Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-06	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C10-02	TRANSFORMER BASE FOR 15" BOLT CIRCLE
09C11-04	CONCRETE BASE TYPE 10
09C12-04A	CONCRETE BASE TYPE 10
09C12-04B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-12A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-12B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-12D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-12G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-04A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-04B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-04C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-03A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-03B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
10A01-02	ELECTRICAL HANDHOLE WIRING
10A02-02	IDENTIFICATION PLAQUES LIGHT POLES
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A06-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
10A08-02	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A17-03B	POLES, TYPES A, ABR, A2 ALUMINUM 47'-6" SHAFT
10A18-04A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)

6

Standard Detail Drawing List

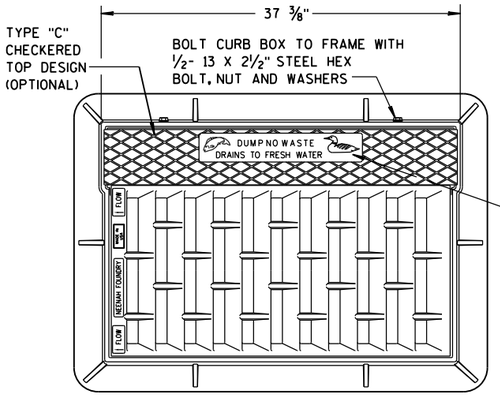
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A03-05	CONCRETE PAVEMENT SHOULDERS
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-16	URBAN NON-DOWELED CONCRETE PAVEMENT
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A02-01	TREE PLANTING DETAIL
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B32-02A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B34-01A	32", 36" & 42" CONCRETE BARRIER SINGLE SLOPE CLASS B
14B35-01A	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B35-01B	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B36-01A	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B36-01B	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B39-01A	32-INCH SSCB TO 36-INCH SSCB HEIGHT TRANSITION
14B39-01C	36-INCH SSCB TO 42-INCH SSCB HEIGHT TRANSITION
14B39-01E	42-INCH SSCB TO 56-INCH SSCB HEIGHT TRANSITION
14B41-01A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-01B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-13A	FENCE CHAIN LINK
15B03-13B	FENCE CHAIN LINK
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES

6

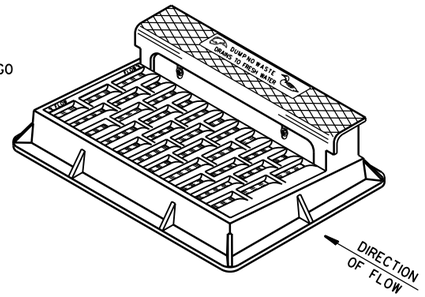
Standard Detail Drawing List

15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C10-10	PAVEMENT MARKINGS FOR DROP LANES FREEWAY/EXPRESSWAY
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C18-03	MEDIAN ISLAND MARKING
15C24-02	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C31-01B	LANE DROP PAVEMENT MARKING
15C31-01C	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D13-02	TEMPORARY EMERGENCY PULLOUTS
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
15D35-01A	RAMP GATE HARD WIRED
15D35-01B	RAMP GATE HARD WIRED
15D35-01C	RAMP GATE HARD WIRED
15D35-01D	RAMP GATE HARD WIRED
15D36-01	BARRICADE RACK

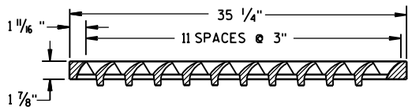
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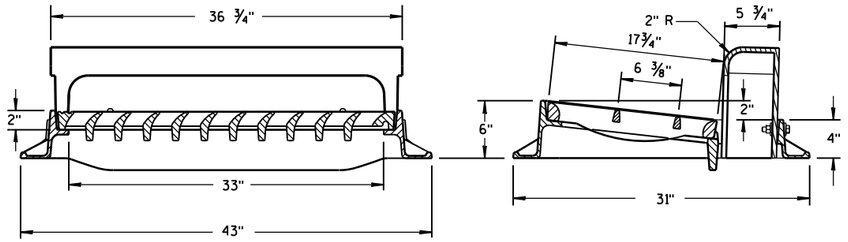


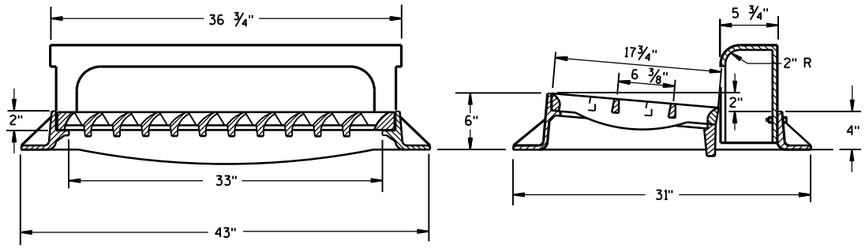
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

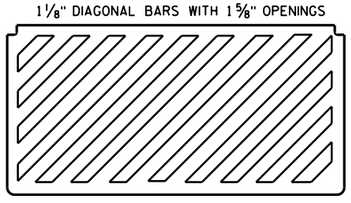






TYPE "H"

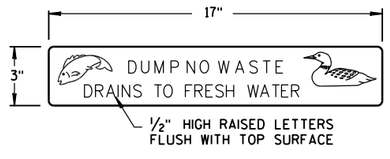
NOTE: EITHER CASTING IS ACCEPTABLE



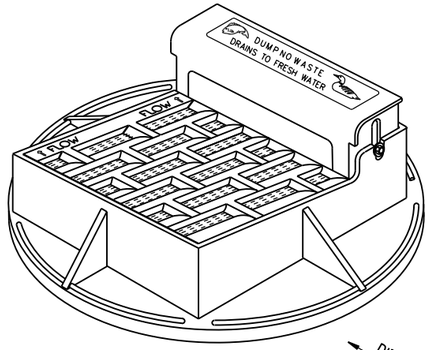
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

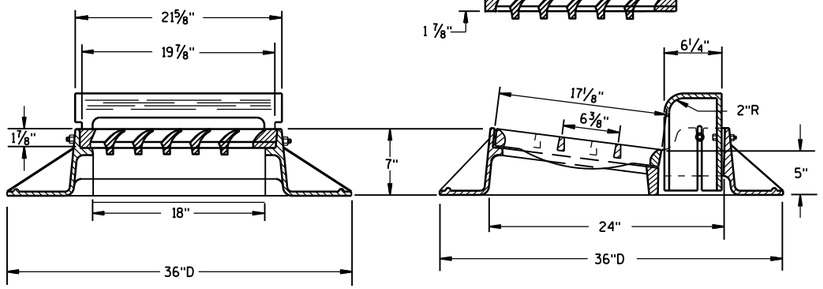


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



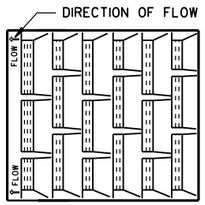
TYPE "A"

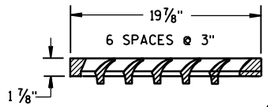
GENERAL NOTES

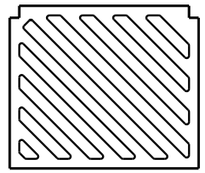
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



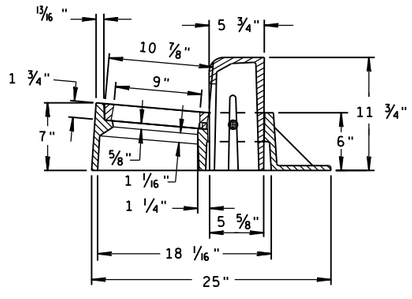


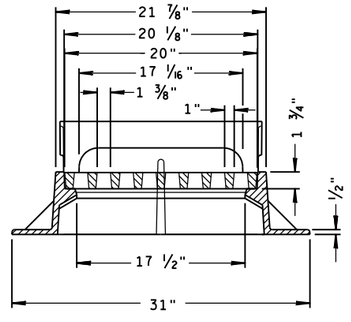


SPECIAL GRATE FOR TYPE "A" COVER

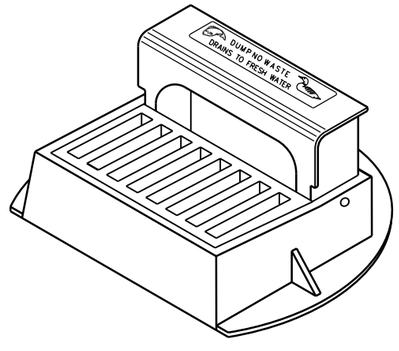
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





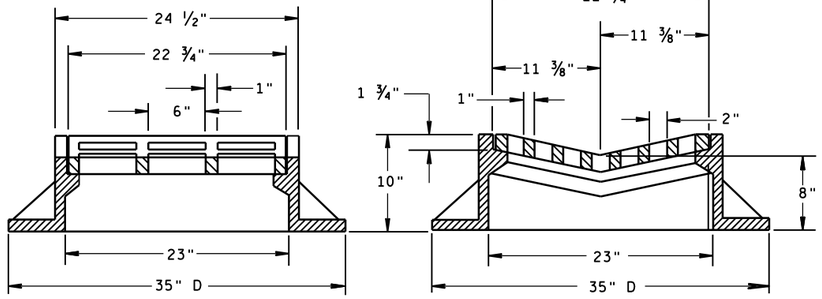
TYPE "Z"

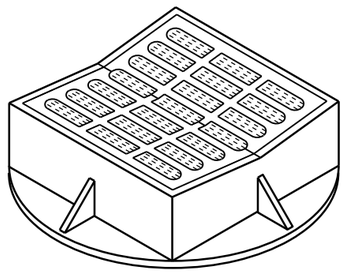


INLET COVERS
TYPE A, H, A-S, H-S & Z

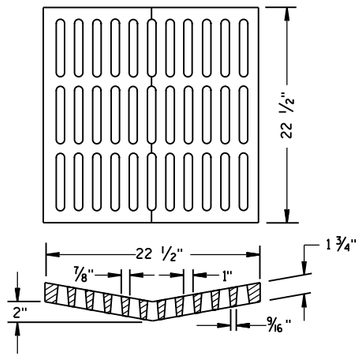
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA



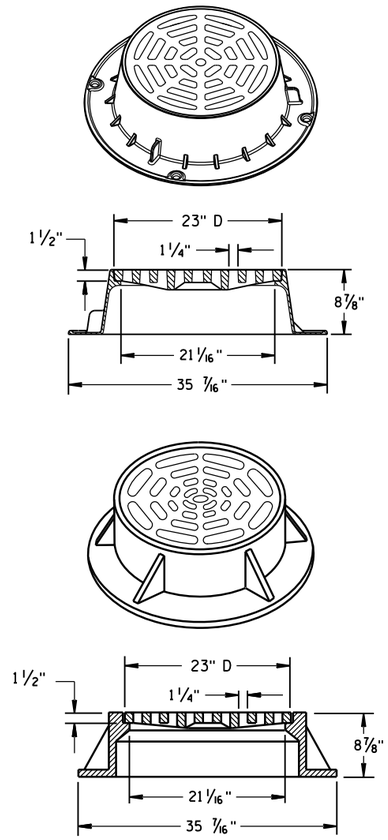


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

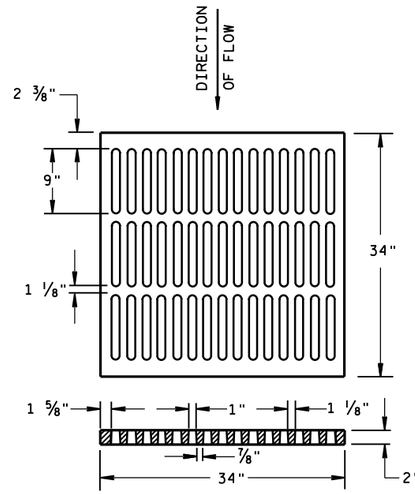
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

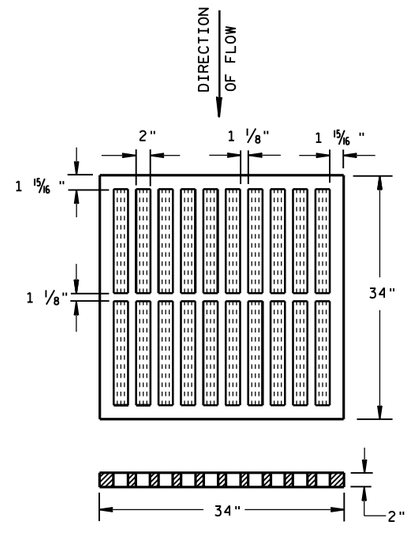
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



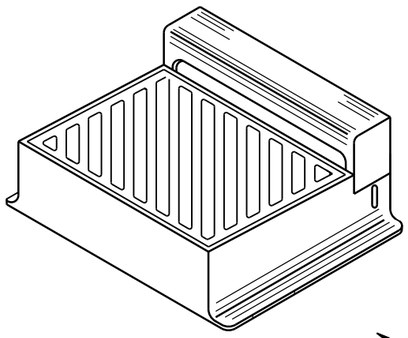
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

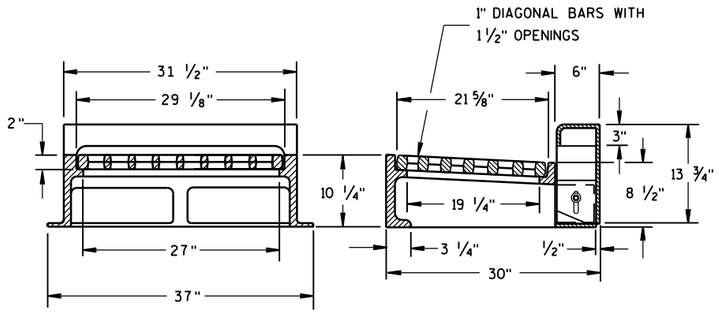


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

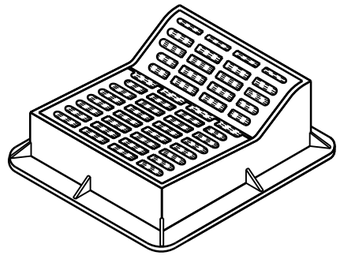
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

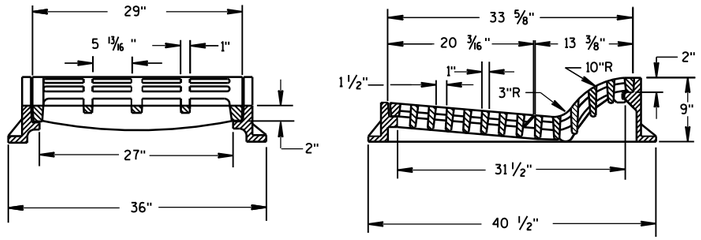
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S.D.D. 8 A 5-19b

6

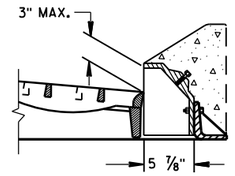
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

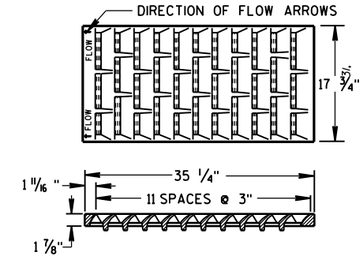
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

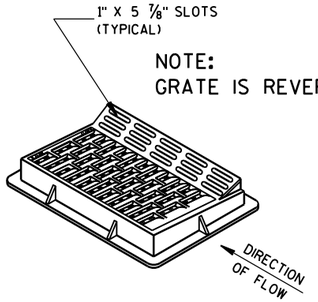
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

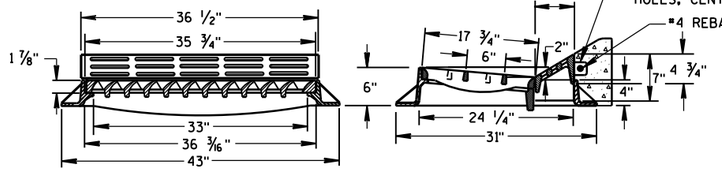
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



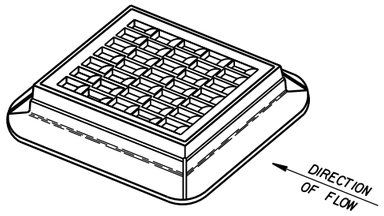


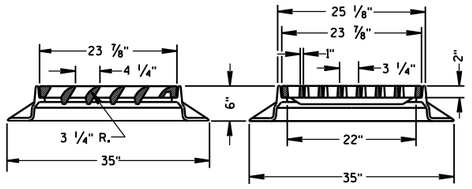


TYPE "HM"

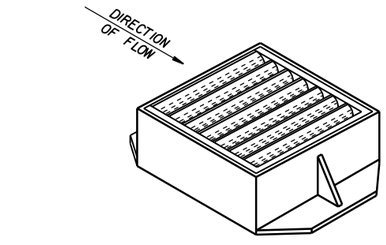
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

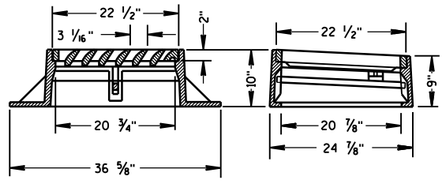
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



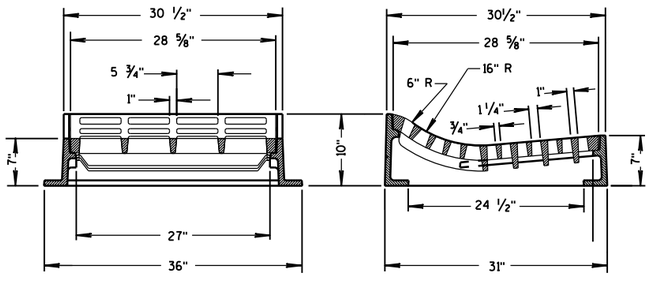


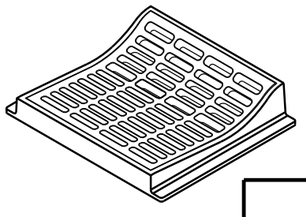
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

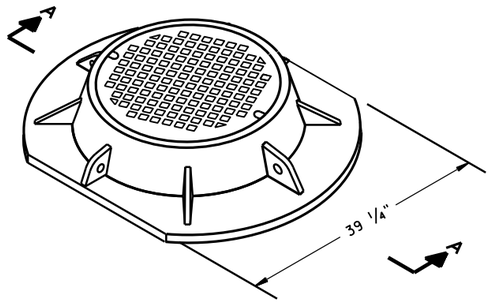
APPROVED
11/27/2013
DATE

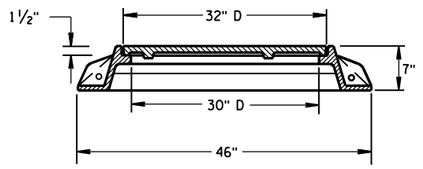
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

2037

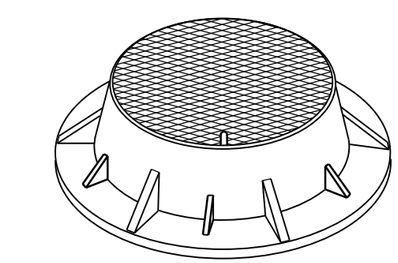
FHWA

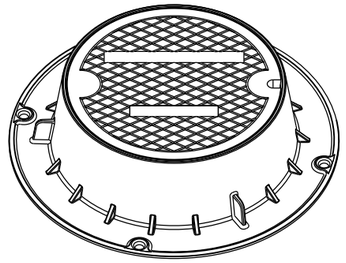
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S.D.D. 8 A 5-19c

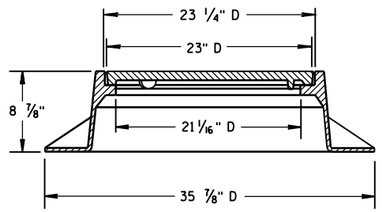


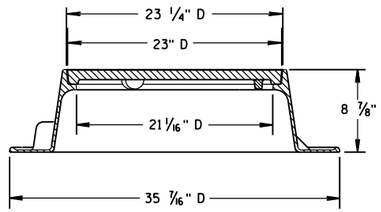


SECTION A-A
TYPE "K"









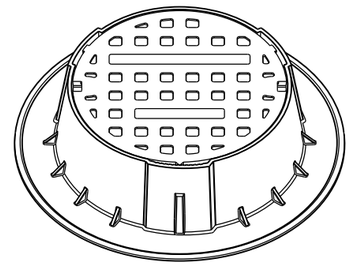
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

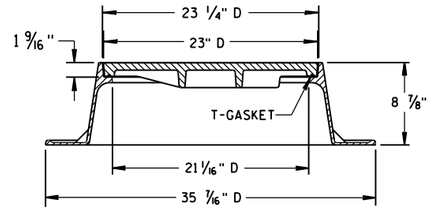
GENERAL NOTES

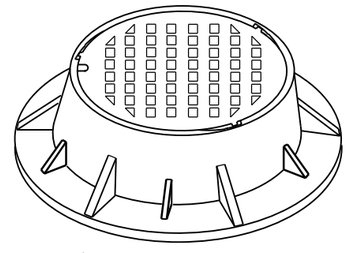
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

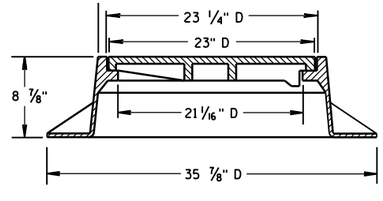
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

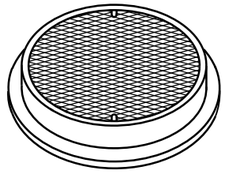


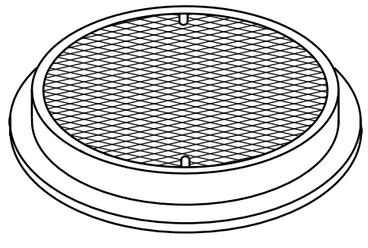


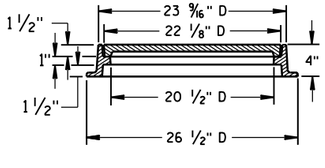




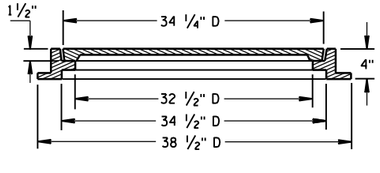
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



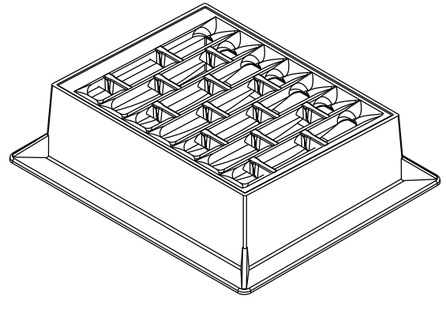


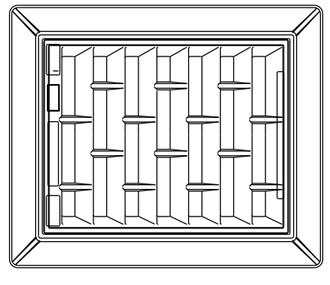


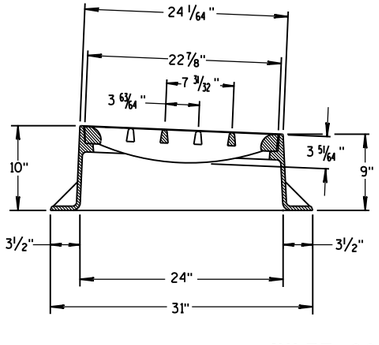
TYPE "L"

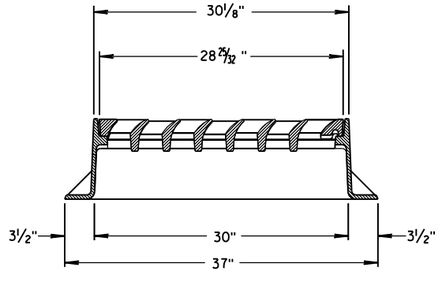


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

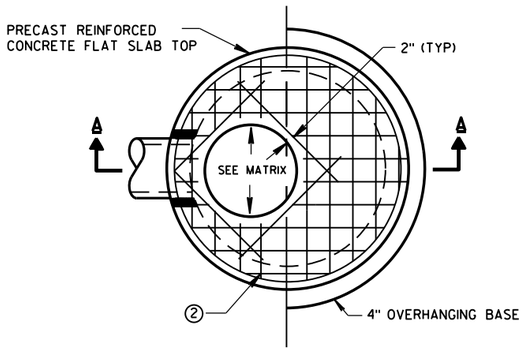
2038

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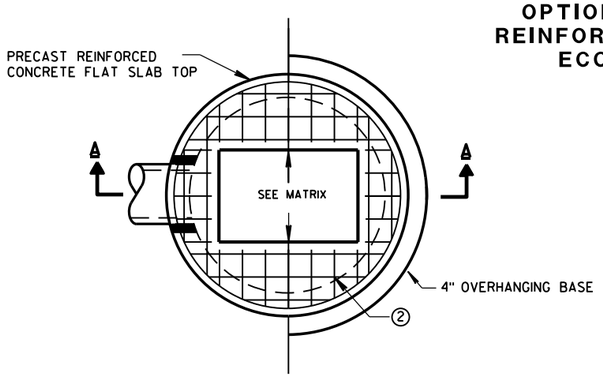
S.D.D. 8 A 5-19d

6

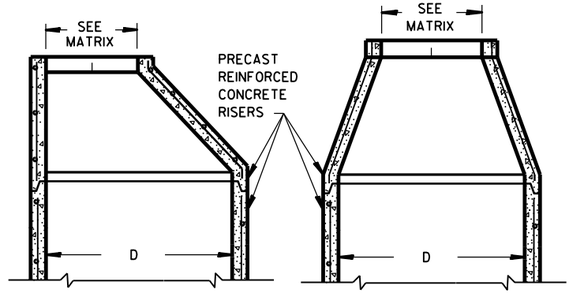
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

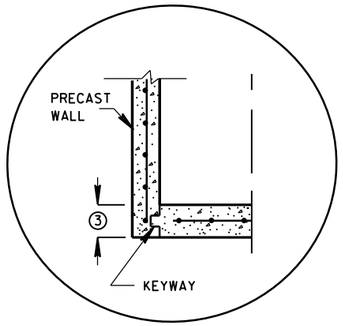


PLAN VIEW RECTANGULAR OPENING

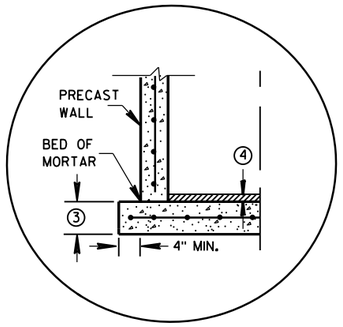


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

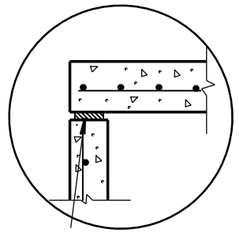


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



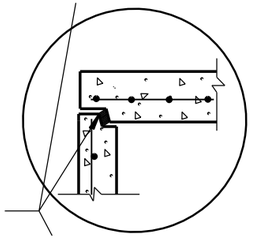
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

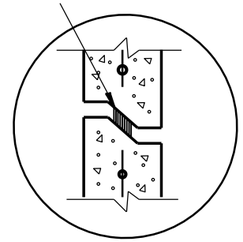


TOP WITH PLAIN END JOINT

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

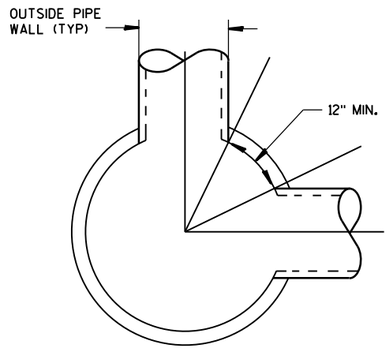


TOP WITH TONGUE AND GROOVE JOINT

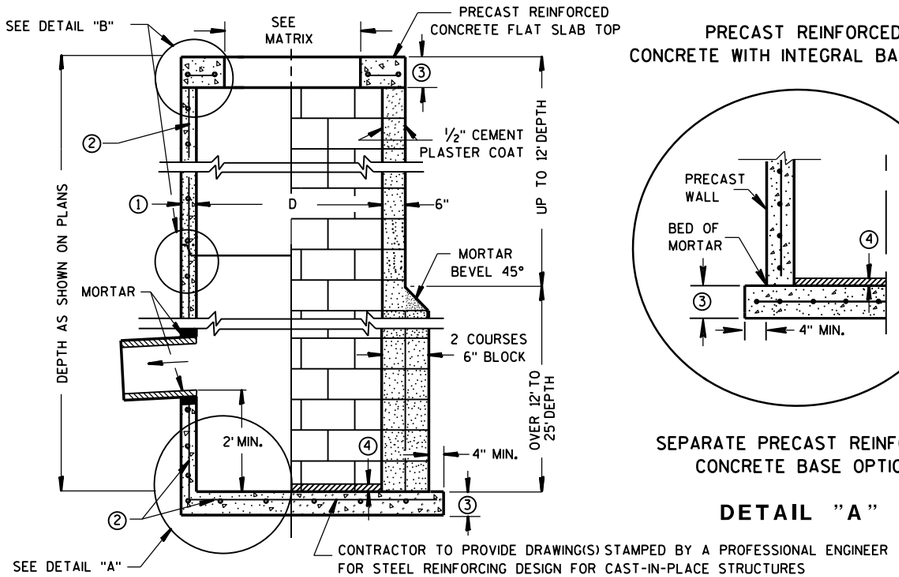


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

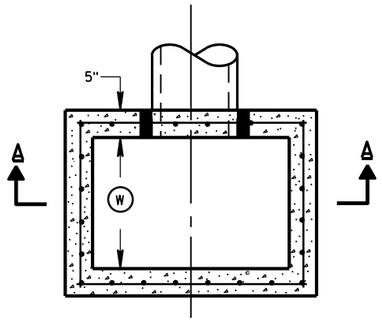
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DEPARTMENT OF TRANSPORTATION

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6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
2039
FHWA

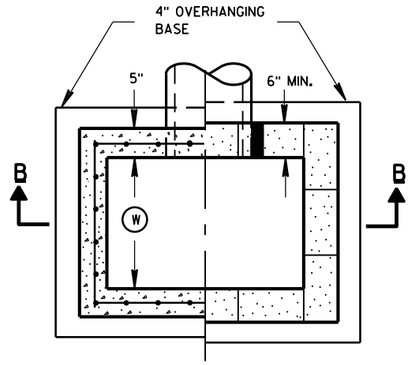
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

S.D.D. 8 A 8-1

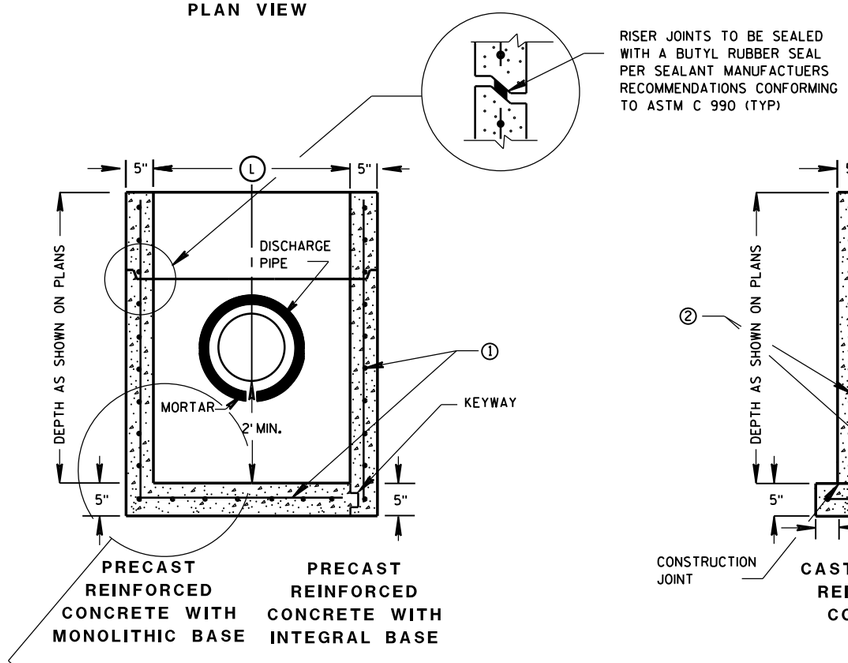
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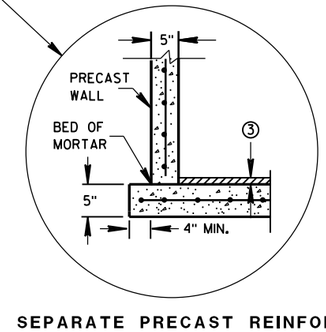
PLAN VIEW



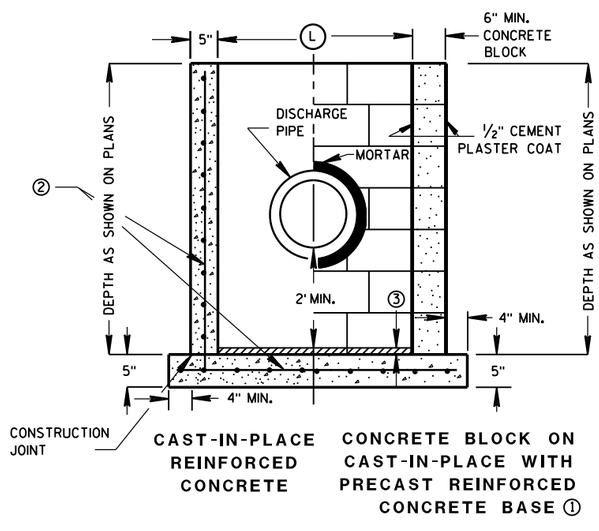
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

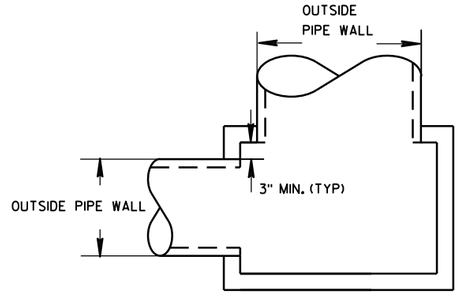
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

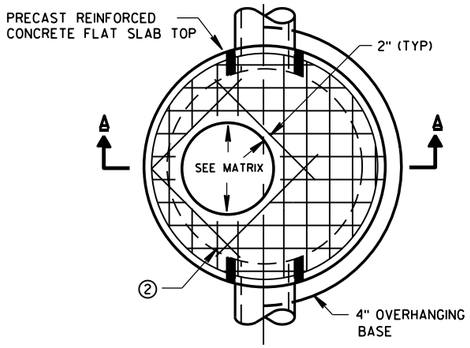
CATCH BASINS 2X3-FT AND 2.5X3-FT

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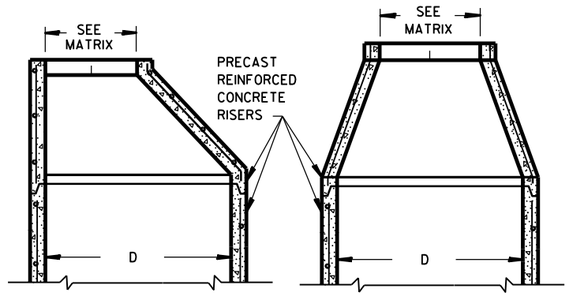
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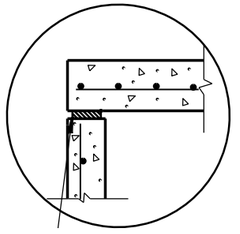


PLAN VIEW CIRCULAR OPENING

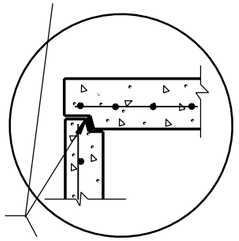


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

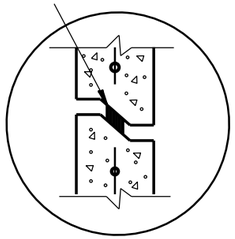


TOP WITH PLAIN END JOINT



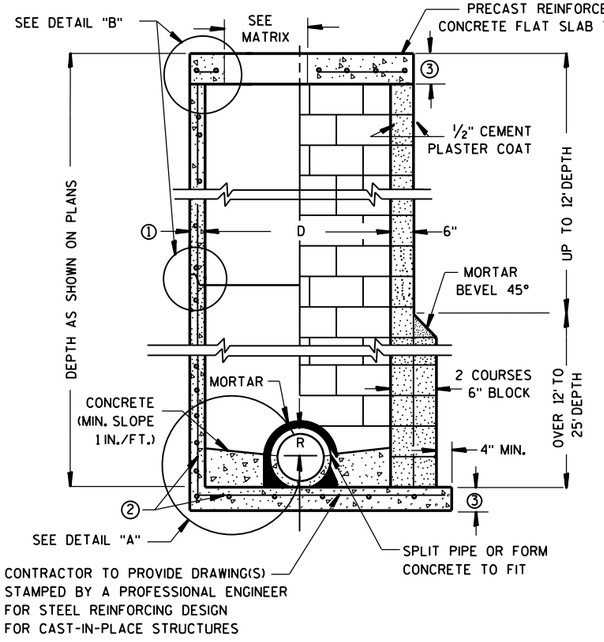
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



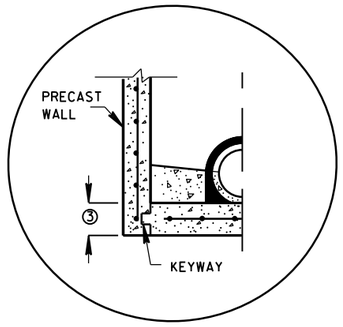
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

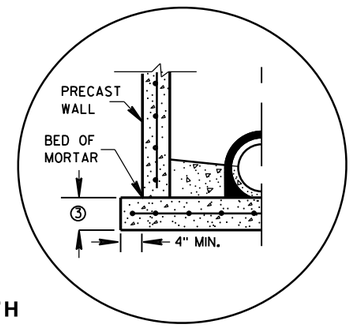


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

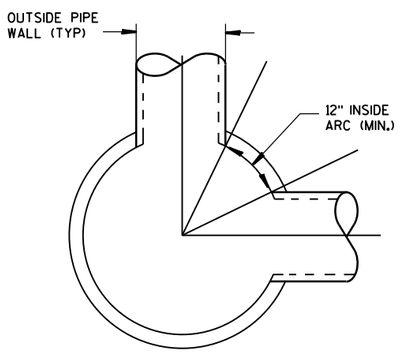


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
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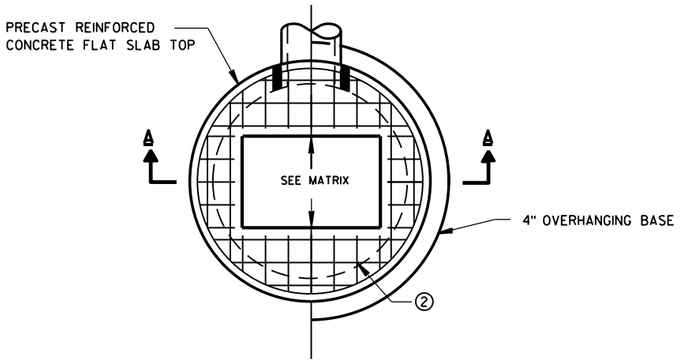
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

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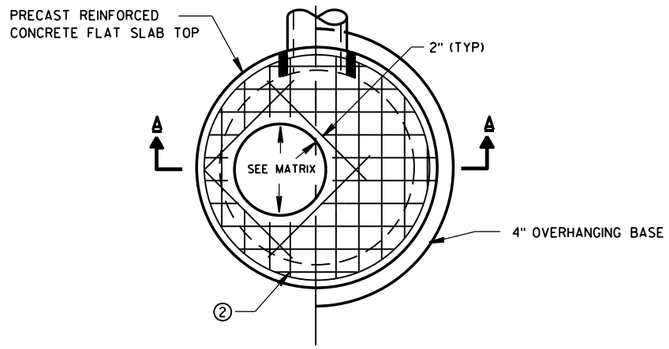
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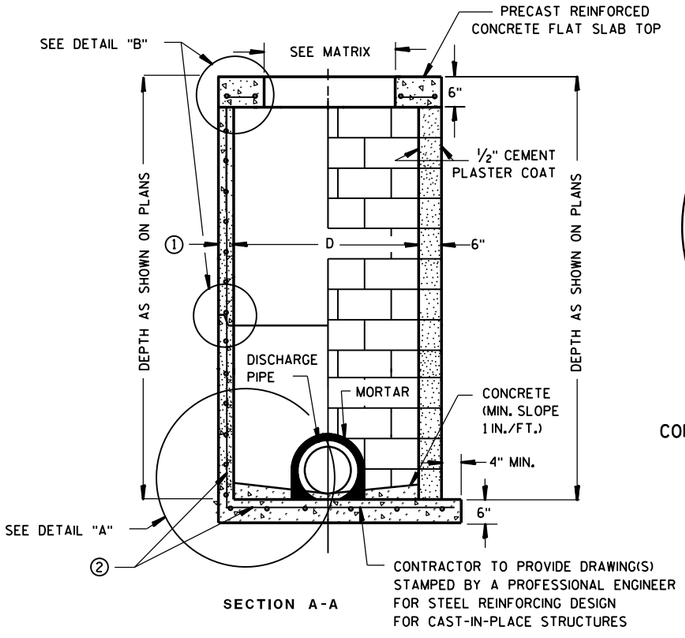
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

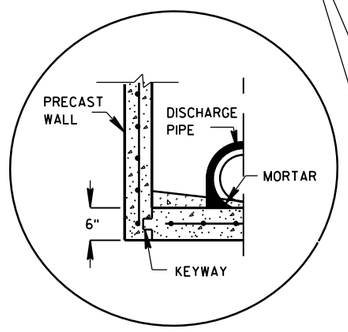


SECTION A-A

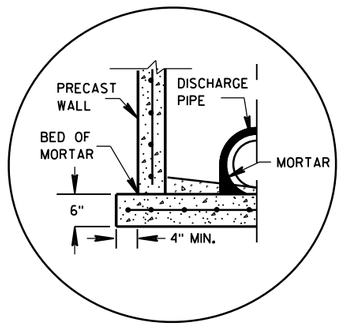
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

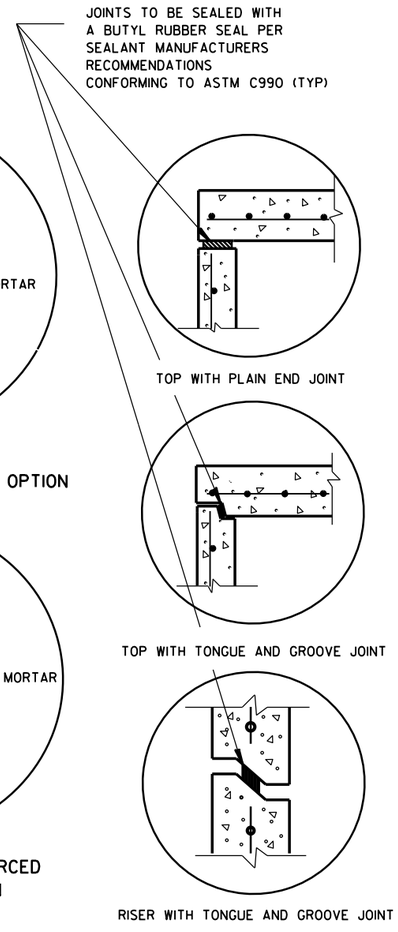


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

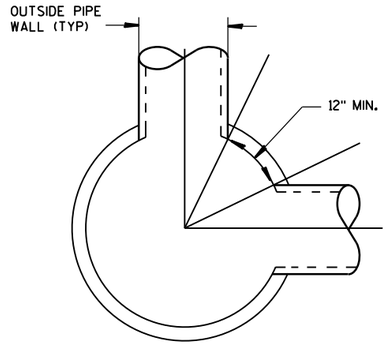
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER 2042

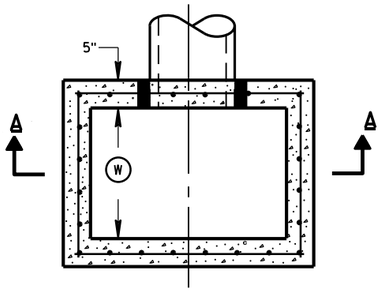
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S.D.D. 8 C 6-1

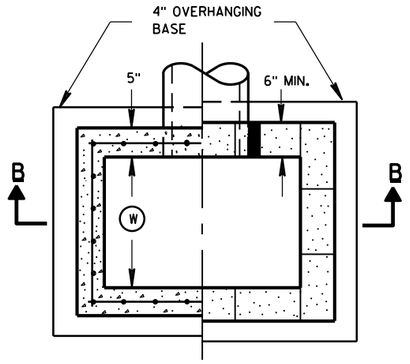
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S.D.D. 8 C 6-1

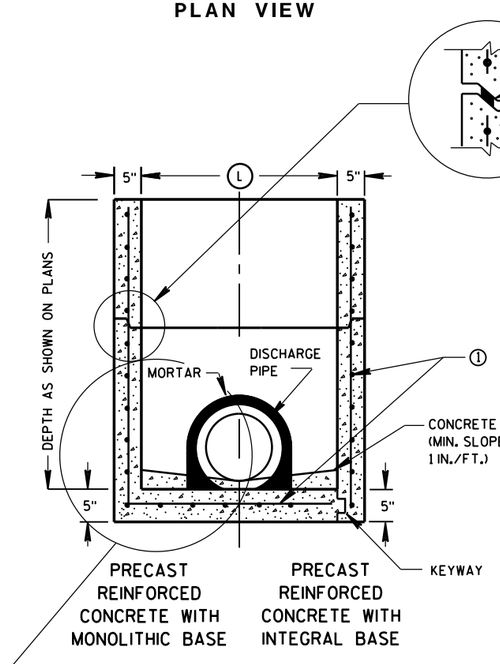
INLETS 3-FT AND 4-FT DIAMETER



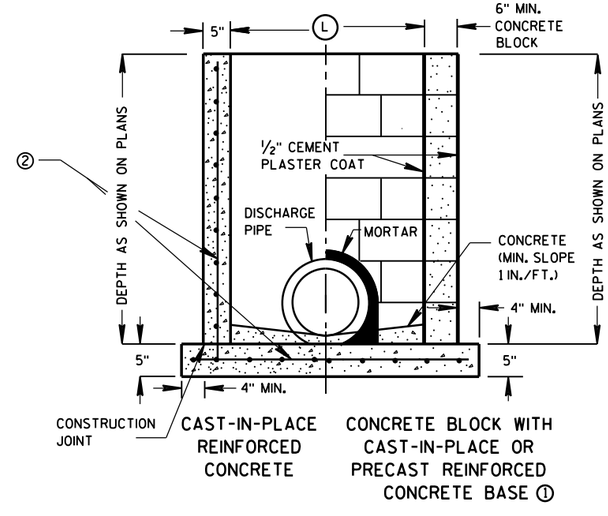
PLAN VIEW



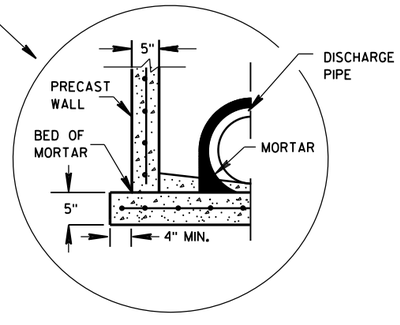
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

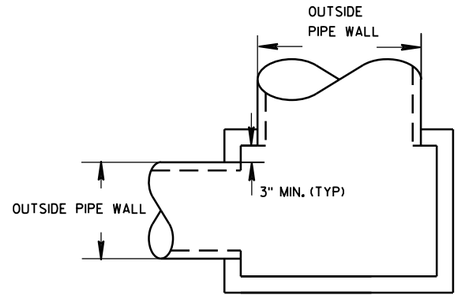
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



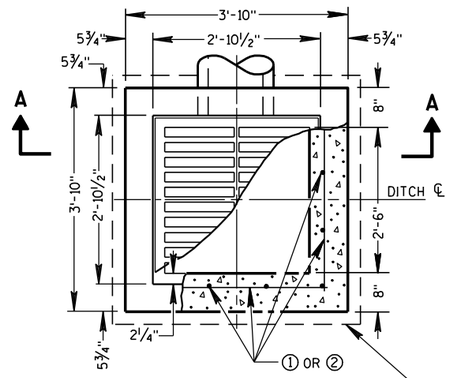
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

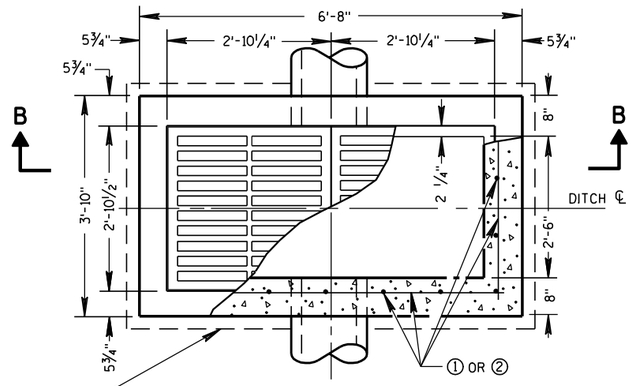
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER
FHWA
2043

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

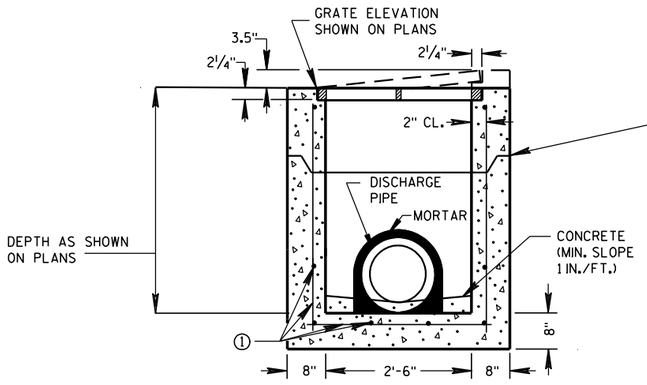


PLAN VIEW

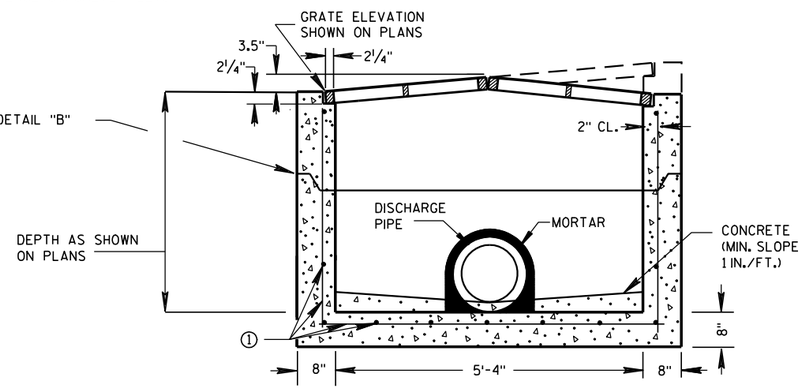


PLAN VIEW

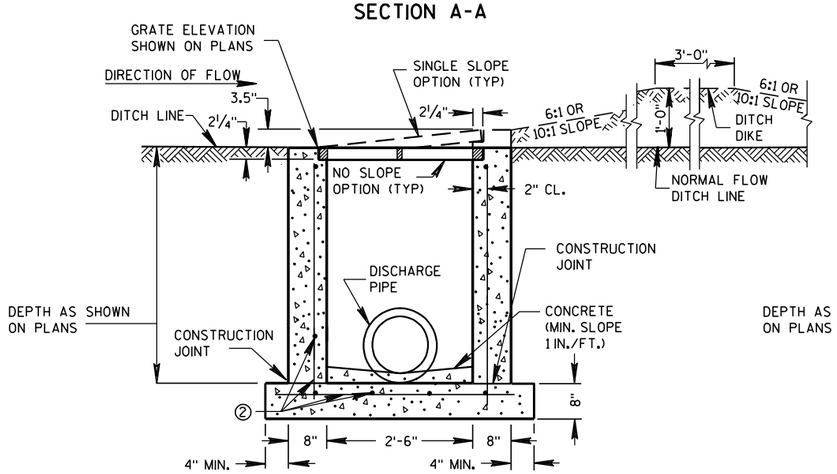
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



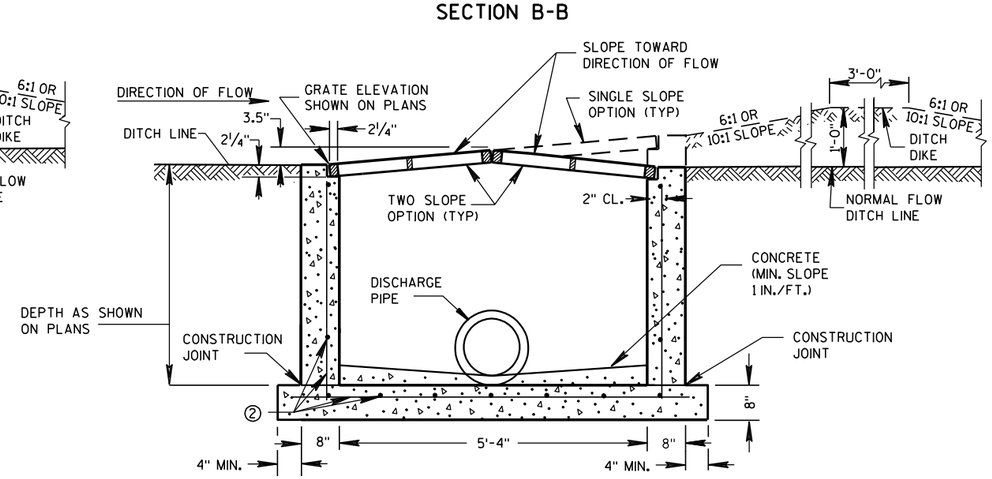
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

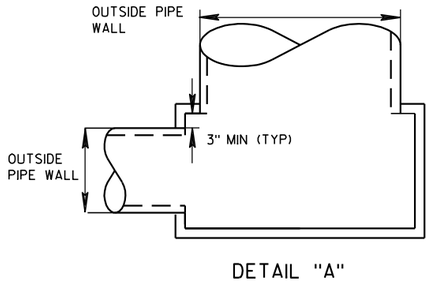
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

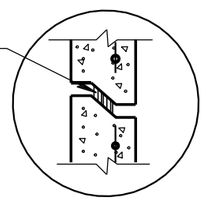
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

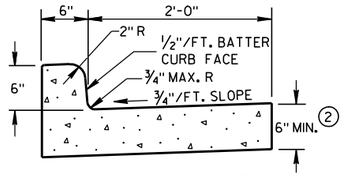
FHWA

6

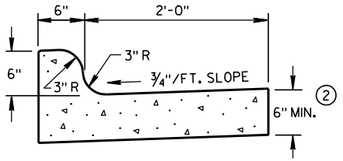
S.D.D. 8 C 8-1

6

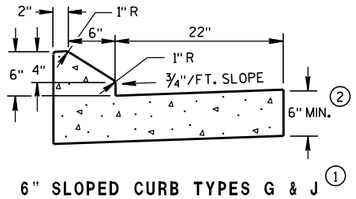
S.D.D. 8 C 8-1



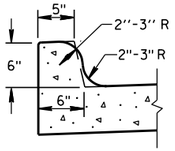
TYPES A & D (1)



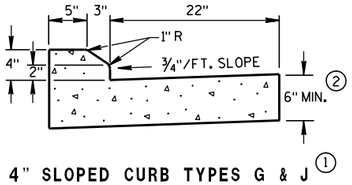
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

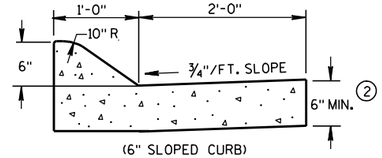


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

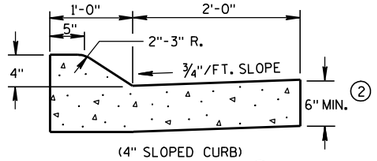


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

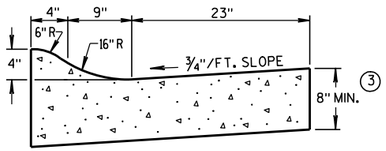


(6" SLOPED CURB)



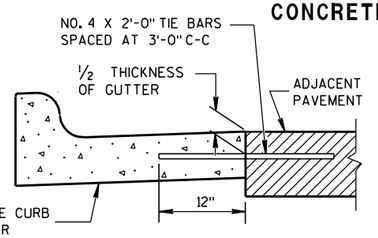
(4" SLOPED CURB)

TYPES A & D (1)

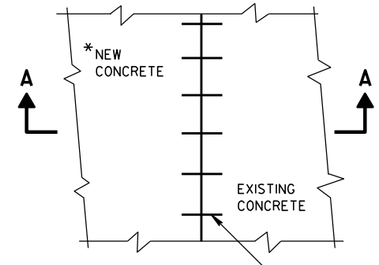


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

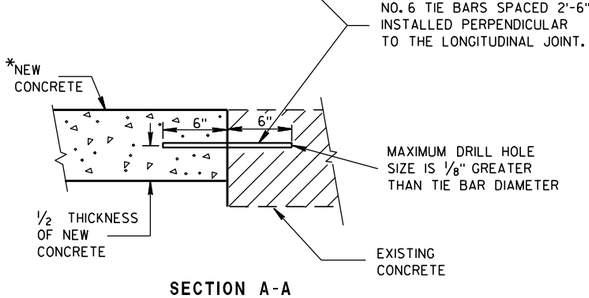


TYPICAL TIE BAR LOCATION (1)



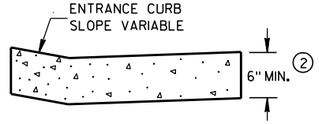
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

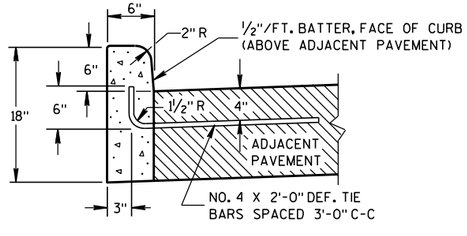


SECTION A-A

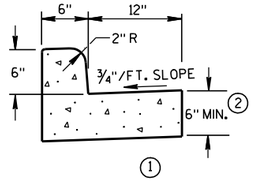
TIE BARS DRILLED INTO EXISTING PAVEMENT



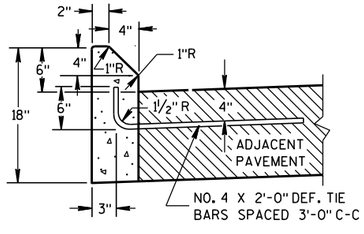
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D

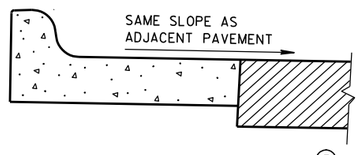


(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES G & J

CONCRETE CURB



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

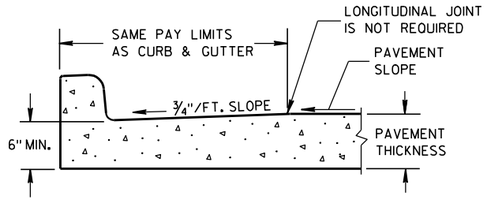
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

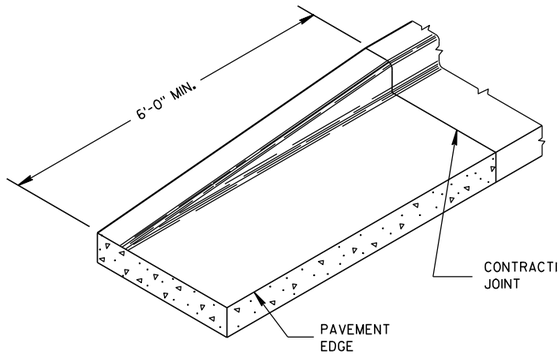
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

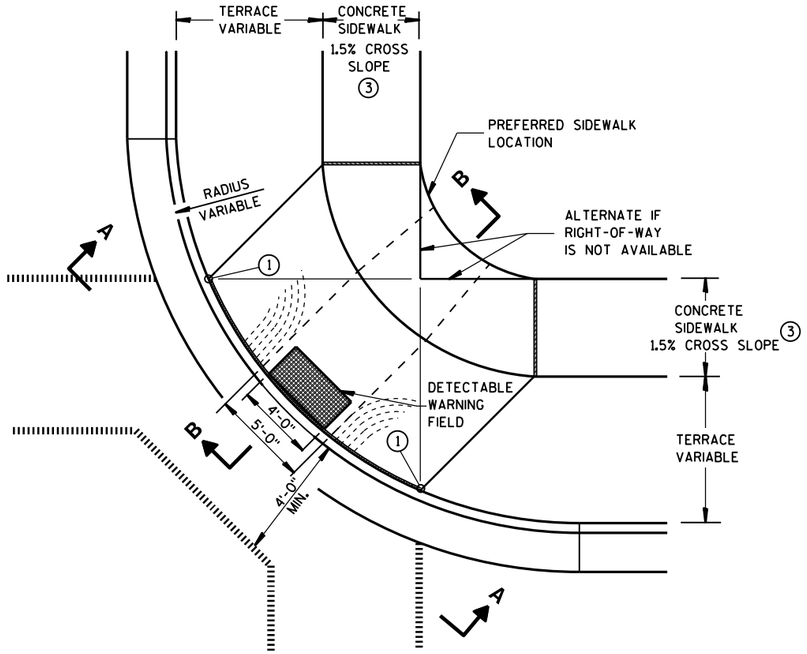
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
2045 ENT
FHWA

6

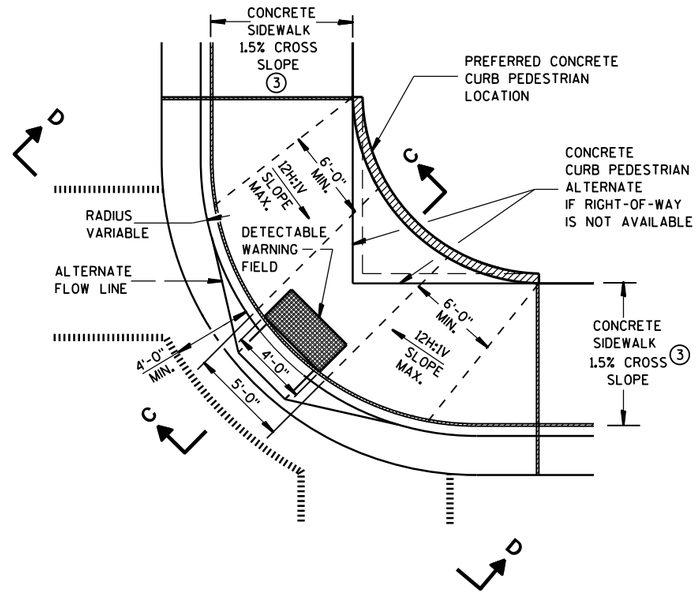
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

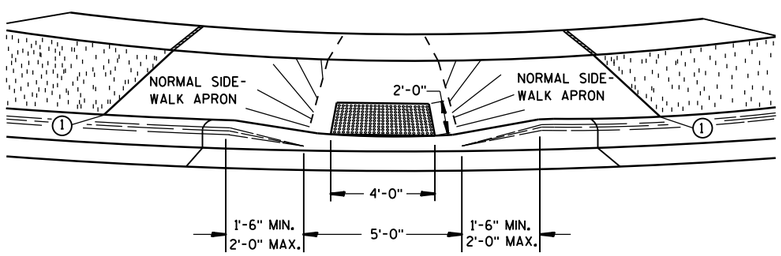
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

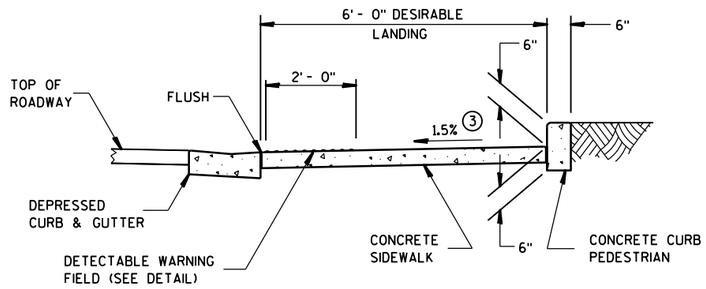
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

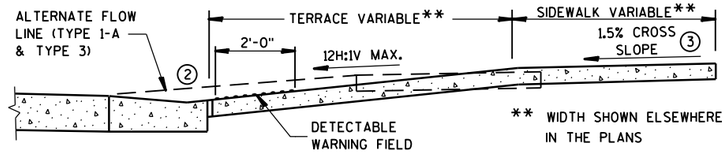
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



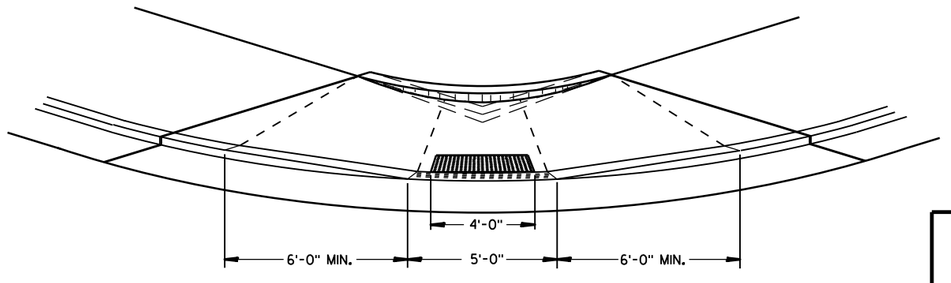
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

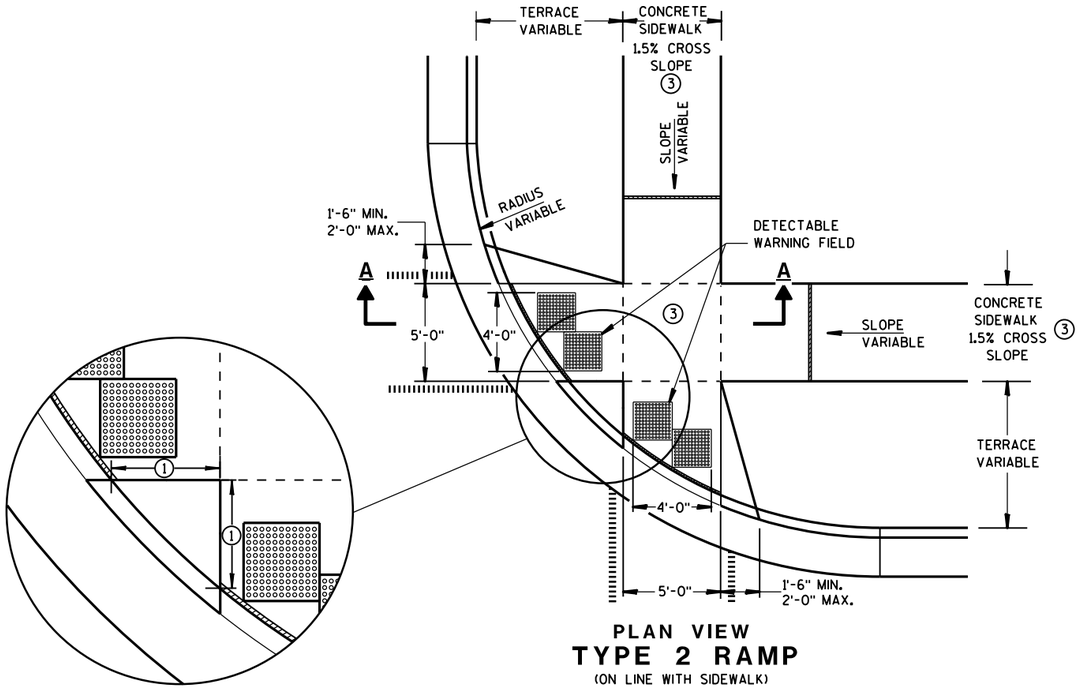
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 2046

6

S.D.D. 8 D 5-15a

6

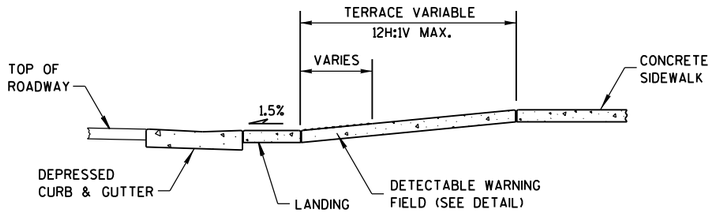
S.D.D. 8 D 5-15a



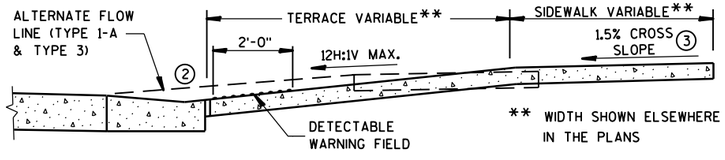
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

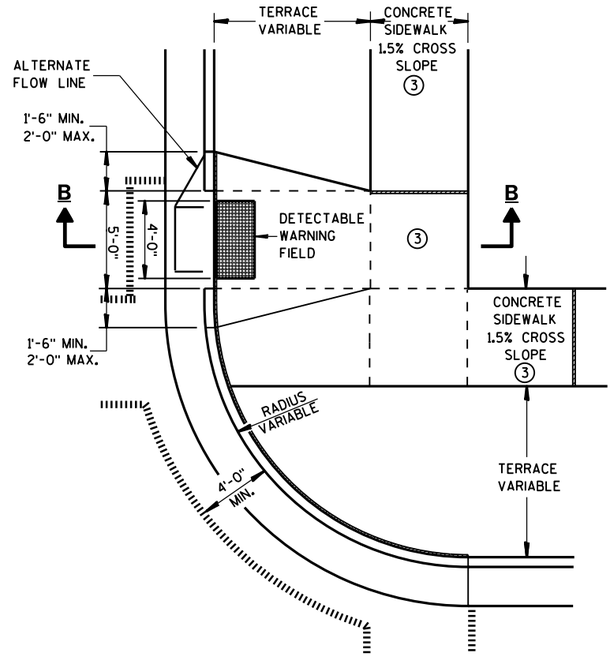
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

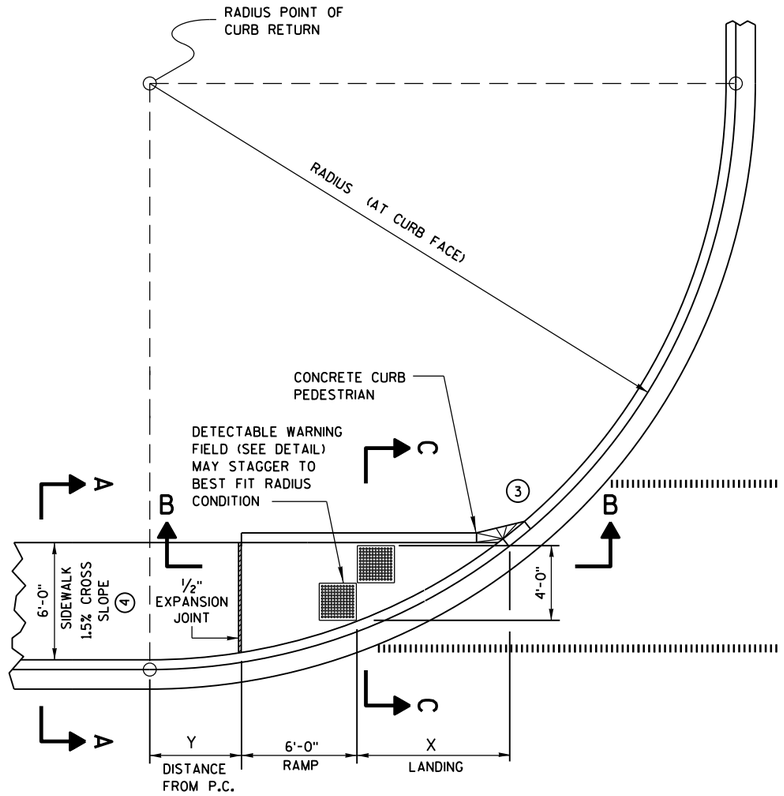
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2047

6

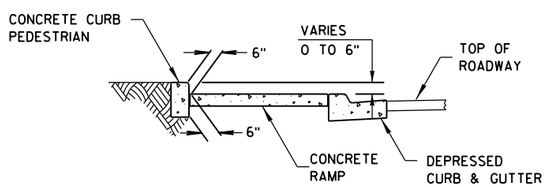
S.D.D. 8 D 5-15b

6

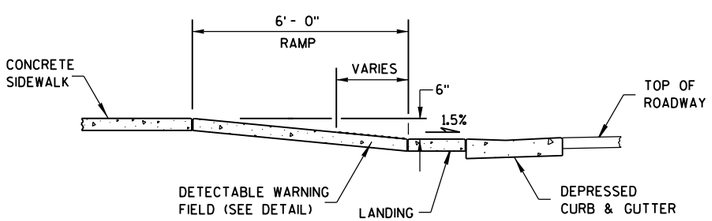
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



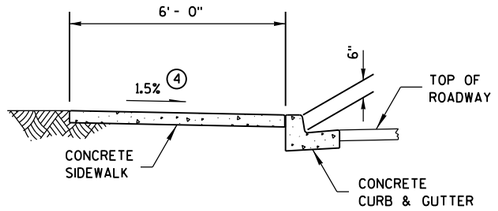
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

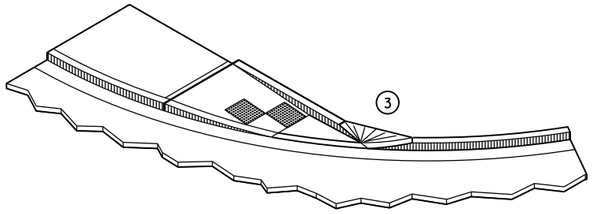
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

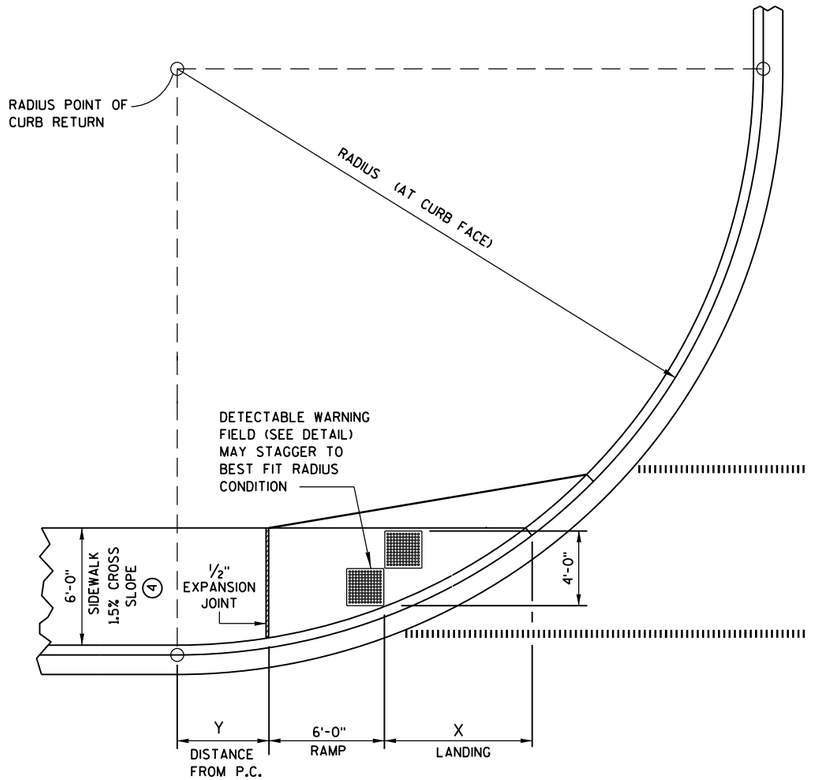
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

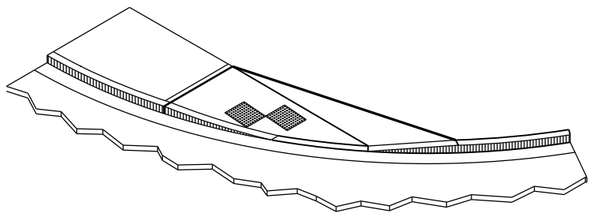
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

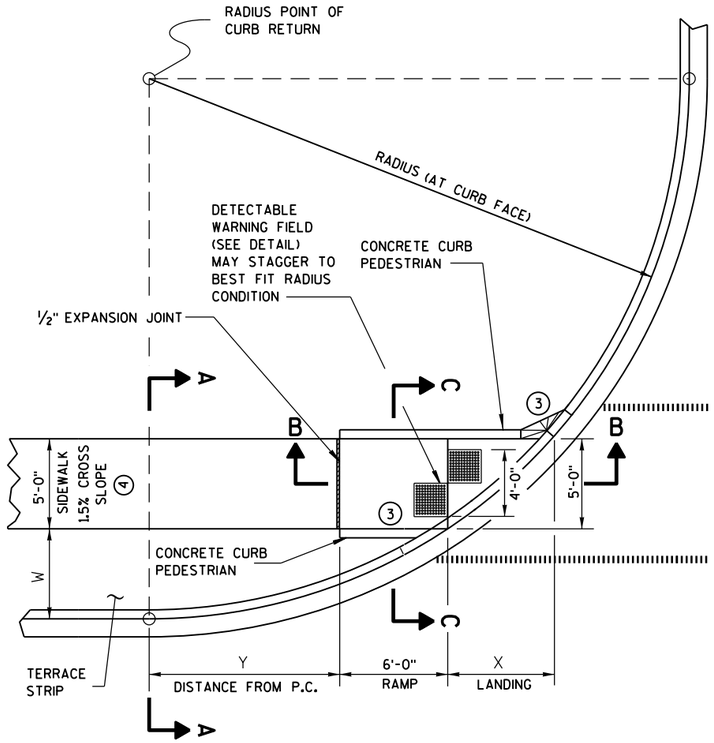
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 2048

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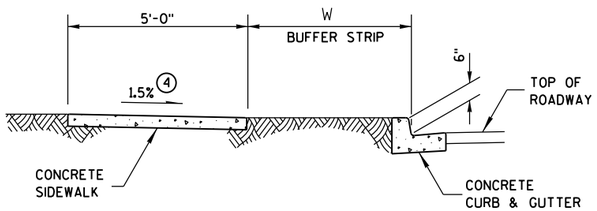
S.D.D. 8 D 5-15c

6

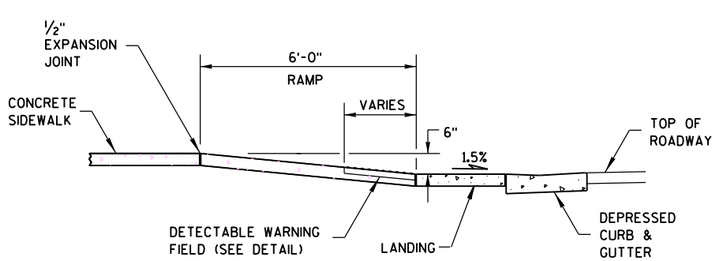
S.D.D. 8 D 5-15c



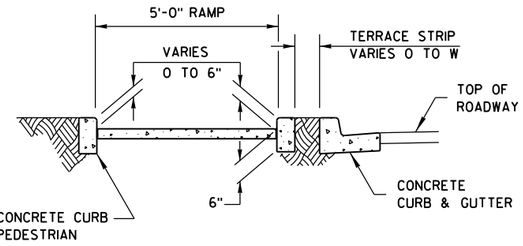
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

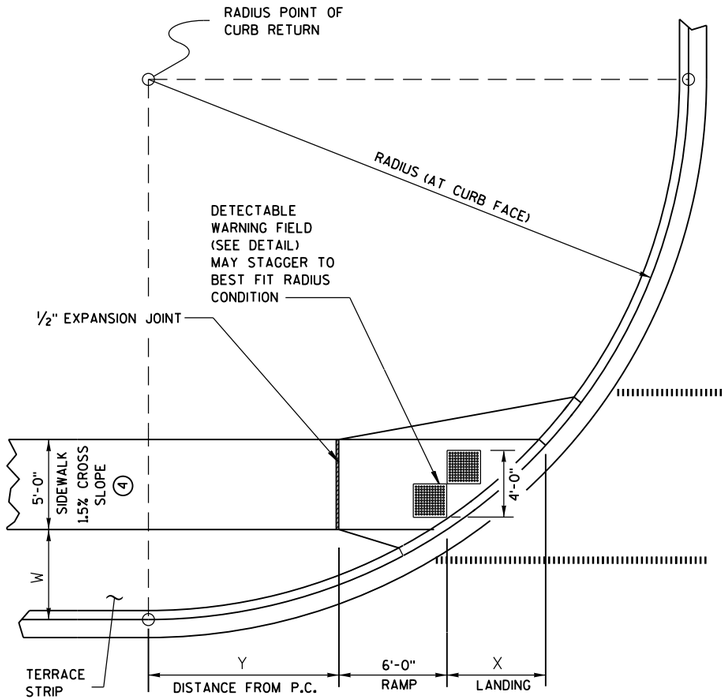
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

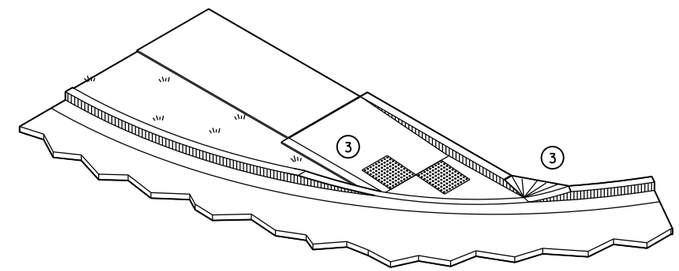
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

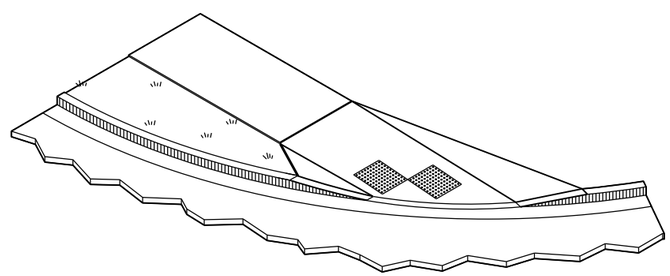
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



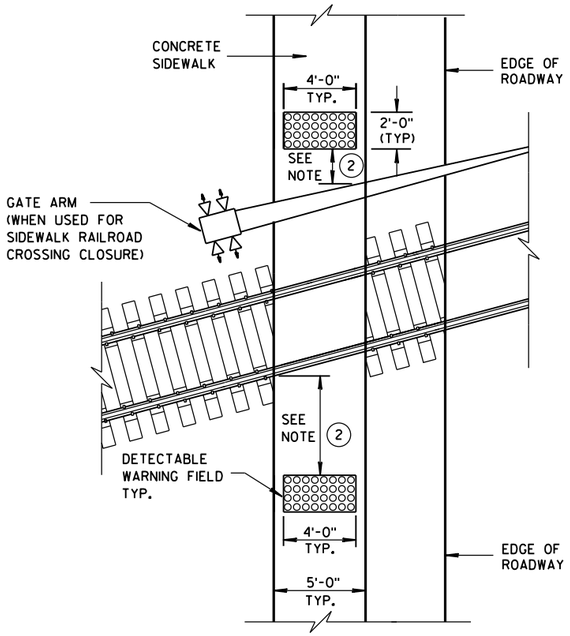
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

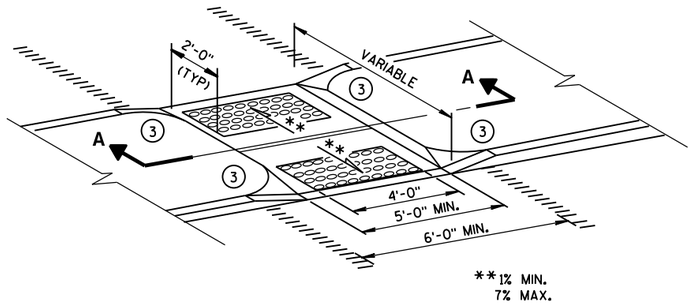
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 2049

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S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

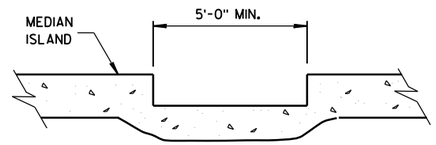
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

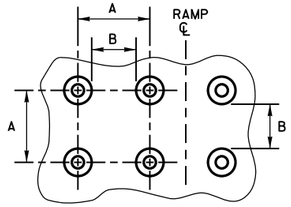
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



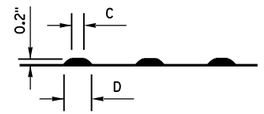
SECTION A-A



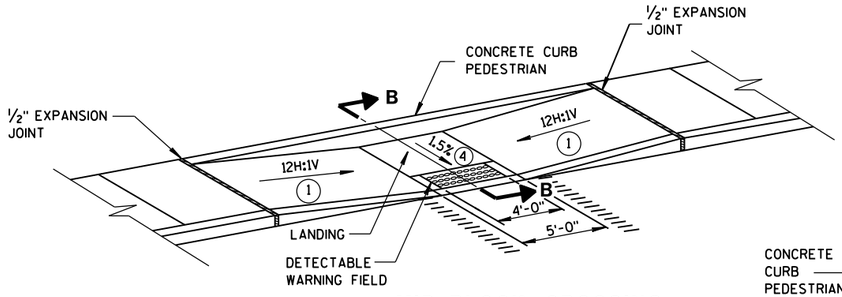
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

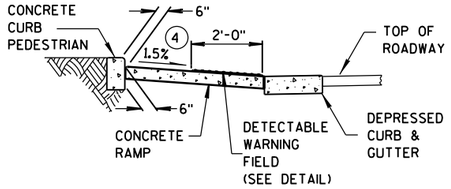
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

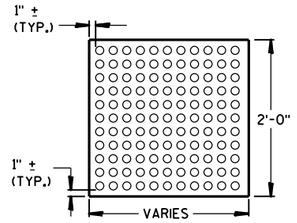


MID-BLOCK CROSSING
TYPE 7A



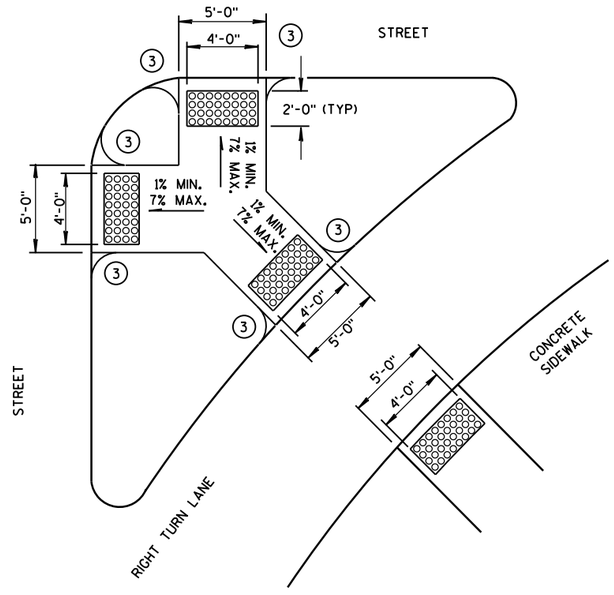
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

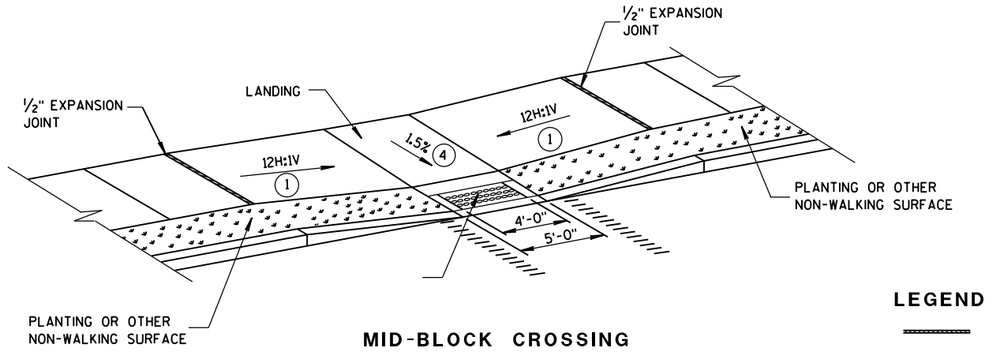


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

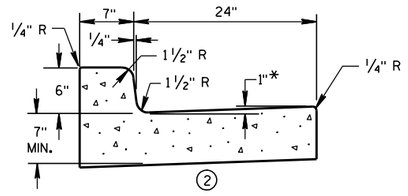
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
2050
FHWA

6

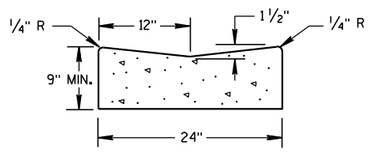
S.D.D. 8 D 5-15e

6

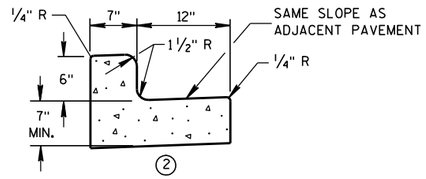
S.D.D. 8 D 5-15e



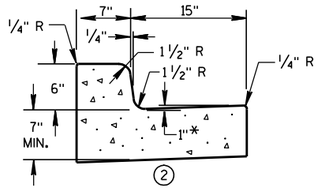
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

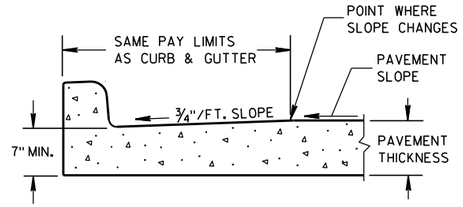


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

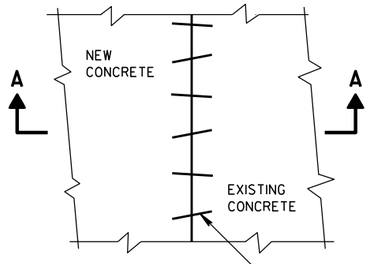
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

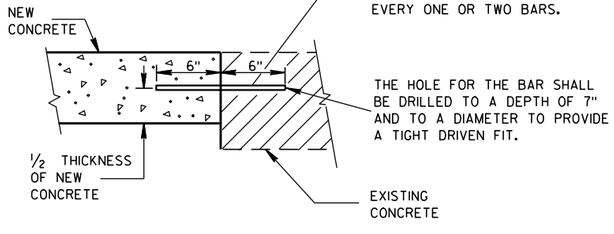
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

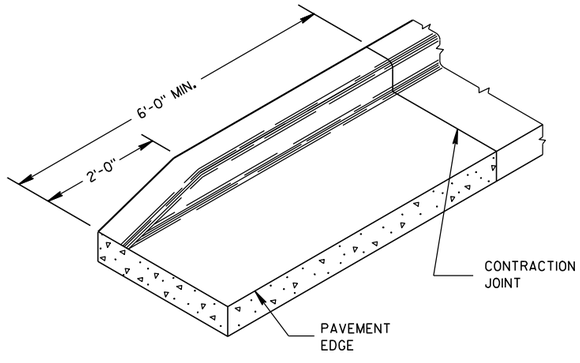
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



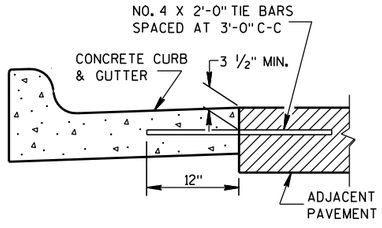
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

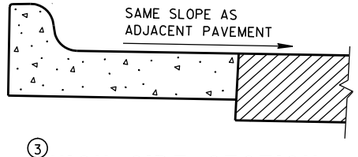
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010
DATE

/S/ Jerry Zogg
ROADWAY STANDARDS ENGINEER

2051 ENT

FHWA

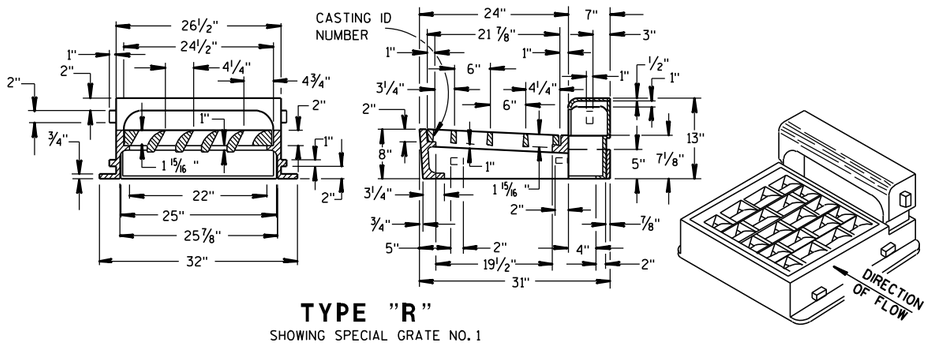
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S.D.D. 8 D 16-10

6

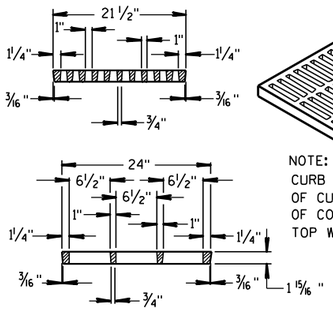
S.D.D. 8 D 16-10

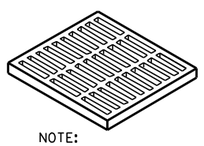
INLET COVERS



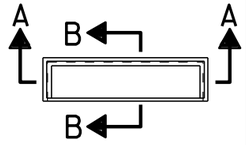
TYPE "R"

SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)

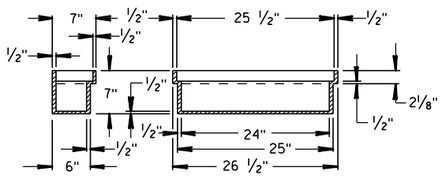




(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.



NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.



GRATE FOR TYPE "R" INLET COVER

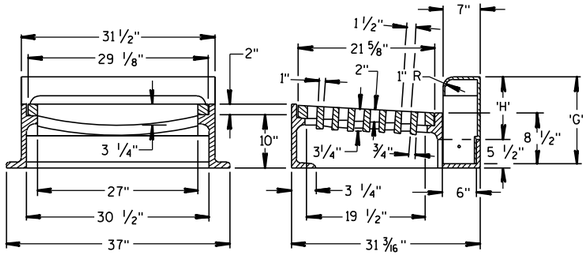
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

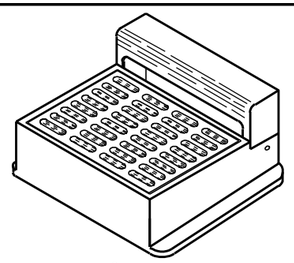
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

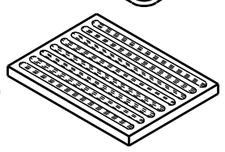
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



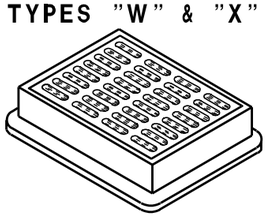
TYPE "W"

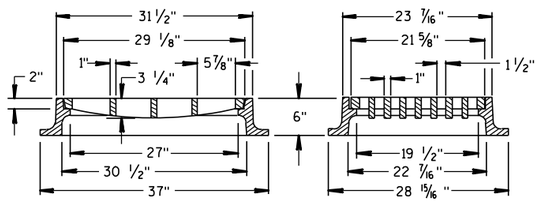
(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.





ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)
TYPES "W" & "X"

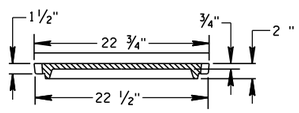




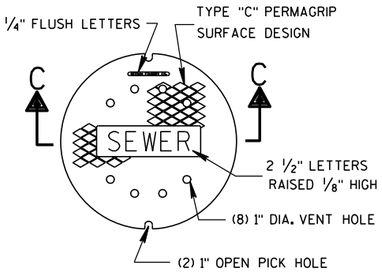
TYPE "X"

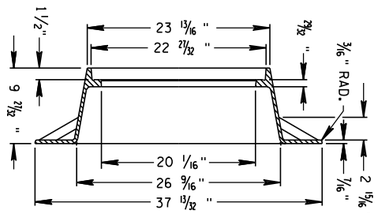
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

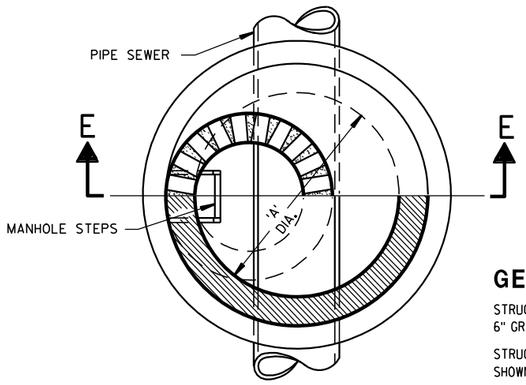
TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

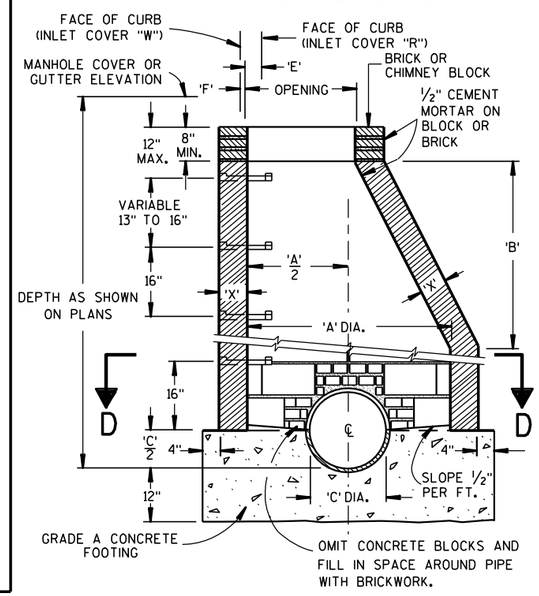
MANHOLE



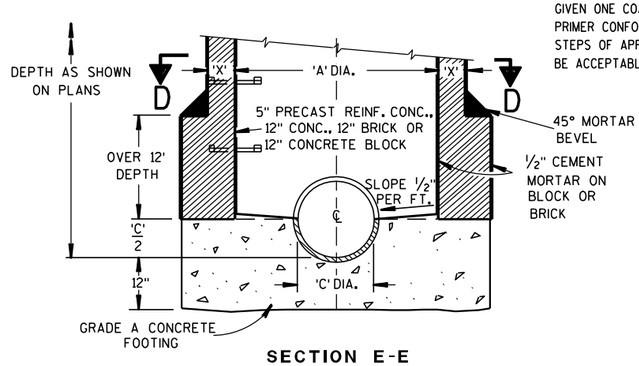
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

COVER TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6" IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACK-FILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

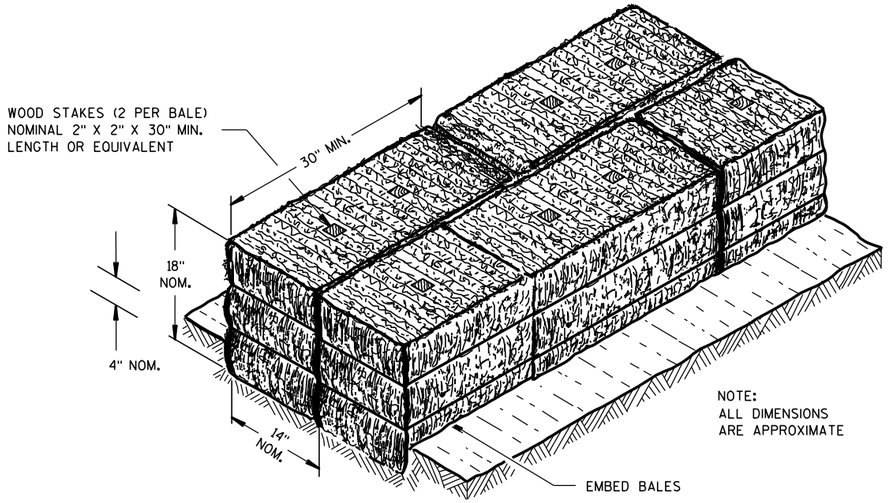
APPROVED
4/12/2011
DATE
/S/ Jerry H. Zogg
ROADSIDE STANDARDS ENGINEER 2052
FHWA

S.D.D. 8 D 17-6

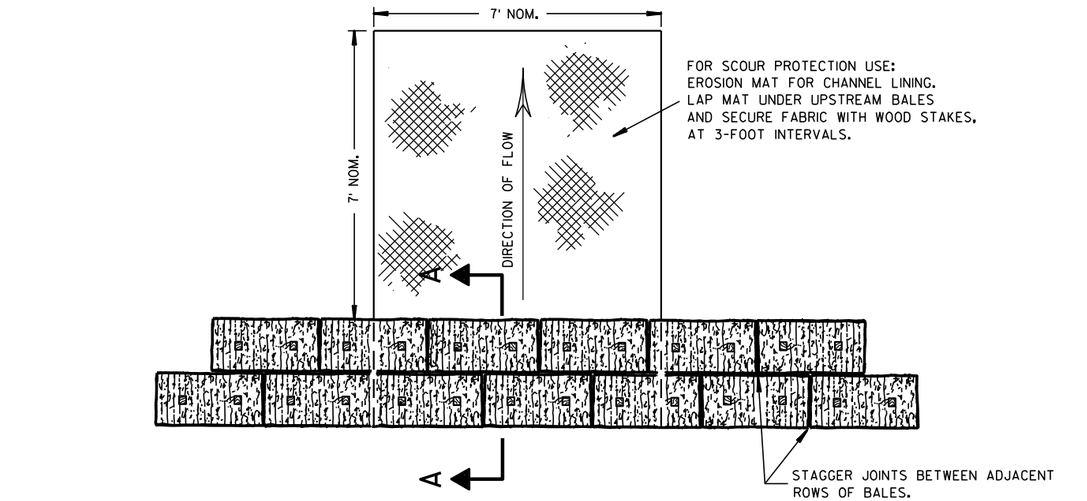
S.D.D. 8 D 17-6

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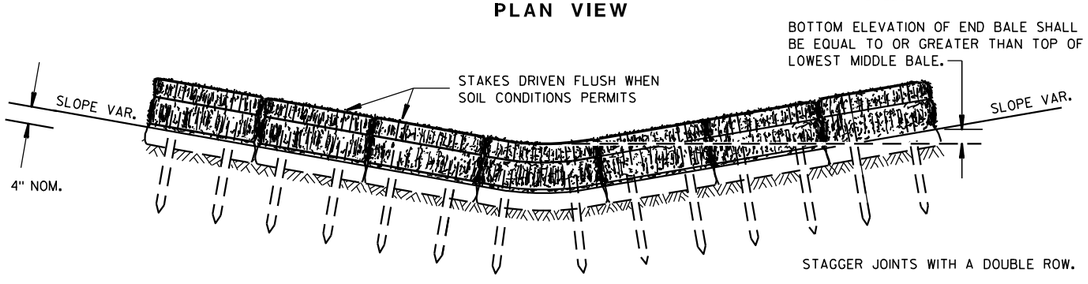
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SECTION A-A



PLAN VIEW



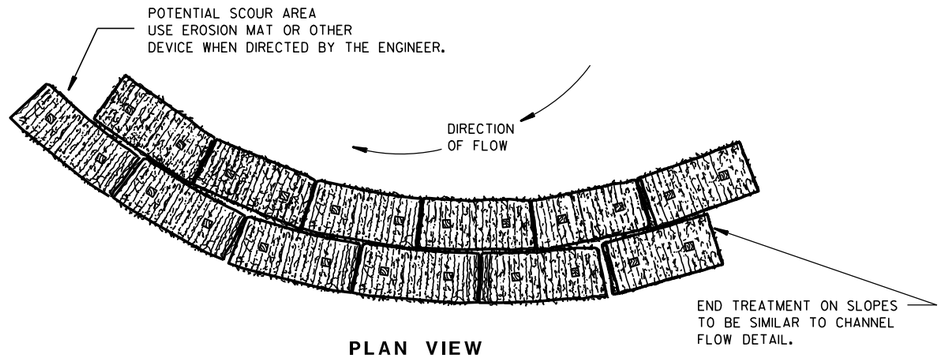
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

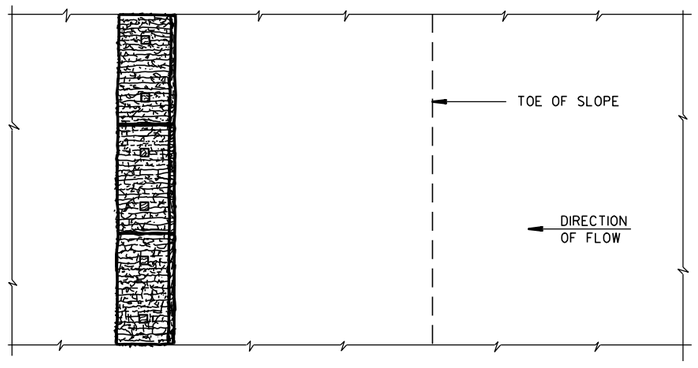
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

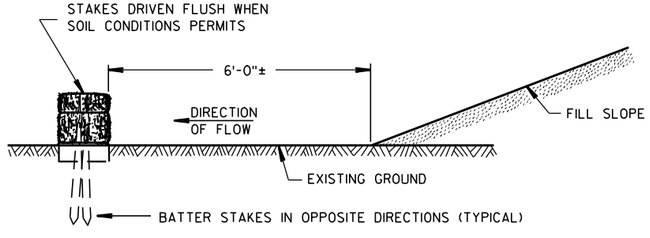


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

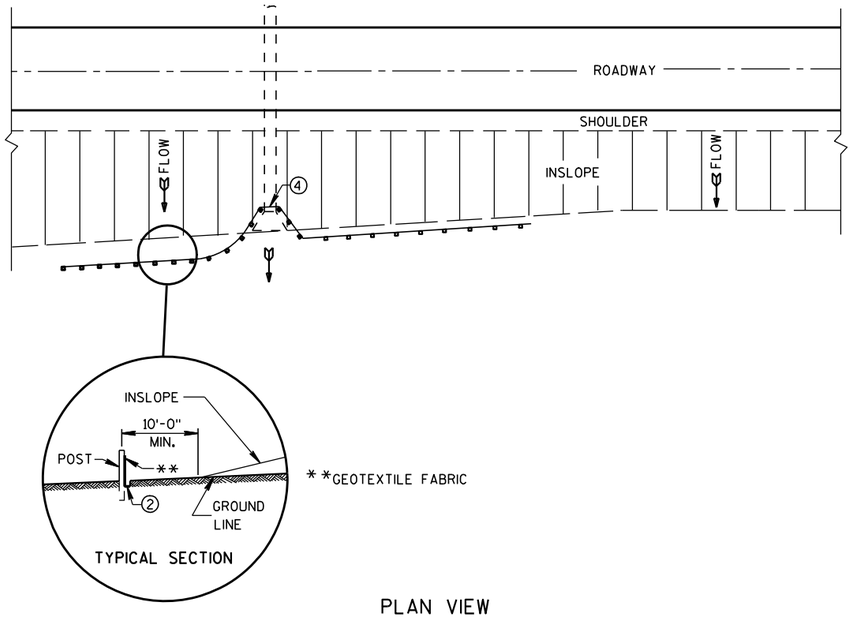
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

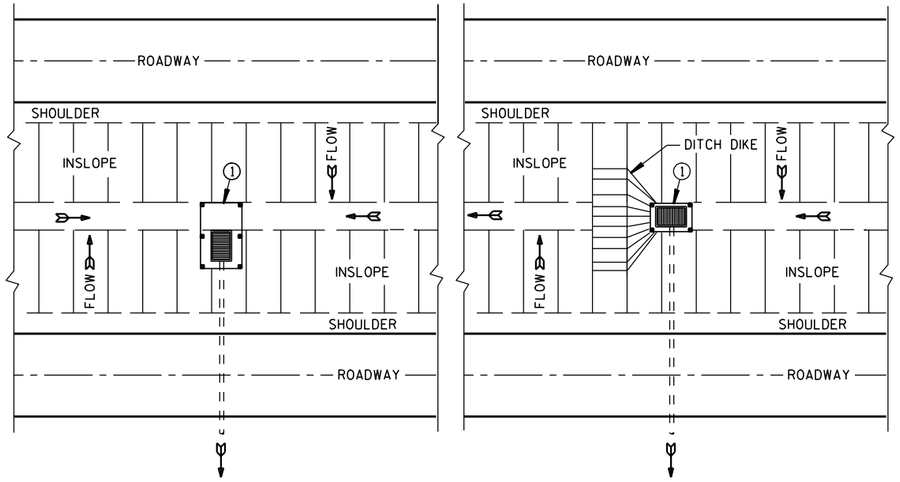
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



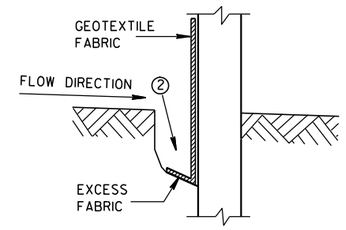
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

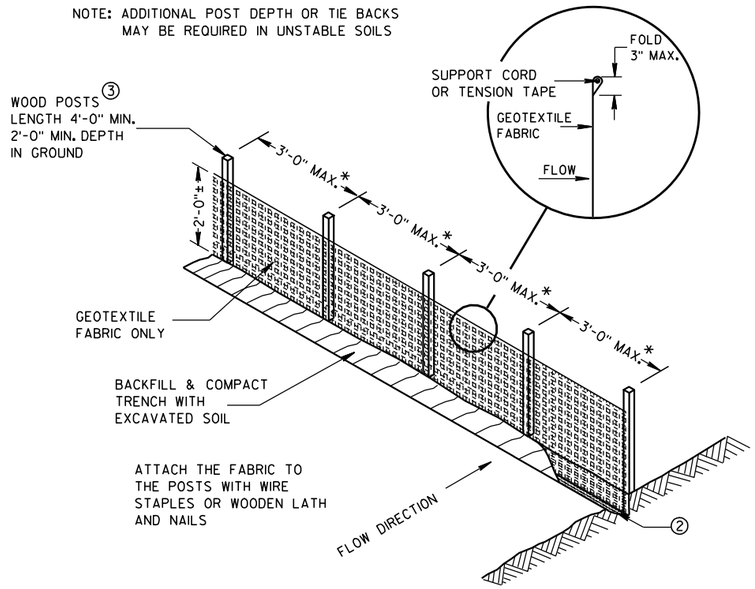
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

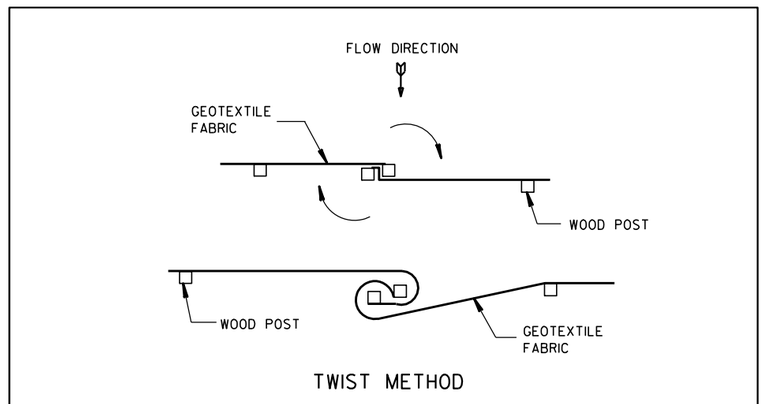
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



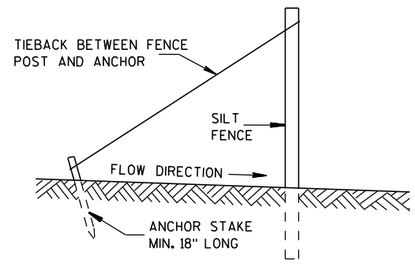
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

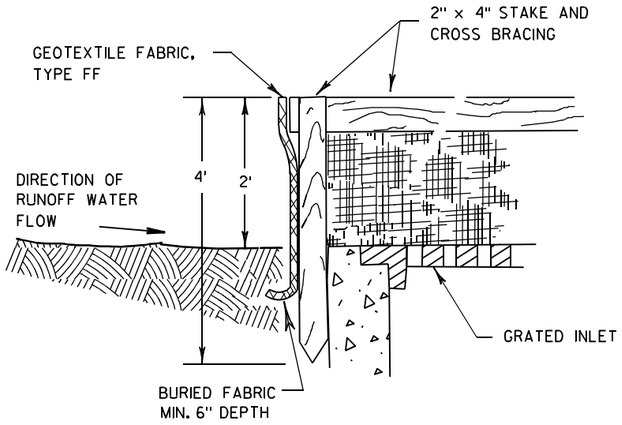
2054

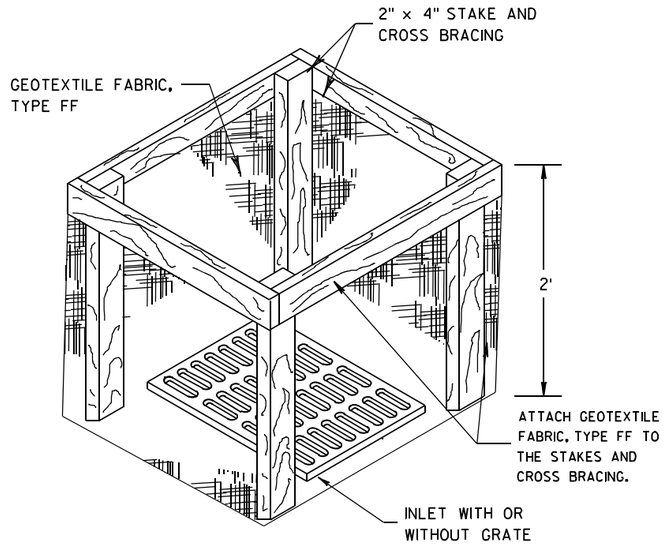
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S.D.D. 8 E 9-6

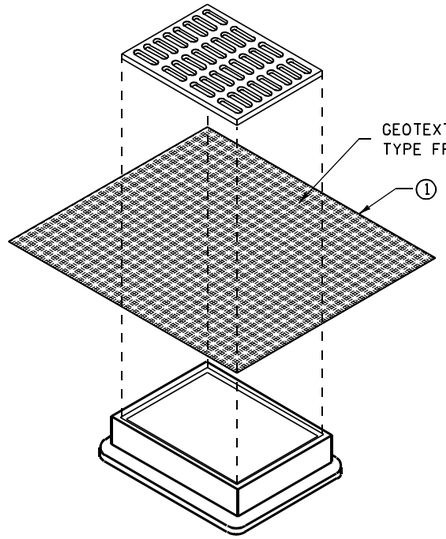
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S.D.D. 8 E 9-6



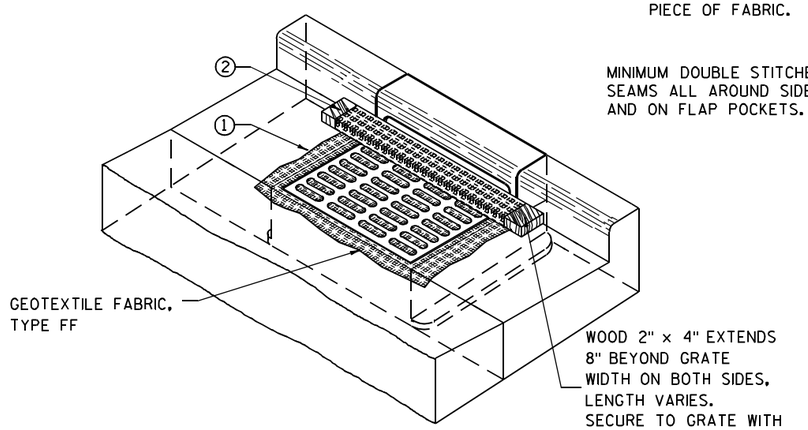


INLET PROTECTION, TYPE A

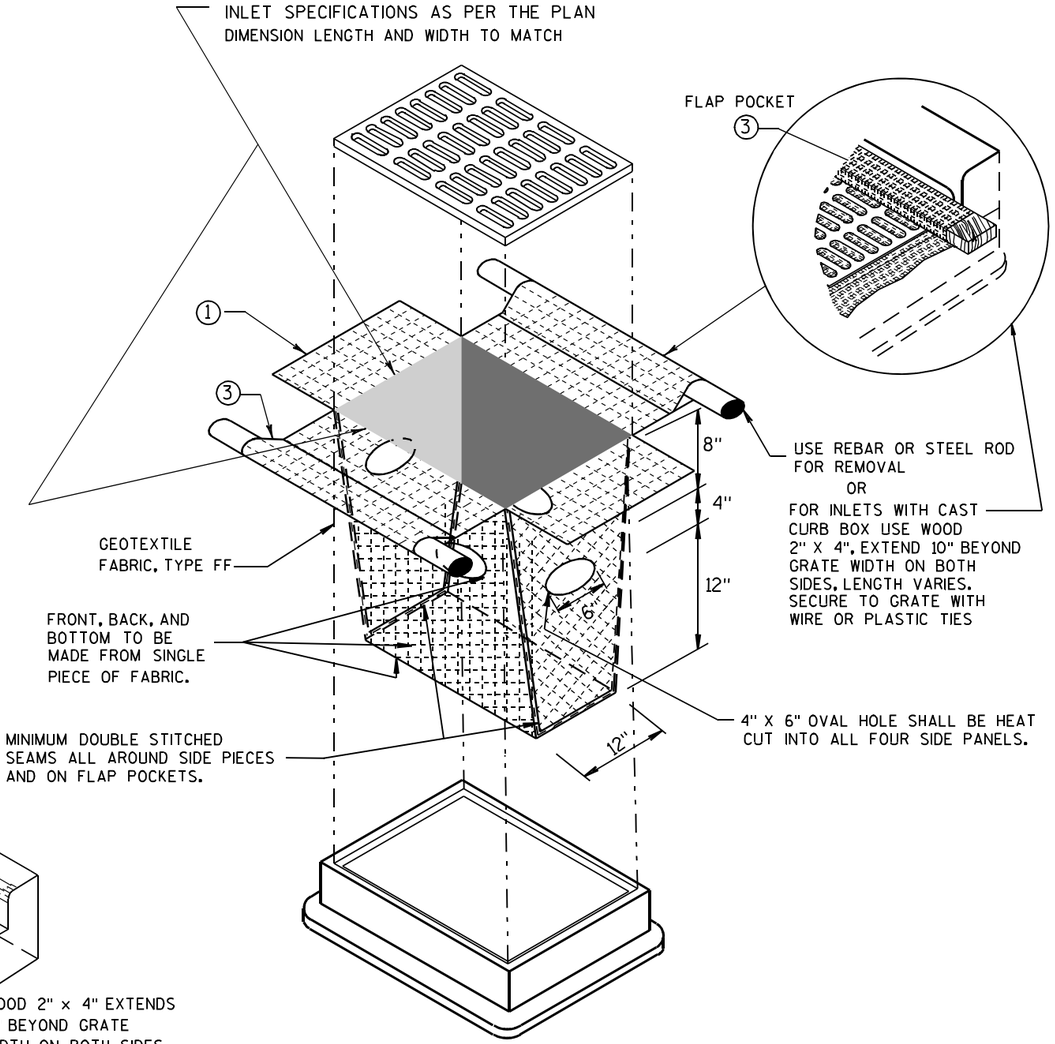


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

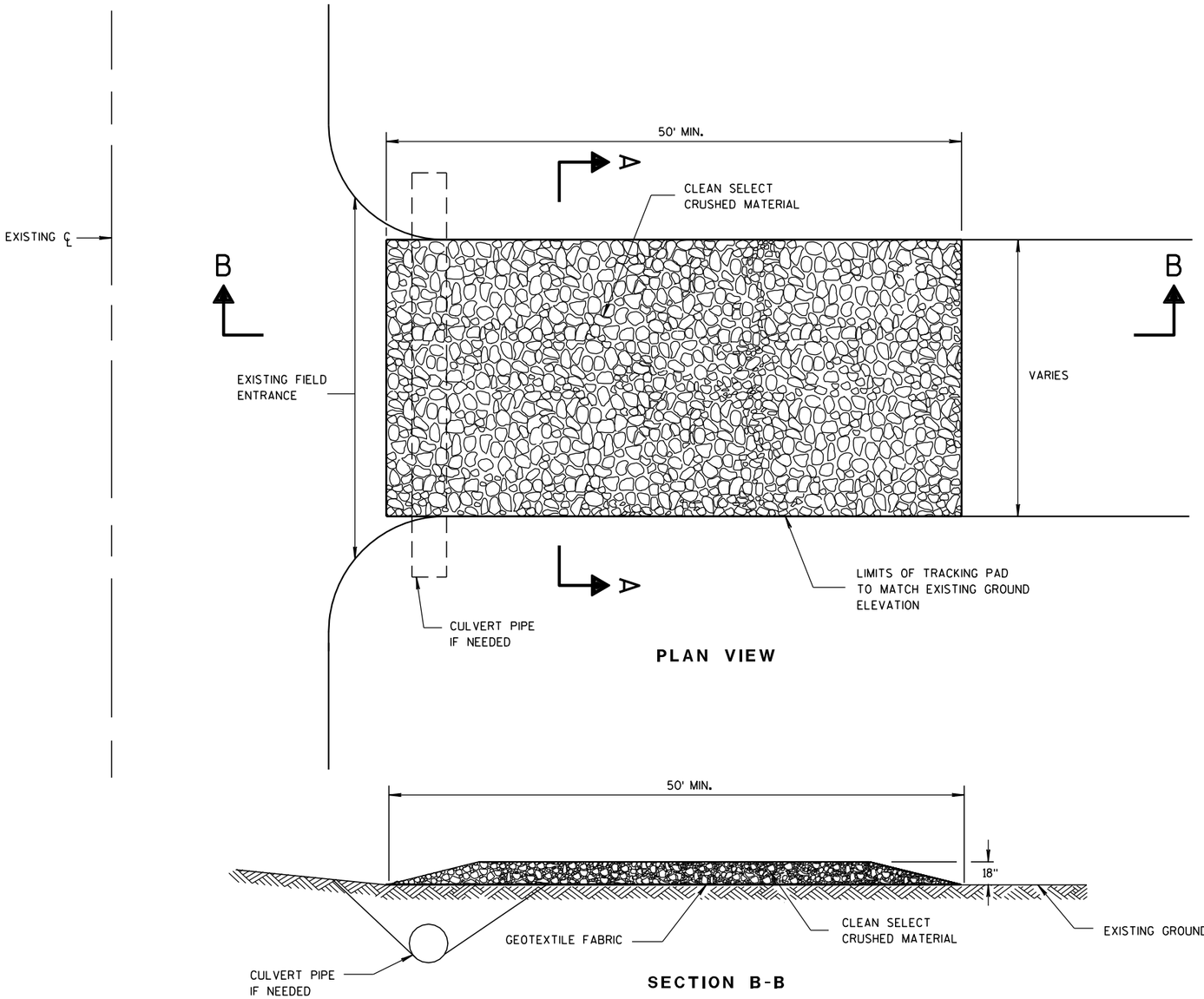
FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

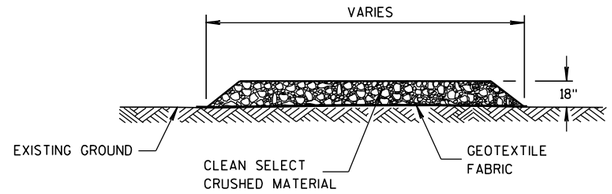
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER 2056 ENT

FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

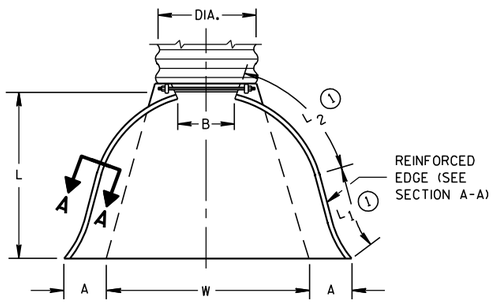
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

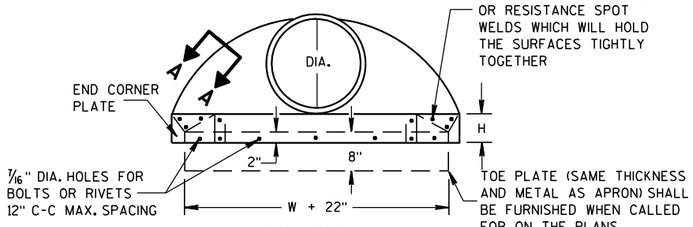
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

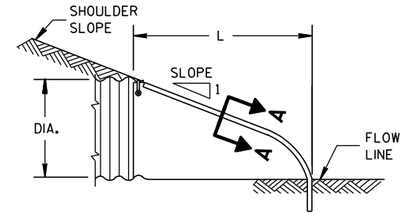
*MINIMUM
**MAXIMUM



PLAN VIEW

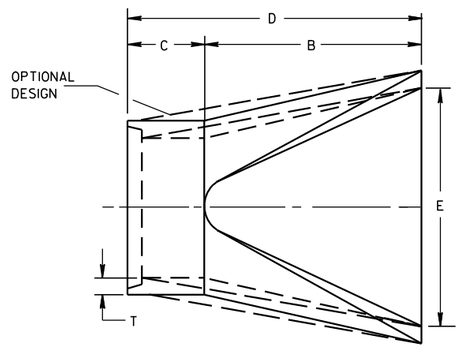


END VIEW

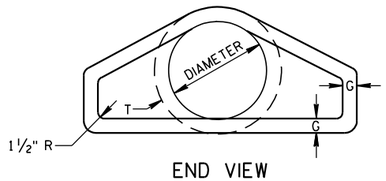


SIDE ELEVATION

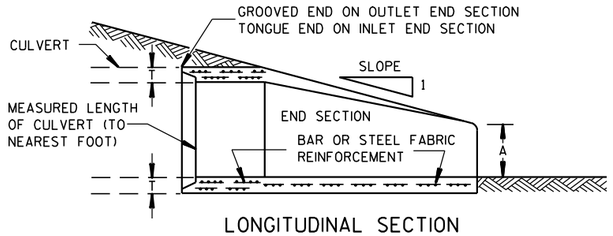
METAL ENDWALLS



PLAN

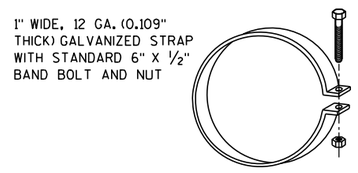


END VIEW



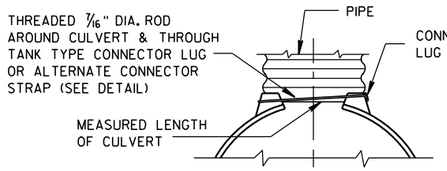
LONGITUDINAL SECTION

CONCRETE ENDWALLS

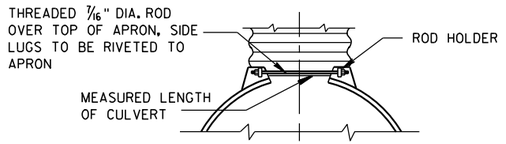


ALTERNATE FOR TYPE 1 CONNECTION

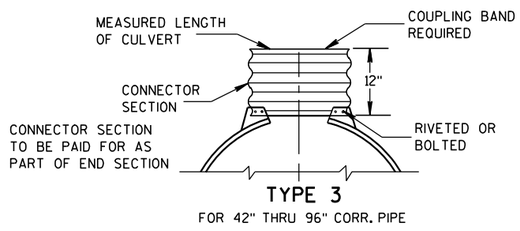
END SECTION CONNECTOR STRAP



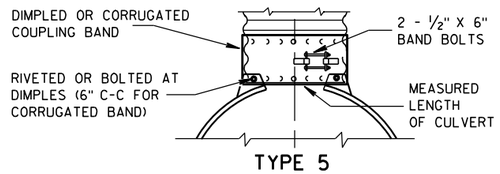
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

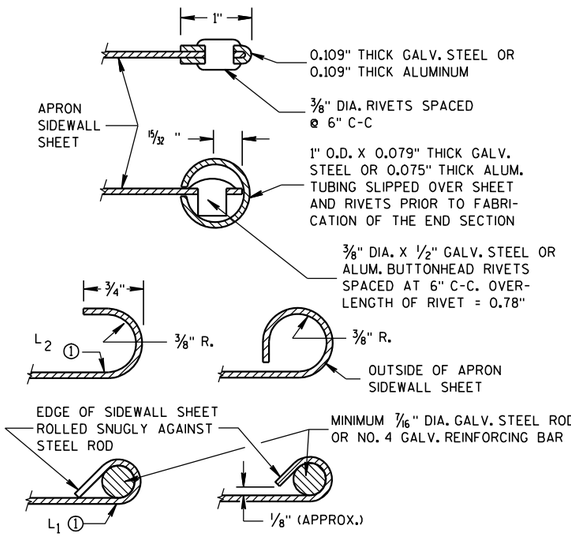
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

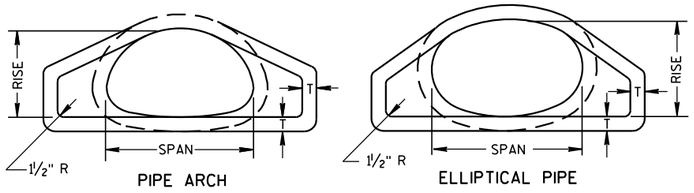
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

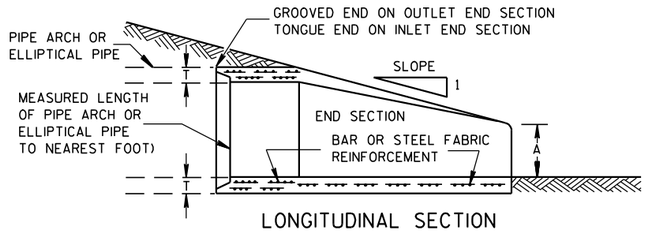
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 2057 NEER
FHWA

6

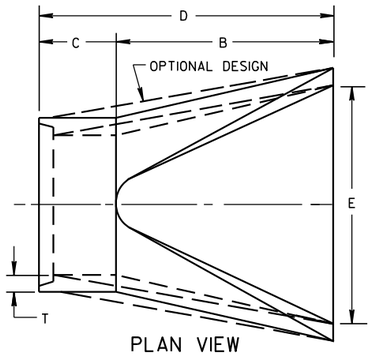
S.D.D. 8 F 1-11



END VIEW

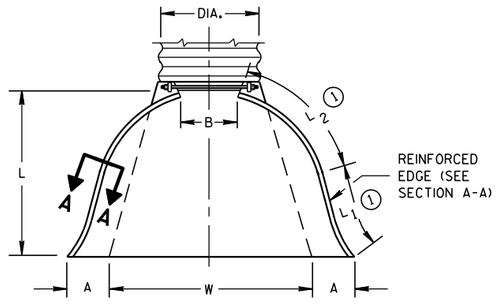


LONGITUDINAL SECTION

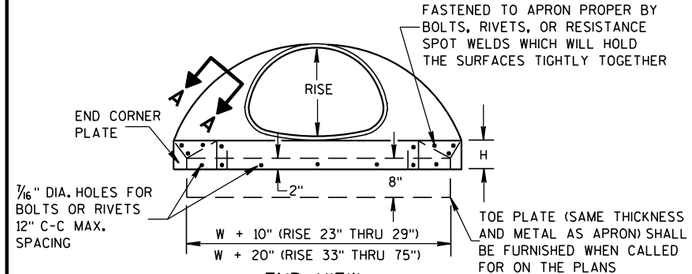


PLAN VIEW

CONCRETE ENDWALLS

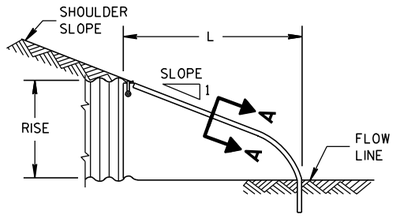


PLAN VIEW



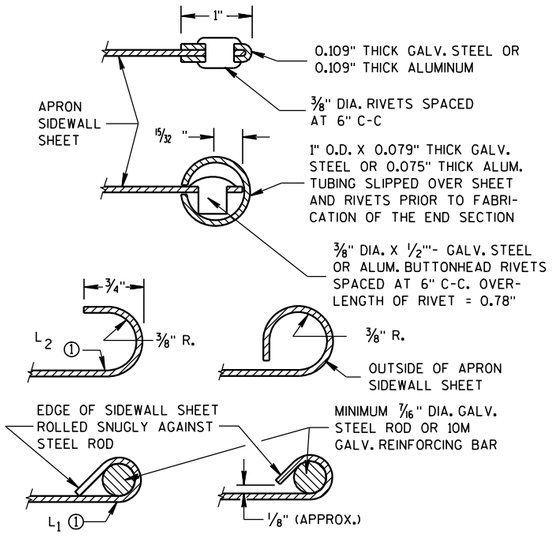
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

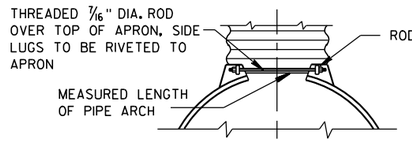
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

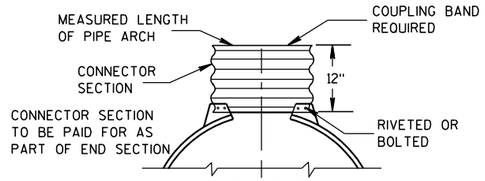
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



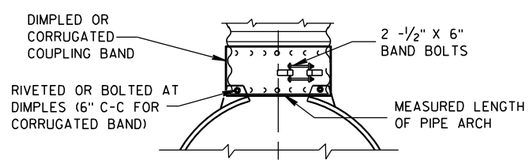
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

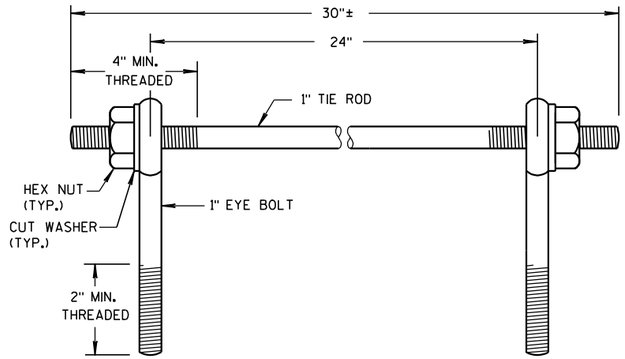
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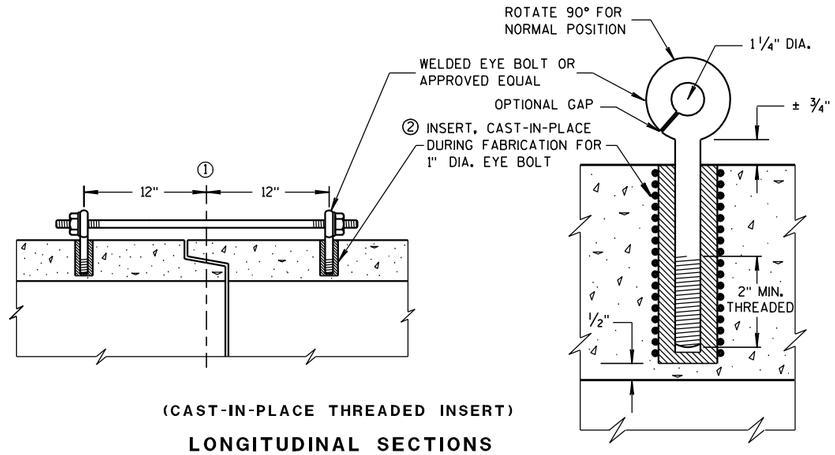
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

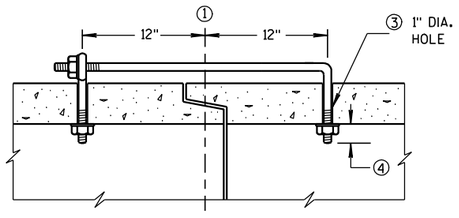
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

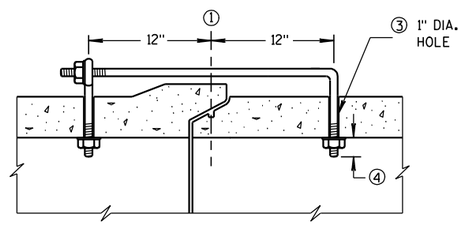
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

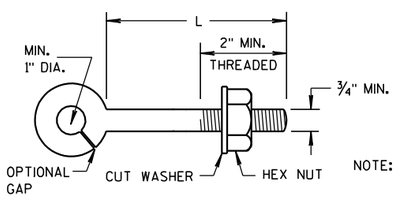


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

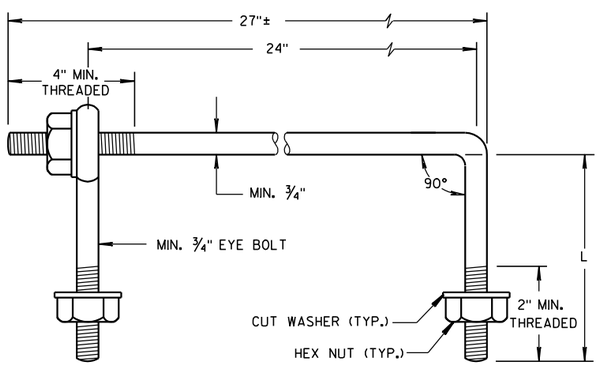
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

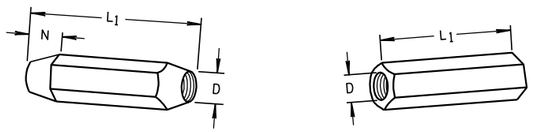
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

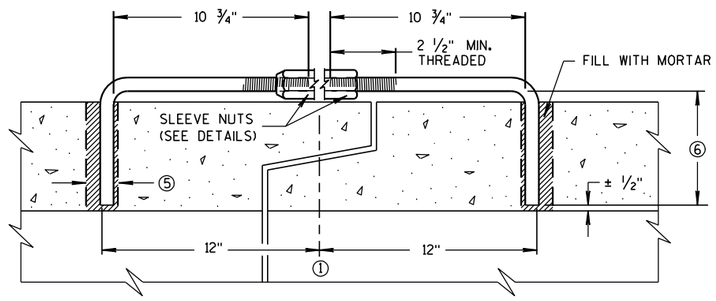
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

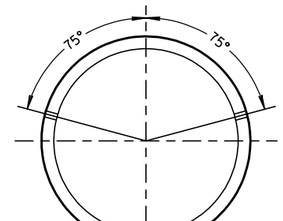
SLEEVE NUTS



LONGITUDINAL SECTION

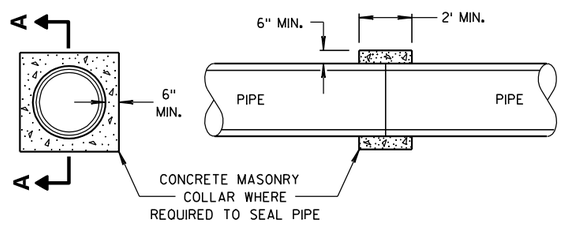
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 2059 MENT ENGINEER
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

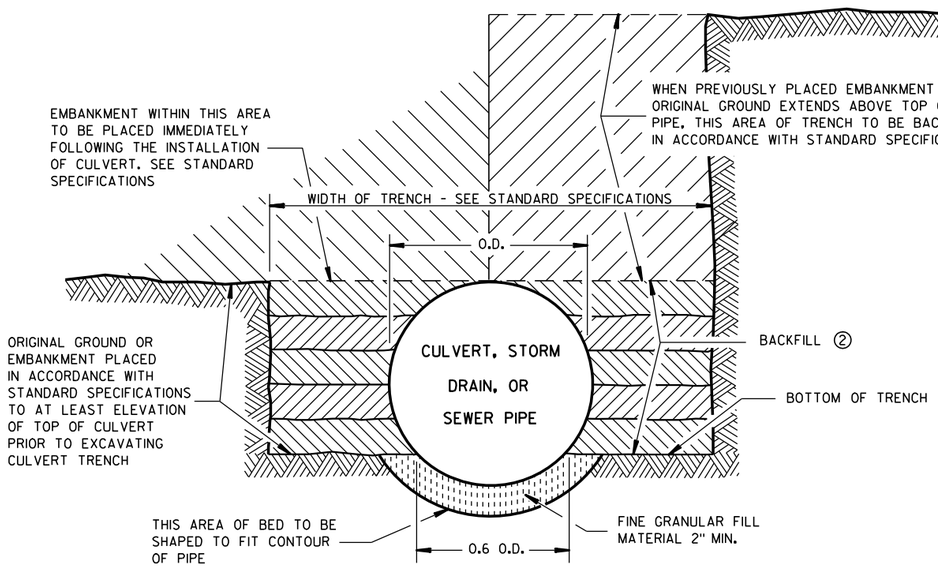
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

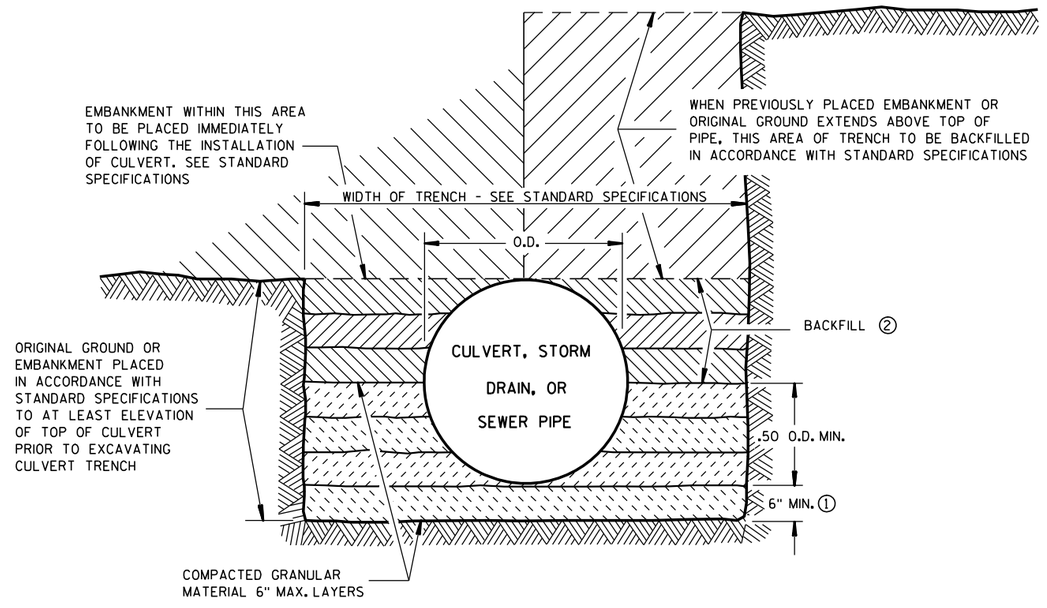
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

CLASS "B" BEDDING

CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER 2060
FHWA	HWYS

6

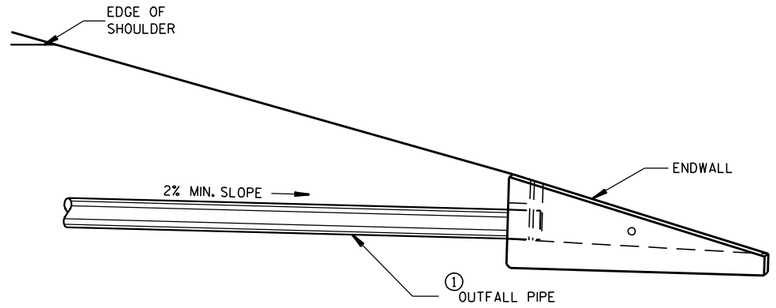
S.D.D. 8 F 5-1

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S.D.D. 8 F 5-1

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

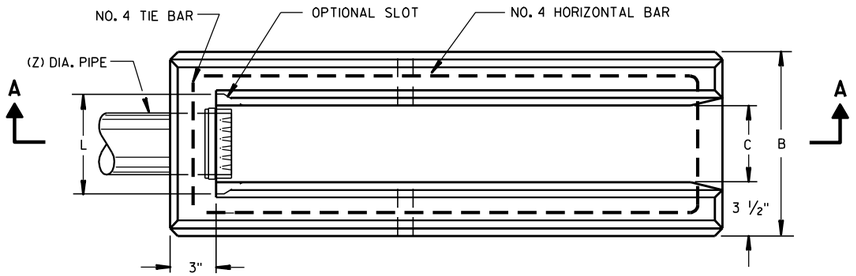
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

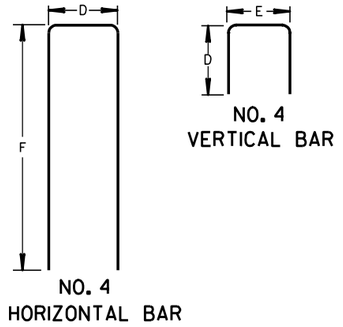
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

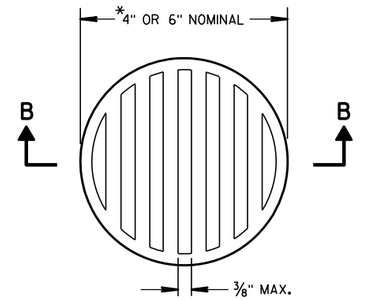
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



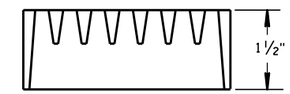
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



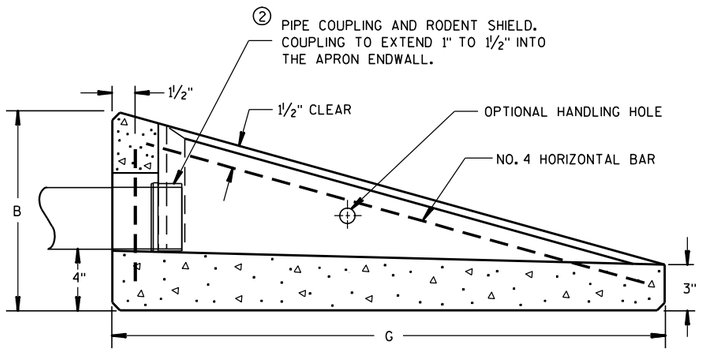
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



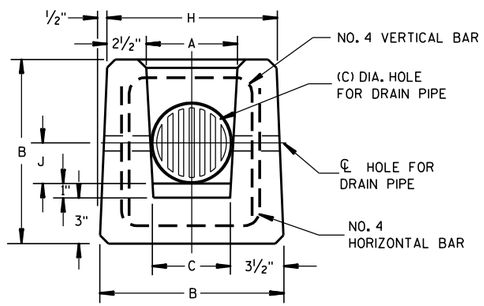
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



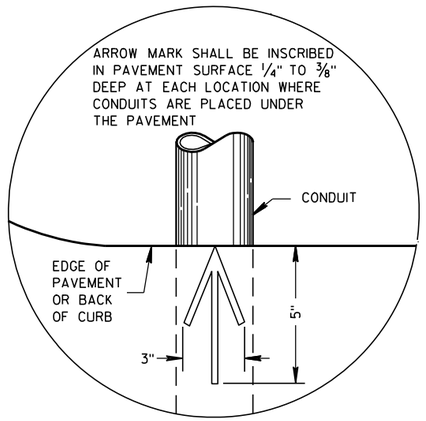
END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

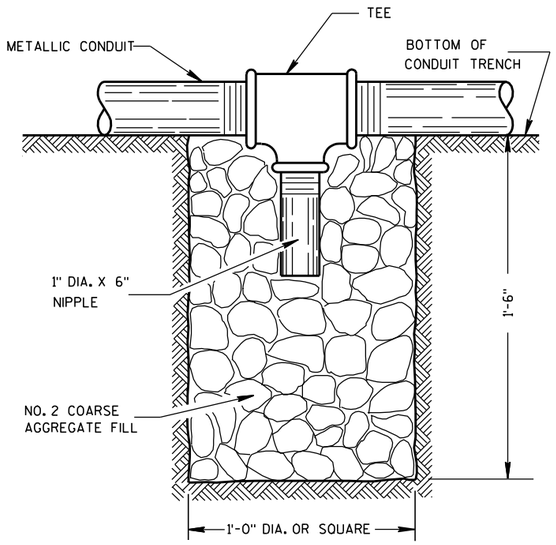
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



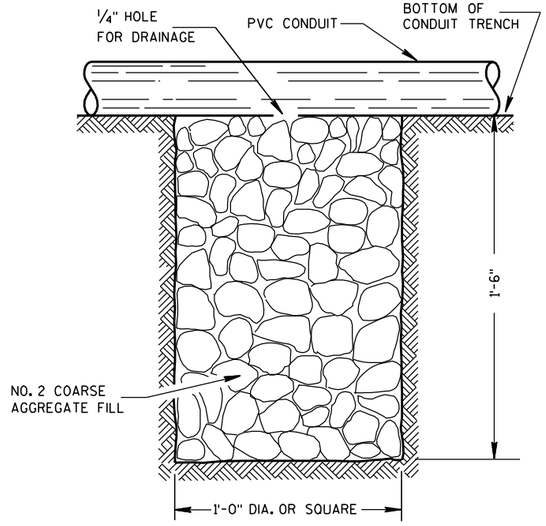
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

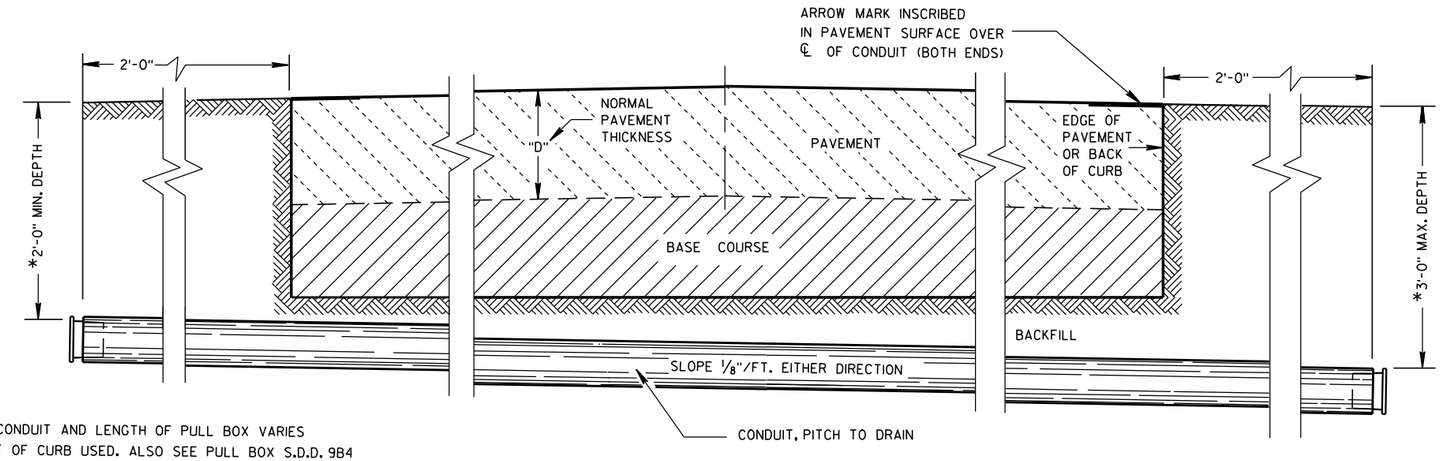
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI 2062 HWYS

FHWA

6

S.D.D. 9 B 2-7

6

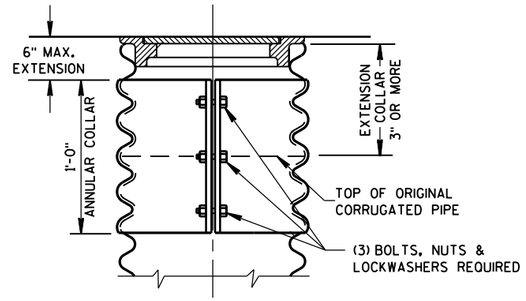
S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

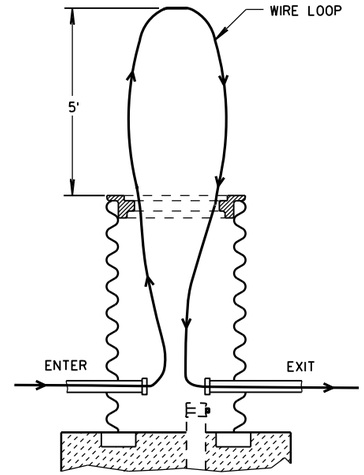
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

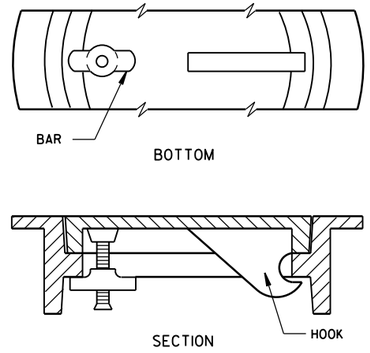
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

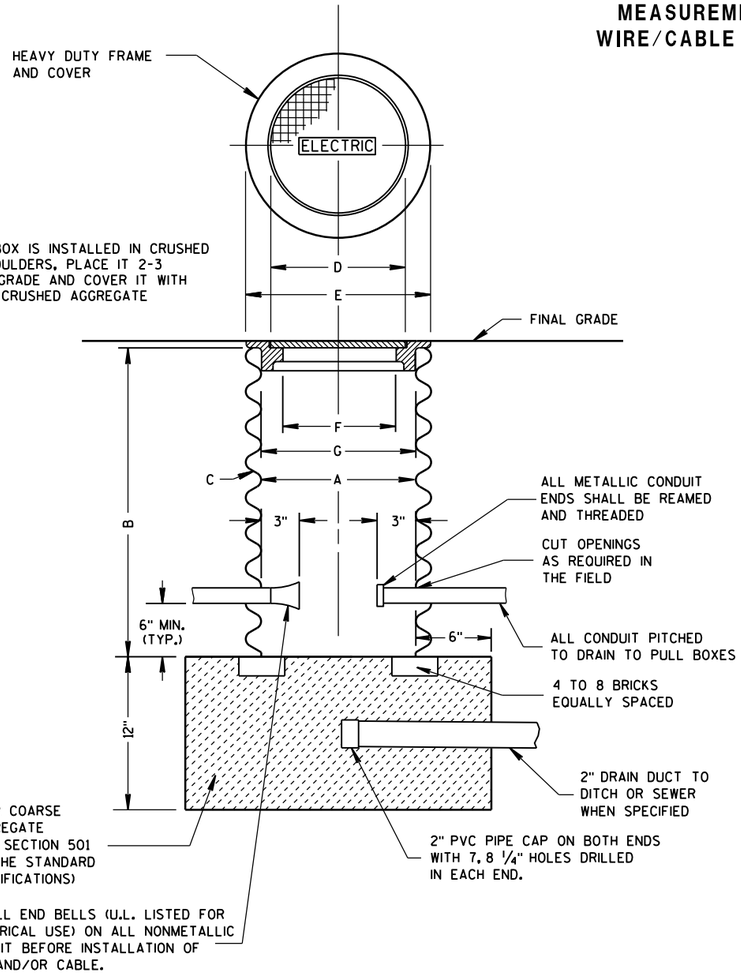


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



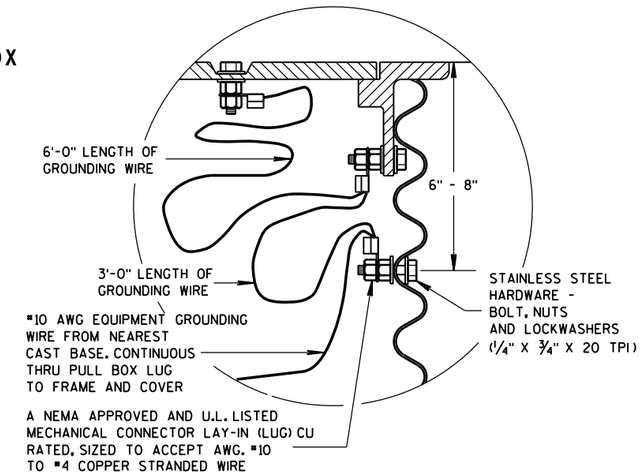
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

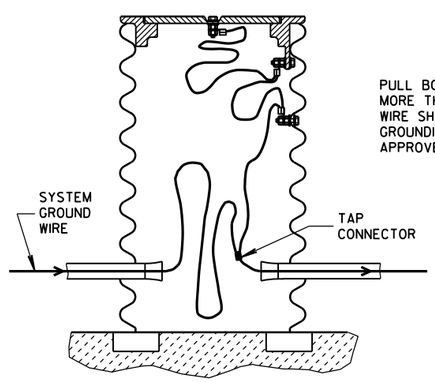


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 2063

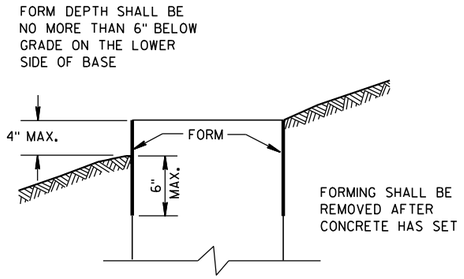
FHWA

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S.D.D. 9 B 4-10

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S.D.D. 9 B 4-10



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

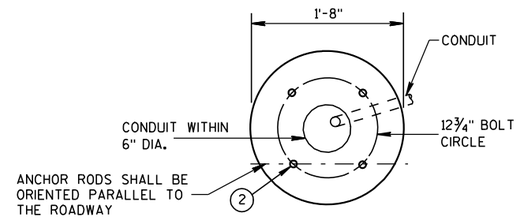
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

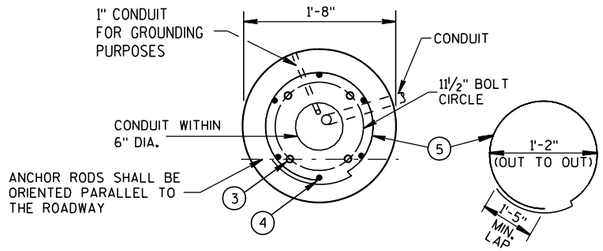
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

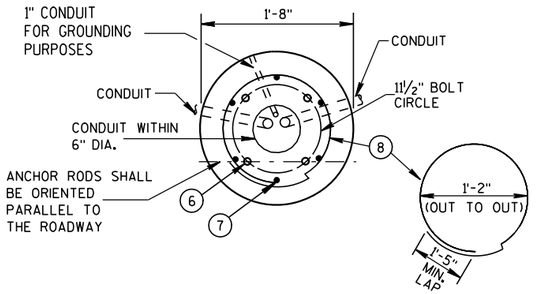
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

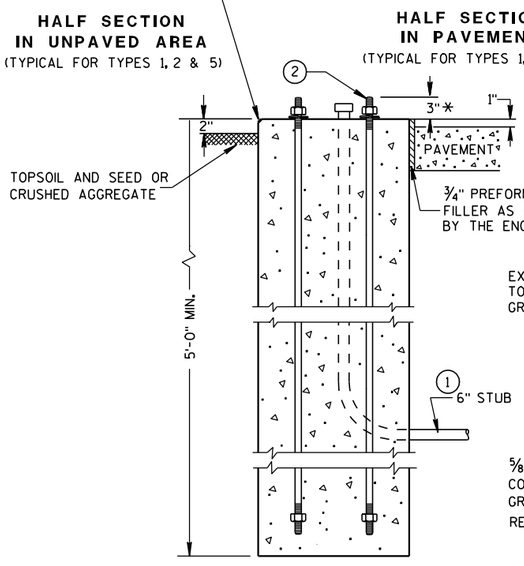






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

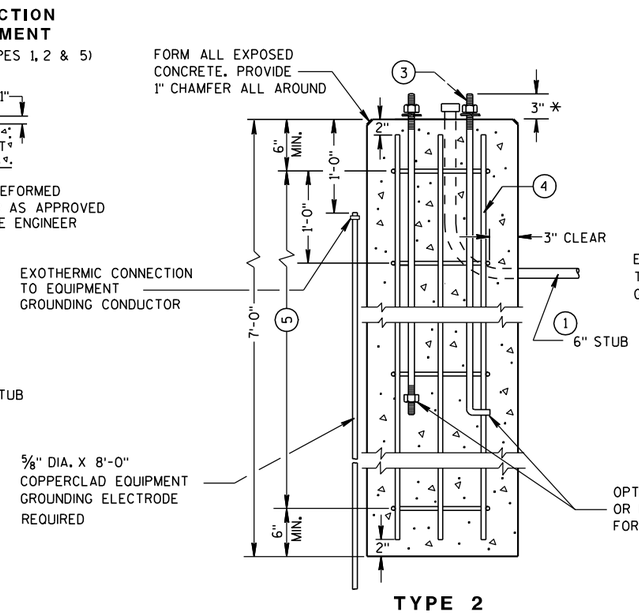
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

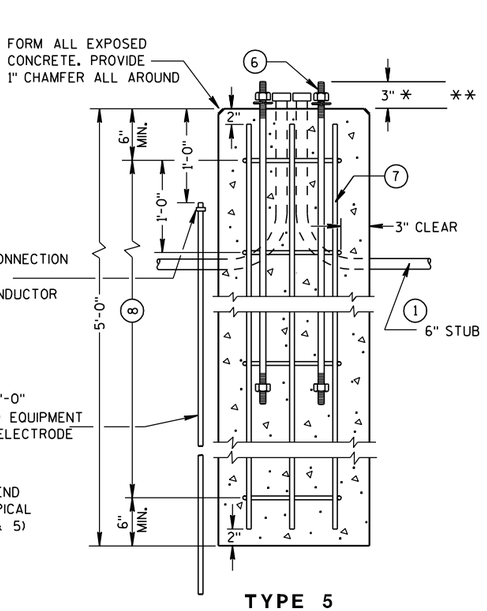
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI 2064 — HWYS
FHWA

6
S.D.D. 9 C 2-6

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

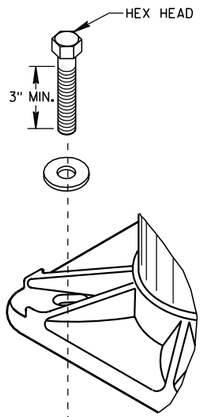
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

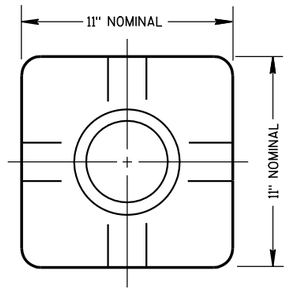
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

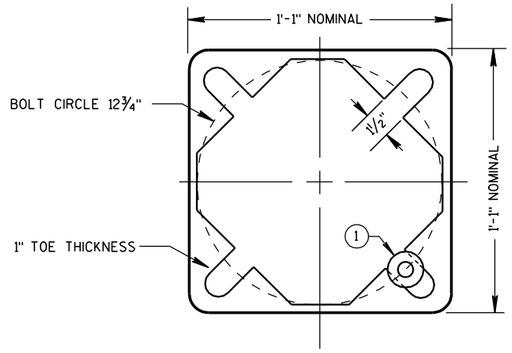
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

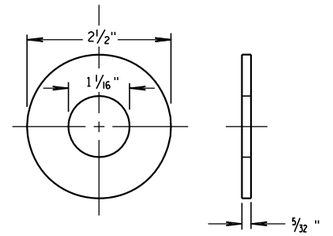




TOP VIEW
(PEDESTAL BASE)

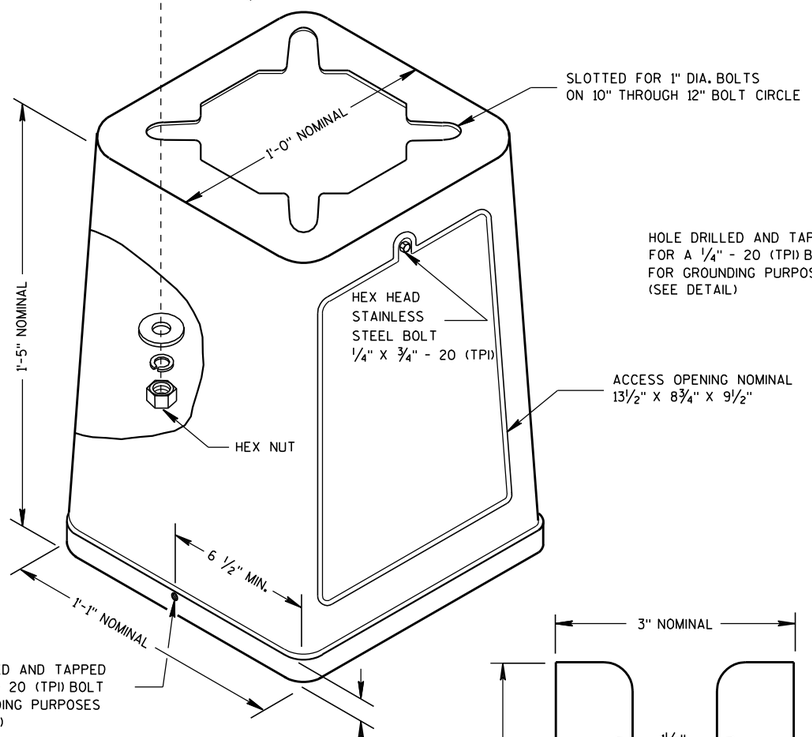


BOTTOM VIEW
(PEDESTAL BASE)

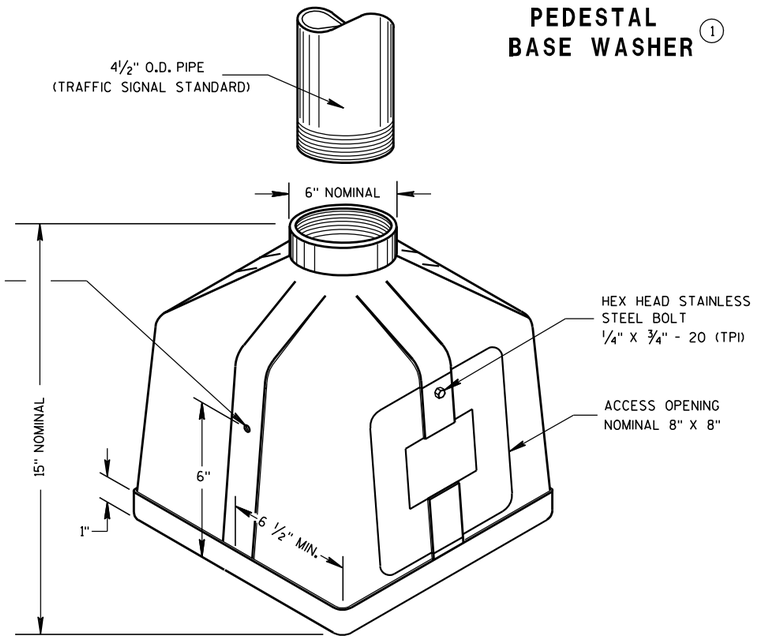


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

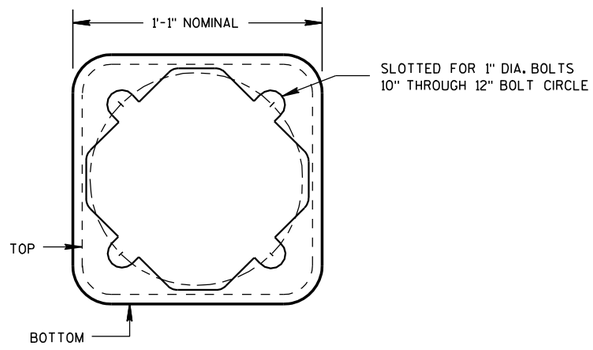


ISOMETRIC VIEW

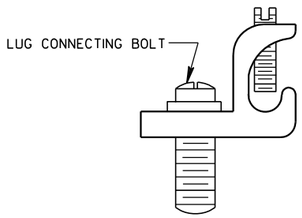


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

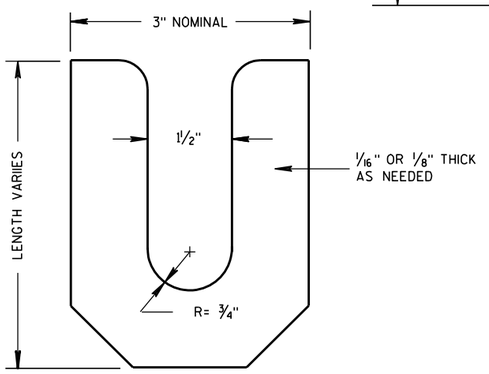


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

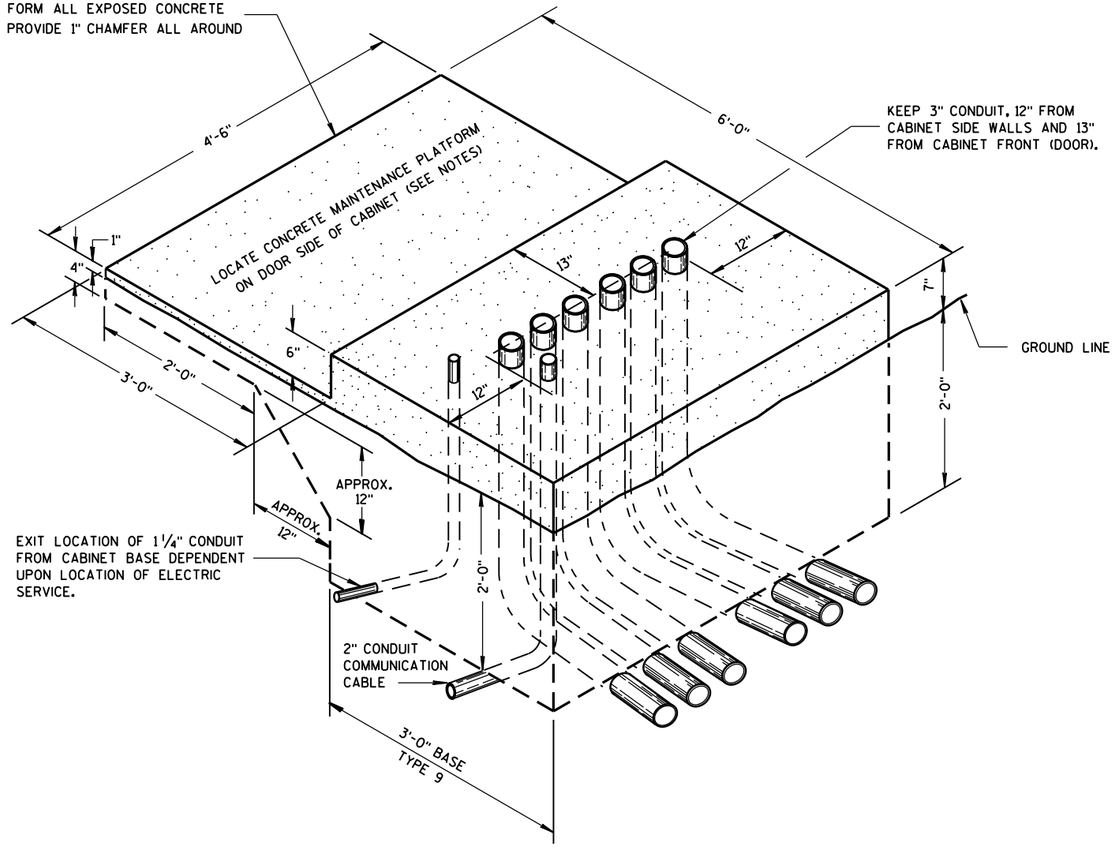
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI 2065 — HWYS
FHWA

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S.D.D. 9 C 3-3

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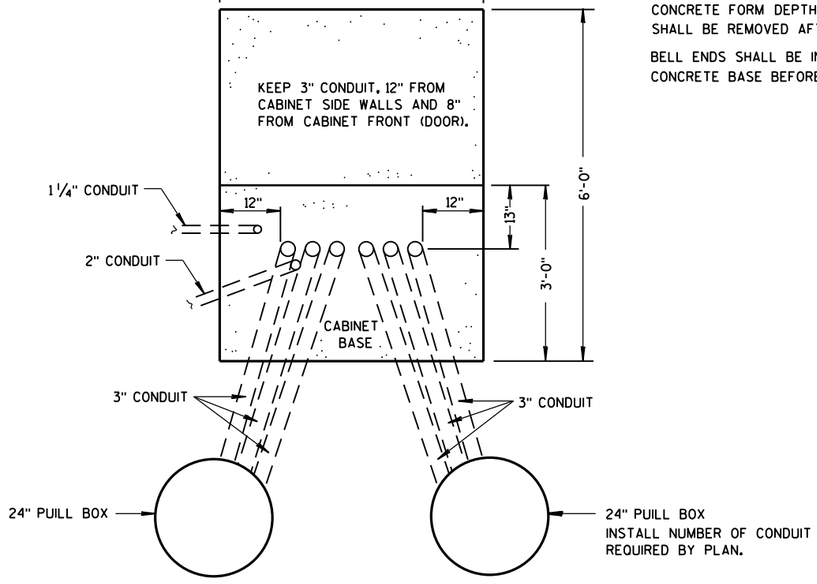
S.D.D. 9 C 3-3



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

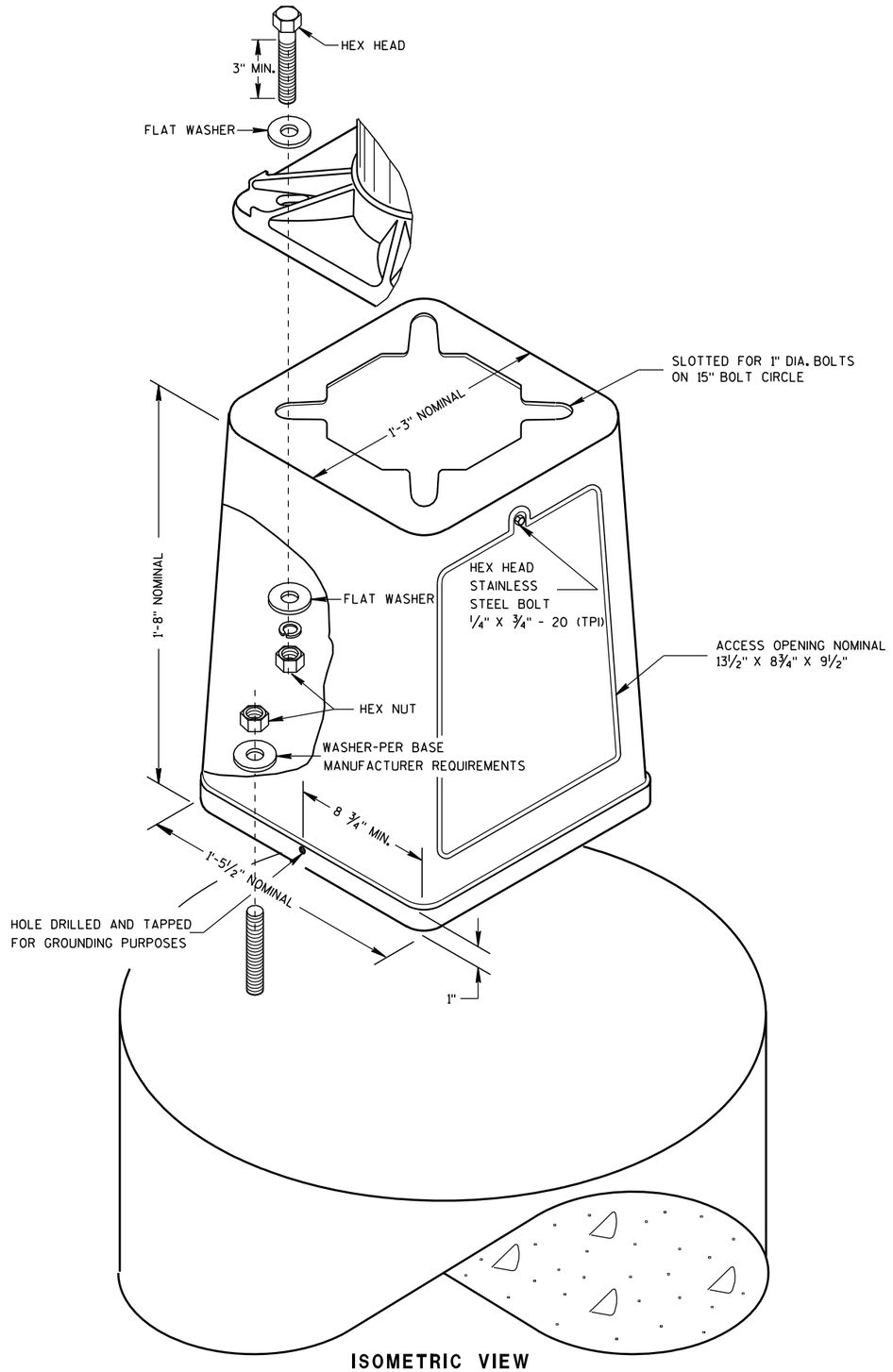
CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/26/2013
DATE

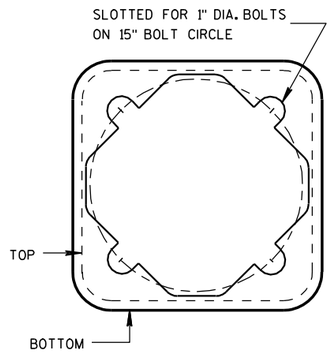
/S/ Ahmet Demirbilek
STATE ELECTRICAL 2066

FHWA

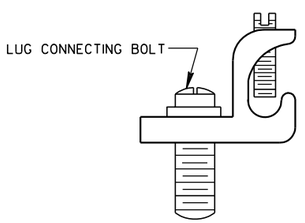


ISOMETRIC VIEW

TRANSFORMER BASE



BOTTOM VIEW



TYPICAL MECHANICAL
CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BREAKAWAY BASES (WHERE REQUIRED) WILL BE MEASURED AND PAID AS SEPARATE ITEMS OF WORK IN ADDITION TO THE LIGHT POLE.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD), HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIMS SHALL BE SIZED TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

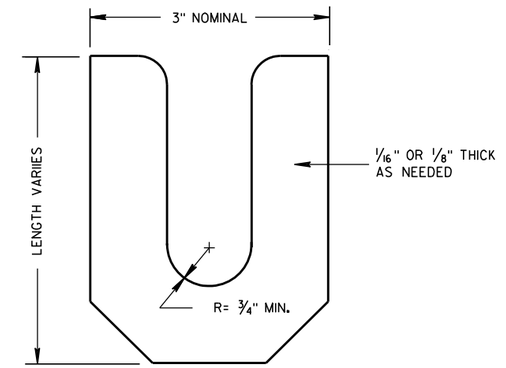
A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE TRANSFORMER BASES.

THE MECHANICAL CONNECTOR (GROUNDING LUG) SHALL BE INSTALLED USING THE TAPPED HOLE PROVIDED BY THE MANUFACTURER. THE MOUNTING BOLT HEXHEAD), NUT, WASHER AND LOCK WASHER SHALL BE STAINLESS STEEL, SIZED TO FIT THE THREADING AND HOLE SIZE, AND BE OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD A GROUNDING LUG MOUNTING HOLE NOT BE PROVIDED, THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" X 3/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE. IT SHALL BE MOUNTED IN THE SAME LOCATION AS IS SHOWN ON THE DRAWING.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, AND LOCK WASHERS, THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

THE ACCESS DOOR SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE BASE.



LEVELING SHIM

TRANSFORMER BASE FOR 15" BOLT CIRCLE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/2/07 DATE	/S/ Balu Ananthanarayanan STATE ELECTRICAL ENGI 2067 HWYS
FHWA	

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

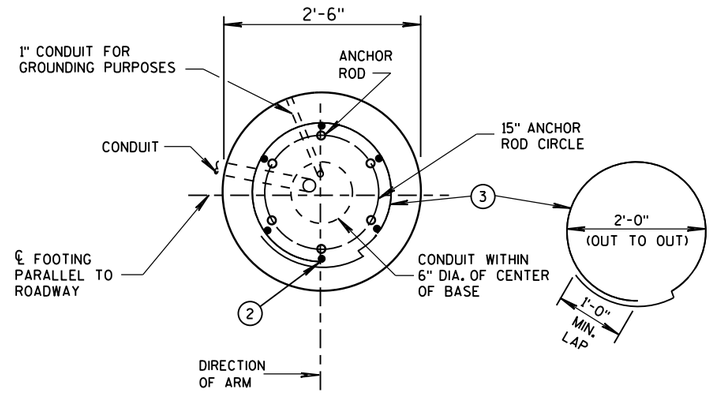
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

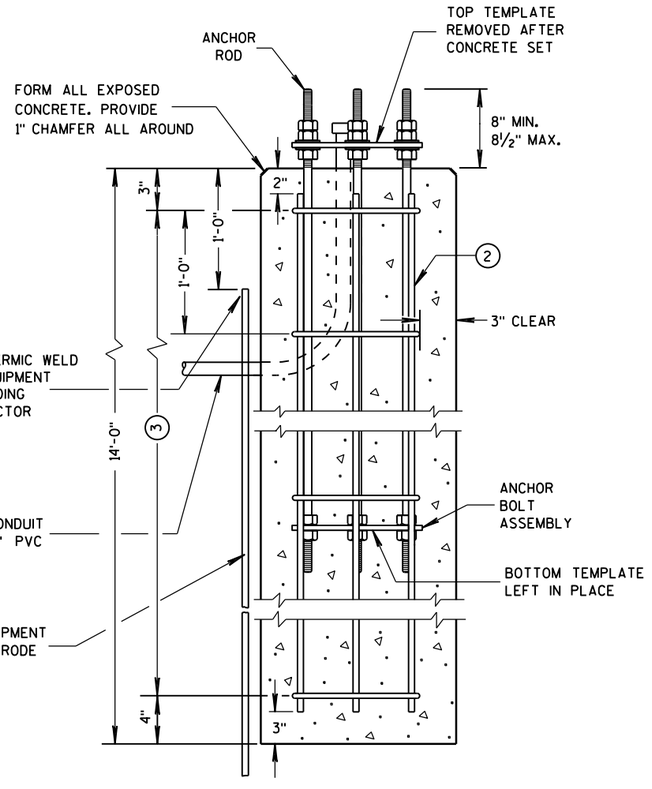
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

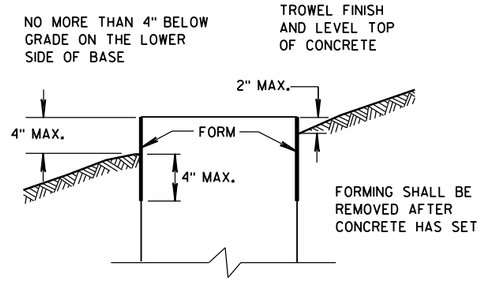
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



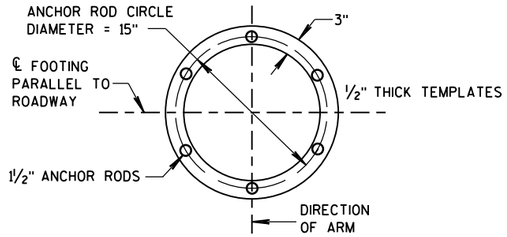


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

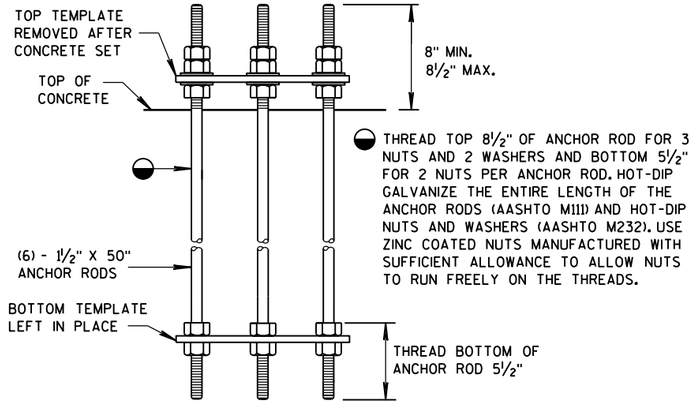
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 2068

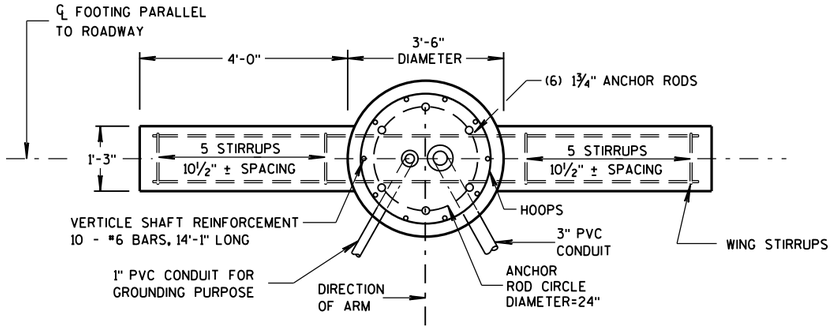
FHWA

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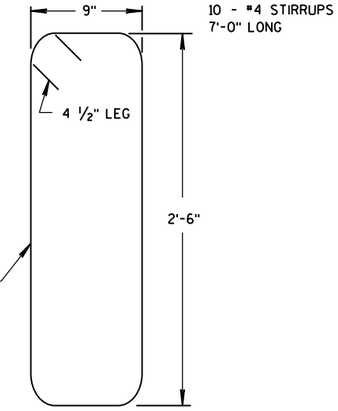
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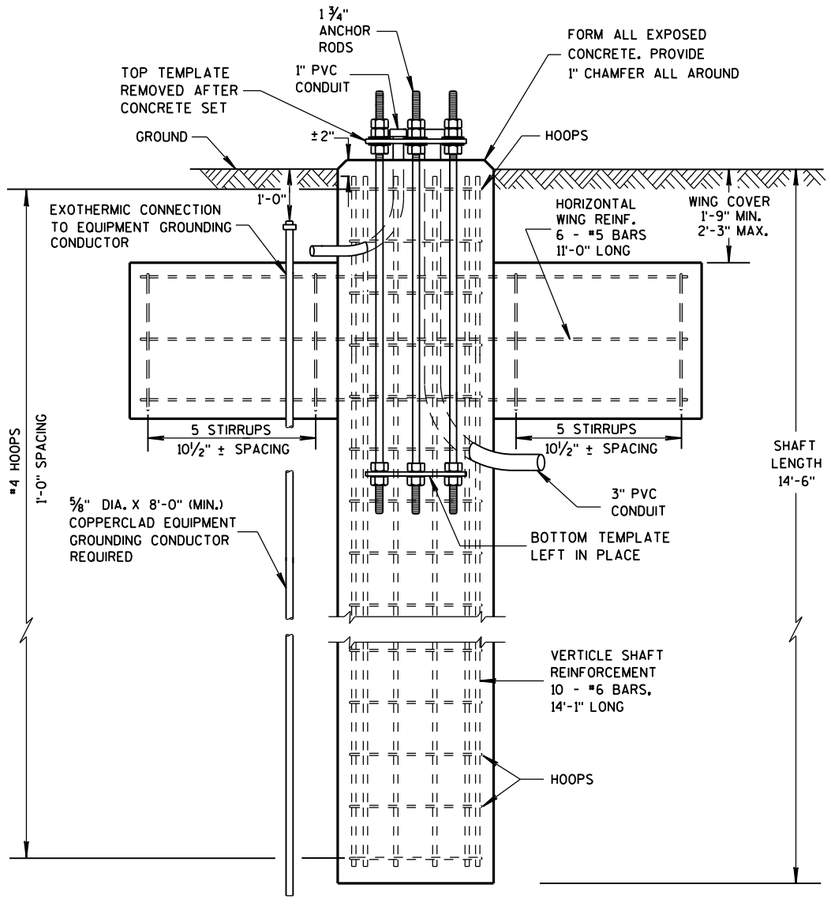
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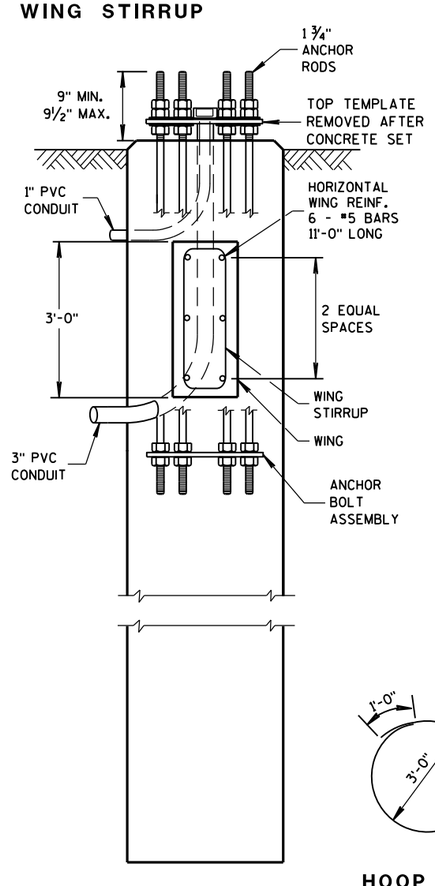
PLAN VIEW



WING STIRRUP

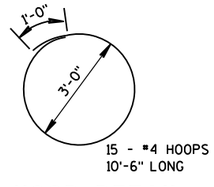


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

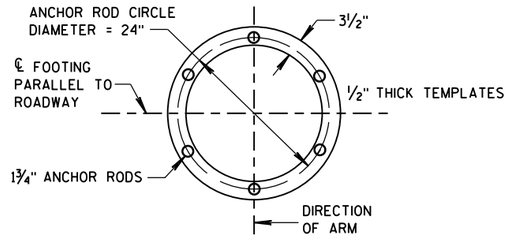
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2069

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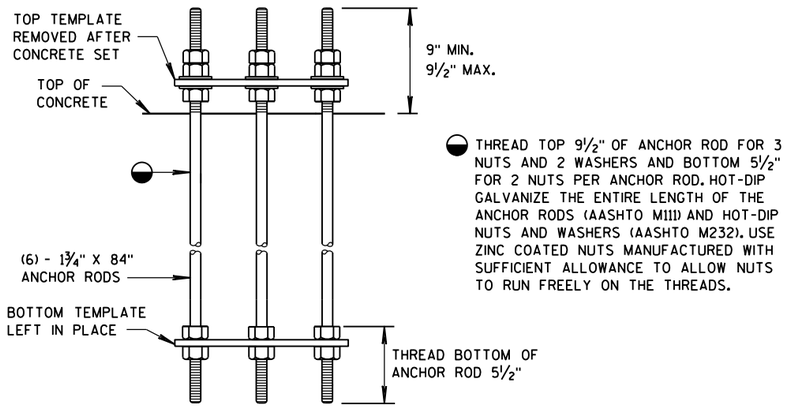
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S.D.D. 9 C 12-4a

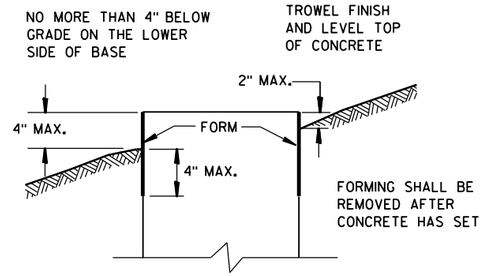


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 2070
FHWA

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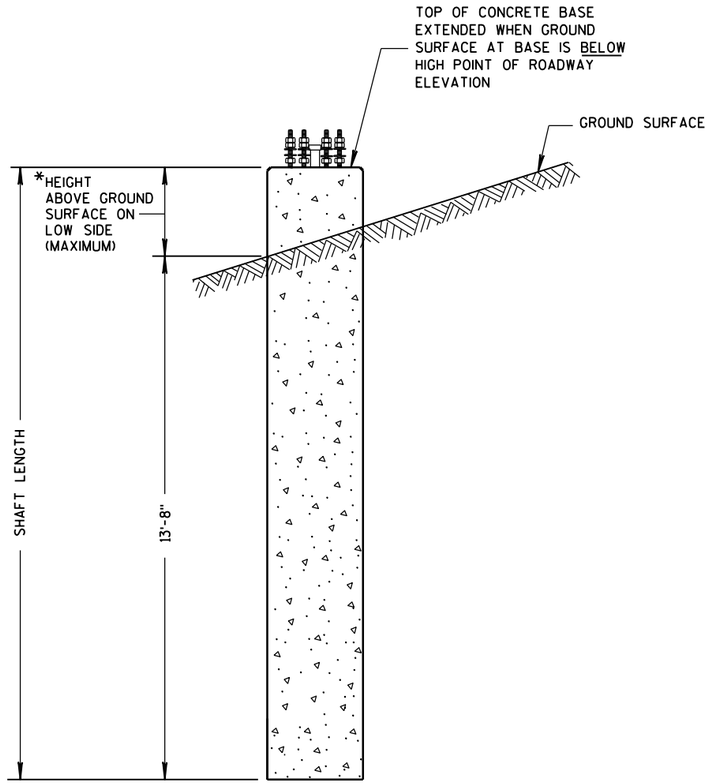
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S.D.D. 9 C 12-4b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

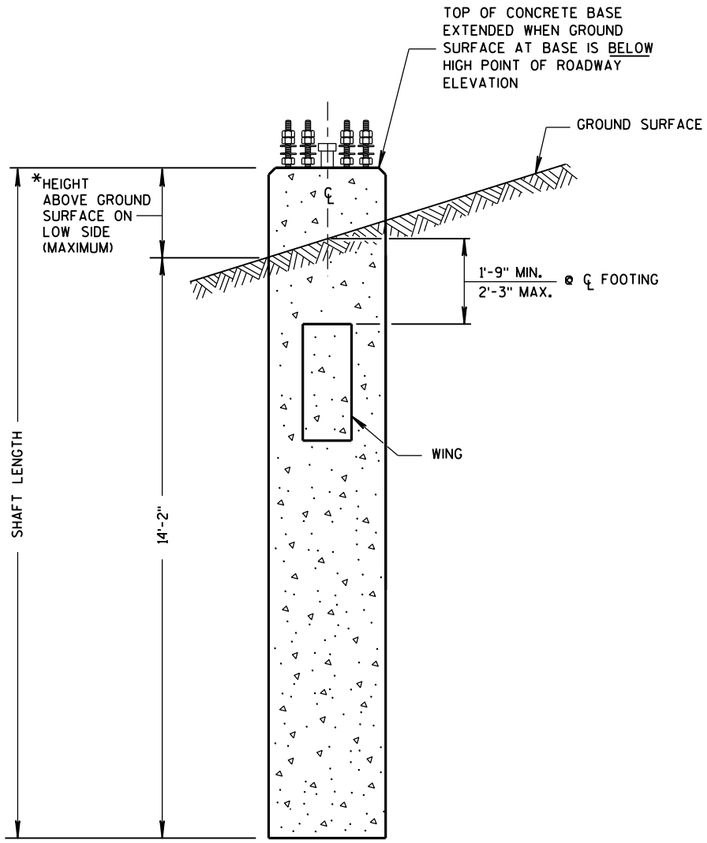
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

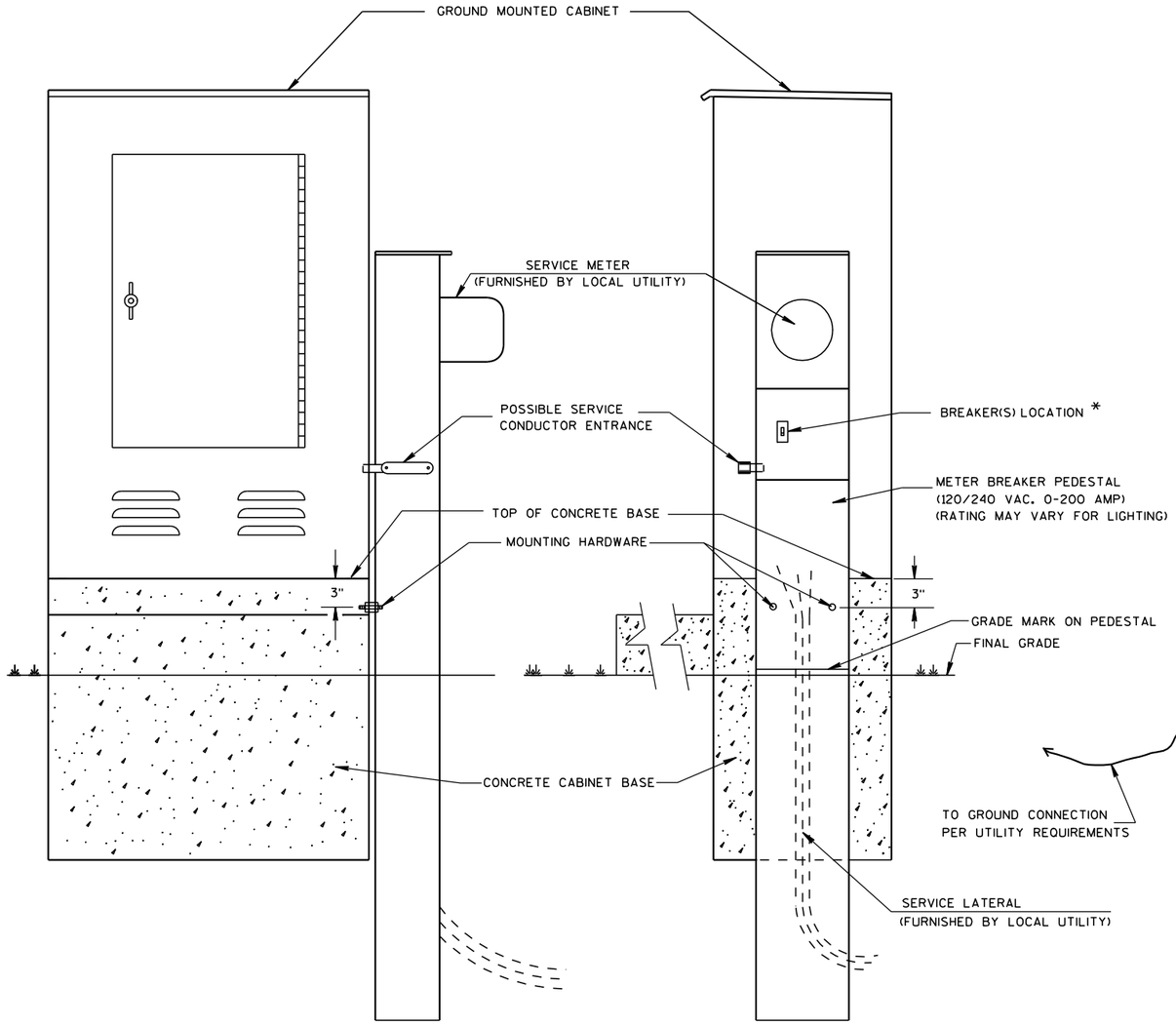
APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 2071
FHWA

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S.D.D. 9 C 13-2

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S.D.D. 9 C 13-2



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/27/09 DATE

/S/ Joanna L. Bush
STATE ELECTRICAL ENGI 2072 HWYS

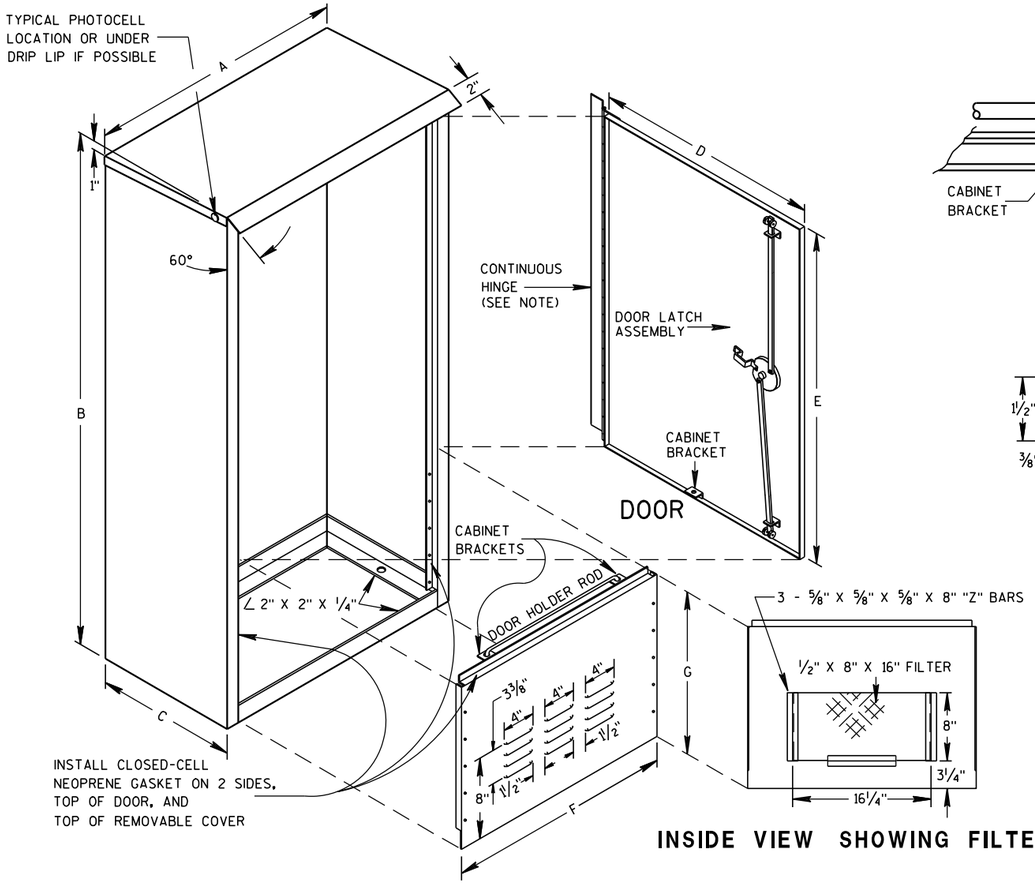
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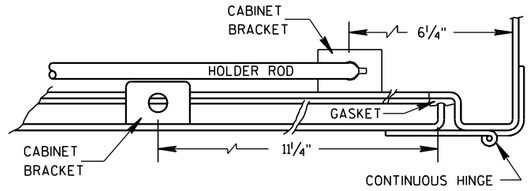
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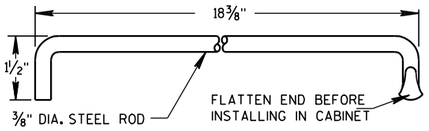
DOOR

REMOVABLE COVER

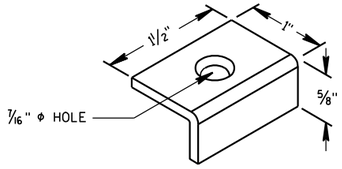
INSIDE VIEW SHOWING FILTER



HINGE & DOOR HOLDER



HOLDER ROD

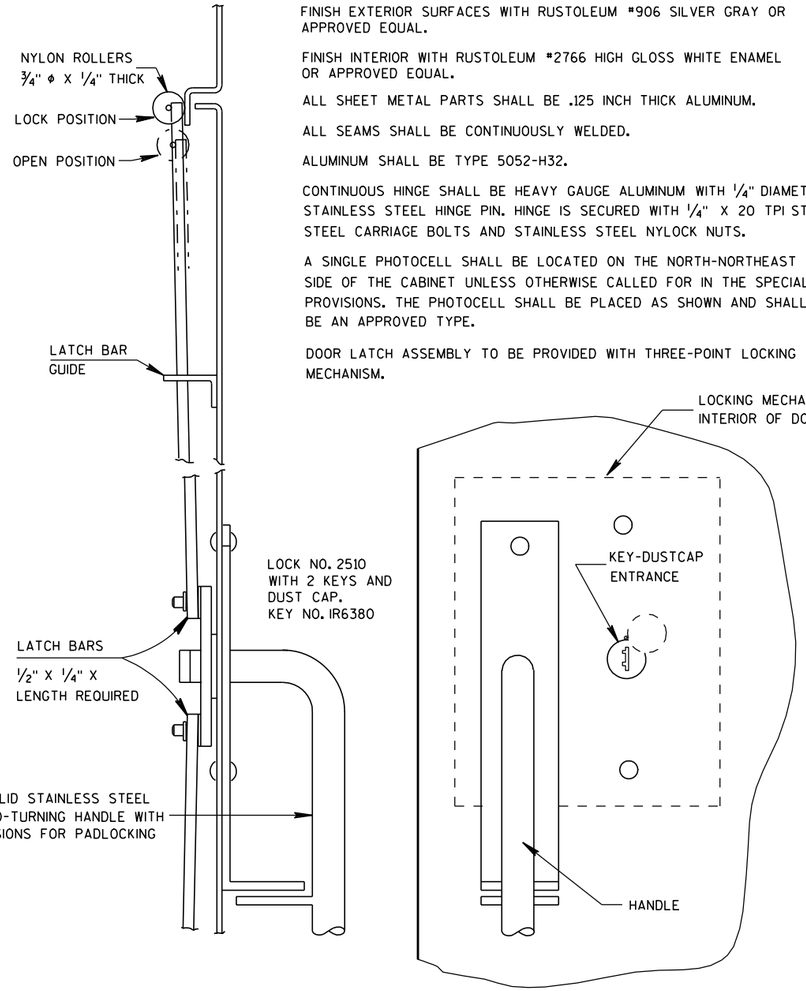


CABINET BRACKET

MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

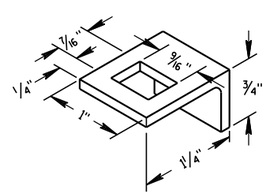
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

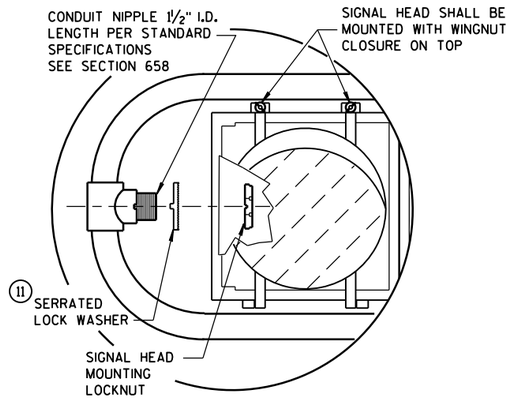
APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI 2073 — HWYS
FHWA

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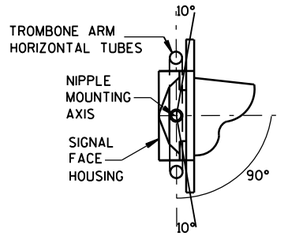
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S.D.D. 9 D 2-2



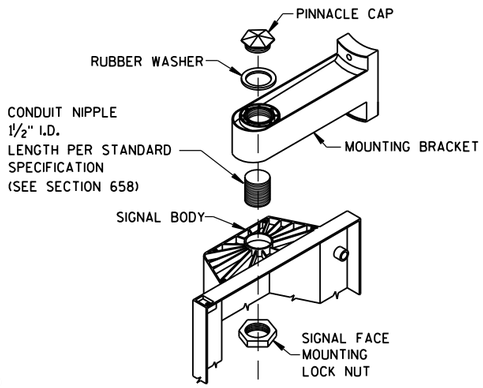
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

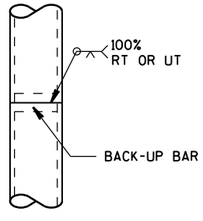
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

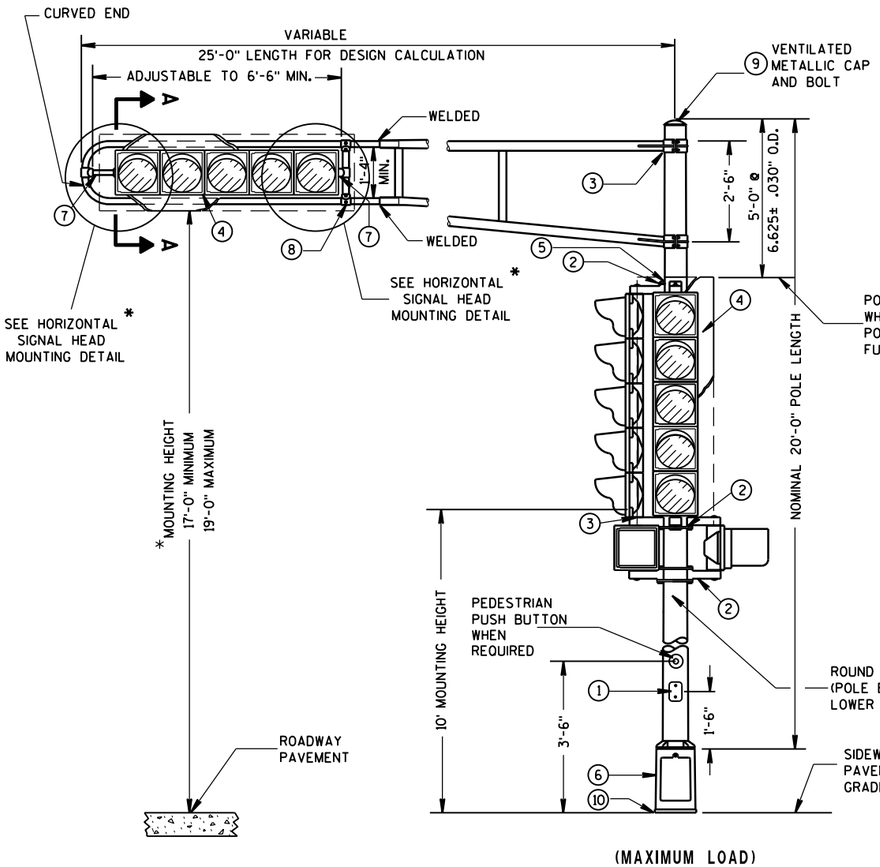
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

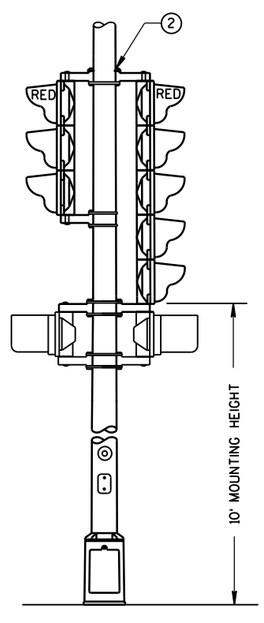
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



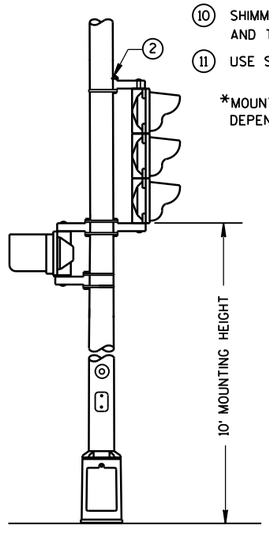
POLE SPLICE DETAIL



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2074

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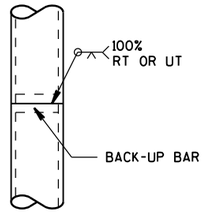
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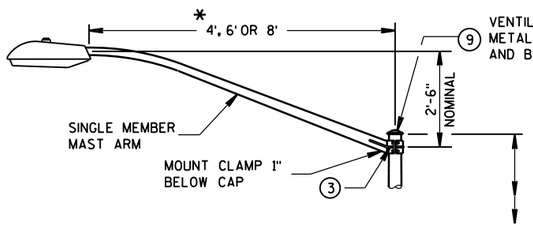
S.D.D. 9 E 1-12a

FOR MANUFACTURERS USE ONLY

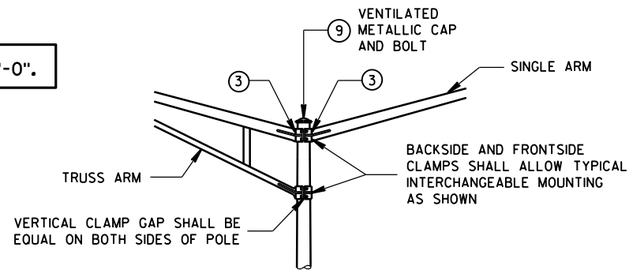
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

*RISE FOR 4' ARM SHALL BE 2'-0".





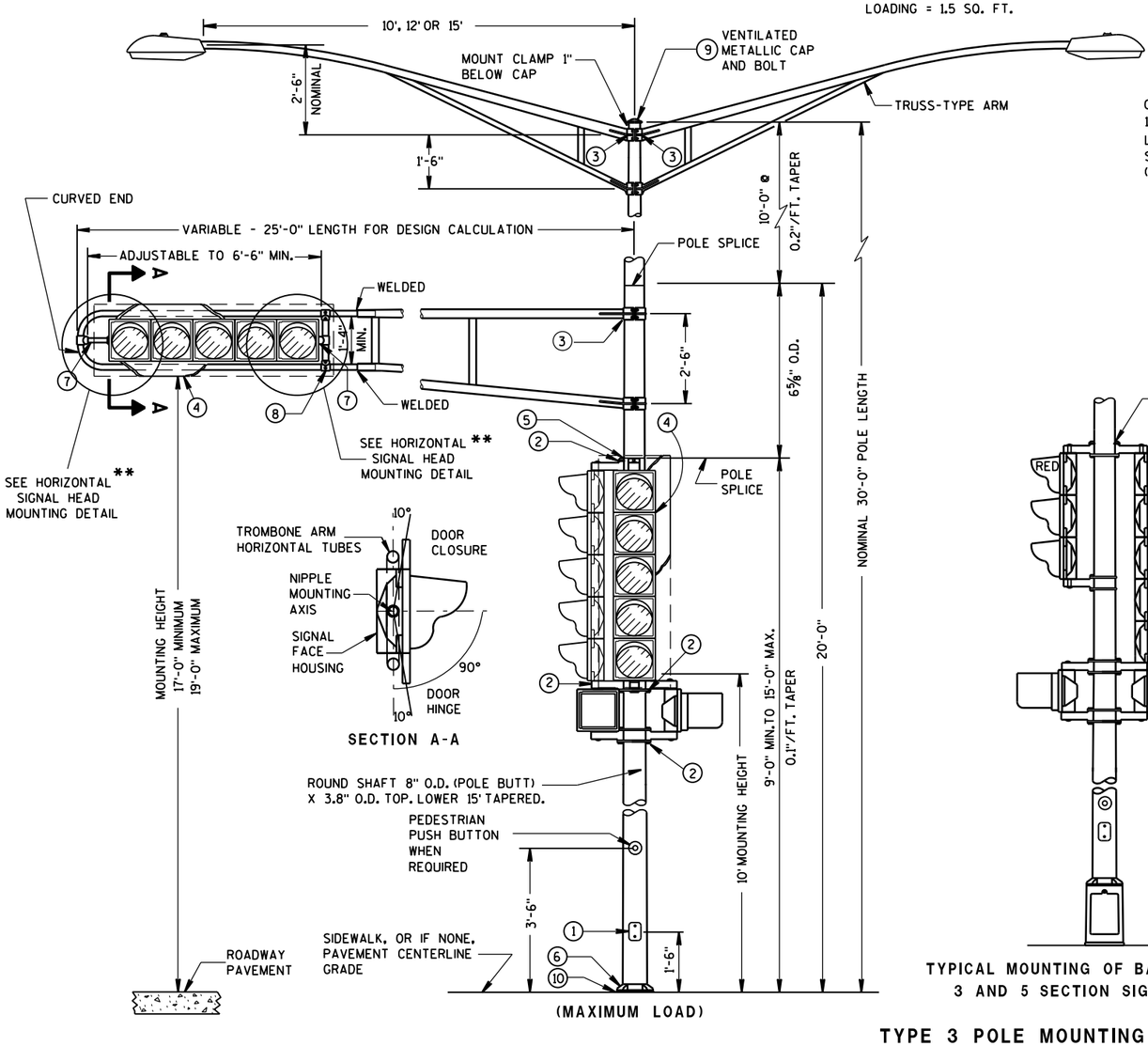
POLE SPLICE DETAIL

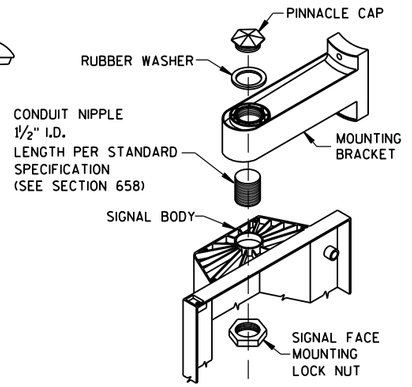


INTERCHANGEABLE MOUNTING DETAIL

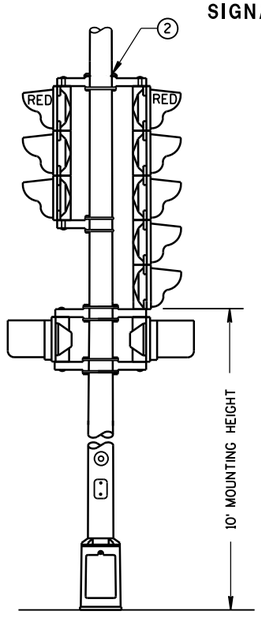
LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

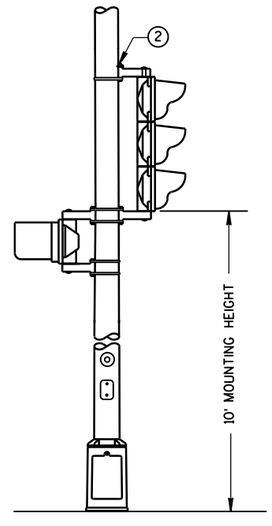




SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

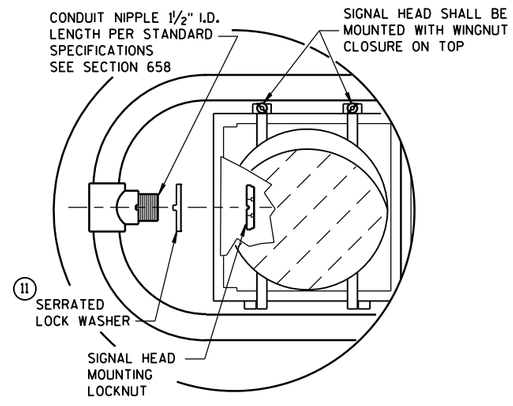
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

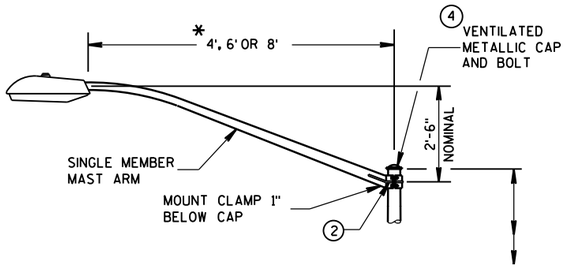
TYPE 3 POLE MOUNTING CONFIGURATION

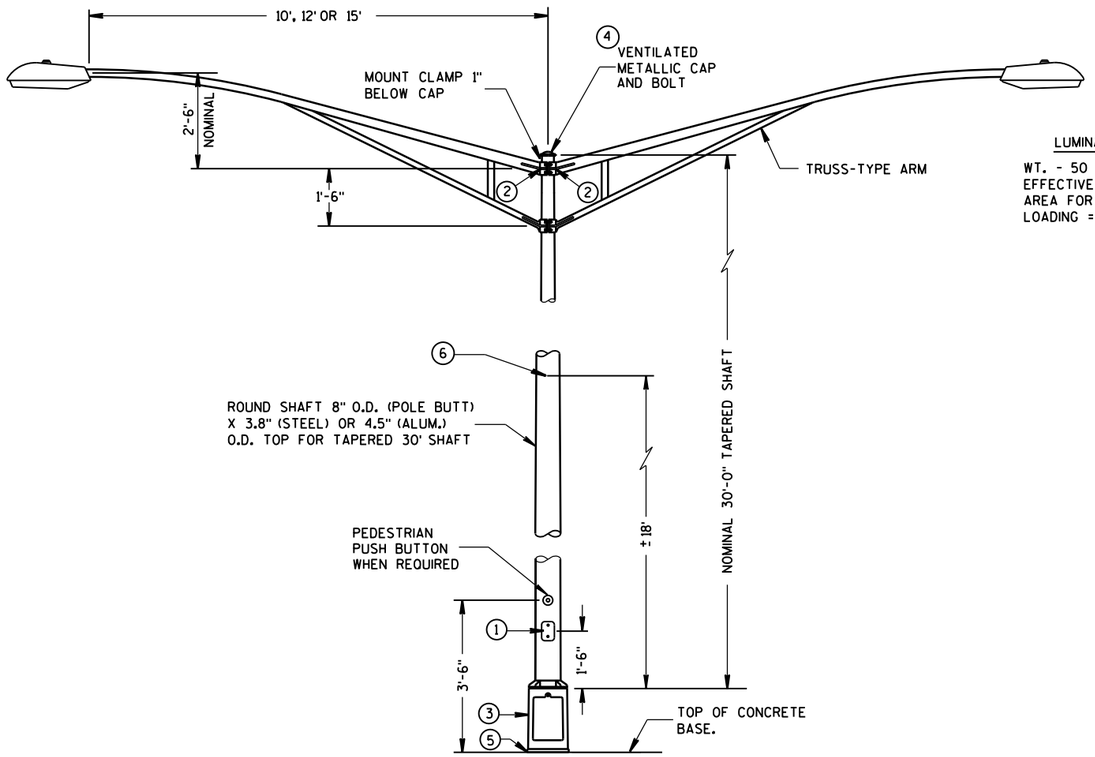
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 2075

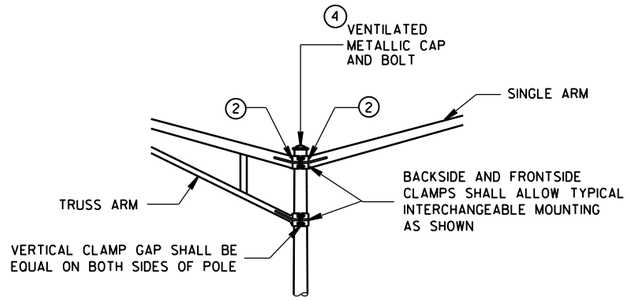
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S.D.D. 9 E 1-12b

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

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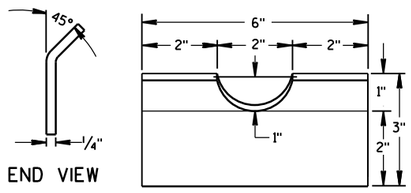
S.D.D. 9 E 1-12d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2076

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S.D.D. 9 E 1-12d

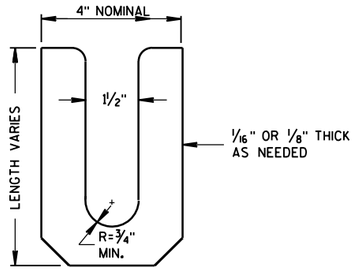


END VIEW

FRONT VIEW

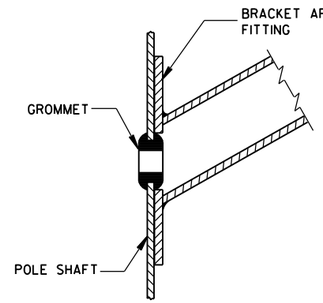
RECTANGULAR CLAMP SHIM

(4 TO A SET)

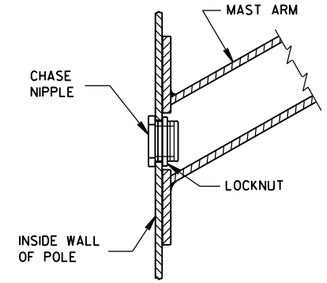


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

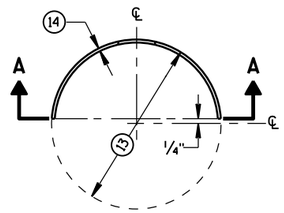
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

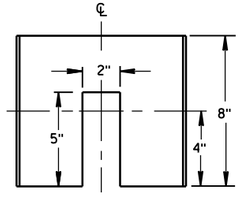
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



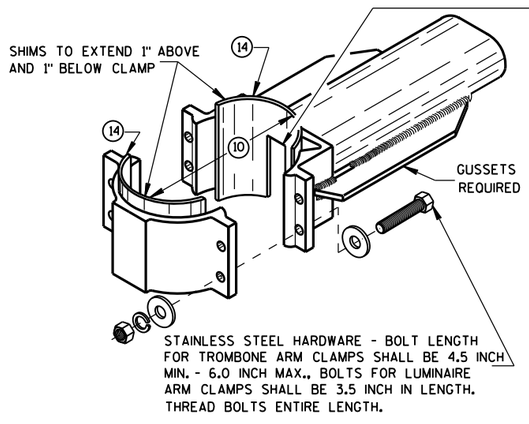
PLAN VIEW



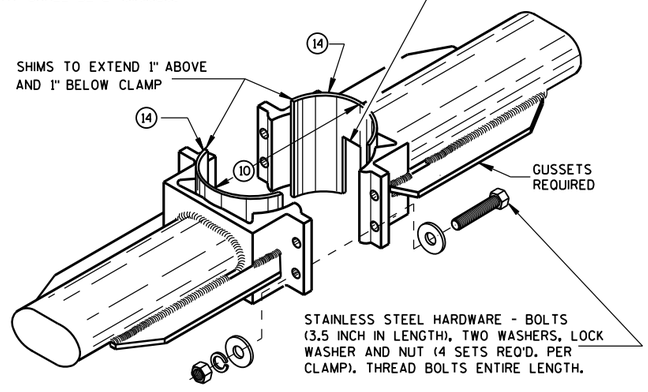
SECTION A-A

CIRCULAR CLAMP SHIM

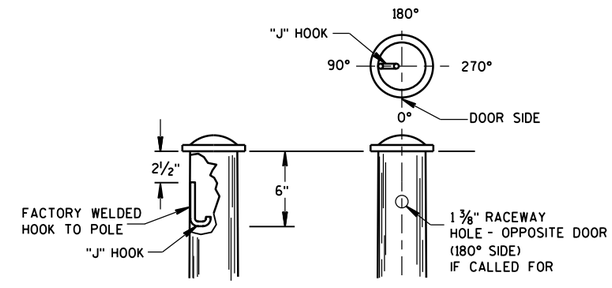
(2 TO A SET)



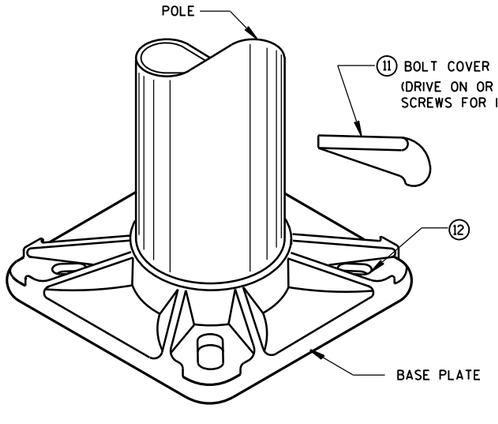
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



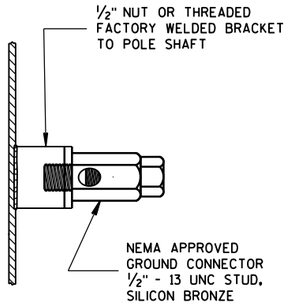
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

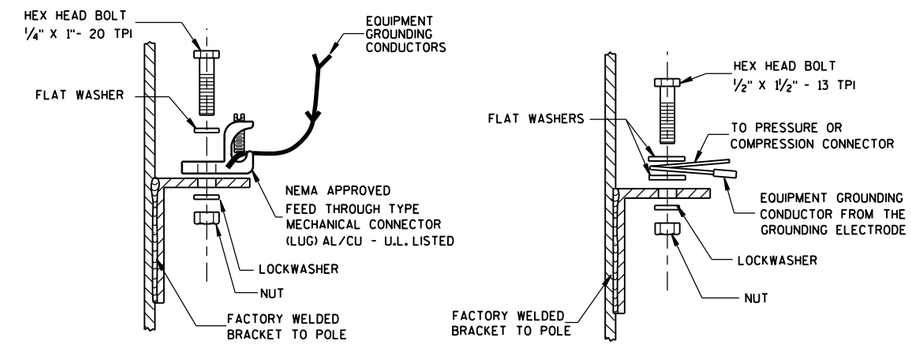


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

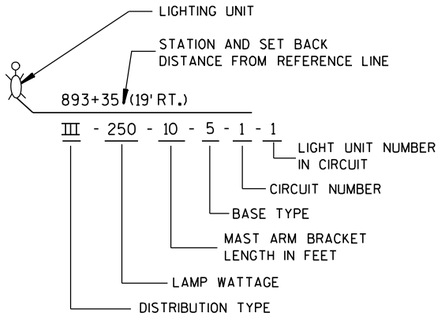
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

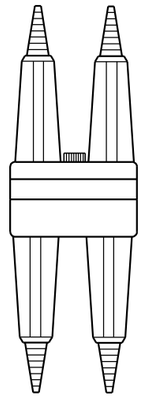
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/7/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 2077
FHWA

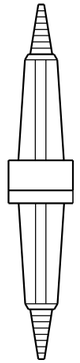
6
S.D.D. 9 E 1-12g



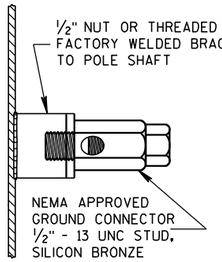
LIGHTING UNIT CODE
(TYPICAL)

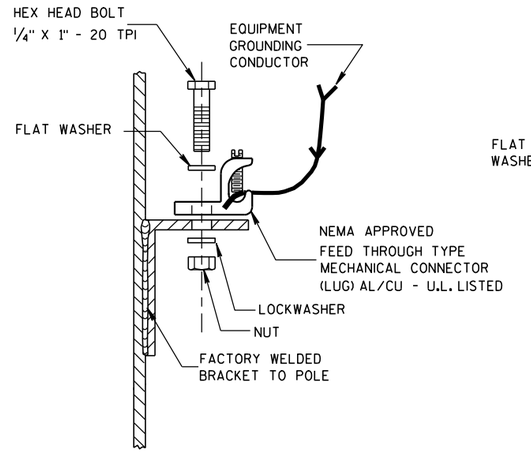


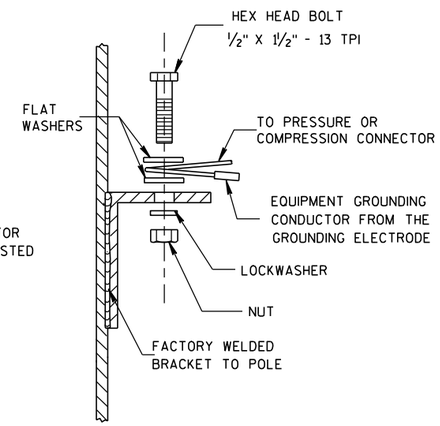
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



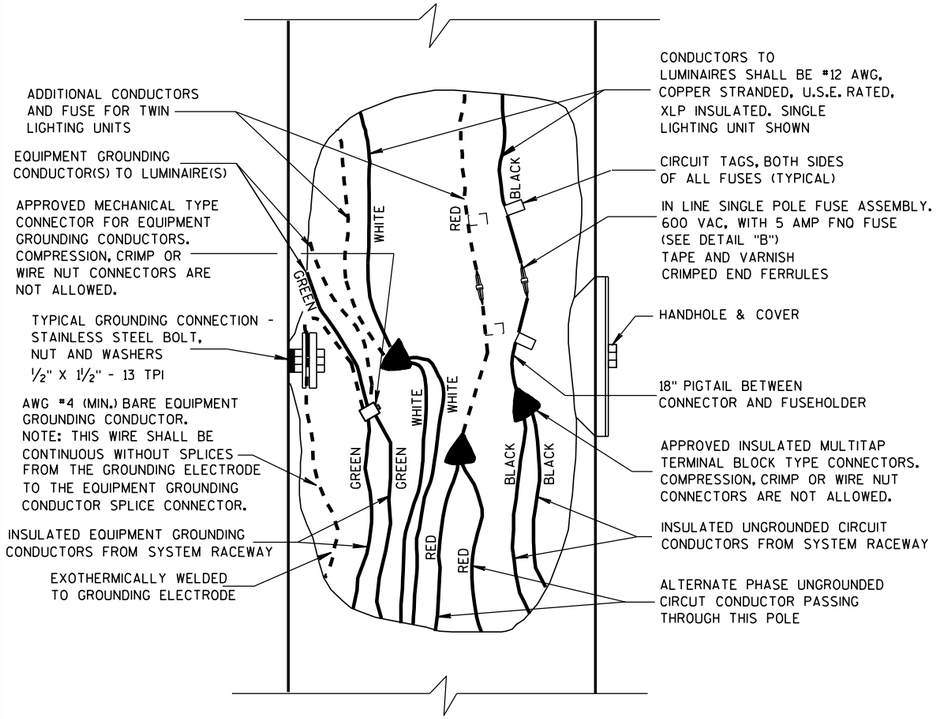
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



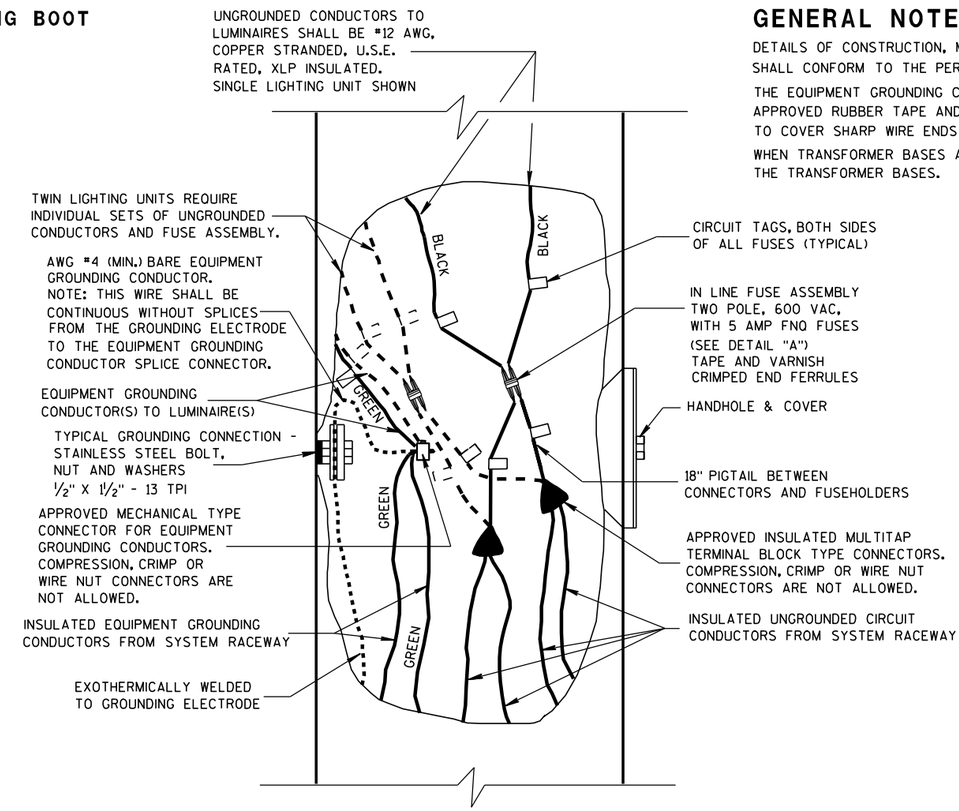




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

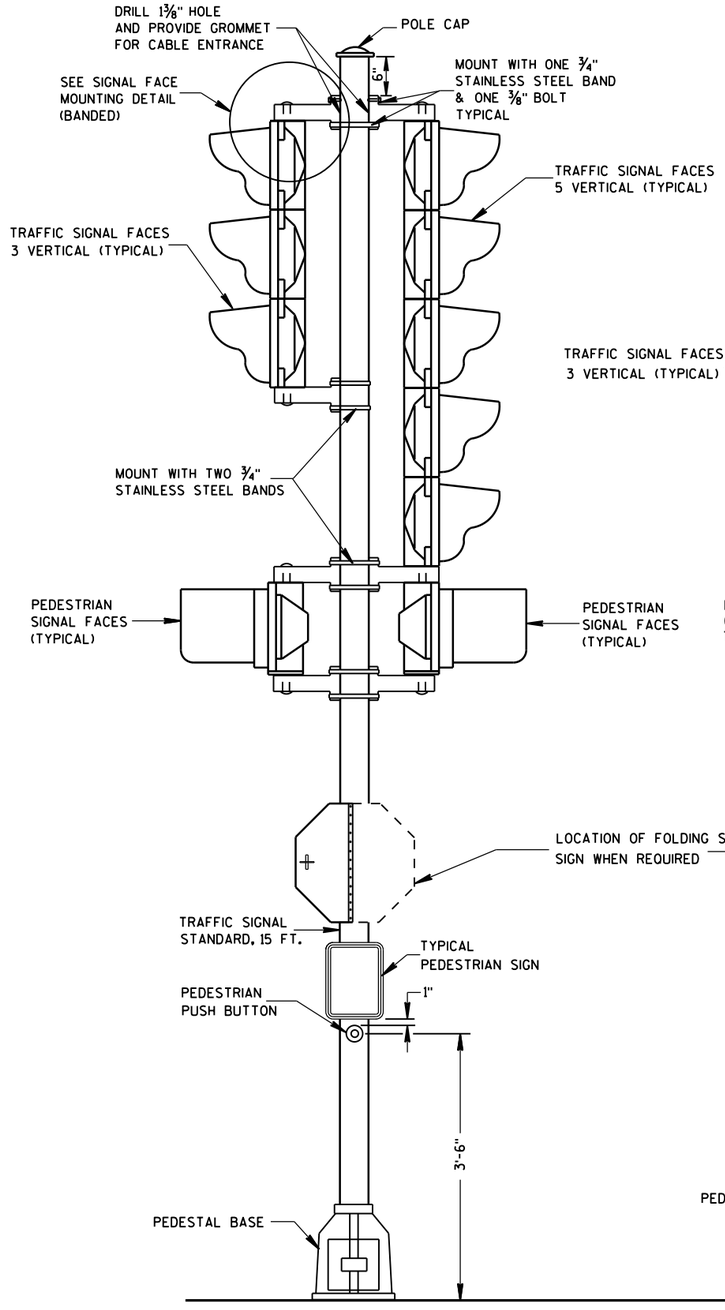
APPROVED

3/2/2011 — DATE

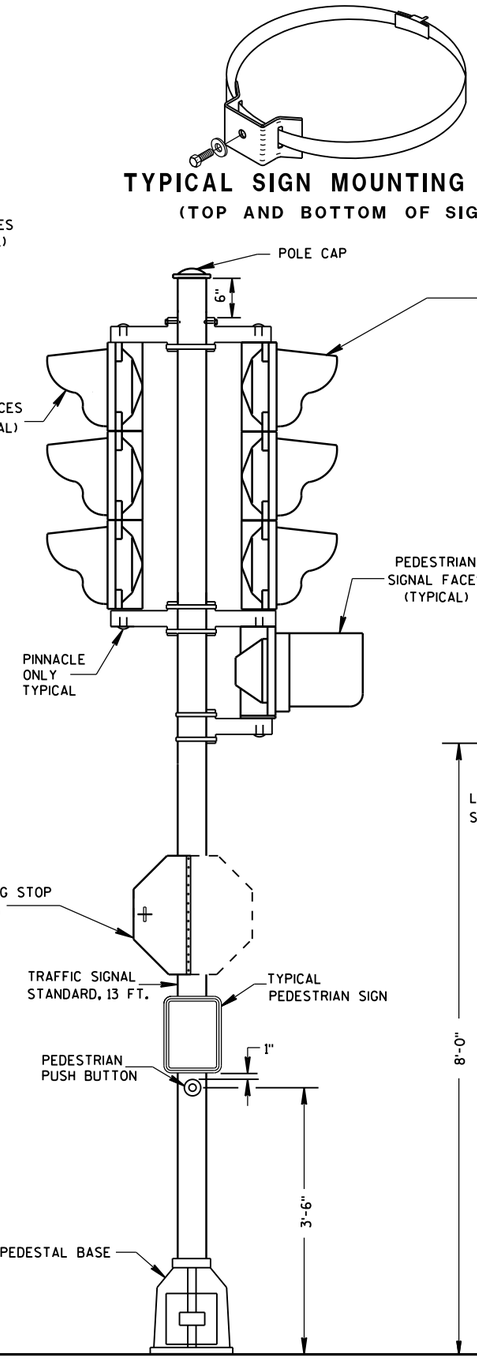
/S/ Thomas J. Gosnine — STATE ELECTRICAL ENGI 2078 — HWYS

FHWA

6
S.D.D. 9 E 3-4

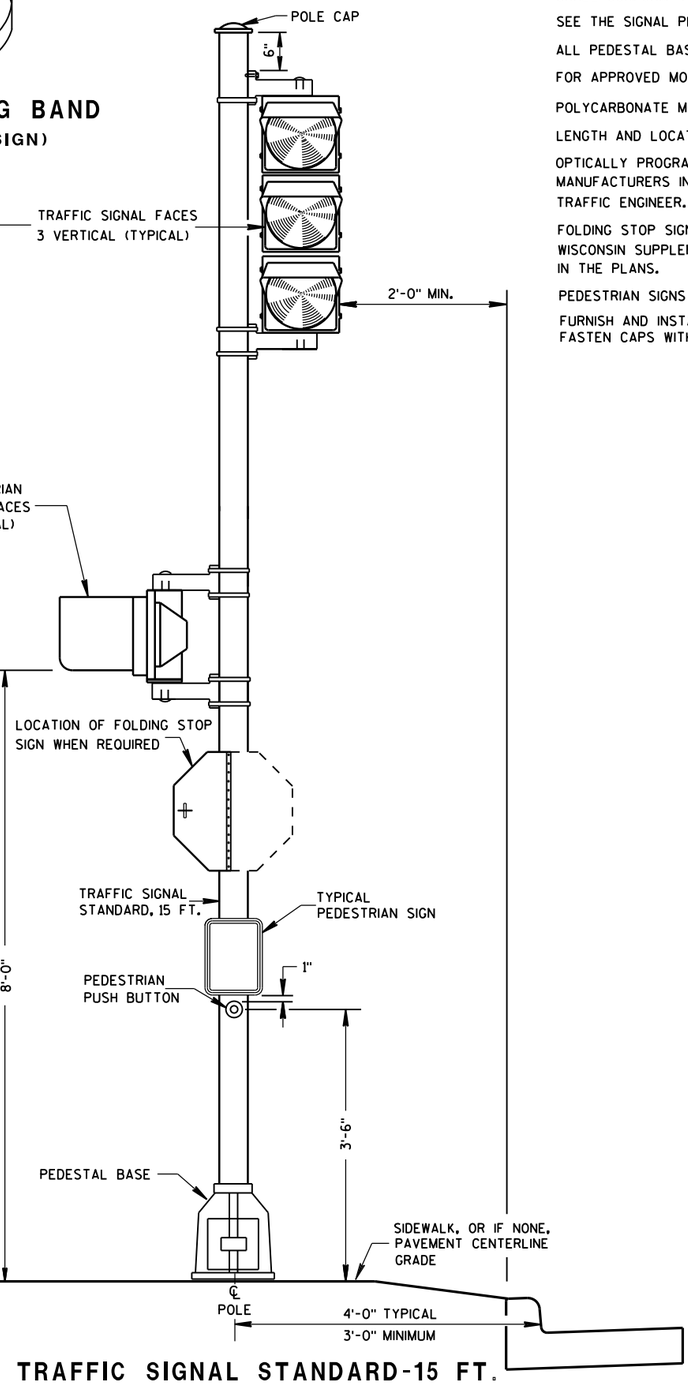


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

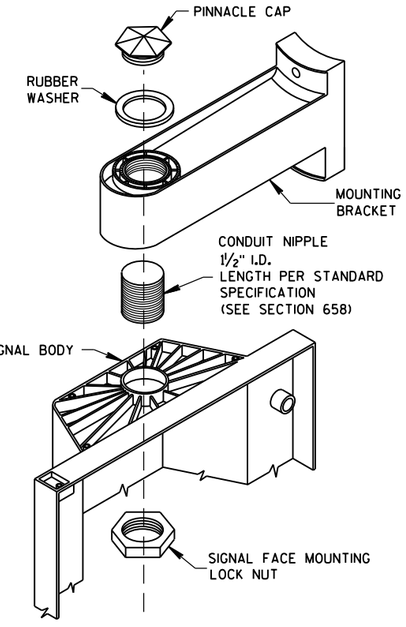
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

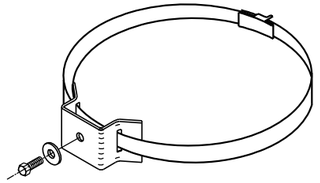
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

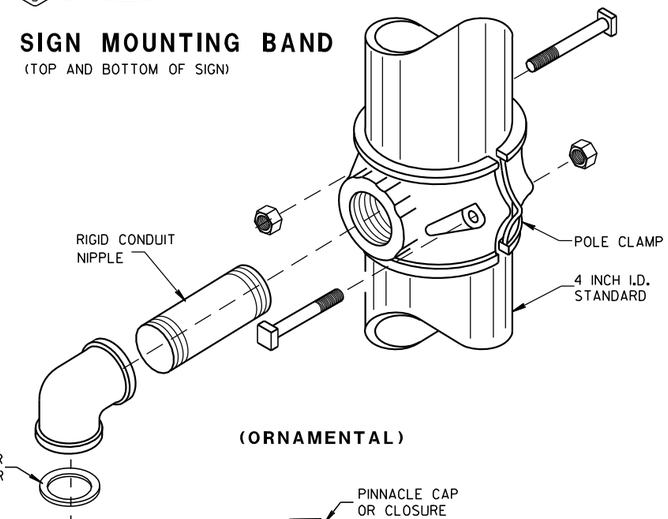
APPROVED
2/28/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 2079

FHWA

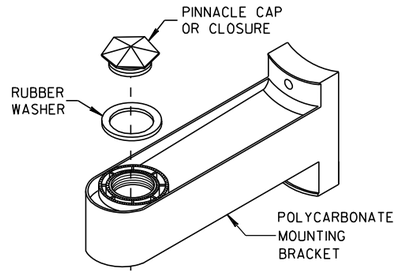
6
S.D.D. 9 E 6-5



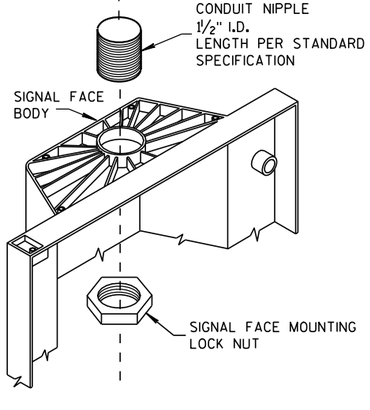
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



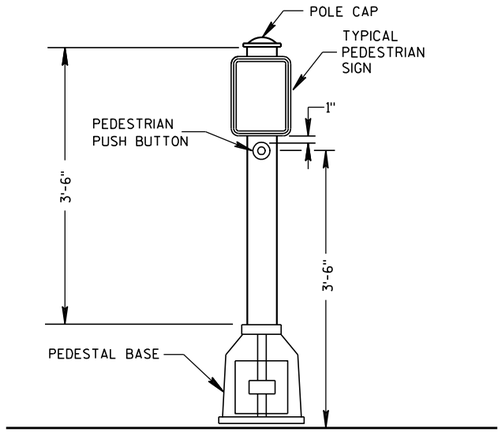
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

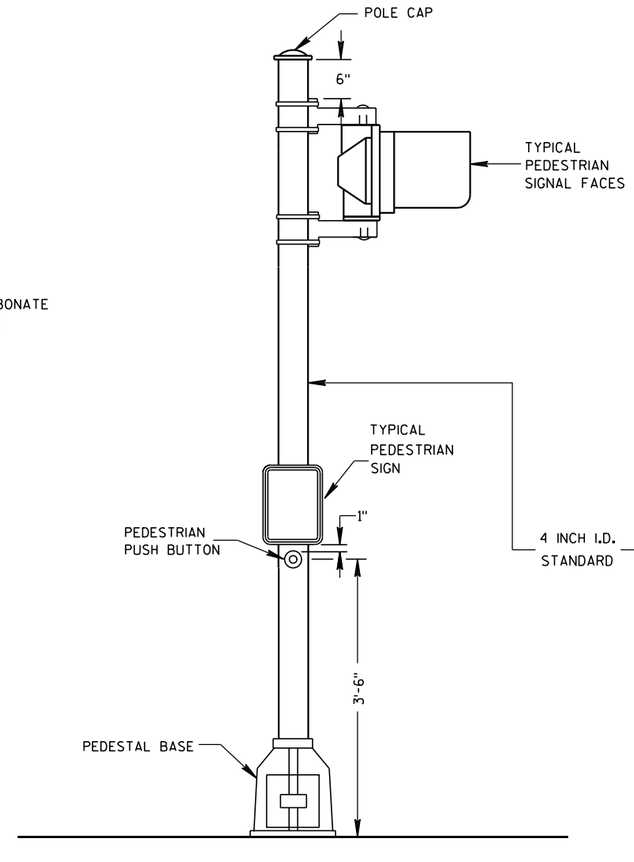
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

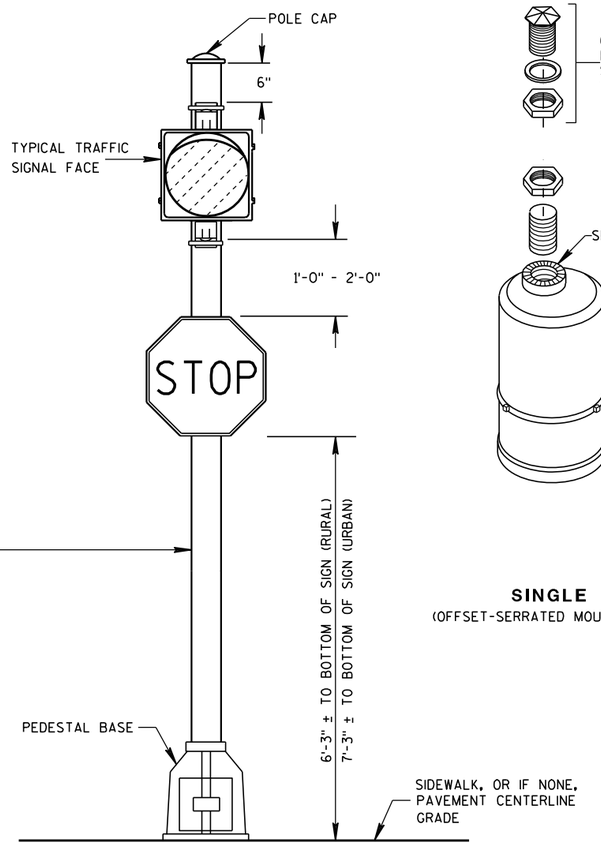
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

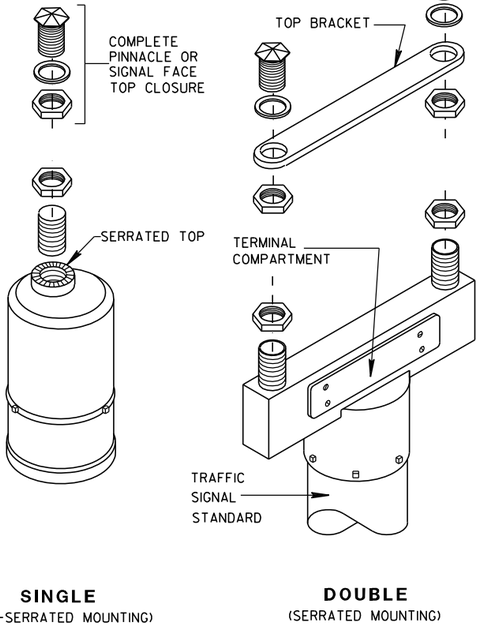
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI 2080 HWYS

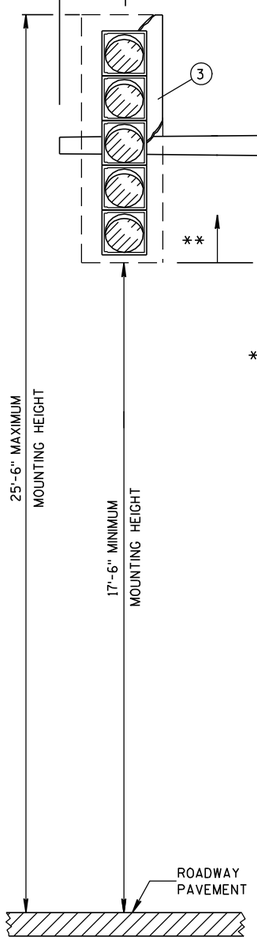
FHWA

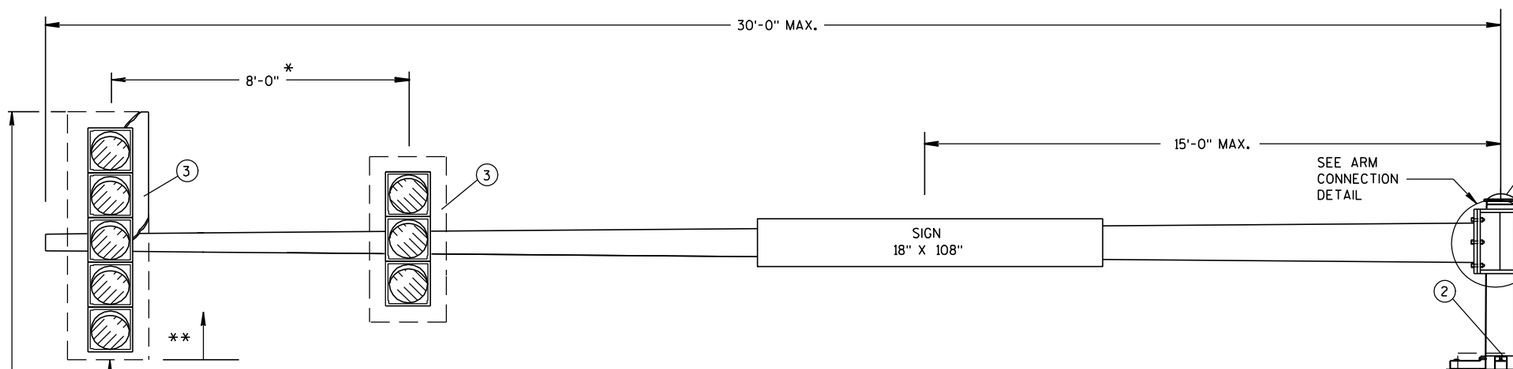
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S.D.D. 9 E 7-5

6

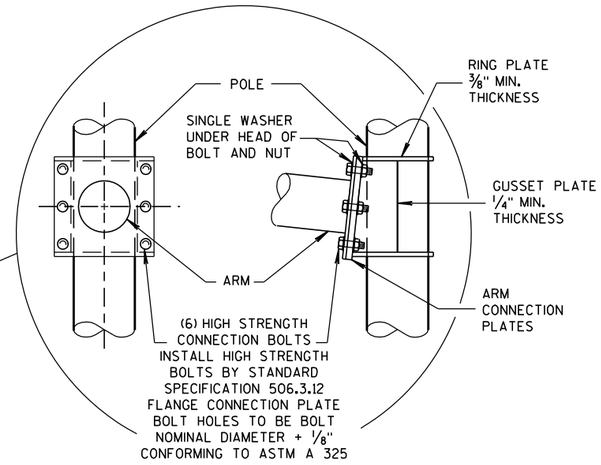
S.D.D. 9 E 7-5



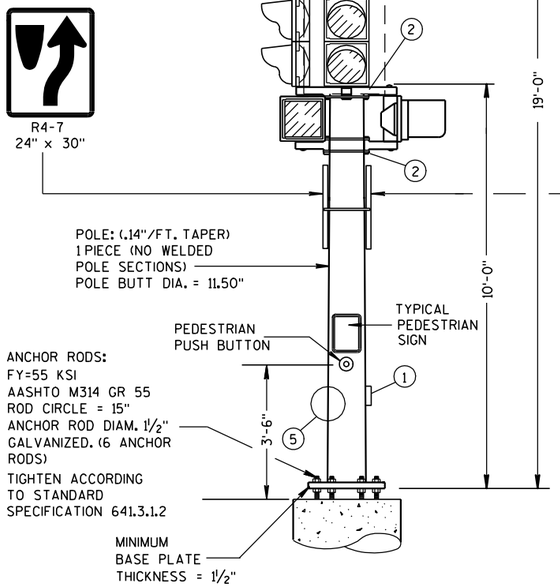


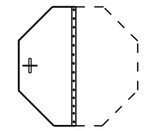
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY. NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

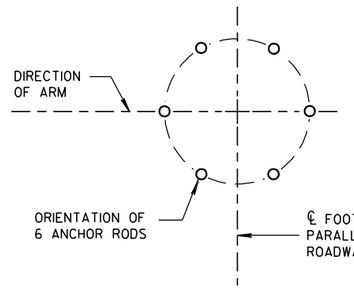
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL







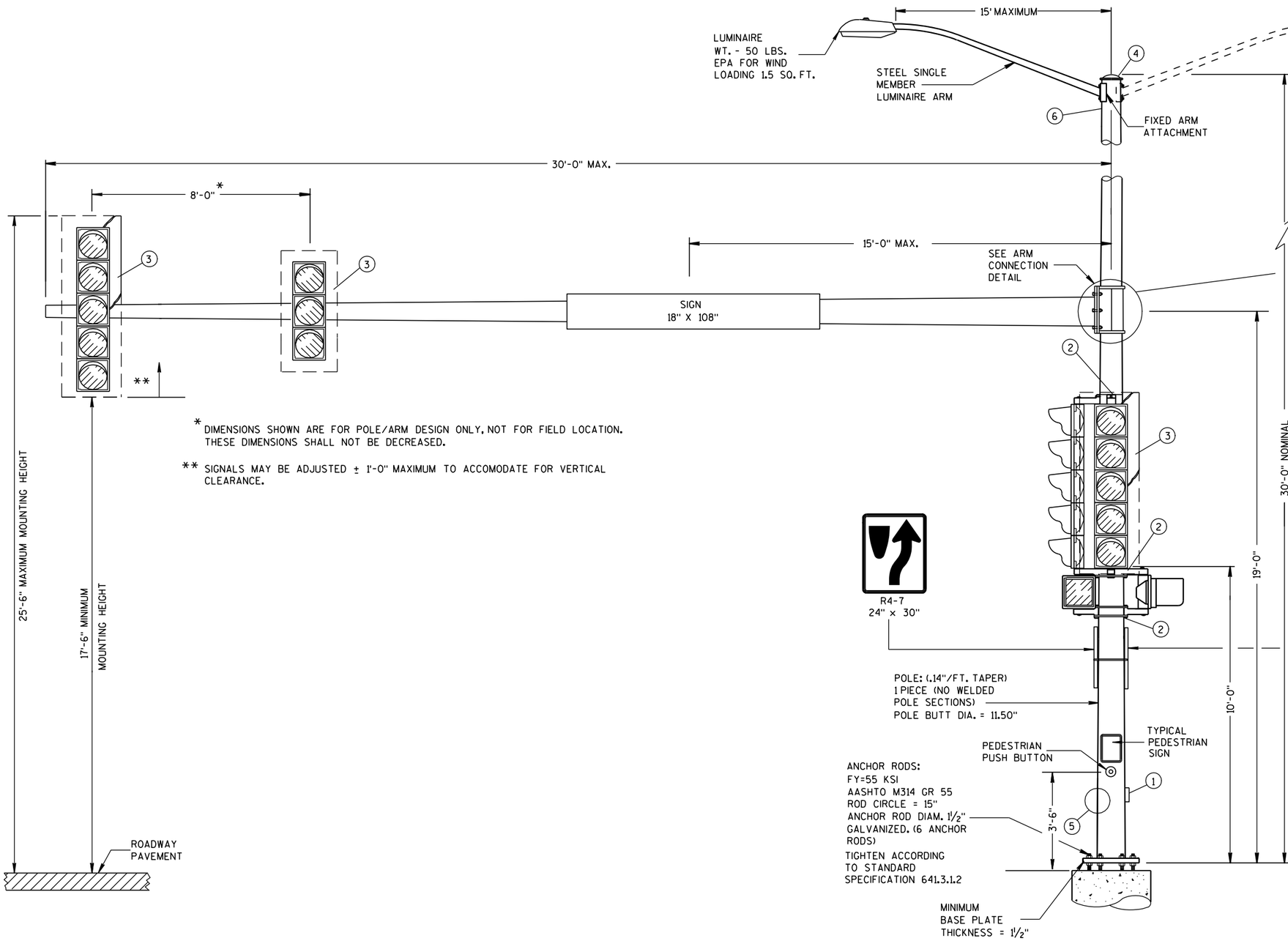
ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

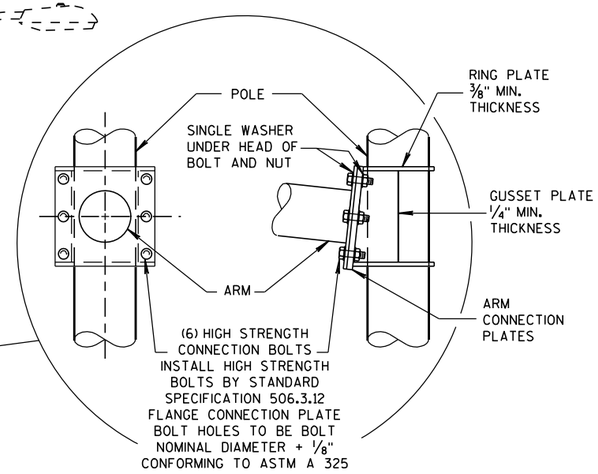
TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/2/2011 DATE	/S/ Thomas J. Corrigan STATE ELECTRICAL ENGI 2081 HWYS
FHWA	

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S.D.D. 9 E 8-4a

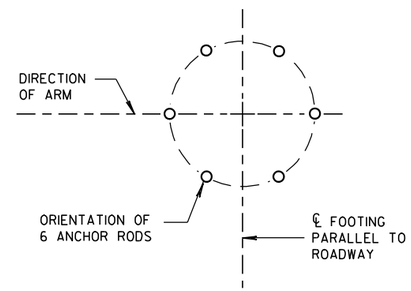


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

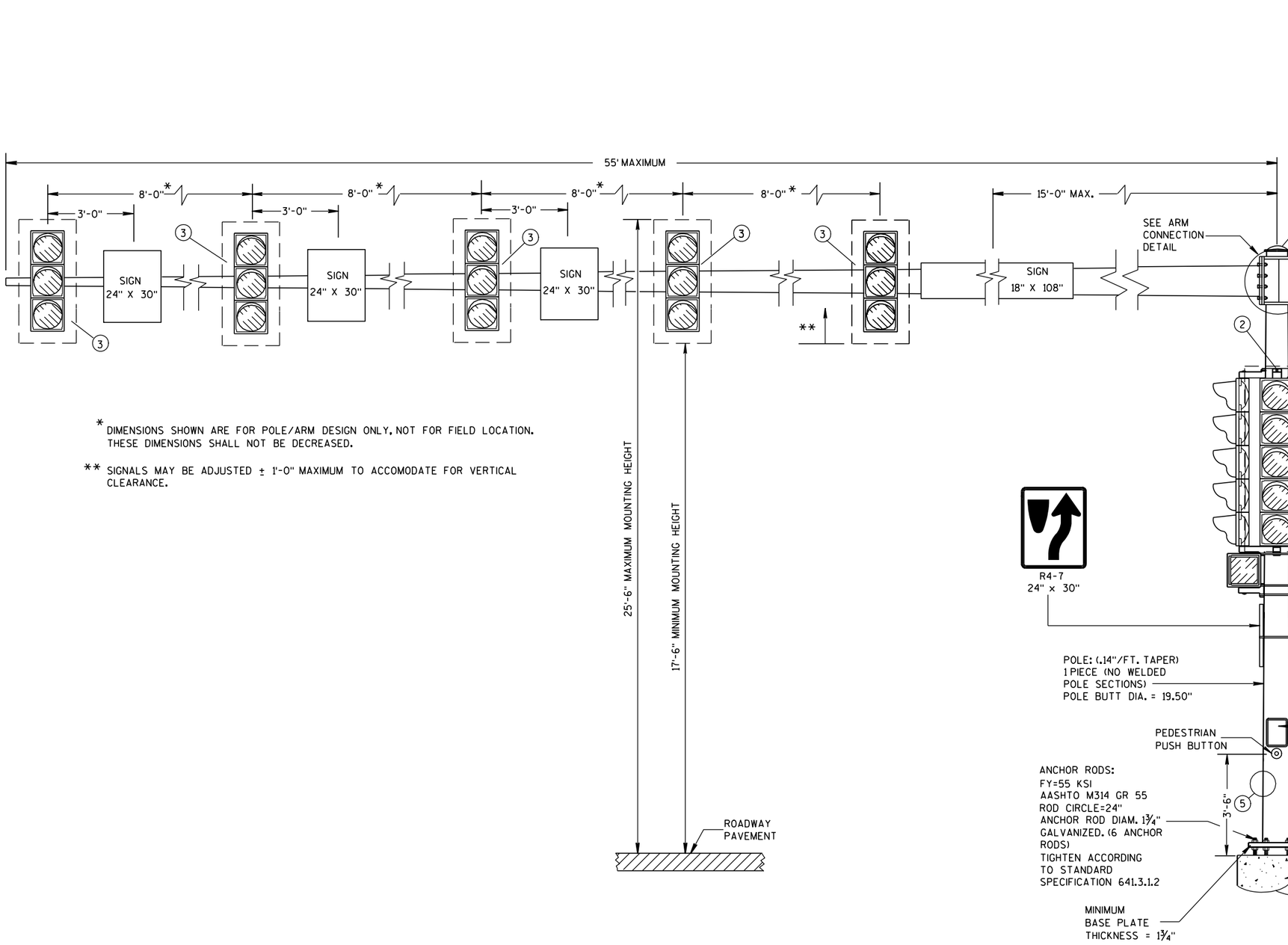
TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/2/2011 DATE	/S/ Thomas J. Corrigo STATE ELECTRICAL ENGI 2082 HWYS
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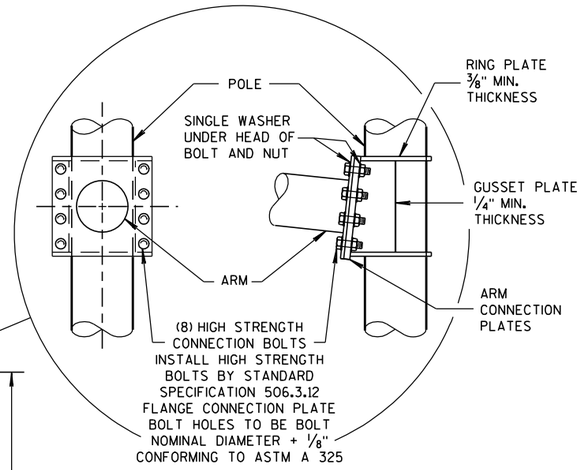
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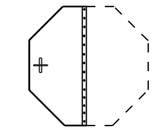


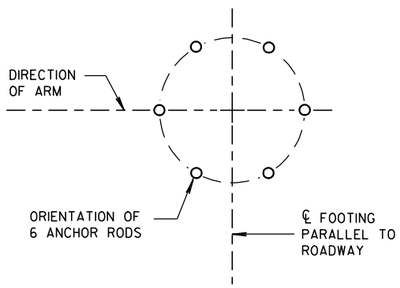
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL





ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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3/2/2011 — DATE
/S/ Thomas J. Gonring — STATE ELECTRICAL ENGI 2083 HWYS
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S.D.D. 9 E 8-4c

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE LATEST AASHTO AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

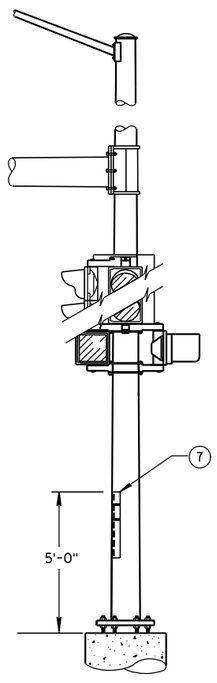
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

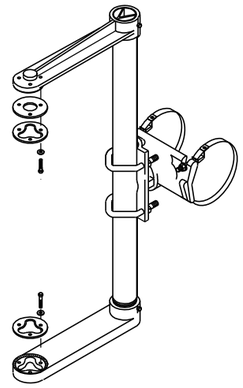
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

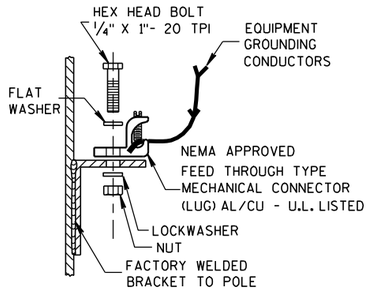


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



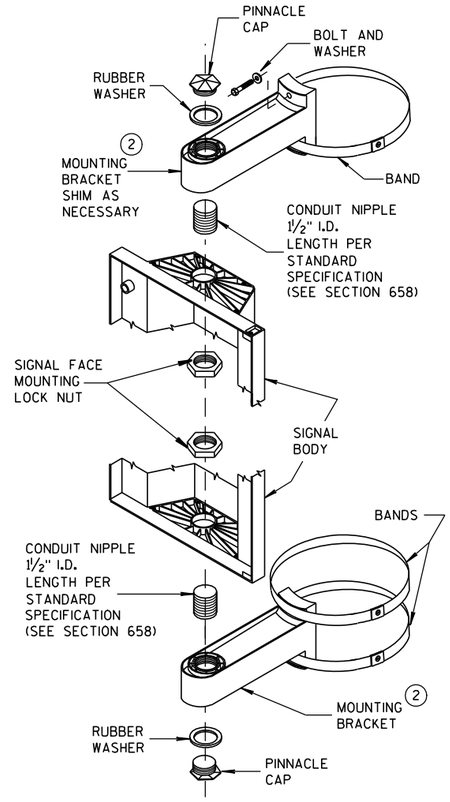
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

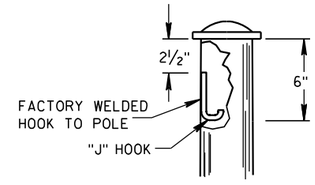


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI 2084 HWYS

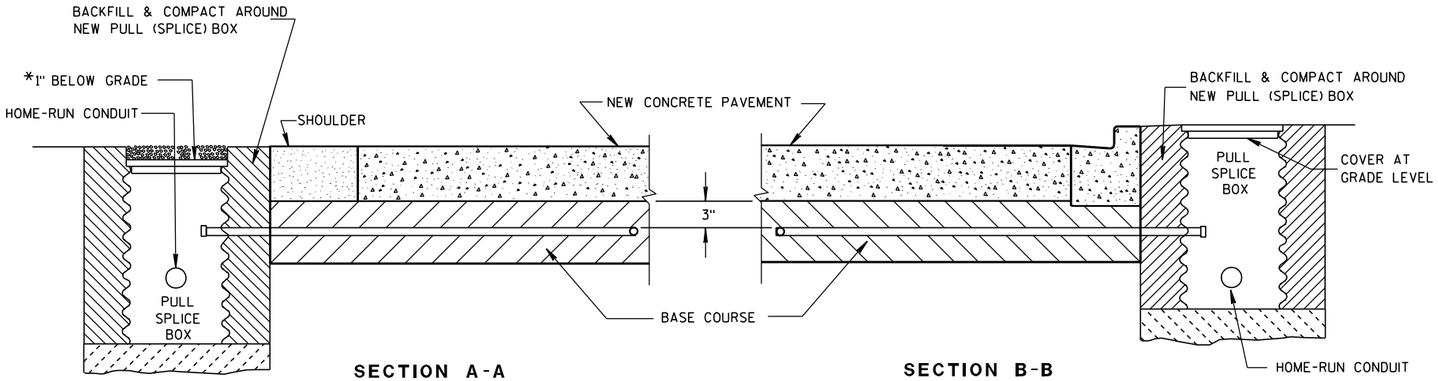
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S.D.D. 9 E 8-4e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

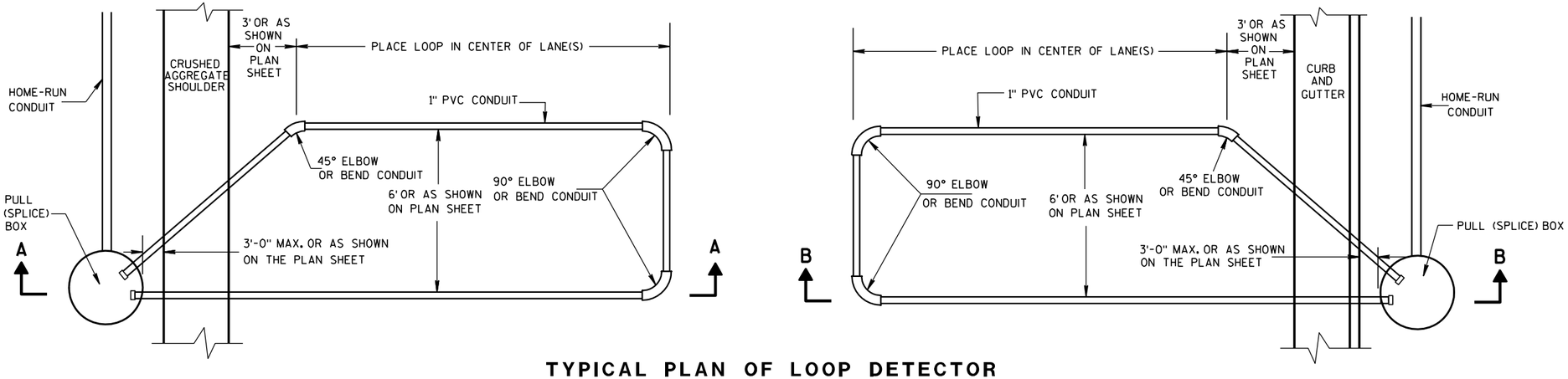
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

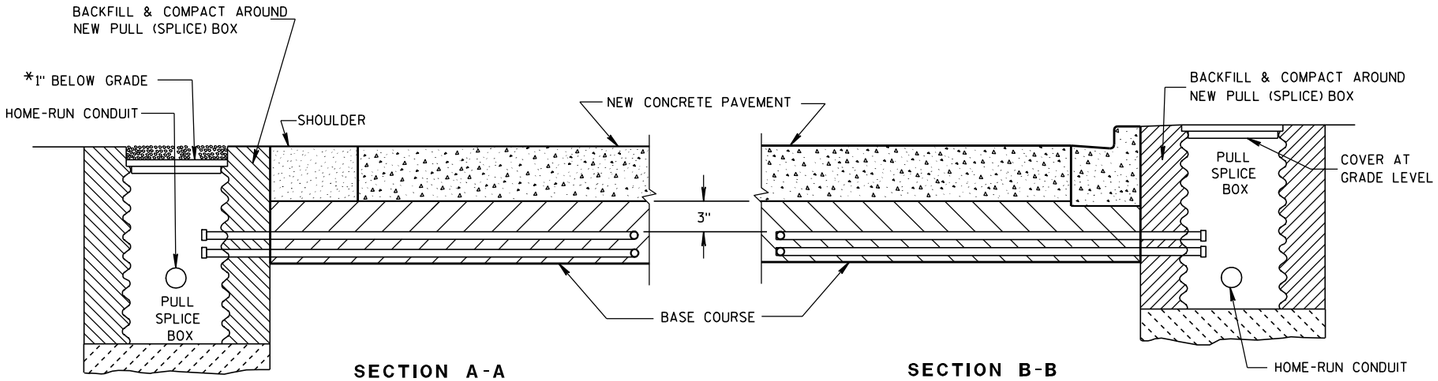
APPROVED
6/7/06 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI 2085 HWYS
FHWA

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S.D.D. 9 F 15-3a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

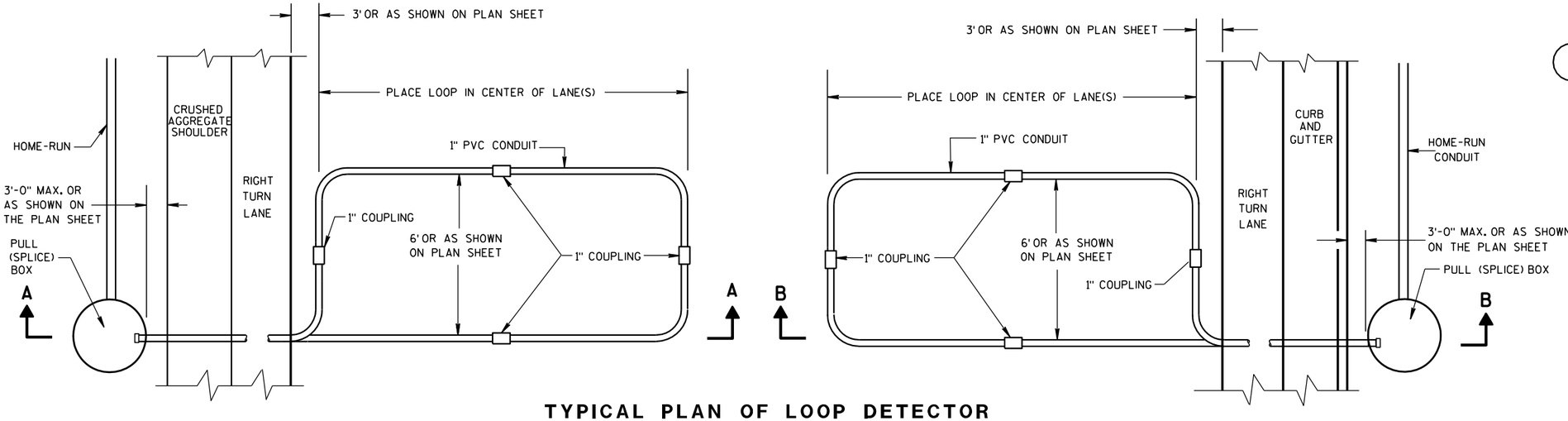
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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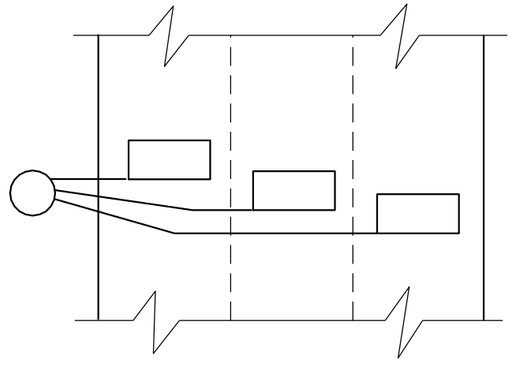
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/7/06 DATE
/S/ Balu Anantharaman
STATE ELECTRICAL ENGI 2086 HWYS
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S.D.D. 9 F 15-3b

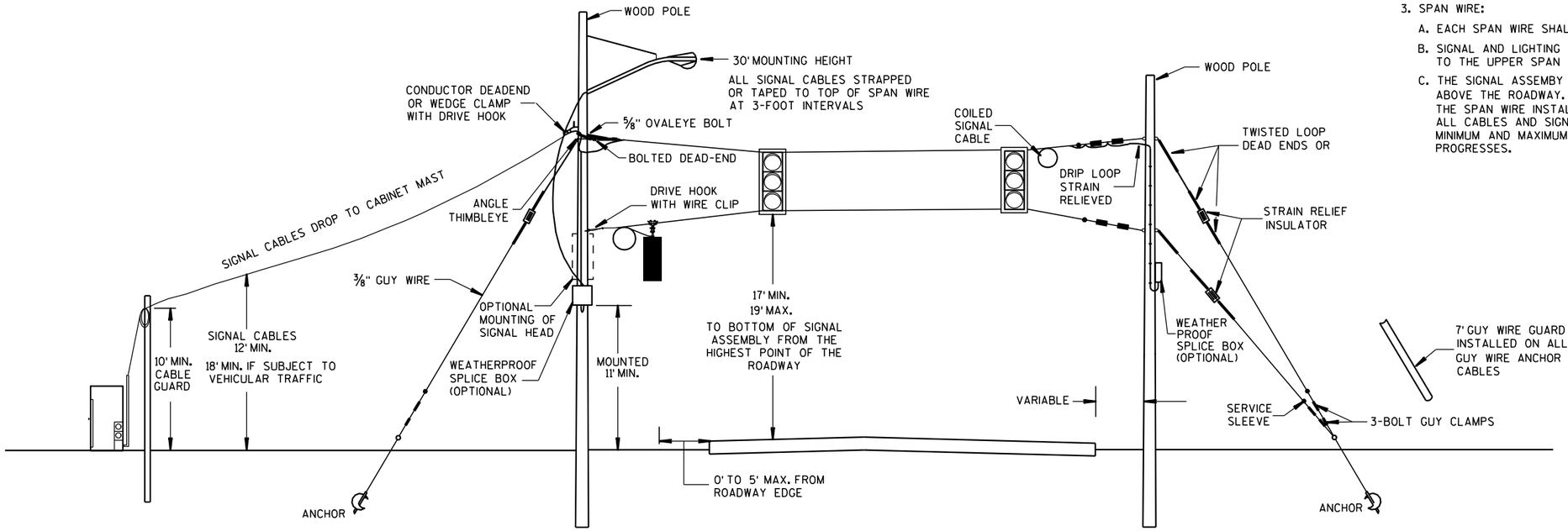
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthar---n 2087
STATE ELECTRICAL ENGI HWYS

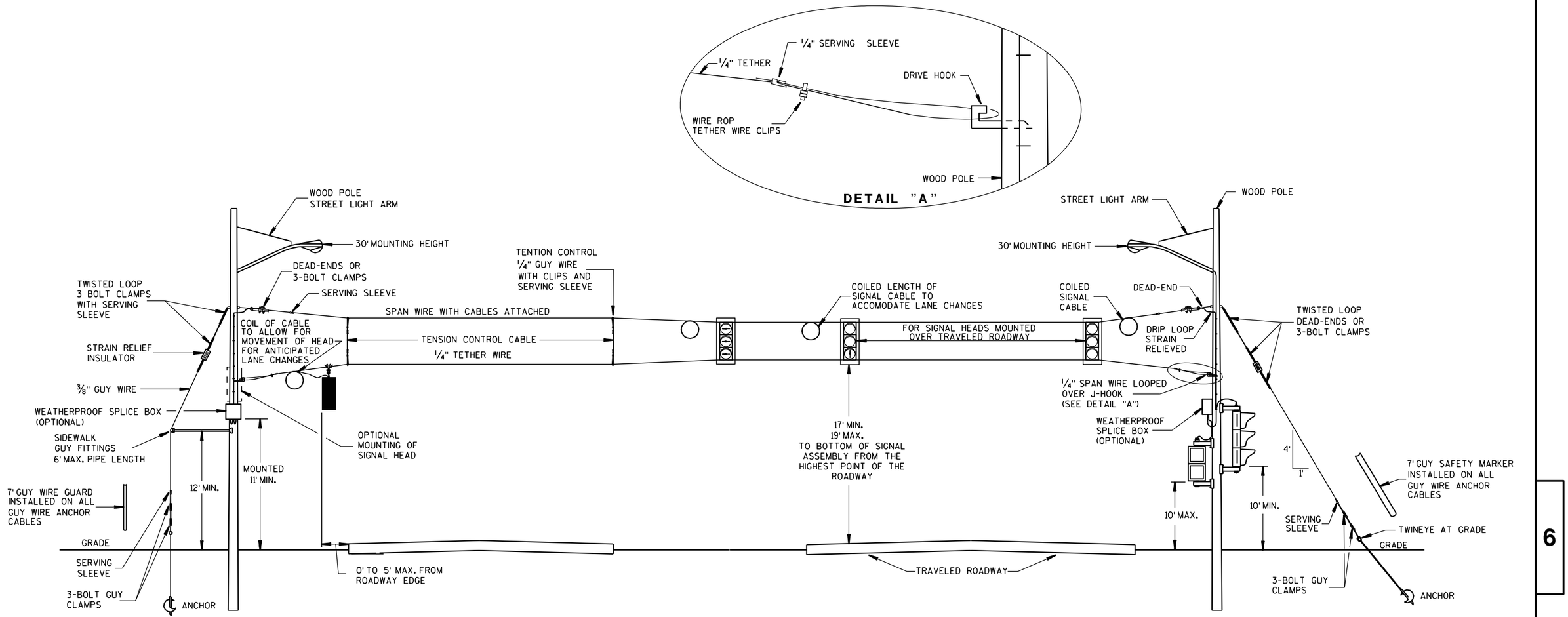
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S.D.D. 9 G 1-3a



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 2088 HWYS

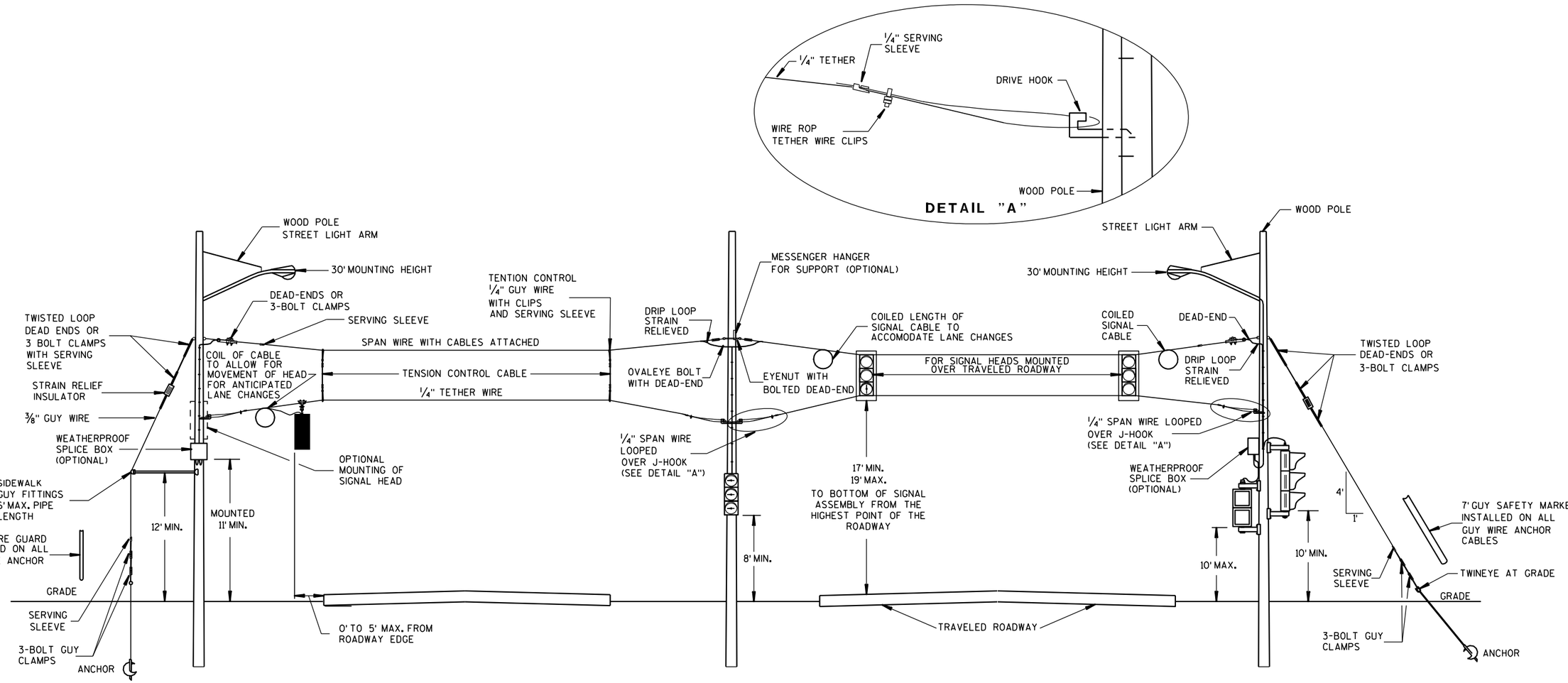
FHWA

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S.D.D. 9 G 1-3b

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S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

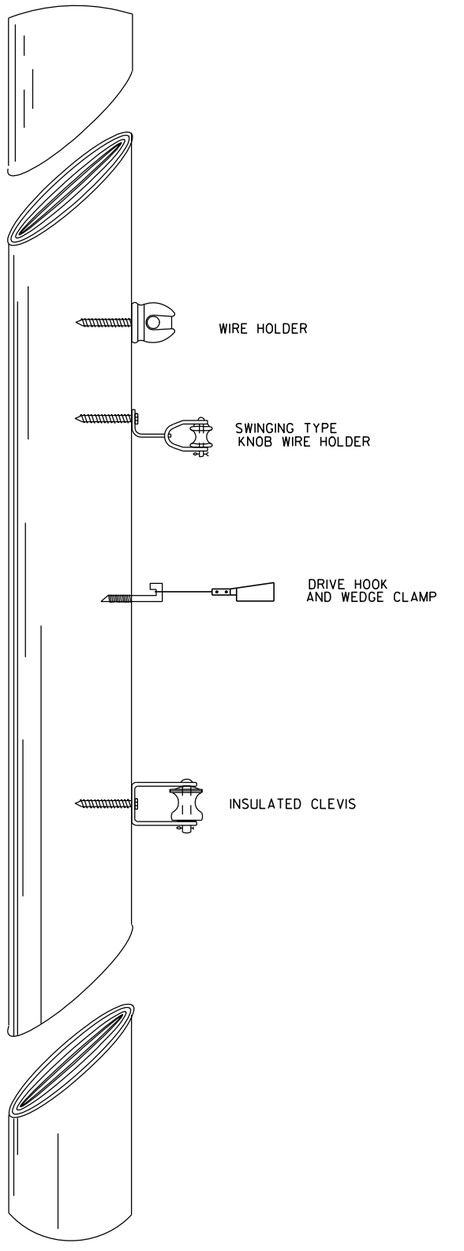
7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 2089 HWYS

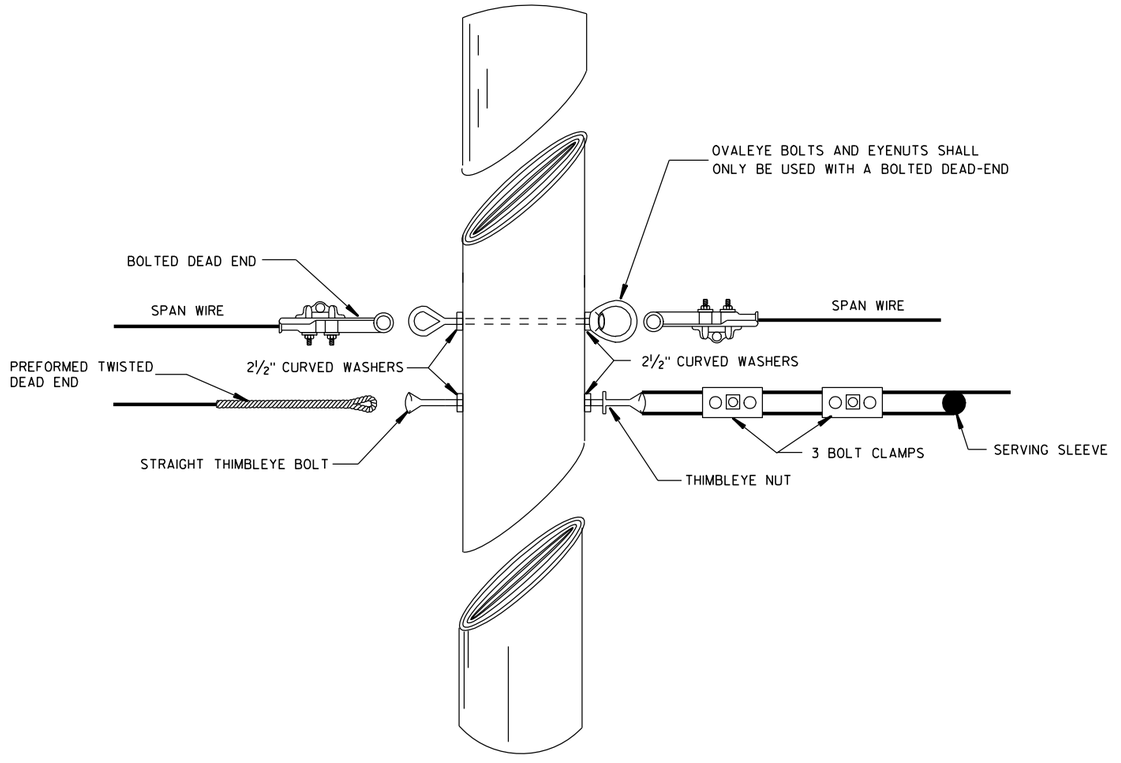
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S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

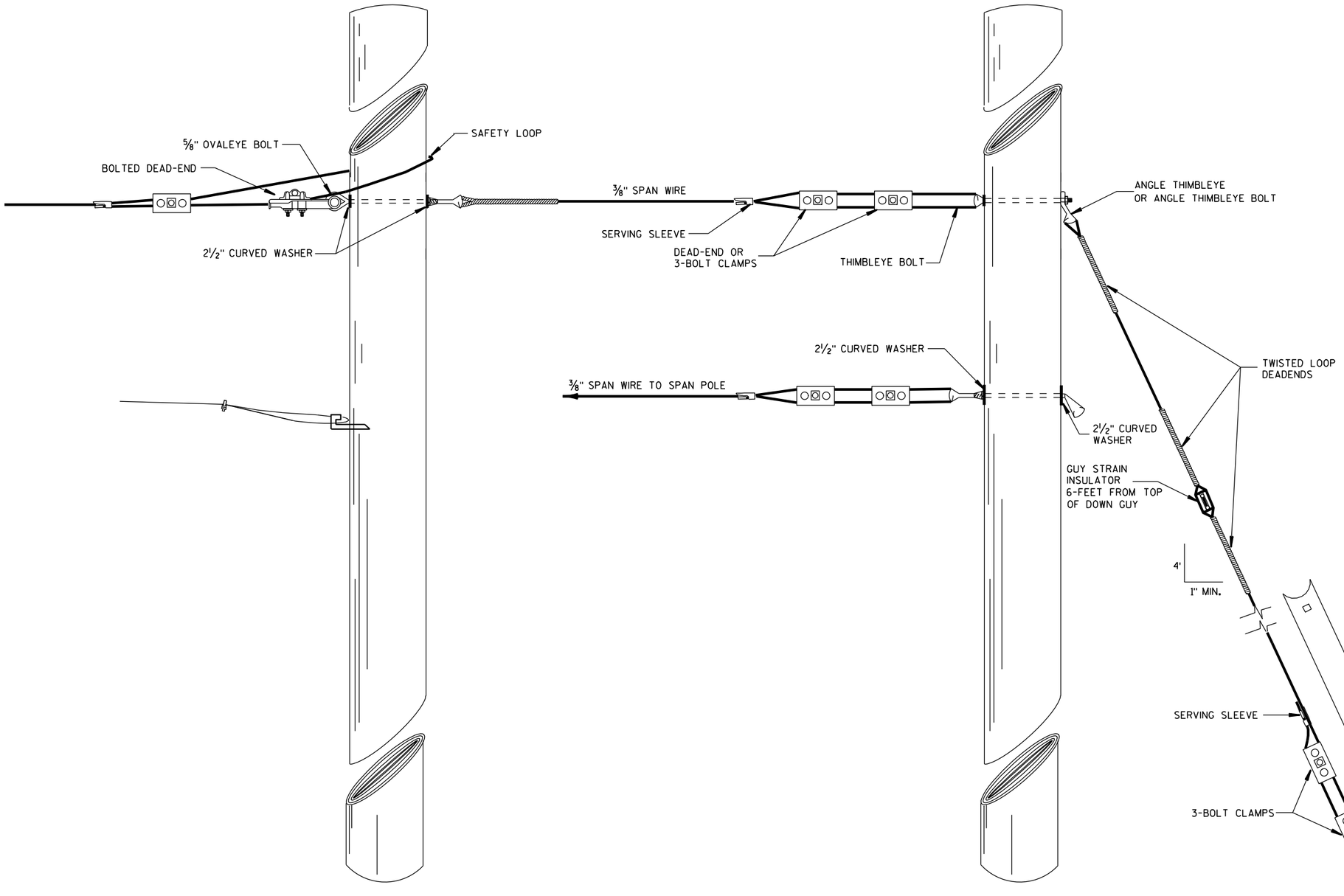
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 2090 HWYS

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GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

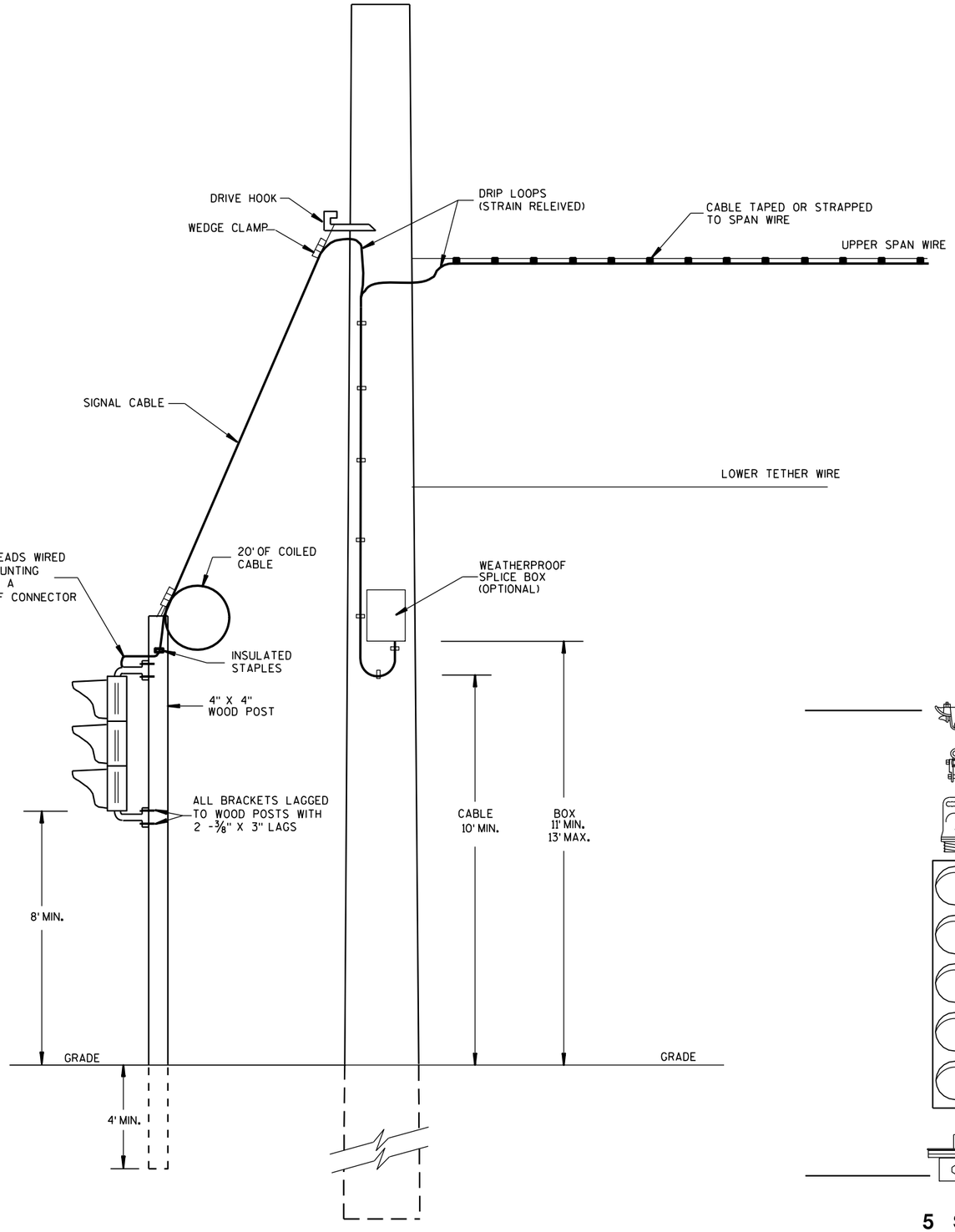
APPROVED
7-14-08 DATE
/S/ Balu Aganthanarayanan
STATE ELECTRICAL ENGI 2091 HWYS
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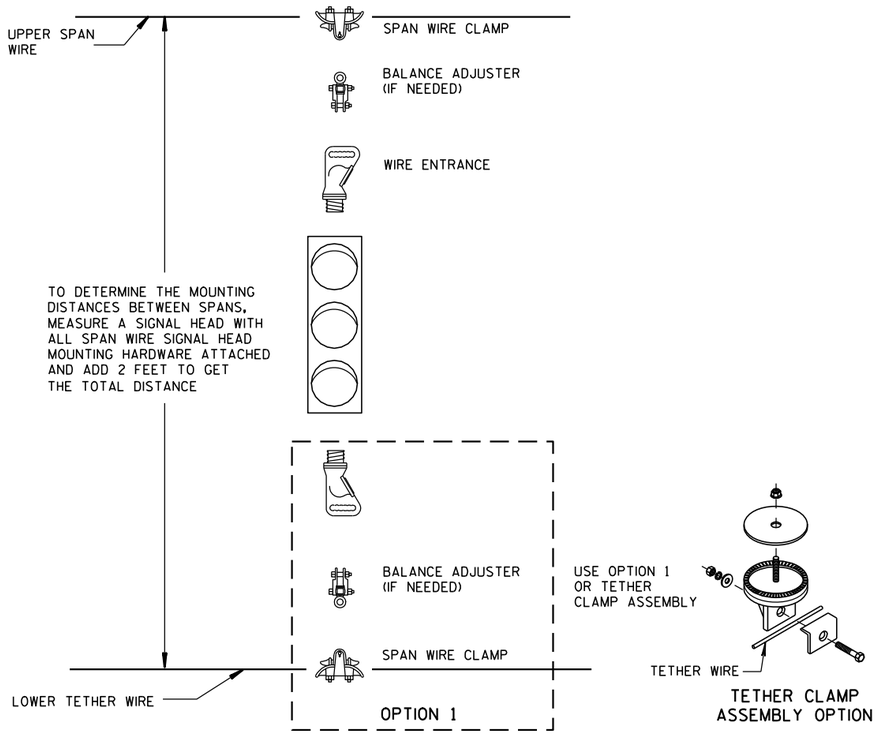
S.D.D. 9 G 1-3e

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S.D.D. 9 G 1-3e

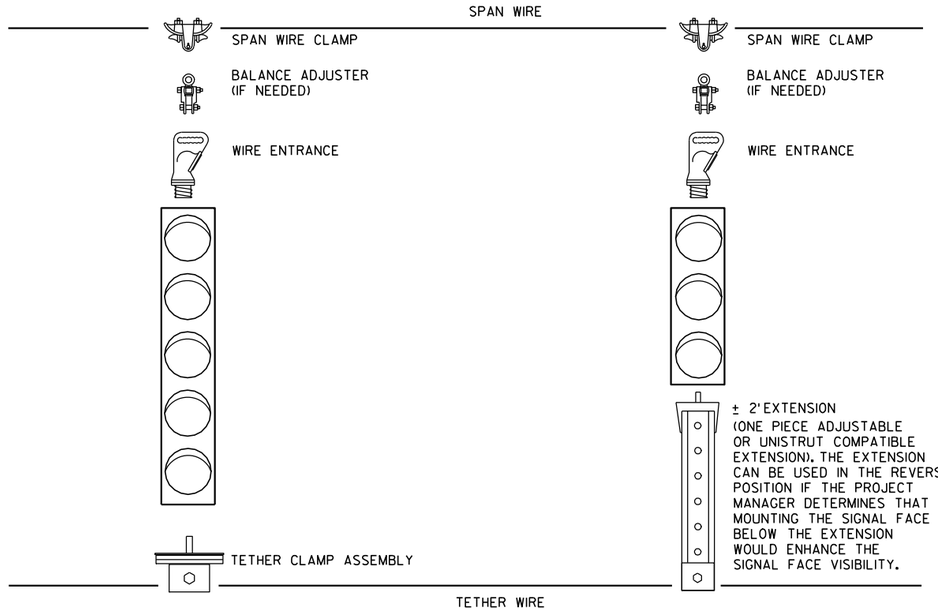


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TETHER CLAMP ASSEMBLY OPTION

TYPICAL SPAN WIRE MOUNTING HARDWARE



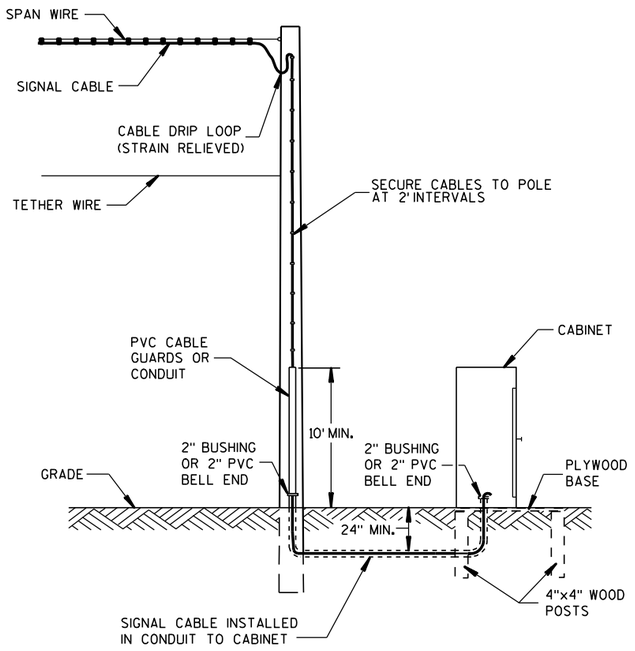
5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

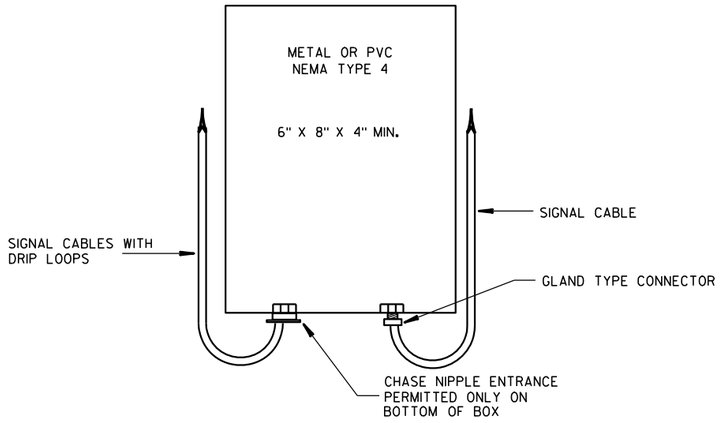
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

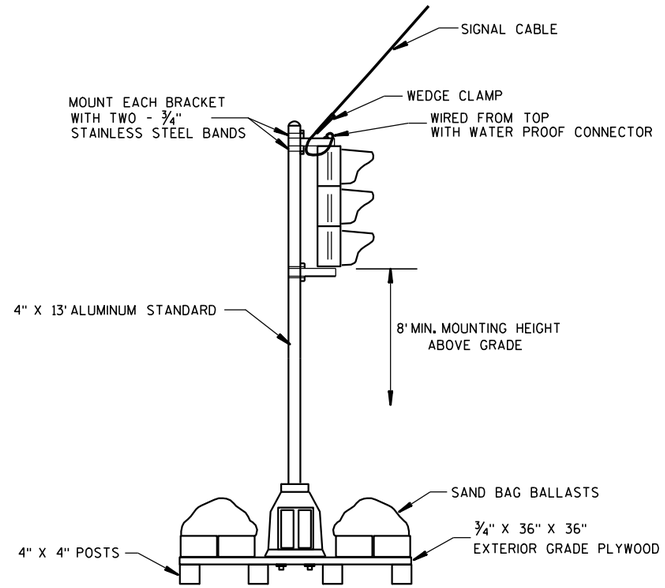
APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 2092 HWYS
FHWA

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S.D.D. 9 G 1-3f

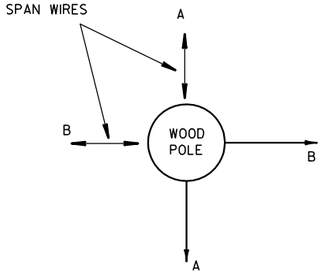




SPLICE BOX

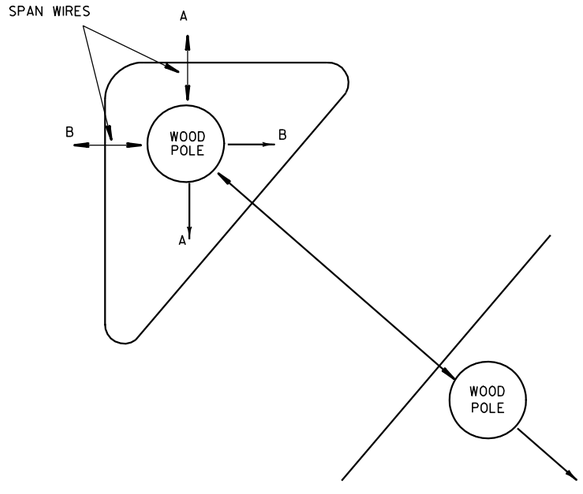


TYPICAL SKID TYPE TEMPORARY

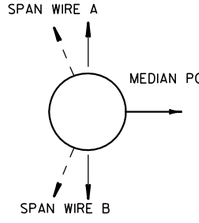


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF THE
SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08
DATE

/S/ Balu Aganthangayagan
STATE ELECTRICAL ENGI 2093 HWYS

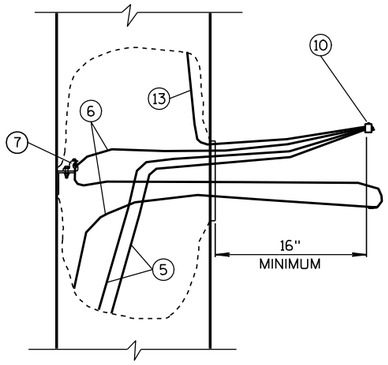
FHWA

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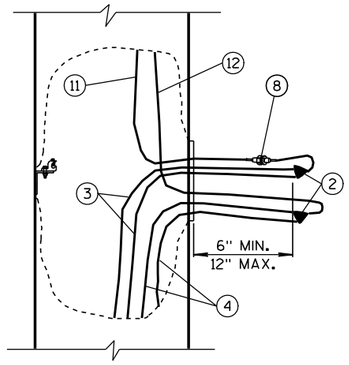
S.D.D. 9 G 1-3g

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S.D.D. 9 G 1-3g

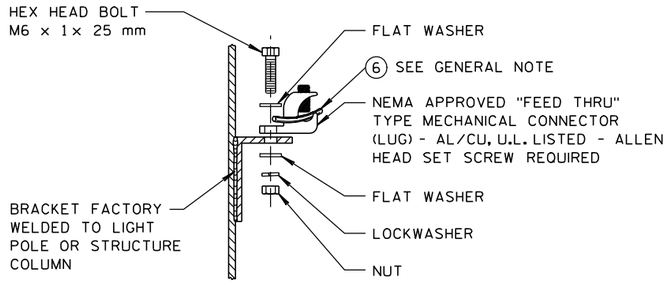


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



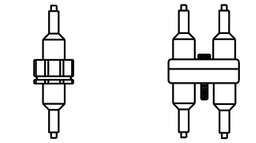
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



FUSE ASSEMBLIES

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

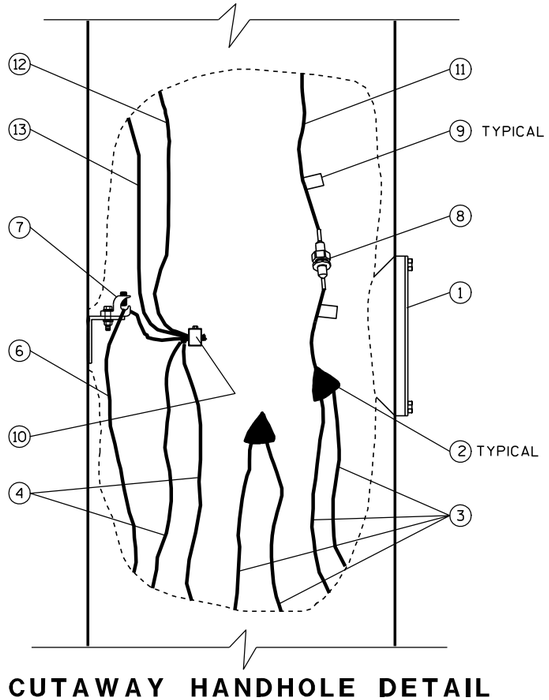
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

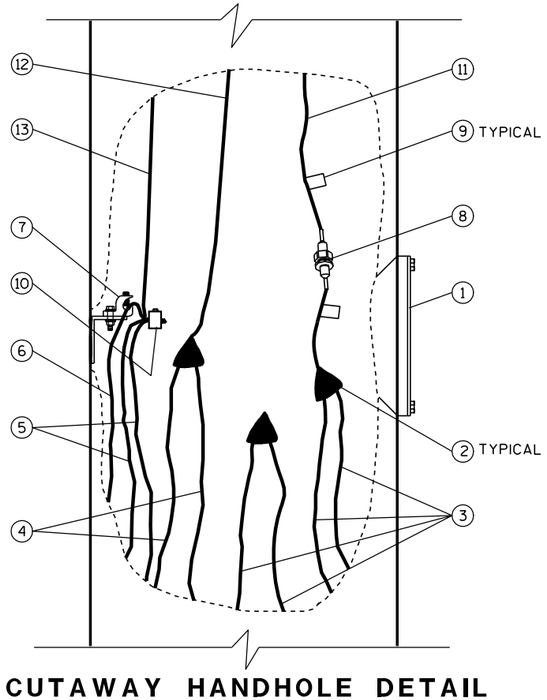
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

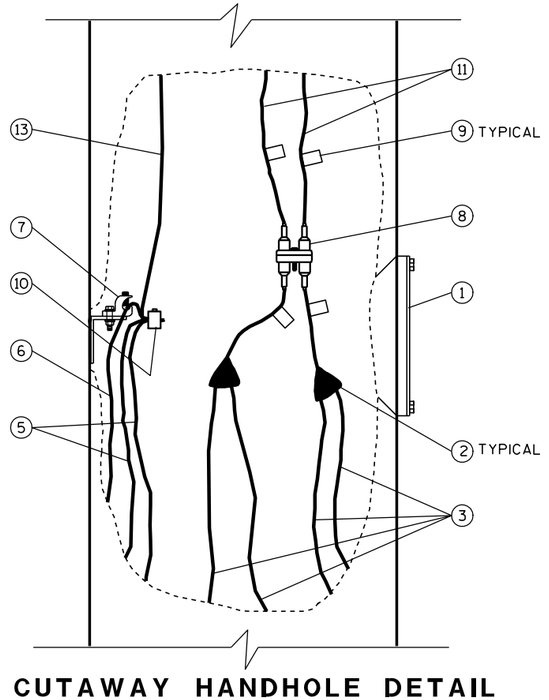
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



CUTAWAY HANDHOLE DETAIL
GROUNDED NEUTRAL SYSTEMS
1-φ



CUTAWAY HANDHOLE DETAIL
ISOLATED NEUTRAL SYSTEMS
1-φ SHOWN; 3-φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL
PHASE-TO-PHASE SYSTEMS
1-φ SHOWN; 3-φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

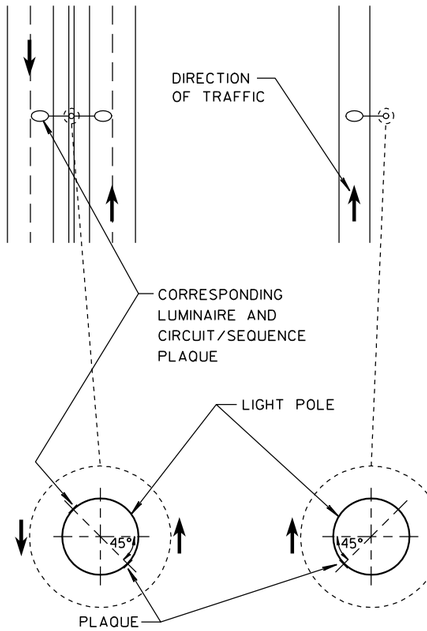
1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 2094 HWYS
FHWA

6
S.D.D. 10 A 1-2



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

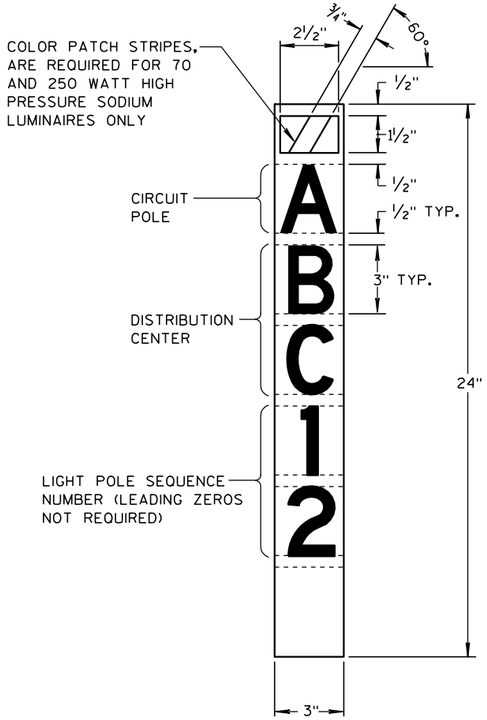
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS LUMINAIRES

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE WITH WHITE STRIPE
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN
70 WATT - BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

6

S.D.D. 10 A 2-2

6

S.D.D. 10 A 2-2

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 2095 HWYS
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

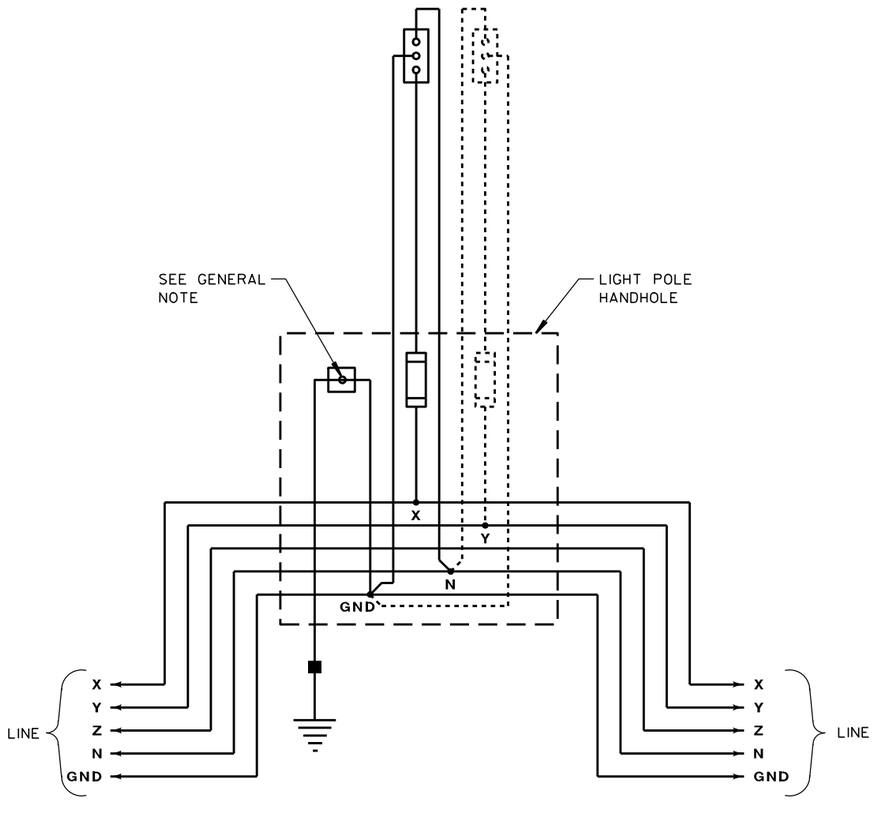
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

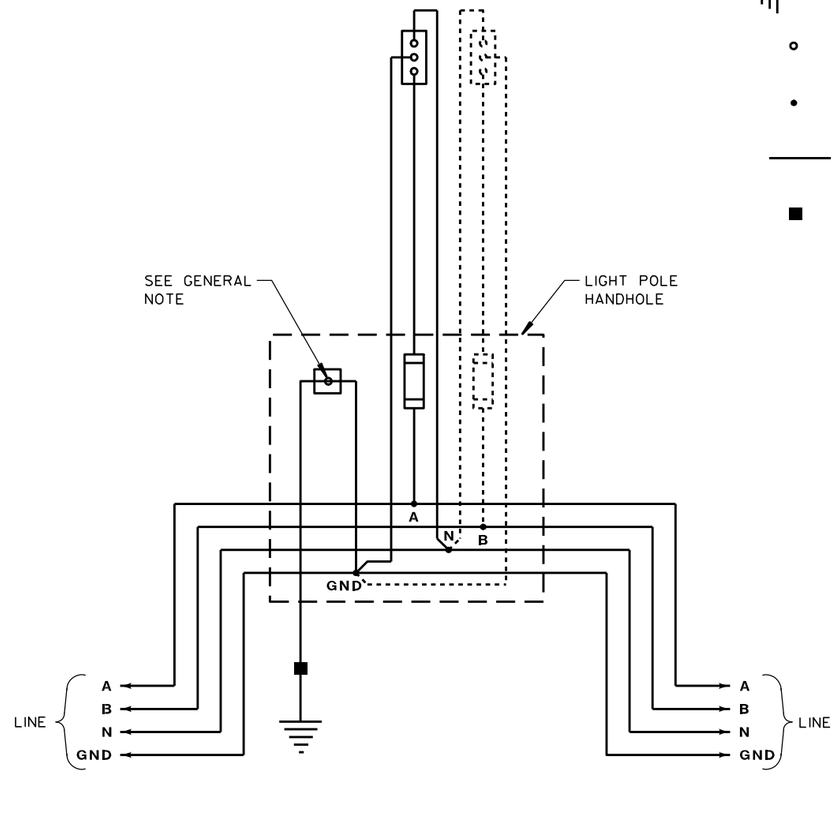
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010
DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 2096 HWYS
FHWA

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S.D.D. 10 A 5-2

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S.D.D. 10 A 5-2

GENERAL NOTES

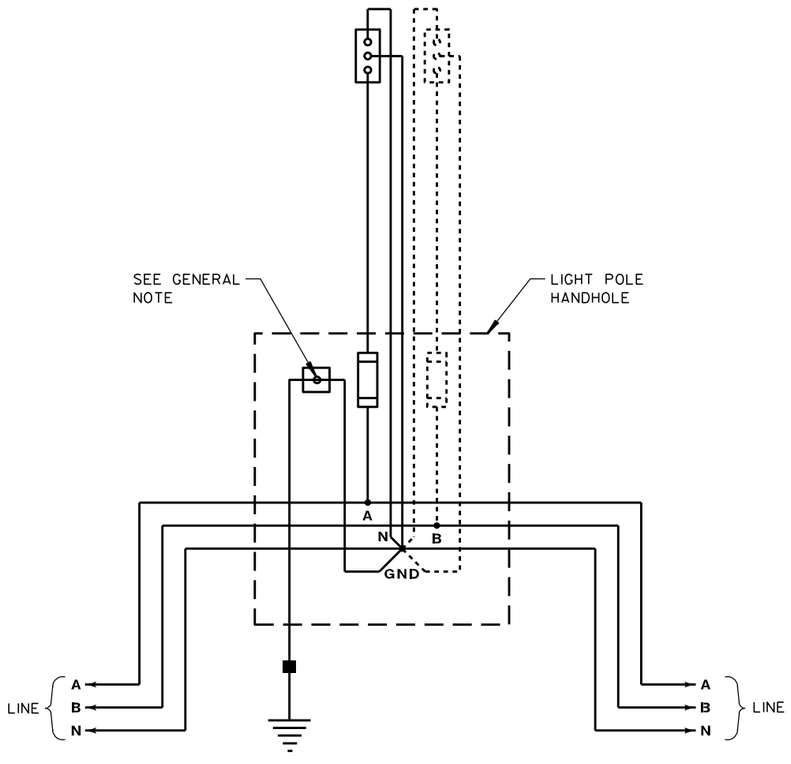
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.



TYPICAL WIRING DIAGRAM
GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE OR 480VAC 2 WIRE

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-GROUND	BALLAST WATTAGE 70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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10/25/2010
DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 2097 HWYS
FHWA

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE φ-GROUND	BALLAST WATTAGE	
	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

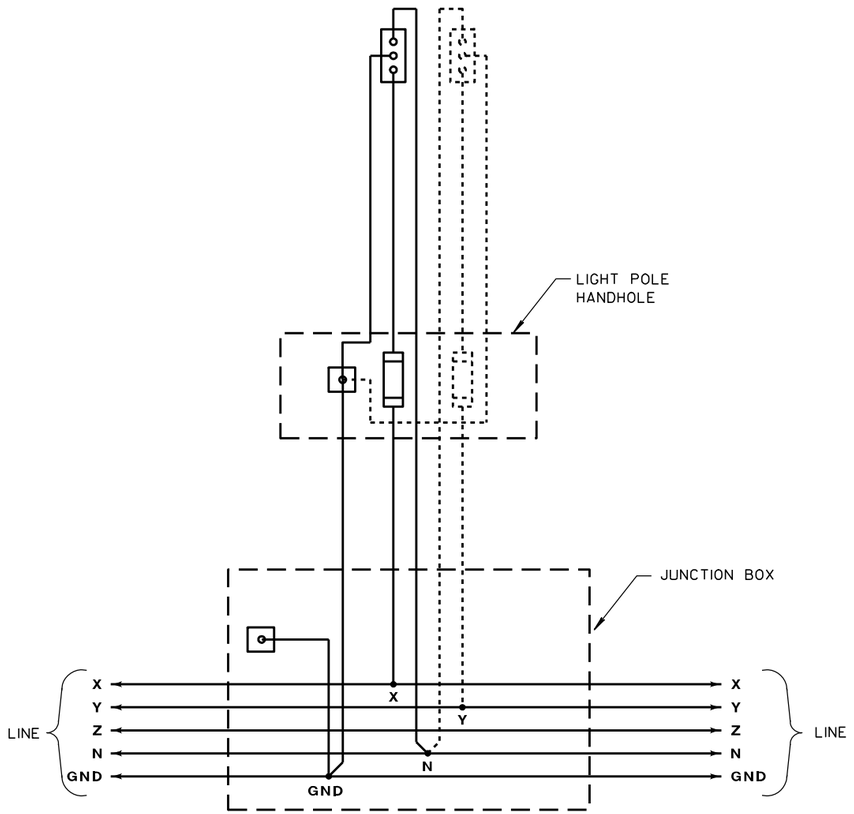
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

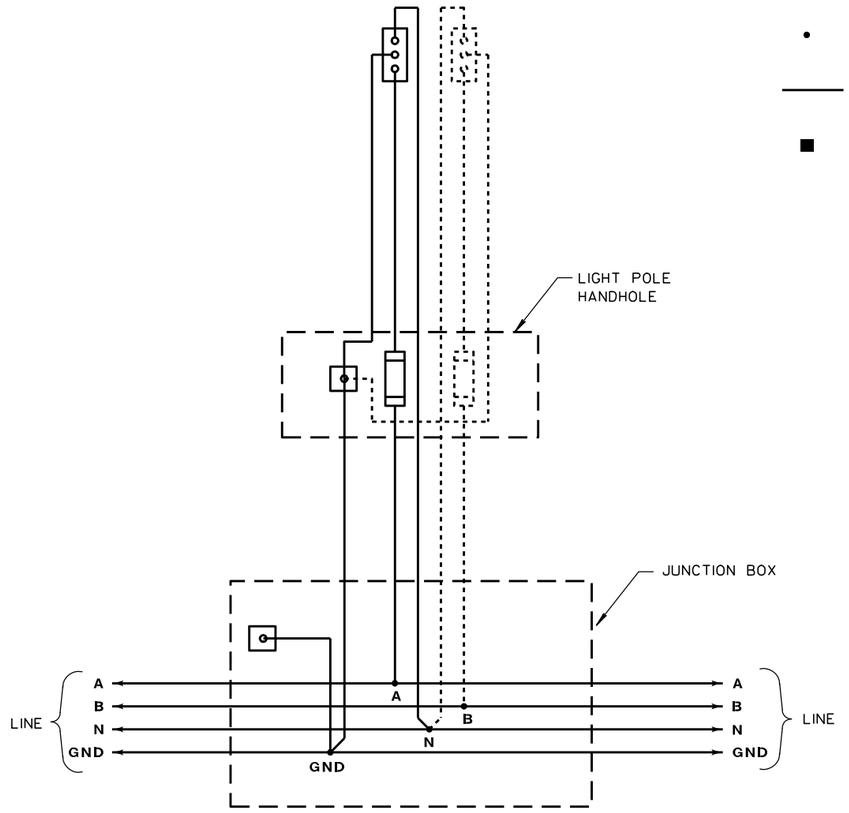
THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALLER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM, PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

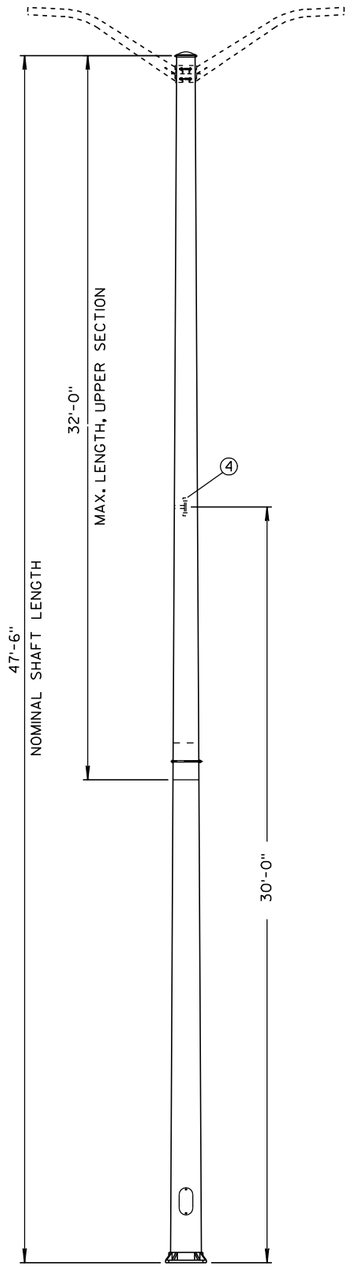
APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI 2098 — HWYS
FHWA

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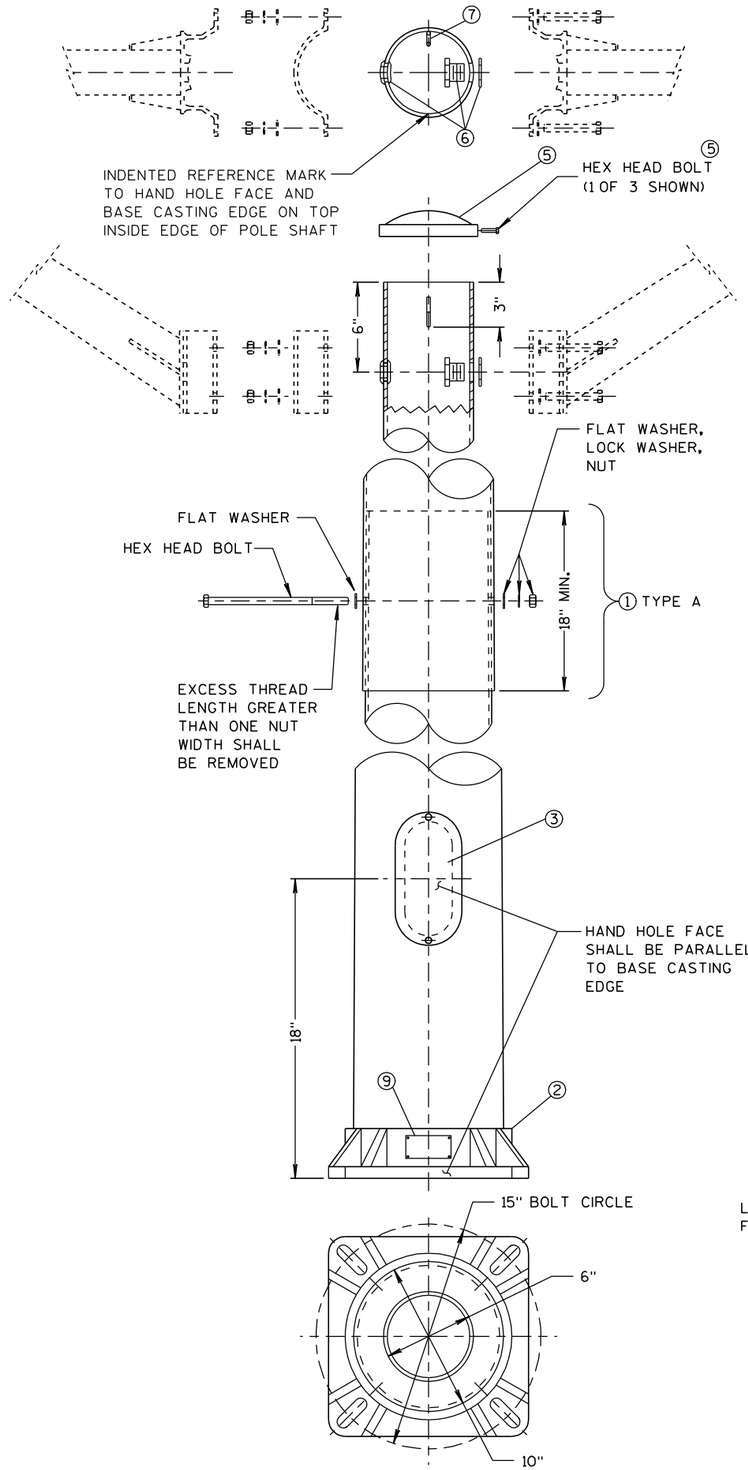
S.D.D. 10 A 8-2

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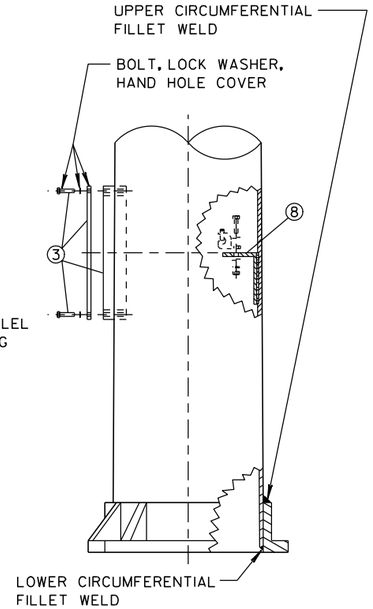
S.D.D. 10 A 8-2



POLE, TYPE A



(TOP VIEW)



POLES COVERED BY THIS DRAWING	
TYPE A	NATURAL FINISH, SLOTTED FOR 1" ANCHOR RODS
TYPE ABR	DARK BROWN ANODIZED, SLOTTED FOR 1" ANCHOR RODS
TYPE A2	NATURAL FINISH, SLOTTED FOR 1¼" ANCHOR RODS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM. EXCEPT THAT BASE CASTINGS SHALL BE CONSTRUCTED OF 356-T6 ALUMINUM. THE SHAFT SHALL BE ROUND AND UNIFORMLY TAPERED FROM A 10" O.D. BUTT TO A 6" O.D. TOP.

HEAT TREATMENT OF WELDMENTS IN STRUCTURAL AREAS (e.g. BASE CASTING, HAND HOLE, BRACKET FOR GROUNDING LUG) REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE ARMS AND CLAMP ASSEMBLIES SHOWN FOR INFORMATION ONLY (PAID SEPARATELY).

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A.

① OPTIONAL TELESCOPING FIELD JOINT SECURED BY A ⅝"-11 TPI THROUGH BOLT OR STUD.

THE OVERLAP OF THE UPPER AND LOWER SECTIONS SHALL BE NOT LESS THAN 18".

② SHOE BASE.

③ 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY SECURED BY TWO (2) ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

HANDHOLE SHALL BE 90 DEGREES FROM LUMINAIRE ARMS OF TWIN LUMINAIRE POLES; 180 DEGREES FROM LUMINAIRE ARM OF SINGLE LUMINAIRE POLES; 0 DEGREES FROM LUMINAIRE ARM FOR STRUCTURE MOUNTED POLES.

④ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

⑤ FURNISH AND INSTALL CAST OR METALLIC (ALUMINUM ALLOY) POLE CAP. FASTEN CAP WITH THREE ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑥ 1⅜" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET), PER EACH REQUIRED LUMINAIRE ARM.

⑦ FACTORY-WELDED "J" HOOK FOR POLE WIRE STRAIN RELIEF.

⑧ FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE. (LUG AND HARDWARE PAID UNDER SEPARATE ITEMS; SHOWN FOR INFORMATION ONLY). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑨ MANUFACTURER'S PLATE SHOWING WisDOT POLE TYPE, MANUFACTURER, AND DATE.

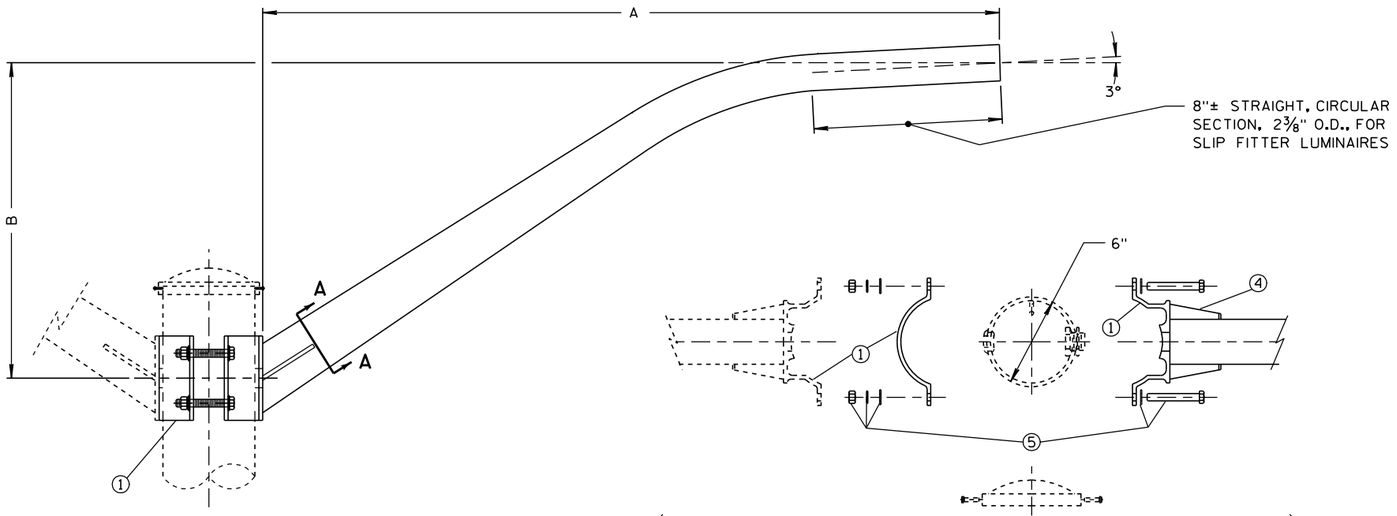
POLE TYPE (NOM. SHAFT LENGTH)	TYPICAL APPLICATION	ARM & LUMINAIRE LOADS (MAX.)	ADDITIONAL (MAX.) LOADS
TYPE A, ABR, A2 (47'-6")	FREEWAY MEDIAN OR STRUCTURE MOUNT	SINGLE ARM, UP TO 10 FT., OR TWIN 4 FT. ARMS	UP TO 20 SQ. FT. OF TRAFFIC SIGNS, MOUNTED AS HIGH AS 15 FT. TO TOP OF SIGN

POLES, TYPES A, ABR, A2
ALUMINUM 47'-6" SHAFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

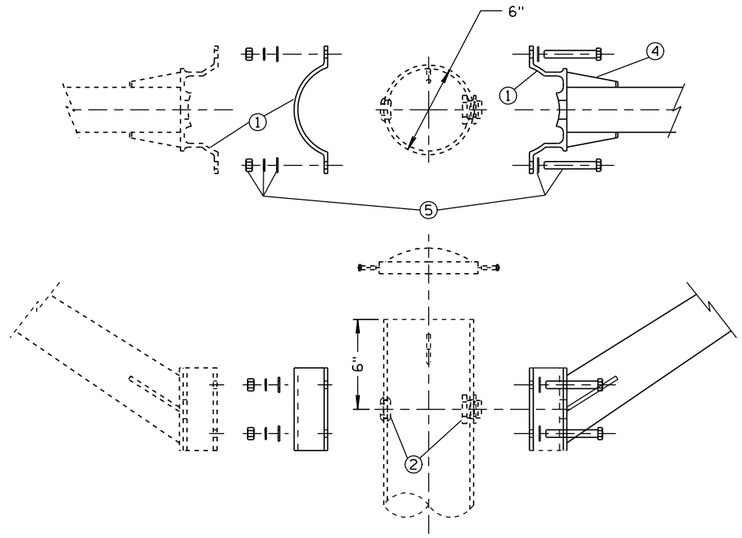
APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI 2099 — HWYS
FHWA

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S.D.D. 10 A 17-3b



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)



CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM (OR DARK BRONZE ANODIZED IF SO STATED IN THE CONTRACT).

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1⅜" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1½" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - ½"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/25/2010 DATE

/S/ John Cochis
STATE ELECTRICAL ENGI 2100 HWYS

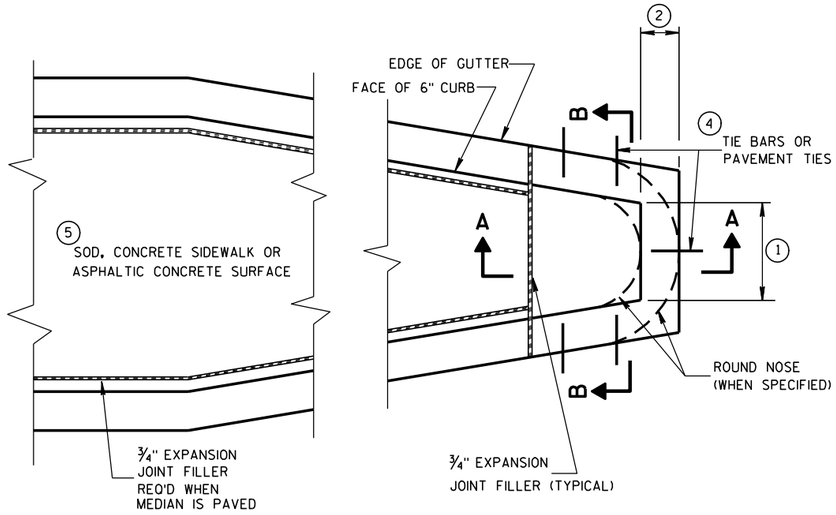
FHWA

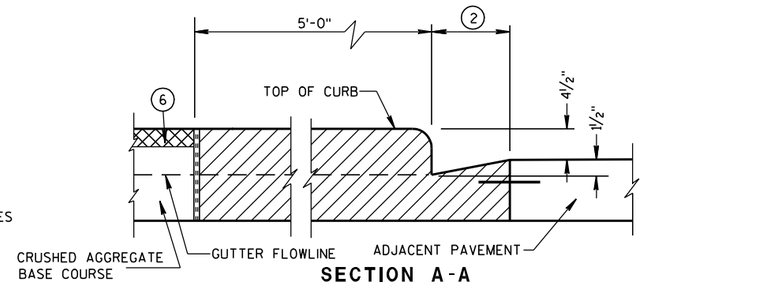
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S.D.D. 10 A 18-4a

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S.D.D. 10 A 18-4a





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

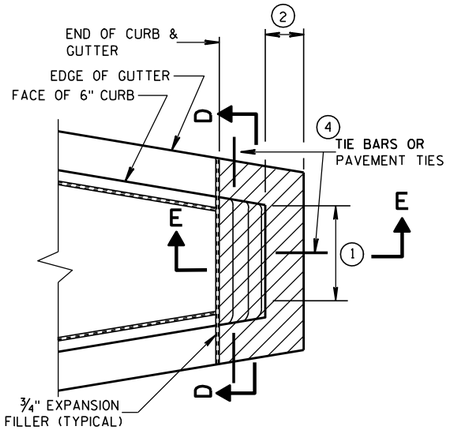
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

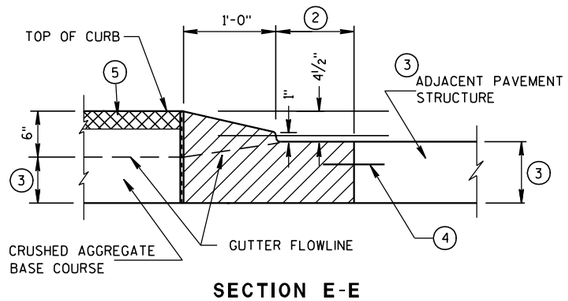
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

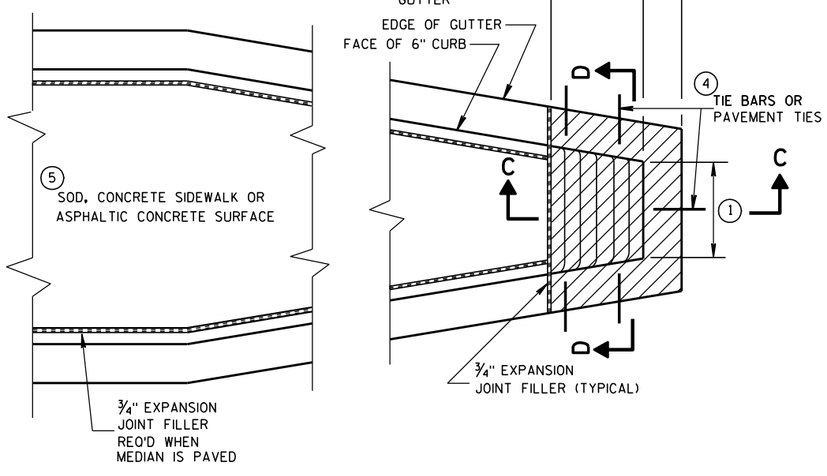
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

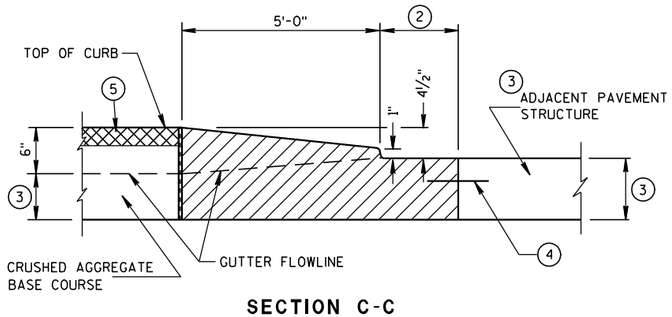




SECTION E-E

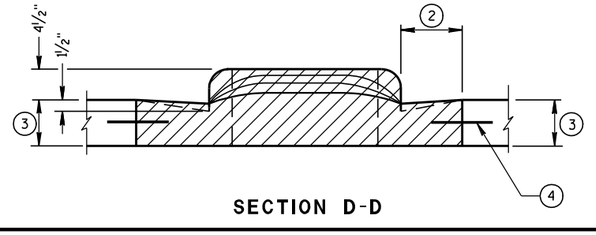
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

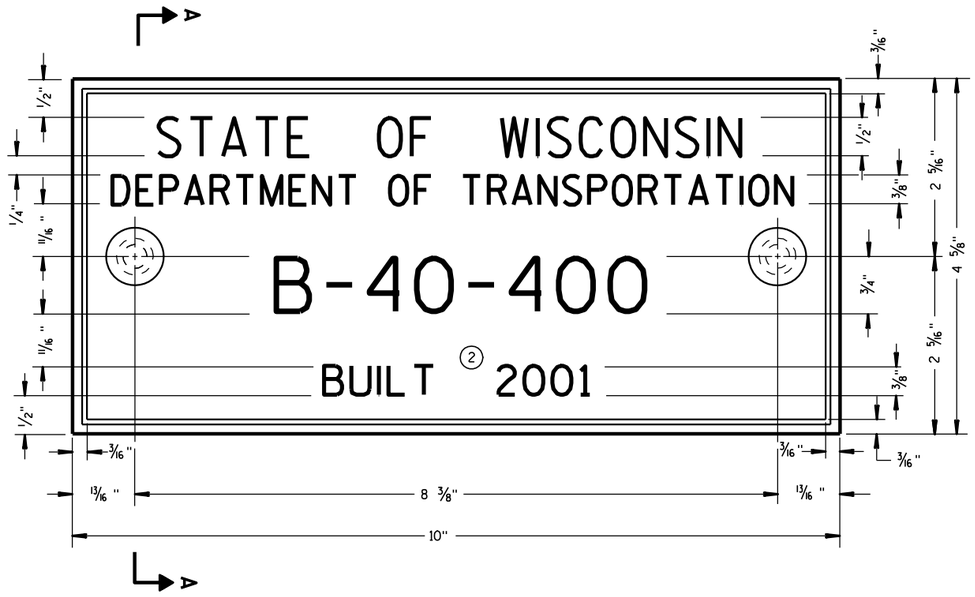
CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER 2101 NT

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S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

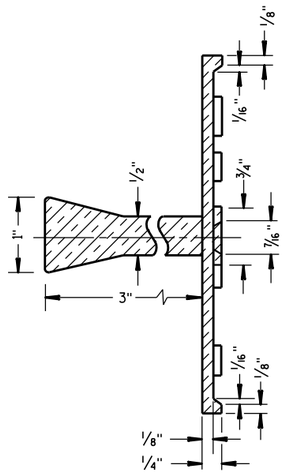
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

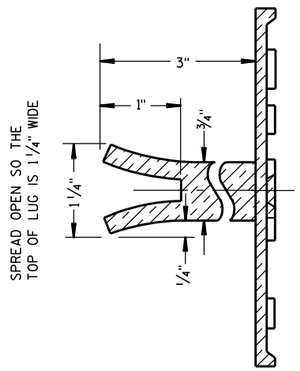
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

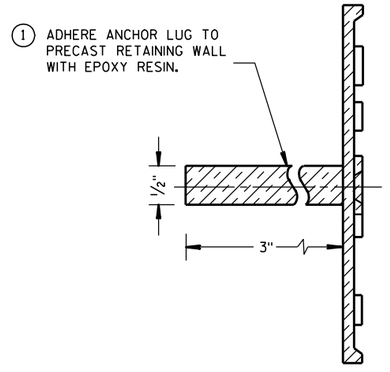
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

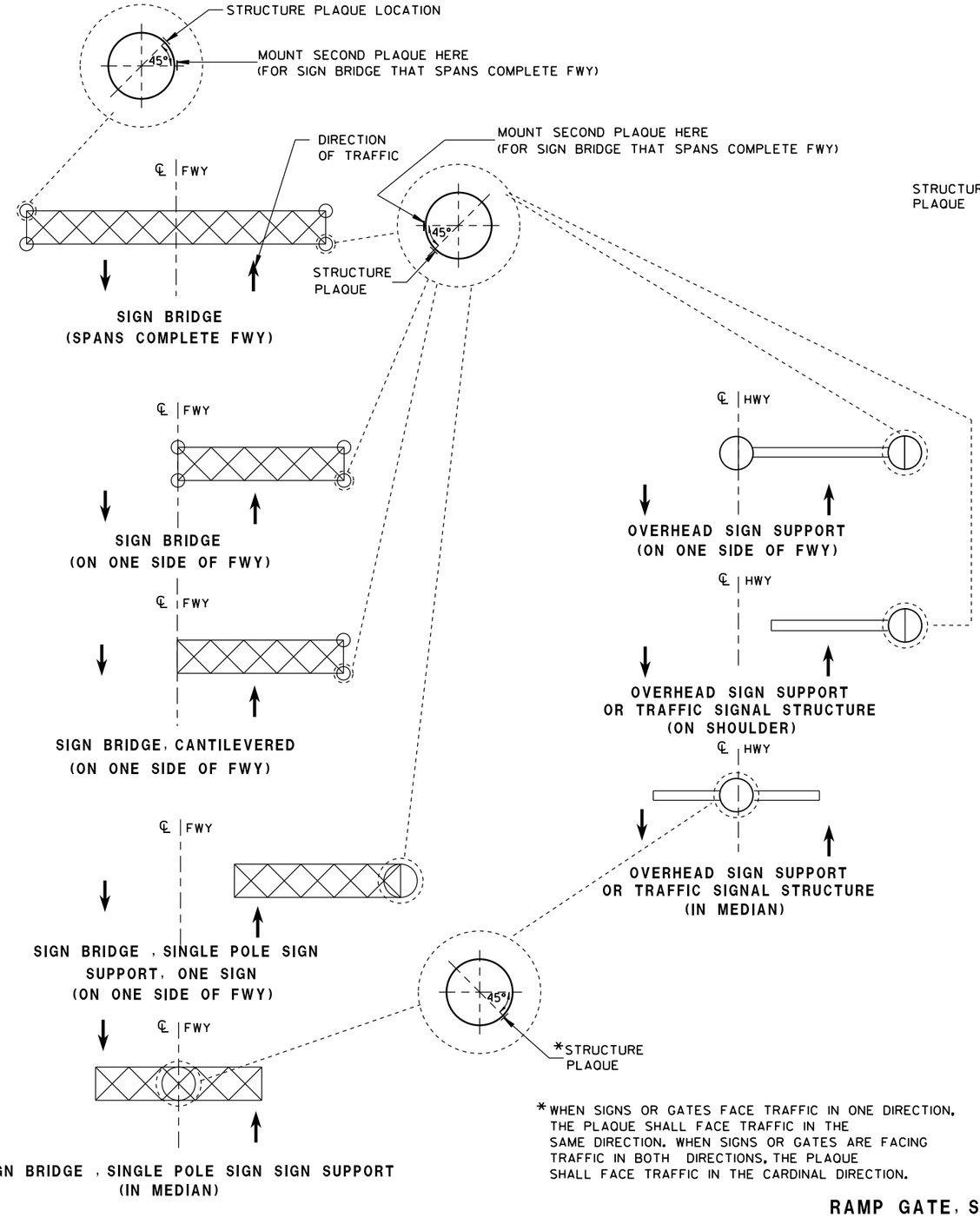
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP 2102 ENGINEER

FHWA

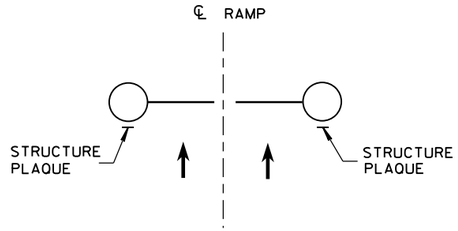
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S.D.D. 12 A 3-10

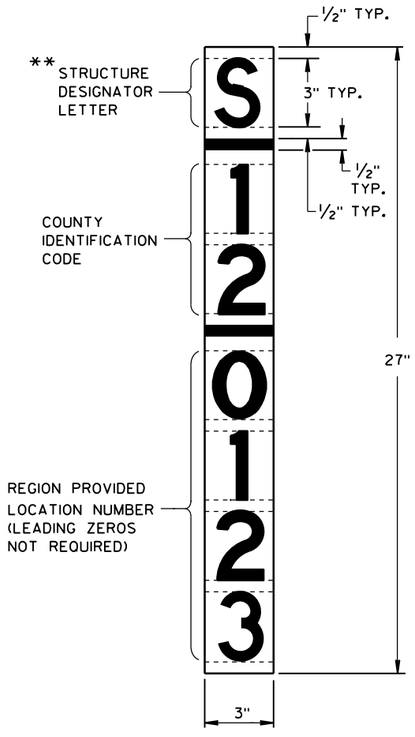


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

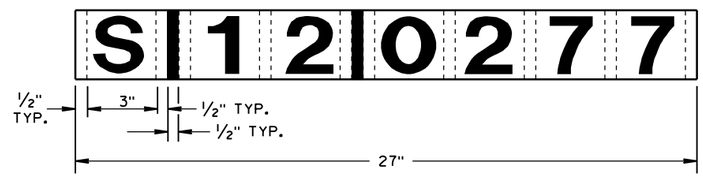
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

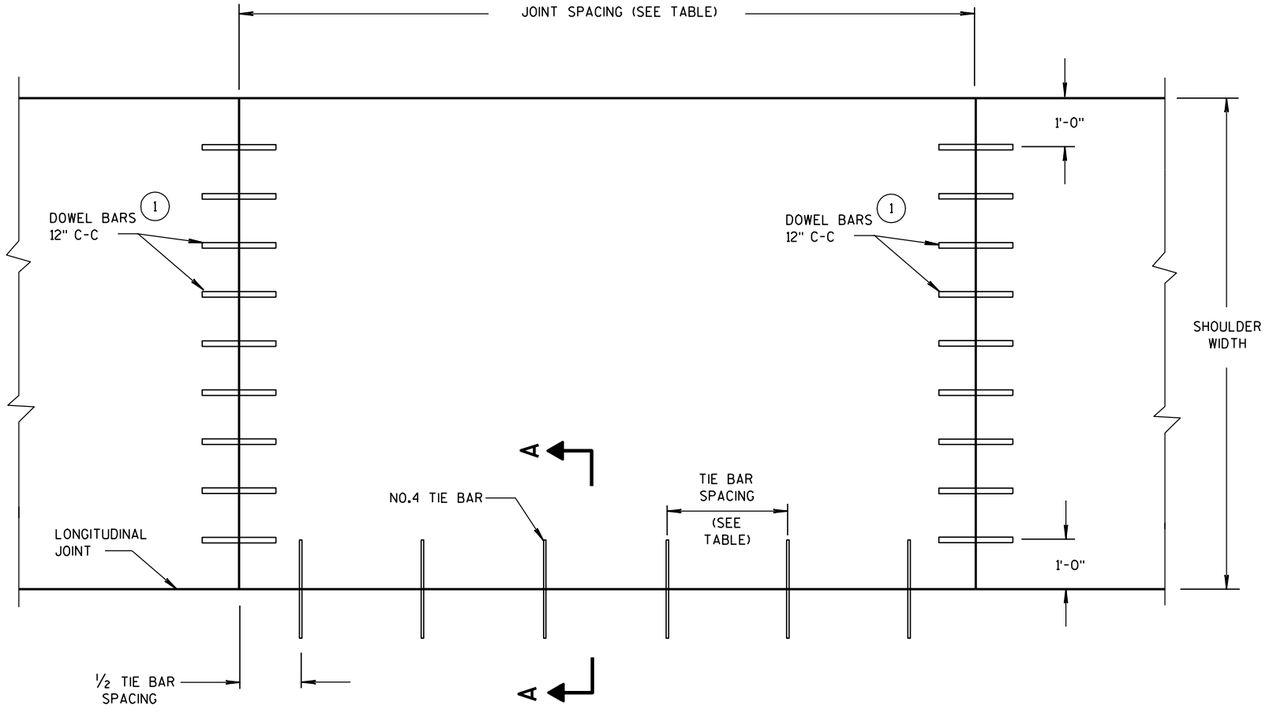
2103 SIGN

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S.D.D. 12 A 4-3

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S.D.D. 12 A 4-3



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDERS
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDERS

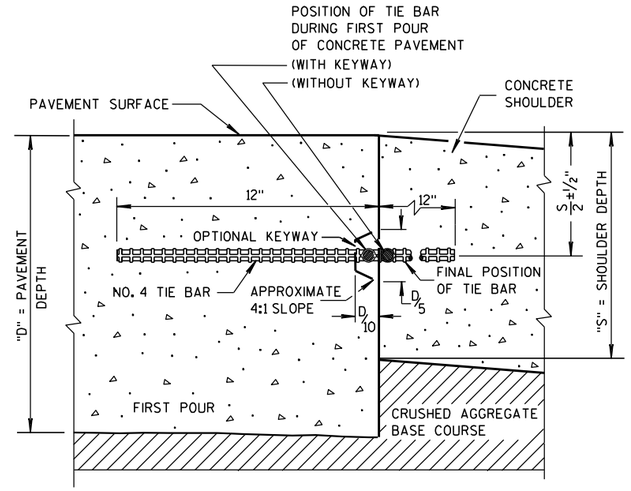
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

(1) **PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

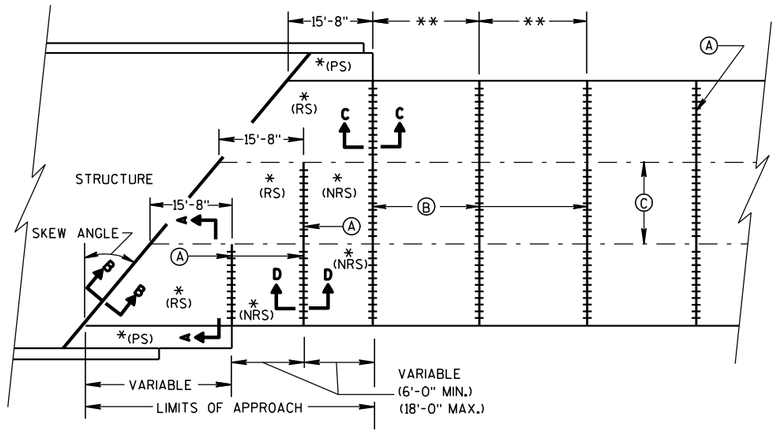
APPROVED
8/15/2011 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D 2104 ENGINEER
FHWA

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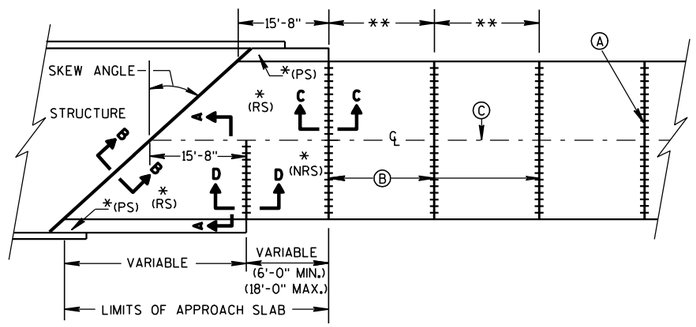
S.D.D. 13 A 3-5

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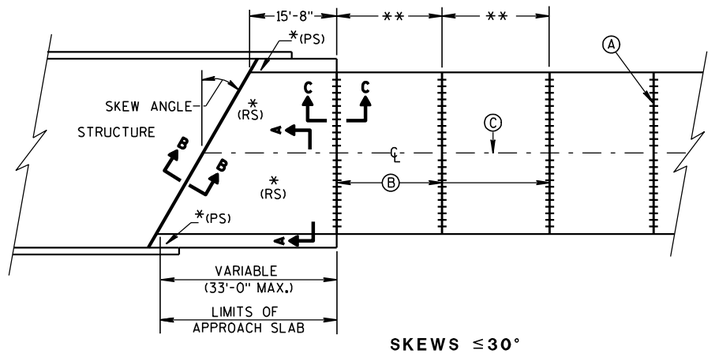
S.D.D. 13 A 3-5



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



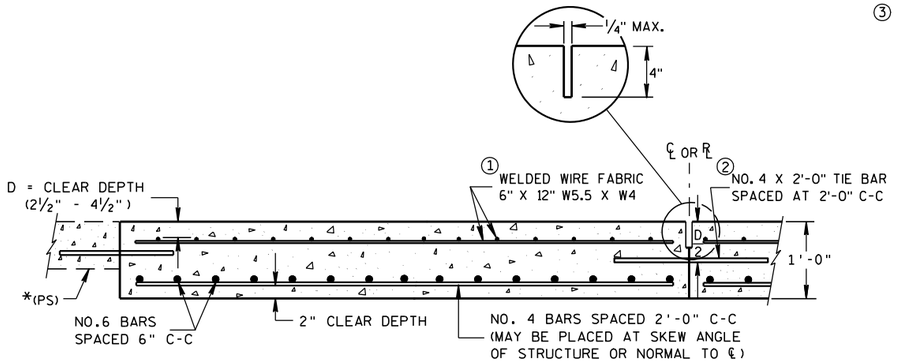
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

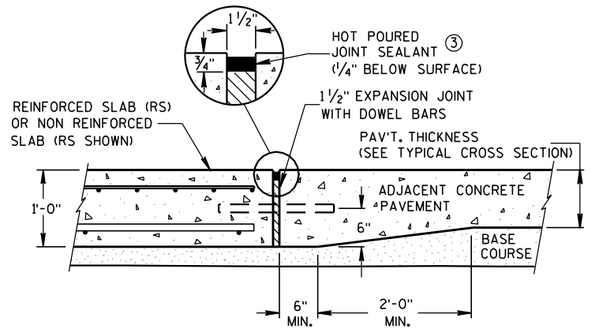
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

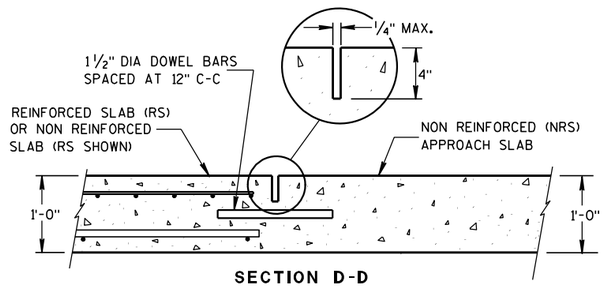
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



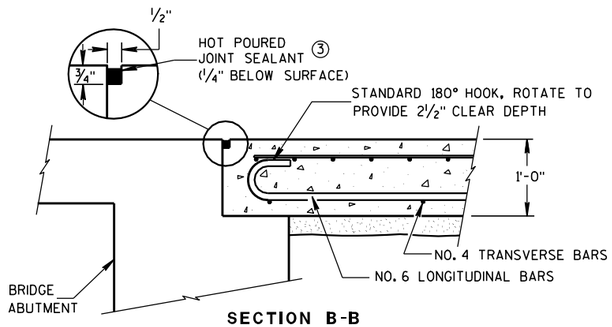
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

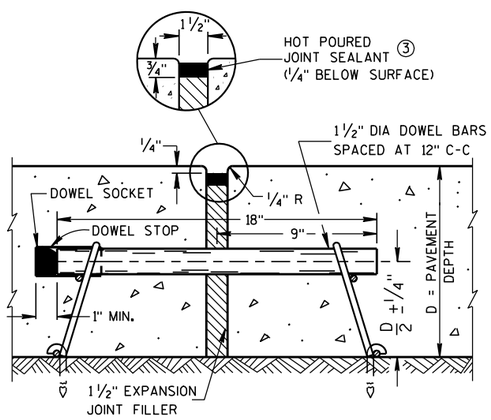
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

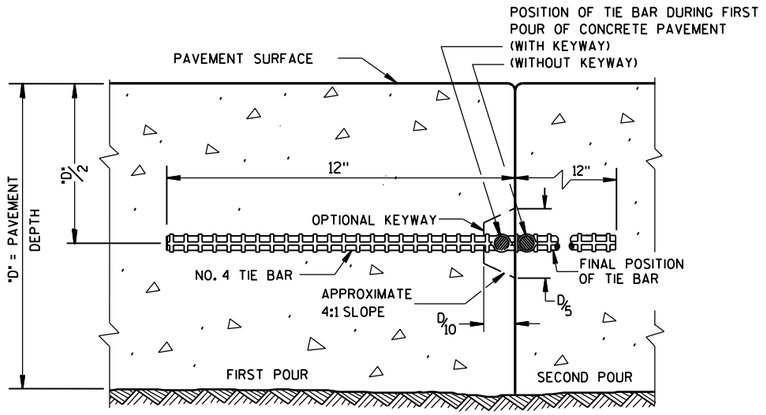
APPROVED
12/11/2009
DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE 2105 NEER
FHWA

6

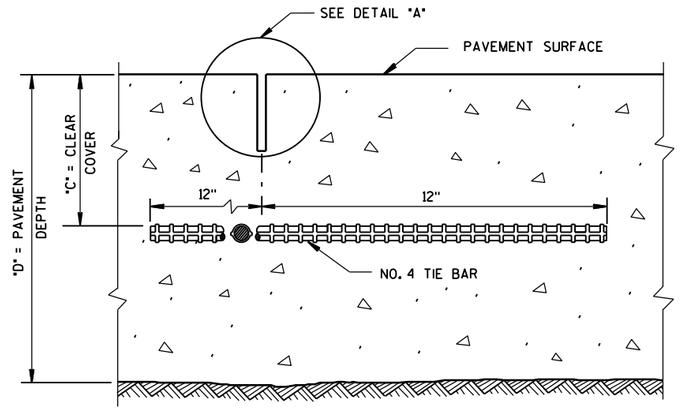
S.D.D. 13 B 2-6

6

S.D.D. 13 B 2-6



CONSTRUCTION JOINT



SAWED JOINT

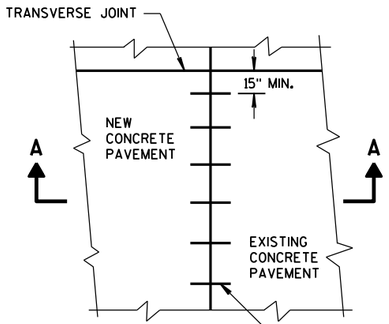
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

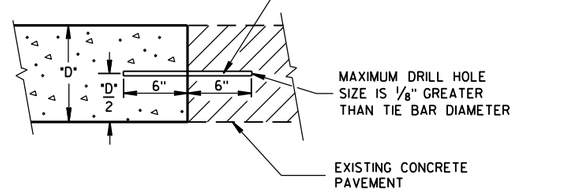
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

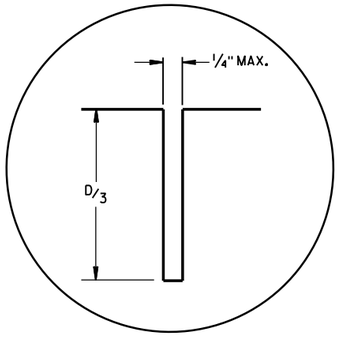


PLAN VIEW



SECTION A-A

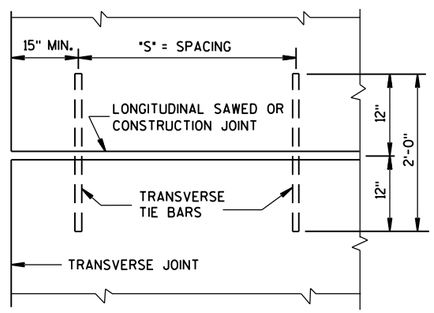
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ... NEER

FHWA

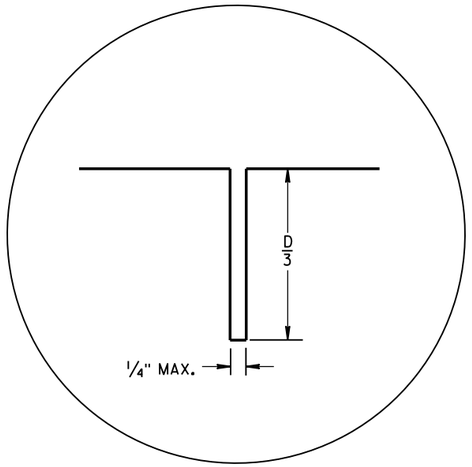
2106

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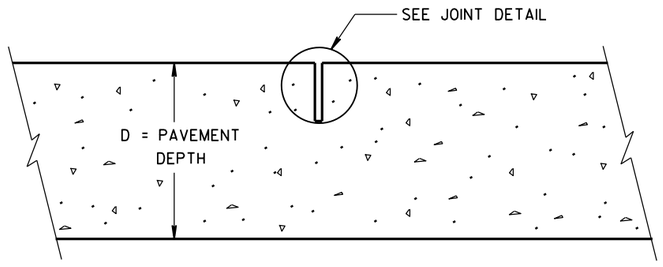
S.D.D. 13 C 1-16

6

S.D.D. 13 C 1-16



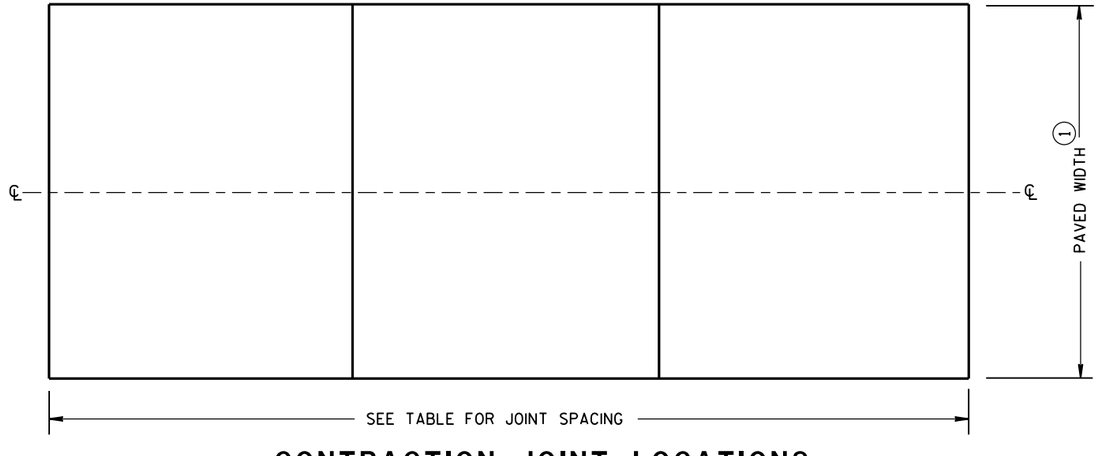
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

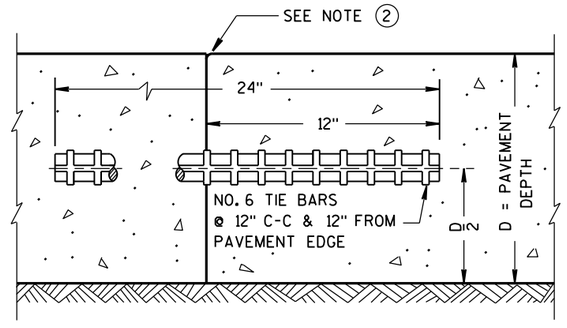
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

6

6

S.D.D. 13 C 4-16

S.D.D. 13 C 4-16

URBAN NON-DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

2107

IEER

FHWA

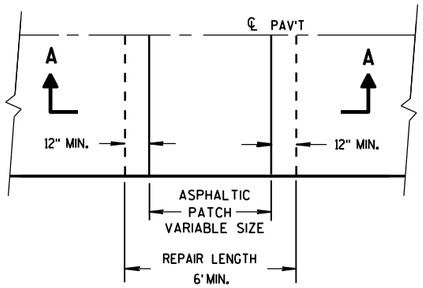
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

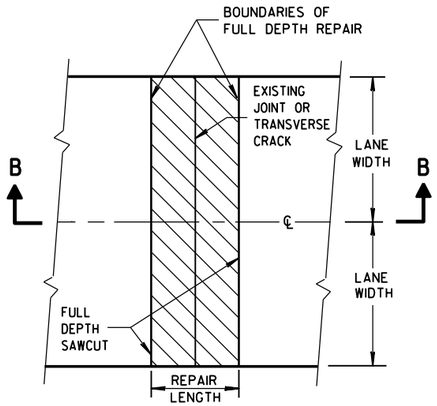
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

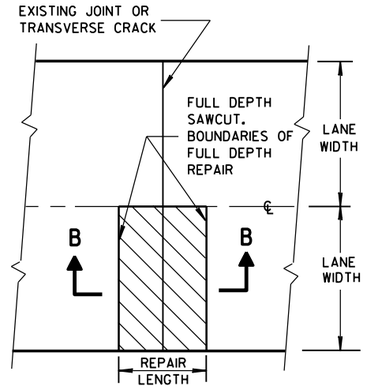
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



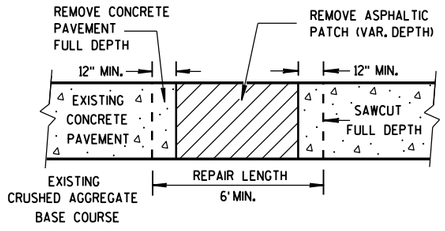
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

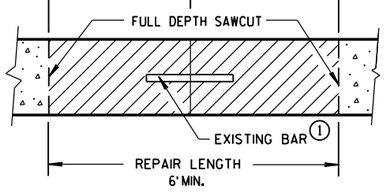
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

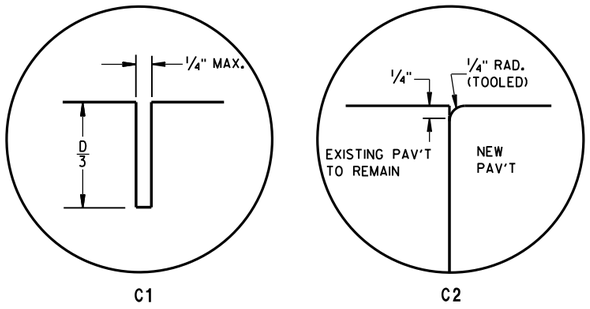
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 2108

6

S.D.D. 13 C 9-11a

6

S.D.D. 13 C 9-11a

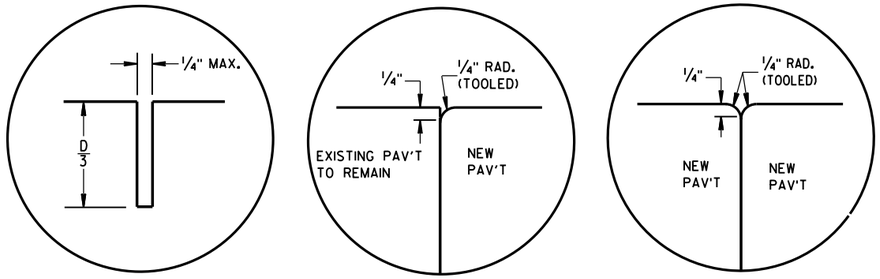


C1 C2

TRANSVERSE JOINTS

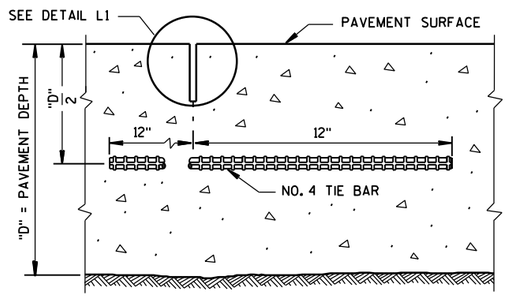
TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

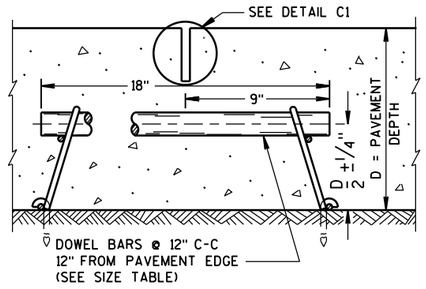
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

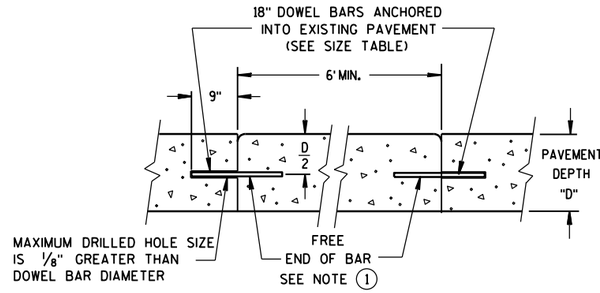
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

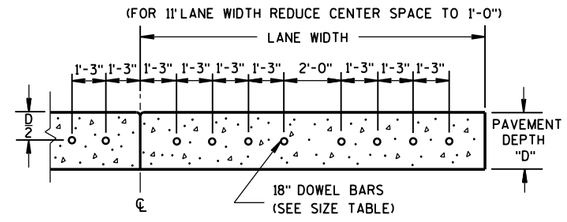


SECTION F-F

CONTRACTION JOINT



SECTION D-D

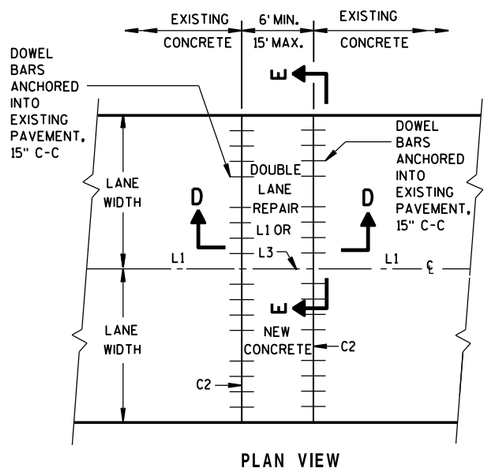


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

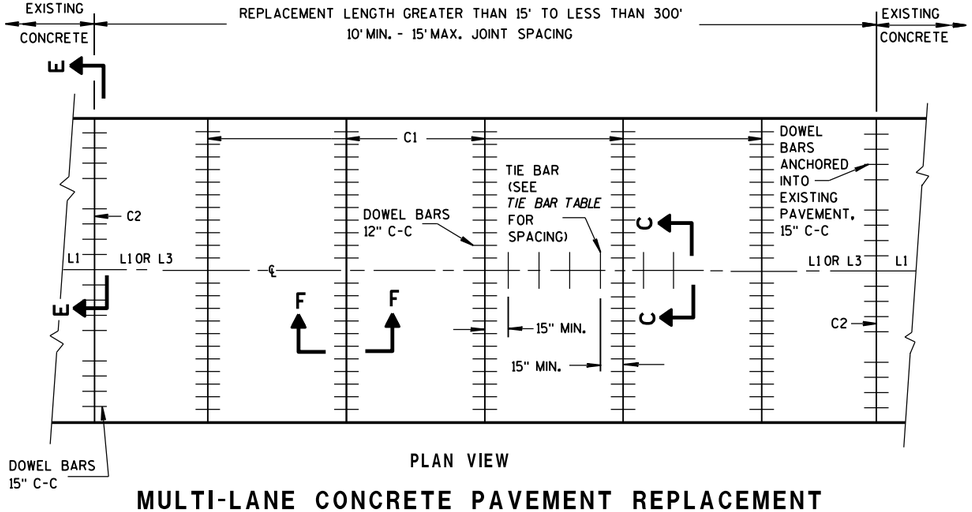
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

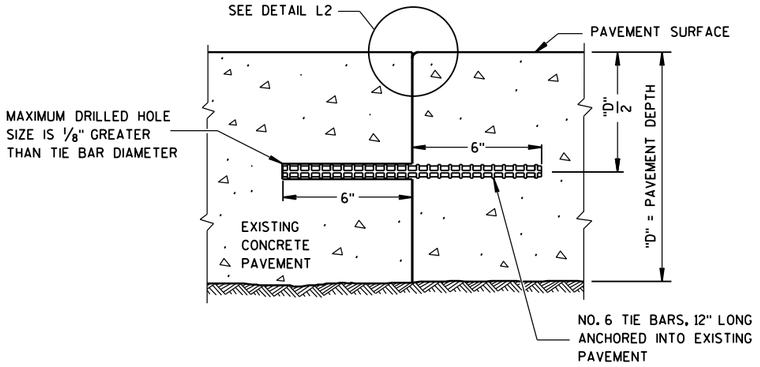
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2109

6

S.D.D. 13 C 9-11b

6

S.D.D. 13 C 9-11b



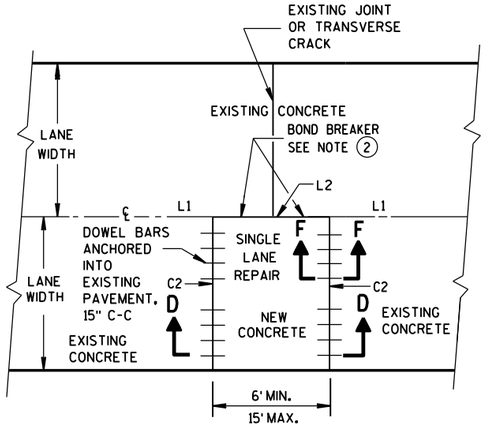
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

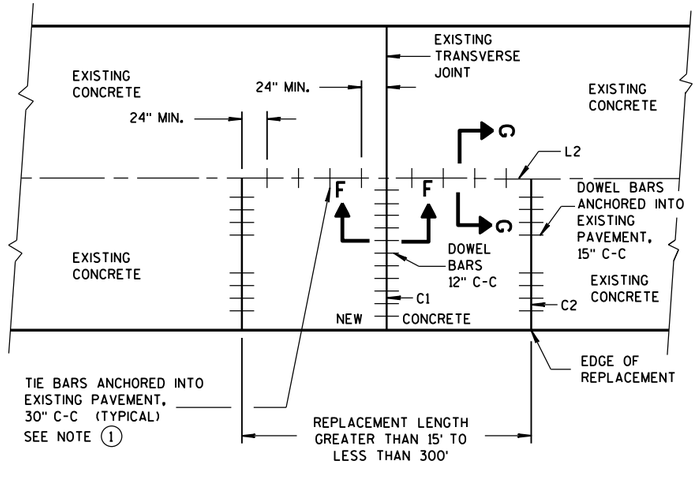
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE: 2110 IEER

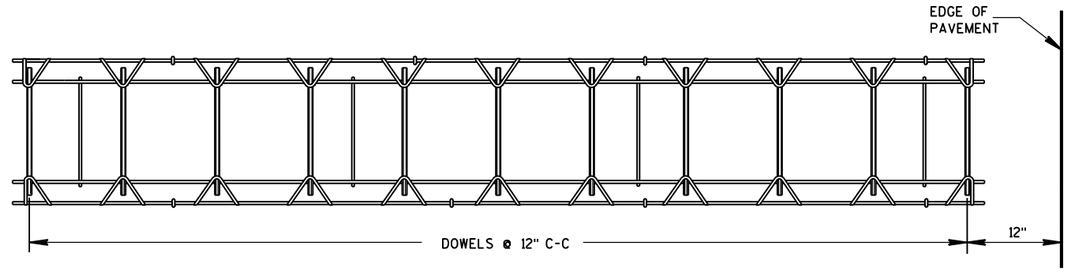
FHWA

6

S.D.D. 13 C 9-11c

6

S.D.D. 13 C 9-11c

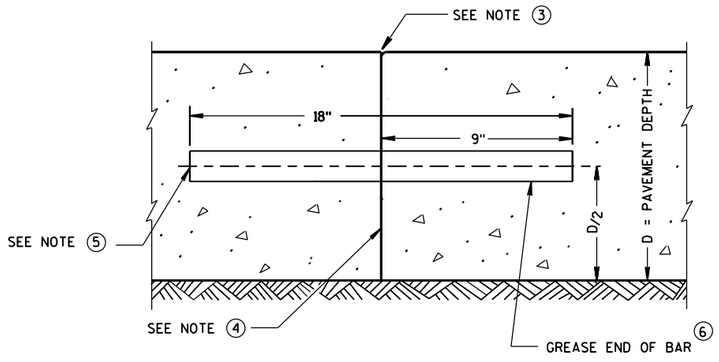


PLAN VIEW

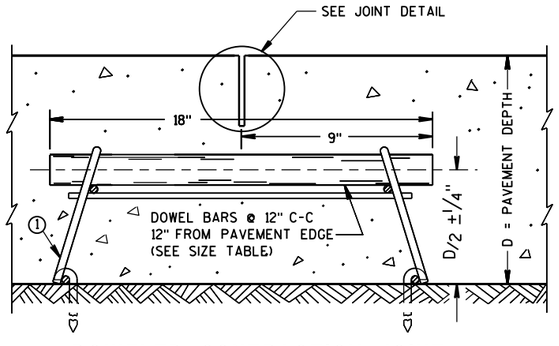


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



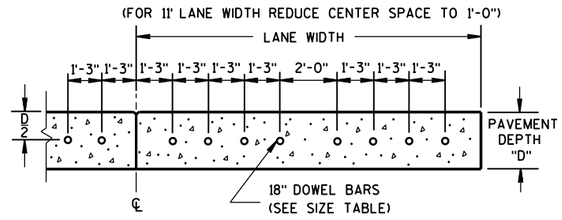
TRANSVERSE CONSTRUCTION JOINT



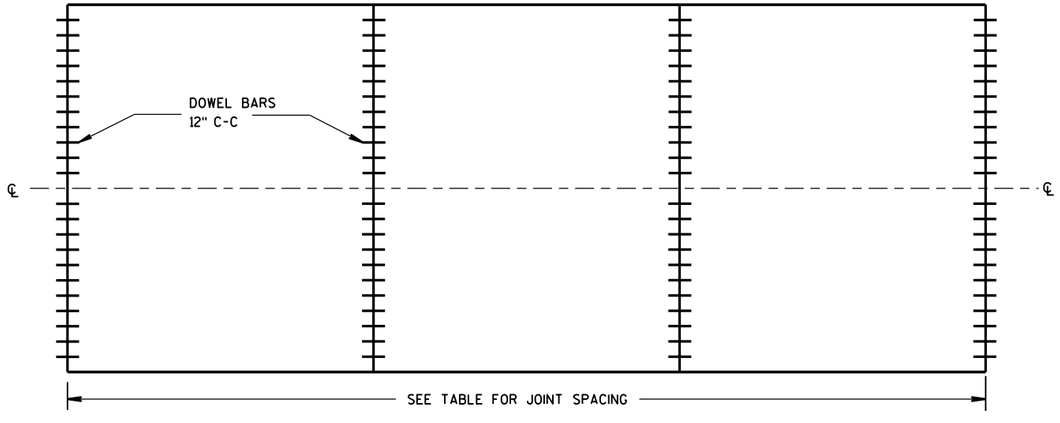
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

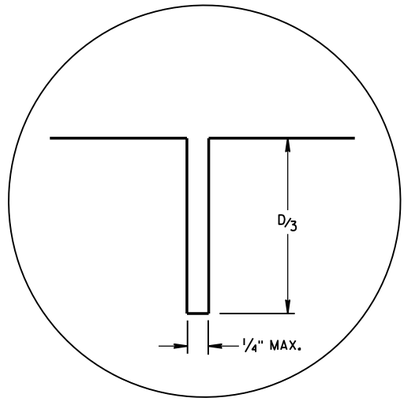
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



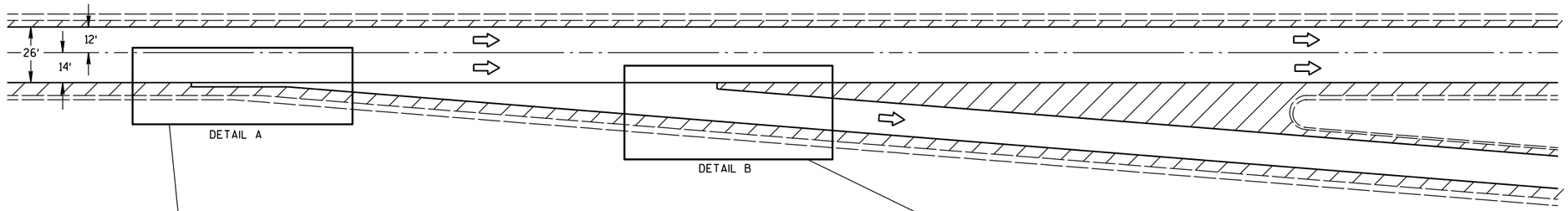
JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

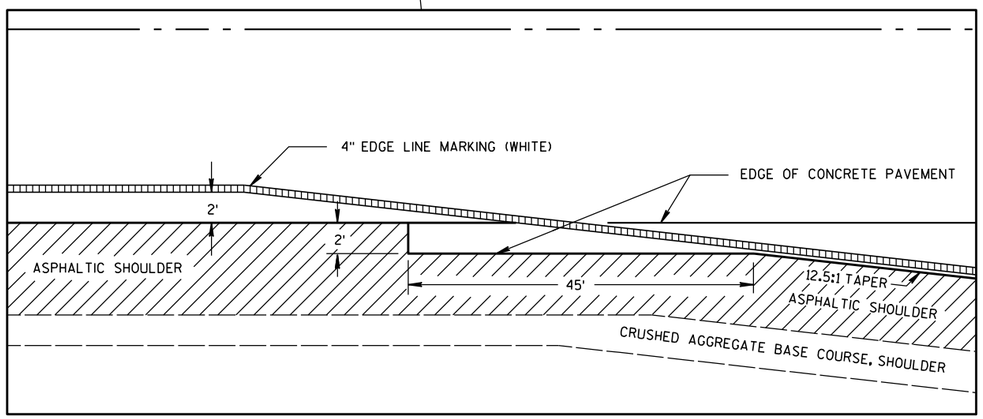
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
FHWA

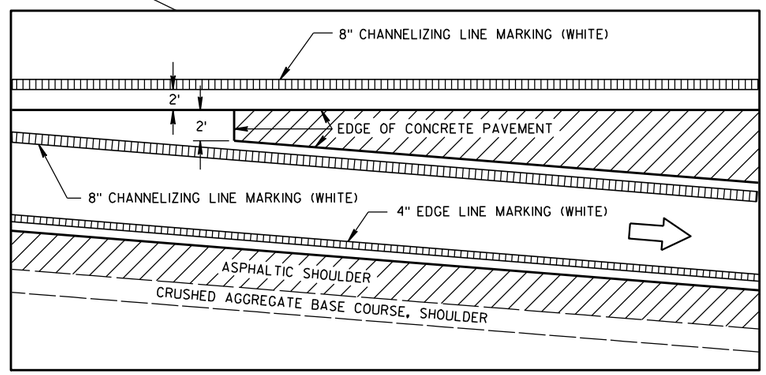
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S.D.D. 13 C 13-8



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

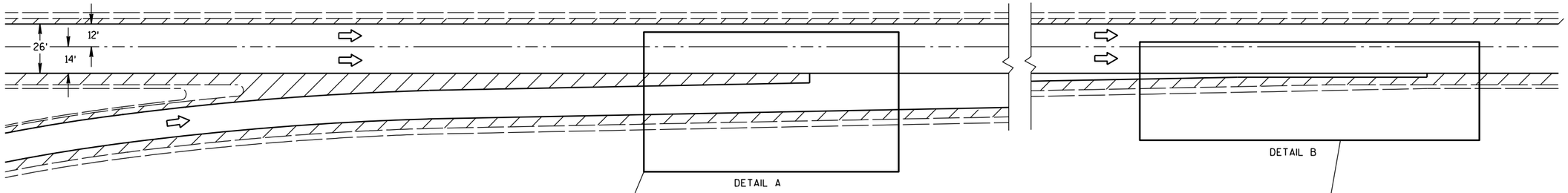
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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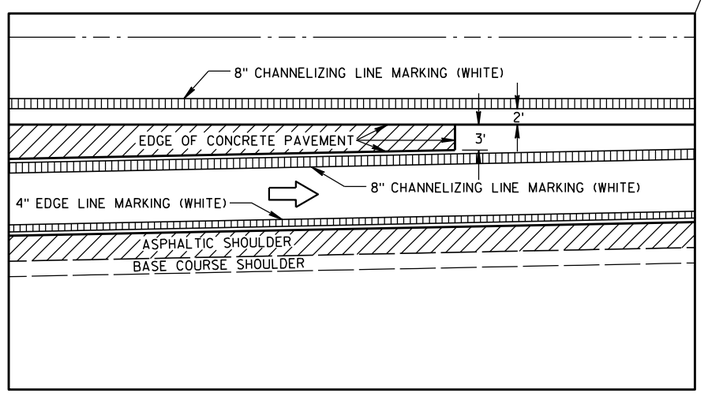
S.D.D. 13 C 17-1a

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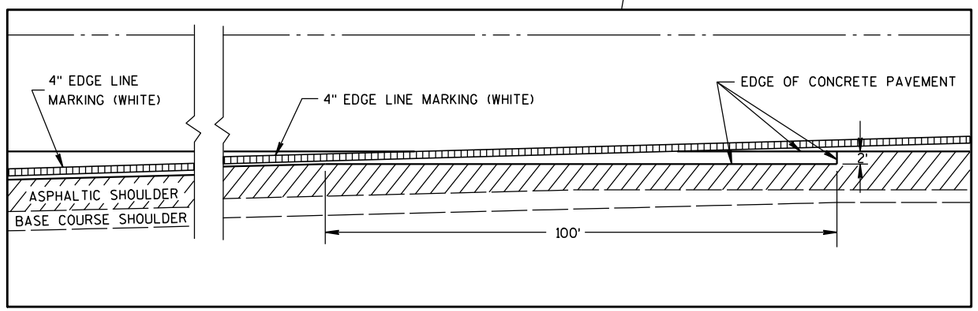
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

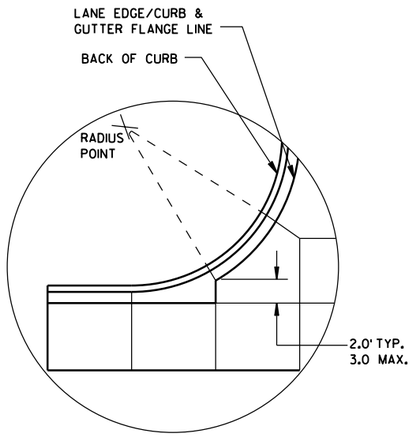
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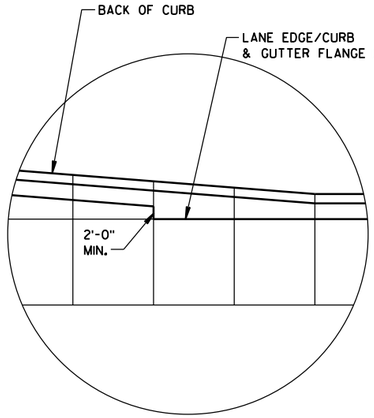
S.D.D. 13 C 17-1b

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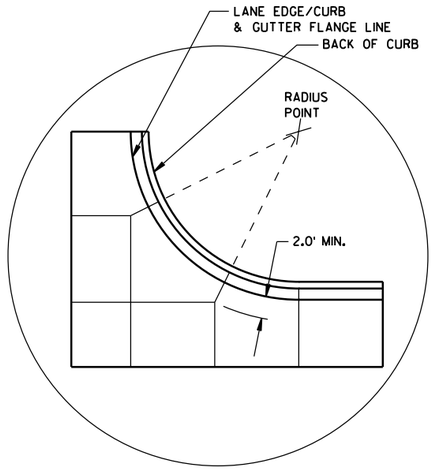
S.D.D. 13 C 17-1b



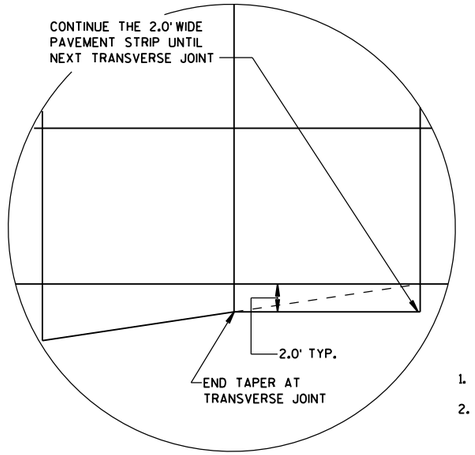
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

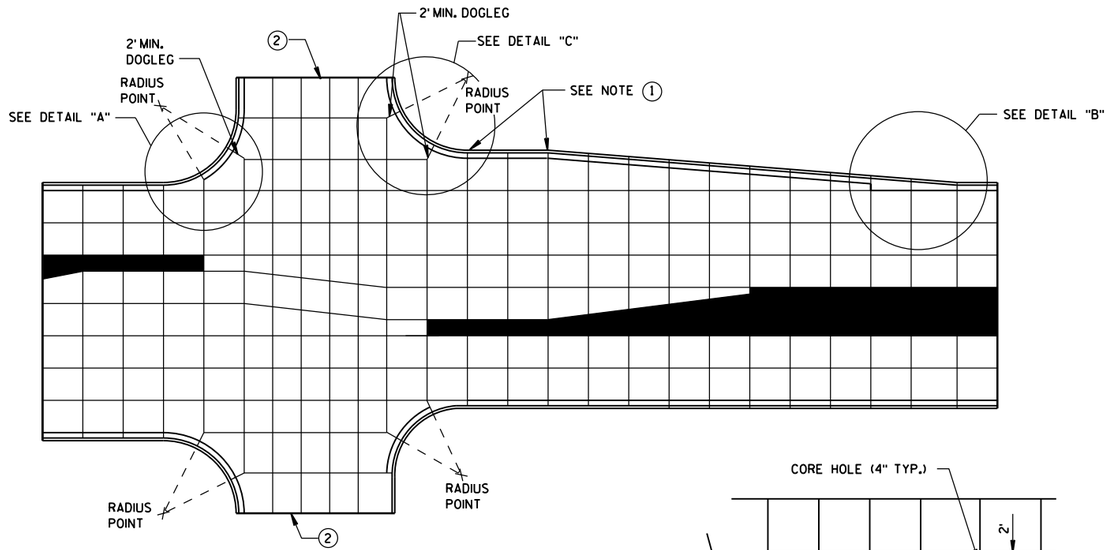
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

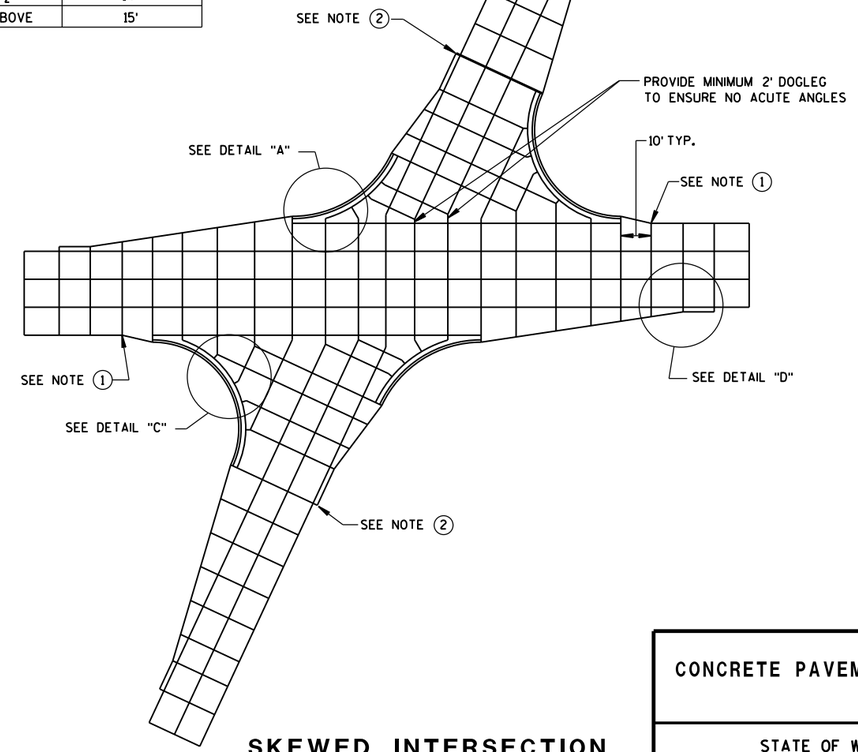
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



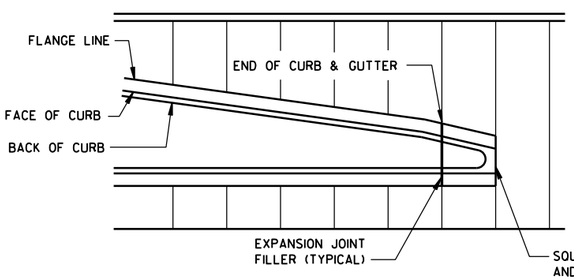
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

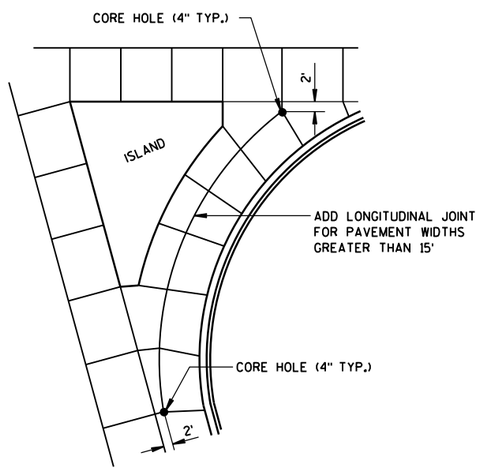
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2114

6

S.D.D. 13 C 18-2a

6

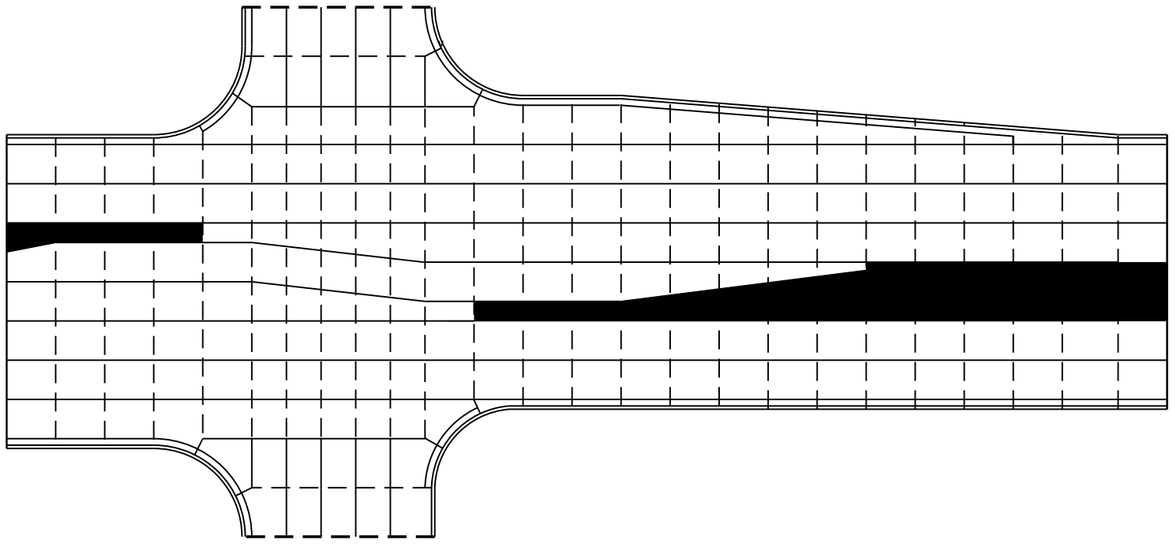
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

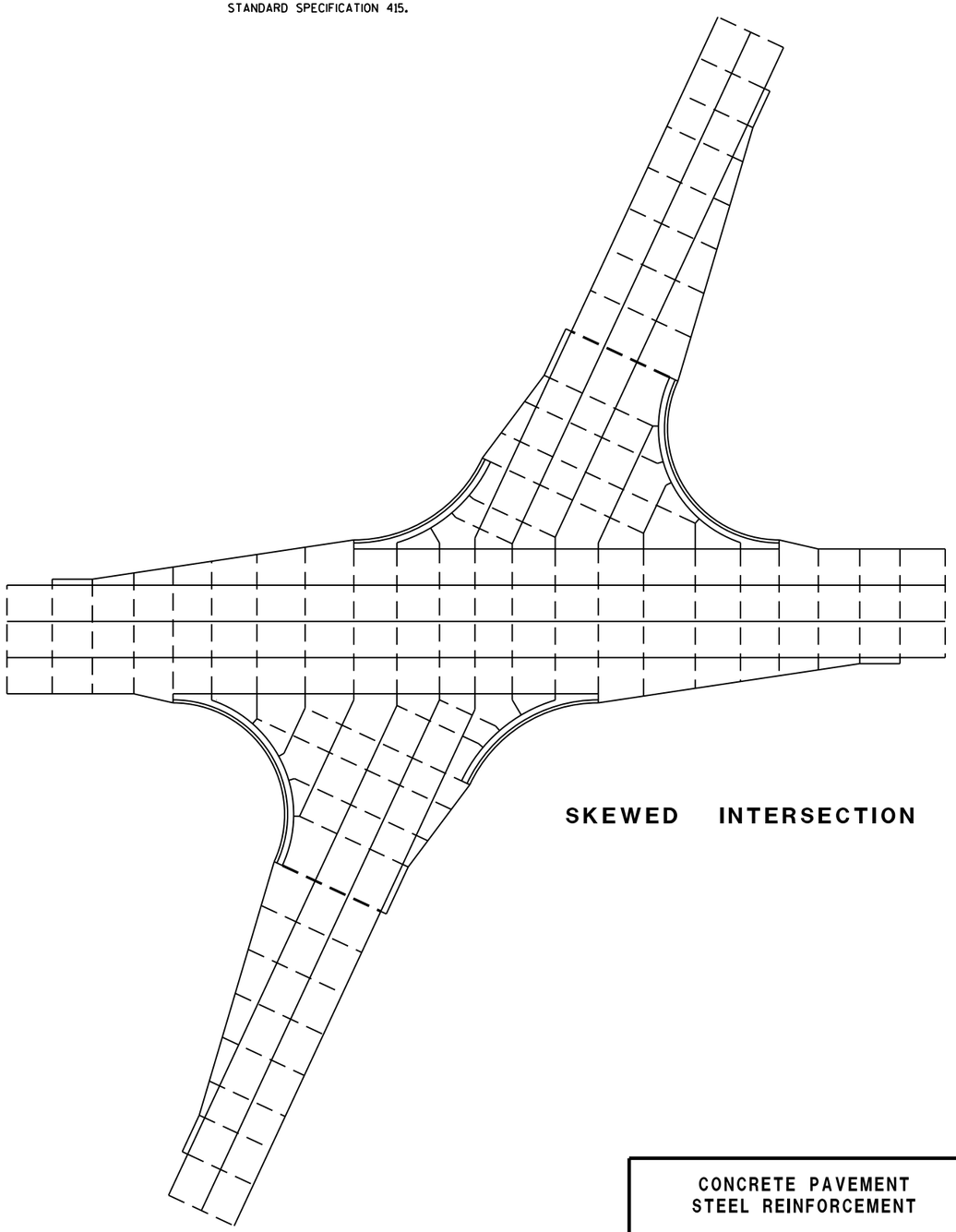
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

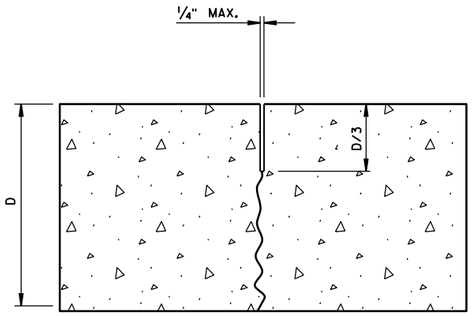
2115

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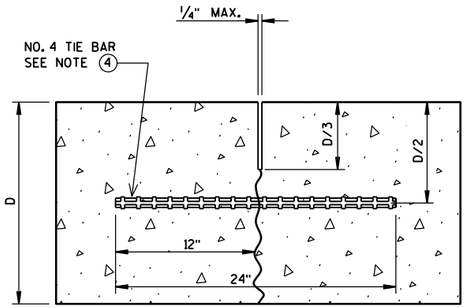
S.D.D. 13 C 18-2b

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S.D.D. 13 C 18-2b



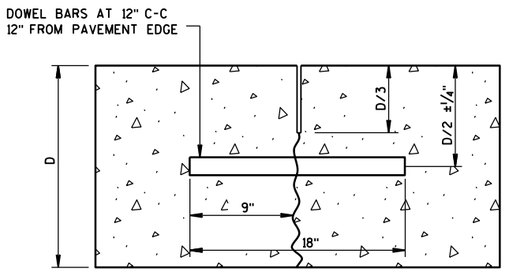
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

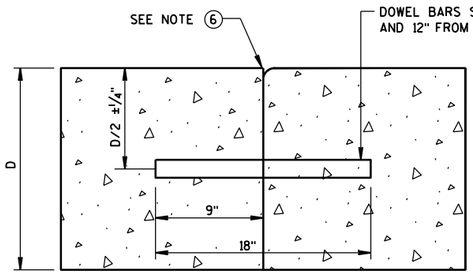
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



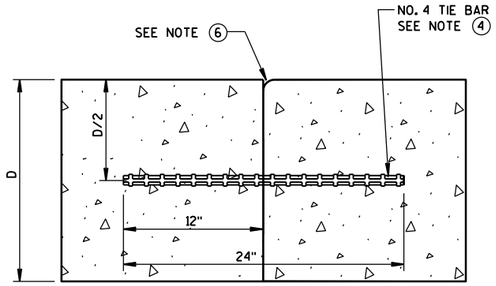
DOWELED-TRANSVERSE

CONTRACTION JOINTS

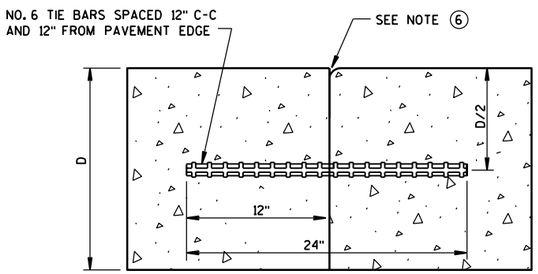
SEE NOTE (2)



DOWELED TRANSVERSE

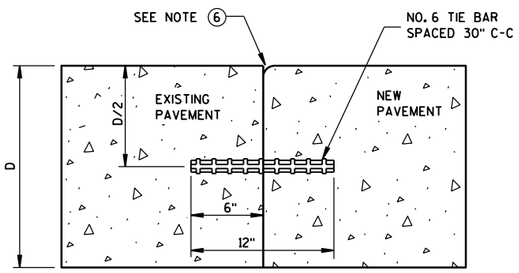


TIED LONGITUDINAL



TIED TRANSVERSE

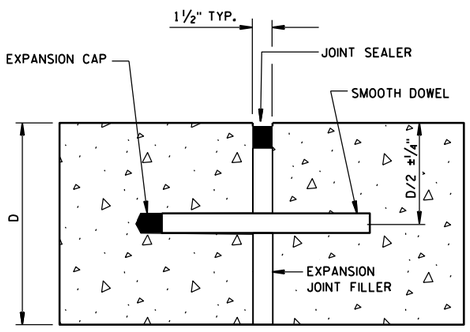
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

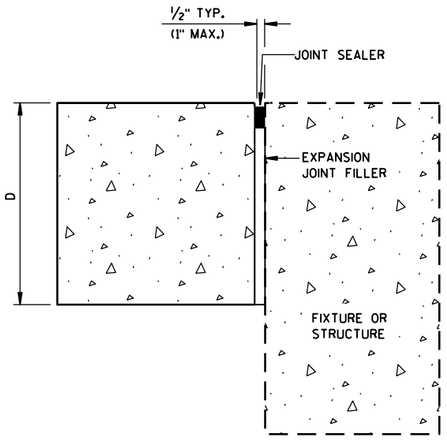
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

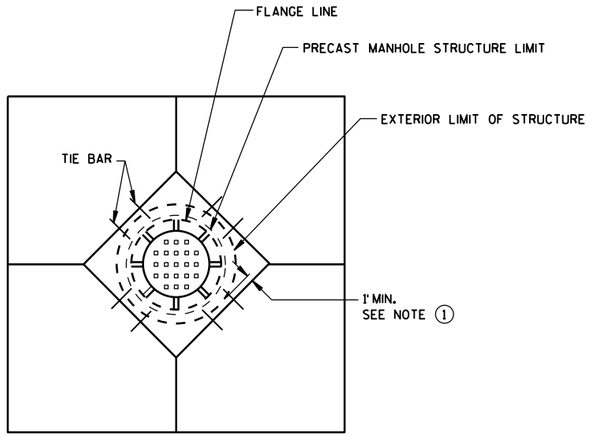
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2116

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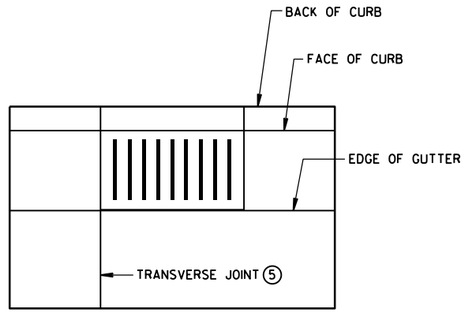
S.D.D. 13 C 18-2c

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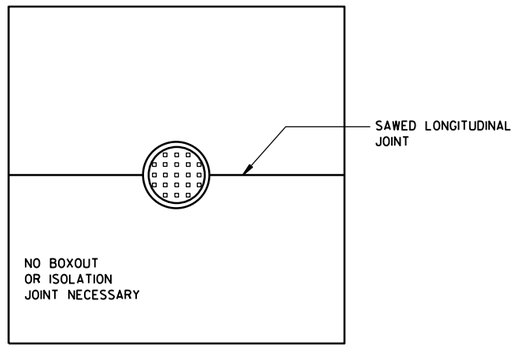
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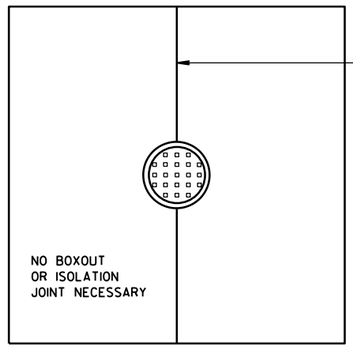
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



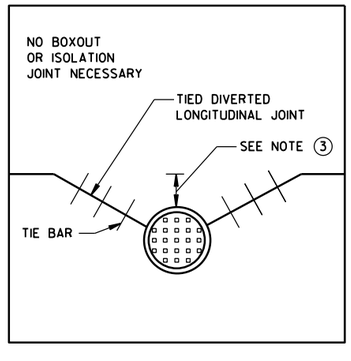
INLET WITH TRANSVERSE JOINT



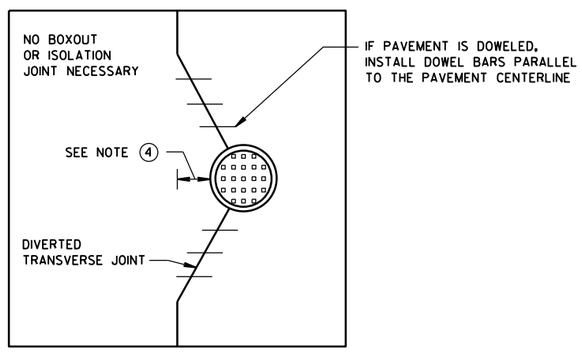
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

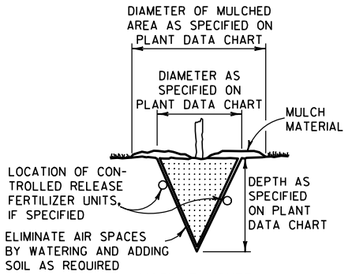
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NEER

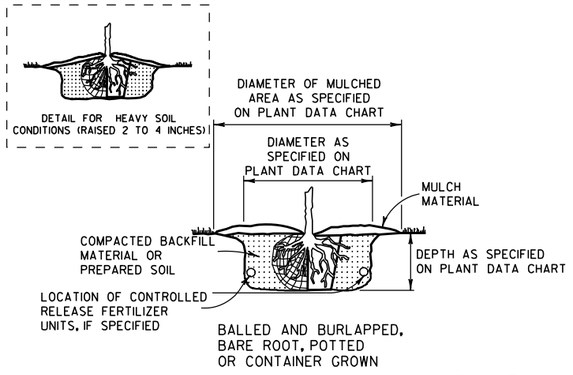
FHWA

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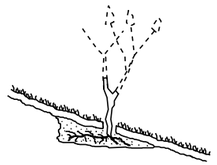
S.D.D. 13 C 18-2d



MACHINE MOVED

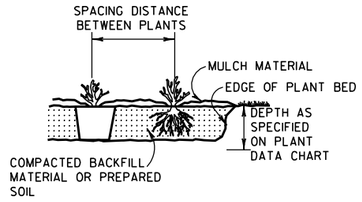


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



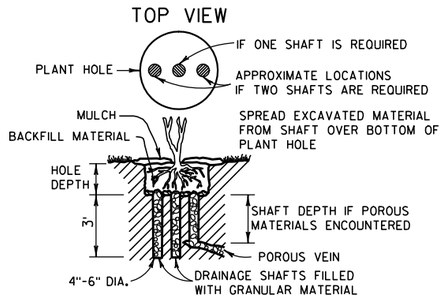
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



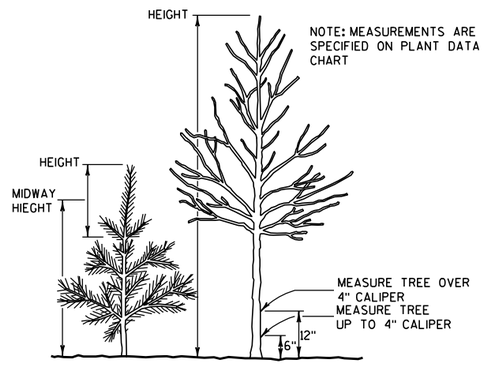
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

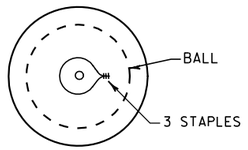


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

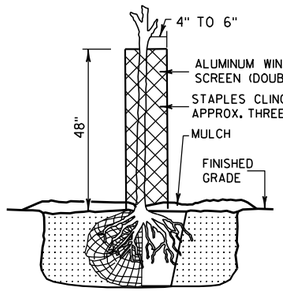
DRAINING



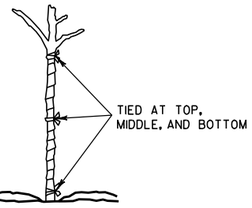
MEASURING



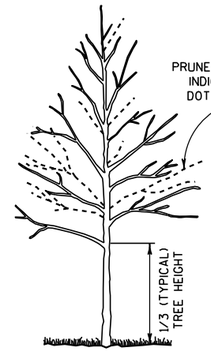
TOP VIEW



RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

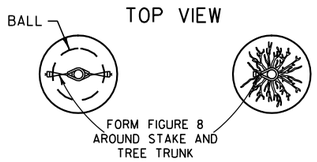


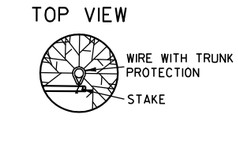
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

SUMAC

TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

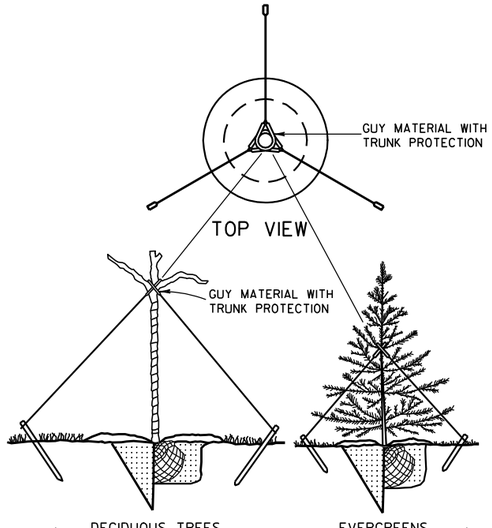
PRUNING



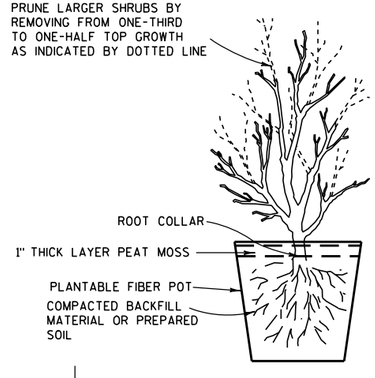


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING



POTTING

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

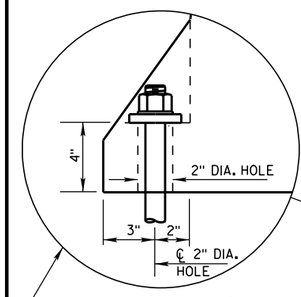
BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

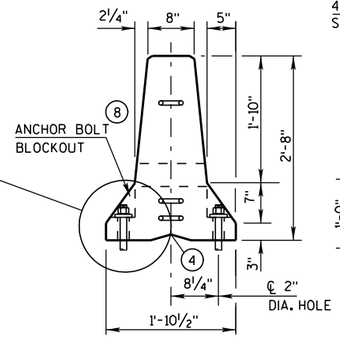
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA 2118

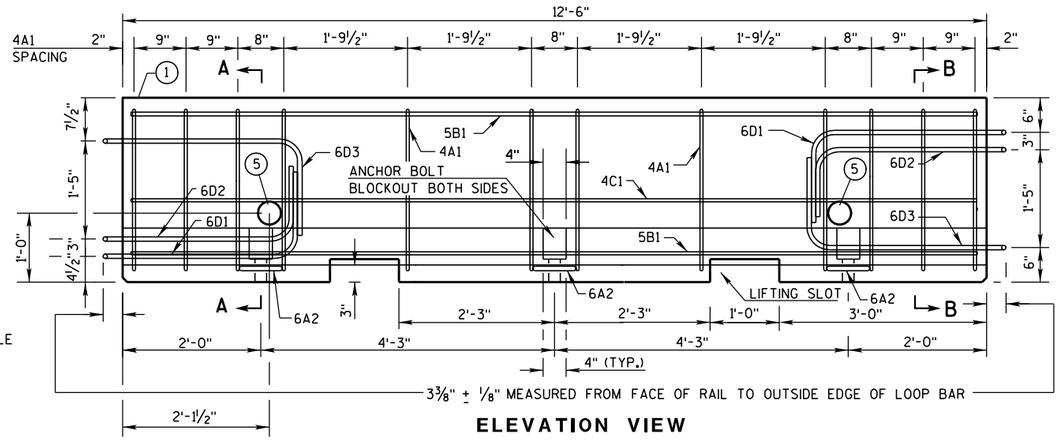
6
S.D.D. 14 A 2-1
6



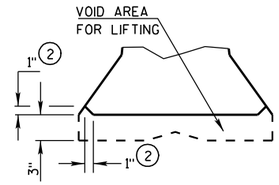
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



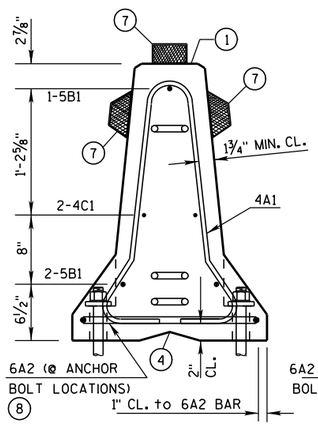
END VIEW



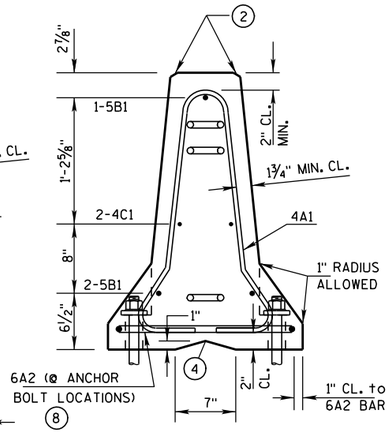
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



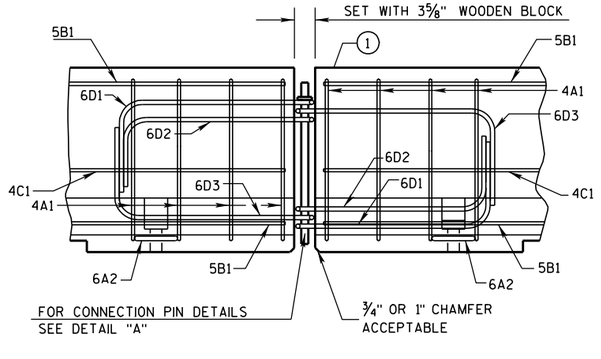
SECTION A-A
(STIRRUP PLACEMENT)



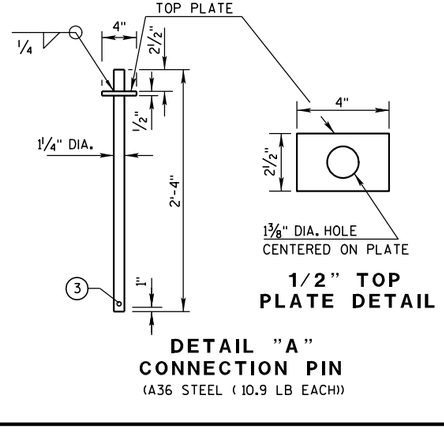
SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

DETAILS OF BARRIER SECTION

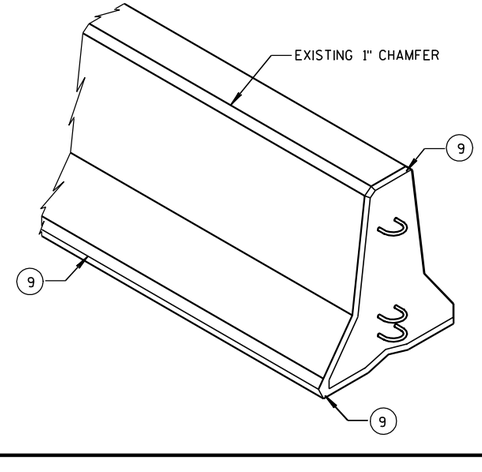


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WICBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

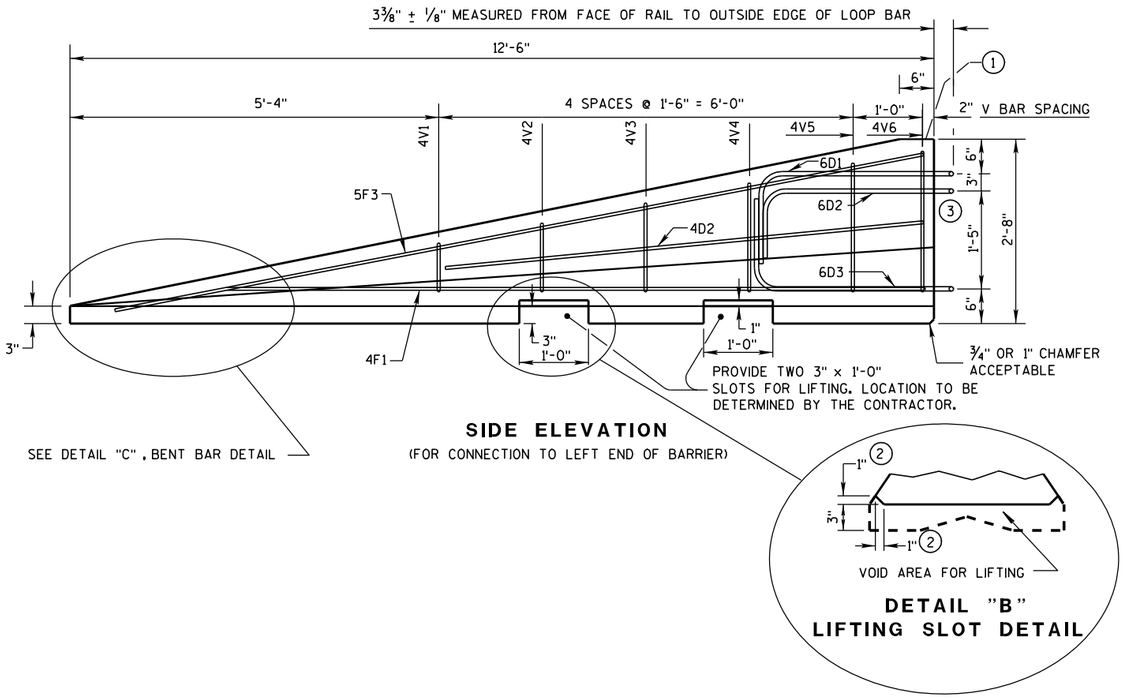
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S.D.D. 14 B 7-13a

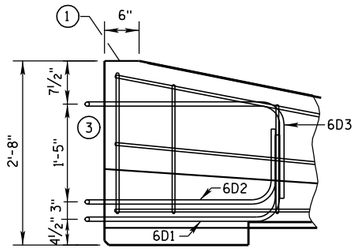
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S.D.D. 14 B 7-13a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)

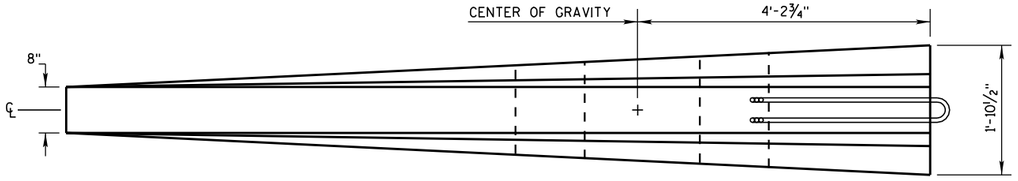
DETAIL "B"
LIFTING SLOT DETAIL



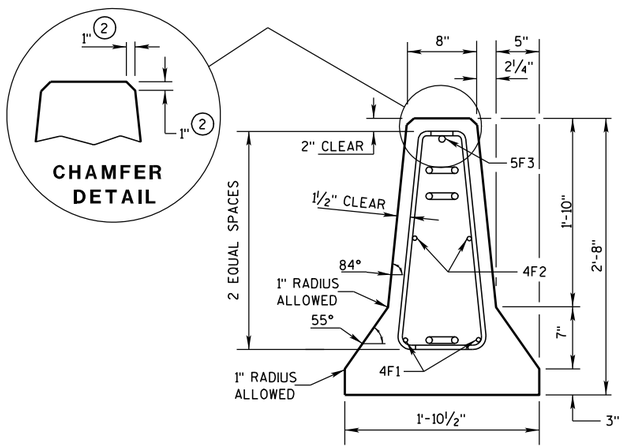
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

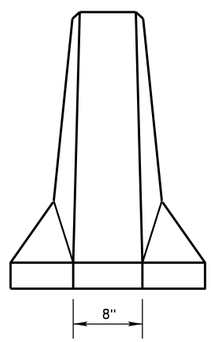
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



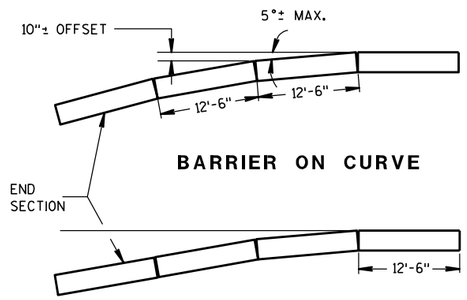
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

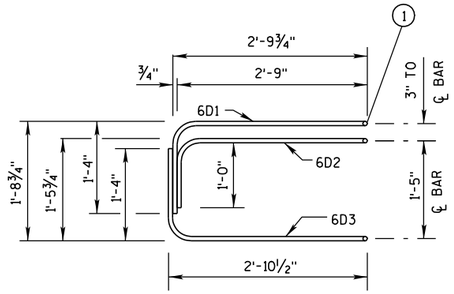
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S.D.D. 14 B 7-13b

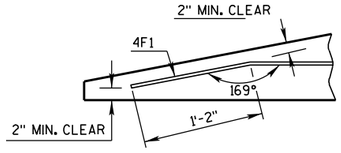
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

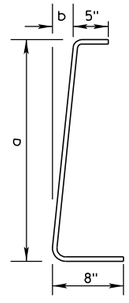
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

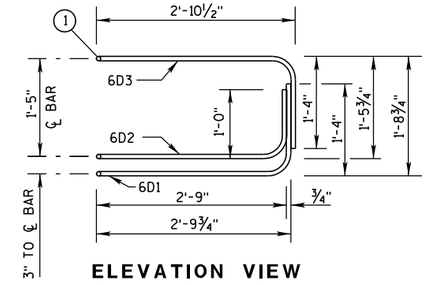
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

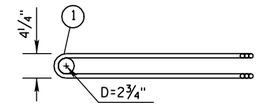
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

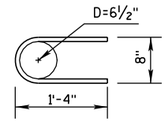
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



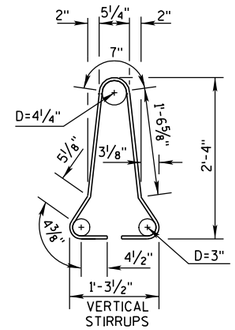
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

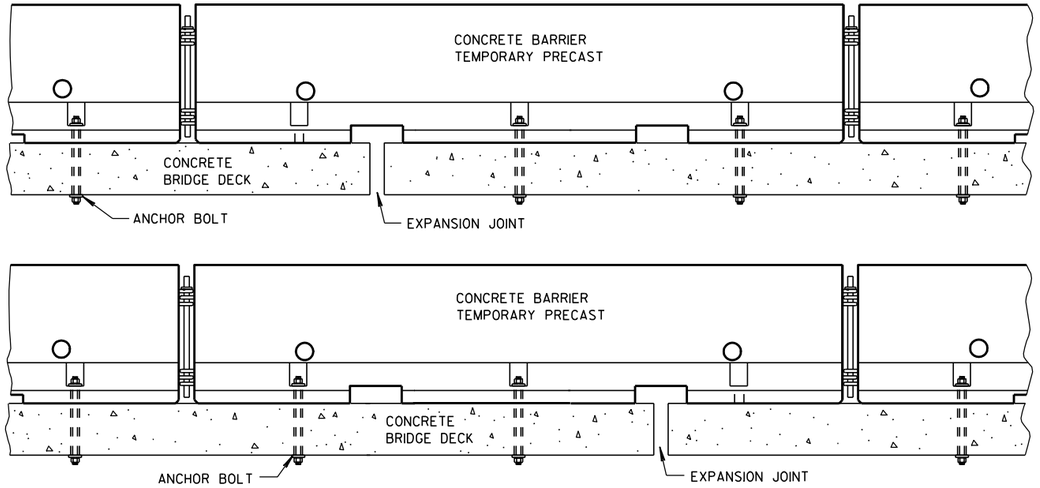
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S.D.D. 14 B 7-13c

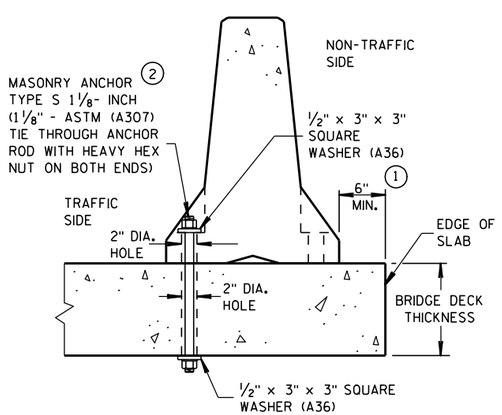
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S.D.D. 14 B 7-13c



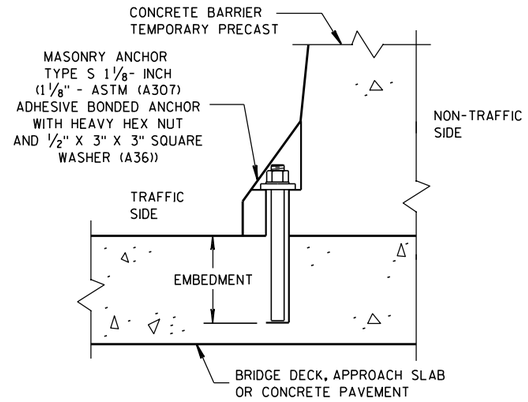
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

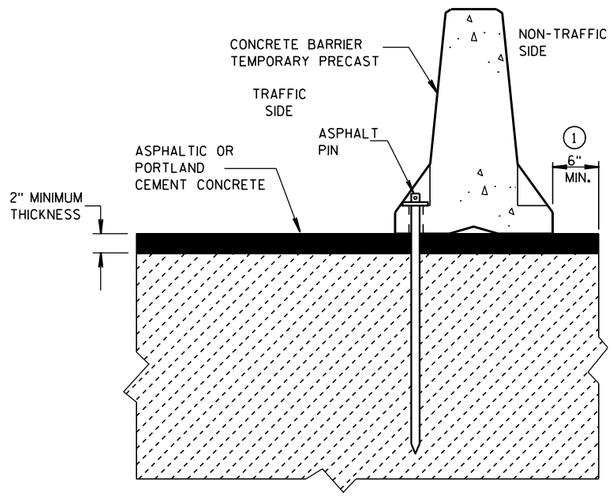
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

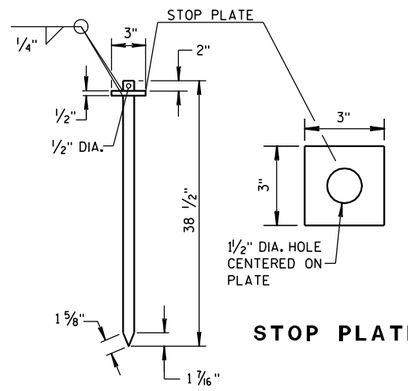
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

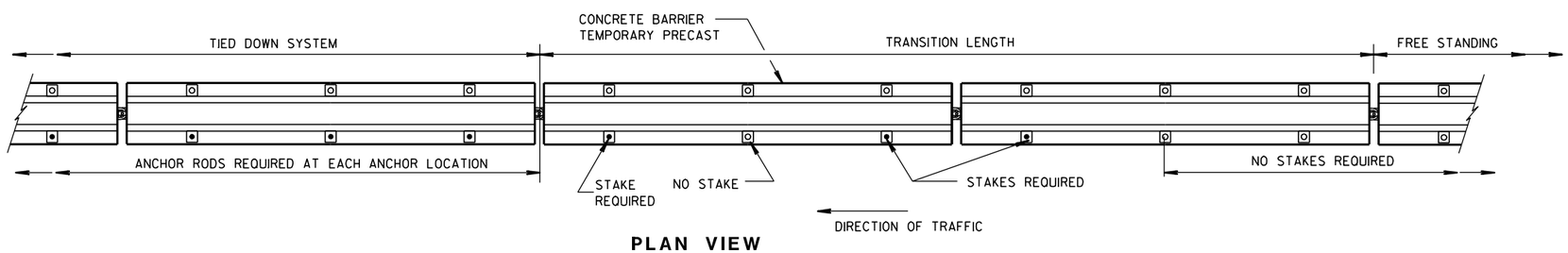
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

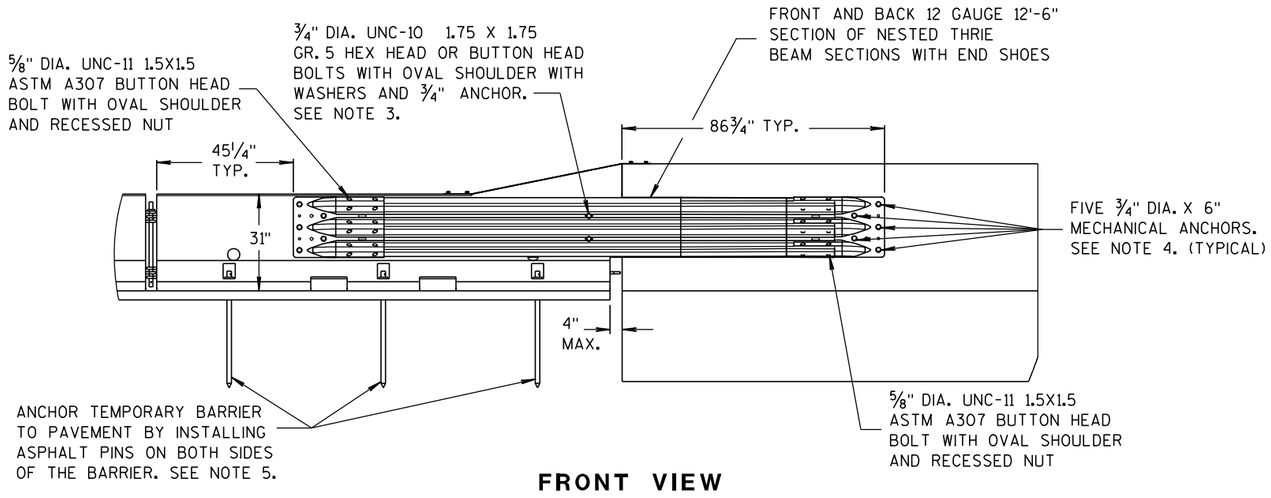
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

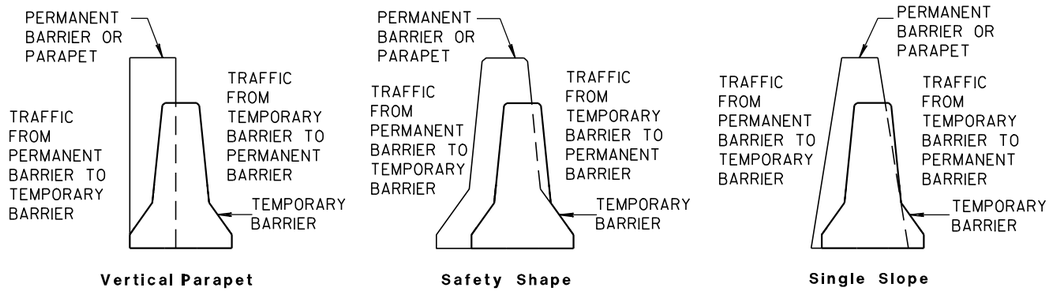
6
S.D.D. 14 B 7-13d

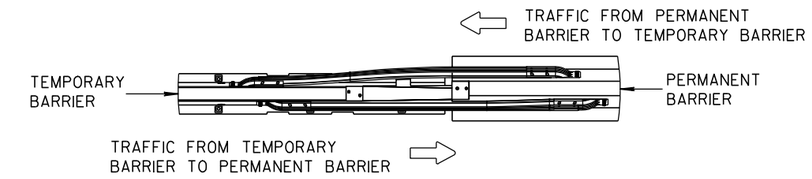


FRONT VIEW

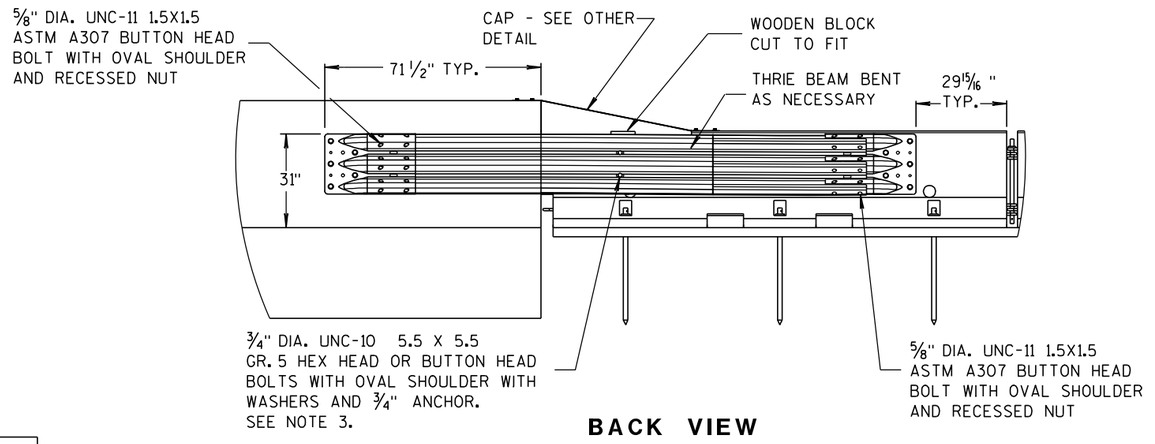
NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

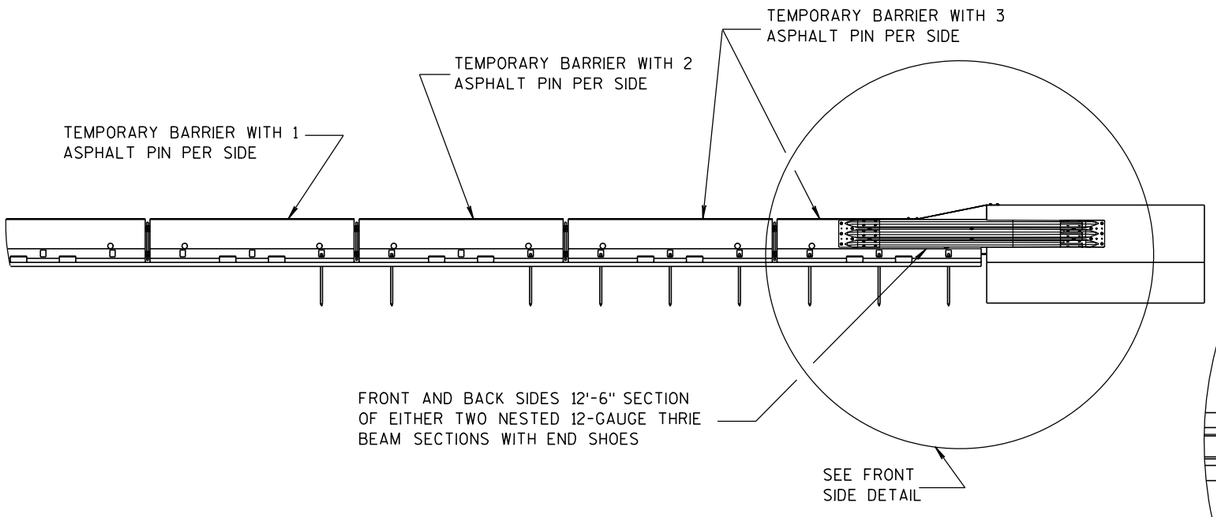




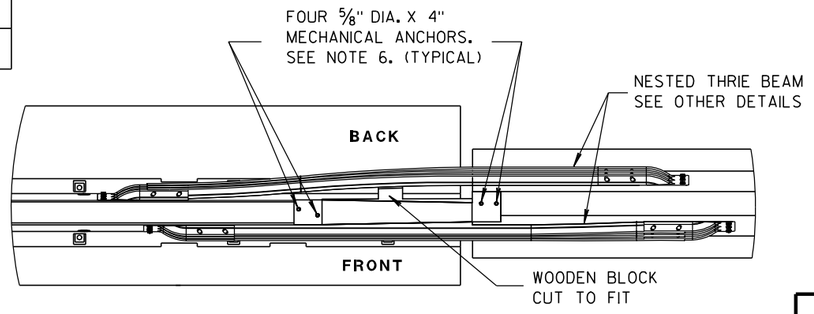
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



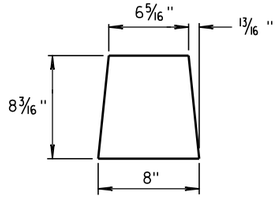
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

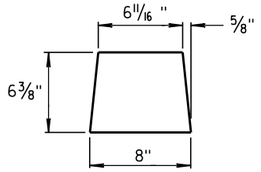
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

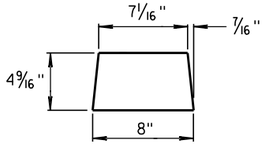
6
S.D.D. 14 B 7-13e



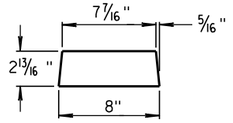
GUSSET 1



GUSSET 2

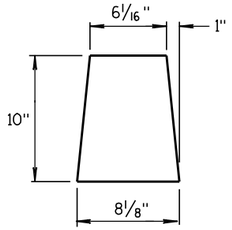


GUSSET 3

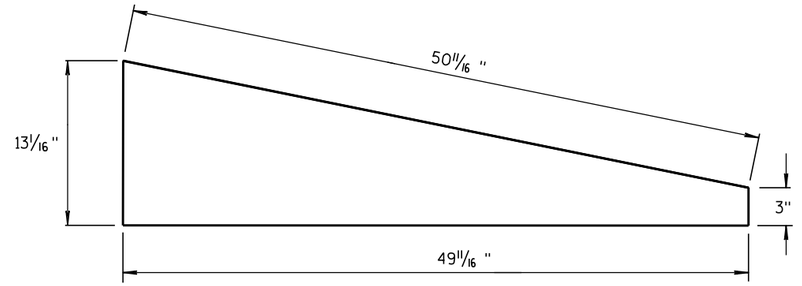


GUSSET 4

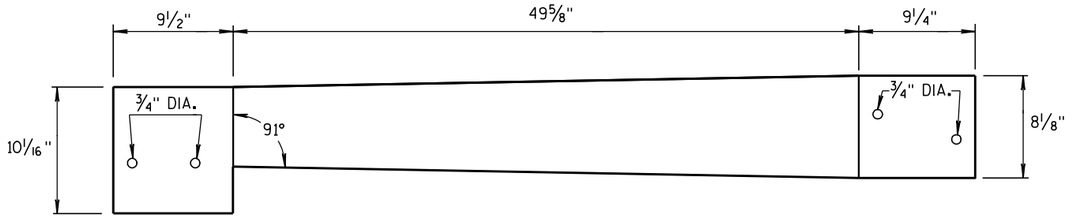
GUSSETS

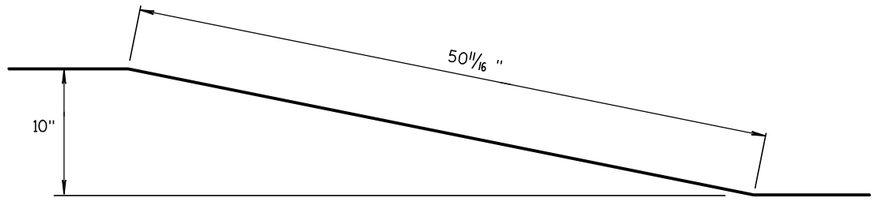


END PLATE

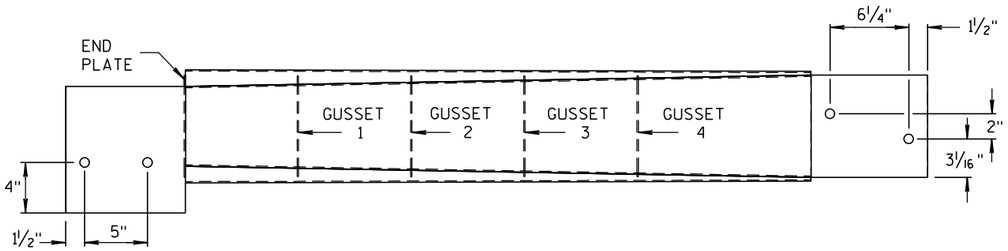


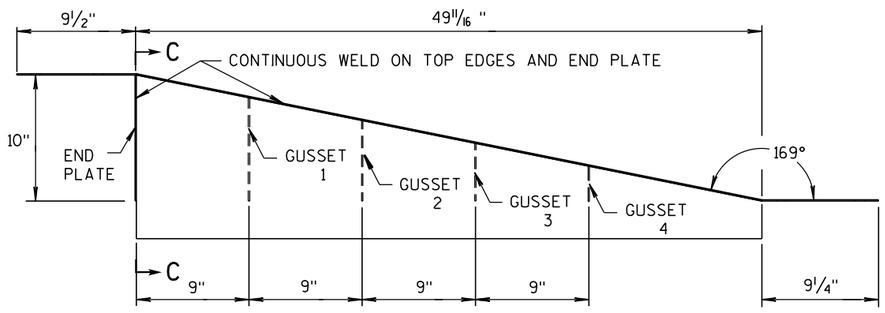
SIDE PLATE

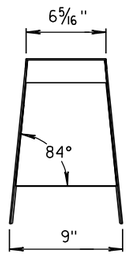




TOP PLATE







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

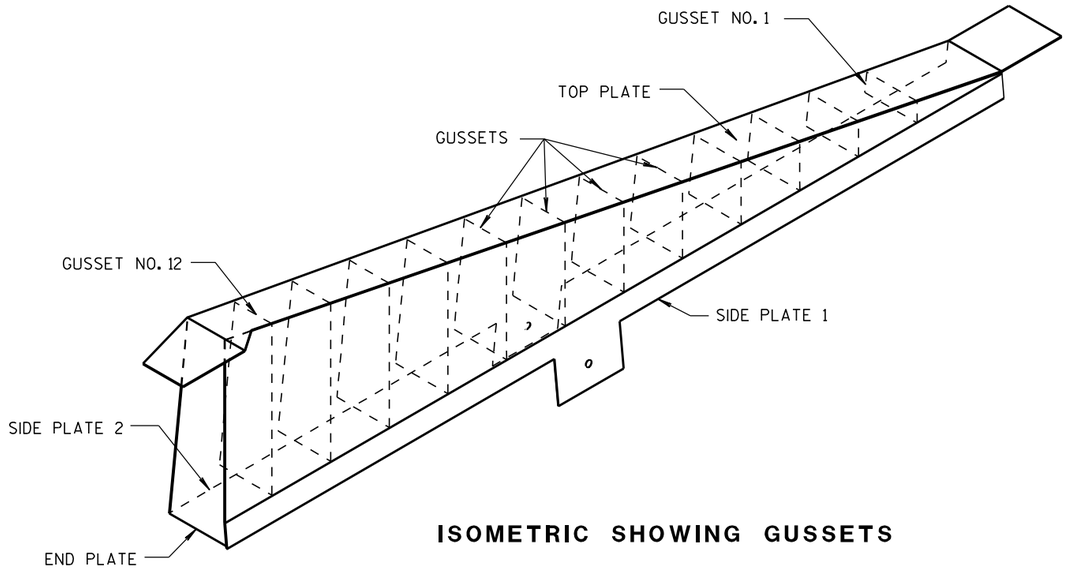
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

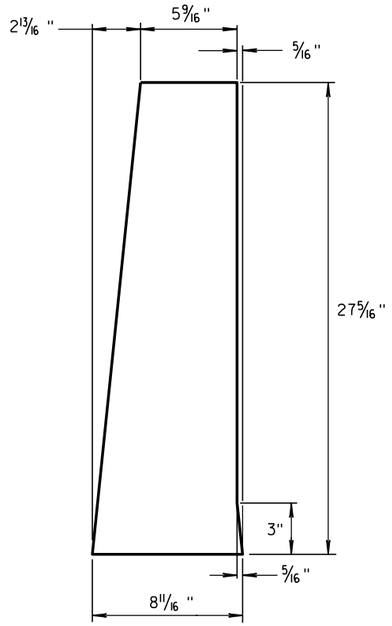
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 7-13f

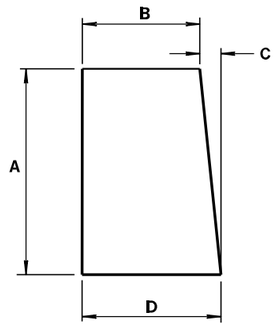


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

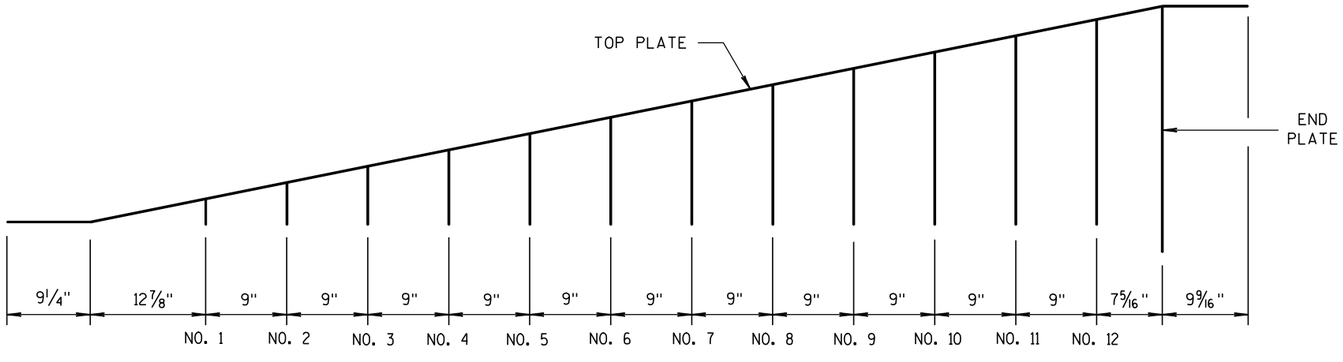
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS

GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

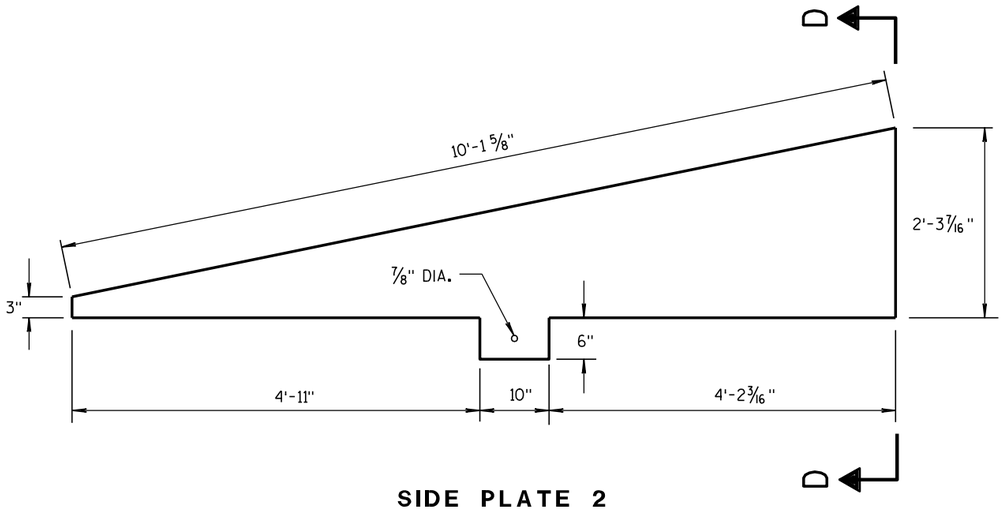
2125

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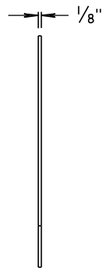
S.D.D. 14 B 7-13g

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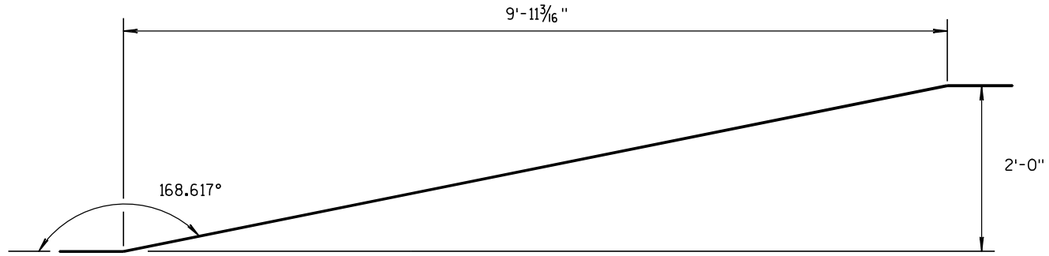
S.D.D. 14 B 7-13g



SIDE PLATE 2

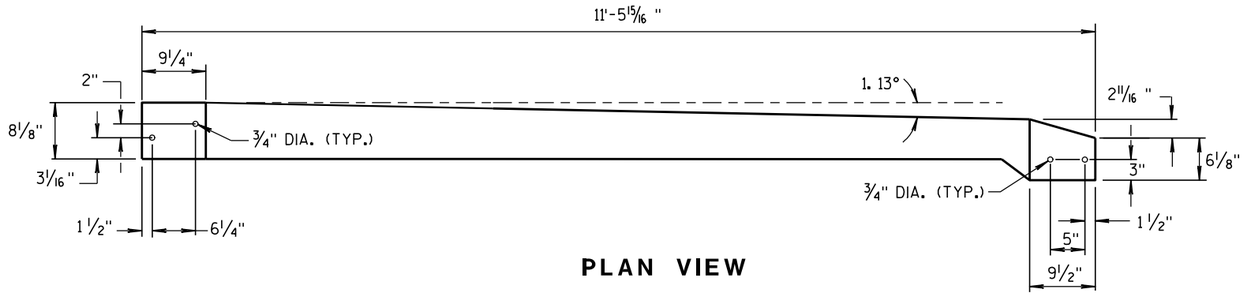


END VIEW



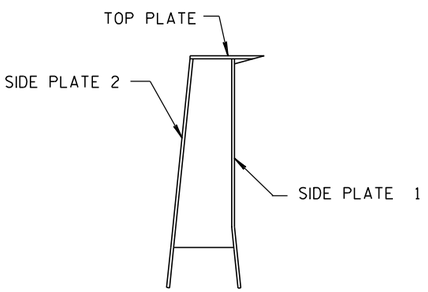
SIDE VIEW

TOP PLATE

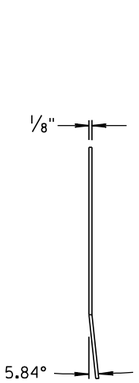


PLAN VIEW

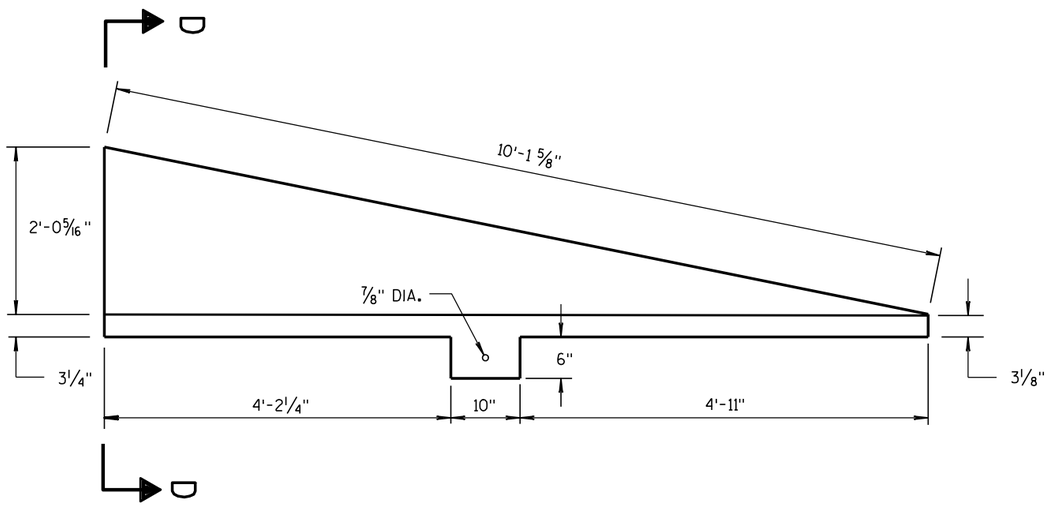
TOP PLATE



SECTION D-D



END VIEW



SIDE PLATE 1

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

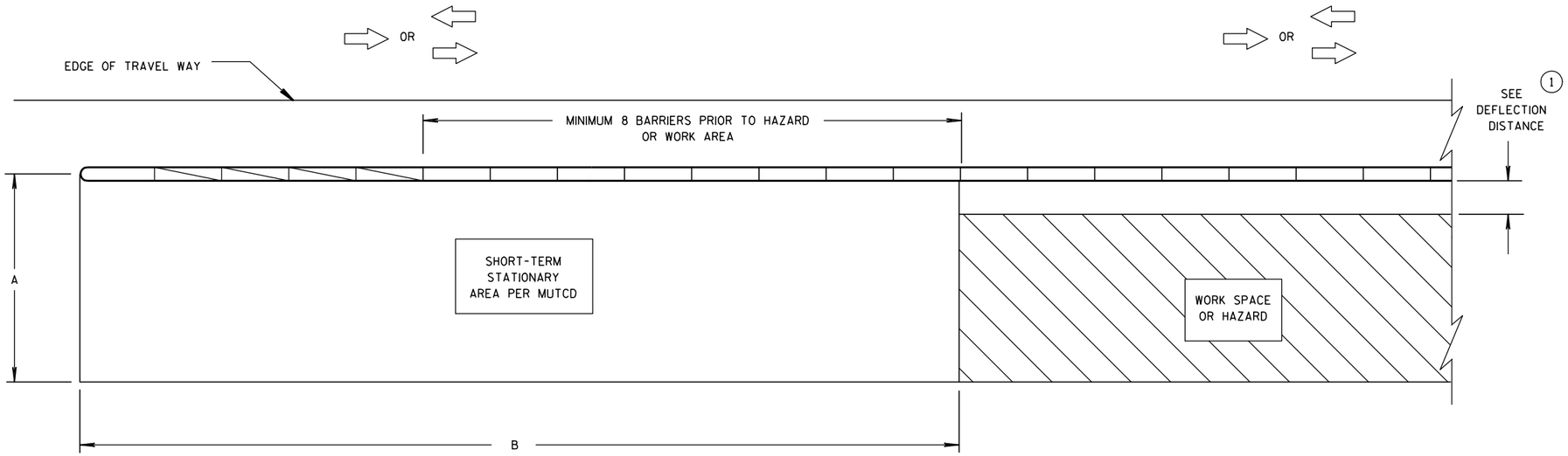
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE /S/ Jerry H. ROADWAY STANDARDS ENGINEER 2126 ENT FHWA

6

S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



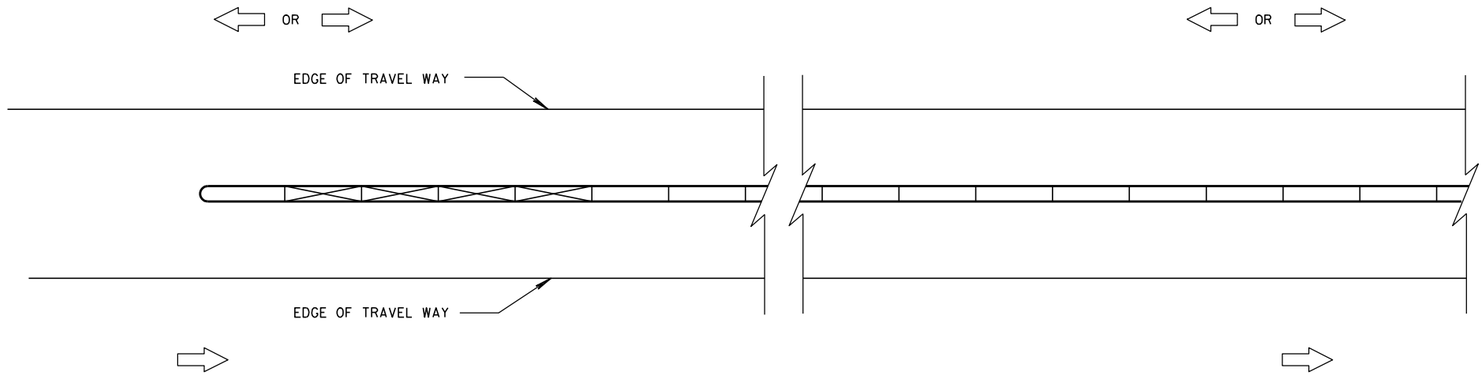
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

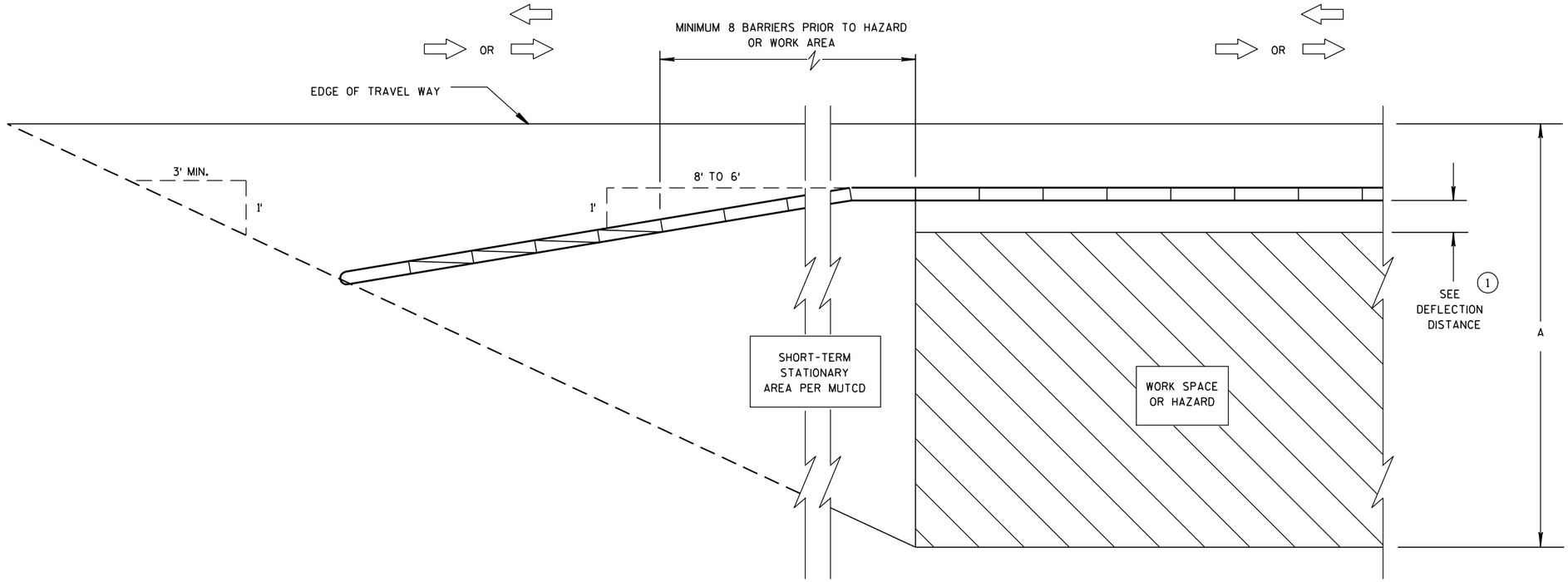
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

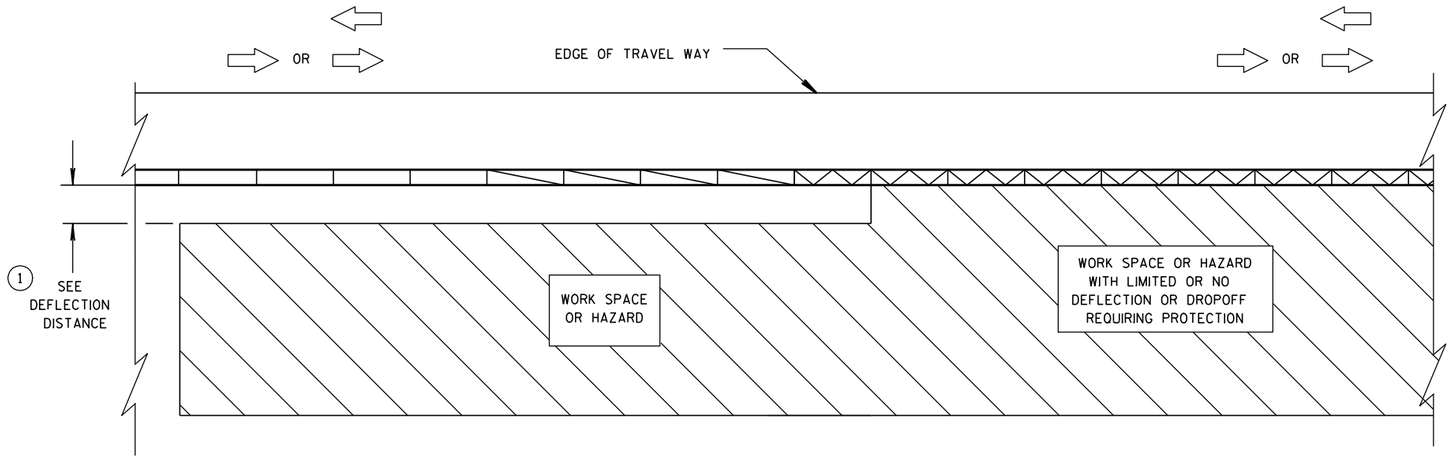
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

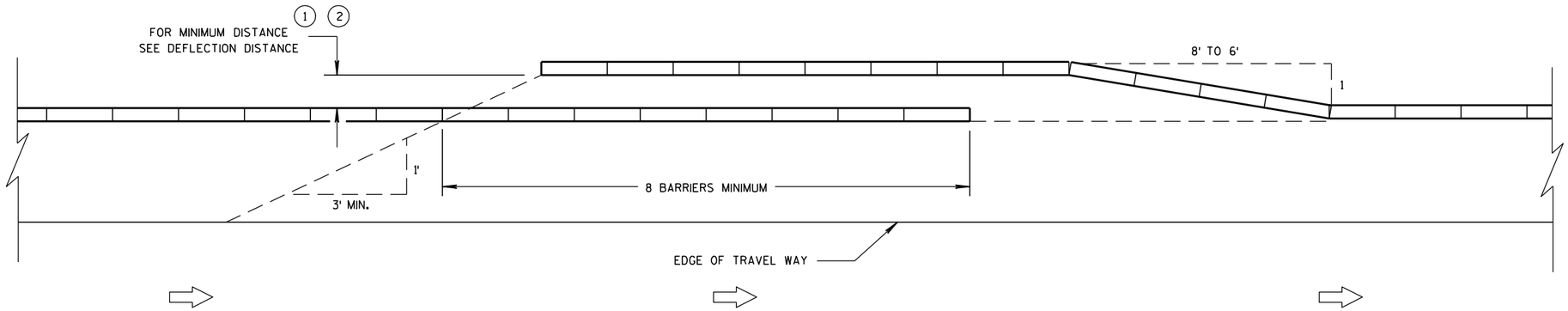
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

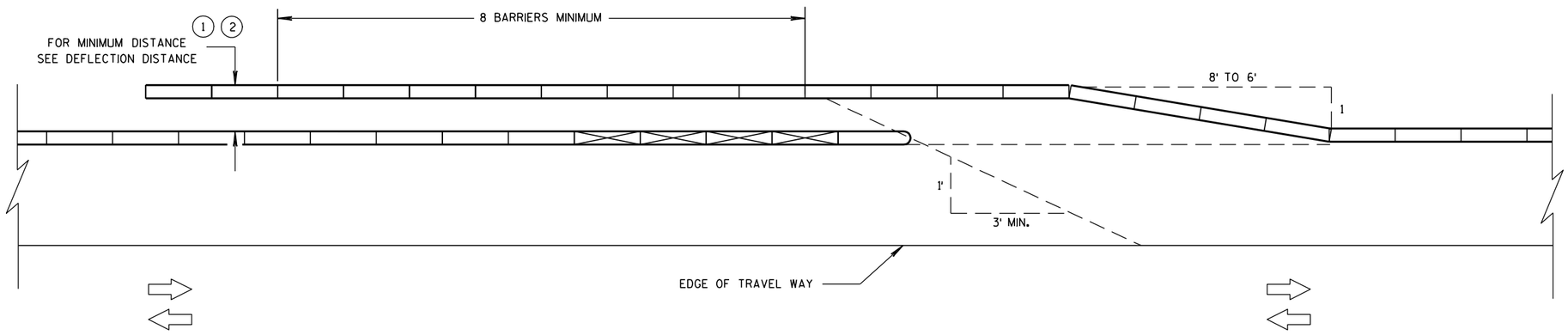
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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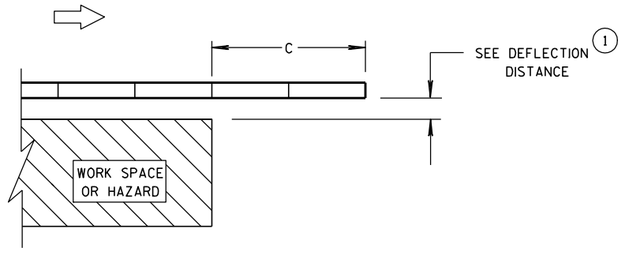
S.D.D. 14 B 8-1b



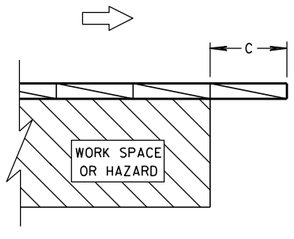
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

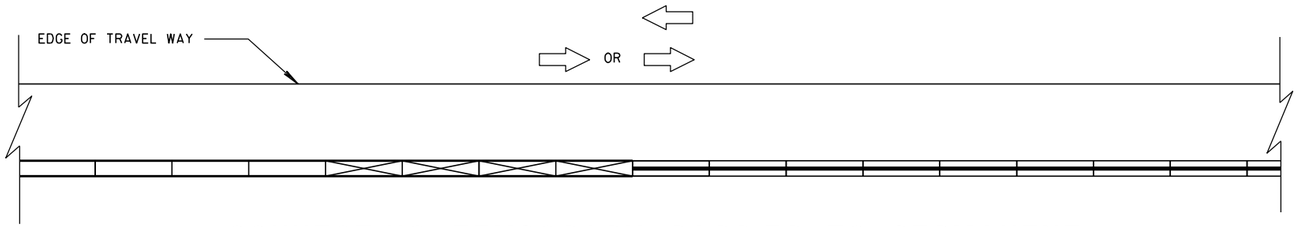
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

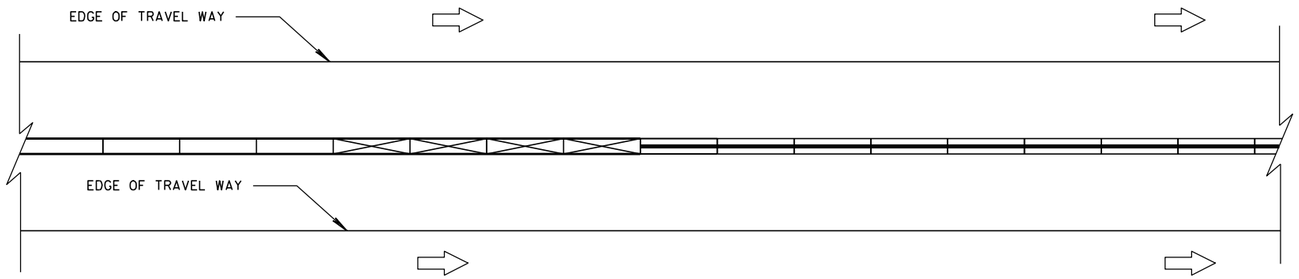
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 8-1c



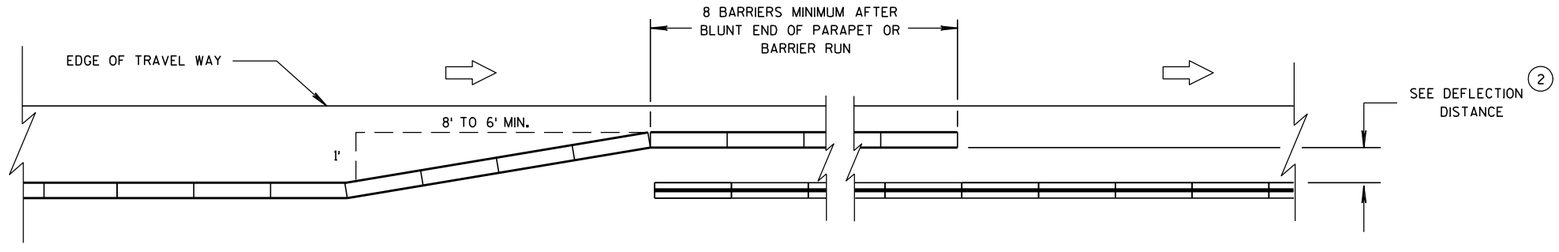
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



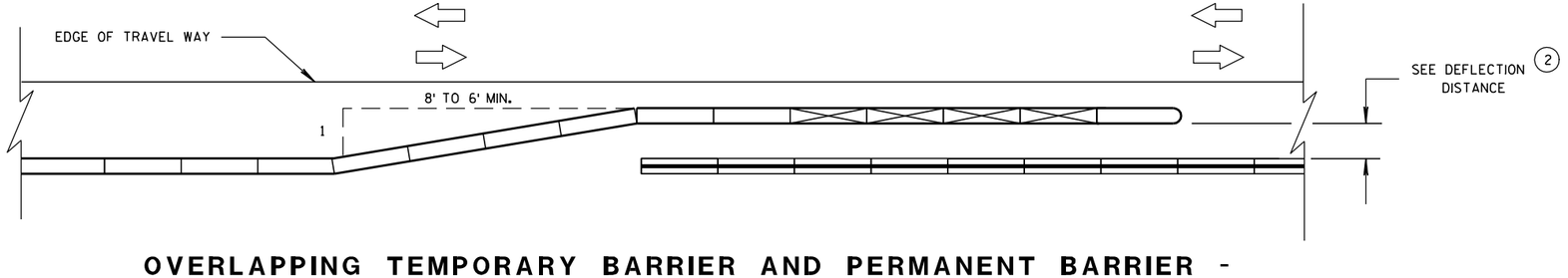
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

2130

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S.D.D. 14 B 8-1d

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LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

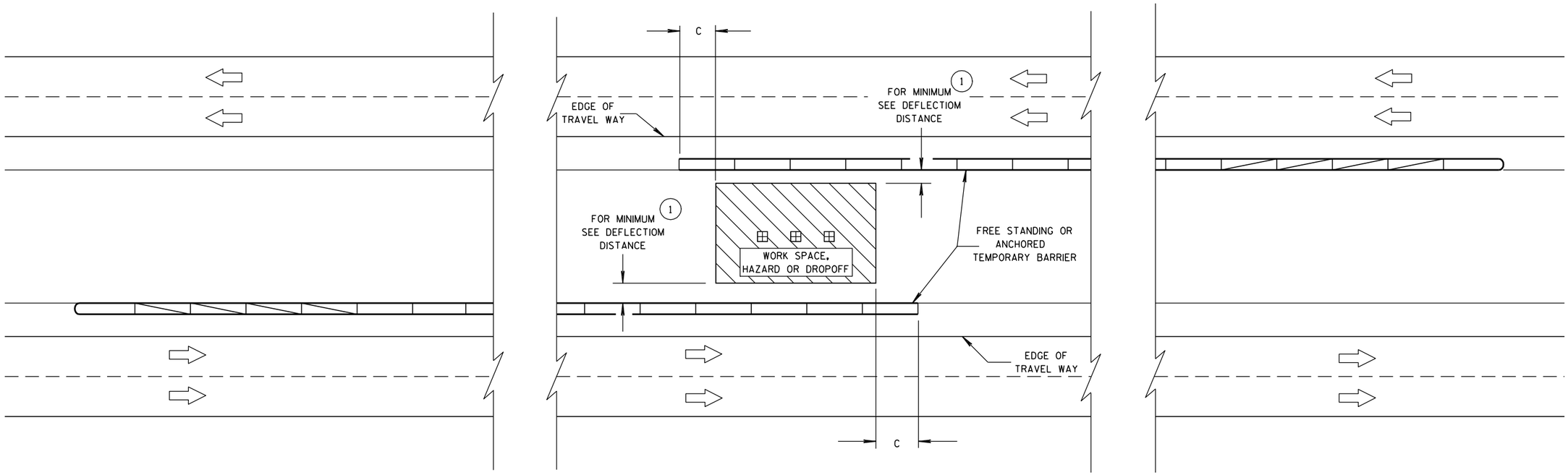
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

2131

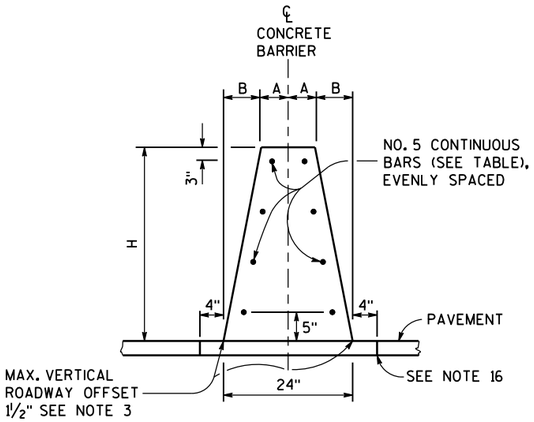
FHWA

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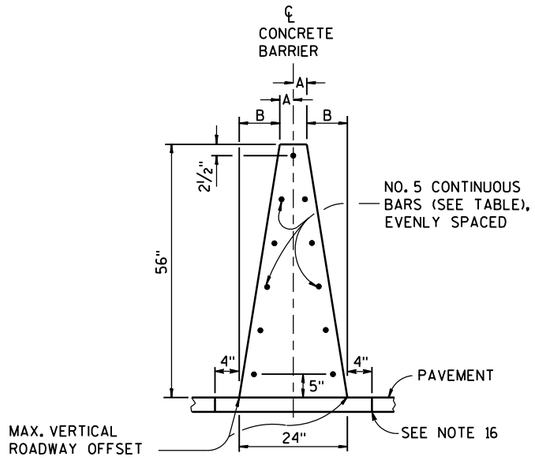
S.D.D. 14 B 8-1e

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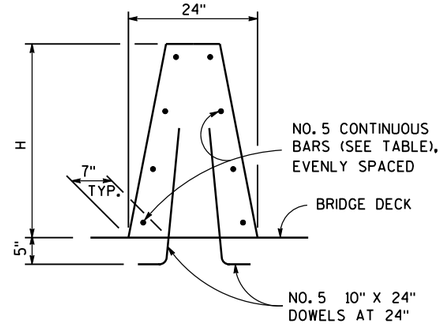
S.D.D. 14 B 8-1e



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



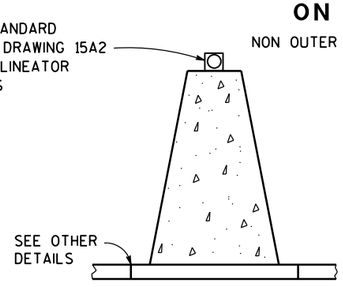
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCERET BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



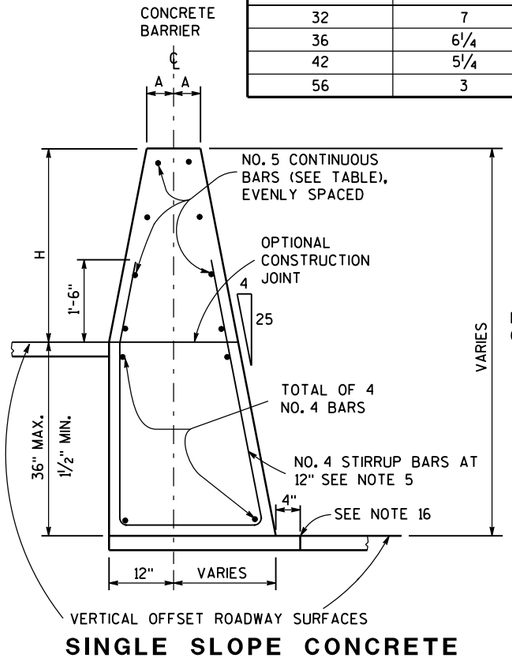
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

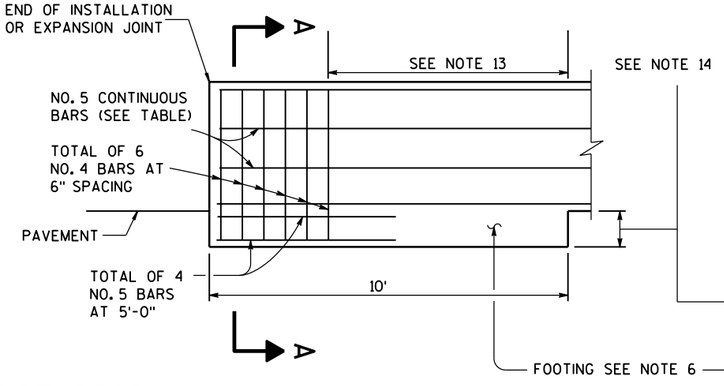
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



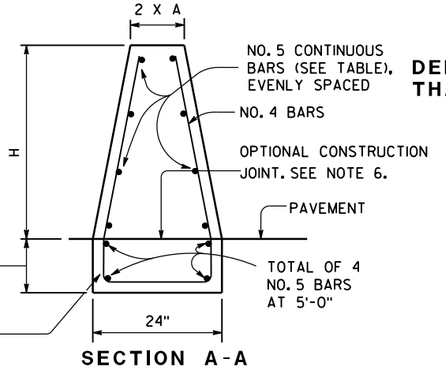
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT



SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

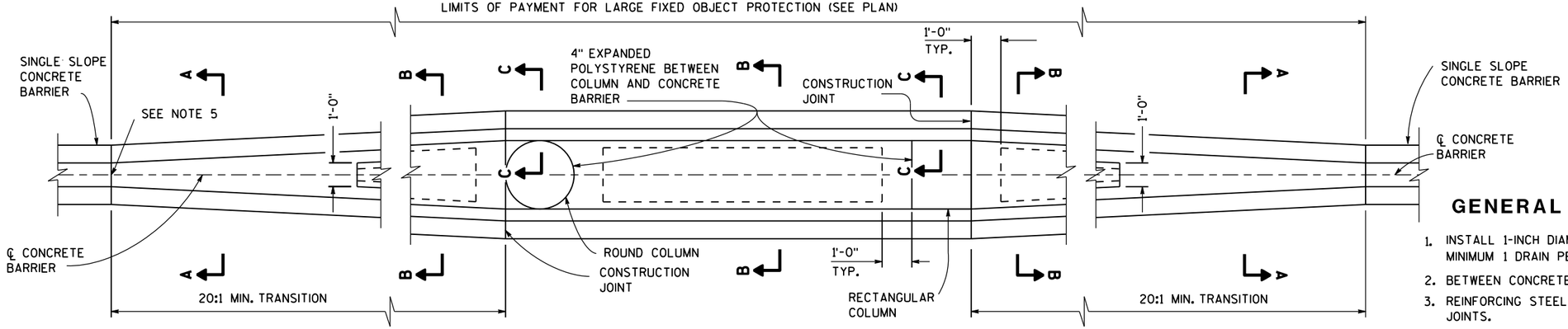
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 2132

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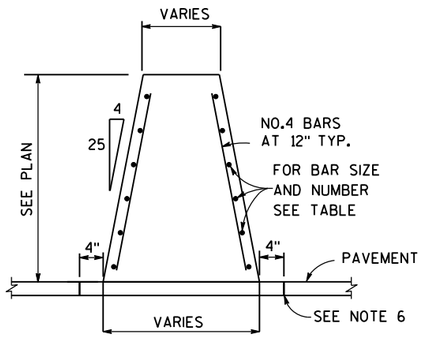
S.D.D. 14 B 32-2a

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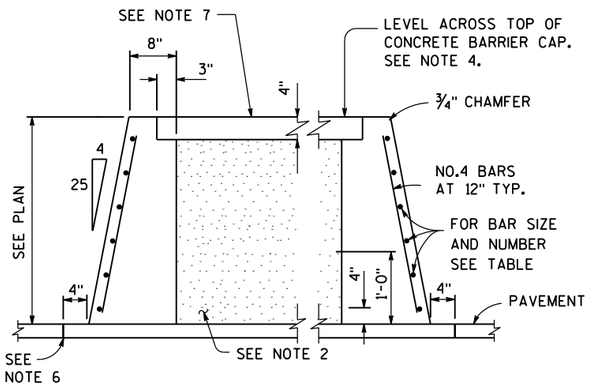
S.D.D. 14 B 32-2a



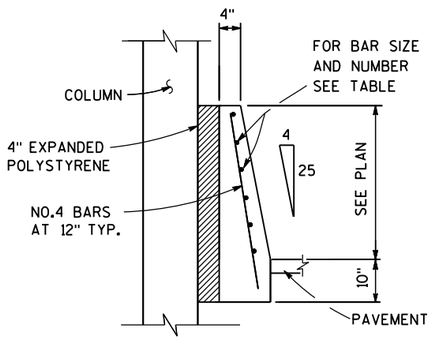
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



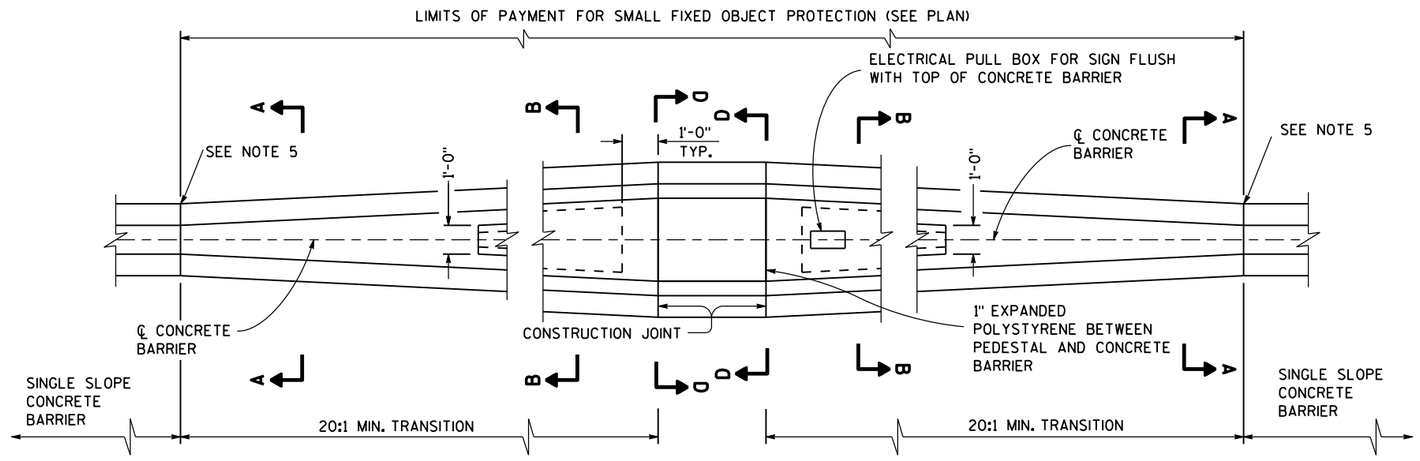
SECTION A-A



SECTION B-B



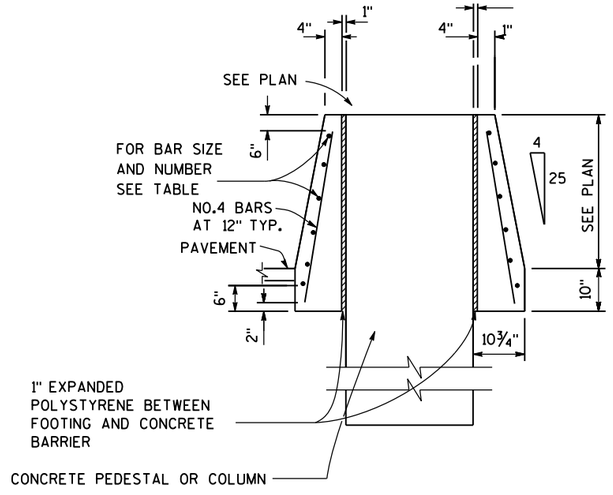
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.

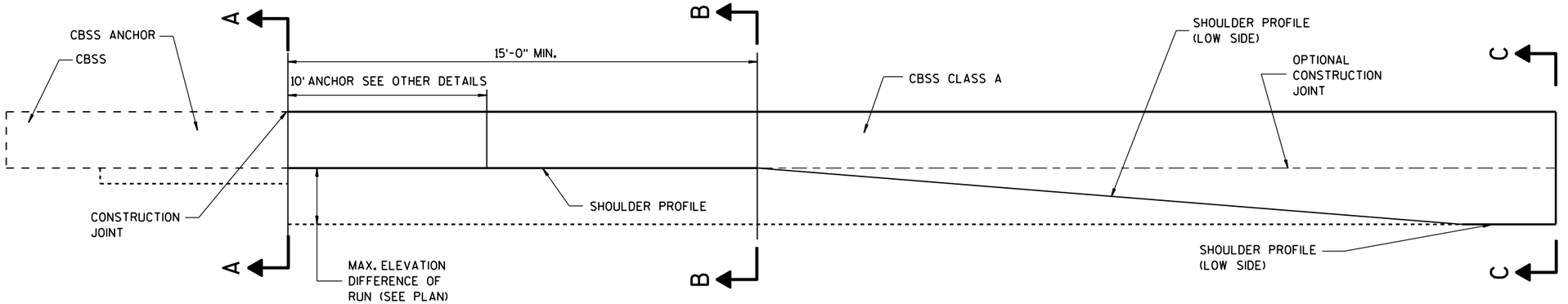


SECTION D-D

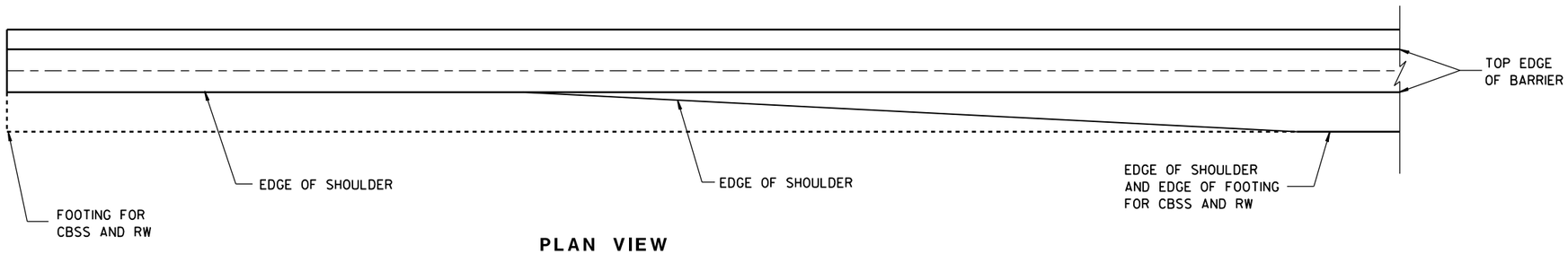
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

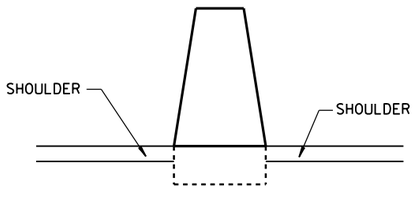
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2133



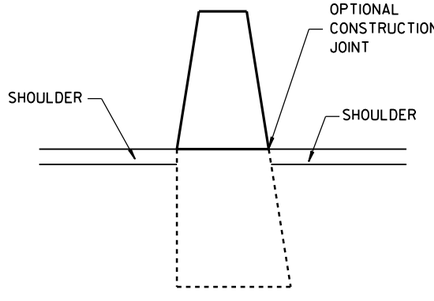
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



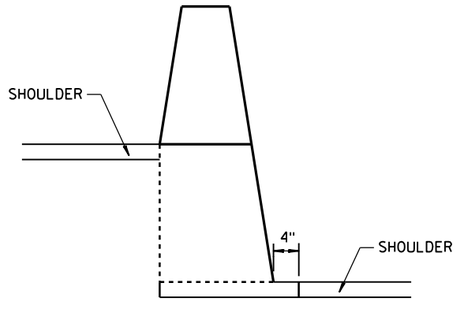
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



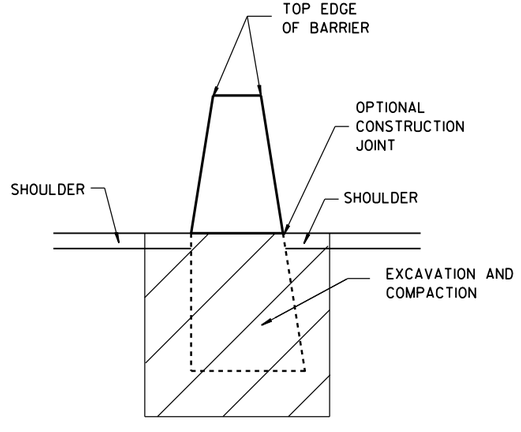
SECTION A-A



SECTION B-B



SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

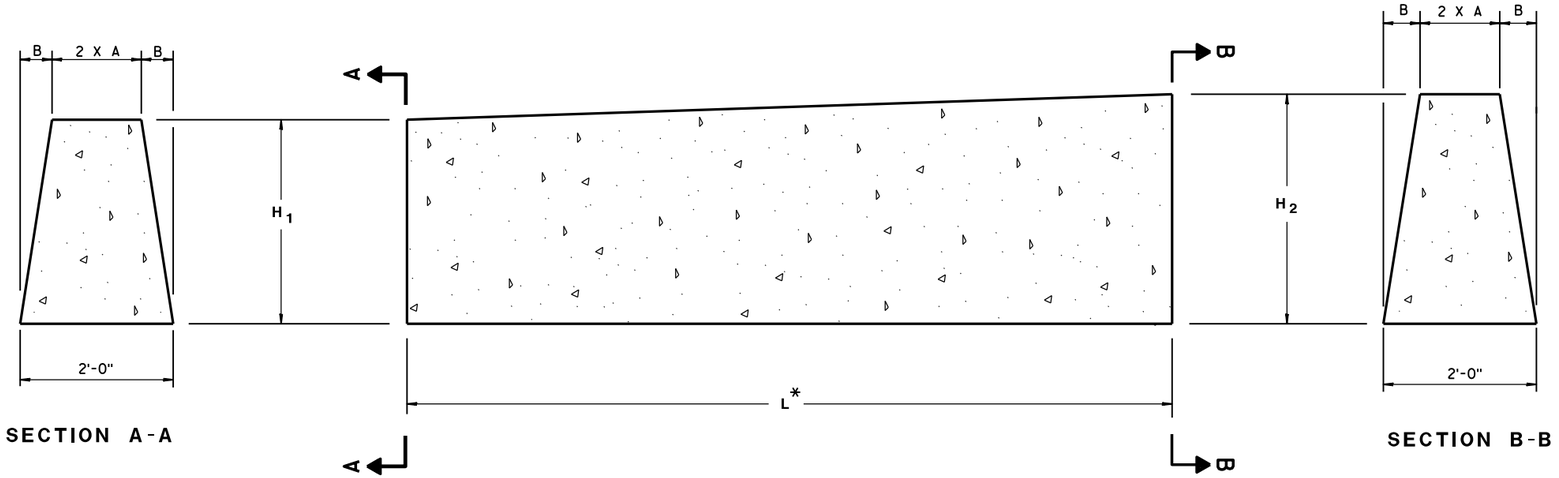
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2134

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S.D.D. 14 B 32-2c

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S.D.D. 14 B 32-2c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

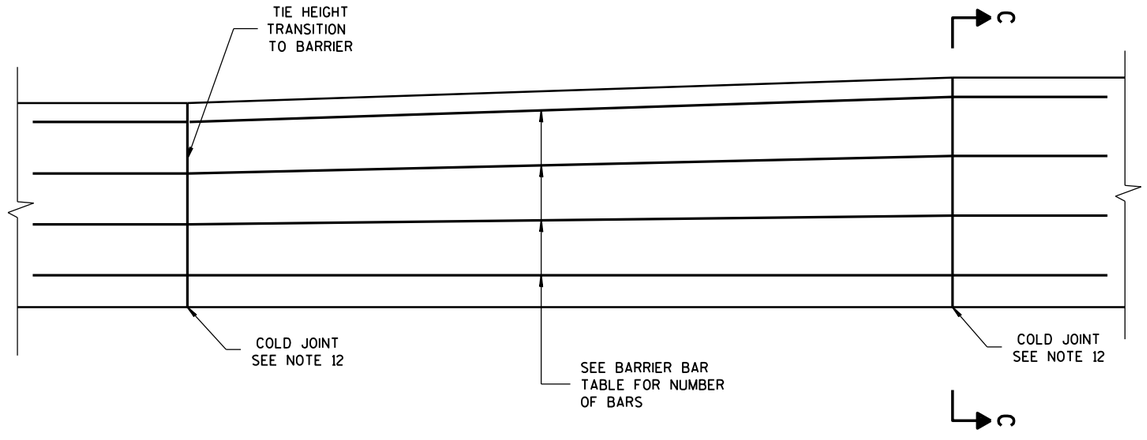
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

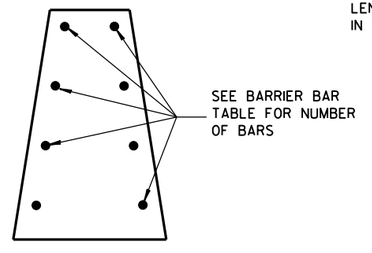
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-10-2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER

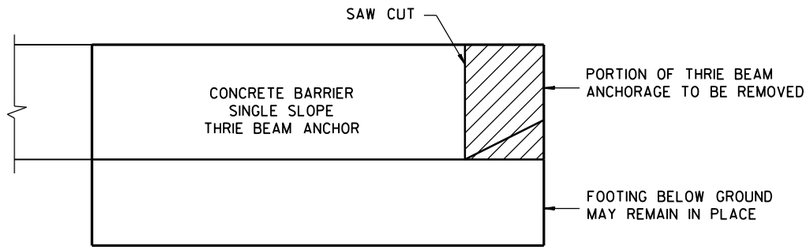
FHWA

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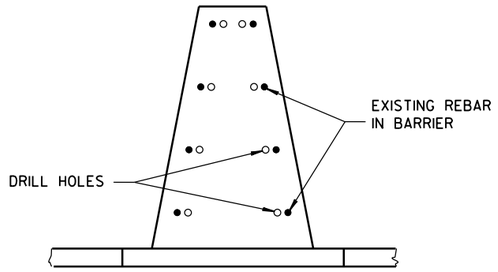
S.D.D. 14 B 32-2d

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S.D.D. 14 B 32-2d



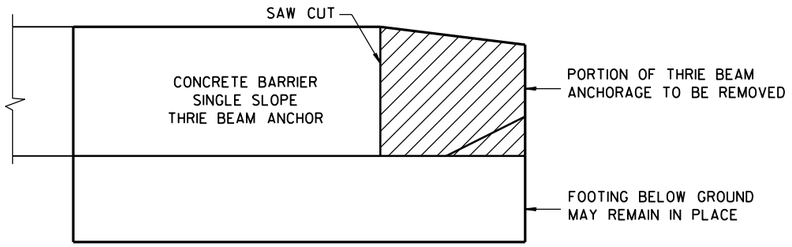
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



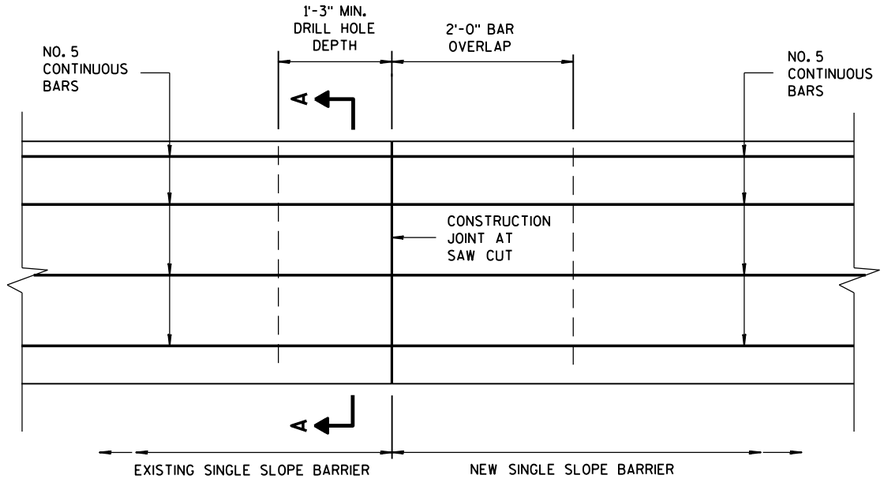
SECTION A-A

GENERAL NOTES

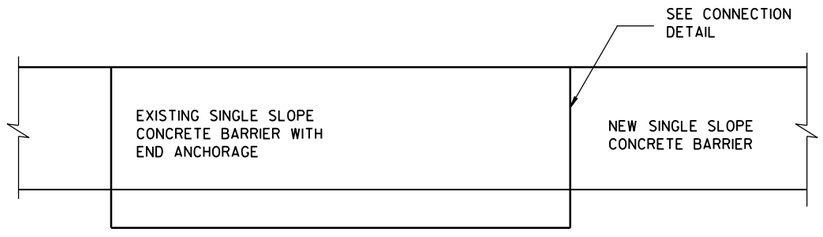
1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.
7. ALL ITEMS INCLUDED WITH CONCRETE BARRIER ITEMS EXCEPT FOR REMOVAL.



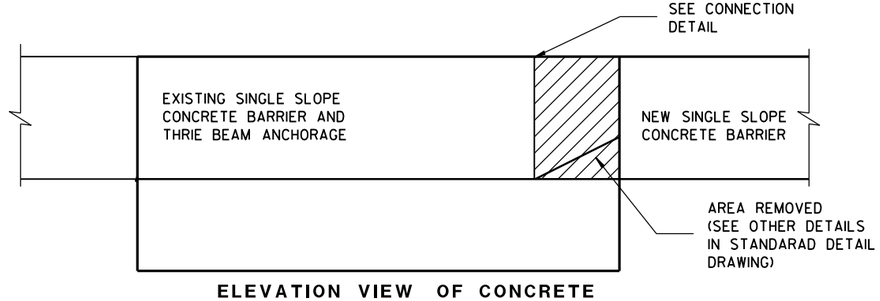
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



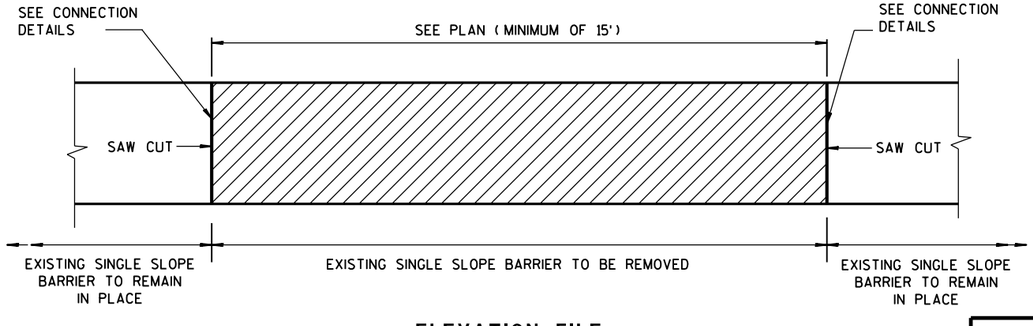
CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-10-2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

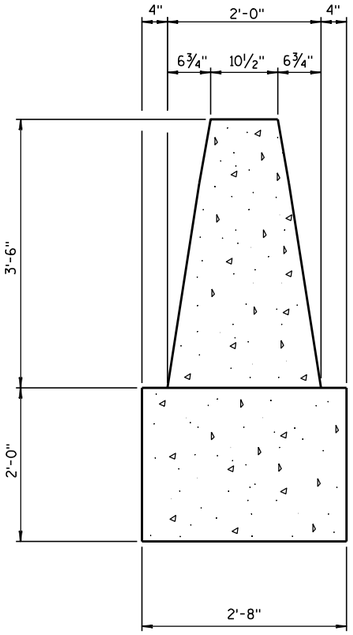
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

6

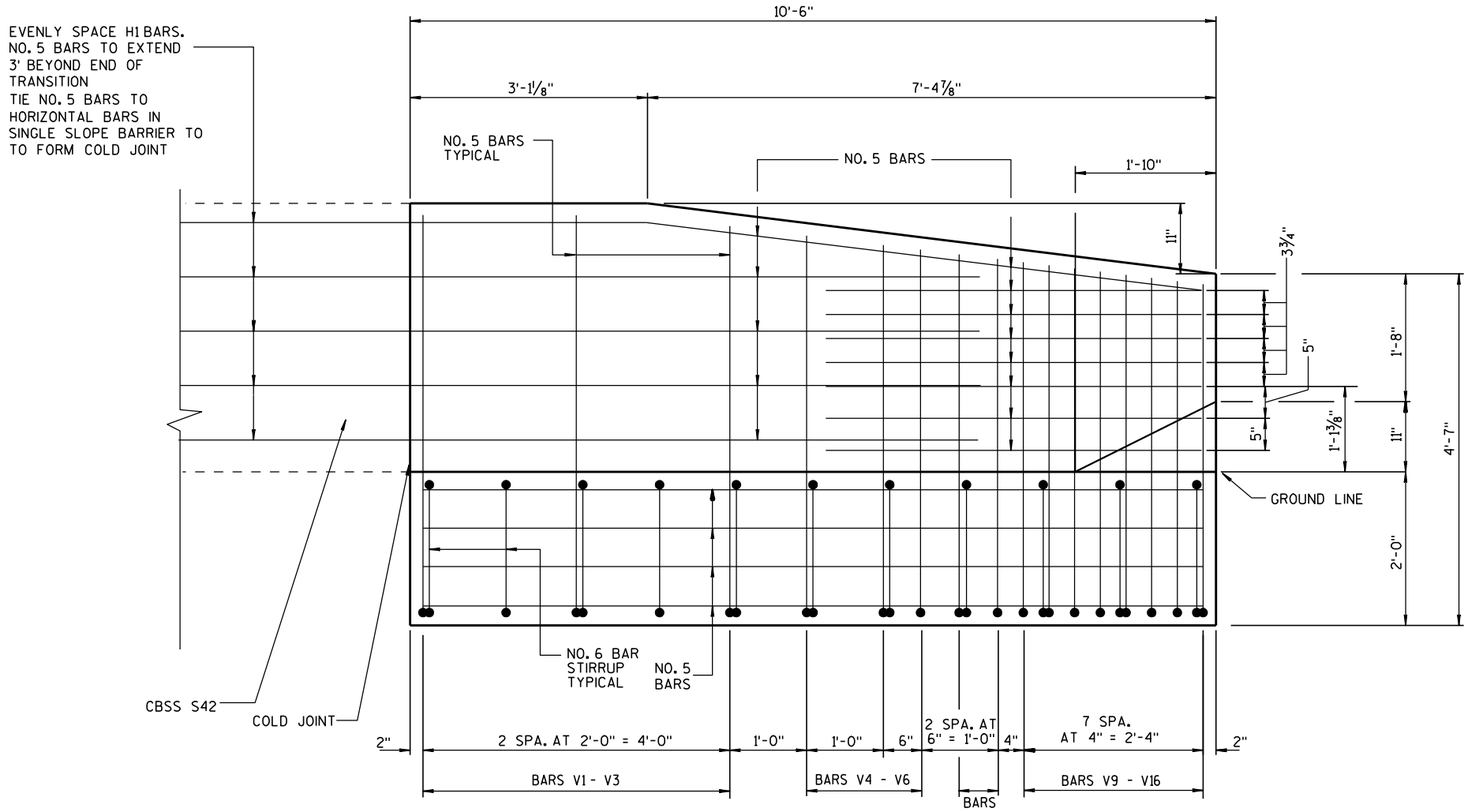
S.D.D. 14 B 32-2e

6

S.D.D. 14 B 32-2e

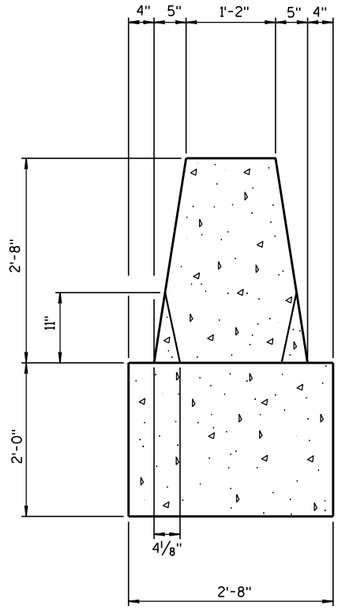


SECTION A-A

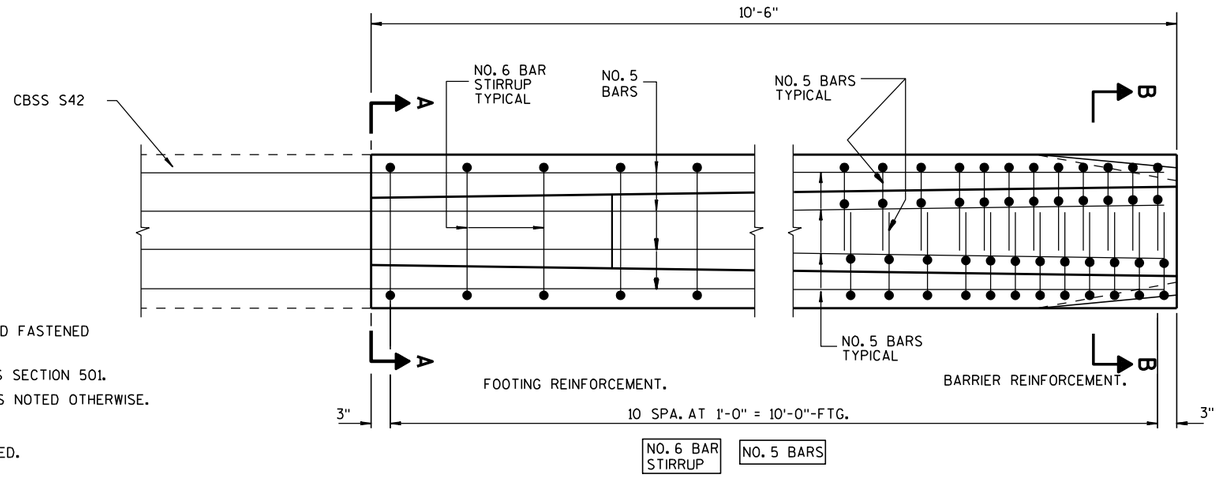


SEE SECTIONS ① THRU ⑯

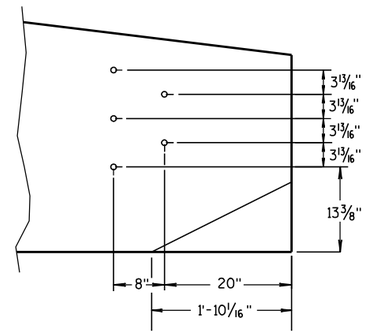
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

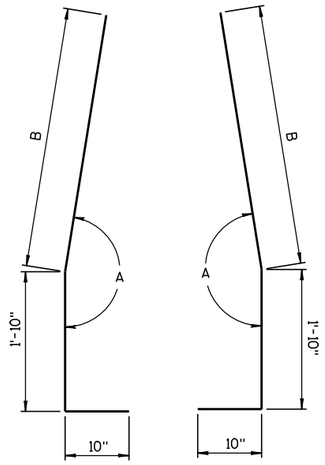
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

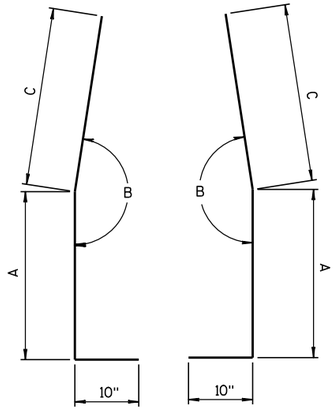
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

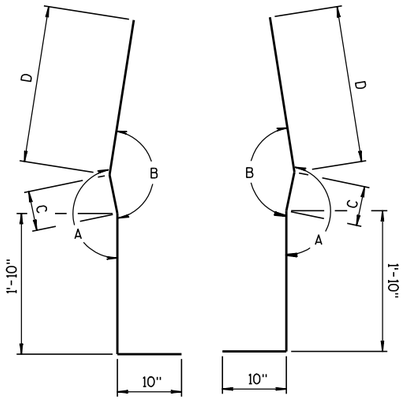
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



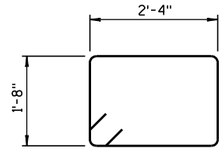
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

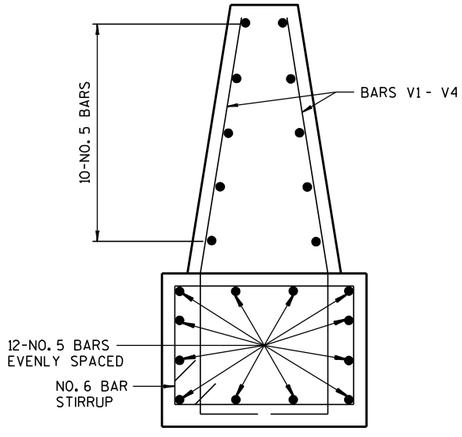
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



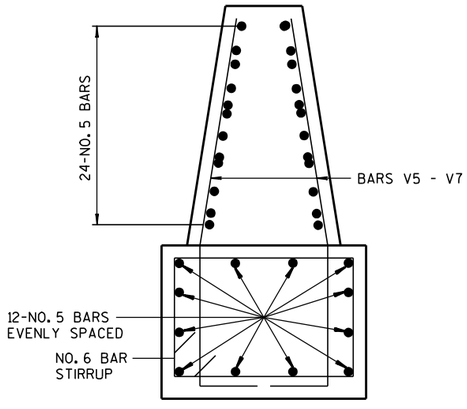
BAR BENDING DETAIL
FOR BARS V14 - V16



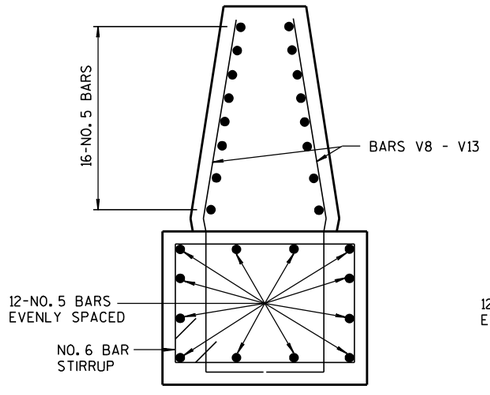
STIRRUP BAR
BENDING DETAIL



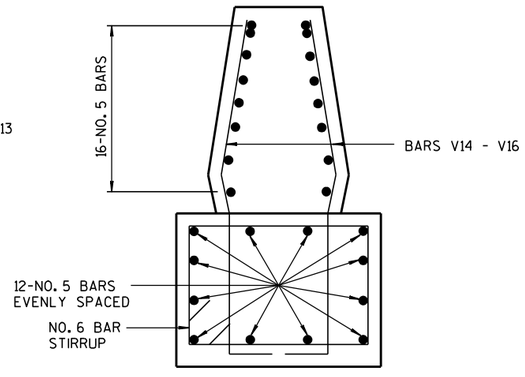
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

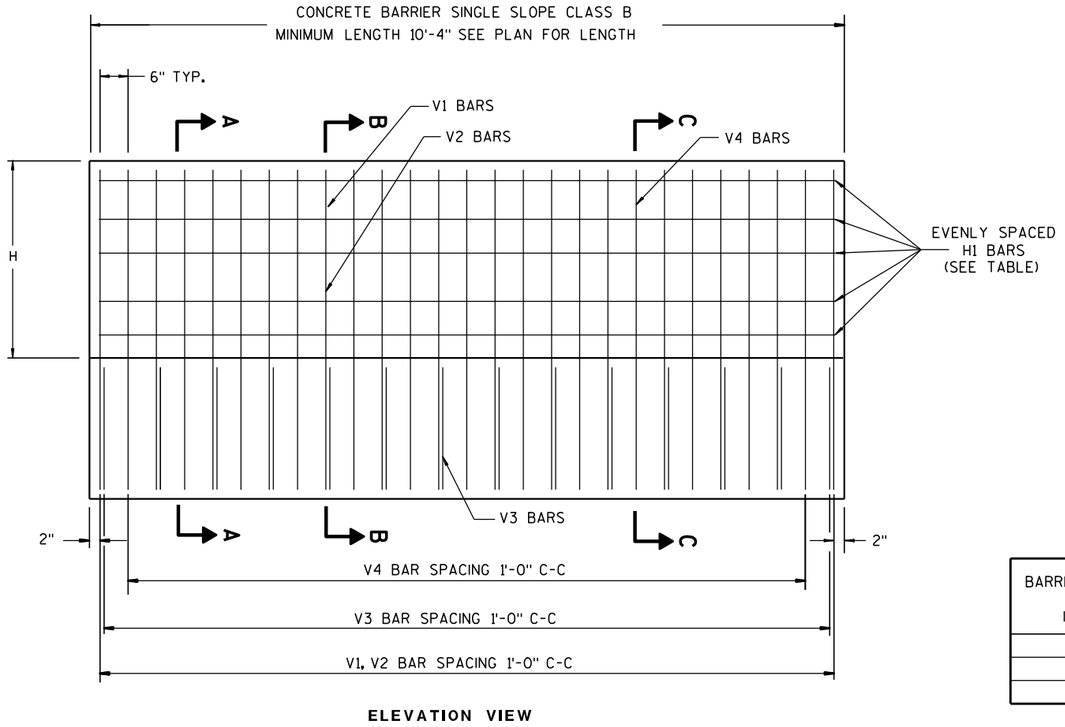
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

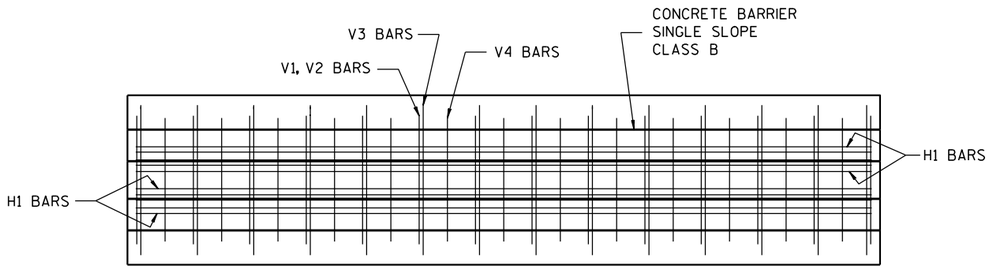
6-3-2010
DATE

/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

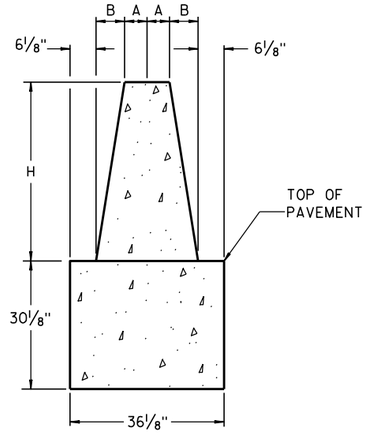
FHWA



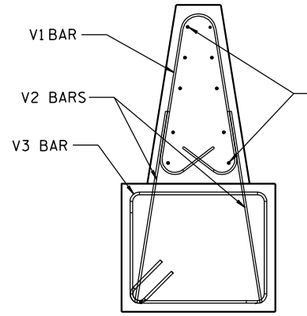
ELEVATION VIEW



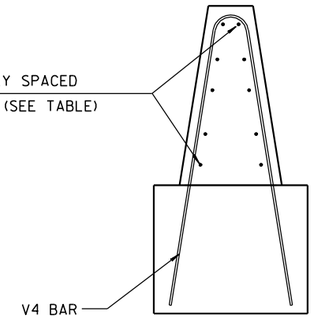
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF H1 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10

BARRIER HEIGHT H INCHES	V1 BAR		V4 BAR	
	C RAD. INCHES	D INCHES	E RAD. INCHES	F INCHES
32	5⅝	18¾	5½	53¾
36	4¾	23¾	4⅞	58⅜
42	3⅝	30½	3⅝	65⅜

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

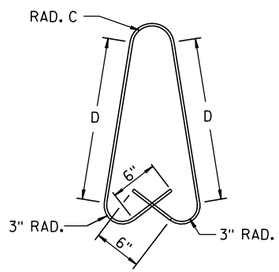
WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

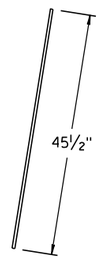
WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.

IF REQUIRED USE THRIE BEAM ANCHOR. NO OTHER ANCHOR REQUIRED.



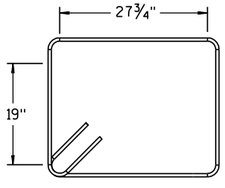
V1 BAR BENDING DETAIL

V1 BARS ARE NO. 4 BARS



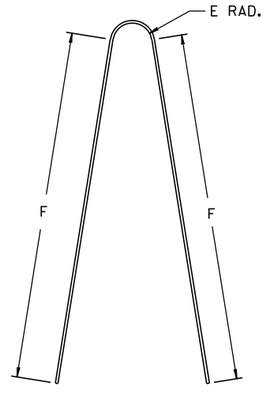
V2 BAR BENDING DETAIL

V2 BARS ARE NO. 5 BARS



V3 BAR BENDING DETAIL

V3 BARS ARE NO. 6 BARS



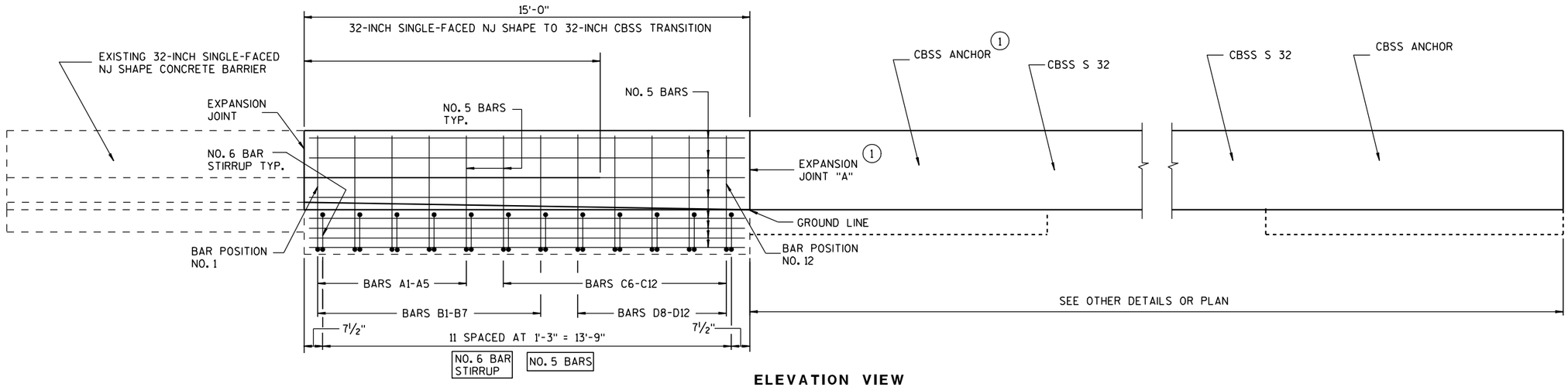
V4 BAR BENDING DETAIL

V4 BARS ARE NO. 6 BARS

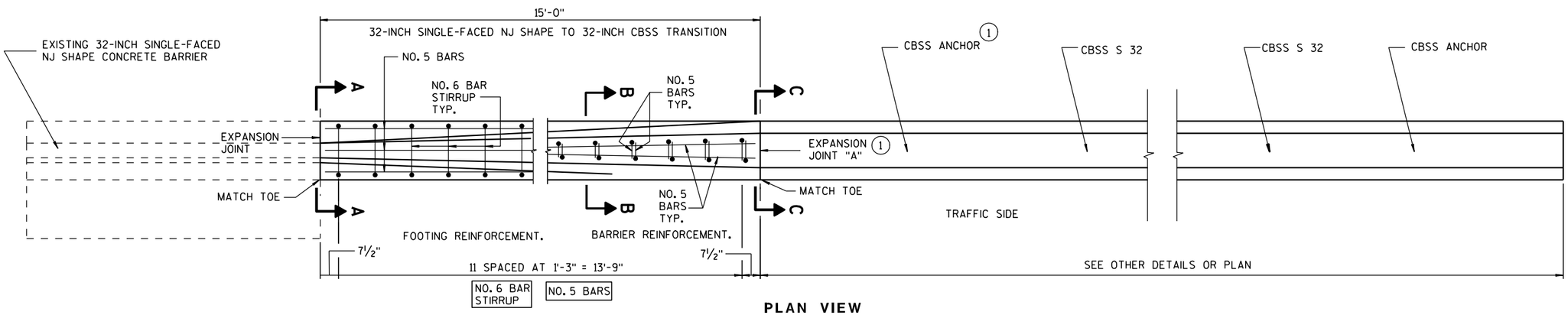
32", 36" & 42"
CONCRETE BARRIER
SINGLE SLOPE CLASS B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

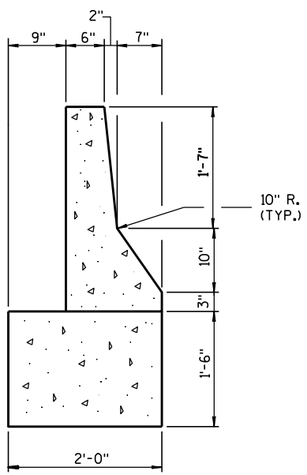
6
S.D.D. 14 B 34-1a



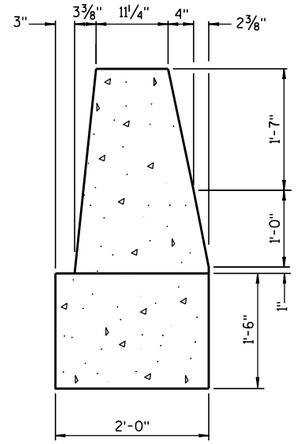
ELEVATION VIEW



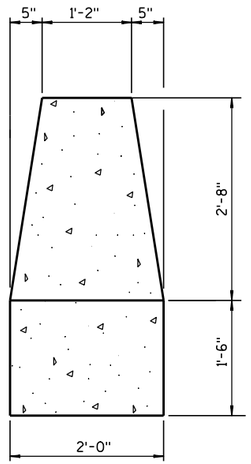
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD -JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

2140

6

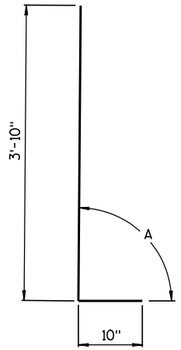
S.D.D. 14 B 35-1a

6

S.D.D. 14 B 35-1a

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

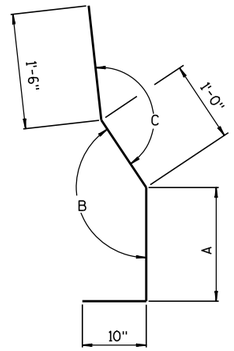
BAR	A
A1	90°
A2	89°-15'
A3	88°-50'
A4	88°-15'
A5	87°-50'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 7

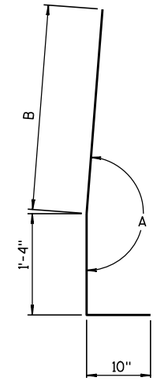
BAR	A	B	C
B1	1'-6"	146°-20'	152°-40'
B2	1'-6"	149°-25'	156°-35'
B3	1'-6"	152°-35'	160°-30'
B4	1'-5½"	155°-20'	163°-55'
B5	1'-5½"	158°-30'	167°-50'
B6	1'-5"	161°-45'	171°-50'
B7	1'-5"	164°-20'	175°-10'



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

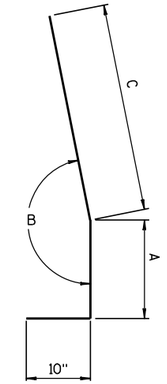
BAR	A	B
C6	176°	2'-6"
C7	175°-05'	2'-6"
C8	174°-25'	2'-6"
C9	173°-45'	2'-6¼"
C10	172°-50'	2'-6¼"
C11	172°-10'	2'-6½"
C12	171°-30'	2'-6½"



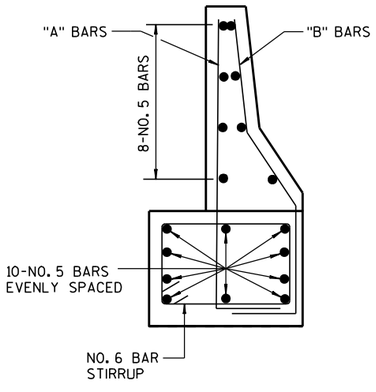
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 8 - NO. 12

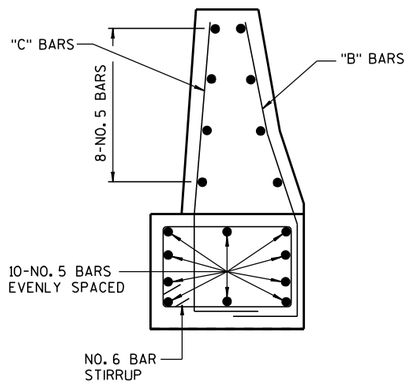
BAR	A	B	C
D8	1'-5"	168°-05'	2'-6"
D9	1'-5"	168°-50'	2'-6"
D10	1'-5"	169°-25'	2'-6"
D11	1'-4"	170°-10'	2'-6½"
D12	1'-4"	170°-50'	2'-6½"



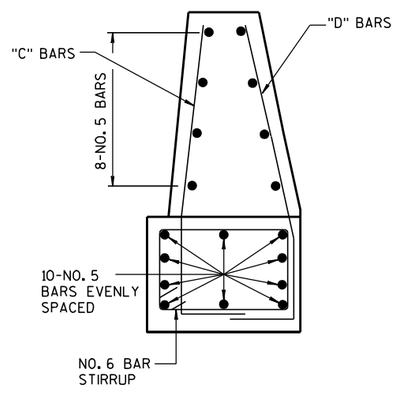
"D" BAR
BENDING DETAIL



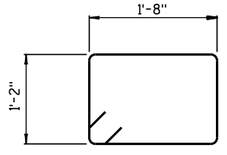
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

2141 ENT

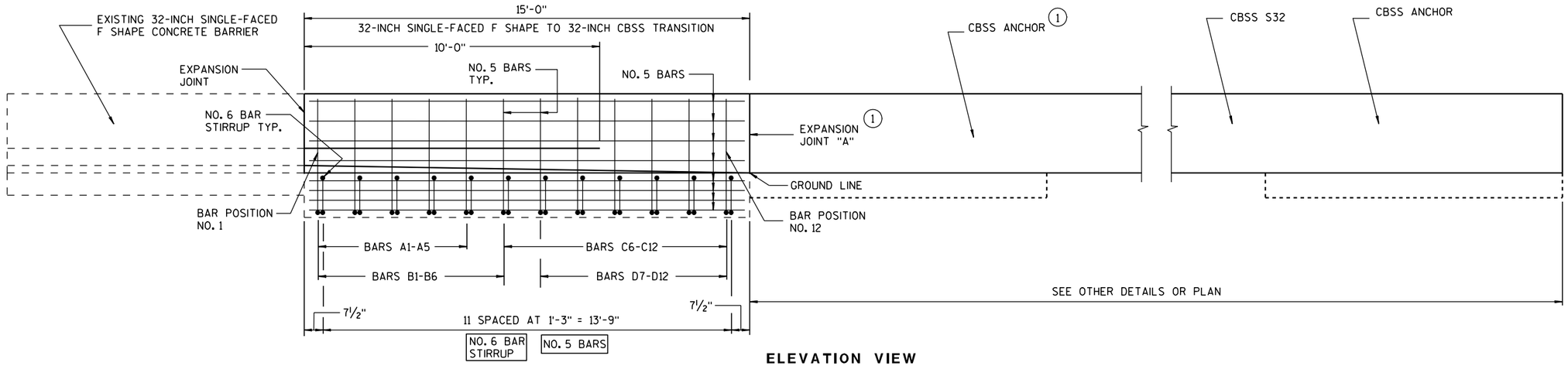
FHWA

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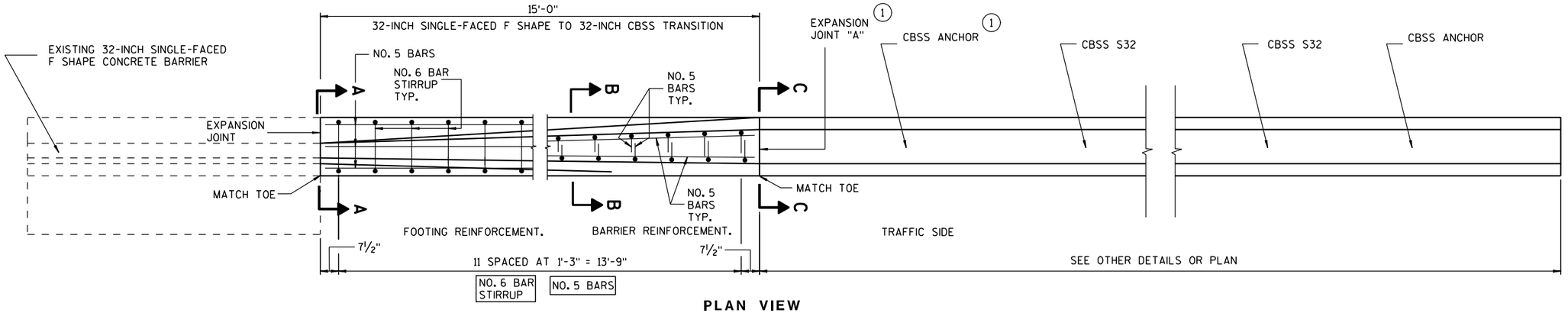
S.D.D. 14 B 35-1b

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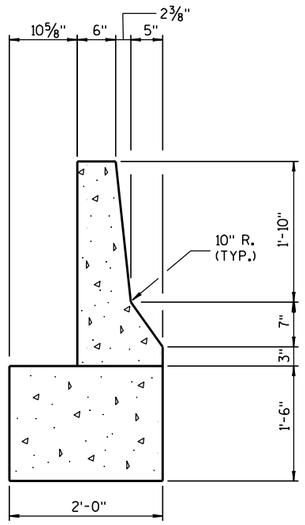
S.D.D. 14 B 35-1b



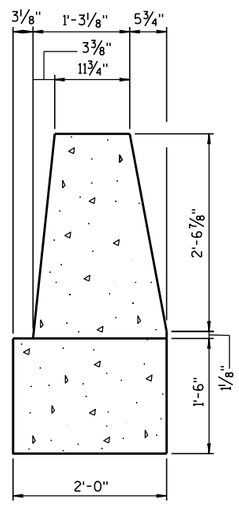
ELEVATION VIEW



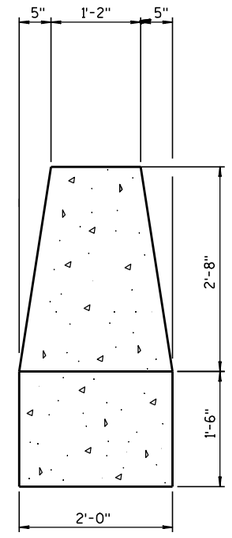
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

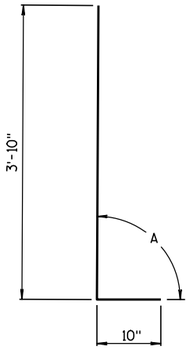
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 36-1a

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

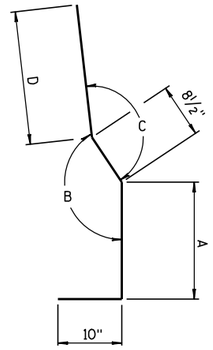
BAR	A
A1	89°-40'
A2	89°-15'
A3	88°-50'
A4	88°-15'
A5	87°-50'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 6

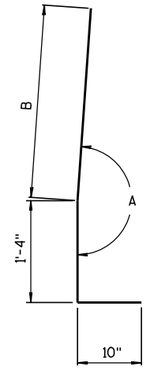
BAR	A	B	C	D
B1	1'-6"	146°-20'	152°-45'	1'-9"
B2	1'-6"	149°-20'	156°-25'	1'-8¾"
B3	1'-6"	152°-20'	160°-05'	1'-8½"
B4	1'-6"	156°-05'	164°-05'	1'-8½"
B5	1'-5½"	158°-55'	167°-40'	1'-8½"
B6	1'-5"	161°-50'	170°-50'	1'-8½"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

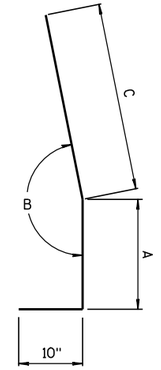
BAR	A	B
C6	175°	2'-6"
C7	175°-05'	2'-6"
C8	174°-25'	2'-6"
C9	173°-45'	2'-6"
C10	172°-55'	2'-6"
C11	172°-15'	2'-6"
C12	171°-35'	2'-6½"



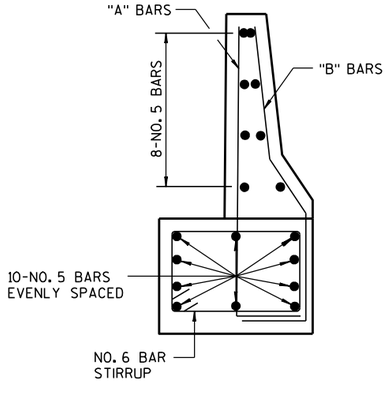
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 7 - NO. 12

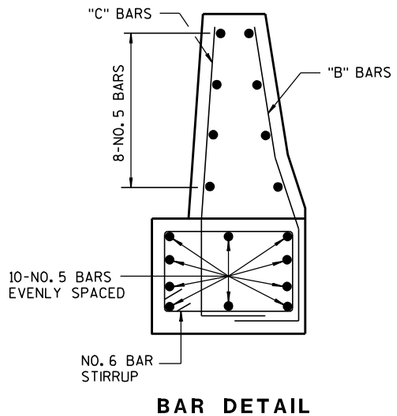
BAR	A	B	C
D7	1'-5"	168°-50'	2'-5½"
D8	1'-5"	169°-15'	2'-5½"
D9	1'-5"	169°-30'	2'-6"
D10	1'-4"	170°-05'	2'-6"
D11	1'-4"	170°-35'	2'-6"
D12	1'-4"	170°-55'	2'-6½"



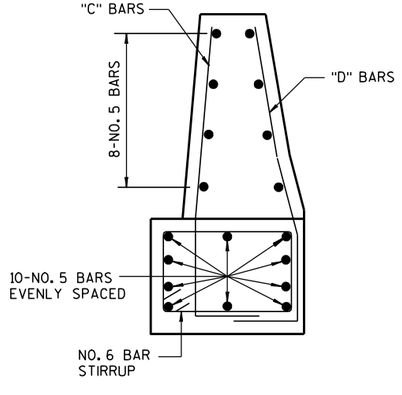
"D" BAR
BENDING DETAIL



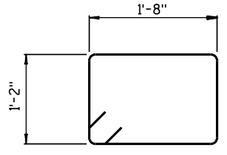
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6



BAR DETAIL
BAR POSITIONS NO. 7 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zaa
ROADWAY STANDARDS I 2143 ENT
ENGINEER

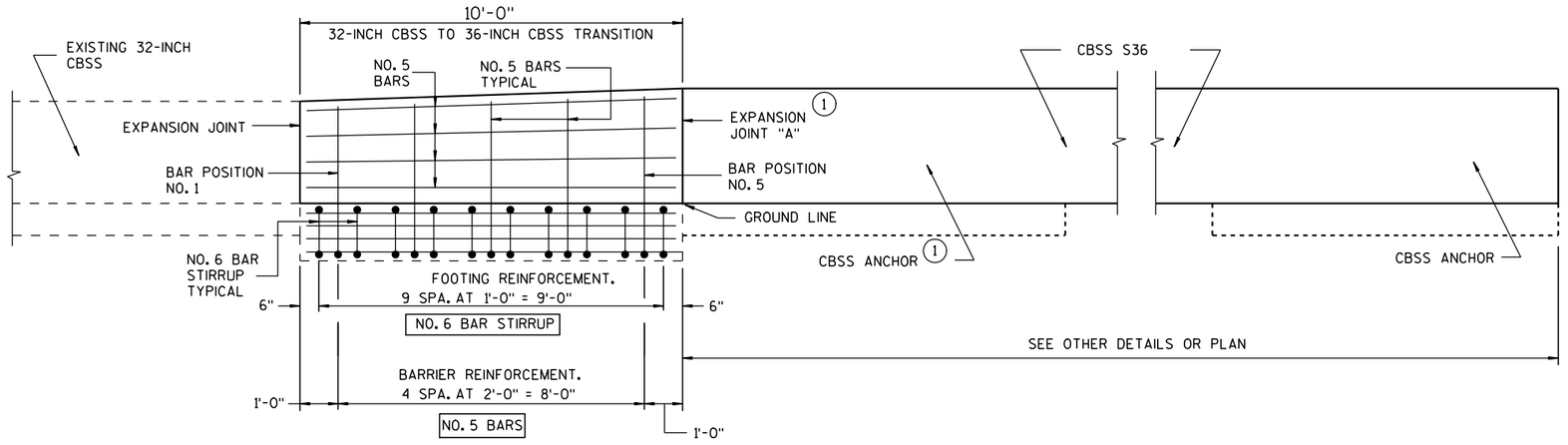
FHWA

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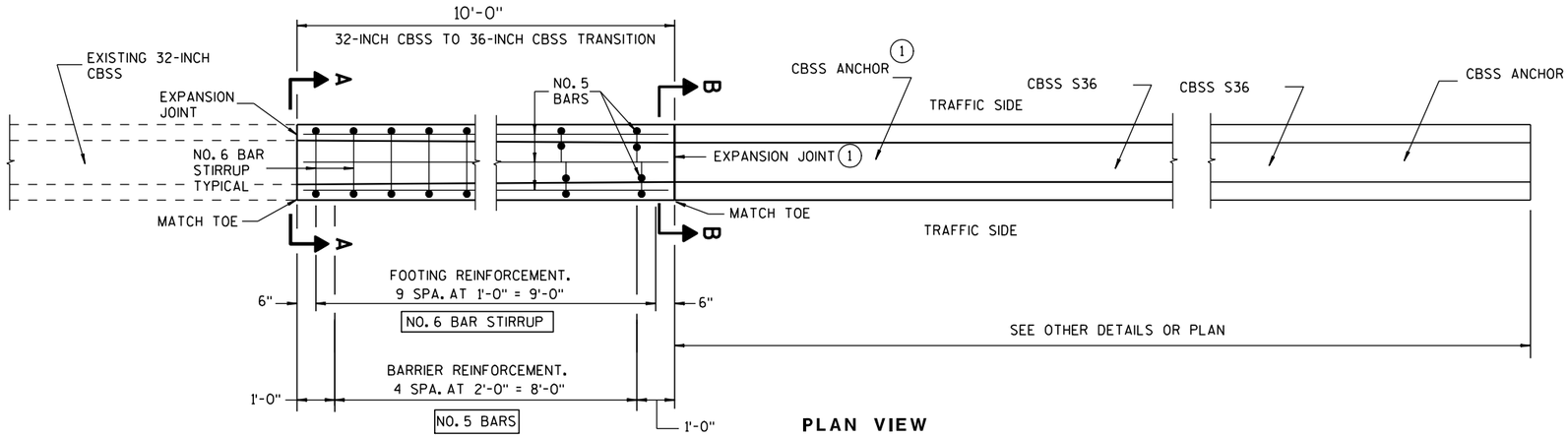
S.D.D. 14 B 36-1b

6

S.D.D. 14 B 36-1b



ELEVATION VIEW



PLAN VIEW

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

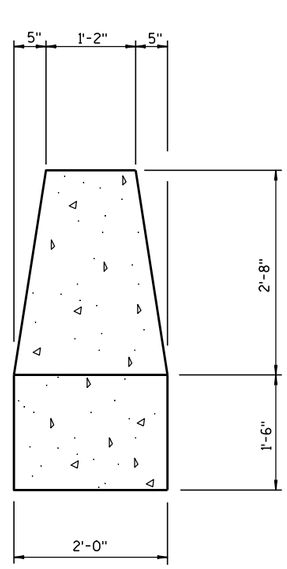
4000 PSICONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE $\frac{3}{4}$" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

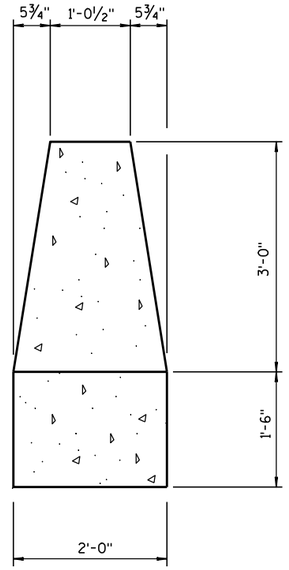
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

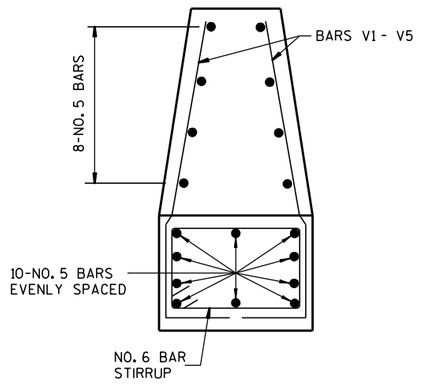
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



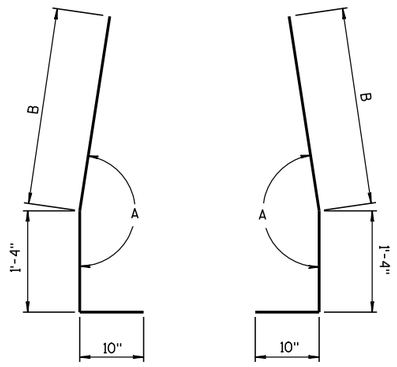
SECTION A-A



SECTION B-B



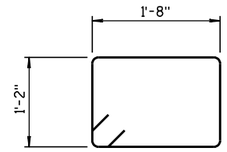
BAR DETAIL
BAR POSITION NO. 1 - NO. 5



BAR BENDING DETAIL
FOR BARS V1 - V5

BAR CHART
SECTIONS V1 - V5

BAR	A	B
V1	171°-10'	2'-6½"
V2	171°-05'	2'-8"
V3	170°-55'	2'-9"
V4	170°-40'	2'-9½"
V5	171°	2'-10"



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE SLOPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

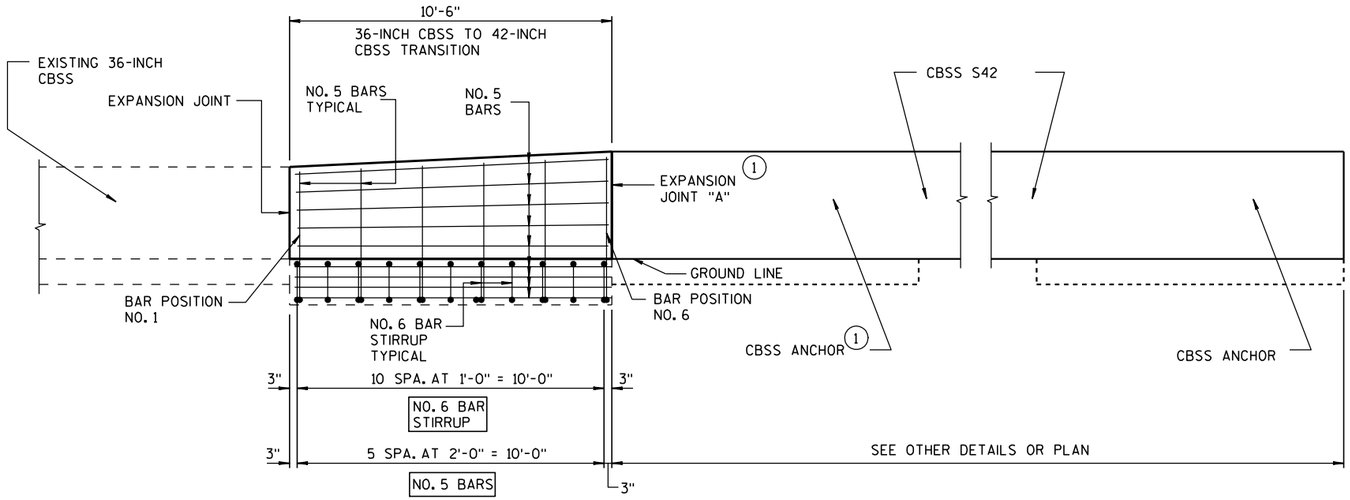
APPROVED
6-3-2010
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible]2144 [illegible]ENT
ENGINEER
FHWA

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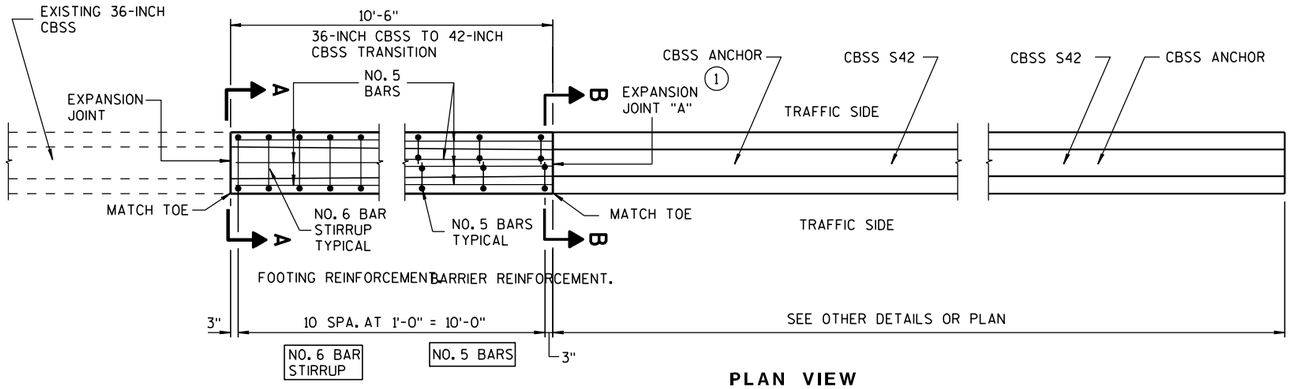
S.D.D. 14 B 39-1a

6

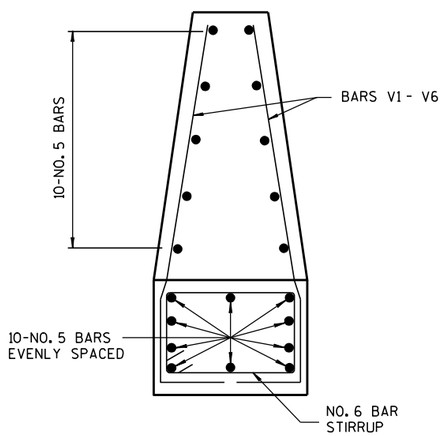
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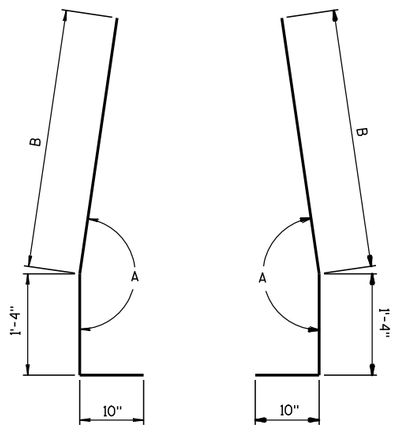
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 6



BAR BENDING DETAIL
FOR BARS V1 - V6

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

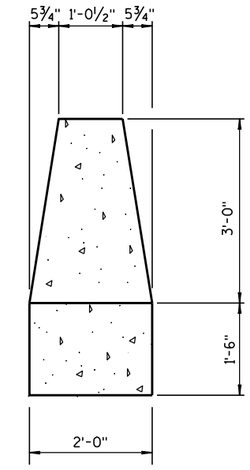
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

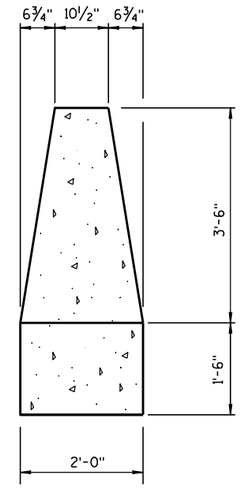
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



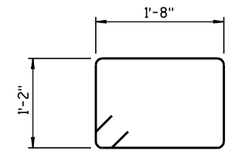
SECTION A-A



SECTION B-B

BAR CHART
SECTIONS V1 - V6

BAR	A	B
V1	170°-55'	2'-10½"
V2	171°-05'	3'-0"
V3	171°-20'	3'-1"
V4	171°-20'	3'-2"
V5	171°-35'	3'-3"
V6	171°-40'	3'-4½"



STIRRUP BAR
BENDING DETAIL

36-INCH SINGLE SLOPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

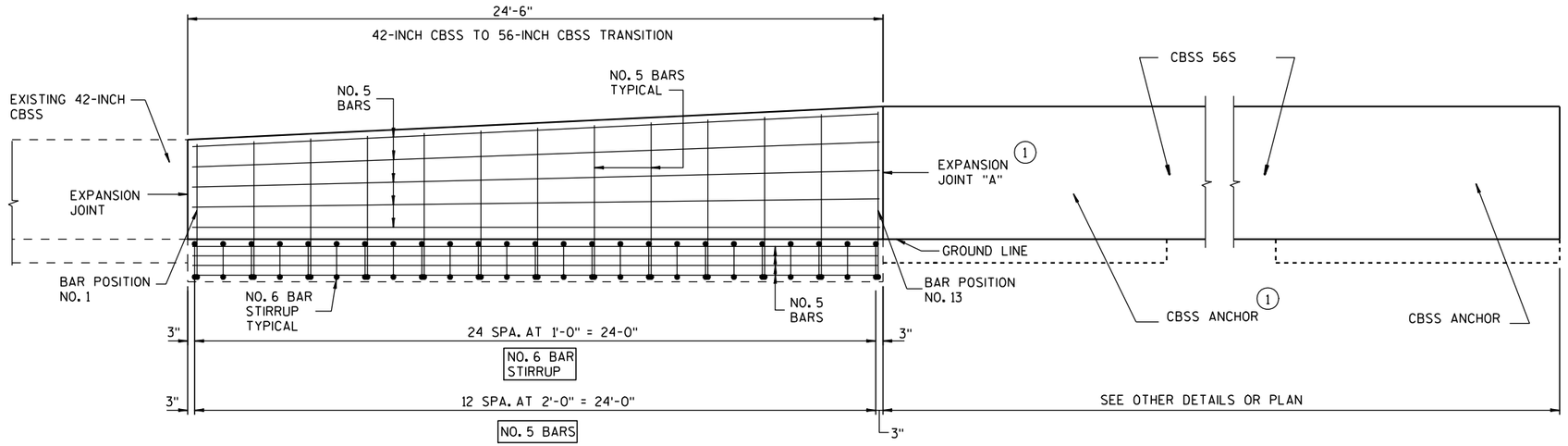
APPROVED
6-3-2010
DATE
/S/ Jerry H. Zoo
ROADWAY STANDARDS [2145] ENT
ENGINEER
FHWA

6

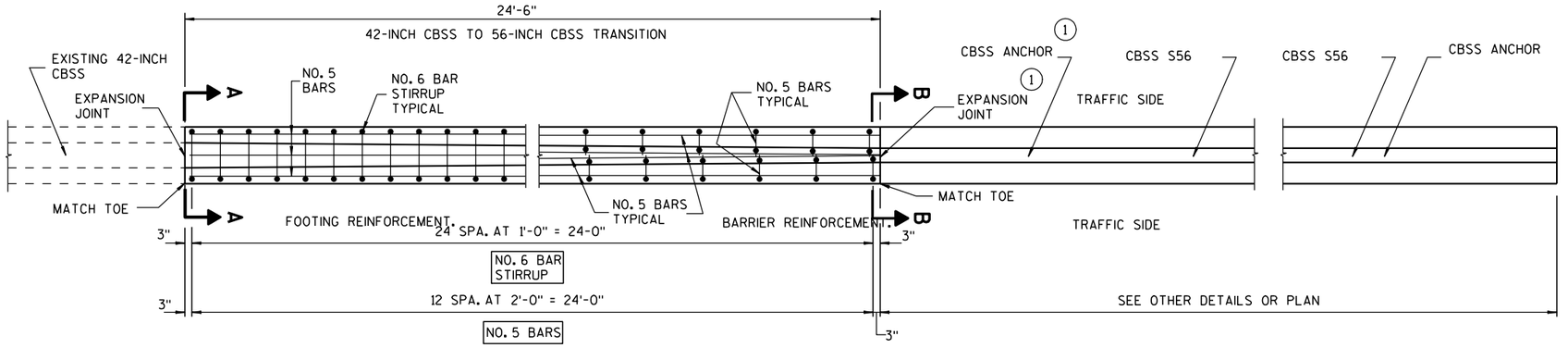
S.D.D. 14 B 39-1c

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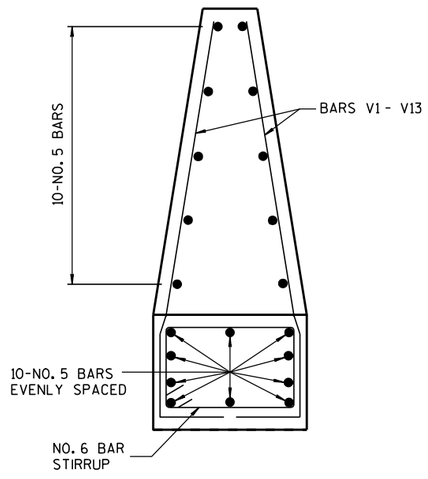
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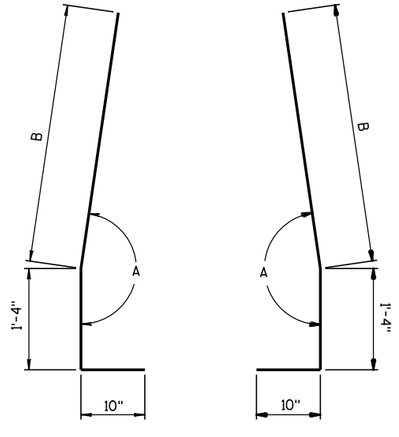
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 13



BAR BENDING DETAIL
FOR BARS V1 - V13

BAR CHART SECTIONS V1 - V13

BAR	A	B
V1	170°-50'	3'-4½"
V2	170°-50'	3'-6"
V3	170°-55'	3'-7"
V4	171°	3'-8"
V5	170°-55'	3'-9½"
V6	170°-50'	3'-10½"
V7	170°-50'	3'-11½"

BAR	A	B
V8	170°-55'	4'-0½"
V9	170°-50'	4'-2"
V10	170°-50'	4'-3"
V11	170°-50'	4'-4½"
V12	170°-55'	4'-5½"
V13	170°-50'	4'-6½"

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

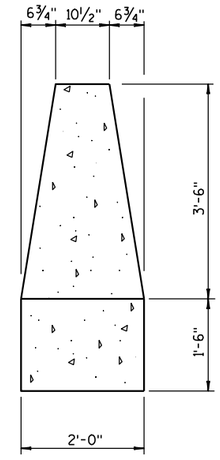
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

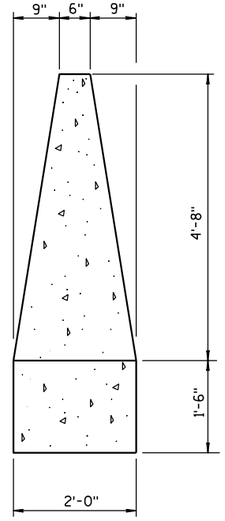
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

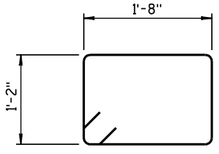
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



SECTION A-A



SECTION B-B



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE SLOPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

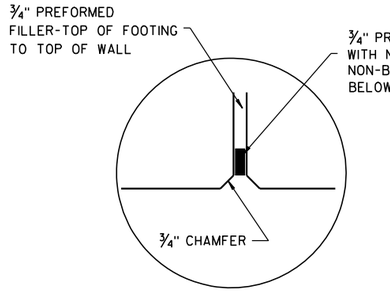
APPROVED
6-3-2010 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
2146 ENT
FHWA

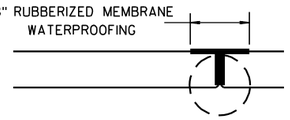
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S.D.D. 14 B 39-1e

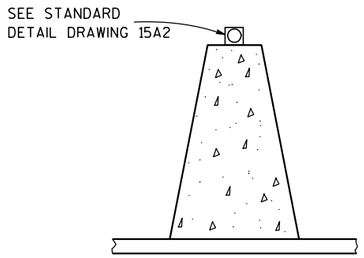
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S.D.D. 14 B 39-1e





VERTICAL EXPANSION JOINT



DELINEATION

SPACING FOR DELINEATORS ON HORIZONTAL CURVES

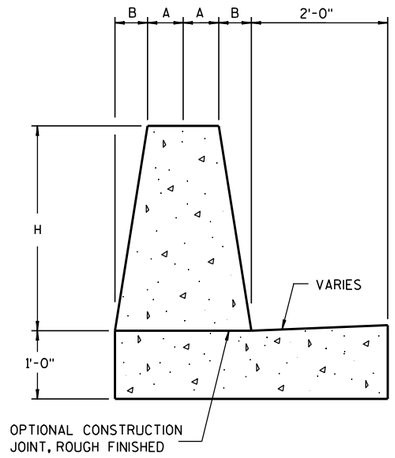
RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

GENERAL NOTES

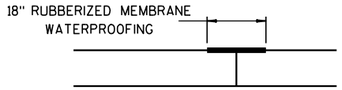
PROVIDE EXPANSION JOINTS WHERE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603.
SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.
USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.
2" CLEAR COVER (TYP.)

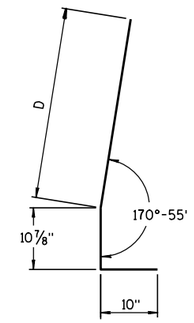


ROADSIDE RETAINING WALL

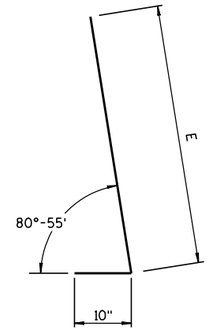


CONSTRUCTION JOINT

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



V1 BAR BENDING DETAIL



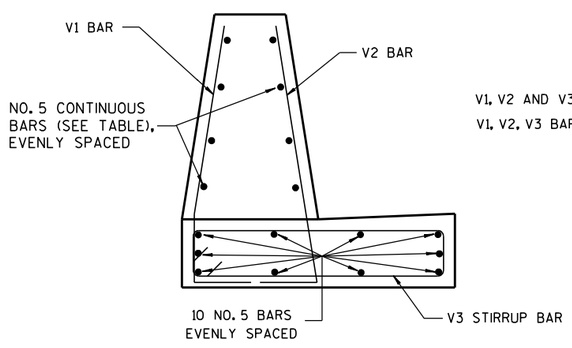
V2 BAR BENDING DETAIL

REFLECTOR SPACING

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2	3

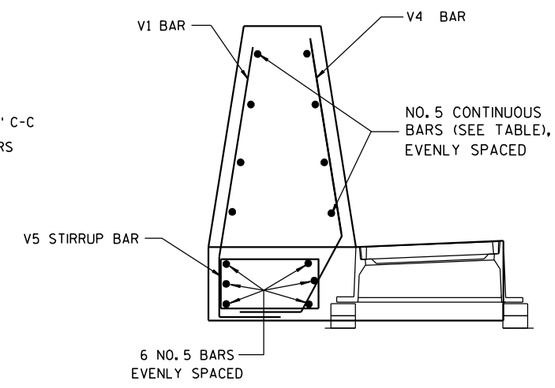
BAR CHART ROADSIDE RETAINING WALL

BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
36"	2'-9⅝"	3'-9¾"	2'-8"
42"	3'-3⅝"	4'-2⅝"	3'-2⅛"
56"	4'-7½"	5'-6½"	4'-4⅜"

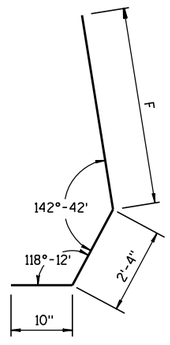


V1, V2 AND V3 ARE SPACED 18" C-C
V1, V2, V3 BARS ARE NO. 5 BARS

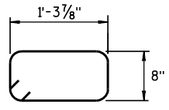
ROADSIDE RETAINING WALL NORMAL BAR PLACEMENT



ROADSIDE RETAINING WALL BAR PLACEMENT NEAR INLET



V4 BAR BENDING DETAIL



V5 STIRRUP BAR BENDING DETAIL

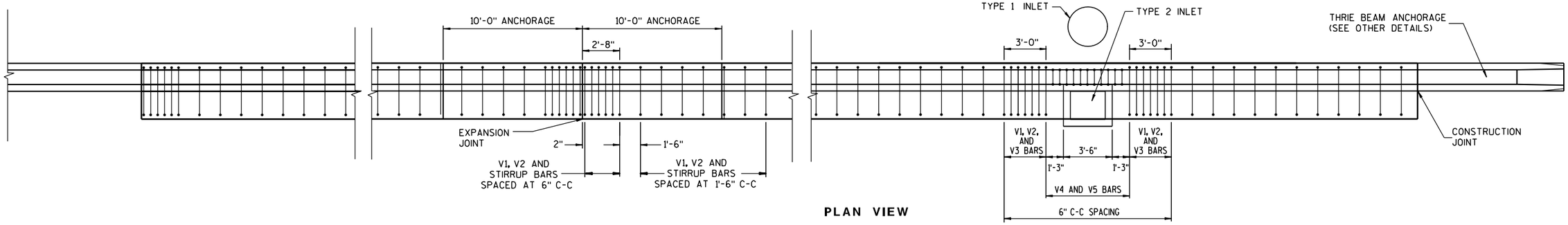


V3 STIRRUP BAR BENDING DETAIL

SINGLE SLOPE ROADSIDE RETAINING WALL

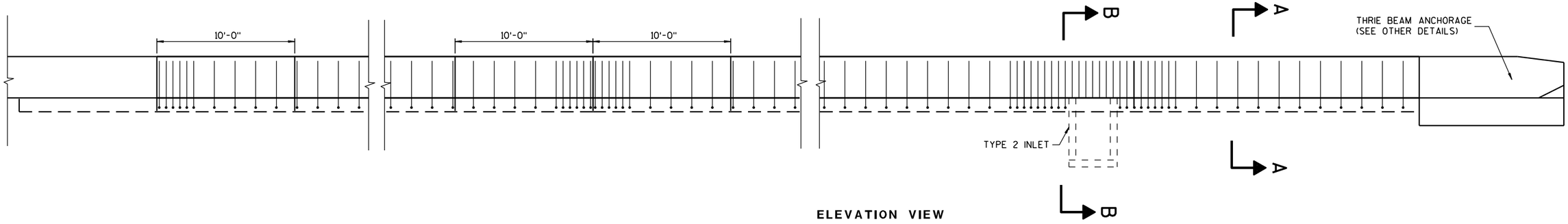
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 41-1a



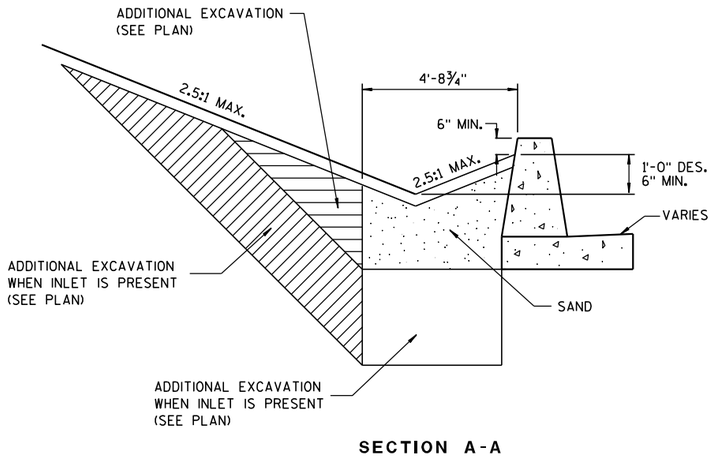
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN
SEE OTHER DETAILS FOR HORIZONTAL BARS.

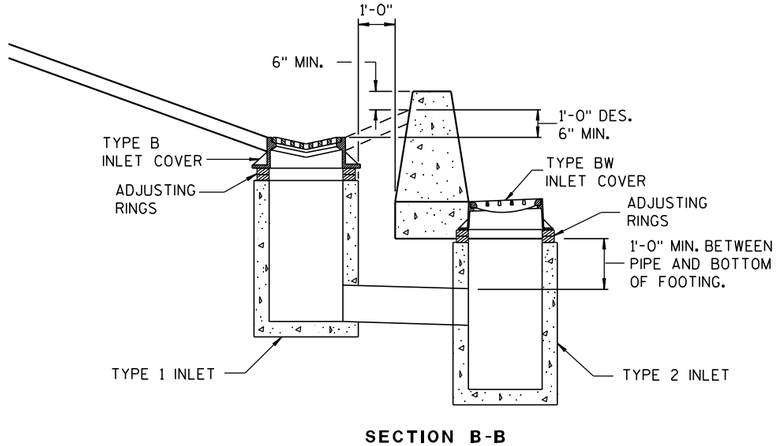


ELEVATION VIEW

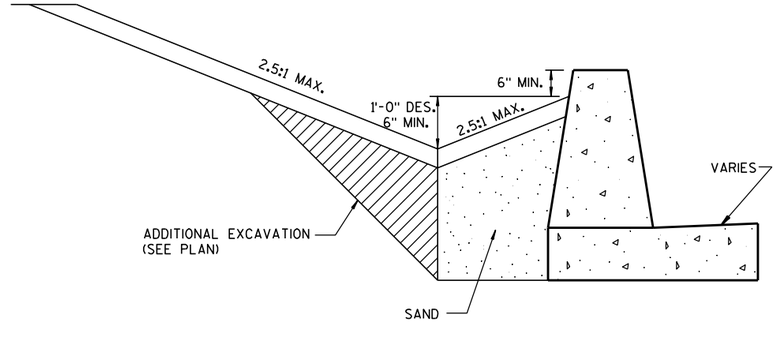
NOTE: HORIZONTAL BARS ARE NOT SHOWN
SEE OTHER DETAILS FOR HORIZONTAL BARS.



SECTION A-A



SECTION B-B



MINIMUM DESIGN OF EARTH WORK

MINIMUM DESIGN OF EARTH WORK FOR INLET

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/13/2011
DATE
FHWA

/S/ Jerry H. Zaaa
ROADWAY STANDARDS ENGINEER 2148 ENT

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S.D.D. 14 B 41-1b

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S.D.D. 14 B 41-1b

GENERAL NOTES

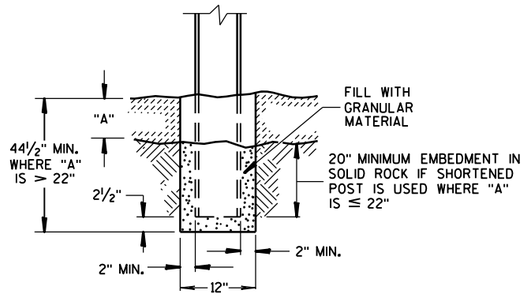
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

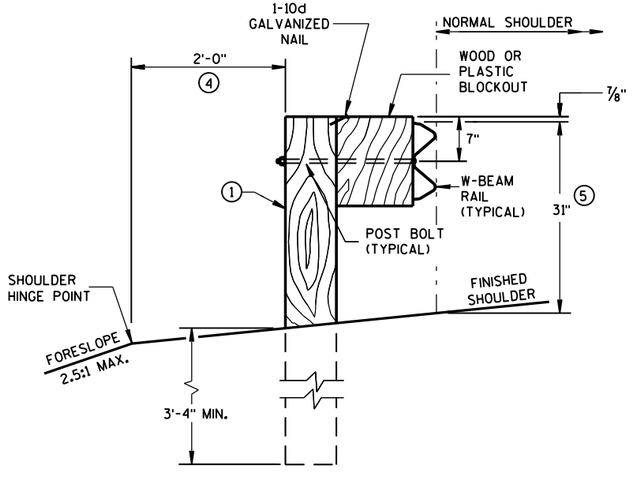
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

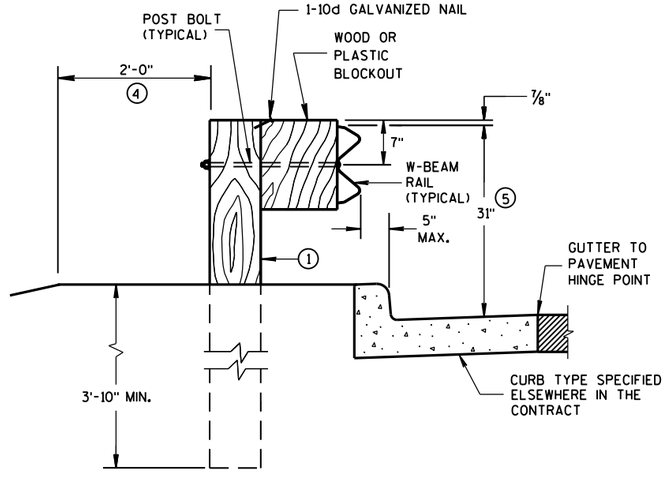


END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



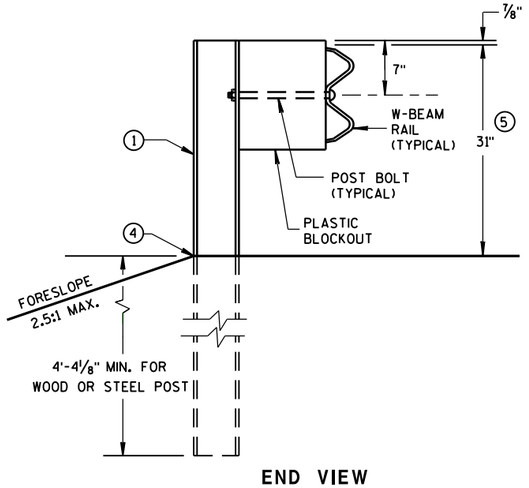
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



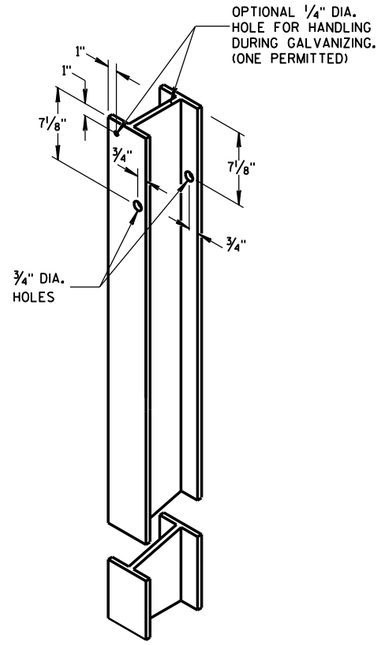
END VIEW

LOCATED ALONG A CURBED ROADWAY

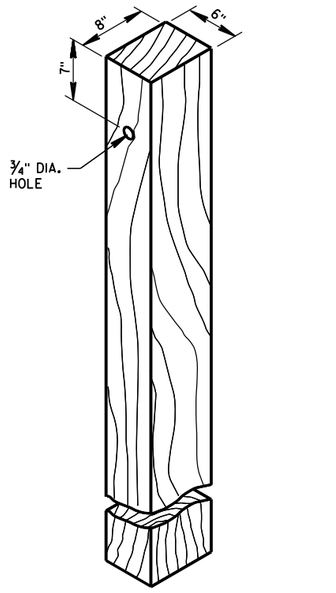


END VIEW

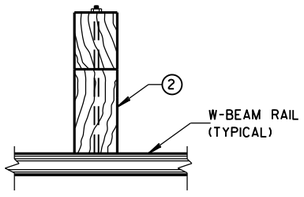
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



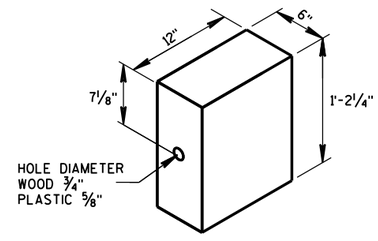
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



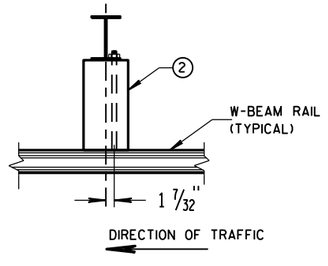
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

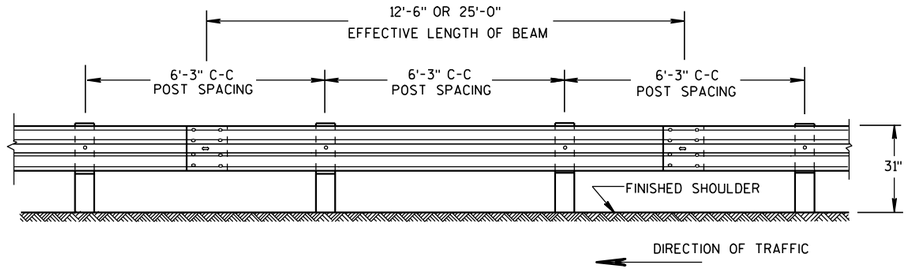


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

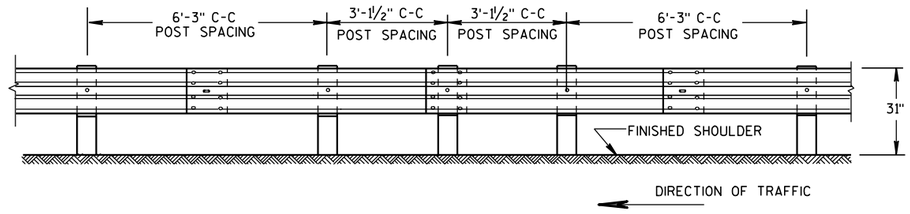
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 42-2a



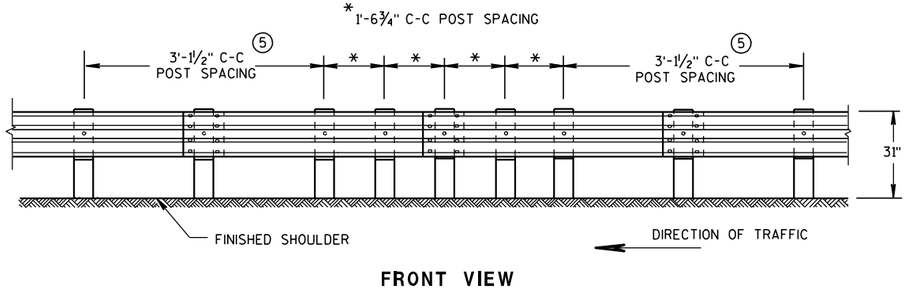
FRONT VIEW

POST SPACING STANDARD INSTALLATION



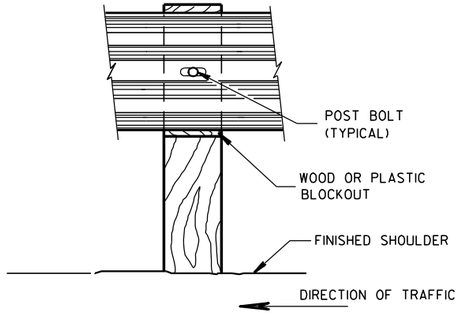
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

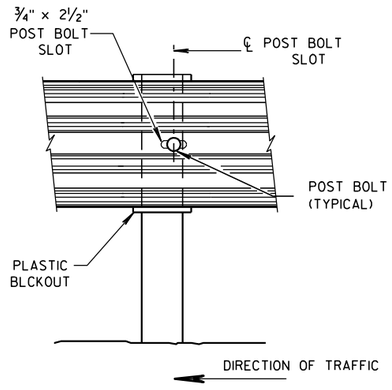


FRONT VIEW

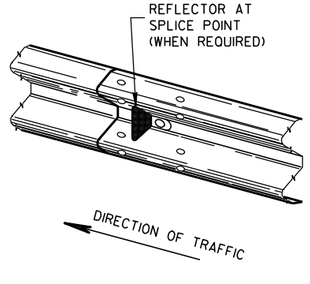
QUARTER POST SPACING (QS)

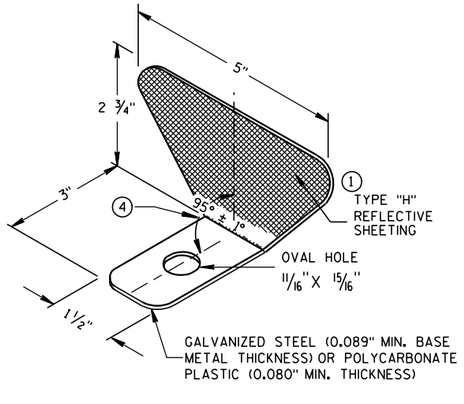


FRONT VIEW AT WOOD POST

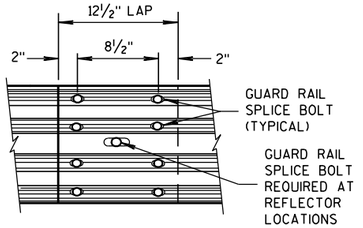


FRONT VIEW AT STEEL POST



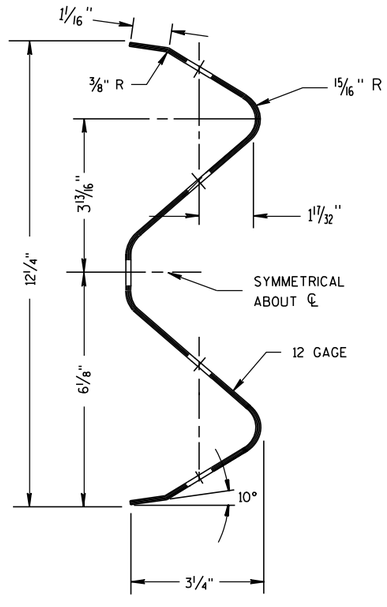


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

GENERAL NOTES

① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.

② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑤ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING ②

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ③ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 ④ 2	3

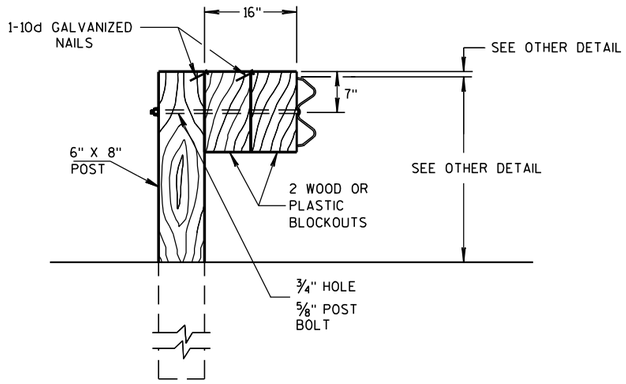
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

2150

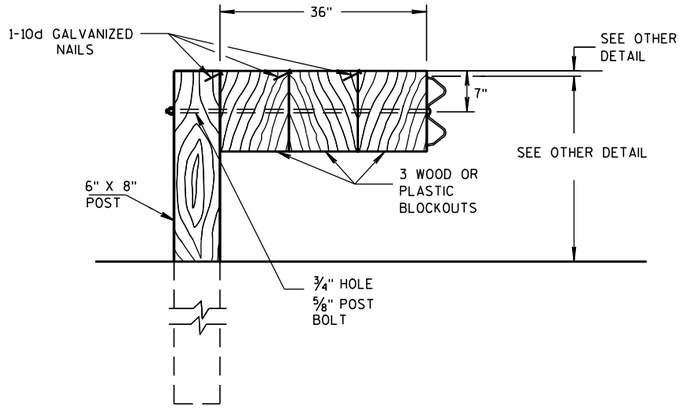
6

S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

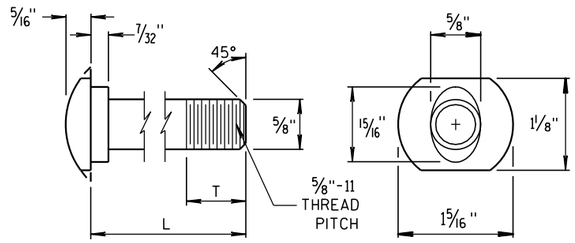


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

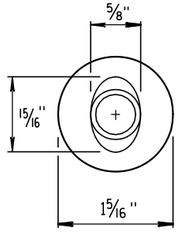
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

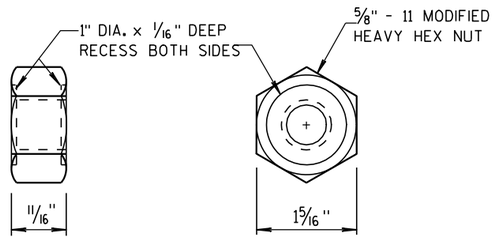


POST BOLT TABLE

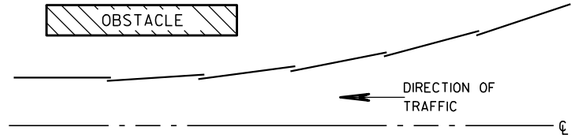
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

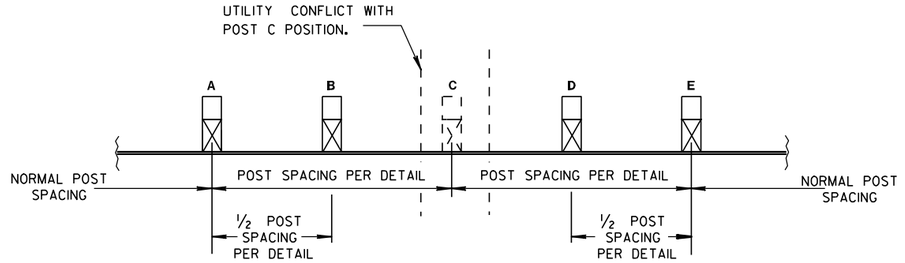


POST BOLT AND RECESS NUT

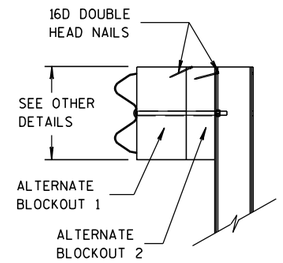


PLAN VIEW

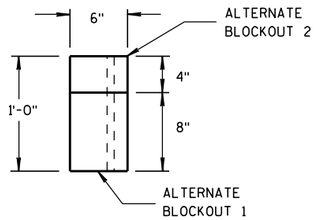
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

2151 ENT

FHWA

6
S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

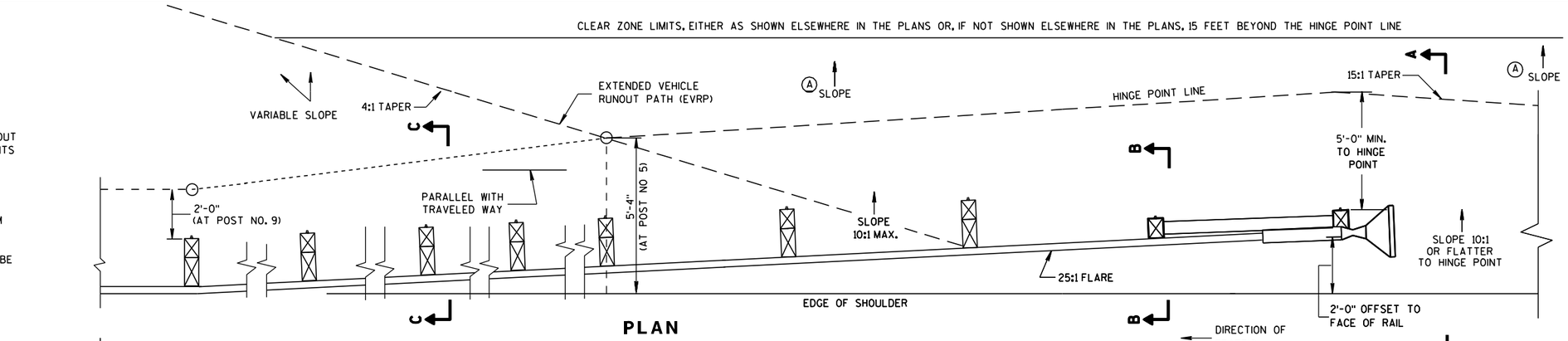
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

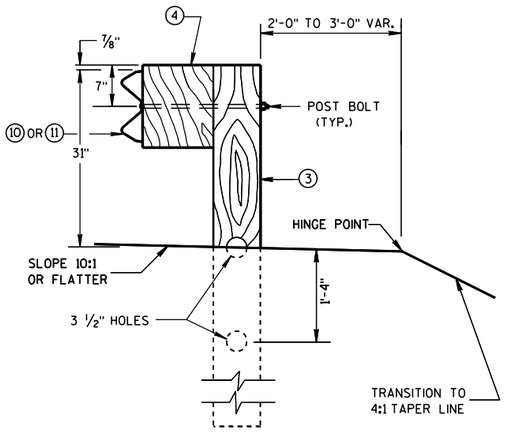
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

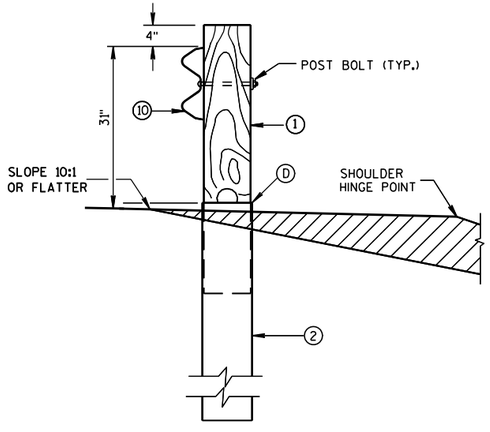
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

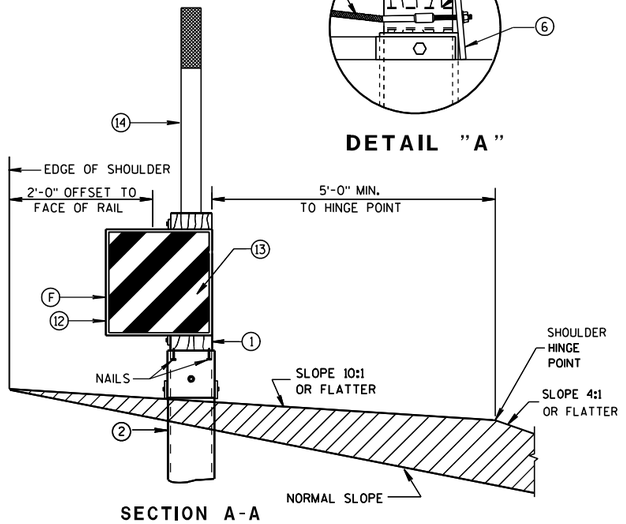




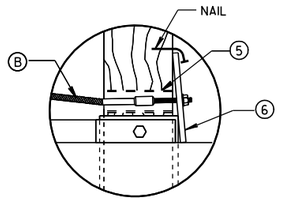
SECTION C-C
TYPICAL AT POST NOS. 3-9



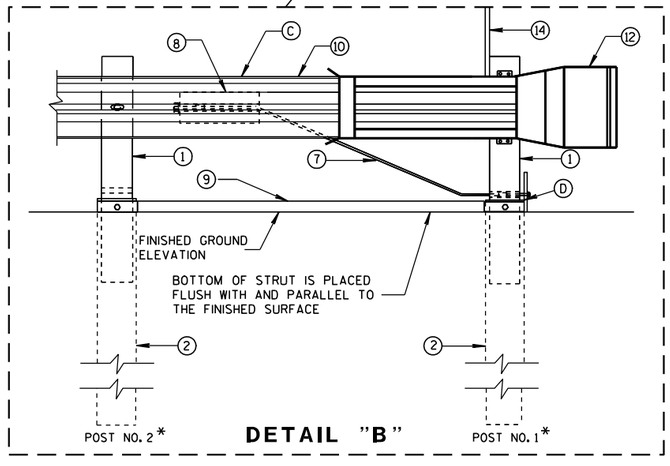
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

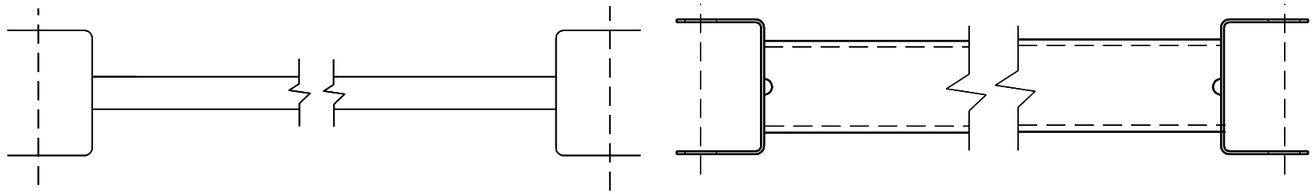
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1a

6

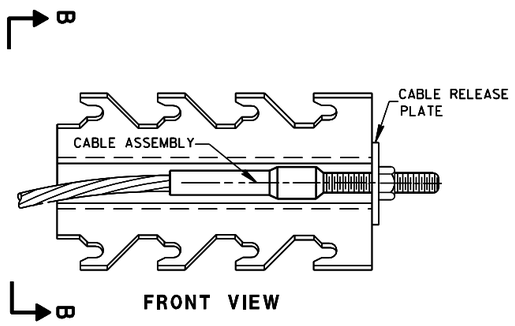
S.D.D. 14 B 44-1a



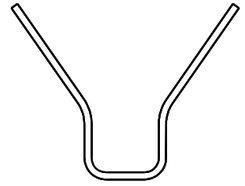
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

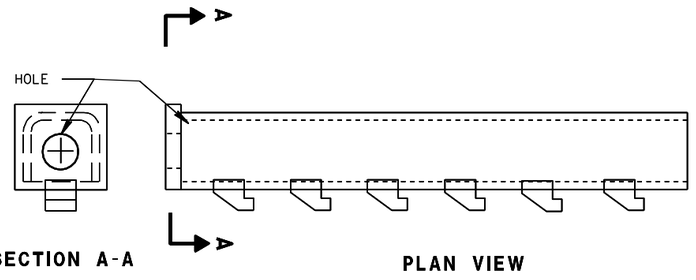
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



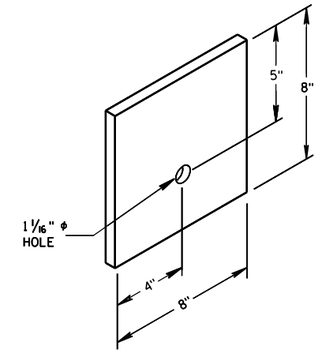
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

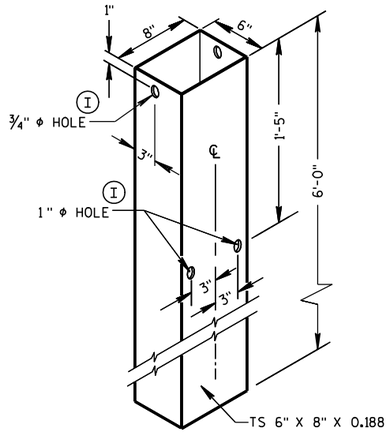


BEARING PLATE (6)

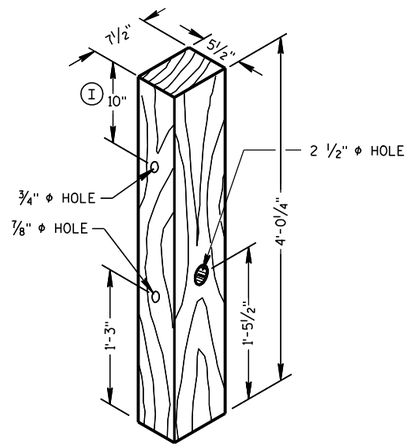
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 44-1b

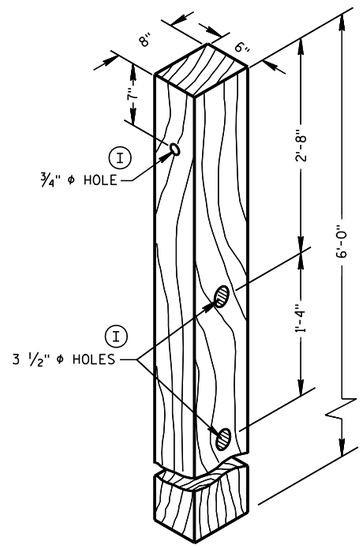


FOUNDATION TUBE (2)



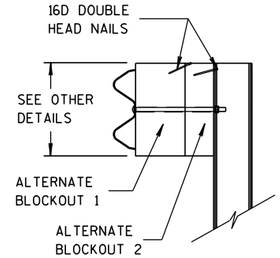
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

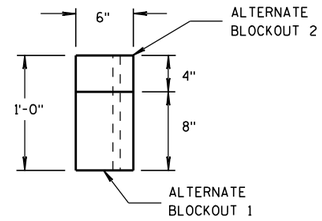


POSTS NUMBER 3-9

WOOD CRT POST (3)

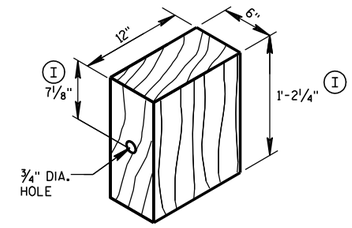


SIDE VIEW



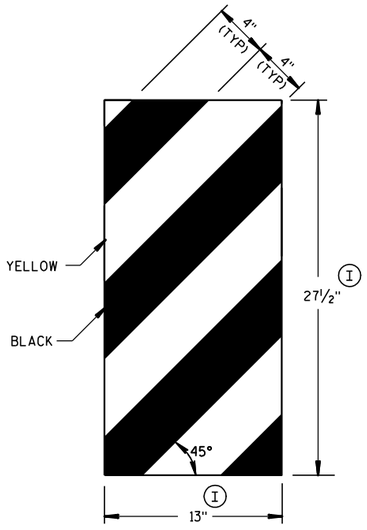
TOP VIEW

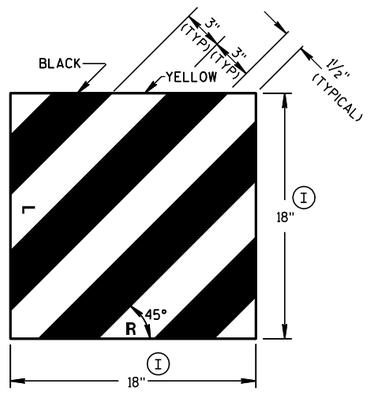
ALTERNATE WOOD BLOCKOUT DETAIL



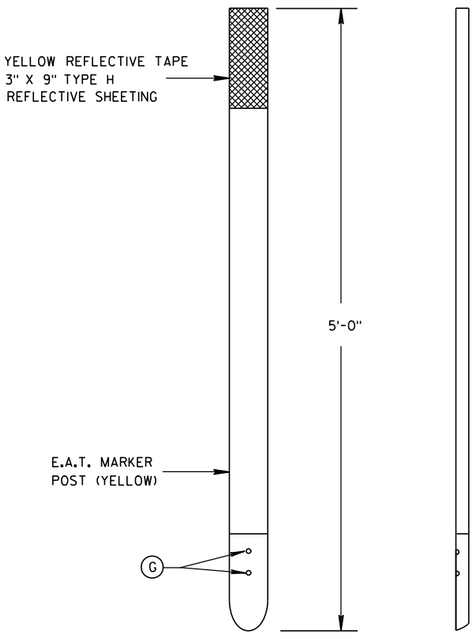
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



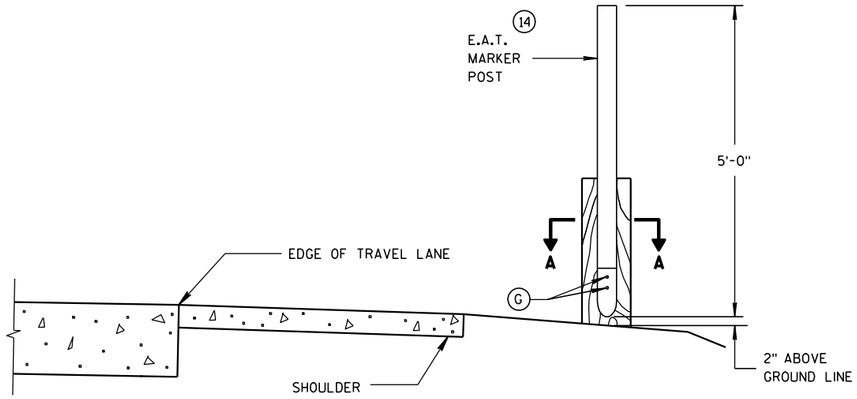


GENERIC REFLECTIVE SHEETING (13) (H)



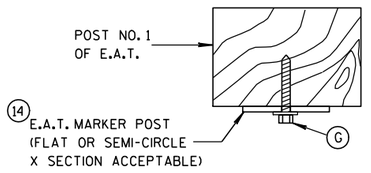
FRONT VIEW **SIDE VIEW**

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)

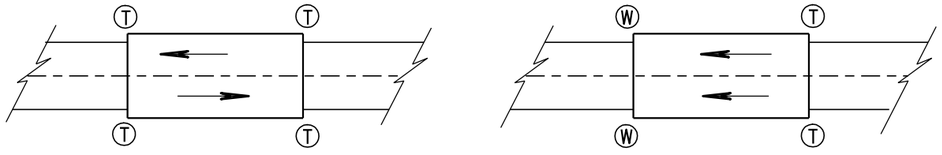


SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

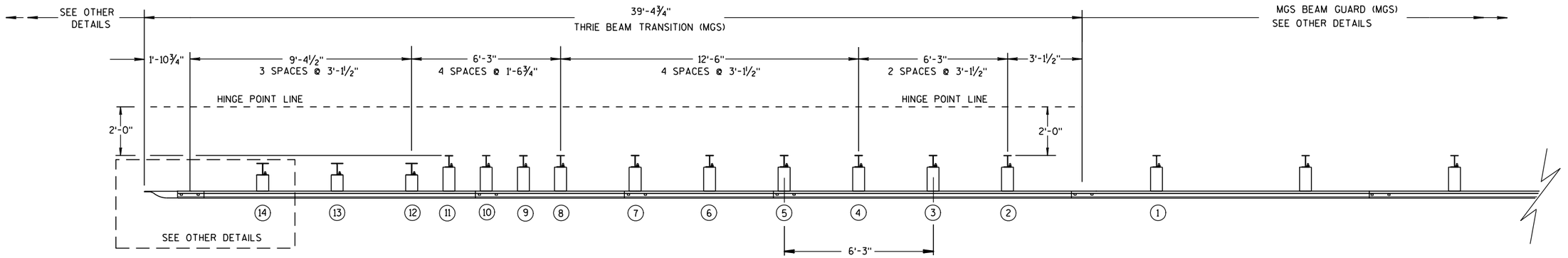
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

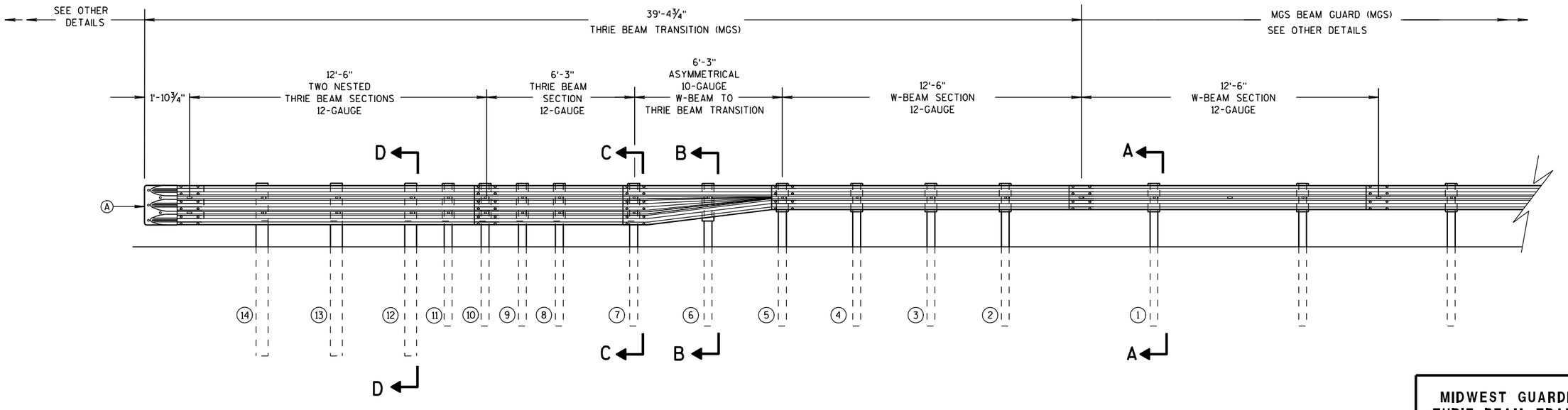
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

2155

6

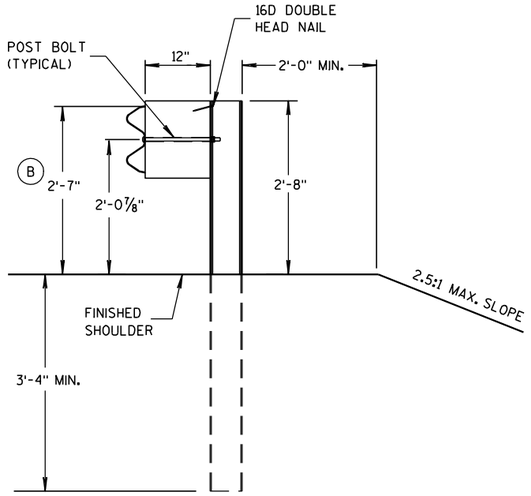
S.D.D. 14 B 45-3a

6

S.D.D. 14 B 45-3a

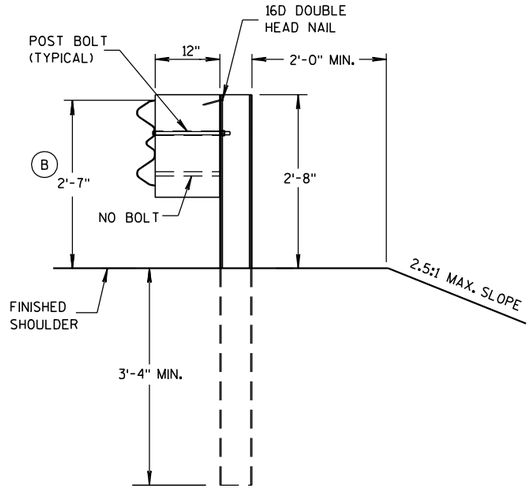
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



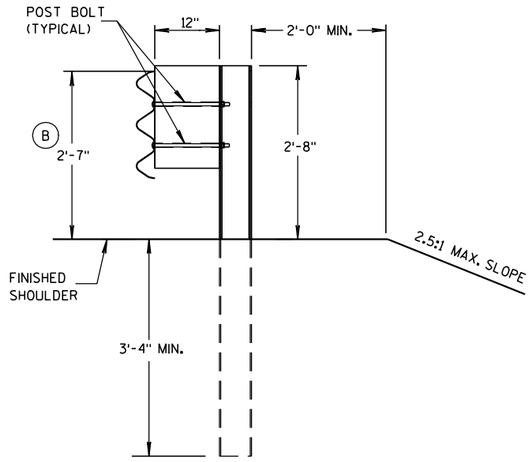
SECTION A-A

POSTS 1-5



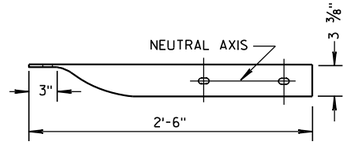
SECTION B-B

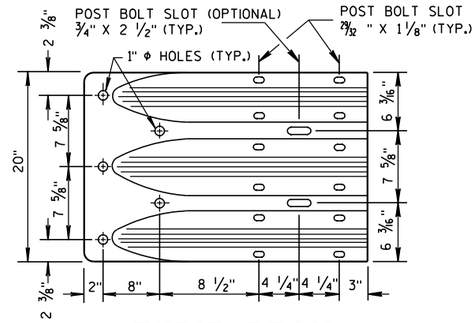
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

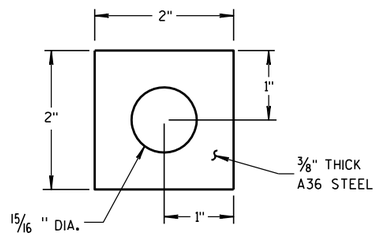
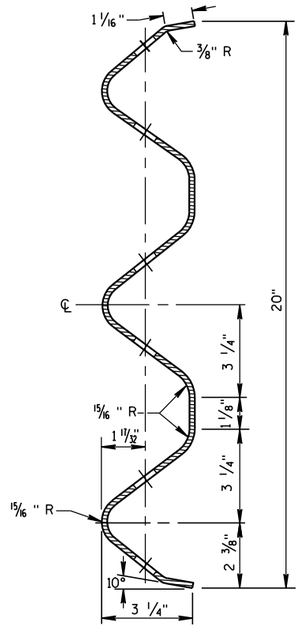
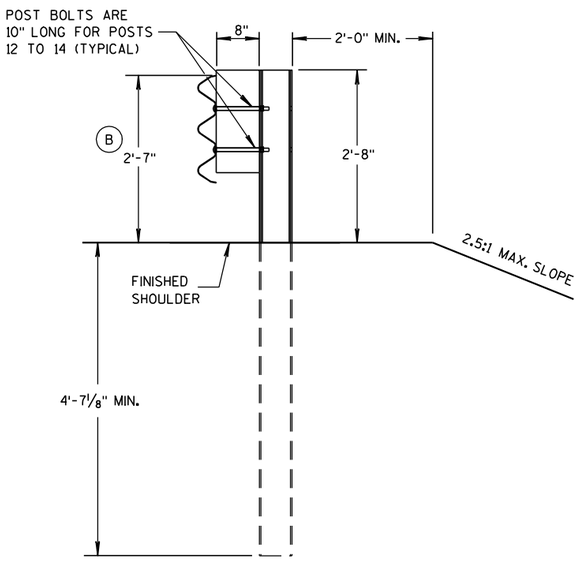


PLATE WASHER DETAIL

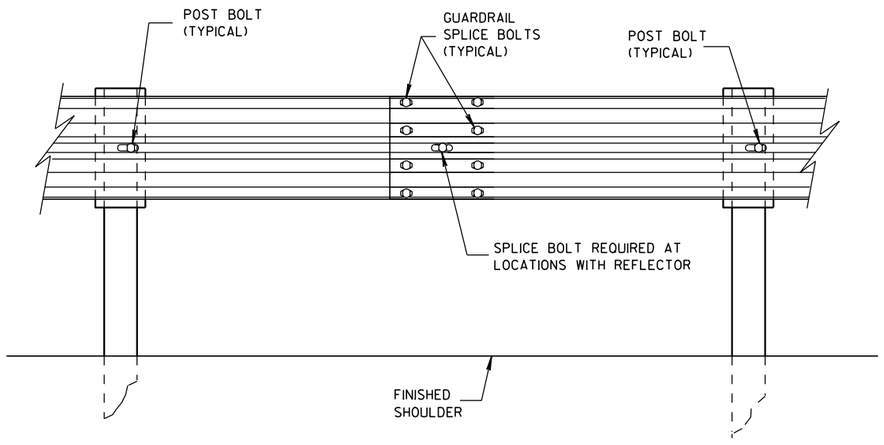


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

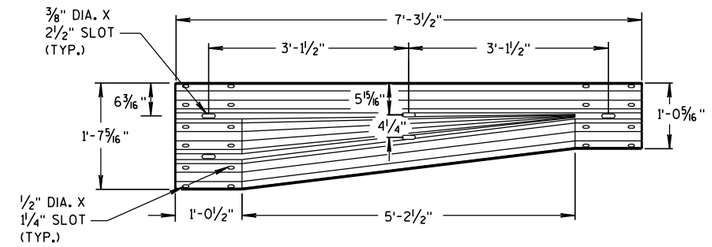
2156

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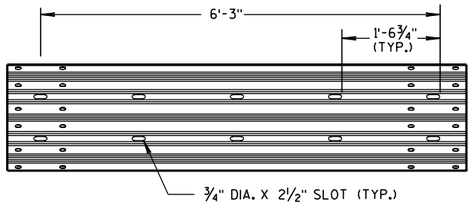
S.D.D. 14 B 45-3b

6

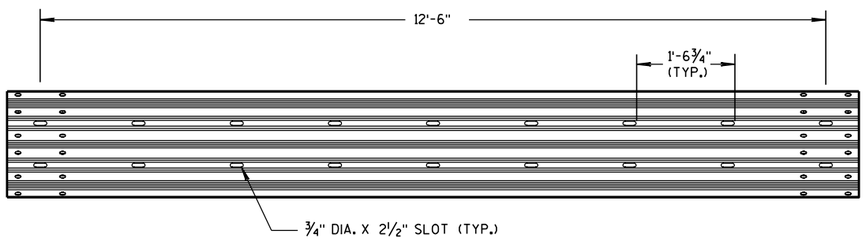
S.D.D. 14 B 45-3b



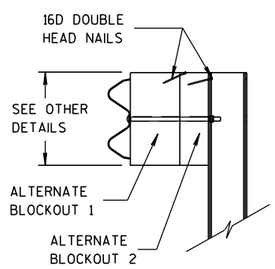
W-BEAM TO THRIE BEAM TRANSITION SECTION



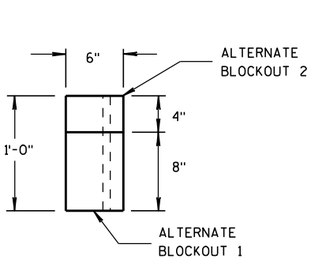
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

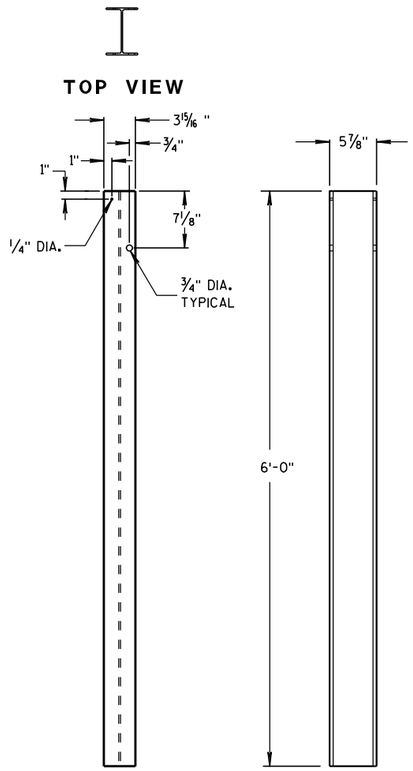


SIDE VIEW



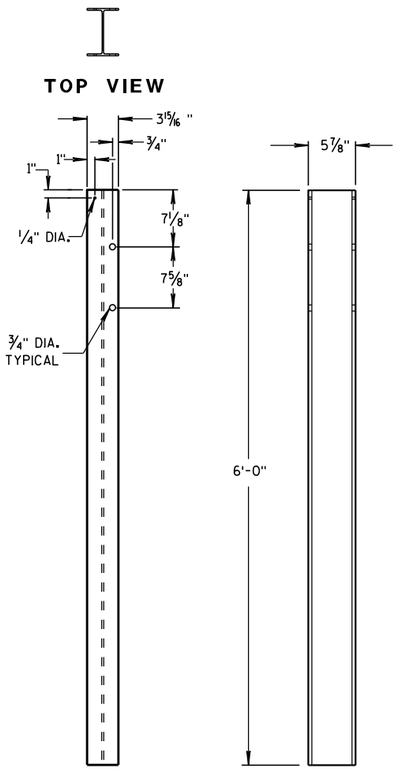
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



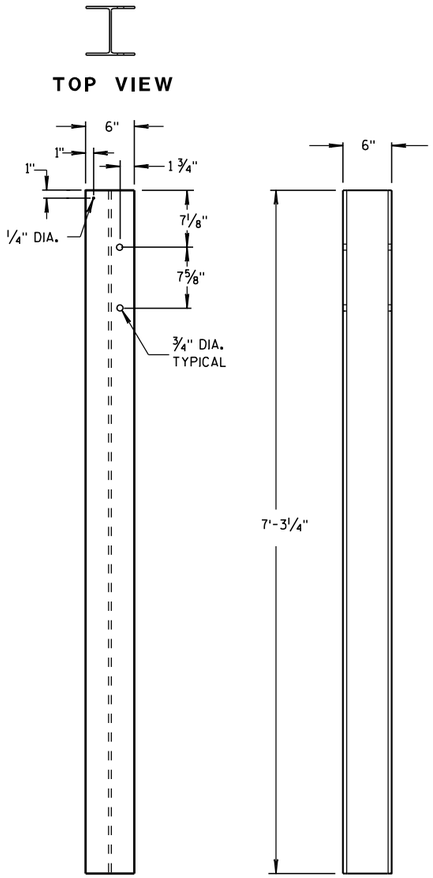
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

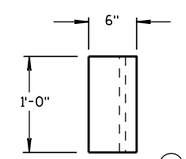
STEEL POSTS 6-11



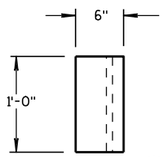
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

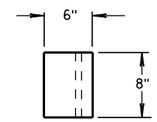
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



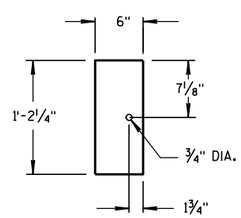
TOP VIEW (1)



TOP VIEW (1)

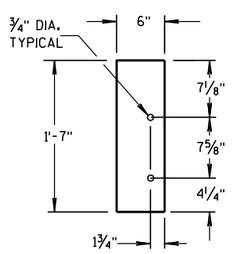


TOP VIEW



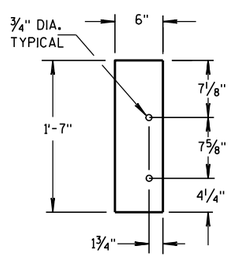
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

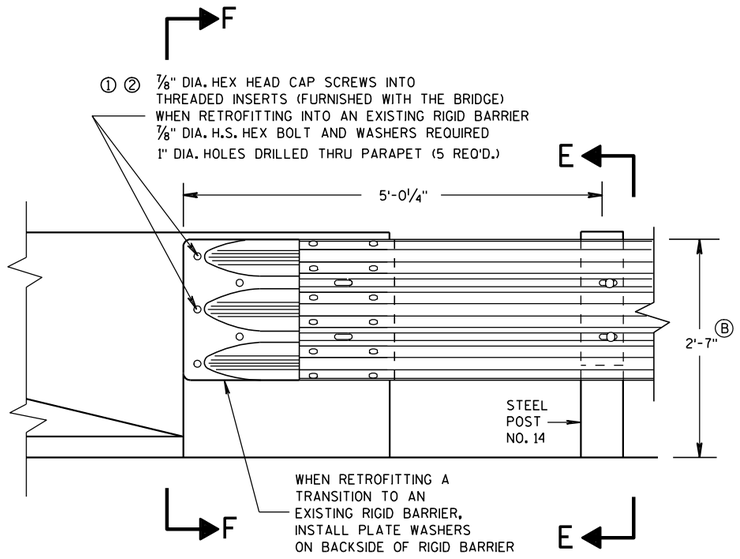
BLOCKOUT POSTS 12-14

STEEL POST SIZES

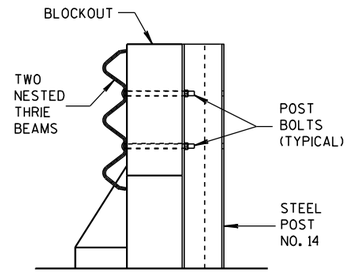
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW



SECTION E-E

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

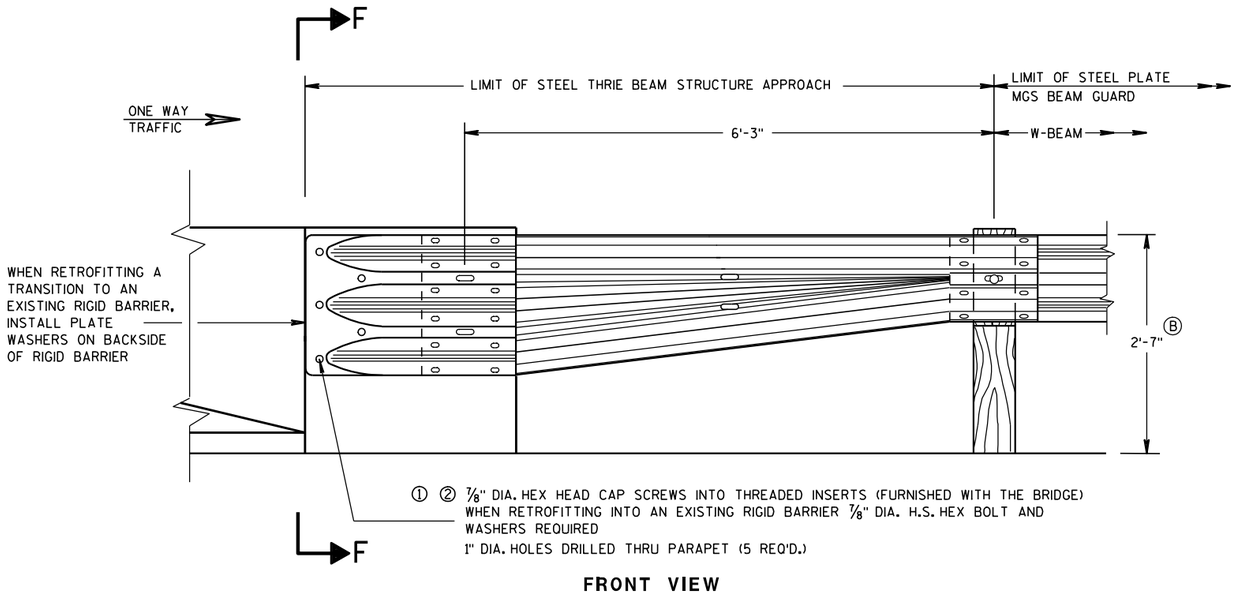
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

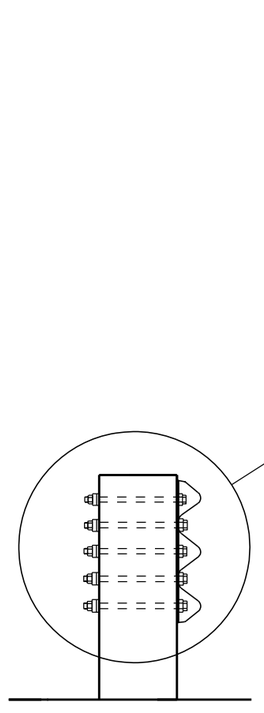
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

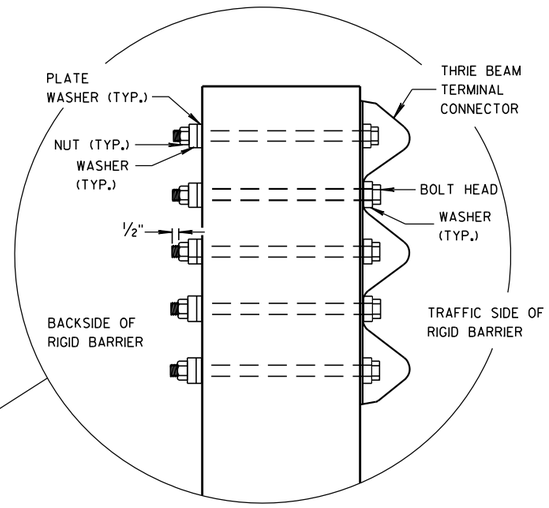
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS (2158) ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

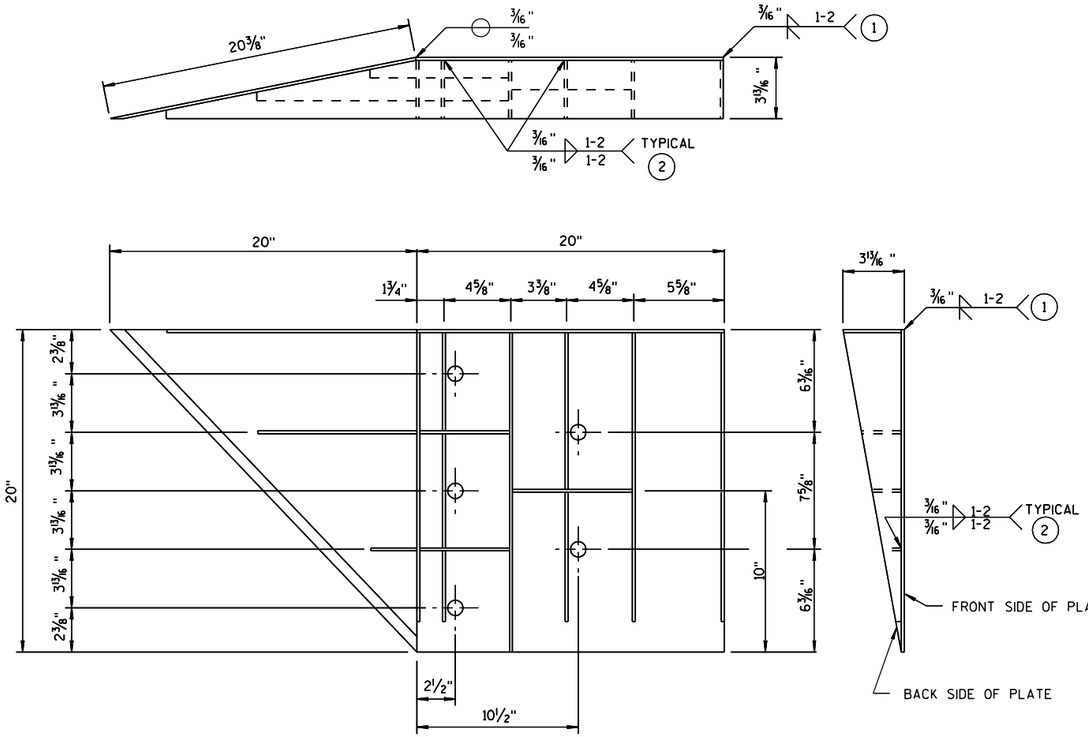
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

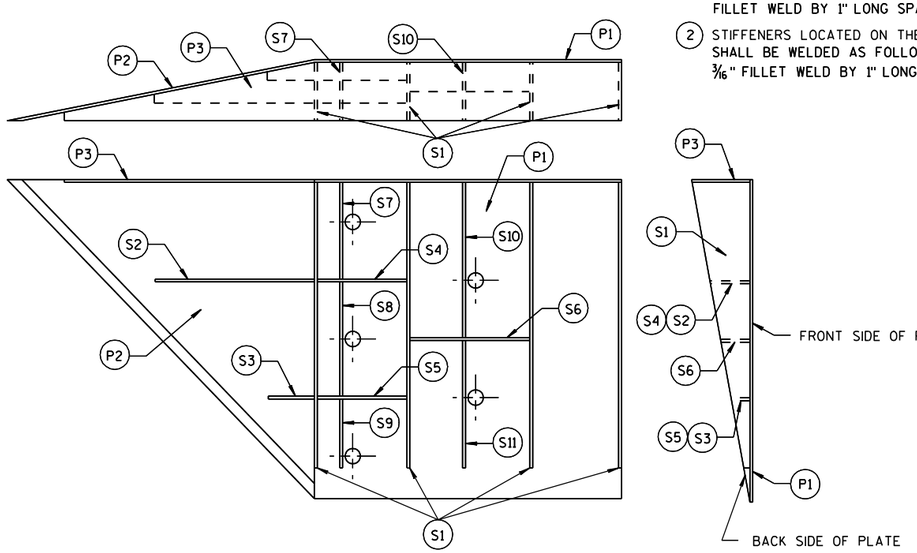


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

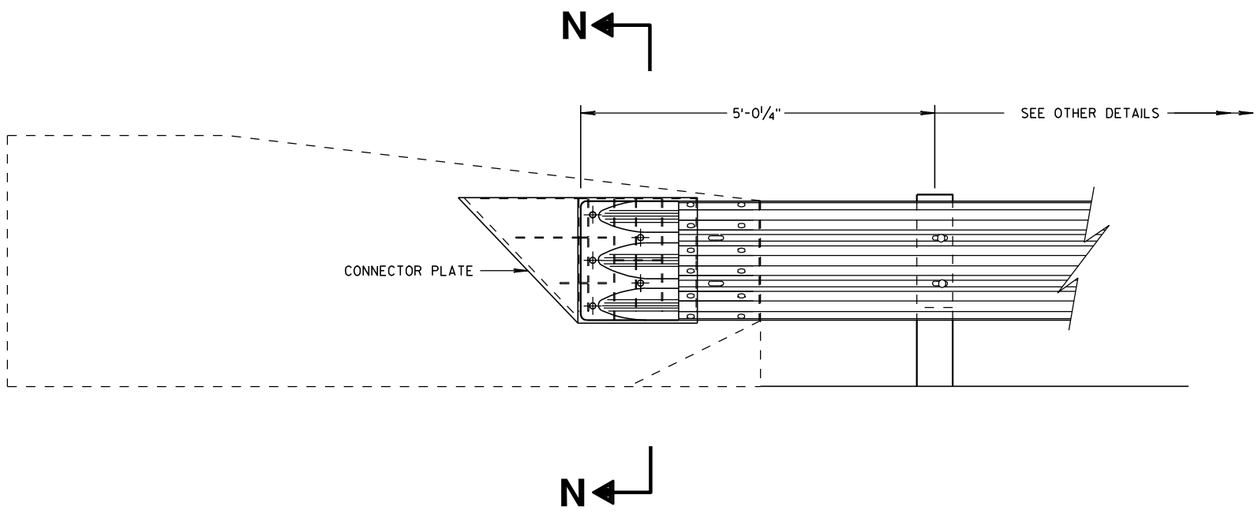
APPROVED
8/31/2012 DATE
/S/ Jerry H ... ROADWAY STANDARDS ENGINEER 2159 ...MENT
FHWA

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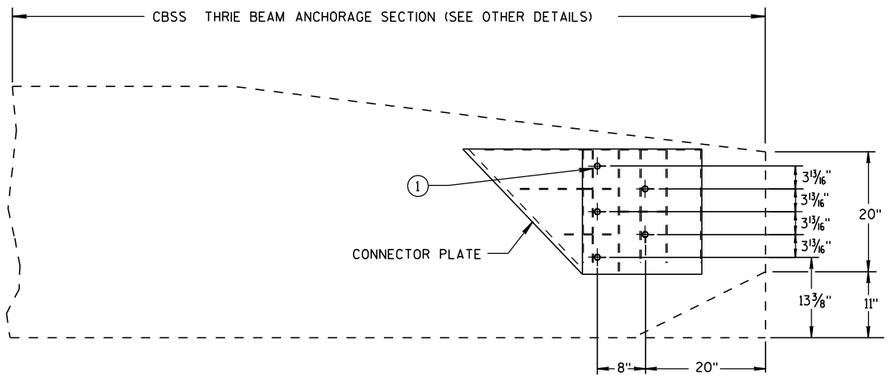
S.D.D. 14 B 45-3i

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S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

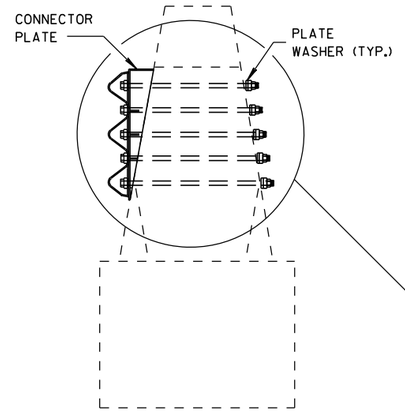


SINGLE SLOPE CONNECTION PLATE PLACEMENT

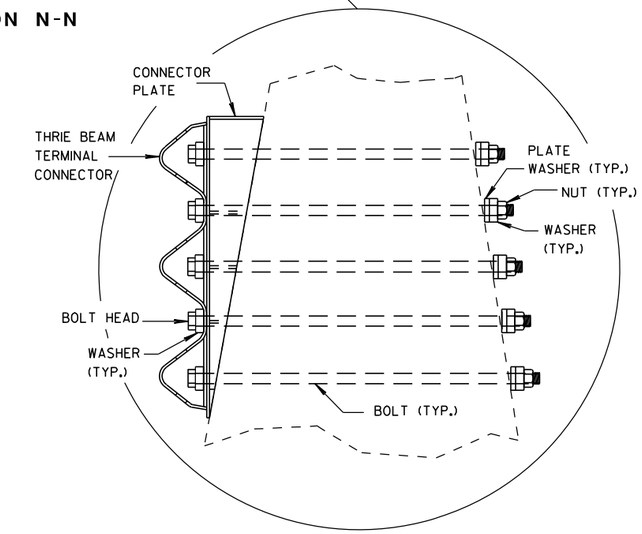
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

2160

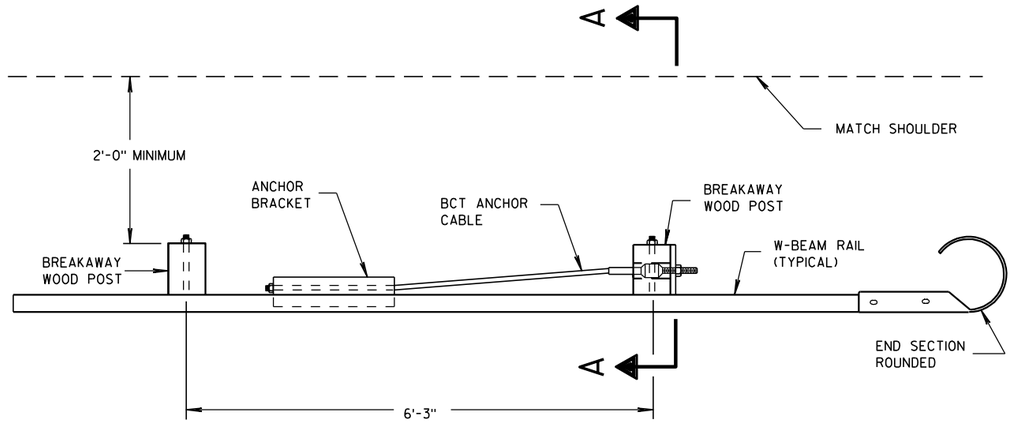
FHWA

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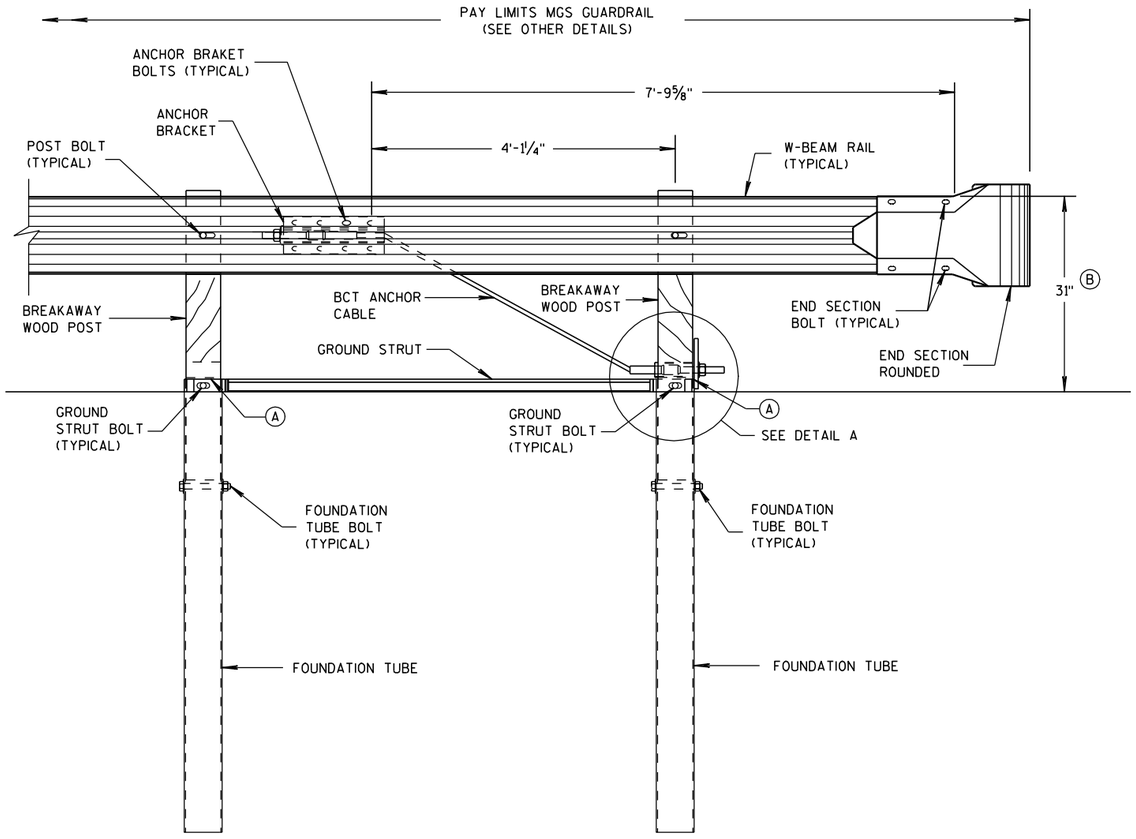
S.D.D. 14 B 45-3j

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S.D.D. 14 B 45-3j

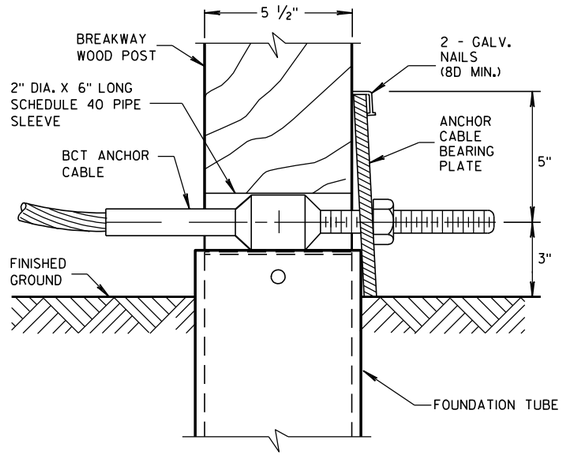


PLAN VIEW



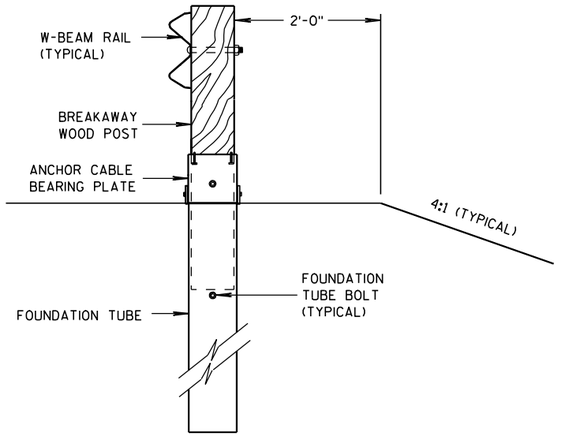
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

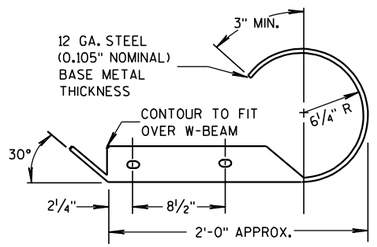
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

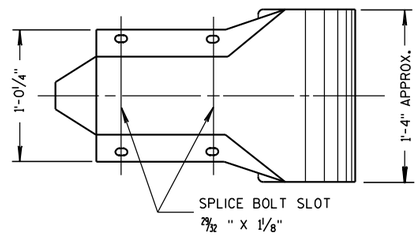
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



FRONT VIEW

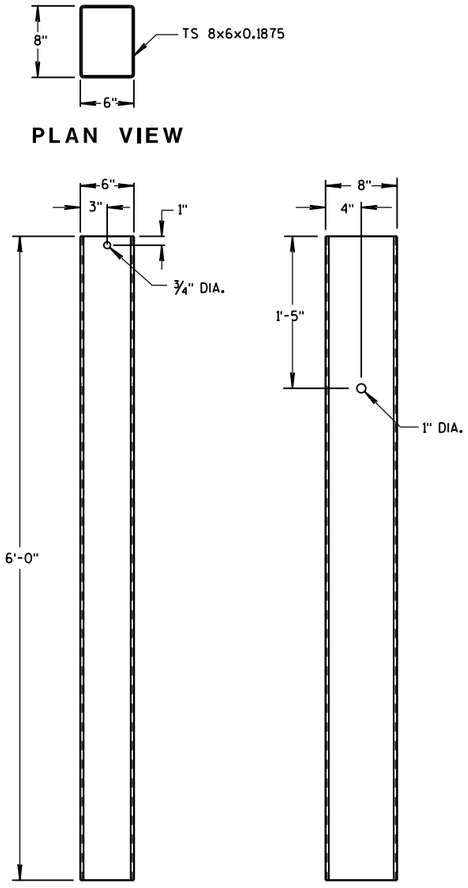
W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 47-1a

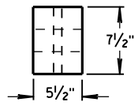


PLAN VIEW

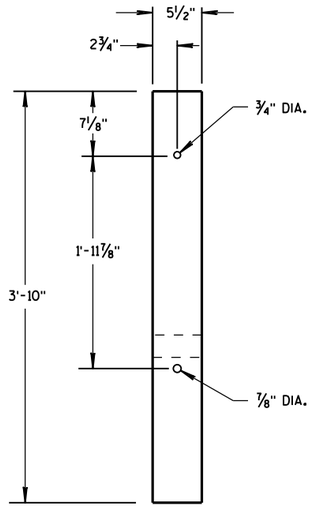
FRONT VIEW

SIDE VIEW

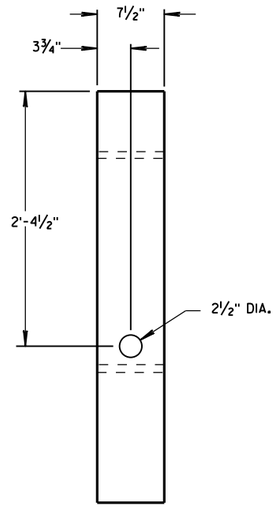
FOUNDATION TUBE



PLAN VIEW



FRONT VIEW

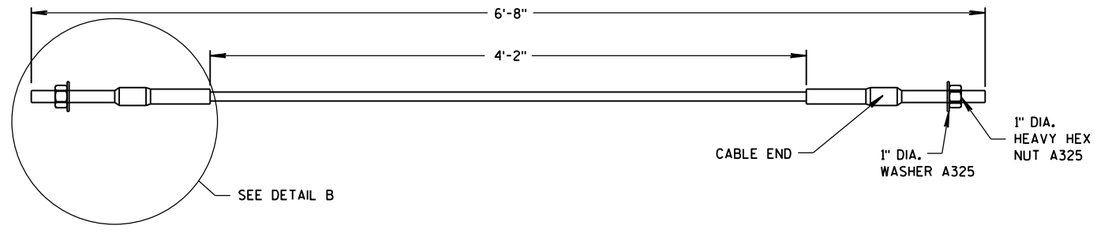


SIDE VIEW

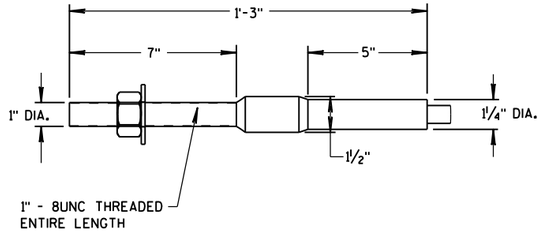
BREAKAWAY WOOD POST

GENERAL NOTES

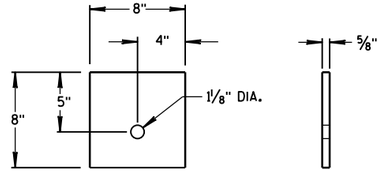
BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

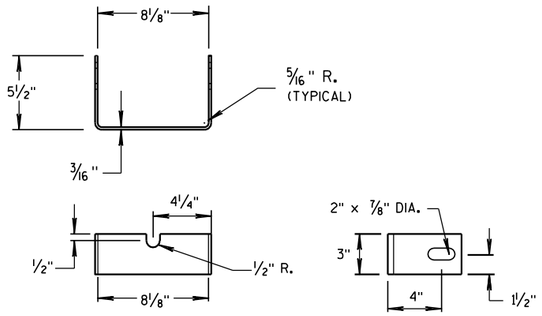
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2162

6

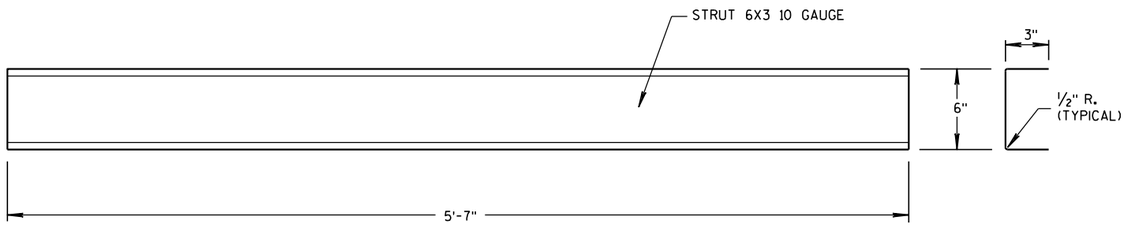
S.D.D. 14 B 47-1b

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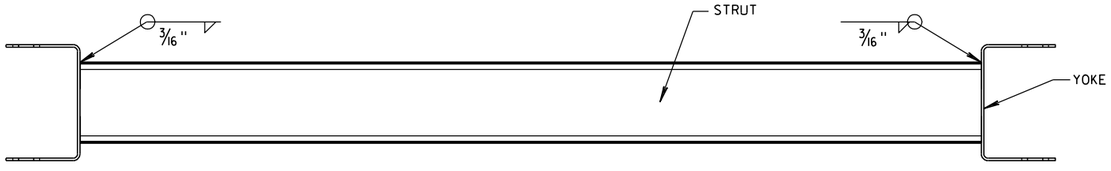
S.D.D. 14 B 47-1b



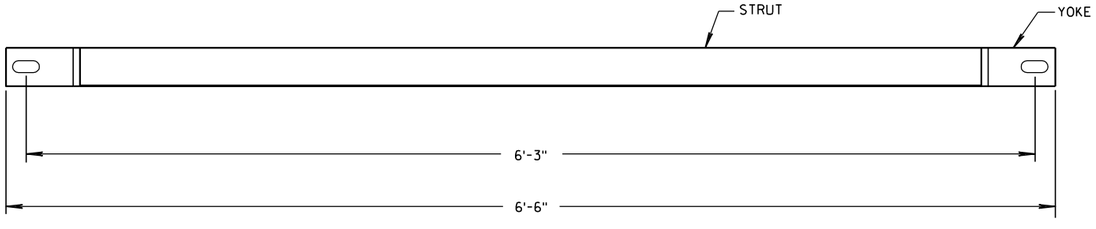
YOKE DETAIL



STRUT DETAIL

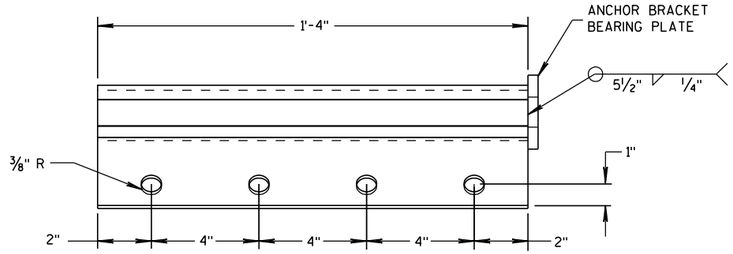


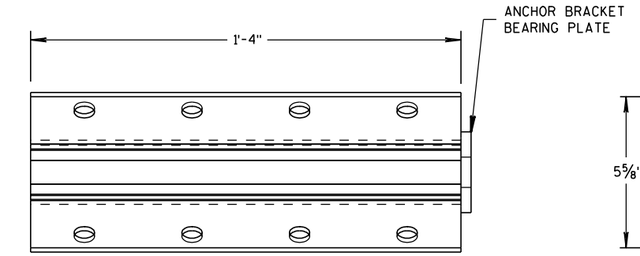
PLAN VIEW

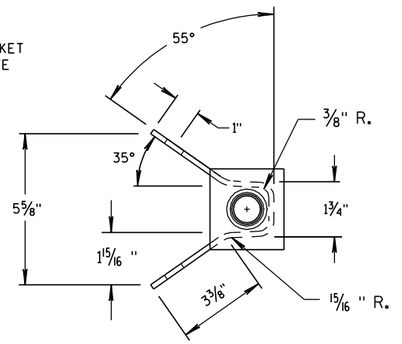


FRONT VIEW

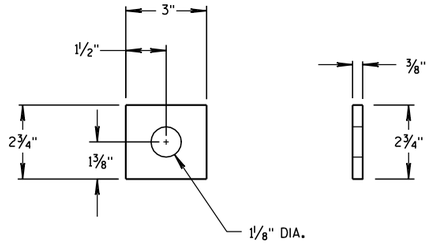
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

6

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S.D.D. 14 B 47-1c

S.D.D. 14 B 47-1c

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

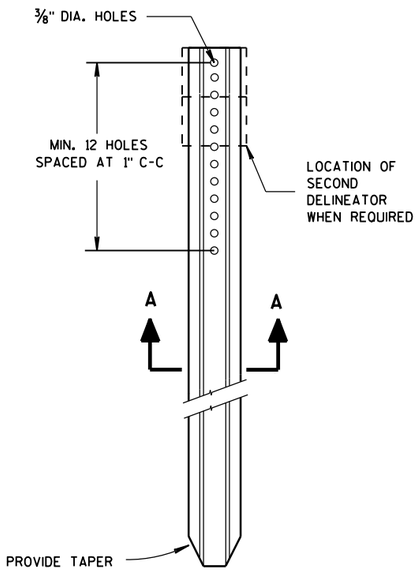
APPROVED

5/23/2011
DATE

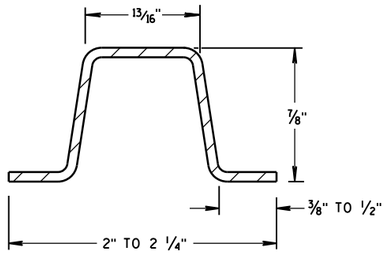
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

2163

FHWA

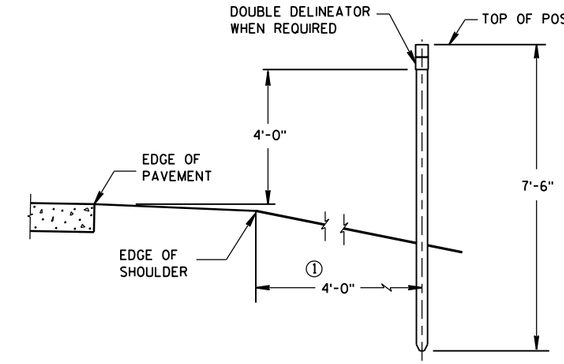


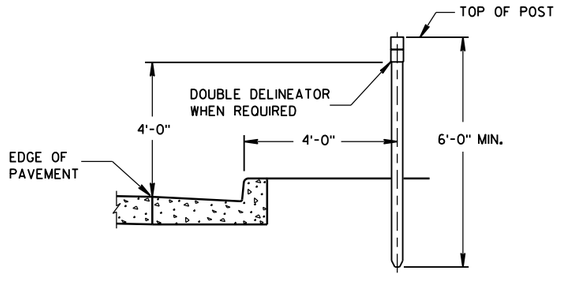
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



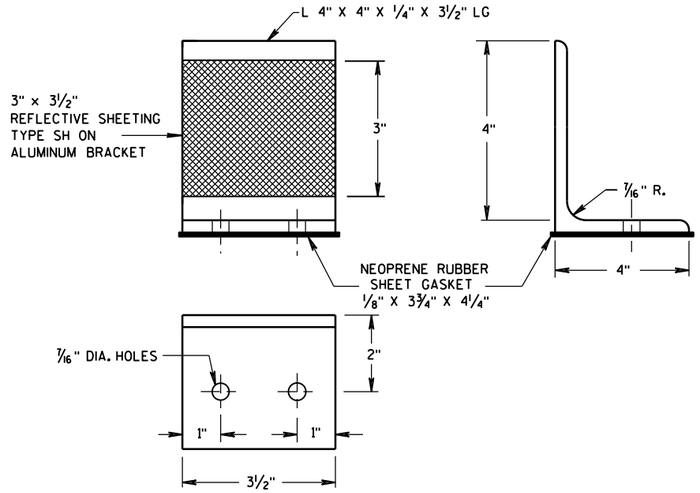


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

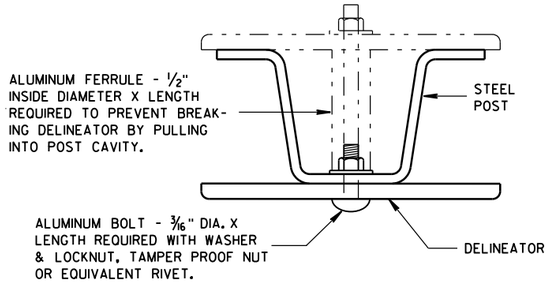
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

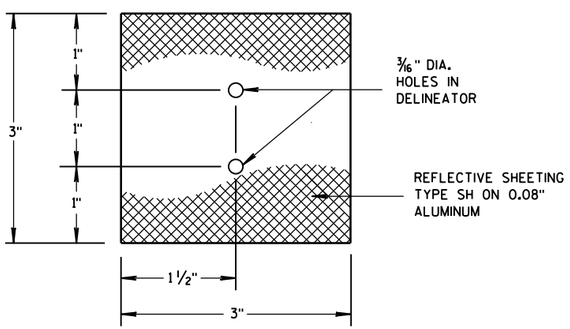
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



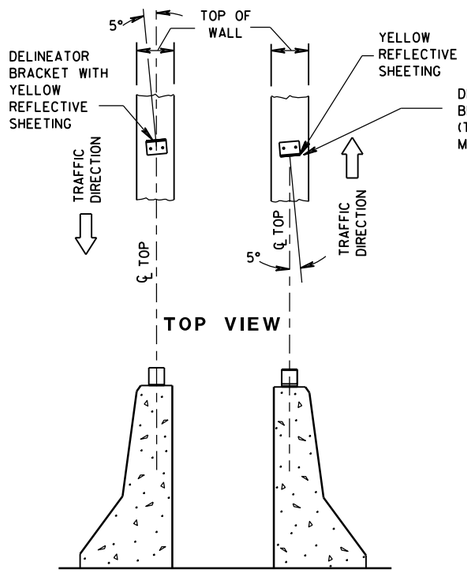
DELINEATOR BRACKET



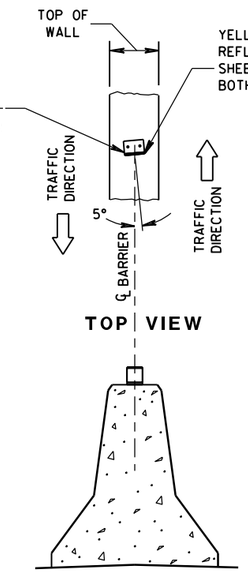
MOUNTING DETAIL FOR DELINEATOR



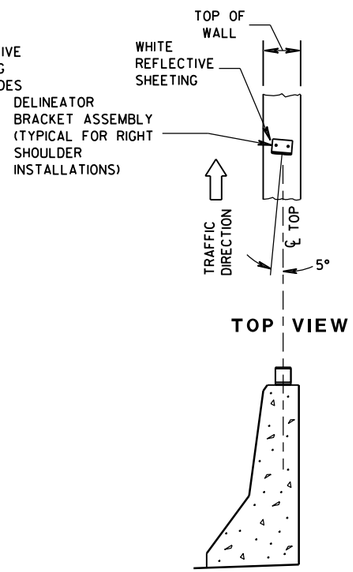
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

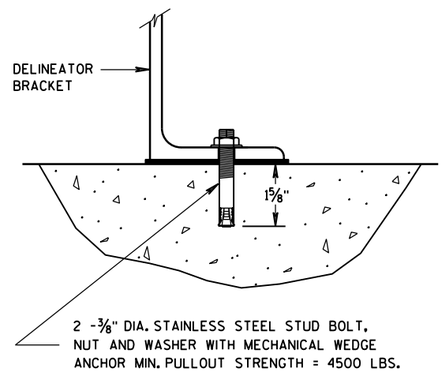


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

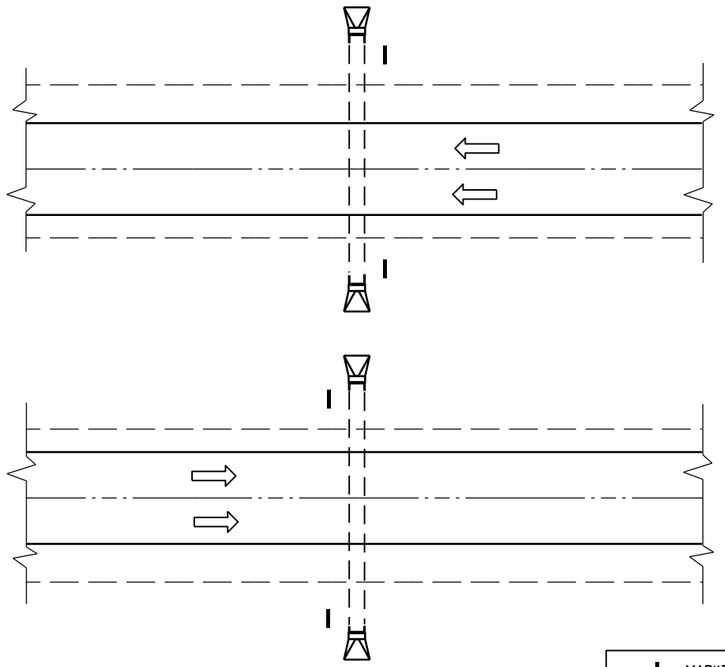
DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E 2164
FHWA

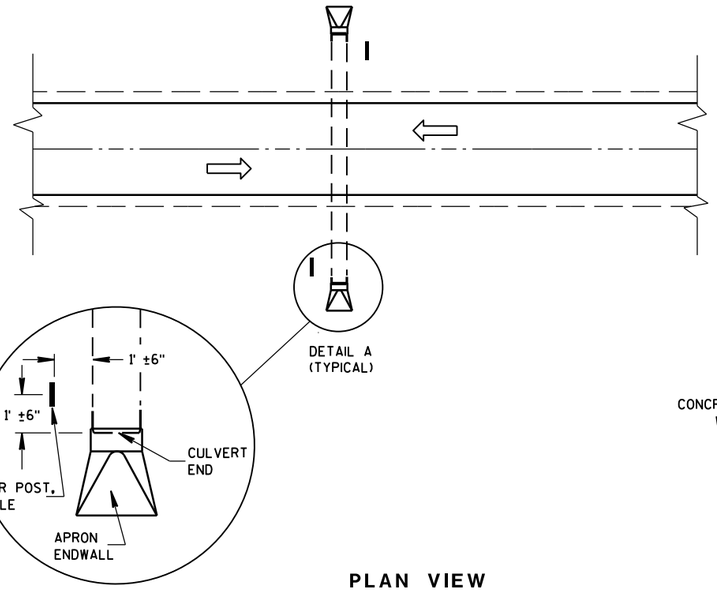
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S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

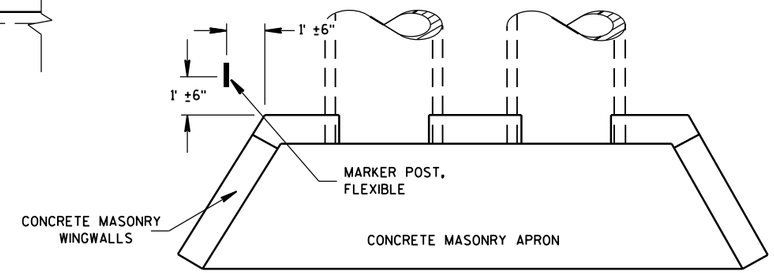
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

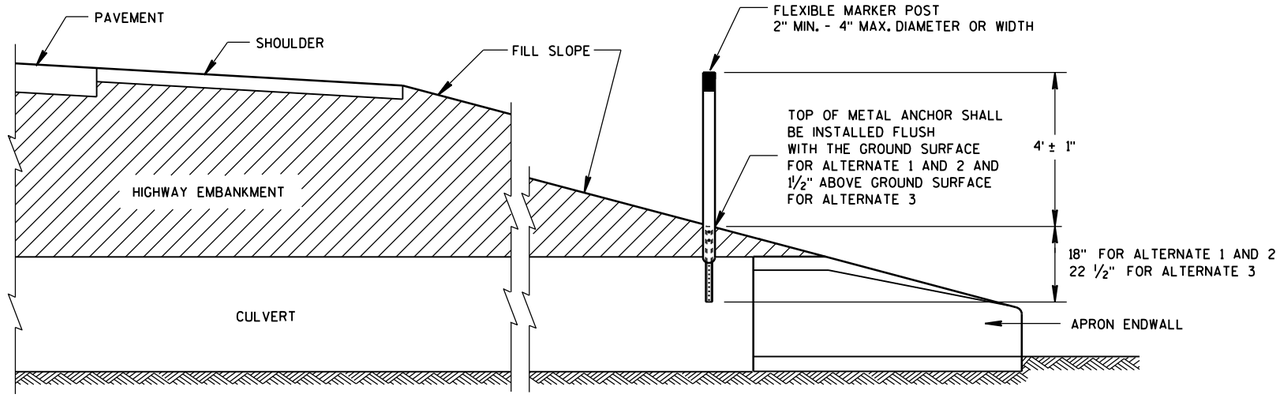
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

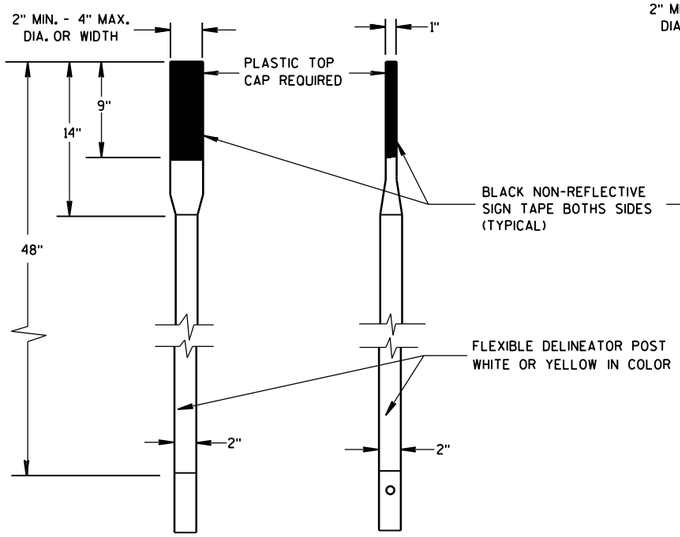
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2165

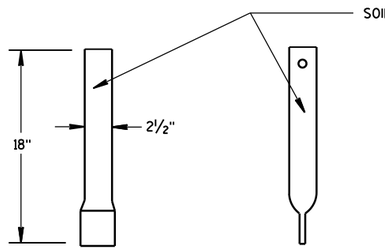
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S.D.D. 15 A 3-2a

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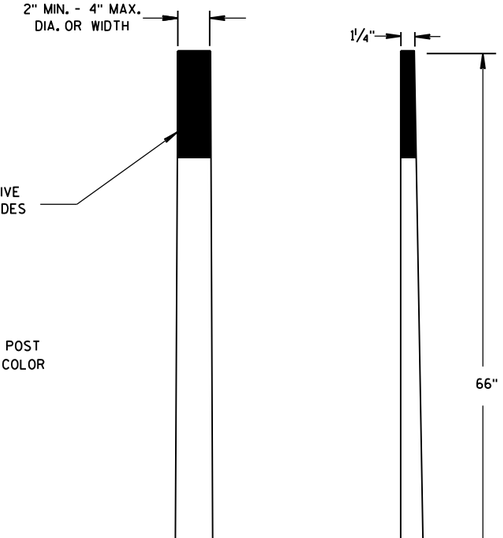
S.D.D. 15 A 3-2a





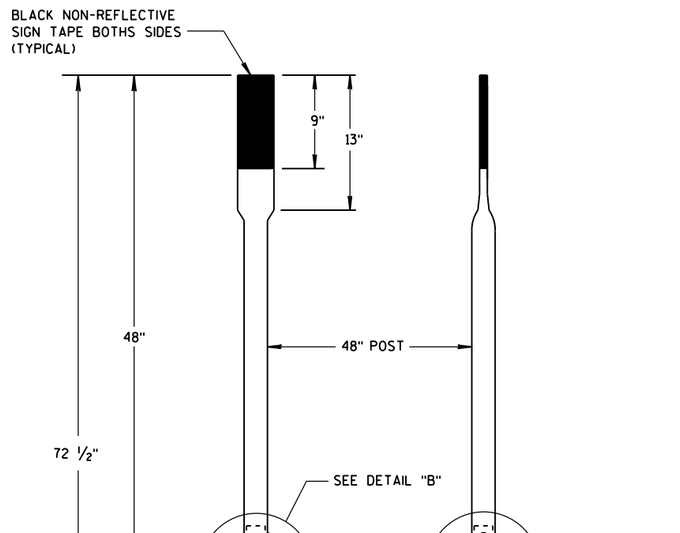
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

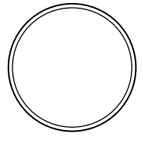
ALTERNATE 2



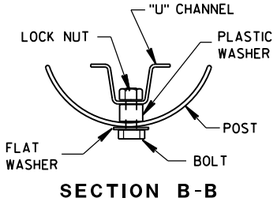
FRONT VIEW SIDE VIEW

ALTERNATE 3

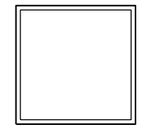
FLEXIBLE MARKER POSTS



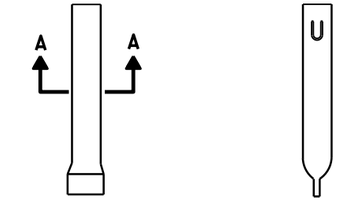
SECTION A-A



SECTION B-B

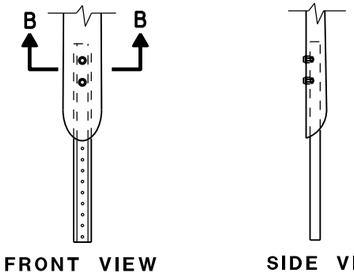


SECTION C-C



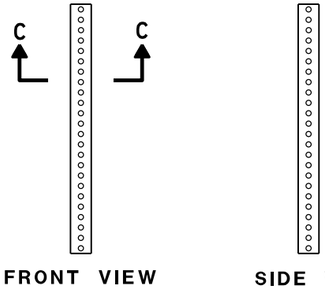
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

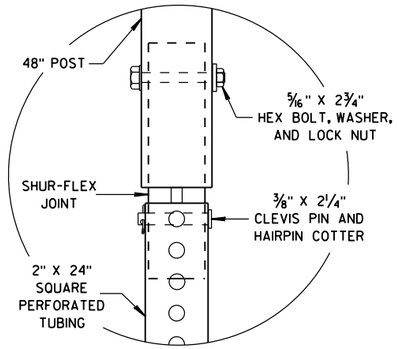
ALTERNATE 2



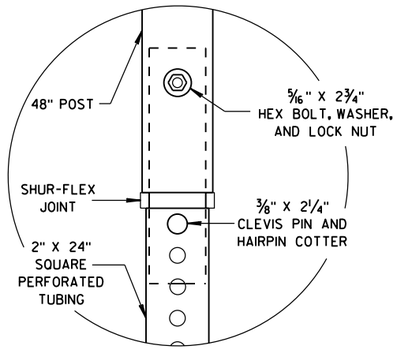
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

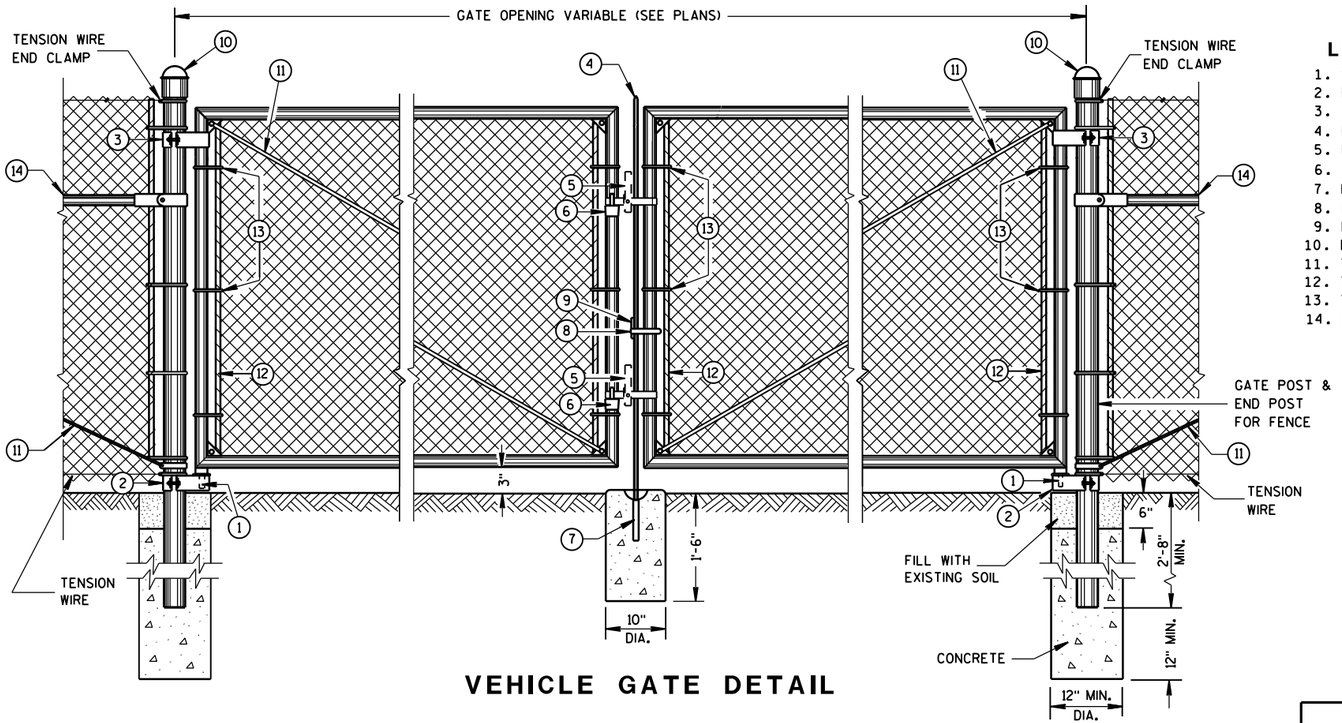
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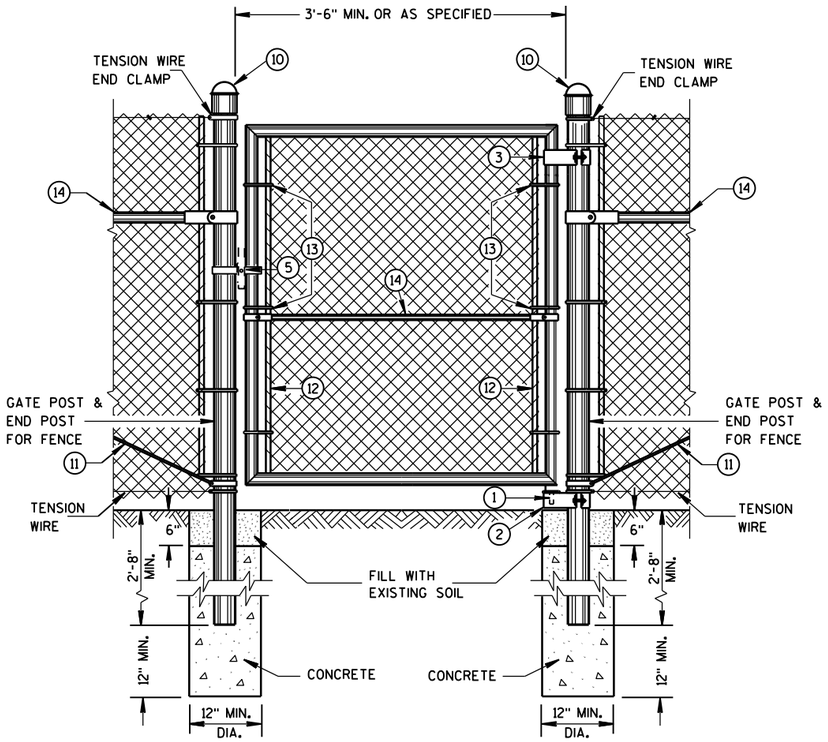
S.D.D. 15 A 3-2b

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S.D.D. 15 A 3-2b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

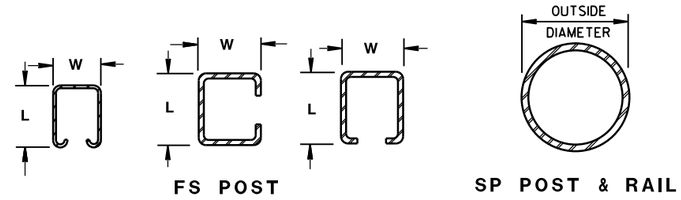
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

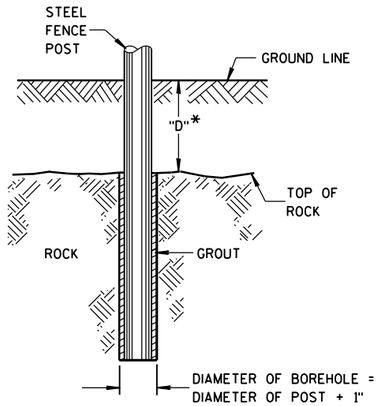
SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

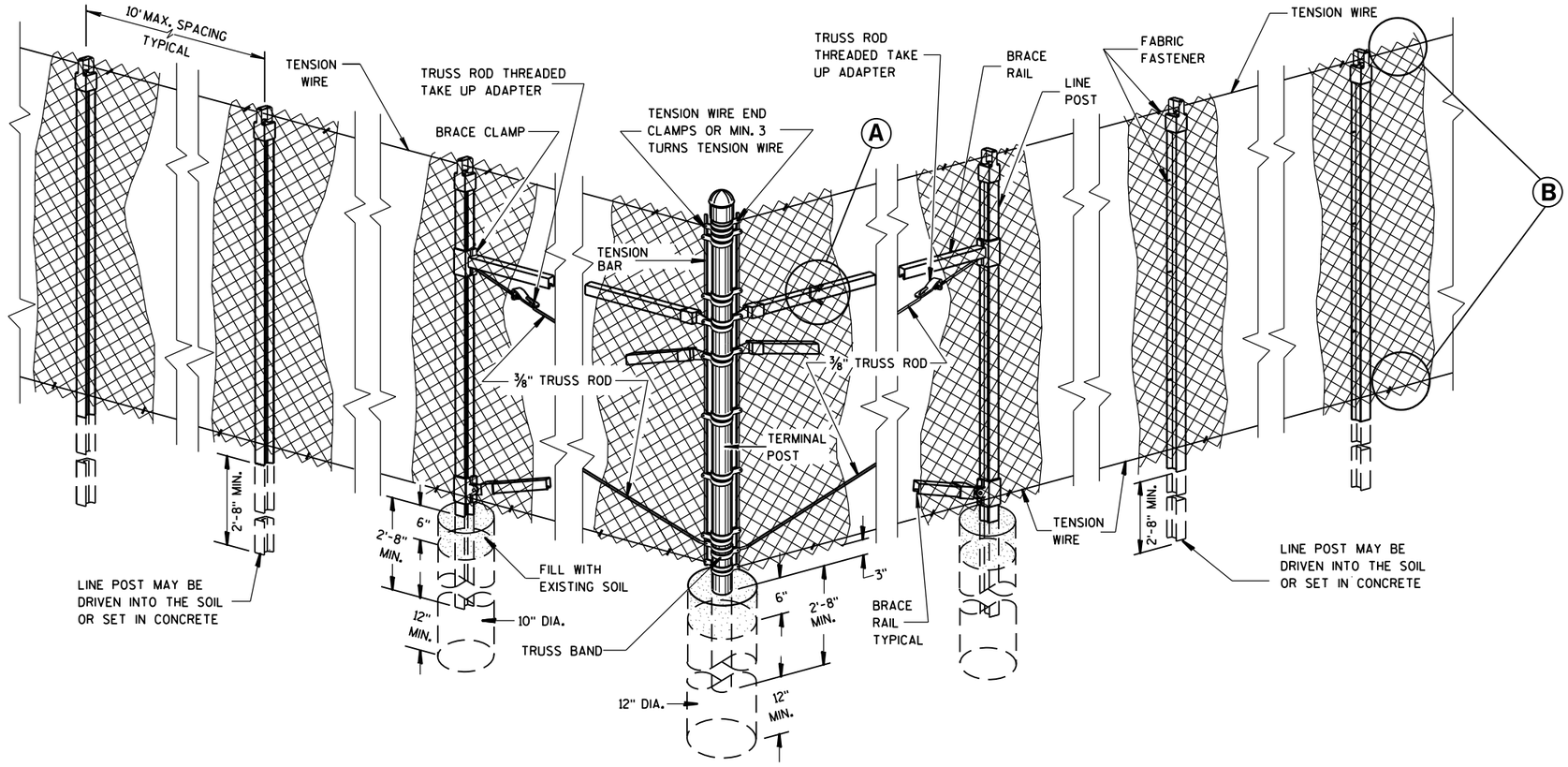
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2167

6
S.D.D. 15 B 3-13a

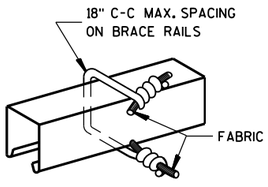


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



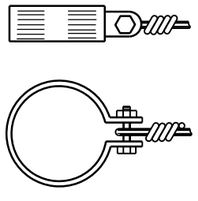
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



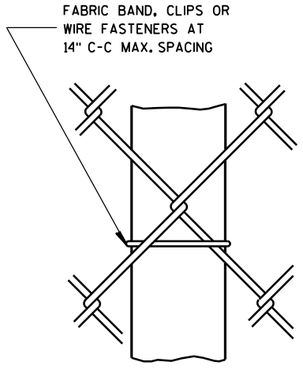
BRACE RAIL

FABRIC FASTENER

Ⓐ



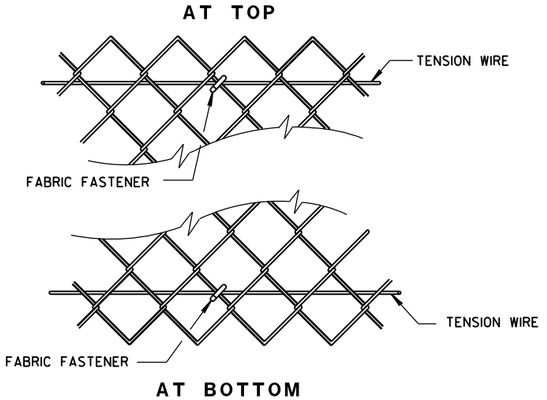
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

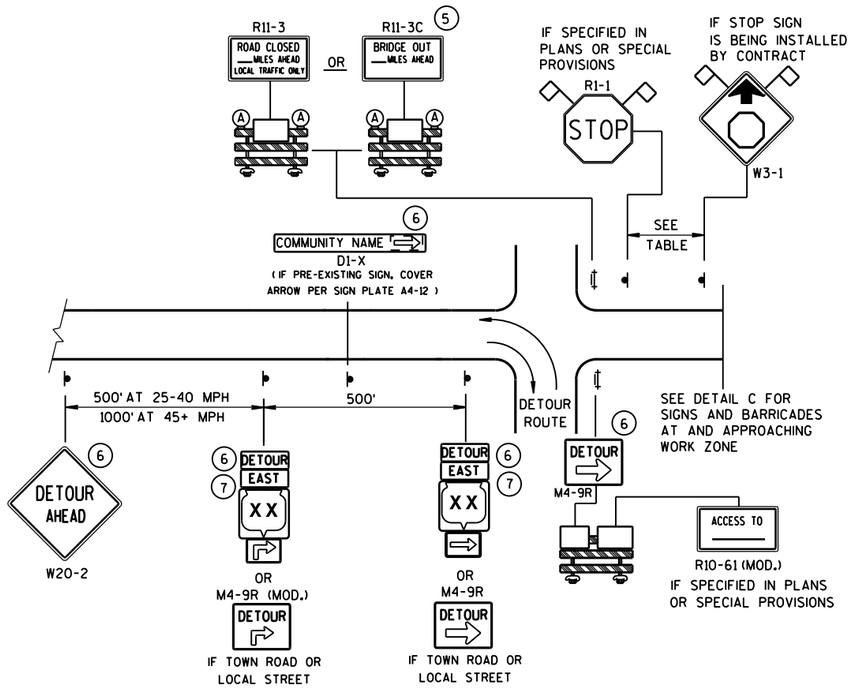
APPROVED
7/16/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D 2168 ENT
ENGINEER
FHWA

6

S.D.D. 15 B 3-13b

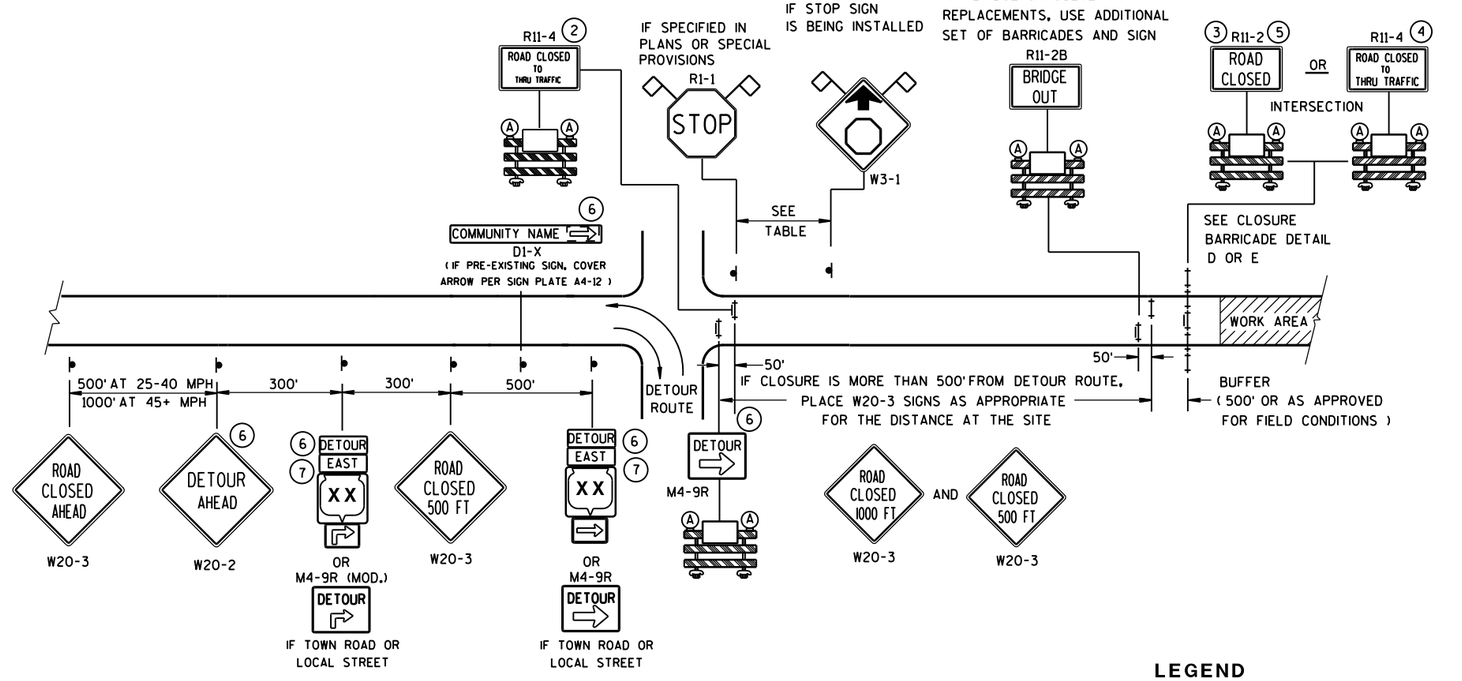
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S.D.D. 15 B 3-13b



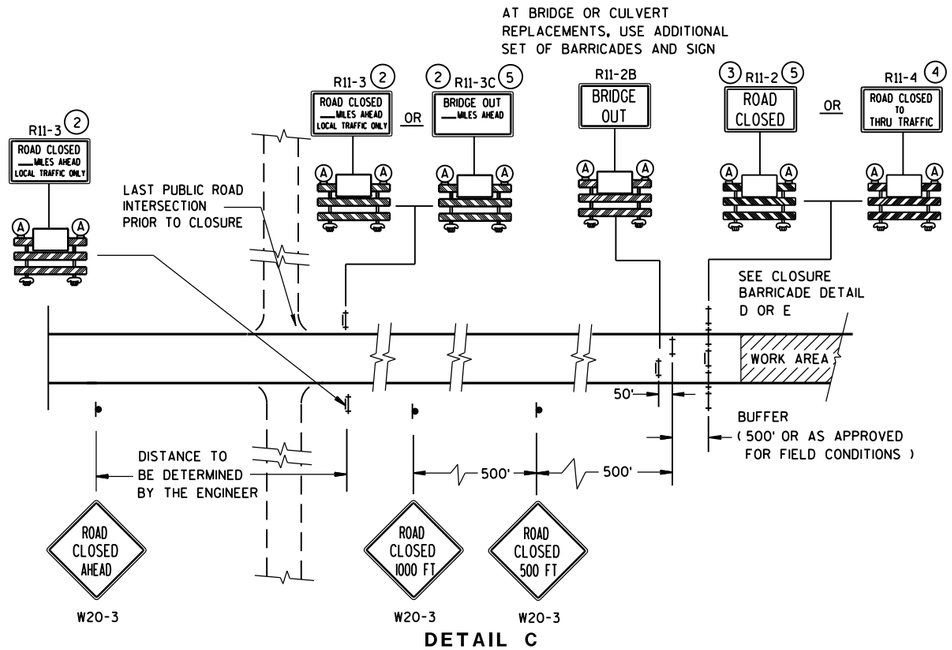
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

2169

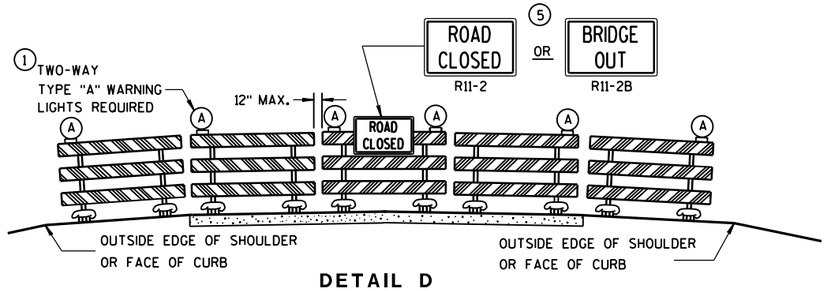
FHWA

6

S.D.D. 15 C 2-5a

6

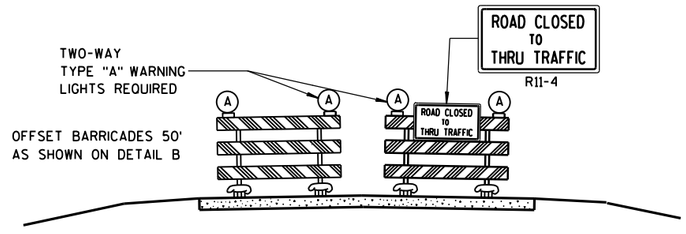
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

2170

DESIGN

FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

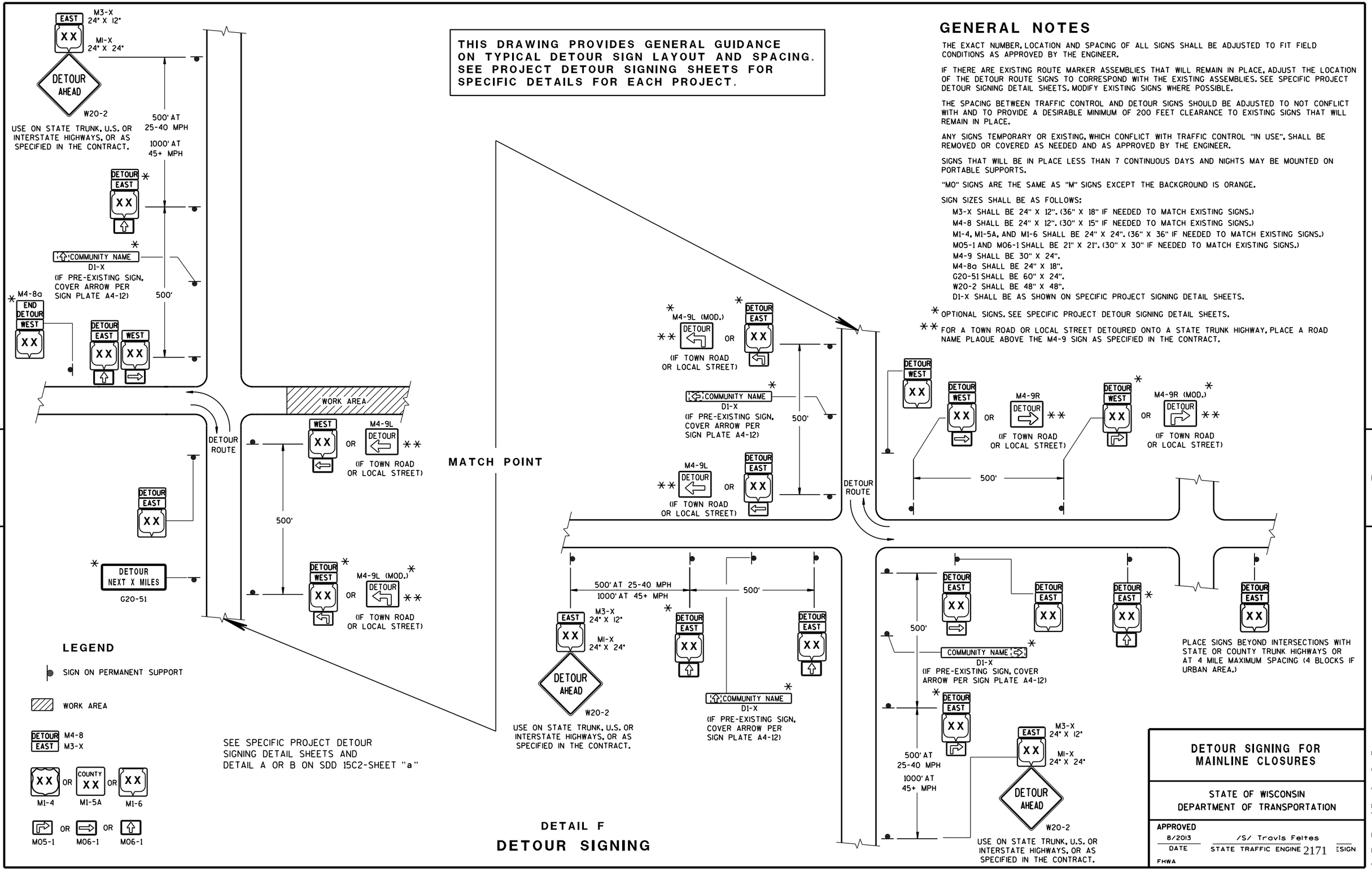
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

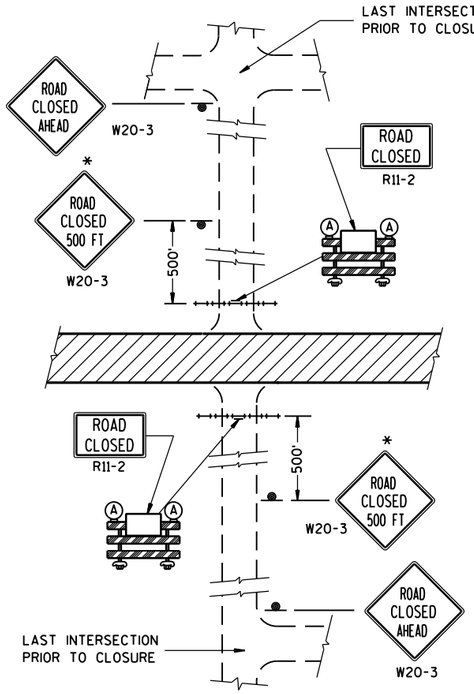
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

2171

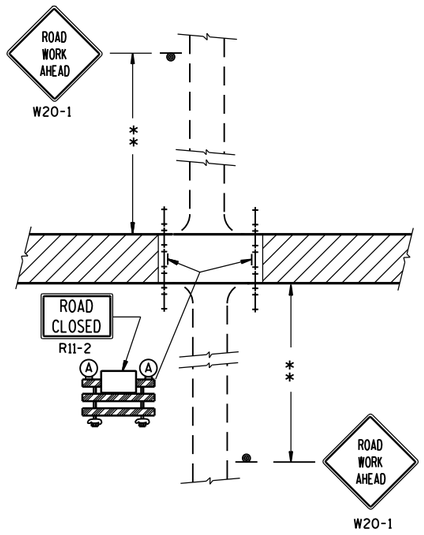
6

S.D.D. 15 C 2-5c



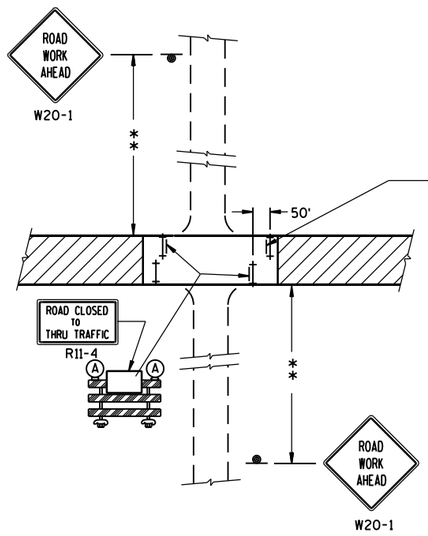
DETAIL 1

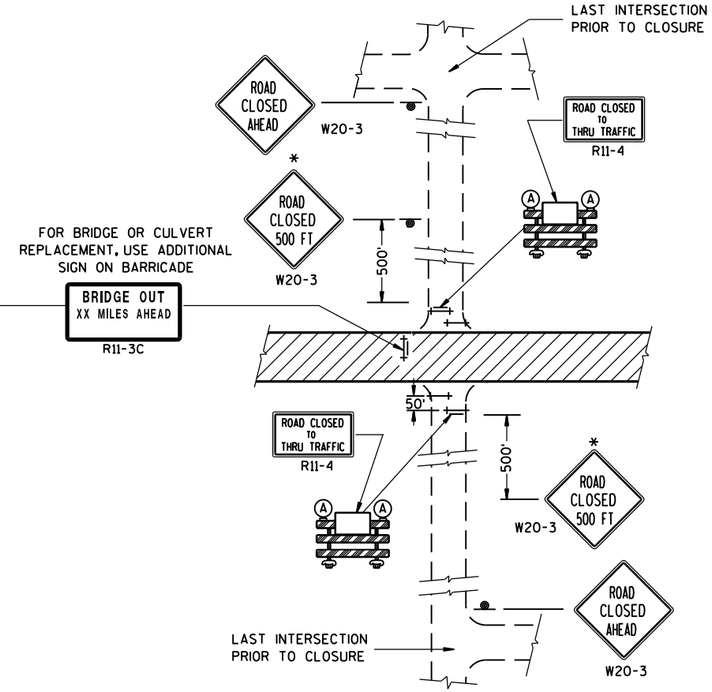
(NO ACCESS TO PROJECT)



DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

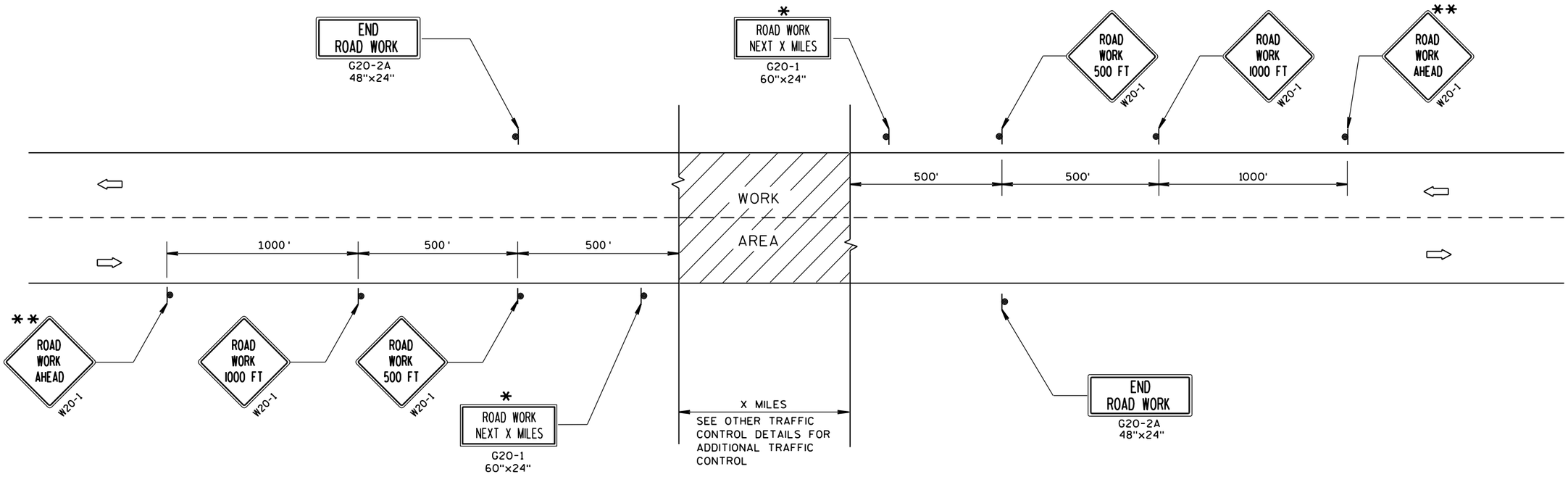
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 3-2



6

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

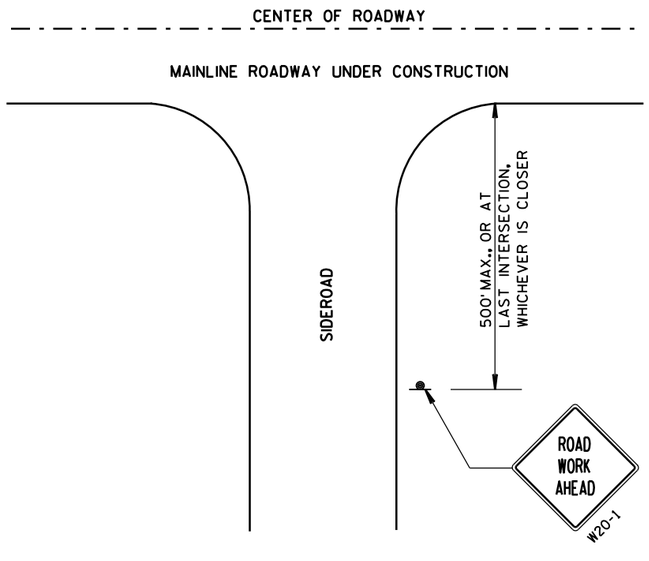
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

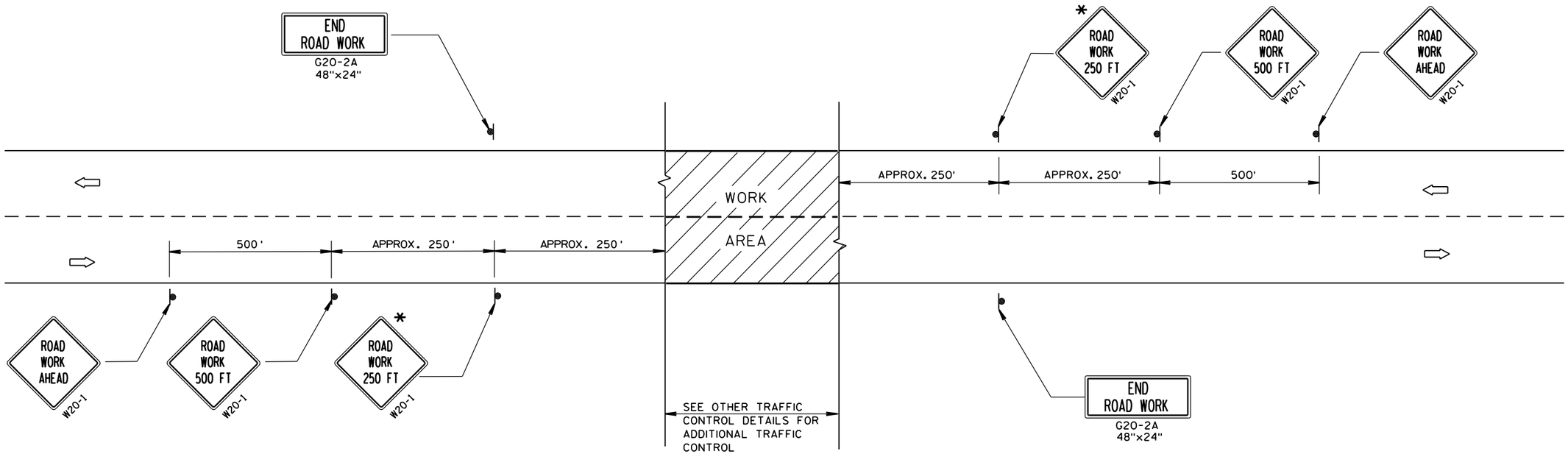
2173 — SIGN

FHWA

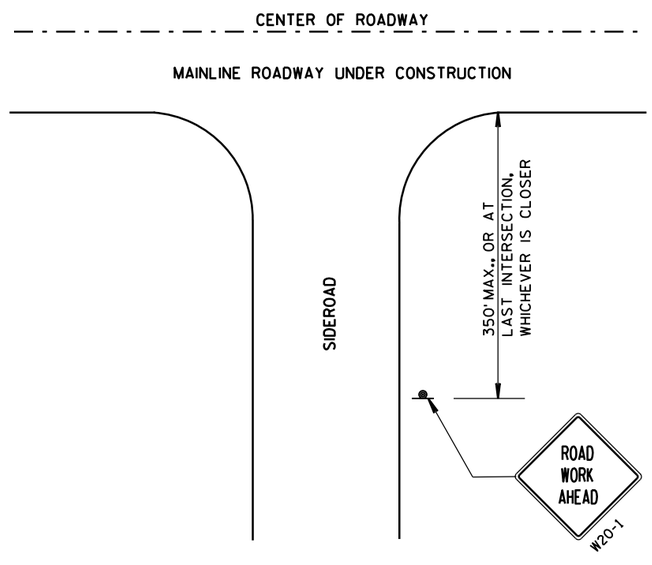
S.D.D. 15 C 4-2

6

S.D.D. 15 C 4-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

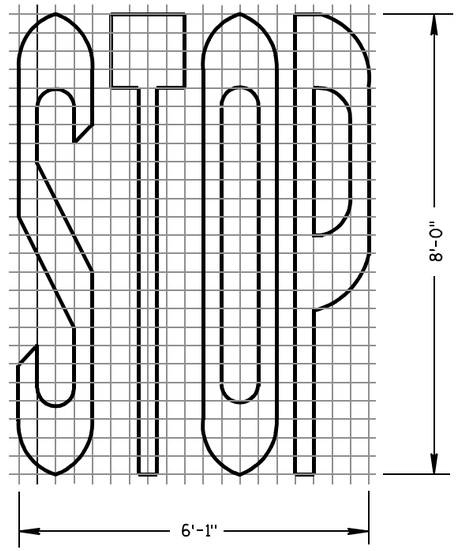
8/2013 (DATE) — /S/ Travis Feltes (STATE TRAFFIC ENGINEER) 2174 (SIGN)

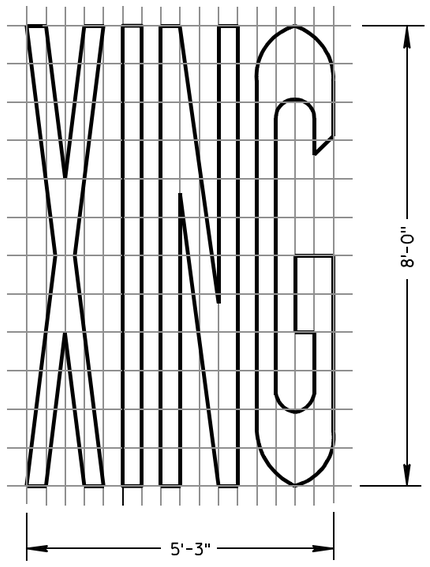
FHWA

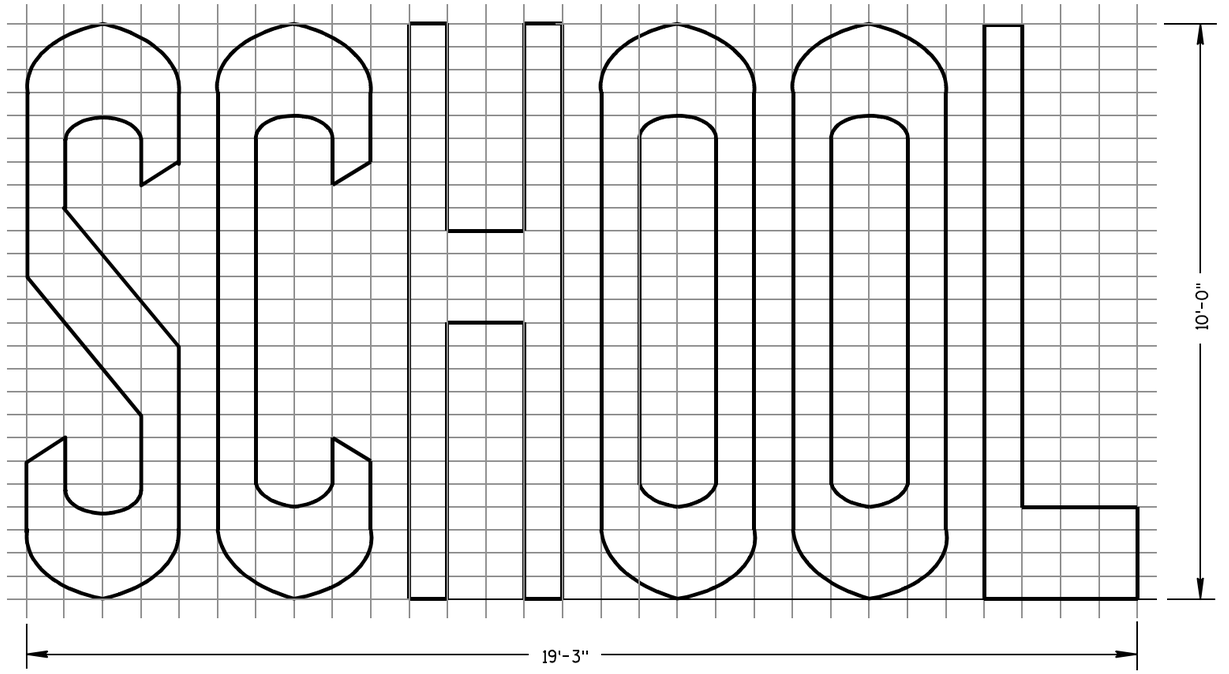
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

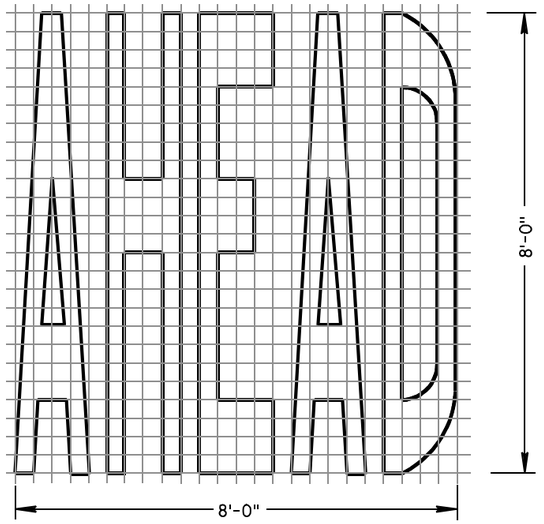
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

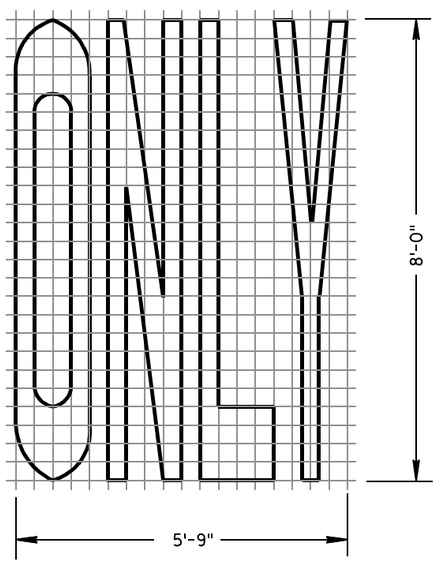


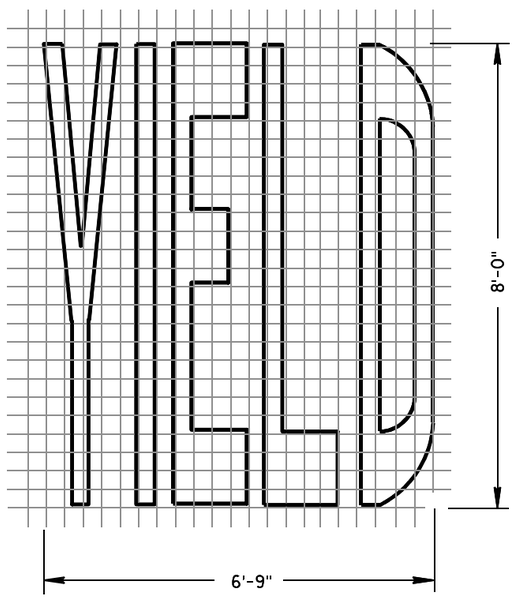


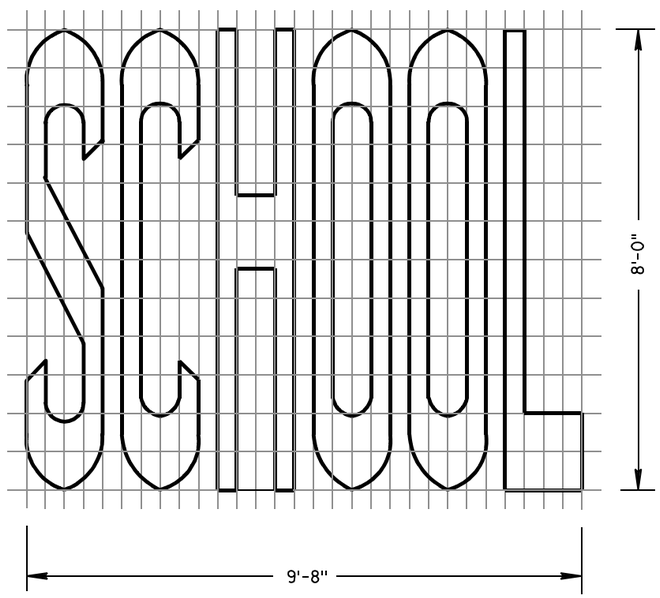


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

2175 IGN

FHWA

6

S.D.D. 15 C 7-12b

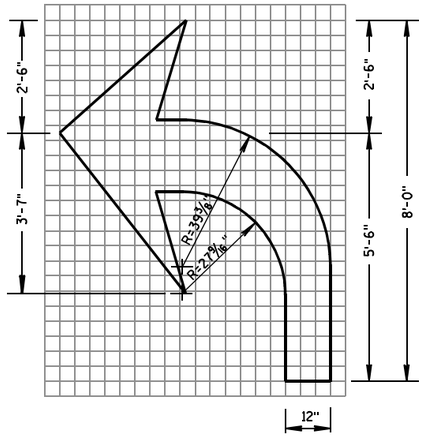
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S.D.D. 15 C 7-12b

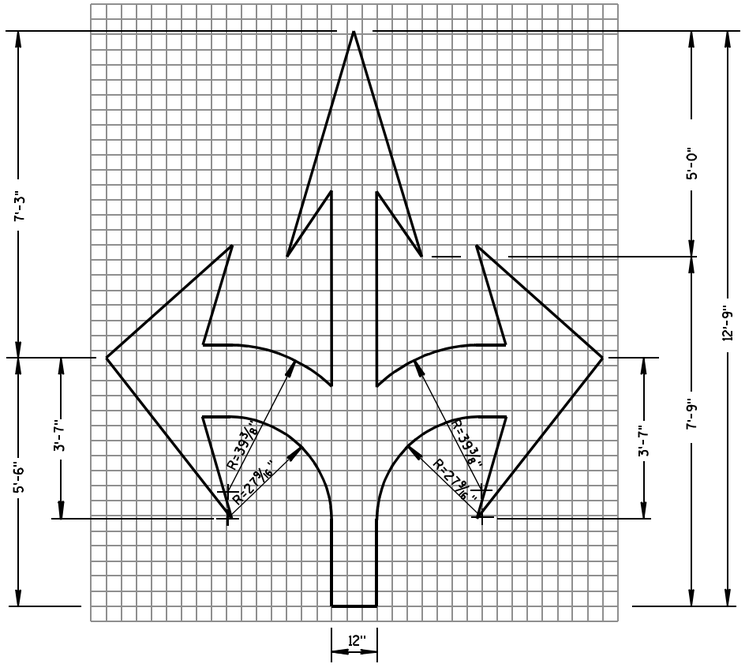
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

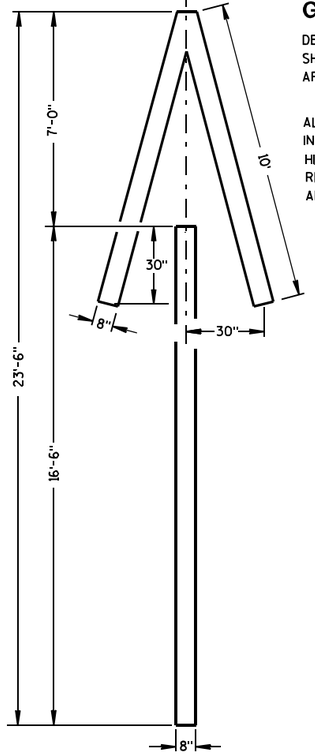
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



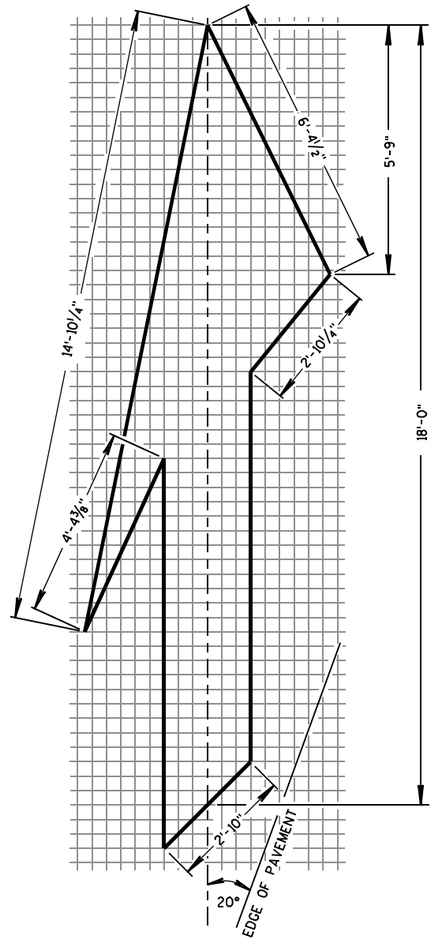
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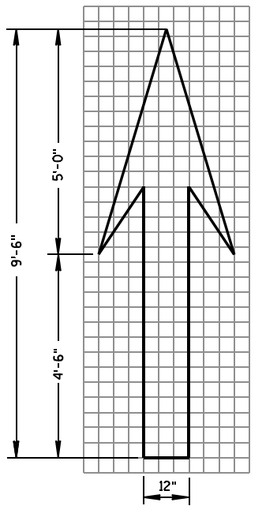
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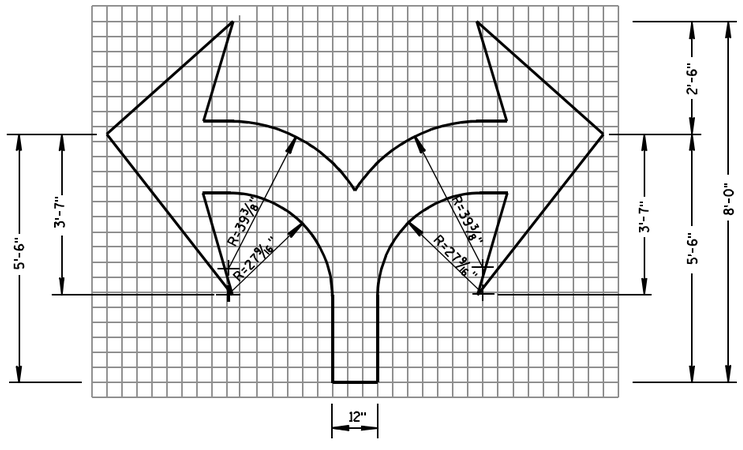
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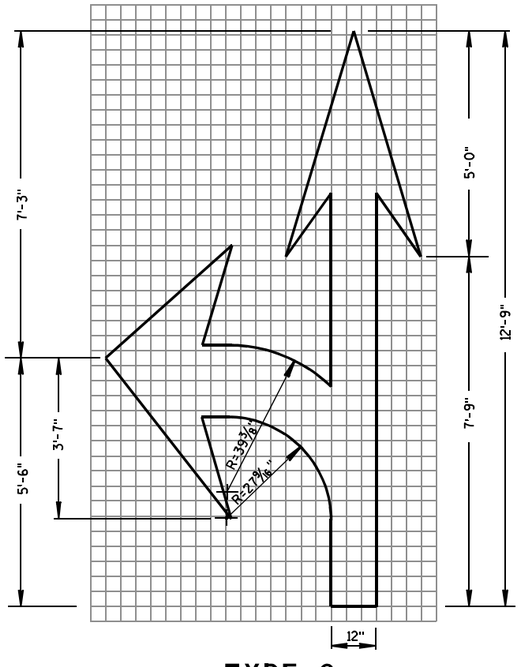
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nathaham — STATE TRAFFIC ENGINEER

2176

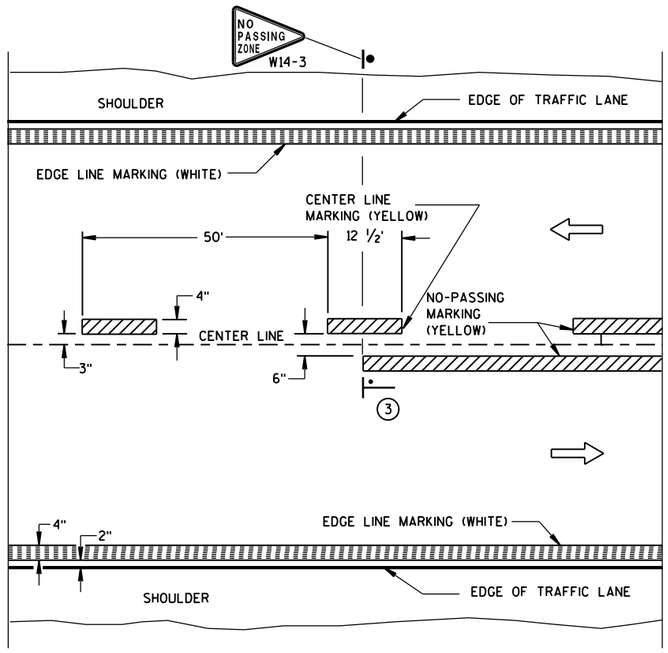
FHWA

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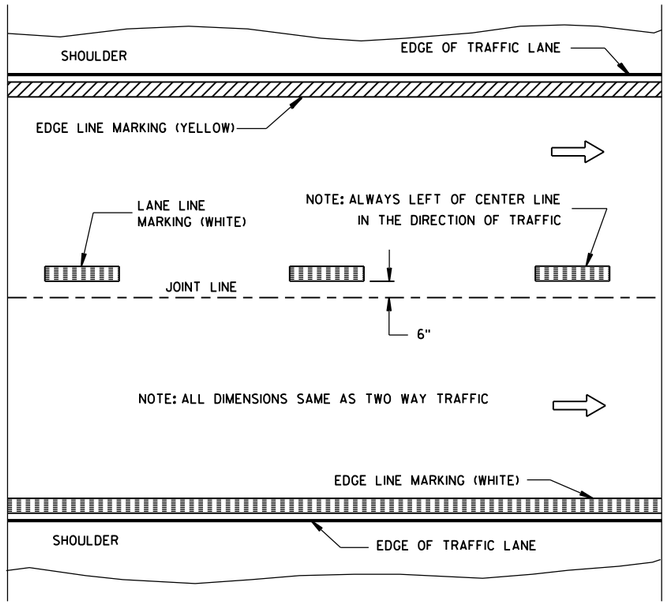
S.D.D. 15 C 7-12c

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S.D.D. 15 C 7-12c

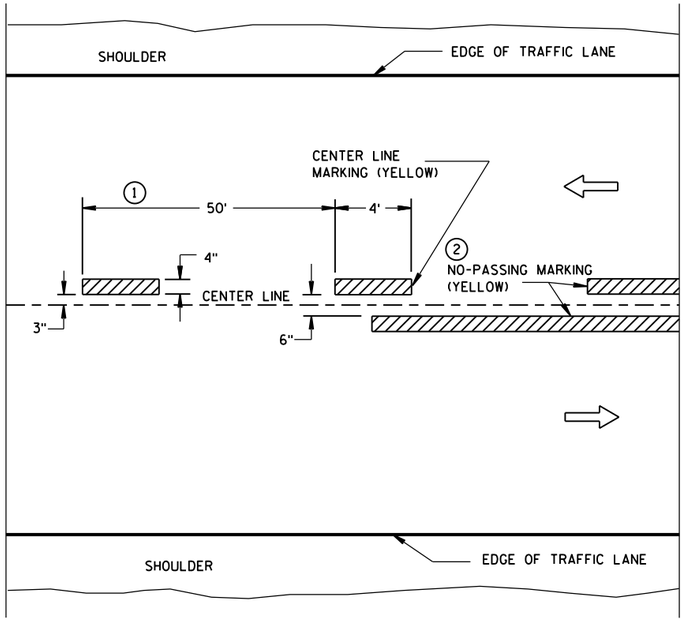


TWO WAY TRAFFIC

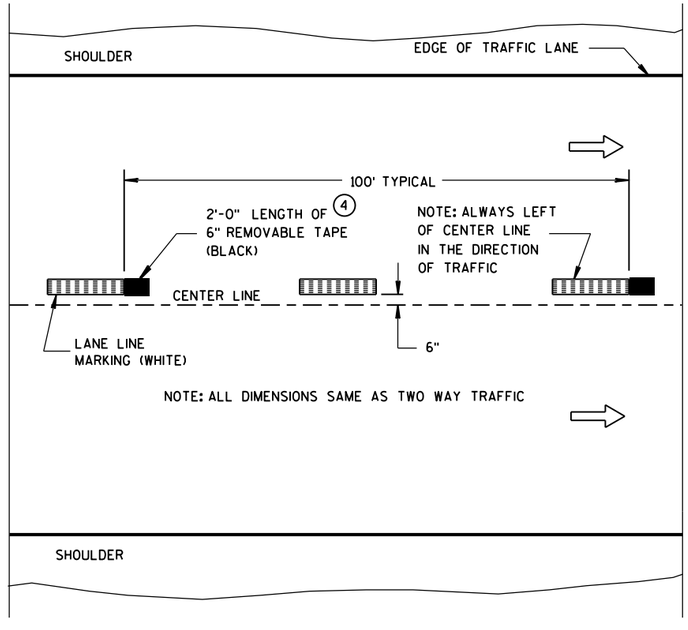


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

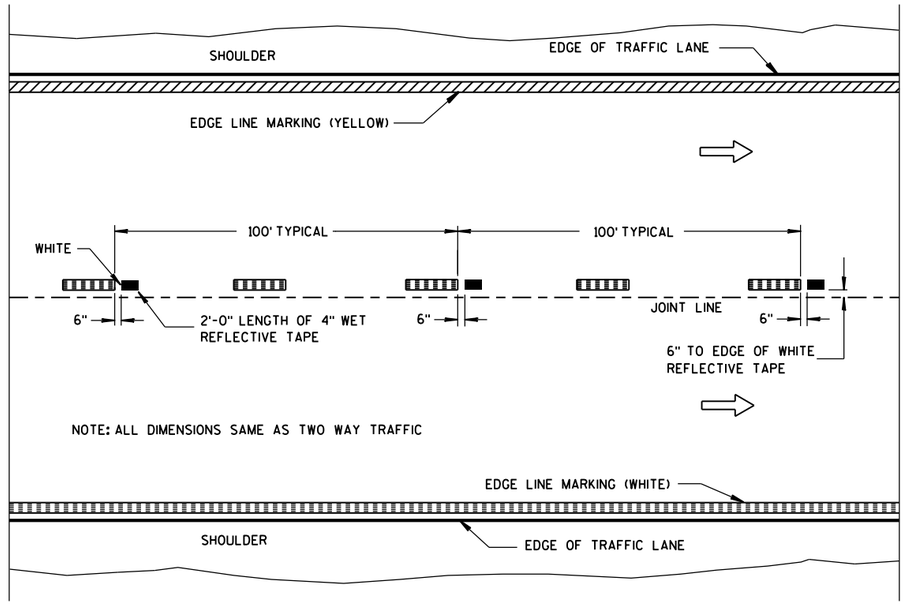
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

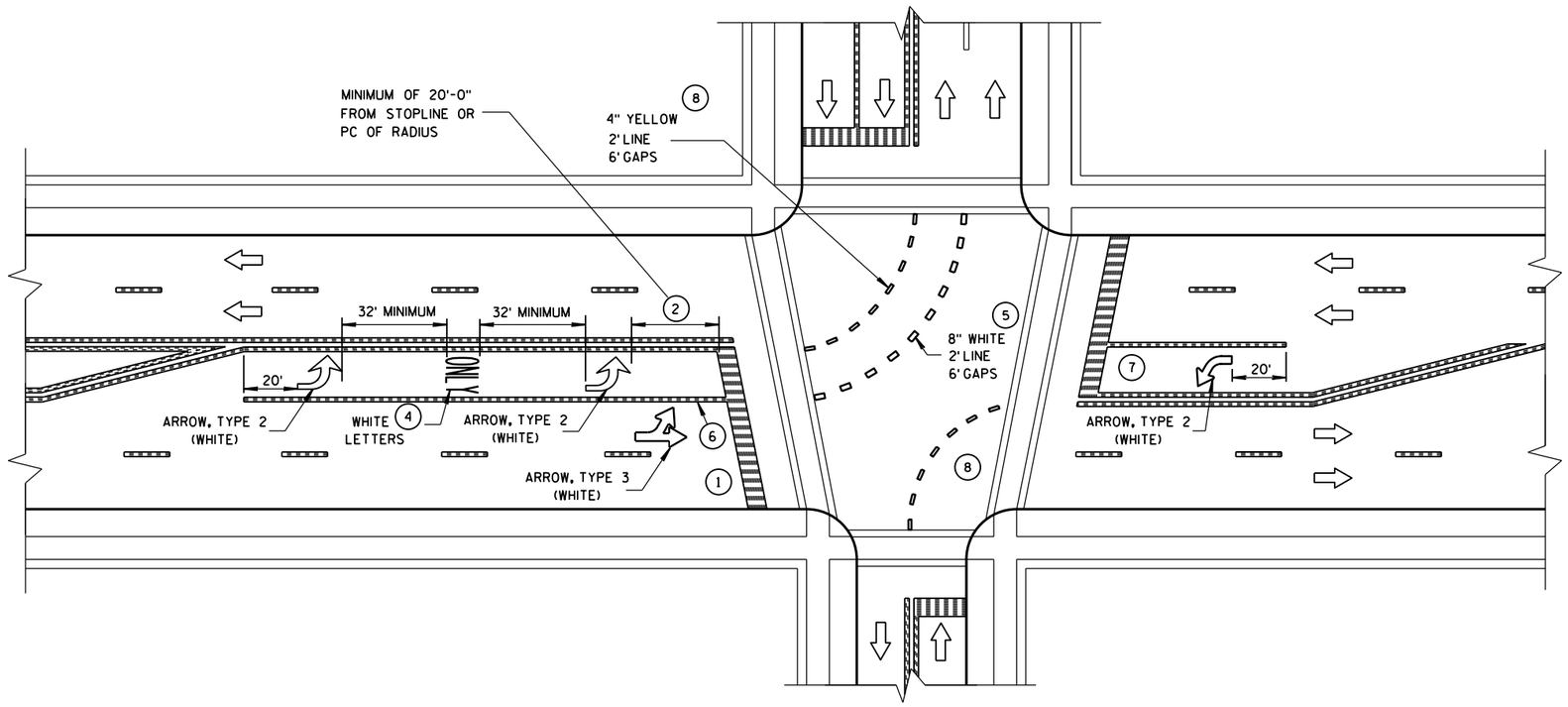
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E 2177
FHWA

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S.D.D. 15 C 8-16a

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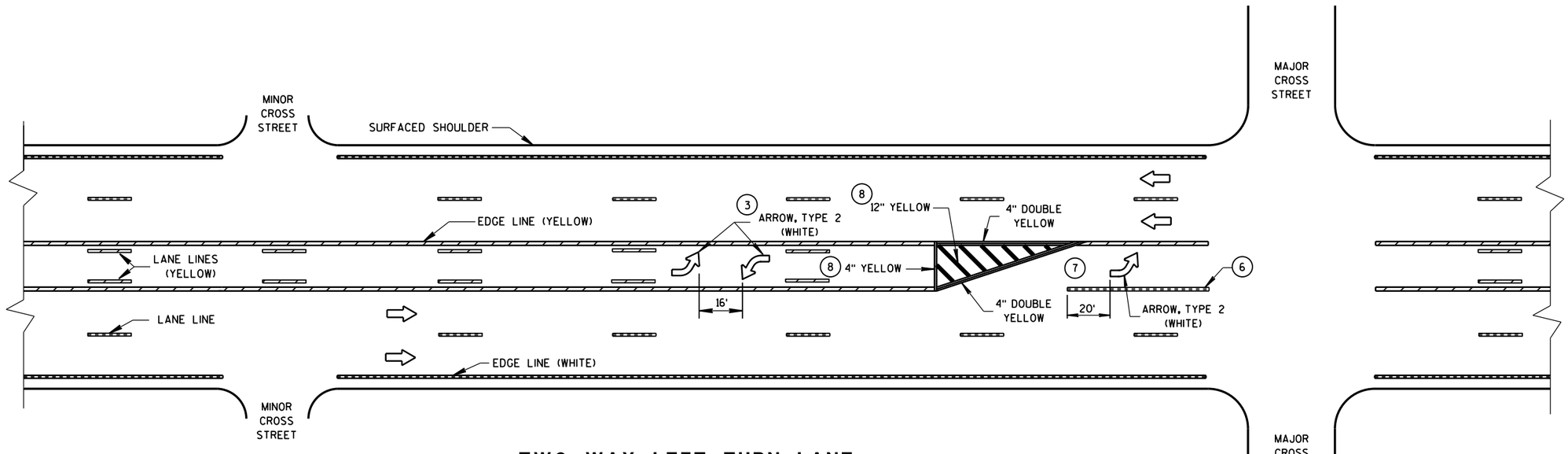
S.D.D. 15 C 8-16a



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

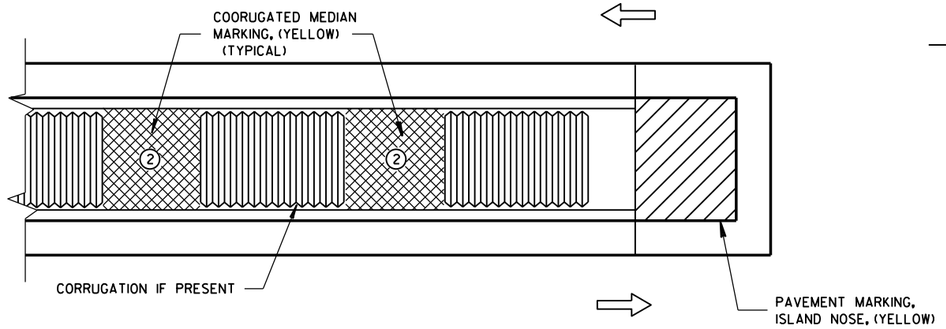
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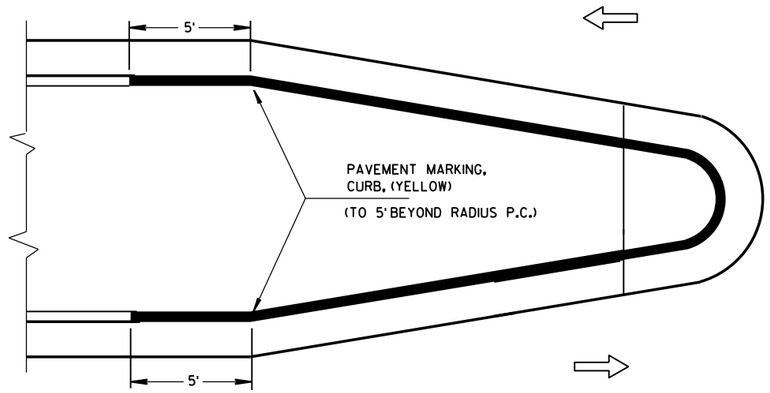
S.D.D. 15 C 8-16e

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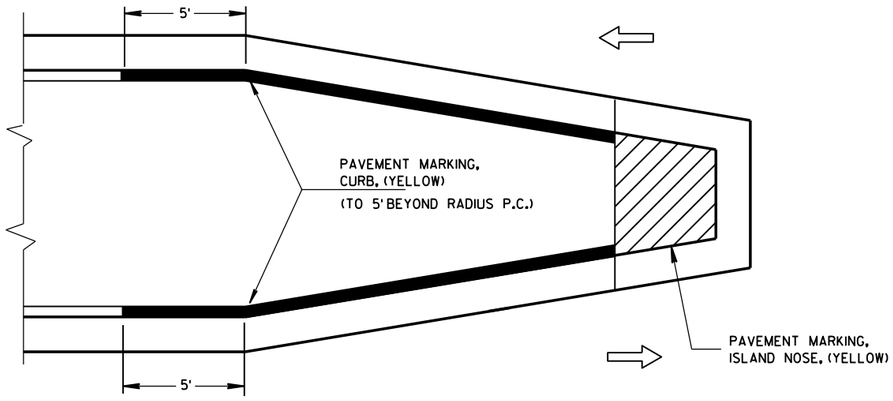
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

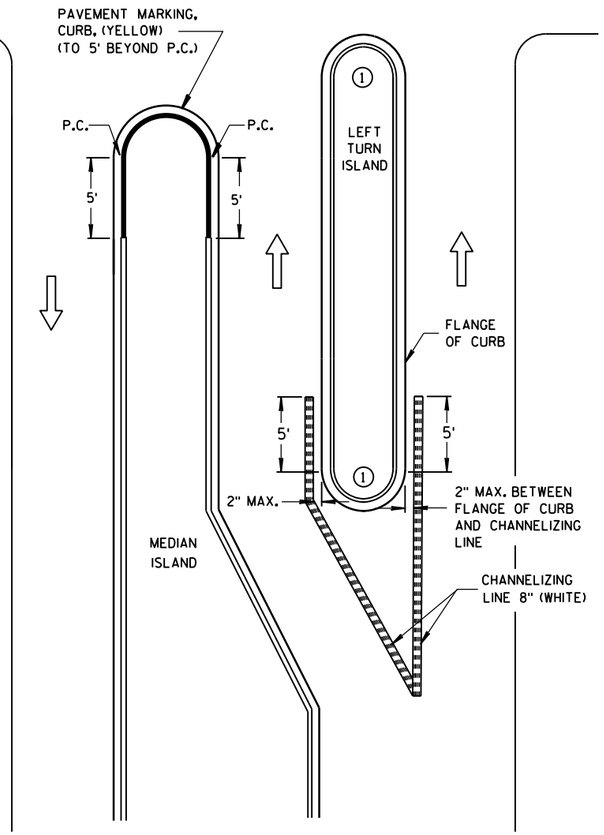


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

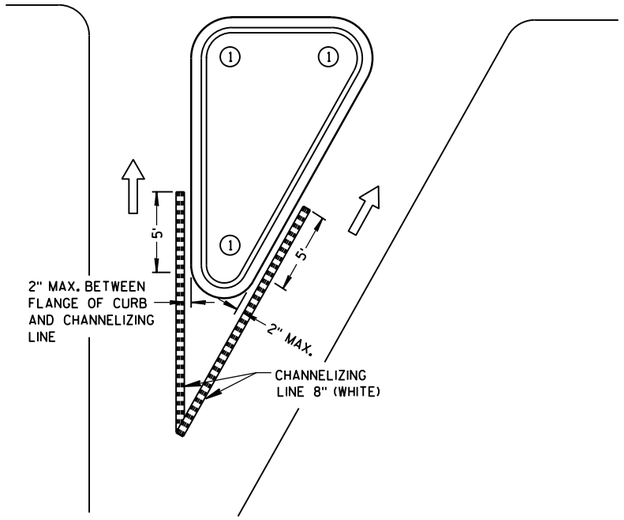


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

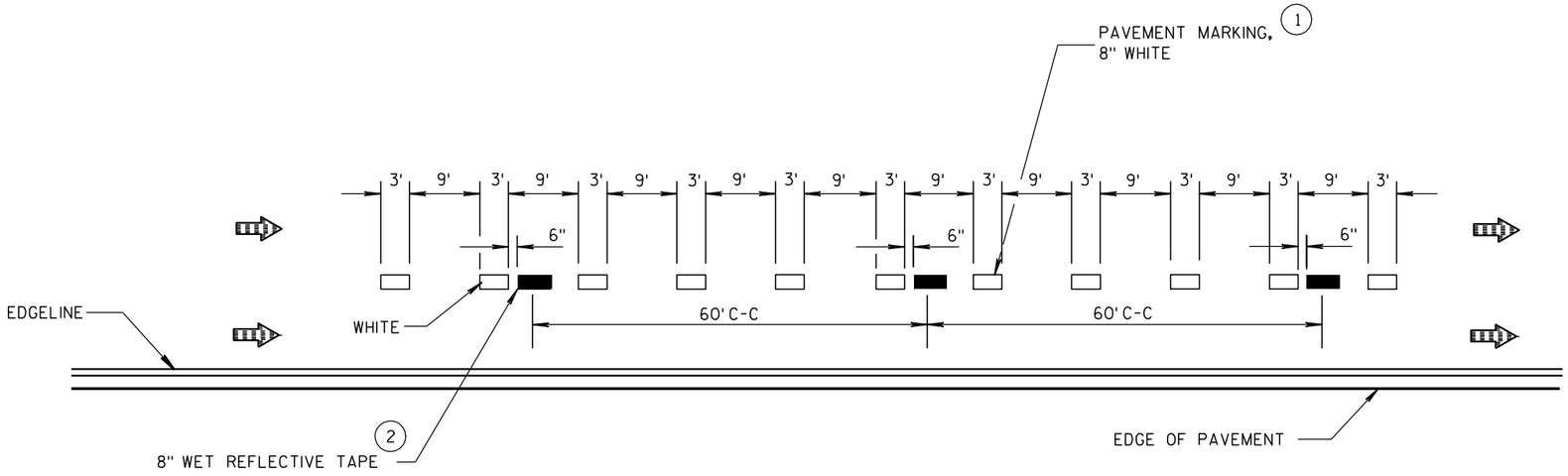
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2179

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S.D.D. 15 C 8-16f

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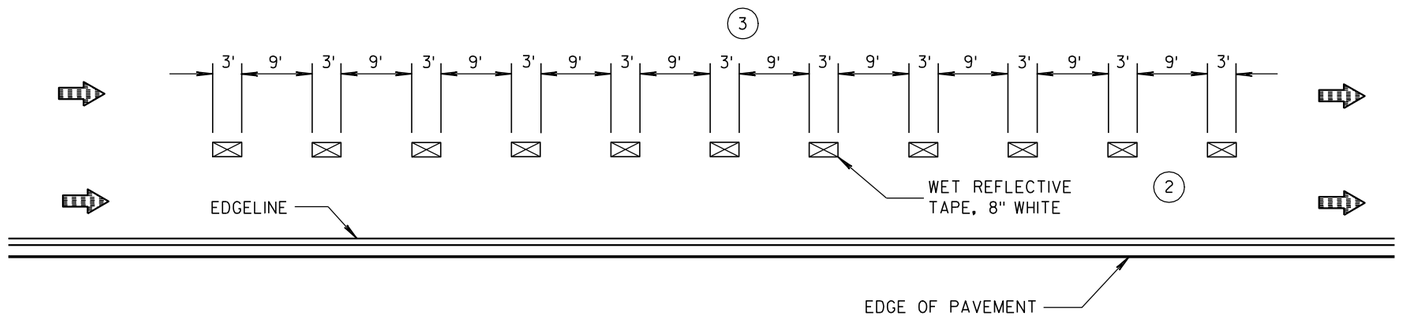
S.D.D. 15 C 8-16f



SPRAYED OR NON WET REFLECTIVE DROP LANE
LINE SUPPLEMENTED BY WET REFLECTIVE TAPE SEGMENT

GENERAL NOTES

1. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE. RETRACE EXISTING 4" MARKING WITH 8" MARKING.
2. REPLACE SAME 4" WET REFLECTIVE TAPE WHERE EXISTING 4" TAPE IS IN PLACE.
3. 3' LINE 9' GAP, EXCEPT REPLACE THE EXISTING LINE - GAP PATTERN AND WIDTH OF TAPE WHERE EXISTING TAPE IS IN PLACE.



DROP LANE DETAIL FOR
NEW WET REFLECTIVE TAPE INSTALLATIONS

LEGEND

- 2.0' LENGTH OF WET REFLECTIVE TAPE
- 3.0' LENGTH OF WET REFLECTIVE TAPE
- DROP LANE MARKING SPRAYED OR NON WET REFLECTIVE TAPE
- DIRECTION OF TRAFFIC

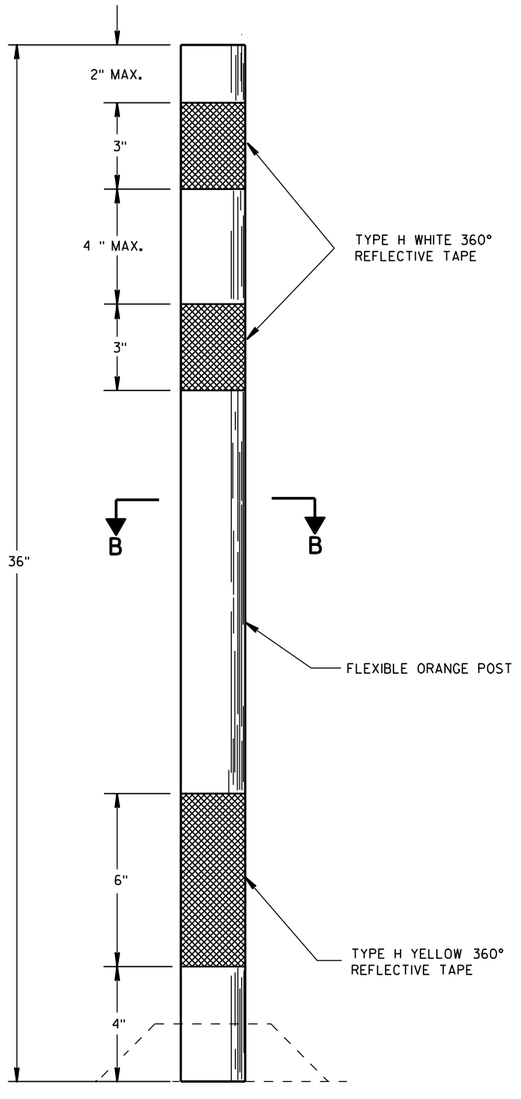
PAVEMENT MARKINGS FOR DROP LANES FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

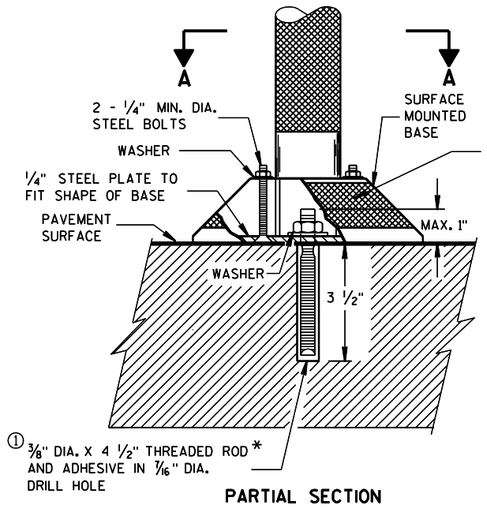
APPROVED
5/13/10 DATE
/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER 2180 DESIGN
FHWA

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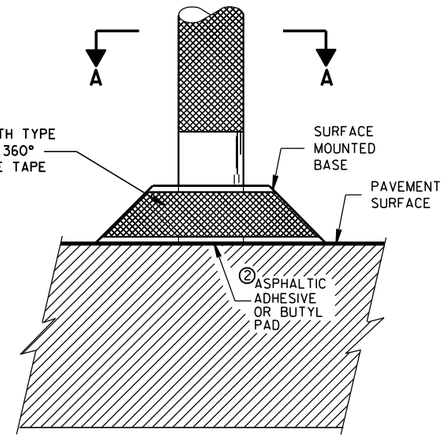
S.D.D. 15 C 10-10



FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

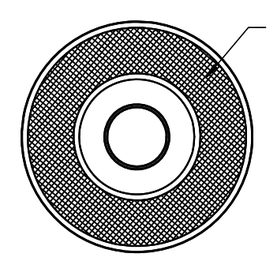
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

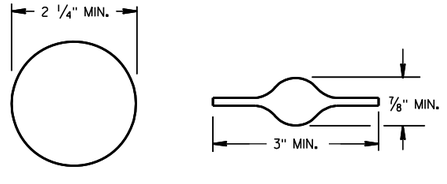
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



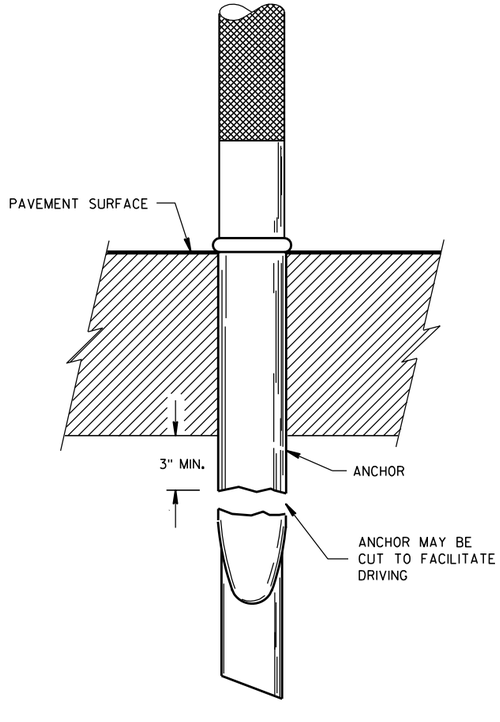
SECTION A-A

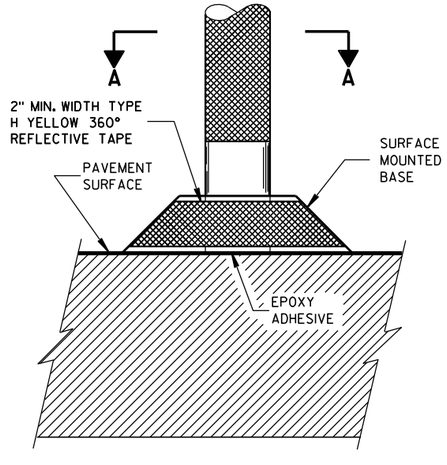
SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O 2181

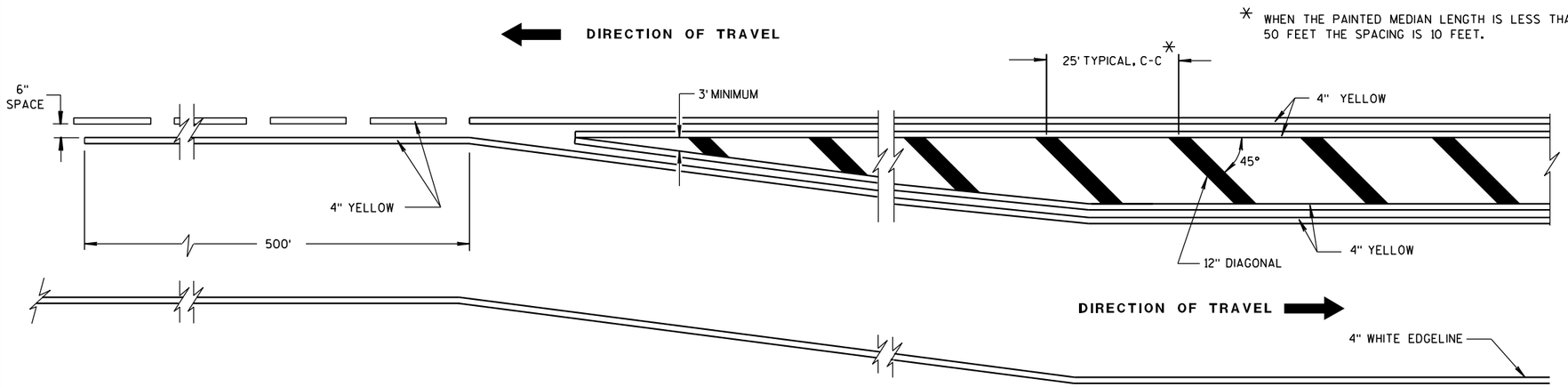
FHWA

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S.D.D. 15 C 11-5

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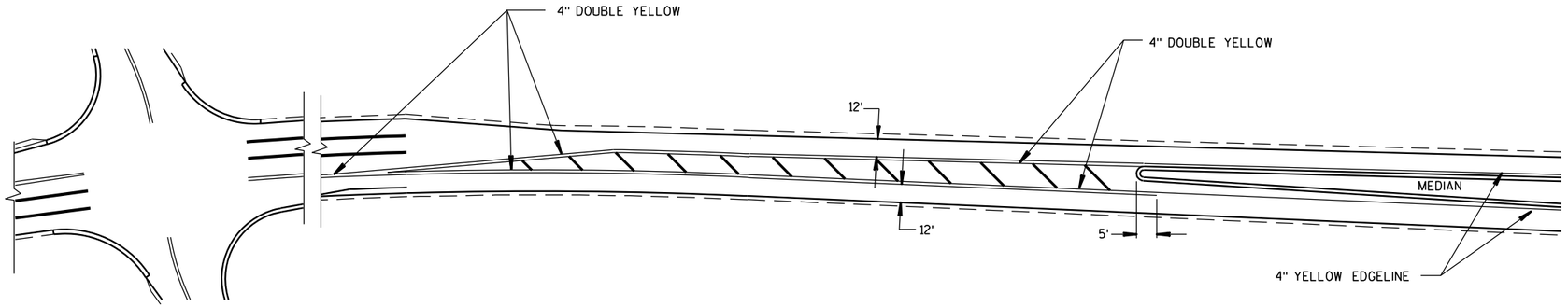
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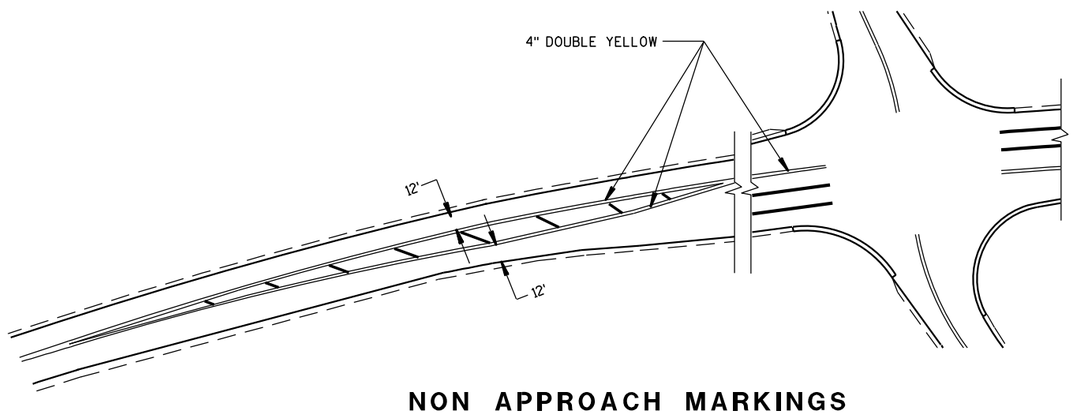
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

6

6

S.D.D. 15 C 18-3

S.D.D. 15 C 18-3

MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-5-09 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

2182 IGN

FHWA

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

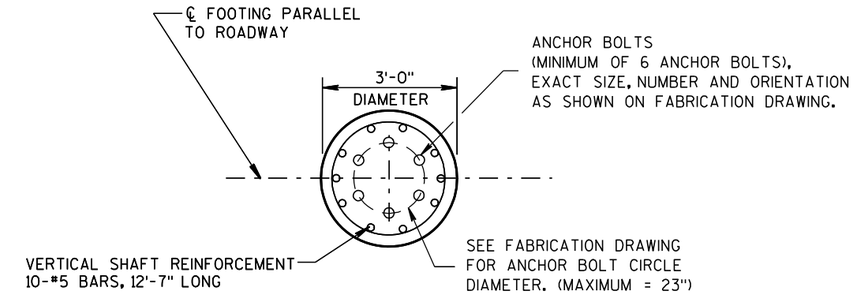
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

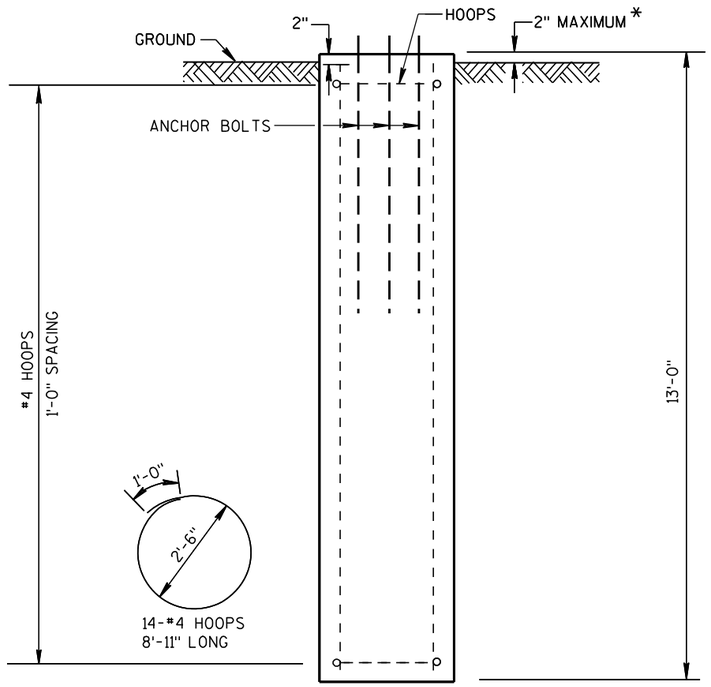
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/17/2009 DATE
/S/ Thomas N. N[illegible] STATE TRAFFIC ENGINEE 2183 IGN
FHWA

6

S.D.D. 15 C 24-2

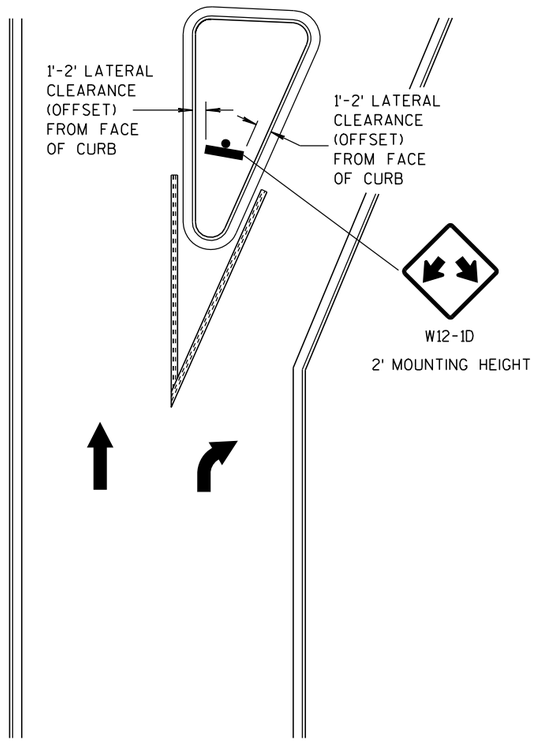
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S.D.D. 15 C 24-2

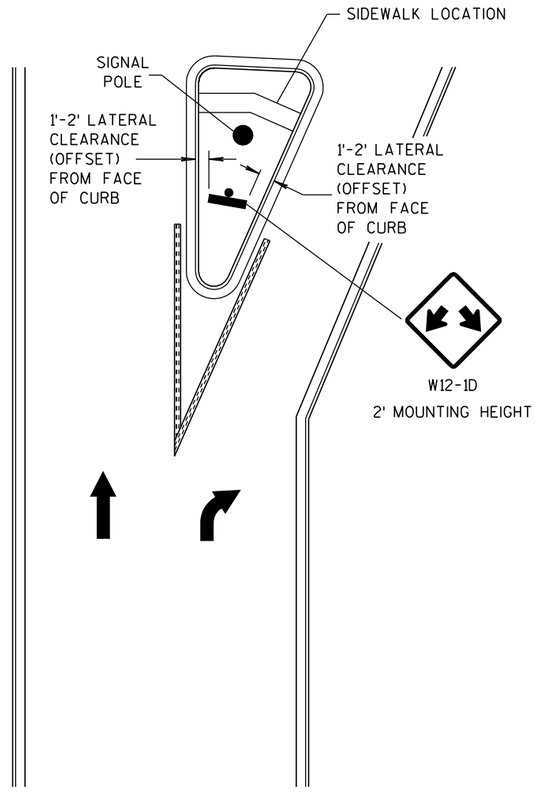
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

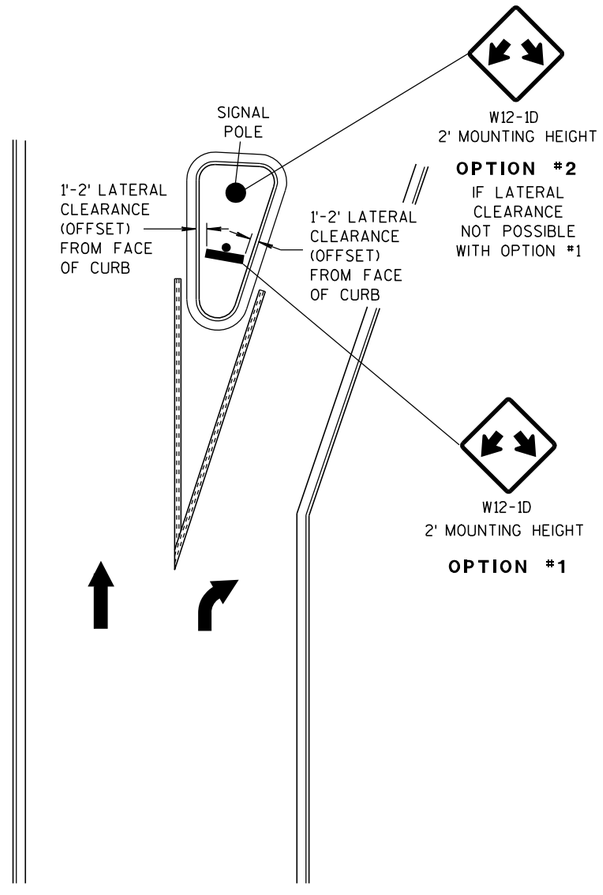
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER 2184 IGN
FHWA	

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S.D.D. 15 C 27-1

6

S.D.D. 15 C 27-1

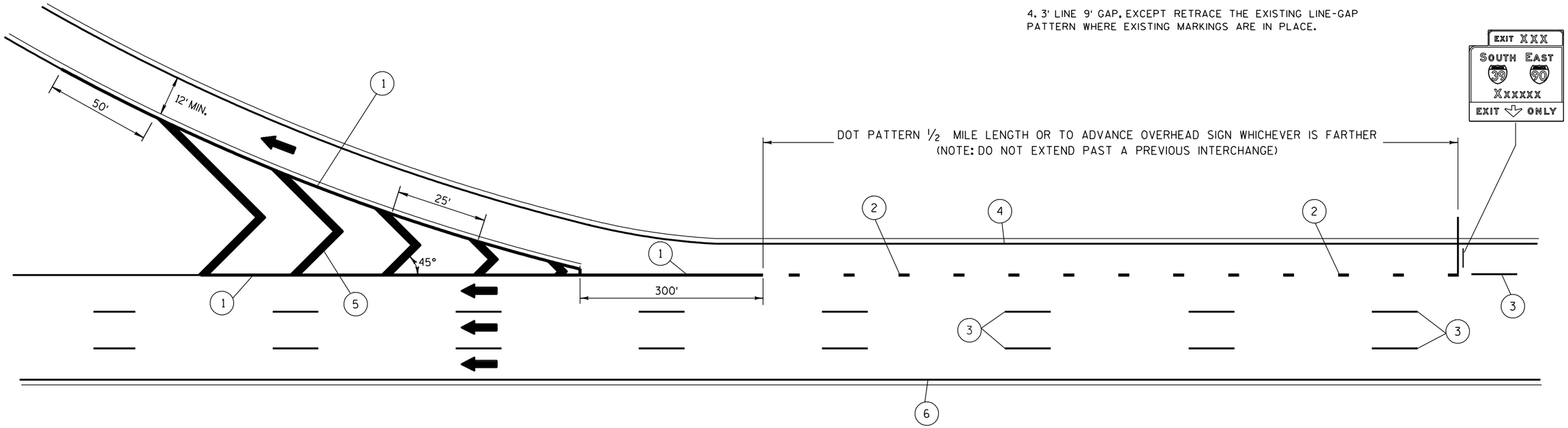
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

2. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1b

NOTES:

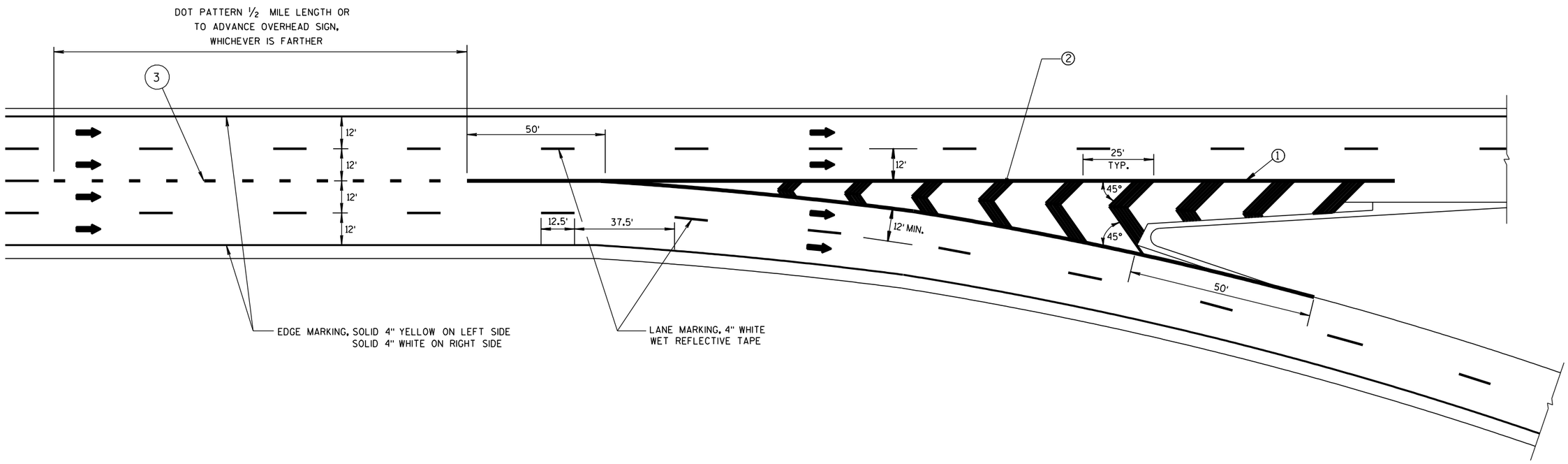
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE.

② CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

③ 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE.



6

6

S.D.D. 15 C 31-1c

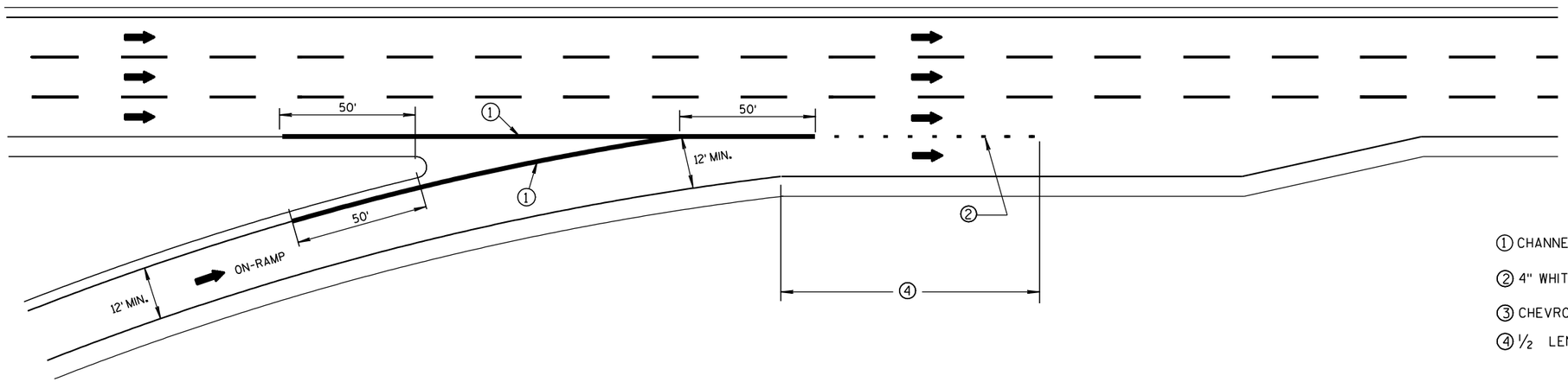
S.D.D. 15 C 31-1c

PAVEMENT MARKING
MAJOR SPLIT
FREEWAY TO FREEWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



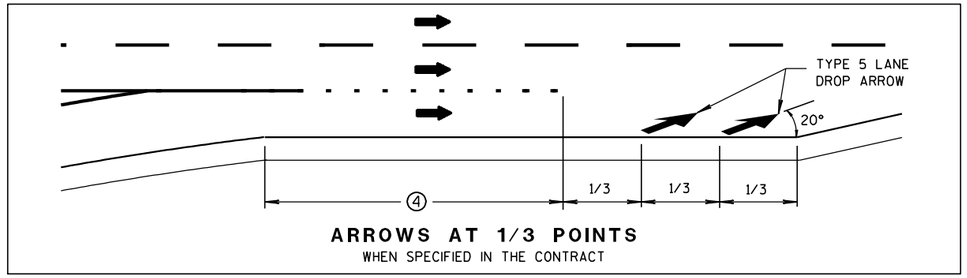
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

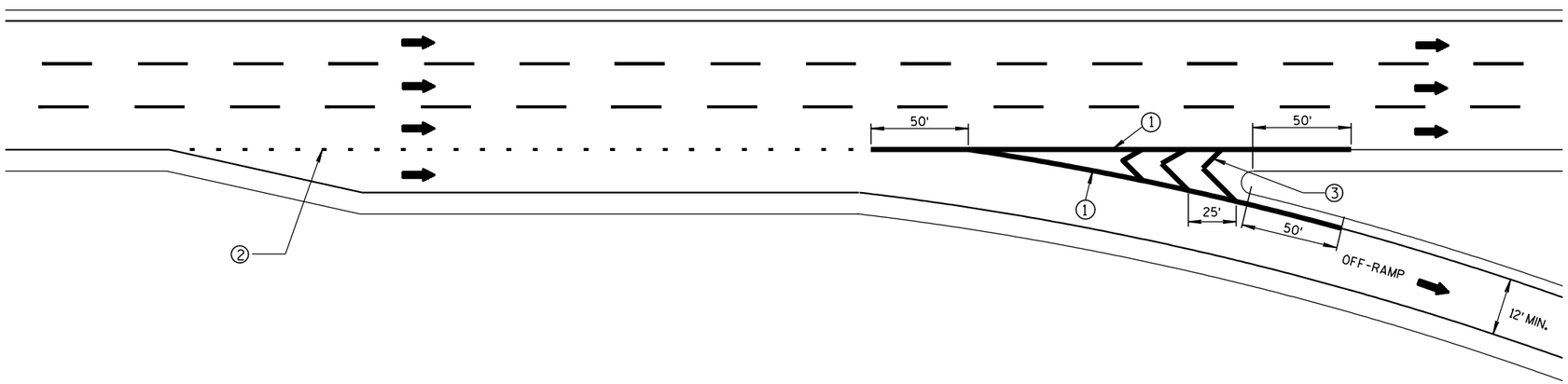
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

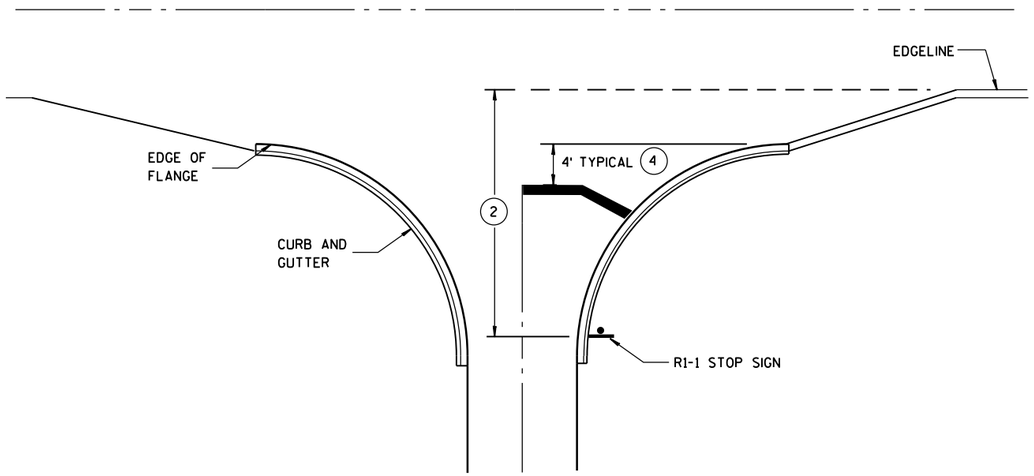
APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothem
STATE TRAFFIC ENGINE 2187 SIGN
FHWA

6

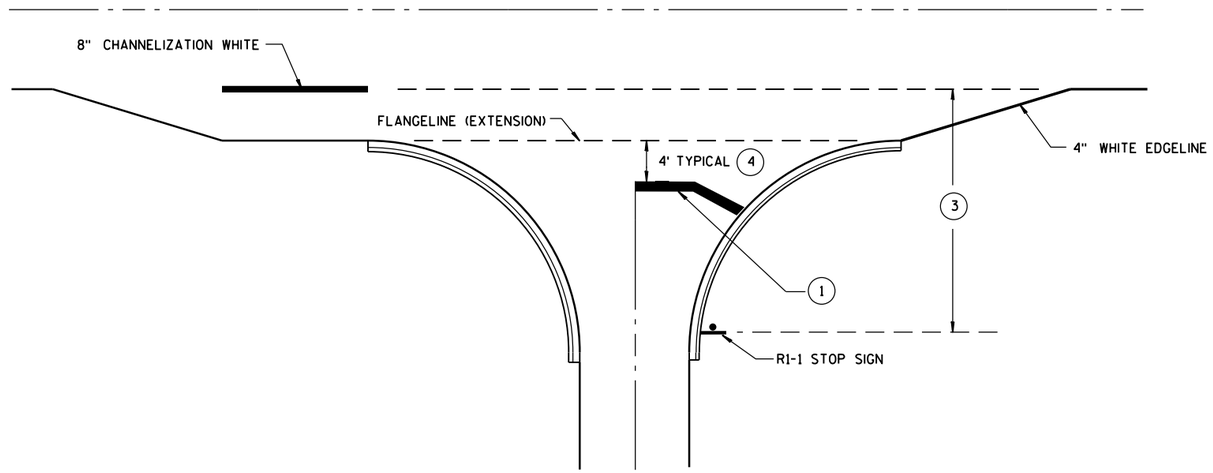
S.D.D. 15 C 31-1d

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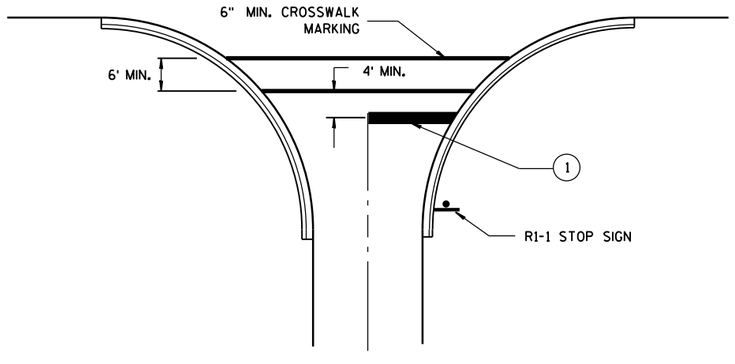
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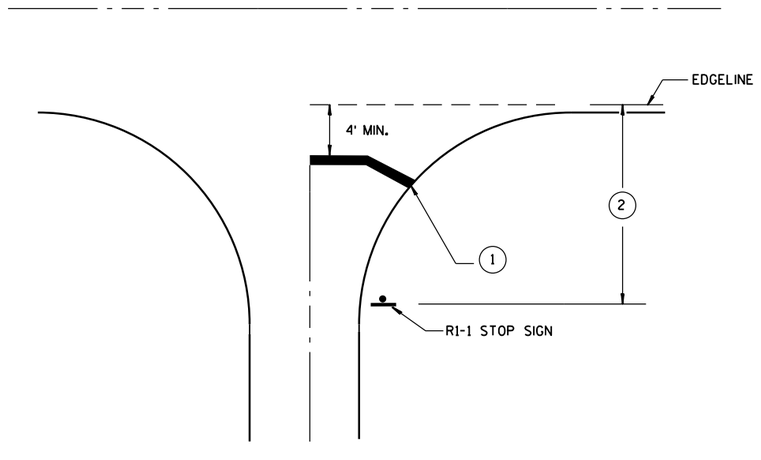
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E 2188

FHWA

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S.D.D. 15 C 33-1

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- POST WITH ATTACHED SIGN IN DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

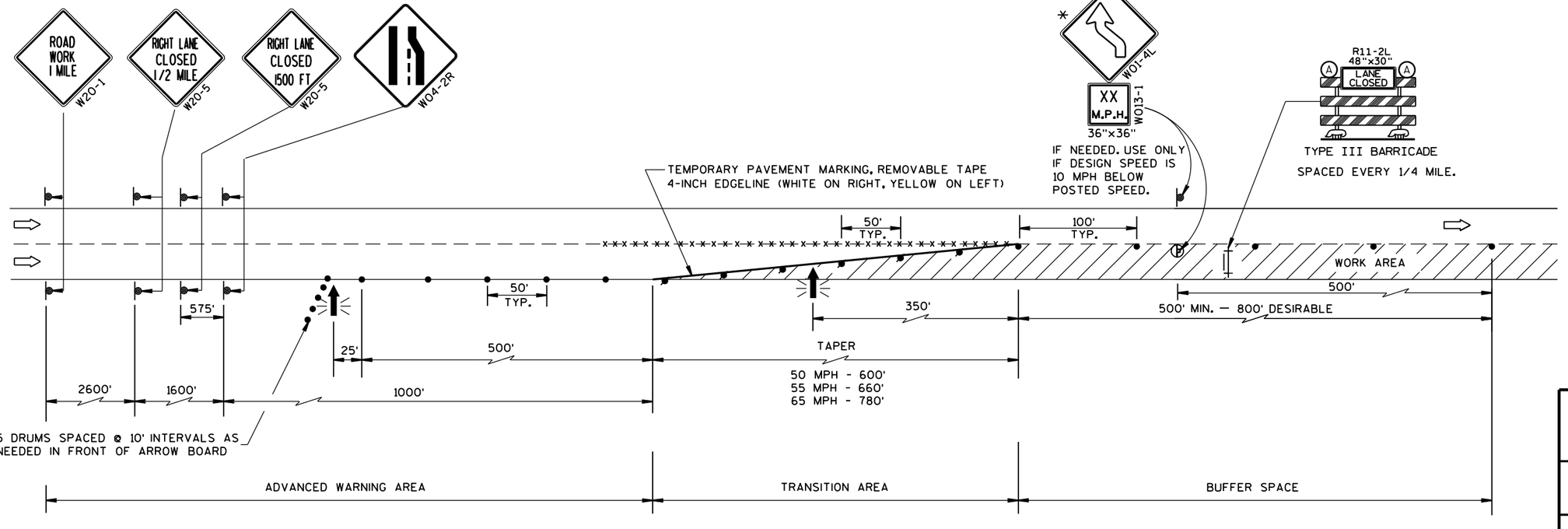


LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



R2-1
48"×60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.



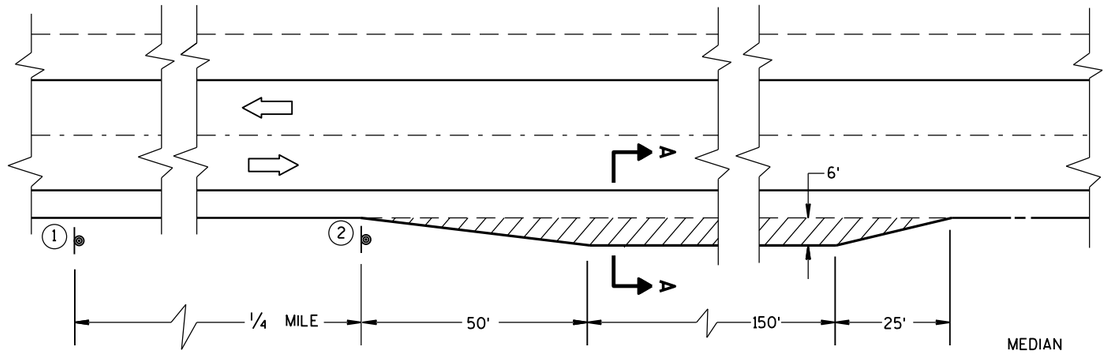
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

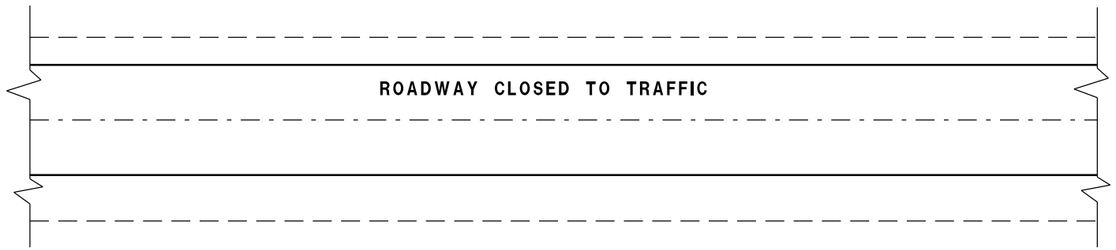
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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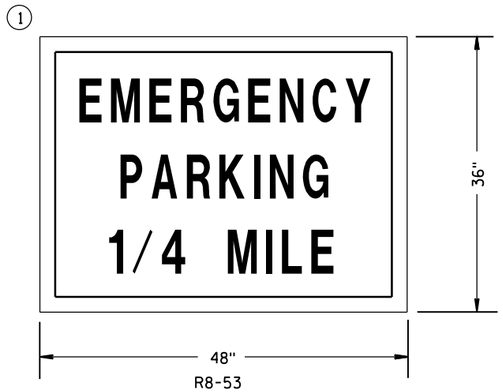
S.D.D. 15 D 12-3





PLAN VIEW

TEMPORARY EMERGENCY PULLOUTS FOR DIVIDED HIGHWAYS



SIGNS TO BE BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

SIGNS FOR TEMPORARY EMERGENCY PULLOUTS

GENERAL NOTES

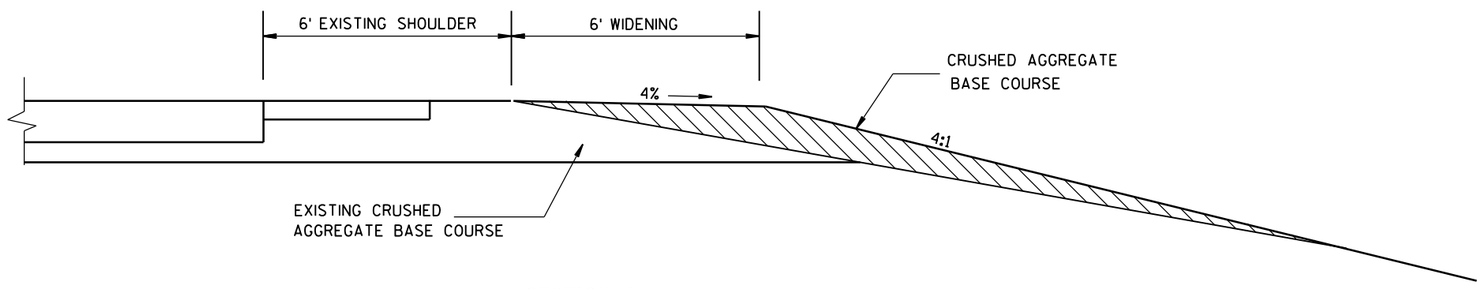
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

TEMPORARY EMERGENCY PULLOUTS AND SIGNS SHALL BE REMOVED AND THE ROADWAY RESTORED TO ITS ORIGINAL CROSS SECTION AND CONDITION PRIOR TO REOPENING THE ROADWAY TO ONE WAY TRAFFIC.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



SECTION A-A

TEMPORARY EMERGENCY PULLOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

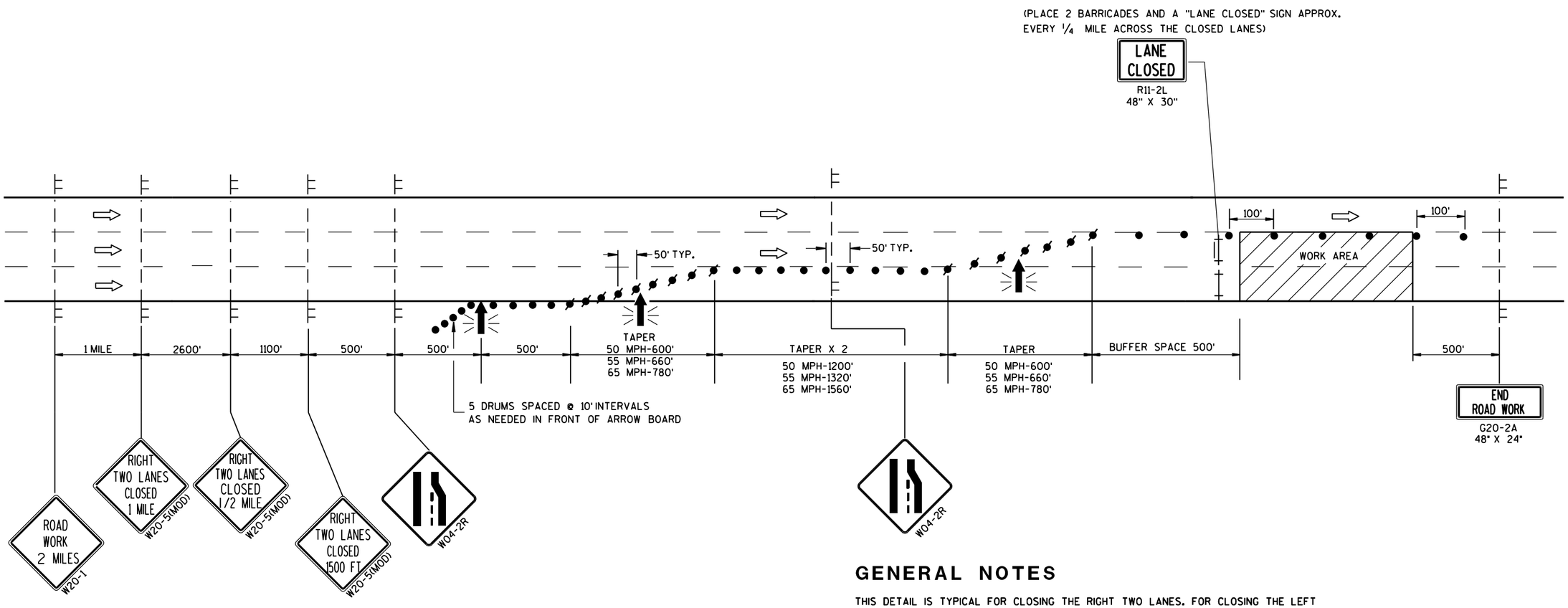
APPROVED
8/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER 2190 SIGN
FHWA

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S.D.D. 15 D 13-2

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S.D.D. 15 D 13-2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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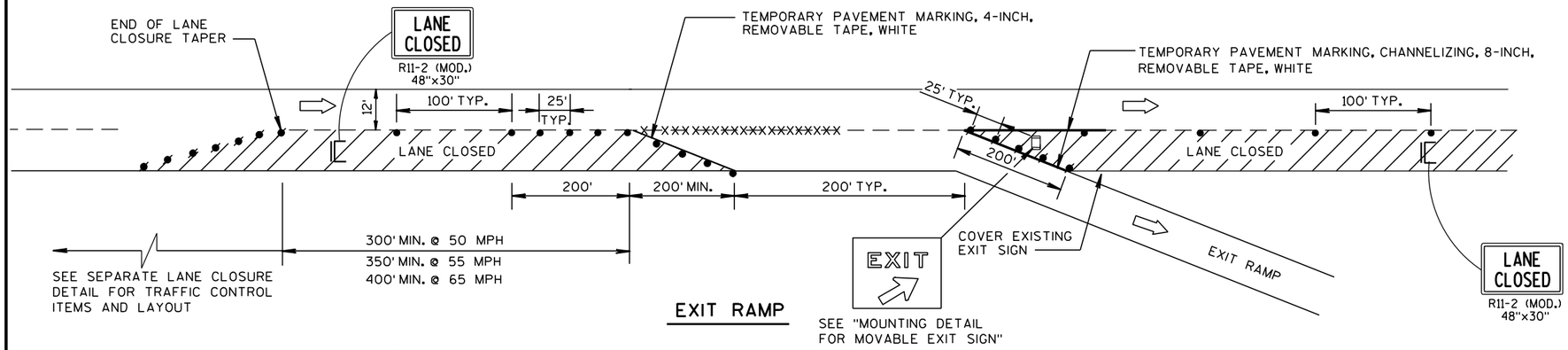
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

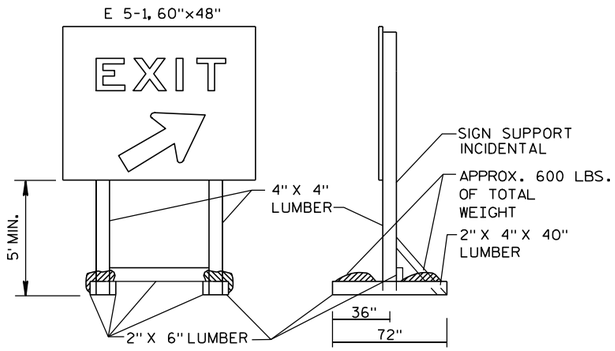
FHWA

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S.D.D. 15 D 14-2

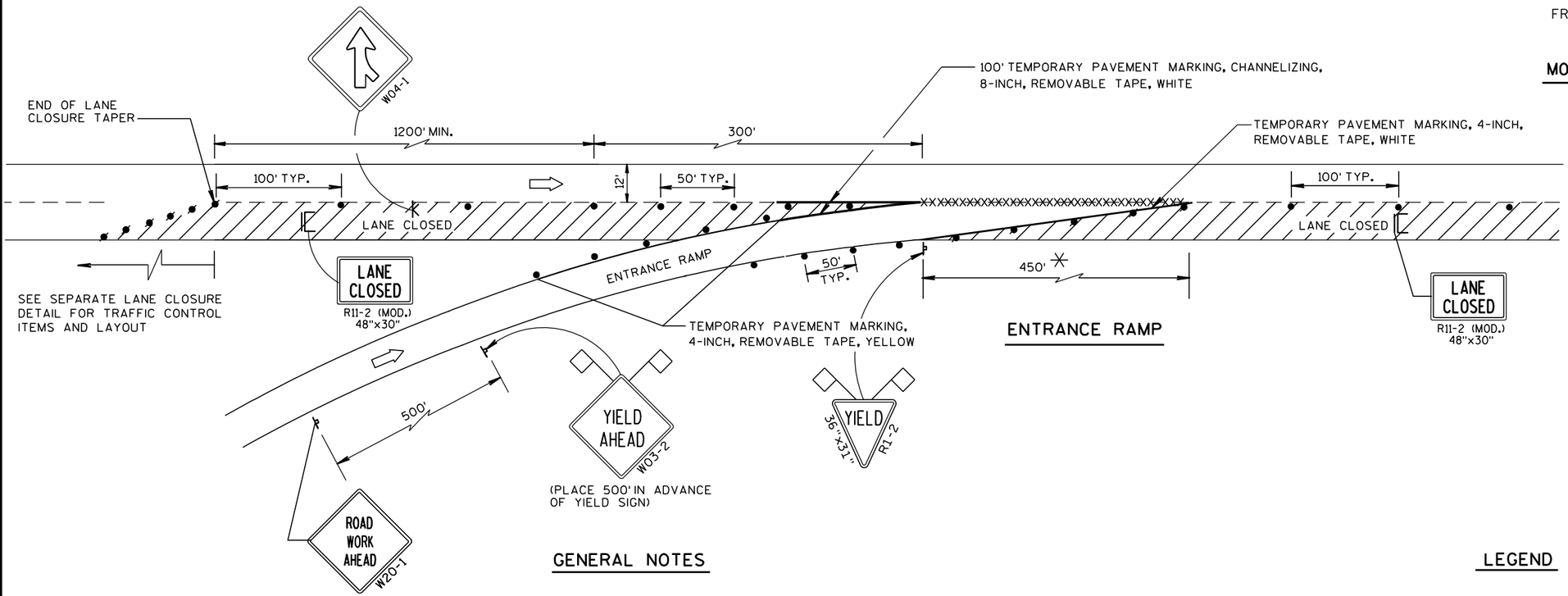


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000
DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 2192 INEER
FHWA

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S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

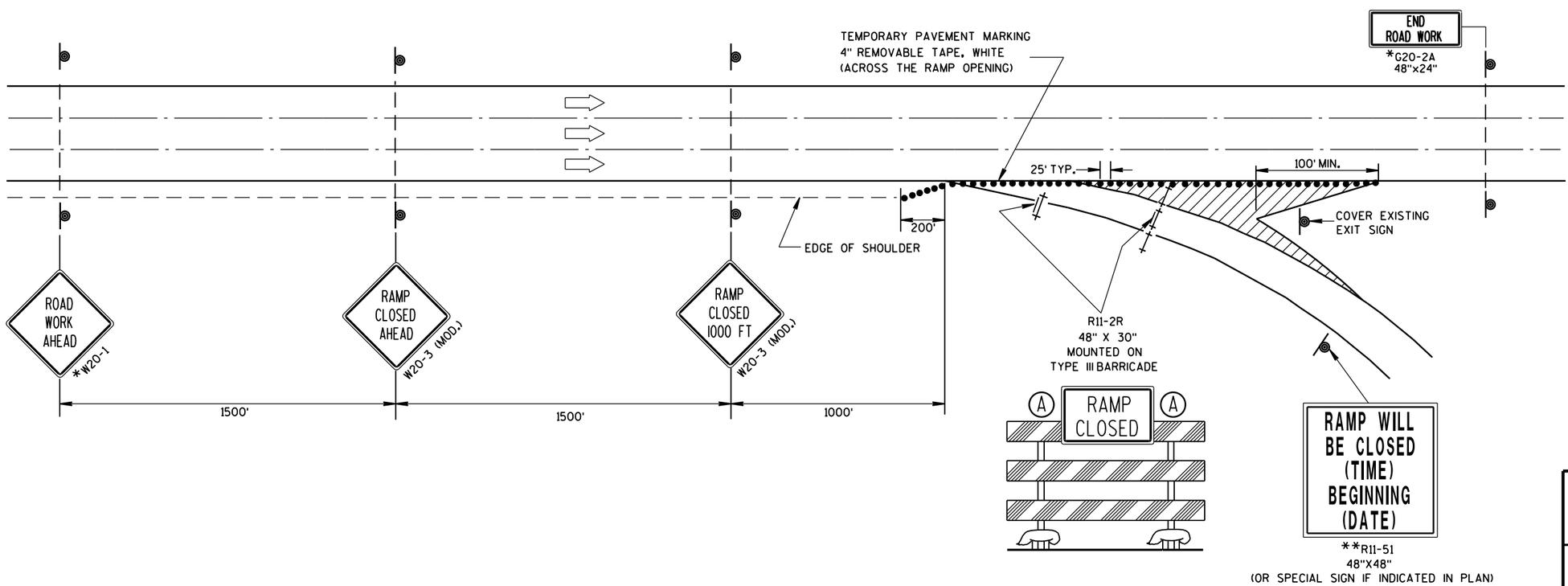
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINE 2193 ESIGN

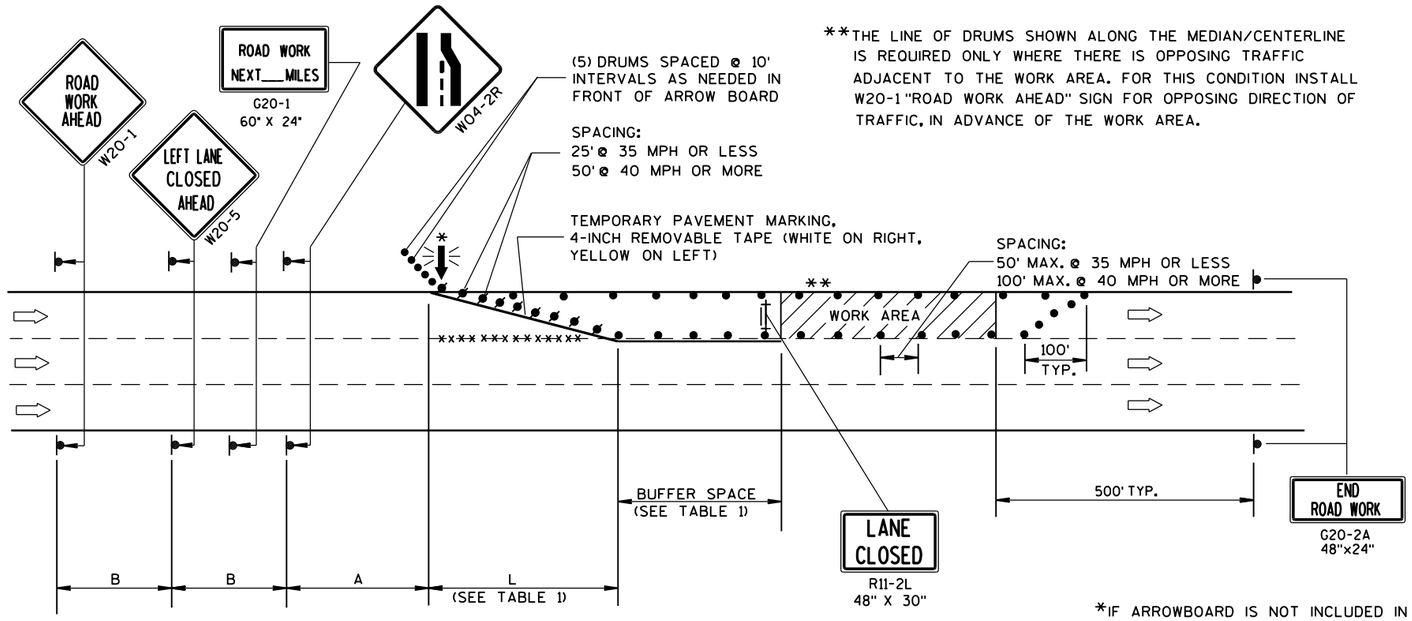
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S.D.D. 15 D 16-2

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S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

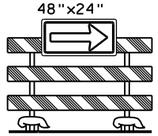


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

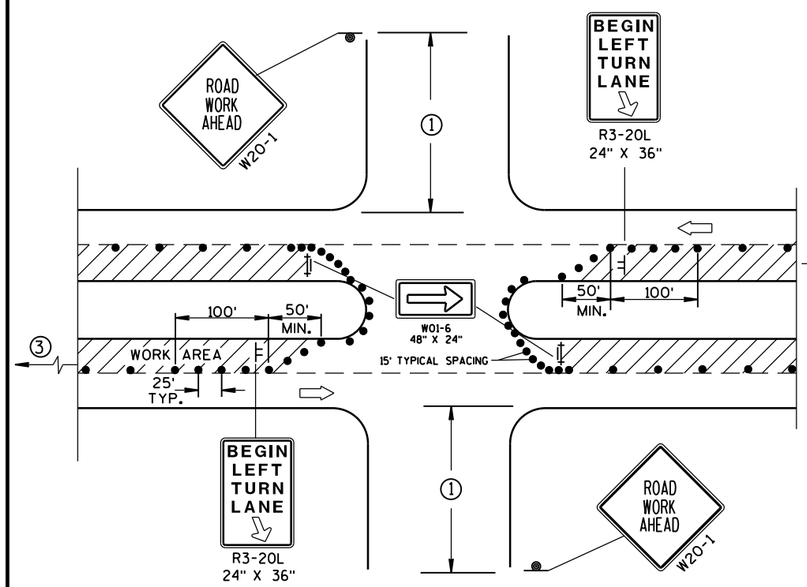
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 D 20-2

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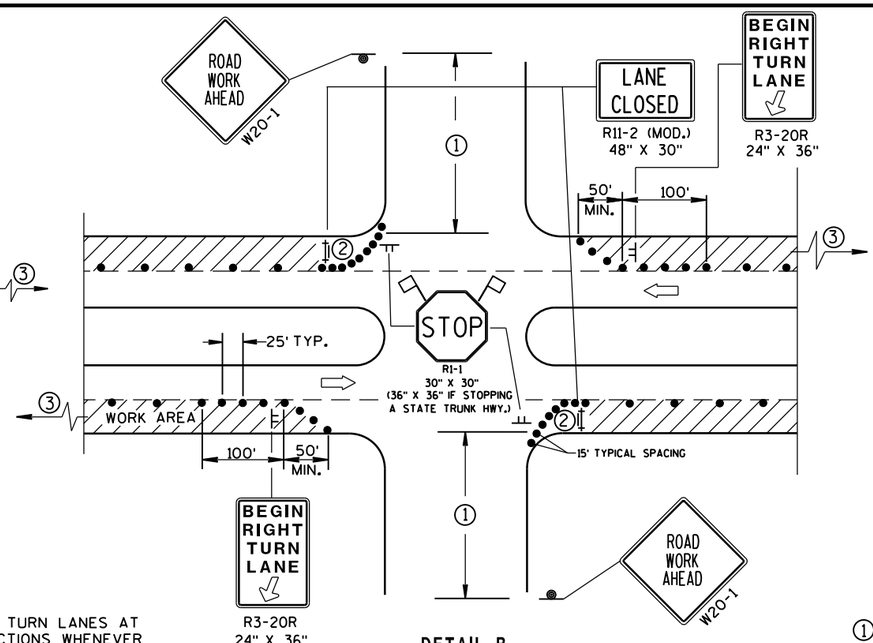
S.D.D. 15 D 20-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

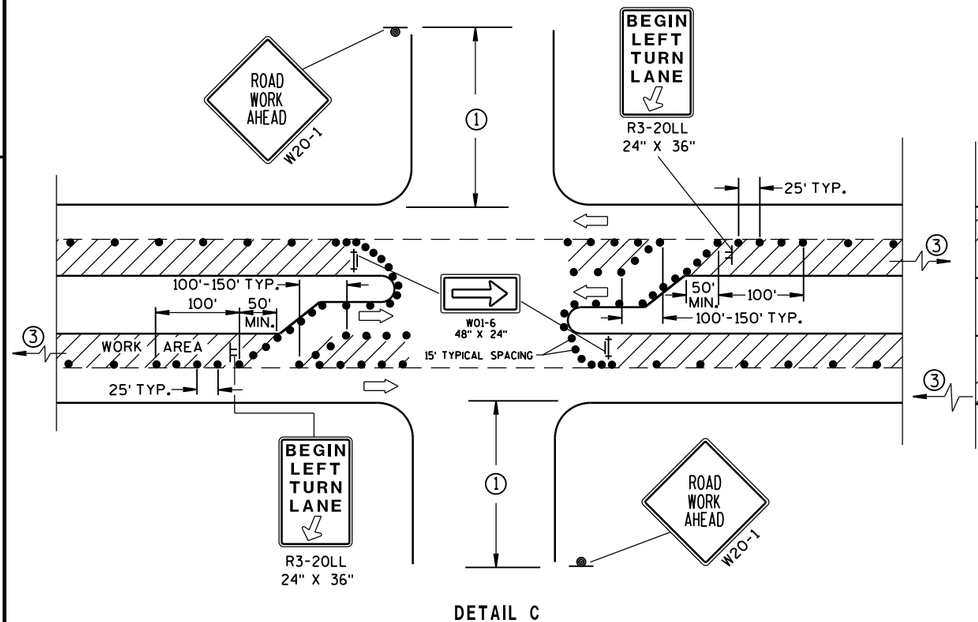
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

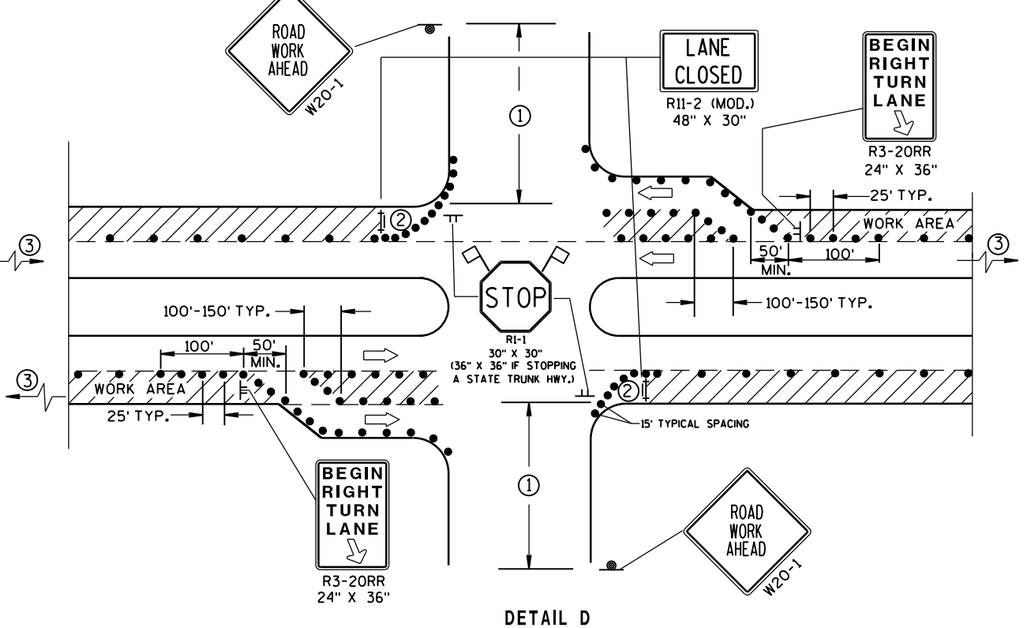
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

2195
DESIGN

FHWA

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S.D.D. 15 D 21-2

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S.D.D. 15 D 21-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

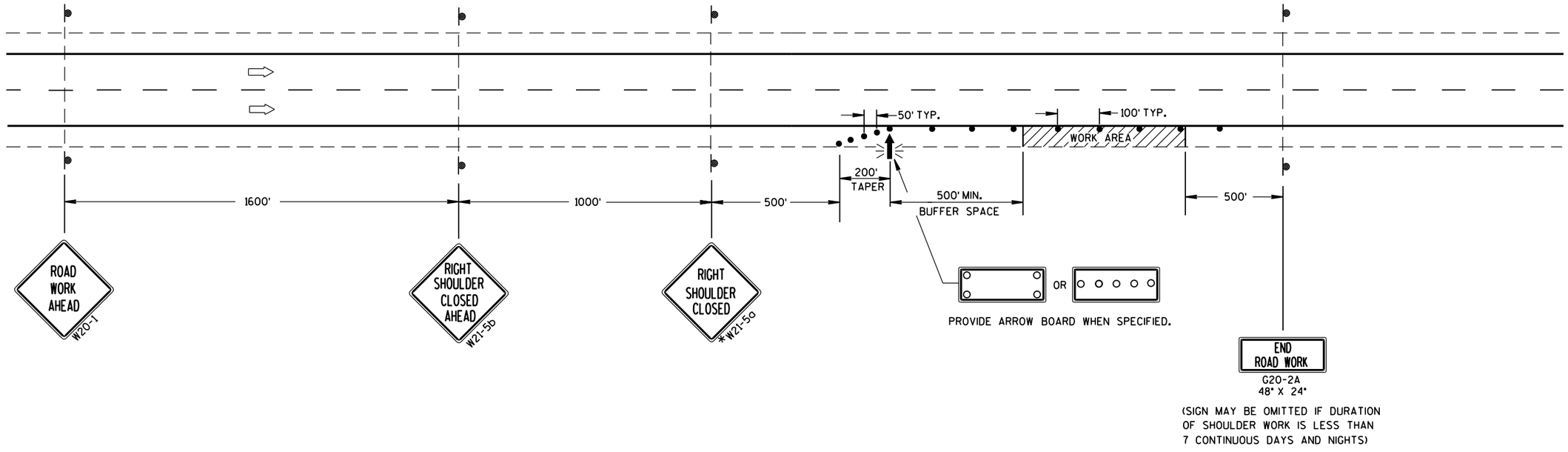
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

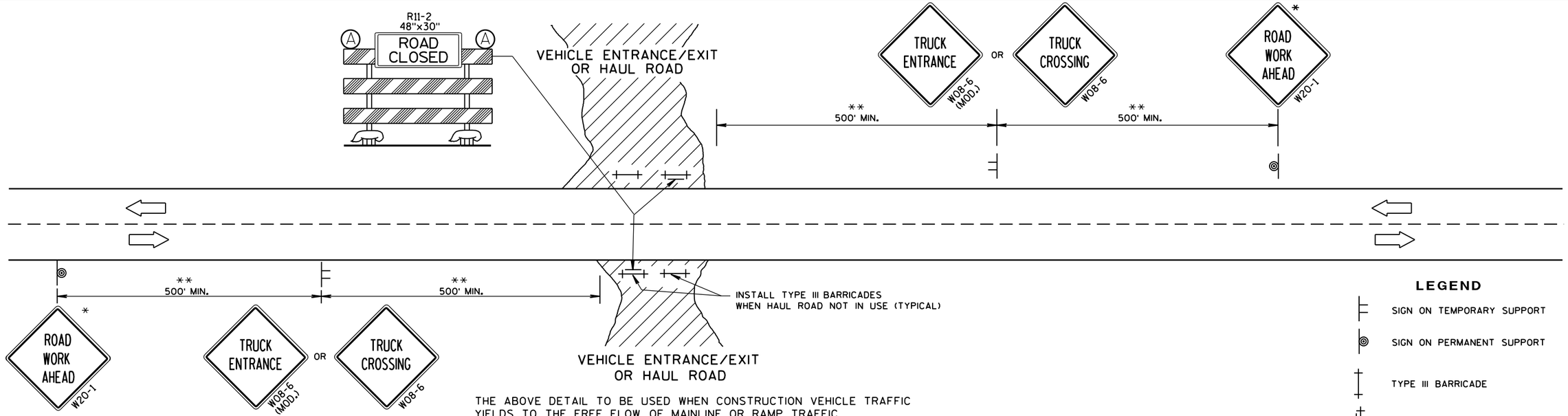
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 D 27-2



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, DEVICES AND FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE **ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES** FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

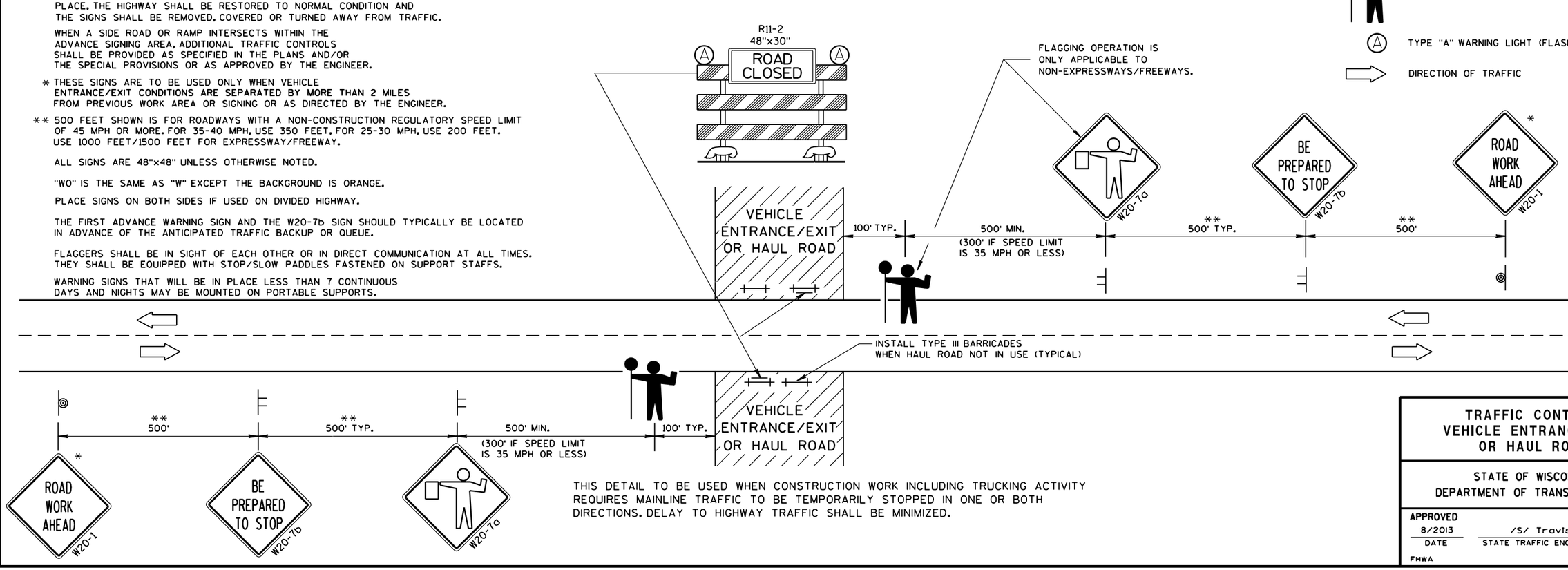
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
2197 IGN
FHWA

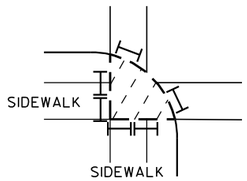
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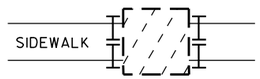
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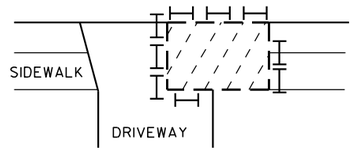
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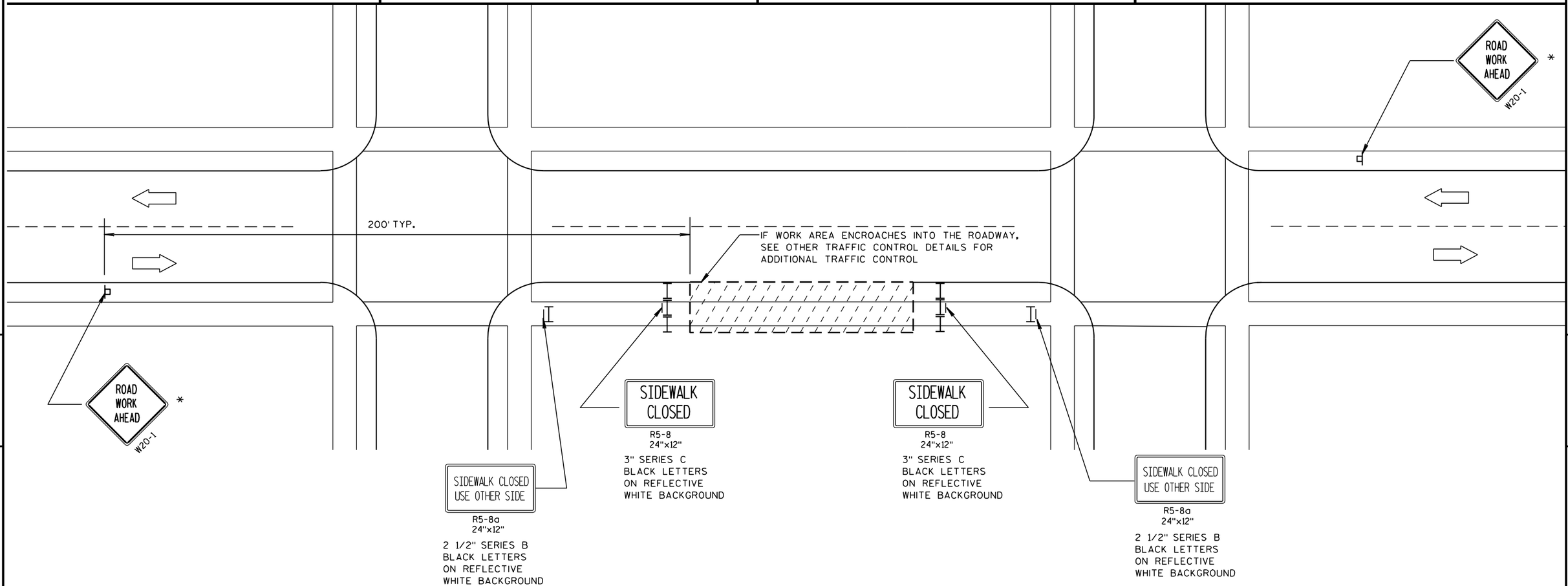
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WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK 2198 NEER
FHWA

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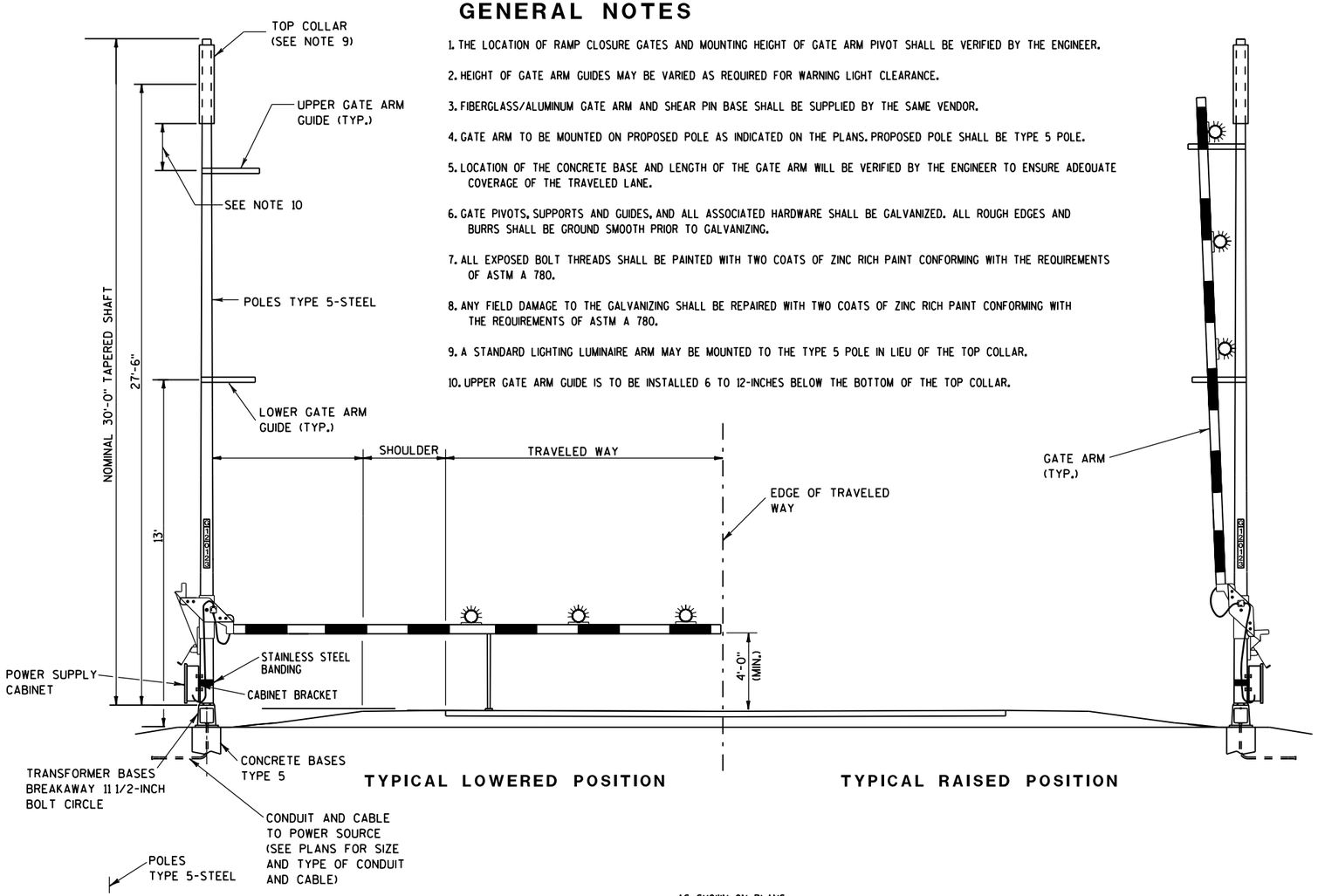
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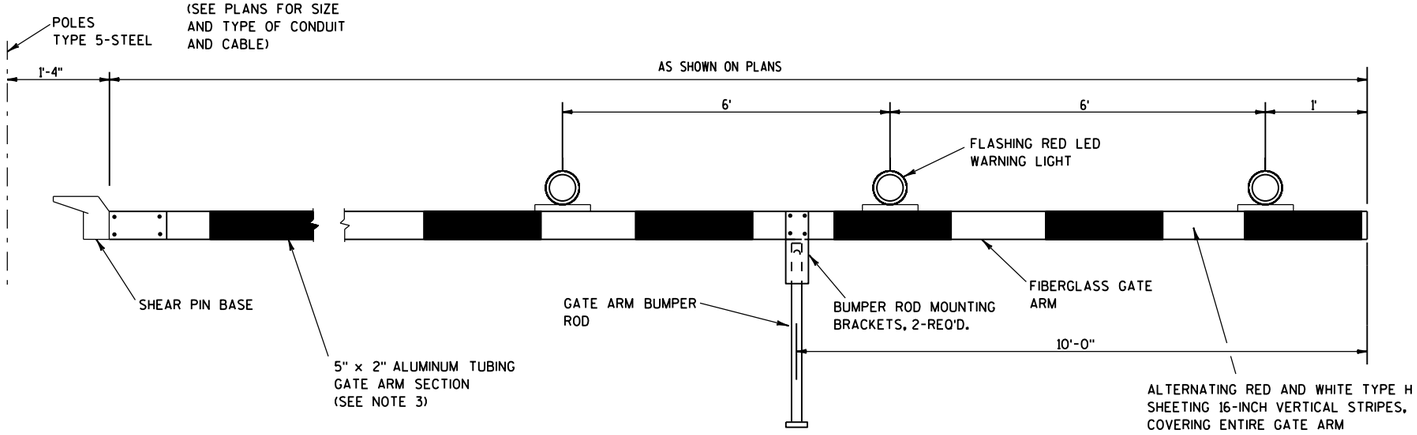
GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.

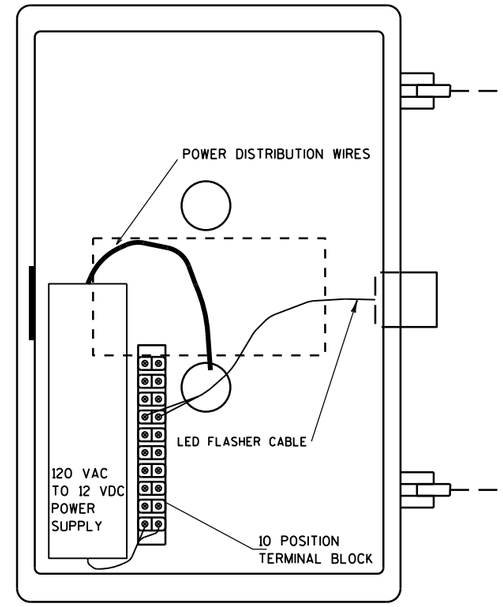


TYPICAL LOWERED POSITION

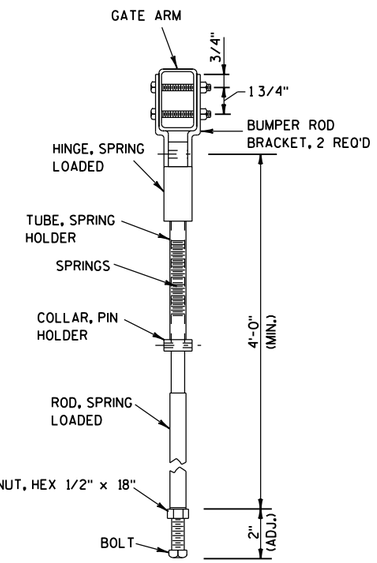
TYPICAL RAISED POSITION



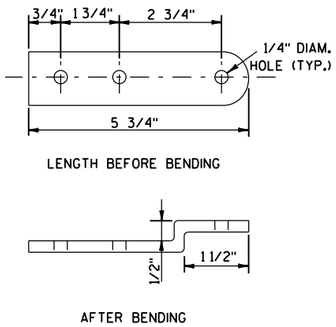
GATE DETAIL
(HARDWIRE POWER OPTION)



POWER SUPPLY CABINET



GATE ARM BUMPER ROD DETAIL

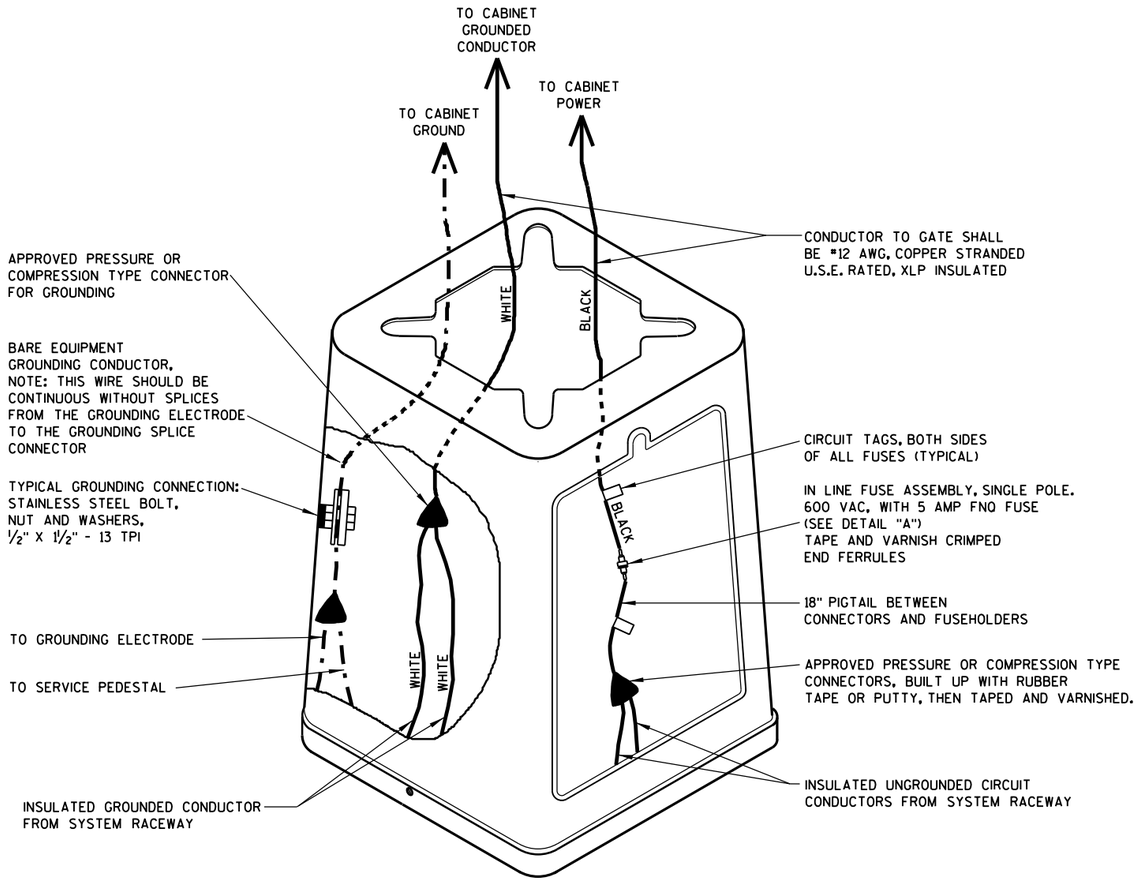


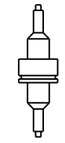
BUMPER ROD MOUNTING
BRACKET DETAIL

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 15 D 35-1a





DETAIL "A"
SINGLE POLE

6

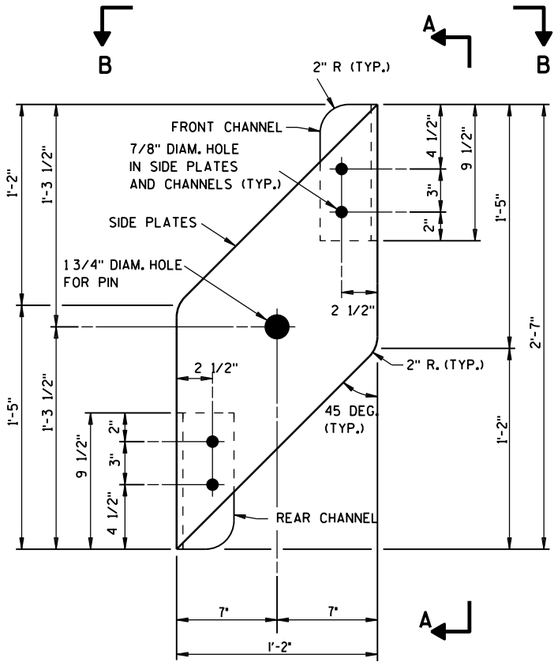
S.D.D. 15 D 35-1b

RAMP GATE
HARD WIRED

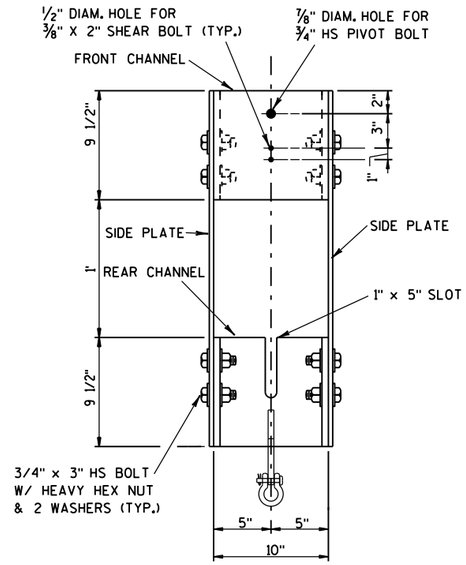
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2200

6

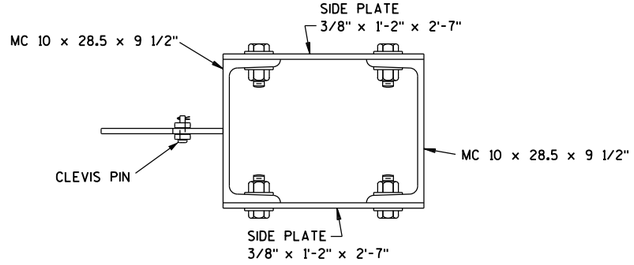
S.D.D. 15 D 35-1b



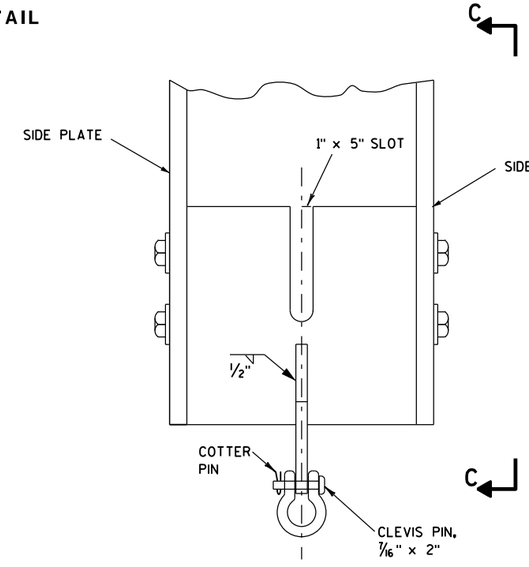
SIDE PLATE DETAIL



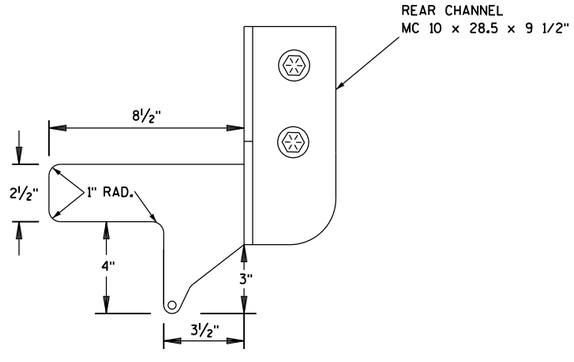
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 2201

6

S.D.D. 15 D 35-1c

6

S.D.D. 15 D 35-1c

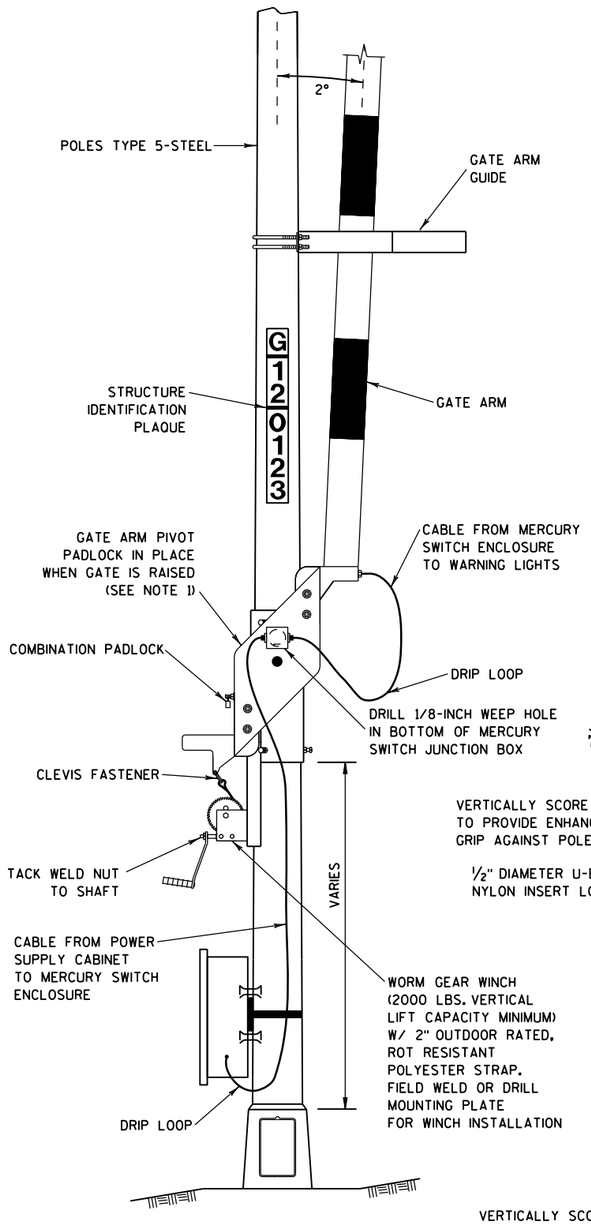
GENERAL NOTES

1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND PADLOCKED IN PLACE.

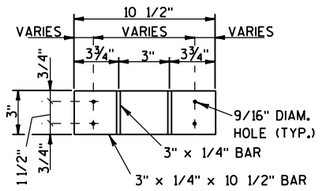
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

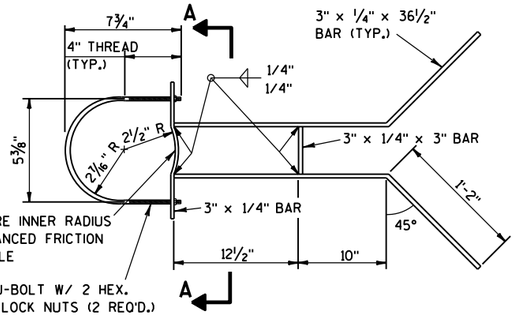
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF ½" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



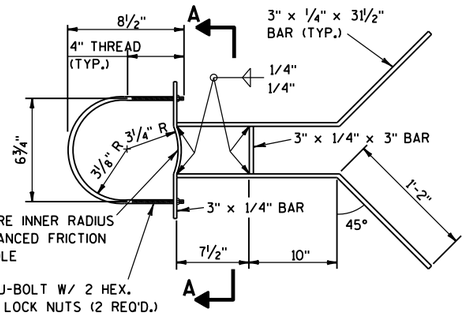
GATE PIVOT ASSEMBLY



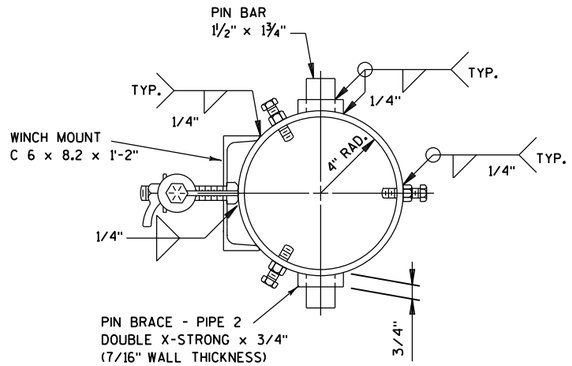
SECTION A-A
U-BOLTS NOT SHOWN



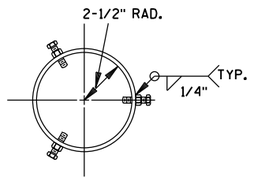
UPPER GATE ARM GUIDE DETAIL



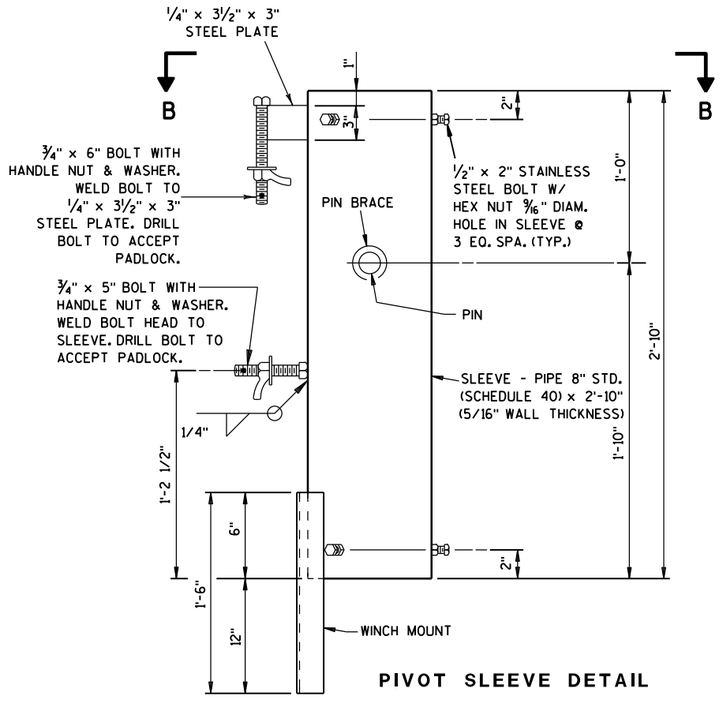
LOWER GATE ARM GUIDE DETAIL



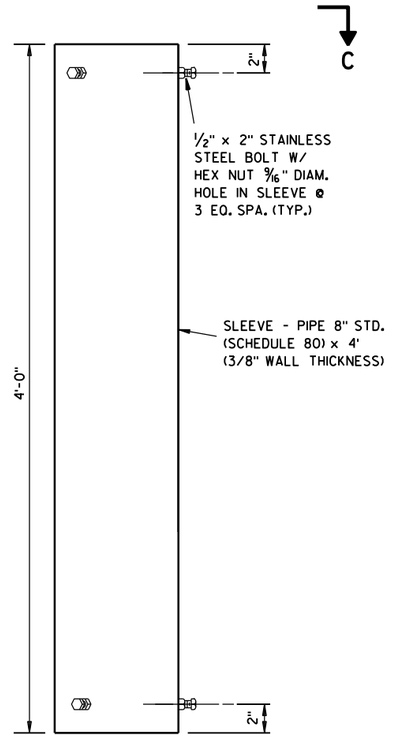
SECTION B-B



SECTION C-C



PIVOT SLEEVE DETAIL



TOP COLLAR

RAMP GATE
HARD WIRED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE
/S/ Bill Wondrachek
STATE TRAFFIC MANAGEMENT EN
FHWA

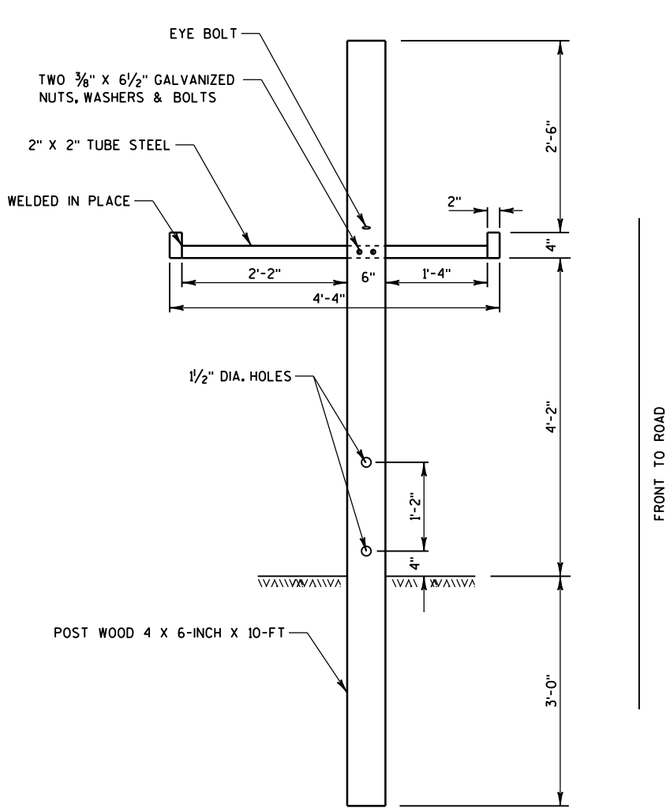
2202

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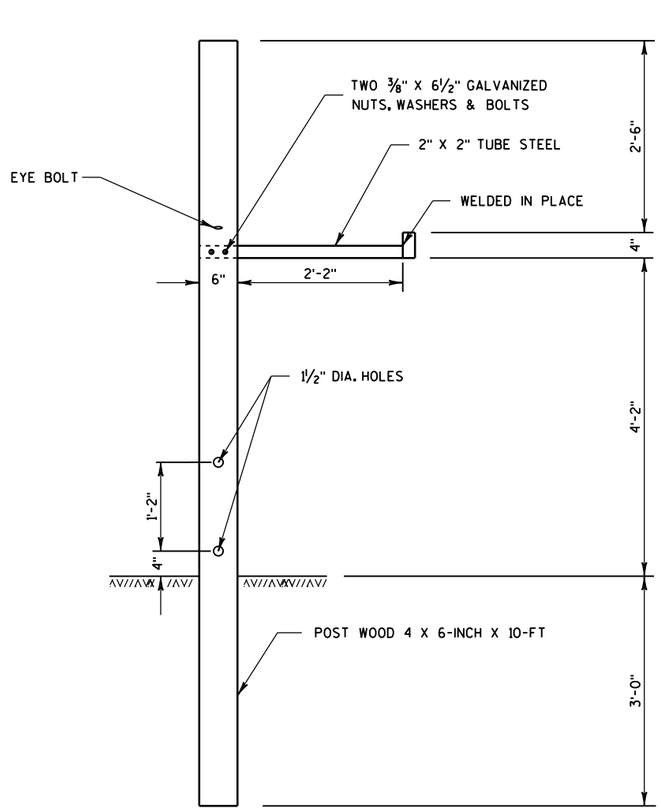
S.D.D. 15 D 35-1d

6

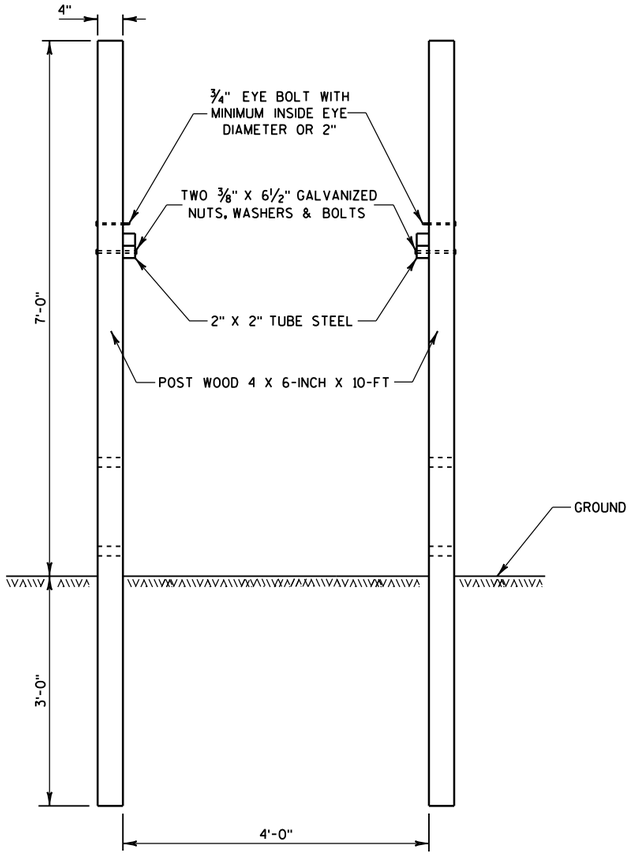
S.D.D. 15 D 35-1d



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



FRONT VIEW

BARRICADE RACK

* LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

BARRICADE RACK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-30-2013
DATE

/S/ Bill Wondrachek
STATE TRAFFIC I
MANAGEMENT E

2203

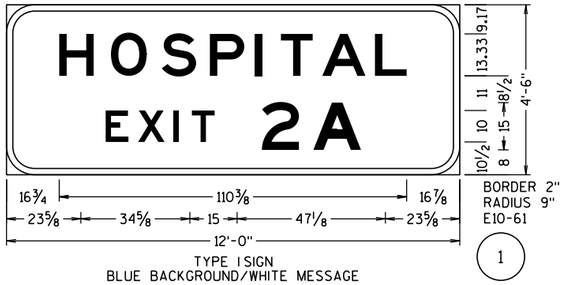
FHWA

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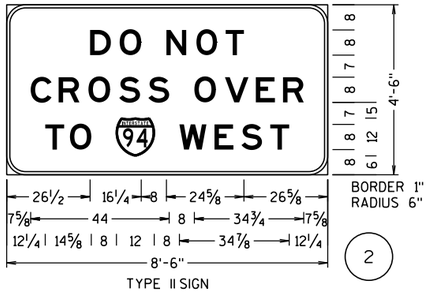
S.D.D. 15 D 36-1

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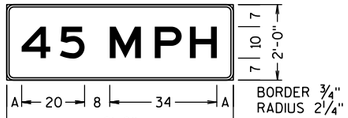
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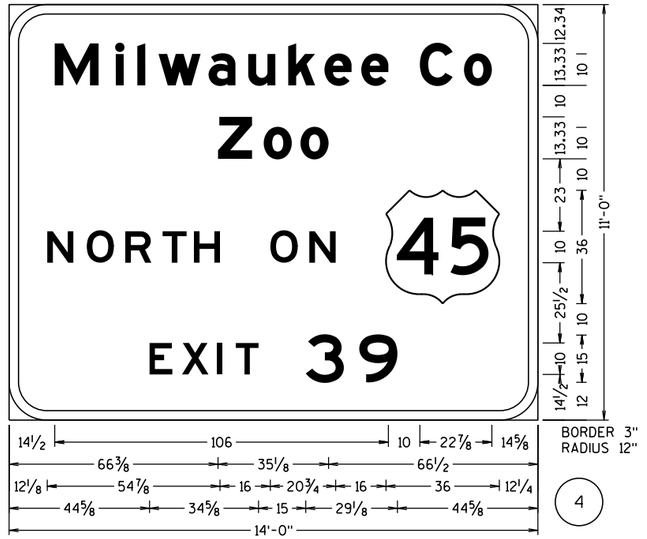
TYPE I SIGN
BLUE BACKGROUND/WHITE MESSAGE



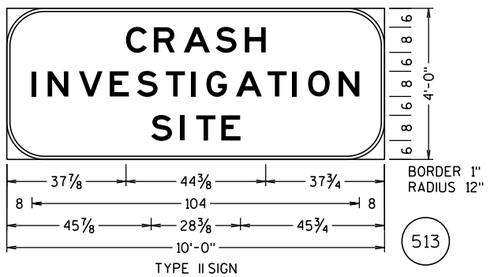
TYPE II SIGN
WHITE BACKGROUND/
BLACK MESSAGE



TYPE II SIGN
YELLOW BACKGROUND/
BLACK MESSAGE



TYPE I SIGN



TYPE II SIGN
BLUE BACKGROUND/
WHITE MESSAGE

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.

7

7

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2204 E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 20-MAY-2014 09:46 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

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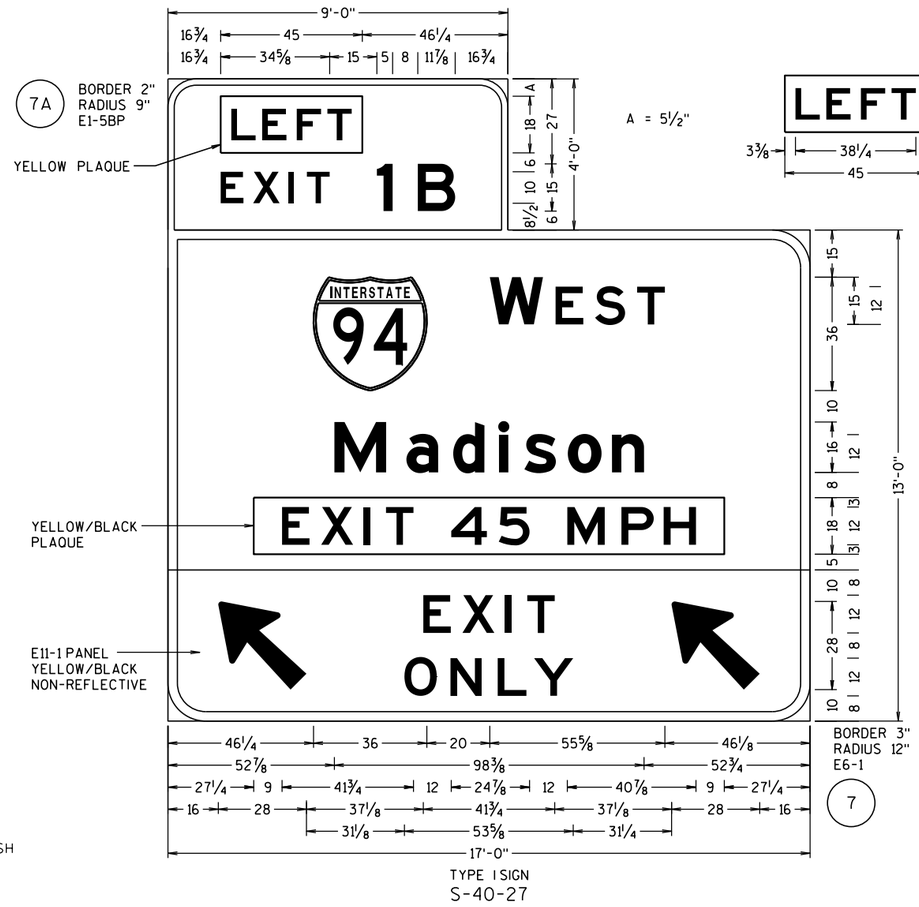
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

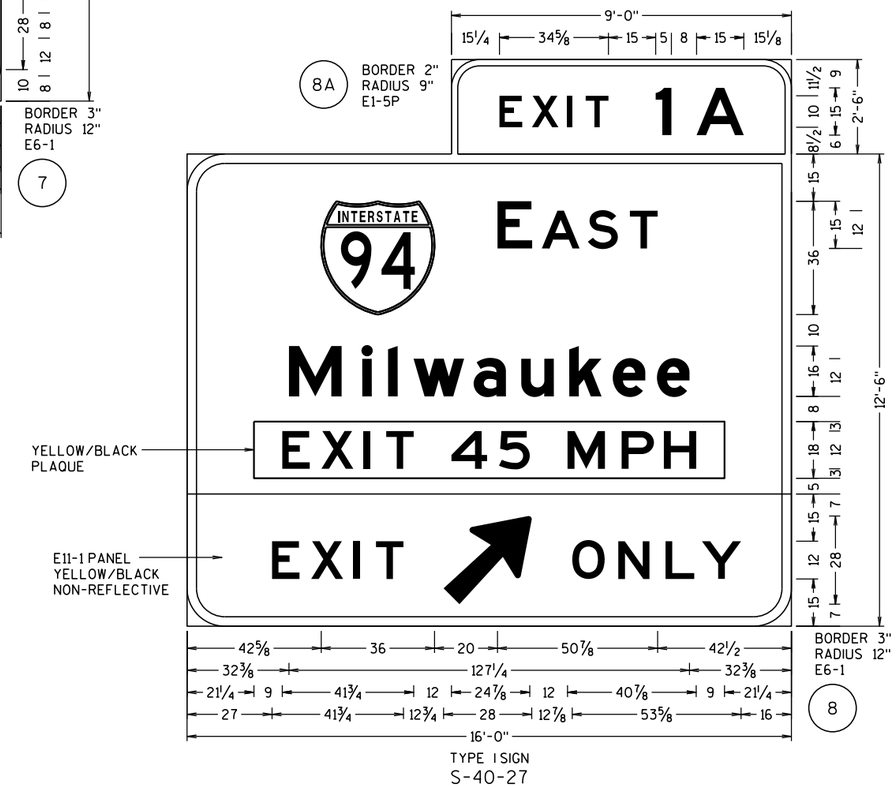
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

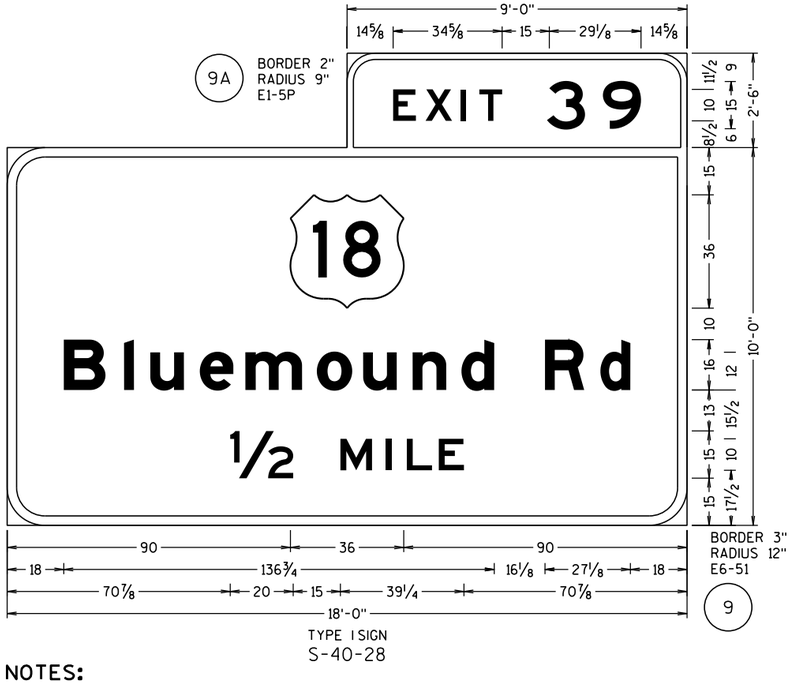
11. DO NOT SCALE.

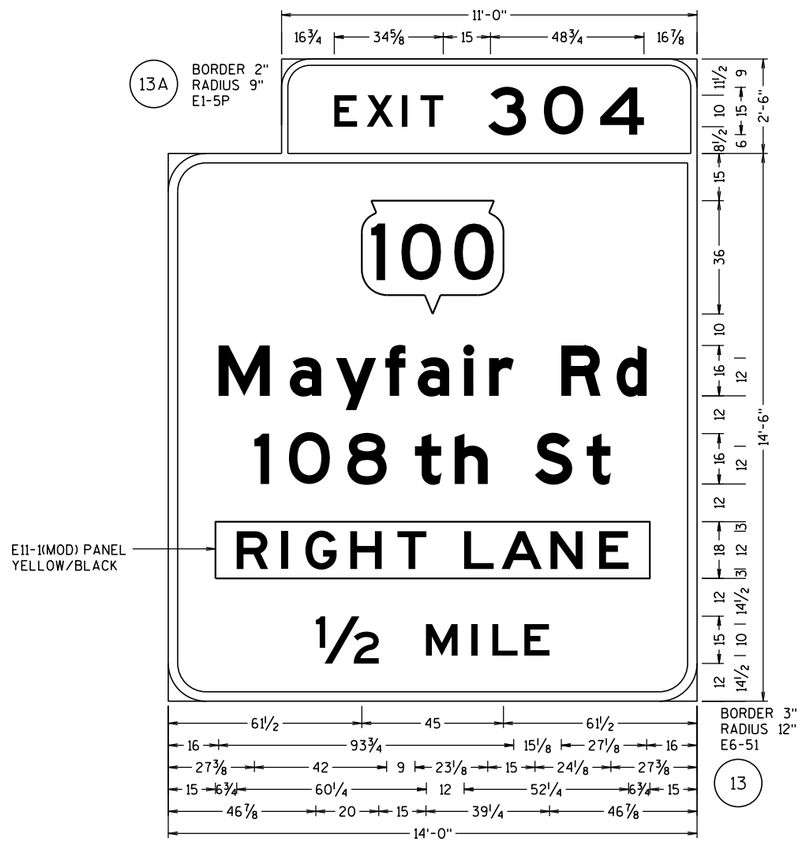




PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2205	E

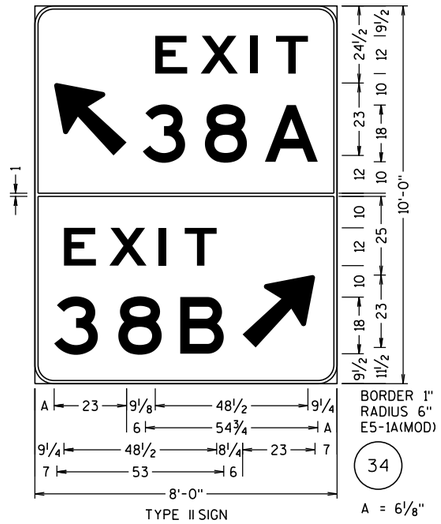
FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47

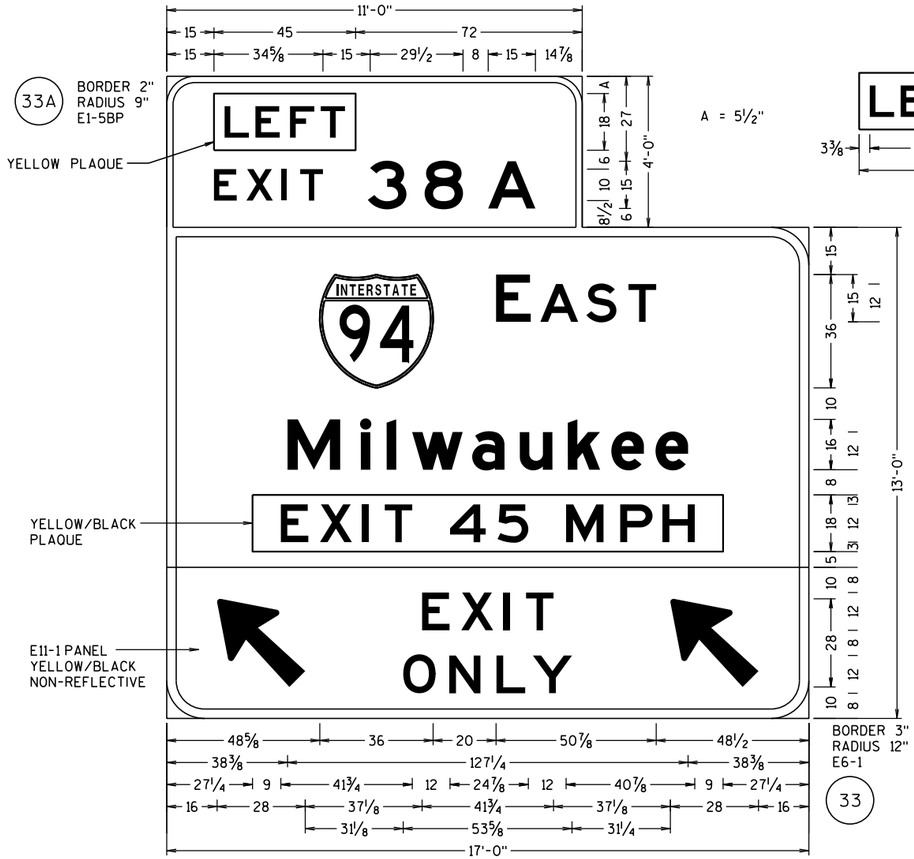


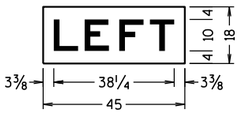


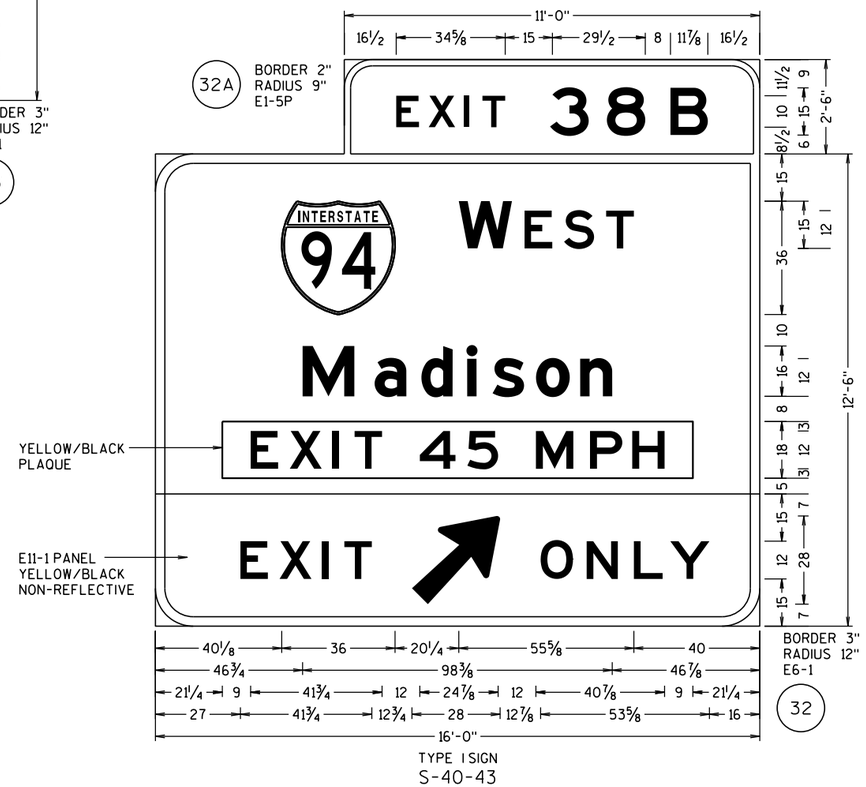
GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
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8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.









GENERAL NOTES:

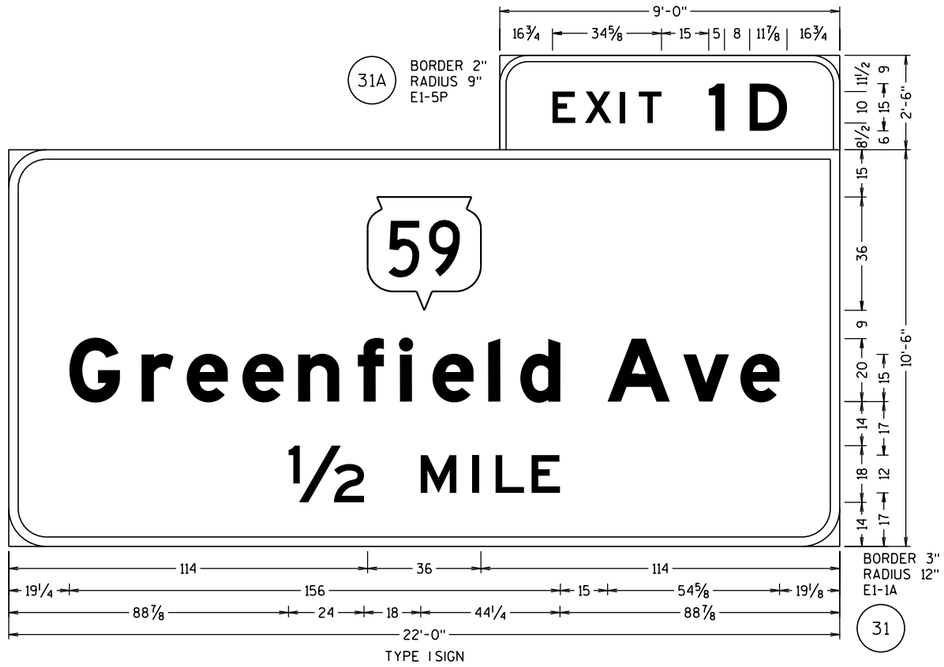
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11. DO NOT SCALE.

7

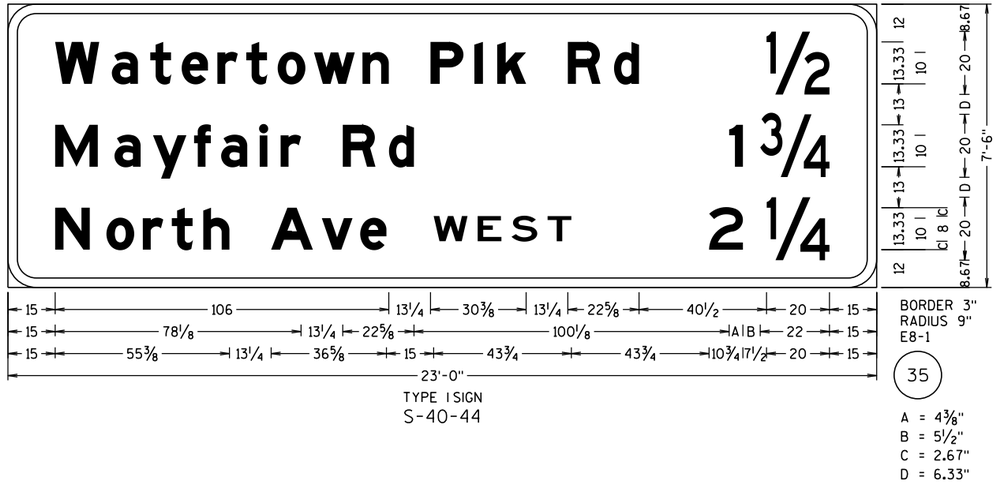
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PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2207	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



TYPE I SIGN

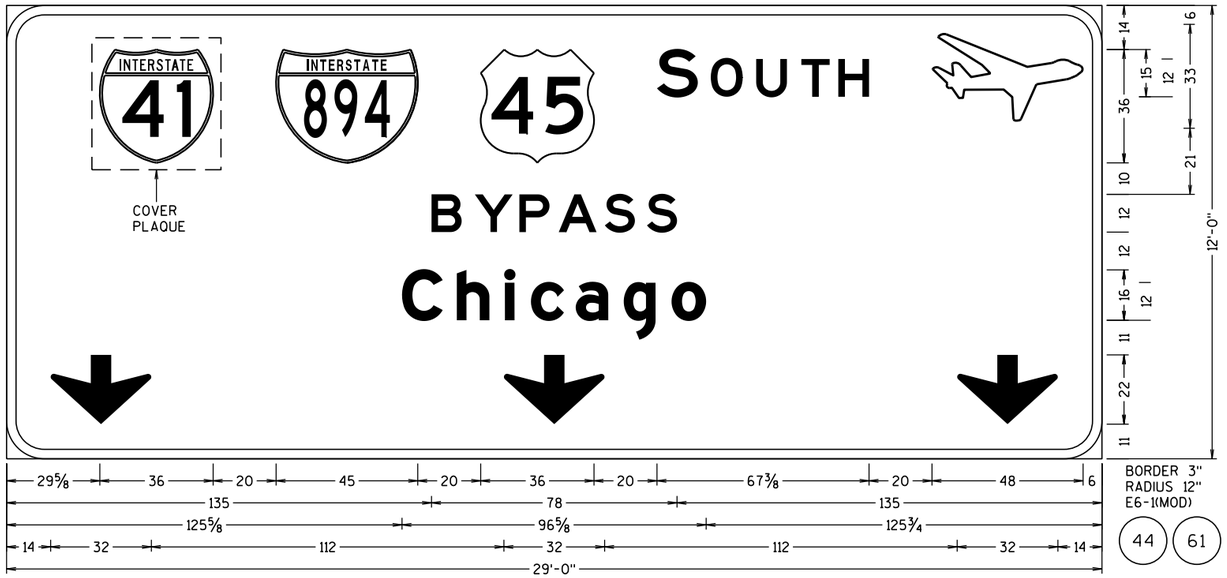


TYPE I SIGN
S-40-44

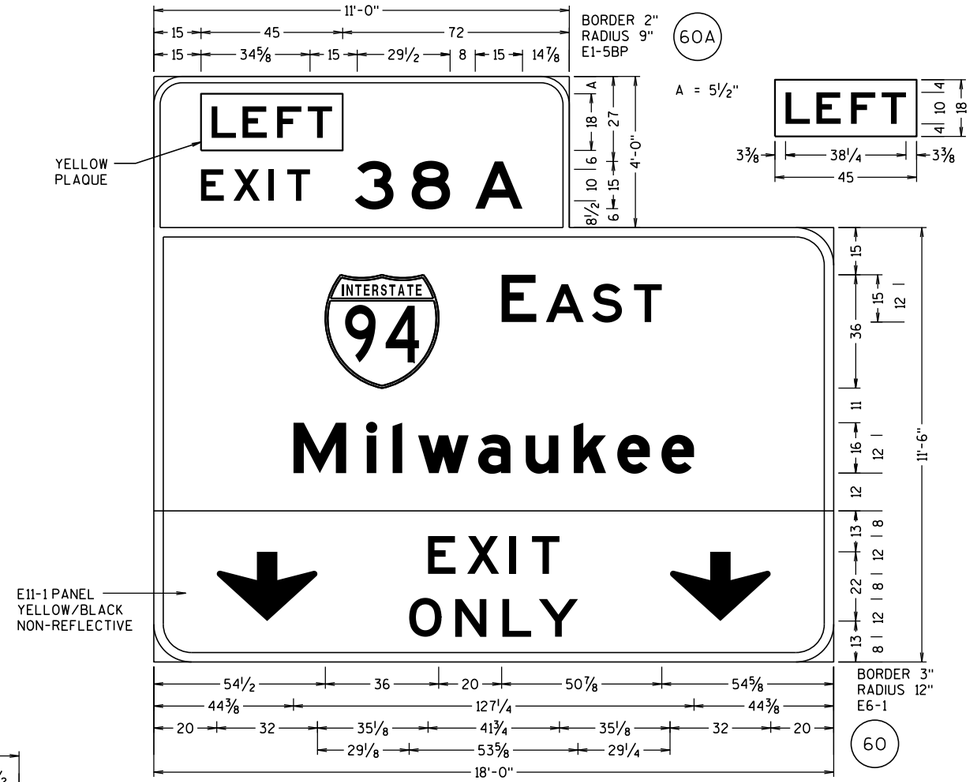
A = 4⅜"
B = 5½"
C = 2.67"
D = 6.33"

GENERAL NOTES:

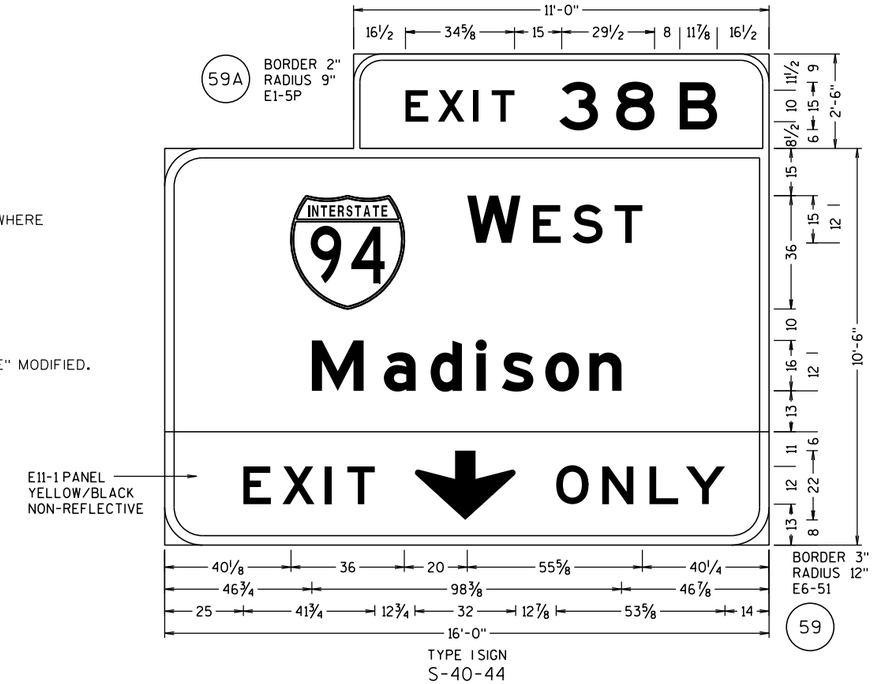
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6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
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8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE I SIGN
S-40-44
S-40-47



TYPE I SIGN
S-40-44



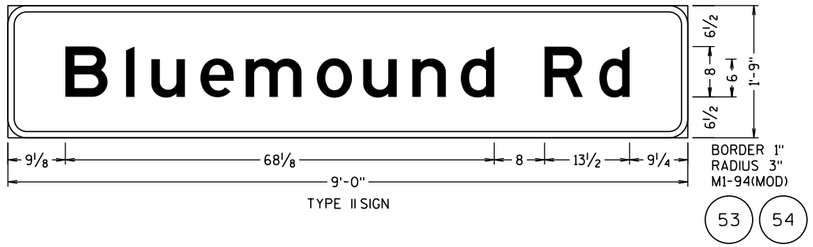
TYPE I SIGN
S-40-44

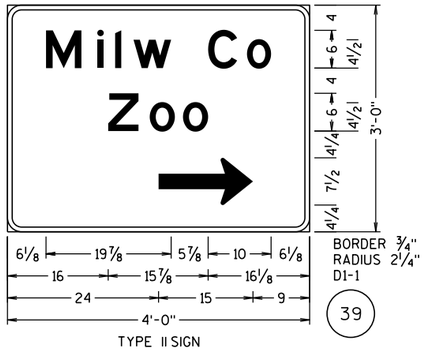
GENERAL NOTES:

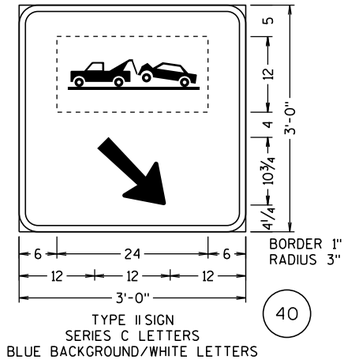
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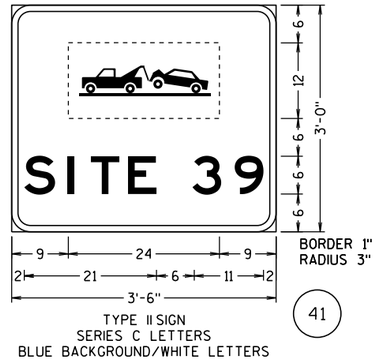
PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2209	E

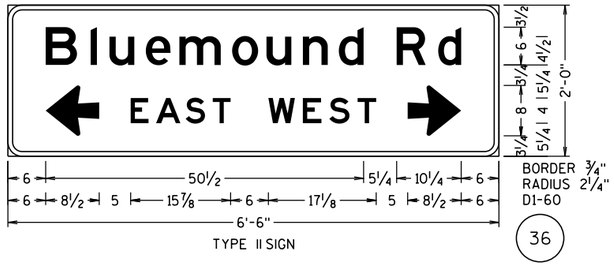
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WISDOT/CADDS SHEET 47

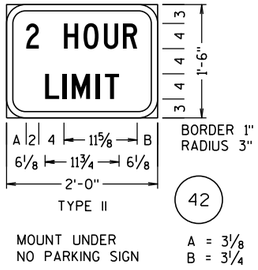


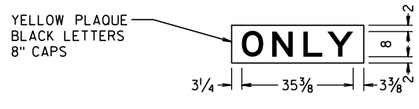


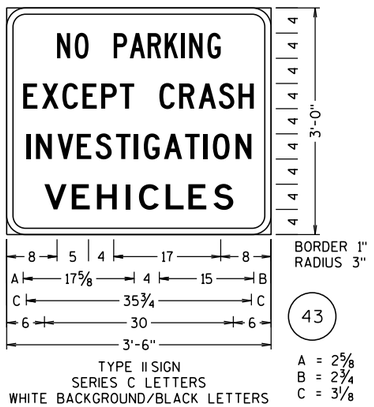


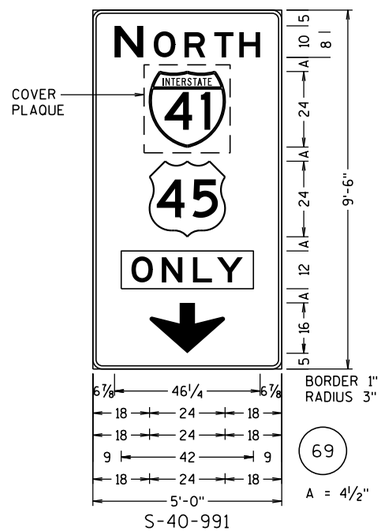


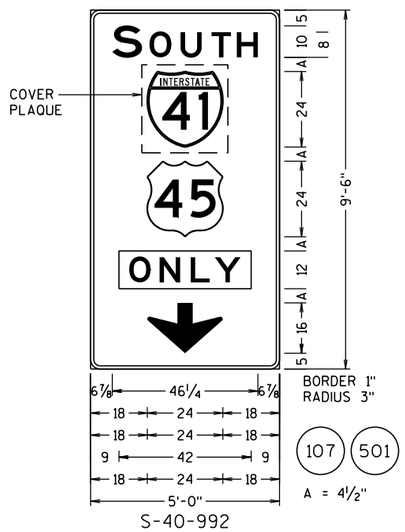












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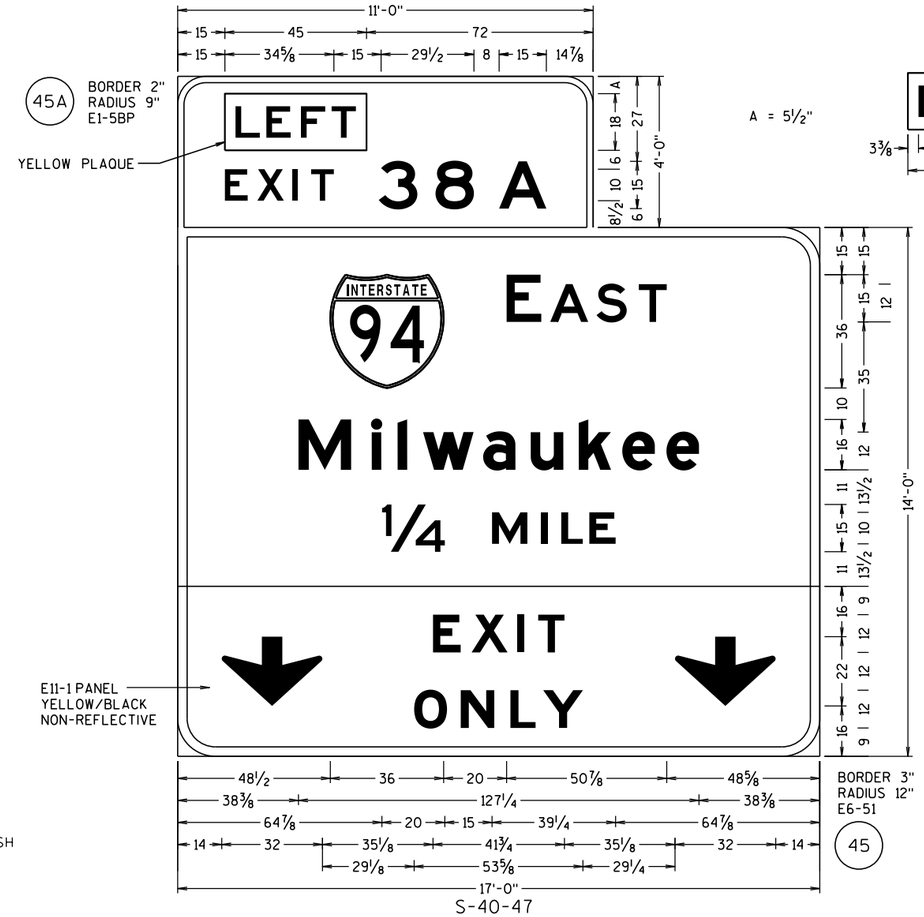
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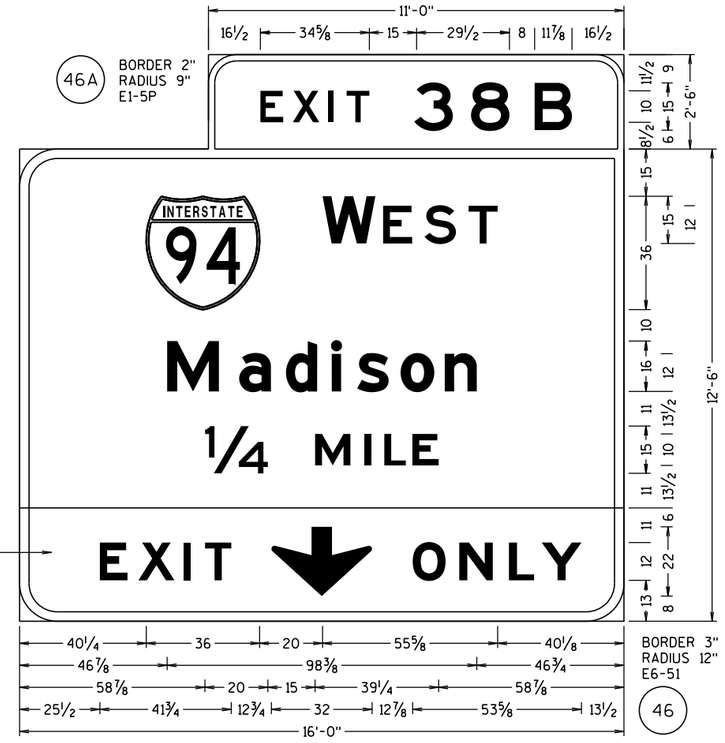
11. DO NOT SCALE.

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2210	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



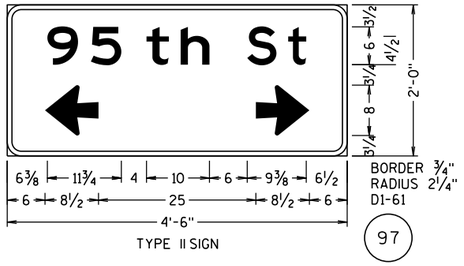
S-40-47

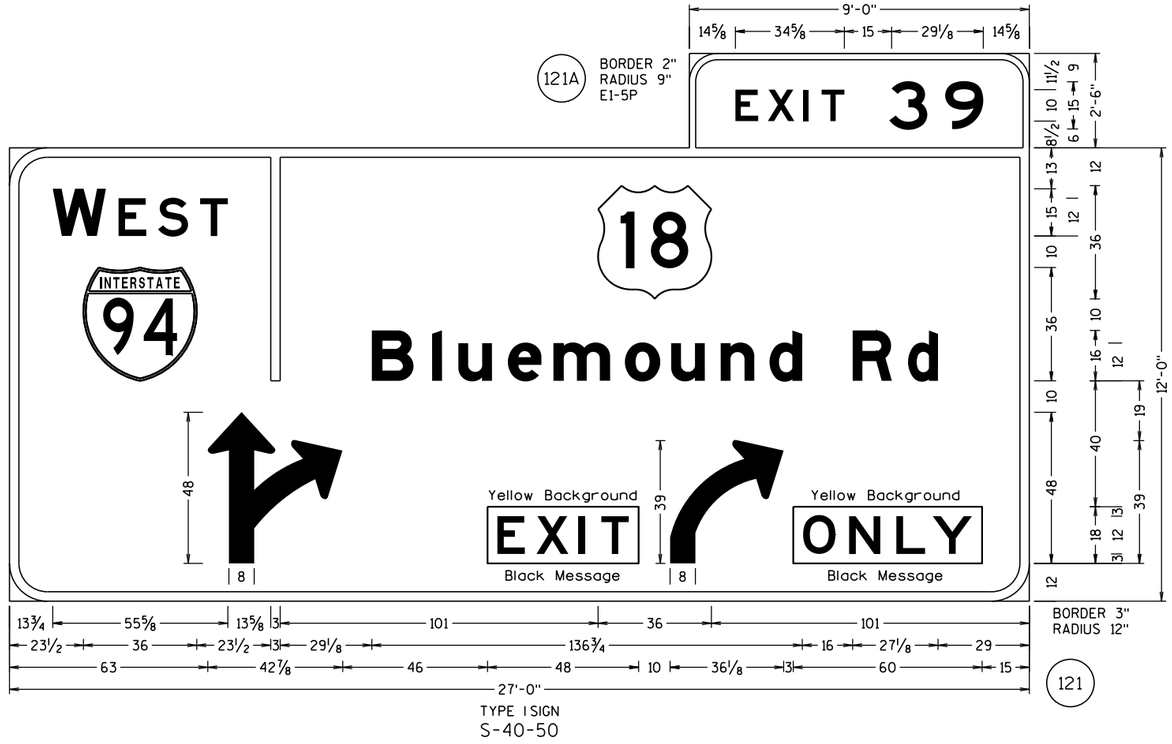


S-40-47

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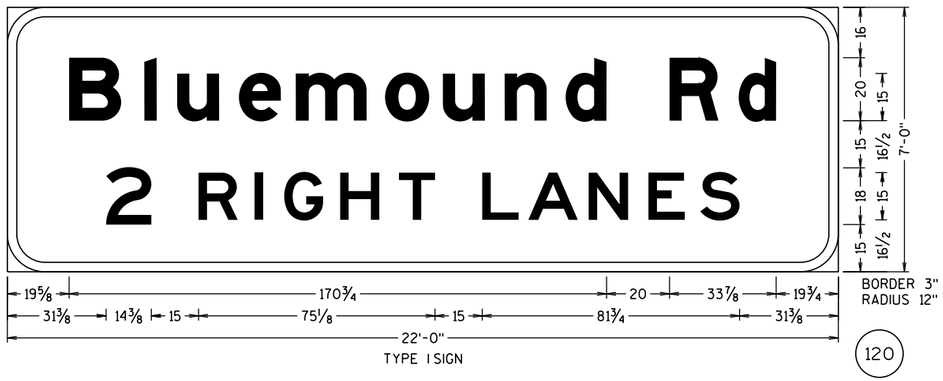
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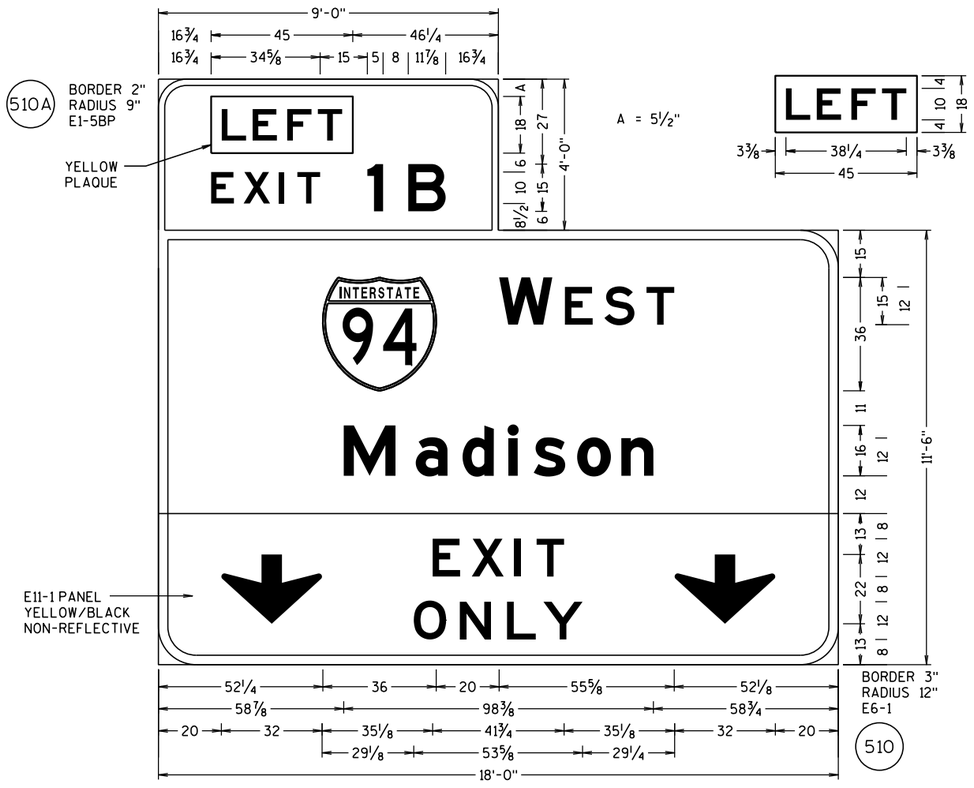
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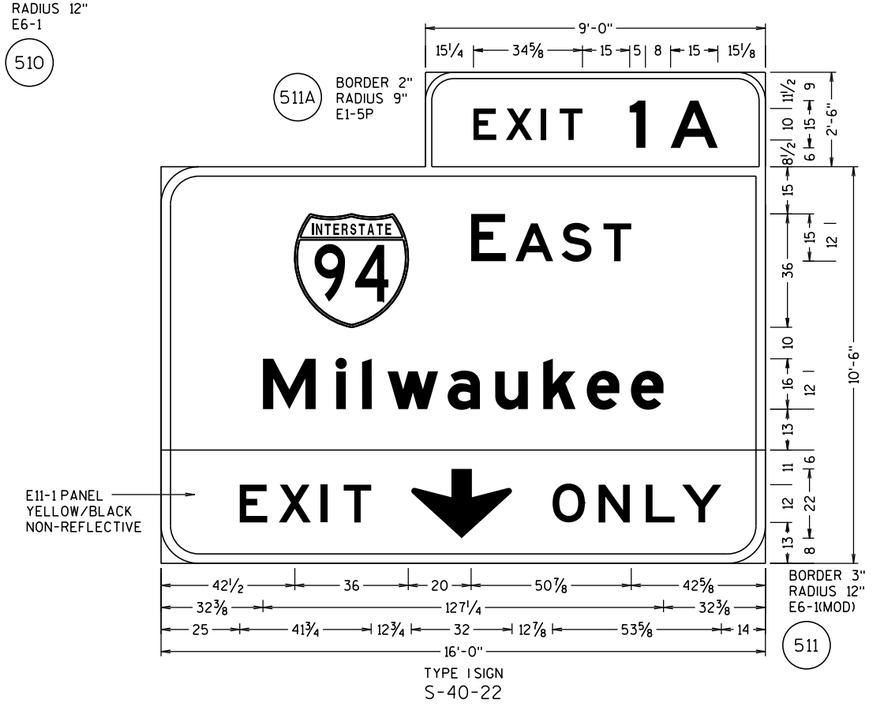
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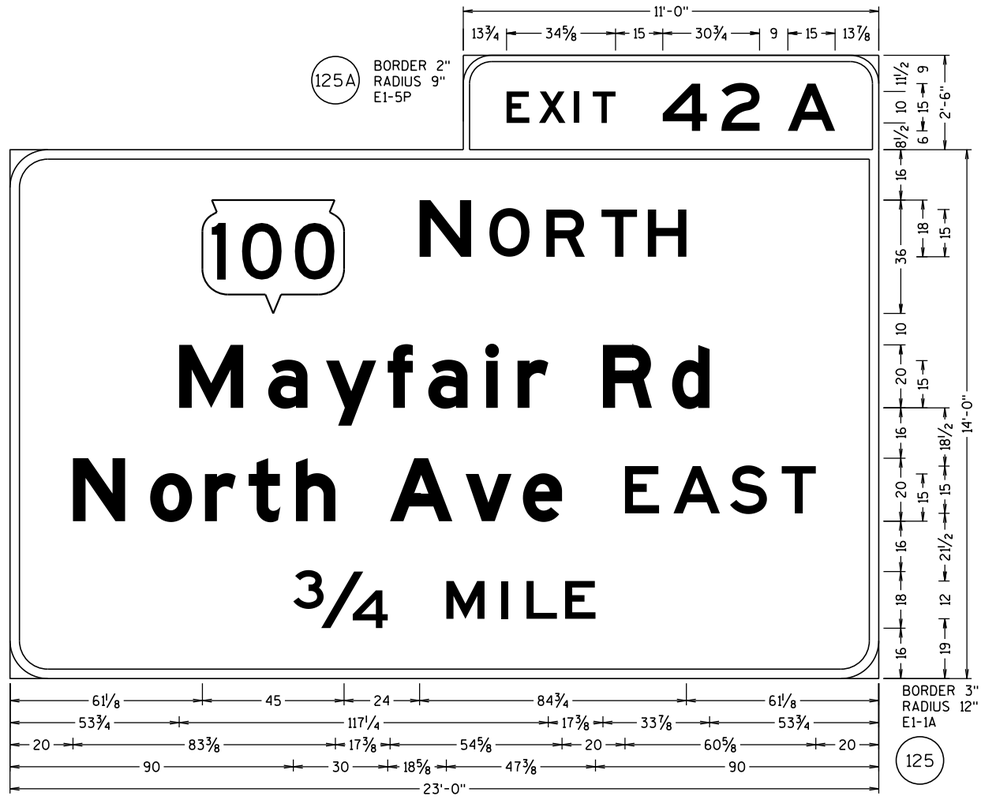
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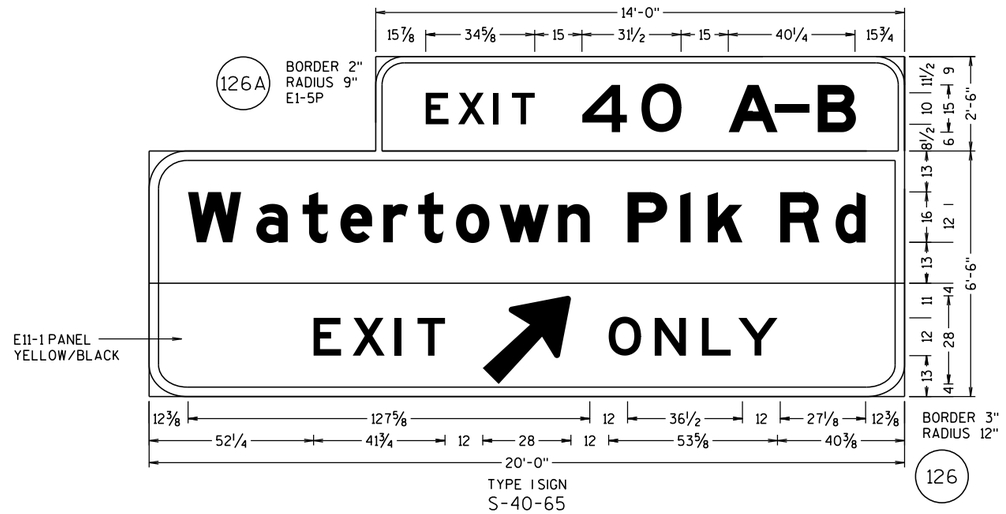
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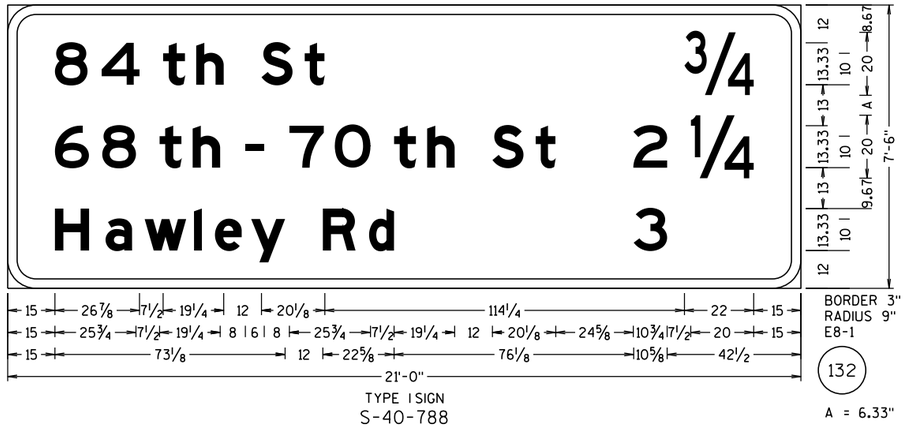
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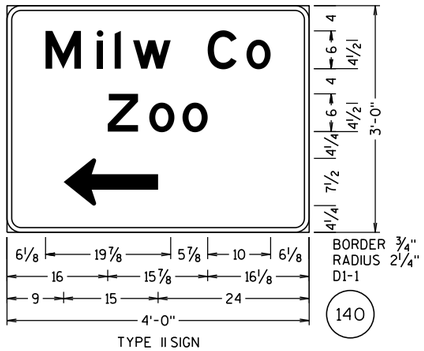


PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2214	E

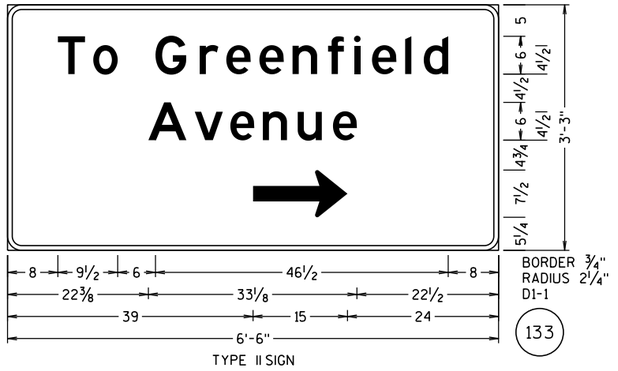
FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



TYPE I SIGN
S-40-788



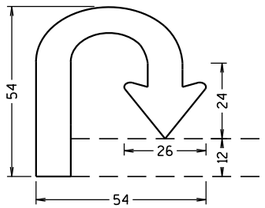
TYPE II SIGN

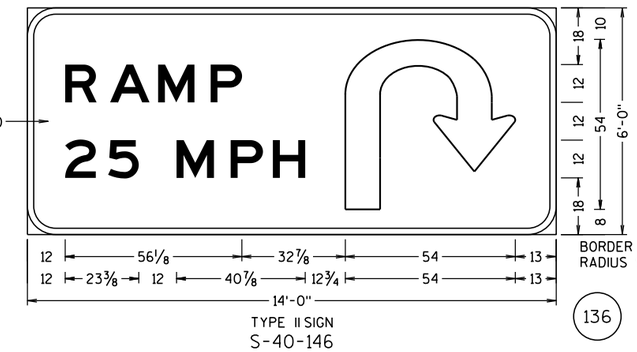


TYPE II SIGN

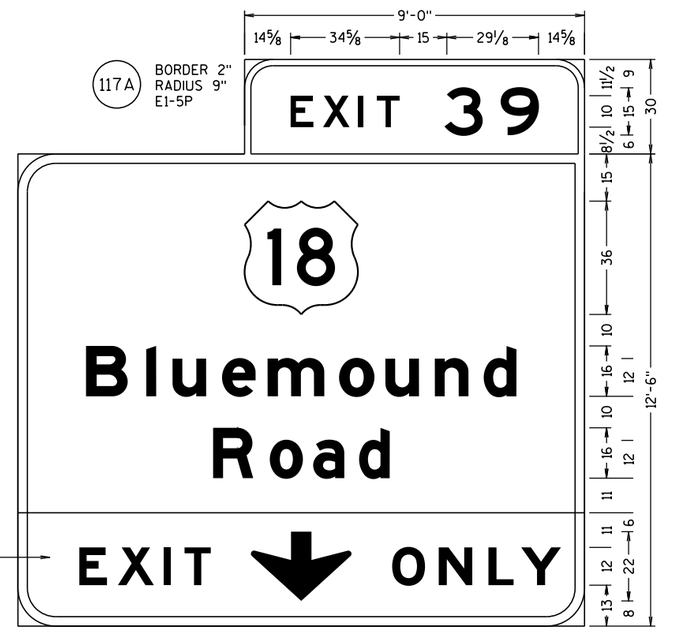
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8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.





TYPE II SIGN
S-40-146



S-40-51

SHEET 12 OF 27

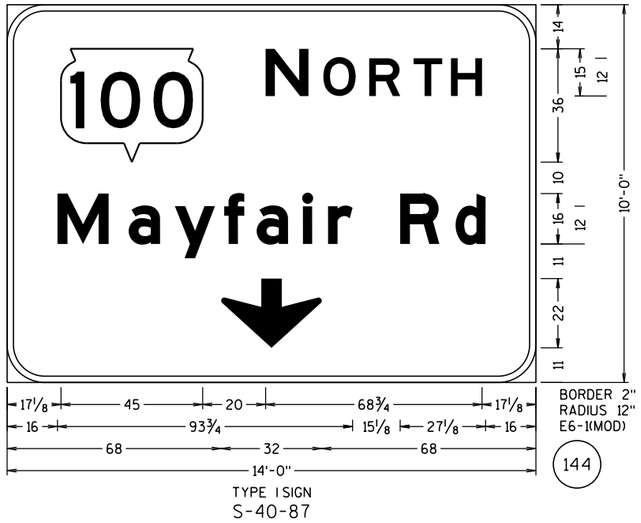
PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 2215 E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

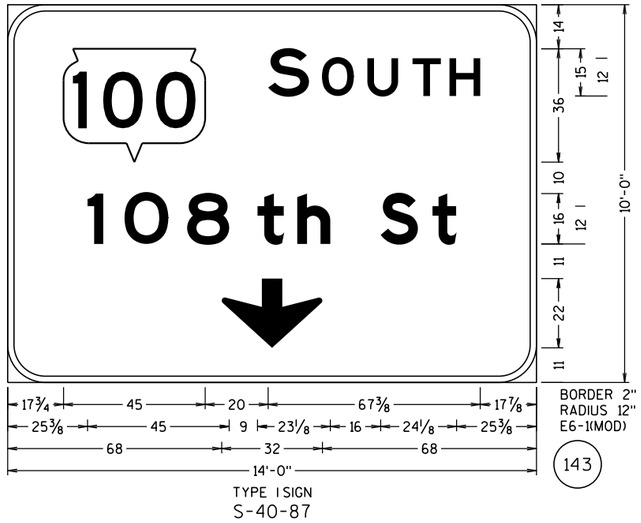
WISDOT/CADDS SHEET 47

7

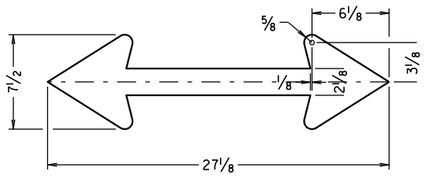
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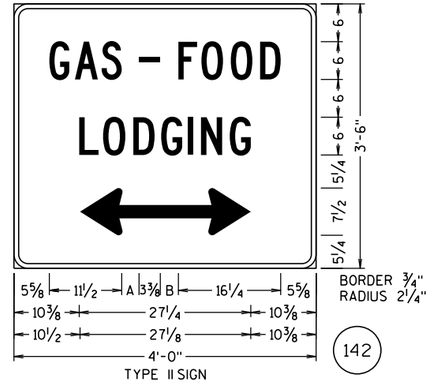


TYPE I SIGN
S-40-87



TYPE I SIGN
S-40-87





TYPE II SIGN
SERIES C LETTERS
BLUE BACKGROUND/WHITE MESSAGE

A = 2 3/4"
B = 2 7/8"

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

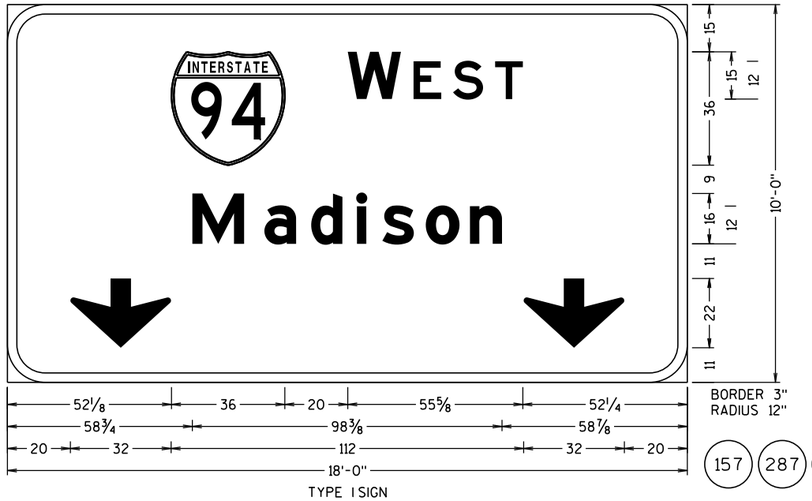
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.



TYPE I SIGN
S-40-104
S-40-122
S-40-135

7

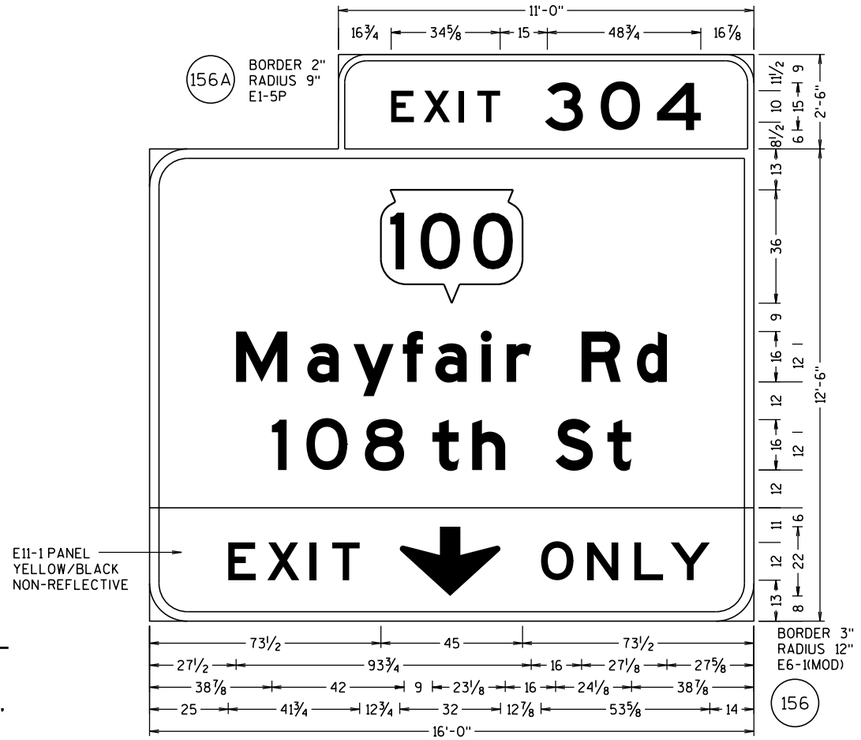
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SHEET 13 OF 27

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 2216	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47



GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

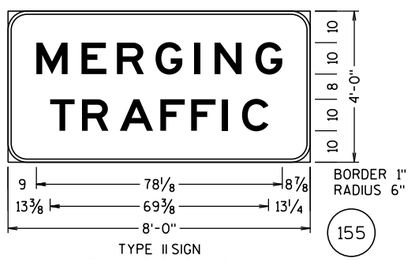
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

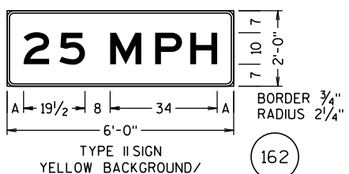
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

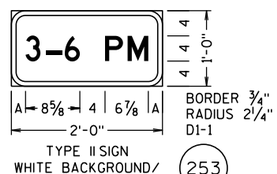
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

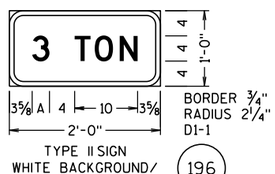
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

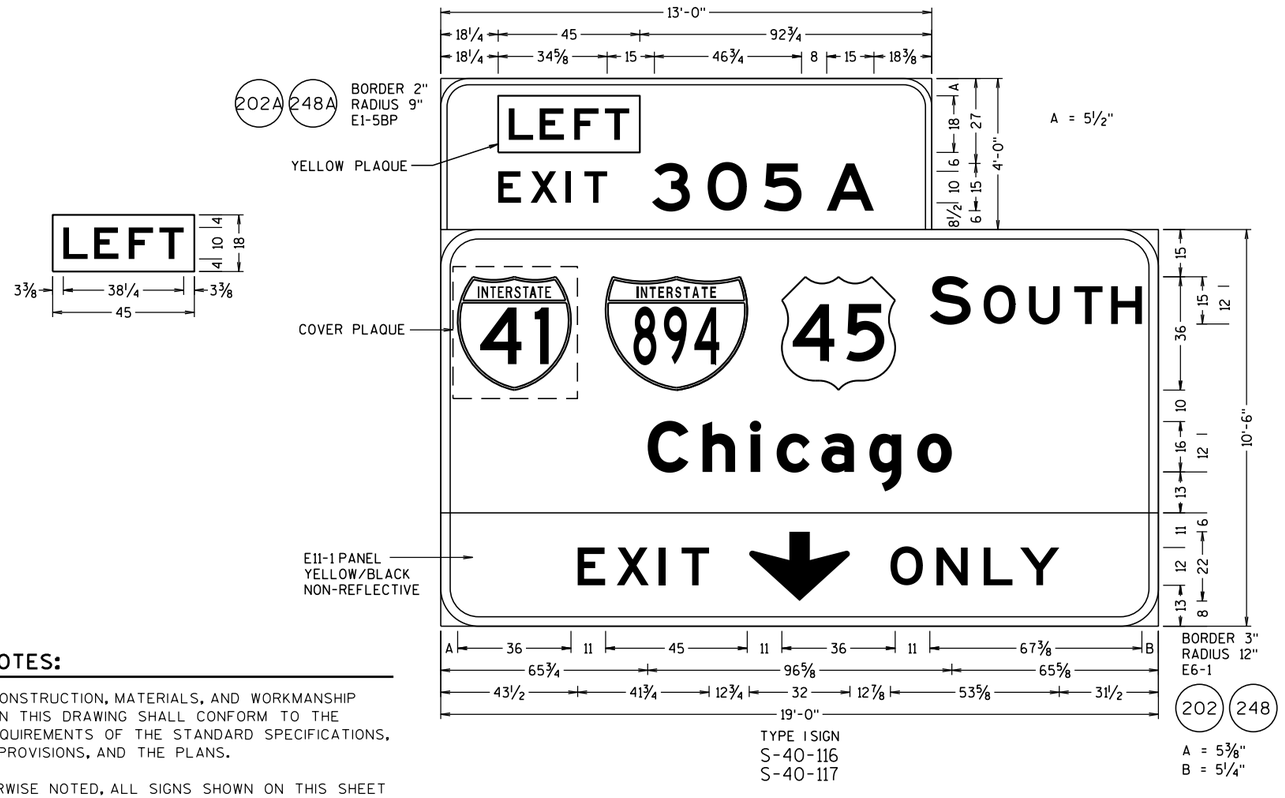
11. DO NOT SCALE.

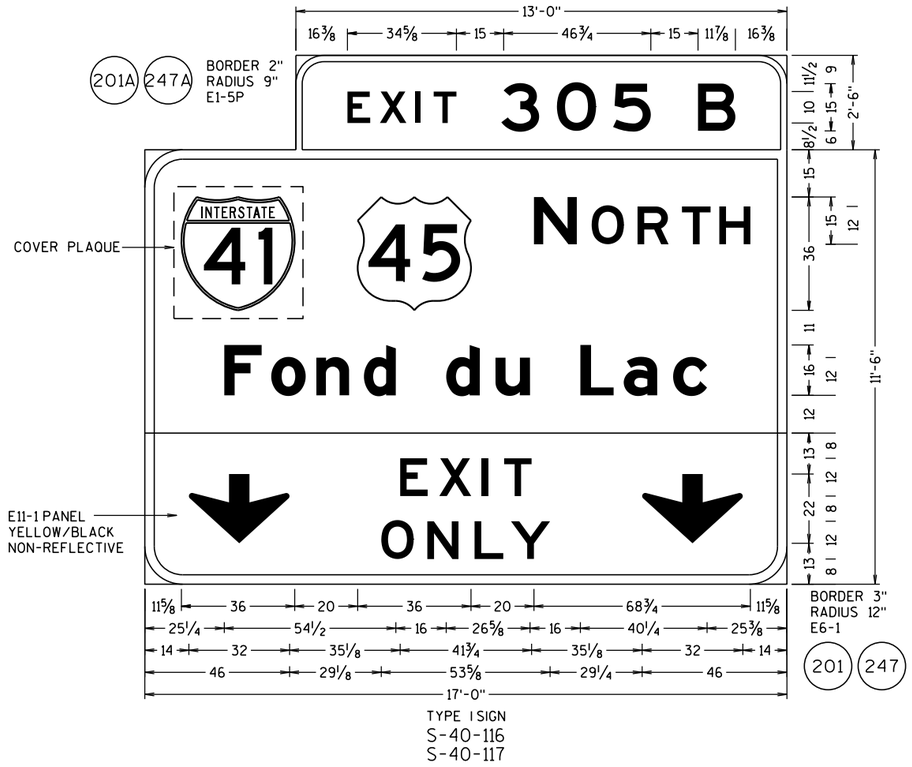


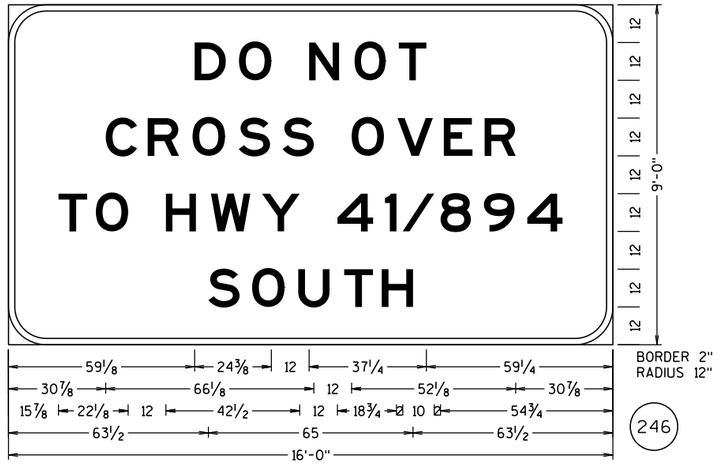


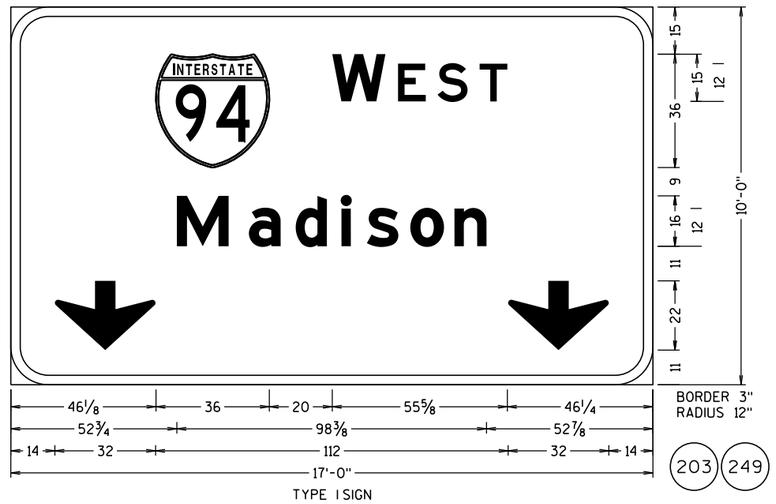






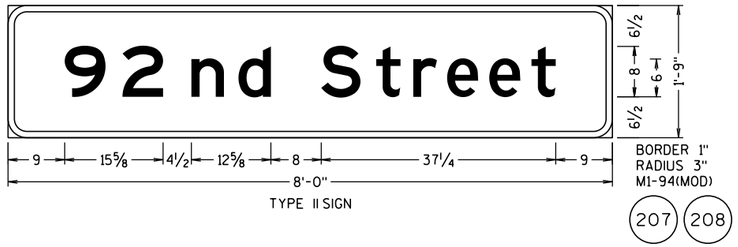




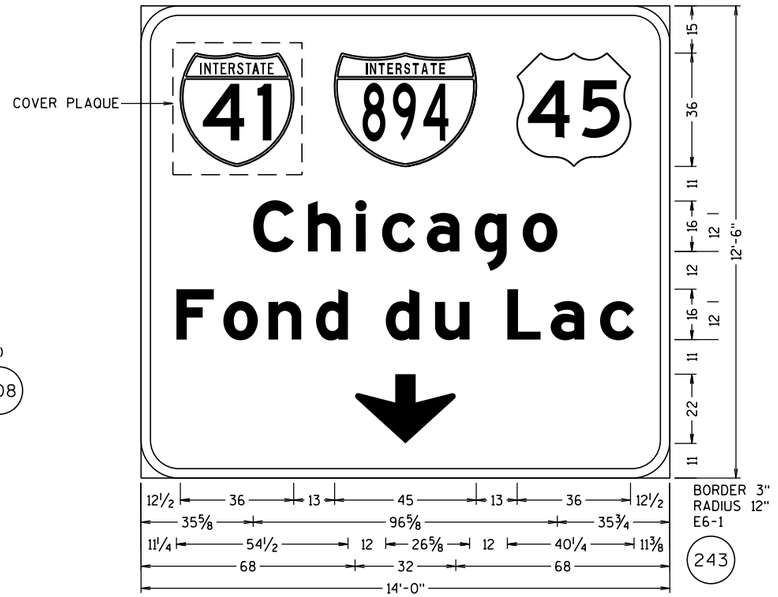


GENERAL NOTES:

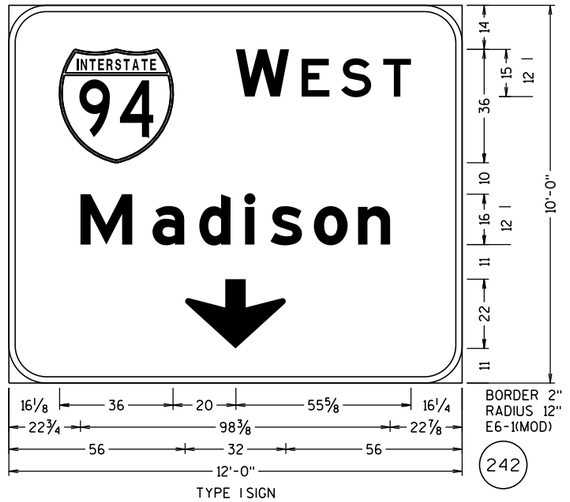
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE II SIGN



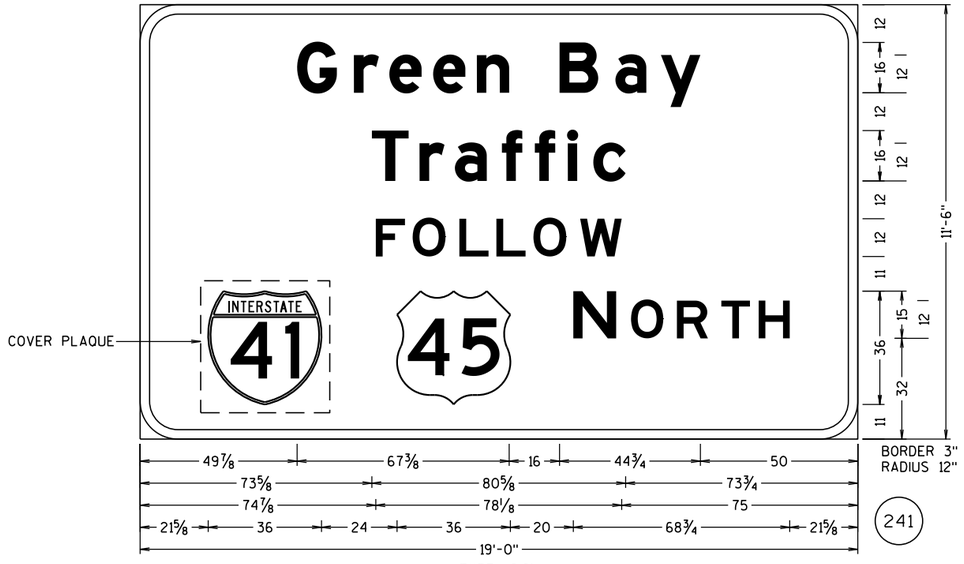
TYPE I SIGN
S-40-121



TYPE I SIGN
S-40-121

GENERAL NOTES:

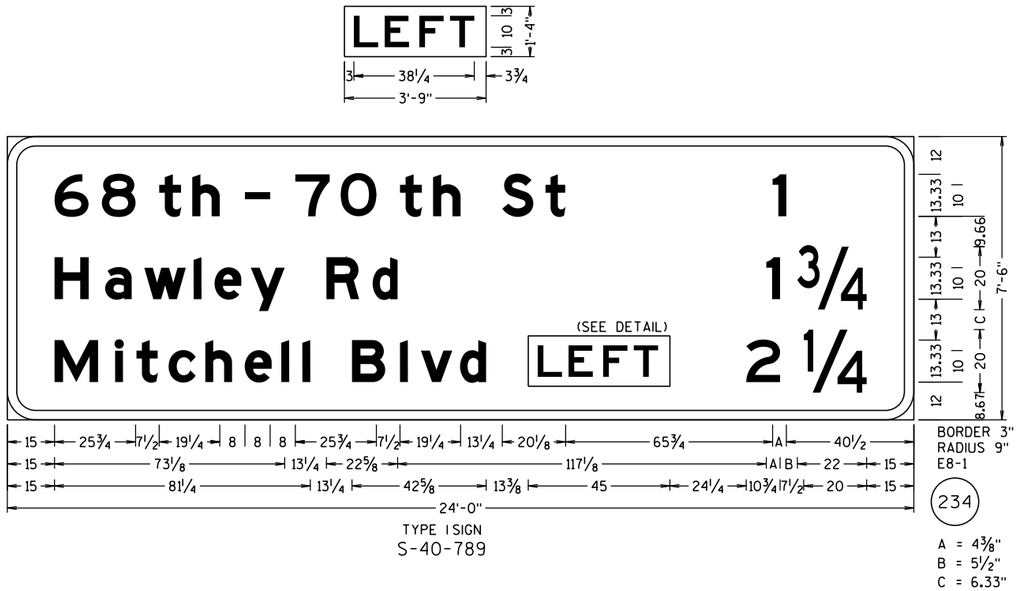
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6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
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8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE I SIGN
S-40-121

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2219	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
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8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.

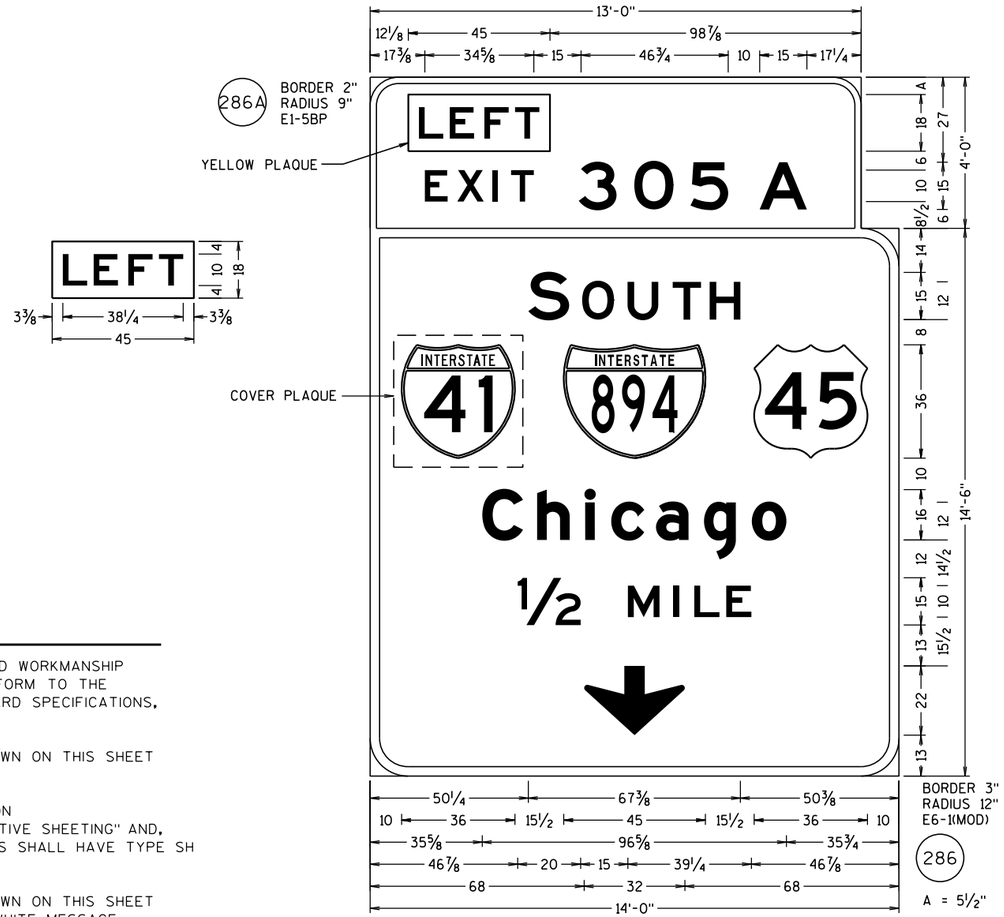


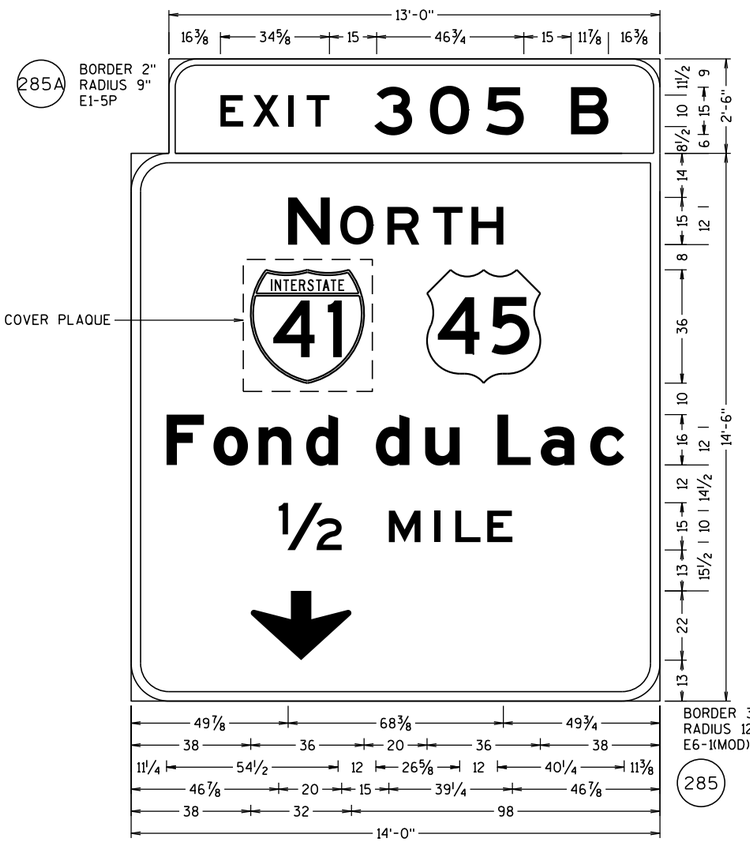
SHEET 17 OF 27

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 2220	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47





GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

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4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

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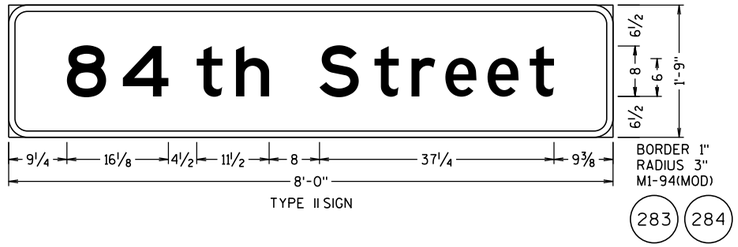
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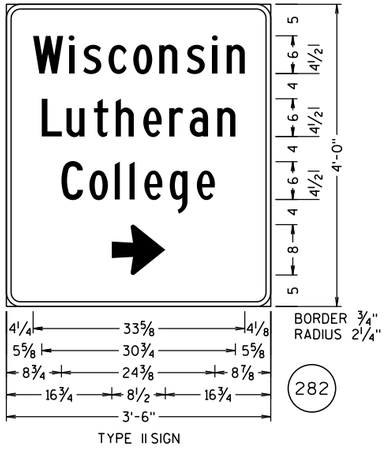
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

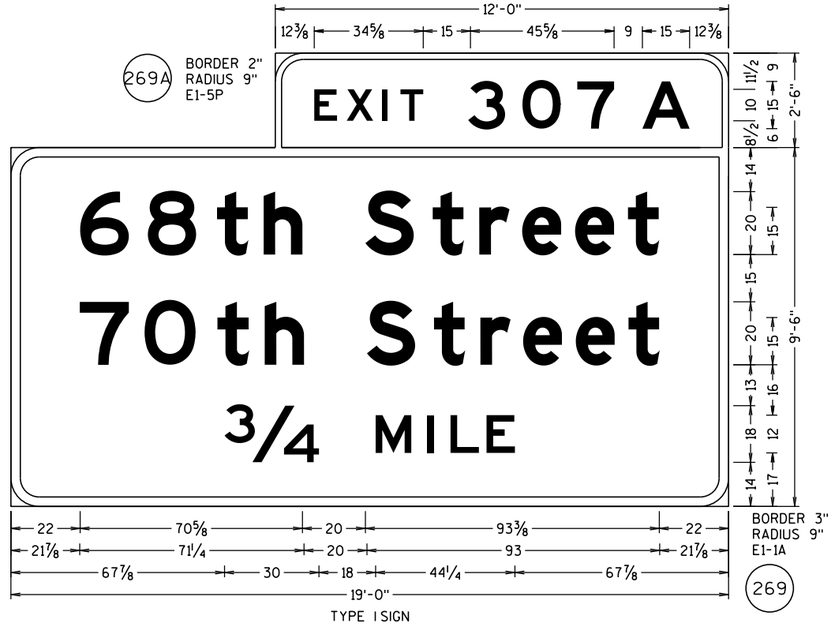
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

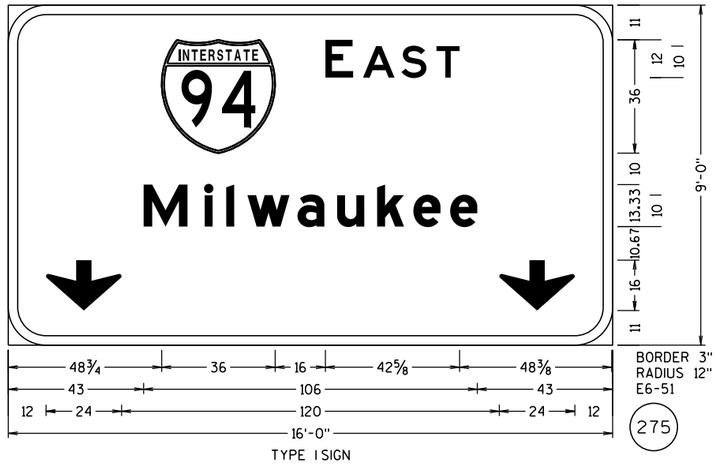


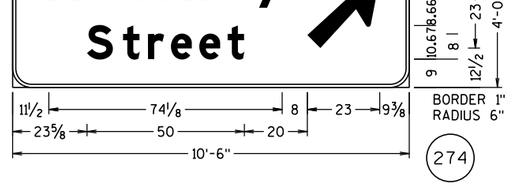


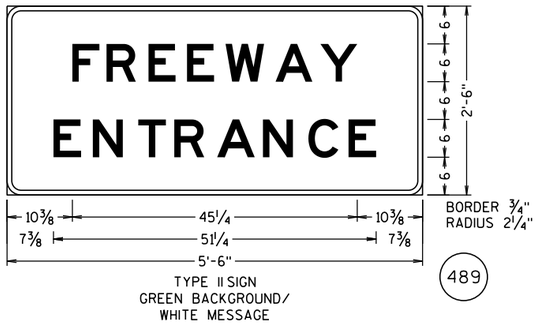


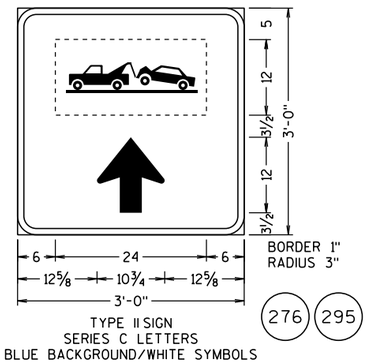
GENERAL NOTES:

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5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
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7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.

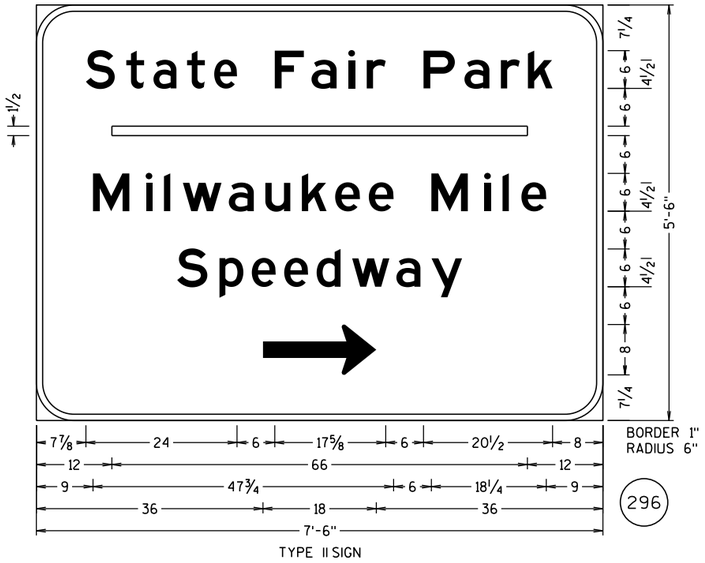




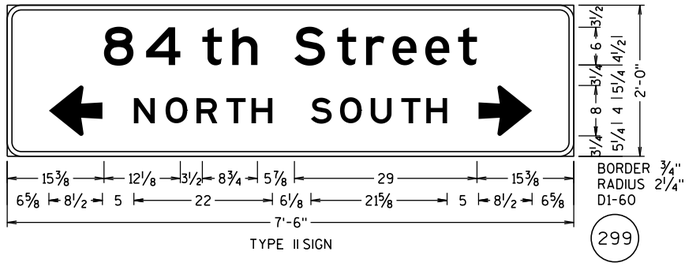




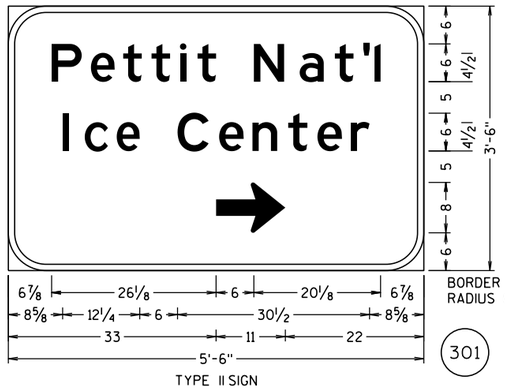
PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2222	E



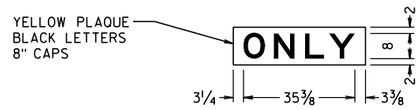
TYPE II SIGN

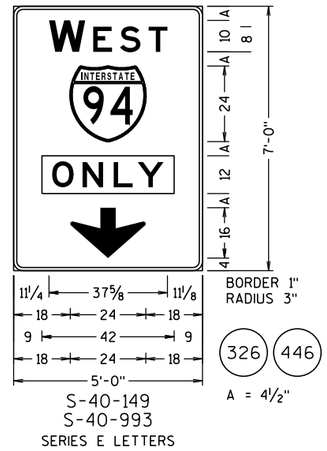


TYPE II SIGN



TYPE II SIGN





S-40-149
S-40-993
SERIES E LETTERS

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

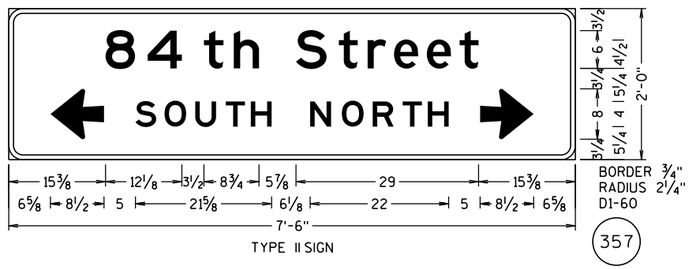
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

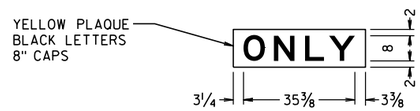
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

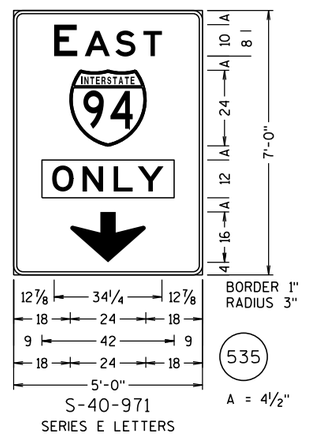
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.



TYPE II SIGN





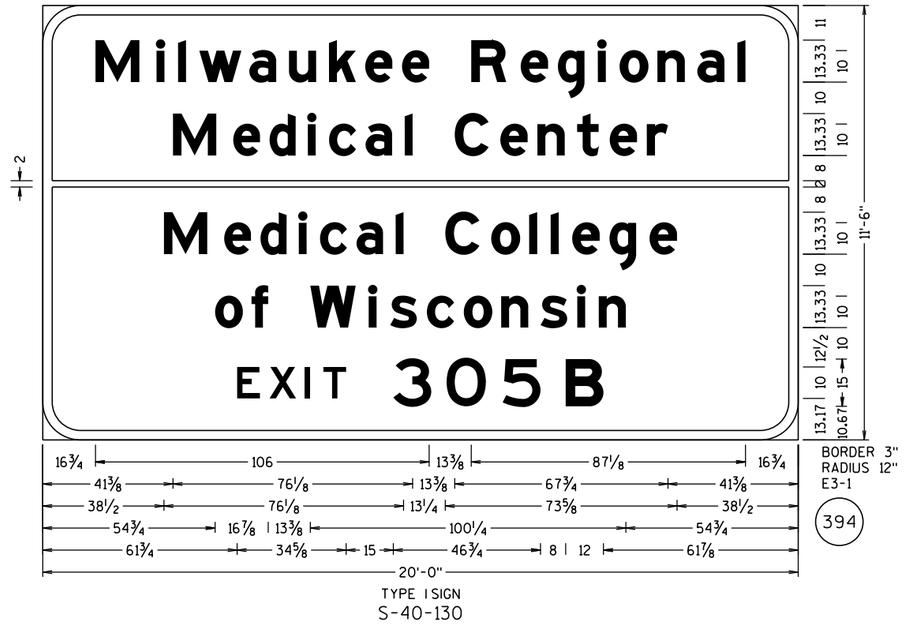
S-40-971
SERIES E LETTERS

SHEET 20 OF 27

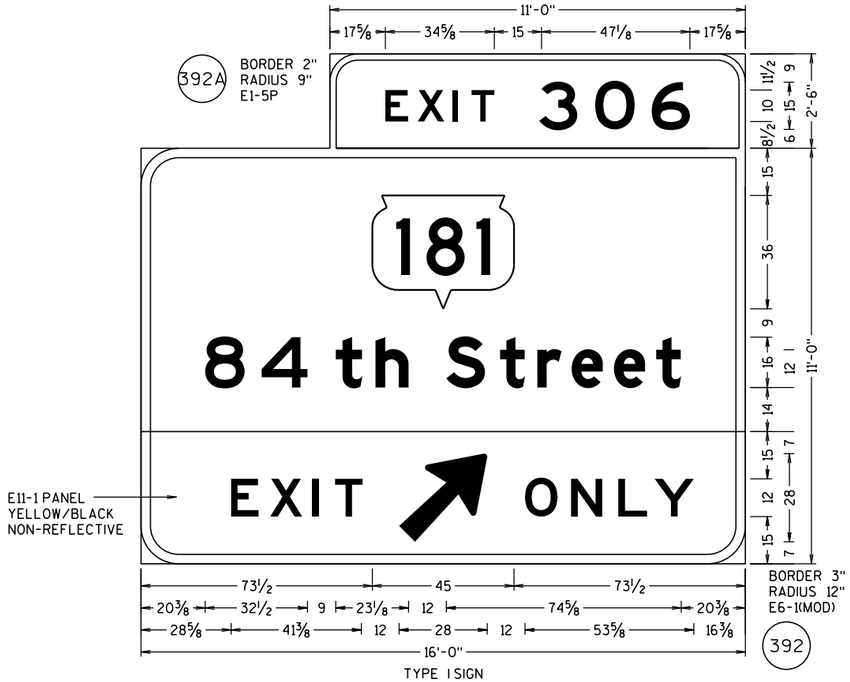
PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2223	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47



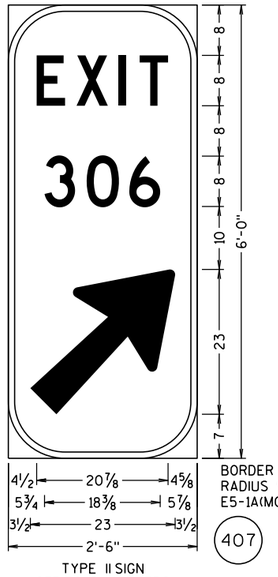
TYPE I SIGN
S-40-130



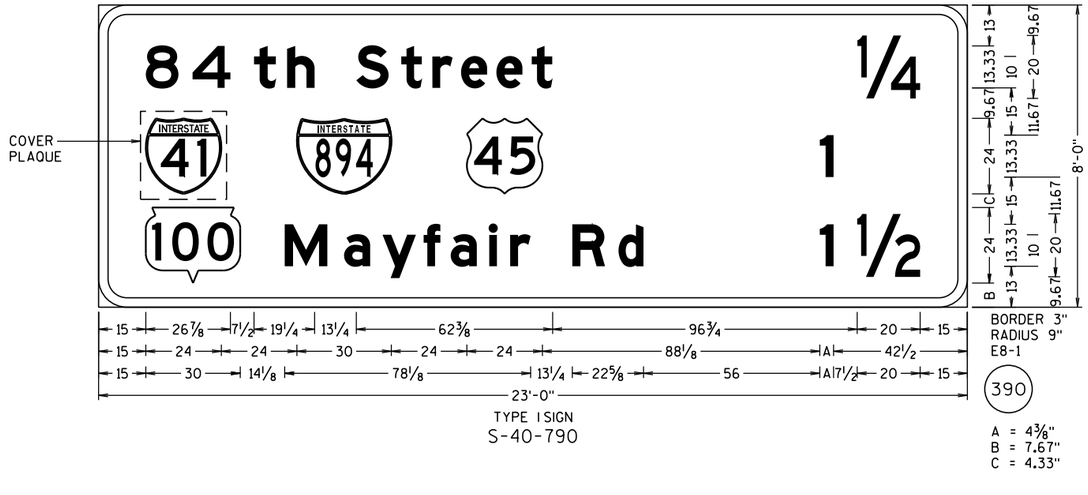
TYPE I SIGN
S-40-129

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



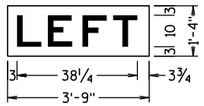
TYPE II SIGN
SERIES D LETTERS
GREEN BACKGROUND/
WHITE LETTERS

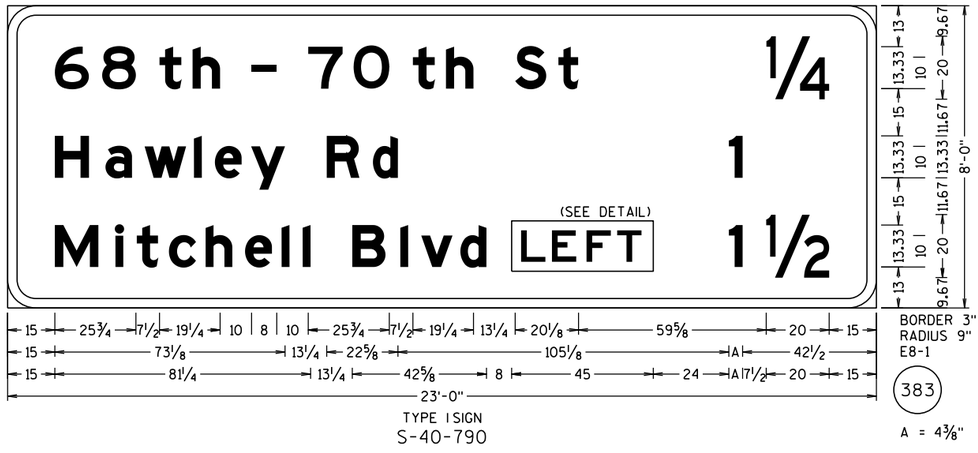


TYPE I SIGN
S-40-790

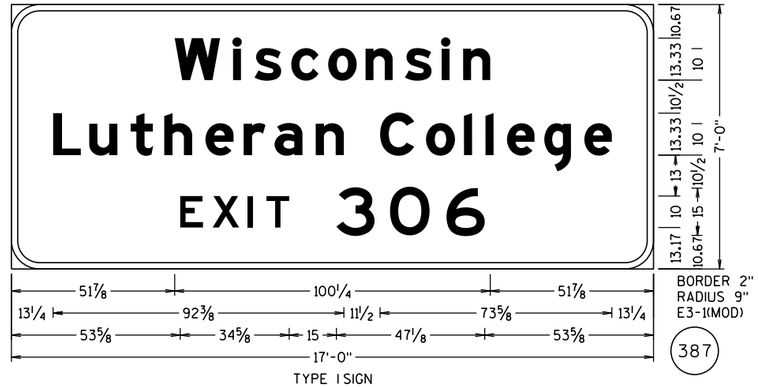
PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 2224	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 20-MAY-2014 09:46 PLOT BY : mscpp1 PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47





TYPE I SIGN
S-40-790



TYPE I SIGN
S-40-134

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

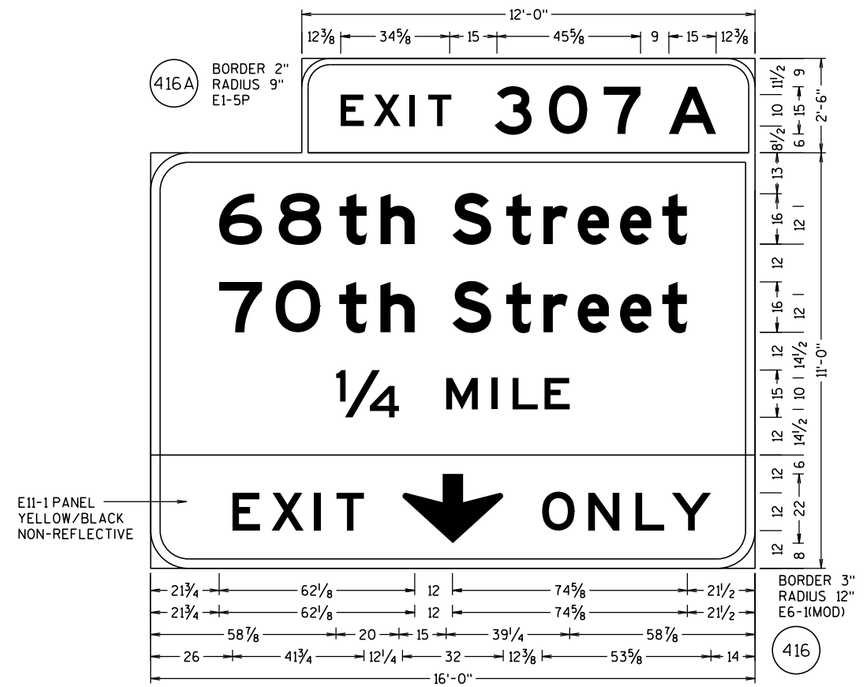
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

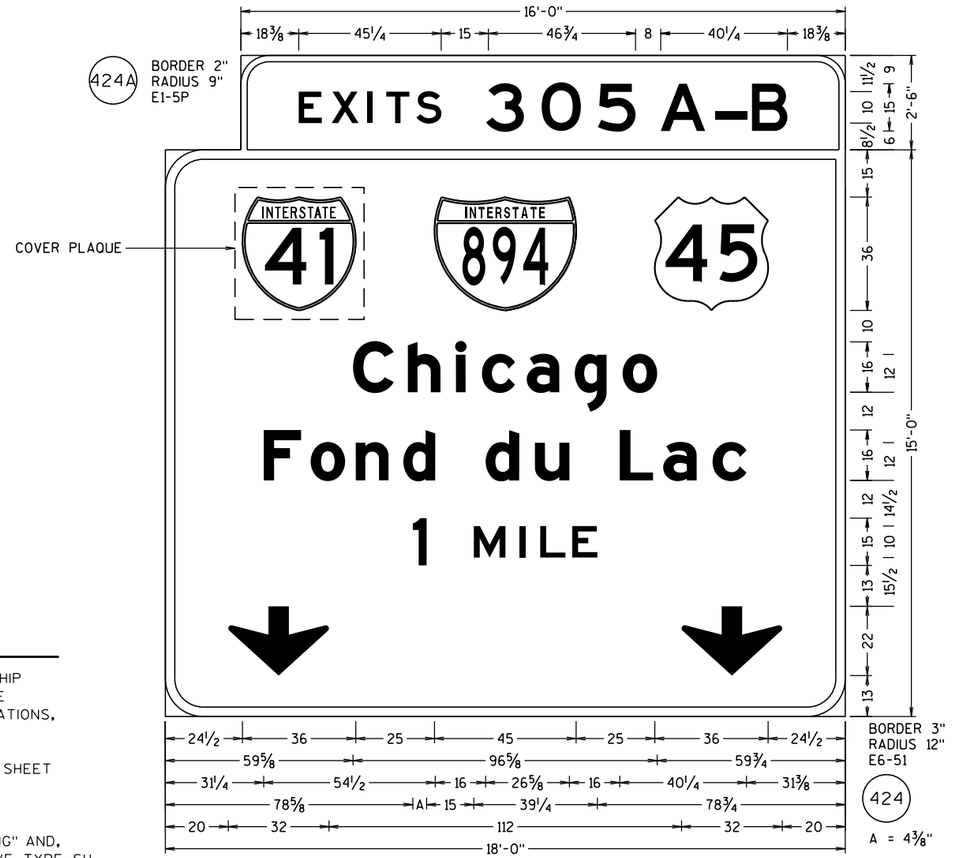
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

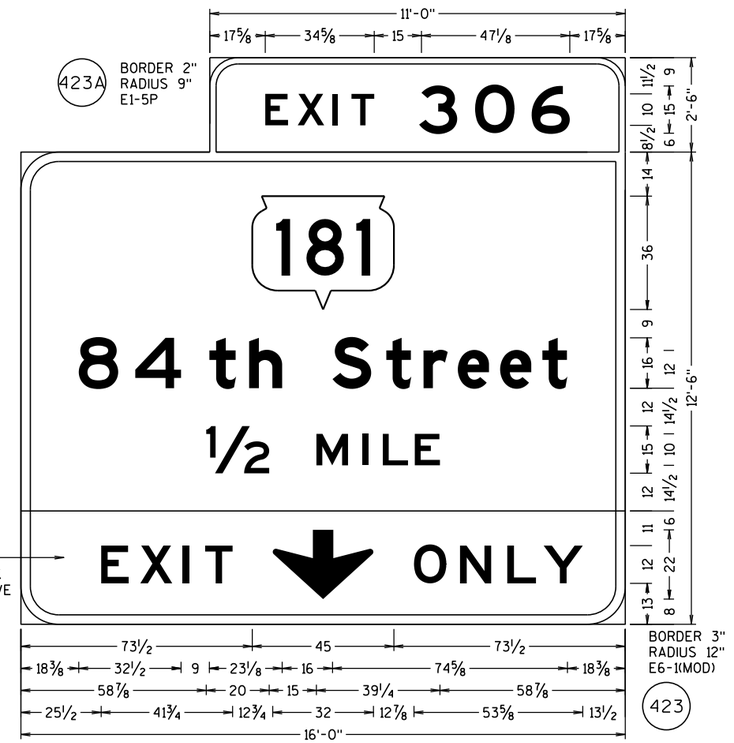
11. DO NOT SCALE.



TYPE I SIGN
S-40-132



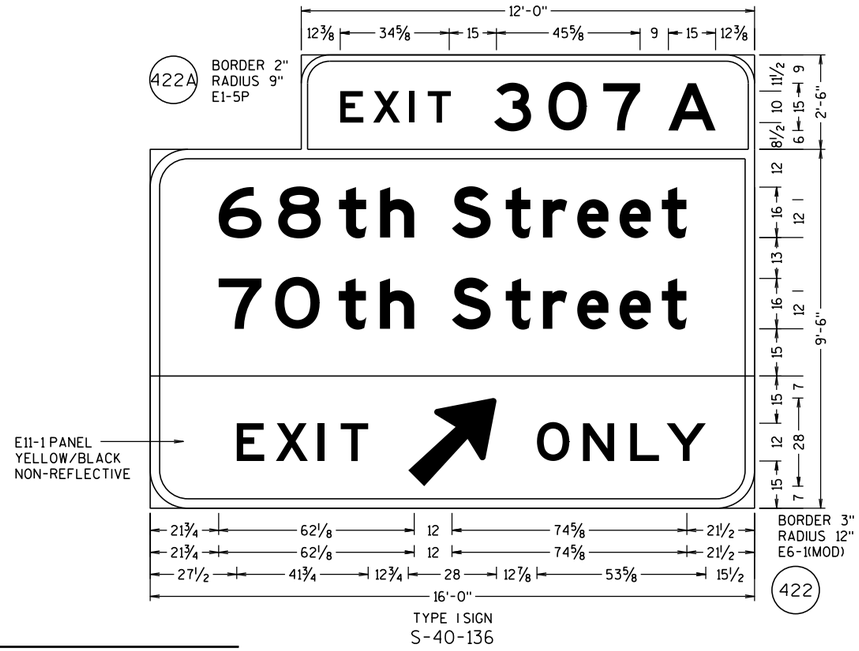
TYPE I SIGN
S-40-135



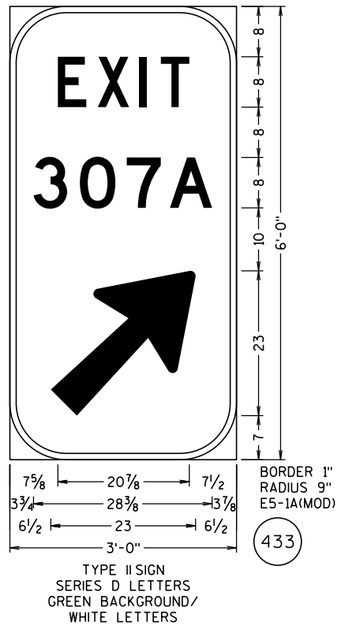
TYPE I SIGN
S-40-135

GENERAL NOTES:

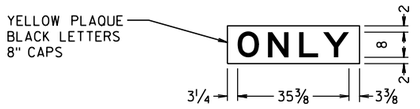
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.

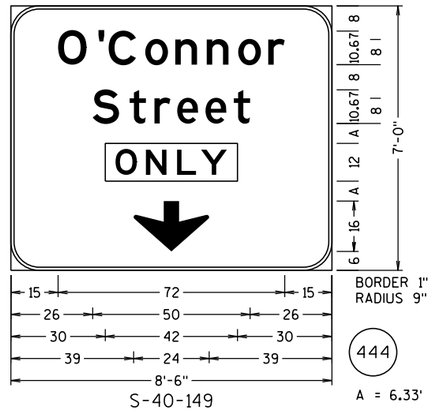


TYPE I SIGN
S-40-136



TYPE II SIGN
SERIES D LETTERS
GREEN BACKGROUND/
WHITE LETTERS



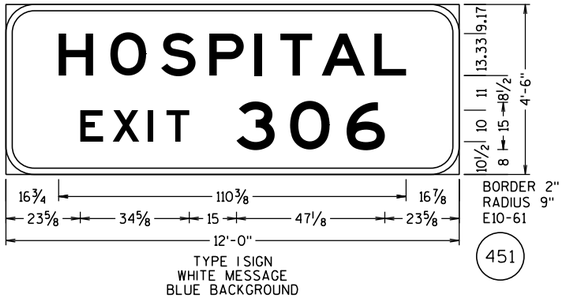


A = 6.33'

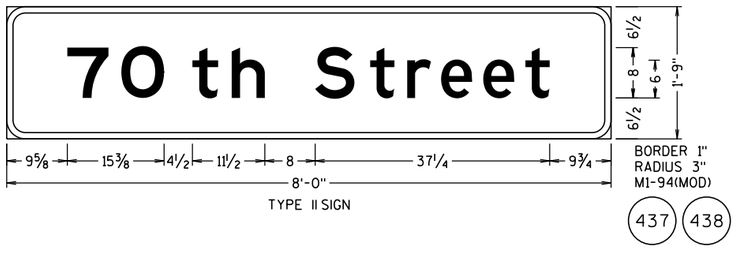
S-40-149

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE I SIGN
WHITE MESSAGE
BLUE BACKGROUND
S-40-137



TYPE II SIGN



TYPE II SIGN

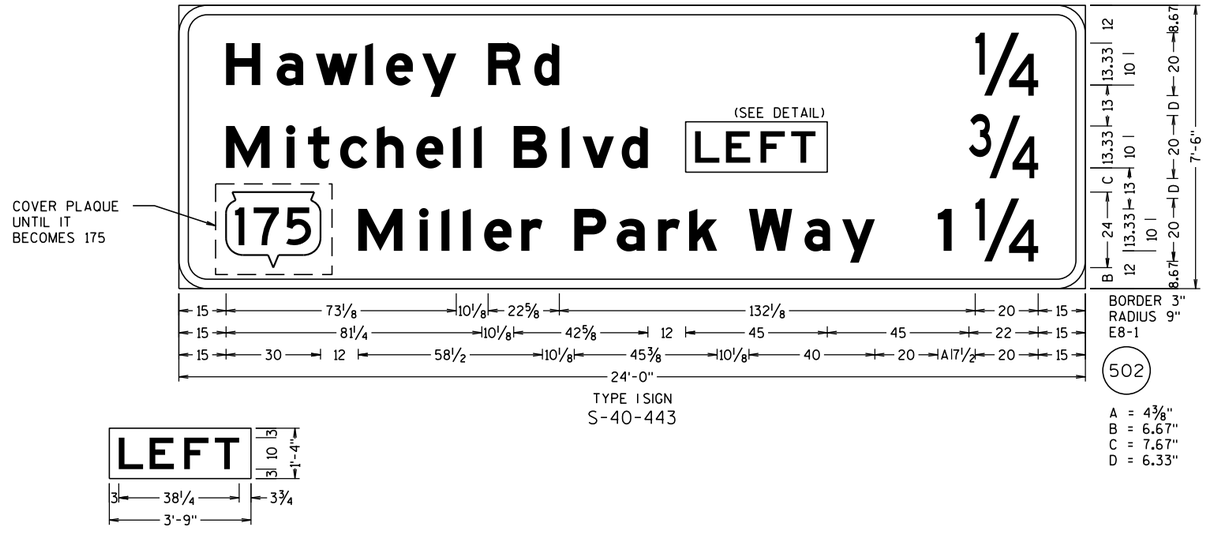
A = 2¼"

SHEET 24 OF 27

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 2227	E

FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47



GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

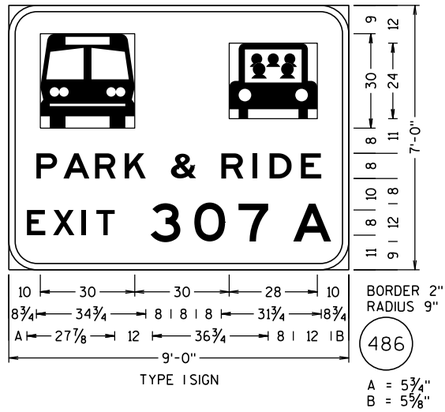
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

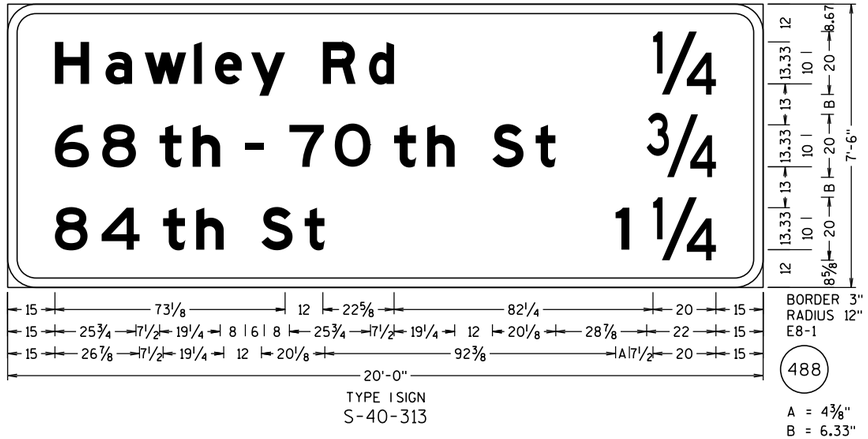
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

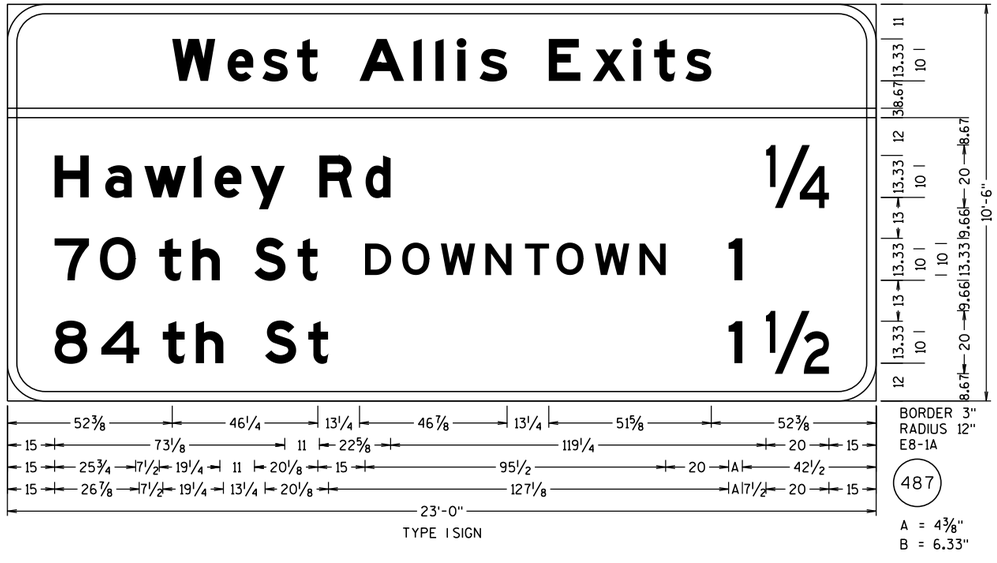


GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
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3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
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5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.



TYPE I SIGN
S-40-313



TYPE I SIGN

SHEET 26 OF 27

PROJECT NO: 1060-33-80	HWY: USH 45/IH 94/IH 894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 2229	E

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE 11 SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE 1 SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

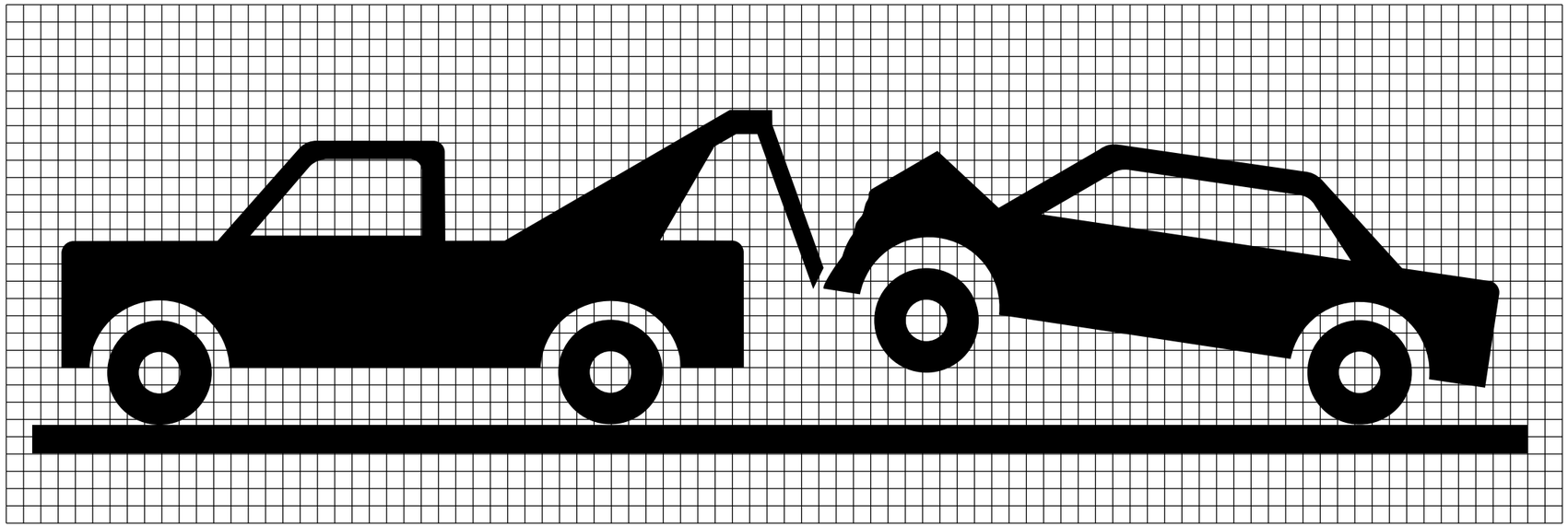
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

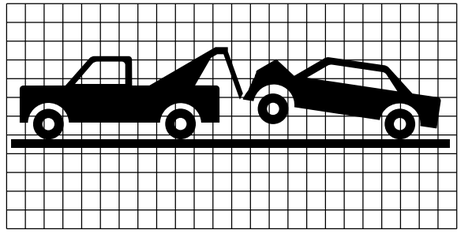
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES ALL-7 AND ALL-10

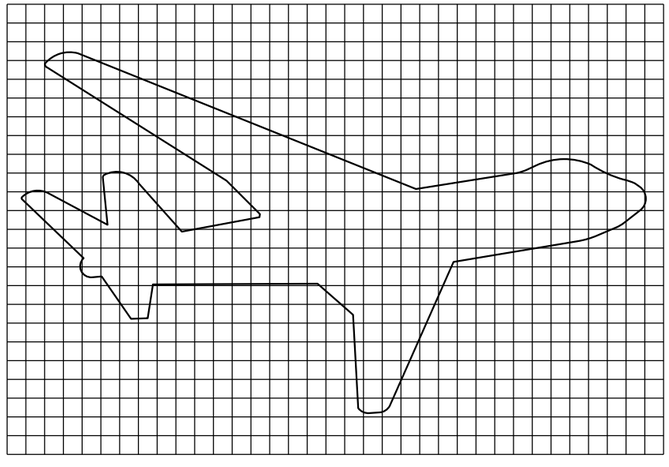
11. DO NOT SCALE.



DETAIL "A"



DETAIL "B"



DETAIL "C"

PROJECT NO: 1060-33-72	HWY: USH 45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE 1 SIGNS	SCALE: 0 ½" 1"	SHEET 2230	E

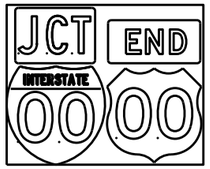
FILE NAME : J:\projects\d2_10603345\80\Sign\070101_ms.dgn PLOT DATE : 17-APR-2014 16:45 PLOT BY : MSCCXV PLOT NAME : PLOT SCALE : 48.125:1

WISDOT/CADDS SHEET 47

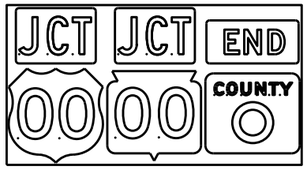
TYPICAL ASSEMBLIES



J1-1



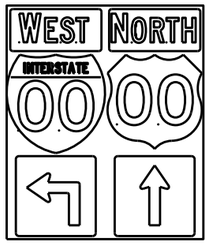
J1-2



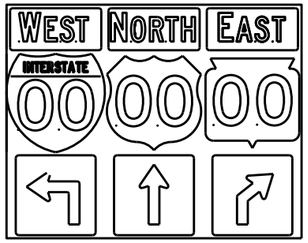
J1-3



J2-1



J2-2

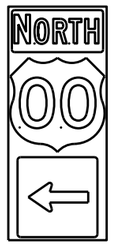


J2-3

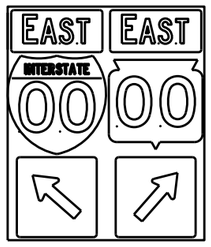


JV

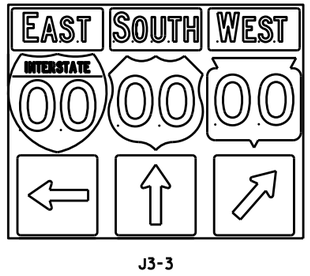
(Typical Vertical J-Assembly
See Note 10 and 11)



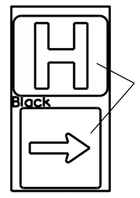
J3-1



J3-2



J3-3

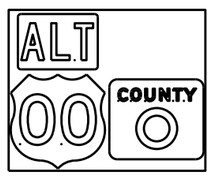


Blue Background

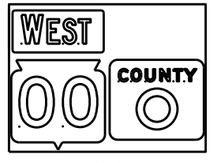
JH-1



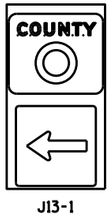
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

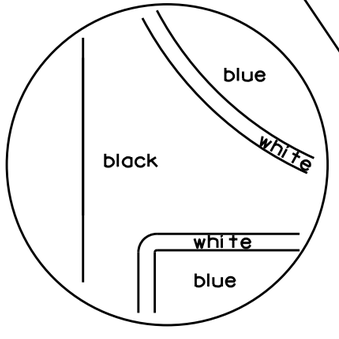


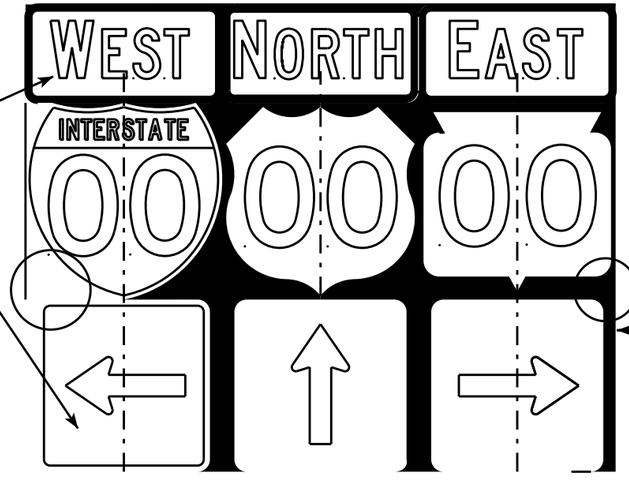
J23-1

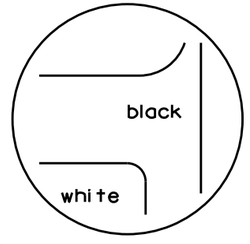


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

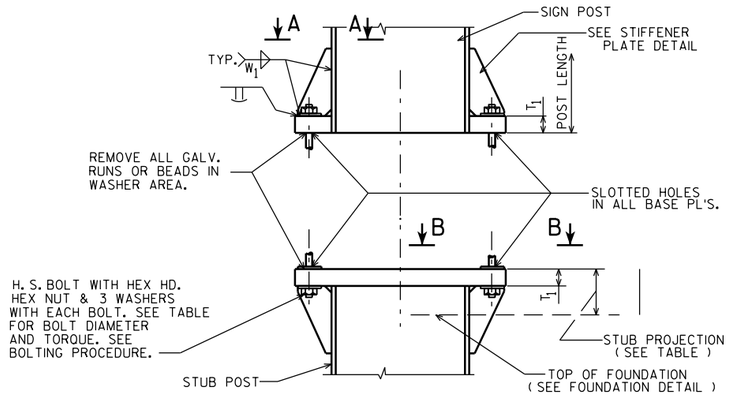
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

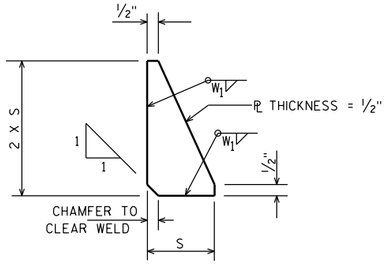
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

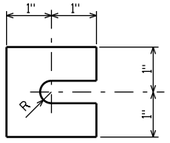


SIGN POST AND STUB POST ELEVATION



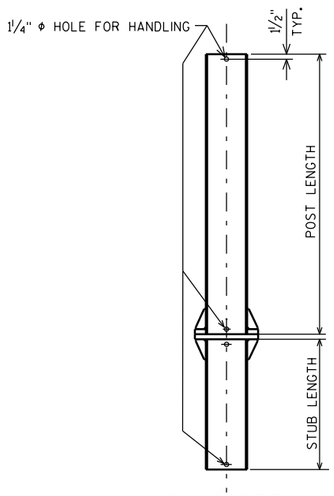
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

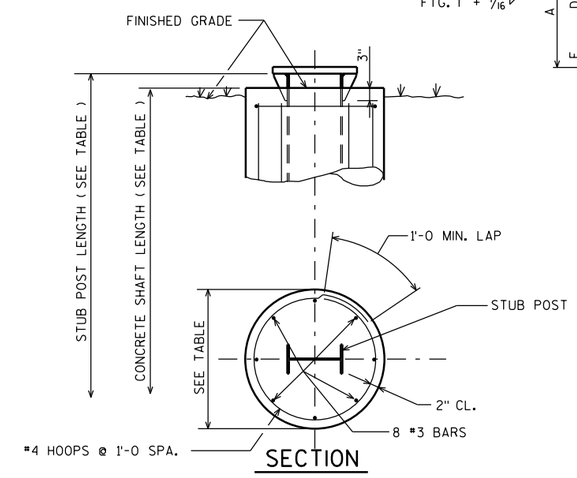
SHIM DETAIL



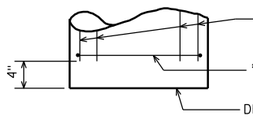
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
⑦ E	1.0	62

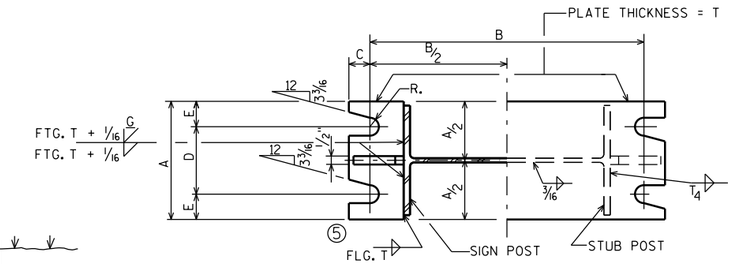
	TYPE	#3	#4
REINF.	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
⑦	E	8 @ 7'-11	9 @ 6'-3



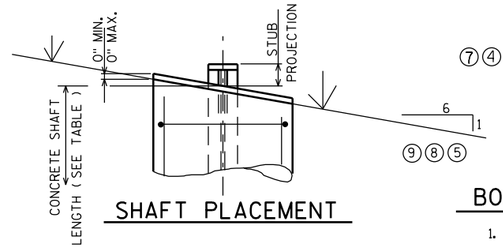
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

⑦④ ⑨⑧⑤

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & ½ WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

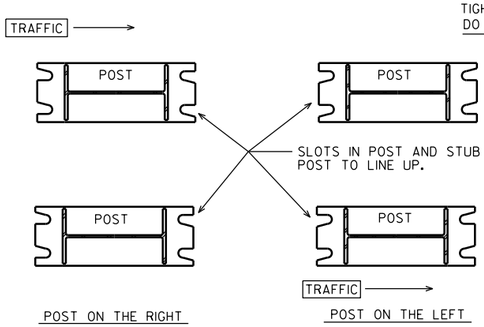
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST SLOT ORIENTATION ⑦

		BASE CONNECTION DATA TABLE											FOUNDATION DATA				②
TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
④ A	W10"X12.0 #/FT.	¾" ϕ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	⅜"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 ϕ	5'-0	76.0# ④
④ B	W12"X16.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	15/32"	3"	5'-6	3"	2'-0 ϕ	7'-0	146.5# ④
C	W12"X19.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 ϕ	7'-6	182.1#
D	W12"X22.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	5/16"	15/32"	3"	6'-6	3"	2'-0 ϕ	8'-0	210.5#
③ E	W12"X26.0 #/FT.	1" ϕ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	5/16"	17/32"	3"	7'-0	3"	2'-0 ϕ	8'-6	293.0# ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION
APPROVED Matthew R Rauch for State Traffic Engineer
DATE 2/06/14 PLATE NO. A3-1.14

NO.	DATE	REVISION
⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE ℄ WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

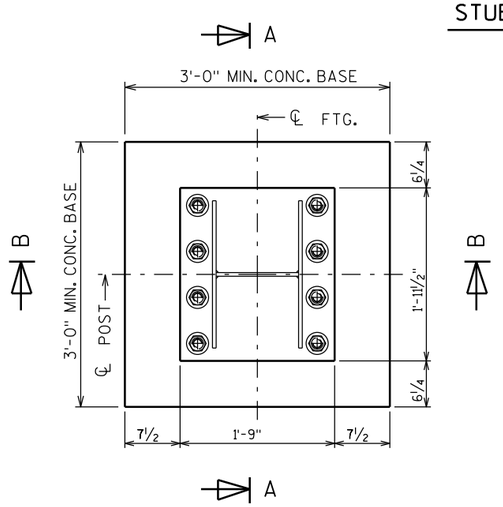
CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

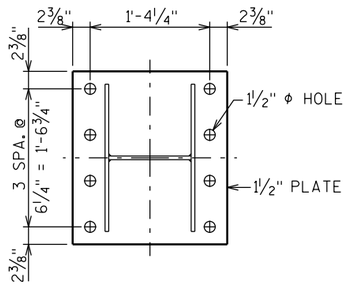
SHEET 2232

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

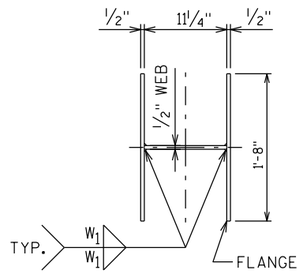
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



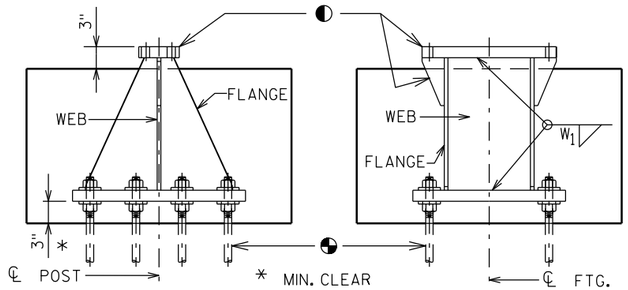
BASE PLATE



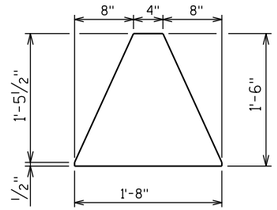
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



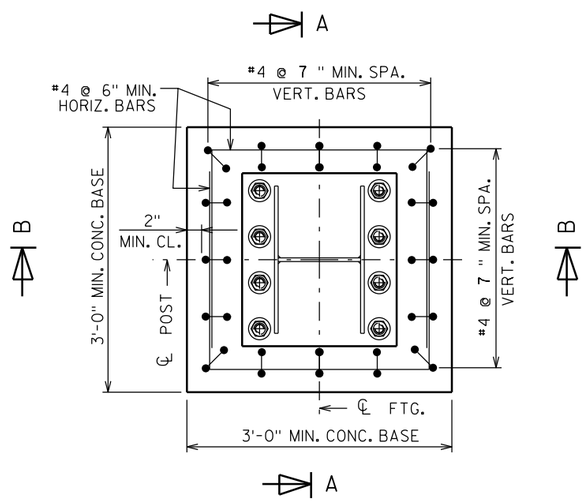
FLANGE

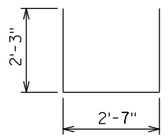
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

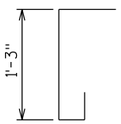
CONCRETE BASE SECTION





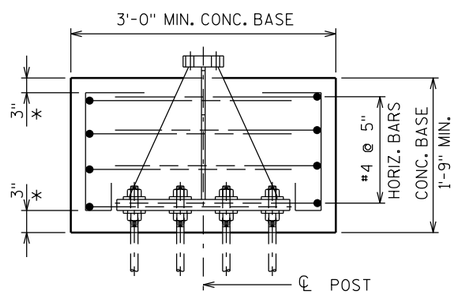
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



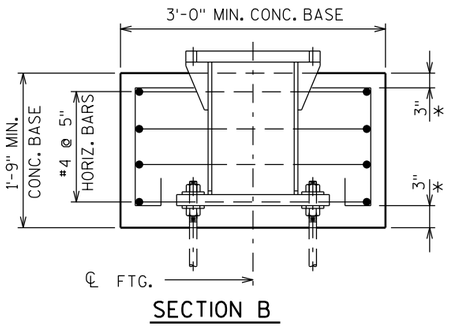
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

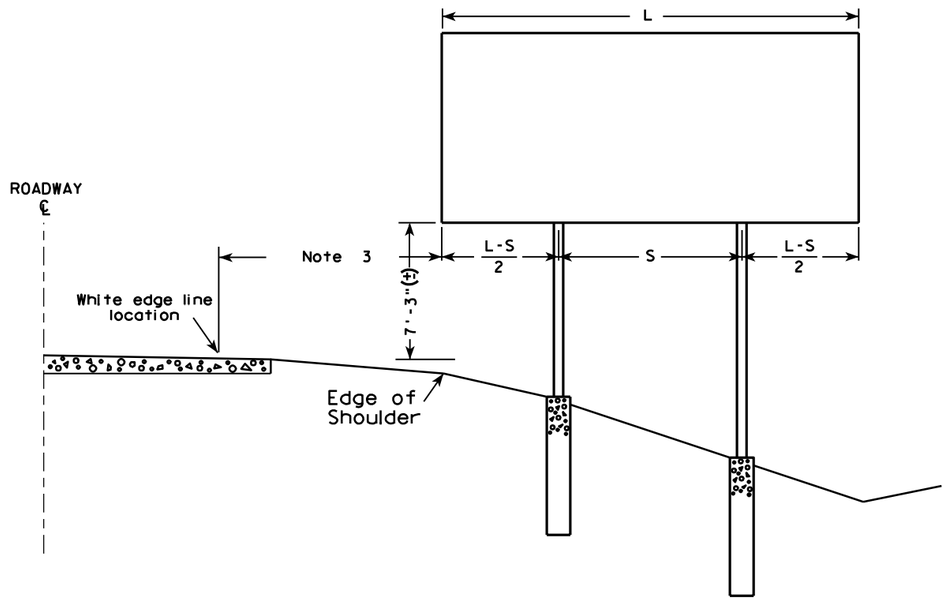
ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

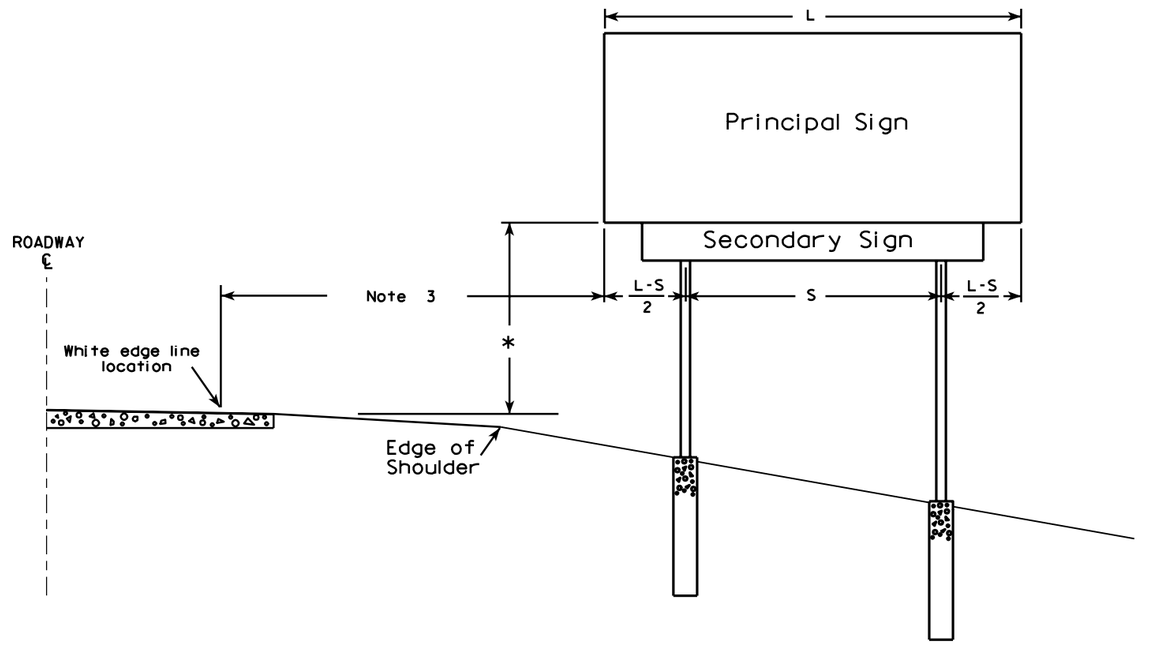
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/2014 PLAN 2233 A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

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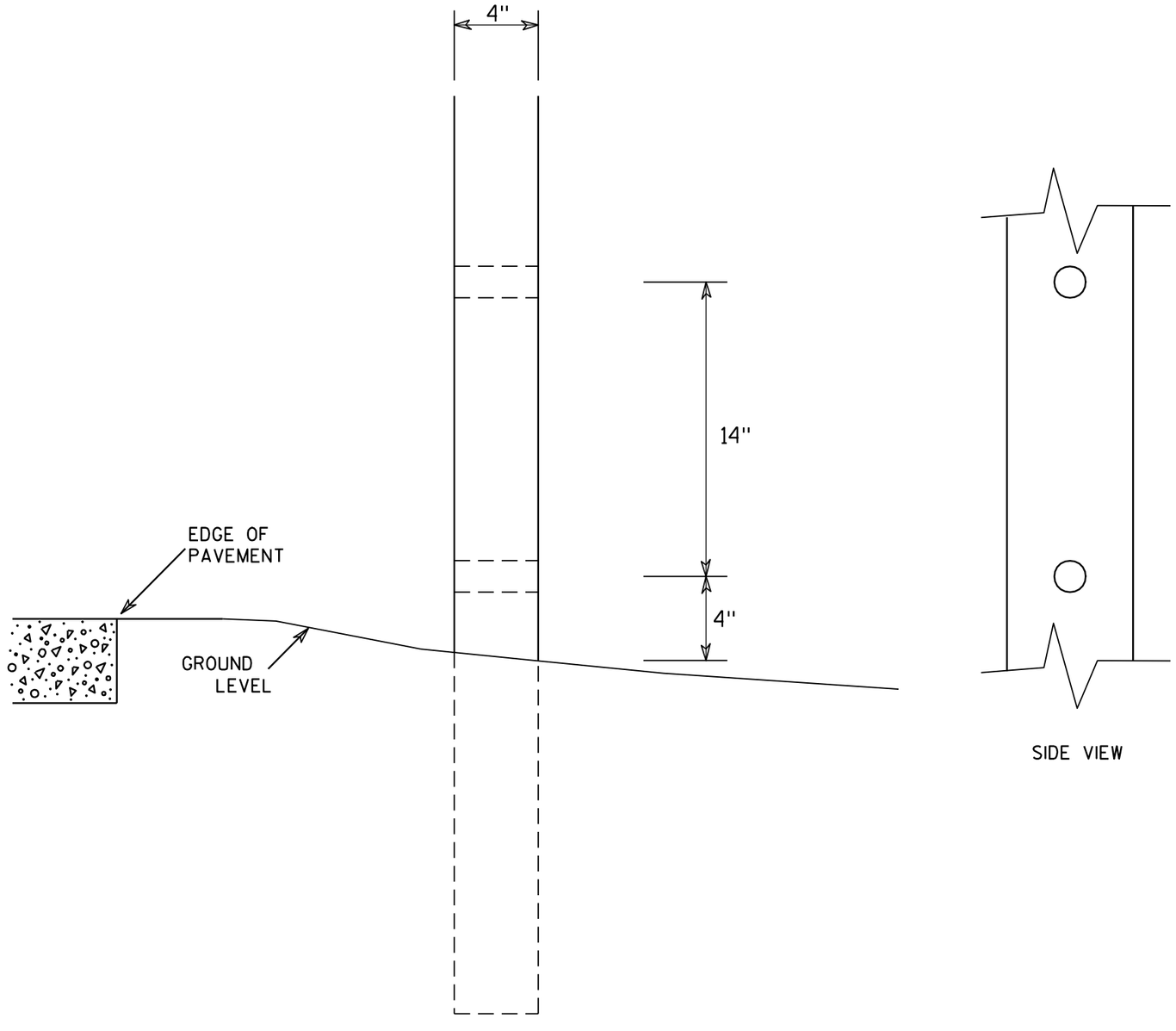
TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 2234	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

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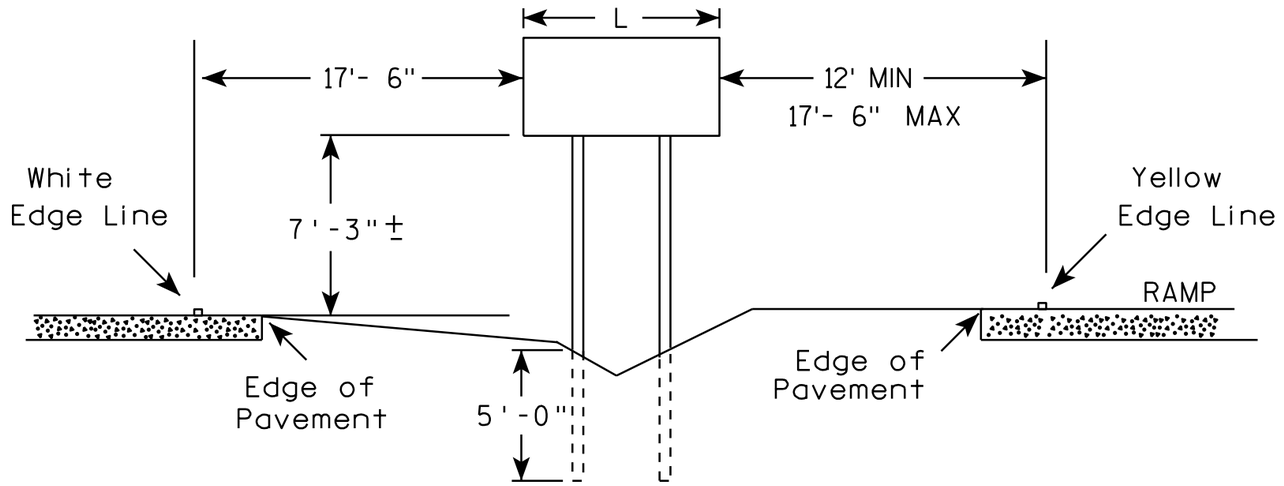
4 X 6 WOOD POST MODIFICATIONS

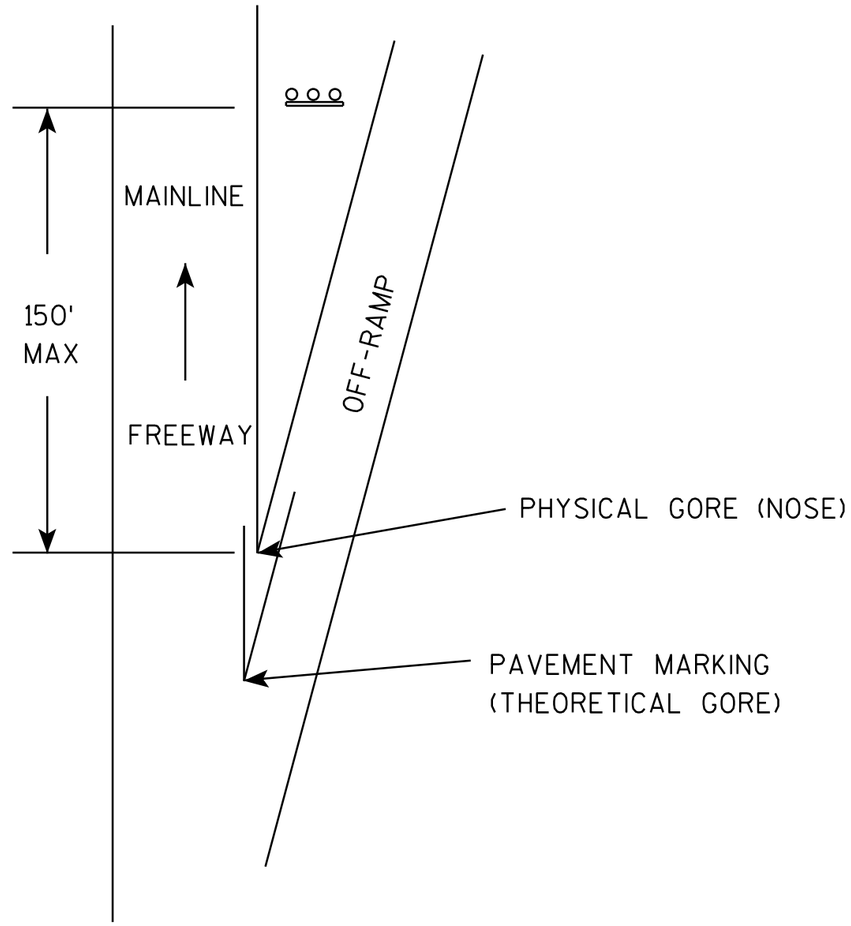
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2235	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

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TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

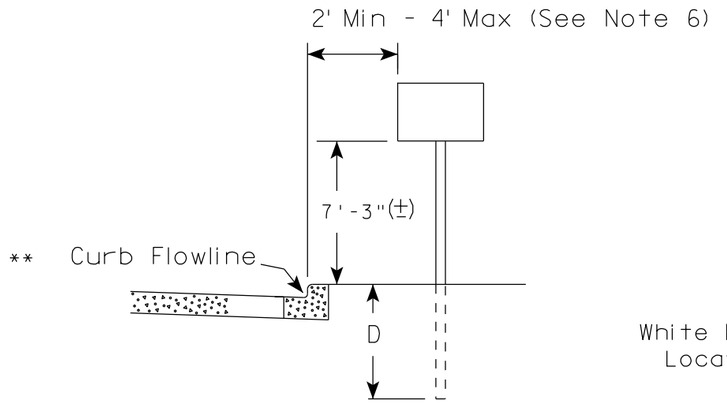
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

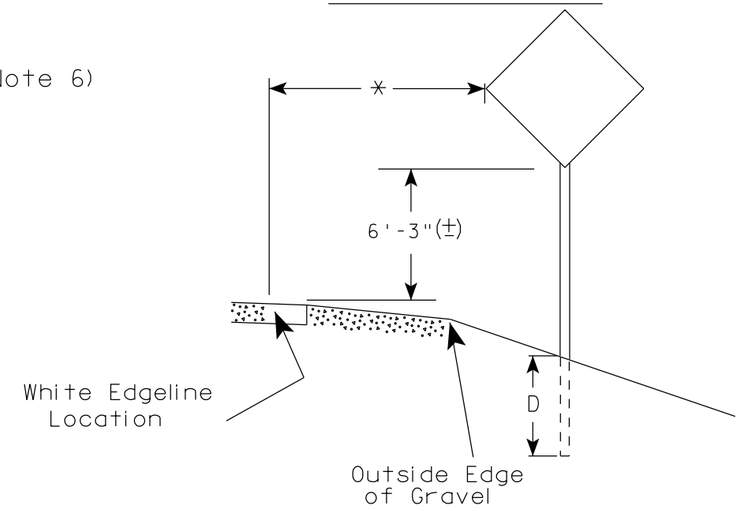
DATE 2/06/14 PLA 2236 A4-2.3

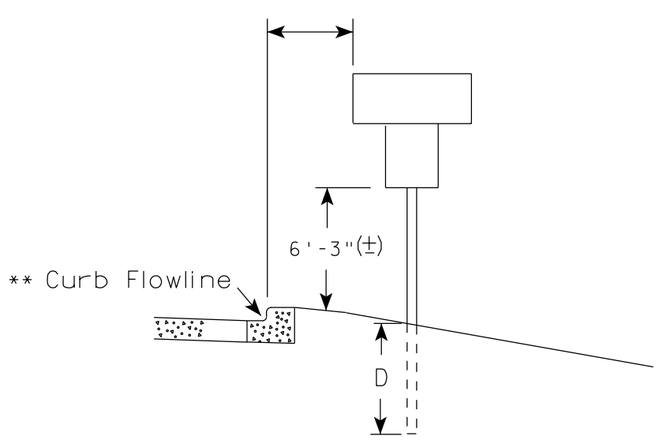
PROJECT NO: | SHEET NO: E

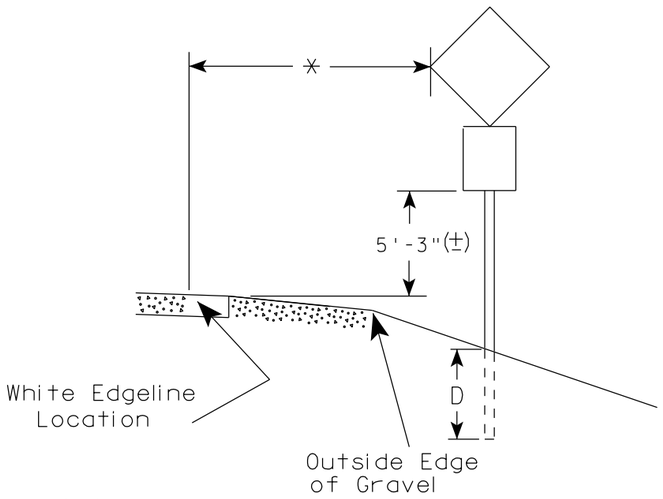
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

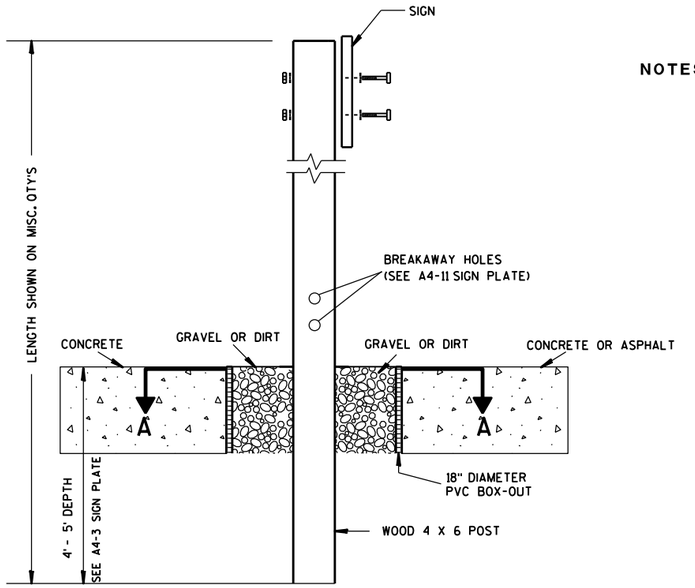
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

2237

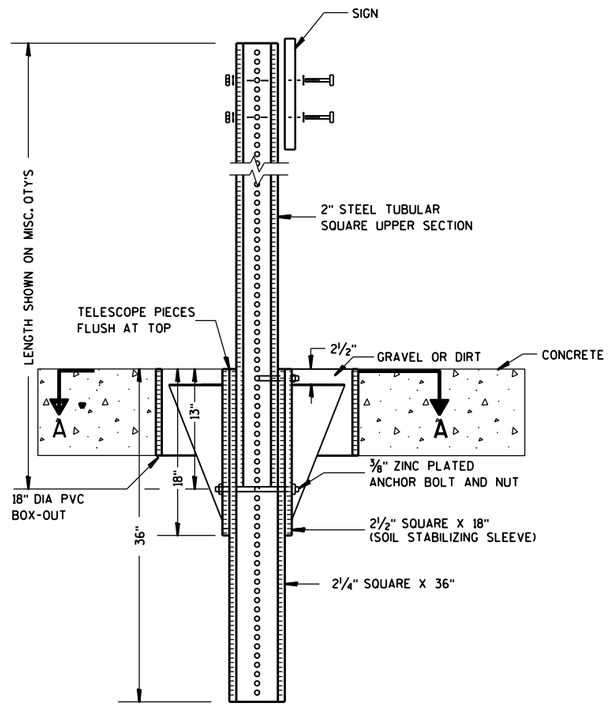
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

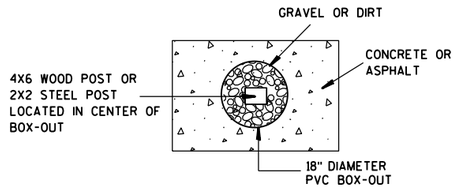
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

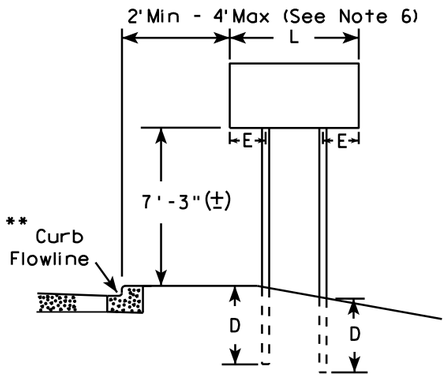
APPROVED Matthew R Rauch
for State Traffic Engineer

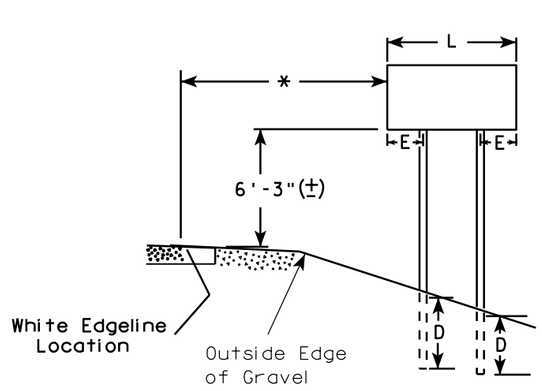
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

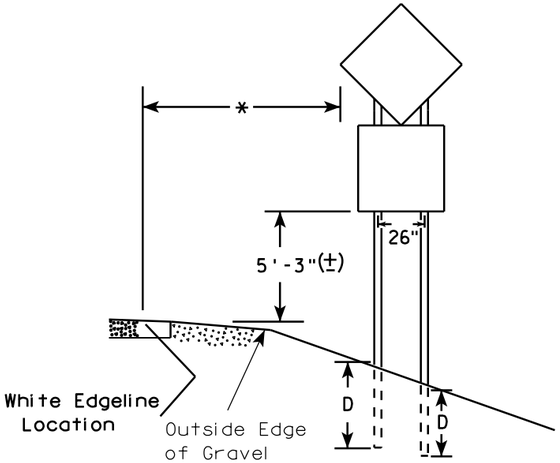
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

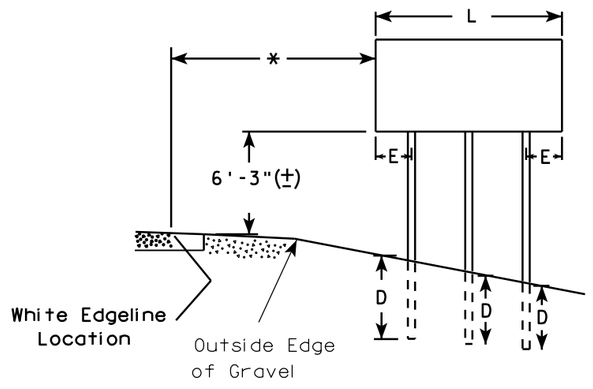
URBAN AREA





RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4 13 2239

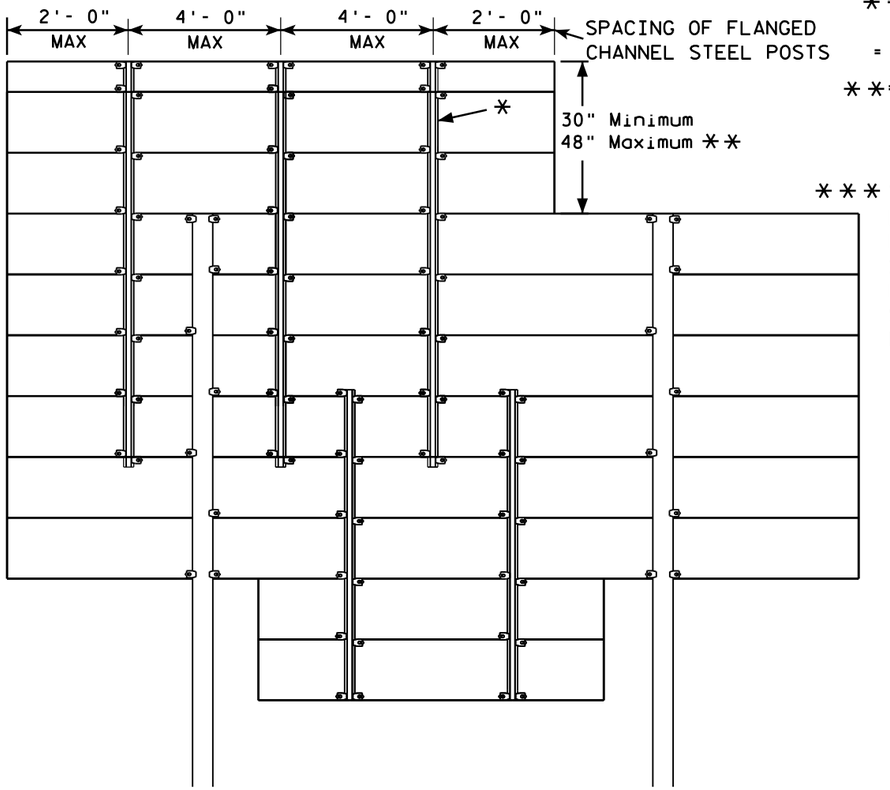
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-APR-2014 13:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

7 7

GROUND MOUNTED SIGN

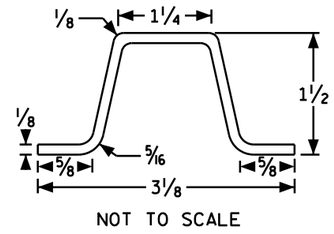


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

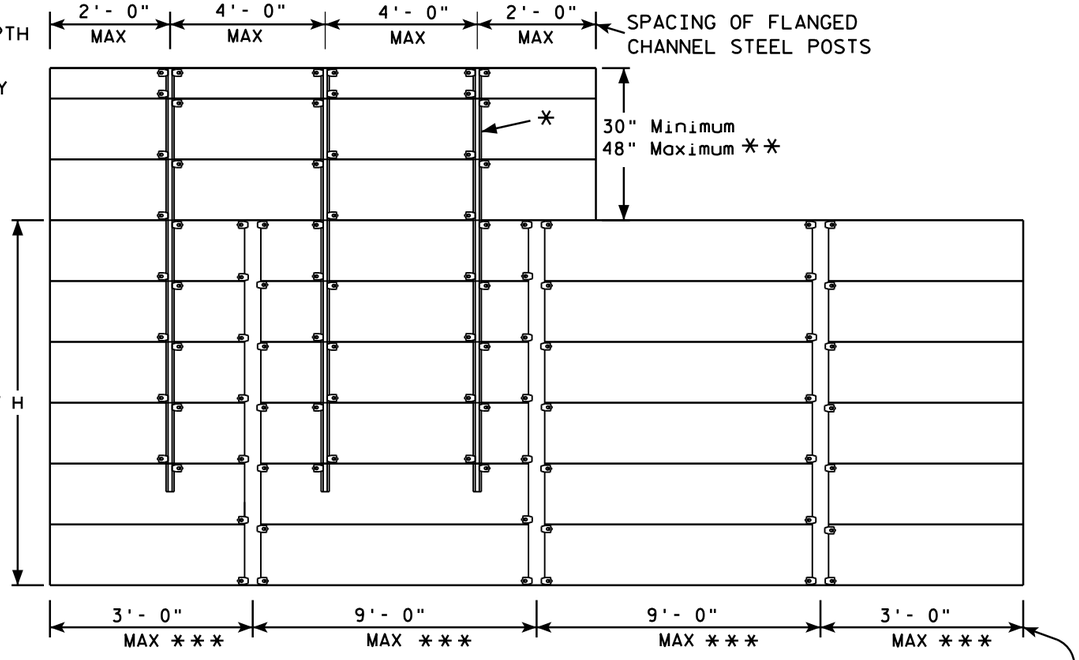
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

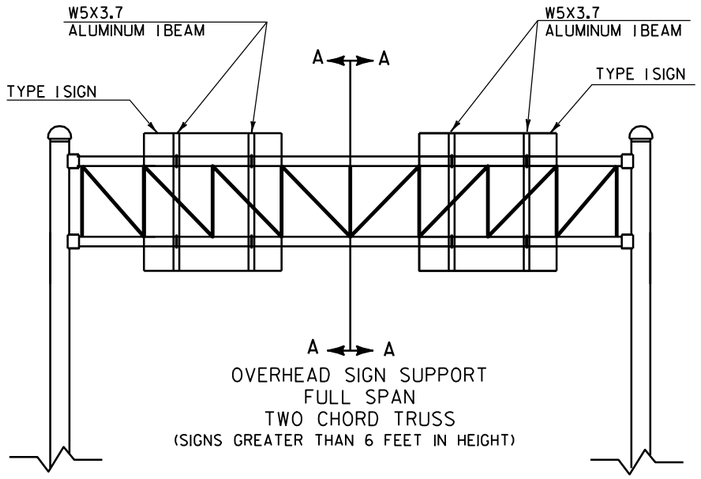
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

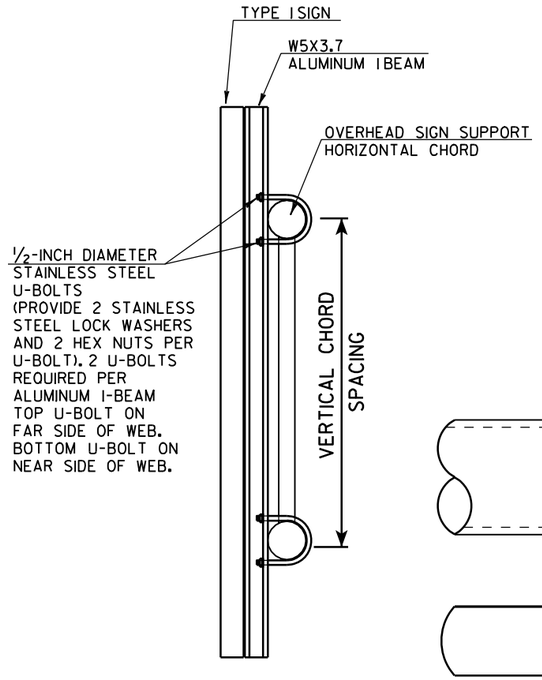
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 2240 A4-6.12

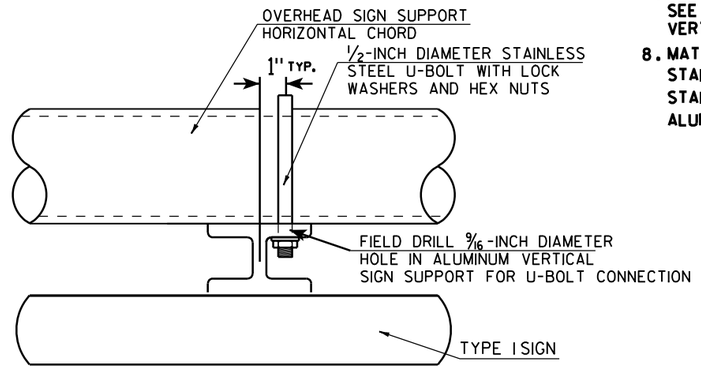
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



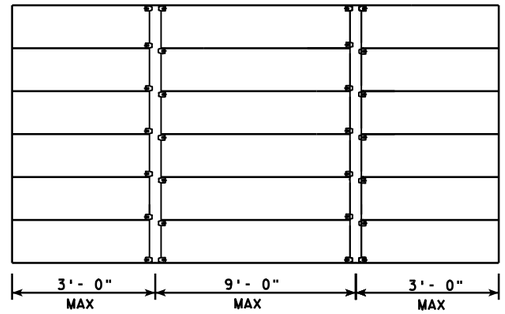
CUT SECTION A-A



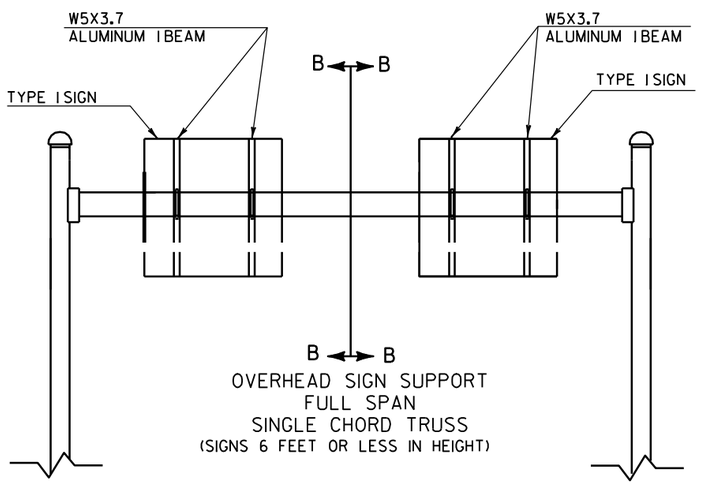
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

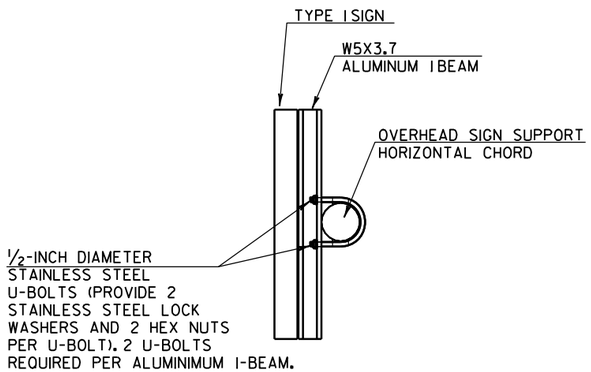
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



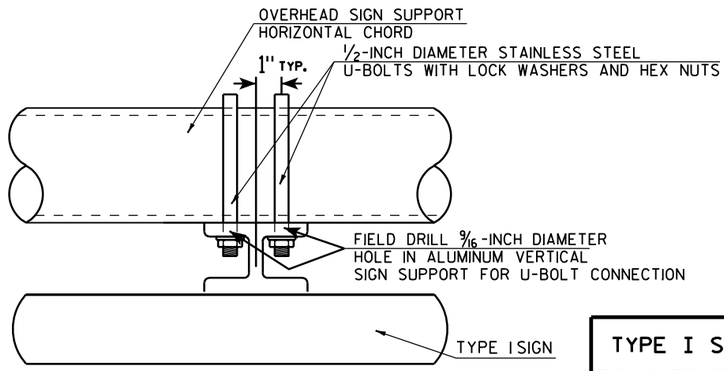
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

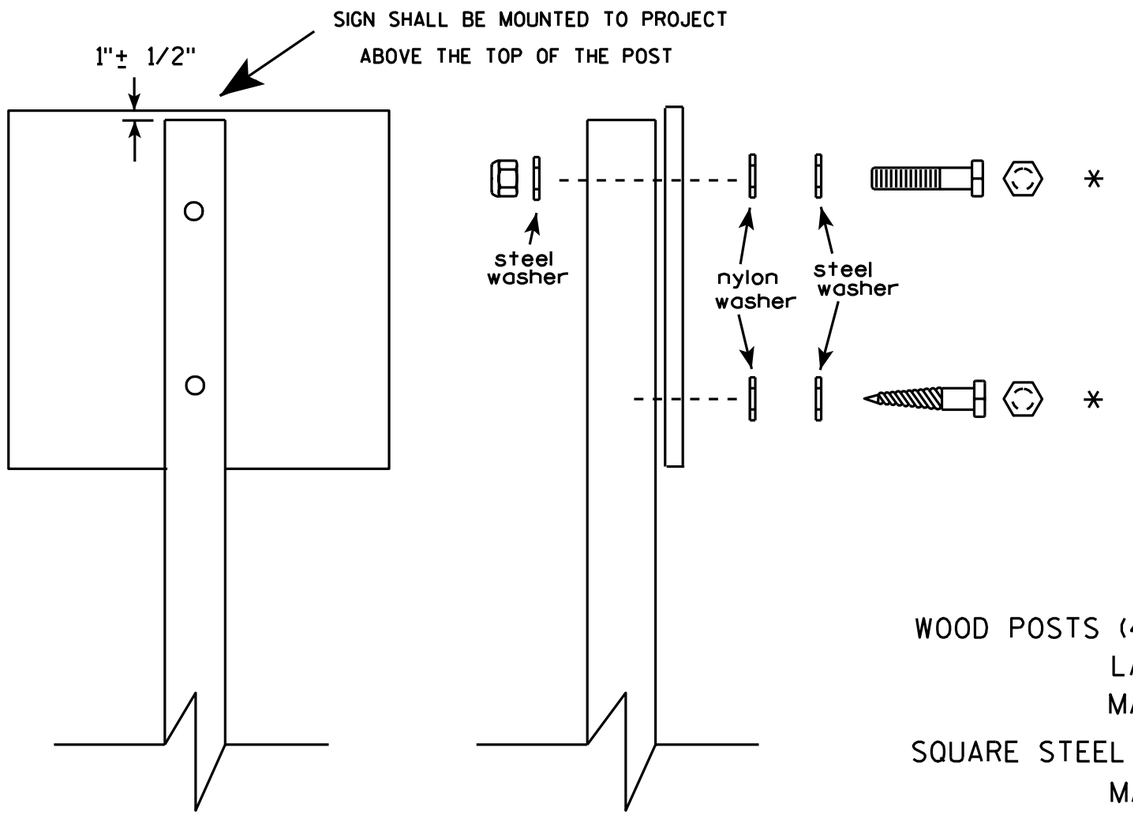
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2241	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

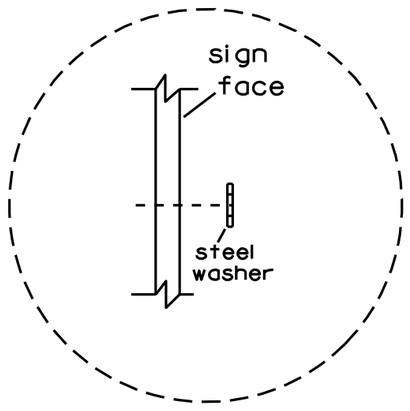
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

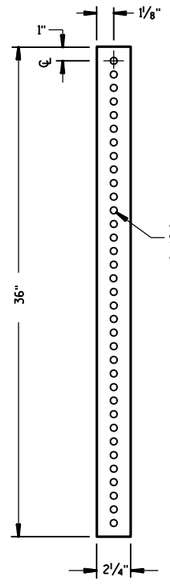
7

PROJECT NO:

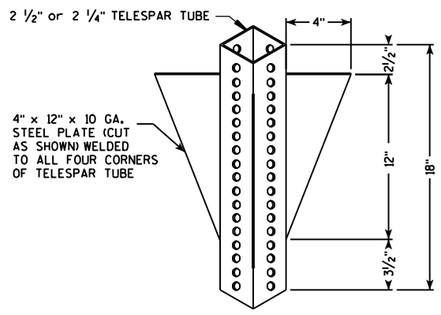
SHEET NO: 2242 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

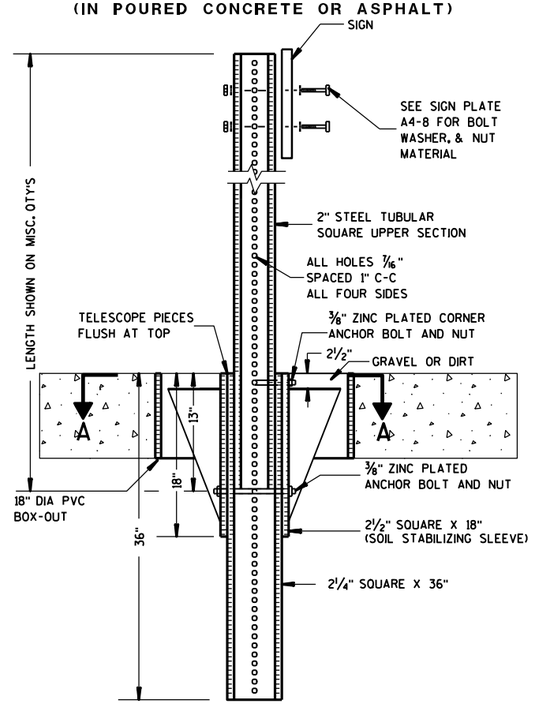
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



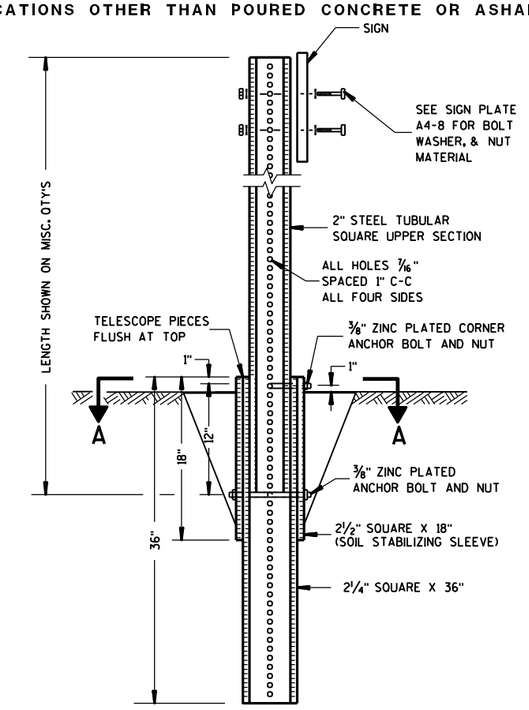
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

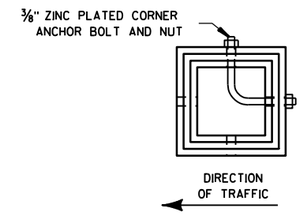


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

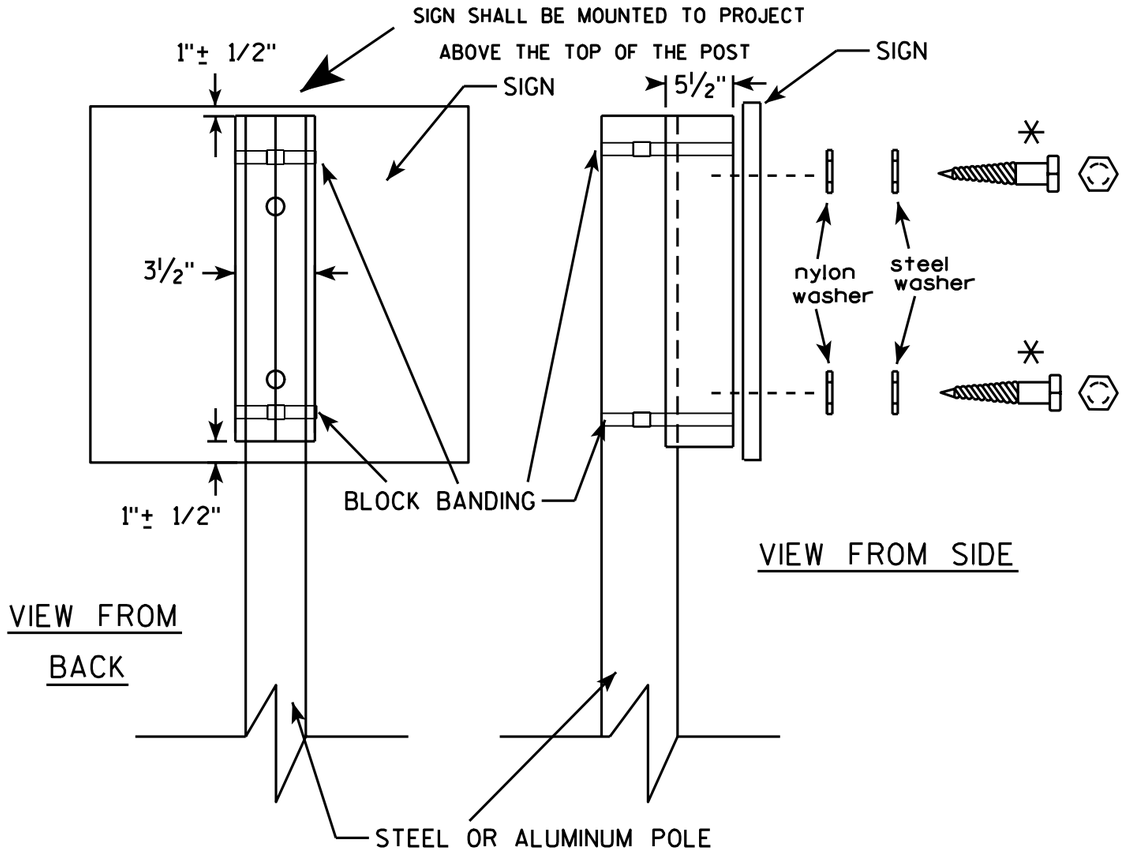
TUBULAR STEEL SIGN POST A4-9

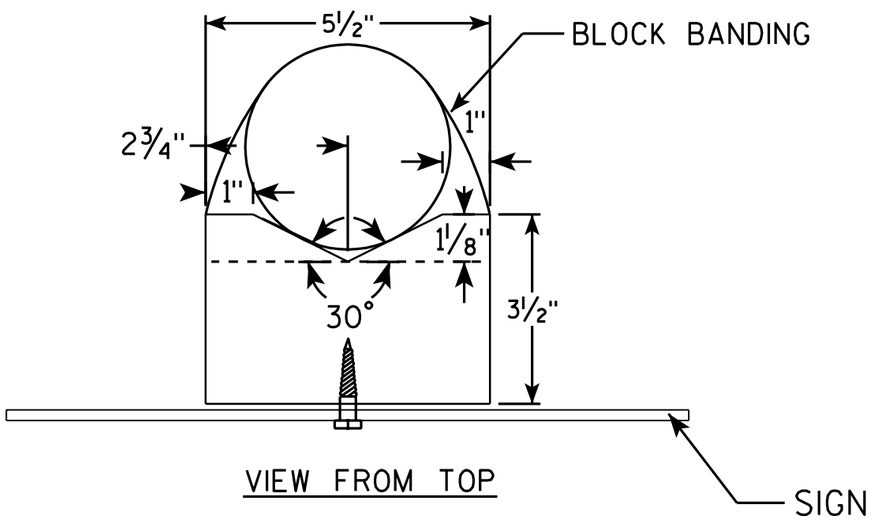
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2243	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

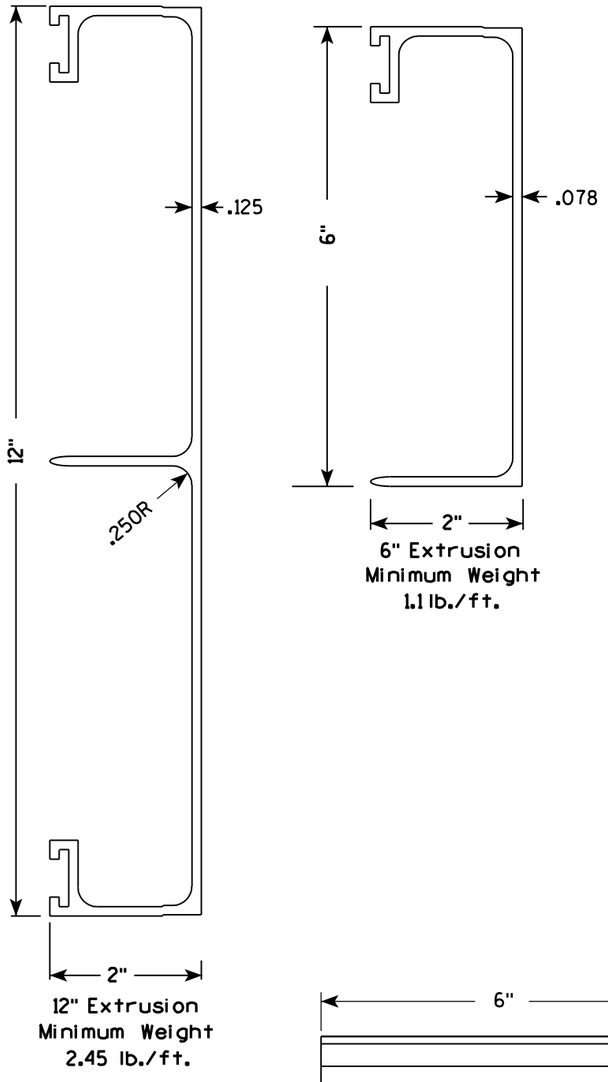
DATE 7/12/07 PLATE NO. A5-10.1

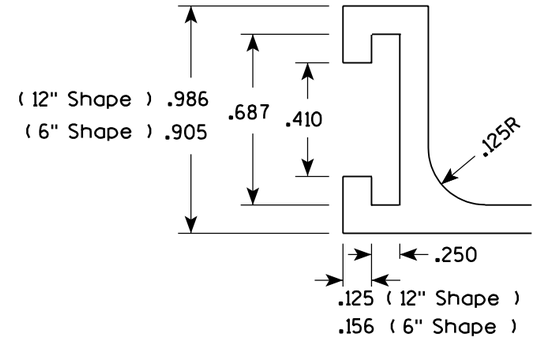
PROJECT NO: | SHEET NO: 2244 | E

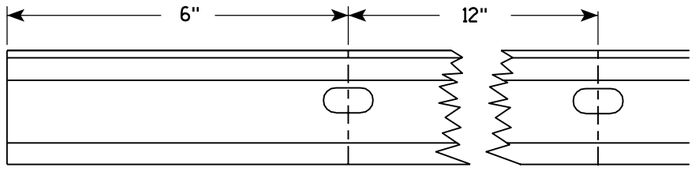
FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

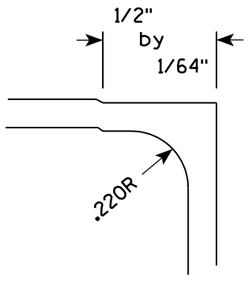
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

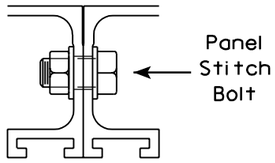


Hardware

STITCH BOLT, WASHER & NUT

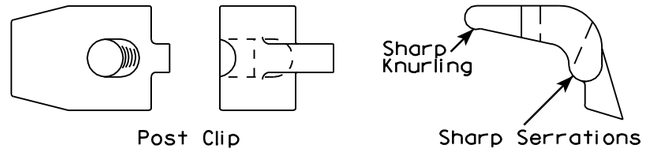
The hardware includes:

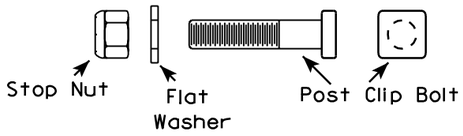
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

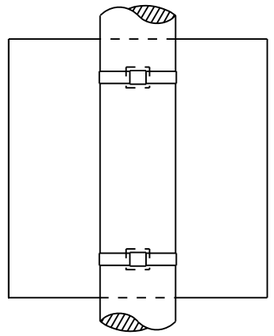
DATE 11/18/99 PLATE NO. A5-2.9

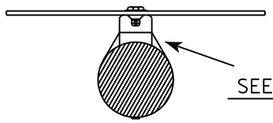
PROJECT NO:

SHEET NO: 2245 E

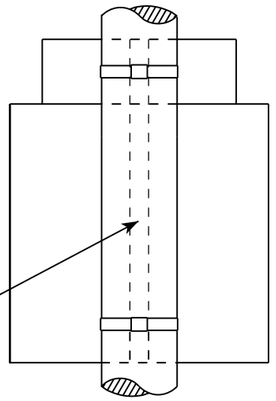
BANDING

SINGLE SIGN



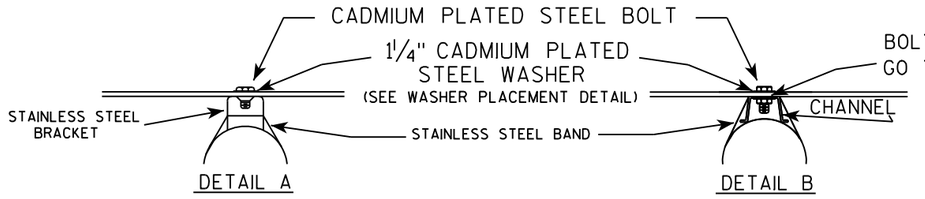


"J" ASSEMBLY

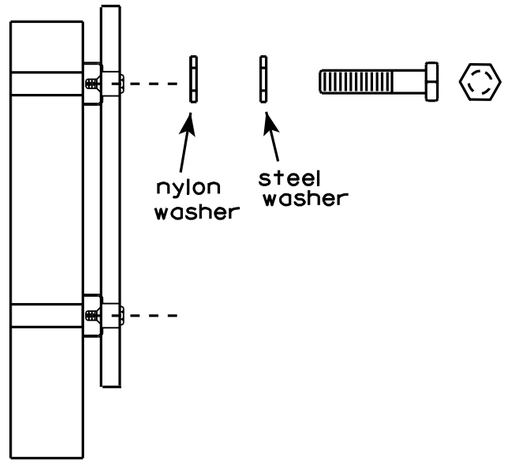


CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

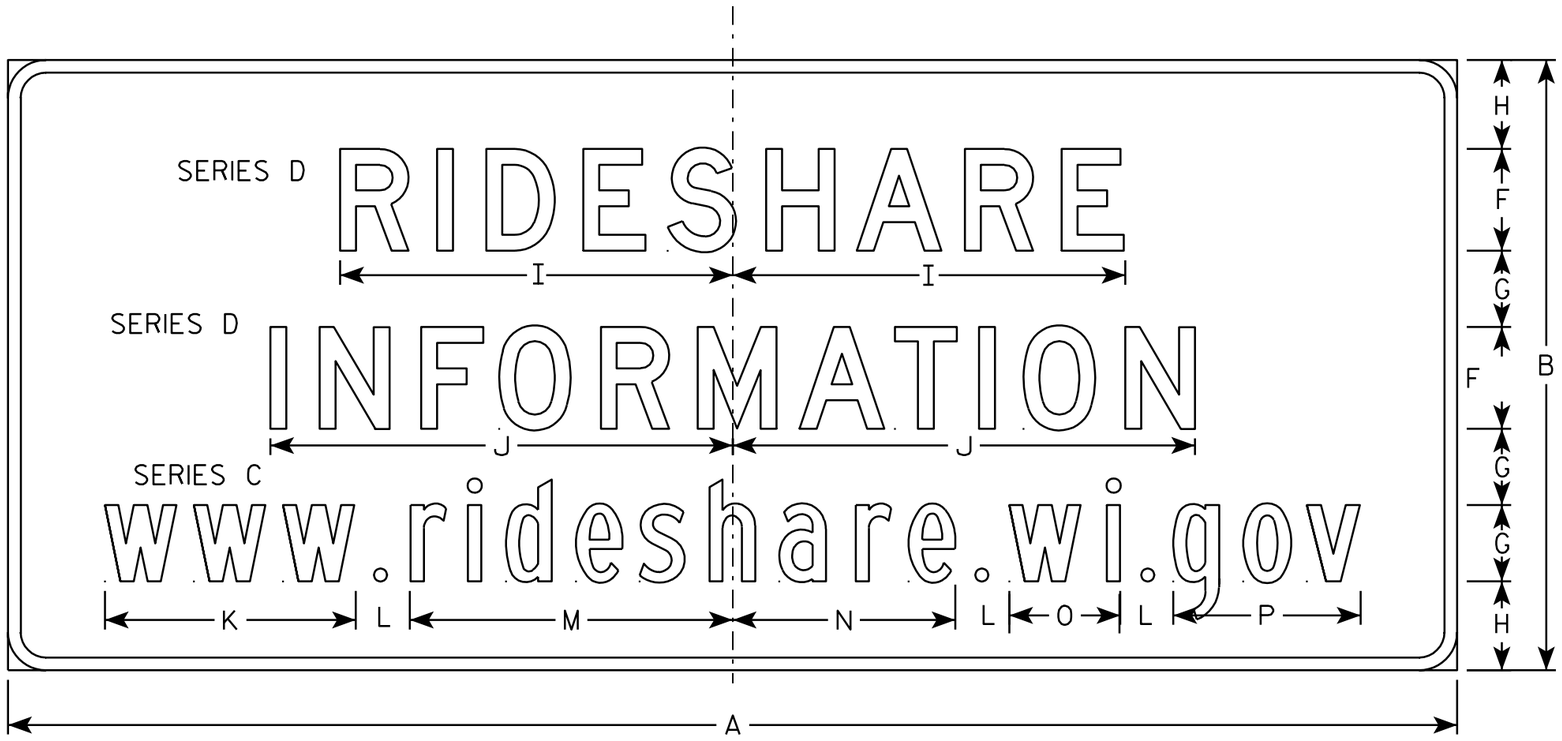
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2246	E



D12-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - Lines 1 & 2 are Series D and Line 3 is Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	
2	2100 mm X 900 mm
3	
4	2850 mm X 1200 mm
5	2850 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19	13 1/8	6 1/2	11											21.0	1.90
3																												
4	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42
5	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42

STANDARD SIGN
D12-2B

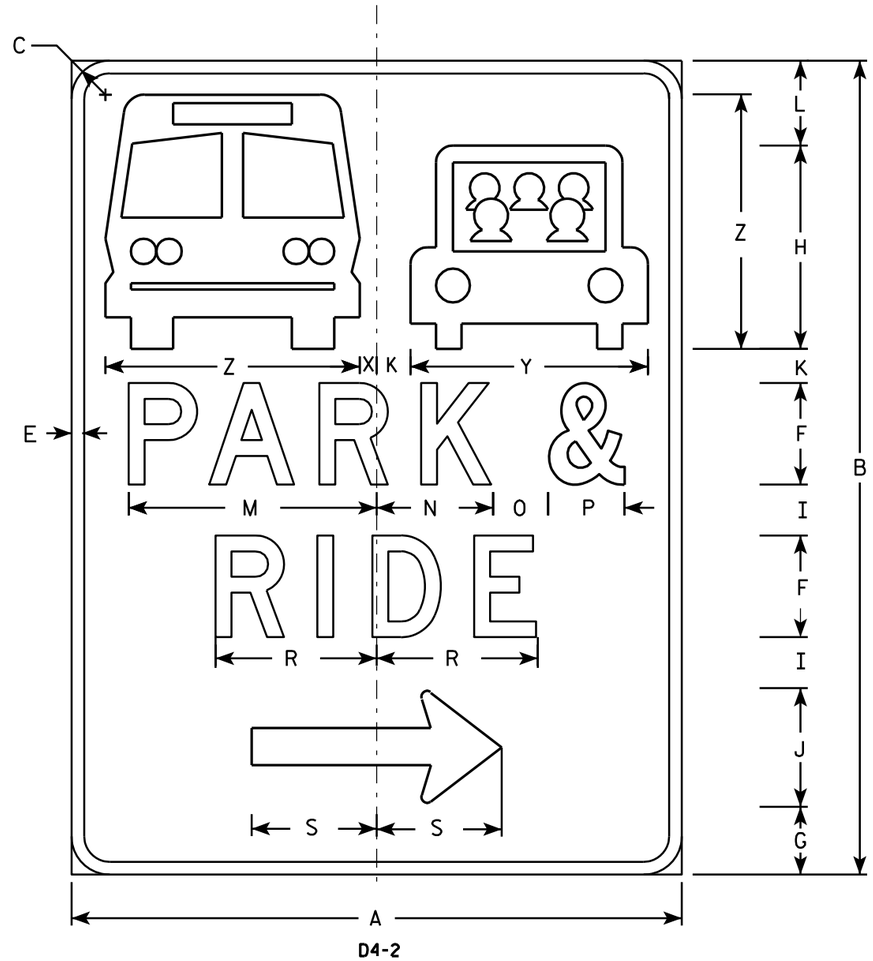
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/04/08 PLATE NO D12-2B.2

PROJECT NO:

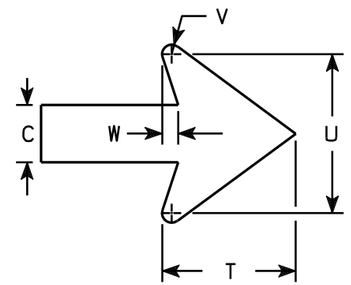
SHEET NO: 2247 E



D4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The D4-2L is the same as a D4-2R except the arrow is reversed.
6. The D4-2 sign may have either symbol or both symbols at the same time.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. D4-2.5

PROJECT NO:

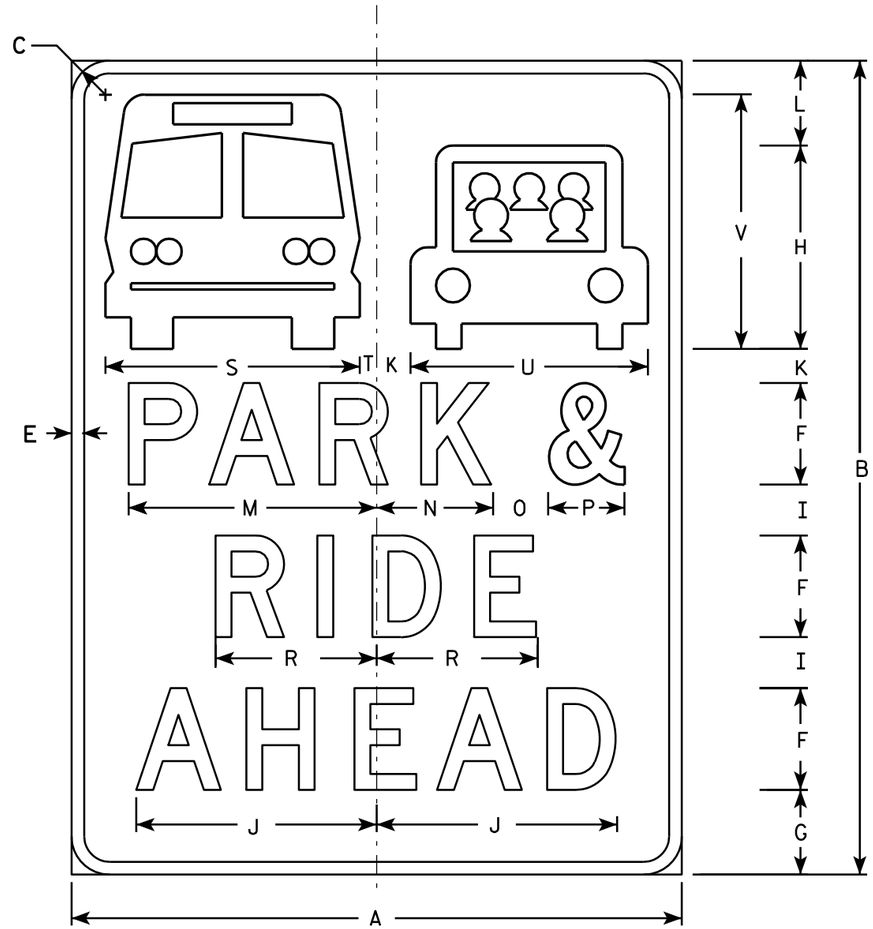
SHEET NO: 2248 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42.dgn PLOT DATE : 10-FEB-2011 14:21 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7



D4-2A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8		1/2	4	1 3/4	7 1/2	2	9 1/8	1 3/8	3 3/8	9 3/4	4 5/8	2 3/4	3		6 3/8	10	5/8	9 3/8	9 3/8					5.0
2	30	36	1 3/8		5/8	5	1 7/8	9	2	11 3/8	1 5/8	4 1/2	12 1/4	5 1/8	3 3/8	3 3/4		8	12 1/2	7/8	11 3/4	12					7.5
3	36	48	2 1/4		3/4	6	5	12	3	14 1/4	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	15	1	14	15					12.0
4																											
5																											

STANDARD SIGN
D4-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/30/10 PLATE NO. D4-2A.2

PROJECT NO:

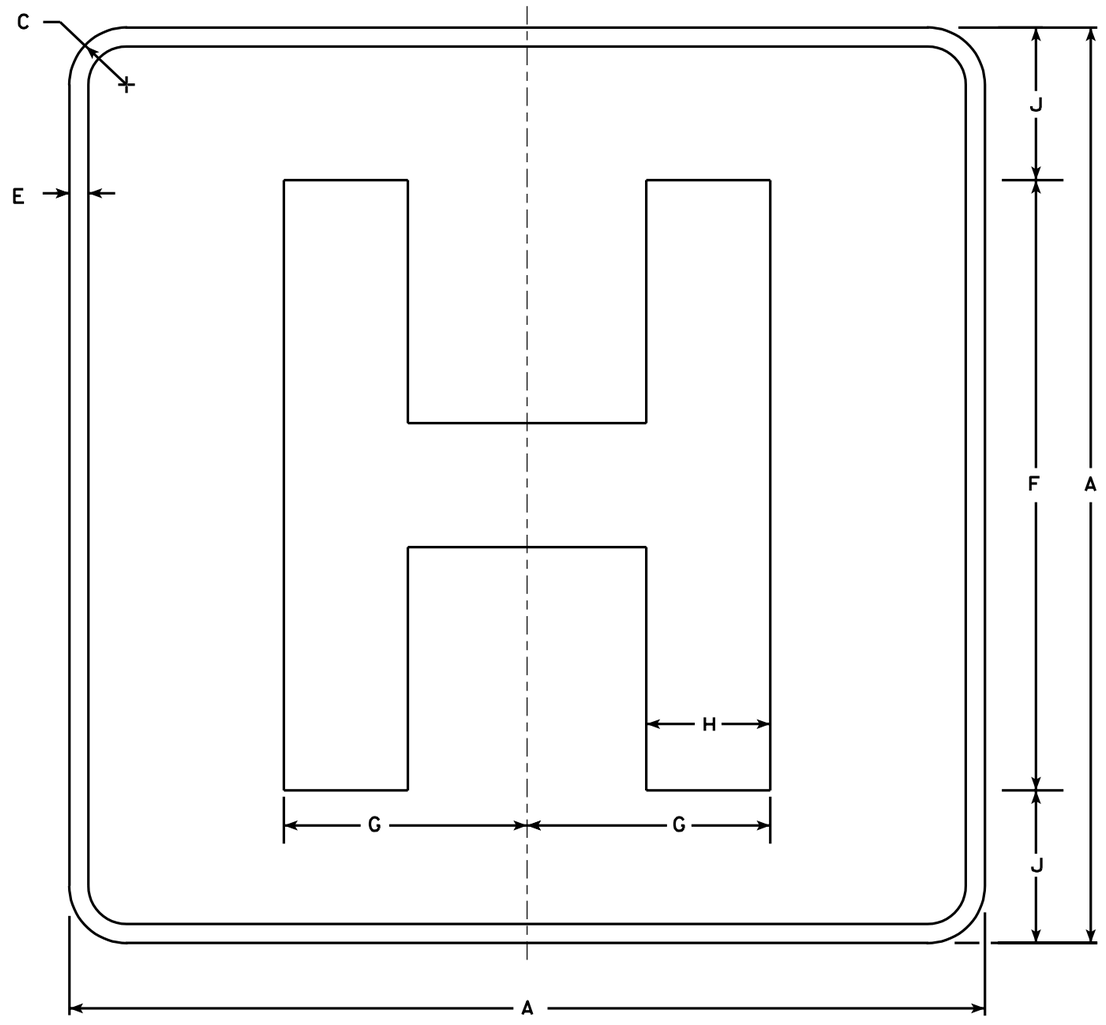
SHEET NO: 2249 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42A.dgn PLOT DATE : 30-DEC-2010 14:04 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

7



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - E Modified
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

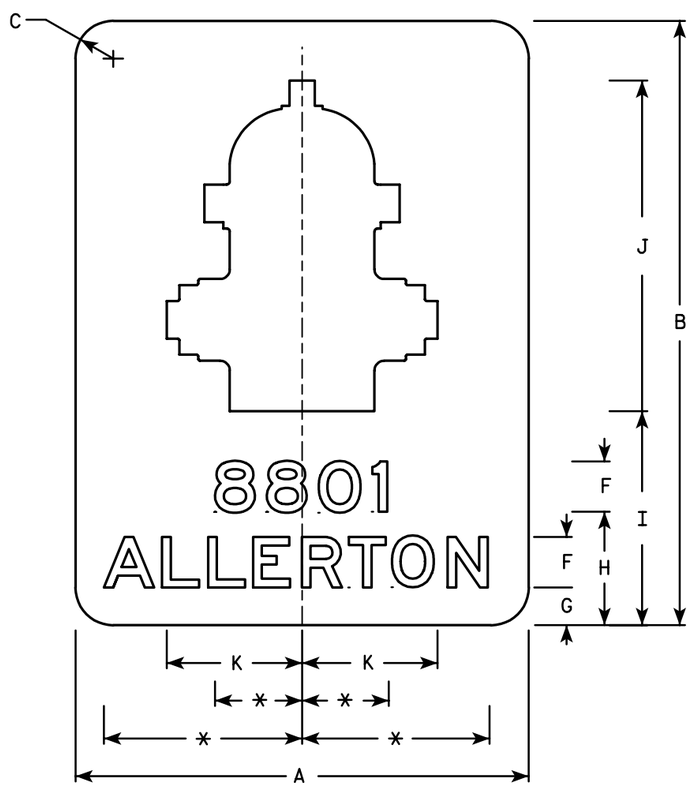
PROJECT NO:

SHEET NO: 2250 E

FILE NAME : C:\Users\Projects\tr_stdplate\D92.DGN PLOT DATE : 21-OCT-2005 10:28 PLOT BY : DOTSJA

WISDOT/CADDS SHEET 42

58,59,60,61,62,63



NOTES

1. Sign is Type II- Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - B thru E See Note 5
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. Select appropriate message series and adjust spacing to achieve proper balance. Each line is independent, therefore use the maximum series available while still fitting within physical limitations of sign.

ALLERTON 2" E
15 1/4

BRIARCLIFF 2" C
13 5/8

Metric equivalent for this sign is:

SIZE	
2	450 mm X 600 mm
3	
4	
5	

* See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq.ft.	Area m2
2	18	24	1 1/2			2	1 1/2	4 1/2	8 1/2	13 1/8	5 3/8																3.0	.28
3																												
4																												
5																												

STANDARD SIGN
D9-54

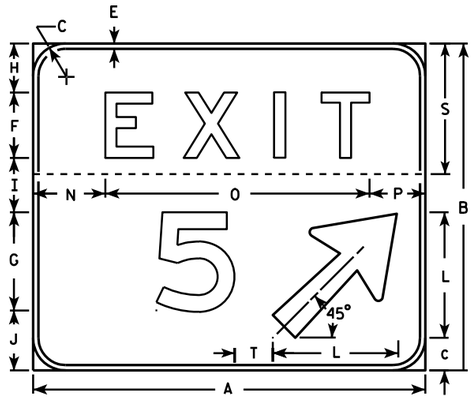
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

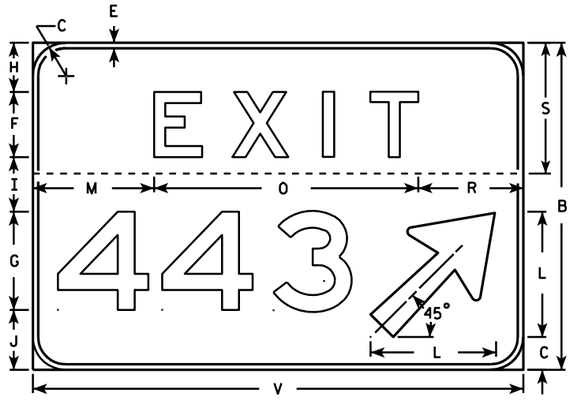
DATE 1/15/02 PLATE NO. D9-54.3

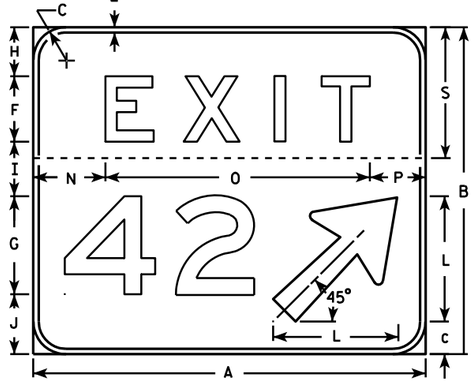
STATE PROJECT NUMBER: | SHEET NO: 2251 | E

LEVELS ON • 2.3.4.5.6. 10.
4.
7
7
FILE NAME : C:\Users\Projects\tr_stdplate\D954.DGN PLOT DATE : 22-JAN-2002 13:48 ORG DATE : 5/6/96 Originator : Don Kluever
WISDOT/CADDS SHEET 42

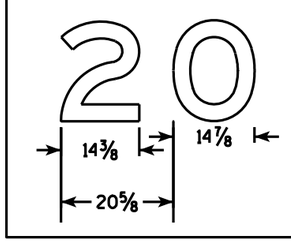


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





EXAMPLE FOR USING SPACING CHART



NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

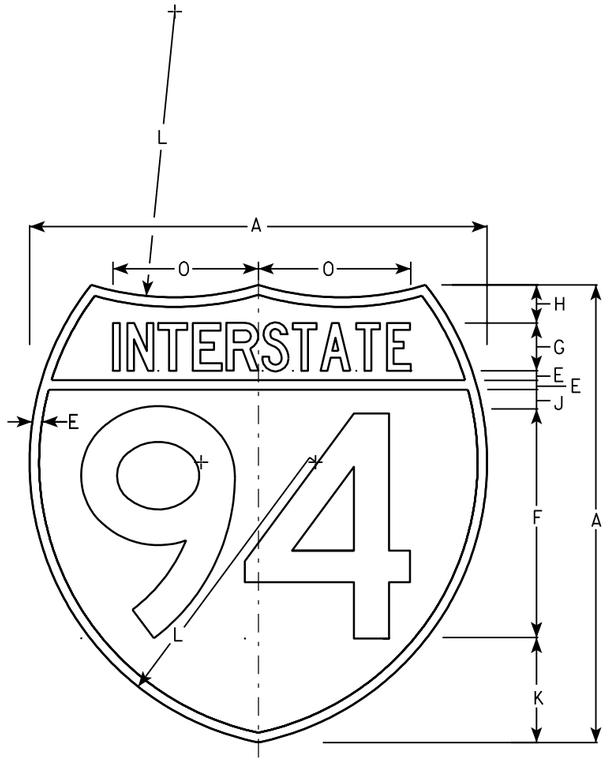
STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

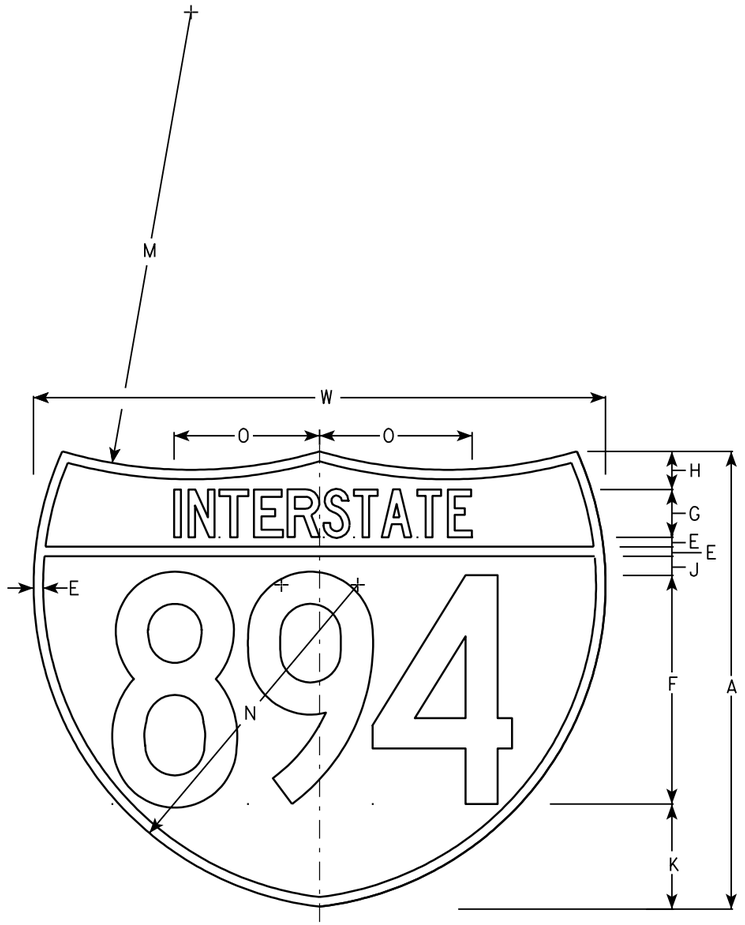
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2252 | E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

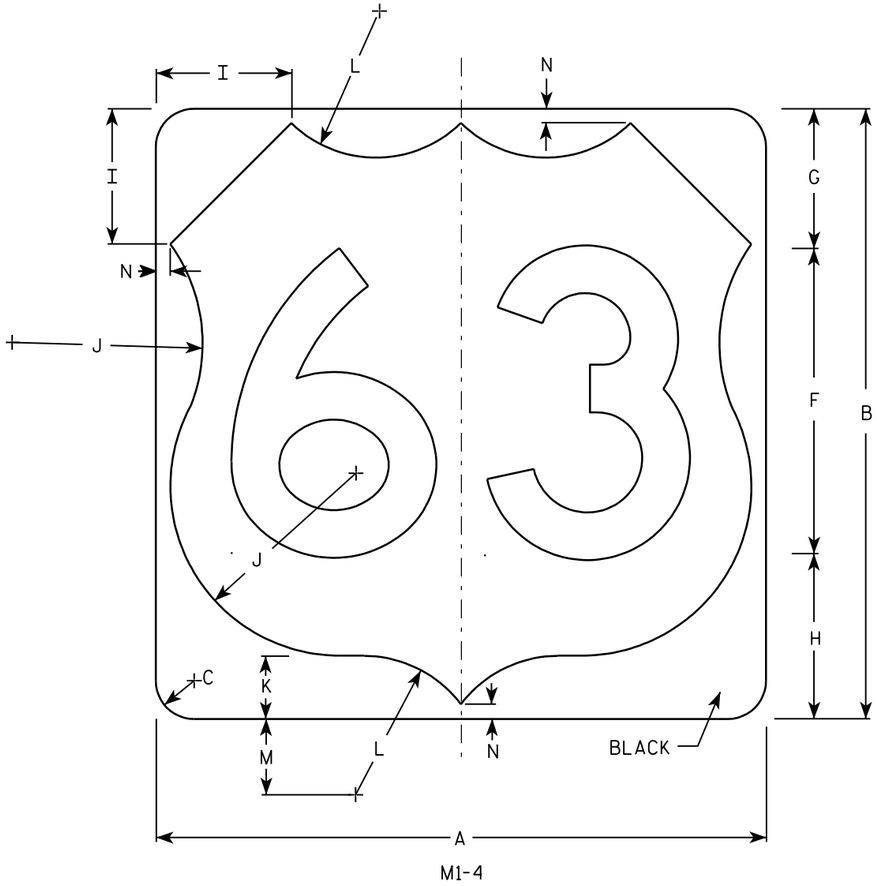
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

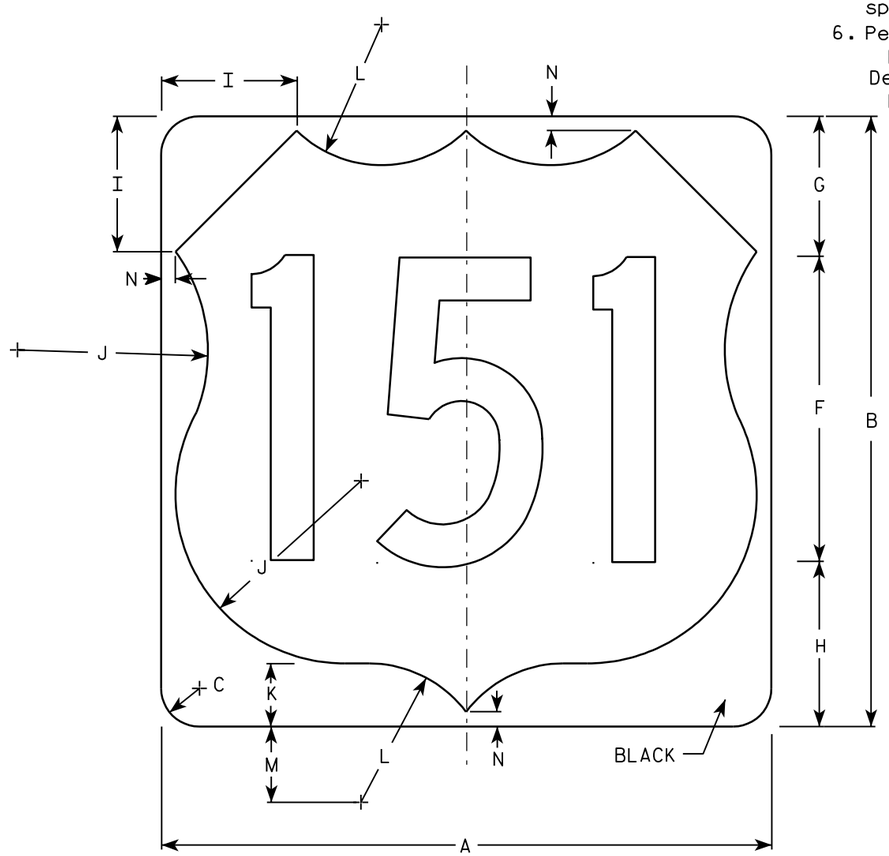
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2253	E



M1-4



M1-4

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

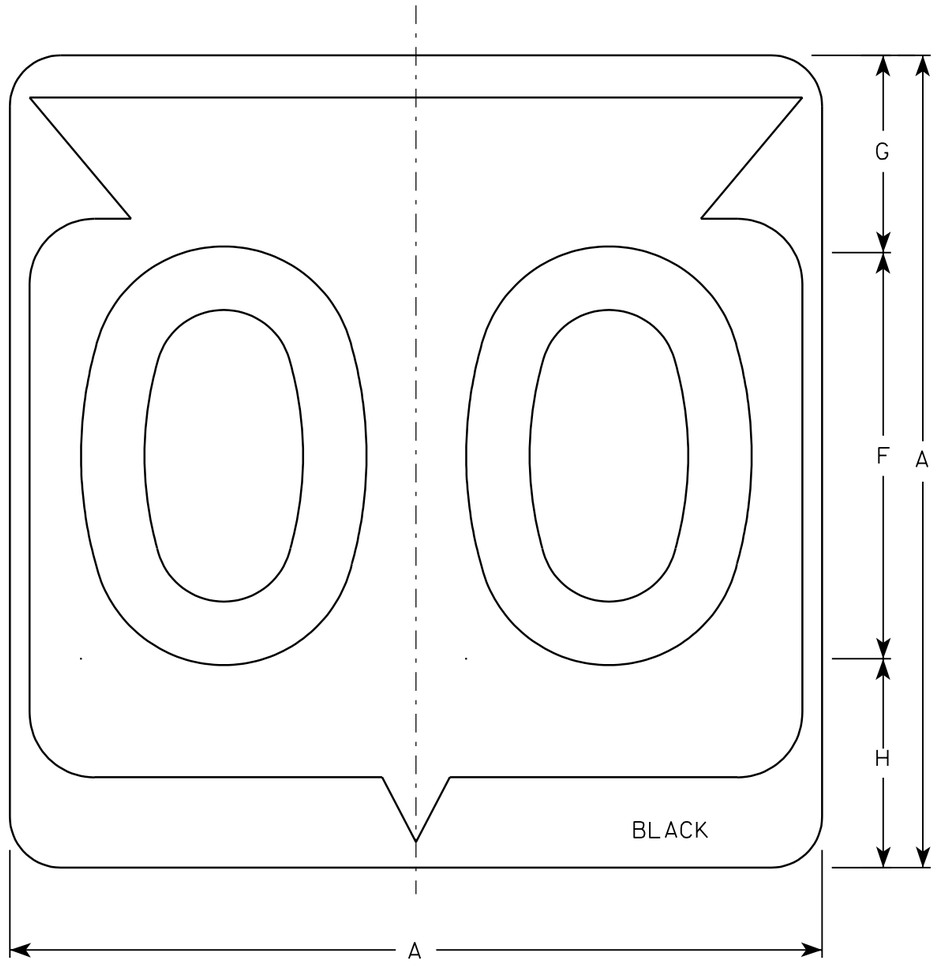
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

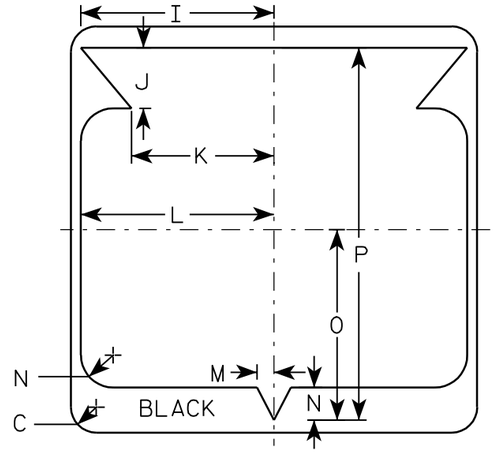
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2254 | E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

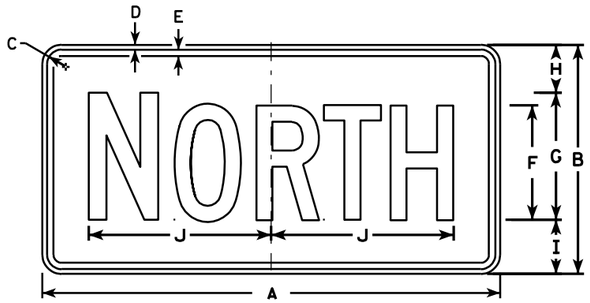
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

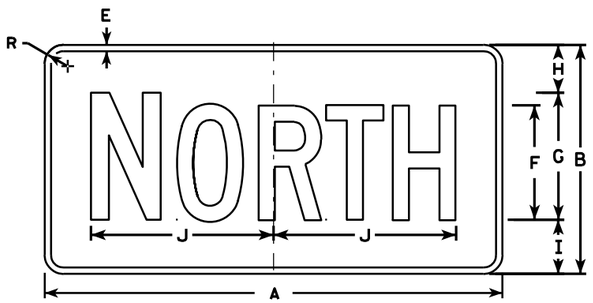
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

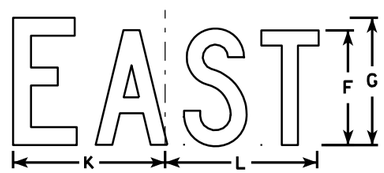
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2255	E



M3-1
MK3-1
MO3-1



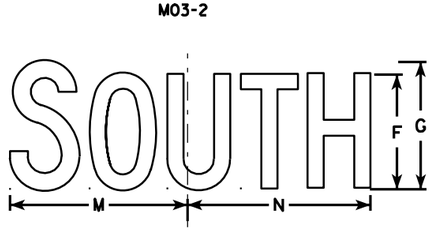
MB3-1
MG3-1
MM3-1
MN3-1



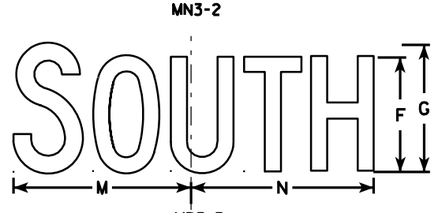
M3-2
MK3-2
MO3-2



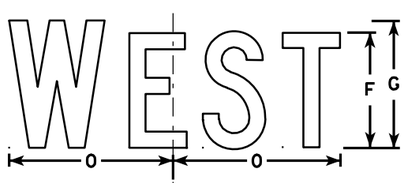
MB3-2
MG3-2
MM3-2
MN3-2



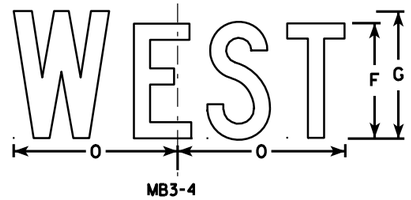
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

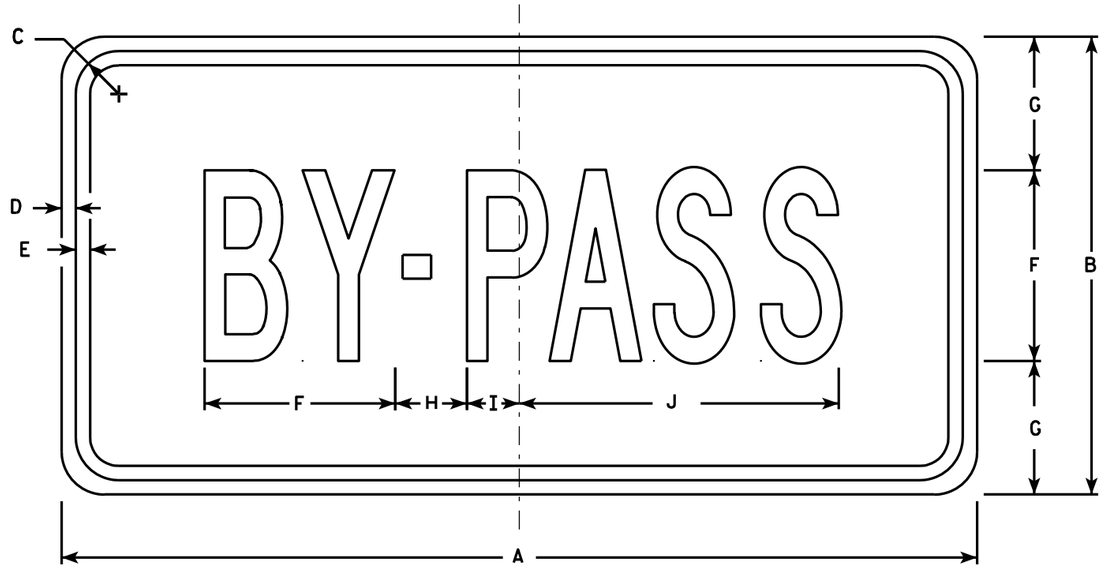
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

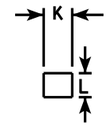
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2256	E



M4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Hyphen

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	5	3 1/2	1 7/8	1 3/8	8 3/8	3/4	5/8															2.0
3	36	18	1 1/8	3/8	1/2	8	5	5 3/8	1 1/8	14 5/8	1 1/4	1															4.5
4																											
5																											

STANDARD SIGN
M4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-2.4

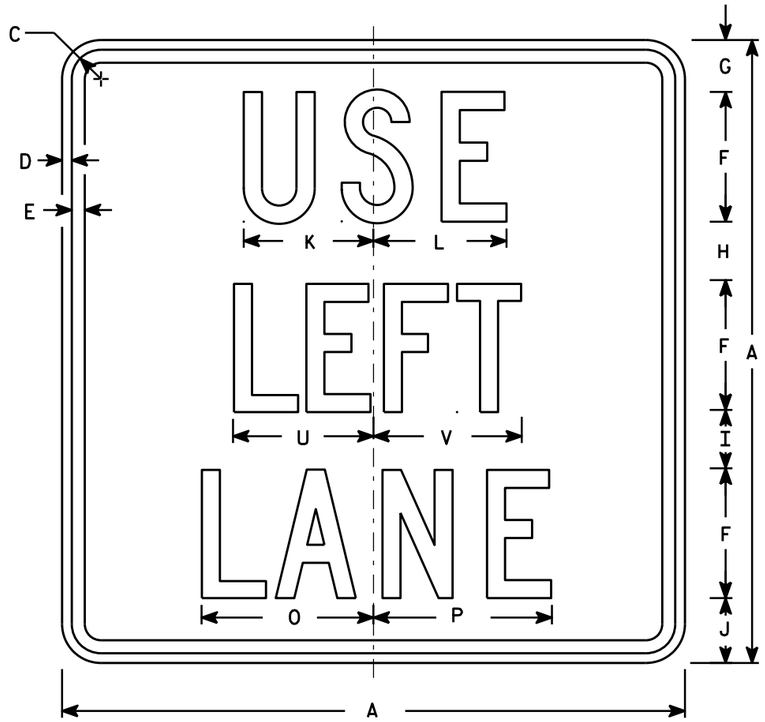
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2257	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M42.DGN PLOT DATE : 10-NOV-2010 10:33 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 3.972696:1.000000

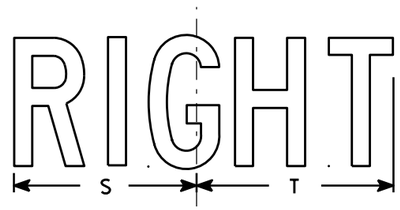
WISDOT/CADDS SHEET 42

7

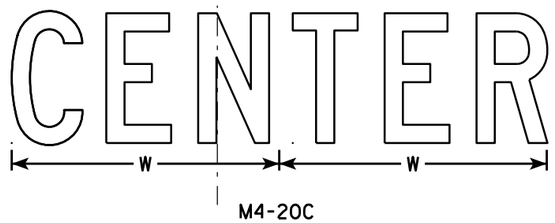
7



M4-20L
MB4-20L
MG4-20L
MK4-20L
MM4-20L
MN4-20L
M04-20L
MP4-20L
MR4-20L



M4-20R
MB4-20R
MG4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R



M4-20C
MB4-20C
MG4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

NOTES

1. Sign is Type II - see Note 5
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White - Type H Reflective
   Message - Black
   MB4-20 Background - Blue - Type H Reflective
   Message - White Type H Reflective
   MG4-20 Background - Green - Type H Reflective
   Message - White Type H Reflective
   MK4-20 Background - Green - Type H Reflective
   Message - White Type H Reflective
   MM4-20 Background - White - Type H Reflective
   Message - Green
   MN4-20 Background - Brown
   Message - White Type H Reflective
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White - Type H Reflective
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow - Type H Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8			6 5/8	6 7/8			7	7 5/8	5 3/8	5 3/4	10 1/4				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4			9 7/8	10 1/4			10 3/8	11 3/8	8	8 5/8	14 3/8				9.0
4																											
5																											

STANDARD SIGN
M4-20

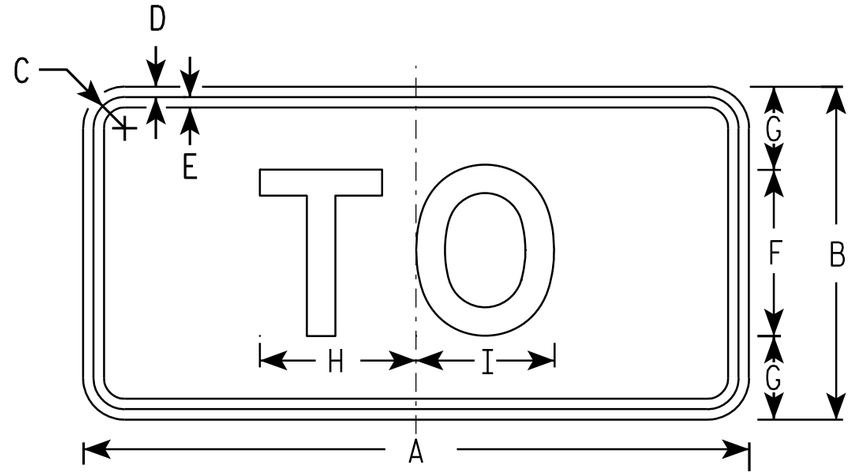
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

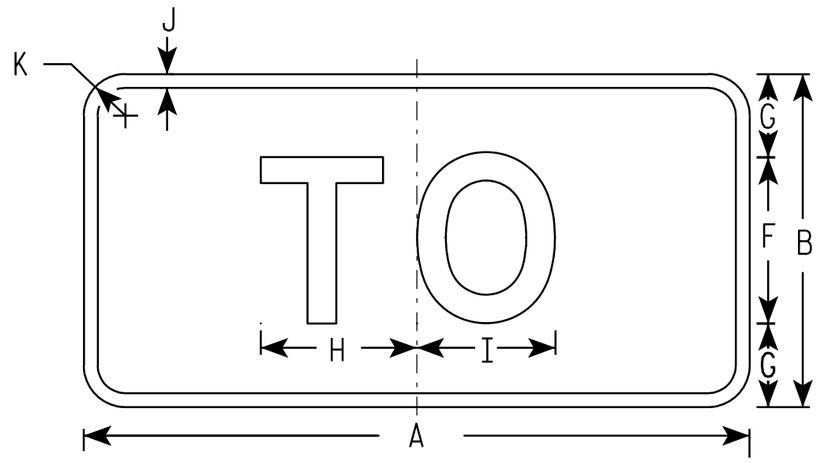
DATE 2/20/14 PLATE NO M4-20.3

2258

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-5
MK4-5
MM4-5



MB4-5
MG4-5
MN4-5

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB4-5 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG4-5 Background - Green
   Message - White - Type H Reflective
   MK4-5 Background - Green
   Message - White - Type H Reflective
   MM4-5 Background - White - Type H Reflective
   Message - Green
   MN4-5 Background - Brown
   Message - White - Type H Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

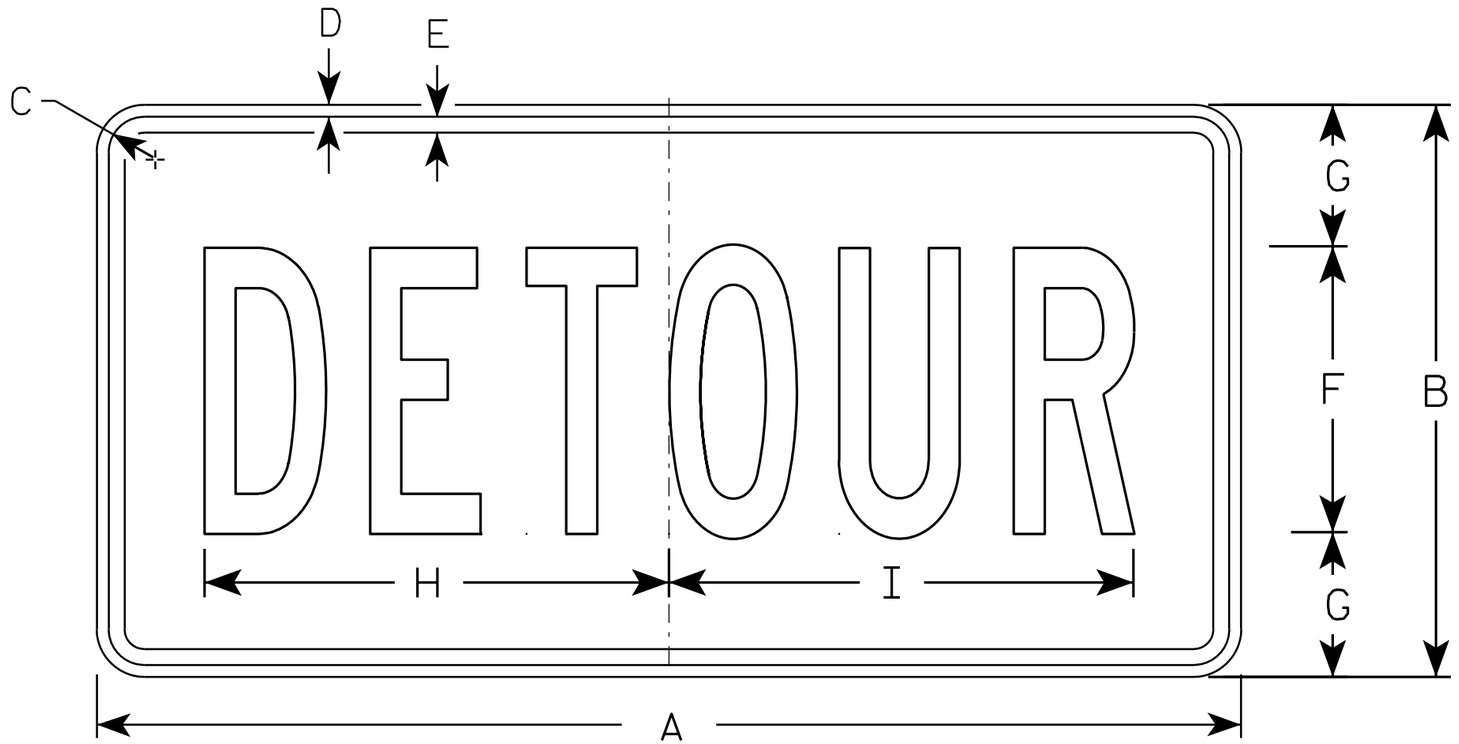
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2259	E



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

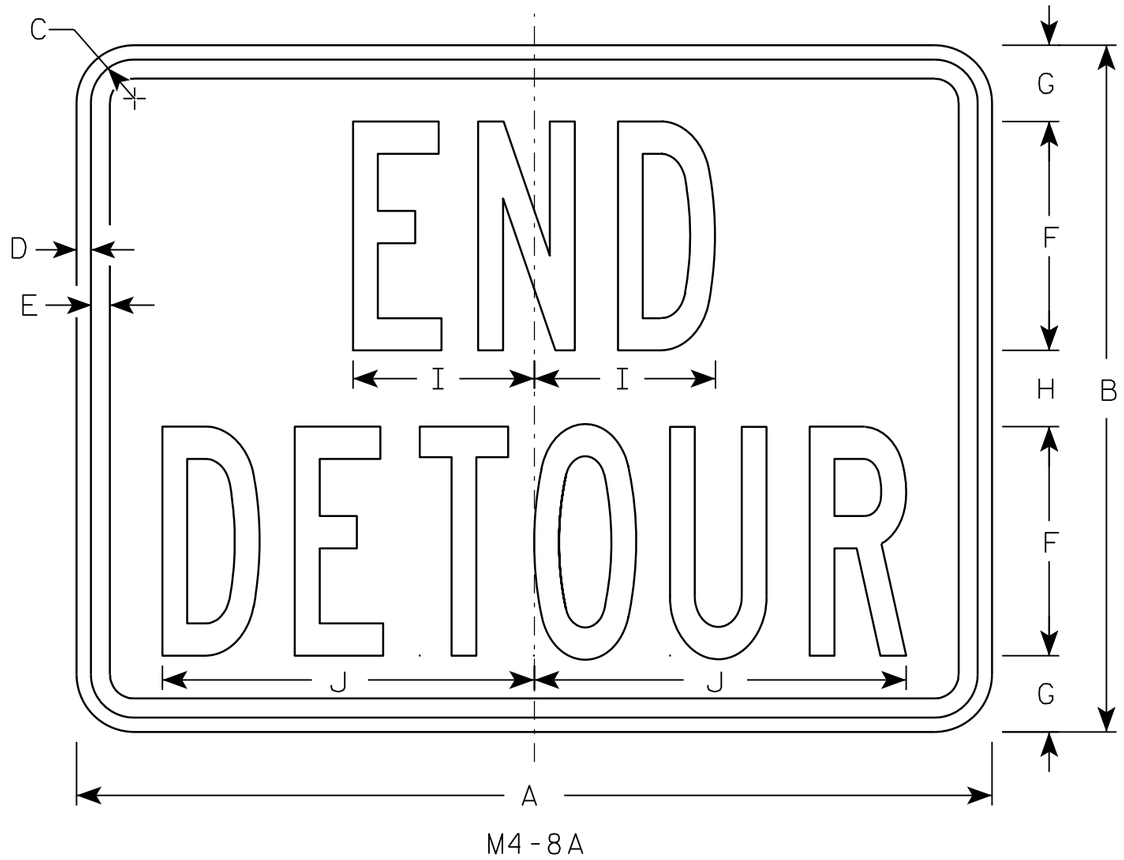
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2260	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

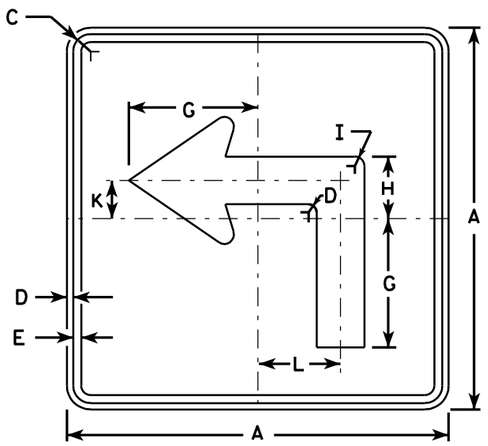
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

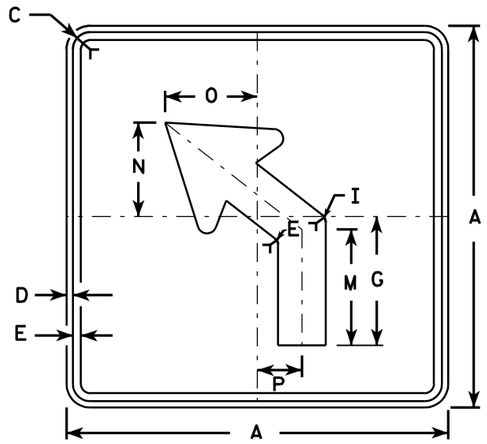
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

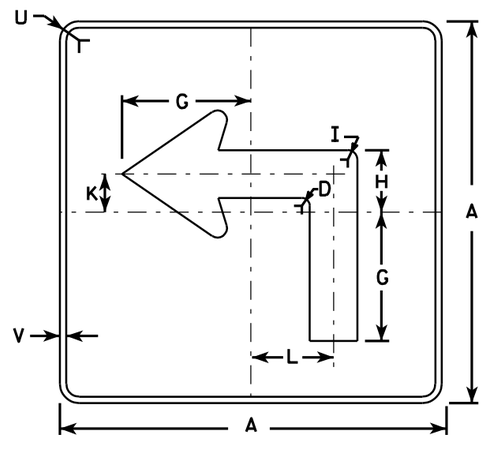
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2261	E



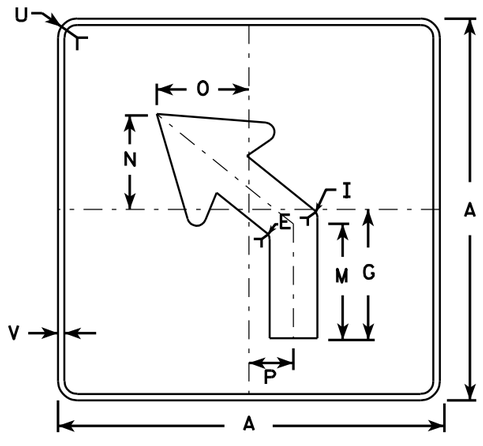
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



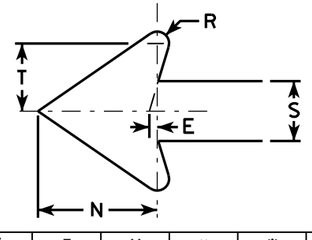
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

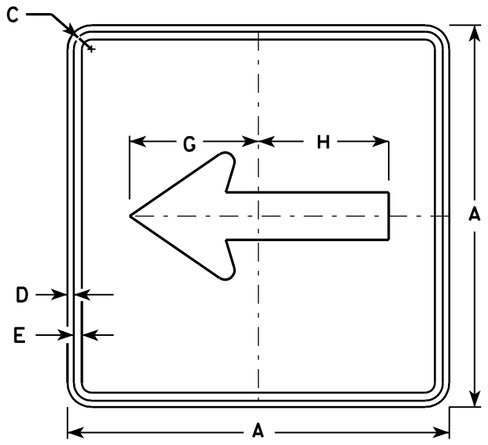
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

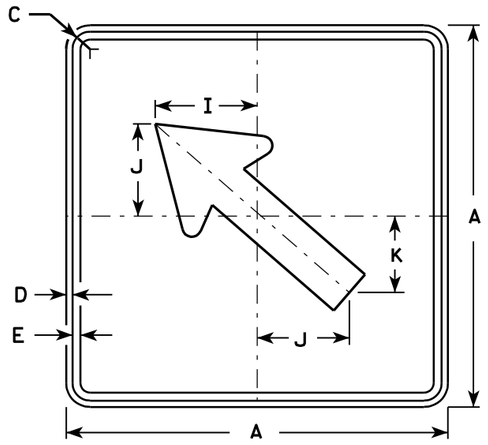
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

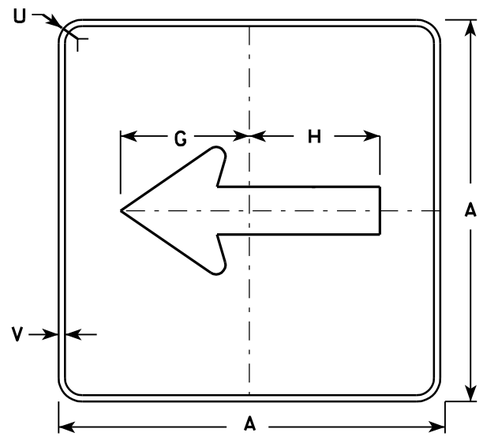
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2262	E



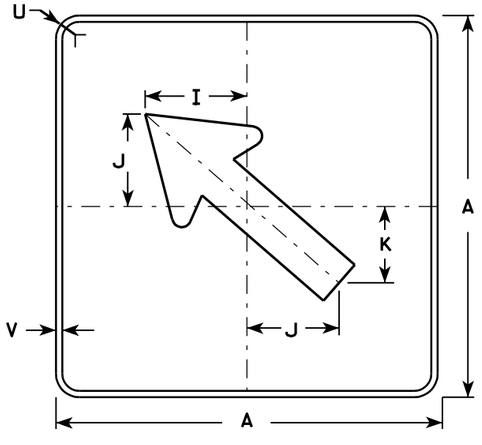
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

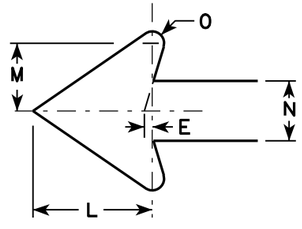
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

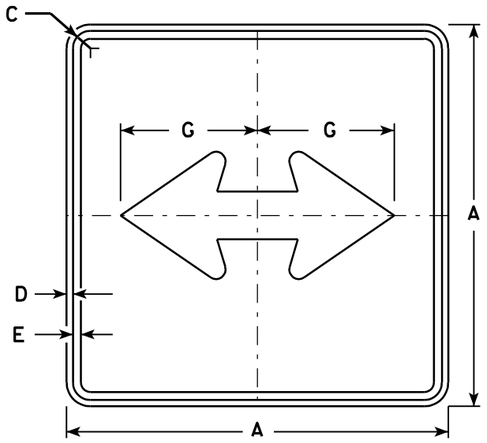
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

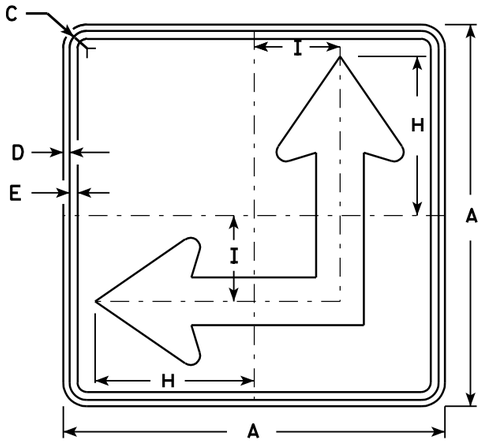
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

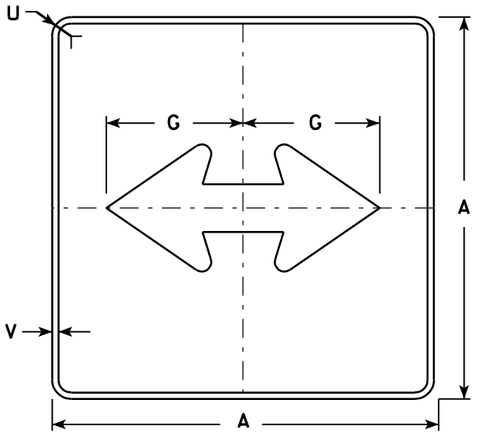
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2263	E



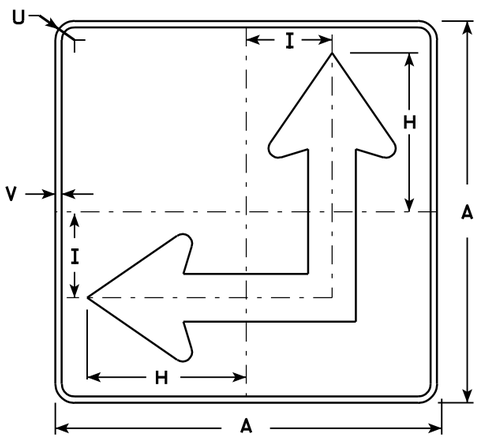
M6-4
MK6-4
MM6-4
MO6-4
MP6-4
MR6-4



M6-6
MK6-6
MM6-6
MO6-6
MP6-6
MR6-6



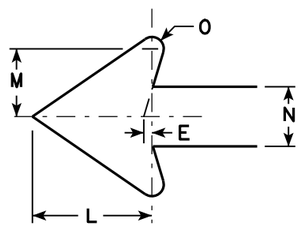
MB6-4
MG6-4
MN6-4



MB6-6
MG6-6
MN6-6

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White - Type H Reflective
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White - Type H Reflective
   MG6-4 and MG6-6 Background - Green
   Message - White - Type H Reflective
   MK6-4 and MK6-6 Background - Green
   Message - White - Type H Reflective
   MM6-4 and MM6-6 Background - White - Type H Reflective
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White - Type H Reflective
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White - Type H Reflective
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow - Type H Reflective
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

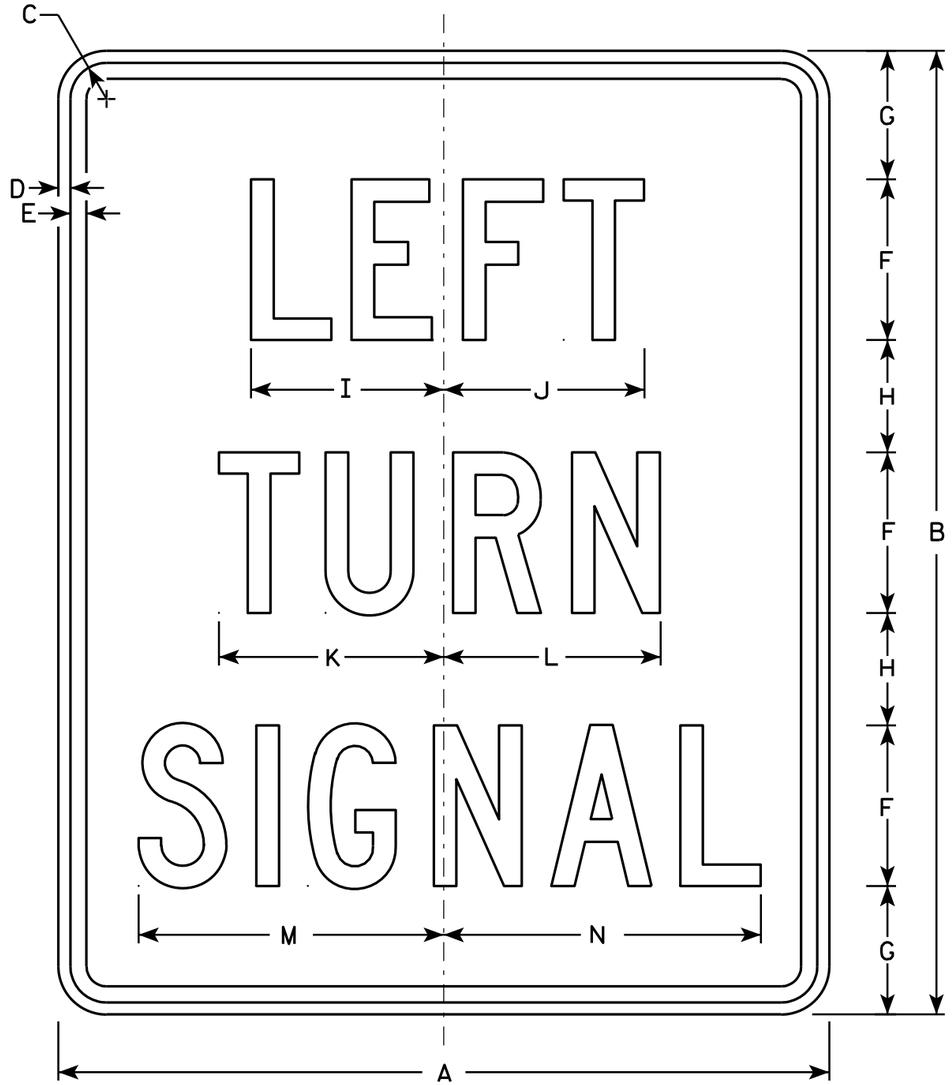
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-4.8

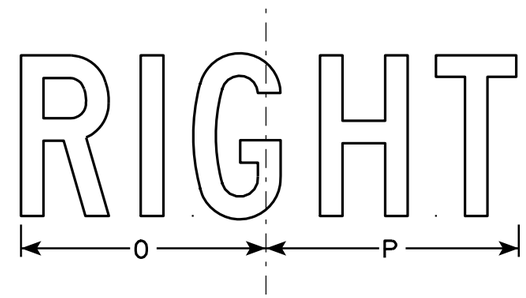
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2264 | E



R10-10L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R10-10R is identical to R10-10L except RIGHT replaces LEFT.



R10-10R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8											5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8											5.0
3																											
4																											
5																											

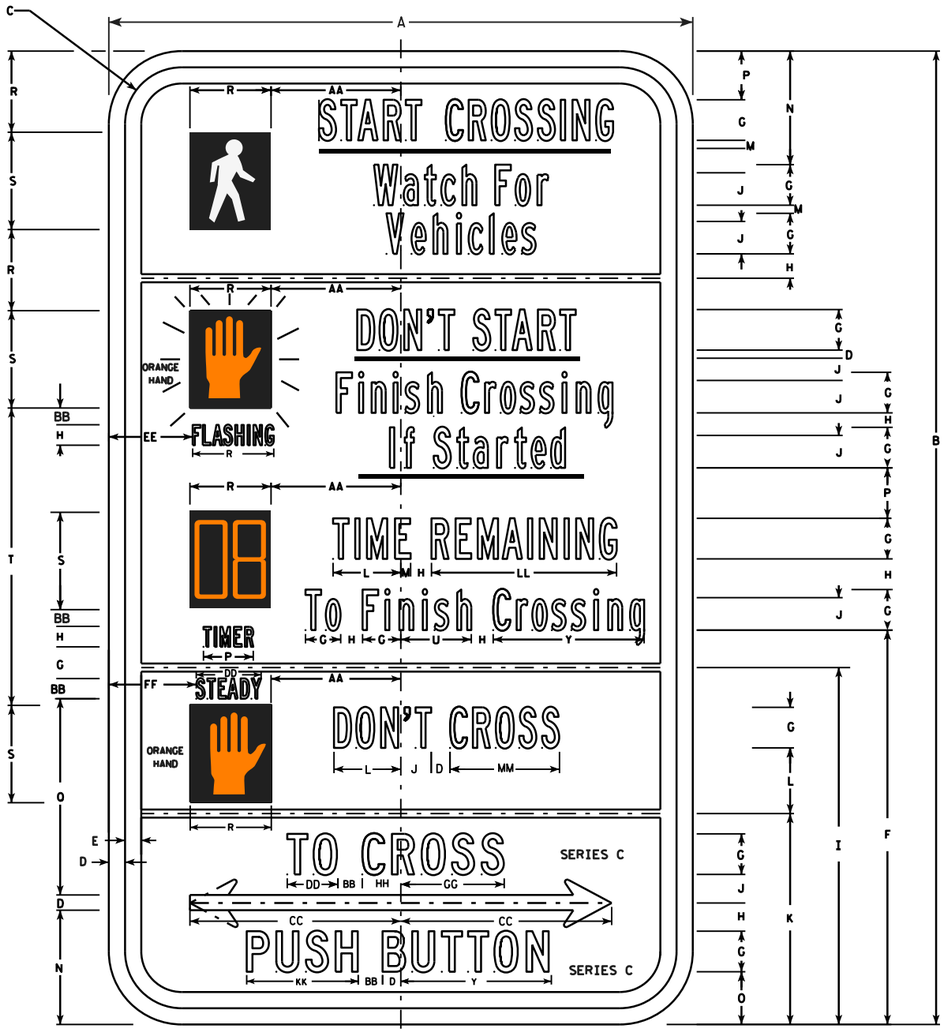
STANDARD SIGN
R10-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-10.6

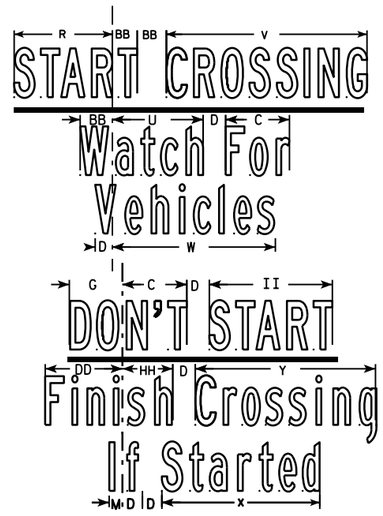
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2265	E



R10-3E

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK except Hand Symbol which is Orange with black background.
3. Message Series - B or as noted on the sign.
4. R10-3ER (right arrow)
   R10-3EL (left arrow)
   R10-3ED (double arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	6	10	1/2	1/8	1/8	4	3/8	1/4	4 1/8	1/4	2 1/8	3/4	1/8	1 1/8	1/2	1/2	2 1/4	7/8	1	3	3/4	1 3/4	1 5/8	1 3/8	1 1/2	5/8	0.42
2S	9	15	7/8	1/4	1/4	6 1/8	5/8	3/8	5 1/2	1/2	3 1/4	1	1/8	1 3/4	7/8	3/4	3	1 1/4	1 1/2	4 5/8	1 1/8	2 5/8	2 1/8	2	2 3/8	1 3/8	0.94
2M	9	15	7/8	1/4	1/4	6 1/8	5/8	3/8	5 1/2	1/2	3 1/4	1	1/8	1 3/4	7/8	3/4	3	1 1/4	1 1/2	4 5/8	1 1/8	2 5/8	2 1/8	2	2 3/8	1 3/8	0.94
3																											
4																											

SIZE	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	Area sq. ft.
1	1 3/8	1/4	2 1/4	1/2	7/8	7/8	1 1/8	3/8	1	1/2	1 1/8	1 7/8	1 1/8														
2S	2	3/8	3 1/4	1	1 1/4	1 3/8	1 5/8	5/8	1 5/8	3/4	1 3/4	2 7/8	1 5/8														
2M	2	3/8	3 1/4	1	1 1/4	1 3/8	1 5/8	5/8	1 5/8	3/4	1 3/4	2 7/8	1 5/8														
3																											
4																											

STANDARD SIGN
R10-3EL,R,D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

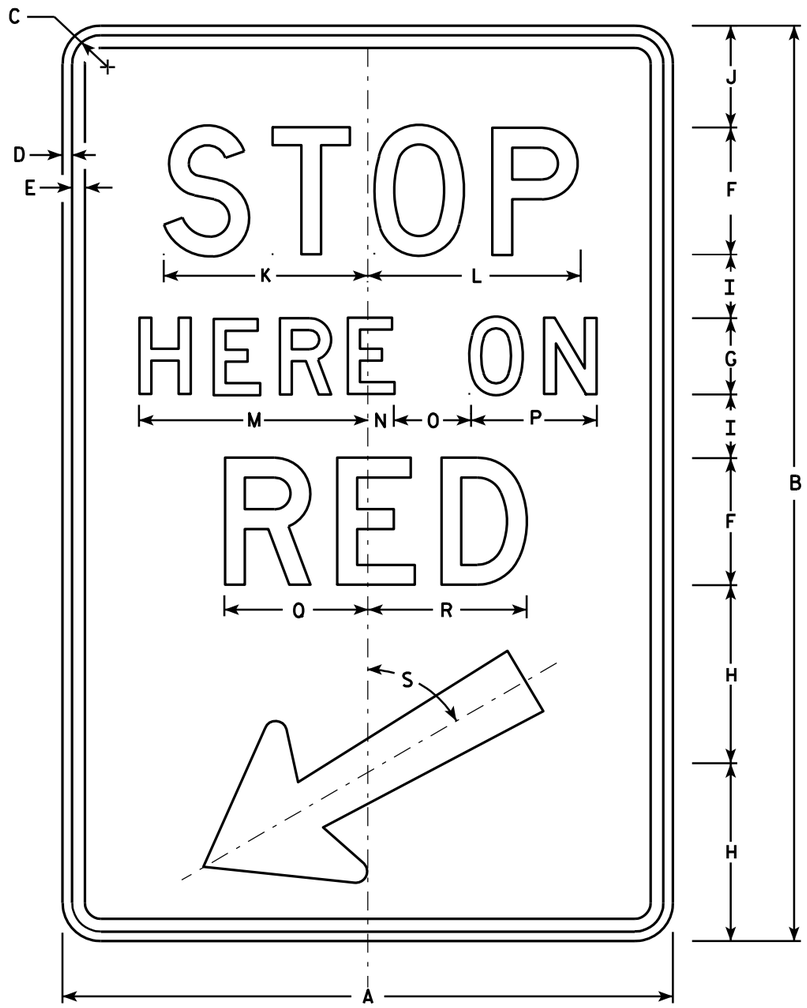
DATE 4/12/2011 PLATE R10-3E.2

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R103E.DGN PLOT DATE : 09-APR-2014 11:22 PLOT BY : mscsja

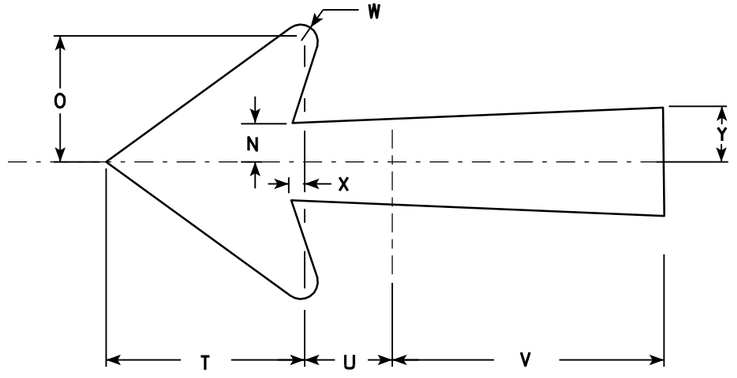
WISDOT/CADDS SHEET 42



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

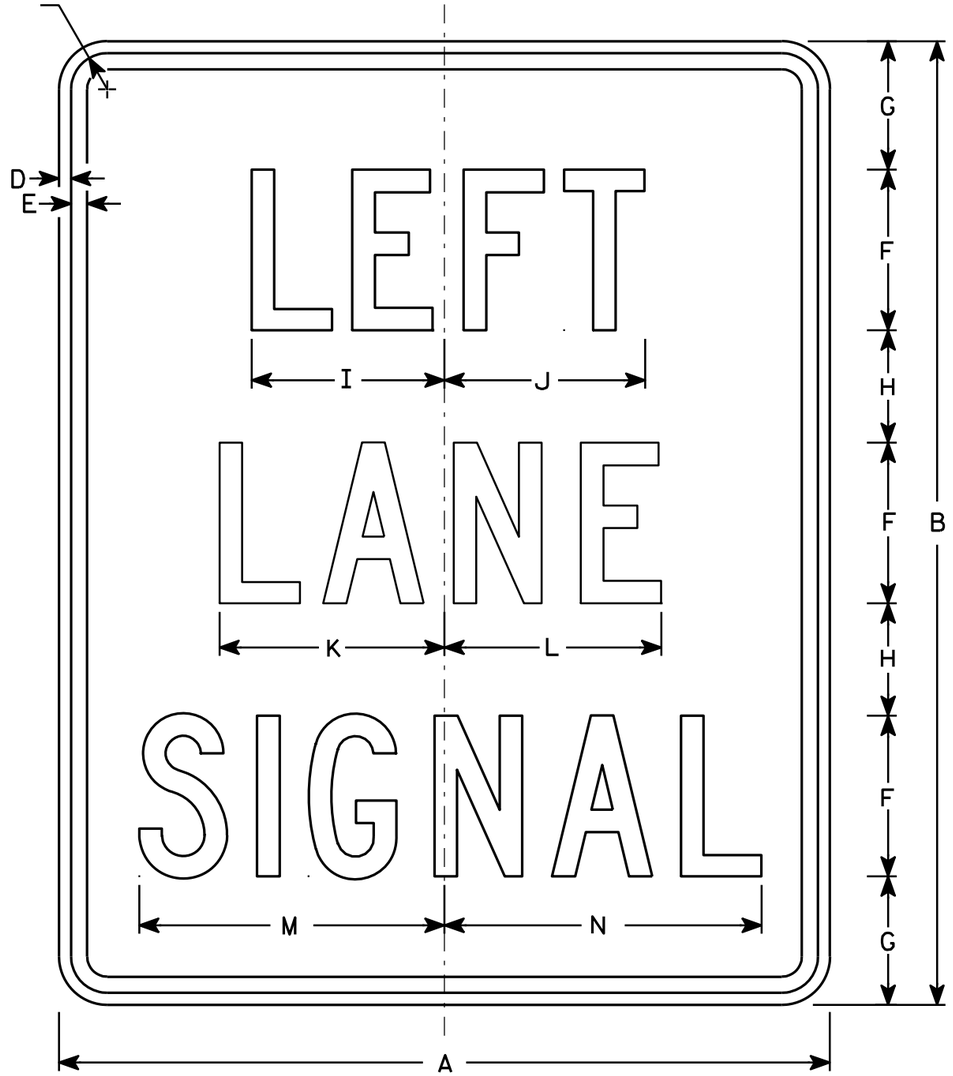
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2267	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN PLOT DATE : 05-APR-2011 09:50 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

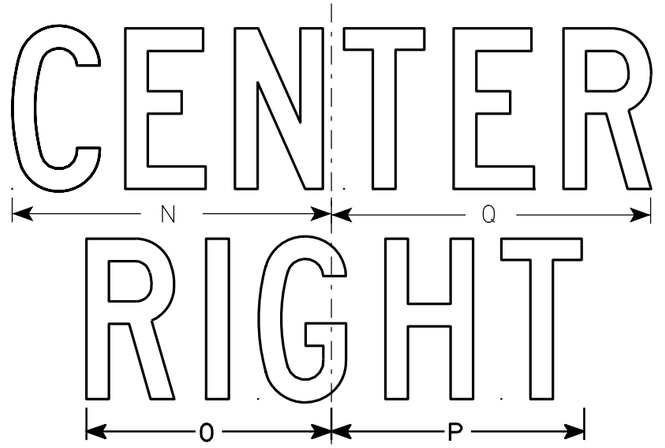
7



R10-65L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R10-65C

R10-65R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
3																											
4																											
5																											

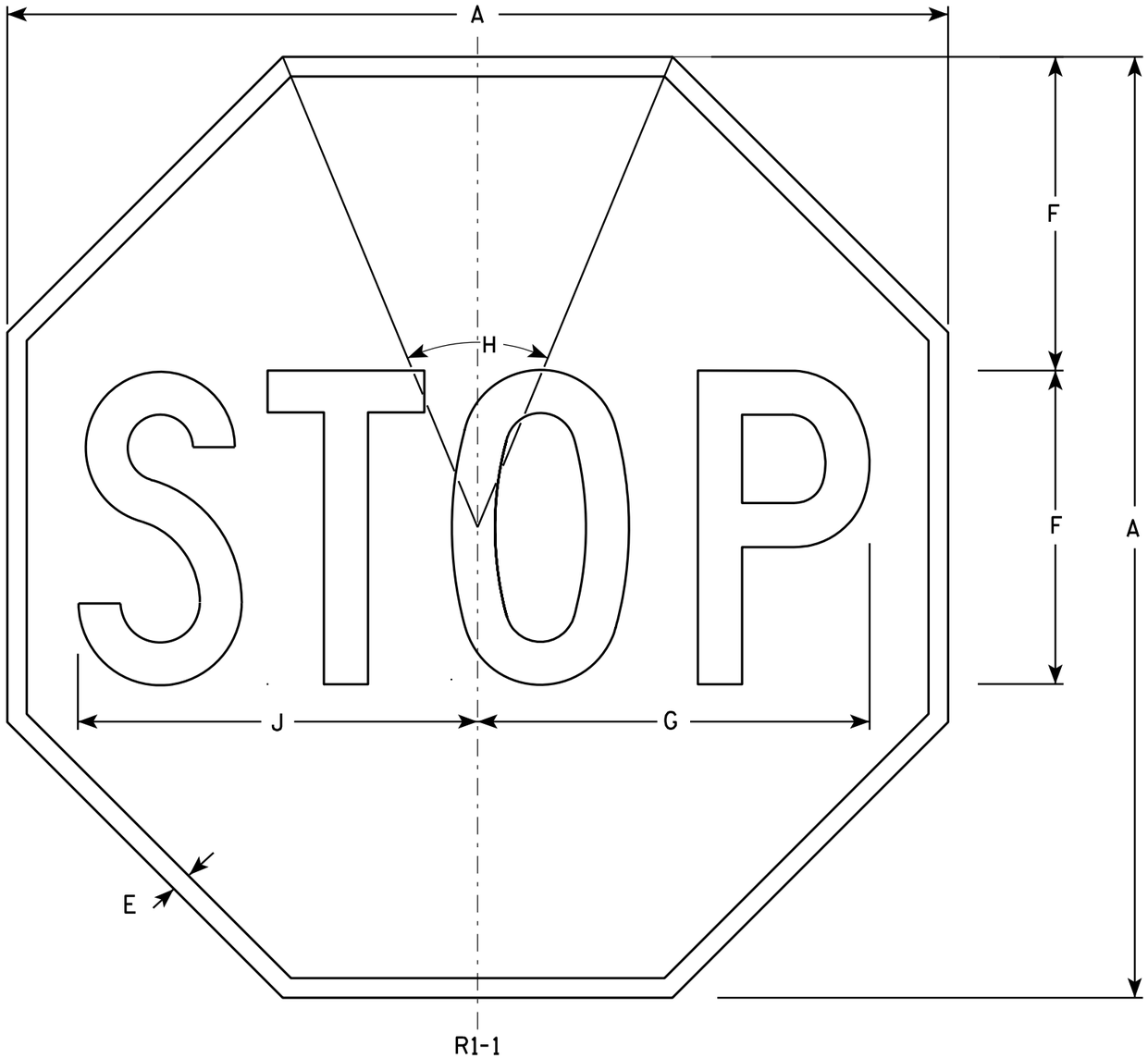
STANDARD SIGN
R10-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-65.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2268 | E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

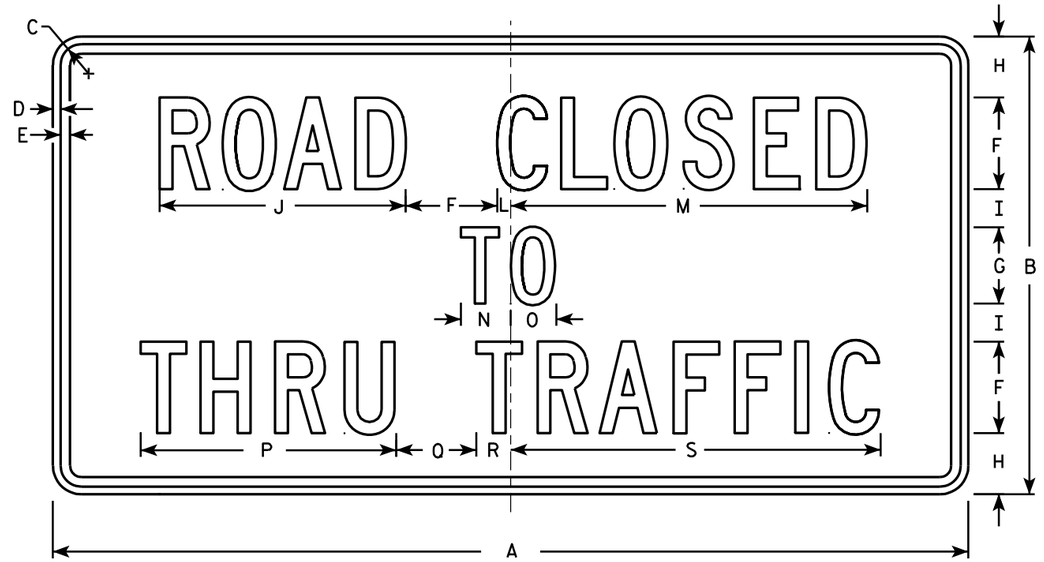
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2269	E



R11-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

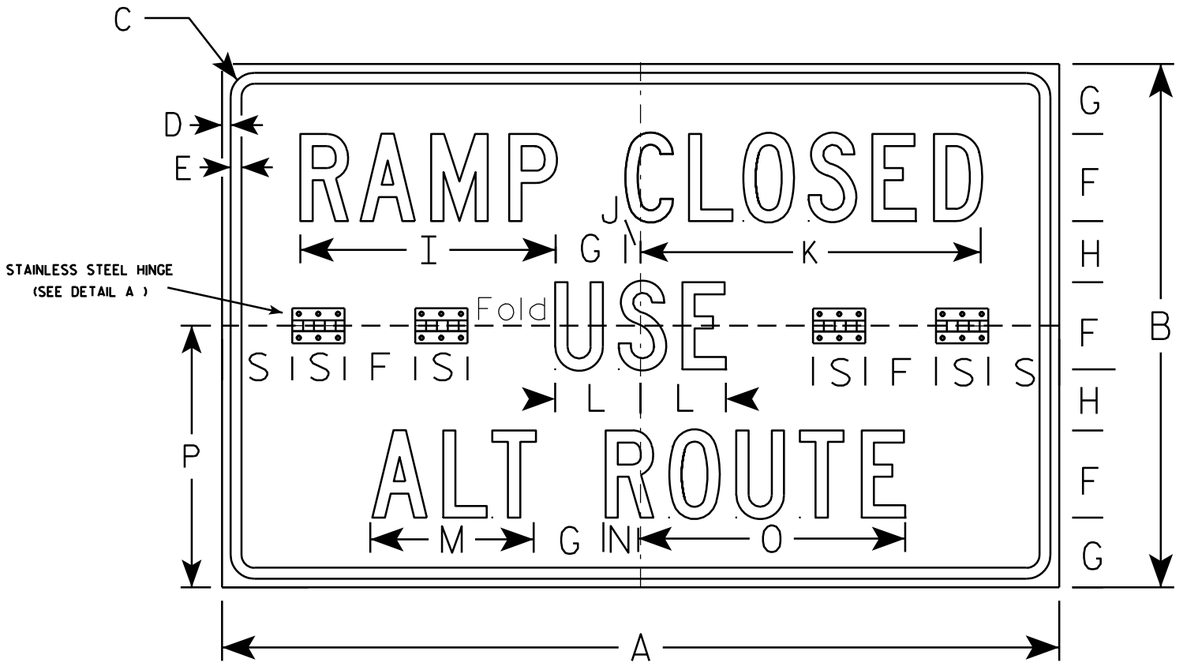
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

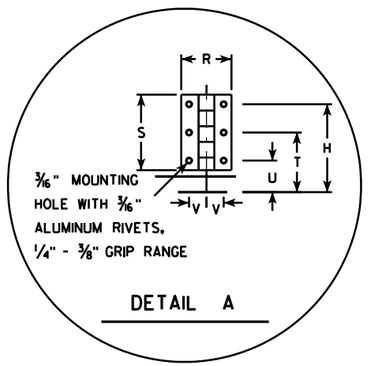
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

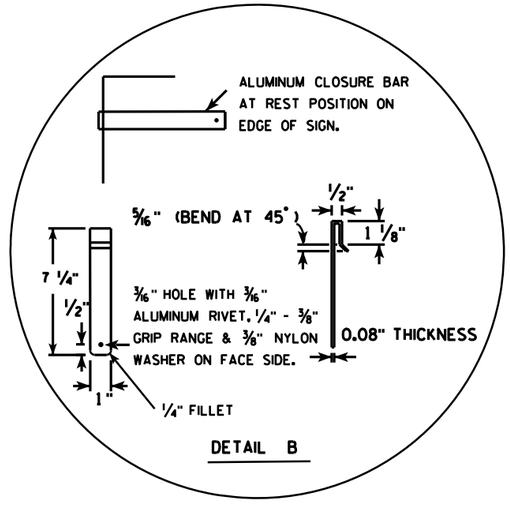
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2270 | E



R11-54F



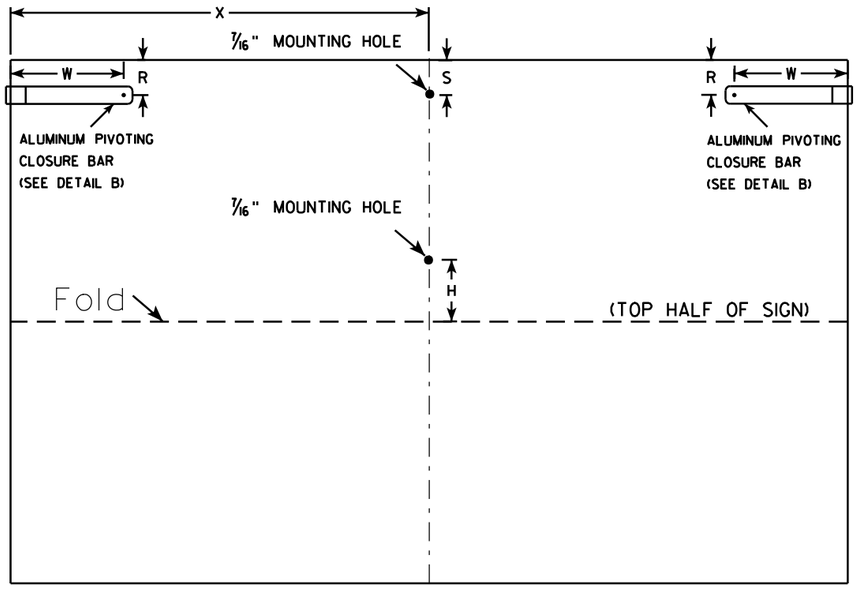
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



(BACK VIEW)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

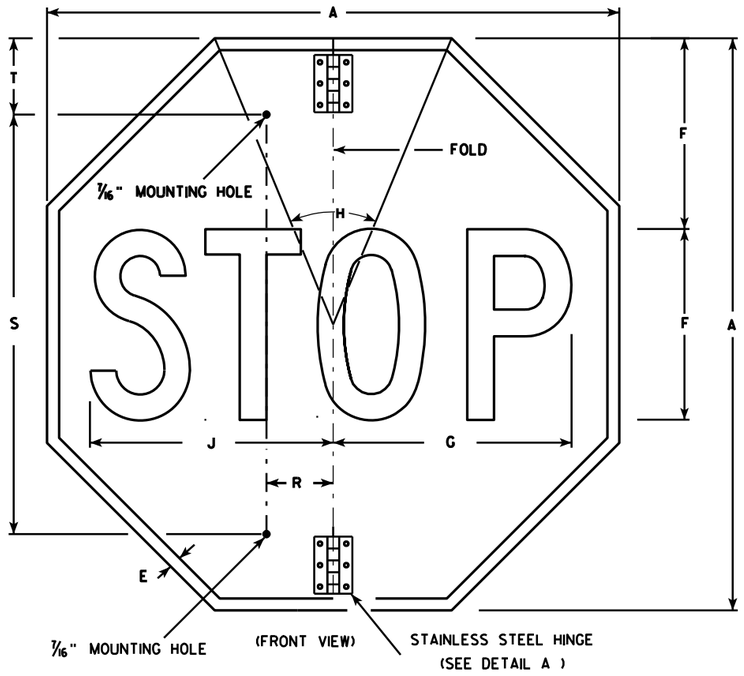
STANDARD SIGN
R11-54F

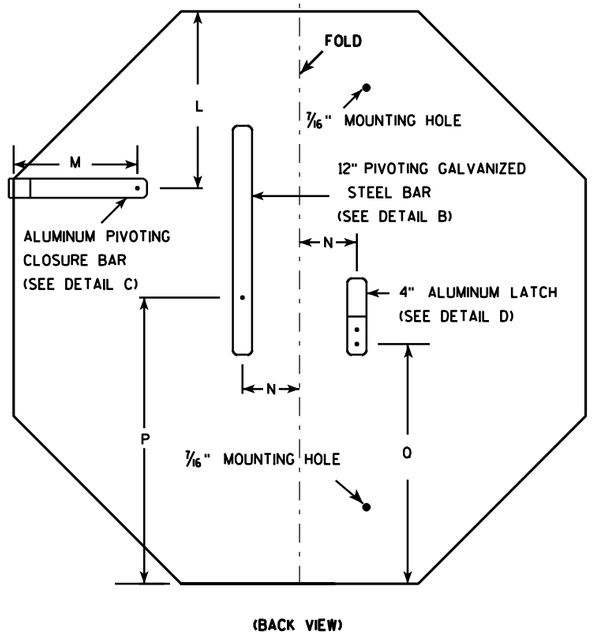
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-54F.2

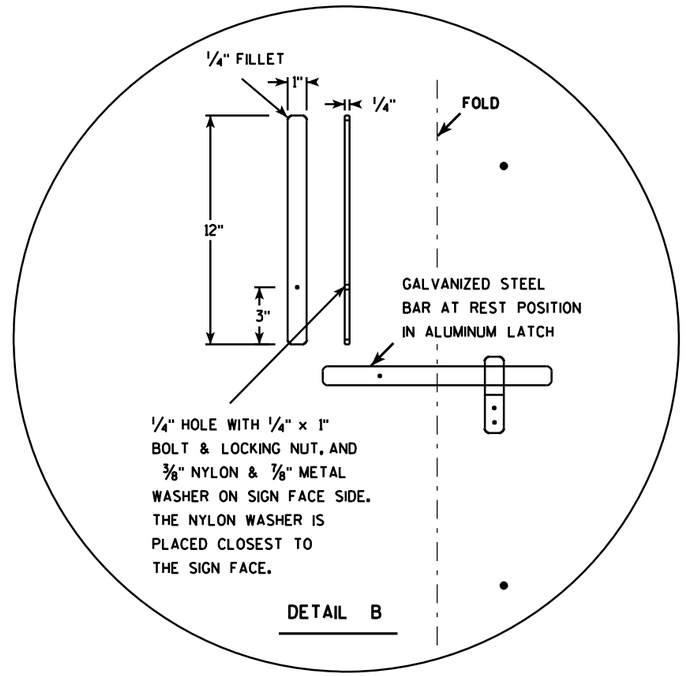
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2271	E

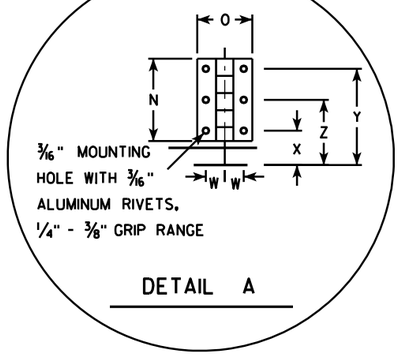


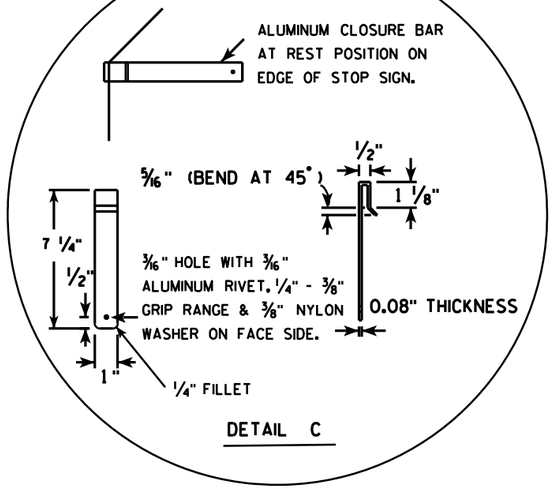


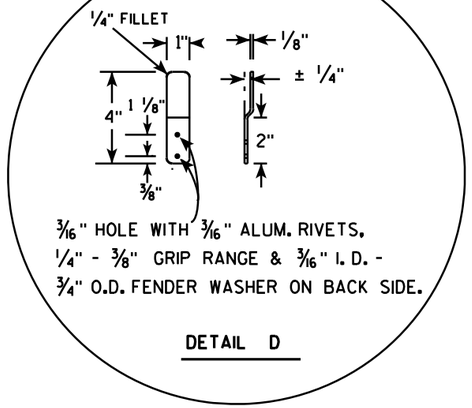
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

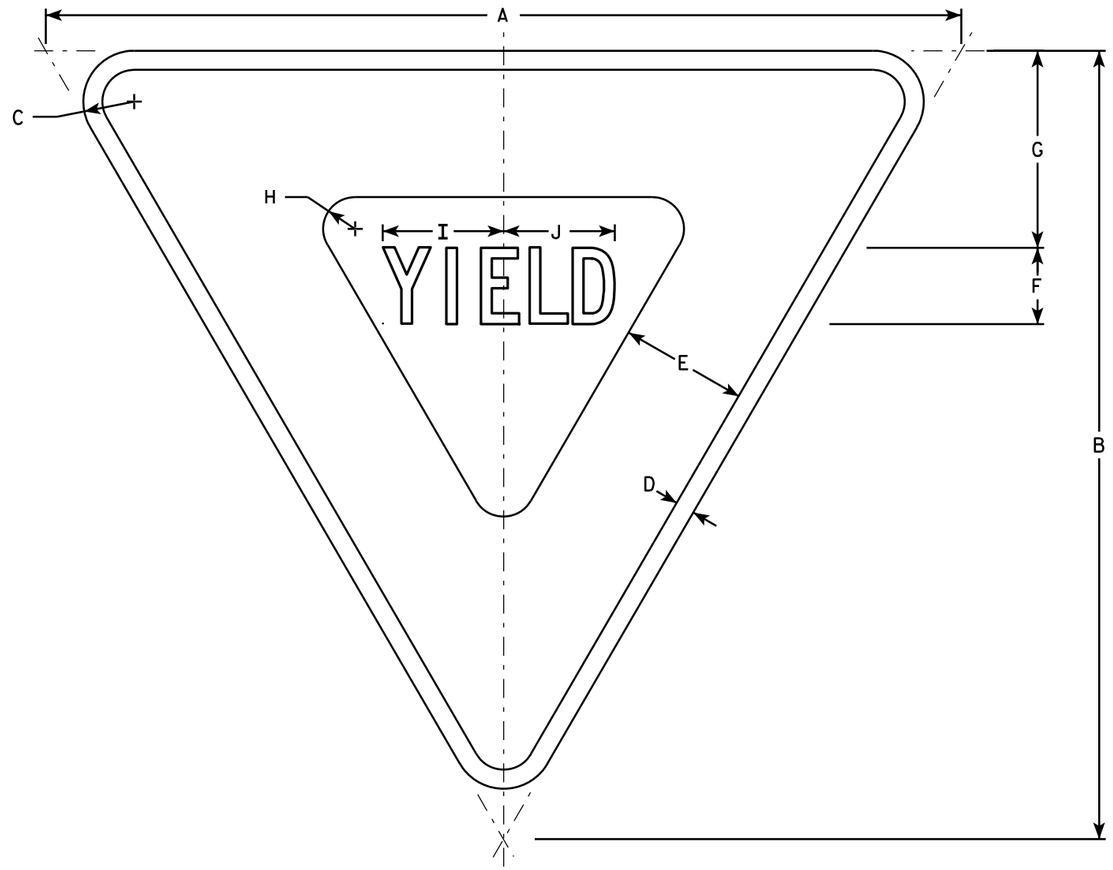
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2272 | E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

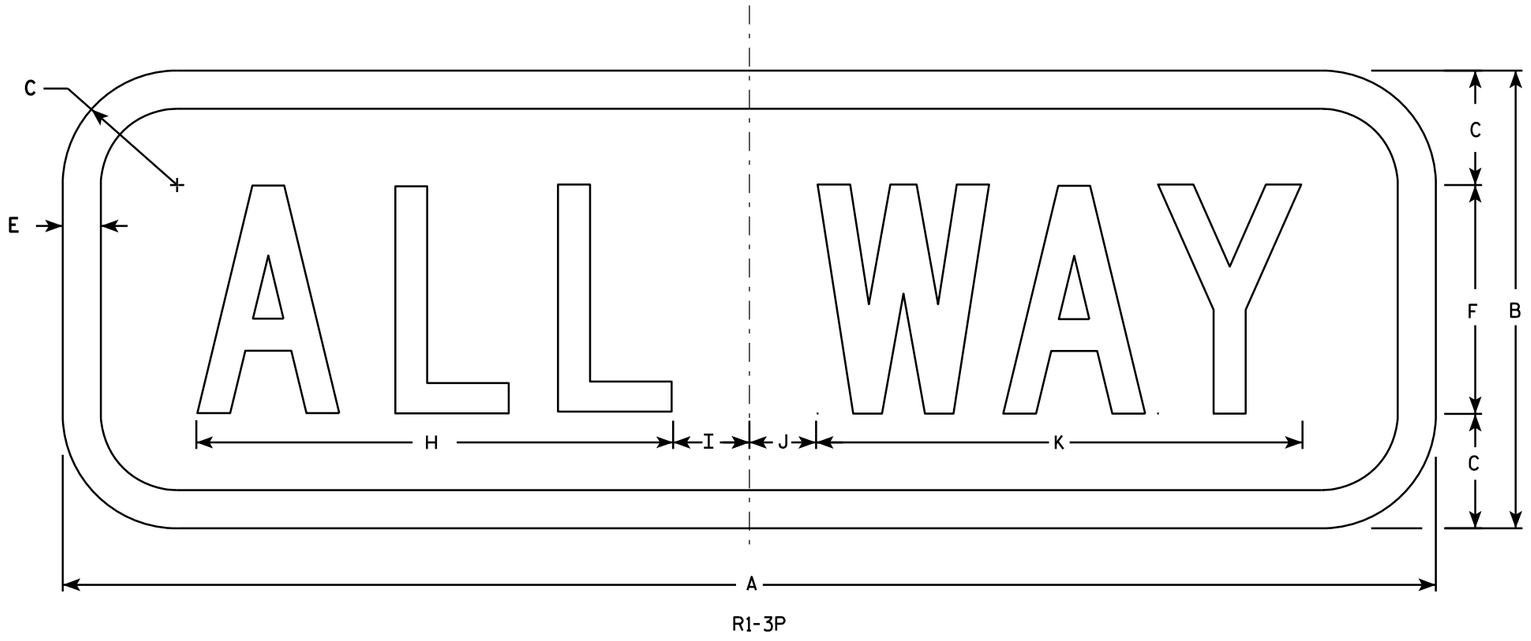
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2273 | E



R1-3P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2S	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																1.5
2M	24	9	1 1/2		1/2	5		9 1/4	1 1/4	3/4	9 3/4																1.5
3	30	12	2 1/4		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
4																											
5																											

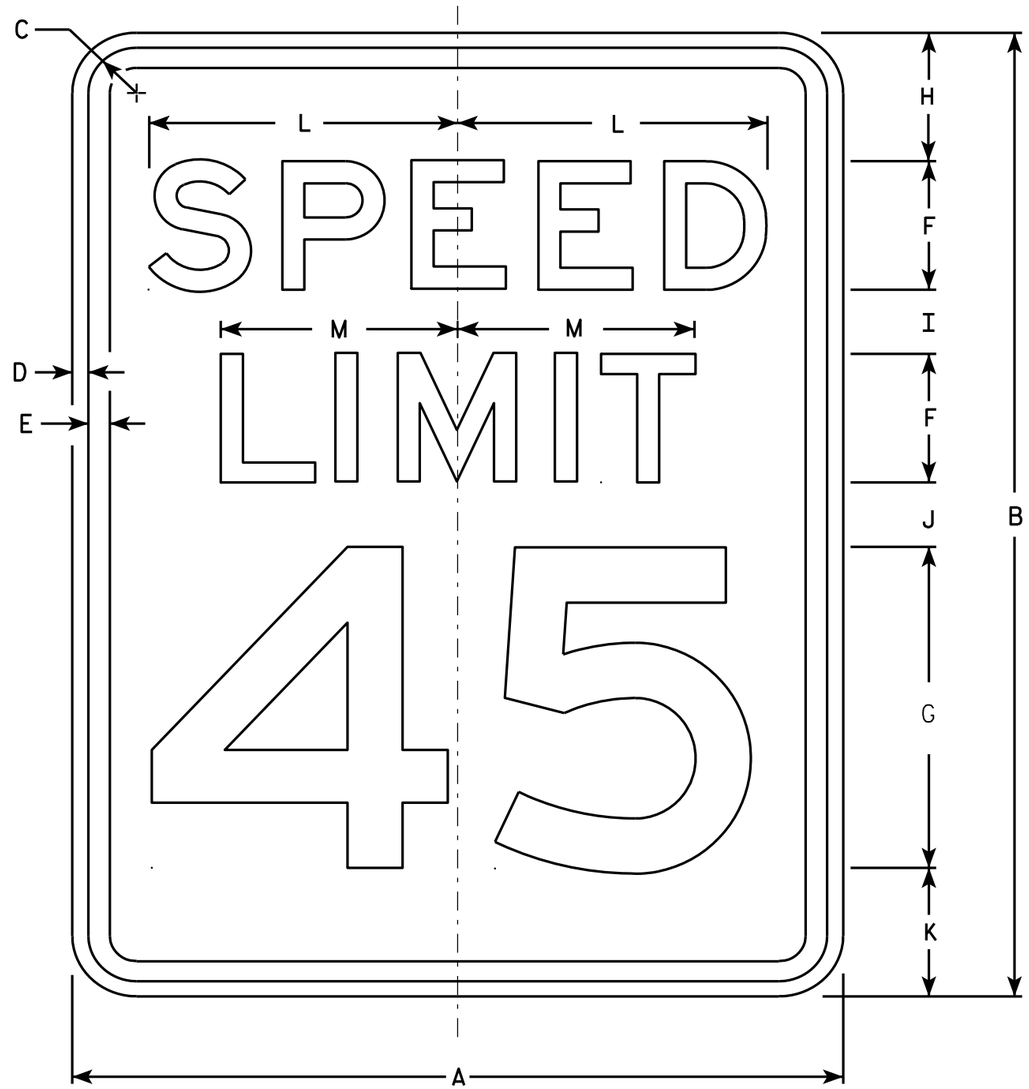
STANDARD SIGN
R1-3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-3P.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2274	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

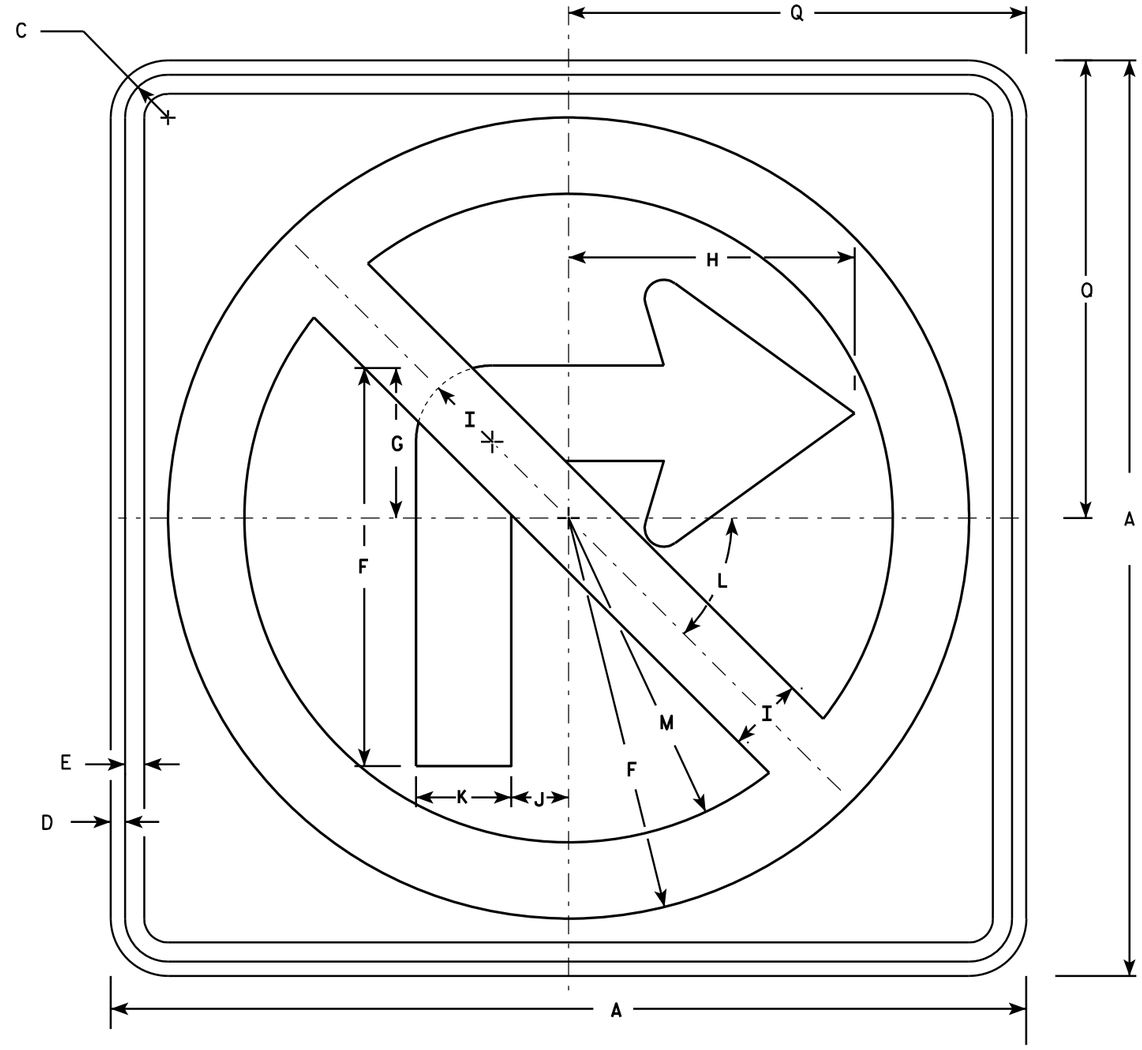
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

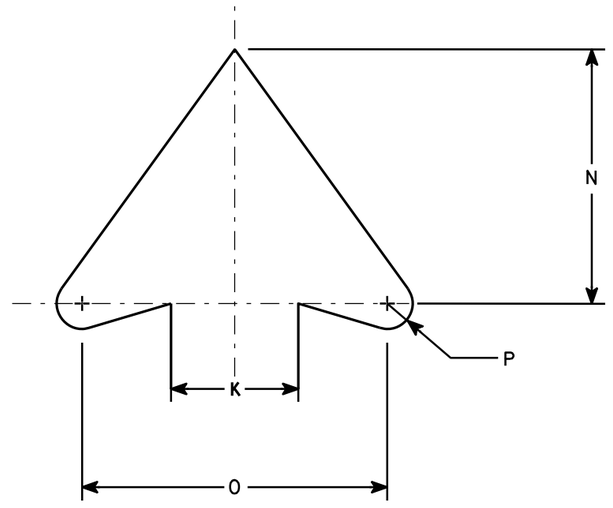
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2275	E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

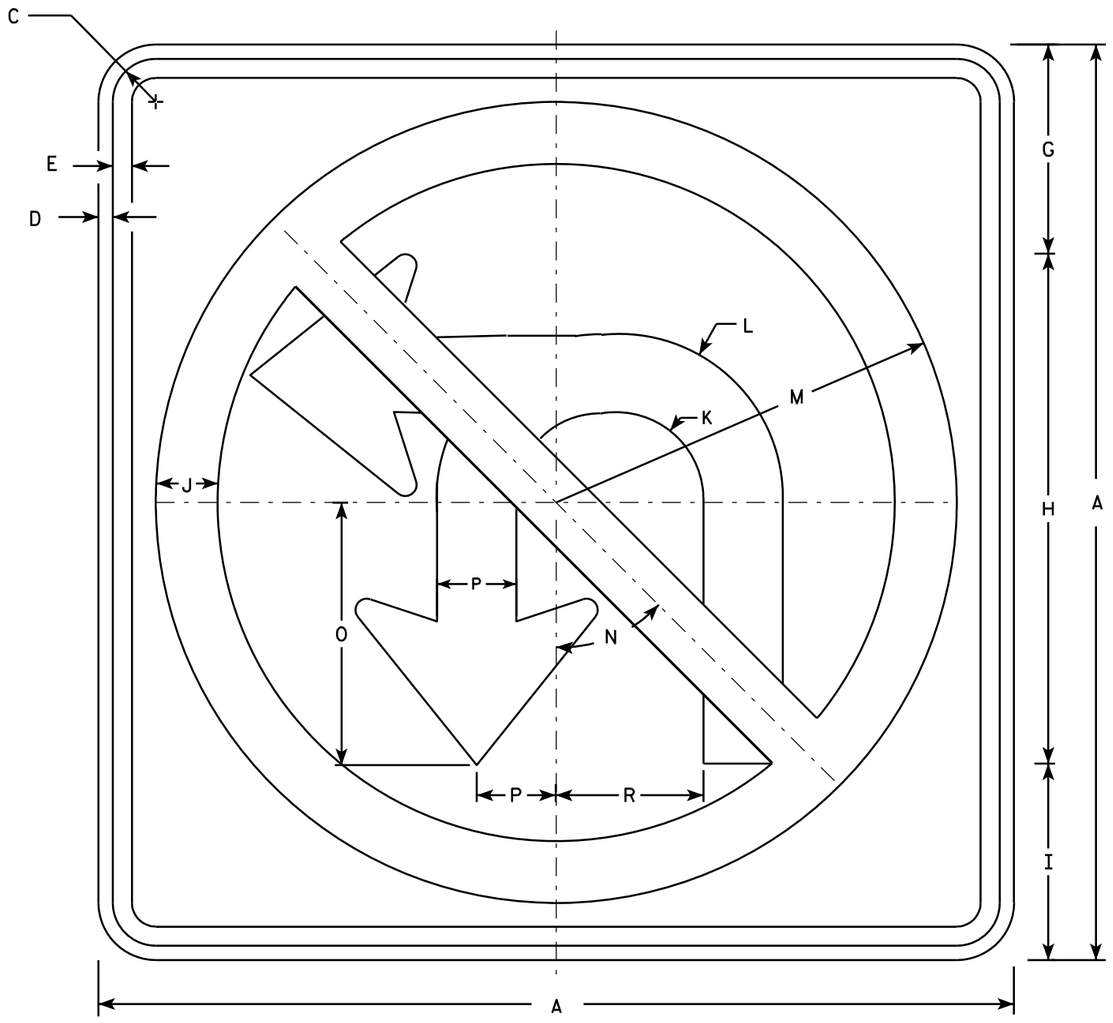
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2276	E



R3-18

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

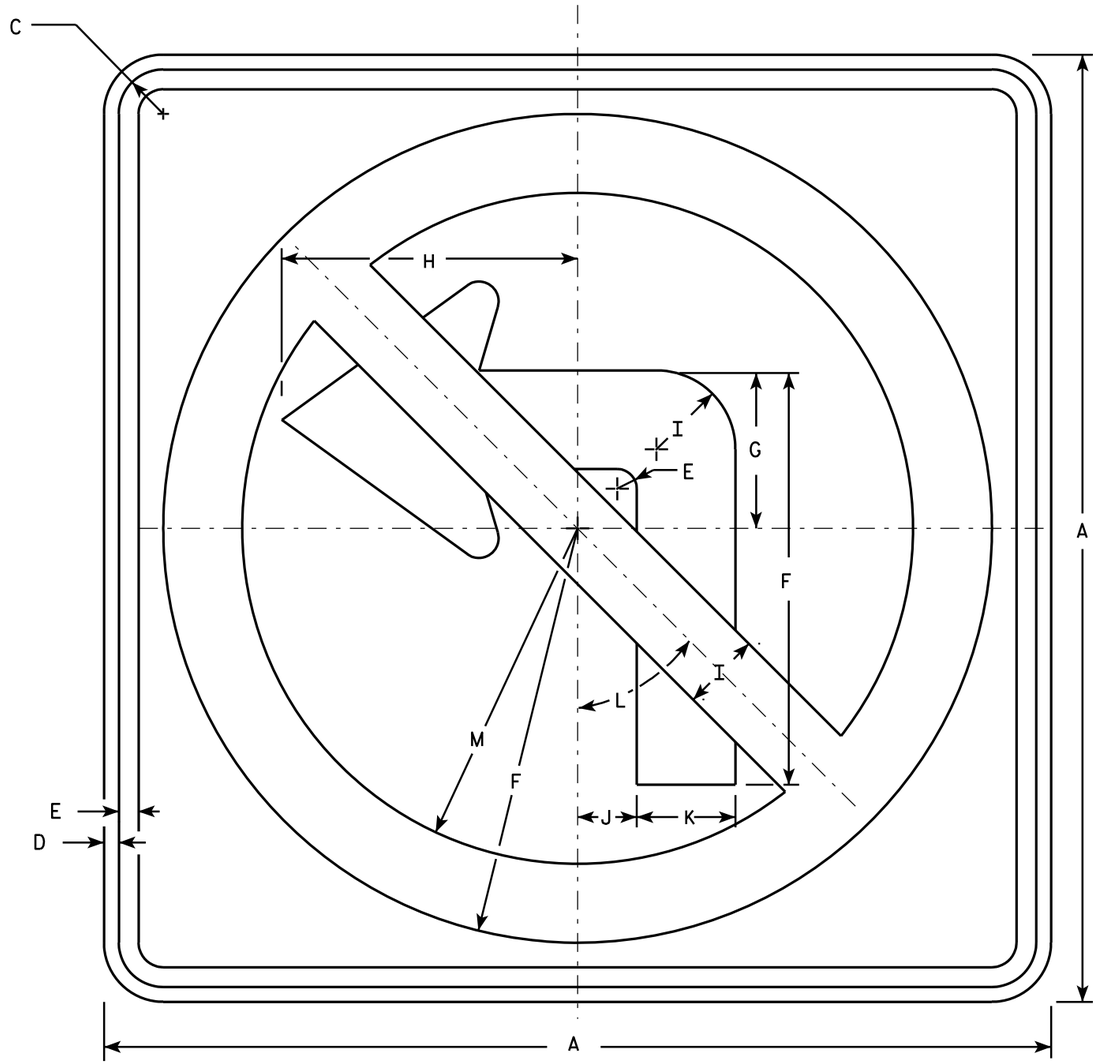
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

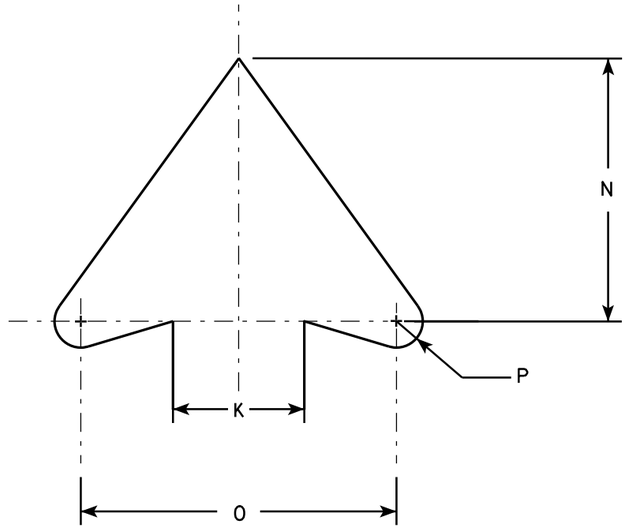
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2277	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

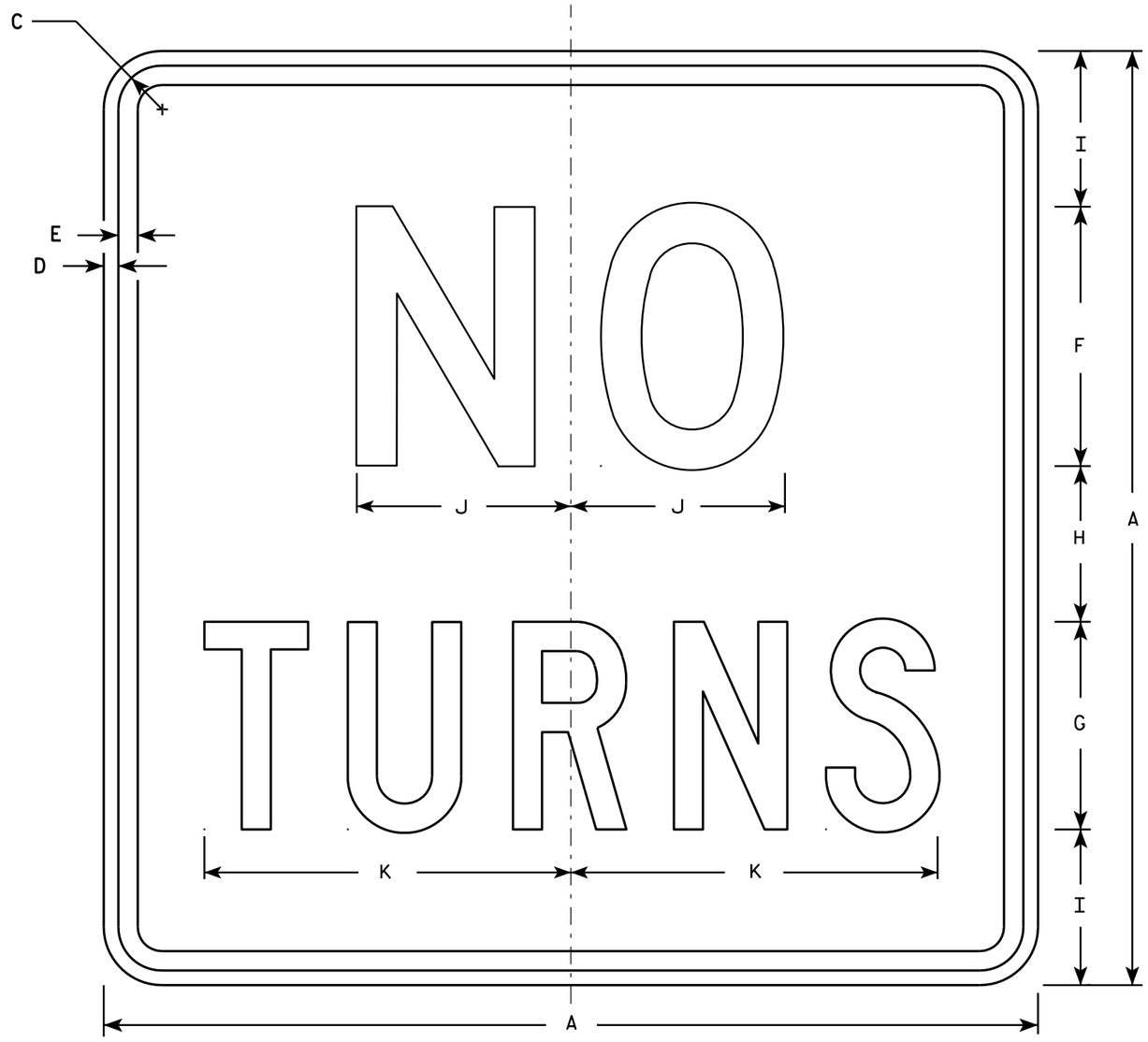
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2278	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R32.DGN PLOT DATE : 08-DEC-2010 14:41 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.760408:1.000000

WISDOT/CADDS SHEET 42



R3-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D and Line 2 is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	6	5	4	4 1/2	5 1/8	8 3/4																4.0
2M	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
3	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
4	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
5	48		2 1/4	3/4	1	12	10	8	9	10 1/4	17 5/8																16.0

STANDARD SIGN
R3-3

WISCONSIN DEPT OF TRANSPORTATION

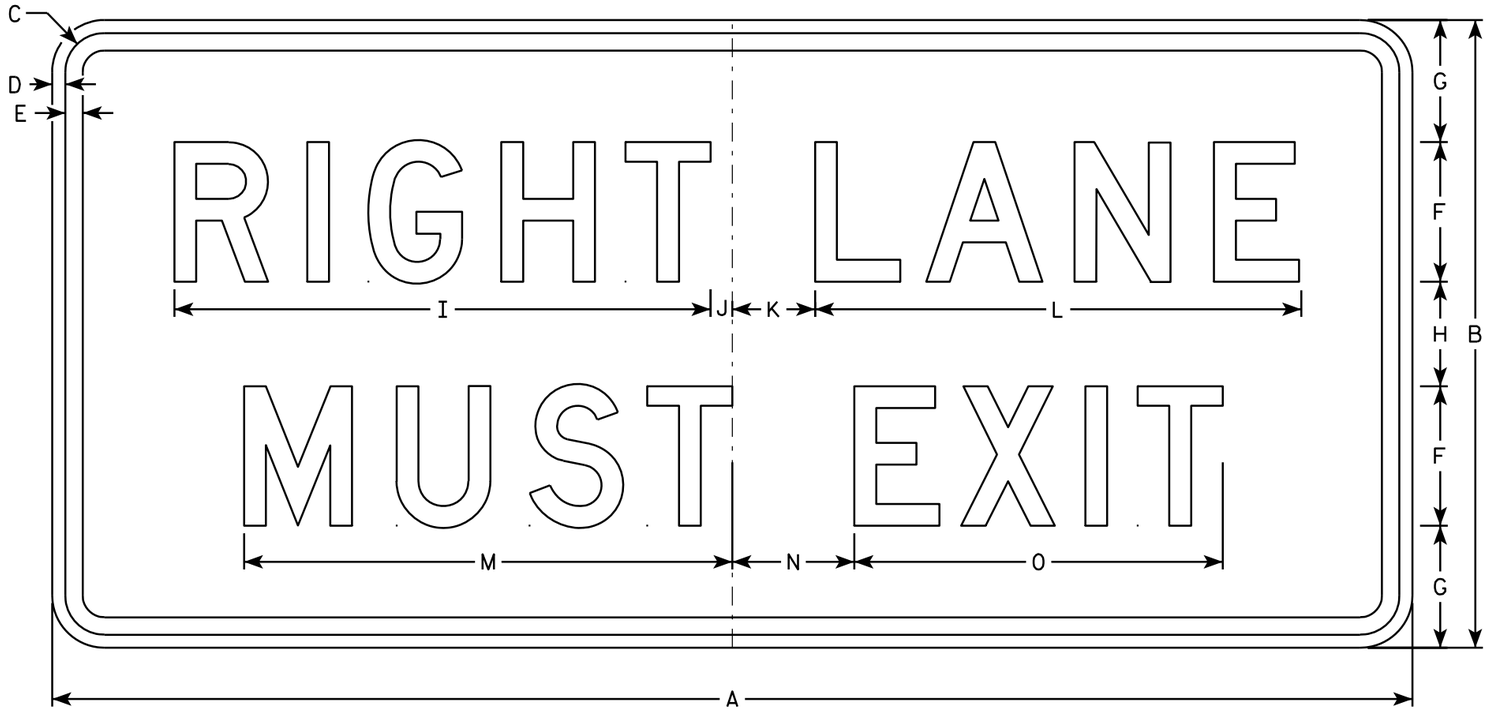
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-3.10

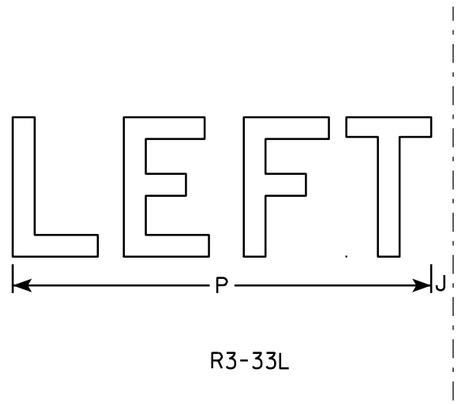
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2279 | E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-33R



R3-33L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	78	36	2 1/4	3/4	1	8	7	6	30 3/4	1 1/4	4 3/4	27 7/8	28	7	21 1/8	24											19.5
5	78	36	2 1/4	3/4	1	8	7	6	30 3/4	1 1/4	4 3/4	27 7/8	28	7	21 1/8	24											19.5

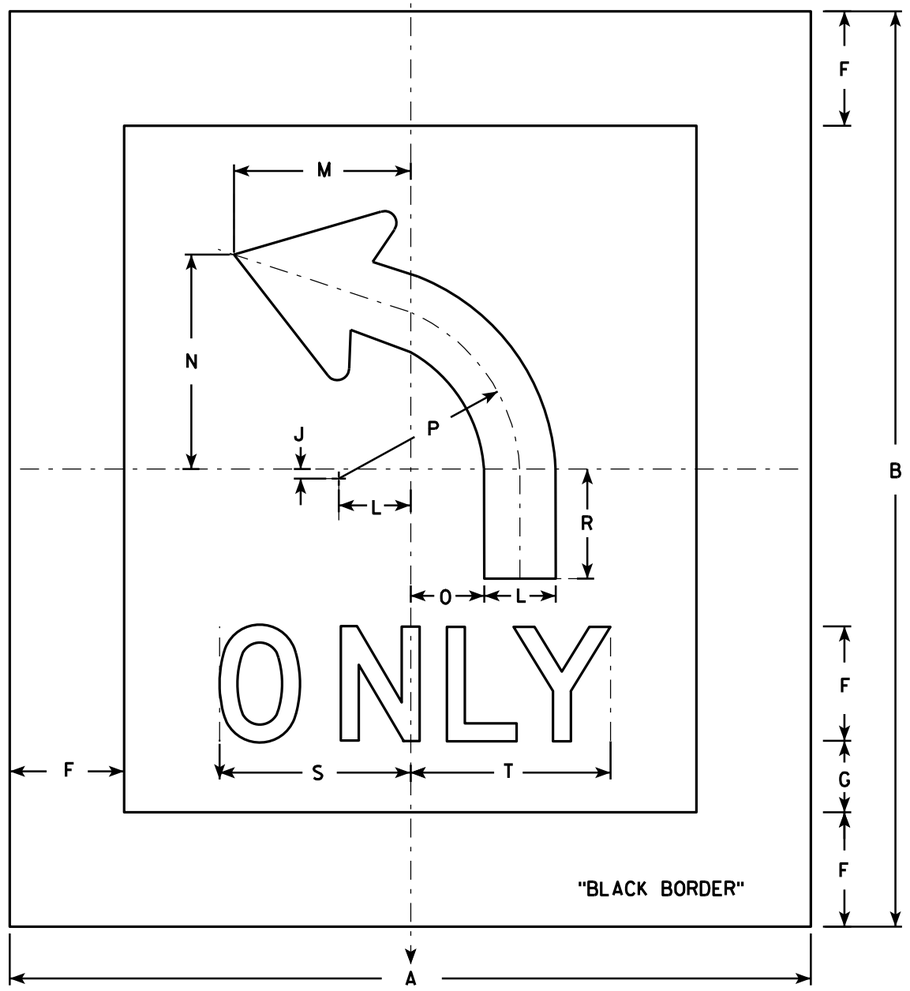
STANDARD SIGN
R3-33

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/7/10 PLATE NO. R3-33.1

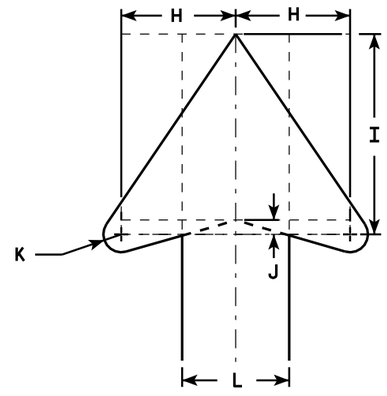
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2280	E



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

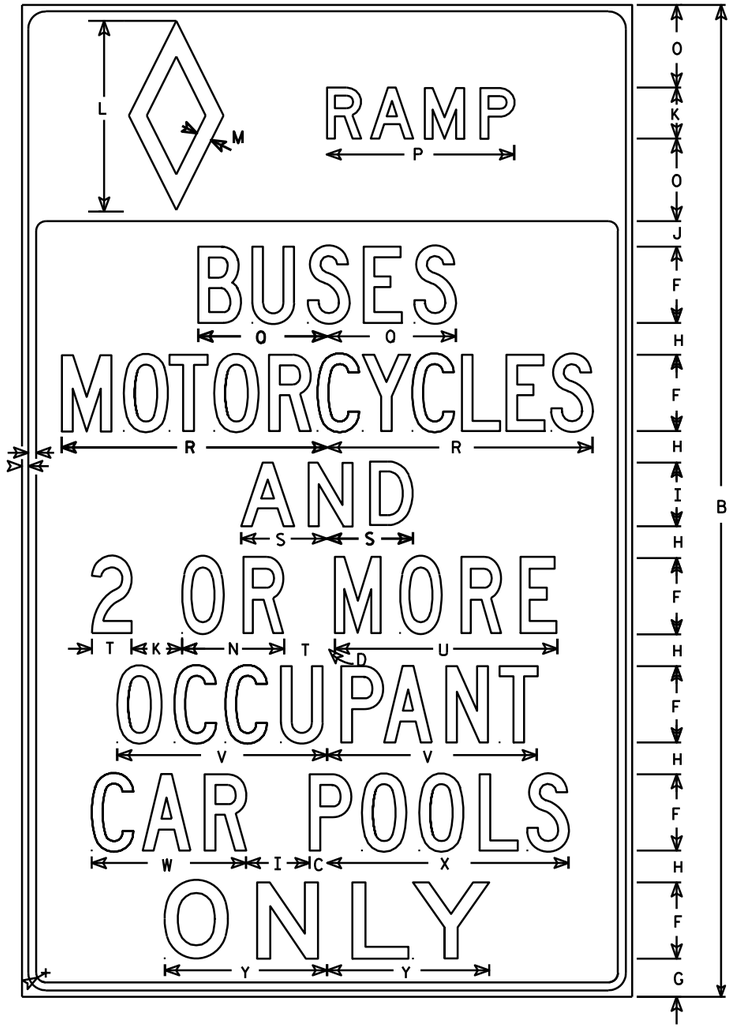
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2281	E



R3-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 5
   Message - See Note 5
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Top symbol and legend are white Type H Reflective with Black background.
   Bottom legend is Black with White Type H Reflective background.
6. Lines 1 and 4 are Series D.
   Lines 2, 5, 6 and 7 are Series C.
   Line 3 is Series B.
   Bottom Line is Series E.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	78	1 3/8	5/8	1/2	6	3	2 1/2	5	2	4	15	1 1/4	8	6 1/2	14 3/4	10 1/8	20 7/8	6 3/4	3 1/8	17 1/2	16 1/2	12 1/8	19	12 3/4	3 3/4	26.0
2M	48	78	1 3/8	5/8	1/2	6	3	2 1/2	5	2	4	15	1 1/4	8	6 1/2	14 3/4	10 1/8	20 7/8	6 3/4	3 1/8	17 1/2	16 1/2	12 1/8	19	12 3/4	3 3/4	26.0
3																											
4																											
5																											

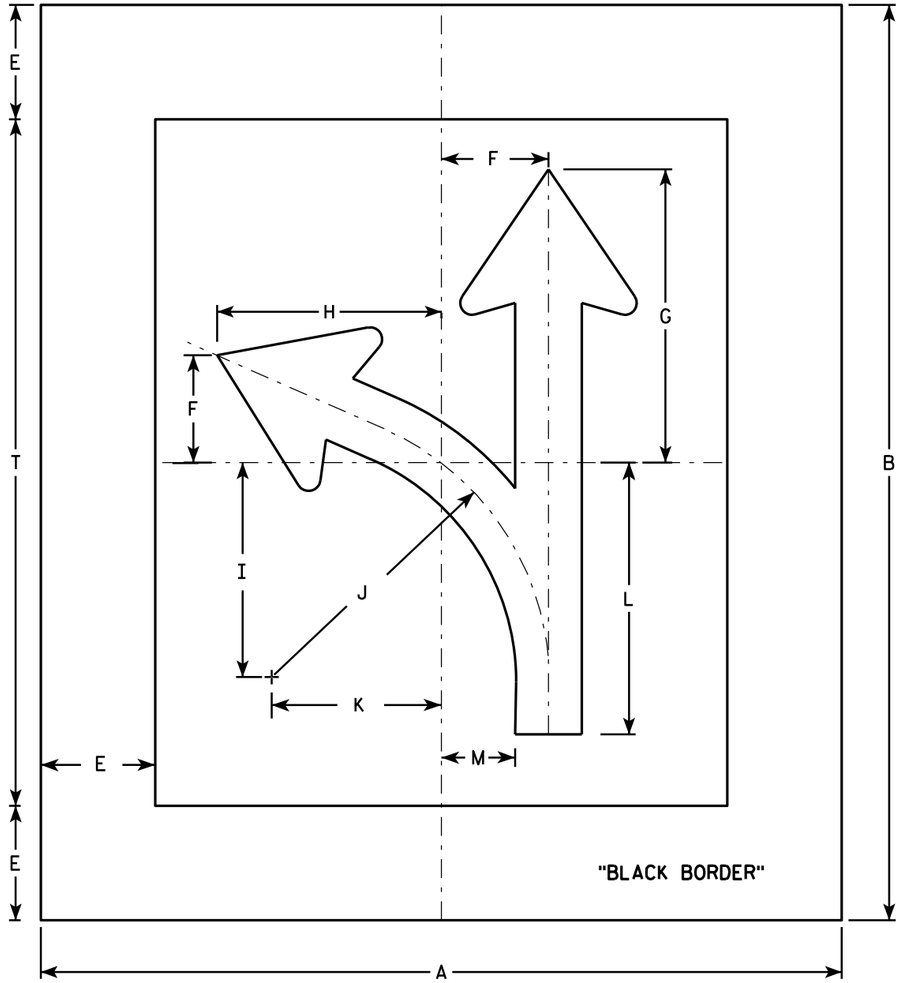
STANDARD SIGN
R3-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-51.5

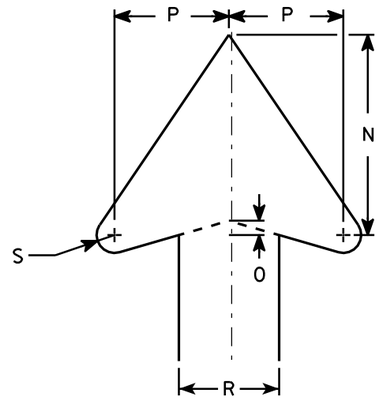
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2282



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

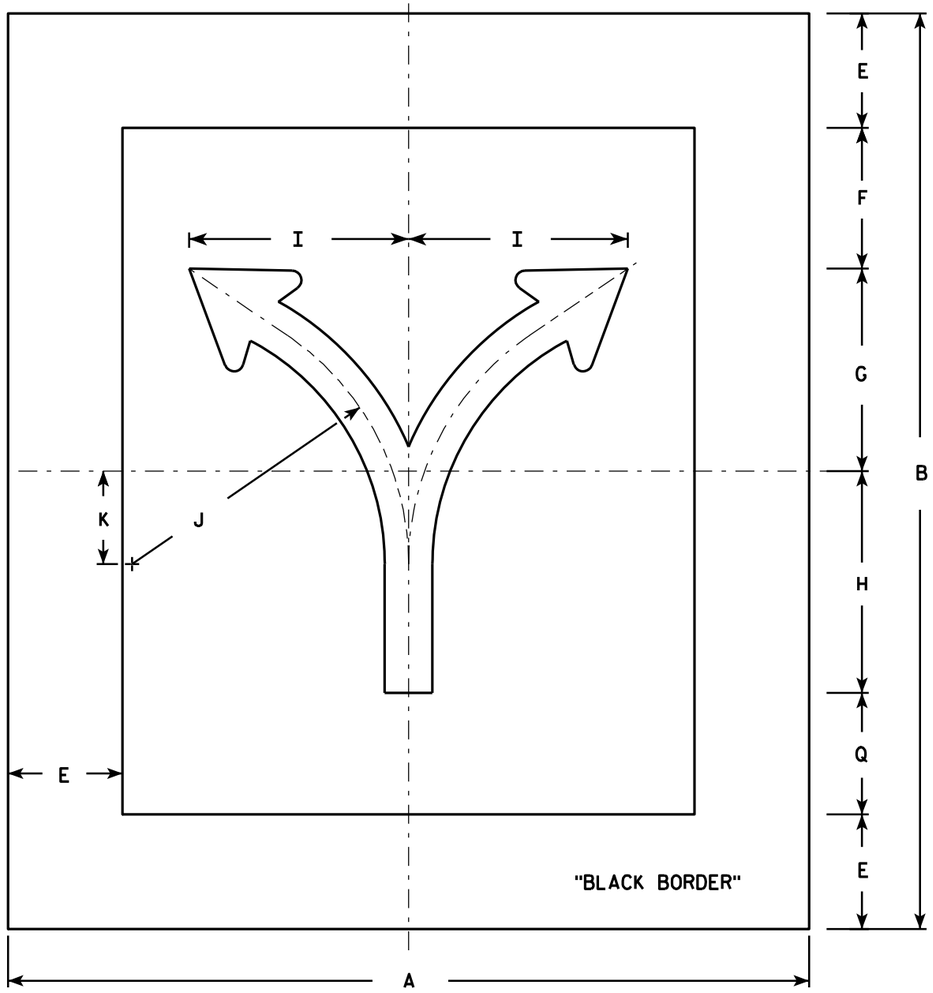
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

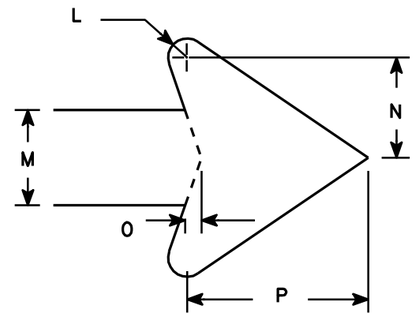
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2283 | E



R3-6T

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	7 3/8	10 5/8	11 5/8	11 1/2	14 1/2	4 7/8	1/2	2 1/2	2 5/8	3/8	4 3/4	6 3/8										14.00
2M	42	48			6	7 3/8	10 5/8	11 5/8	11 1/2	14 1/2	4 7/8	1/2	2 1/2	2 5/8	3/8	4 3/4	6 3/8										14.00
3																											
4																											
5																											

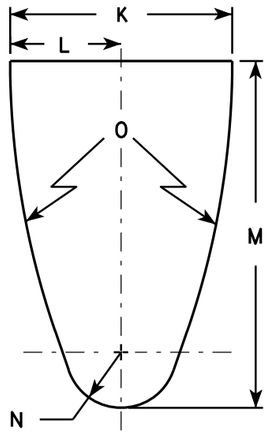
STANDARD SIGN
R3-6T

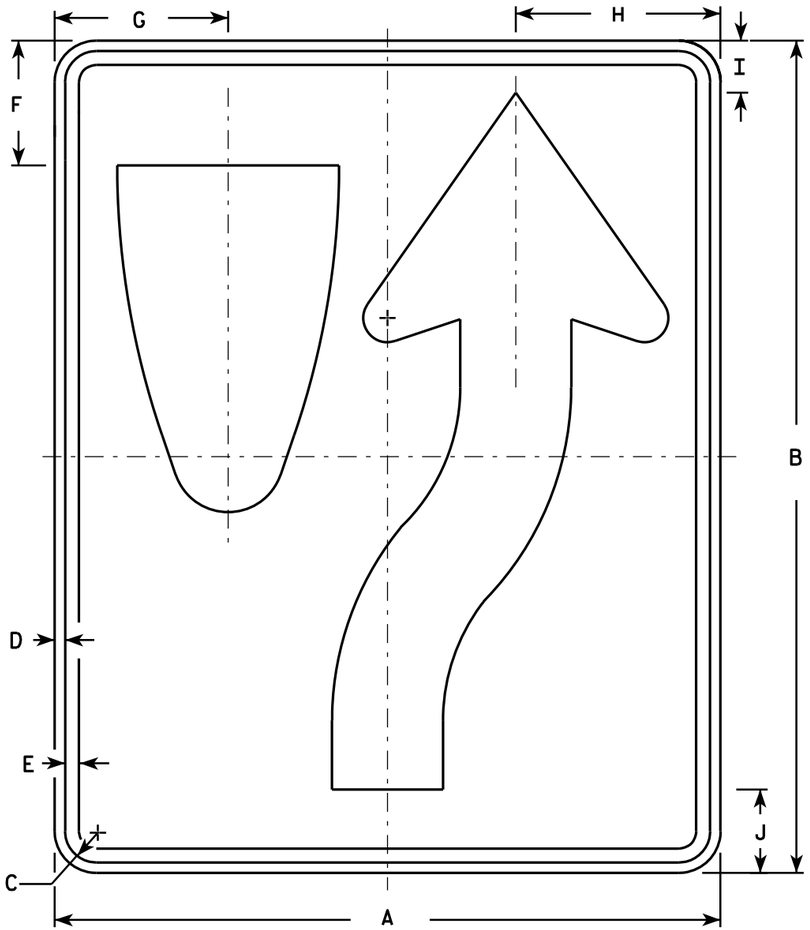
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6T.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2284	E

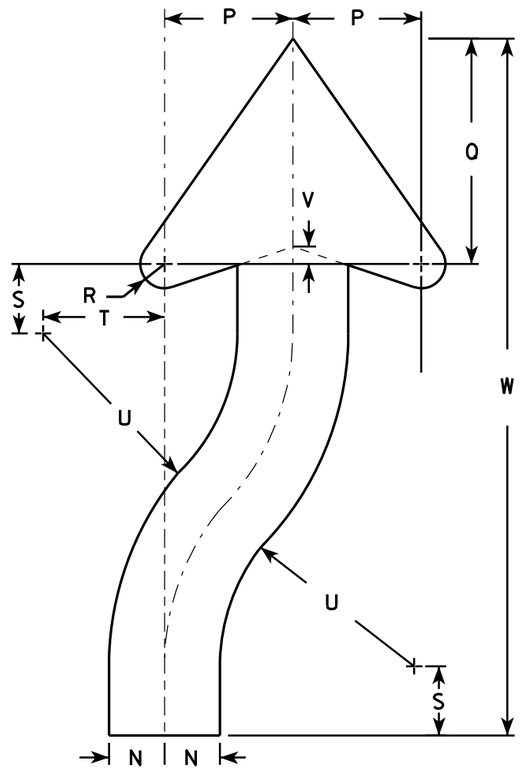




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

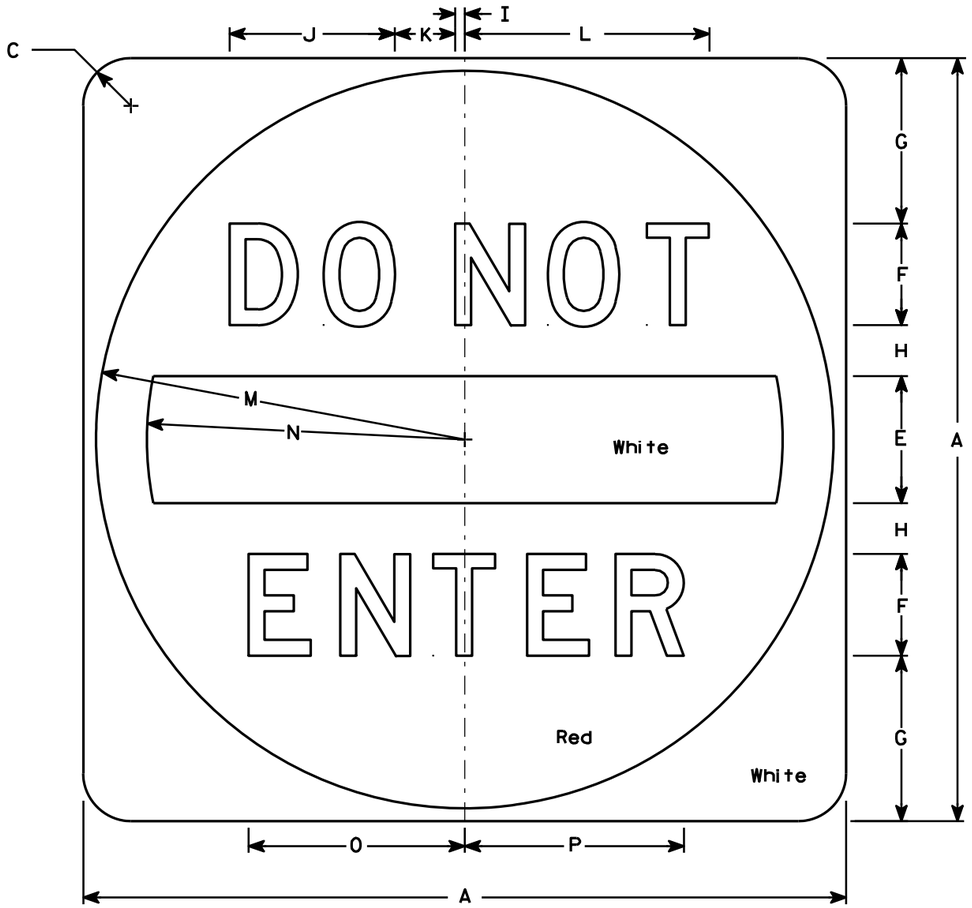
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2285	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

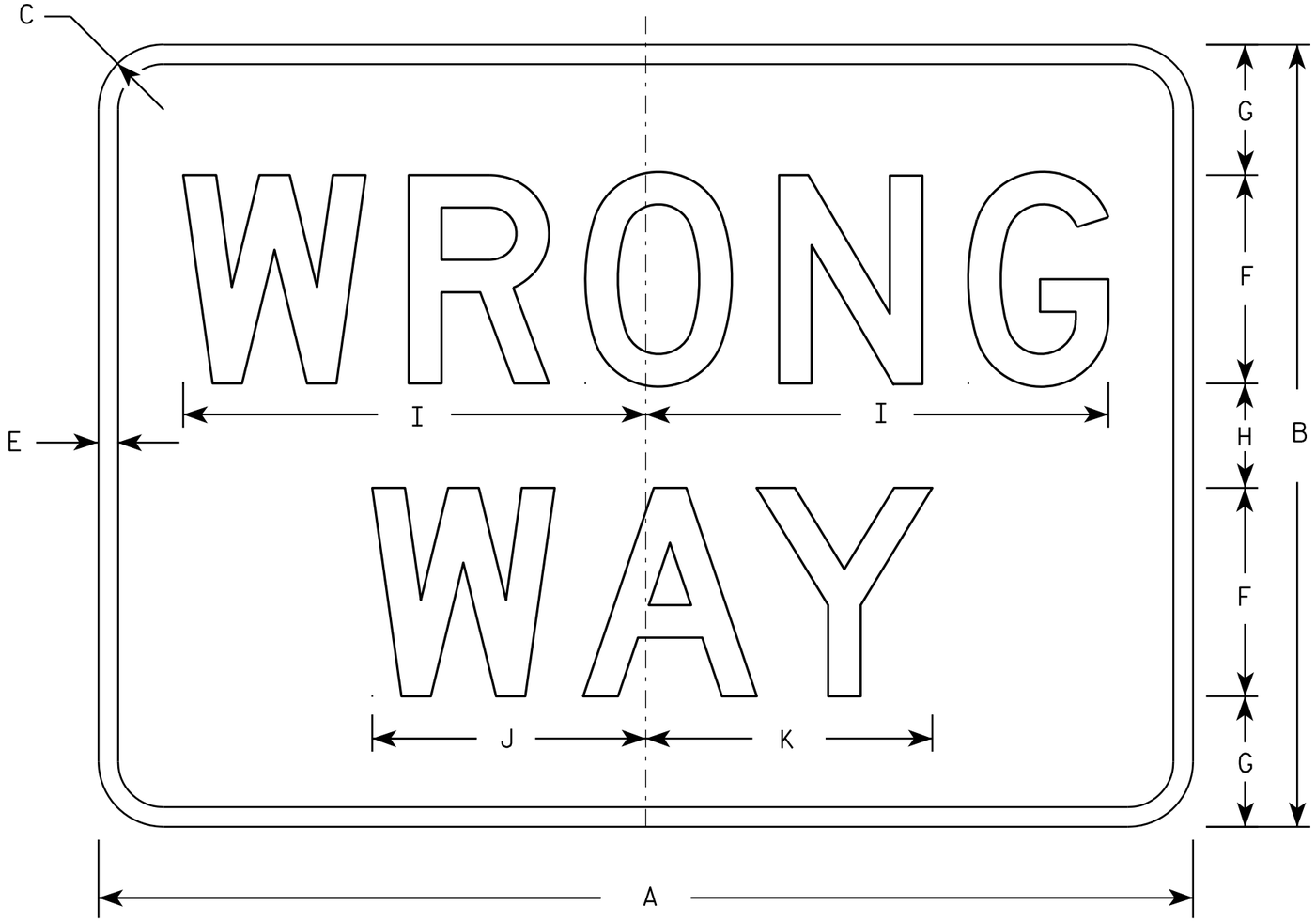
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2286 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2287	E



R5-57

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

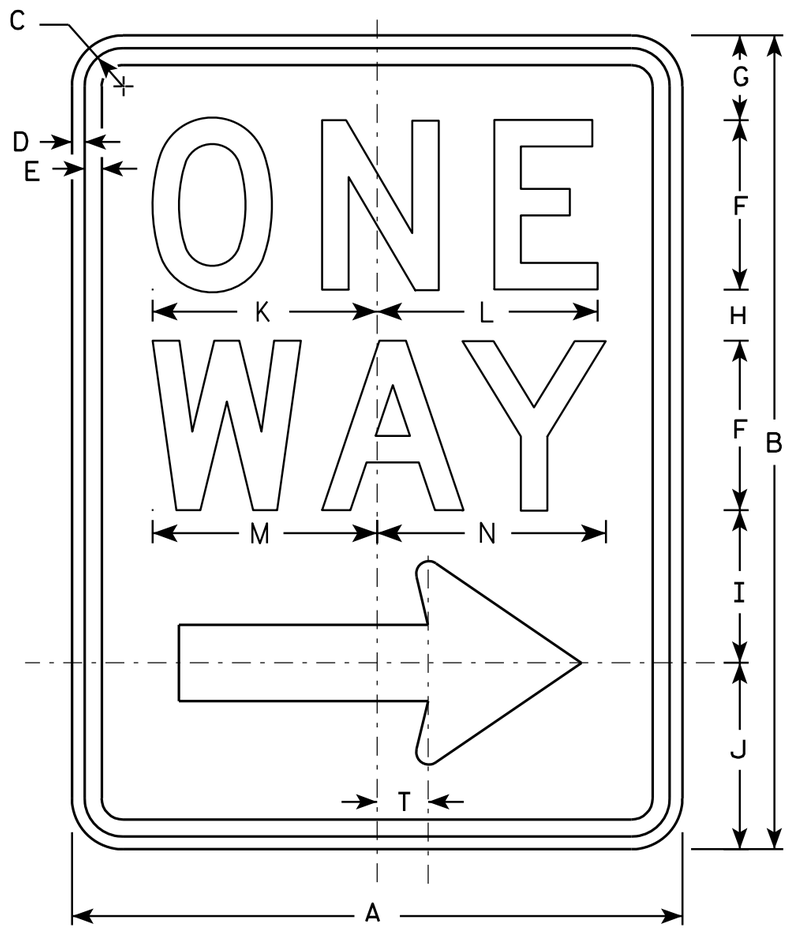
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

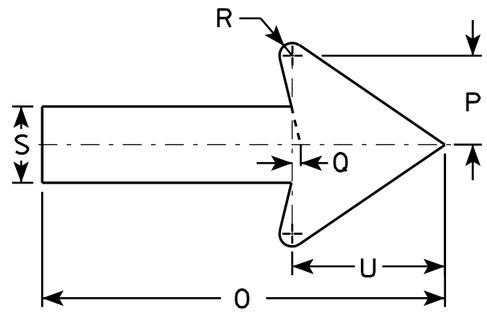
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2288 | E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

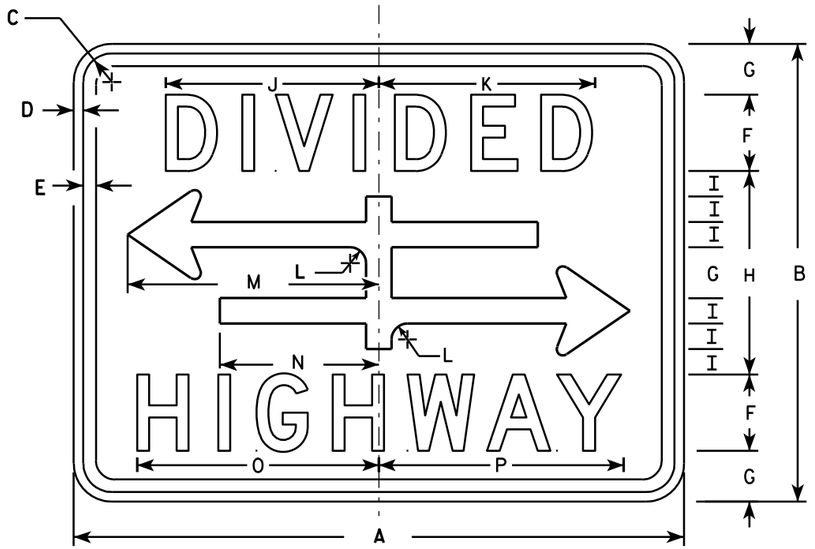
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

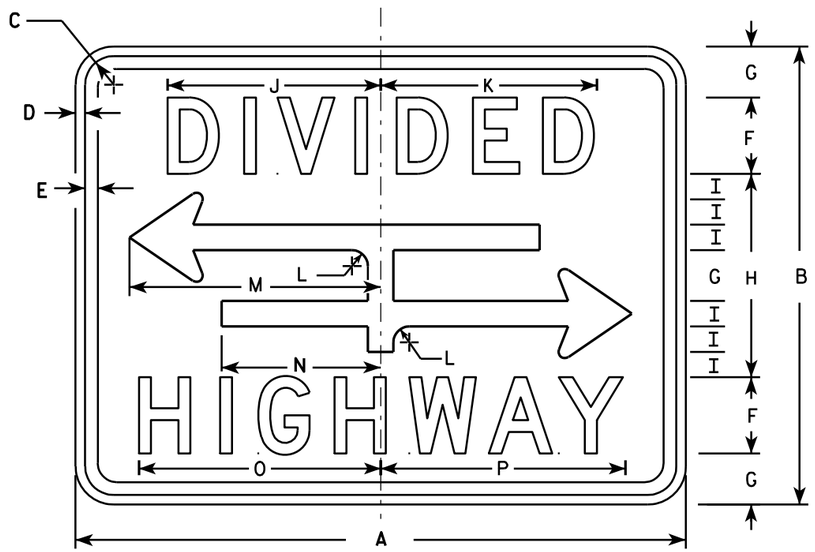
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2289	E



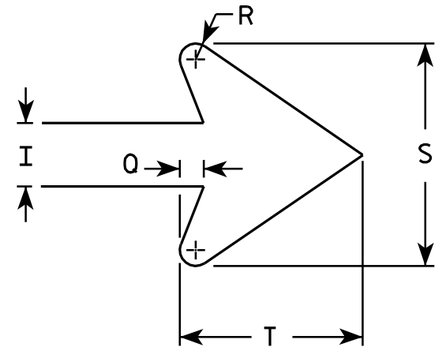
R6-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

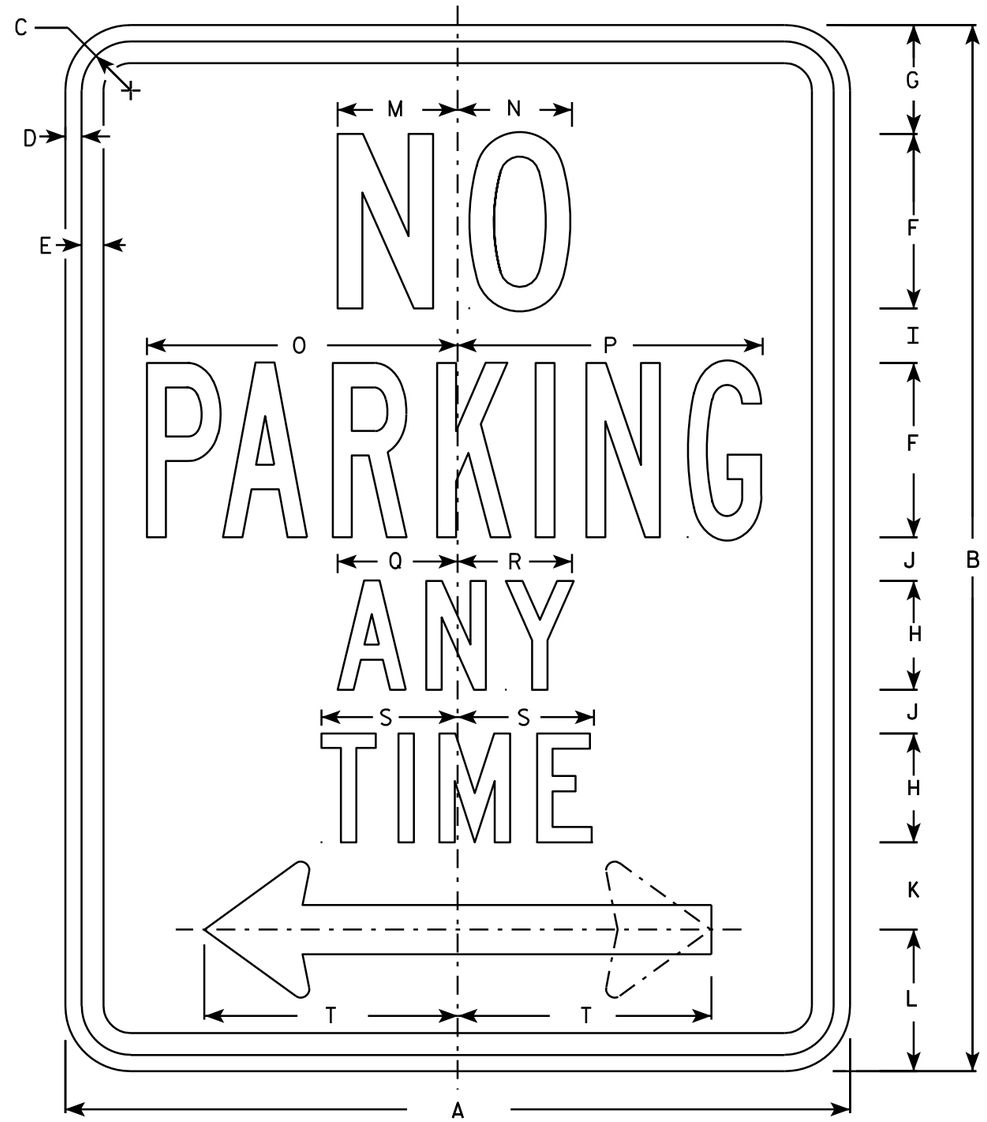
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

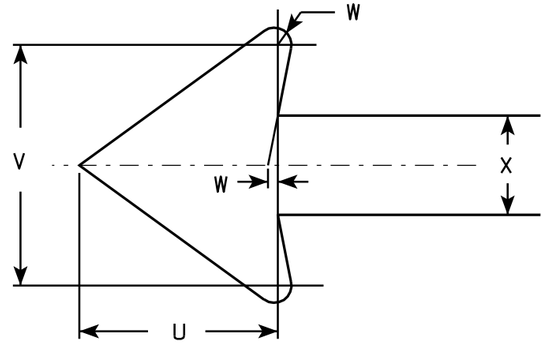
SHEET NO: 2290 E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

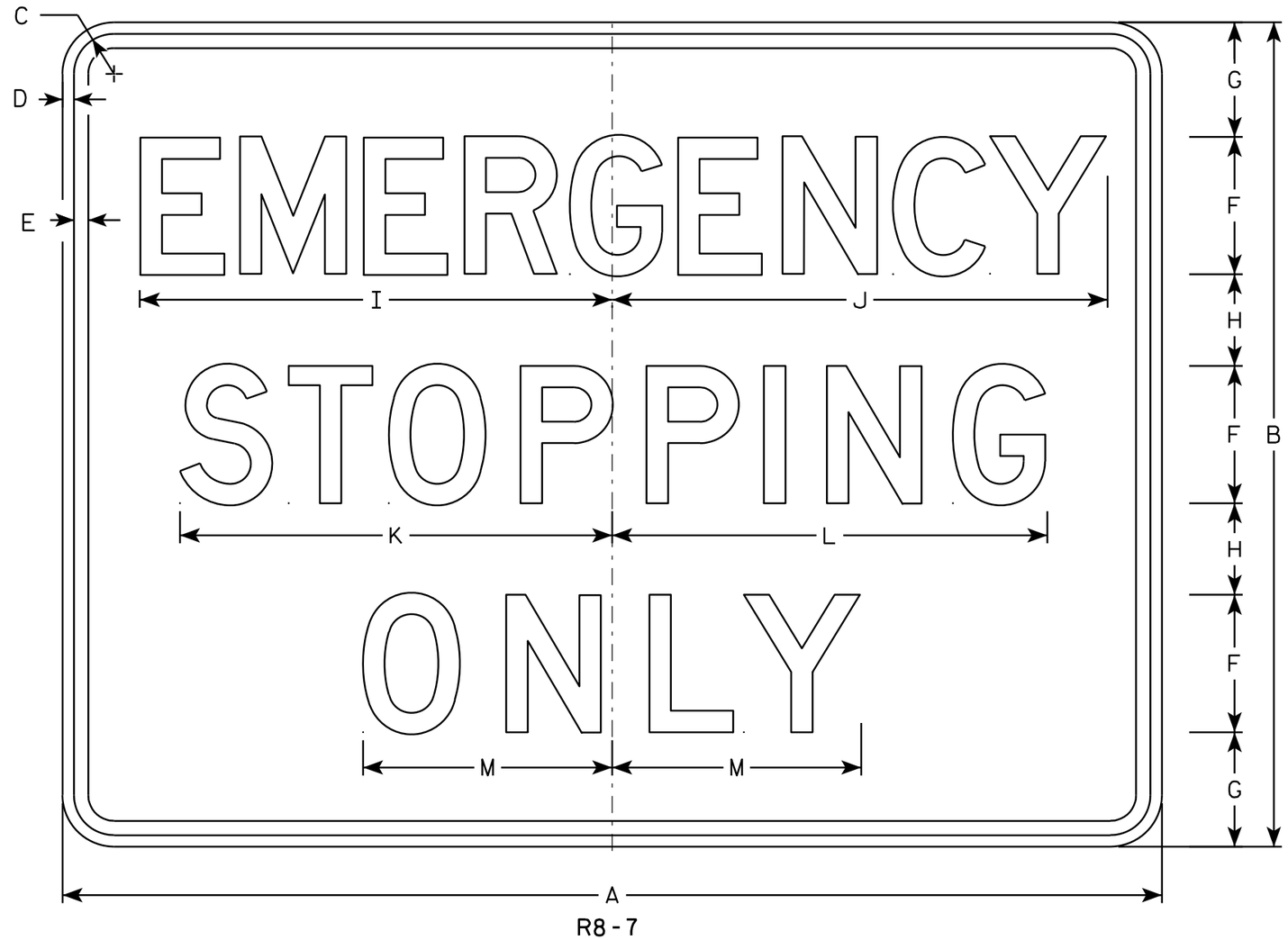
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2291	E



R8-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

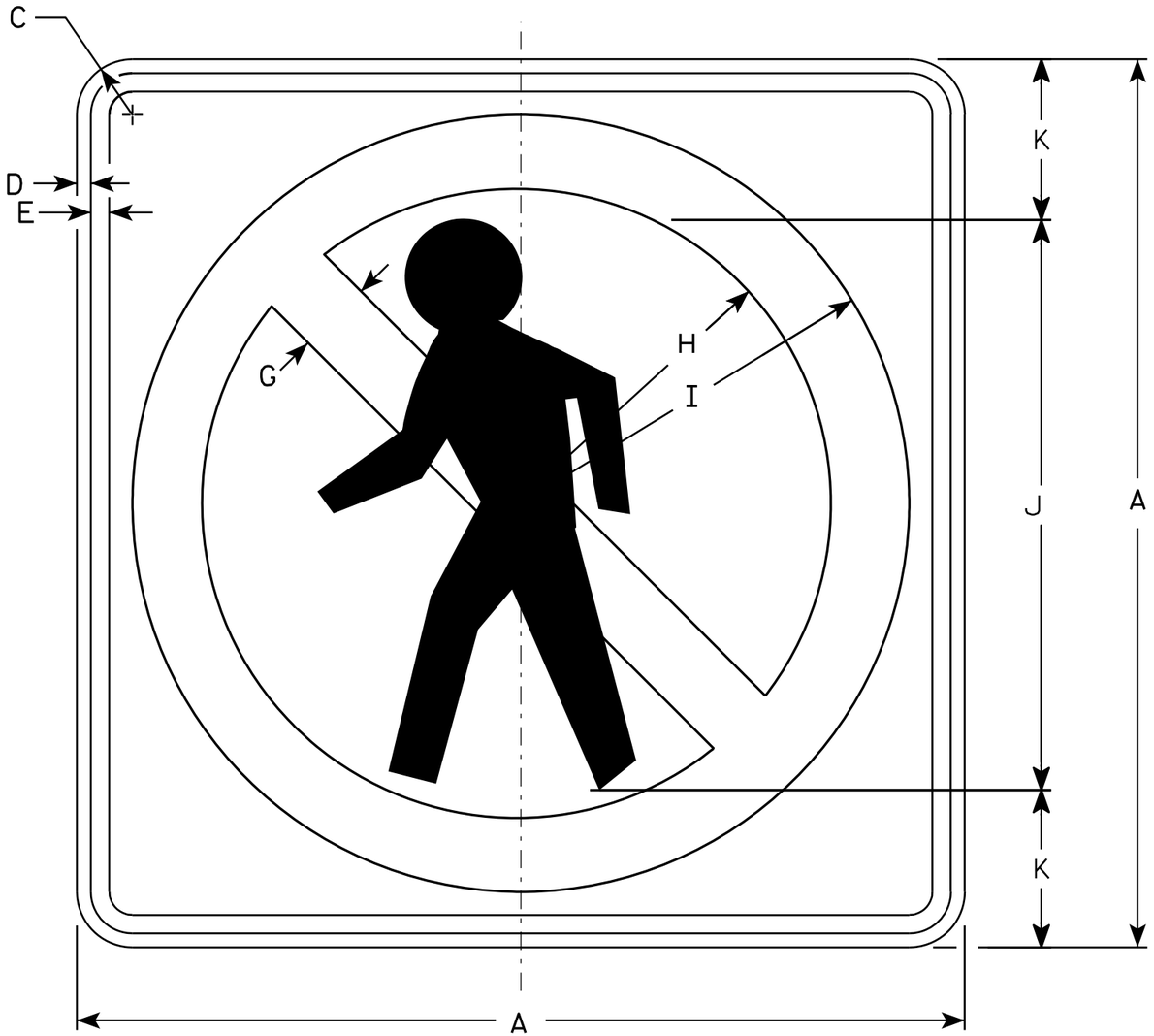
STANDARD SIGN
R8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2292 | E



R9-3A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Pedistrian are non-reflective black. Circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
2M	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
3																											
4	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	15	4																4.00
5																											

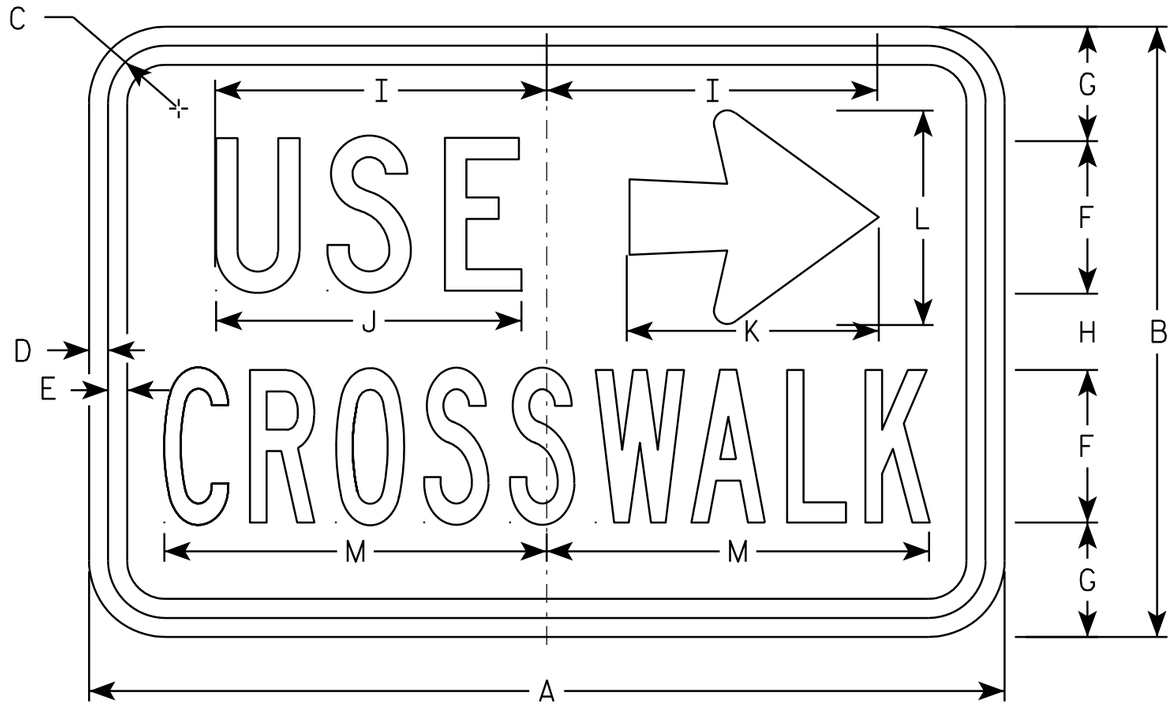
STANDARD SIGN
R9-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/4/10 PLATE NO. R9-3A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2293	E



R9-3BR

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C Line 1, Series B Line 2
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R9-3BL is the same as R9-3BR except USE and the arrow are switched.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	6 1/2	6	5	4 1/4	7 1/2														1.5
2M	18	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	6 1/2	6	5	4 1/4	7 1/2														1.5
3																											
4																											
5																											

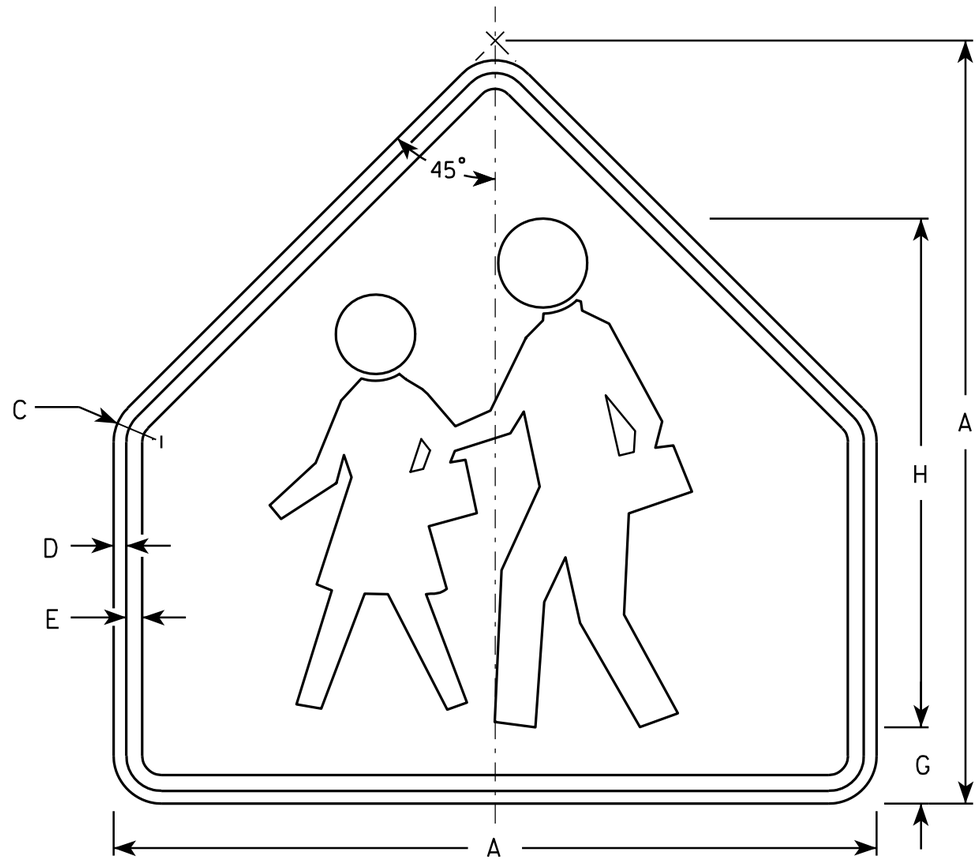
STANDARD SIGN
R9-3BR&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/4/10 PLATE NO. R9-3B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2294 | E



S1-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

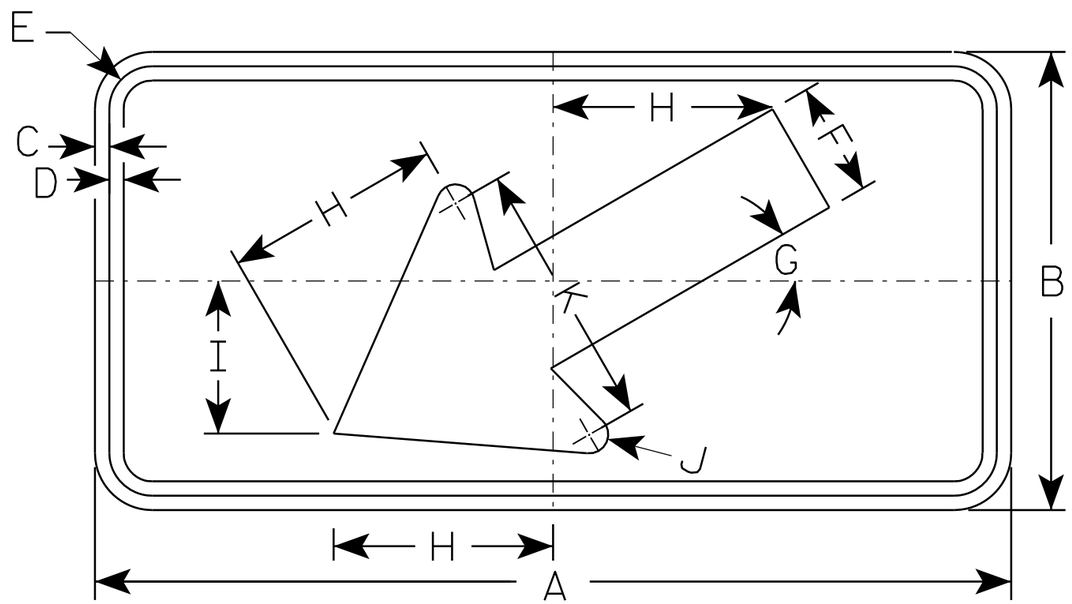
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2295	E



S16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

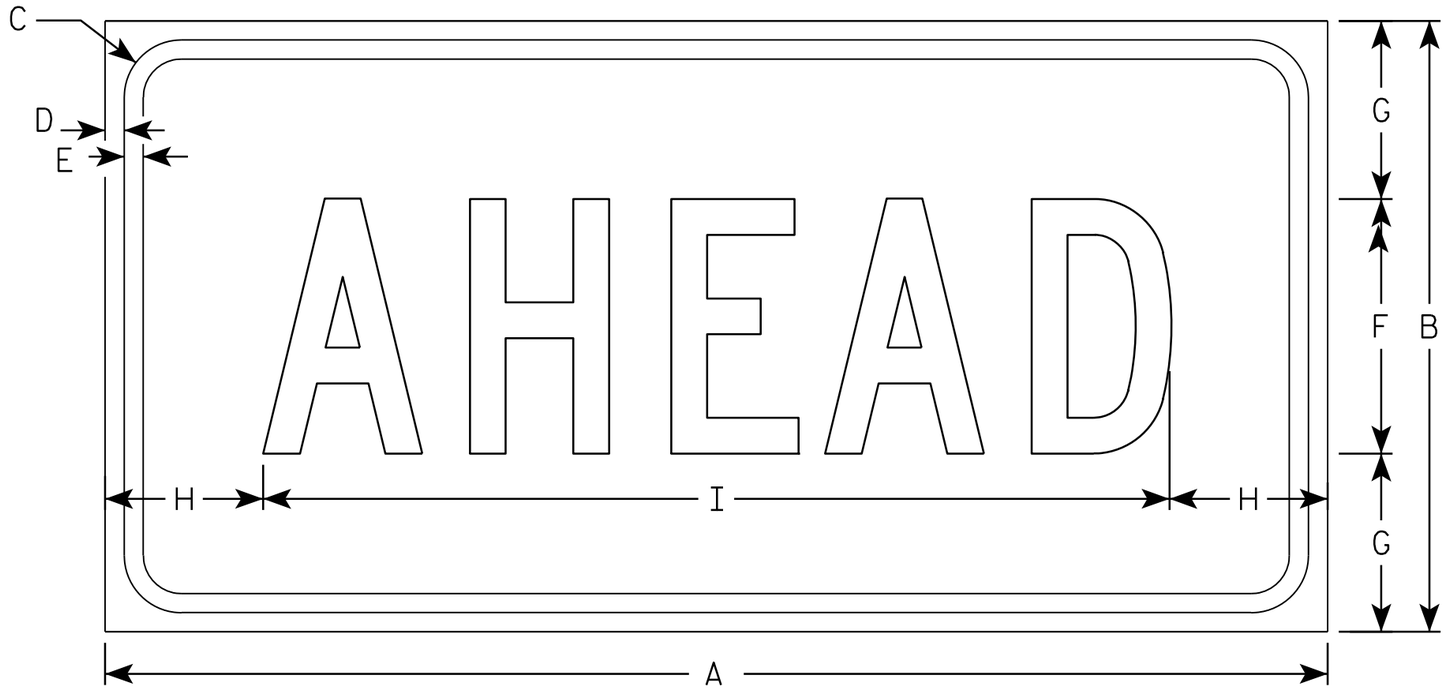
STANDARD SIGN
S16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2296 | E



S16-9P

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

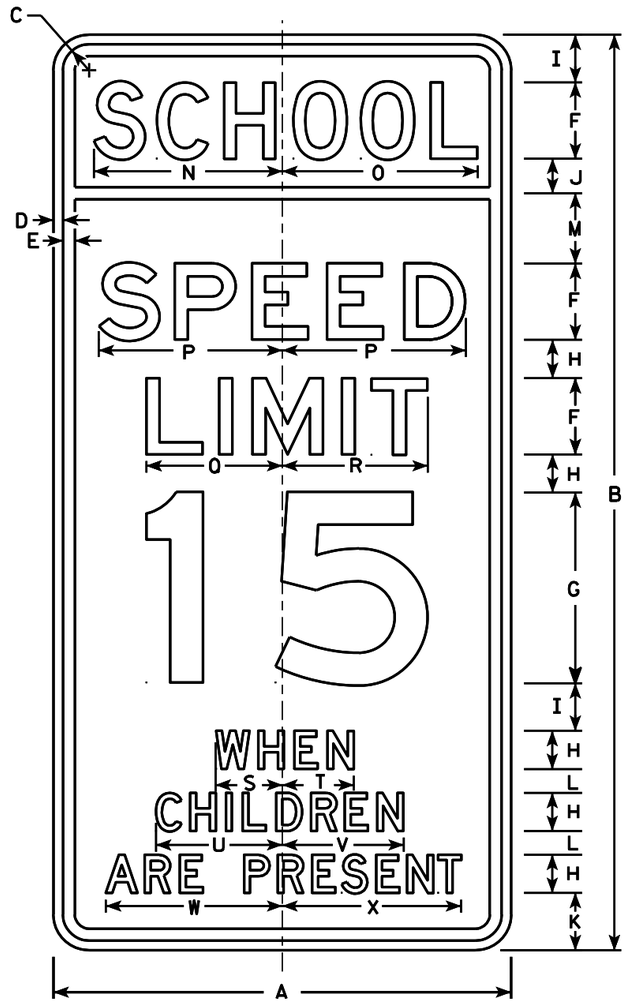
STANDARD SIGN
S16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-9P.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2297 | E



S4-51

NOTES

1. Sign is Type II - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. (See note 5).
2. Color:
   Background - See note 5
   Message - Black
3. Message Series - See note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Top panel (SCHOOL) background - Yellow Green -Type F Reflective.
   Lower panel background - White -Type H Reflective.
6. From top to bottom:
   Lines 1, 5, 6 & 7 are series D
   Lines 2, 3 & 4 are series E
7. Line 4 substitute appropriate numerals and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	900 mm X 1800 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	48	1 3/8	1/2	5/8	4	10	2	2 1/2	1 3/4	3	1 1/4	3 3/4	9 7/8	10 1/4	9 5/8	7 1/8	7 5/8	3 1/2	3 3/8	6 5/8	6 3/8	9 1/4	9 3/8			8.00	0.72
3	36	72	2 1/4	3/4	1	6	15	3	3 3/4	2 3/4	4 1/2	1 7/8	5 1/2	15	15 1/4	14 1/2	11 1/4	11 1/2	5 1/2	5 3/4	10	9 3/4	14	14 1/8			18.00	1.62
4																												
5																												

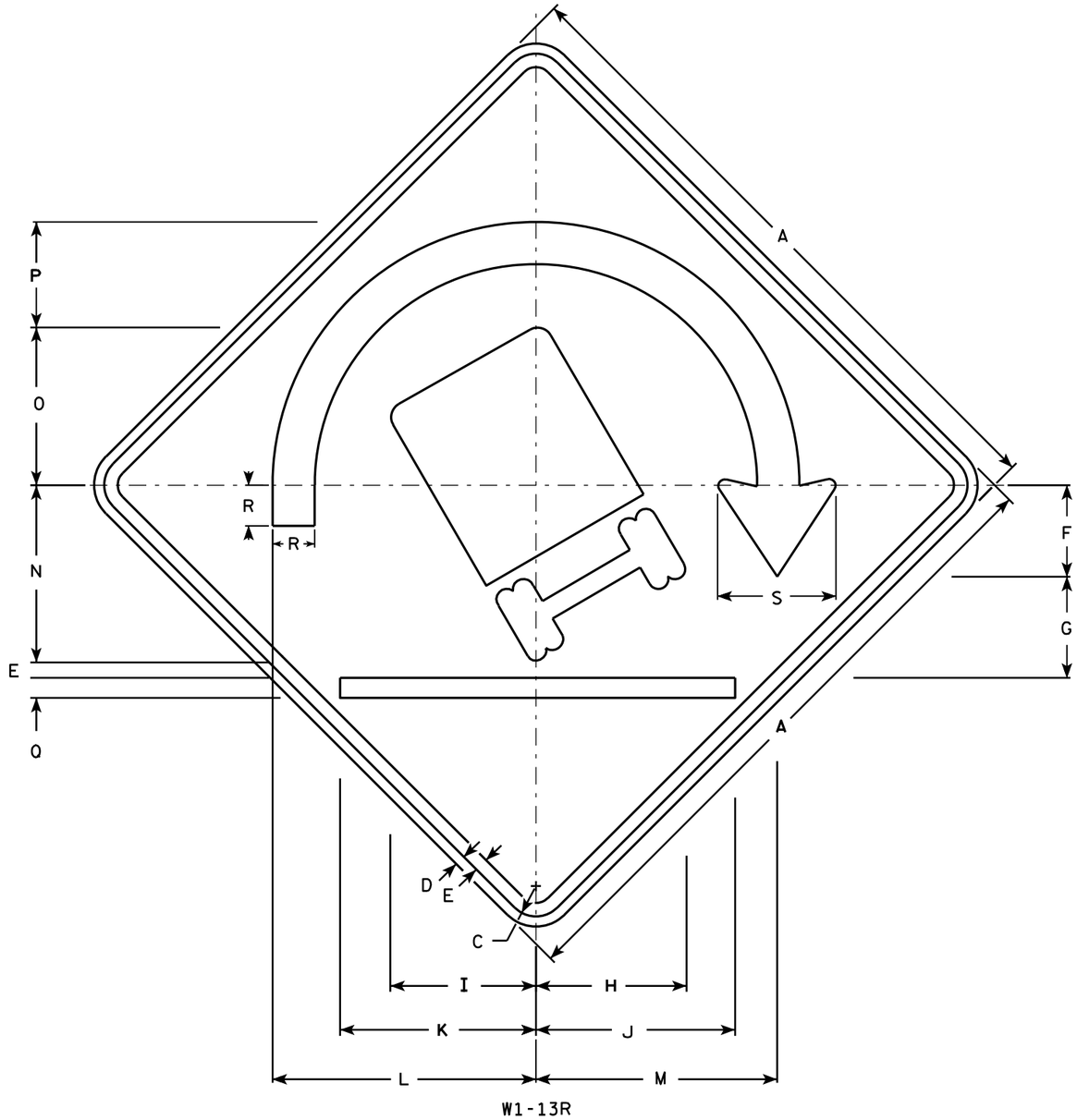
STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/10 PLATE NO. S4-51.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2298	E



W1-13R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-13L is the same as W1-13R except the arrow points to the left and the trucks tips to the right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	48		2 1/4	3/4	1	6 3/4	7 1/2	11 1/8	10 3/4	14 3/4	14 1/2	19 1/2	22 1/4	13 1/8	11 3/4	7 3/4	1 1/2	3	8 3/4								16.00
5	48		2 1/4	3/4	1	6 3/4	7 1/2	11 1/8	10 3/4	14 3/4	14 1/2	19 1/2	22 1/4	13 1/8	11 3/4	7 3/4	1 1/2	3	8 3/4								16.00

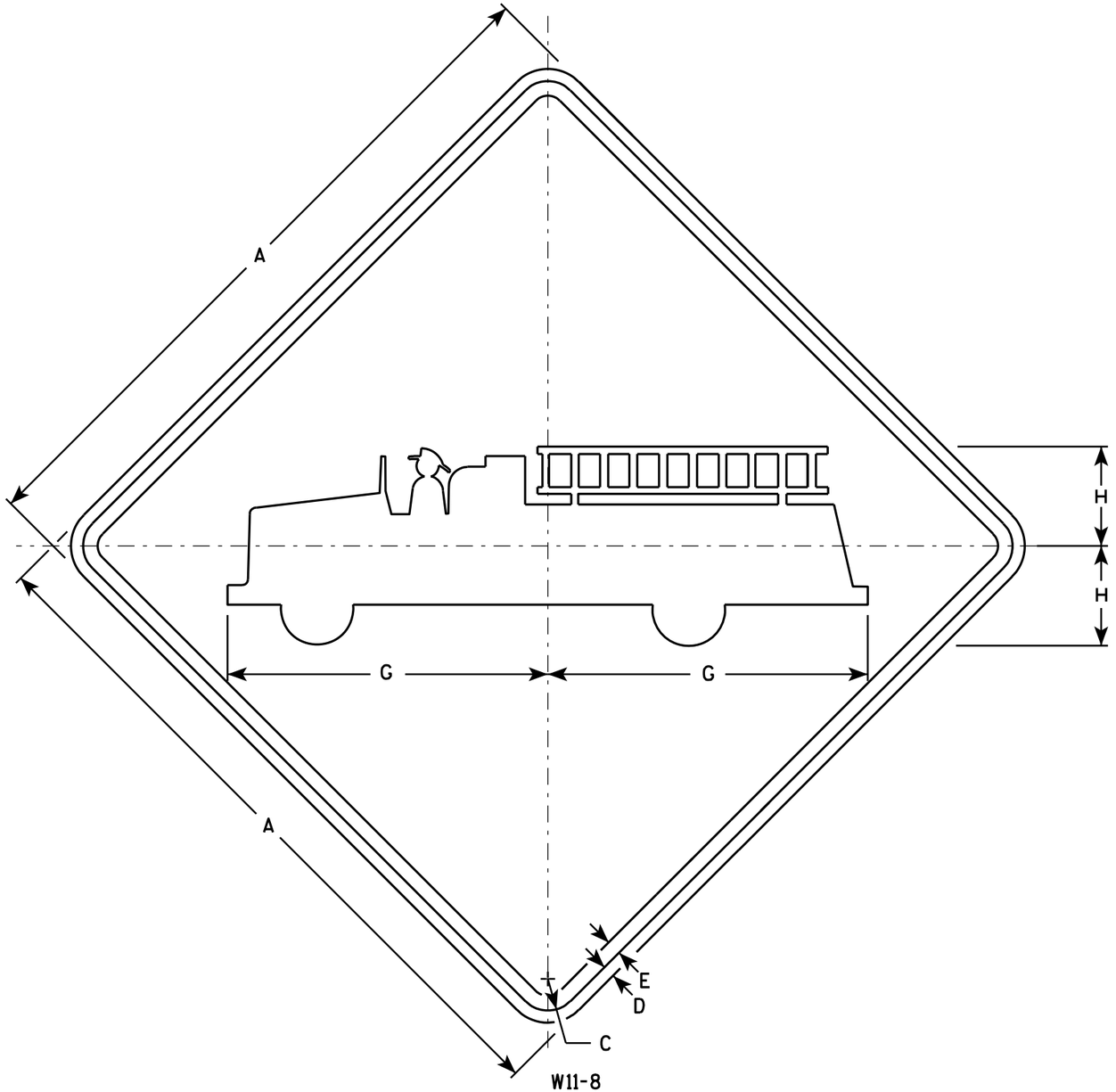
STANDARD SIGN
W1-13

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/18/12 PLATE NO. W1-13RL.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2299	E



W11-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN
W11-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-8.7

PROJECT NO:

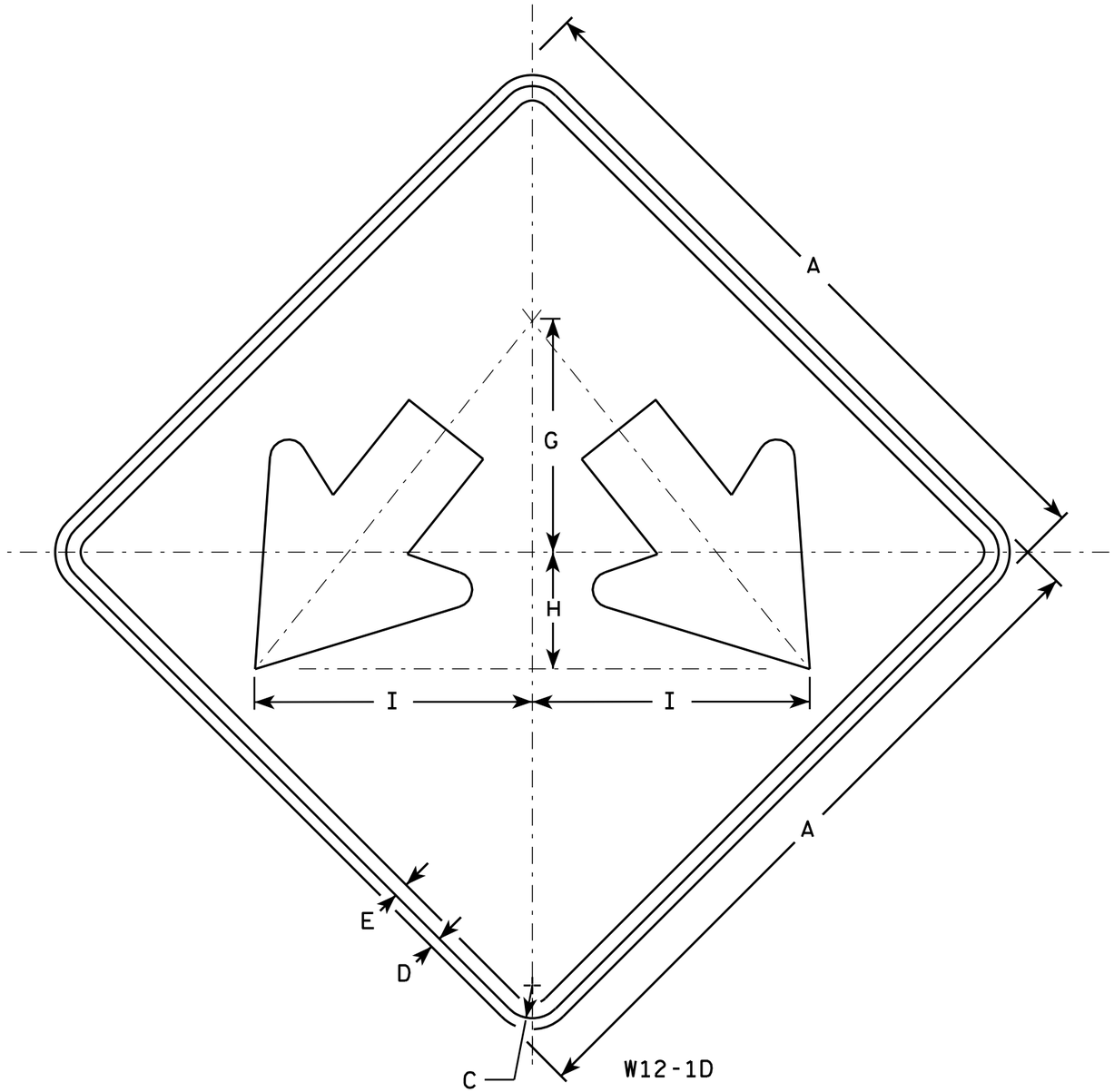
SHEET NO: 2300 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W118.DGN PLOT DATE : 13-MAR-2013 12:58 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

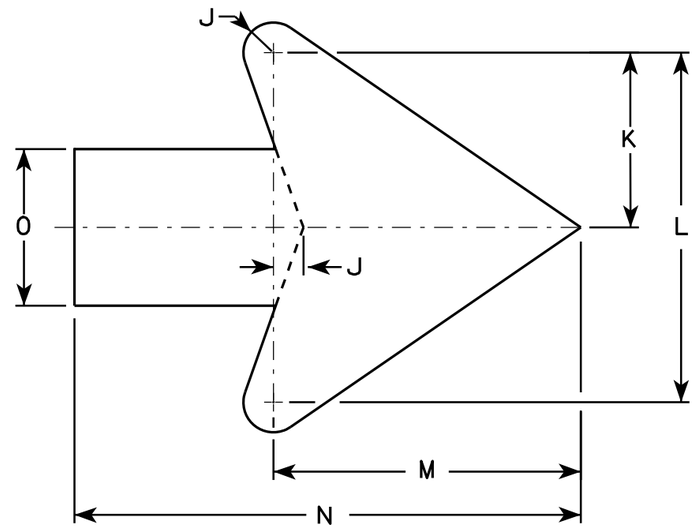
7

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

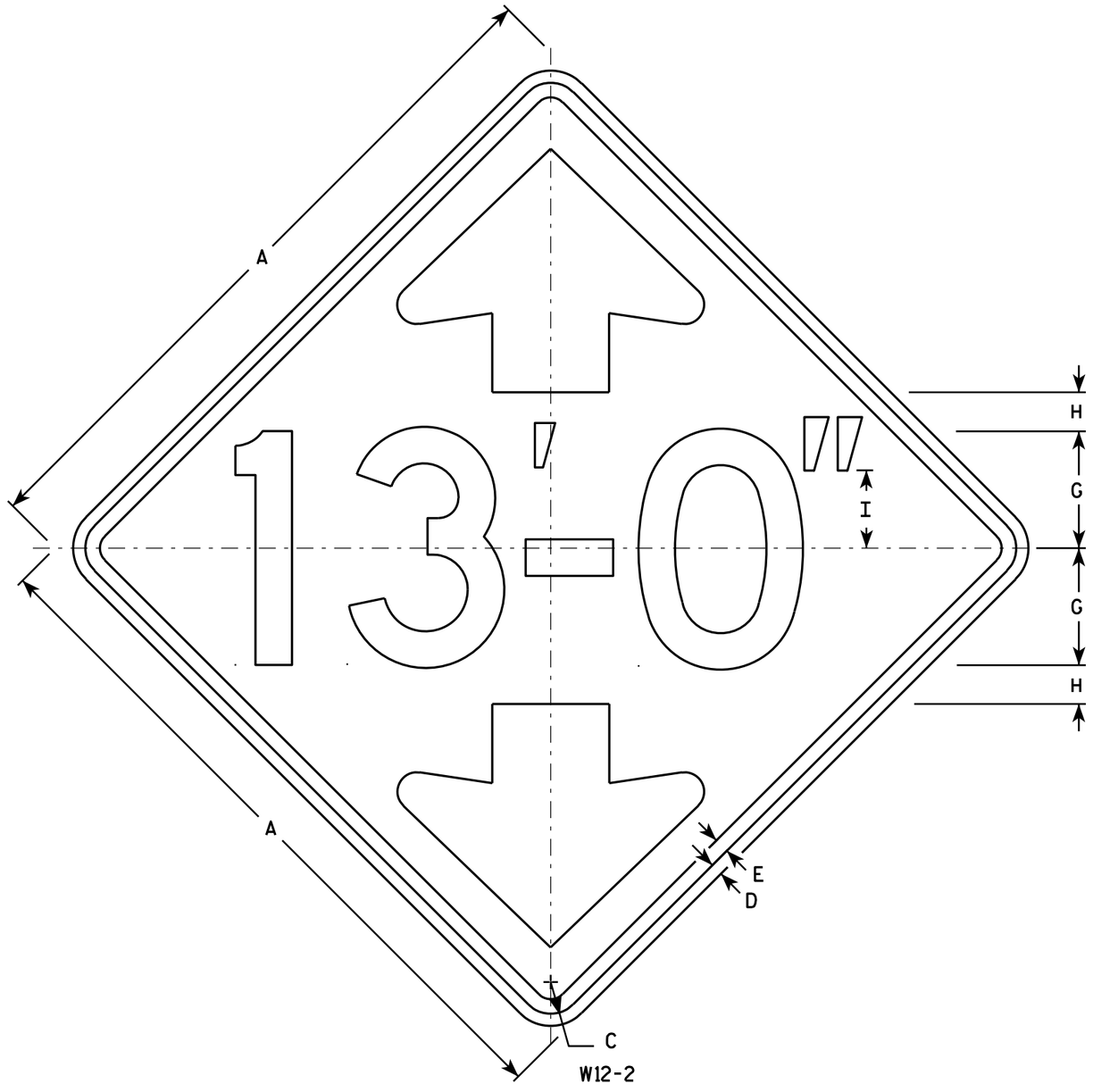
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2301	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

WISDOT/CADDS SHEET 42

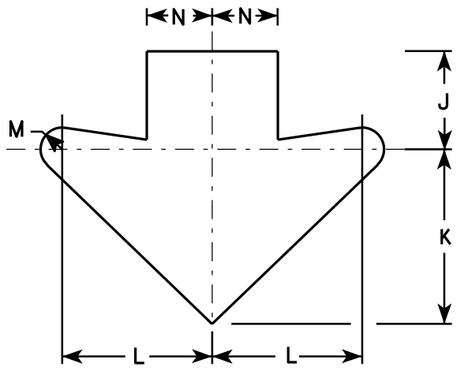
7

7

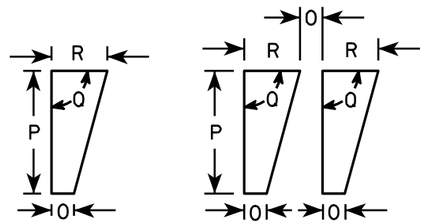


NOTES

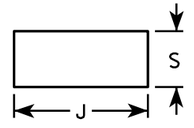
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.



Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

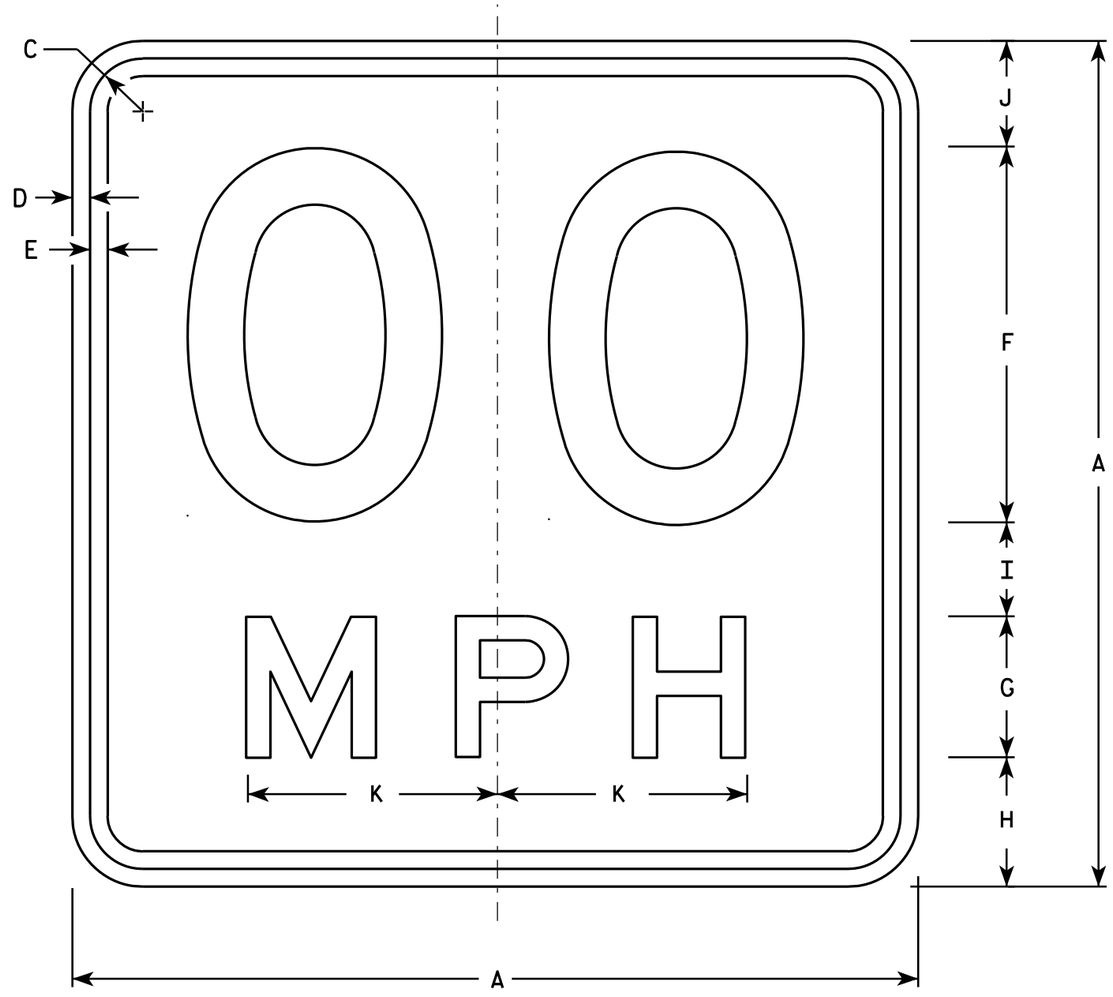
STANDARD SIGN
W12-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-2.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2302	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

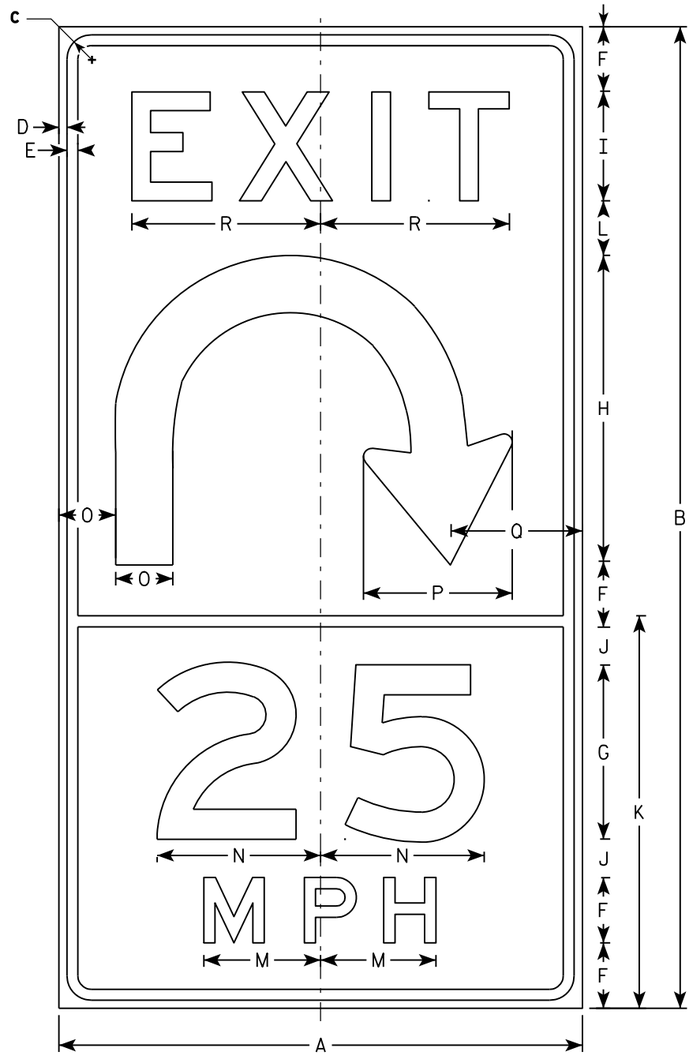
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2303	E



W13-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
2M	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
3																											
4																											
5																											

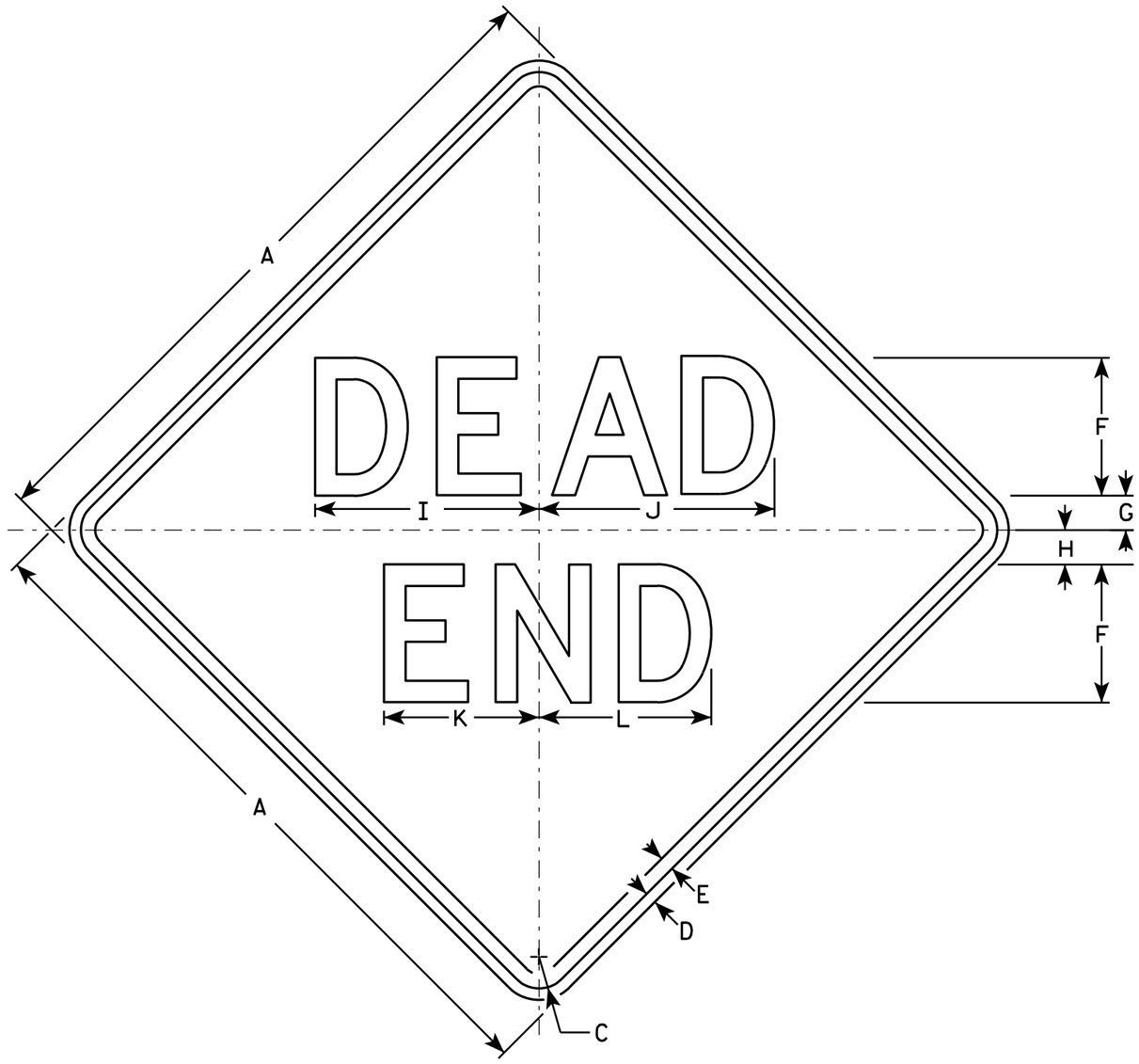
STANDARD SIGN
W13-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-2A.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2304	E



W14-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	5	1	2	8 1/4	8 5/8	5 5/8	6 1/4															4.0
2S	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
2M	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
3	36		1 5/8	5/8	3/4	7	2	3	11 3/8	12	7 7/8	8 3/4															9.0
4																											
5																											

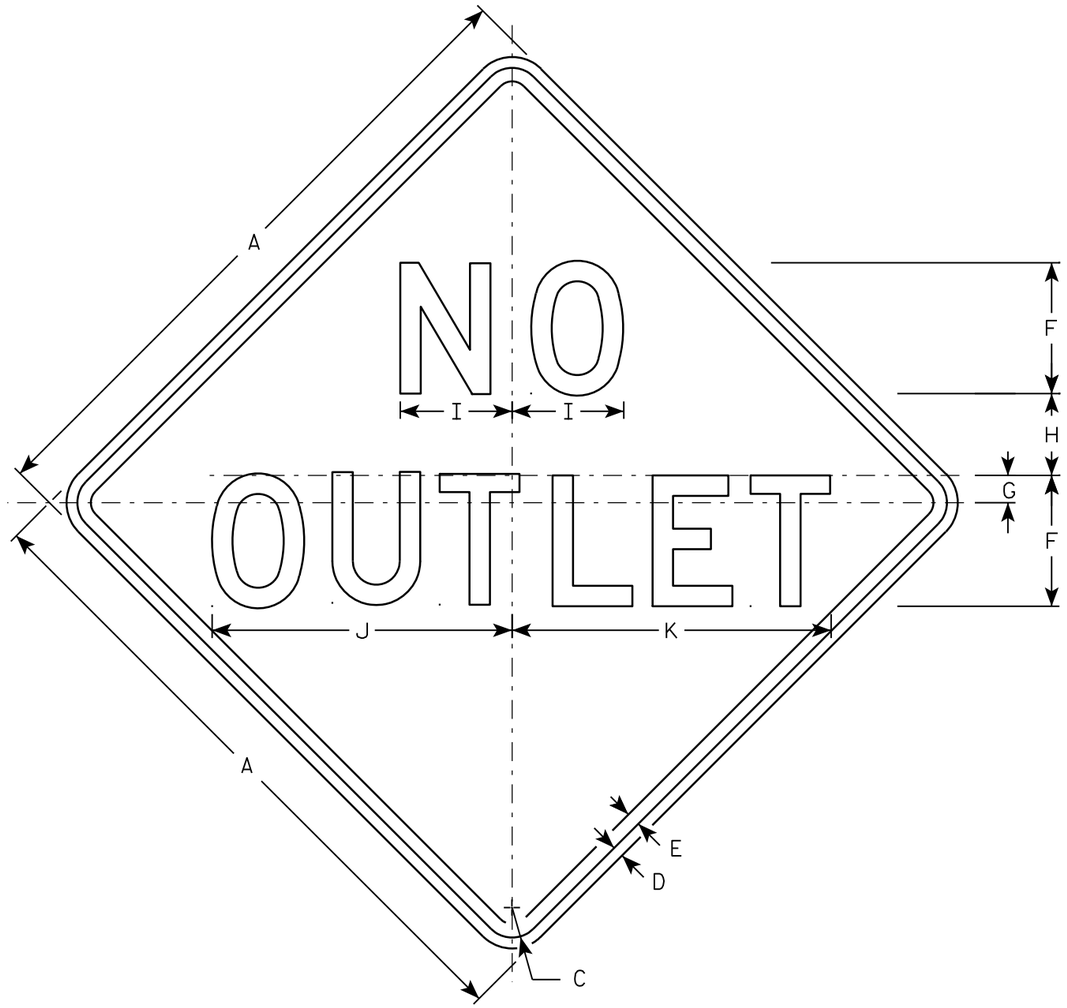
STANDARD SIGN
W14-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2305	E



W14-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	5	1	2 3/4	4 1/8	11 3/4	12 3/8																4.0
2S	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
2M	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
3	36		1 5/8	5/8	3/4	7	1 3/8	4 5/8	6	16 1/8	17 1/8																9.0
4																											
5																											

STANDARD SIGN
W14-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-2.3

PROJECT NO:

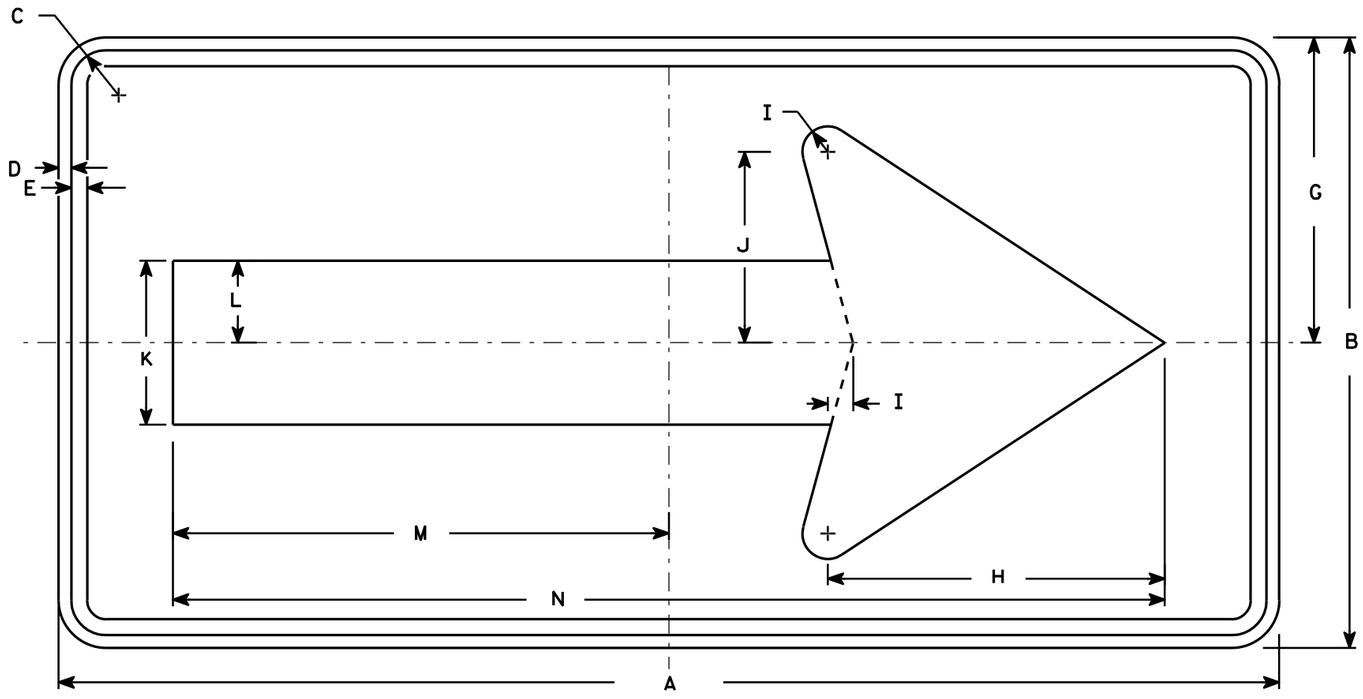
SHEET NO: 2306 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W142.DGN PLOT DATE : 13-MAR-2013 13:30 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

7



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

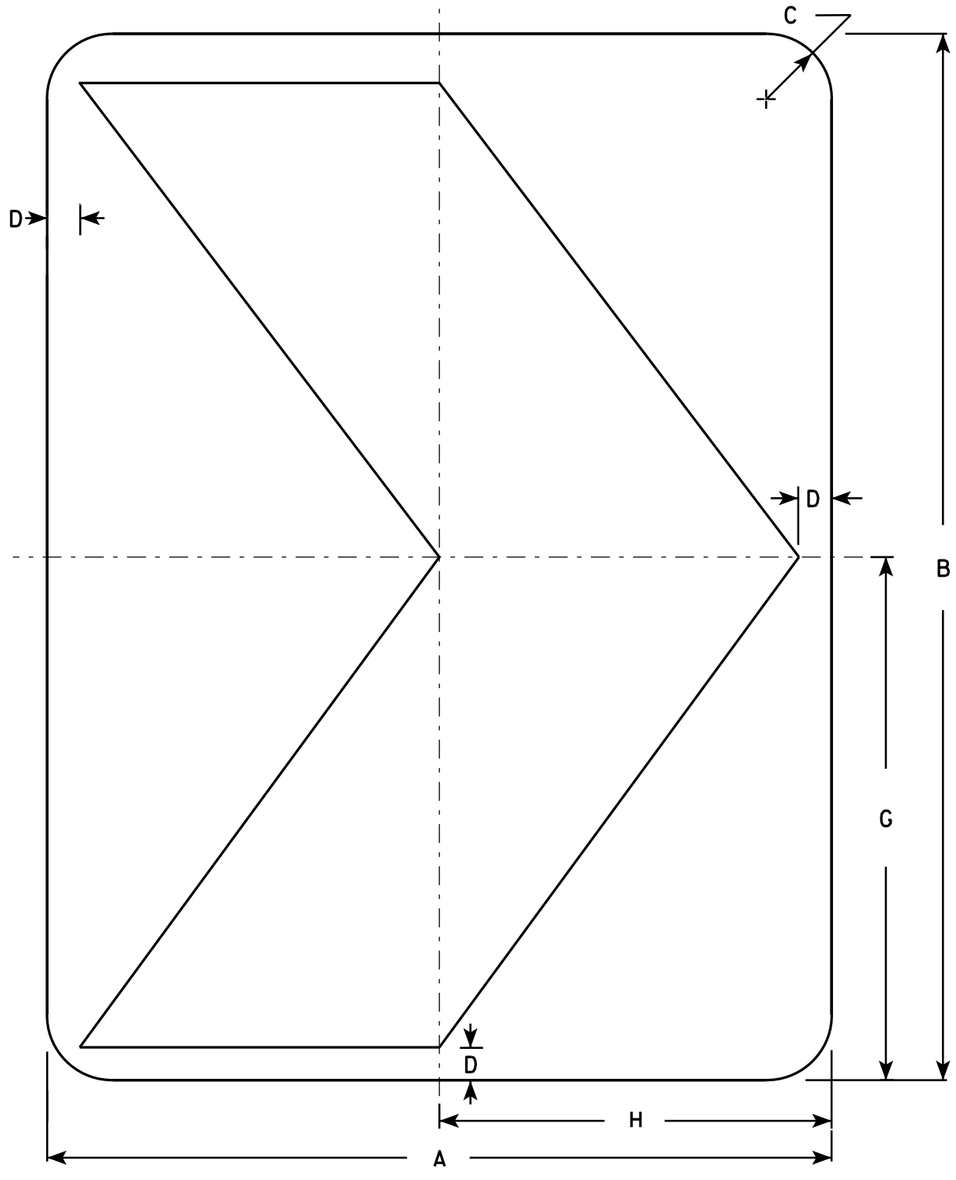
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2307



W1-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

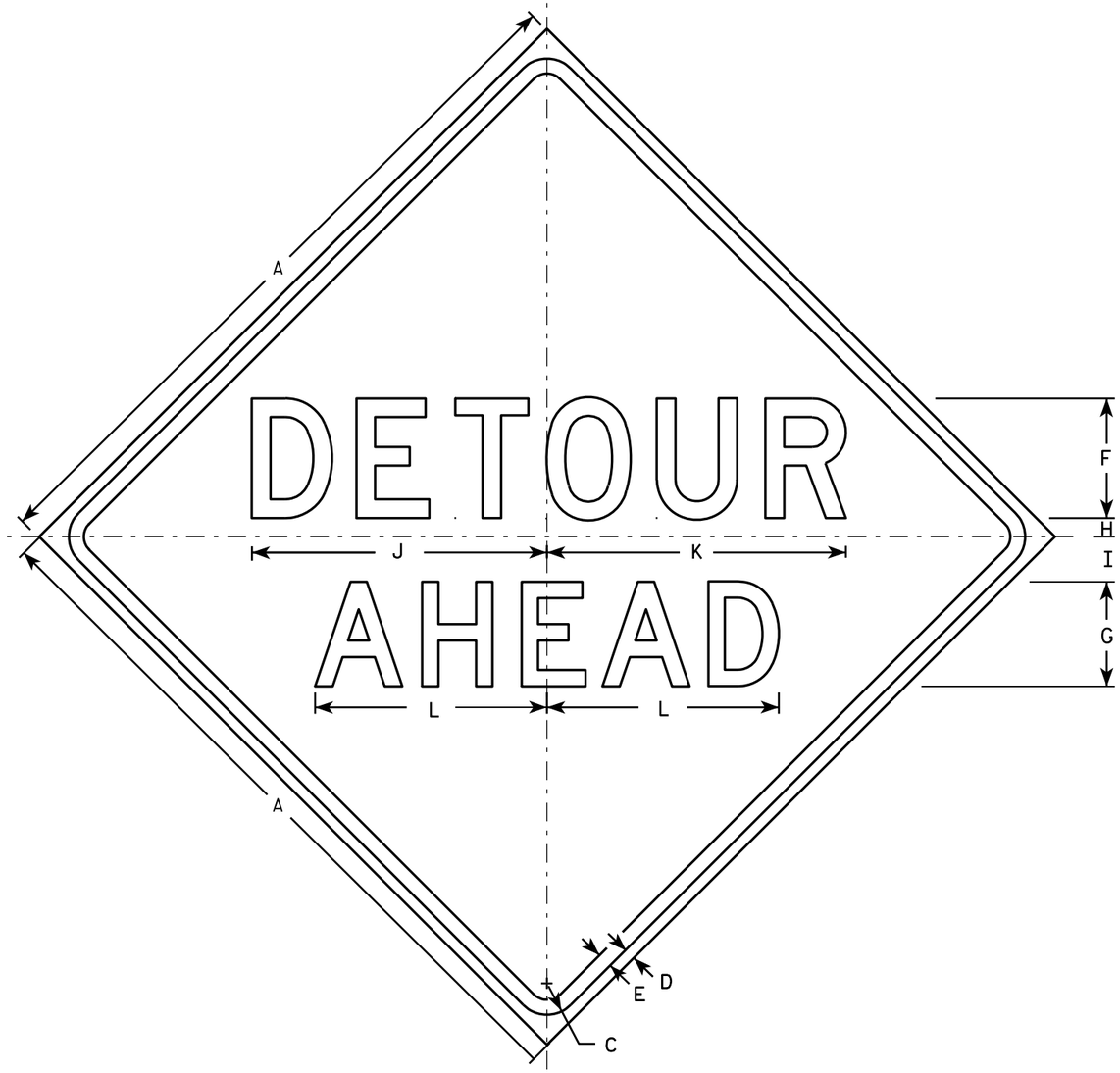
SHEET NO: 2308 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W18.DGN PLOT DATE : 07-JUN-2010 12:55 PLOT BY : ditjph

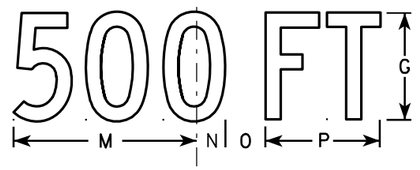
WISDOT/CADDS SHEET 42

7

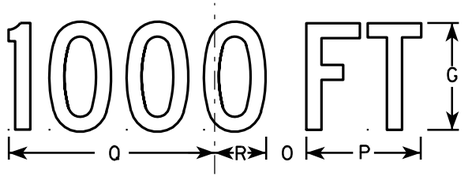
7



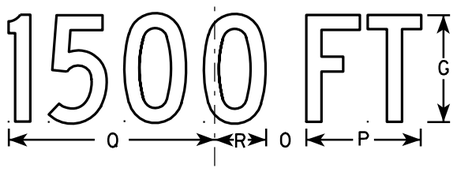
W20-2A



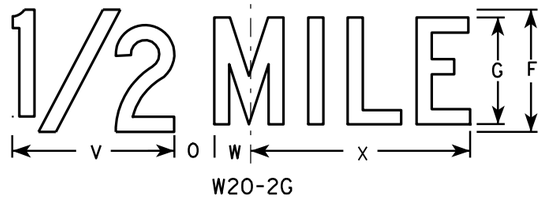
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

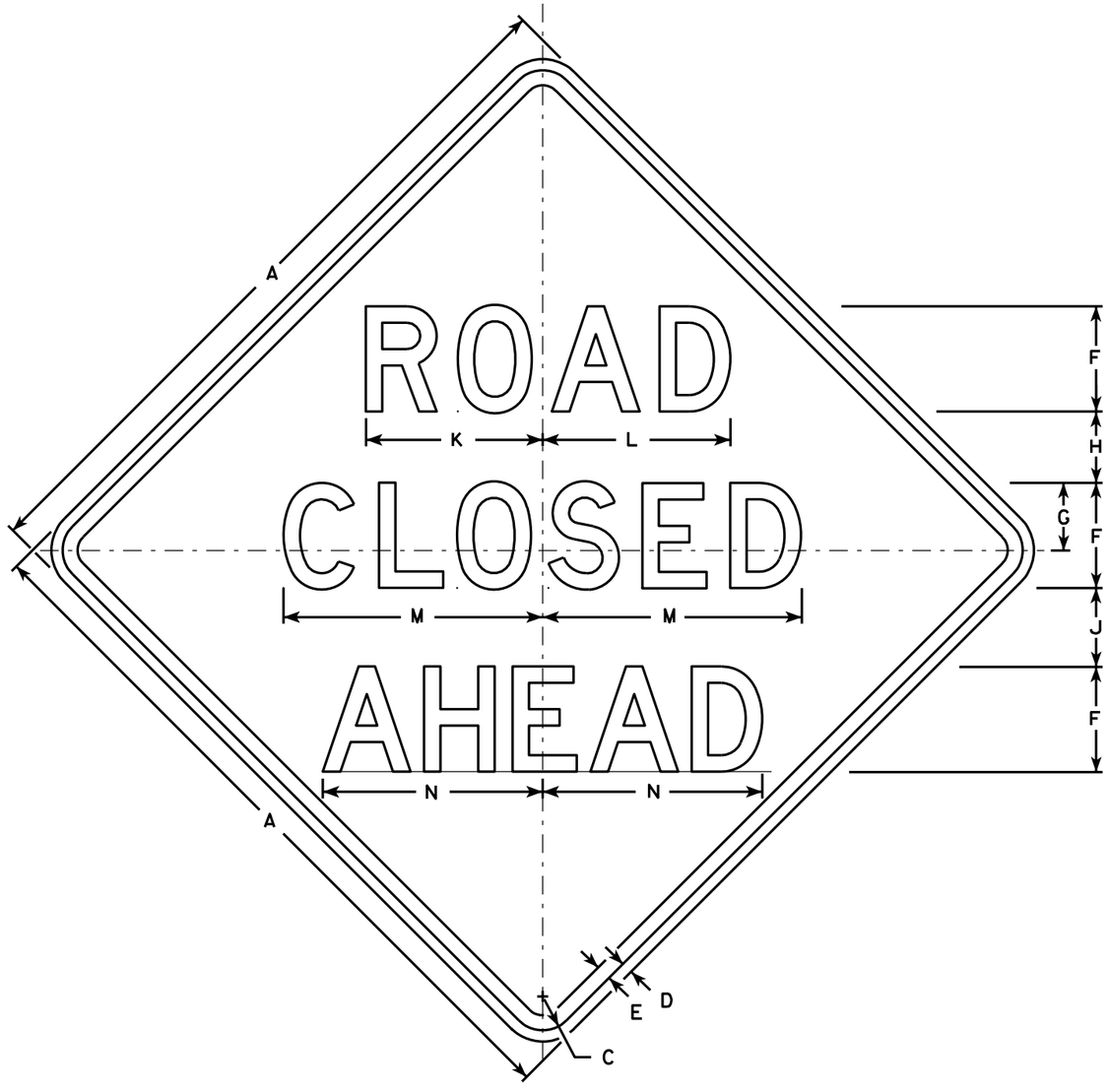
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

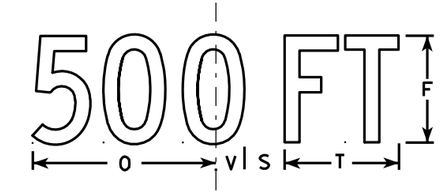
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

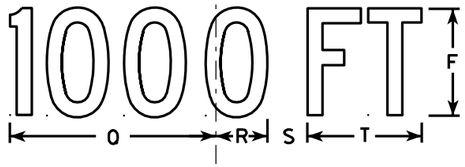
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2309 | E



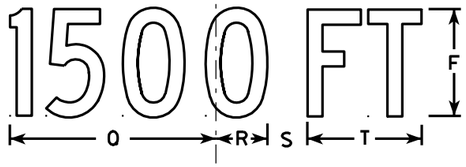
W20-3A



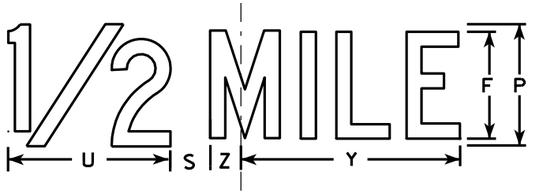
W20-3D



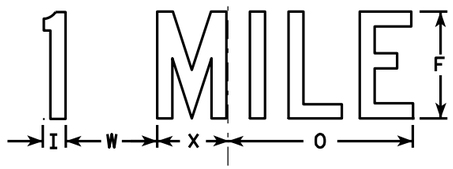
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

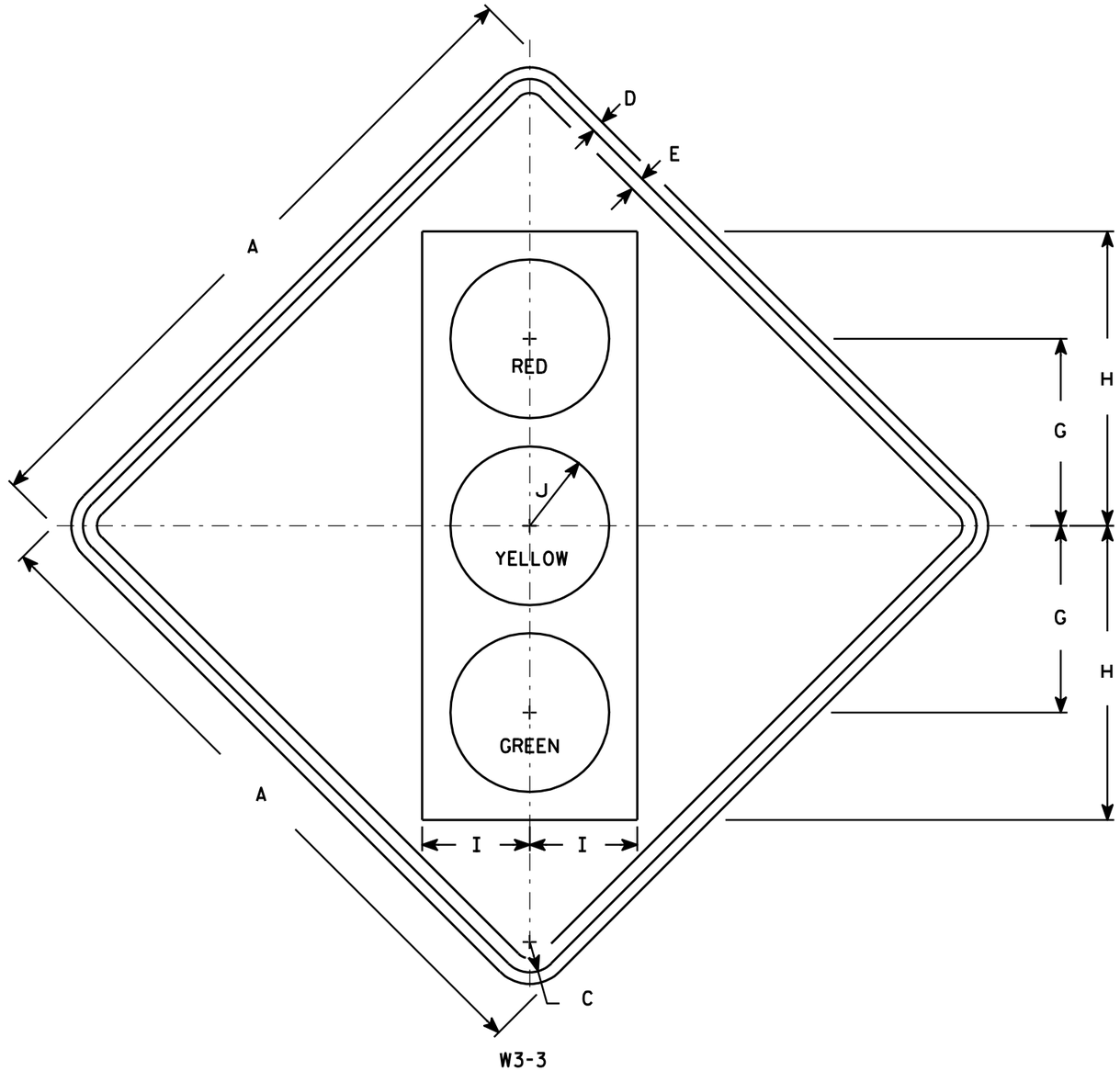
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2310 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

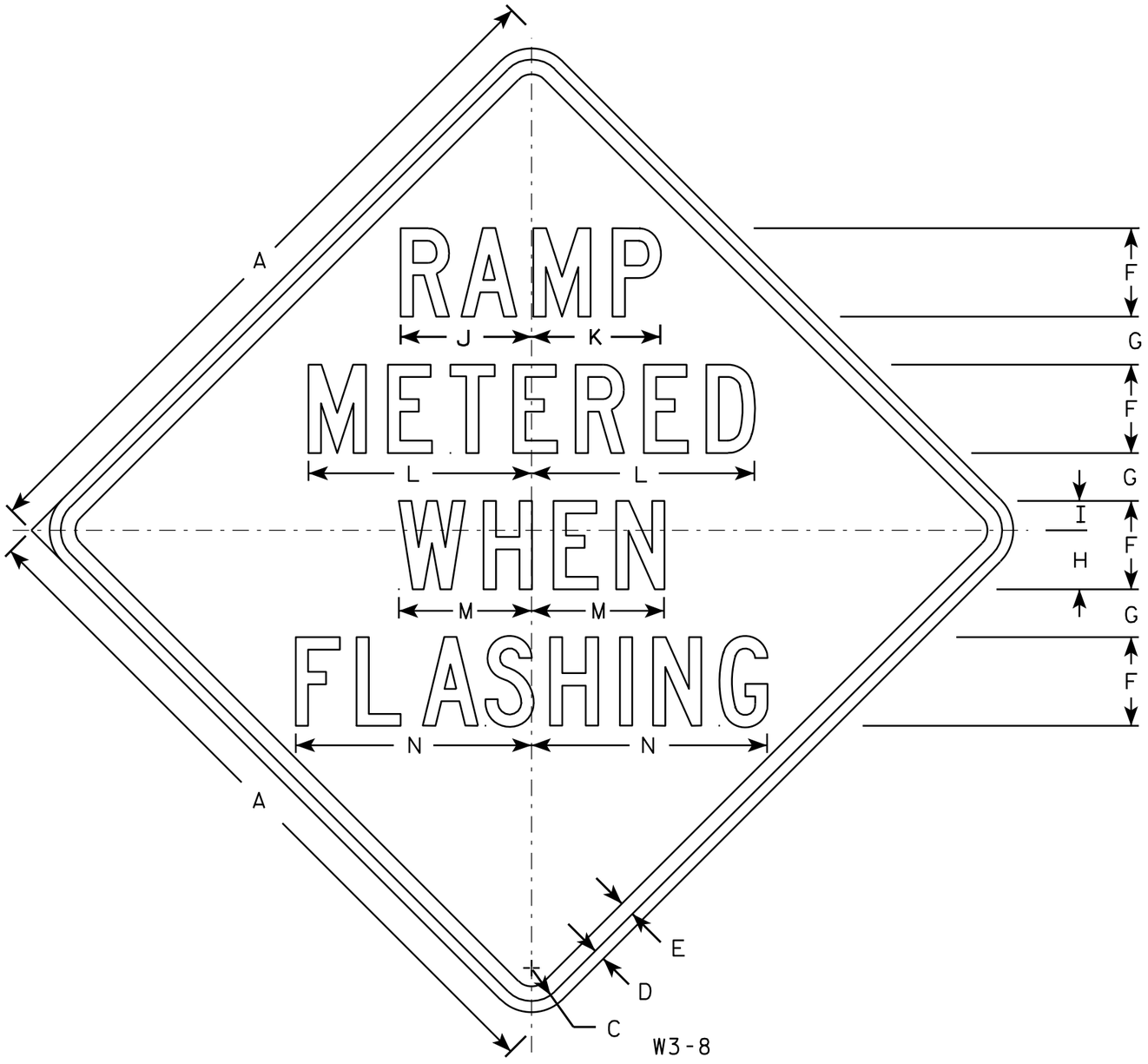
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 2311 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000

WISDOT/CADDS SHEET 42

7

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
2M	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
3	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
4	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
5	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0

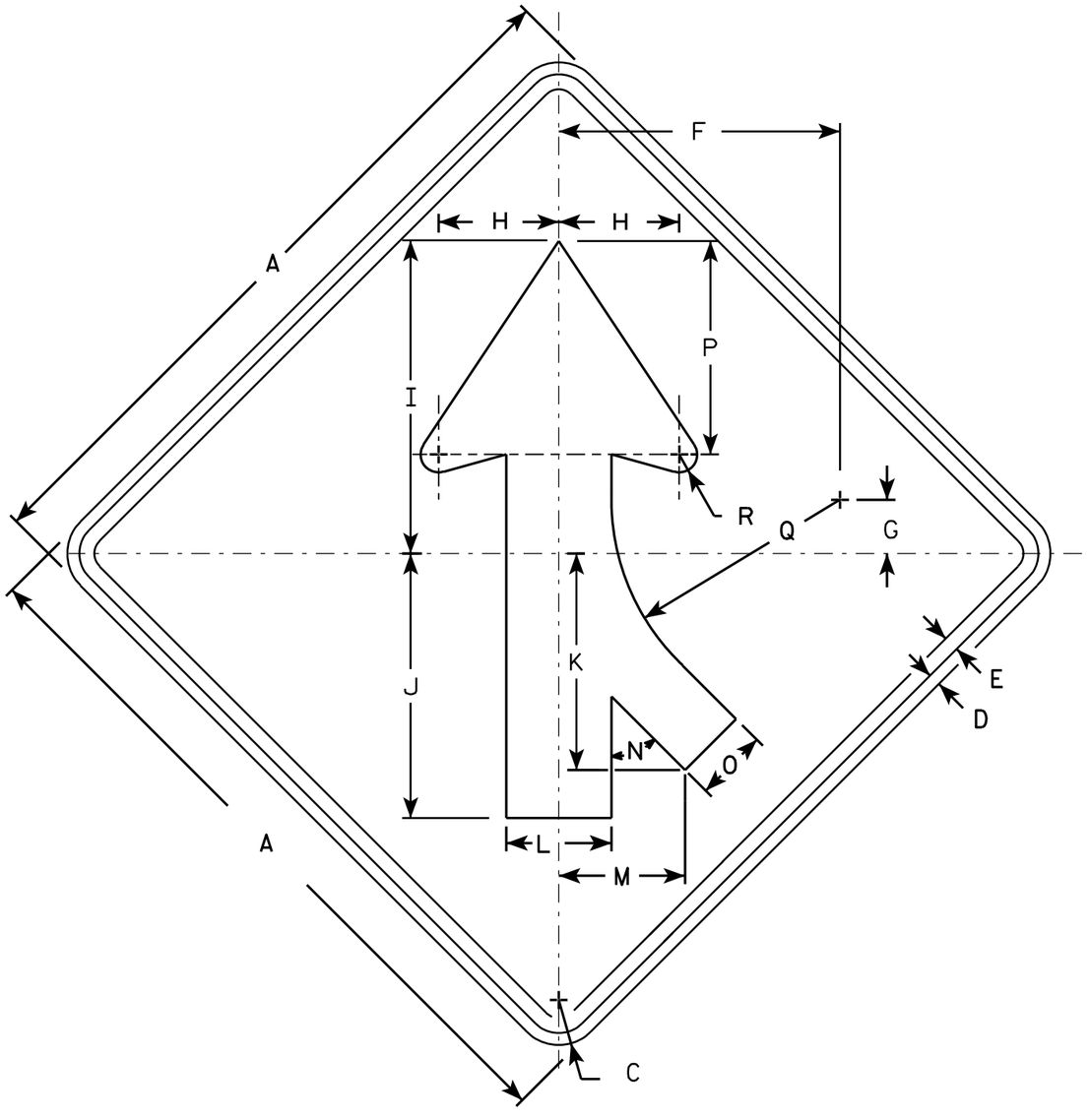
STANDARD SIGN
W3-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W3-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2312	E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

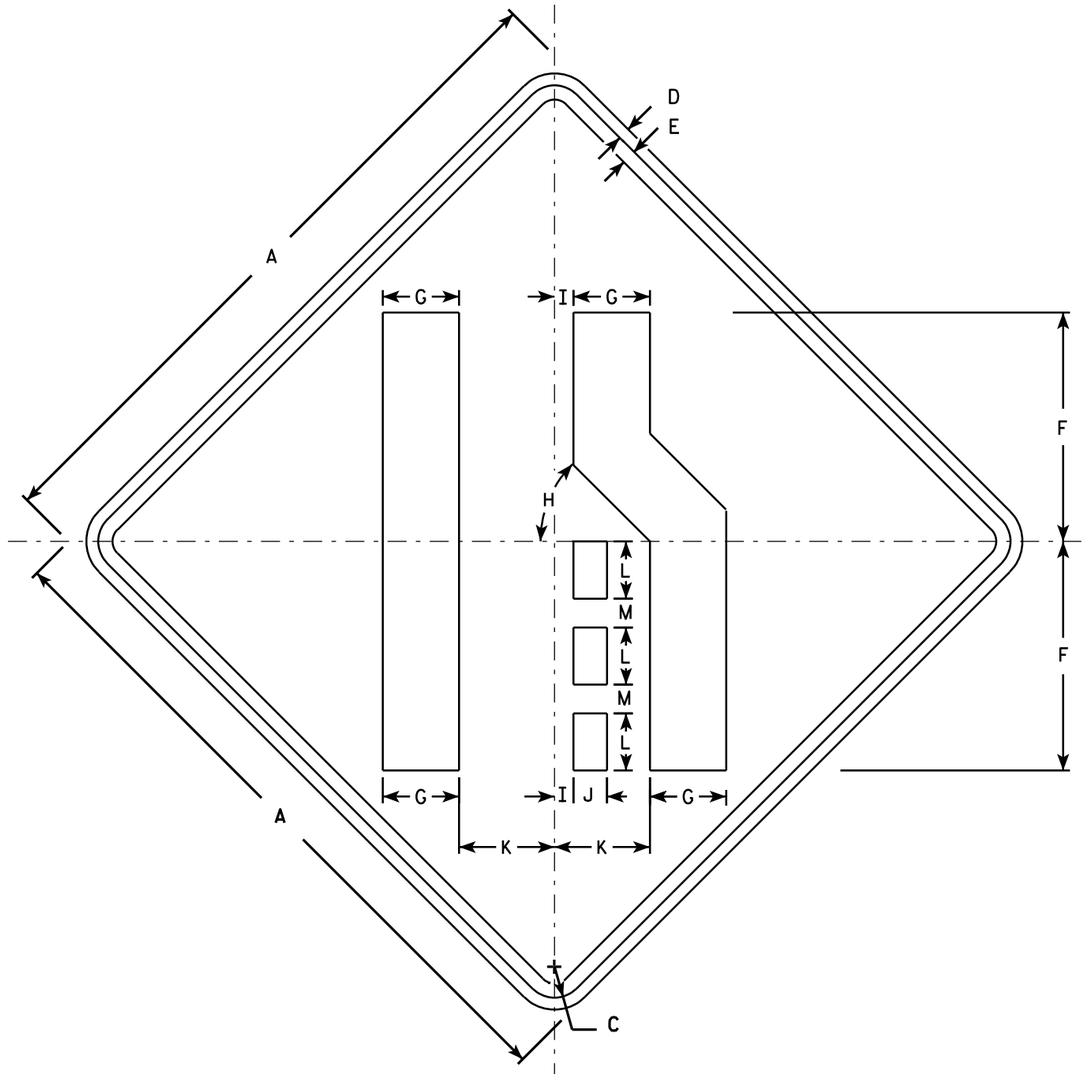
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2313	E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

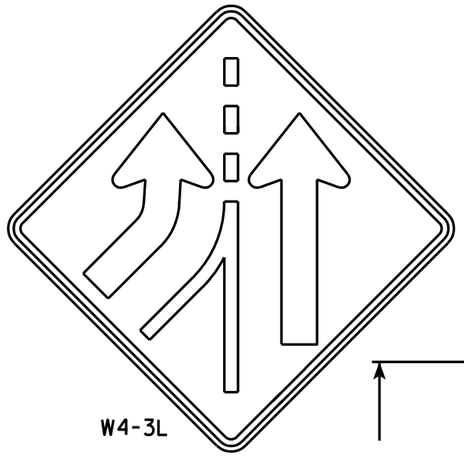
WISCONSIN DEPT OF TRANSPORTATION

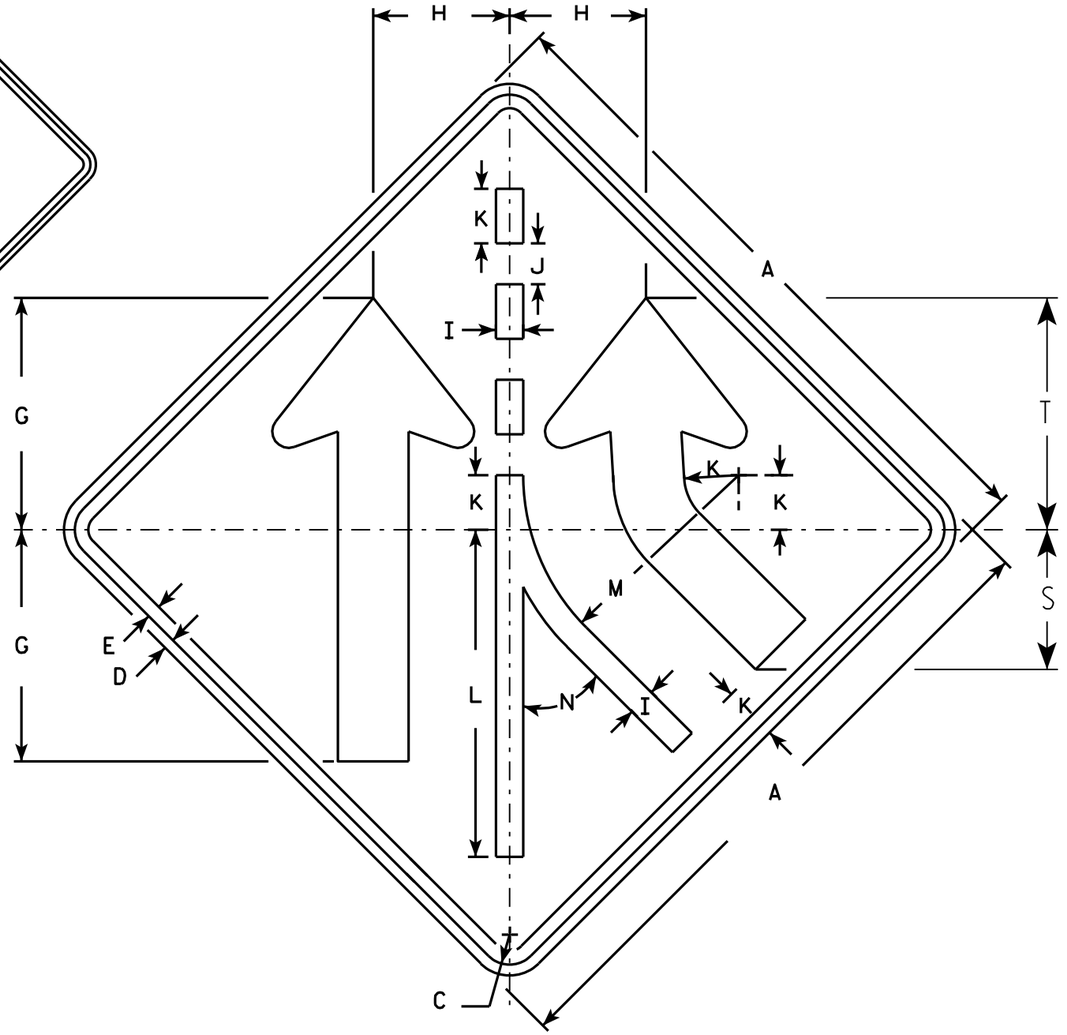
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 2314 E

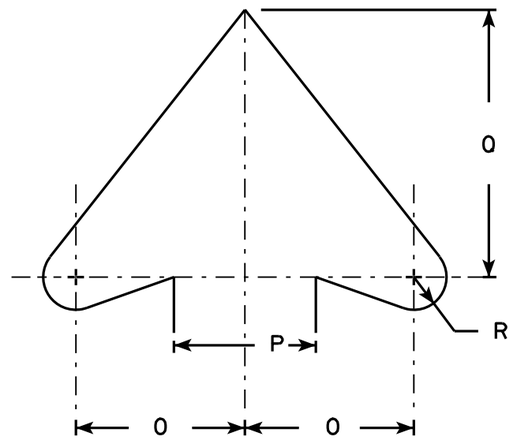




W4-3R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-3 L is the same as W4-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2M	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
3																											
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN
W4-3

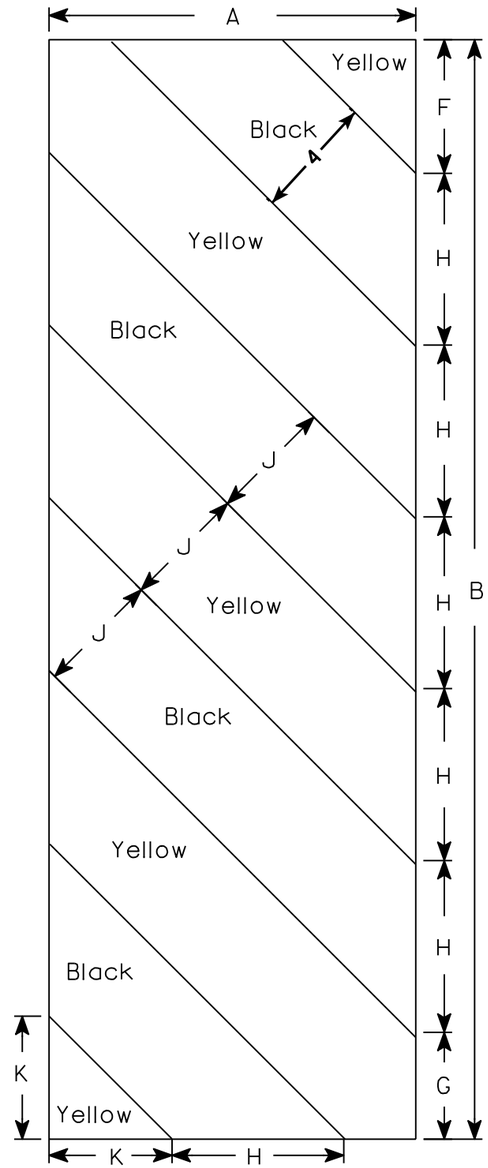
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

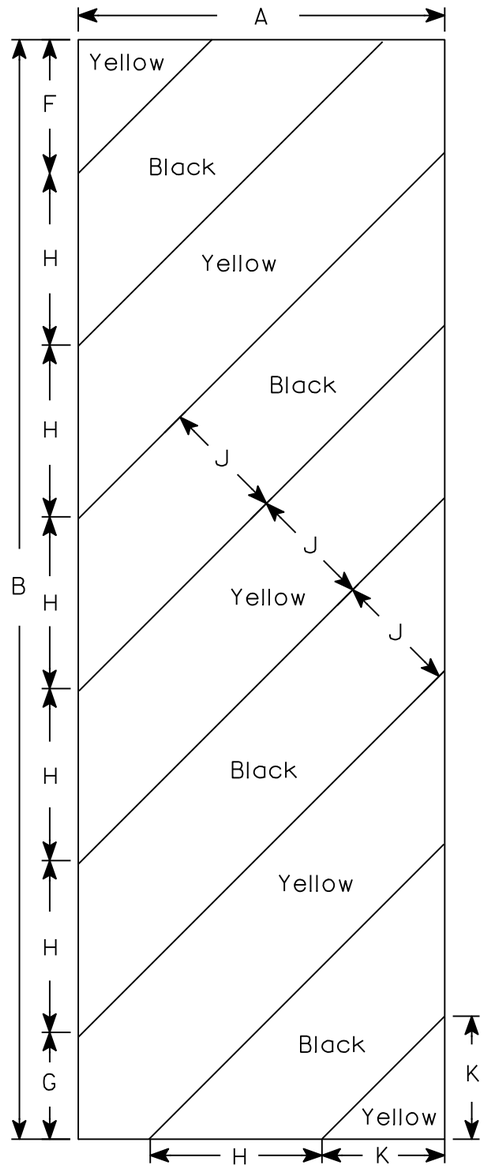
DATE 03/12/13 PLATE NO. W4-3.8

PROJECT NO:

SHEET NO: 2315 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

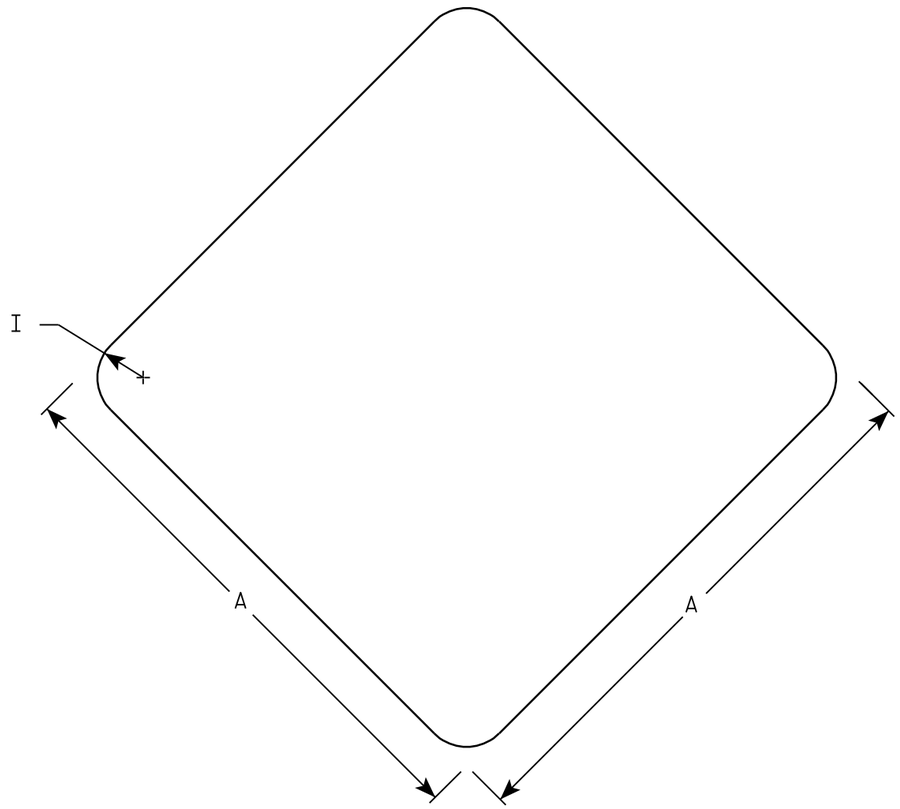
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2316	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

7



W5-54

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

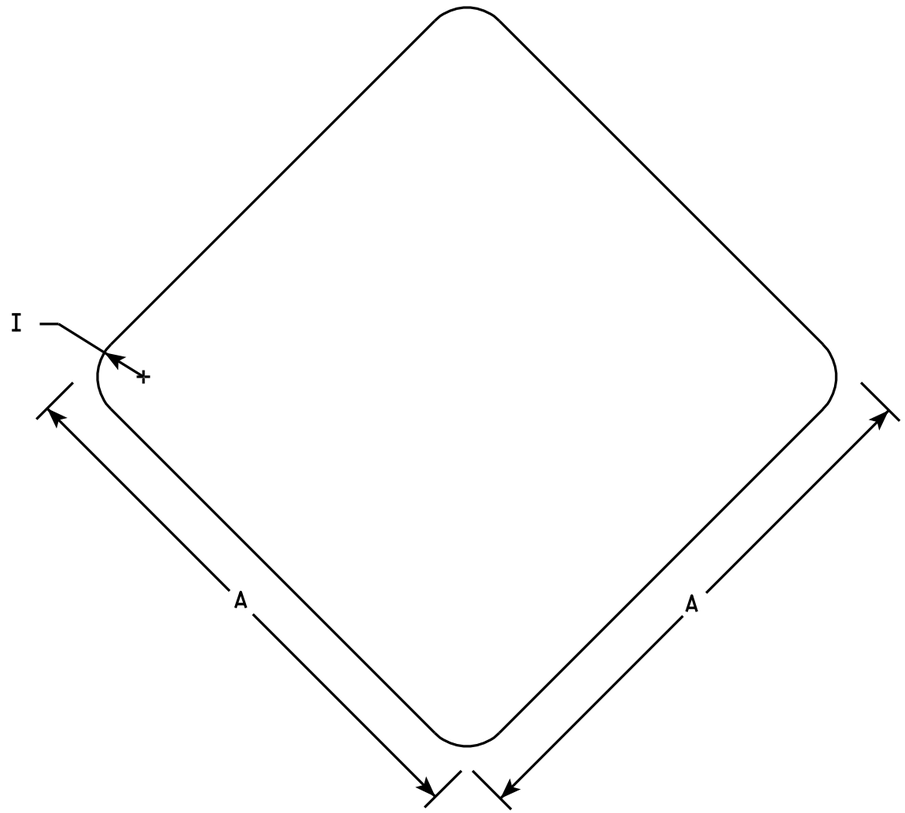
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2317	E



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

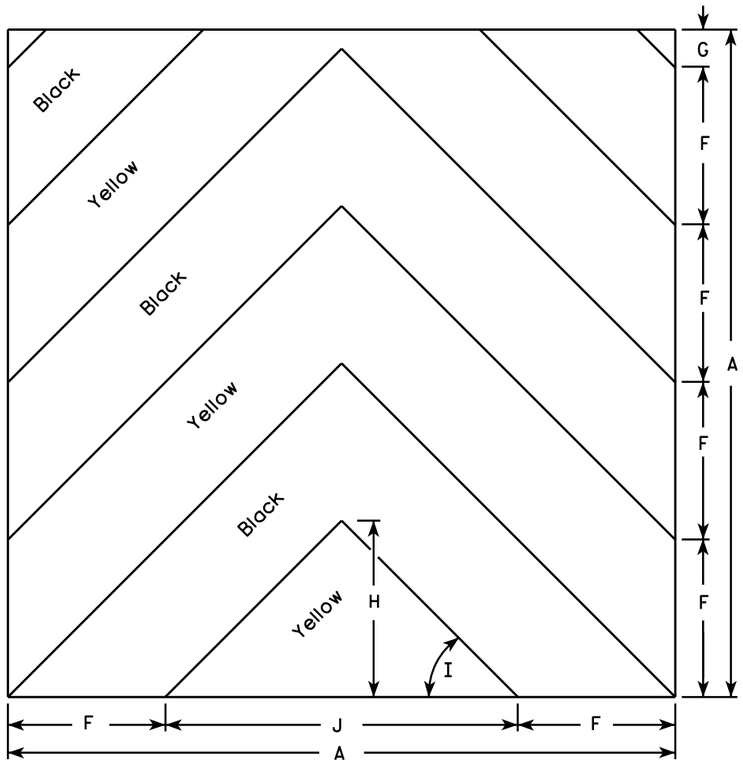
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. W5-56.6

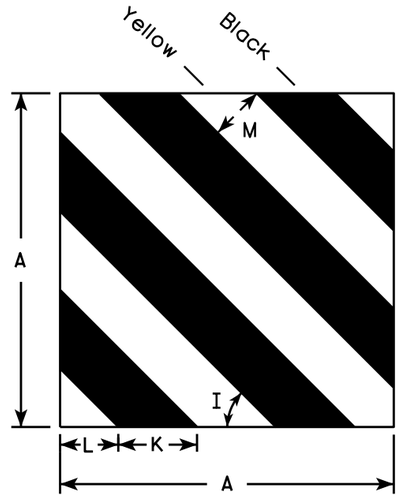
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 2318	E

NOTES

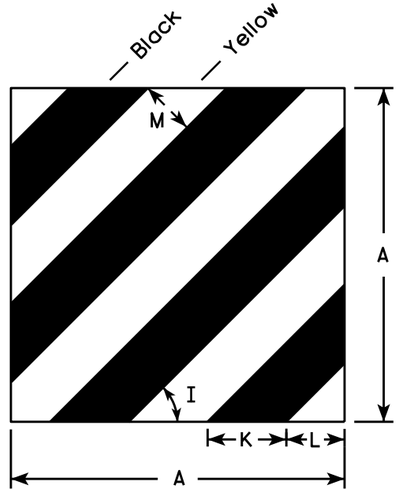
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Sign shall be a sheeting overlay no aluminum base material
4. Overall sign size varies depending upon manufacturer of crash cushion.



W5-58D



W5-58L



W5-58R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	VARIES					8 ½	2	9 ½	45°	19	8 ½	6 ¼	6														VARIES
2M	VARIES					8 ½	2	9 ½	45°	19	8 ½	6 ¼	6														VARIES
3																											
4																											
5																											

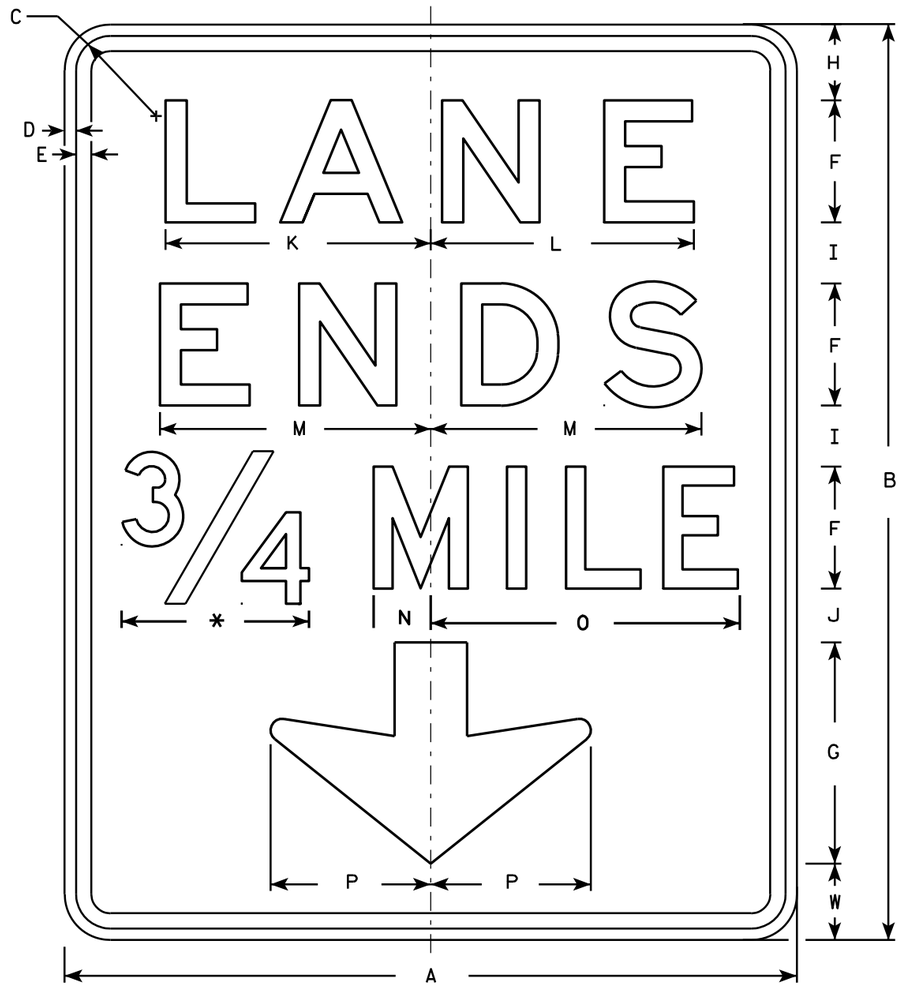
STANDARD SIGN
W5-58D & W5-58L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE W5-58.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

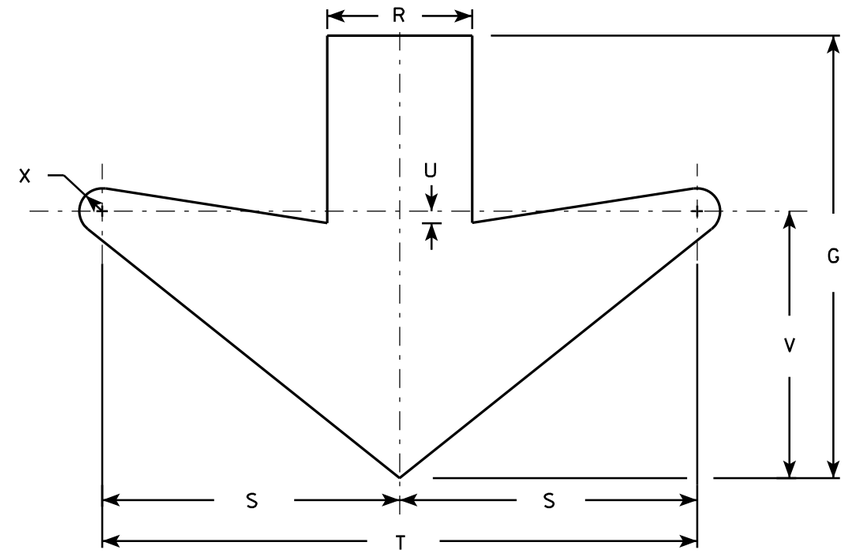


W9-63

* See Note 6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background -Yellow
   Message - Black non-reflective
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series E, Line 3 is Series D.
6. Substitute appropriate numerals and optically adjust spacing to give proper balance.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	17 3/8	17 1/4	17 3/4	3 3/4	20 1/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
2S	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	17 3/8	17 1/4	17 3/4	3 3/4	20 1/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
2M	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	17 3/8	17 1/4	17 3/4	3 3/4	20 1/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
3																											
4	72	90	6	1	1 1/2	12	22	8	6	5	26 1/8	26 1/8	26 5/8	5 5/8	30 3/8	16		6 1/2	15	30	2	15	7	1			45.0
5	72	90	6	1	1 1/2	12	22	8	6	5	26 1/8	26 1/8	26 5/8	5 5/8	30 3/8	16		6 1/2	15	30	2	15	7	1			45.0

STANDARD SIGN
W9-63

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W9-63.4

PROJECT NO:

SHEET NO: 2320 E

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.79
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC)..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- CIP CONCRETE PILING..... f'c = 3,500 psi
- 45W-INCH PRESTRESSED GIRDERS..... f'c = 8,000 psi

BAR STEEL REINFORCEMENT..... fy = 60,000 psi
PRESTRESSING STRANDS.....ULTIMATE TENSILE STRENGTH = 270,000 psi
STEEL PILE SHELLS SHALL BE ASTM A252 GRADE 3. Fy = 45,000 psi

DESIGN THE TEMPORARY WIRE FACE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHARGE LIVE LOAD ABOVE THE BEAM SEATS PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE TEMPORARY WIRE FACE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

FOUNDATION DATA

USING THE MODIFIED GATES ACCEPTANCE METHOD:

ABUTMENTS SHALL BE SUPPORTED ON 14" DIA. CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE 240 TONS PER PILE AT THE ABUTMENTS AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50 USING MODIFIED GATES ACCEPTANCE METHOD REDUCED BY THE DOWN DRAG OF 23.5 TONS FOR THE NORTH ABUTMENT & 15 TONS FOR THE SOUTH ABUTMENT TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:
- SOUTH ABUTMENT ..... 91 FEET
- NORTH ABUTMENT ..... 75 FEET

TRAFFIC DATA

USH 45 NB	USH 45 SB	IH 94 EB
ADT = 42,200 (2015)	ADT = 44,800 (2015)	ADT = 36,400 (2015)
ADT = 65,500 (2035)	RDS = 69,300 (2035)	ADT = 44,900 (2035)
RDS = 60 MPH	RDS = 60 MPH	RDS = 60 MPH

LIST OF DRAWINGS

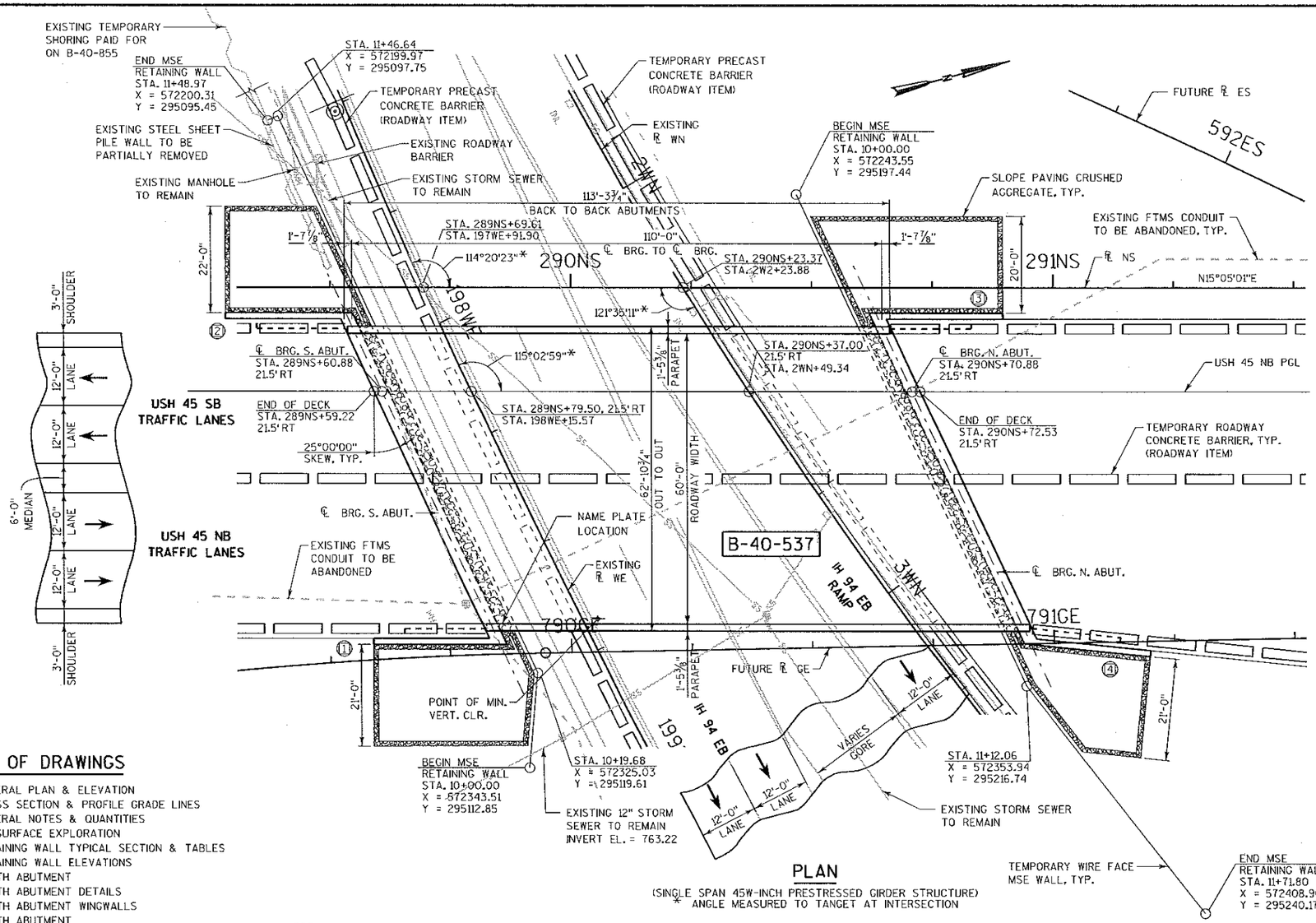
1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & PROFILE GRADE LINES
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. RETAINING WALL TYPICAL SECTION & TABLES
6. RETAINING WALL ELEVATIONS
7. SOUTH ABUTMENT
8. SOUTH ABUTMENT DETAILS
9. SOUTH ABUTMENT WINGWALLS
10. NORTH ABUTMENT
11. NORTH ABUTMENT DETAILS
12. NORTH ABUTMENT WINGWALLS
13. ABUTMENT DETAILS
14. 45W" PRESTRESSED GIRDER
15. 45W" PRESTRESSED GIRDER DETAILS
16. SUPERSTRUCTURE FRAMING PLAN
17. STEEL DIAPHRAGMS
18. SUPERSTRUCTURE REINFORCEMENT
19. SUPERSTRUCTURE DETAILS
20. SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 2)
21. SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 2)
22. SLOPE PAVING DETAILS

LEGEND

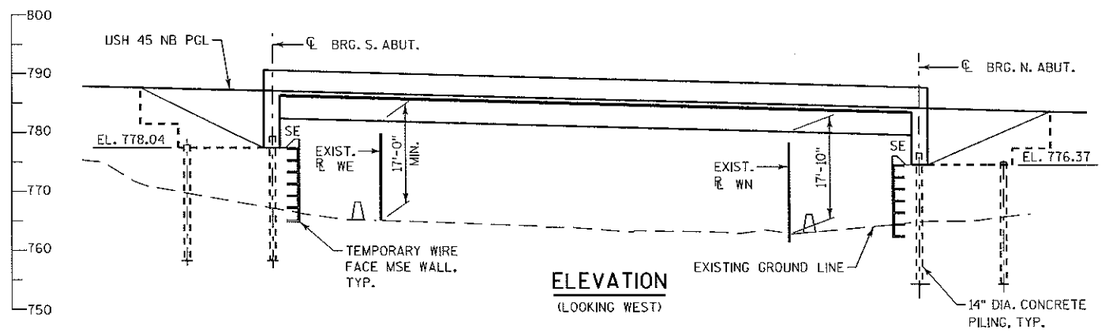
→ DIRECTION OF TRAFFIC
(X) WINGWALL NUMBER

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200



PLAN
(SINGLE SPAN 45W-INCH PRESTRESSED GIRDER STRUCTURE)
* ANGLE MEASURED TO TANGET AT INTERSECTION



ELEVATION
(LOOKING WEST)

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
5/1/2014

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/07/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-537

USH 45 NB BRIDGE OVER EXISTING IH 94 EB

COUNTY	MILWAUKEE	CITY	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	AJA	DESIGN CK'D.	SWS	DRAWN BY	AJA	PLANS CK'D.	MHZ

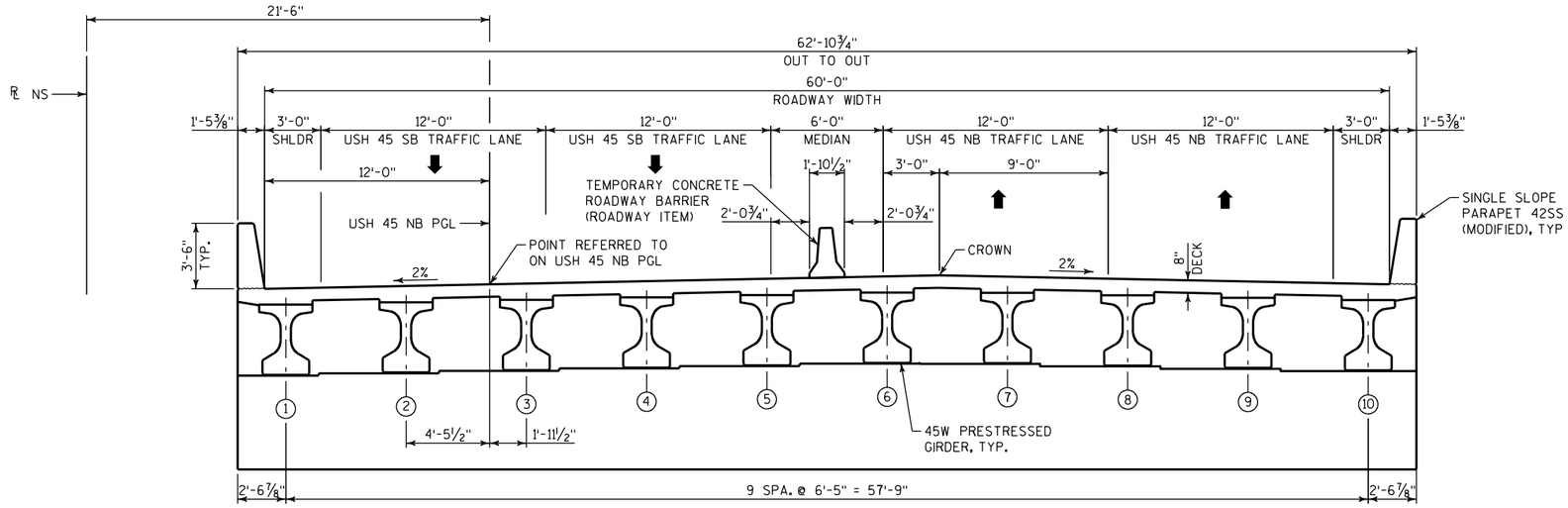
GENERAL PLAN & ELEVATION

SHEET 1 OF 22

8

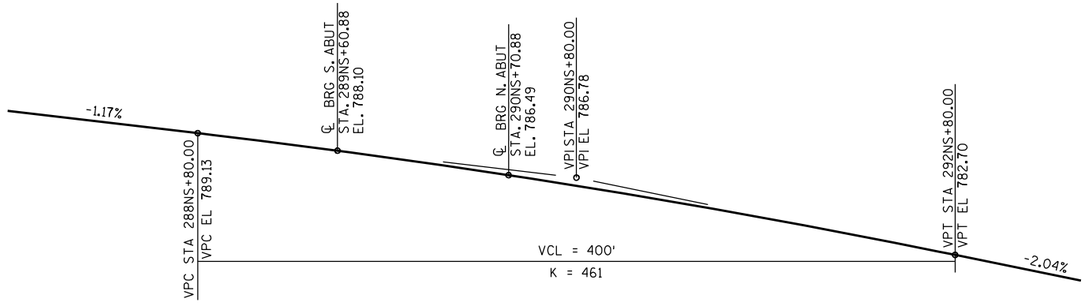
8

STATE PROJECT NUMBER
1060-33-80

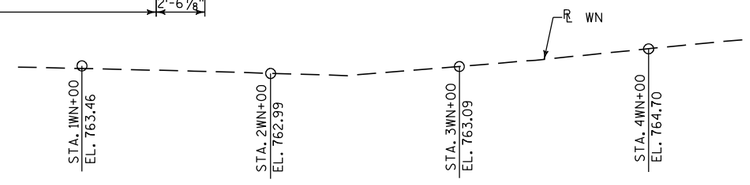


BRIDGE CROSS SECTION B-40-537

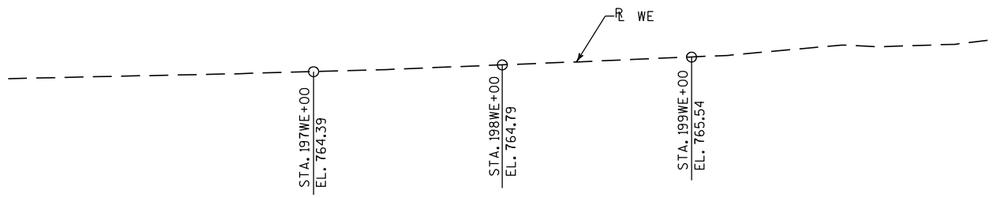
(LOOKING NORTH)
(ALL DIMENSIONS ARE MEASURED NORMAL USH 45 NB PGL)



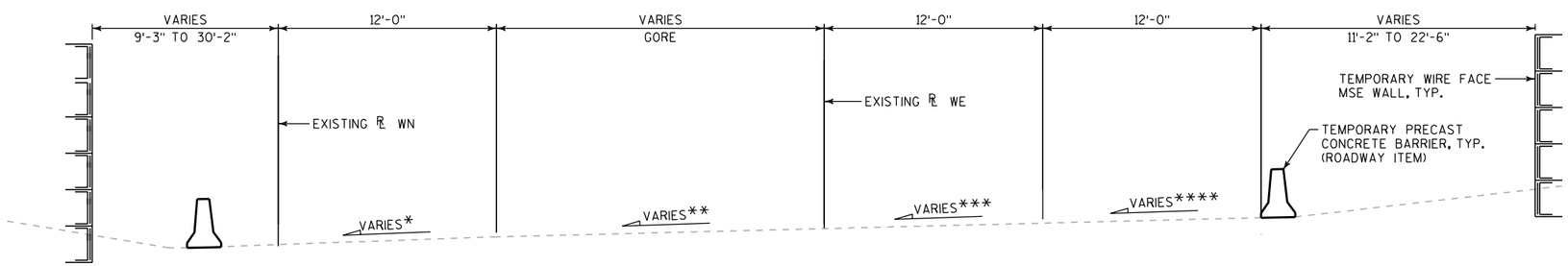
PROFILE GRADE LINE - USH 45 NB



SURVEYED EXISTING PROFILE - WN



SURVEYED EXISTING PROFILE - WE



EXISTING TYPICAL SECTION - IH 94 EB

(LOOKING EAST)

* IH 94 EB PAVEMENT SLOPE VARIES FROM 3.74%± TO 4.68%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

** IH 94 EB PAVEMENT SLOPE VARIES FROM 3.94%± TO 4.93%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

*** IH 94 EB PAVEMENT SLOPE VARIES FROM 3.67%± TO 4.17%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

**** IH 94 EB PAVEMENT SLOPE VARIES FROM 3.08%± TO 3.67%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY MM | PLANS CK'D. MHZ

CROSS SECTION & PROFILE GRADE LINES

SHEET 2 OF 22

8

8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SOUTH ABUTMENT	NORTH ABUTMENT	SUPER*	TOTAL
206.1000.0001	EXCAVATION FOR STRUCTURES BRIDGES B-40-537	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	358	358	-	716
502.0100	CONCRETE MASONRY BRIDGES	CY	77	79	293	449
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	866	866
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	-	-	1,110	1,110
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	10,400	10,400	43,110	63,910
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	10	10	-	20
506.4000.0001	STEEL DIAPHRAGMS B-40-537	EACH	-	-	18	18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	19	19	-	38
550.2148	PILING CIP CONCRETE 14 X 0.5-INCH	LF	1,274	1,125	-	2,399
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	155	149	-	304
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	73	140	-	213
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	246	296	-	542
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	1,862	2,135	-	3,997
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				¾"
	NON-BITUMINOUS JOINT FILLER	SIZE				½"
	CORK FILLER	SIZE				¾"
	NAME PLATE	EACH				1

ALL ITEMS ARE CATEGORY 2000

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007).

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT WALLS WITH THE NORTH & SOUTH ABUTMENT OF BRIDGE B-40-537.

THE PLAN QUANTITY FOR THE BID ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO BOTTOM OF WALL AS SHOWN IN THE PLANS. THE BOTTOM OF THE WALL IS ASSUMED TO BE 1'-6" BELOW FINISHED GRADE. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

THE PARAPET CONCRETE QUANTITY FOR SINGLE SLOPE 42SS MODIFIED SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE COST OF FURNISHING AND INSTALLING GEOTEXTILE FABRIC TYPE DF IS TO BE INCLUDED IN THE BID ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE COST FOR CONSTRUCTION & REMOVAL OF THE EXISTING TEMPORARY SHORING IS INCLUDED IN B-40-855 CONSTRUCTION.

THE MSE WALL SHALL HAVE DOUBLE LAYER OF GEOTEXTILE FABRIC OF ALL EXPOSED SURFACES.

ONLY ANCHORED ROADWAY TEMPORARY BARRIER SHALL BE USED. SEE ROADWAY PLANS FOR DETAILS. ANCHORED ROADWAY TEMPORARY BARRIER IS A ROADWAY ITEM.

* CONTRACTOR MAY ELECT TO USE STAY-IN-PLACE "PRECAST PRESTRESSED DECK PANELS" AS SPECIFIED.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY MM | PLANS CK'D. MHZ

GENERAL NOTES & QUANTITIES

SHEET 3 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-537\cds\B537_080103_qu.dgn PLOT DATE : 29-APR-2014 09:08 PLOT BY : MSCAYA PLOT NAME : B537_080103_qu PLOT SCALE : 8:1

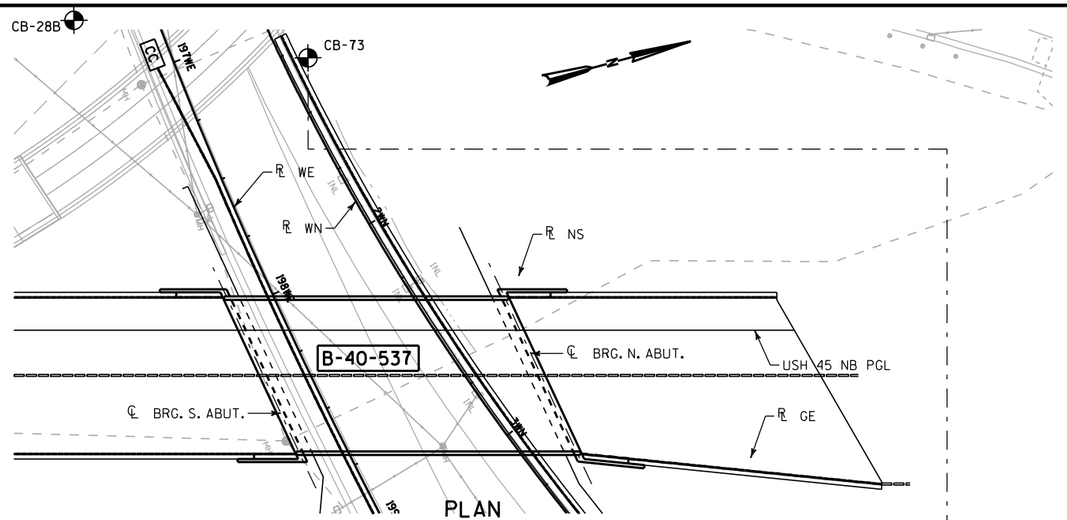
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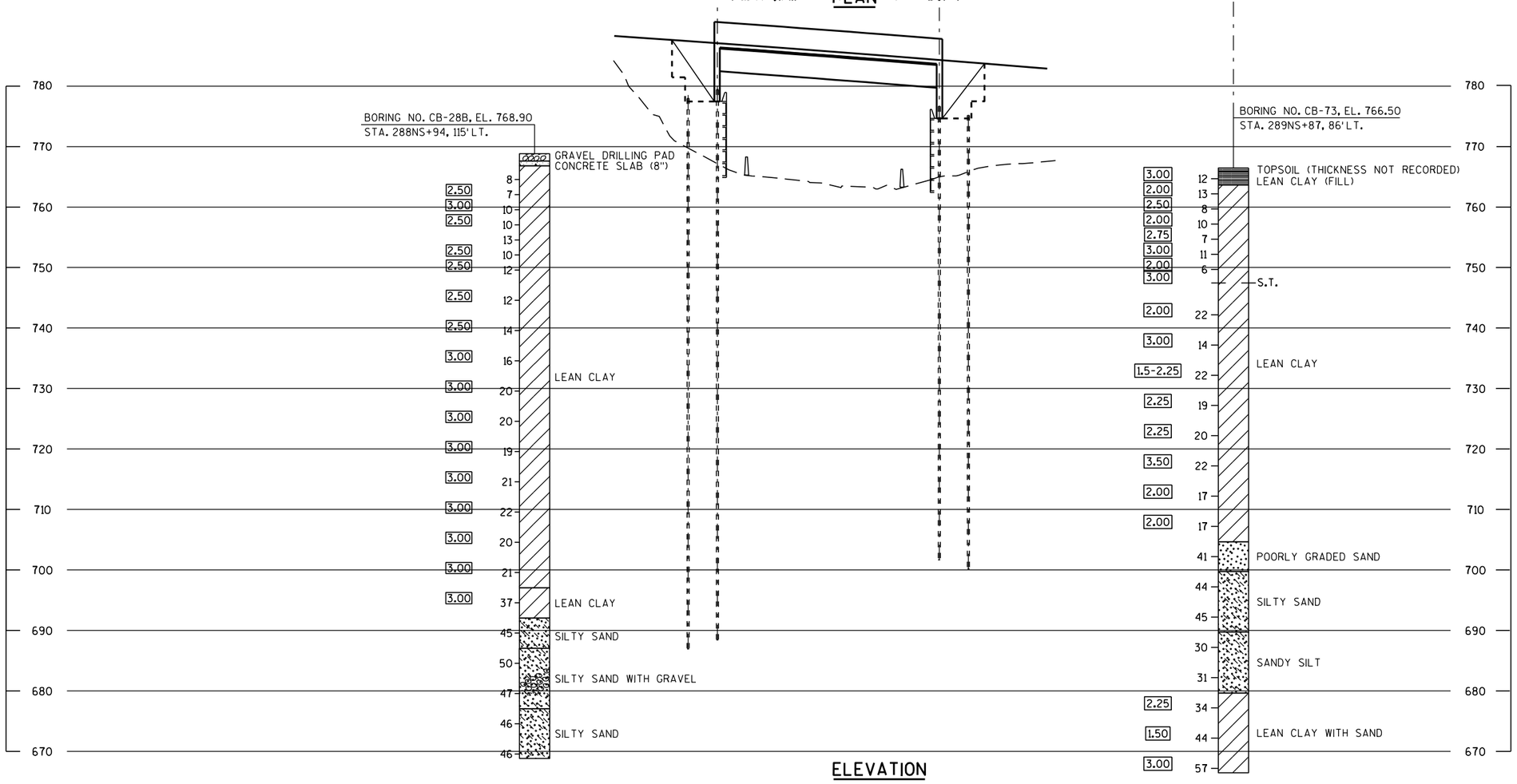
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JUNE 18 2012 - BORING CB-73
FEBRUARY 04 2012 - BORING CB-28-B





ELEVATION

STATE PROJECT NUMBER

1060-33-80

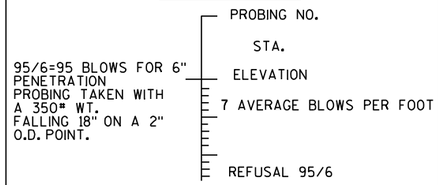
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

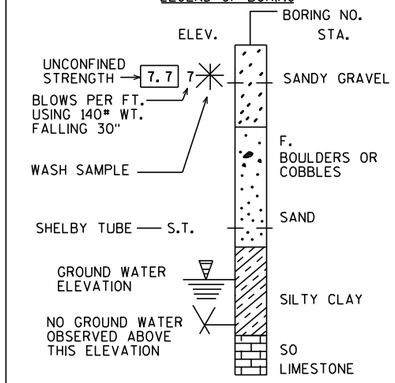
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION

SHEET 4 OF 22

8

8

STATE PROJECT NUMBER
1060-33-80

WALL EXTERNAL & GLOBAL STABILITY EVALUATION

DIMENSIONS		
WALL HEIGHT (FEET) ***	28.0	27.5
EXPOSED WALL HEIGHT (FEET)	25.0	24.5
LENGTH OF REINFORCEMENT (FEET) *	14.7	14.3
WALL STATION (℄ B-40-537)	11+43	11+41
BORING USED	CB-28B	CB-73
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING	1.43	1.44
ECCENTRICITY	1.03	1.12
BEARING	1.25	1.23
GLOBAL STABILITY	**	1.003

* THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. LENGTH OF REINFORCEMENT IS BASED ON WALL HEIGHT EXCLUDING UNREINFORCED FILL THICKNESS.

** GLOBAL STABILITY NOT CRITICAL FOR SOUTH ABUTMENT

*** WALL HEIGHT INCLUDES 9.9 FEET OF UNREINFORCED FILL ABOVE MSE WALL

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		COHESION (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
LEAN CLAY	130	2,400	0	10	32
POORLY GRADED SAND/SILTY SAND	120	-	36	0	36
SILT WITH SAND	120	-	33	0	33
LEAN CLAY	135	2,500	0	10	32

DESIGN PROFILE AT NORTH ABUTMENT (CB-73)

SOIL PARAMETERS

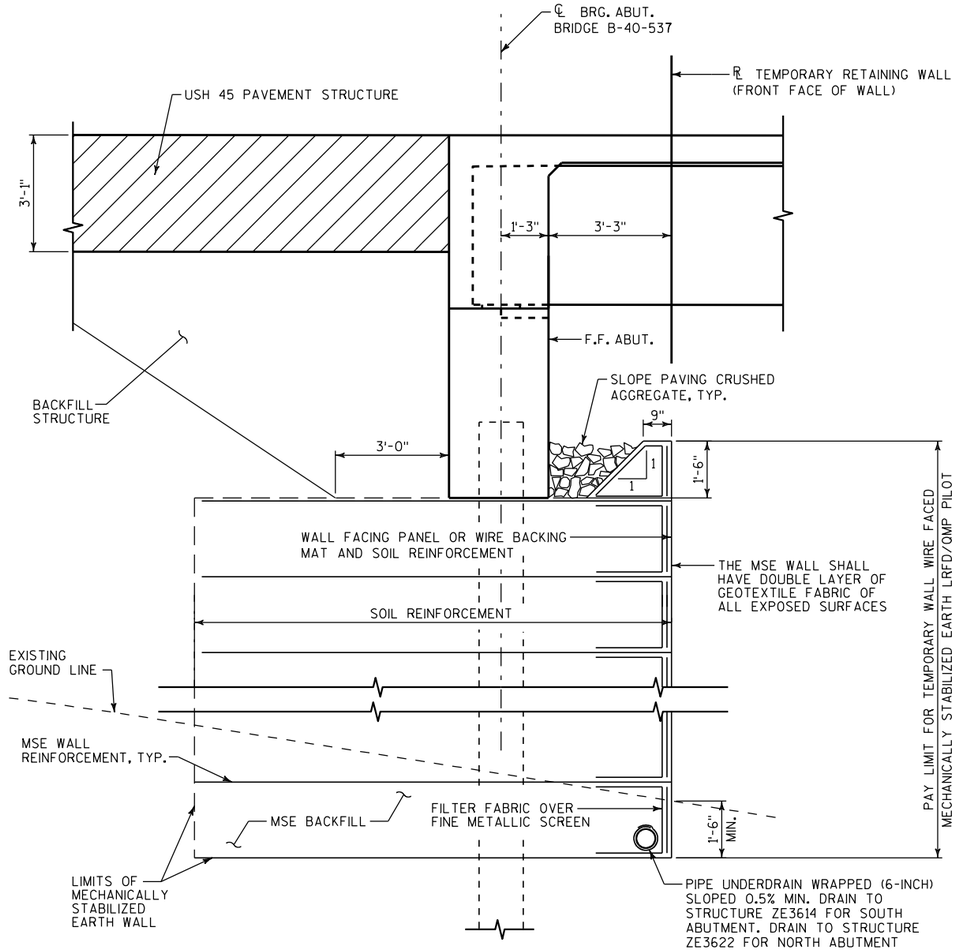
SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		COHESION (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
LEAN CLAY	135	2,800	0	20	32
SILTY SAND	125	-	34	0	34
SILTY SAND WITH GRAVEL	130	-	40	0	40
SILTY SAND	130	-	38	0	38

DESIGN PROFILE AT SOUTH ABUTMENT (CB-28B)

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		COHESION (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
MSE RETAINED GRANULAR FILL	120	0	30	0	30
GRANULAR FILL	130	0	32	0	32
NEW COHESIVE FILL	125	1,500 - 2,000	0	0 - 10	30 - 31

GENERAL FILL SOIL PARAMETERS



TYPICAL SECTION AT B-40-537 ABUTMENT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

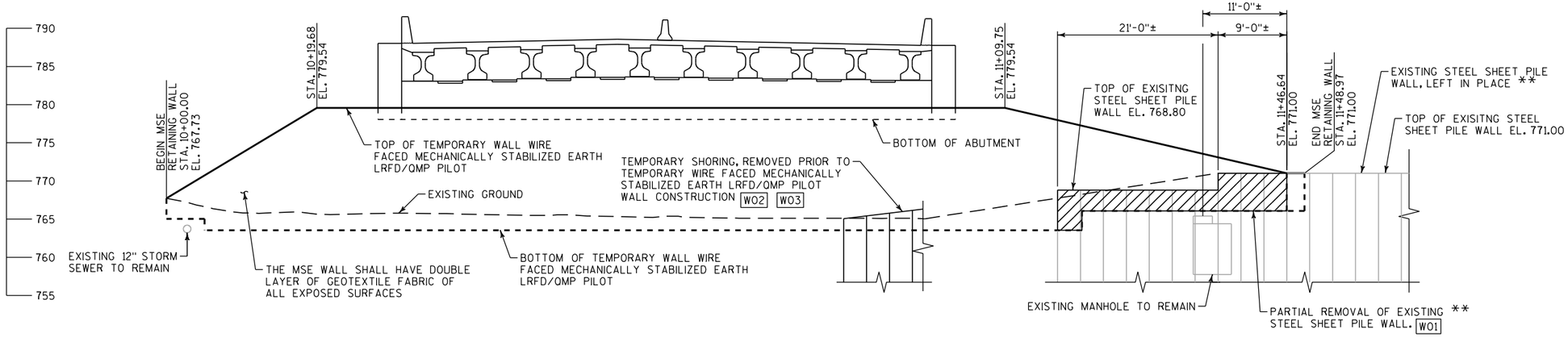
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RETAINING WALL TYPICAL SECTION & TABLES

SHEET 5 OF 22

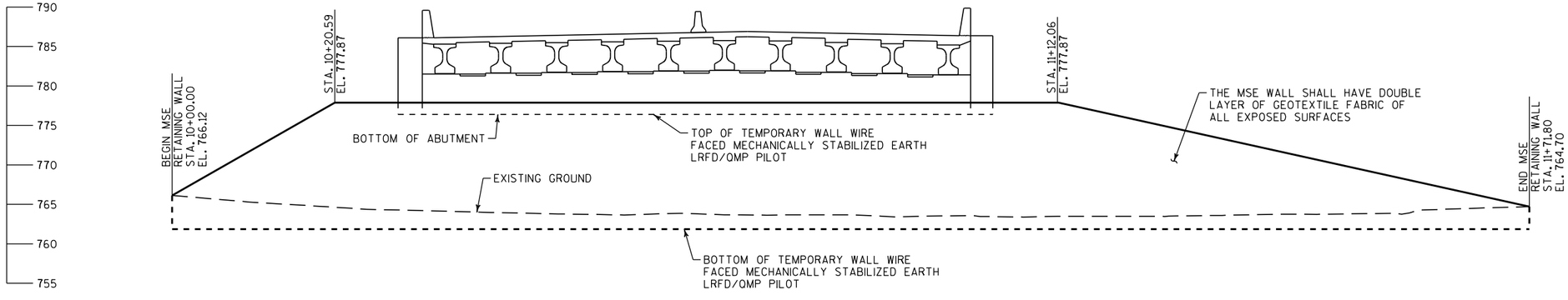
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STATE PROJECT NUMBER
1060-33-80



SOUTH ABUTMENT RETAINING WALL ELEVATON

(LOOKING SOUTH)



NORTH ABUTMENT RETAINING WALL ELEVATON

(LOOKING NORTH)

NOTES

** MINIMUM EFFECTIVE SECTION MODULUS OF EXISTING STEEL SHEET PILE = 30.2 IN^3/FT AS INDICATED ON EXISTING SHEET PILE PLANS.

LEGEND

W01 THE COST OF PARTIAL REMOVAL OF THE EXISTING STEEL SHEET PILE WALL TO BE INCLUDED IN THE BID ITEM" TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

W02 THE COST OF REMOVING TEMPORARY SHORING PRIOR TO TEMORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT CONSTRUCTION IS INCLUDED IN B-40-855 BRIDGE CONSTRUCTION.

W03 CONSTRUCTION OF THE TEMPORARY SHORING IS INCLUDED IN B-40-855 BRIDGE CONSTRUCTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

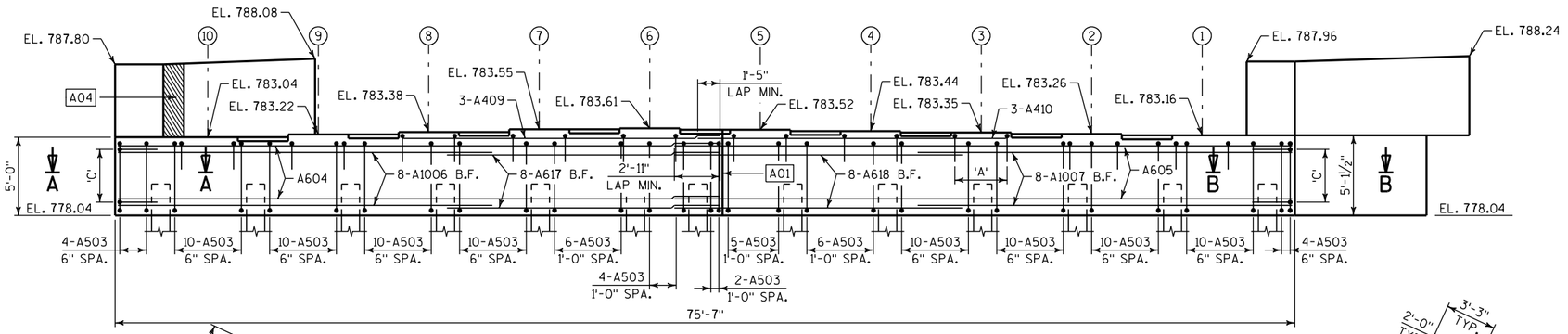
RETAINING WALL ELEVATIONS

SHEET 6 OF 22

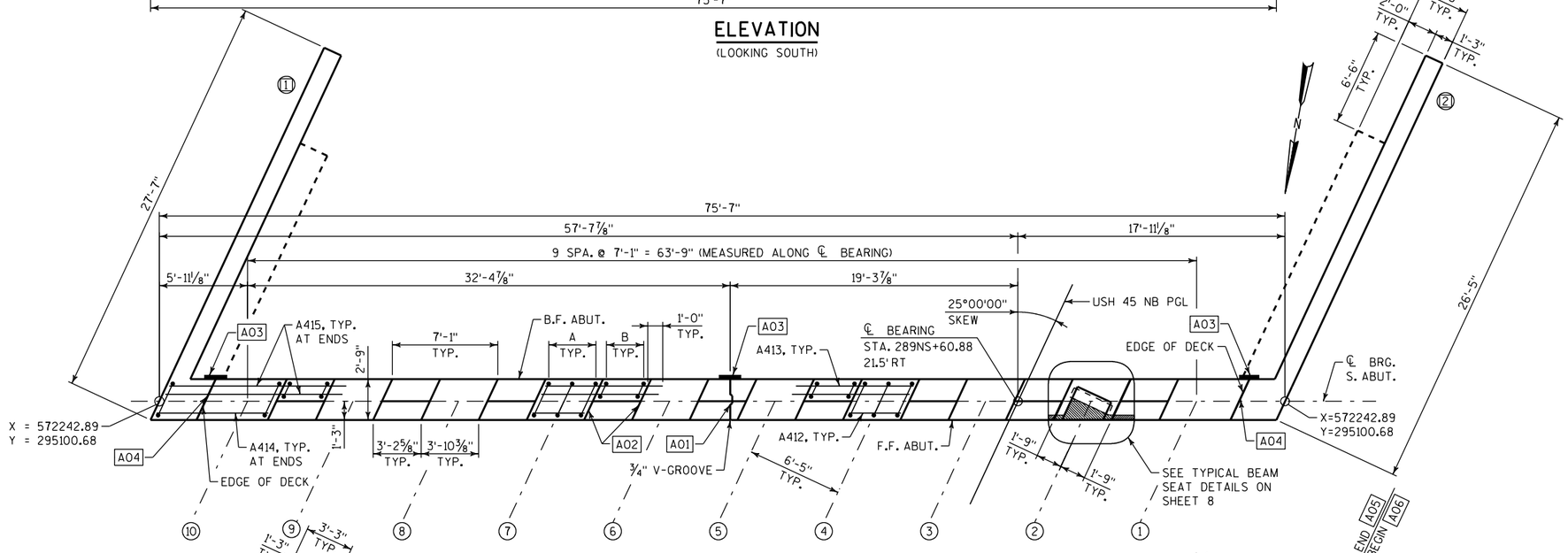
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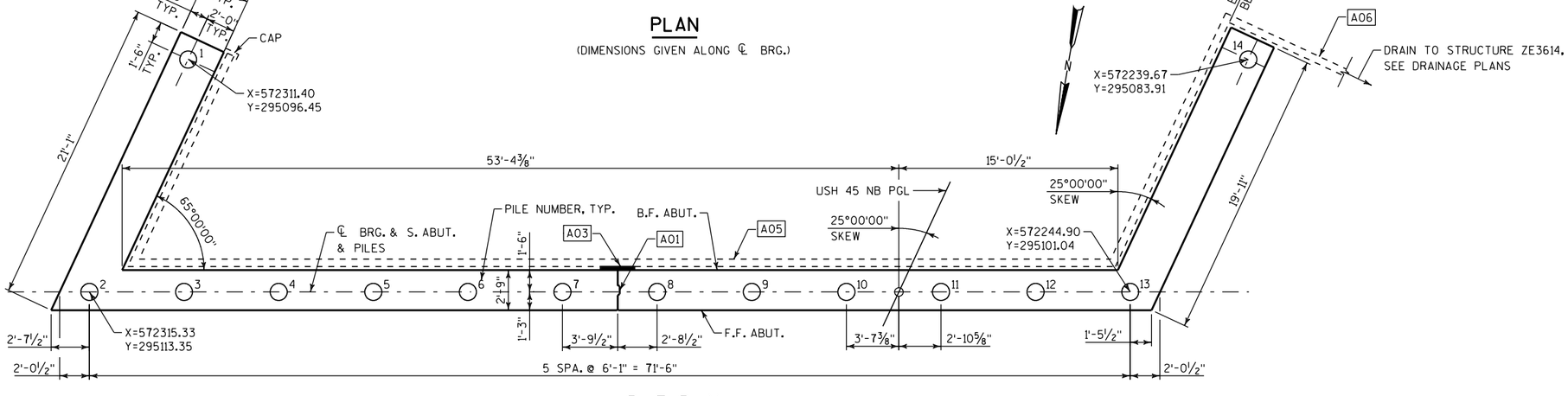
STATE PROJECT NUMBER
1060-33-80



ELEVATION
(LOOKING SOUTH)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 8.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 8.
4. FOR SECTIONS A-A & B-B, SEE SHEET 8.
5. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 9.

LEGEND

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".
- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- A04 ½" FILLER & SEALER FROM GIRDER SEAT TO TOP OF WINGWALL
- A05 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A06 PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5% MIN.
- ◯ 14" DIAMETER, 0.5" WALL CIP PIPE CONCRETE PILING.
- (X) GIRDER NUMBER
- (X) WINGWALL NUMBER

A - 5 - A508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 2 THRU 9.
6 - A508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 10.

B - 4 - A416 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)

C - 5 - A511 LAPPED WITH A604 & A605.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

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SOUTH ABUTMENT

SHEET 7 OF 22

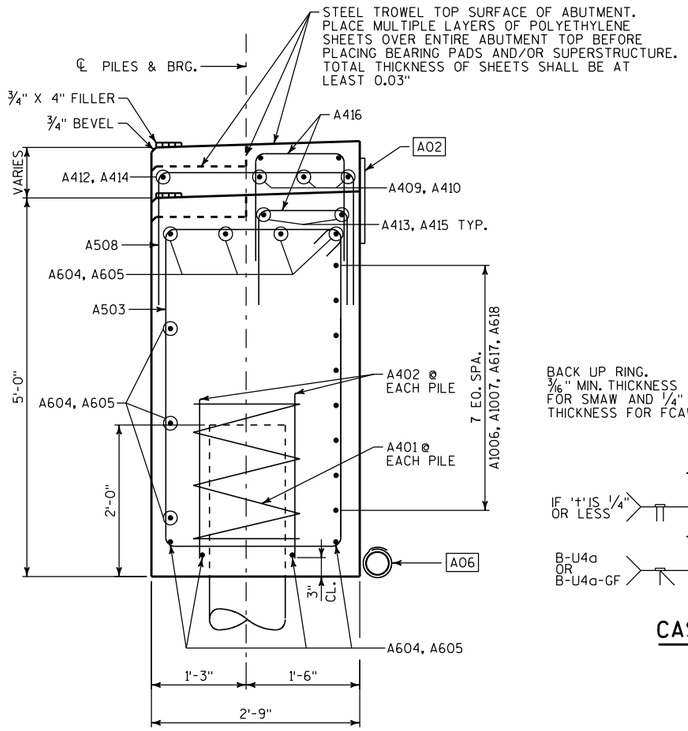
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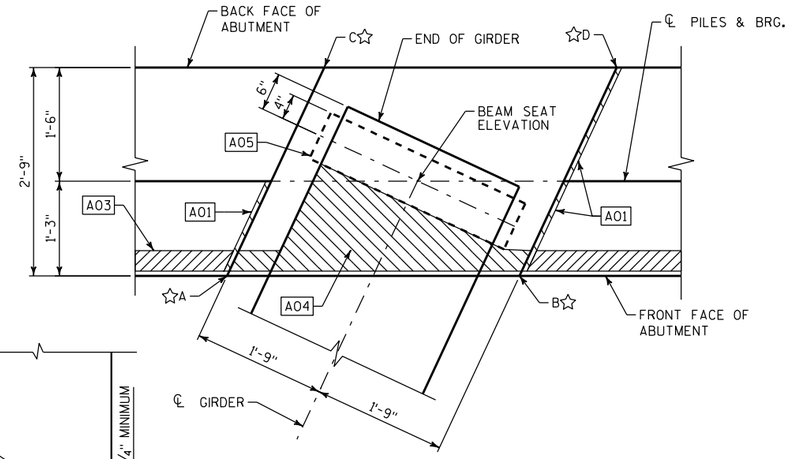
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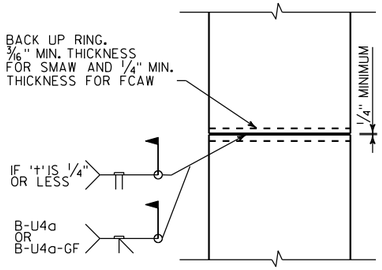


SECTION THRU ABUTMENT BODY

(LOOKING EAST)



TYPICAL BEAM SEAT DETAIL



CAST-IN-PLACE 'PIPE PILE'

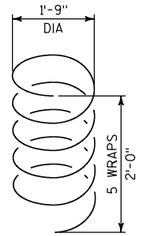
☆BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	783.16	-0.03	0.00	+0.01	+0.04
2	783.26	-0.03	-0.01	+0.01	+0.04
3	783.35	-0.03	-0.01	+0.01	+0.04
4	783.44	-0.03	-0.01	+0.01	+0.04
5	783.52	-0.03	-0.01	+0.01	+0.04
6	783.61	-0.03	-0.01	+0.01	+0.04
7	783.55	-0.03	-0.01	+0.01	+0.04
8	783.38	-0.03	-0.01	+0.01	+0.04
9	783.22	-0.03	-0.01	+0.01	+0.04
10	783.04	-0.04	-0.01	+0.01	+0.04

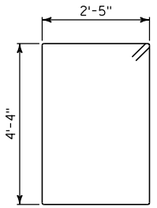
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		13	28'-0"	X	ABUTMENT PILES 5 WRAP SPIRAL
A402		26	2'-3"	-	ABUTMENT PILES - VERT.
A503		111	14'-1"	X	ABUTMENT BODY - LONG.
A604		11	38'-7"	-	ABUTMENT BODY - LONG.
A605		11	40'-7"	-	ABUTMENT BODY - LONG.
A1006		8	26'-9"	X	ABUTMENT BODY - LONG.
A1007		8	27'-0"	X	ABUTMENT BODY - LONG.
A508		52	5'-7"	X	ABUTMENT BODY - VERT.
A409		3	20'-5"	-	ABUTMENT BODY - LONG.
A410		3	20'-0"	-	ABUTMENT BODY - LONG.
A511		10	7'-1"	X	ABUTMENT BODY - HORIZ.
A412		8	3'-6"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 9)
A413		16	8'-1"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 9)
A414		2	7'-6"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 10)
A415		4	12'-1"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 10)
A416		36	4'-2"	X	ABUTMENT SEAT - VERT.
A617		8	16'-3"	-	ABUTMENT BODY - LONG.
A618		8	19'-9"	-	ABUTMENT BODY - LONG.

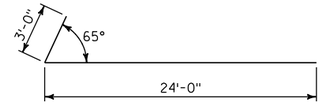
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



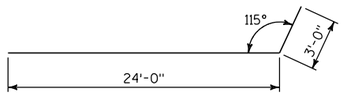
A401



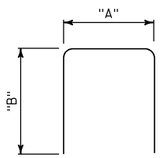
A503



A1006

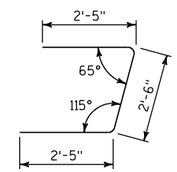


A1007



BAR MARK	DIM "A"	DIM "B"
A508	2'-8"	1'-7"
A416	1'-4"	1'-6"

BENDING DIAGRAMS



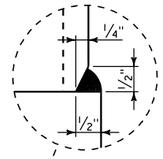
A511

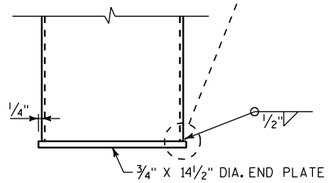
LEGEND

- A01 3/4" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- A03 4" X 3/4" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A04 3/4" FILLER UNDER GIRDERS, TYP.
- A05 1/2" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A06 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

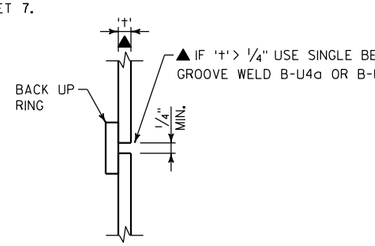
NOTES

1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 7.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 9.

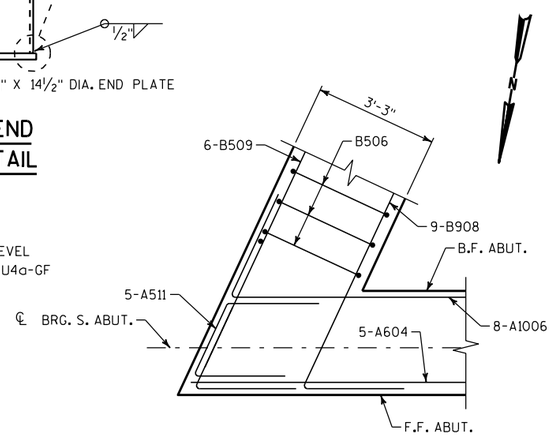




CIP PILE END PLATE DETAIL

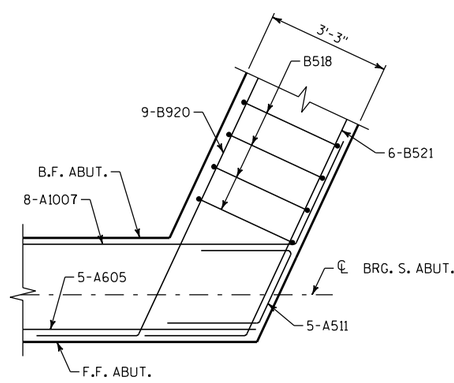


CIP PILE WELD DETAIL



SECTION A-A

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION B-B

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

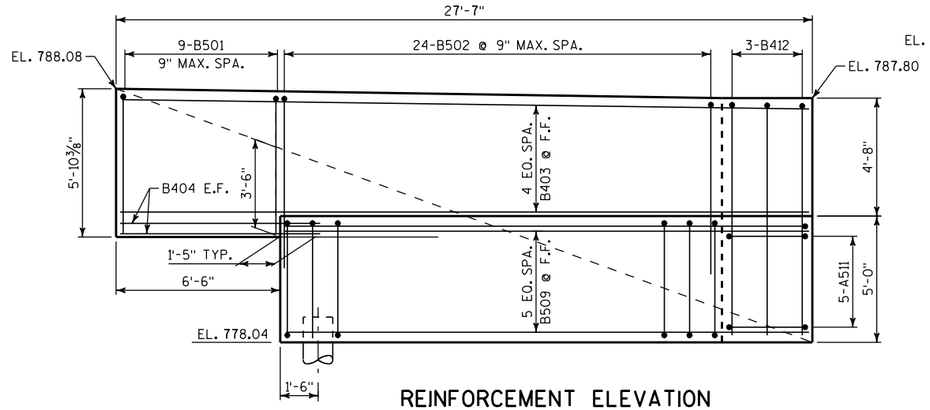
SOUTH ABUTMENT DETAILS

SHEET 8 OF 22

8

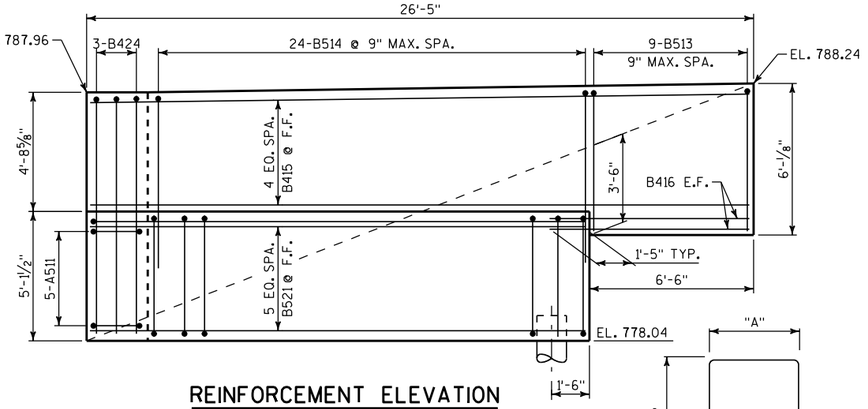
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STATE PROJECT NUMBER
1060-33-80



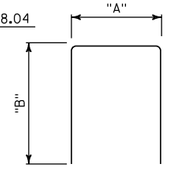
REINFORCEMENT ELEVATION

(EAST WINGWALL (1) FRONT FACE)
(LOOKING WEST)



REINFORCEMENT ELEVATION

(WEST WINGWALL (2) FRONT FACE)
(LOOKING EAST)

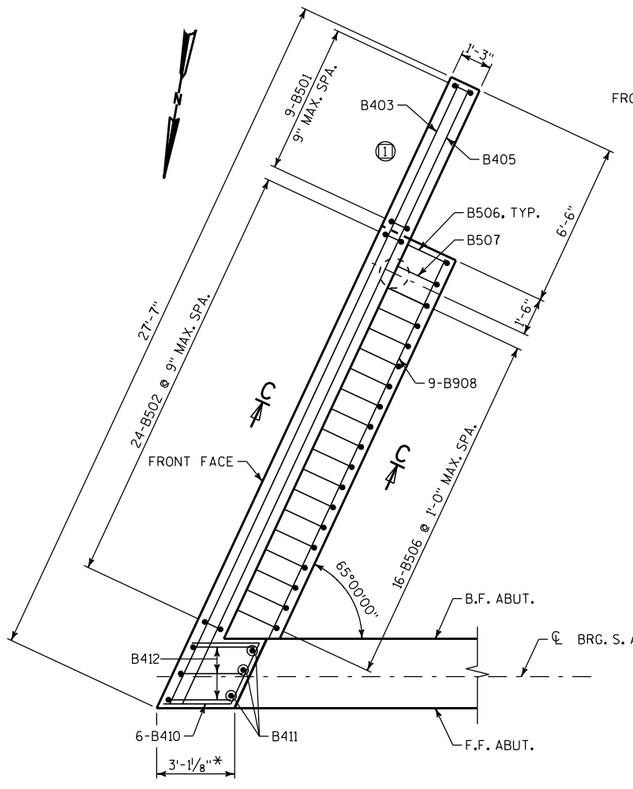


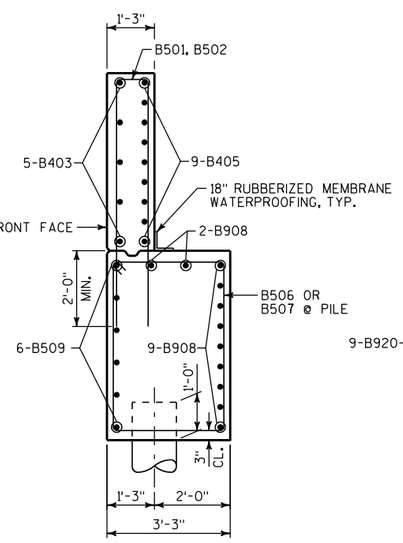
BAR MARK	DIM "A"	DIM "B"
B501	1'-0"	5'-5"
B502	1'-0"	7'-0"
B507	2'-11"	4'-7"
B513	1'-0"	5'-7"
B514	1'-0"	7'-0"
B519	2'-11"	4'-8"

BILL OF BARS

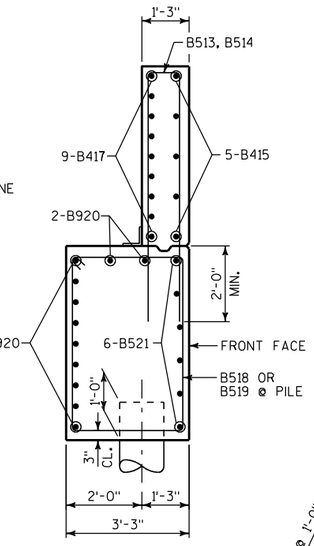
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		9	11'-7"	X	-	SE WINGWALL 1 - VERT.
B502		24	14'-9"	X	-	SE WINGWALL 1 - VERT.
B403		5	27'-1"	-	-	SE WINGWALL 1 - LONG.
B404		4	7'-11"	-	-	SE WINGWALL 1 - LONG.
B405		9	26'-9"	-	-	SE WINGWALL 1 - LONG.
B506		17	15'-7"	X	-	SE WINGWALL 1 - VERT.
B507		1	11'-10"	X	-	SE WINGWALL 1 - VERT.
B908		11	21'-7"	X	-	SE WINGWALL 1 - LONG.
B509		6	23'-1"	X	-	SE WINGWALL 1 - LONG.
B410		6	7'-10"	X	-	SE WINGWALL 1 - HORIZ.
B411		3	5'-11"	-	-	SE WINGWALL 1 - VERT.
B412		3	12'-0"	X	-	SE WINGWALL 1 - VERT.
B513		9	11'-11"	X	-	SW WINGWALL 2 - VERT.
B514		24	14'-9"	X	-	SW WINGWALL 2 - VERT.
B415		5	26'-1"	-	-	SW WINGWALL 2 - LONG.
B416		4	7'-11"	-	-	SW WINGWALL 2 - LONG.
B417		9	26'-6"	-	-	SW WINGWALL 2 - LONG.
B518		17	15'-9"	X	-	SW WINGWALL 2 - VERT.
B519		1	12'-0"	X	-	SW WINGWALL 2 - VERT.
B920		11	23'-6"	X	-	SW WINGWALL 2 - LONG.
B521		6	22'-6"	X	-	SW WINGWALL 2 - LONG.
B422		6	7'-10"	X	-	SW WINGWALL 2 - HORIZ.
B423		3	5'-11"	-	-	SW WINGWALL 2 - VERT.
B424		3	12'-2"	X	-	SW WINGWALL 2 - VERT.

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

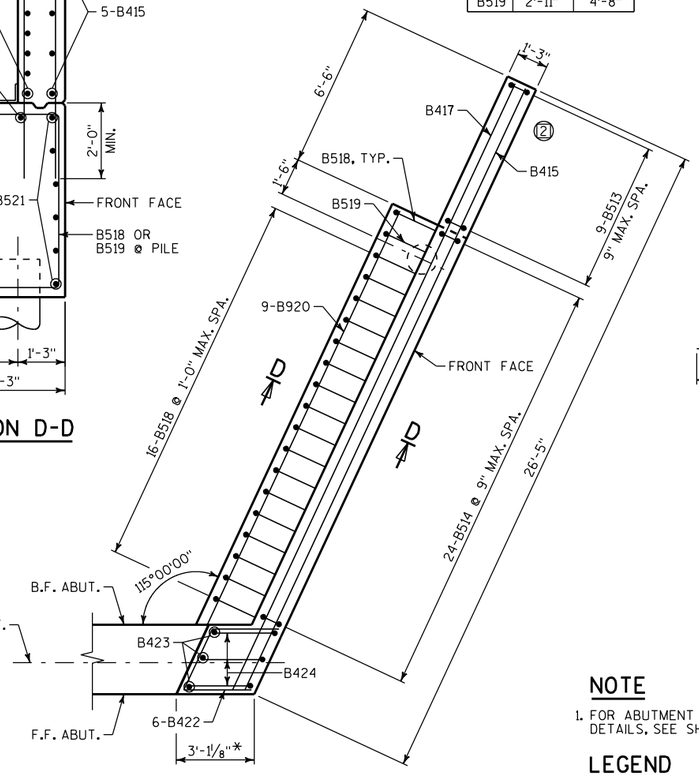


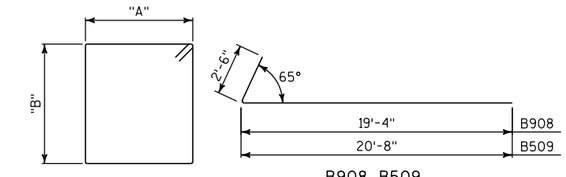


SECTION C-C



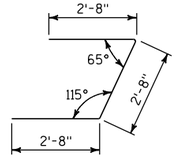
SECTION D-D





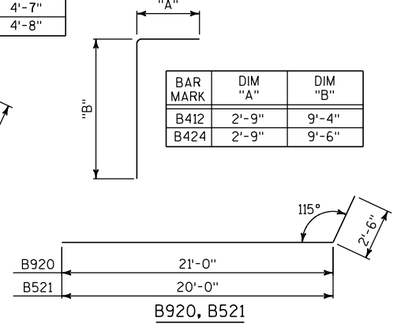
B908, B509

BAR MARK	DIM "A"	DIM "B"
B506	2'-11"	4'-7"
B518	2'-11"	4'-8"



B410, B422

BAR MARK	DIM "A"	DIM "B"
B412	2'-9"	9'-4"
B424	2'-9"	9'-6"



B920, B521

BENDING DIAGRAMS

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 7 & 8.

LEGEND

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

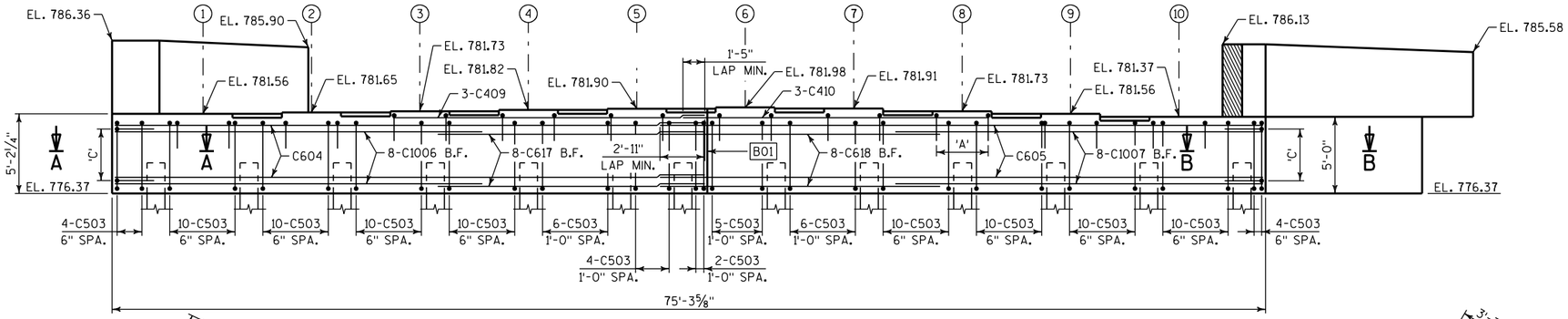
SOUTH ABUTMENT WINGWALLS

SHEET 9 OF 22

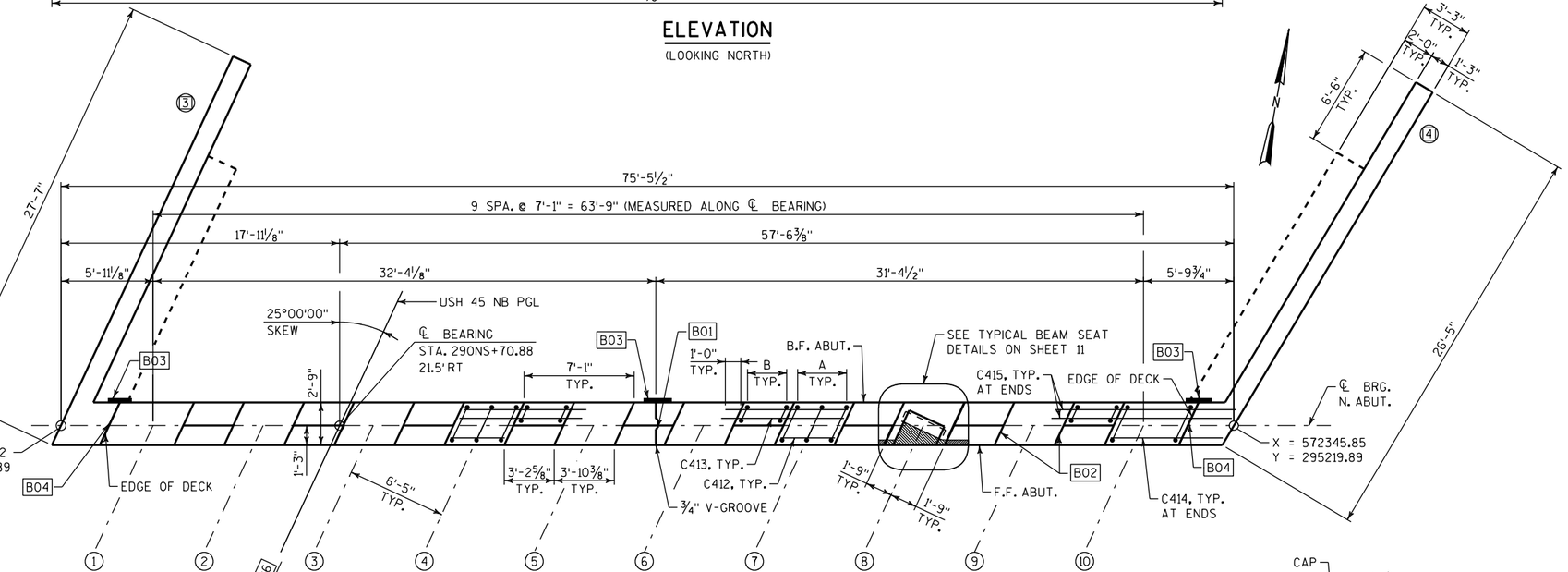
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8

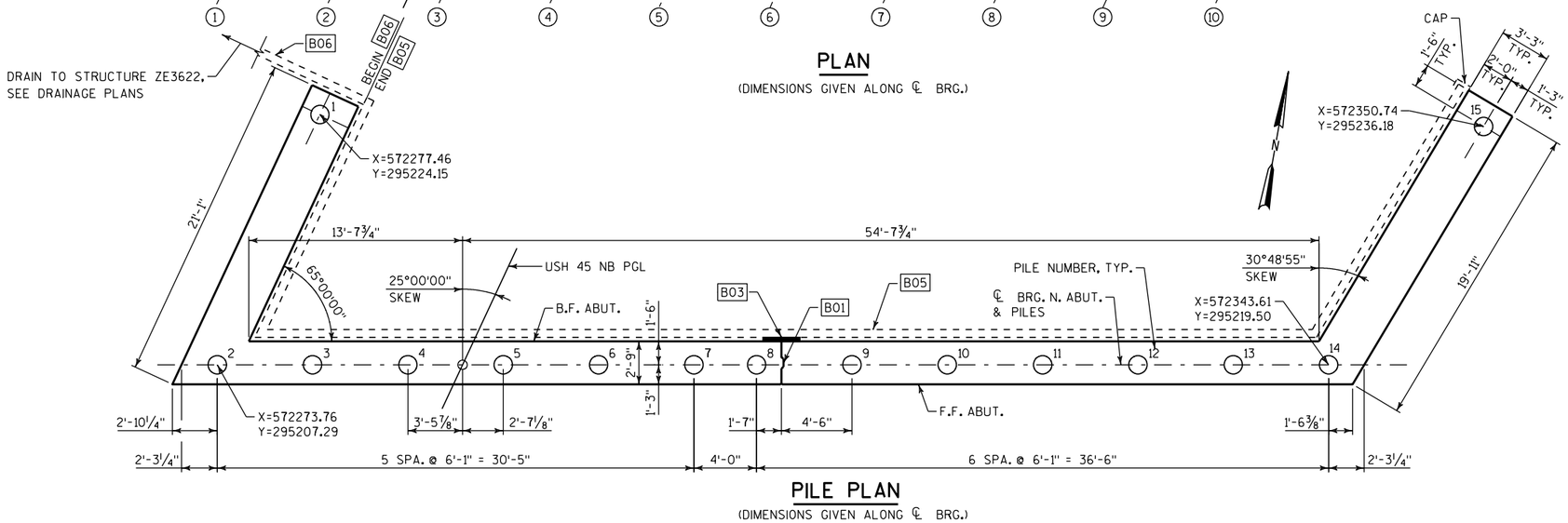
STATE PROJECT NUMBER
1060-33-80



ELEVATION
(LOOKING NORTH)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 11.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 11.
4. FOR SECTIONS A-A & B-B, SEE SHEET 11.
5. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 12.

LEGEND

- B01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".
- B02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- B03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B04 ½" FILLER & SEALER FROM GIRDER SEAT TO TOP OF WINGWALL
- B05 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- B06 PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5% MIN.
- ◯ 14" DIAMETER, 0.5" WALL CIP PIPE CONCRETE PILING.
- (X) GIRDER NUMBER
- ⓧ WINGWALL NUMBER

A - 5 - C508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 2 THRU 9.

6 - C508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 10.

B - 4 - C416 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)

C - 5 - C511 LAPPED WITH C604 & C605.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

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NORTH ABUTMENT

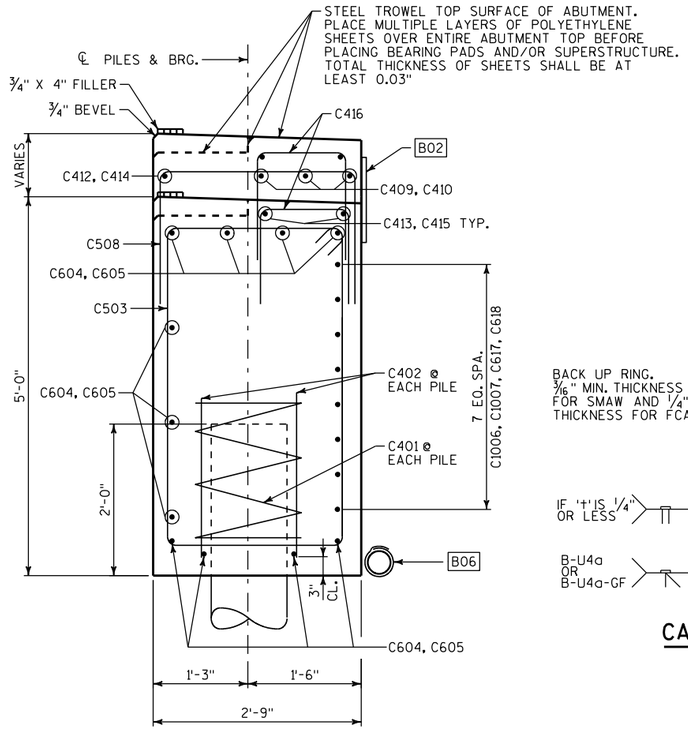
SHEET 10 OF 22

8

8

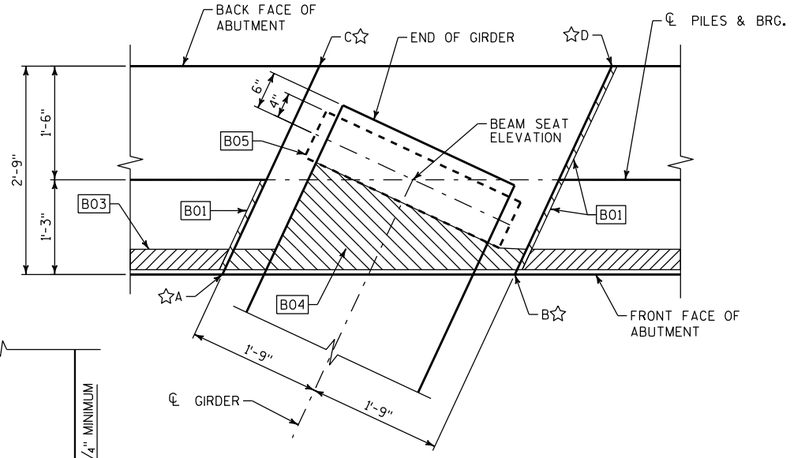
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STATE PROJECT NUMBER
1060-33-80

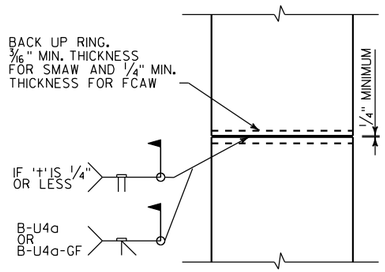


SECTION THRU ABUTMENT BODY

(LOOKING WEST)



TYPICAL BEAM SEAT DETAIL



CAST-IN-PLACE 'PIPE PILE'

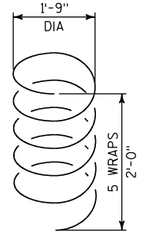
☆BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	781.56	+0.03	+0.00	-0.01	-0.04
2	781.65	+0.03	+0.01	-0.01	-0.04
3	781.73	+0.03	+0.01	-0.01	-0.04
4	781.82	+0.03	+0.01	-0.01	-0.04
5	781.90	+0.03	+0.01	-0.01	-0.04
6	781.98	+0.03	+0.01	-0.01	-0.04
7	781.91	+0.03	+0.01	-0.01	-0.04
8	781.73	+0.03	+0.01	-0.01	-0.04
9	781.56	+0.03	+0.01	-0.01	-0.04
10	781.37	+0.04	+0.01	-0.01	-0.04

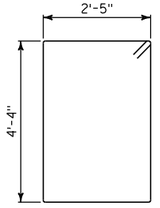
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
C401		13	28'-0"	X	ABUTMENT PILES 5 WRAP SPIRAL
C402		26	2'-3"	-	ABUTMENT PILES - VERT.
C503		111	14'-1"	X	ABUTMENT BODY - LONG.
C604		11	38'-6"	-	ABUTMENT BODY - LONG.
C605		11	40'-0"	-	ABUTMENT BODY - LONG.
C1006		8	26'-9"	X	ABUTMENT BODY - LONG.
C1007		8	27'-0"	X	ABUTMENT BODY - LONG.
C508		52	5'-9"	X	ABUTMENT BODY - VERT.
C409		3	20'-4"	-	ABUTMENT BODY - LONG.
C410		3	21'-5"	-	ABUTMENT BODY - LONG.
C511		10	7'-1"	X	ABUTMENT BODY - HORIZ.
C412		8	3'-6"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 9)
C413		16	8'-1"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 9)
C414		2	7'-6"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 10)
C415		4	12'-1"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 10)
C416		36	4'-6"	X	ABUTMENT SEAT - VERT.
C617		8	16'-2"	-	ABUTMENT BODY - LONG.
C618		8	19'-11"	-	ABUTMENT BODY - LONG.

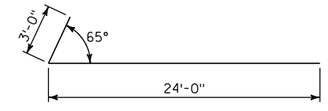
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



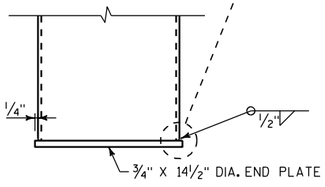
C401



C503



C1006



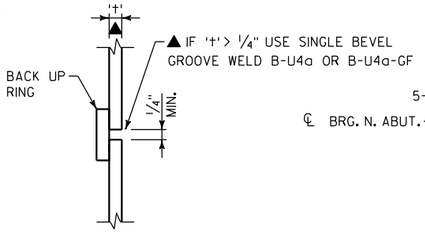
CIP PILE END PLATE DETAIL

LEGEND

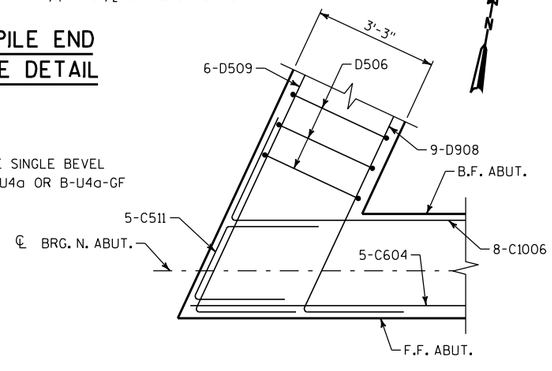
- B01 3/4" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- B02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B03 4" X 3/4" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- B04 3/4" FILLER UNDER GIRDERS, TYP.
- B05 1/2" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- B06 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

NOTES

1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 10.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 12.

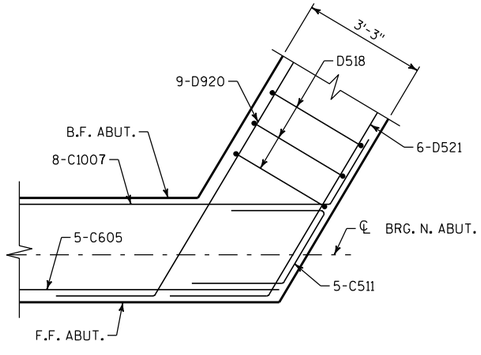


CIP PILE WELD DETAIL



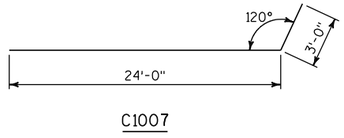
SECTION A-A

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)

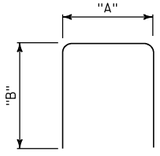


SECTION B-B

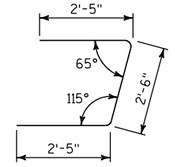
(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)



C1007



BAR MARK	DIM "A"	DIM "B"
C508	2'-8"	1'-8"
C416	1'-4"	1'-8"



C511

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

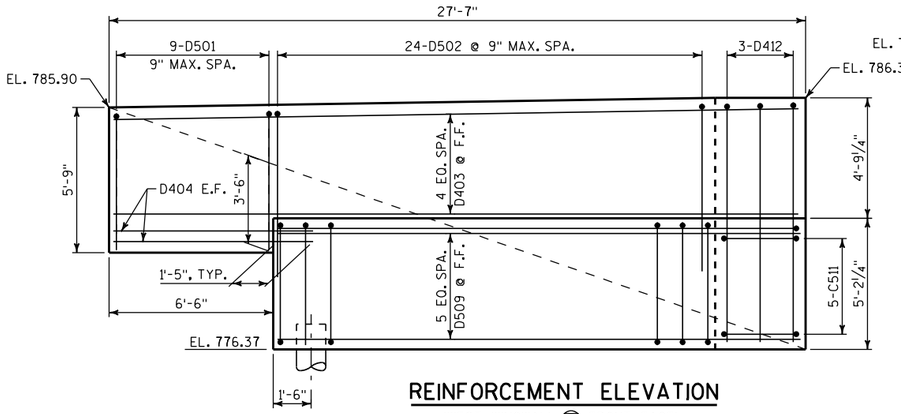
NORTH ABUTMENT DETAILS

SHEET 11 OF 22

8

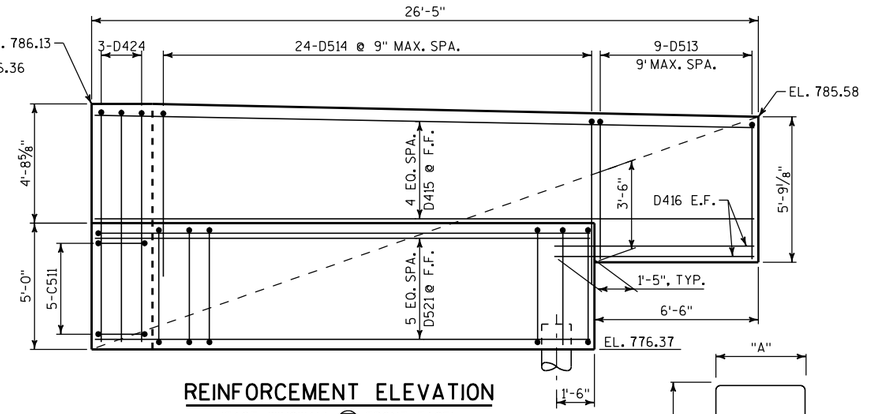
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STATE PROJECT NUMBER
1060-33-80



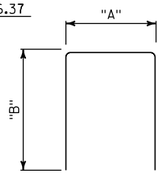
REINFORCEMENT ELEVATION

(WEST WINGWALL (3) FRONT FACE)
(LOOKING EAST)



REINFORCEMENT ELEVATION

(EAST WINGWALL (4) FRONT FACE)
(LOOKING WEST)

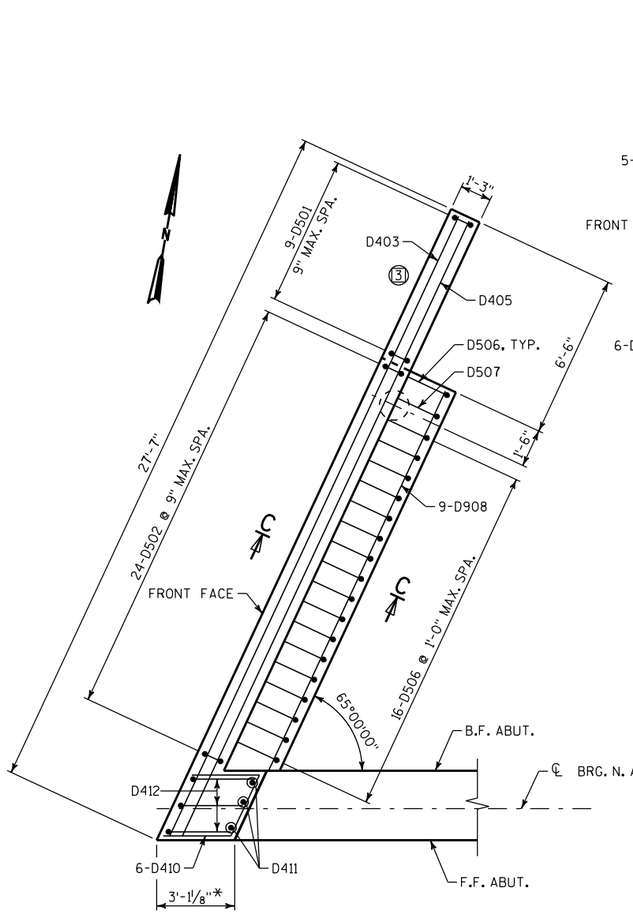


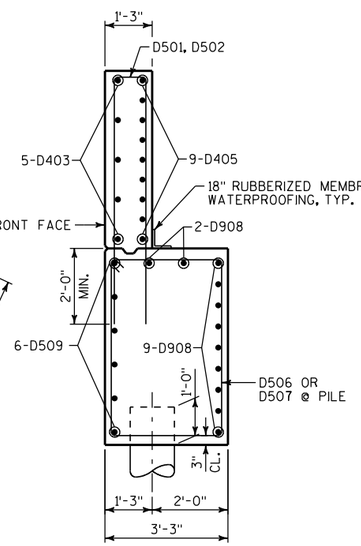
BAR MARK	DIM "A"	DIM "B"
D501	1'-0"	5'-5"
D502	1'-0"	6'-10"
D507	2'-11"	4'-9"
D513	1'-0"	5'-5"
D514	1'-0"	6'-9"
D519	2'-11"	4'-7"

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D501		9	11'-7"	X	-	NW WINGWALL 3 - VERT.
D502		24	14'-5"	X	-	NW WINGWALL 3 - VERT.
D403		5	27'-1"	-	-	NW WINGWALL 3 - LONG.
D404		4	7'-11"	-	-	NW WINGWALL 3 - LONG.
D405		9	26'-9"	-	-	NW WINGWALL 3 - LONG.
D506		17	15'-11"	X	-	NW WINGWALL 3 - VERT.
D507		1	12'-2"	X	-	NW WINGWALL 3 - VERT.
D908		11	21'-7"	X	-	NW WINGWALL 3 - LONG.
D509		6	23'-1"	X	-	NW WINGWALL 3 - LONG.
D410		6	7'-10"	X	-	NW WINGWALL 3 - HORIZ.
D411		3	6'-0"	-	-	NW WINGWALL 3 - VERT.
D412		3	12'-3"	X	-	NW WINGWALL 3 - VERT.
D513		9	11'-7"	X	-	NE WINGWALL 4 - VERT.
D514		24	14'-3"	X	-	NE WINGWALL 4 - VERT.
D415		5	26'-1"	-	-	NE WINGWALL 4 - LONG.
D416		4	7'-11"	-	-	NE WINGWALL 4 - LONG.
D417		9	26'-7"	-	-	NE WINGWALL 4 - LONG.
D518		17	15'-7"	X	-	NE WINGWALL 4 - VERT.
D519		1	11'-10"	X	-	NE WINGWALL 4 - VERT.
D920		11	23'-11"	X	-	NE WINGWALL 4 - LONG.
D521		6	22'-2"	X	-	NE WINGWALL 4 - LONG.
D422		6	7'-6"	X	-	NE WINGWALL 4 - HORIZ.
D423		3	5'-11"	-	-	NE WINGWALL 4 - VERT.
D424		3	11'-8"	X	-	NE WINGWALL 4 - VERT.

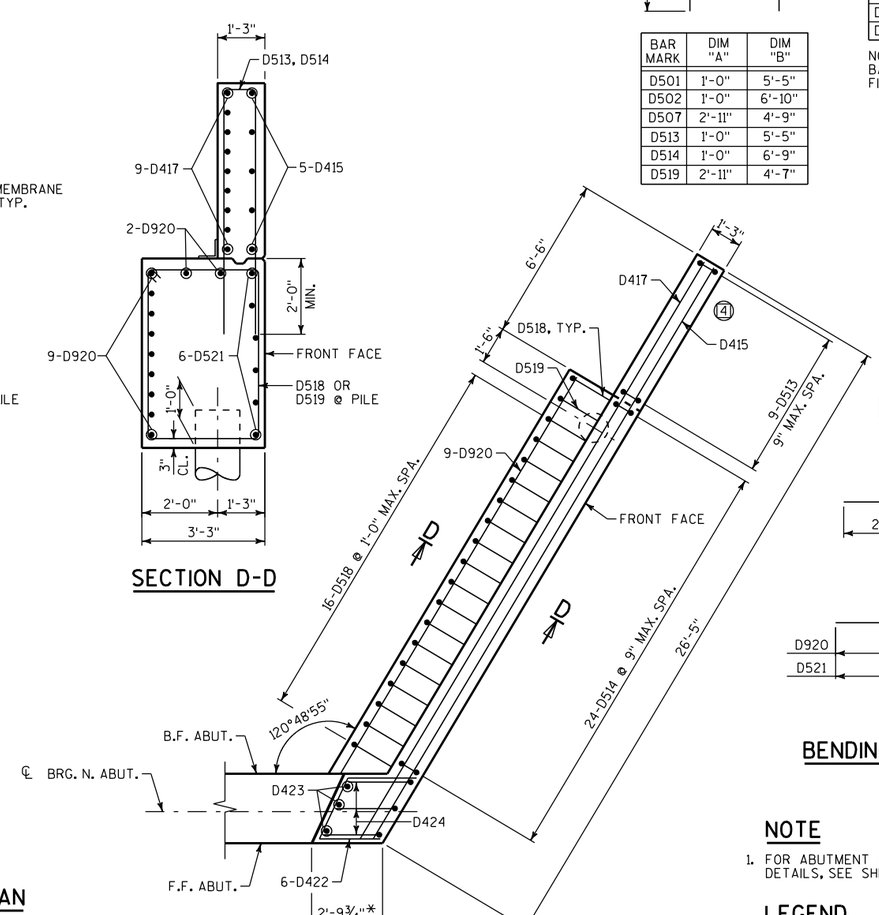
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE





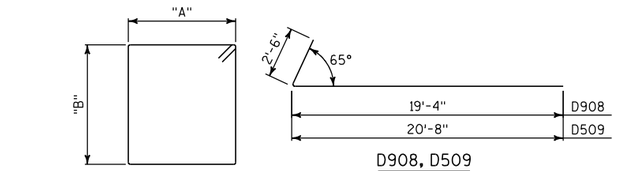
SECTION C-C

SECTION D-D



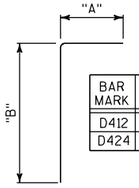
REINFORCEMENT PLAN

* DIMENSION INCLUDES ½" FILLER & SEALER

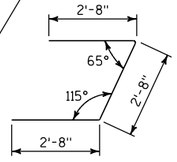


D908, D509

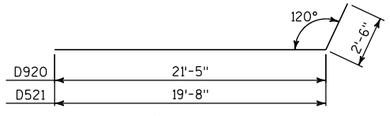
BAR MARK	DIM "A"	DIM "B"
D506	2'-11"	4'-9"
D518	2'-11"	4'-7"



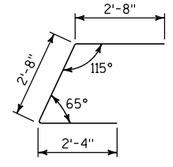
BAR MARK	DIM "A"	DIM "B"
D412	2'-9"	9'-7"
D424	2'-5"	9'-4"



D410



D920, D521



D422

BENDING DIAGRAMS

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 10 & 11.

LEGEND

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

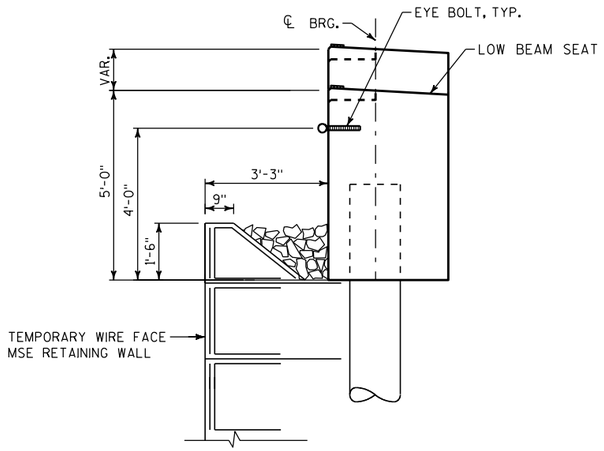
NORTH ABUTMENT WINGWALLS

SHEET 12 OF 22

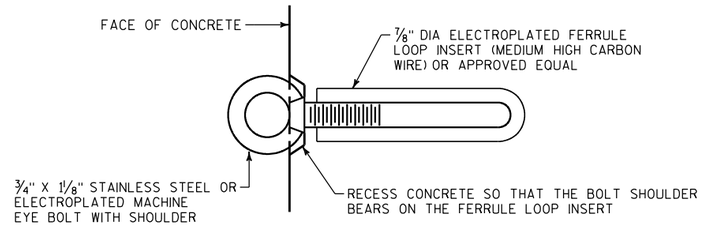
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STATE PROJECT NUMBER
1060-33-80

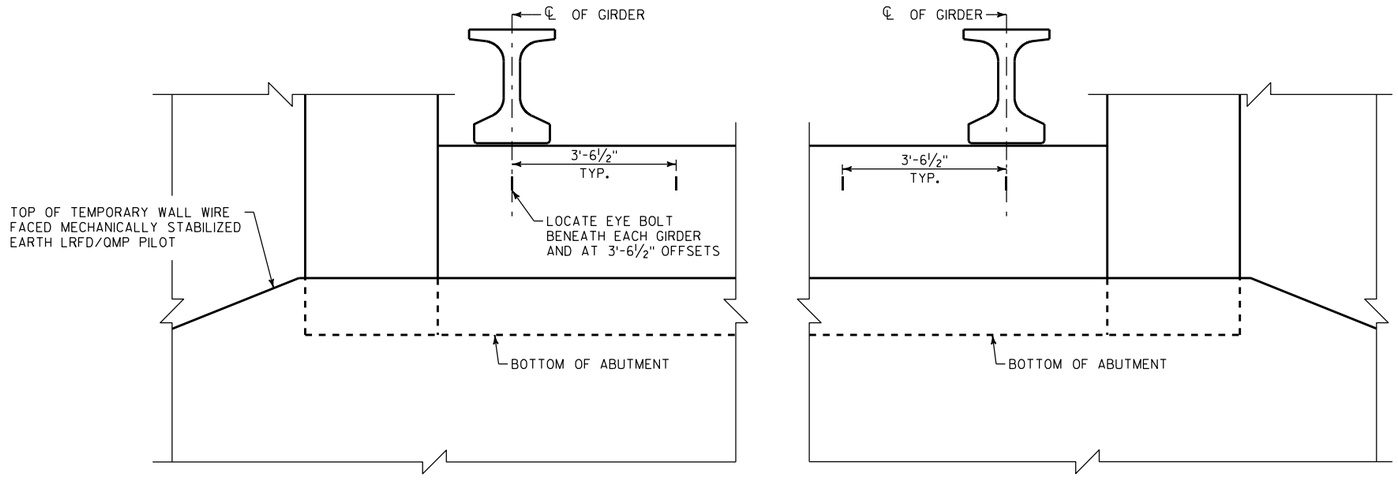


CROSS SECTION THRU ABUTMENT AT MSE WALL



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.



FALL PROTECTION ELEVATION

(LOOKING AT FRONT FACE OF ABUTMENT)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

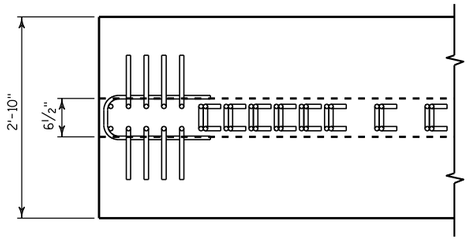
DRAWN BY AJA | PLANS CK'D. MHZ

ABUTMENT DETAILS

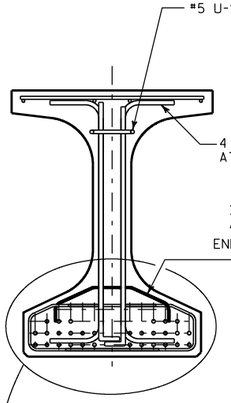
SHEET 13 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-537\cds\B537_080407_ab.dgn PLOT DATE : 29-APR-2014 09:09 PLOT BY : MSCAYA PLOT NAME : B537_080407_ab PLOT SCALE : 2:1

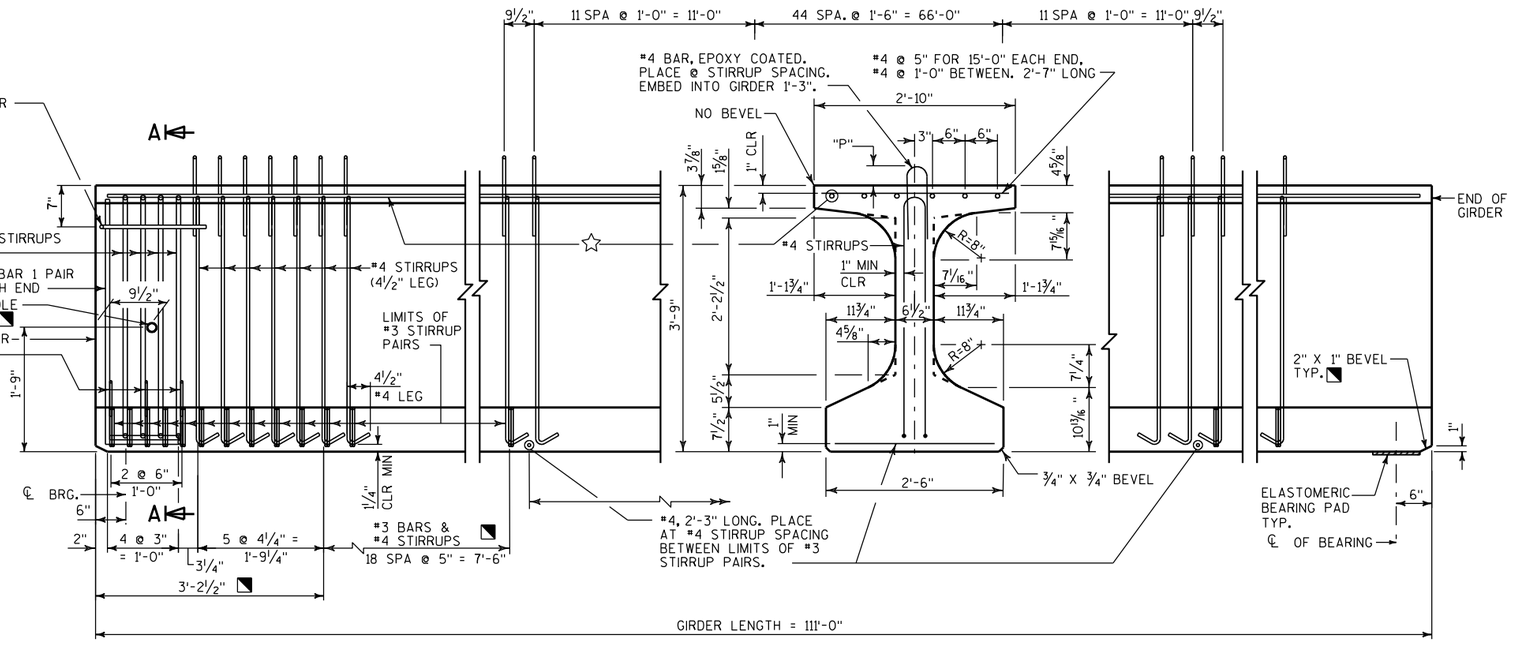
STATE PROJECT NUMBER
1060-33-80



TOP FLANGE



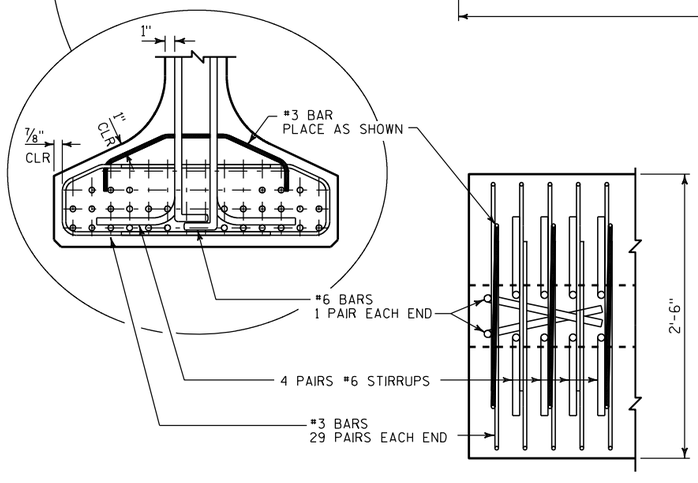
SECTION A-A



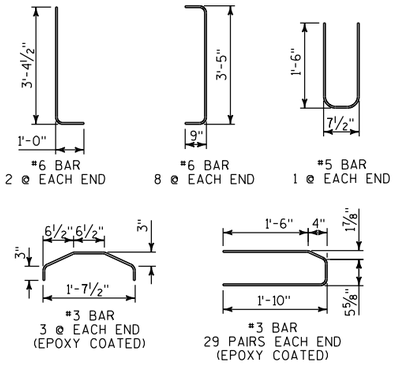
SIDE VIEW & TYPICAL SECTION IN SPAN

▙ DETAIL TYPICAL AT EACH END

☆ 6 #4 BARS, FULL LENGTH, LAP = 1'-8"



BOTTOM FLANGE



GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6"ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE SHEET 17.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

45W" PRESTRESSED GIRDER

SHEET 14 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-537\cds\B537_080501_gr.dgn PLOT DATE : 29-APR-2014 09:09 PLOT BY : MSCAYA PLOT NAME : B537_080501_gr PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

GIRDER DATA

SPAN	GIRDER NUMBERS	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) *** 1/10	2/10	3/10	4/10	5/10	CONC. STRGTH. f'c (p.s.i.)	f'ci (P.S.I.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	NO. OF DEBONDED STRANDS
1	GIRDERS 1 & 10	111'-0"	5/8	1 3/8	1 7/8	2 1/8	2 1/4	8000	6800	8.0	7.0	8.0	0.6	38	38	13	16	5	0
1	GIRDERS 2 - 9	111'-0"	3/4	1 3/8	1 7/8	2 1/4	2 3/8	8000	6800	8.0	7.0	8.0	0.6	38	38	13	16	5	0

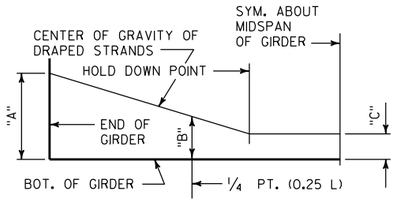
*** SEE DEAD LOAD DEFLECTION DIAGRAM

SPAN	GIRDER NUMBERS	PRESTRESS CAMBER (A*) (IN.)	DEAD LOAD DEFLECTION (B) (IN.)	RESIDUAL CAMBER (C) (IN.)
1	GIRDERS 1 & 10	4 3/8	2 1/4	2 1/8
1	GIRDERS 2 - 9	4 3/8	2 3/8	2

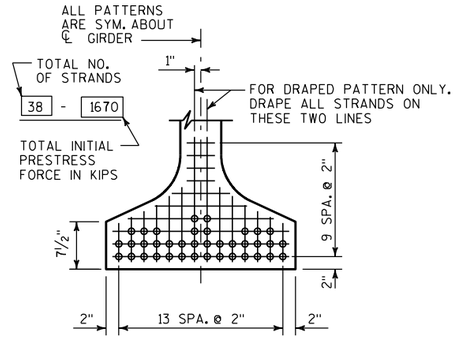
* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

THESE VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

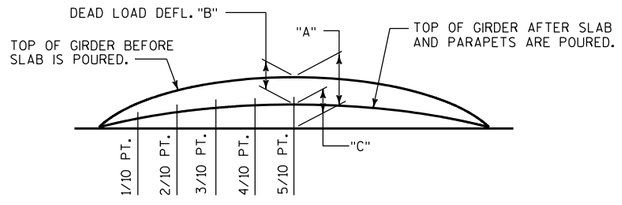


DRAPED STRAND PROFILE

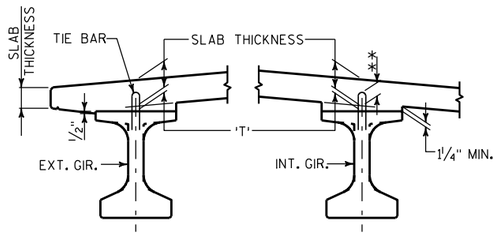


STRAND PATTERN

0.6" DIA. STRANDS



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

45W" PRESTRESSED GIRDER DETAILS

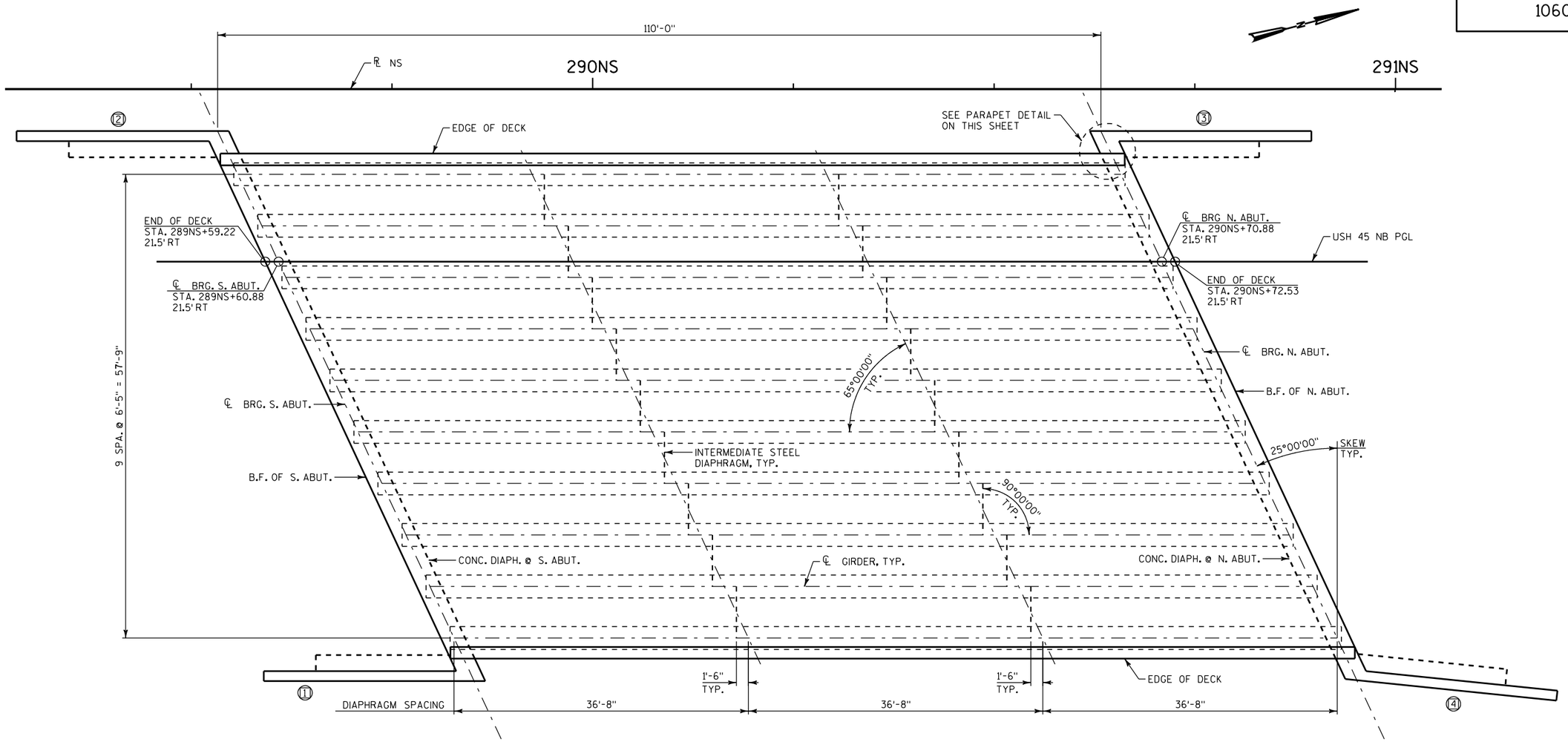
SHEET 15 OF 22

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-537\cds\B537_080502_gr.dgn PLOT DATE : 29-APR-2014 09:09 PLOT BY : MSCAYA PLOT NAME : B537_080502_gr PLOT SCALE : 2:1

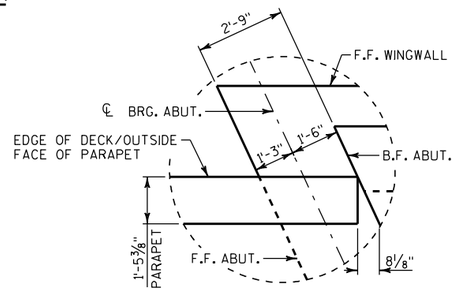
STATE PROJECT NUMBER
1060-33-80



FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	S. ABUT. BRG.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	N. ABUT. BRG.
W. EDGE OF DECK	787.96	787.81	787.66	787.51	787.35	787.19	787.03	786.87	786.70	786.53	786.36
FLOW LINE W. PARAPET	787.95	787.80	787.65	787.50	787.34	787.18	787.02	786.86	786.69	786.52	786.35
℄ GIRDER 1	787.96	787.81	787.66	787.51	787.35	787.20	787.03	786.87	786.70	786.53	786.36
℄ GIRDER 2	788.05	787.90	787.75	787.60	787.44	787.28	787.12	786.95	786.79	786.62	786.44
PGL	788.11	787.96	787.81	787.66	787.50	787.34	787.18	787.01	786.84	786.67	786.50
℄ GIRDER 3	788.14	787.99	787.84	787.68	787.53	787.37	787.20	787.04	786.87	786.70	786.53
℄ GIRDER 4	788.23	788.08	787.92	787.77	787.61	787.45	787.29	787.12	786.95	786.78	786.61
℄ GIRDER 5	788.32	788.16	788.01	787.85	787.70	787.53	787.37	787.20	787.03	786.86	786.69
℄ GIRDER 6	788.40	788.25	788.10	787.94	787.78	787.62	787.37	787.20	787.12	786.86	786.69
CROWN	788.44	788.29	788.13	787.98	787.82	787.65	787.49	787.32	787.15	786.98	786.80
℄ GIRDER 7	788.34	788.19	788.04	787.88	787.72	787.56	787.39	787.22	787.05	786.88	786.70
℄ GIRDER 8	788.18	788.02	787.87	787.71	787.55	787.38	787.22	787.05	786.88	786.70	786.53
℄ GIRDER 9	788.01	787.85	787.70	787.54	787.37	787.21	787.04	786.87	786.70	786.53	786.35
℄ GIRDER 10	787.84	787.68	787.52	787.36	787.20	787.04	786.87	786.70	786.53	786.35	786.17
FLOW LINE E. PARAPET	787.81	787.65	787.49	787.33	787.17	787.01	786.84	786.67	786.49	786.32	786.14
E. EDGE OF DECK	787.80	787.64	787.48	787.32	787.16	787.00	786.83	786.66	786.48	786.31	786.13



PARAPET DETAIL

(TYPICAL @ ALL END OF PARAPET LOCATIONS)

LEGEND

Ⓧ WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

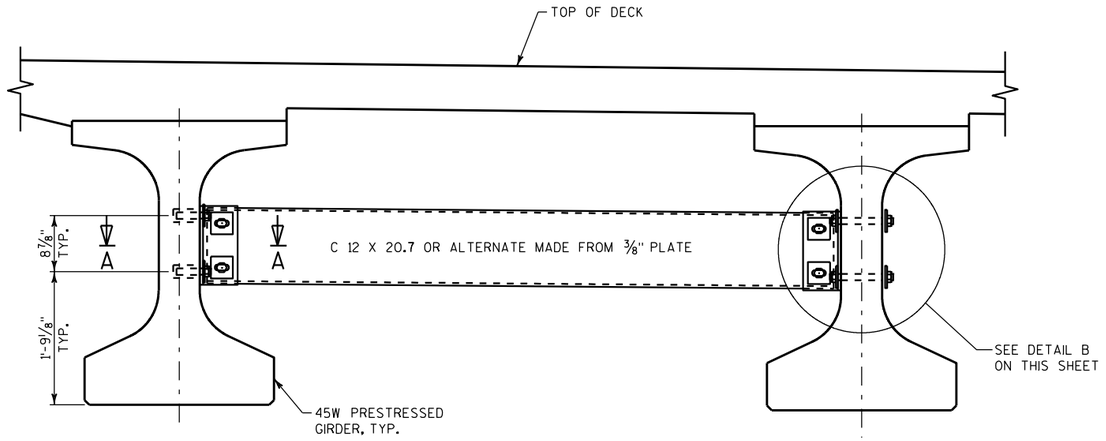
SUPERSTRUCTURE FRAMING PLAN

SHEET 16 OF 22

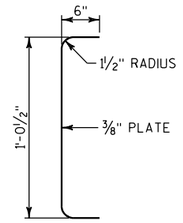
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STATE PROJECT NUMBER
1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

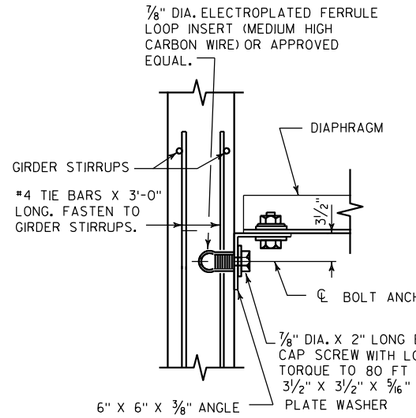
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-537", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

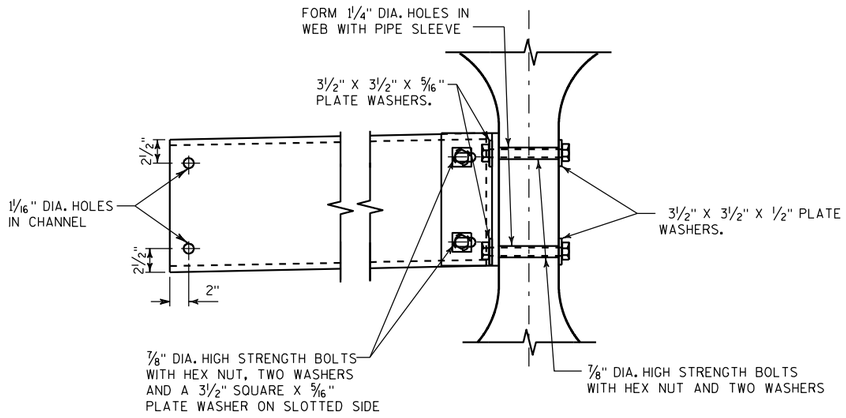
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

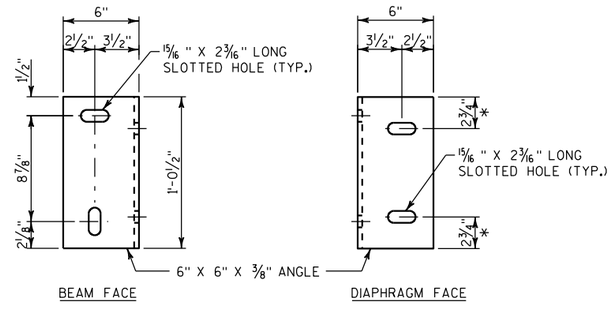


SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B



DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

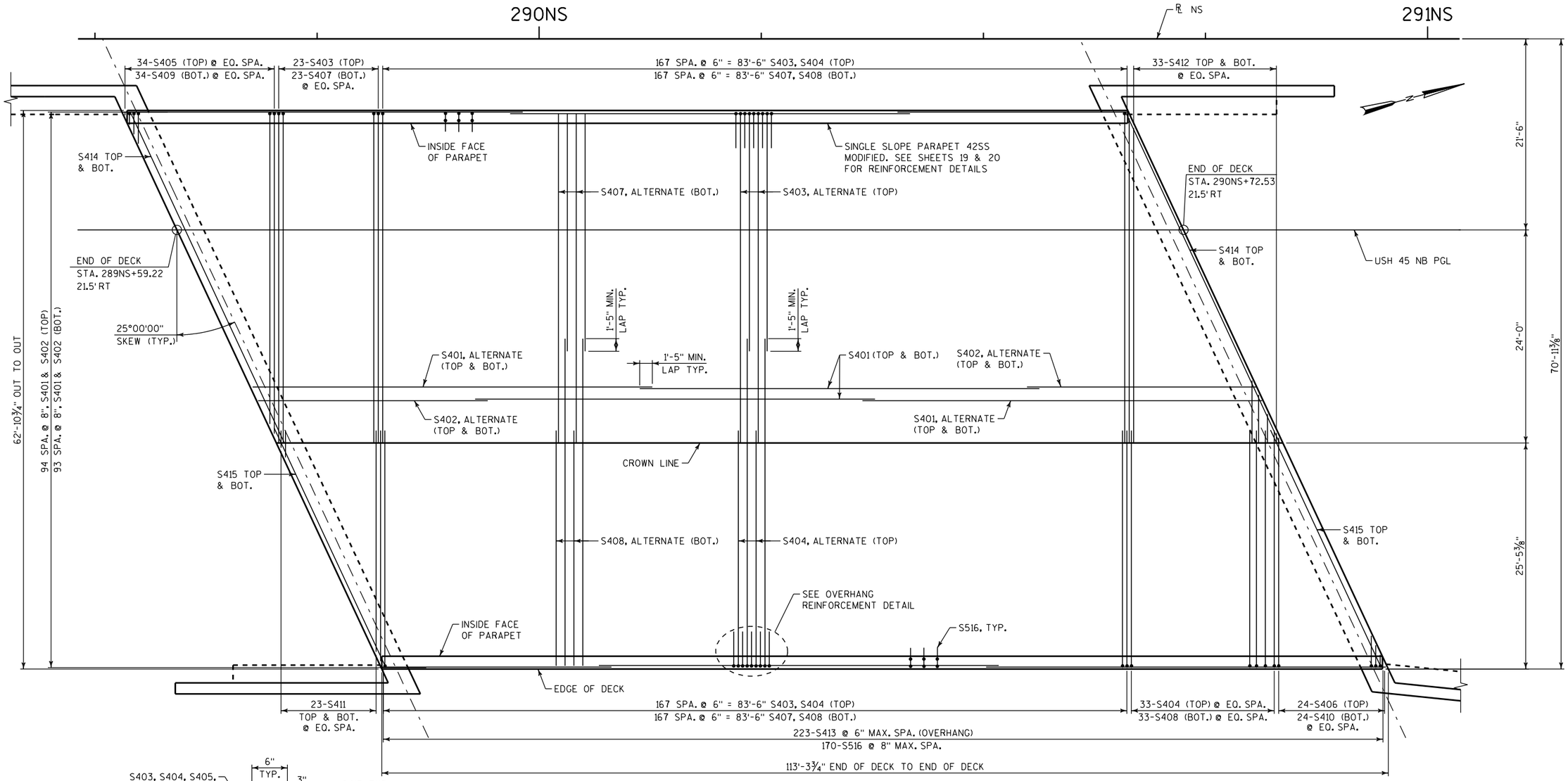
DRAWN BY AJA | PLANS CK'D. MHZ

STEEL DIAPHRAGM

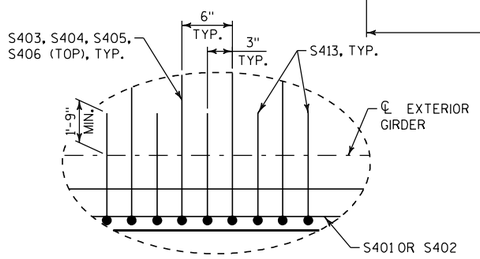
SHEET 17 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-537\cds\B537_080503_ss.dgn PLOT DATE : 29-APR-2014 09:09 PLOT BY : MSCAYA PLOT NAME : B537_080503_ss PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



DECK REINFORCEMENT PLAN



OVERHANG REINFORCEMENT DETAIL

NOTES

1. FOR CROSS SECTION THRU DECK, SEE SHEET 19.
2. FOR ABUTMENT DIAPHRAGM REINFORCEMENT, SEE SHEET 19.
3. FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 19.
4. FOR PARAPET REINFORCEMENT, SEE SHEETS 20 & 21.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

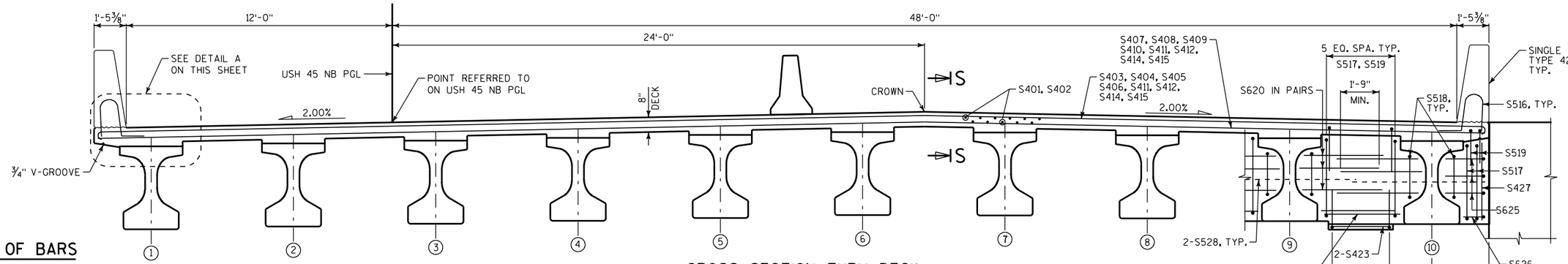
SUPERSTRUCTURE REINFORCEMENT

SHEET 18 OF 22

8

8

STATE PROJECT NUMBER
1060-33-80



BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401		378	45'-0"	-	-	DECK LONG. - TOP & BOT.
S402		189	25'-10"	-	-	DECK LONG. - TOP & BOT.
S403		107	37'-8"	X	-	DECK TRANS. - TOP
S404		117	27'-1"	X	-	DECK TRANS. - TOP
S405		34	19'-10"	X	⚠	DECK TRANS. - TOP (SW CORNER)
S406		24	13'-11"	X	⚠	DECK TRANS. - TOP (NE CORNER)
S407		107	37'-2"	-	-	DECK TRANS. - BOT.
S408		117	26'-7"	-	-	DECK TRANS. - BOT.
S409		34	19'-4"	-	⚠	DECK TRANS. - BOT. (SW CORNER)
S410		24	13'-5"	-	⚠	DECK TRANS. - BOT. (NE CORNER)
S411		46	14'-8"	-	⚠	DECK TRANS. - TOP & BOT. (SE CORNER)
S412		66	19'-0"	-	⚠	DECK TRANS. - TOP & BOT. (NW CORNER)
S413		446	4'-10"	X	-	DECK OVERHANG TRANS. - TOP
S414		4	41'-0"	-	-	DECK TRANS. EDGE TOP & BOT.
S415		4	29'-6"	-	-	DECK TRANS. EDGE TOP & BOT.
S516		340	4'-5"	X	-	DECK PARAPET - VERT.
S517		116	12'-7"	X	-	ABUTMENT DIAPHRAGM VERT.
S518		40	9'-5"	X	-	ABUTMENT DIAPHRAGM VERT.
S519		116	6'-2"	X	-	ABUTMENT DIAPHRAGM VERT.
S620		108	4'-1"	-	-	ABUTMENT DIAPHRAGM LONG. (F.F.)
S621		36	3'-0"	-	-	ABUTMENT DIAPHRAGM LONG. (F.F.)
S422		72	3'-9"	X	-	ABUTMENT DIAPHRAGM VERT.
S423		36	2'-9"	-	-	ABUTMENT DIAPHRAGM LONG. (B.F.)
S624		24	39'-1"	-	-	ABUTMENT DIAPHRAGM LONG. (B.F.)
S625		12	6'-4"	X	-	ABUTMENT DIAPHRAGM ENDS HORIZ. U BAR
S626		4	5'-7"	X	-	ABUTMENT DIAPHRAGM ENDS HORIZ. U BAR
S427		8	3'-9"	-	-	ABUTMENT DIAPHRAGM ENDS VERT.
S528		40	6'-0"	-	-	ABUTMENT DIAPHRAGM THROUGH GIRDERS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

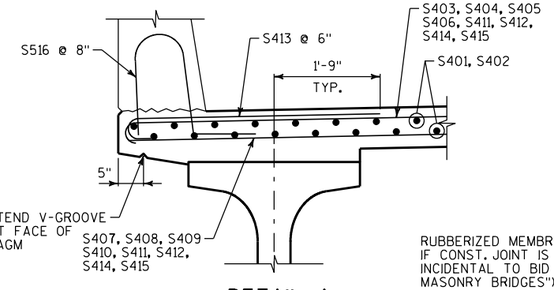
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
S405	1 SERIES OF 34	2'-3" TO 37'-5"
S406	1 SERIES OF 24	1'-8" TO 26'-2"
S409	1 SERIES OF 34	1'-9" TO 36'-11"
S410	1 SERIES OF 24	1'-2" TO 25'-8"
S411	2 SERIES OF 23	2'-11" TO 26'-5"
S412	2 SERIES OF 33	1'-10" TO 36'-2"

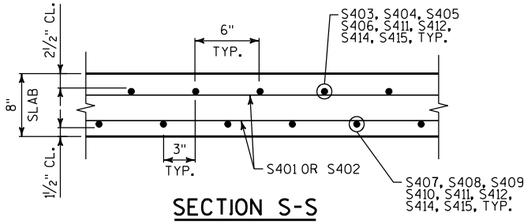
⚠ BUNDLE AND TAG EACH SERIES SEPARATELY

CROSS SECTION THRU DECK

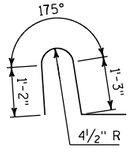
(LOOKING NORTH)



DETAIL A

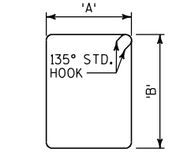


SECTION S-S

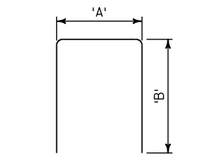


S516

S625, S626

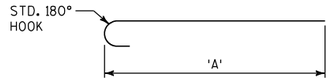


BAR MARK	DIM. 'A'	DIM. 'B'
S517	2'-5"	3'-7"
S518	2'-5"	2'-0"

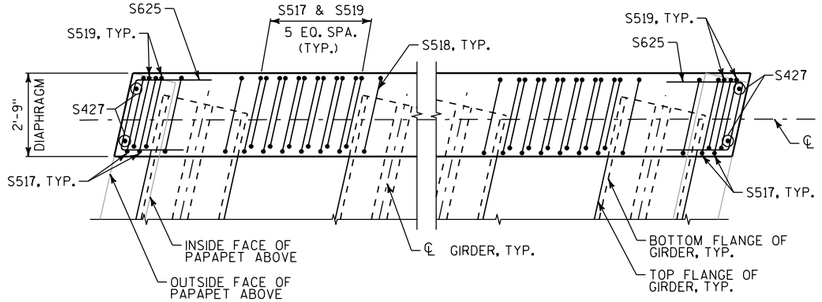


BAR MARK	DIM. 'A'	DIM. 'B'
S519	2'-5"	2'-0"
S422	11"	1'-6"

BAR MARK	DIM. 'A'
S403	37'-2"
S404	26'-7"
S405	1'-9" TO 36'-11"
S406	1'-2" TO 25'-8"
S413	4'-4"



BENDING DIAGRAMS

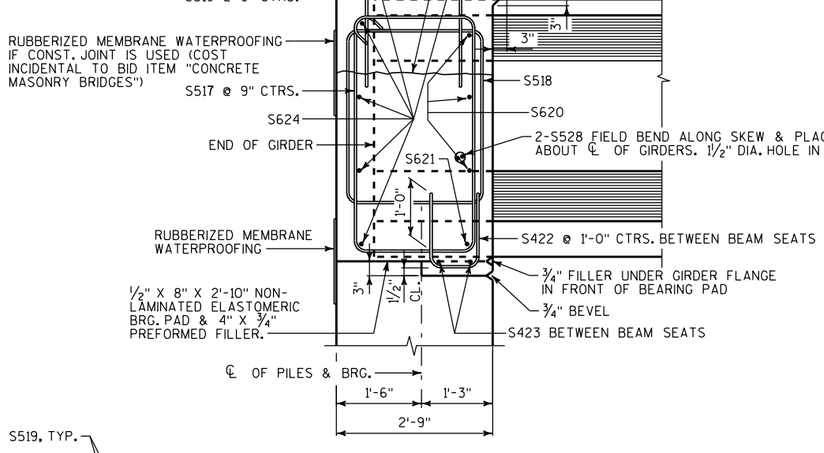


ABUTMENT CONCRETE DIAPHRAGM PART PLAN

(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)

CONCRETE DIAPHRAGM

(TYPICAL)
(BACK FACE LONGITUDINAL BARS S624 NOT SHOWN FOR CLARITY)



PART LONGITUDINAL SECTION AT ABUTMENT

NOTES

1. FOR SUPERSTRUCTURE REINFORCEMENT PLAN, SEE SHEET 18.
2. FOR PARAPET REINFORCEMENT, SEE SHEETS 20 & 21.
3. FOR ABUTMENT DETAILS, SEE SHEETS 7, 8, 10 & 11.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

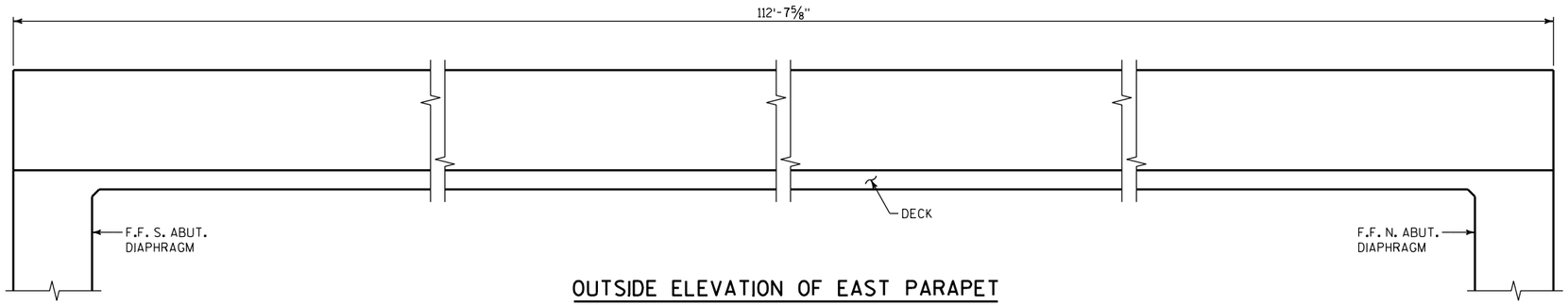
STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

SUPERSTRUCTURE DETAILS

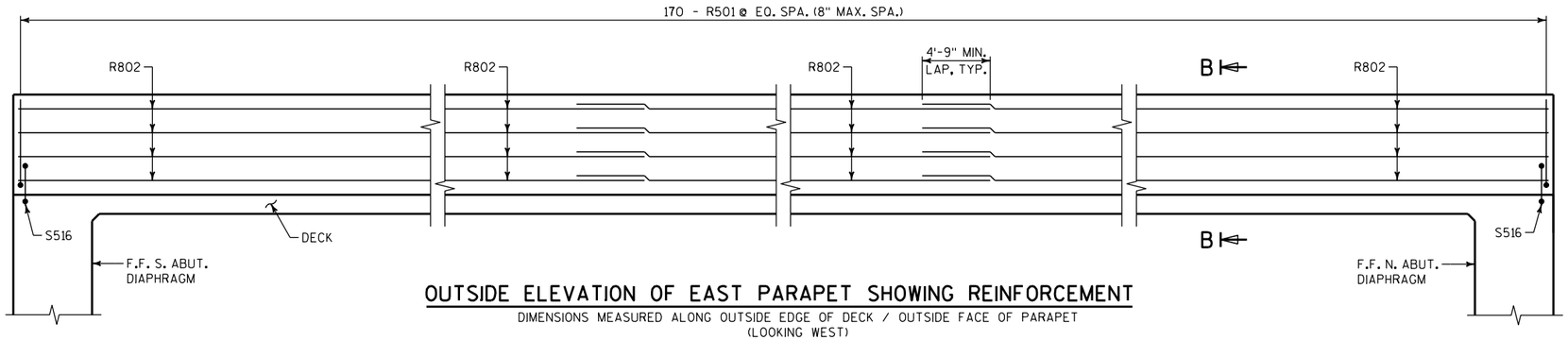
SHEET 19 OF 22

STATE PROJECT NUMBER
1060-33-80



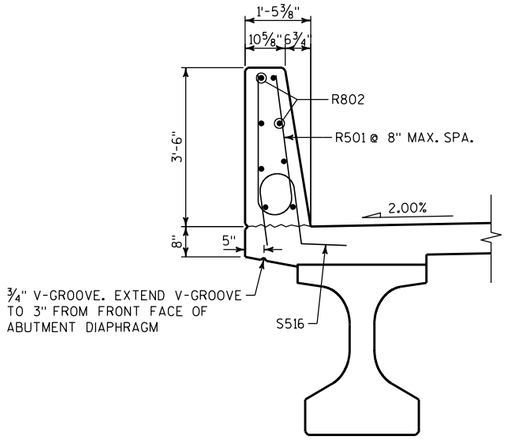
OUTSIDE ELEVATION OF EAST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)

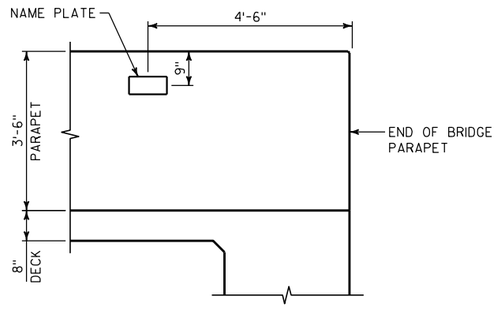


OUTSIDE ELEVATION OF EAST PARAPET SHOWING REINFORCEMENT

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)



SECTION B-B



INSIDE FACE OF EAST PARAPET

(SOUTH END, LOOKING EAST)
(DIMENSIONS GIVEN AT INSIDE FACE OF PARAPET)

NOTES

1. FOR PARAPET BILL OF BARS, SEE SHEET 21.
2. FOR SUPERSTRUCTURE REINFROCEMENT, SEE SHEETS 18 & 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 2)

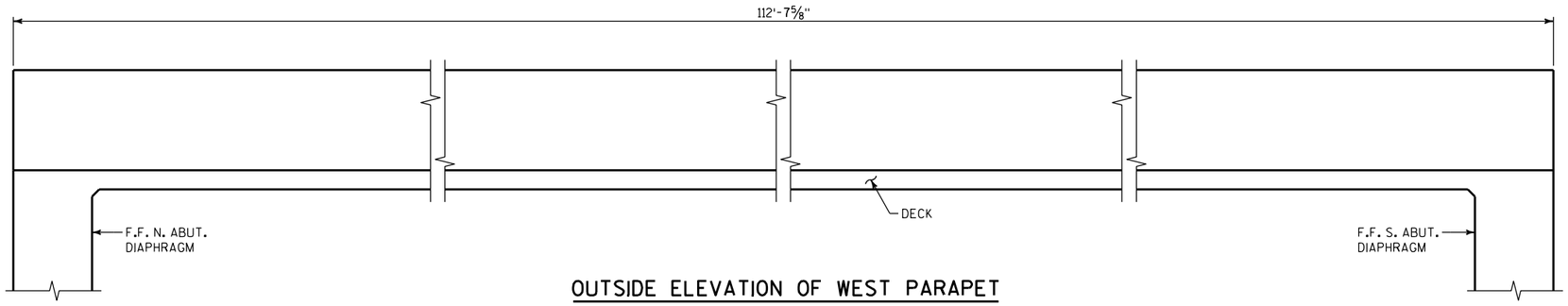
SHEET 20 OF 22

8

8

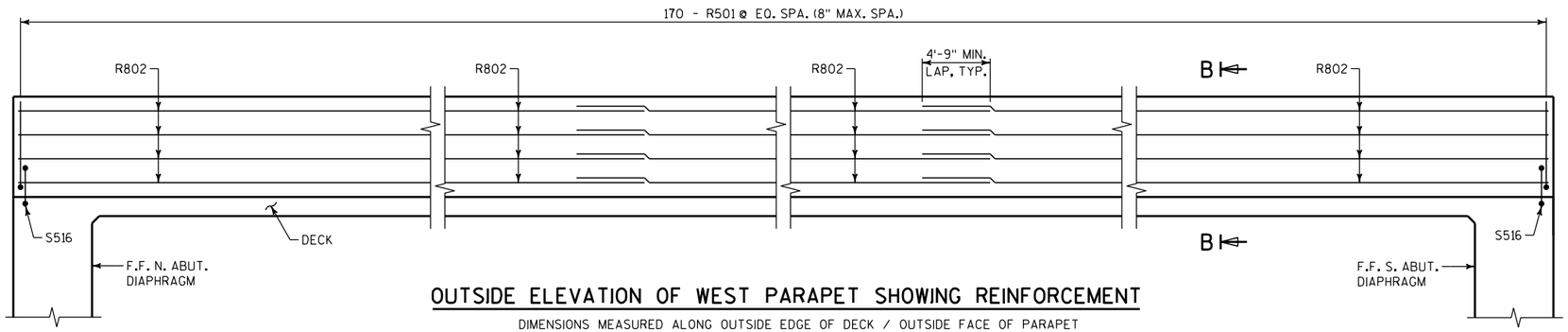
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STATE PROJECT NUMBER
1060-33-80



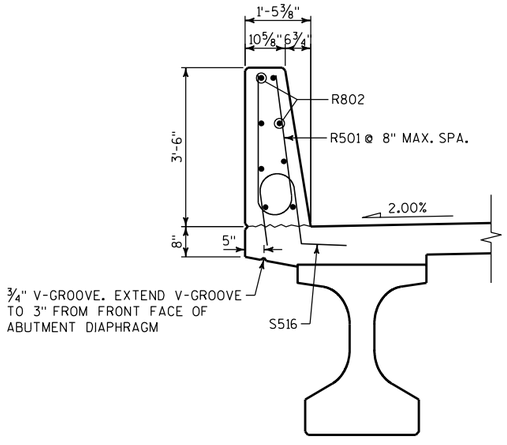
OUTSIDE ELEVATION OF WEST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



OUTSIDE ELEVATION OF WEST PARAPET SHOWING REINFORCEMENT

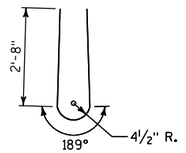
DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501		340	6'-8"	X	-	PARAPET - VERTICAL
R802		48	40'-8"	-	-	PARAPET - LONG.



R501

BENDING DIAGRAM

NOTE

1. FOR SUPERSTRUCTURE REINFROCEMENT, SEE SHEETS 18 & 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 2)

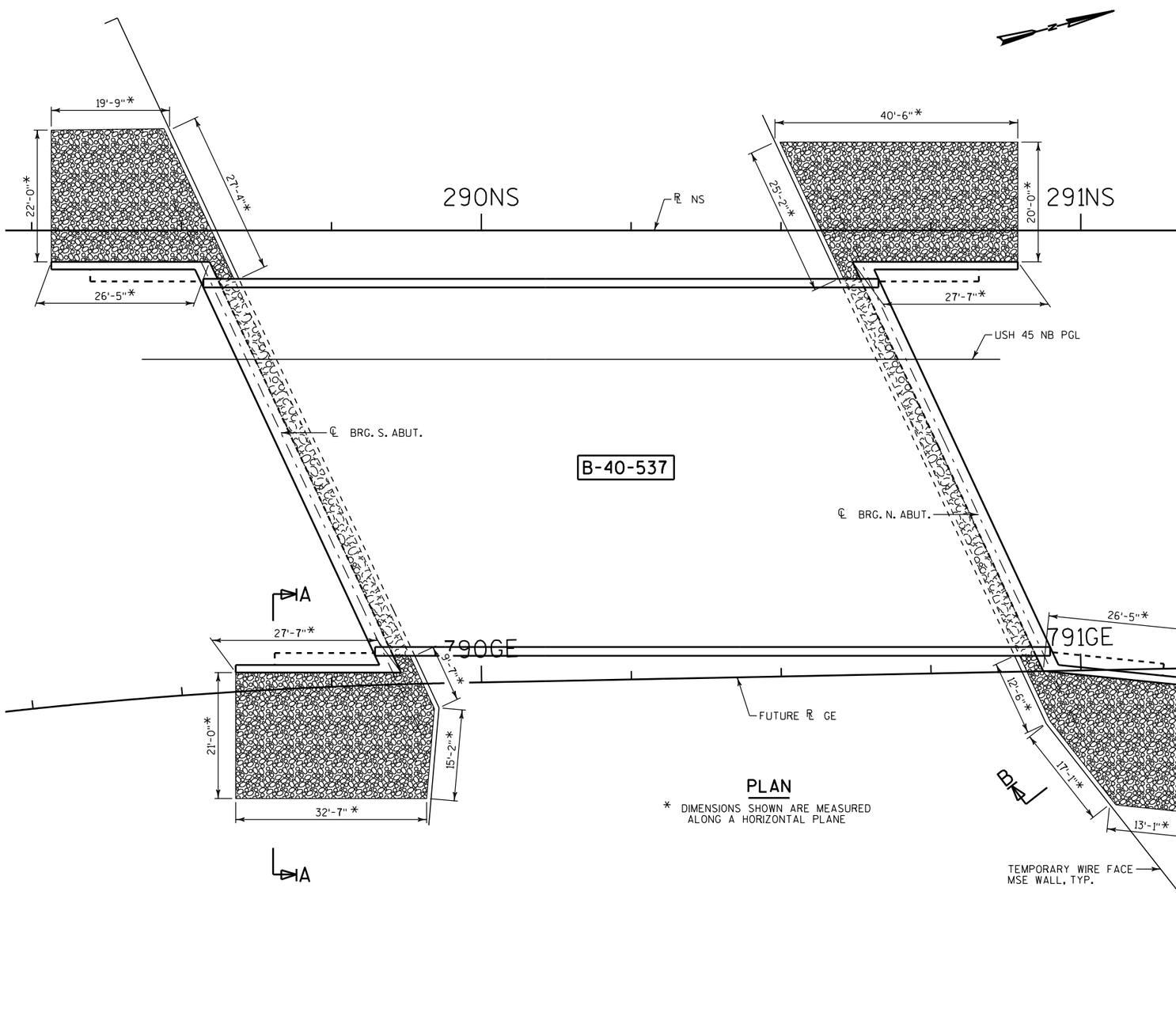
SHEET 21 OF 22

8

8

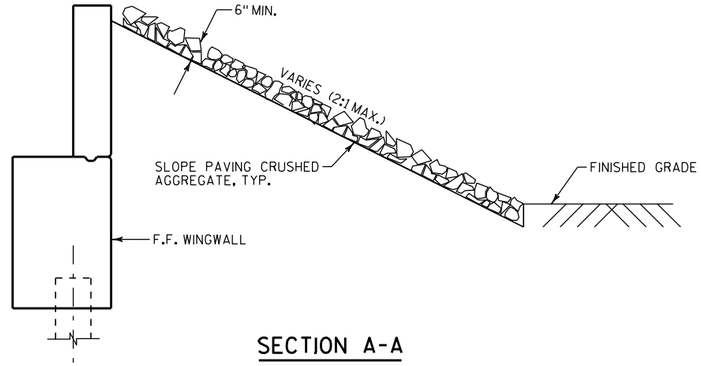
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STATE PROJECT NUMBER
1060-33-80

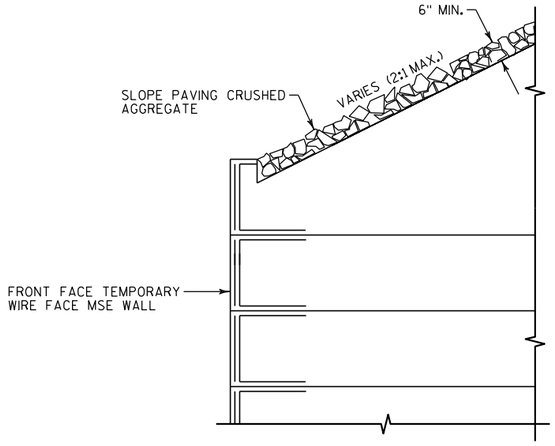


PLAN

* DIMENSIONS SHOWN ARE MEASURED ALONG A HORIZONTAL PLANE



SECTION A-A



SECTION B-B

NOTES

1. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
2. WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-537

DRAWN BY AJA | PLANS CK'D. MHZ

SLOPE PAVING DETAILS

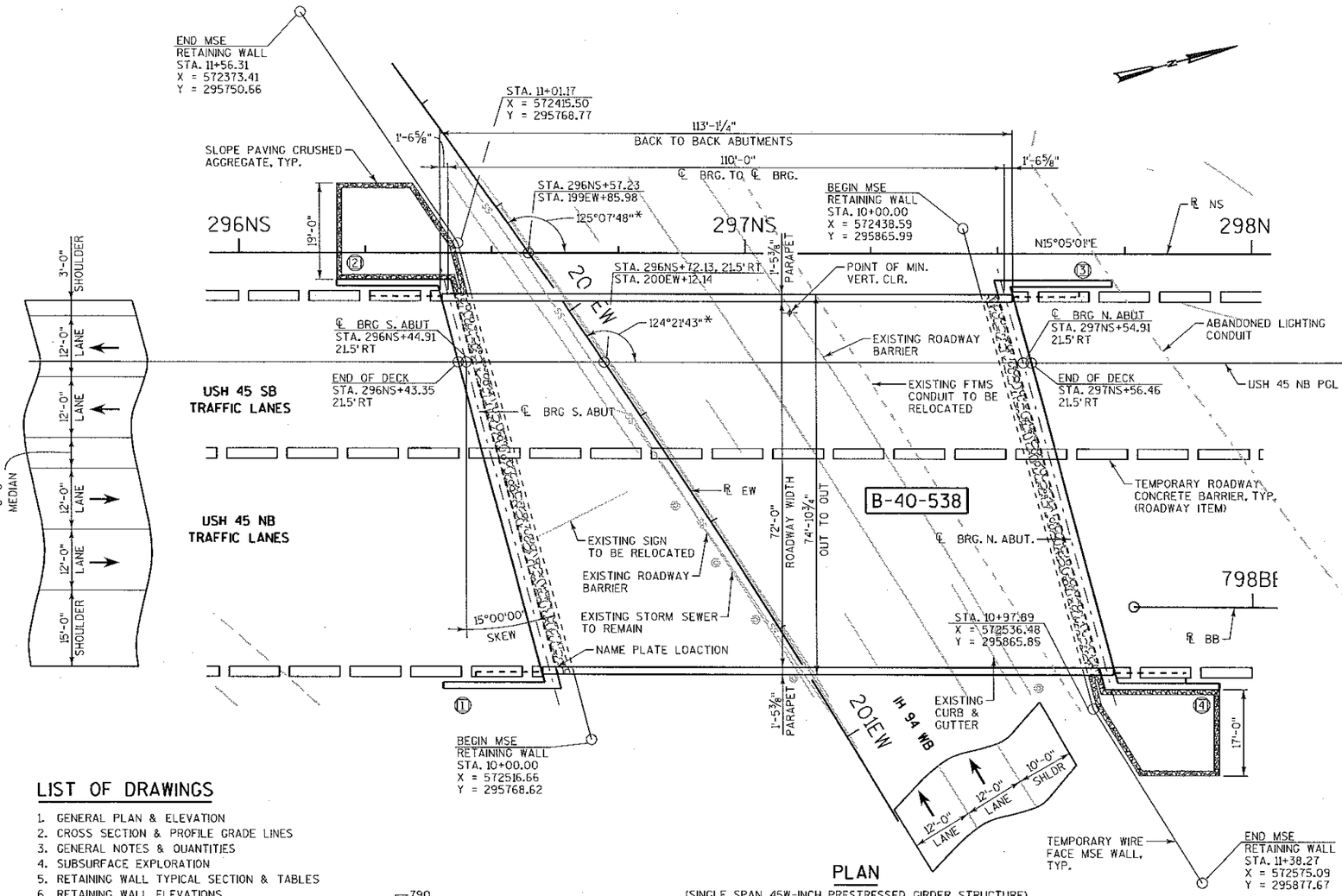
SHEET 22 OF 22

8

8

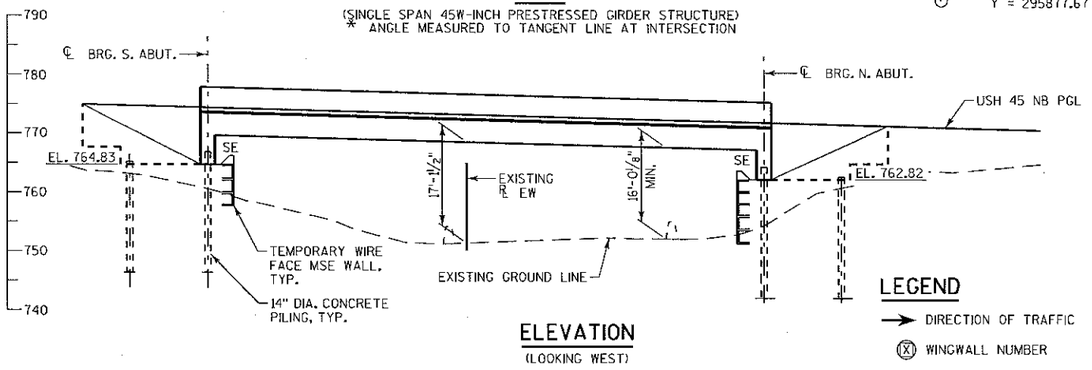
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STATE PROJECT NUMBER
1060-33-80



PLAN

(SINGLE SPAN 45W-INCH PRESTRESSED GIRDER STRUCTURE)
* ANGLE MEASURED TO TANGENT LINE AT INTERSECTION



ELEVATION

(LOOKING WEST)

LEGEND

→ DIRECTION OF TRAFFIC

Ⓧ WINGWALL NUMBER

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & PROFILE GRADE LINES
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. RETAINING WALL TYPICAL SECTION & TABLES
6. RETAINING WALL ELEVATIONS
7. SOUTH ABUTMENT
8. SOUTH ABUTMENT DETAILS
9. SOUTH ABUTMENT WINGWALLS
10. NORTH ABUTMENT
11. NORTH ABUTMENT DETAILS
12. NORTH ABUTMENT WINGWALLS
13. ABUTMENT DETAILS
14. 45W" PRESTRESSED GIRDER
15. 45W" PRESTRESSED GIRDER DETAILS
16. SUPERSTRUCTURE FRAMING PLAN
17. STEEL DIAPHRAGM
18. SUPERSTRUCTURE REINFORCEMENT
19. SUPERSTRUCTURE DETAILS
20. SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 2)
21. SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 2)
22. SLOPE PAVING DETAILS

DESIGN DATA

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.10
OPERATING RATING FACTOR: RF = 1.77
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- CIP CONCRETE PILING ..... f'c = 3,500 psi
- 45W-INCH PRESTRESSED GIRDERS ..... f'c = 8,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi
STEEL PILE SHELLS SHALL BE ASTM A252 GRADE 3. Fy = 45,000 psi

DESIGN THE TEMPORARY WIRE FACE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHARGE LIVE LOAD ABOVE THE BEAM SEATS PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE TEMPORARY WIRE FACE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

FOUNDATION DATA

USING THE MODIFIED GATES ACCEPTANCE METHOD:

ABUTMENTS SHALL BE SUPPORTED ON 14" DIA. CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AT THE ABUTMENTS AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50 USING MODIFIED GATES ACCEPTANCE METHOD REDUCED BY THE DOWN DRAG OF 13 TONS FOR THE NORTH ABUTMENT & 19 TONS FOR THE SOUTH ABUTMENT TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:
- SOUTH ABUTMENT ..... 68 FEET
- NORTH ABUTMENT ..... 67 FEET

TRAFFIC DATA

USH 45 NB	USH 45 SB	IH 94 WB
ADT = 42,200 (2015)	ADT = 44,800 (2015)	ADT = 34,600 (2015)
ADT = 65,500 (2035)	ADT = 69,300 (2035)	ADT = 44,900 (2035)
RDS = 60 MPH	RDS = 60 MPH	RDS = 60 MPH

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/07/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
Mohammed Zagloul 5/1/2014

STRUCTURE B-40-538

USH 45 NB BRIDGE OVER EXISTING IH 94 WB

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJA	MHZ	AJA	MHZ

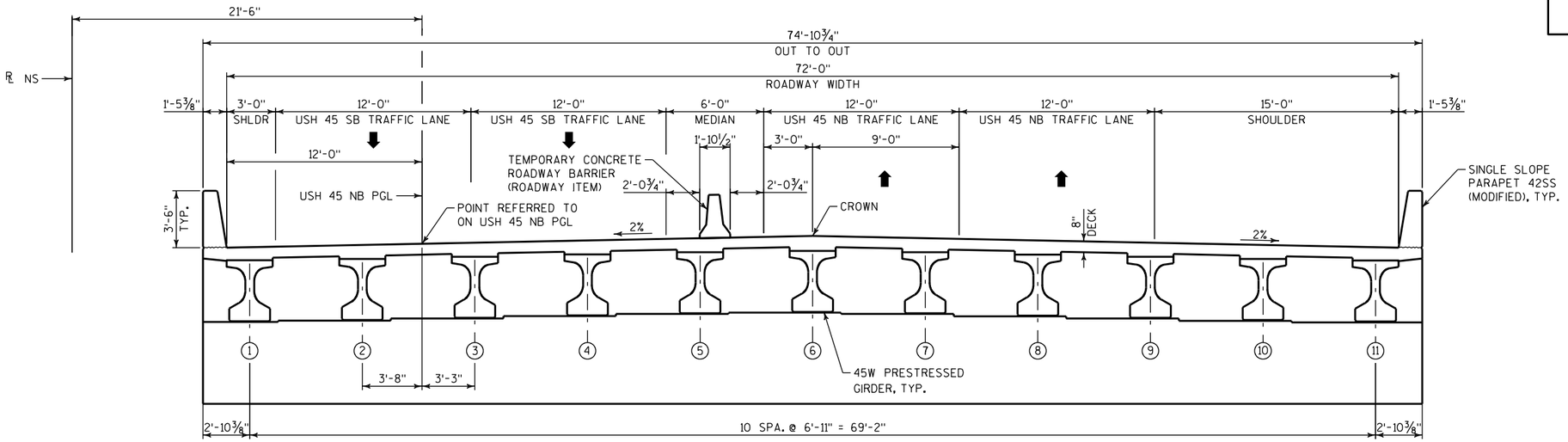
GENERAL PLAN & ELEVATION

SHEET 1 OF 22

8

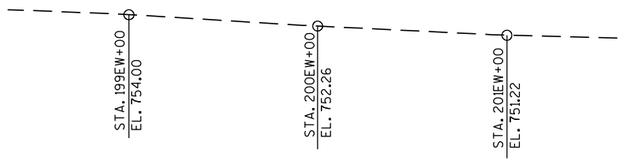
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STATE PROJECT NUMBER
1060-33-80

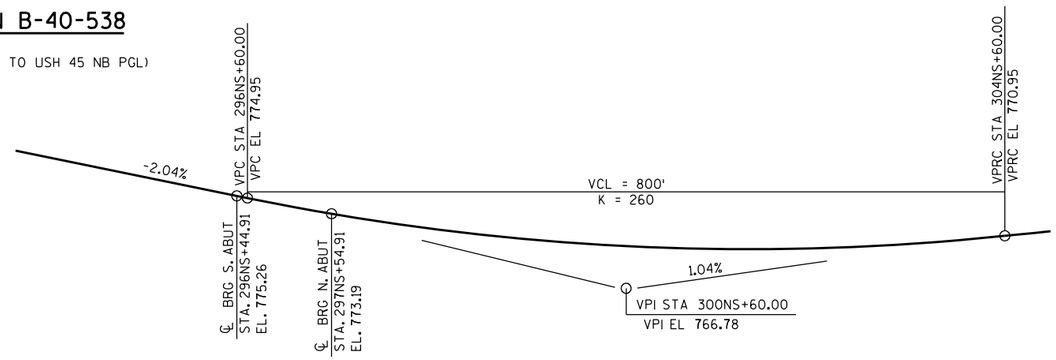


BRIDGE CROSS SECTION B-40-538

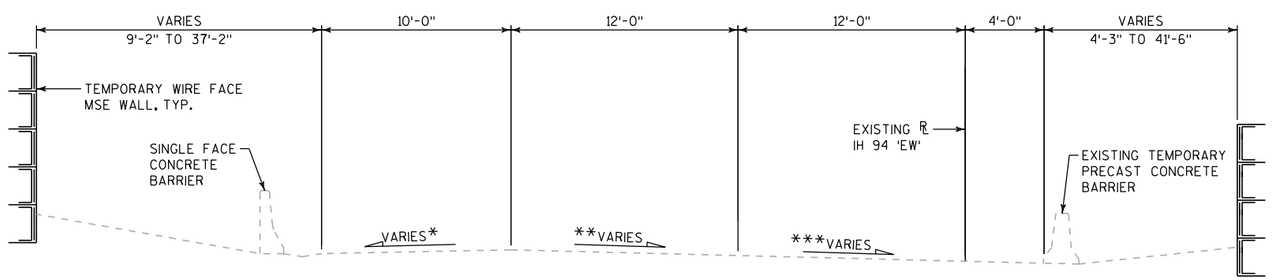
(LOOKING NORTH)
(ALL DIMENSIONS ARE MEASURED NORMAL TO USH 45 NB PGL)



SURVEYED EXISTING PROFILE IH 94 WB



PROFILE GRADE LINE - USH 45 NB



EXISTING TYPICAL SECTION - IH 94 WB

(LOOKING EAST)

* IH 94 WB PAVEMENT SLOPE VARIES FROM -2.40%± TO 0.70%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

** IH 94 WB PAVEMENT SLOPE VARIES FROM -3.67%± TO -4.08%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

*** IH 94 WB PAVEMENT SLOPE VARIES FROM -3.92%± TO -4.75%±. THE SLOPE WAS CALCULATED BASED ON EXISTING SURVEY DATA AT BRIDGE LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY	AJA	PLANS CK'D.	MHZ

CROSS SECTION & PROFILE GRADE LINES

SHEET 2 OF 22

8

8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	NORTH ABUTMENT	SOUTH ABUTMENT	SUPER*	TOTAL
206.1000.0002	EXCAVATION FOR STRUCTURES BRIDGES B-40-538	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	412	411	-	822
502.0100	CONCRETE MASONRY BRIDGES	CY	76	78	347	501
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	1,016	1,016
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	-	-	1,221	1,221
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	9,280	9,290	60,940	79,510
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	11	11	-	22
506.4000.0002	STEEL DIAPHRAGMS B-40-538	EACH	-	-	20	20
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18	18	-	36
550.2148	PILING CIP CONCRETE 14 X 0.5-INCH	LF	1,088	1,072	-	2,160
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	67	62	-	129
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	71	71	-	142
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	281	255	-	536
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	1,253	1,030	-	2,284
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE	-	-	-	¾"
	NON-BITUMINOUS JOINT FILLER	SIZE	-	-	-	½"
	CORK FILLER	SIZE	-	-	-	¾"
	NAME PLATE	EACH	-	-	-	1

ALL ITEMS ARE CATEGORY 2010

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007).

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT WALLS WITH THE NORTH & SOUTH ABUTMENT OF BRIDGE B-40-538.

THE PLAN QUANTITY FOR THE BID ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO BOTTOM OF WALL AS SHOWN IN THE PLANS. THE BOTTOM OF THE WALL IS ASSUMED TO BE 1'-6" BELOW FINISHED GRADE. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

THE PARAPET CONCRETE QUANTITY FOR SINGLE SLOPE 42SS MODIFIED SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE MSE WALL SHALL HAVE DOUBLE LAYER OF GEOTEXTILE FABRIC OF ALL EXPOSED SURFACES.

ONLY ANCHORED ROADWAY TEMPORARY BARRIER SHALL BE USED. SEE ROADWAY PLANS FOR DETAILS. ANCHORED ROADWAY TEMPORARY BARRIER IS A ROADWAY ITEM.

* CONTRACTOR MAY ELECT TO USE A STAY-IN-PLACE "PRECAST PRESTRESSED DECK PANELS" AS SPECIFIED.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

GENERAL NOTES & QUANTITIES

SHEET 3 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080103_qu.dgn PLOT DATE : 29-APR-2014 09:46 PLOT BY : MSCAYA PLOT NAME : B538_080103_qu PLOT SCALE : 8:1

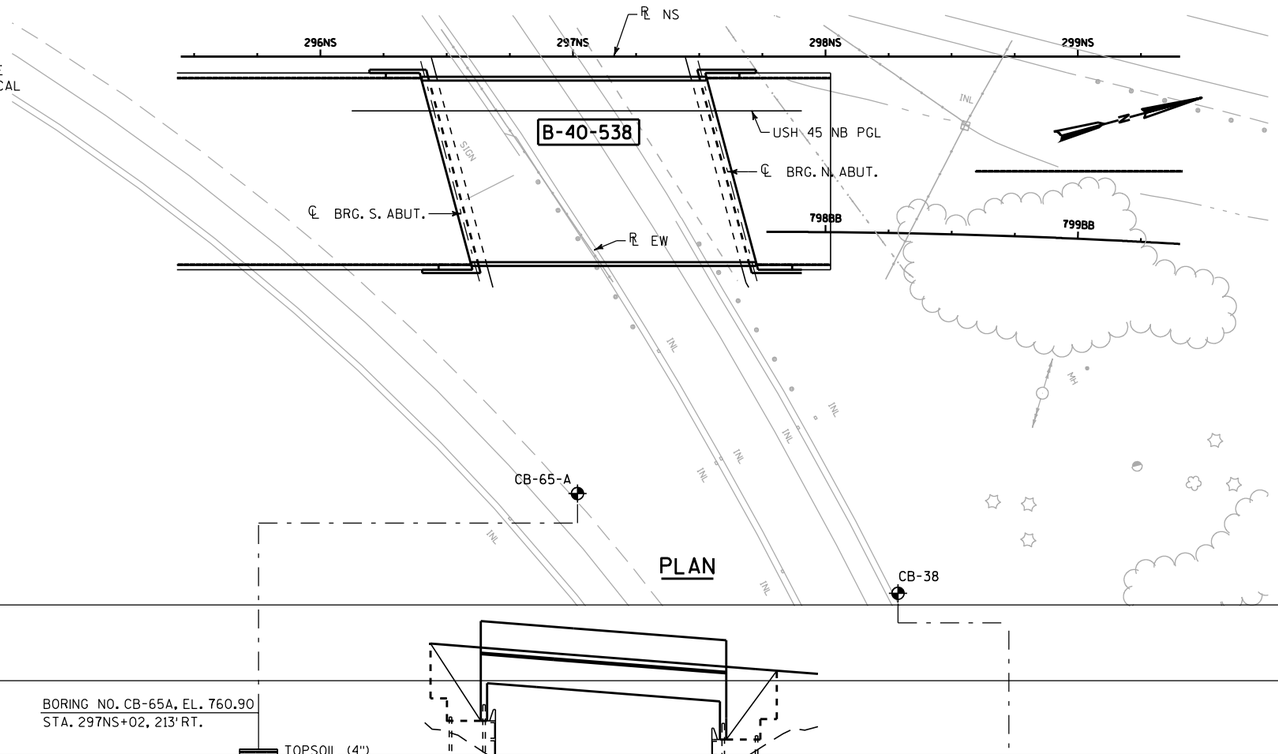
NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

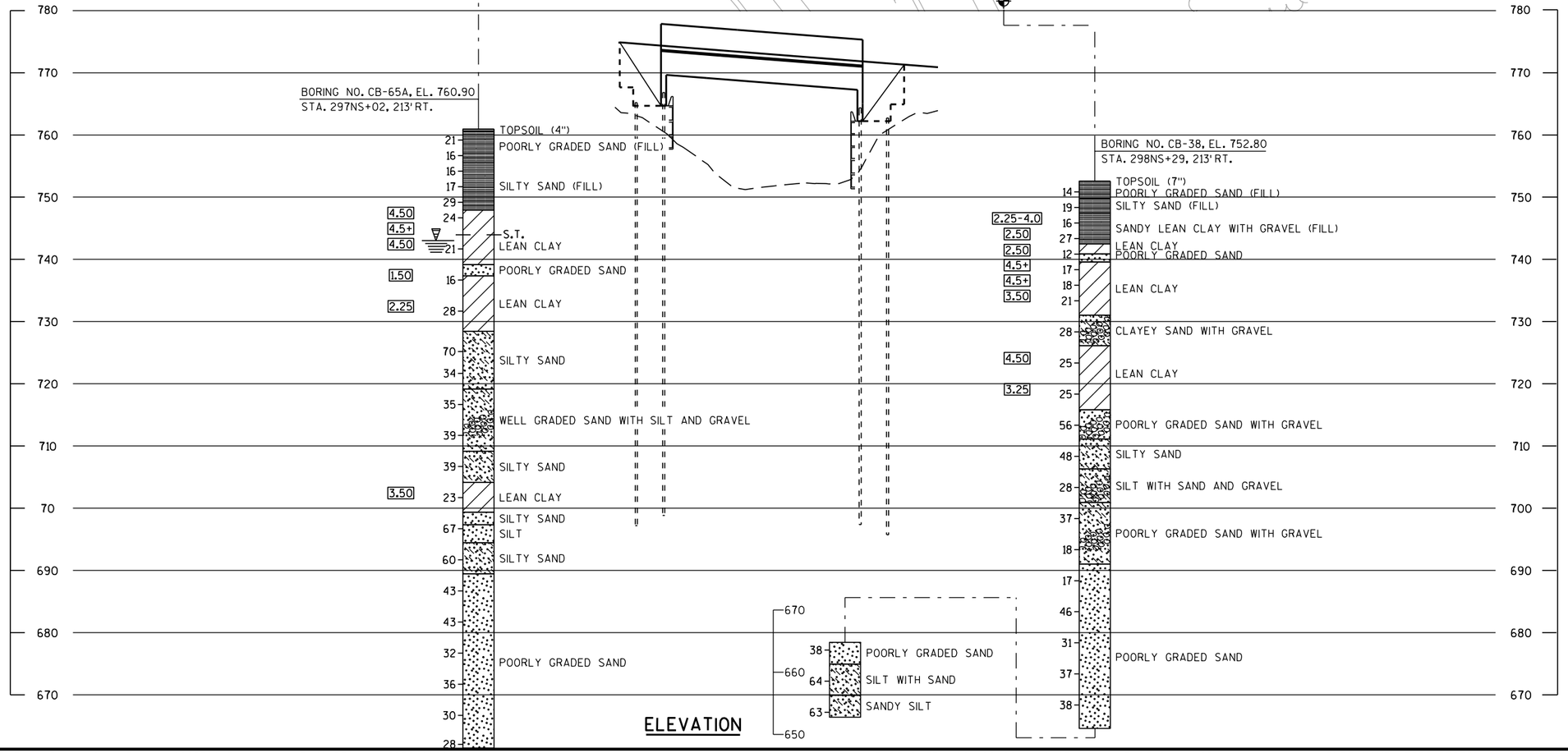
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JUNE, 19 2012 - BORING CB-38
JUNE, 24-26 2013 - BORING CB-65-A



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

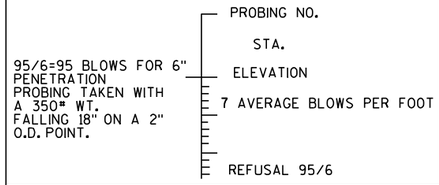
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

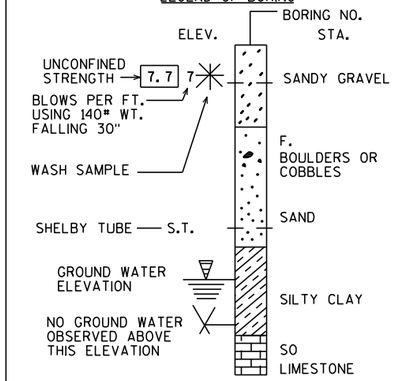
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION

SHEET 4 OF 22

8

8

STATE PROJECT NUMBER
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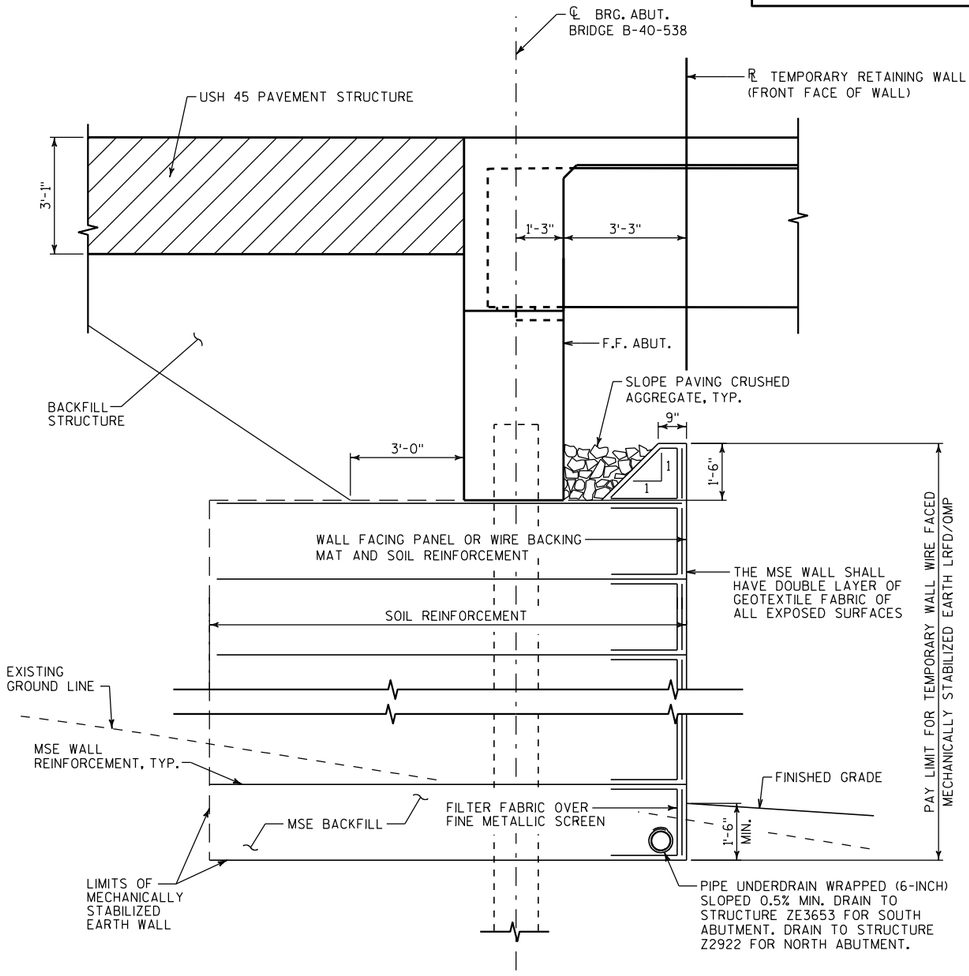
WALL EXTERNAL & GLOBAL STABILITY EVALUATION

DIMENSIONS		
WALL HEIGHT (FEET) ***	24.6	25.6
EXPOSED WALL HEIGHT (FEET)	21.6	22.6
LENGTH OF REINFORCEMENT (FEET) *	11.42	12.2
WALL STATION (℄ B-40-537)	11+57	11+32
BORING USED	CB-38	CB-65A
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING	1.38	1.59
ECCENTRICITY	1.06	1.08
BEARING	2.49	1.65
GLOBAL STABILITY	**	1.01

* THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENTLENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIALPROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. LENGTH OF REINFORCEMENT IS BASED ON WALL HEIGHT EXCLUDING UNREINFORCED FILL THICKNESS.

** GLOBAL STABILITY NOT CRITICAL FOR NORTH ABUTMENT

*** WALL HEIGHT INCLUDES 10.5 FEET OF UNREINFORCED FILL ABOVE MSE WALL



TYPICAL SECTION AT B-40-538 ABUTMENT

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		COHESION (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
SAND/SILTY SAND FILL	120	-	32	-	32
SANDY LEAN CLAY FILL	135	2,700	-	0	33
LEAN CLAY	135	2,700	-	10	33
POORLY GRADED SAND	120	-	32	-	32
LEAN CLAY	138	4,500	-	100	34
CLAYEY SAND W/GRAVEL	125	-	32	-	32
LEAN CLAY	135	3,800	-	50	34
POORLY GRADED SAND W/GRAVEL	133	-	38	-	38
SILTY SAND/SILT W/SAND AND GRAVEL	130	-	35	-	35
POORLY GRADED SAND W/GRAVEL	130	-	38	-	38
POORLY GRADED SAND/SILT W/SAND /SANDY SILT	128	-	36	-	36

DESIGN PROFILE AT NORTH ABUTMENT (CB-38)

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		COHESION (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
POORLY GRADED SAND/SILTY SAND FILL	120	-	32	-	32
LEAN CLAY	135	4,500	-	100	34
POORLY GRADED SAND	120	-	32	-	32
LEAN CLAY	132	2,000	-	5	32
SILTY SAND/POORLY GRADED SAND W/SILT	122	-	36	-	36
SANDY SILT	120	-	34	-	34
LEAN CLAY	138	3,500	-	25	34
SILTY SAND/SILT/POORLY GRADED SAND	122	-	36	-	36

DESIGN PROFILE AT SOUTH ABUTMENT (CB-65A)

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)
MSE RETAINED GRANULAR FILL	120	0	30	0	30
GRANULAR FILL	130	0	32	0	32
NEW COHESIVE FILL	125	1,500 - 2,000	0	0 - 10	30 - 31

GENERAL FILL SOIL PARAMETERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

RETAINING WALL TYPICAL SECTION & TABLES

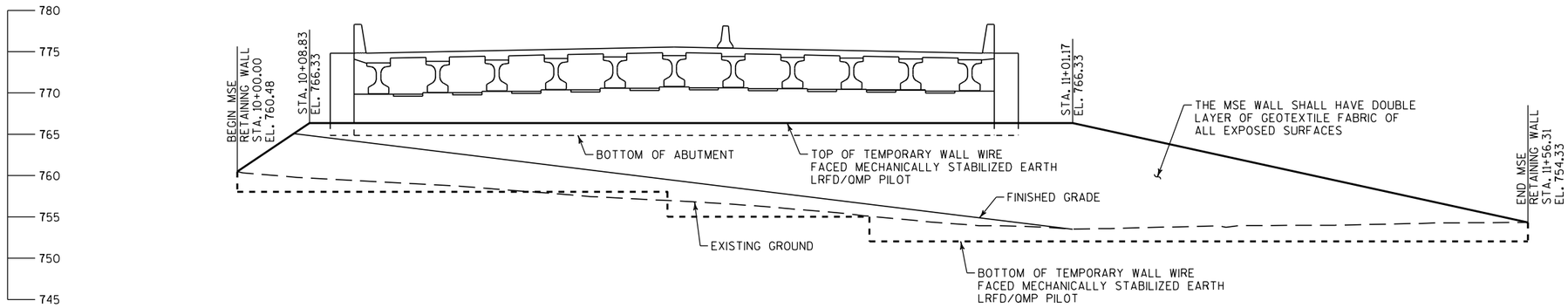
SHEET 5 OF 22

2347

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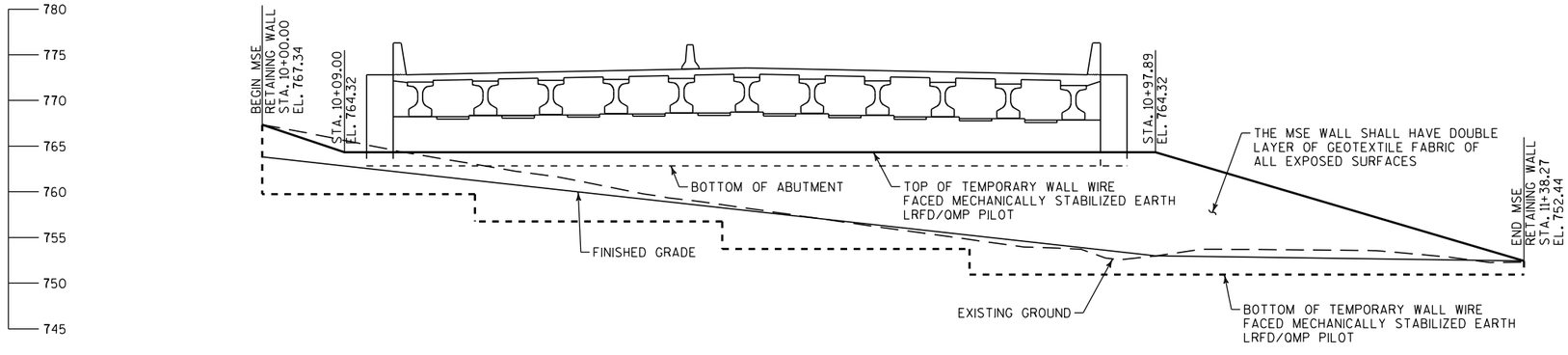
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SOUTH ABUTMENT RETAINING WALL ELEVATON

(LOOKING SOUTH)



NORTH ABUTMENT RETAINING WALL ELEVATON

(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

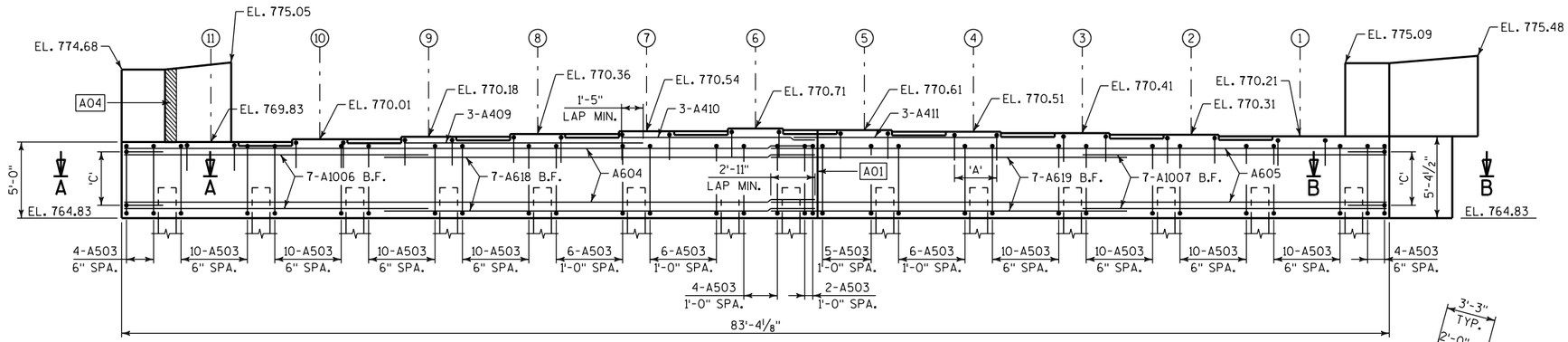
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RETAINING WALL ELEVATIONS

SHEET 6 OF 22

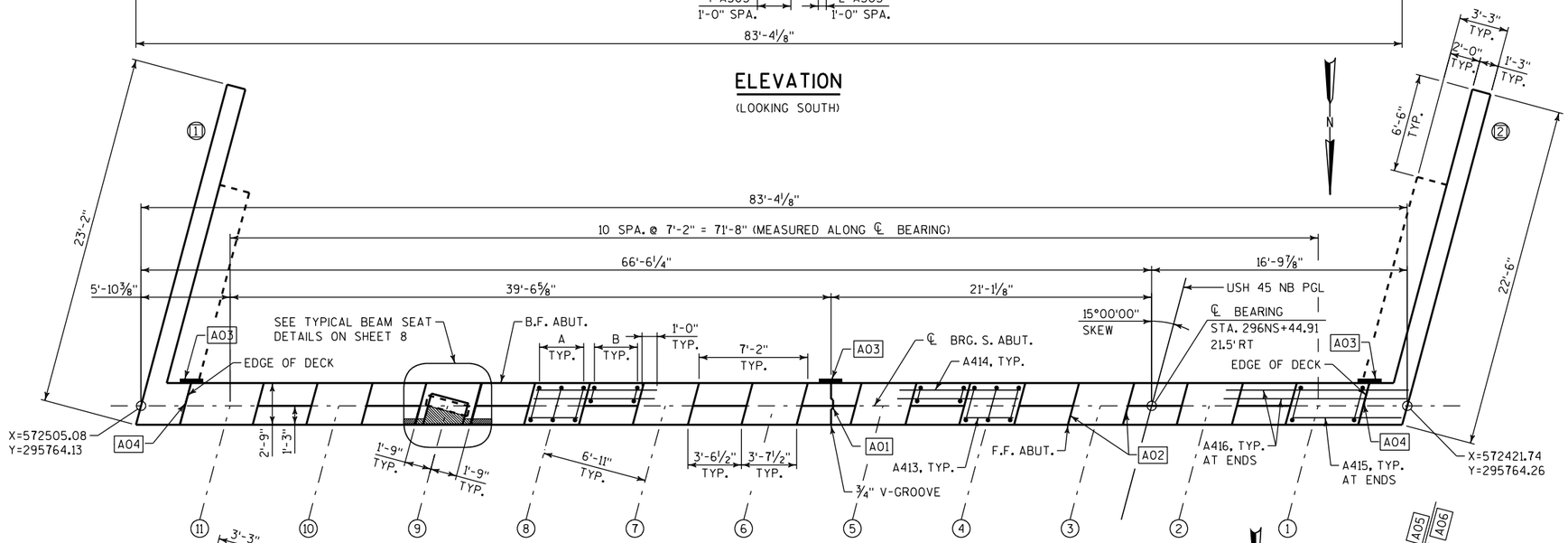
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1060-33-80



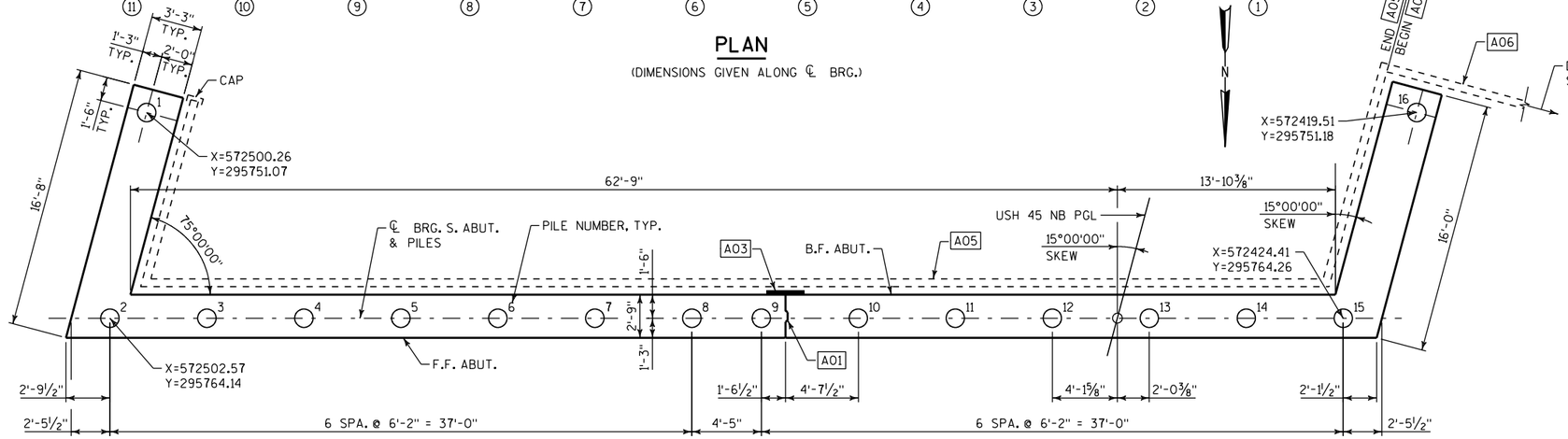
ELEVATION

(LOOKING SOUTH)



PLAN

(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN

(DIMENSIONS GIVEN ALONG ℄ BRG.)

NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 8.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 8.
4. FOR SECTIONS A-A & B-B, SEE SHEET 8.
5. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 9.

LEGEND

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".
- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- A04 ½" FILLER & SEALER FROM GIRDER SEAT TO TOP OF WINGWALL.
- A05 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A06 PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5% MIN.
- ◯ 14" DIAMETER, 0.5" WALL CIP PIPE CONCRETE PILING.
- (X) GIRDER NUMBER
- ⓧ WINGWALL NUMBER
- A - 5 - A508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED @ GIRDER 2 THRU 10.
  6 - A508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 11.
- B - 4 - A417 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)
- C - 5 - A512 LAPPED WITH A604 & A605.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

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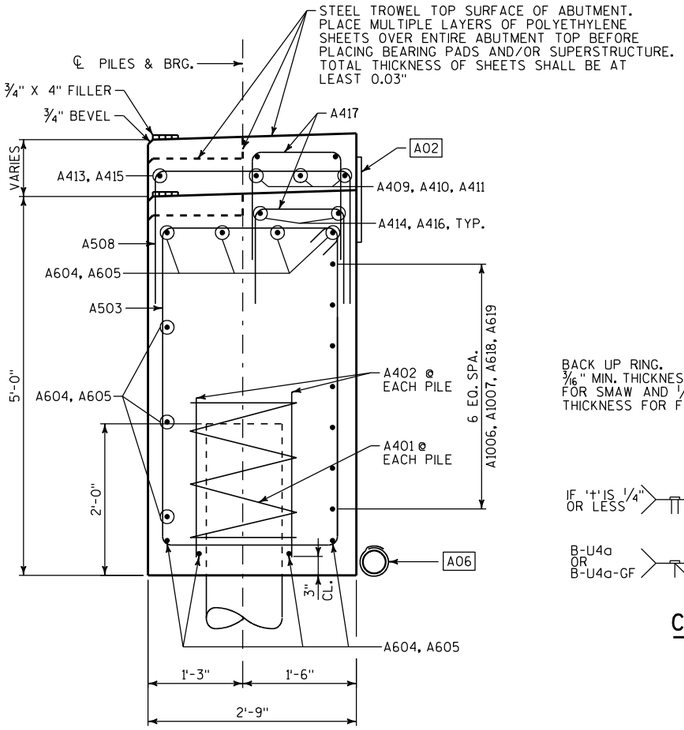
SOUTH ABUTMENT

SHEET 7 OF 22

8

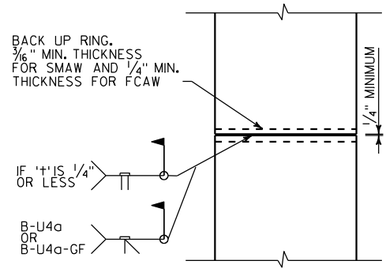
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STATE PROJECT NUMBER
1060-33-80

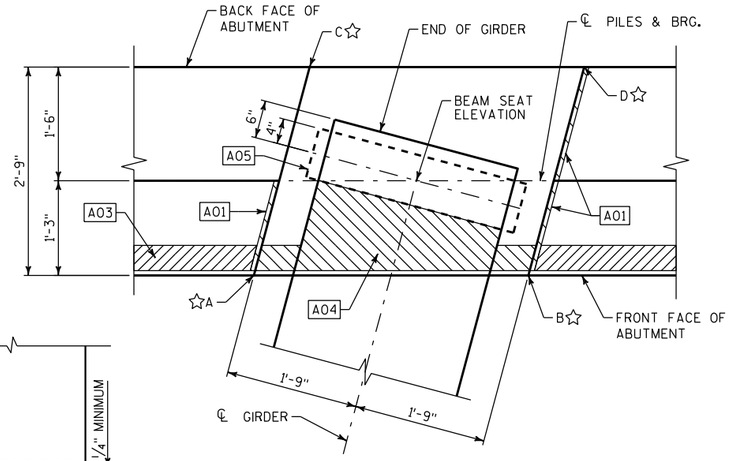


SECTION THRU ABUTMENT BODY

(LOOKING EAST)



CAST-IN-PLACE 'PIPE PILE'



TYPICAL BEAM SEAT DETAIL

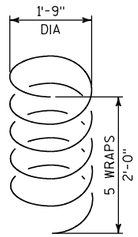
☆BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	770.21	-0.03	-0.01	+0.02	+0.04
2	770.31	-0.03	-0.02	+0.02	+0.04
3	770.41	-0.03	-0.02	+0.02	+0.04
4	770.51	-0.03	-0.02	+0.02	+0.04
5	770.61	-0.03	-0.02	+0.02	+0.04
6	770.71	-0.03	-0.02	+0.02	+0.04
7	770.54	-0.03	-0.02	+0.02	+0.04
8	770.36	-0.03	-0.02	+0.02	+0.04
9	770.18	-0.03	-0.02	+0.02	+0.04
10	770.01	-0.03	-0.02	+0.02	+0.04
11	769.83	-0.04	-0.02	+0.01	+0.04

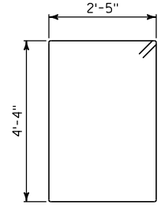
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		14	28'-0"	X	ABUTMENT PILES 5 WRAP SPIRAL
A402		28	2'-3"	-	ABUTMENT PILES - VERT.
A503		117	14'-1"	X	ABUTMENT BODY - VERT.
A604		11	45'-5"	-	ABUTMENT BODY - LONG.
A605		11	40'-6"	-	ABUTMENT BODY - LONG.
A1006		7	22'-9"	X	ABUTMENT BODY - LONG.
A1007		7	23'-0"	X	ABUTMENT BODY - LONG.
A508		57	6'-1"	X	ABUTMENT BODY - VERT.
A409		3	15'-9"	-	ABUTMENT BODY - LONG.
A410		3	12'-8"	-	ABUTMENT BODY - LONG.
A411		3	14'-2"	-	ABUTMENT BODY - LONG.
A512		10	7'-1"	X	ABUTMENT BODY - HORIZ.
A413		9	3'-3"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 10)
A414		18	8'-2"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 10)
A415		2	7'-4"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 11)
A416		4	12'-3"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 11)
A417		40	4'-10"	X	ABUTMENT SEAT - VERT.
A618		7	27'-7"	-	ABUTMENT BODY - LONG.
A619		7	24'-2"	-	ABUTMENT BODY - LONG.

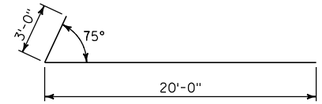
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



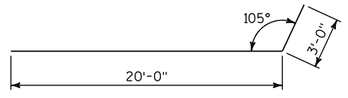
A401



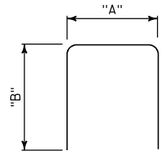
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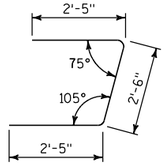
A1006



A1007



BAR MARK	DIM "A"	DIM "B"
A508	2'-6"	1'-11"
A417	1'-4"	1'-10"



A512

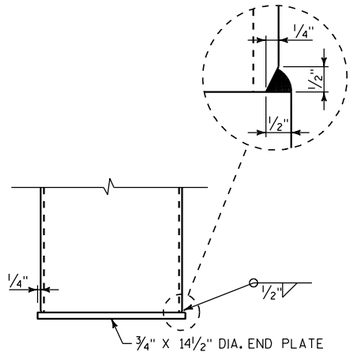
BENDING DIAGRAMS

LEGEND

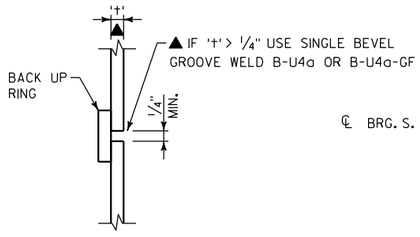
- A01 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- A03 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A04 ¾" FILLER UNDER GIRDERS, TYP.
- A05 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A06 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

NOTES

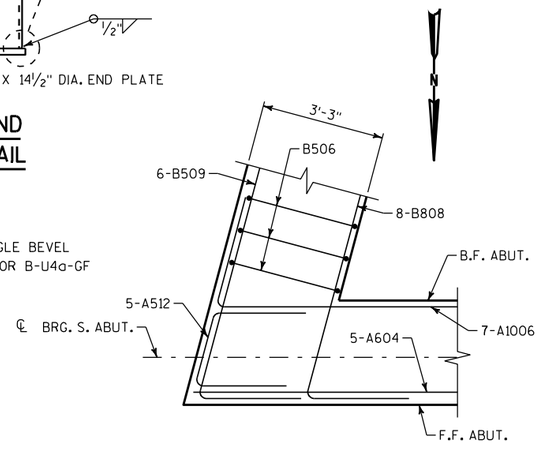
1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 7.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 9.



CIP PILE END PLATE DETAIL

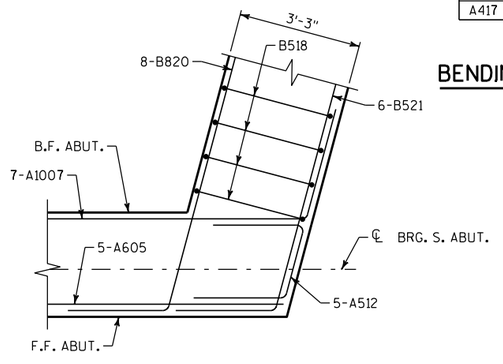


CIP PILE WELD DETAIL



SECTION A-A

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION B-B

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

SOUTH ABUTMENT DETAILS

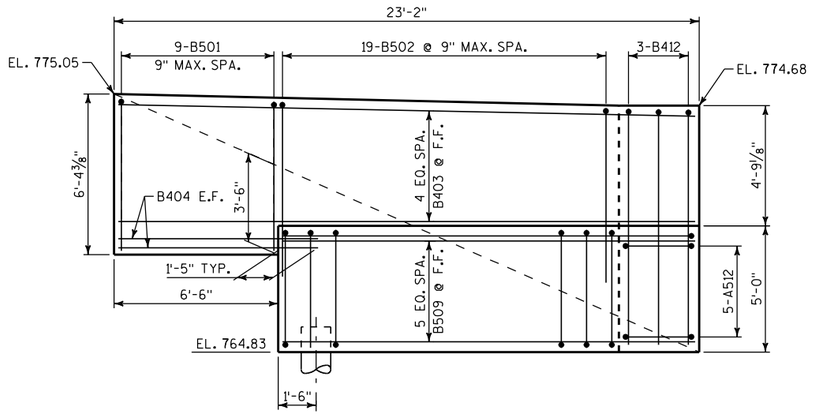
SHEET 8 OF 22

8

8

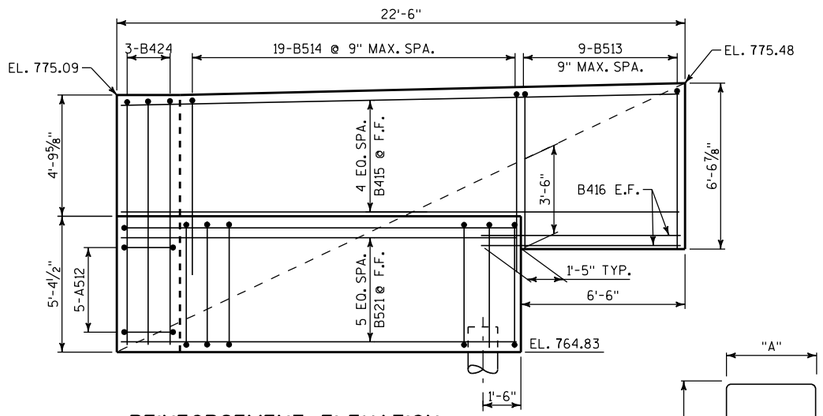
STATE PROJECT NUMBER

1060-33-80



REINFORCEMENT ELEVATION

(EAST WINGWALL (1) FRONT FACE)
(LOOKING WEST)



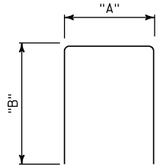
REINFORCEMENT ELEVATION

(WEST WINGWALL (2) FRONT FACE)
(LOOKING EAST)

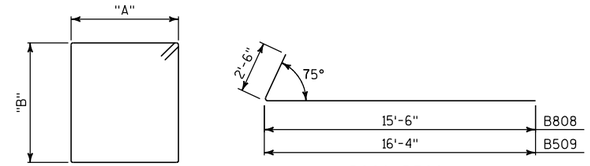
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		9	12'-9"	X	-	SE WINGWALL 1 - VERT.
B502		19	15'-1"	X	-	SE WINGWALL 1 - VERT.
B403		5	22'-8"	-	-	SE WINGWALL 1 - LONG.
B404		4	7'-11"	-	-	SE WINGWALL 1 - LONG.
B405		9	22'-4"	-	-	SE WINGWALL 1 - LONG.
B506		13	15'-7"	X	-	SE WINGWALL 1 - VERT.
B507		1	11'-10"	X	-	SE WINGWALL 1 - VERT.
B808		10	17'-10"	X	-	SE WINGWALL 1 - LONG.
B509		6	18'-9"	X	-	SE WINGWALL 1 - LONG.
B410		6	7'-4"	X	-	SE WINGWALL 1 - HORIZ.
B411		3	6'-0"	-	-	SE WINGWALL 1 - VERT.
B412		3	11'-10"	X	-	SE WINGWALL 1 - VERT.
B513		9	13'-1"	X	-	SW WINGWALL 2 - VERT.
B514		19	15'-1"	X	-	SW WINGWALL 2 - VERT.
B415		5	22'-0"	-	-	SW WINGWALL 2 - LONG.
B416		4	7'-11"	-	-	SW WINGWALL 2 - LONG.
B417		9	22'-4"	-	-	SW WINGWALL 2 - LONG.
B518		13	16'-3"	X	-	SW WINGWALL 2 - VERT.
B519		1	12'-6"	X	-	SW WINGWALL 2 - VERT.
B820		10	19'-0"	X	-	SW WINGWALL 2 - LONG.
B521		6	18'-0"	X	-	SW WINGWALL 2 - LONG.
B422		6	7'-4"	X	-	SW WINGWALL 2 - HORIZ.
B423		3	6'-1"	-	-	SW WINGWALL 2 - VERT.
B424		3	12'-2"	X	-	SW WINGWALL 2 - VERT.

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

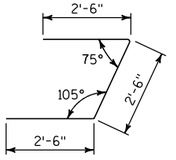


BAR MARK	DIM "A"	DIM "B"
B501	1'-0"	6'-0"
B502	1'-0"	7'-2"
B507	2'-11"	4'-7"
B513	1'-0"	6'-2"
B514	1'-0"	7'-2"
B519	2'-11"	4'-11"

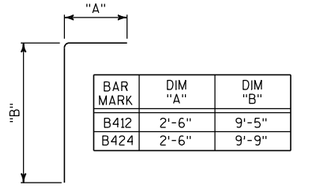


B808, B509

BAR MARK	DIM "A"	DIM "B"
B506	2'-11"	4'-7"
B518	2'-11"	4'-11"



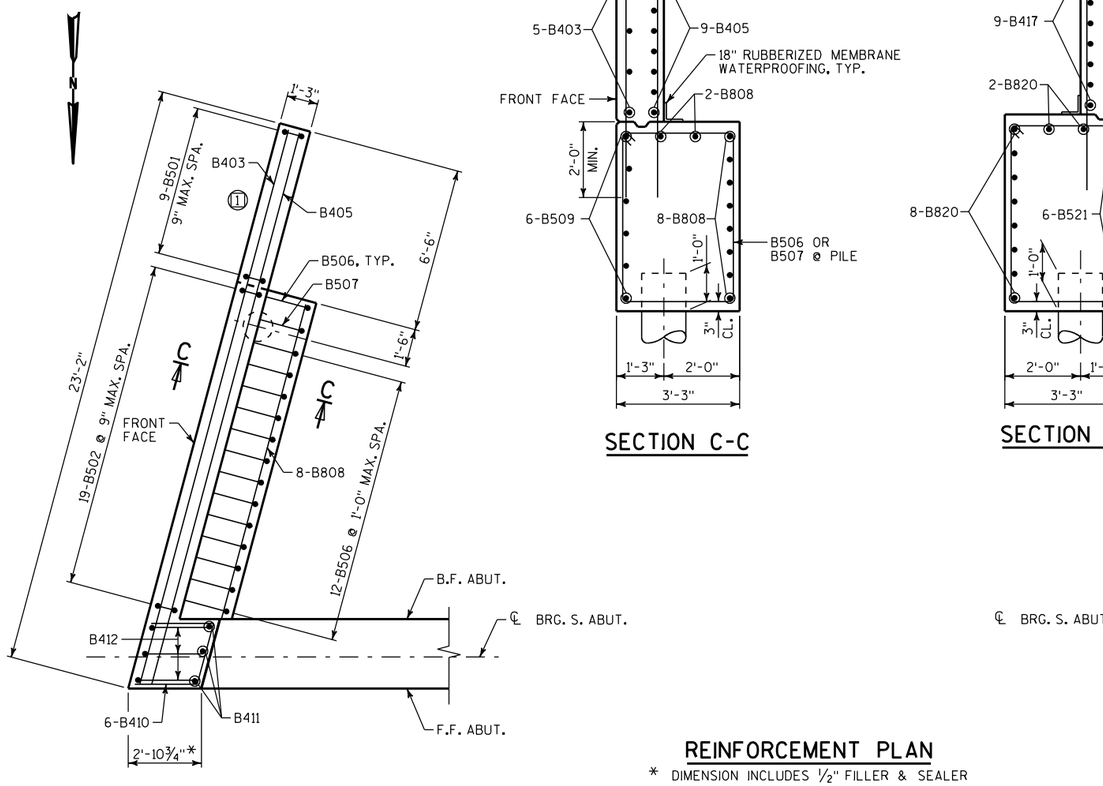
B410, B422



B820, B521

BAR MARK	DIM "A"	DIM "B"
B412	2'-6"	9'-5"
B424	2'-6"	9'-9"

BENDING DIAGRAMS



REINFORCEMENT PLAN

* DIMENSION INCLUDES 1/2" FILLER & SEALER

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 7 & 8.

LEGEND

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

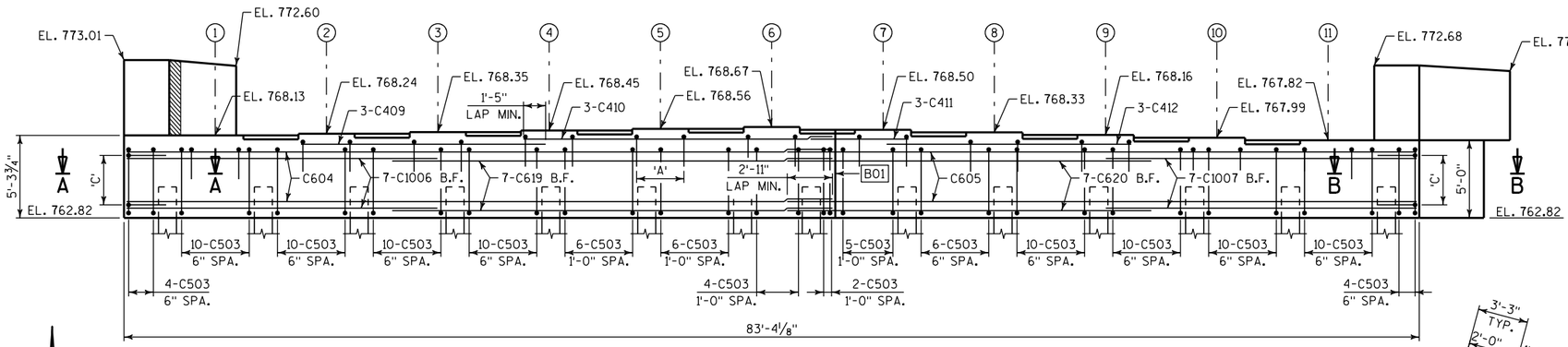
SOUTH ABUTMENT WINGWALLS

SHEET 9 OF 22

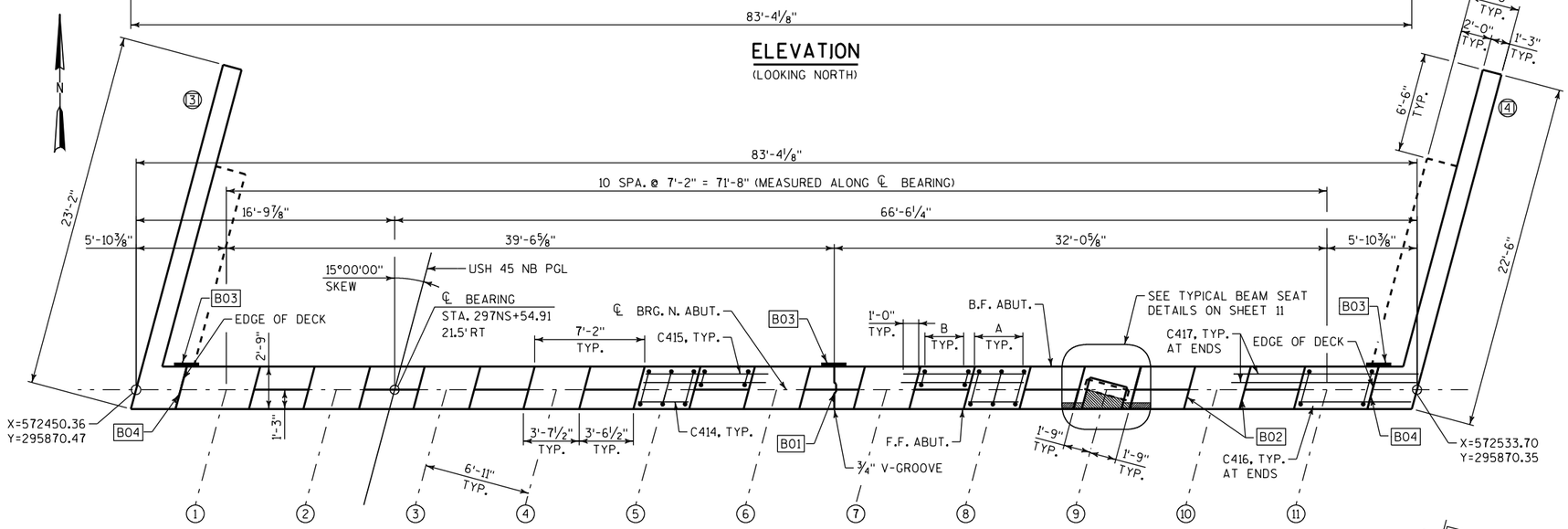
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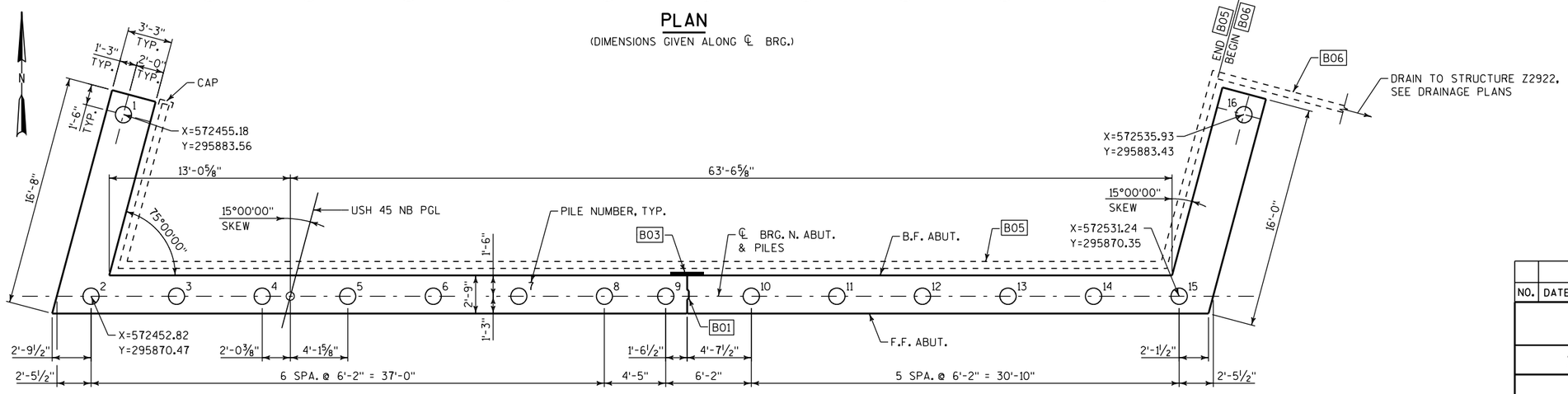
STATE PROJECT NUMBER
1060-33-80



ELEVATION
(LOOKING NORTH)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 11.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 11.
4. FOR SECTIONS A-A & B-B, SEE SHEET 11.
5. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 12.

LEGEND

- B01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".
- B02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- B03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B04 ½" FILLER & SEALER FROM GIRDER SEAT TO TOP OF WINGWALL.
- B05 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- B06 PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5% MIN.
- ◯ 14" DIAMETER, 0.5" WALL CIP PIPE CONCRETE PILING.
- (X) GIRDER NUMBER
- ⓧ WINGWALL NUMBER

A - 5 - C508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 2 THRU 10.
6 - C508 @ EQ. SPA. SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 11.

B - 4 - C418 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)

C - 5 - C513 LAPPED WITH C604 & C605.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

NORTH ABUTMENT

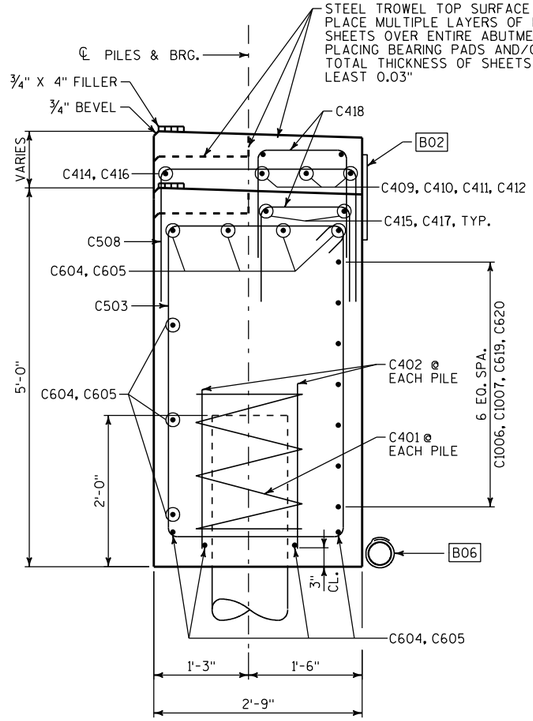
SHEET 10 OF 22

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080404_ab.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080404_ab PLOT SCALE : 9:1

STATE PROJECT NUMBER
1060-33-80



SECTION THRU ABUTMENT BODY

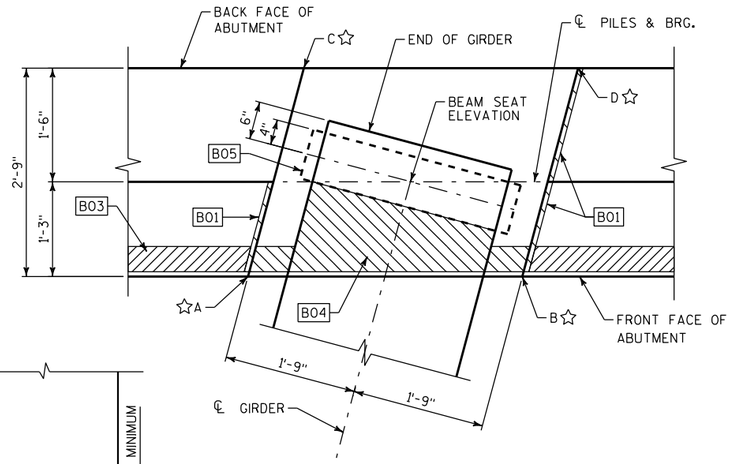
(LOOKING WEST)

LEGEND

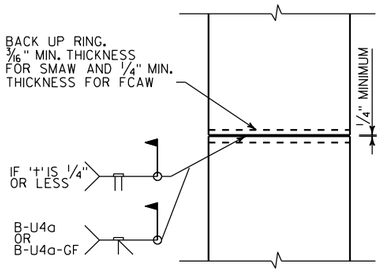
- B01 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- B02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B03 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- B04 ¾" FILLER UNDER GIRDERS, TYP.
- B05 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- B06 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

NOTES

1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 10.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 12.



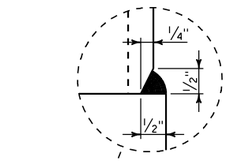
TYPICAL BEAM SEAT DETAIL

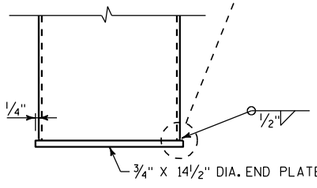


CAST-IN-PLACE 'PIPE PILE'

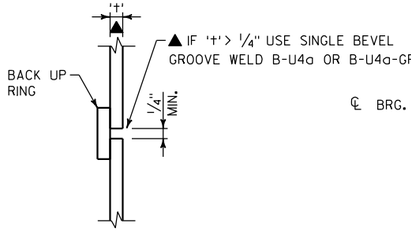
☆ BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	768.13	+0.03	+0.01	-0.02	-0.04
2	768.24	+0.03	+0.02	-0.02	-0.04
3	768.35	+0.03	+0.02	-0.02	-0.04
4	768.45	+0.03	+0.02	-0.02	-0.04
5	768.56	+0.03	+0.02	-0.02	-0.04
6	768.67	+0.03	+0.02	-0.02	-0.04
7	768.50	+0.03	+0.02	-0.02	-0.04
8	768.33	+0.03	+0.02	-0.02	-0.04
9	768.16	+0.03	+0.02	-0.02	-0.04
10	767.99	+0.03	+0.02	-0.02	-0.04
11	767.82	+0.04	+0.02	-0.01	-0.04

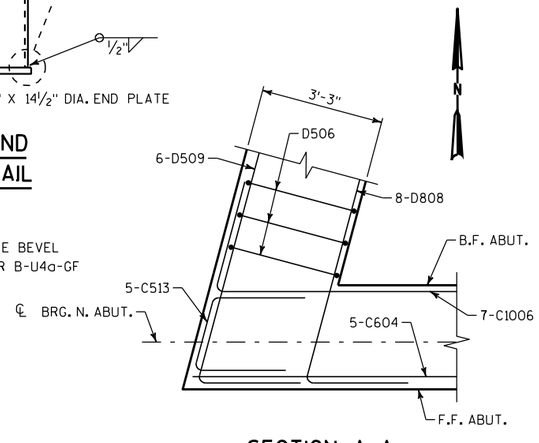




CIP PILE END PLATE DETAIL

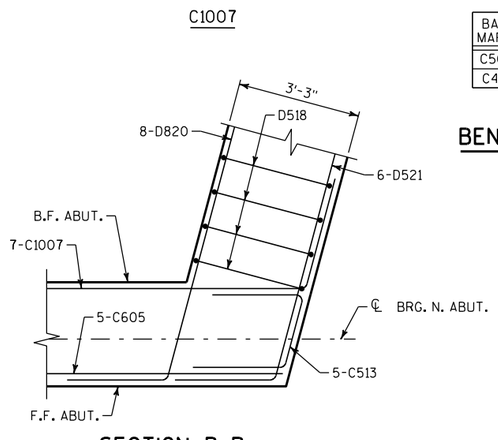


CIP PILE WELD DETAIL



SECTION A-A

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)



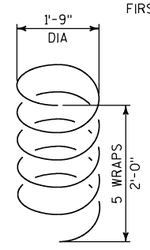
SECTION B-B

(VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY)

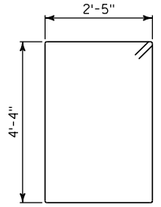
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
C401		15	28'-0"	X	ABUTMENT PILES 5 WRAP SPIRAL
C402		30	2'-3"	-	ABUTMENT PILES - VERT.
C503		117	14'-1"	X	ABUTMENT BODY - VERT.
C604		11	45'-5"	-	ABUTMENT BODY - LONG.
C605		11	40'-6"	-	ABUTMENT BODY - LONG.
C1006		7	22'-9"	X	ABUTMENT BODY - LONG.
C1007		7	23'-0"	X	ABUTMENT BODY - LONG.
C508		57	6'-1"	X	ABUTMENT BODY - VERT.
C409		3	15'-9"	-	ABUTMENT BODY - LONG.
C410		3	19'-10"	-	ABUTMENT BODY - LONG.
C411		3	7-1"	-	ABUTMENT BODY - LONG.
C412		3	15'-9"	-	ABUTMENT BODY - LONG.
C513		10	7'-1"	X	ABUTMENT BODY - HORIZ.
C414		9	3'-3"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 10)
C415		18	8'-2"	-	ABUTMENT SEAT - LONG. (GIRDERS 2 - 10)
C416		2	7'-4"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 11)
C417		4	12'-3"	-	ABUTMENT SEAT - LONG. (GIRDERS 1 & 11)
C418		40	4'-10"	X	ABUTMENT SEAT - VERT.
C619		7	27'-7"	-	ABUTMENT BODY - LONG.
C620		7	24'-2"	-	ABUTMENT BODY - LONG.

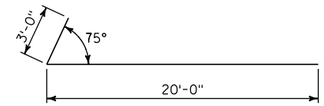
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



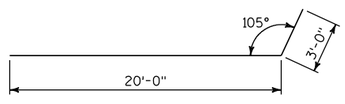
C401



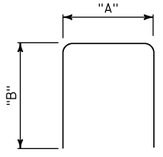
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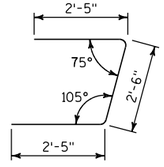
C1006



C1007



BAR MARK	DIM "A"	DIM "B"
C508	2'-6"	1'-11"
C418	1'-4"	1'-10"



C513

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

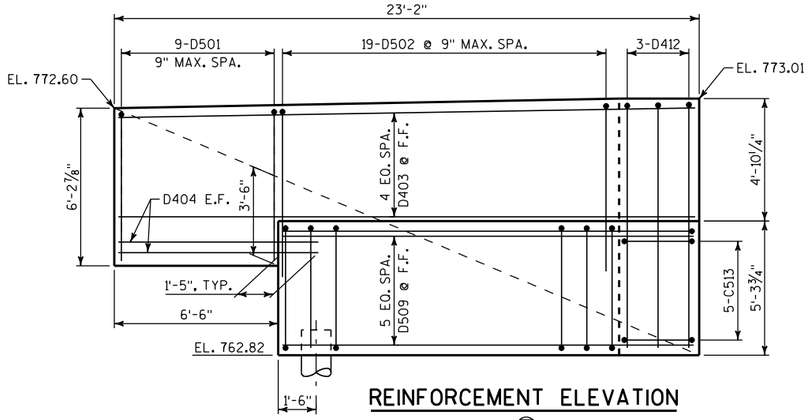
NORTH ABUTMENT DETAILS

SHEET 11 OF 22

8

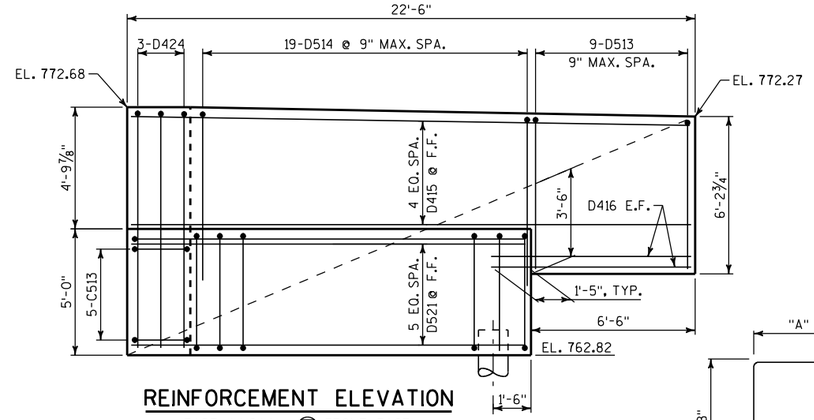
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STATE PROJECT NUMBER
1060-33-80



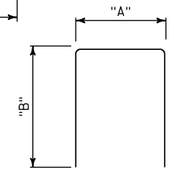
REINFORCEMENT ELEVATION

(WEST WINGWALL ③ FRONT FACE)
(LOOKING EAST)



REINFORCEMENT ELEVATION

(EAST WINGWALL ④ FRONT FACE)
(LOOKING WEST)

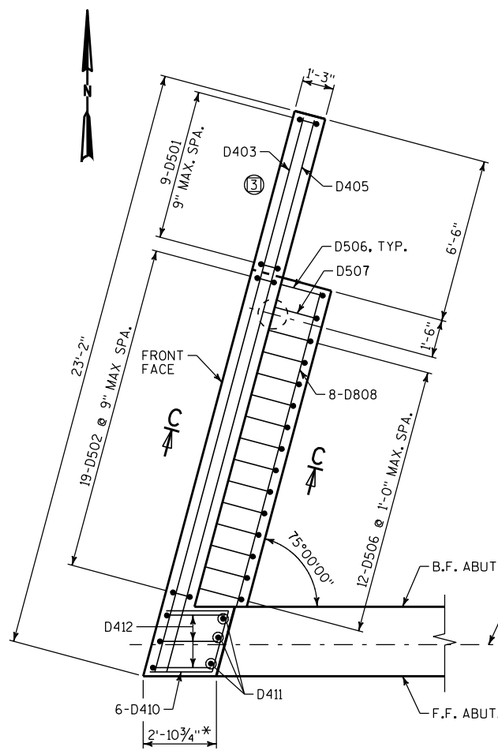


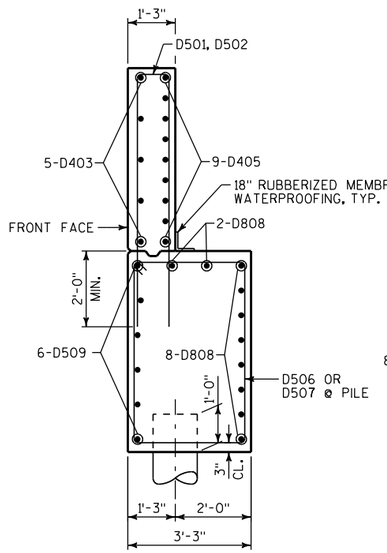
BAR MARK	DIM "A"	DIM "B"
D501	1'-0"	5'-10"
D502	1'-0"	6'-11"
D507	2'-11"	4'-10"
D513	1'-0"	5'-10"
D514	1'-0"	6'-10"
D519	2'-11"	4'-7"

BILL OF BARS

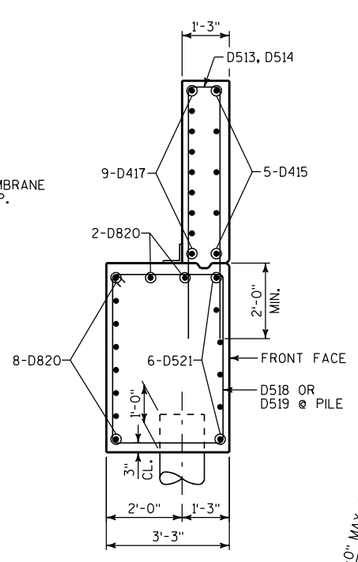
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D501		9	12'-5"	X	-	NW WINGWALL 3 - VERT.
D502		19	14'-7"	X	-	NW WINGWALL 3 - VERT.
D403		5	22'-8"	-	-	NW WINGWALL 3 - LONG.
D404		4	7'-11"	-	-	NW WINGWALL 3 - LONG.
D405		9	22'-4"	-	-	NW WINGWALL 3 - LONG.
D506		13	16'-1"	X	-	NW WINGWALL 3 - VERT.
D507		1	12'-4"	X	-	NW WINGWALL 3 - VERT.
D808		10	17'-10"	X	-	NW WINGWALL 3 - LONG.
D509		6	18'-8"	X	-	NW WINGWALL 3 - LONG.
D410		6	7'-4"	X	-	NW WINGWALL 3 - HORIZ.
D411		3	6'-0"	-	-	NW WINGWALL 3 - VERT.
D412		3	12'-2"	X	-	NW WINGWALL 3 - VERT.
D513		9	12'-5"	X	-	NE WINGWALL 4 - VERT.
D514		19	14'-5"	X	-	NE WINGWALL 4 - VERT.
D415		5	22'-0"	-	-	NE WINGWALL 4 - LONG.
D416		4	7'-11"	-	-	NE WINGWALL 4 - LONG.
D417		9	22'-4"	-	-	NE WINGWALL 4 - LONG.
D518		13	15'-7"	X	-	NE WINGWALL 4 - VERT.
D519		1	11'-10"	X	-	NE WINGWALL 4 - VERT.
D820		10	19'-0"	X	-	NE WINGWALL 4 - LONG.
D521		6	18'-2"	X	-	NE WINGWALL 4 - LONG.
D422		6	7'-4"	X	-	NE WINGWALL 4 - HORIZ.
D423		3	6'-0"	-	-	NE WINGWALL 4 - VERT.
D424		3	11'-10"	X	-	NE WINGWALL 4 - VERT.

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

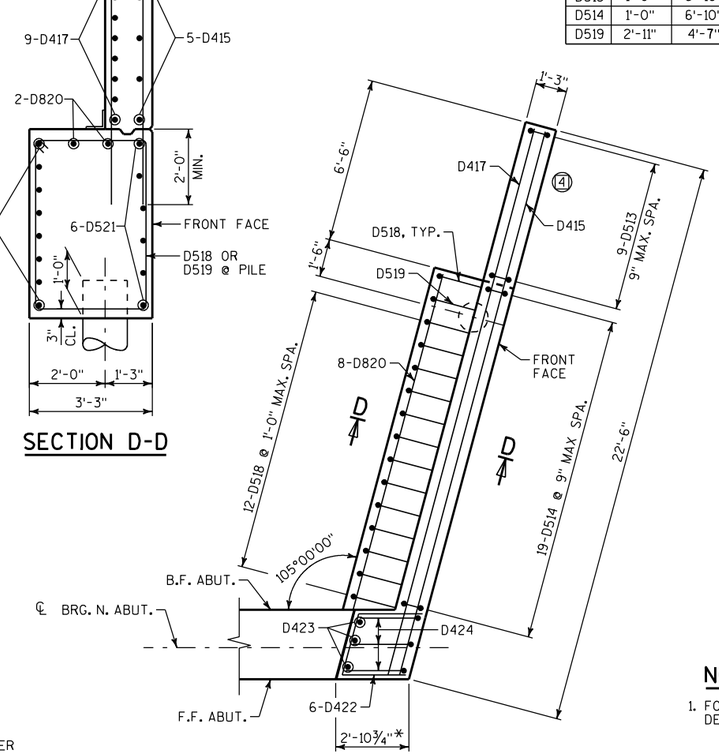




SECTION C-C

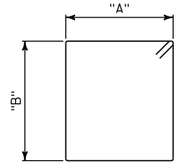


SECTION D-D



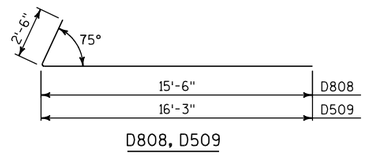
REINFORCEMENT PLAN

* DIMENSION INCLUDES ½" FILLER & SEALER

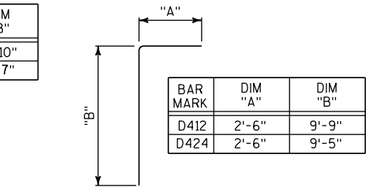


BAR MARK	DIM "A"	DIM "B"
D506	2'-11"	4'-10"
D518	2'-11"	4'-7"

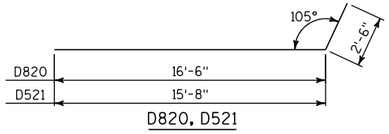
D410, D422



D808, D509



BAR MARK	DIM "A"	DIM "B"
D412	2'-6"	9'-9"
D424	2'-6"	9'-5"



D820, D521

BENDING DIAGRAMS

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 10 & 11.

LEGEND

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

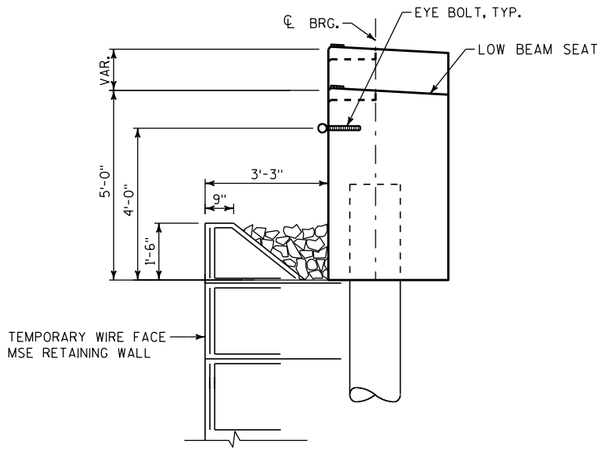
NORTH ABUTMENT WINGWALLS

SHEET 12 OF 22

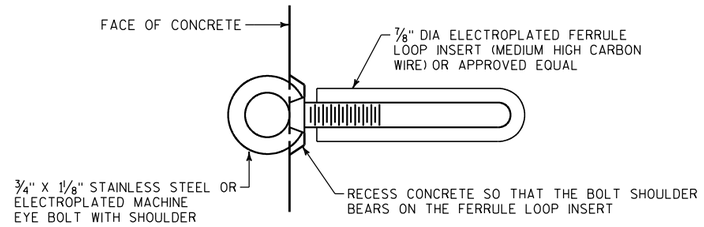
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STATE PROJECT NUMBER
1060-33-80

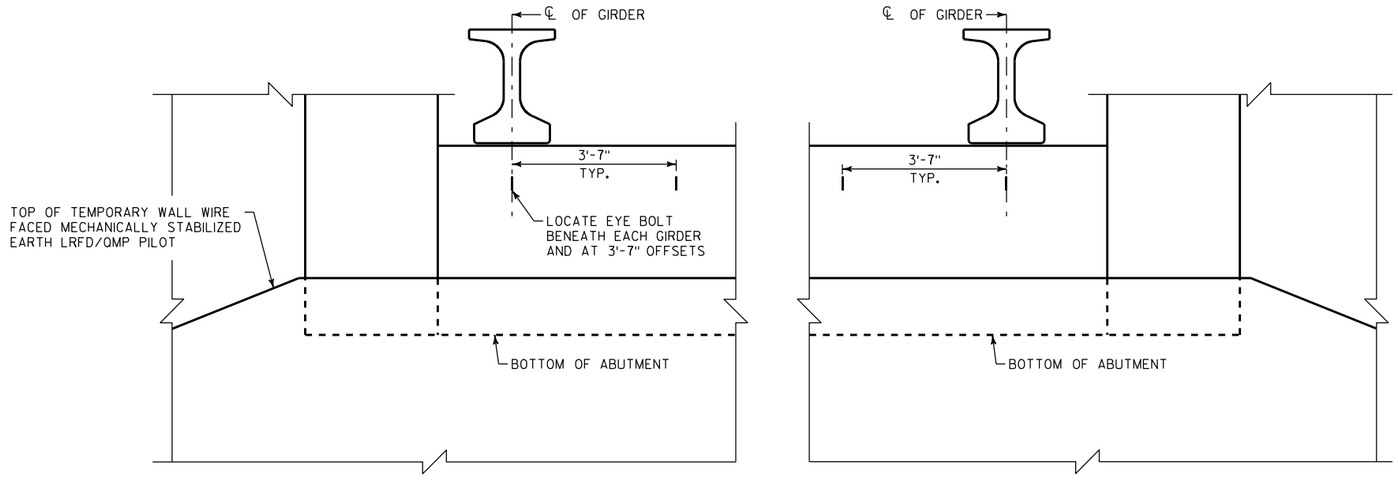


CROSS SECTION THRU ABUTMENT AT MSE WALL



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.



FALL PROTECTION ELEVATION

(LOOKING AT FRONT FACE OF ABUTMENT)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

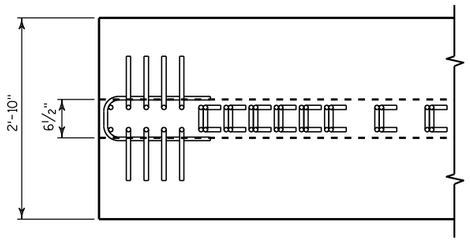
DRAWN BY AJA | PLANS CK'D. MHZ

ABUTMENT DETAILS

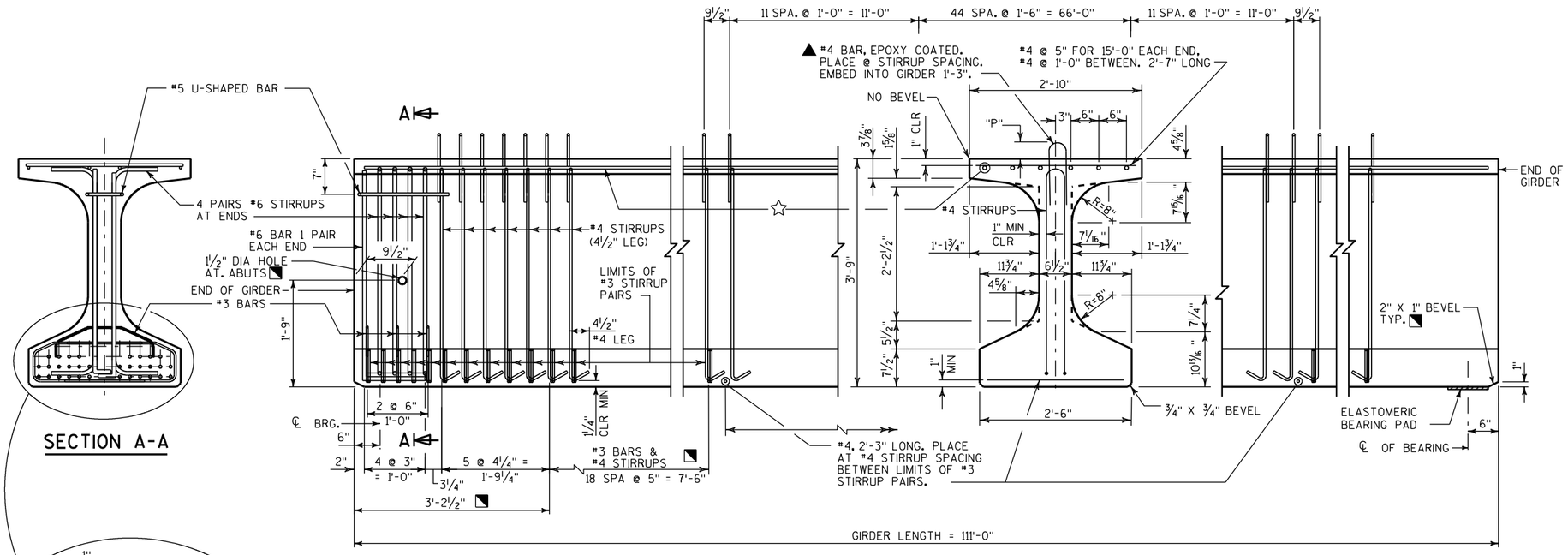
SHEET 13 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080407_ab.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080407_ab PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



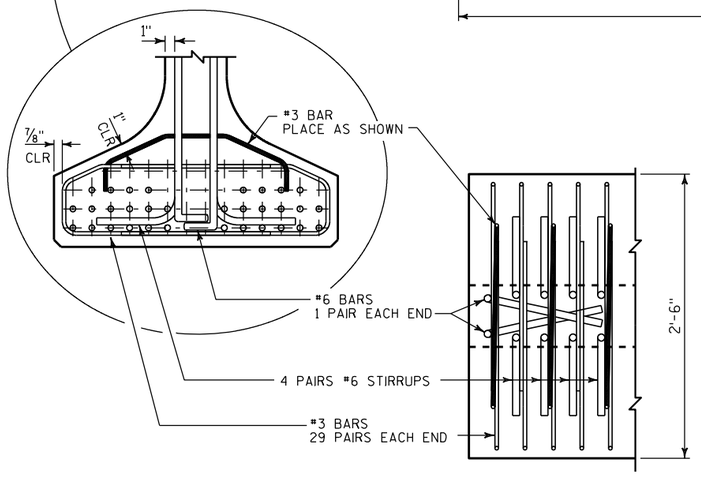
TOP FLANGE



SECTION A-A

SIDE VIEW & TYPICAL SECTION IN SPAN

- ◥ DETAIL TYPICAL AT EACH END
- ☆ 6 #4 BARS, FULL LENGTH, LAP = 1'-8"
- ▲ FIELD BEND PRESTRESSED GIRDER TIE REINFORCEMENT IN CONFLICT WITH DECK SLAB TOP REINFORCEMENT AS NEEDED



BOTTOM FLANGE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

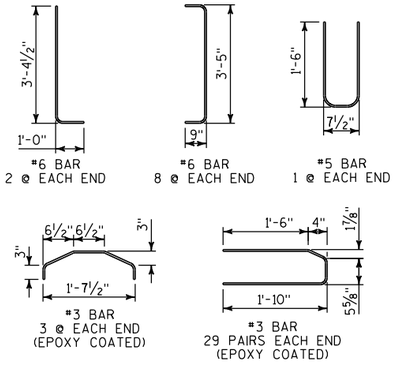
PRESTRESSING STRANDS SHALL BE 0.6"Φ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINUOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE SHEET 17.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.



8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

45W" PRESTRESSED GIRDER

SHEET 14 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080501_gr.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080501_gr PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

GIRDER DATA

SPAN	GIRDER NUMBERS	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) *** 1/10	2/10	3/10	4/10	5/10	CONC. STRGTH. f'c (p.s.i.)	f'ci (P.S.I.)	"P" ▲ 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" ▲ END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	NO. OF DEBONDED STRANDS
1	GIRDERS 1 & 11	111'-0"	3/4	1 1/2	2	2 3/8	2 1/2	8000	6800	8.5	7.0	8.5	0.6	40	40	14	17	5	0
1	GIRDERS 2 - 10	111'-0"	3/4	1 1/2	2 1/8	2 3/8	2 1/2	8000	6800	8.5	7.0	8.5	0.6	40	40	14	17	5	0

*** SEE DEAD LOAD DEFLECTION DIAGRAM

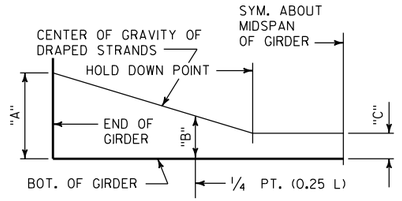
▲ FIELD BEND TIE REINFORCEMENT IN CONFLICT WITH DECK SLAB TOP REINFORCEMENT MAT AS NEEDED

SPAN	GIRDER NUMBERS	PRESTRESS CAMBER (A*) (IN.)	DEAD LOAD DEFLECTION (B) (IN.)	RESIDUAL CAMBER (C) (IN.)
1	GIRDERS 1 & 11	4 3/4	2 1/2	2 1/4
1	GIRDERS 2 - 10	4 3/4	2 1/2	2 1/4

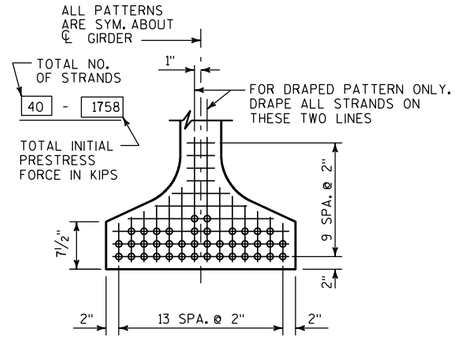
* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

THESE VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

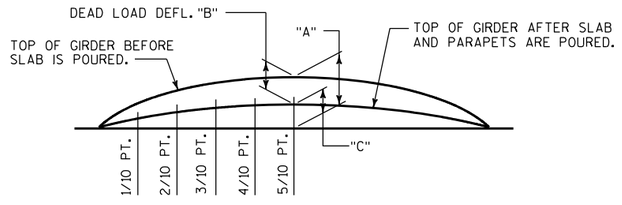


DRAPED STRAND PROFILE

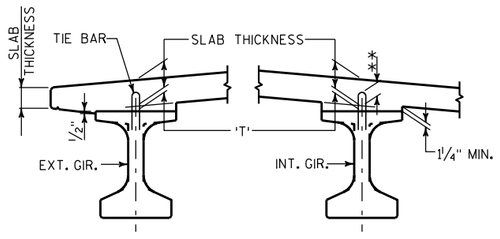


STRAND PATTERN

0.6" DIA. STRANDS



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3 1/2" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

45W" PRESTRESSED GIRDER DETAILS

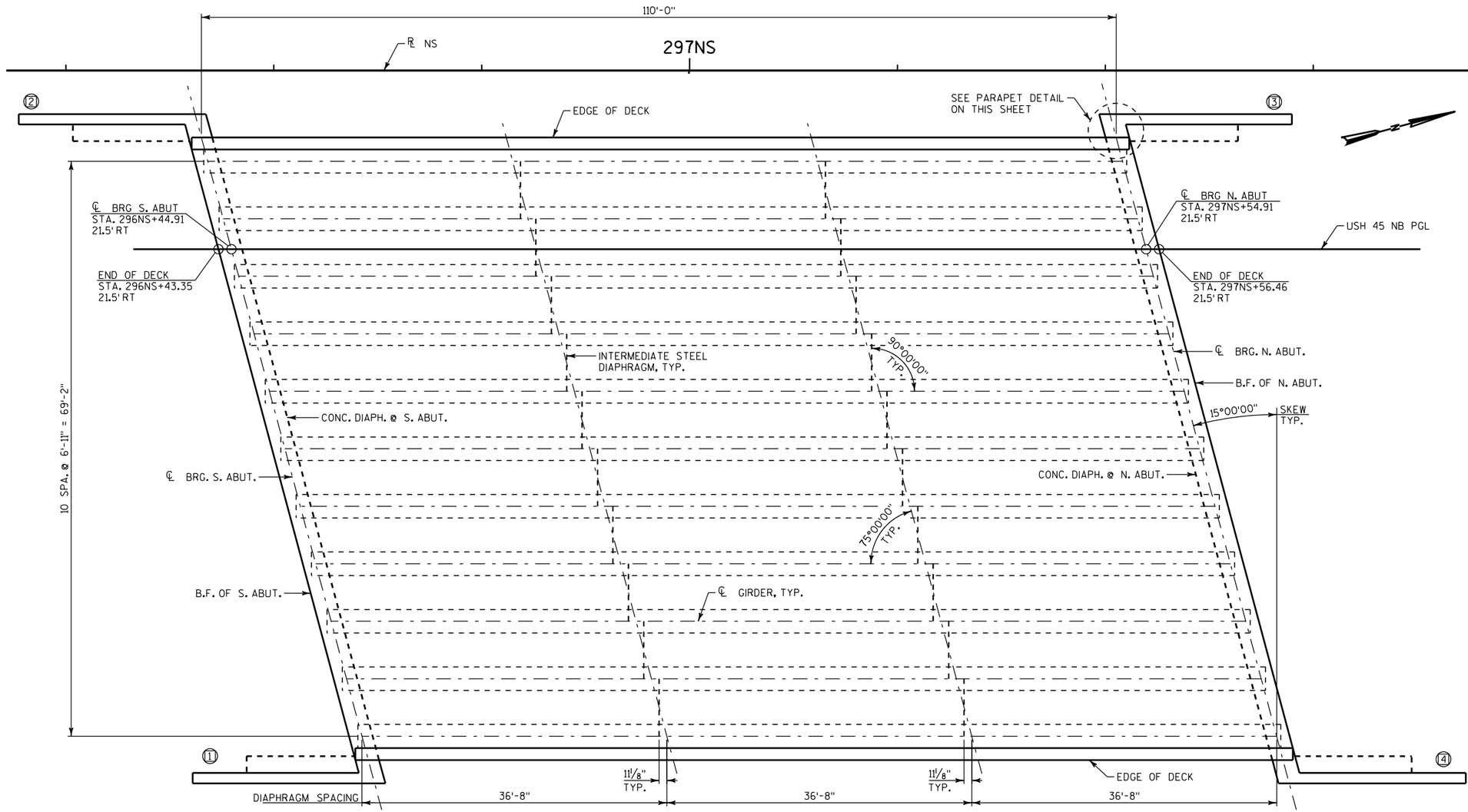
SHEET 15 OF 22

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080502_gr.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080502_gr PLOT SCALE : 2:1

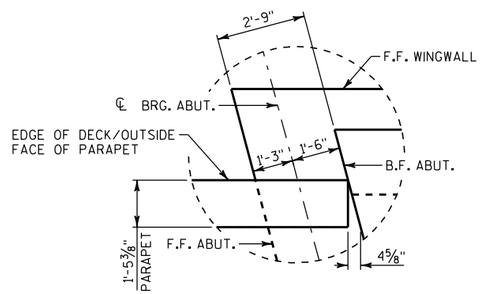
STATE PROJECT NUMBER
1060-33-80



TOP OF DECK ELEVATIONS

LOCATION	S. ABUT. BRG.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	N. ABUT. BRG.
W. EDGE OF DECK	775.09	774.87	774.64	774.42	774.21	773.99	773.79	773.59	773.39	773.20	773.01
FLOW LINE W. PARAPET	775.08	774.86	774.63	774.41	774.20	773.99	773.78	773.58	773.38	773.19	773.00
℄ GIRDER 1	775.10	774.88	774.66	774.44	774.22	774.01	773.80	773.60	773.40	773.21	773.02
℄ GIRDER 2	775.20	774.98	774.76	774.54	774.32	774.11	773.91	773.71	773.51	773.32	773.13
PGL	775.26	775.03	774.81	774.59	774.38	774.17	773.96	773.76	773.57	773.37	773.19
℄ GIRDER 3	775.31	775.08	774.86	774.64	774.42	774.22	774.01	773.81	773.61	773.42	773.24
℄ GIRDER 4	775.41	775.18	774.96	774.74	774.53	774.32	774.11	773.92	773.72	773.53	773.35
℄ GIRDER 5	775.51	775.28	775.06	774.84	774.63	774.42	774.22	774.02	773.83	773.64	773.45
℄ GIRDER 6/CROWN	775.61	775.38	775.16	774.94	774.73	774.53	774.32	774.13	773.93	773.74	773.56
℄ GIRDER 7	775.43	775.21	774.99	774.77	774.56	774.35	774.15	773.95	773.76	773.57	773.39
℄ GIRDER 8	775.25	775.03	774.81	774.60	774.39	774.18	773.98	773.78	773.59	773.41	773.22
℄ GIRDER 9	775.08	774.86	774.64	774.42	774.21	774.01	773.81	773.61	773.42	773.24	773.05
℄ GIRDER 10	774.90	774.68	774.46	774.25	774.04	773.84	773.64	773.44	773.25	773.07	772.89
℄ GIRDER 11	774.73	774.50	774.29	774.07	773.87	773.66	773.46	773.27	773.08	772.90	772.72
FLOW LINE E. PARAPET	774.69	774.47	774.25	774.04	773.83	773.63	773.43	773.24	773.05	772.86	772.68
E. EDGE OF DECK	774.68	774.46	774.24	774.03	773.82	773.62	773.42	773.23	773.04	772.86	772.68

FRAMING PLAN



PARAPET DETAIL

(TYPICAL @ ALL END OF PARAPET LOCATIONS)

LEGEND

Ⓧ WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

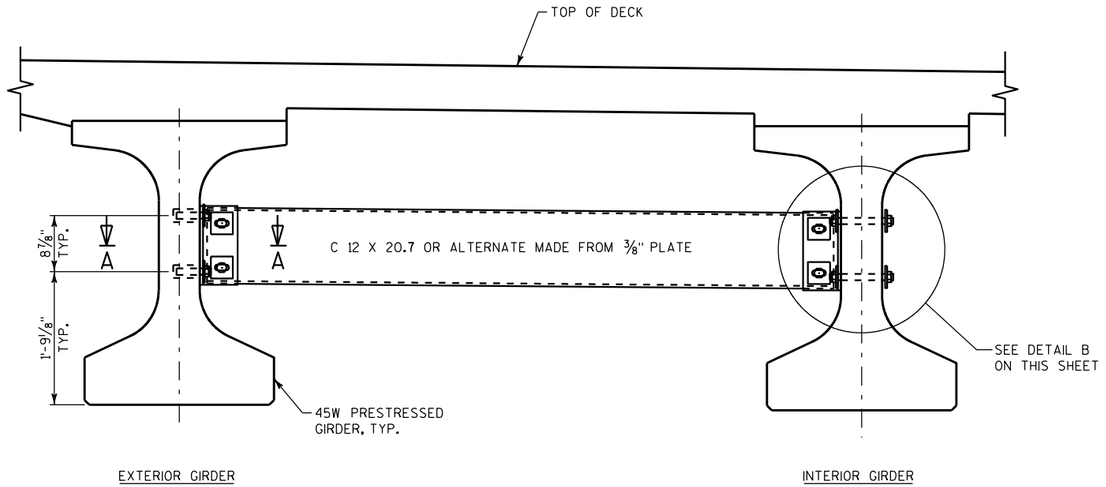
DRAWN BY AJA | PLANS CK'D. MHZ

SUPERSTRUCTURE FRAMING PLAN

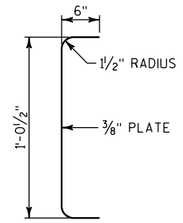
SHEET 16 OF 22

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080502_ss.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080502_ss PLOT SCALE : 14:1

STATE PROJECT NUMBER
1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

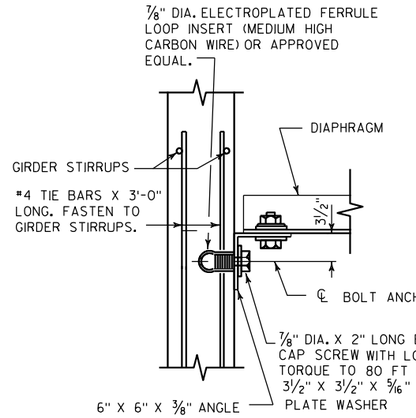
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-538", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

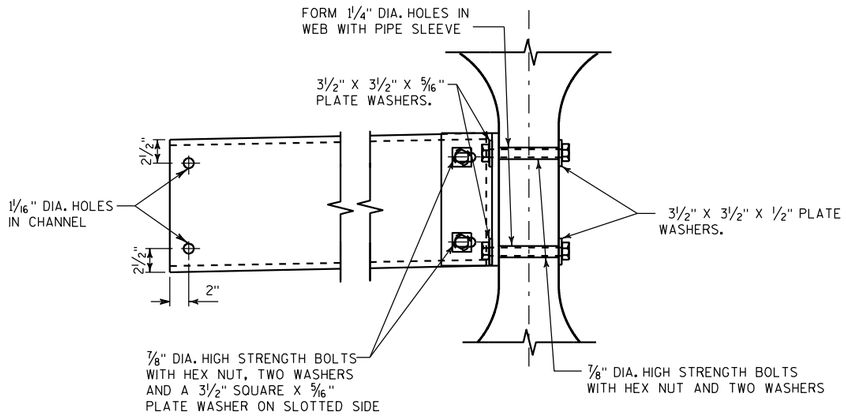
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

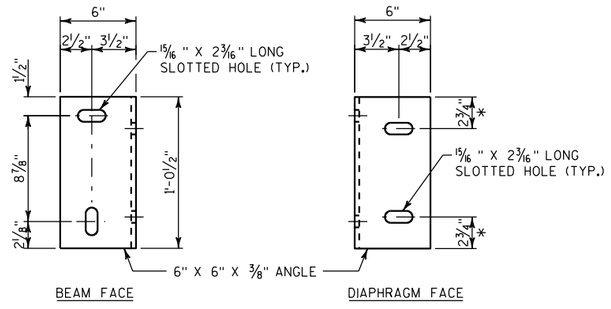


SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B



DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

STEEL DIAPHRAGM

SHEET 17 OF 22

8

8

STATE PROJECT NUMBER

1060-33-80

297NS

℄ NS

STATION INCREASE

168 SPA. @ 8" = 112'-0"

S508 - PARAPET CONNECTOR (EAST & WEST EDGE)

SINGLE SLOPE PARAPET 42SS MODIFIED, SEE SHEETS 19 & 20 FOR REINFORCEMENT DETAILS

S508 @ 8" TYP.

INSIDE FACE OF PARAPET

END OF DECK
STA. 297NS+56.46
21.5' RT

END OF DECK
STA. 296NS+43.35
21.5' RT

USH 45 NB PGL

S503, ALTERNATE (TOP)
S505, ALTERNATE (BOT.)

S504, ALTERNATE (TOP)
S506, ALTERNATE (BOT.)

S401, ALTERNATE (TOP & BOT.)

1'-5" MIN. LAP TYP.

S402, ALTERNATE (TOP & BOT.)

S402, ALTERNATE (TOP & BOT.)

S401 (TOP & BOT.)

S401, ALTERNATE (TOP & BOT.)

CROWN LINE

1'-9" MIN. LAP TYP.

15°00'00" SKEW (TYP.)

74-10¾" OUT TO OUT

111 SPA. @ 8" = S401 & S402 (TOP)
110 SPA. @ 8" = S401 & S402 (BOT.)

21'-6"

24'-0"

82'-11⅞"

37'-5⅜"

SEE OVERHANG REINFORCEMENT DETAIL

INSIDE FACE OF PARAPET

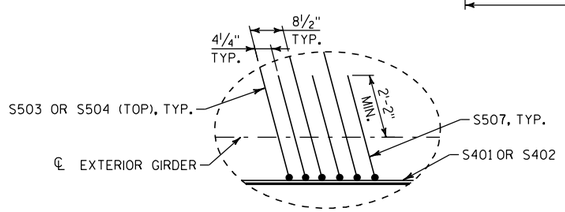
EDGE OF DECK, TYP.

159 SPA. @ 8½" = 112'-7½" S503, S504 (TOP) & S505, S506 (BOT.)

158 SPA. @ 8½" = 111'-11" S507 (OVERHANG)

113'-1¼" END OF DECK TO END OF DECK

DECK REINFORCEMENT PLAN



OVERHANG REINFORCEMENT DETAIL

NOTES

1. FOR CROSS SECTION THRU DECK, SEE SHEET 19.
2. FOR ABUTMENT DIAPHRAGM REINFORCEMENT, SEE SHEET 19.
3. FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 19.
4. FOR PARAPET REINFORCEMENT, SEE SHEETS 20 & 21.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

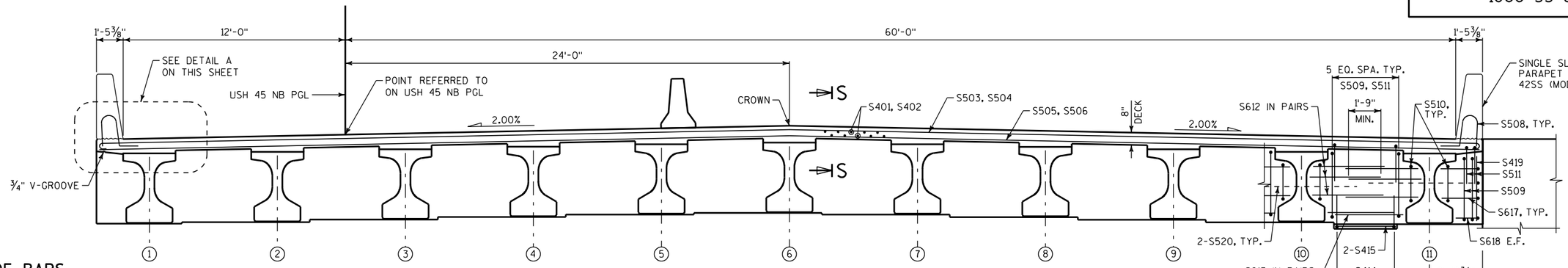
SUPERSTRUCTURE REINFORCEMENT

SHEET 18 OF 22

8

8

STATE PROJECT NUMBER
1060-33-80



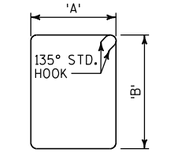
CROSS SECTION THRU DECK

(LOOKING NORTH)

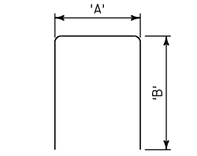
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401		446	45'-0"	-	DECK LONG. - TOP & BOT.
S402		223	25'-7"	-	DECK LONG. - TOP & BOT.
S503		160	39'-2"	X	DECK TRANS. - TOP
S504		160	40'-10"	X	DECK TRANS. - TOP
S505		160	38'-7"	-	DECK TRANS. - BOT.
S506		160	40'-3"	-	DECK TRANS. - BOT.
S507		318	5'-11"	X	DECK OVERHANG TRANS. - TOP
S508		338	4'-5"	X	DECK PARAPET - VERT.
S509		128	12'-7"	X	ABUTMENT DIAPHRAGM VERT.
S510		44	9'-5"	X	ABUTMENT DIAPHRAGM VERT.
S511		128	6'-2"	X	ABUTMENT DIAPHRAGM VERT.
S612		120	4'-1"	-	ABUTMENT DIAPHRAGM LONG. (F.F.)
S613		40	3'-1"	-	ABUTMENT DIAPHRAGM LONG. (F.F.)
S414		80	3'-9"	X	ABUTMENT DIAPHRAGM VERT.
S415		40	3'-2"	-	ABUTMENT DIAPHRAGM LONG.
S616		24	43'-0"	-	ABUTMENT DIAPHRAGM LONG. (B.F.)
S617		12	6'-4"	X	ABUTMENT DIAPHRAGM ENDS HORIZ. U BAR
S618		4	5'-4"	X	ABUTMENT DIAPHRAGM ENDS HORIZ. U BAR
S419		8	3'-9"	-	ABUTMENT DIAPHRAGM ENDS VERT.
S520		44	6'-0"	-	ABUTMENT DIAPHRAGM THROUGH GIRDERS

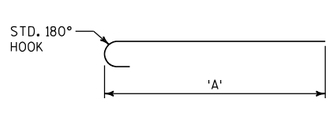
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



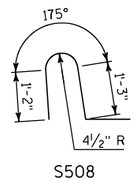
BAR MARK	DIM. 'A'	DIM. 'B'
S509	2'-5"	3'-7"
S510	2'-5"	2'-0"



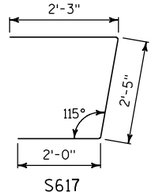
BAR MARK	DIM. 'A'	DIM. 'B'
S511	2'-5"	2'-0"
S414	11"	1'-6"



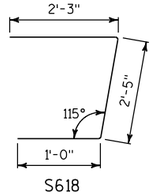
BAR MARK	DIM. 'A'
S503	38'-7"
S504	40'-3"
S507	5'-4"



S508

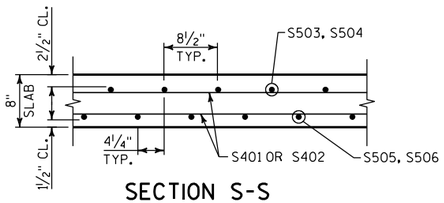


S617

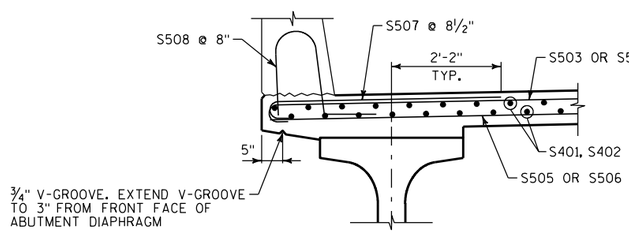


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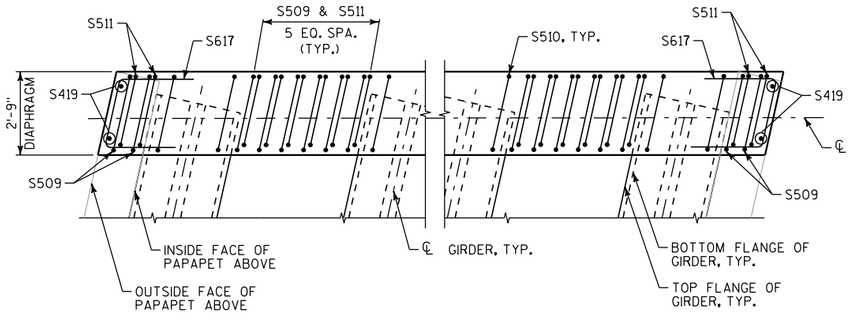
BENDING DIAGRAMS



SECTION S-S



DETAIL A

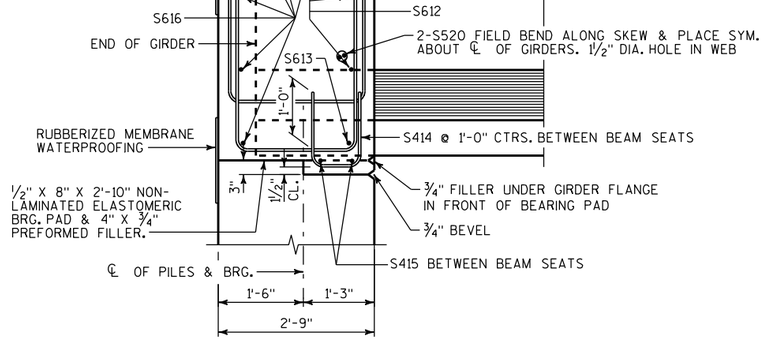


ABUTMENT CONCRETE DIAPHRAGM PART PLAN

(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)

CROSS SECTION THRU DECK

(TYPICAL)
(BACK FACE LONGITUDINAL BARS S616 NOT SHOWN FOR CLARITY)



PART LONGITUDINAL SECTION AT ABUTMENT

NOTES

1. FOR SUPERSTRUCTURE REINFORCEMENT PLAN, SEE SHEET 18.
2. FOR PARAPET REINFORCEMENT, SEE SHEETS 20 & 21.
3. FOR ABUTMENT DETAILS, SEE SHEETS 7, 8, 10 & 11.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

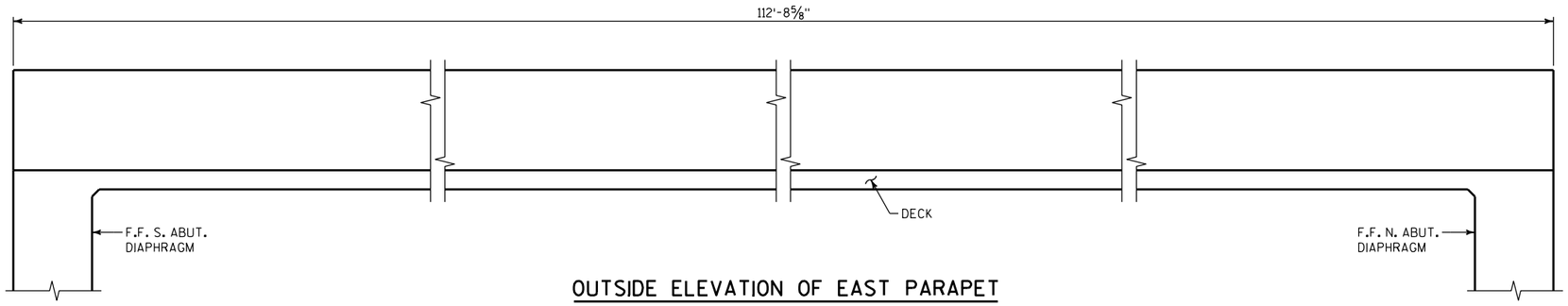
STRUCTURE B-40-538

DRAWN BY MM | PLANS CK'D. MHZ

SUPERSTRUCTURE DETAILS

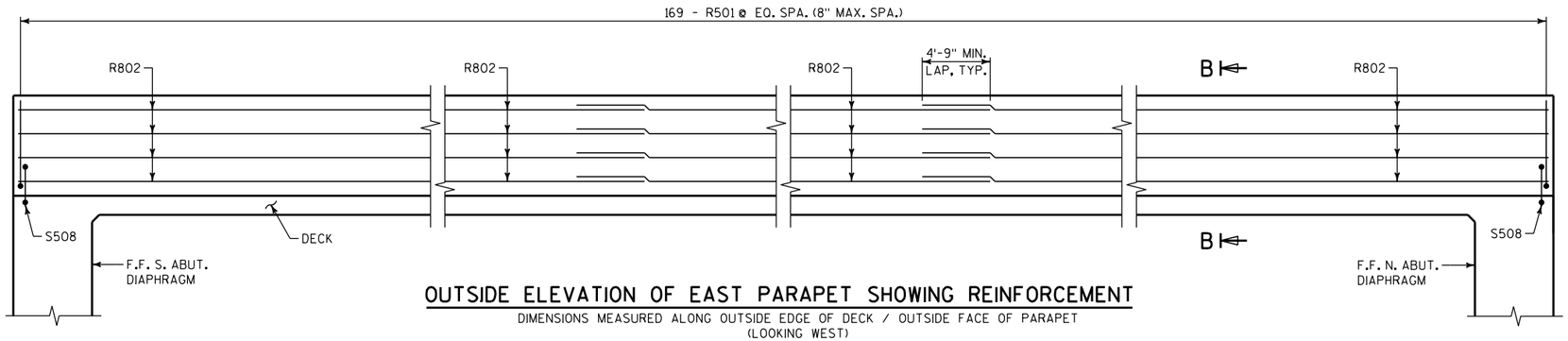
SHEET 19 OF 22

STATE PROJECT NUMBER
1060-33-80



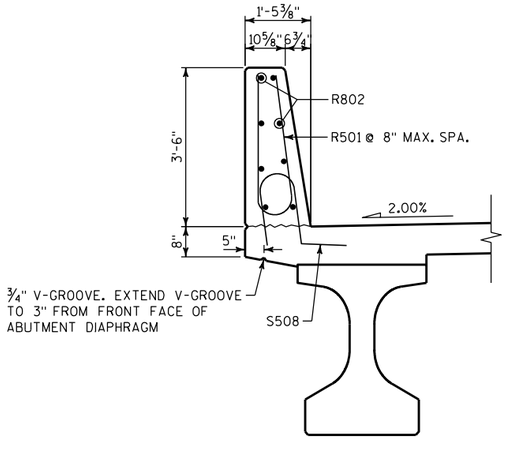
OUTSIDE ELEVATION OF EAST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)

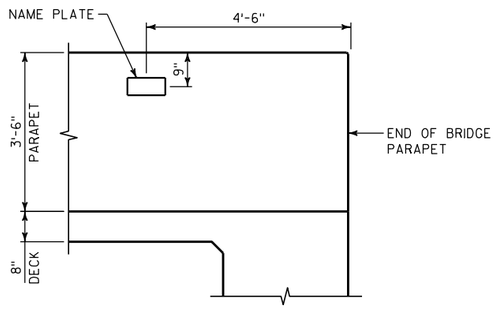


OUTSIDE ELEVATION OF EAST PARAPET SHOWING REINFORCEMENT

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)



SECTION B-B



INSIDE FACE OF EAST PARAPET

(SOUTH END, LOOKING EAST)
(DIMENSIONS GIVEN AT INSIDE FACE OF PARAPET)

NOTES

1. FOR PARAPET BILL OF BARS, SEE SHEET 21.
2. FOR SUPERSTRUCTURE REINFORCEMENT, SEE SHEETS 18 & 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 2)

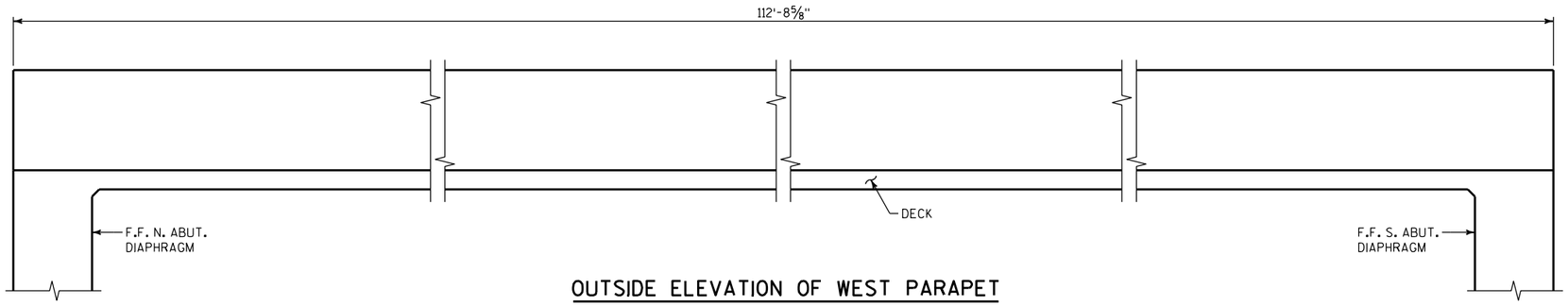
SHEET 20 OF 22

8

8

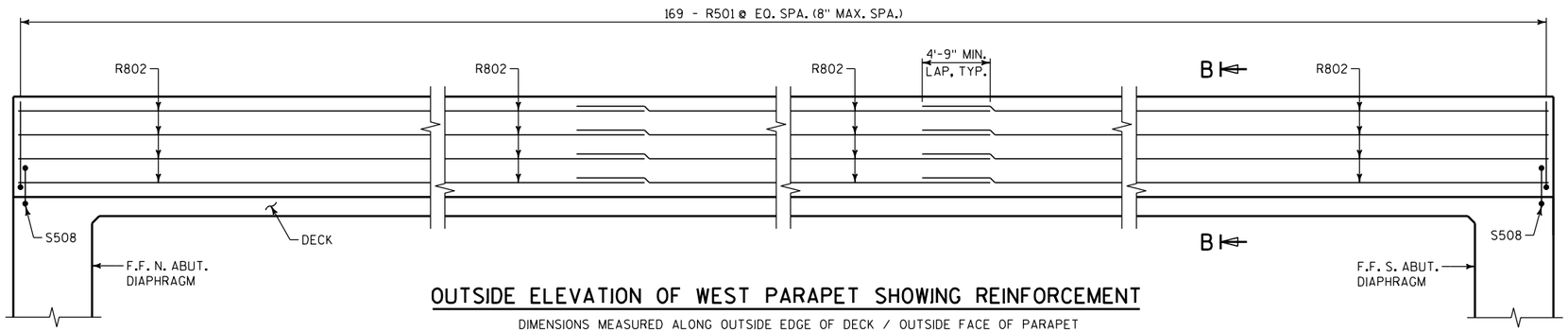
FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080601_rp.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080601_rp PLOT SCALE : 5:1

STATE PROJECT NUMBER
1060-33-80



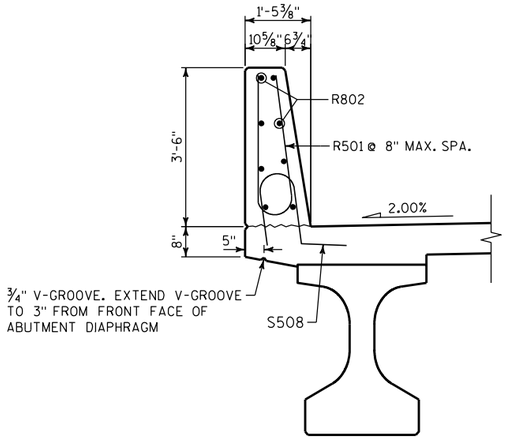
OUTSIDE ELEVATION OF WEST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



OUTSIDE ELEVATION OF WEST PARAPET SHOWING REINFORCEMENT

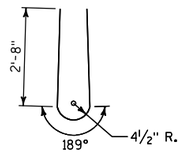
DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501		338	6'-8"	X	-	PARAPET - VERTICAL
R802		48	40'-8"	-	-	PARAPET - LONG.



R501

BENDING DIAGRAM

NOTE

1. FOR SUPERSTRUCTURE REINFORCEMENT, SEE SHEETS 18 & 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

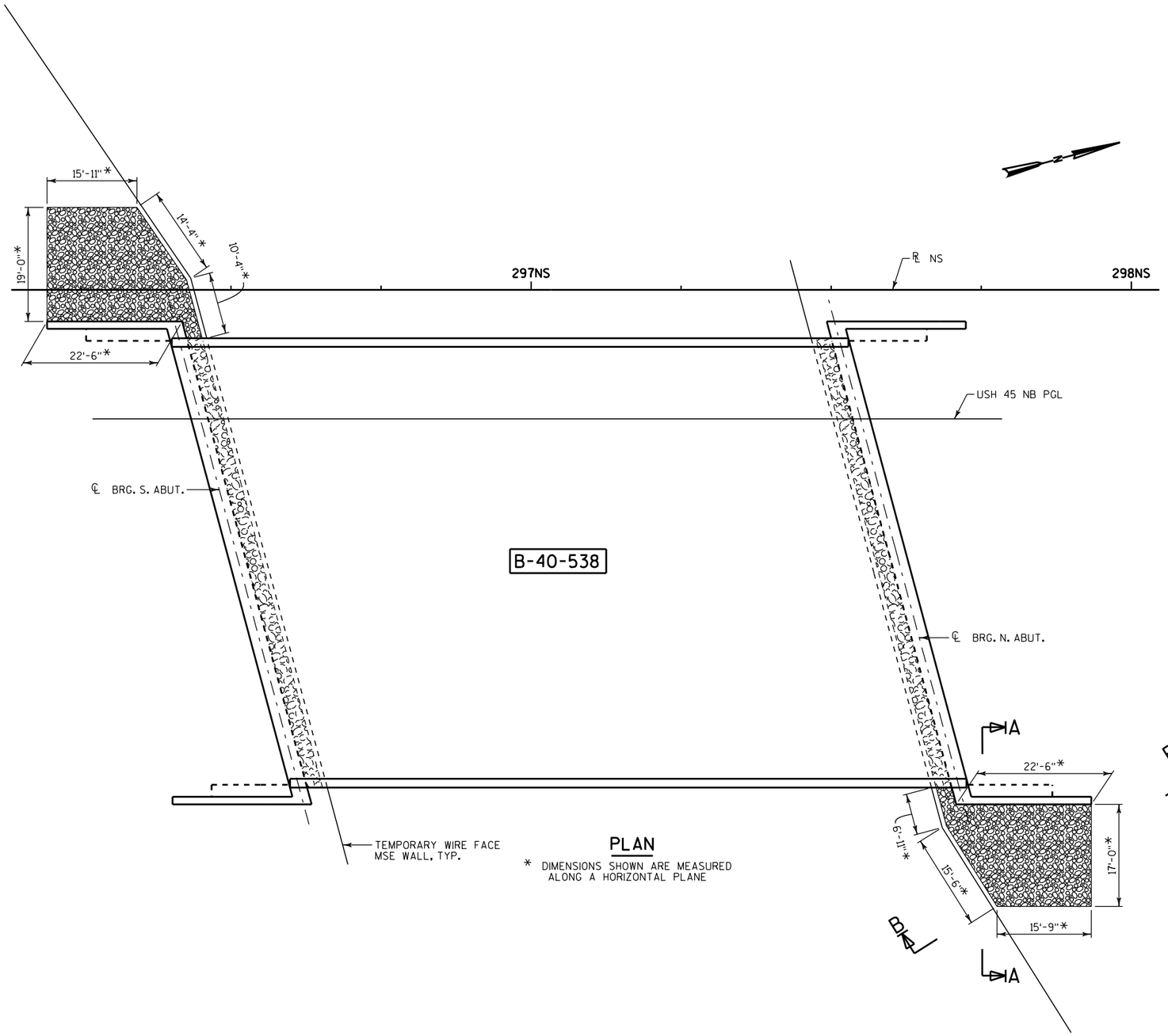
SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 2)

SHEET 21 OF 22

8

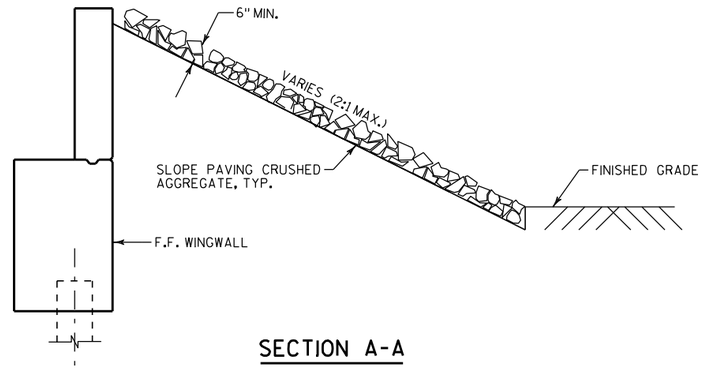
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STATE PROJECT NUMBER
1060-33-80

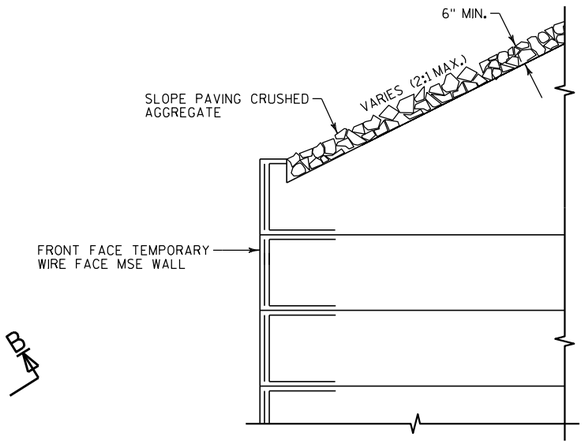


PLAN

* DIMENSIONS SHOWN ARE MEASURED ALONG A HORIZONTAL PLANE



SECTION A-A



SECTION B-B

NOTES

1. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
2. WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-538

DRAWN BY AJA | PLANS CK'D. MHZ

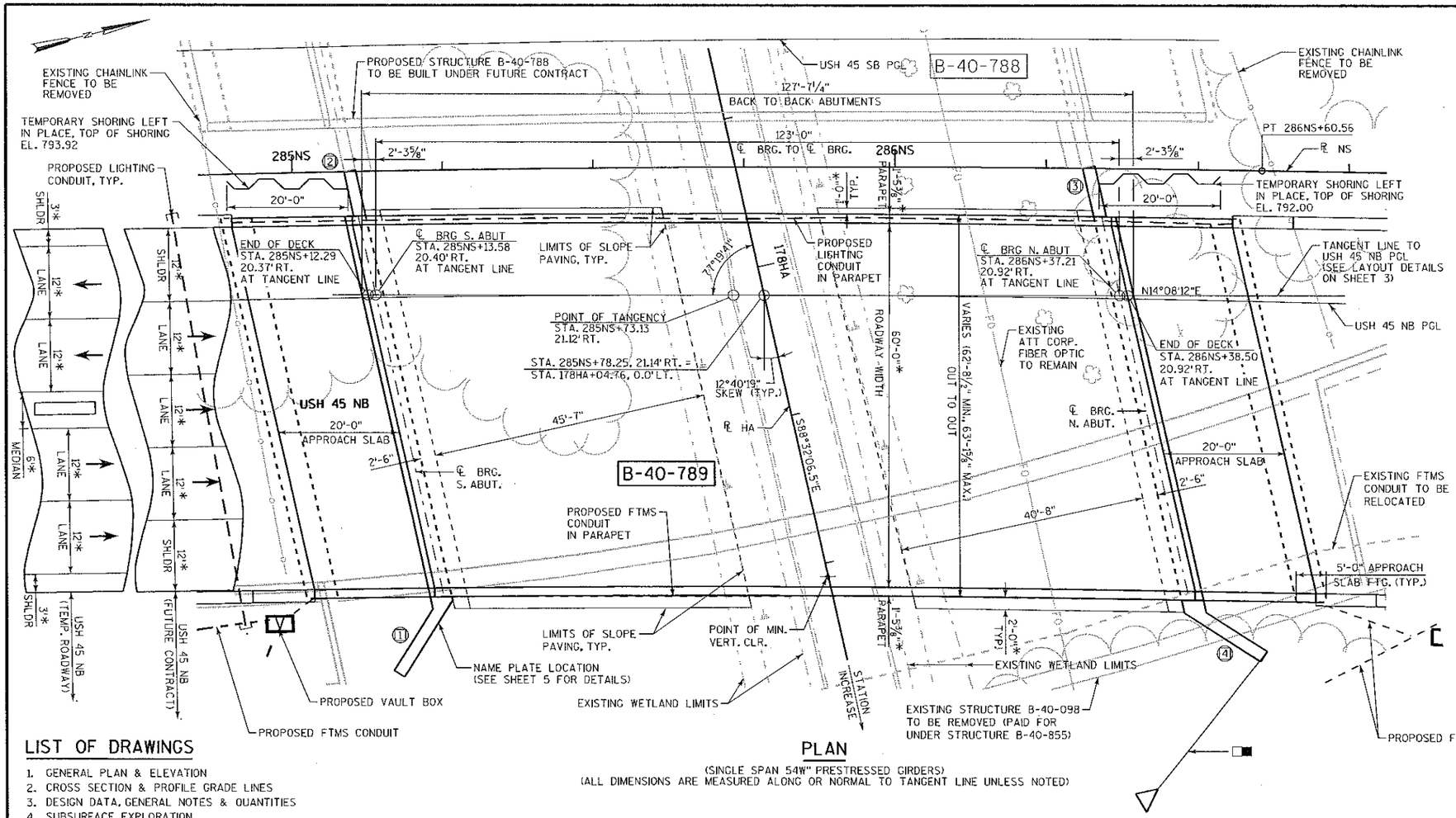
SLOPE PAVING DETAILS

SHEET 22 OF 22

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-538\cds\B538_080701_sp.dgn PLOT DATE : 29-APR-2014 09:47 PLOT BY : MSCAYA PLOT NAME : B538_080701_sp PLOT SCALE : 20:1

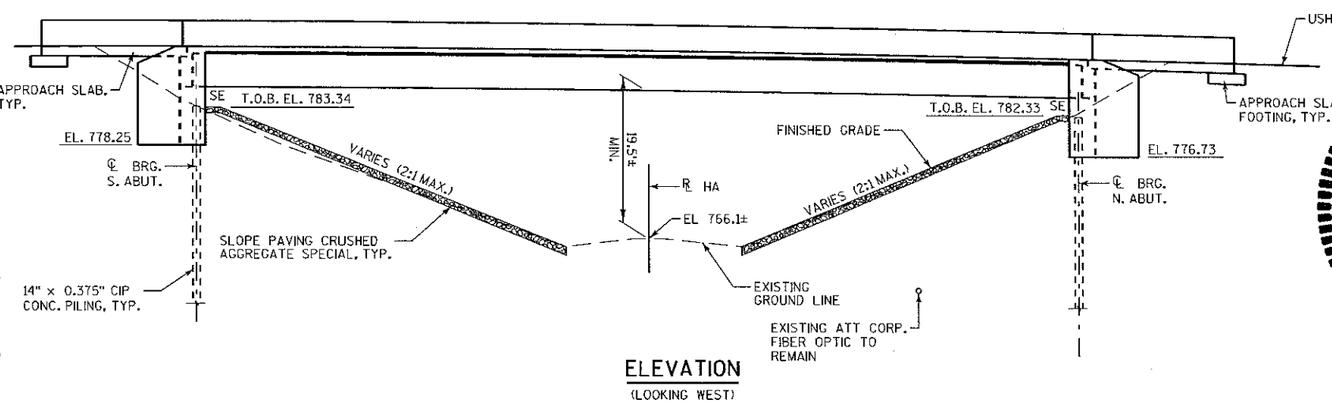


PLAN

(SINGLE SPAN 54W" PRESTRESSED GIRDERS)
(ALL DIMENSIONS ARE MEASURED ALONG OR NORMAL TO TANGENT LINE UNLESS NOTED)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & PROFILE GRADE LINES
3. DESIGN DATA, GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS
7. SOUTH ABUTMENT WINGWALLS
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS
10. NORTH ABUTMENT WINGWALLS
11. 54W" PRESTRESSED GIRDER
12. 54W" PRESTRESSED GIRDER DETAILS
13. SUPERSTRUCTURE FRAMING PLAN
14. STEEL DIAPHRAGM
15. SUPERSTRUCTURE REINFORCEMENT
16. SUPERSTRUCTURE DETAILS (1 OF 2)
17. SUPERSTRUCTURE DETAILS (2 OF 2)
18. SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 3)
19. SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 3)
20. SINGLE SLOPE PARAPET 42SS MODIFIED (3 OF 3)
21. STRUCTURAL APPROACH SLAB
22. STRUCTURAL APPROACH SLAB DETAILS
23. SLOPE PAVING DETAILS
24. AESTHETIC DETAILS



ELEVATION

(LOOKING WEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.04
OPERATING RATING FACTOR: RF = 1.94
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- CIP CONCRETE PILING ..... f'c = 3,500 psi
- 54W-INCH PRESTRESSED GIRDERS ..... f'c = 8,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi
STEEL PILE SHELLS SHALL BE ASTM A252, GRADE 3 .... fy = 45,000 psi

FOUNDATION DATA

USING THE PDA/CAPWAP ACCEPTANCE METHOD:

ABUTMENTS SHALL BE SUPPORTED ON 14" DIA. CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 185 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.55 USING PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:
- SOUTH ABUTMENT ..... 77 FEET
- NORTH ABUTMENT ..... 74 FEET

LEGEND

- → DIRECTION OF TRAFFIC
- (X) WINGWALL NUMBER
- T.O.B. TOP OF BERM
- * DIMENSION MEASURED NORMAL TO USH 45 NB PGL
- "PIPE UNDERDRAIN UNPERFORATED 6-INCH" CONNECT TO "APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH", INVERT EL. = 775.00. SEE SHEET 9 FOR RODENT SHIELD DETAIL.

TRAFFIC DATA

USH 45 NB

ADT = 42,200 (2015)
ADT = 65,500 (2035)
RDS = 60 MPH

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

STATE PROJECT NUMBER: 1060-33-80

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/07/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
Mohammed Zagloul
5/1/2014

STRUCTURE B-40-789

USH 45 NB BRIDGE OVER HANK AARON TRAIL

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJA	MHZ	MM	MHZ

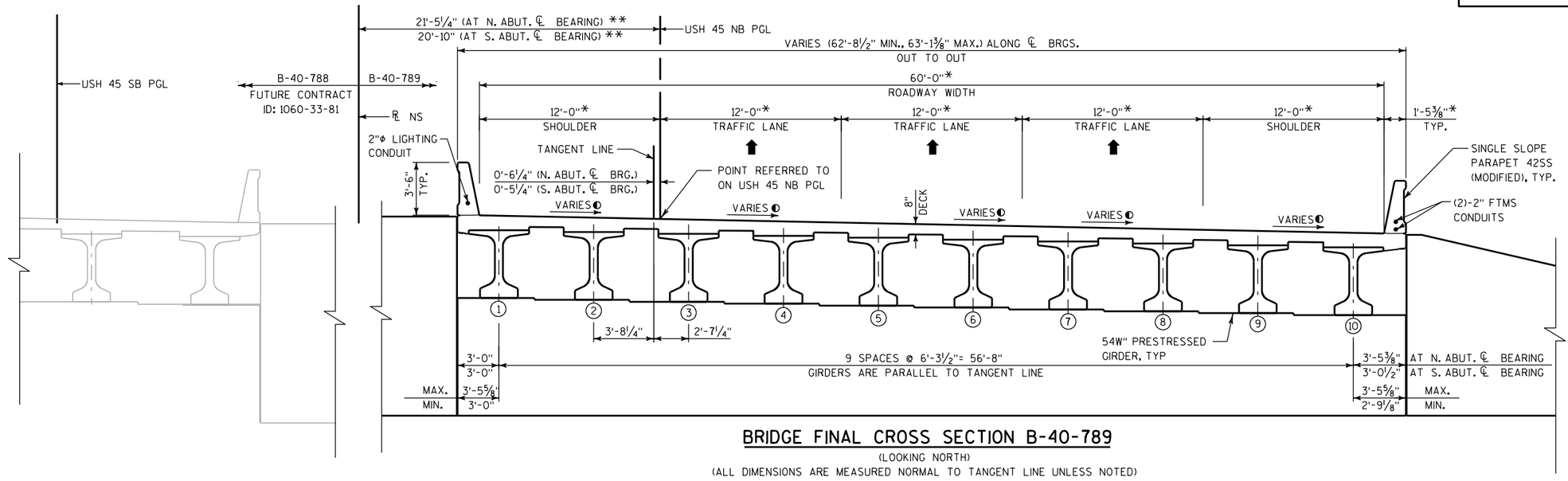
GENERAL PLAN & ELEVATION

SHEET 1 OF 24

8 8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-789\cds\B789_080101_gp.dgn PLOT DATE : 01-MAY-2014 07:54 PLOT BY : MSCAYA PLOT NAME : B789_080101_gp PLOT SCALE : 20:1

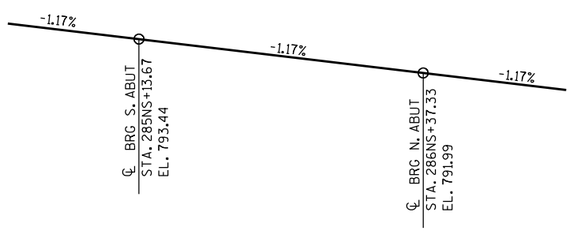
STATE PROJECT NUMBER
1060-33-80



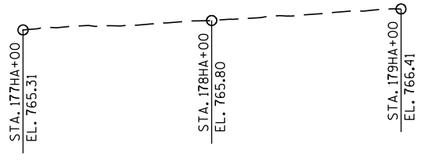
BRIDGE FINAL CROSS SECTION B-40-789

(LOOKING NORTH)

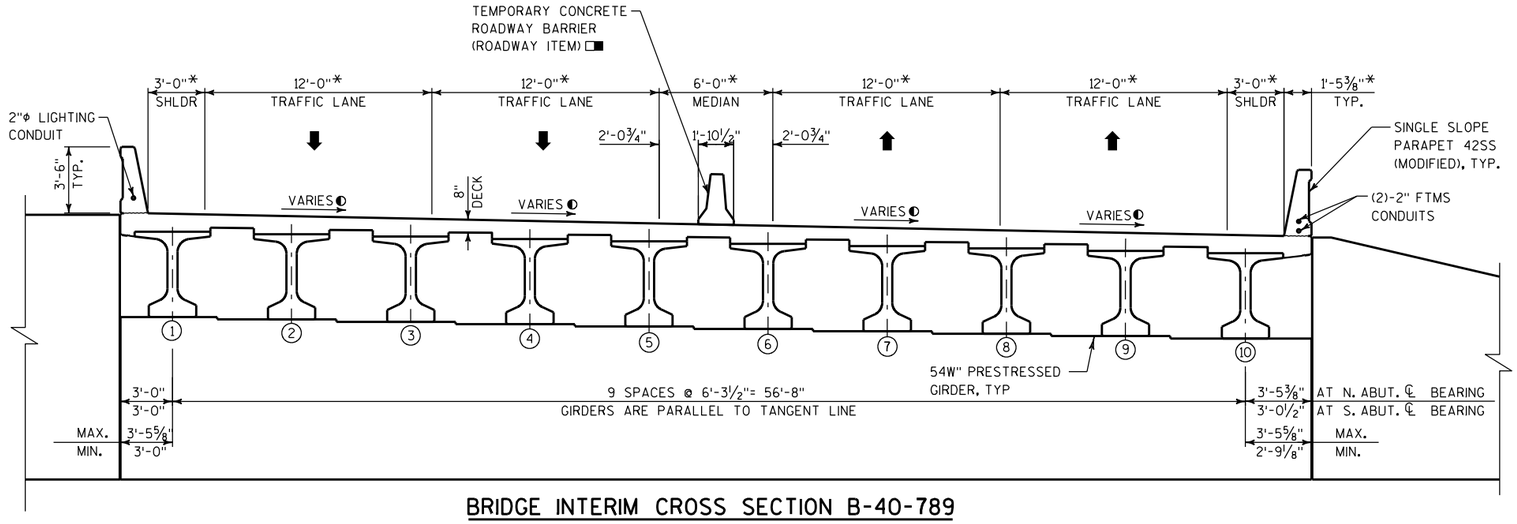
(ALL DIMENSIONS ARE MEASURED NORMAL TO TANGENT LINE UNLESS NOTED)



PROFILE GRADE LINE - USH 45 NB



SURVEYED EXISTING PROFILE REFERENCE LINE - HA



BRIDGE INTERIM CROSS SECTION B-40-789

(LOOKING NORTH)

(ALL DIMENSIONS ARE MEASURED NORMAL TO TANGENT LINE UNLESS NOTED)

LEGEND

* DIMENSION MEASURED NORMAL TO USH 45 NB PGL

** DIMENSION MEASURED NORMAL TO ℞ NS

◐ 3.5% TO THE RIGHT (STA. 276NS+29 TO STA. 285NS+98)
3.5% TO 2% TO THE RIGHT (STA. 285NS+98 TO STA. 286NS+78)

■ TEMPORARY ROADWAY CONCRETE BARRIER NOT TO BE ANCHORED TO THE BRIDGE DECK SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

CROSS SECTION & PROFILE GRADE LINE

SHEET 2 OF 24

8

8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SOUTH APPROACH SLAB	SOUTH ABUTMENT	NORTH APPROACH SLAB	NORTH ABUTMENT	SUPER	TOTAL
206.1000.0003	EXCAVATION FOR STRUCTURES BRIDGES B-40-789	LS	-	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	-	557	-	600	-	1,158
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	201	-	202	-	-	403
502.0100	CONCRETE MASONRY BRIDGES	CY	18	95	18	101	-	232
502.3200	PROTECTIVE SURFACE TREATMENT	SY	154	-	154	-	962	1,270
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-	-	-	-	1,240	1,240
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	13,830	7,410	13,830	7,600	63,210	105,880
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	10	-	10	-	20
506.4000.0003	STEEL DIAPHRAGMS B-40-789	EACH	-	-	-	-	18	18
511.2200.0002	TEMPORARY SHORING LEFT IN PLACE B-40-789	SF	-	106	-	97	-	203
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	19	-	19	-	38
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	-	1,220	-	1,172	-	2,392
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	56	-	30	-	86
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	86	-	88	-	174
612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	-	-	-	1	-	1
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	69	-	69	-	30	168
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-	-	-	-	348	348
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	69	-	69	-	370	508
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	-	2	-	2	-	4
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	-	2	-	2	-	4
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	-	-	-	-	2,180	2,180
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,200	-	1,200	-	7,537	9,937
SPV.0180.4800	SLOPE PAVING CRUSHED AGGREGATE SPECIAL	SY	-	361	-	324	-	685
	NON-BID ITEMS							
	PREFORMED JOINT FILLER	SIZE						¾"
	NON-BITUMINOUS JOINT FILLER	SIZE						½"
	CORK FILLER	SIZE						¾"
	NAME PLATE	EACH						1

ALL ITEMS ARE CATEGORY 2020

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH CRUSHED AGGREGATE SPECIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE SLOPE PAVING DETAILS.

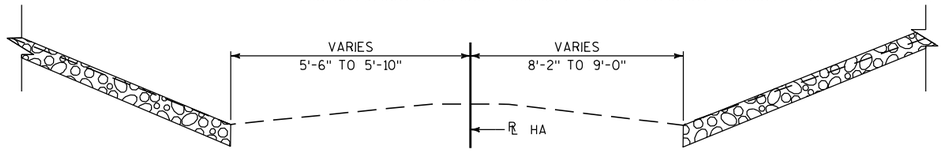
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAIL SHEET.

THE PARAPET CONCRETE QUANTITY FOR SINGLE SLOPE 42SS MODIFIED SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

BRIDGE B-40-788 WILL BE CONSTRUCTED IN FUTURE CONTRACT.

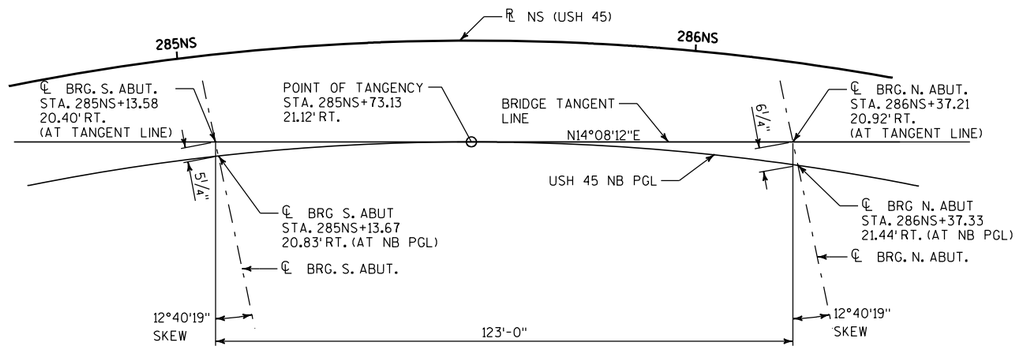
THE SLOPE OF THE FILL IN FRONT OF TEH ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 & ABUTMENT DETAILS.

RODENT SHIELD SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH". FABRICATE ACCORDING TO S.D.D.8 F 6-4.



EXISTING HANK AARON STATE TRAIL CROSS SECTION

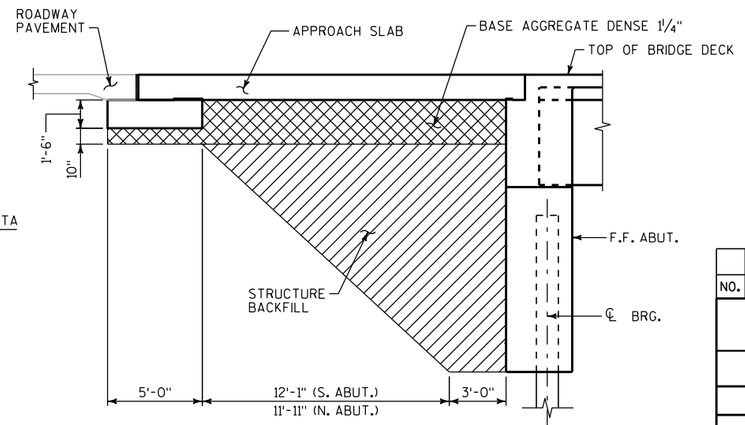
(DIMENSIONS ARE BASED EXISTING SURVEY)
(LOOKING EAST)



TANGENT LINE LAYOUT

NOT TO SCALE
CURVATURE EXAGGERATED FOR CLARITY

HORIZONTAL CURVE DATA
P.I. = 281NS+16.88
X=572018.44
Y=294288.04
Δ = 15°24'03" RIGHT
D = 1°24'28"
T = 550.32'
L = 1094.01'
R = 4070.00'
P.C. = 275NS+66.56
X=572021.48
Y=293737.73
P.T. = 286NS+60.56
X=572161.64
Y=294819.40



BACKFILL LIMITS

(DIMENSIONS ARE MEASURED NORMAL TO ABUTMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY RT | PLANS CK'D. MHZ

DESIGN DATA, GENERAL NOTES & QUANTITIES

SHEET 3 OF 24

8

8

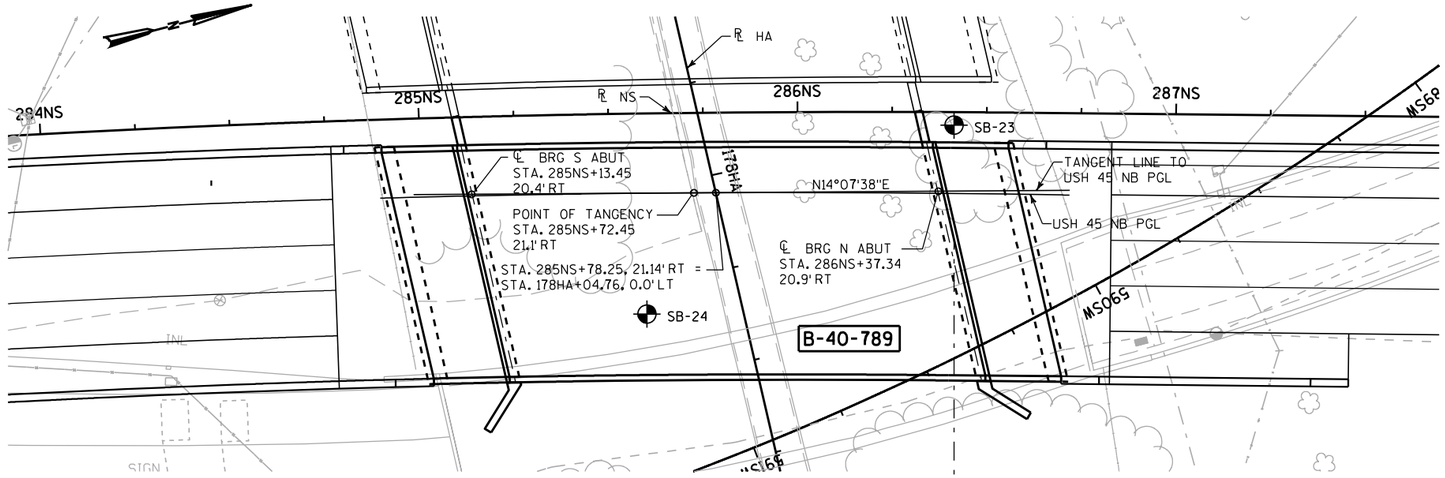
NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

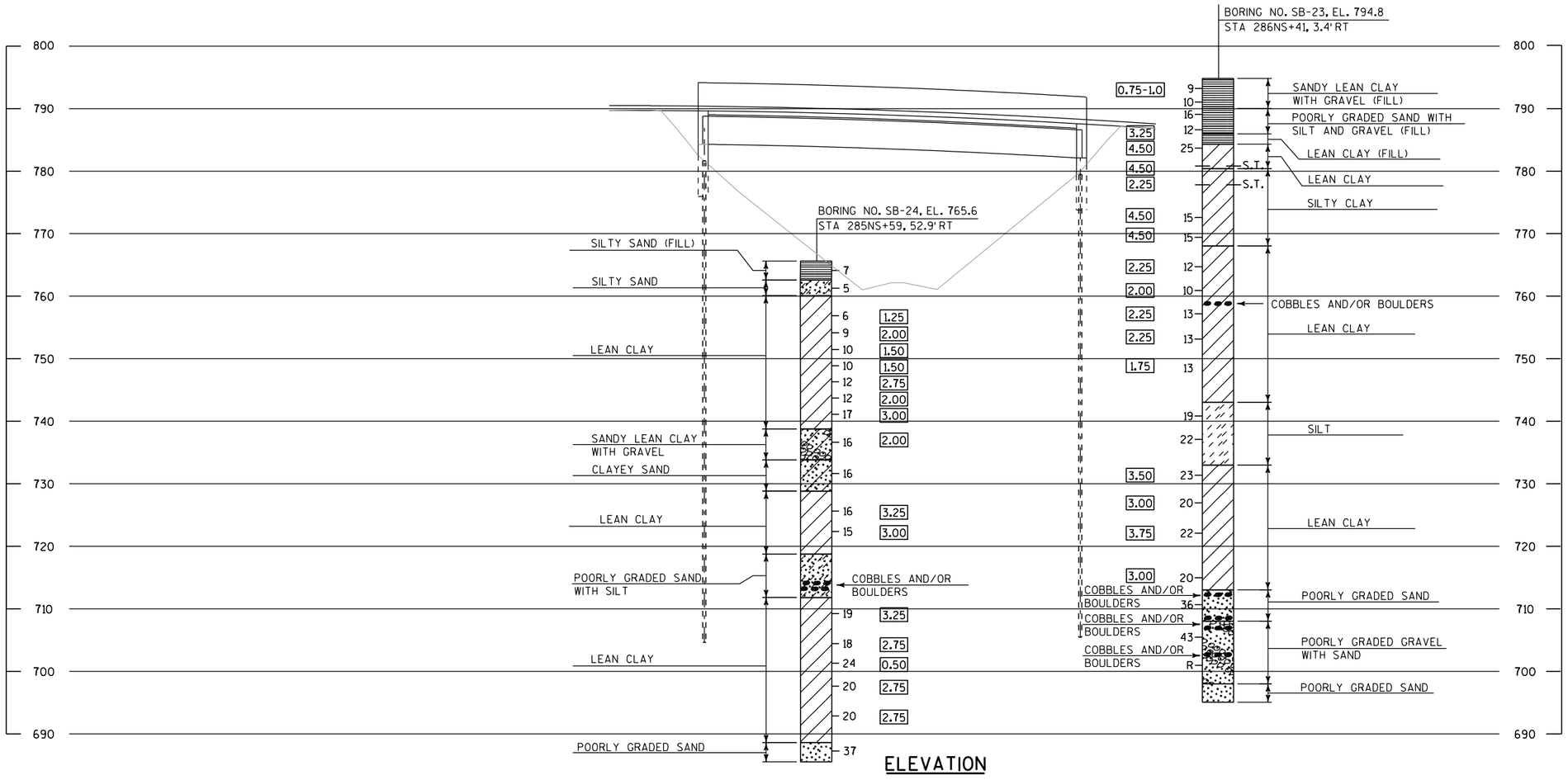
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
FEBRUARY 14 2011 - BORING SB-24
FEBRUARY 16 2011 - BORING SB-23



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

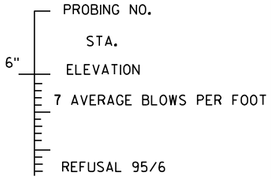
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

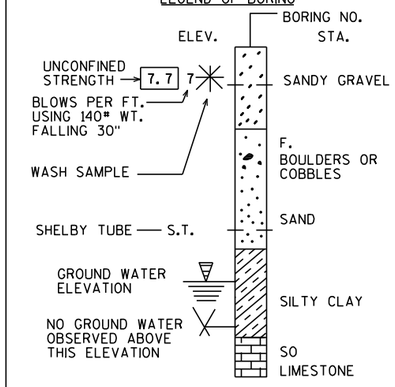
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION

SHEET 4 OF 24

8

8

STATE PROJECT NUMBER
1060-33-80

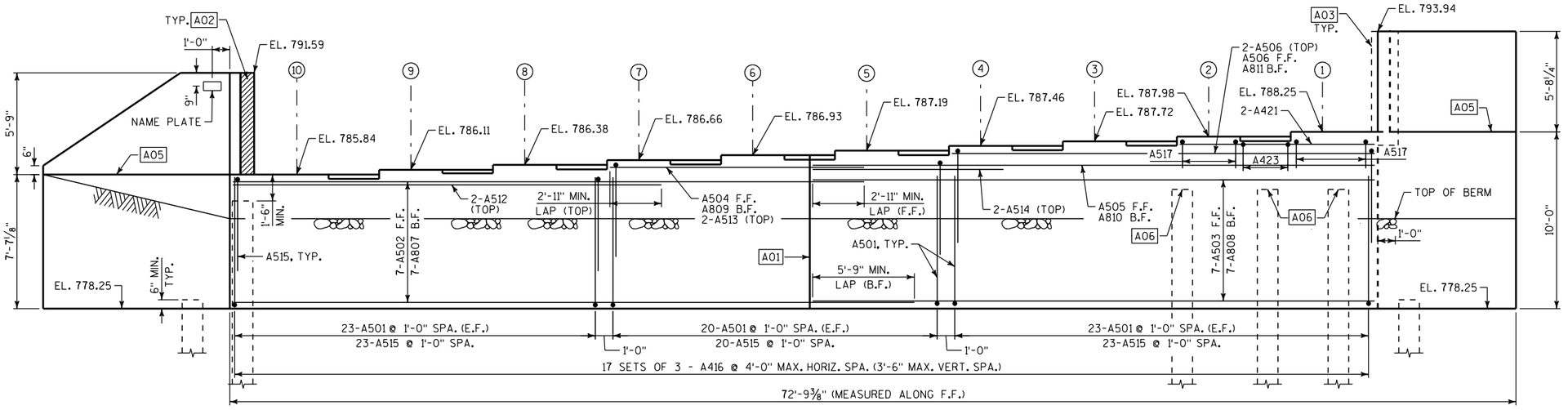
NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER & ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 6.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 6.
4. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 7.

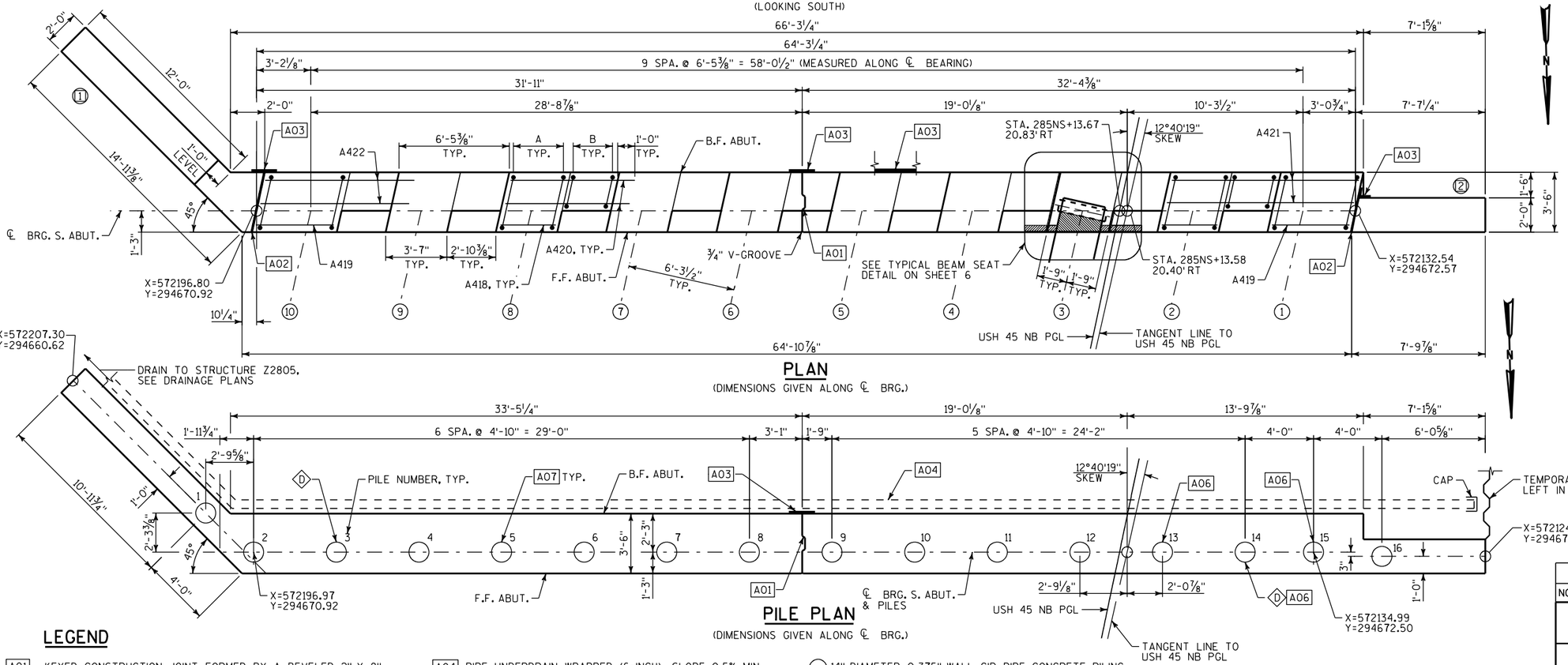
A: 5-A517 @ EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQUIRED AT GIRDERS 2 THRU 9.

6-A517 @ EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 10.

B: 4-A423 @ EQ. SPA. BETWEEN GIRDER SEATS, TYP.



ELEVATION
(LOOKING SOUTH)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

LEGEND

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 8".
- A02 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.).
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A05 OPTIONAL CONSTRUCTION JOINT
- A06 SET TOP OF PILE ELEVATION AT 785.00 FOR PILES 13, 14, & 15.
- A07 TOP OF PILE EL. = 784.34 FOR PILES 2 THRU 12
- ◯ 14" DIAMETER, 0.375" WALL CIP PIPE CONCRETE PILING
- ◇D DYNAMIC PILE LOAD TESTING
- (X) GIRDER NUMBER
- ⓧ WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY	PLANS CK'D.
MM	MHZ

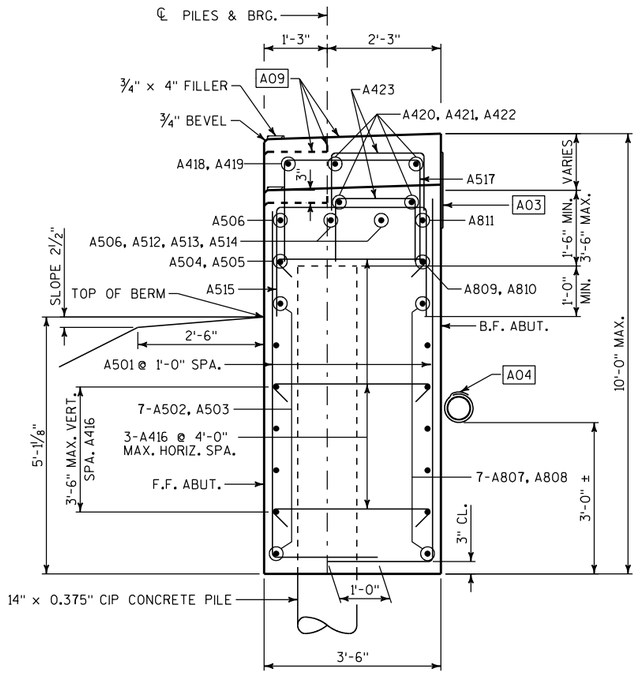
SOUTH ABUTMENT

SHEET 5 OF 24

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-789\cds\B789_080301_ab.dgn PLOT DATE : 01-MAY-2014 07:55 PLOT BY : MSCAYA PLOT NAME : B789_080301_ab PLOT SCALE : 7:1

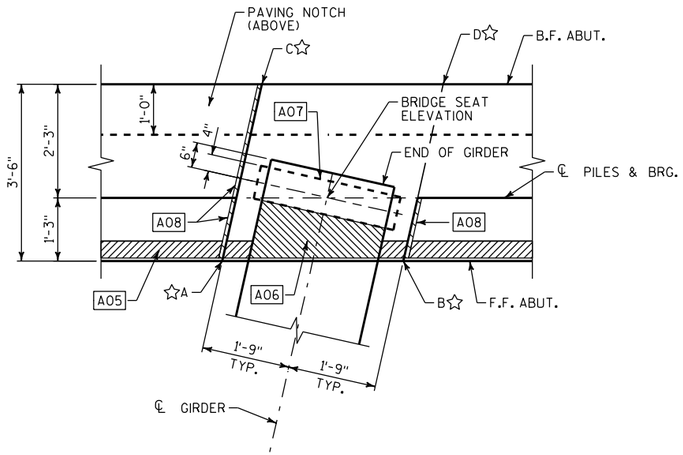
STATE PROJECT NUMBER

1060-33-80



SECTION THRU ABUTMENT BODY

(LOOKING EAST)



TYPICAL BEAM SEAT DETAIL

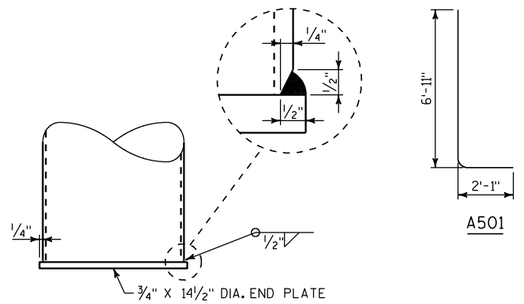
☆ BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	788.25	-0.02	-0.01	+0.02	+0.04
2	787.98	-0.02	-0.01	+0.02	+0.03
3	787.72	-0.02	-0.01	+0.02	+0.03
4	787.46	-0.02	-0.01	+0.02	+0.03
5	787.19	-0.02	-0.01	+0.02	+0.03
6	786.93	-0.02	-0.01	+0.02	+0.03
7	786.66	0.00	0.00	0.00	0.00
8	786.38	0.00	0.00	0.00	0.00
9	786.11	0.00	0.00	0.00	0.00
10	785.84	0.00	0.00	0.00	0.00

BILL OF BARS

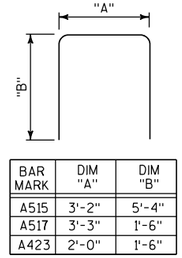
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	132	8'-11"	X	-	ABUTMENT BODY - VERT.
A502	X	7	35'-11"	-	-	ABUTMENT BODY - LONG.
A503	X	7	31'-9"	-	-	ABUTMENT BODY - LONG.
A504	X	1	14'-5"	-	-	ABUTMENT BODY - LONG.
A505	X	1	31'-9"	-	-	ABUTMENT BODY - LONG.
A506	X	3	23'-10"	-	-	ABUTMENT BODY - LONG.
A807	X	7	39'-3"	-	-	ABUTMENT BODY - LONG.
A808	X	7	32'-6"	-	-	ABUTMENT BODY - LONG.
A809	X	1	16'-6"	-	-	ABUTMENT BODY - LONG.
A810	X	1	32'-6"	-	-	ABUTMENT BODY - LONG.
A811	X	1	23'-10"	-	-	ABUTMENT BODY - LONG.
A512	X	2	25'-9"	-	-	ABUTMENT BODY - LONG.
A513	X	2	14'-5"	-	-	ABUTMENT BODY - LONG.
A514	X	2	11'-7"	-	-	ABUTMENT BODY - LONG.
A515	X	66	13'-7"	X	-	ABUTMENT BODY - VERT.
A416	X	51	3'-11"	X	-	ABUTMENT BODY - TRANS.
A517	X	52	6'-0"	X	-	ABUTMENT SEAT - VERT.
A418	X	8	3'-3"	-	-	ABUTMENT SEAT - LONG.
A419	X	2	4'-7"	-	-	ABUTMENT SEAT - LONG.
A420	X	14	7'-6"	-	-	ABUTMENT SEAT - LONG.
A421	X	2	10'-11"	-	-	ABUTMENT SEAT - LONG.
A422	X	2	8'-11"	-	-	ABUTMENT SEAT - LONG.
A423	X	32	4'-10"	X	-	ABUTMENT SEAT - VERT.

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

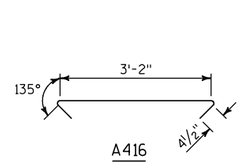


CIP PILE END PLATE DETAIL

A501



BAR MARK	DIM "A"	DIM "B"
A515	3'-2"	5'-4"
A517	3'-3"	1'-6"
A423	2'-0"	1'-6"

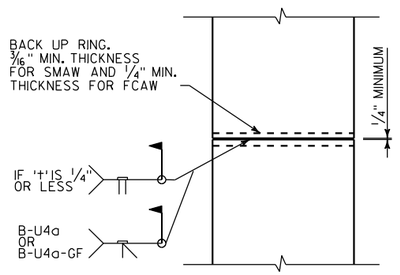


A416

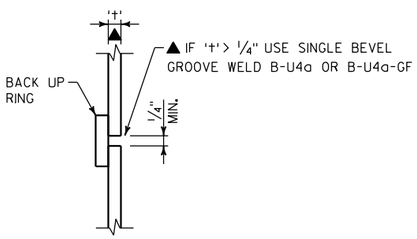
BENDING DIAGRAMS

LEGEND

- A03 — 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 — PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A05 — 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A06 — ¾" FILLER UNDER GIRDERS, TYP.
- A07 — ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A08 — ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A09 — STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULITPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"



CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL

NOTES

1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 5.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEE SHEET 7.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

SOUTH ABUTMENT DETAILS

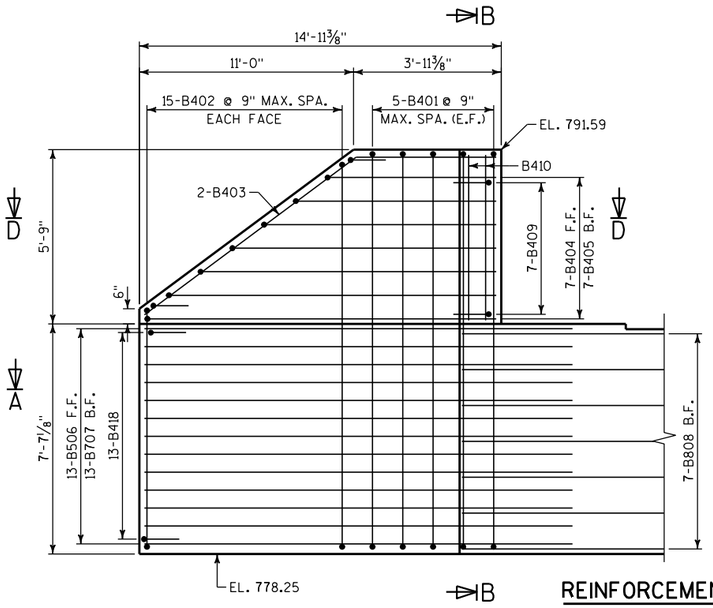
SHEET 6 OF 24

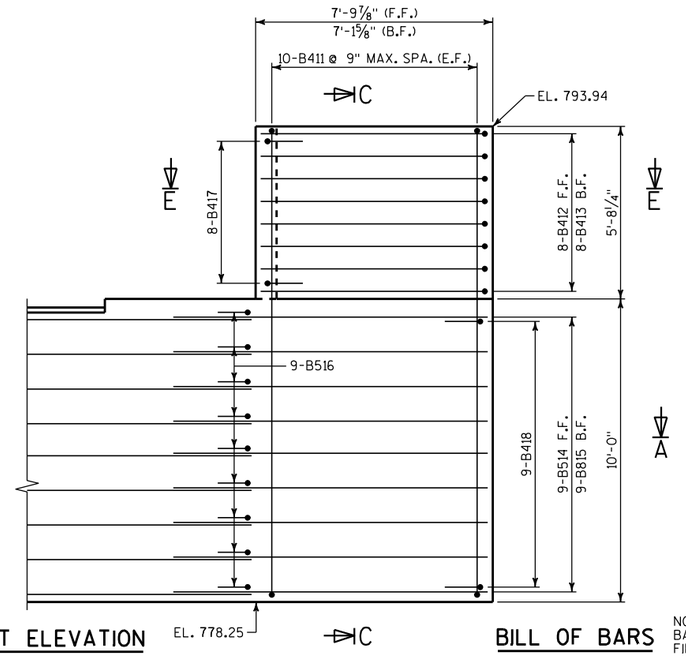
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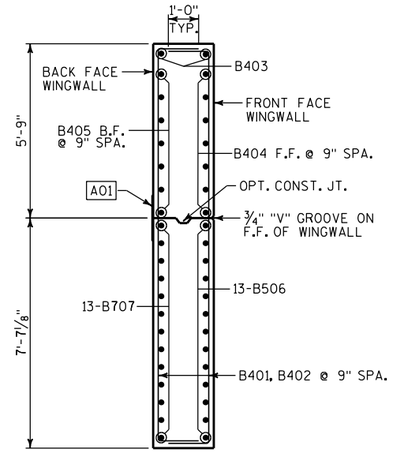
STATE PROJECT NUMBER
1060-33-80



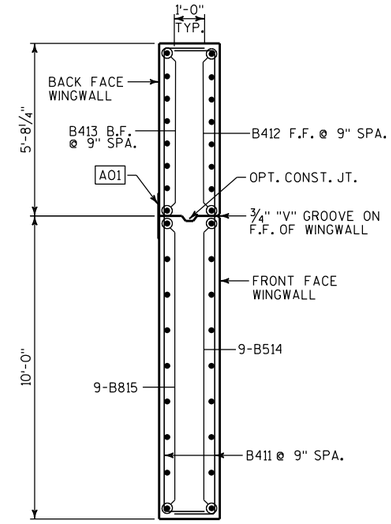


REINFORCEMENT ELEVATION

(BACK FACE REINFORCEMENT NOT SHOWN FOR CLAIRY)
(WINGWALLS ① & ② FRONT FACE)
(LOOKING SOUTH)



SECTION B-B



SECTION C-C

BILL OF BARS

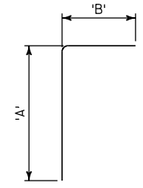
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401	X	10	15'-5"	X	-	SE WINGWALL - VERT.
B402	X	30	12'-8"	X	⚠	SE WINGWALL - VERT.
B403	X	2	15'-9"	X	-	SE WINGWALL - HORIZ.
B404	X	7	11'-3"	X	⚠	SE WINGWALL - HORIZ.
B405	X	7	10'-10"	X	⚠	SE WINGWALL - HORIZ.
B506	X	13	18'-3"	X	-	SE WINGWALL - HORIZ.
B707	X	13	17'-8"	X	-	SE WINGWALL - HORIZ.
B808	X	7	11'-10"	X	-	SE WINGWALL - HORIZ.
B409	X	7	7'-3"	X	-	SE WINGWALL - HORIZ.
B410	X	4	5'-5"	-	-	SE WINGWALL - VERT.
B411	X	20	17'-9"	X	-	SW WINGWALL - VERT.
B412	X	8	8'-5"	X	-	SW WINGWALL - HORIZ.
B413	X	8	8'-0"	X	-	SW WINGWALL - HORIZ.
B514	X	9	10'-0"	-	-	SW WINGWALL - HORIZ.
B815	X	9	12'-10"	-	-	SW WINGWALL - HORIZ.
B516	X	9	4'-1"	X	-	SW WINGWALL - TRANS.
B417	X	8	3'-9"	X	-	SW WINGWALL - HORIZ.
B418	X	22	3'-9"	X	-	SE & SW WINGWALL - HORIZ.

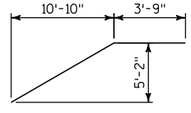
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
B402	2 SERIES OF 15	10'-2" TO 15'-1"
B404	1 SERIES OF 7	6'-8" TO 15'-10"
B405	1 SERIES OF 7	5'-9" TO 15'-11"

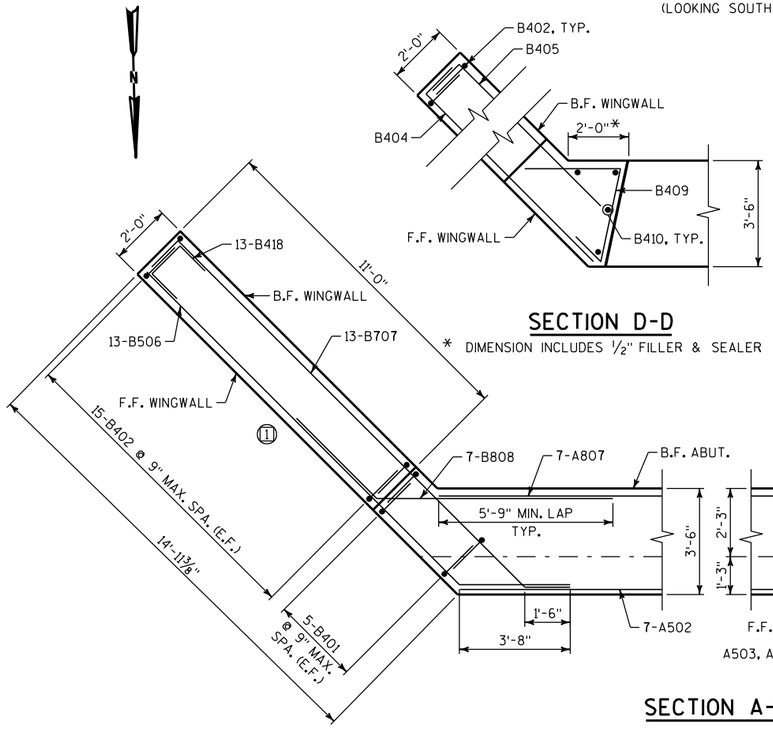
⚠ BUNDLE AND TAG EACH SERIES SEPARATELY



BAR MARK	DIM 'A'	DIM 'B'
B404	5'-5" TO 14'-7"	1'-4"
B405	4'-6" TO 14'-8"	1'-4"
B412	7'-2"	1'-4"
B413	6'-9"	1'-4"
B516	3'-2"	1'-0"

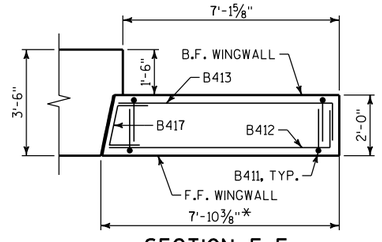


B403



SECTION D-D

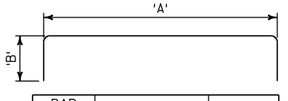
* DIMENSION INCLUDES ½" FILLER & SEALER



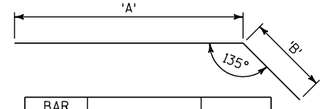
SECTION E-E

* DIMENSION INCLUDES ½" FILLER & SEALER

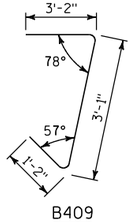
SECTION A-A



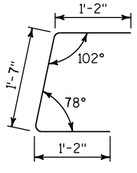
BAR MARK	DIM 'A'	DIM 'B'
B401	12'-11"	1'-4"
B402	7'-8" TO 12'-7"	1'-4"
B411	15'-3"	1'-4"



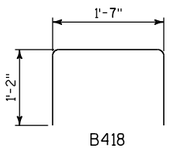
BAR MARK	DIM 'A'	DIM 'B'
B506	14'-7"	3'-8"
B707	16'-2"	1'-6"
B808	8'-1"	3'-9"



B409



B417



B418

BENDING DIAGRAMS

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 5 & 6.

LEGEND

A01 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

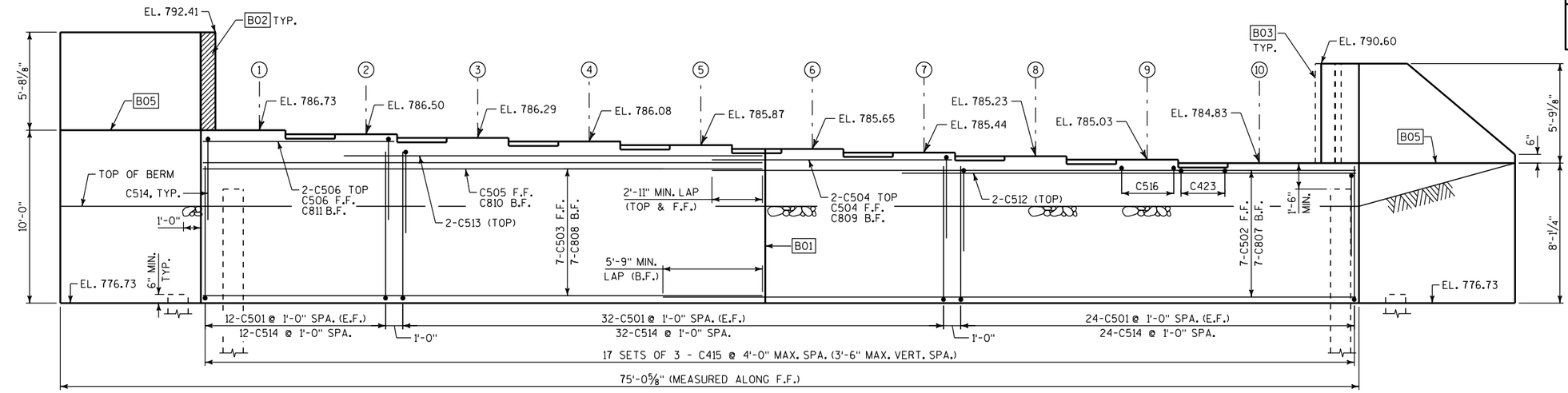
SOUTH ABUTMENT WINGWALLS

SHEET 7 OF 24

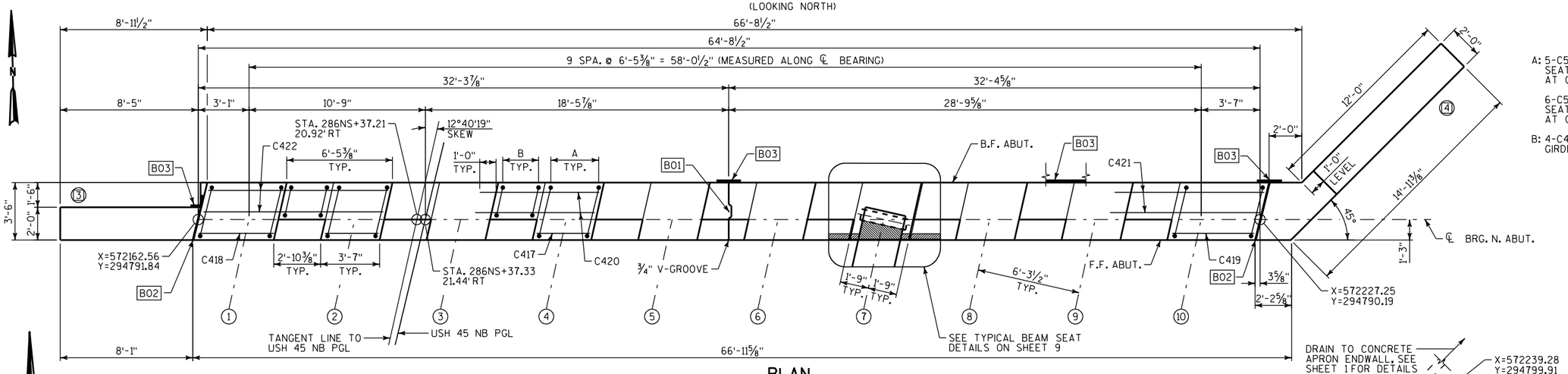
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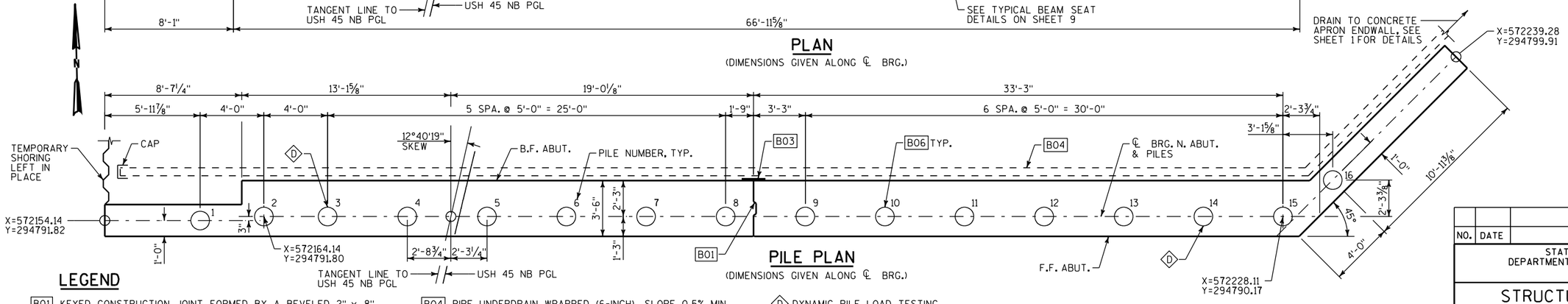
STATE PROJECT NUMBER
1060-33-80



ELEVATION
(LOOKING NORTH)



PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)



PILE PLAN
(DIMENSIONS GIVEN ALONG ℄ BRG.)

A: 5-C516 @ EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQUIRED AT GIRDERS 2 THRU 8.

6-C516 @ EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQUIRED AT GIRDERS 1 & 9.

B: 4-C423 @ EQ. SPA. BETWEEN GIRDER SEATS, TYP.

NOTES

1. ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER & ℄ BEARING.
2. FOR TYPICAL SECTION THRU ABUTMENT, SEE SHEET 9.
3. FOR REINFORCEMENT BILL OF BARS, SEE SHEET 9.
4. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS SEE SHEET 10.

LEGEND

- B01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 8".
- B02 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.).
- B03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- B04 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- B05 OPTIONAL CONSTRUCTION JOINT
- B06 TOP OF PILE EL. = 783.33 UNLESS NOTED OTHERWISE.
- ◯ 14" DIAMETER, 0.375" WALL CIP PIPE CONCRETE PILING
- ⟨D⟩ DYNAMIC PILE LOAD TESTING
- ⟨X⟩ GIRDER NUMBER
- ⟨X⟩ WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

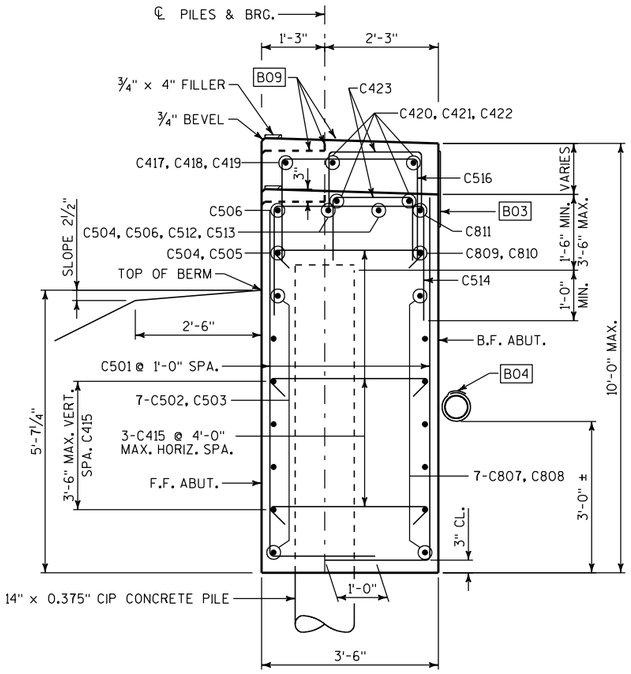
NORTH ABUTMENT

SHEET 8 OF 24

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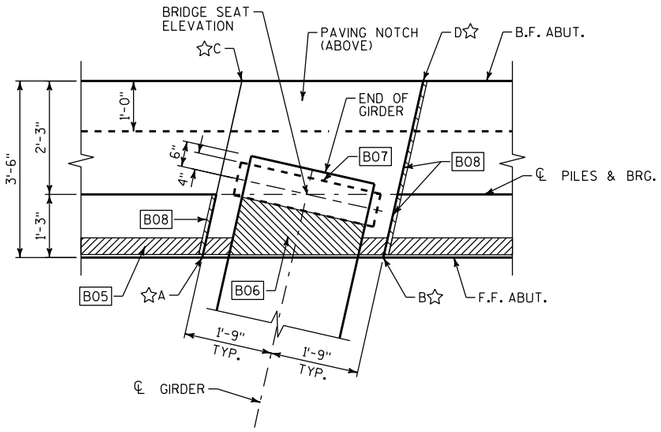
STATE PROJECT NUMBER

1060-33-80



SECTION THRU ABUTMENT BODY

(LOOKING WEST)



TYPICAL BEAM SEAT DETAIL

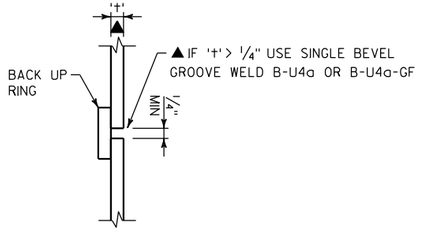
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C501	X	136	9'-5"	X	-	ABUTMENT BODY - VERT.
C502	X	7	37'-3"	-	-	ABUTMENT BODY - LONG.
C503	X	7	32'-3"	-	-	ABUTMENT BODY - LONG.
C504	X	3	13'-11"	-	-	ABUTMENT BODY - LONG.
C505	X	1	32'-3"	-	-	ABUTMENT BODY - LONG.
C506	X	3	11'-0"	-	-	ABUTMENT BODY - LONG.
C807	X	7	40'-9"	-	-	ABUTMENT BODY - LONG.
C808	X	7	31'-5"	-	-	ABUTMENT BODY - LONG.
C809	X	1	17'-6"	-	-	ABUTMENT BODY - LONG.
C810	X	1	31'-5"	-	-	ABUTMENT BODY - LONG.
C811	X	1	10'-11"	-	-	ABUTMENT BODY - LONG.
C512	X	2	26'-1"	-	-	ABUTMENT BODY - LONG.
C513	X	2	24'-5"	-	-	ABUTMENT BODY - LONG.
C514	X	68	12'-7"	X	-	ABUTMENT BODY - VERT.
C415	X	51	3'-11"	X	-	ABUTMENT BODY - TRANS.
C516	X	52	6'-0"	X	-	ABUTMENT SEAT - VERT.
C417	X	8	3'-3"	-	-	ABUTMENT SEAT - LONG.
C418	X	2	4'-6"	-	-	ABUTMENT SEAT - LONG.
C419	X	2	5'-0"	-	-	ABUTMENT SEAT - LONG.
C420	X	14	7'-6"	-	-	ABUTMENT SEAT - LONG.
C421	X	2	9'-3"	-	-	ABUTMENT SEAT - LONG.
C422	X	2	11'-11"	-	-	ABUTMENT SEAT - LONG.
C423	X	32	4'-10"	X	-	ABUTMENT SEAT - VERT.

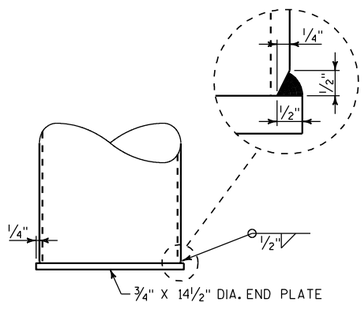
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

☆ BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	786.73	+0.02	+0.01	-0.02	-0.04
2	786.50	+0.02	+0.01	-0.02	-0.03
3	786.29	+0.02	+0.01	-0.02	-0.03
4	786.08	+0.02	+0.01	-0.02	-0.03
5	785.87	+0.02	+0.01	-0.02	-0.03
6	785.65	+0.02	+0.01	-0.02	-0.03
7	785.44	0.00	0.00	0.00	0.00
8	785.23	0.00	0.00	0.00	0.00
9	785.03	0.00	0.00	0.00	0.00
10	784.83	0.00	0.00	0.00	0.00



CIP PILE WELD DETAIL



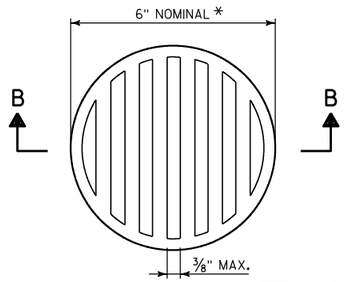
CIP PILE END PLATE DETAIL

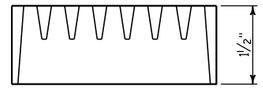
C501

BAR MARK	DIM "A"	DIM "B"
C514	3'-2"	4'-10"
C516	3'-3"	1'-6"
C423	2'-0"	1'-6"

C415

BENDING DIAGRAMS



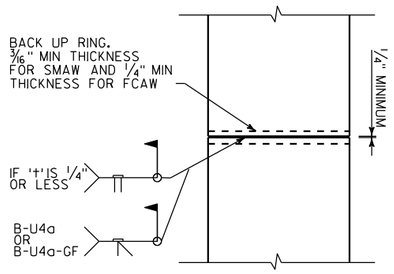


SECTION B-B

(ORIENT SHIELD SO SLOTS ARE VERTICAL)

B10 RODENT SHIELD

*DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



CAST-IN-PLACE 'PIPE PILE'

LEGEND

- B03 — 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- B04 — PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- B05 — 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- B06 — ¾" FILLER UNDER GIRDERS, TYP.
- B07 — ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- B08 — ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- B09 — STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULITPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRED ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"
- B10 — THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS

NOTES

1. FOR ABUTMENT PLAN & ELEVATION, SEE SHEET 8.
2. FOR WINGWALL DETAILS, REINFORCEMENT & BILL OF BARS, SEET SHEET 7.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

NORTH ABUTMENT DETAILS

SHEET 9 OF 24

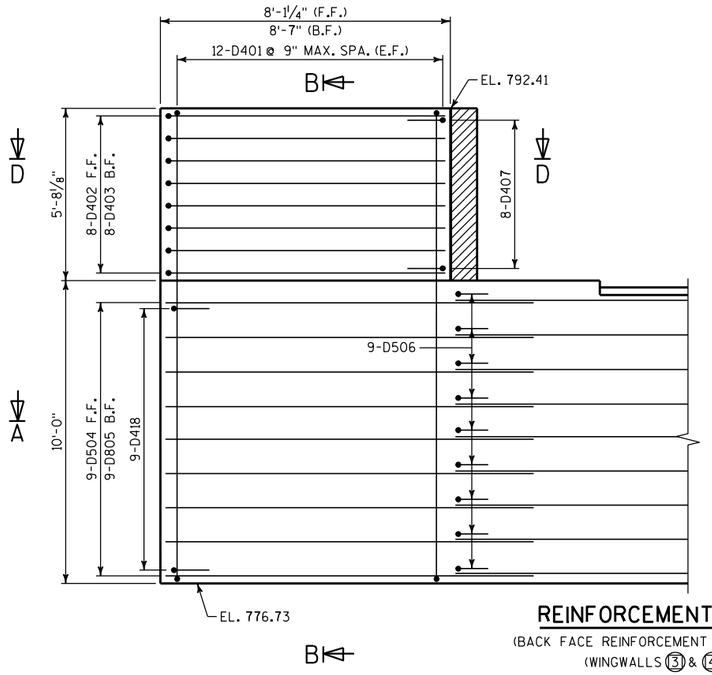
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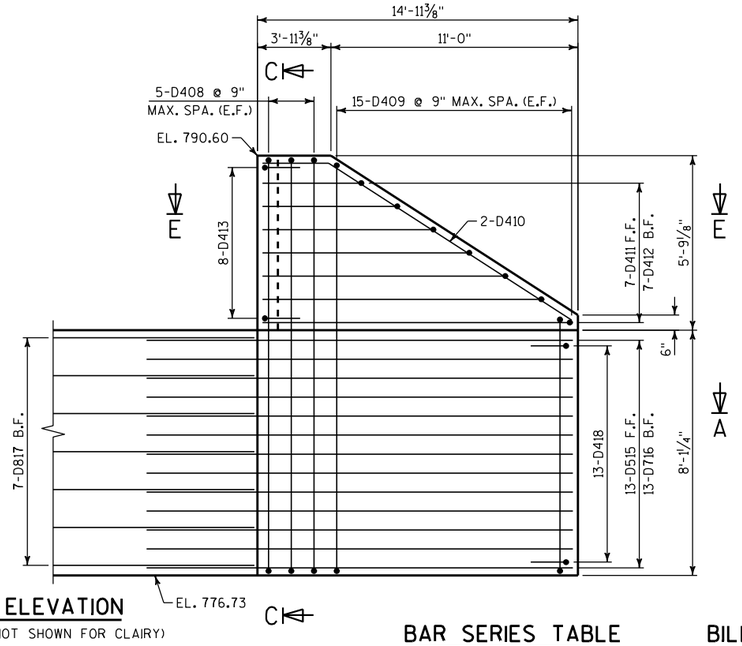
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STATE PROJECT NUMBER

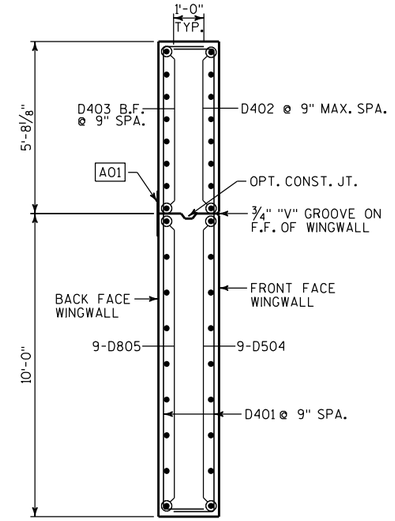
1060-33-80



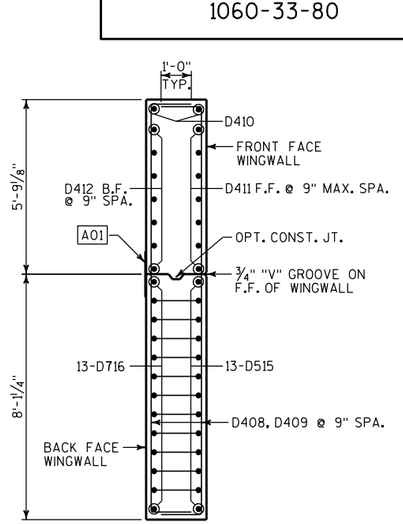


REINFORCEMENT ELEVATION

(BACK FACE REINFORCEMENT NOT SHOWN FOR CLAIRY)
(WINGWALLS ③ & ④ FRONT FACE)
(LOOKING NORTH)



SECTION B-B



SECTION C-C

BAR SERIES TABLE

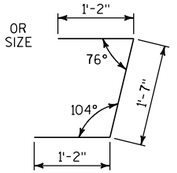
BAR MARK	NO. REQ'D	LENGTH
D409	2 SERIES OF 15	10'-8" TO 15'-7"
D411	1 SERIES OF 7	6'-5" TO 15'-0"
D412	1 SERIES OF 7	7'-7" TO 16'-2"

⚠ BUNDLE AND TAG EACH SERIES SEPARATELY

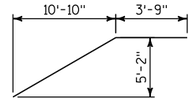
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

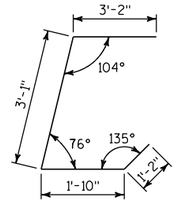
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D401	X	24	17'-9"	X	-	NW WINGWALL - VERT.
D402	X	8	9'-0"	X	-	NW WINGWALL - HORIZ.
D403	X	8	9'-6"	X	-	NW WINGWALL - HORIZ.
D504	X	9	11'-6"	-	-	NW WINGWALL - HORIZ.
D805	X	9	14'-4"	-	-	NW WINGWALL - HORIZ.
D506	X	9	4'-1"	X	-	NW WINGWALL - TRANS.
D407	X	8	3'-9"	X	-	NW WINGWALL - HORIZ.
D408	X	10	15'-11"	X	-	NE WINGWALL - VERT.
D409	X	30	13'-2"	X	⚠	NE WINGWALL - VERT.
D410	X	2	15'-9"	X	-	NE WINGWALL - HORIZ.
D411	X	7	10'-9"	X	⚠	NE WINGWALL - HORIZ.
D412	X	7	11'-11"	X	⚠	NE WINGWALL - HORIZ.
D413	X	8	9'-3"	X	-	NE WINGWALL - HORIZ.
D414	X	5	5'-5"	-	-	NE WINGWALL - VERT.
D515	X	13	18'-3"	X	-	NE WINGWALL - HORIZ.
D716	X	13	17'-8"	X	-	NE WINGWALL - HORIZ.
D817	X	7	11'-10"	X	-	NE WINGWALL - HORIZ.
D418	X	22	3'-9"	X	-	NW & NE WINGWALL - HORIZ.



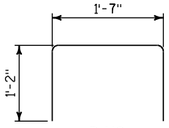
D407



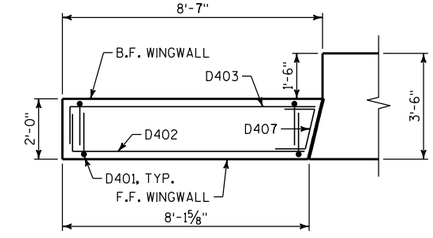
D410



D413

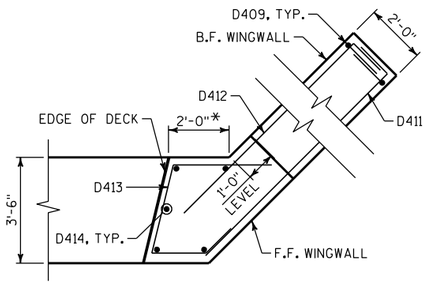


D418



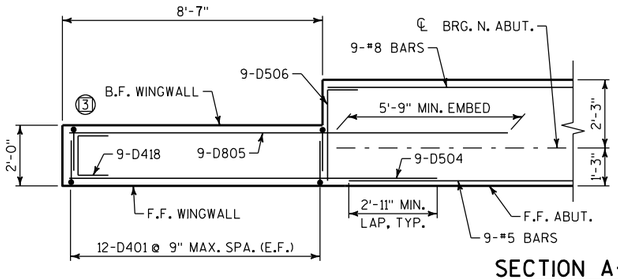
SECTION D-D

* DIMENSION INCLUDES ½" FILLER & SEALER

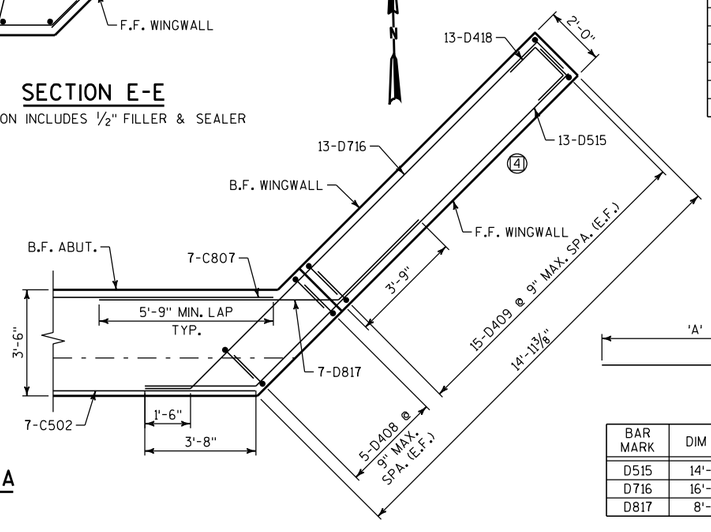


SECTION E-E

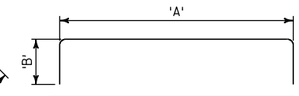
* DIMENSION INCLUDES ½" FILLER & SEALER



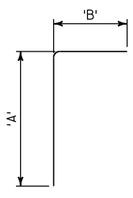
SECTION A-A

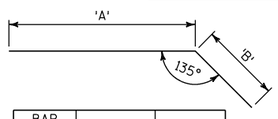


BENDING DIAGRAMS



BAR MARK	DIM 'A'	DIM 'B'
D401	15'-3"	1'-4"
D408	13'-5"	1'-4"
D409	8'-2" TO 13'-1"	1'-4"





BAR MARK	DIM 'A'	DIM 'B'
D515	14'-7"	3'-8"
D716	16'-2"	1'-6"
D817	8'-1"	3'-9"

BAR MARK	DIM 'A'	DIM 'B'
D402	7'-9"	1'-4"
D403	8'-3"	1'-4"
D506	3'-2"	1'-0"
D411	5'-2" TO 13'-9"	1'-4"
D412	6'-4" TO 14'-11"	1'-4"

NOTE

1. FOR ABUTMENT PLAN, ELEVATION & DETAILS, SEE SHEETS 8 & 9.

LEGEND

A01 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")

(X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

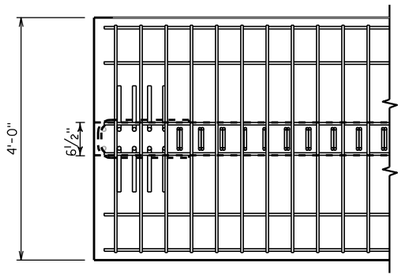
NORTH ABUTMENT WINGWALLS

SHEET 10 OF 24

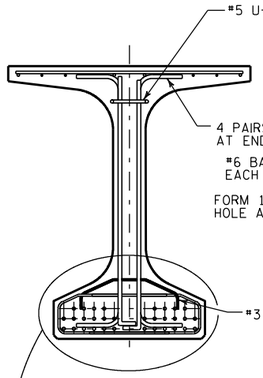
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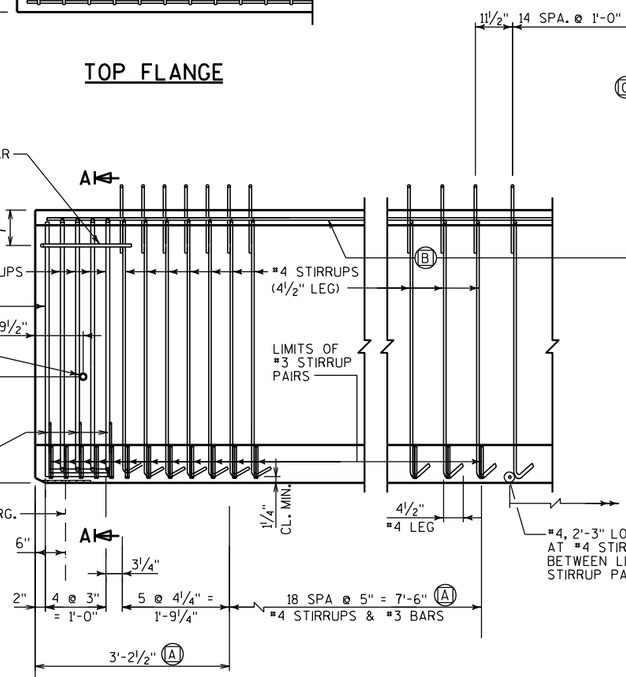
STATE PROJECT NUMBER
1060-33-80



TOP FLANGE



SECTION A-A

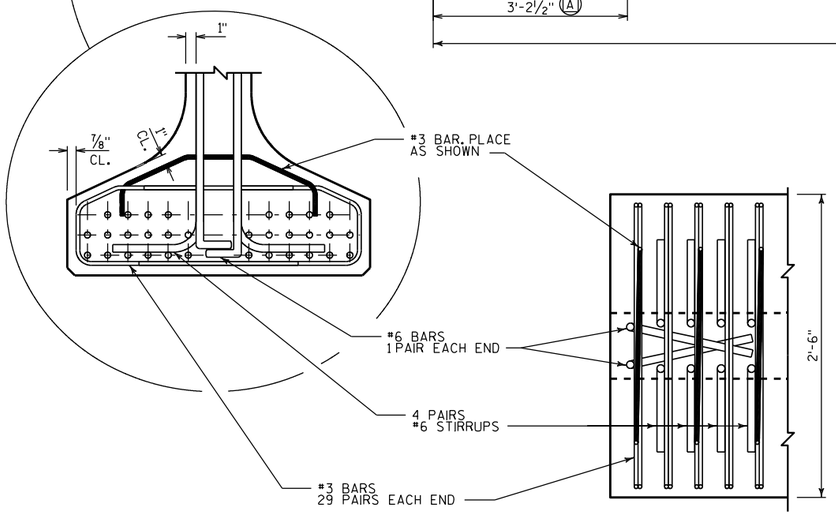


SIDE VIEW & TYP. SECTION IN SPAN

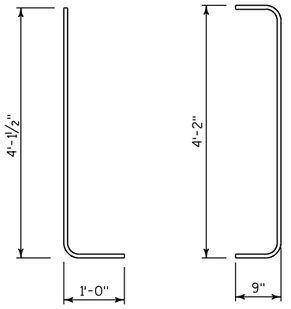
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6-#4 BARS, FULL LENGTH, MIN. LAP = 1'-8"

Ⓒ FIELD BEND PRESTRESSED GIRDER TIE REINFORCEMENT IN CONFLICT WITH DECK SLAB TOP REINFORCEMENT AS NEEDED

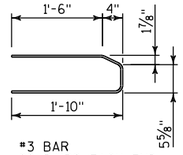


BOTTOM FLANGE

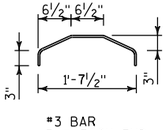


#6 BAR
2 @ EACH END

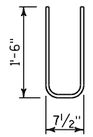
#6 BAR
8 @ EACH END



#3 BAR
29 PAIRS EACH END
(EPOXY COATED)



#3 BAR
3 @ EACH END
(EPOXY COAT)



#5 BAR
1 @ EACH END

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER AND ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE SHEET 14.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

54W" PRESTRESSED GIRDER

SHEET 11 OF 24

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-789\cds\B789_080501_gr.dgn PLOT DATE : 01-MAY-2014 07:55 PLOT BY : MSCAYA PLOT NAME : B789_080501_gr PLOT SCALE : 8:1

STATE PROJECT NUMBER

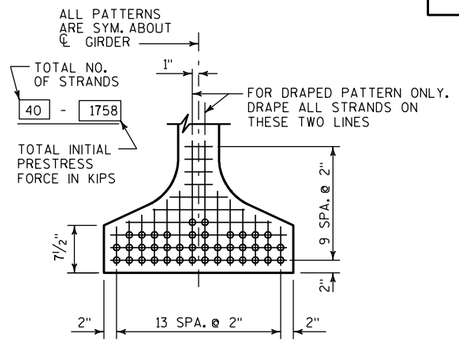
1060-33-80

GIRDER DATA

SPAN	GIRDER NUMBERS	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) *** 1/10	2/10	3/10	4/10	5/10	CONC. STRGTH. f'c (p.s.i.)	f'ci (P.S.I.)	"P" ▲ 1ST 1/3 OF GIRDER	"P" ▲ MID 1/3 OF GIRDER	"P" ▲ END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN (IN.) "A"	"B" MIN.	"B" MAX.	"C"	NO. OF DEBONDED STRANDS
1	GIRDER 1	124'-0"	3/4	1 3/8	1 7/8	2 1/4	2 3/8	8000	6800	8.0	8.0	8.0	0.6	40	49	16	19	5	0
1	GIRDER 2	124'-0"	5/8	1 1/4	1 3/4	2 1/8	2 1/4	8000	6800	8.0	8.0	8.0	0.6	40	49	16	19	5	0
1	GIRDER 3	124'-0"	5/8	1 1/4	1 3/4	2 1/8	2 1/4	8000	6800	8.5	8.0	8.5	0.6	40	49	16	19	5	0
1	GIRDER 4	124'-0"	5/8	1 3/8	1 3/4	2 1/8	2 1/4	8000	6800	8.5	8.0	8.5	0.6	40	49	16	19	5	0
1	GIRDER 5	124'-0"	5/8	1 3/8	1 7/8	2 1/8	2 1/4	8000	6800	9.0	8.0	9.0	0.6	40	49	16	19	5	0
1	GIRDER 6	124'-0"	3/4	1 3/8	1 7/8	2 1/8	2 1/4	8000	6800	9.5	8.0	9.5	0.6	40	49	16	19	5	0
1	GIRDER 7	124'-0"	3/4	1 3/8	1 7/8	2 1/4	2 3/8	8000	6800	10.0	8.0	10.0	0.6	40	49	16	19	5	0
1	GIRDER 8	124'-0"	3/4	1 3/8	1 7/8	2 1/4	2 3/8	8000	6800	10.0	8.0	10.0	0.6	40	49	16	19	5	0
1	GIRDER 9	124'-0"	3/4	1 3/8	1 7/8	2 1/4	2 3/8	8000	6800	10.5	8.0	10.5	0.6	40	49	16	19	5	0
1	GIRDER 10	124'-0"	3/4	1 1/2	2	2 3/8	2 1/2	8000	6800	11.0	8.0	11.0	0.6	40	49	16	19	5	0

*** SEE DEAD LOAD DEFLECTION DIAGRAM

▲ FIELD BEND TIE REINFORCEMENT IN CONFLICT WITH DECK SLAB TOP REINFORCEMENT MAT AS NEEDED



STRAND PATTERN

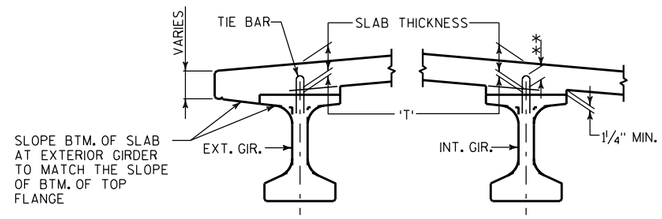
0.6" DIA. STRANDS

SPAN	GIRDER NUMBERS	PRESTRESS CAMBER (A*) (IN.)	DEAD LOAD DEFLECTION (B) (IN.)	RESIDUAL CAMBER (C) (IN.)
1	GIRDER 1	4 1/4	2 3/8	1 7/8
1	GIRDER 2	4 1/4	2 1/4	2
1	GIRDER 3	4 1/4	2 1/4	2
1	GIRDER 4	4 1/4	2 1/4	2
1	GIRDER 5	4 1/4	2 1/4	2
1	GIRDER 6	4 1/4	2 1/4	2
1	GIRDER 7	4 1/4	2 3/8	1 7/8
1	GIRDER 8	4 1/4	2 3/8	1 7/8
1	GIRDER 9	4 1/4	2 3/8	1 7/8
1	GIRDER 10	4 1/4	2 1/2	1 3/4

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

THESE VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



SLAB HAUNCH DETAIL

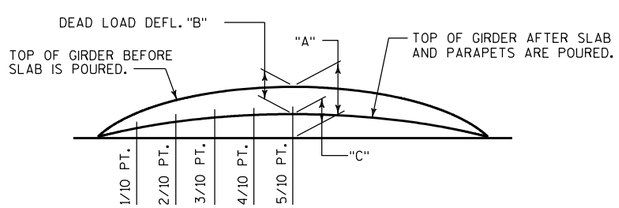
IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

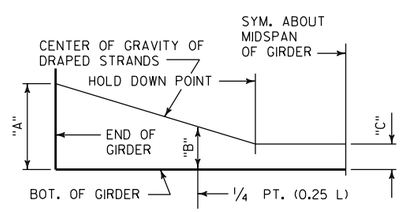
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4 1/4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

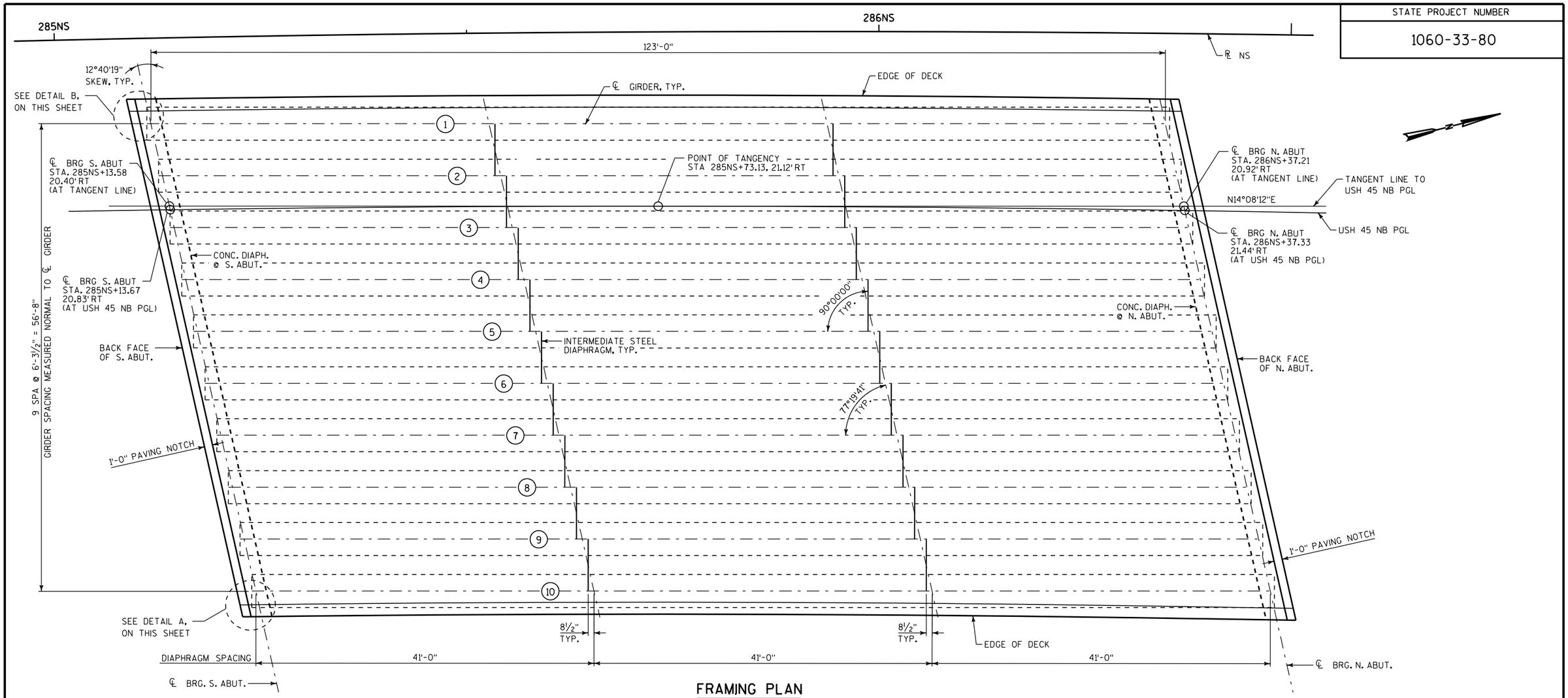
54W" PRESTRESSED GIRDER DETAILS

SHEET 12 OF 24

8

8

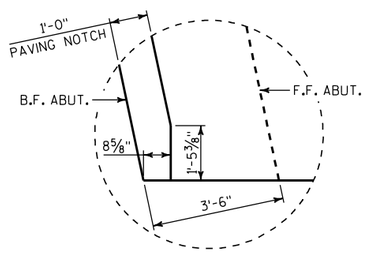
STATE PROJECT NUMBER
1060-33-80



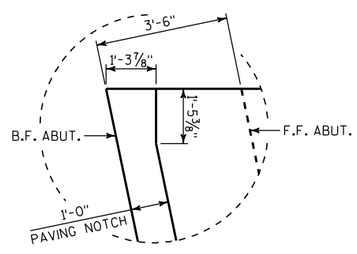
FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	S. ABUT. BRG.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	N. ABUT. BRG.
W. EDGE OF DECK	793.89	793.75	793.60	793.46	793.31	793.17	793.02	792.88	792.71	792.54	792.37
FLOW LINE W. PARAPET	793.89	793.74	793.60	793.45	793.31	793.16	793.02	792.88	792.71	792.53	792.36
℄ GIRDER 1	793.83	793.68	793.53	793.38	793.24	793.09	792.95	792.80	792.64	792.48	792.31
℄ GIRDER 2	793.59	793.44	793.29	793.15	793.00	792.85	792.71	792.57	792.42	792.27	792.12
TANGENT	793.45	793.30	793.15	793.01	792.86	792.71	792.57	792.43	792.29	792.15	792.01
℄ GIRDER 3	793.36	793.21	793.06	792.91	792.76	792.62	792.47	792.33	792.20	792.06	791.93
℄ GIRDER 4	793.12	792.97	792.82	792.67	792.53	792.38	792.24	792.10	791.98	791.86	791.74
℄ GIRDER 5	792.88	792.73	792.58	792.44	792.29	792.14	792.00	791.87	791.77	791.66	791.55
℄ GIRDER 6	792.65	792.50	792.35	792.20	792.05	791.91	791.76	791.65	791.56	791.47	791.37
℄ GIRDER 7	792.41	792.26	792.11	791.96	791.82	791.67	791.53	791.43	791.35	791.27	791.20
℄ GIRDER 8	792.17	792.02	791.87	791.73	791.58	791.43	791.29	791.21	791.15	791.09	791.02
℄ GIRDER 9	791.94	791.79	791.64	791.49	791.34	791.20	791.05	791.00	790.95	790.90	790.85
℄ GIRDER 10	791.70	791.55	791.40	791.25	791.11	790.96	790.82	790.79	790.75	790.72	790.69
FLOW LINE E. PARAPET	791.64	791.49	791.35	791.20	791.05	790.91	790.77	790.73	790.70	790.67	790.63
E. EDGE OF DECK	791.64	791.49	791.34	791.20	791.05	790.90	790.77	790.73	790.70	790.67	790.63



DETAIL A
(DETAIL SIMILAR AT NW CORNER)



DETAIL B
(DETAIL SIMILAR AT NE CORNER)

NOTE

1. FOR OFFSET AND TANGENT LINE LAYOUT, SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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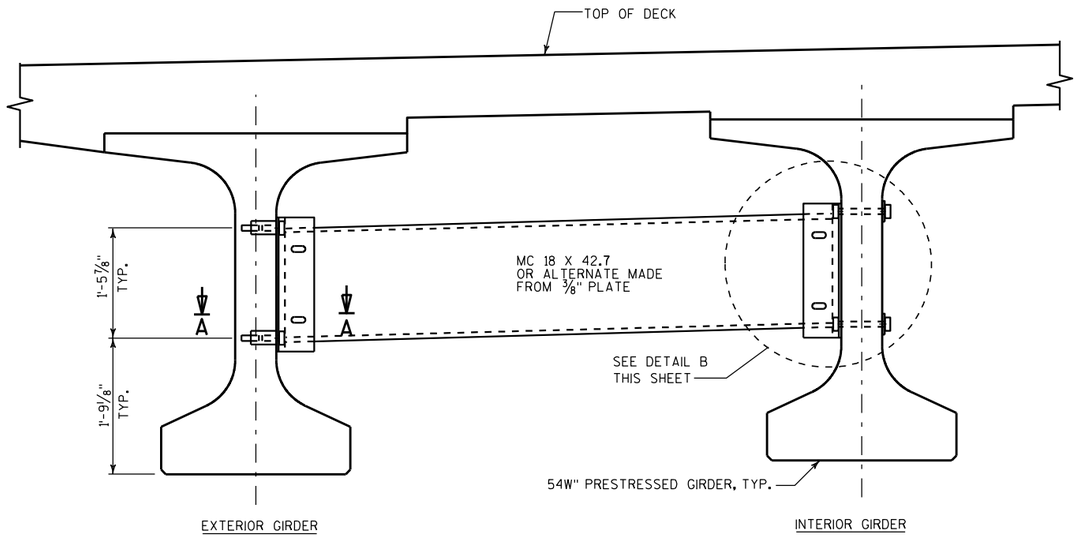
STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

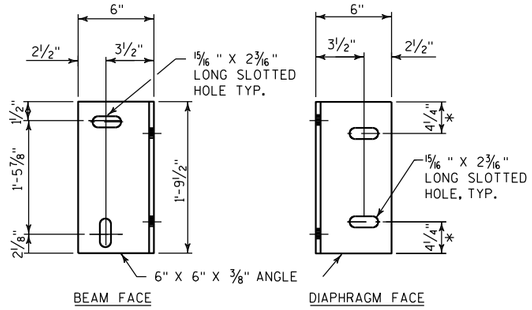
SUPERSTRUCTURE FRAMING PLAN

SHEET 13 OF 24

STATE PROJECT NUMBER
1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM



DIAPHRAGM SUPPORT

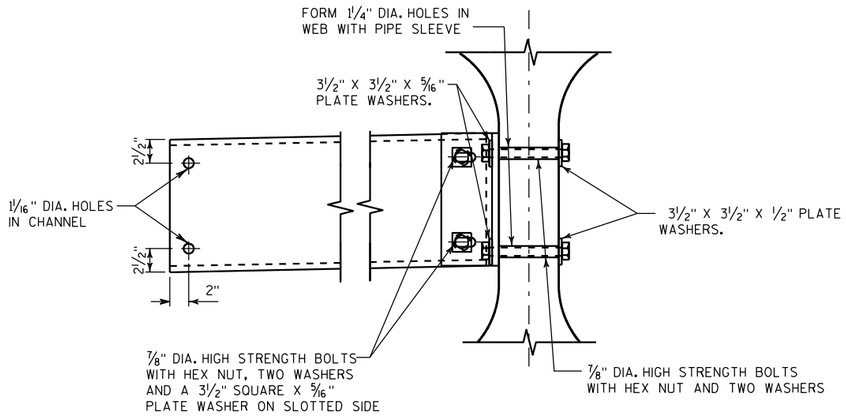
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-789", EACH.

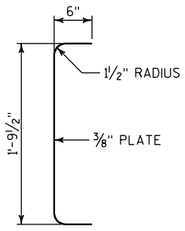
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

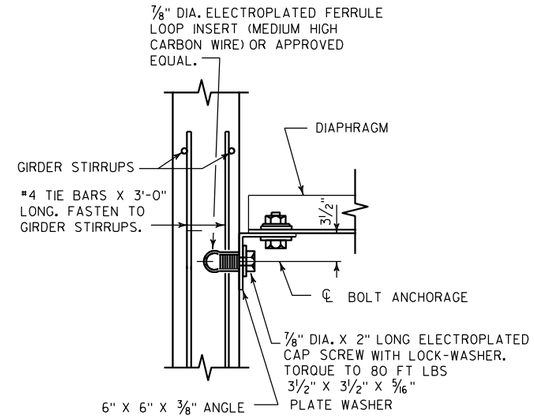


DETAIL B



SECTION THRU ALTERNATE DIAPHRAGM

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

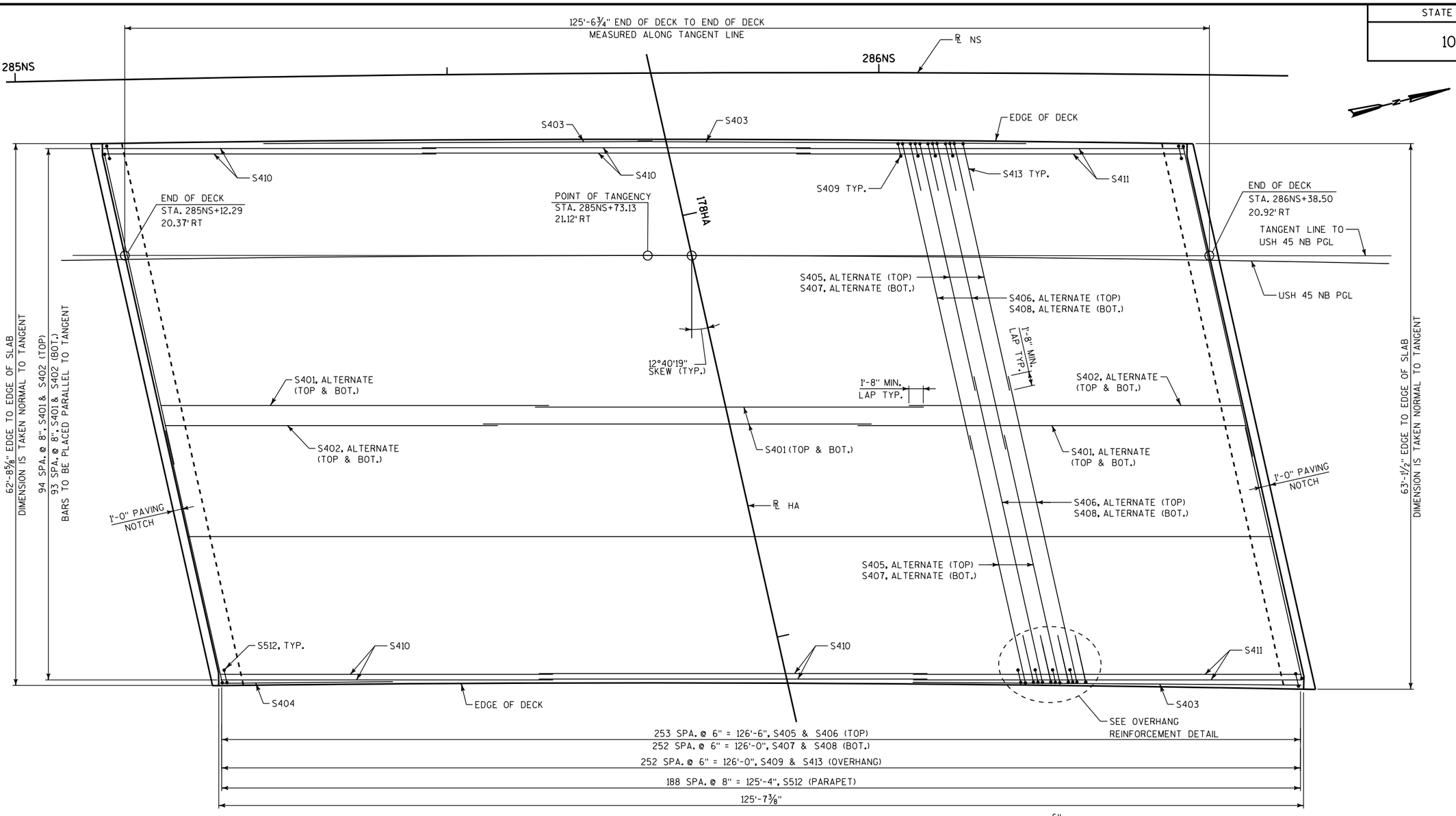
DRAWN BY MM | PLANS CK'D. MHZ

STEEL DIAPHRAGM

SHEET 14 OF 24

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STATE PROJECT NUMBER
1060-33-80

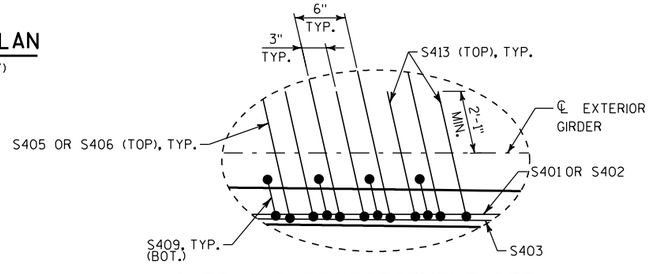


DECK REINFORCEMENT PLAN

(PARAPET NOT SHOWN FOR CLARITY)

NOTES

1. FIELD BEND PRESTRESSED GIRDER TIE REINFORCEMENT IN CONFLICT WITH DECK SLAB TOP REINFORCEMENT MAT AS NEEDED.
2. FOR CROSS SECTION THRU DECK, SEE SHEET 16.
3. FOR HAUNCH REINFORCEMENT, SEE SHEET 17.
4. FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 17.
5. FOR PARAPET REINFORCEMENT, SEE SHEETS 18 & 19.
6. FOR OFFSET AND TANGENT LINE LAYOUT, SEE SHEET 2.



OVERHANG REINFORCEMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

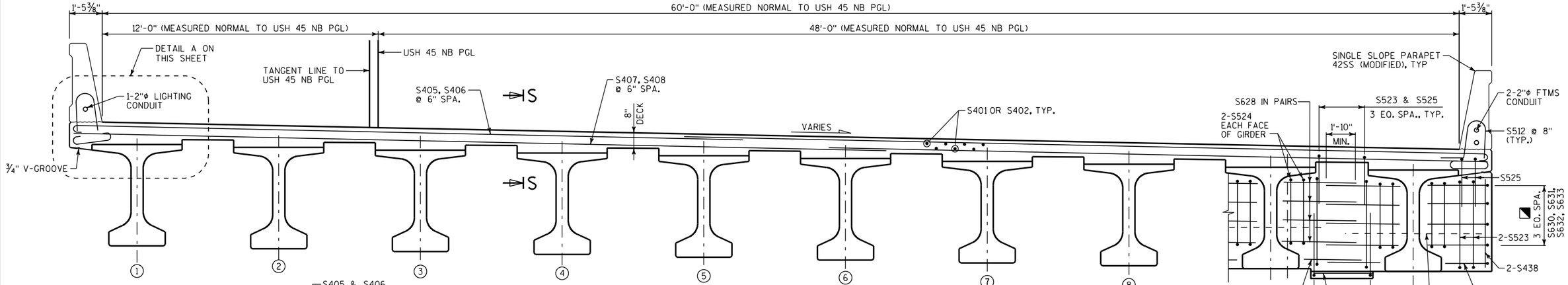
DRAWN BY MM | PLANS CK'D. MHZ

SUPERSTRUCTURE REINFORCEMENT

SHEET 15 OF 24

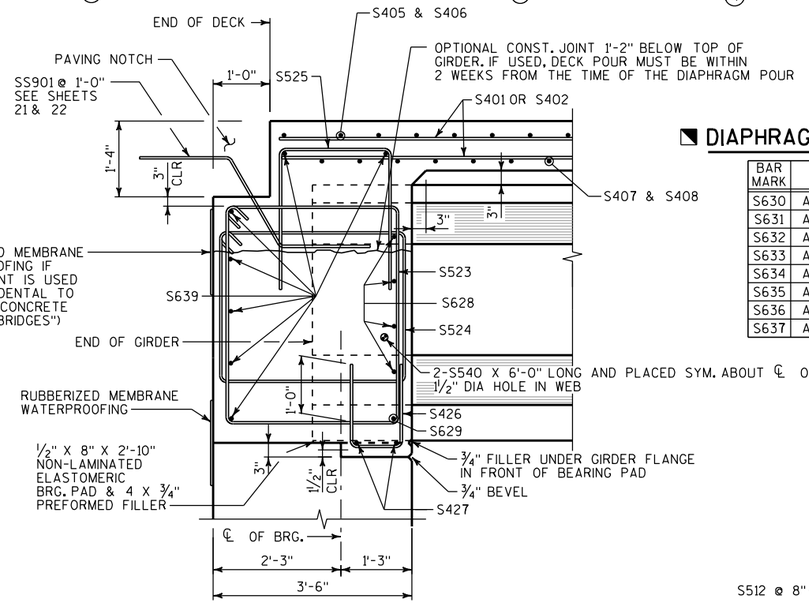
FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-789\cds\B789_080505_ss.dgn PLOT DATE : 01-MAY-2014 07:56 PLOT BY : MSCAYA PLOT NAME : B789_080505_ss PLOT SCALE : 12:1

STATE PROJECT NUMBER
1060-33-80



CROSS SECTION THRU DECK

(LOOKING NORTH)



PART LONGITUDINAL SECTION AT ABUTMENT

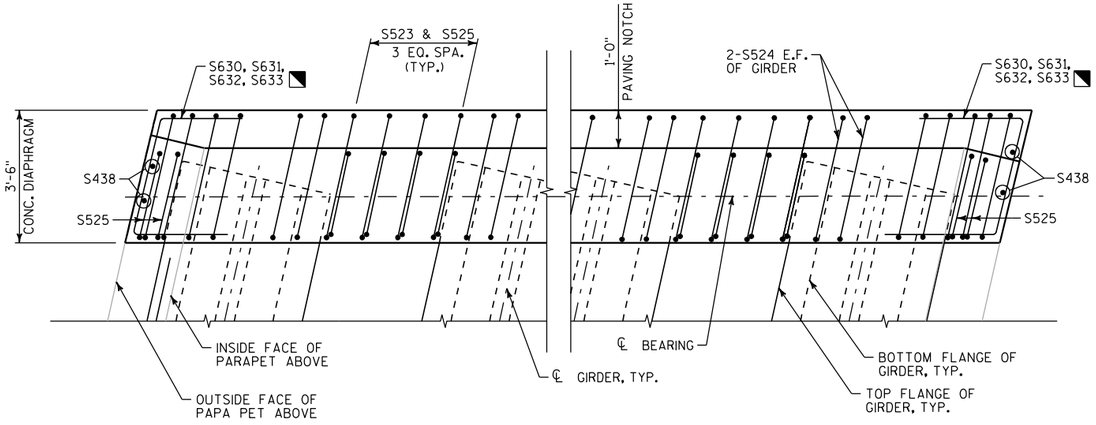
CONC DIAPH TO EXTEND OUT TO OUT OF BRIDGE DECK
(SEE SHEETS 5, 6, 8 & 9 FOR ABUTMENT BEAM SEAT DETAILS)

DIAPHRAGM REINFORCEMENT TABLE

BAR MARK	LOCATION
S630	ABUTMENT DIAPHRAGM (SW CORNER)
S631	ABUTMENT DIAPHRAGM (SE CORNER)
S632	ABUTMENT DIAPHRAGM (NW CORNER)
S633	ABUTMENT DIAPHRAGM (NE CORNER)
S634	ABUTMENT DIAPHRAGM (SW CORNER)
S635	ABUTMENT DIAPHRAGM (SE CORNER)
S636	ABUTMENT DIAPHRAGM (NW CORNER)
S637	ABUTMENT DIAPHRAGM (NE CORNER)

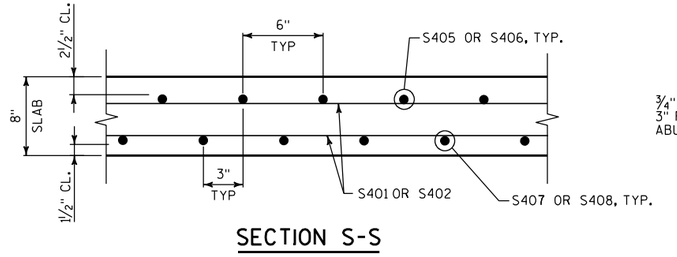
CONCRETE DIAPHRAGM

(TYPICAL)
(BACK FACE LONGITUDINAL BARS S639 NOT SHOWN FOR CLARITY)

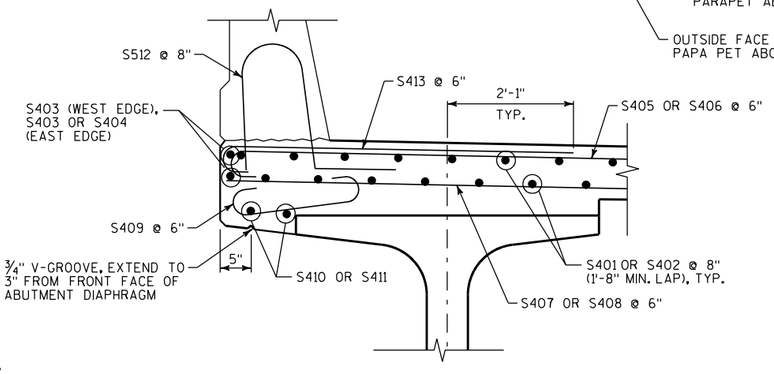


ABUTMENT CONCRETE DIAPHRAGM PART PLAN

(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)



SECTION S-S



DETAIL A

NOTES

1. FOR SUPERSTRUCTURE REINFORCEMENT PLAN, SEE SHEET 15.
2. FOR HAUNCH REINFORCEMENT, SEE SHEET 17.
3. FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 17.
4. FOR PARAPET REINFORCEMENT, SEE SHEETS 18 & 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

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SUPERSTRUCTURE DETAILS (1 OF 2)

SHEET 16 OF 24

8

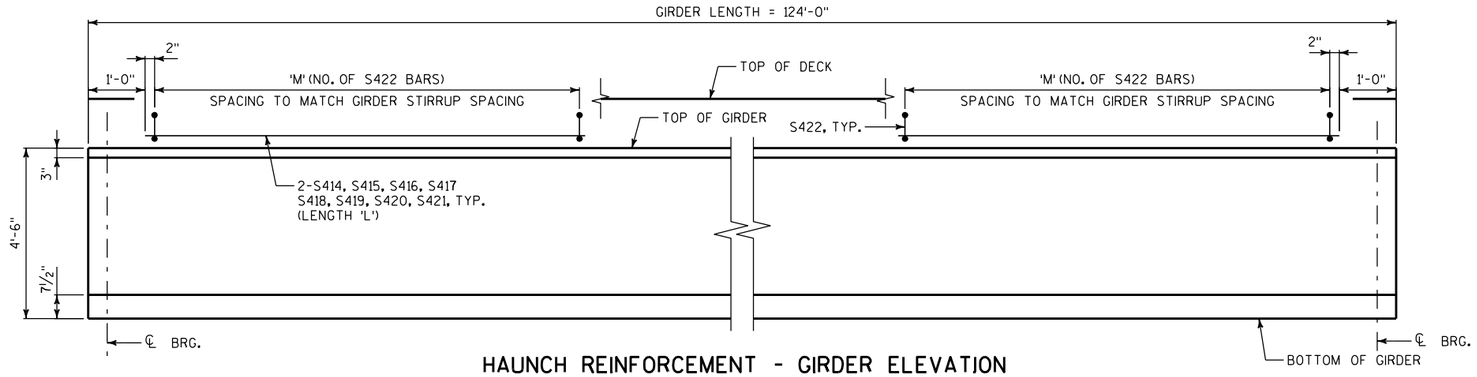
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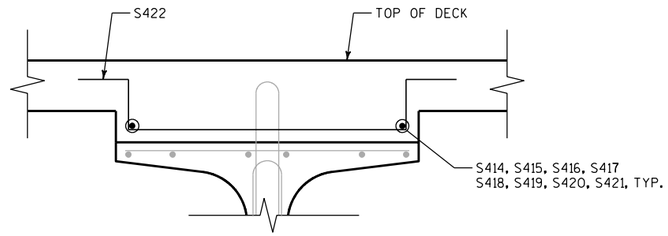
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	378	45'-0"	-	DECK LONG. - TOP & BOT.
S402	X	189	38'-7"	-	DECK LONG. - TOP & BOT.
S403	X	6	45'-0"	-	DECK LONG. - TOP & BOT. WEST & NE EDGE
S404	X	2	20'-0"	-	DECK LONG. - TOP & BOT. SE EDGE
S405	X	252	30'-6"	X	DECK TRANS. - TOP
S406	X	252	36'-7"	X	DECK TRANS. - TOP
S407	X	252	30'-0"	-	DECK TRANS. - BOT.
S408	X	252	36'-1"	-	DECK TRANS. - BOT.
S409	X	504	2'-8"	X	DECK OVERHANG TRANS. - BOT.
S410	X	8	45'-0"	-	DECK OVERHANG LONG. - BOT.
S411	X	4	38'-7"	-	DECK OVERHANG LONG. - BOT.
S512	X	378	4'-5"	X	DECK PARAPET - VERT.
S413	X	504	6'-1"	X	DECK OVERHANG TRANS. - TOP
S414	X	4	1'-9"	-	HAUNCH LONG. GIRDER 3
S415	X	4	5'-6"	-	HAUNCH LONG. GIRDER 4
S416	X	4	9'-9"	-	HAUNCH LONG. GIRDER 5
S417	X	4	14'-4"	-	HAUNCH LONG. GIRDER 6
S418	X	4	19'-0"	-	HAUNCH LONG. GIRDER 7
S419	X	4	23'-3"	-	HAUNCH LONG. GIRDER 8
S420	X	4	27'-8"	-	HAUNCH LONG. GIRDER 9
S421	X	4	31'-1"	-	HAUNCH LONG GIRDER 10
S422	X	456	6'-0"	X	HAUNCH VERT. ALL GIRDERS
S523	X	80	14'-7"	X	ABUTMENT DIAPHRAGM VERT.
S524	X	80	12'-7"	X	ABUTMENT DIAPHRAGM VERT.
S525	X	80	7'-11"	X	ABUTMENT DIAPHRAGM VERT.
S426	X	72	3'-7"	X	ABUTMENT DIAPHRAGM VERT.
S427	X	36	2'-6"	-	ABUTMENT DIAPHRAGM HORIZ - F.F.
S628	X	144	3'-10"	-	ABUTMENT DIAPHRAGM HORIZ - F.F.
S629	X	36	2'-9"	-	ABUTMENT DIAPHRAGM HORIZ - F.F.
S630	X	4	7'-7"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (SW CORNER)
S631	X	4	7'-9"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (SE CORNER)
S632	X	4	7'-7"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (NW CORNER)
S633	X	4	8'-1"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (NE CORNER)
S634	X	1	6'-7"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (SW CORNER)
S635	X	1	6'-9"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (SE CORNER)
S636	X	1	6'-9"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (NW CORNER)
S637	X	1	7'-1"	X	ABUTMENT DIAPHRAGM HORIZ. EXTERIOR (NE CORNER)
S438	X	8	3'-11"	-	ABUTMENT DIAPHRAGM VERT. EXTERIOR
S639	X	28	35'-2"	-	ABUTMENT DIAPHRAGM HORIZ. - B.F.
S540	X	40	6'-0"	-	ABUTMENT DIAPHRAGM THROUGH GIRDERS
SS901	-	128	5'-0"	X	CONC. ABUT. DIAPH. TO APPROACH SLAB

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR
FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



HAUNCH REINFORCEMENT - GIRDER ELEVATION

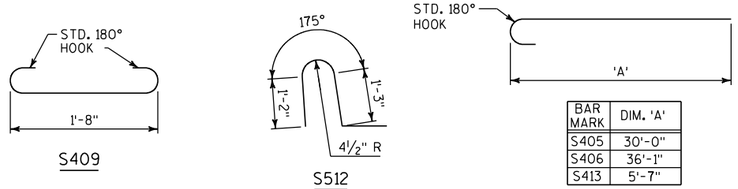


HAUNCH REINFORCEMENT DETAIL

(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)

HAUNCH REINFORCEMENT TABLE

	LENGTH 'L'	'M' @ EACH END	LONG. BARS
GIRDER 1	-	-	-
GIRDER 2	-	-	-
GIRDER 3	1'-9"	5	S414
GIRDER 4	5'-6"	14	S415
GIRDER 5	9'-9"	24	S416
GIRDER 6	14'-4"	28	S417
GIRDER 7	19'-0"	33	S418
GIRDER 8	23'-3"	37	S419
GIRDER 9	27'-8"	42	S420
GIRDER 10	31'-1"	45	S421

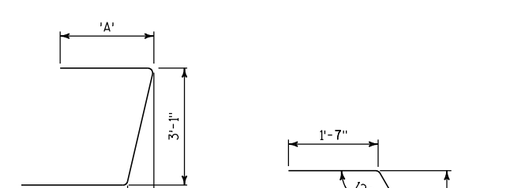


BAR MARK	DIM. 'A'
S405	30'-0"
S406	36'-1"
S413	5'-7"

BAR MARK	DIM. 'A'	DIM. 'B'
S523	3'-2"	3'-10"
S524	3'-2"	2'-10"

BAR MARK	DIM. 'A'	DIM. 'B'
S525	2'-2"	3'-0"
S426	11"	1'-5"

BENDING DIAGRAMS



BAR MARK	DIM. 'A'	DIM. 'B'
S630	2'-5"	2'-5"
S631	2'-7"	2'-5"
S632	2'-5"	2'-5"
S633	2'-5"	2'-11"
S634	2'-5"	1'-5"
S635	1'-7"	2'-5"
S636	1'-7"	2'-5"
S637	2'-5"	1'-11"

NOTES

1. FOR SUPERSTRUCTURE REINFORCEMENT PLAN, SEE SHEET 15.
2. FOR DIAPHRAGM REINFORCING PLAN & ELEVATION, SEE SHEET 16.
3. FOR STRUCTURAL APPROACH SLAB, SEE SHEETS 21 & 22.
4. FOR ABUTMENT DETAILS, SEE SHEETS 5, 6, 8 & 9

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

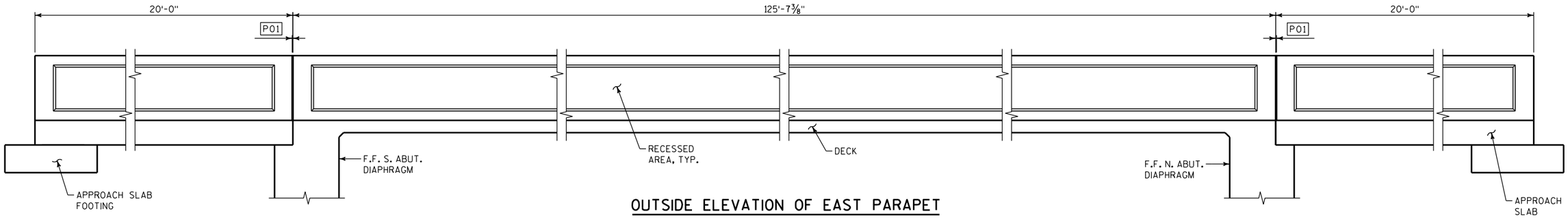
SUPERSTRUCTURE DETAILS (2 OF 2)

SHEET 17 OF 24

8

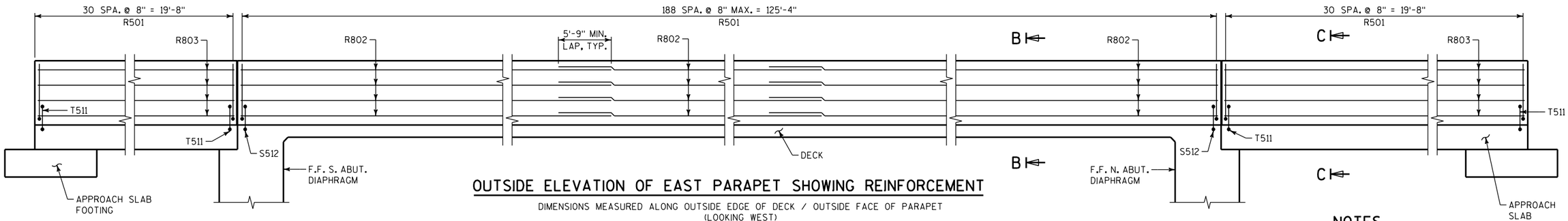
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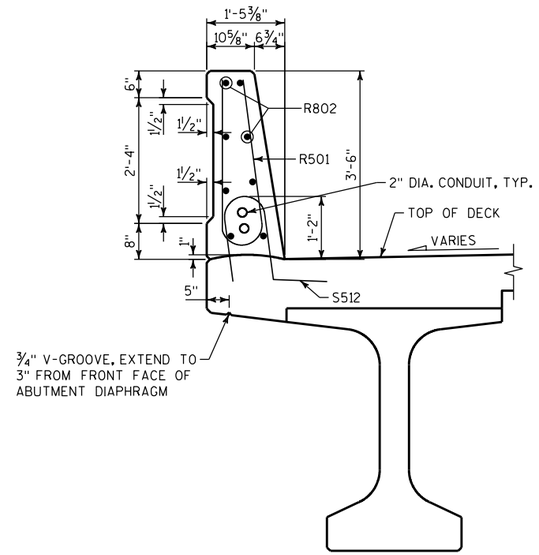
OUTSIDE ELEVATION OF EAST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)

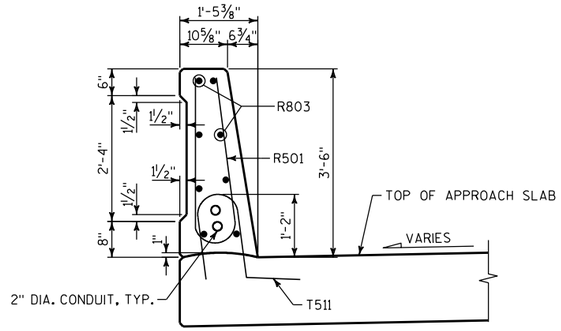


OUTSIDE ELEVATION OF EAST PARAPET SHOWING REINFORCEMENT

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)



SECTION B-B



SECTION C-C

NOTES

1. FOR PARAPET BILL OF BARS, SEE SHEET 19.
2. FOR SUPERSTRUCTURE REINFORCEMENT, SEE SHEETS 15, 16 & 17.
3. FOR STRUCTURAL APPROACH SLAB REINFORCEMENT, SEE SHEETS 21 & 22.
4. FOR CONDUIT DETAILS, SEE SHEET 20.
5. FOR CONCRETE STAINING, SEE SHEET 24 FOR AESTHETIC DETAILS.

LEGEND

P01 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY	MM	PLANS CK'D.	MHZ

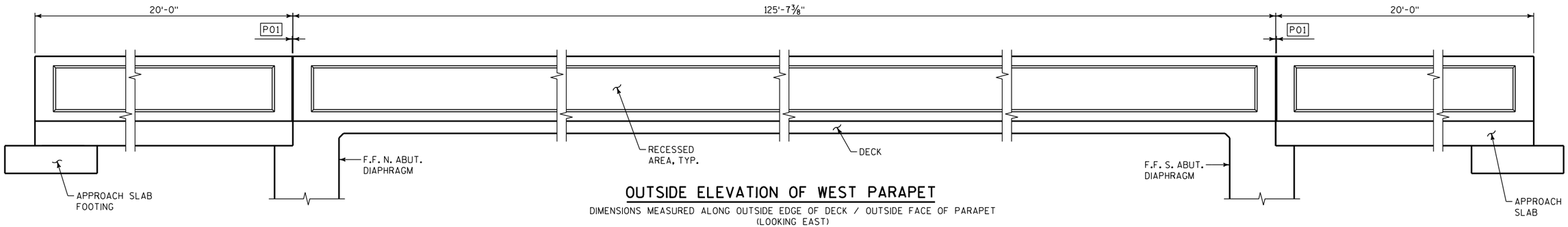
SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 3)

SHEET 18 OF 24

8

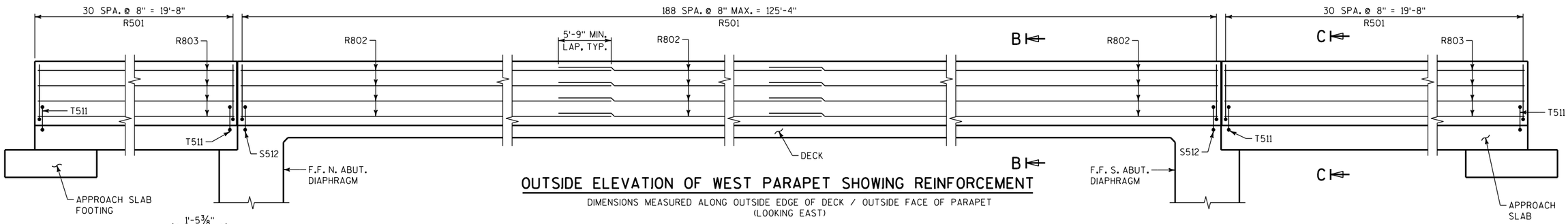
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STATE PROJECT NUMBER
1060-33-80



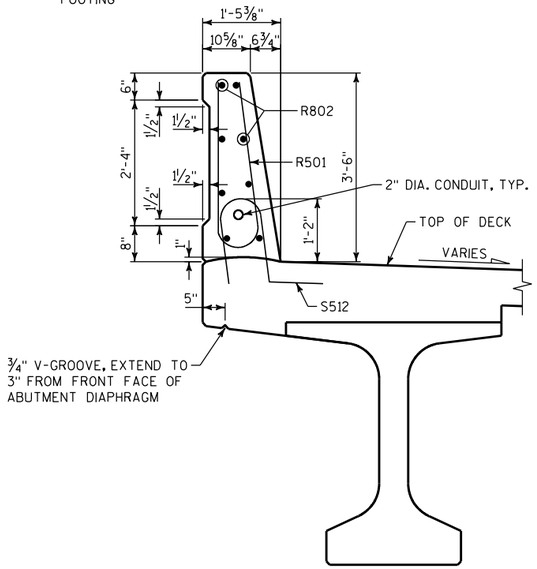
OUTSIDE ELEVATION OF WEST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)

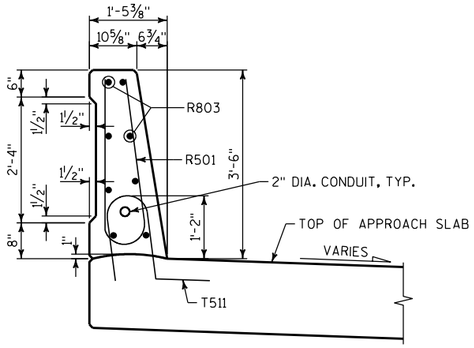


OUTSIDE ELEVATION OF WEST PARAPET SHOWING REINFORCEMENT

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



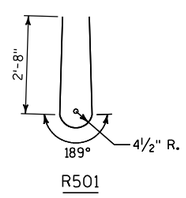
SECTION B-B



SECTION C-C

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	502	6'-8"	X	-	PARAPET - VERTICAL
R802	X	48	45'-8"	-	-	PARAPET - LONG. OVER DECK
R803	X	32	19'-8"	-	-	PARAPET - LONG. OVER APPROACH SLAB



R501

BENDING DIAGRAM

NOTES

1. FOR SUPERSTRUCTURE REINFORCEMENT, SEE SHEETS 15, 16, & 17.
2. FOR STRUCTURAL APPROACH SLAB REINFORCEMENT, SEE SHEETS 21 & 22.
3. FOR CONDUIT DETAILS, SEE SHEET 20.
4. FOR CONCRETE STAINING, SEE SHEET 24 FOR AESTHETIC DETAILS.

LEGEND

P01 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

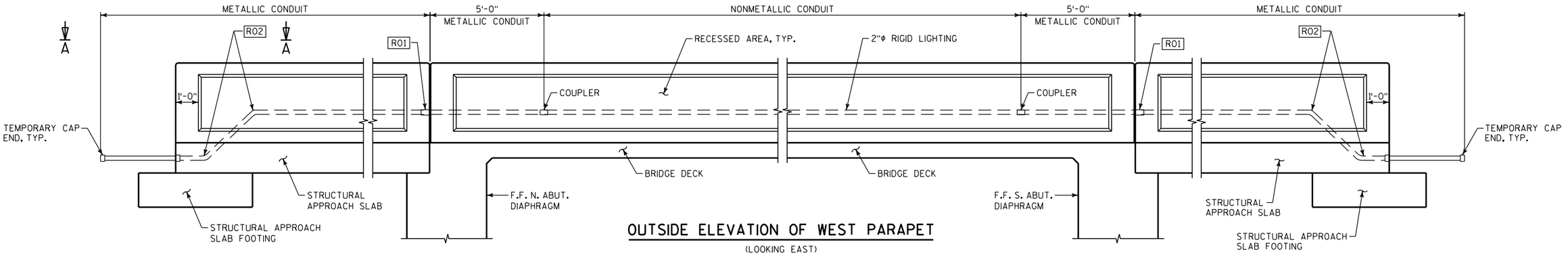
SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 3)

SHEET 19 OF 24

8

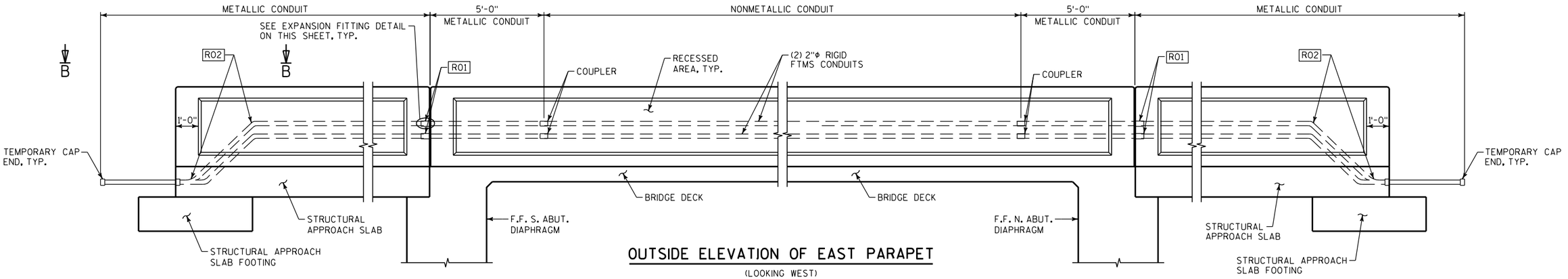
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STATE PROJECT NUMBER
1060-33-80



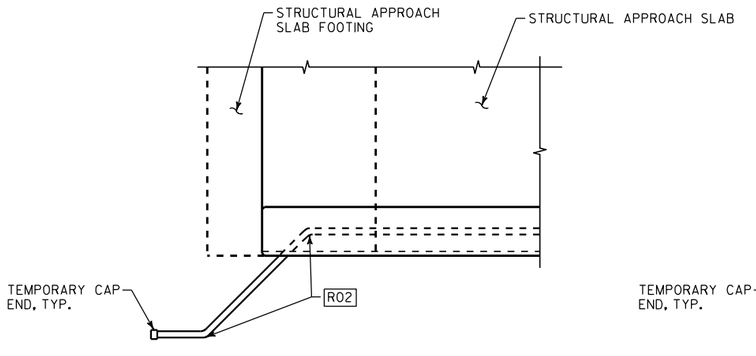
OUTSIDE ELEVATION OF WEST PARAPET

(LOOKING EAST)



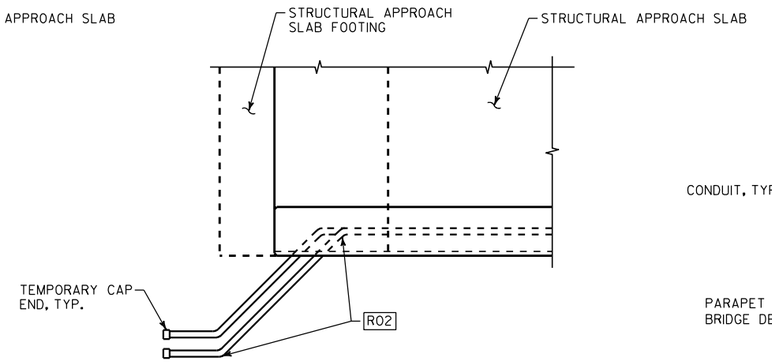
OUTSIDE ELEVATION OF EAST PARAPET

(LOOKING WEST)



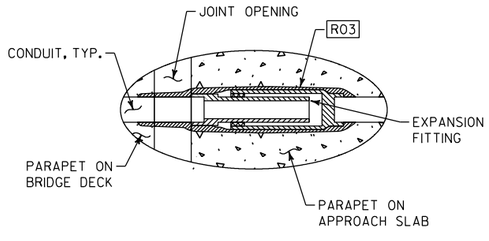
SECTION A-A

(NORTH END SHOWN,
SOUTH END SIMILAR BUT OPPOSITE HAND)



SECTION B-B

(SOUTH END SHOWN,
NORTH END SIMILAR BUT OPPOSITE HAND)



EXPANSION FITTING DETAIL

LEGEND

R01 METALLIC CONDUIT EXPANSION FITTING (O-Z/GEDNEY TYP AX-200 & BONDING JUMPER) WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCLUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

R02 45° BEND IN CONDUIT, USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

R03 WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. 1¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (3 OF 3)

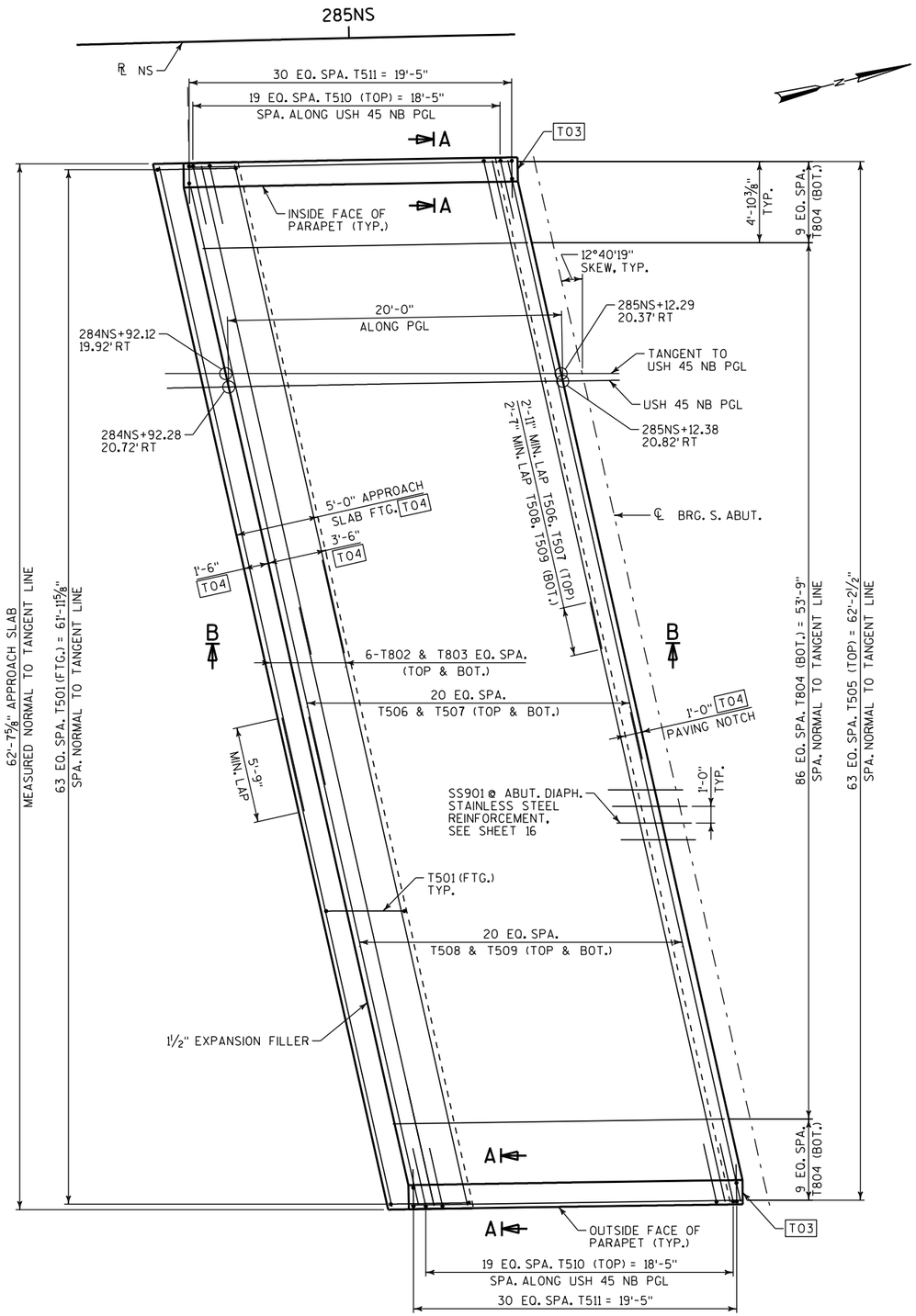
SHEET 20 OF 24

8

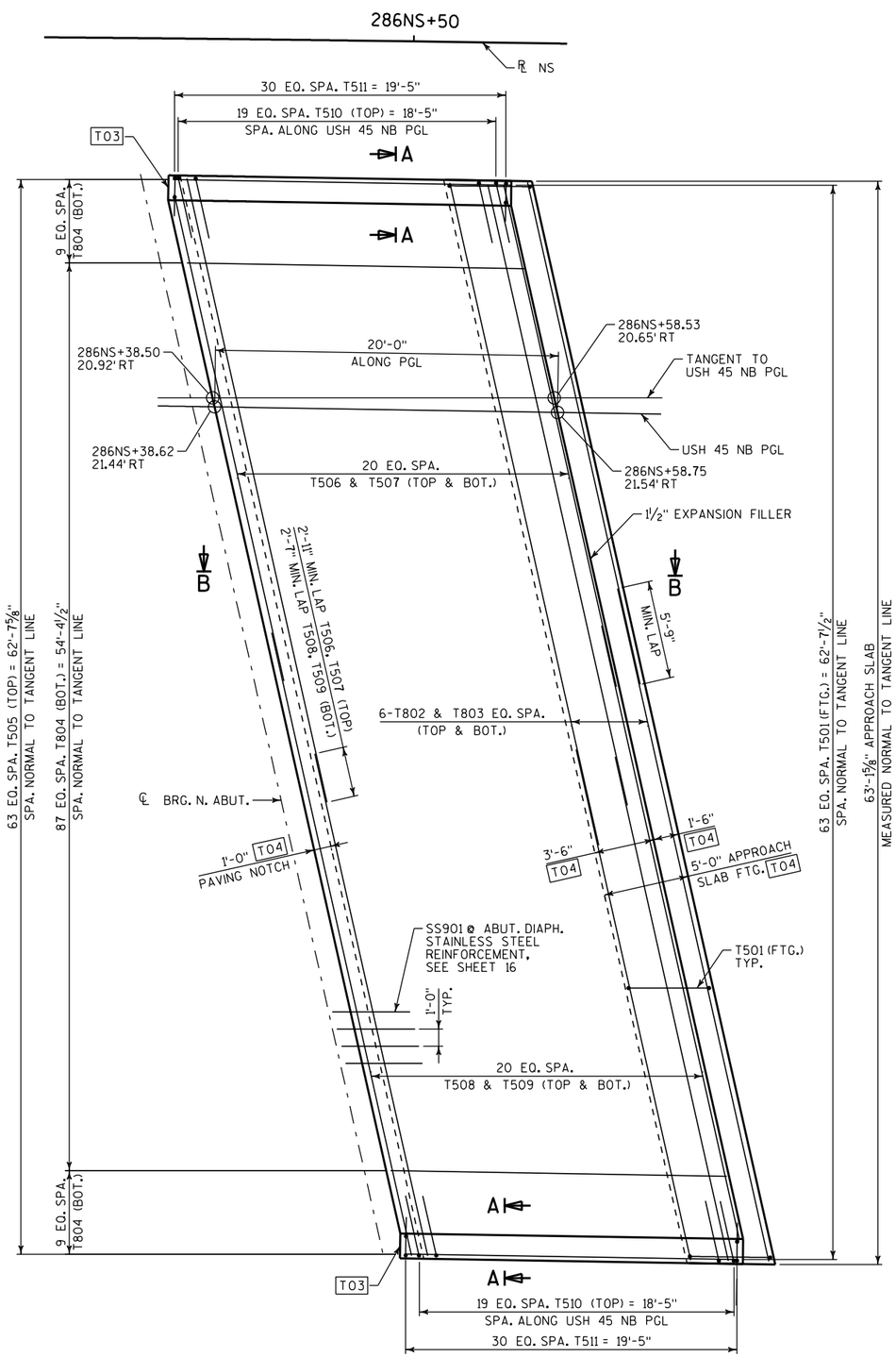
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STATE PROJECT NUMBER
1060-33-80



SOUTH APPROACH SLAB



NORTH APPROACH SLAB

LEGEND

T03 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

T04 MEASURED NORMAL TO ABUTMENT

NOTES

1. FOR PARAPET REINFORCEMENT, SEE SHEETS 18 & 19.
2. FOR SECTIONS A-A & B-B, SEE SHEET 22.
3. FOR STRUCTURAL APPROACH SLAB BILL OF BARS, SEE SHEET 22.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

STRUCTURAL APPROACH SLAB

SHEET 21 OF 24

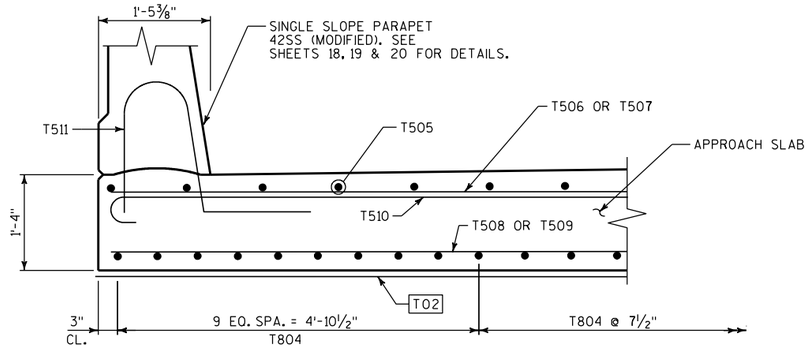
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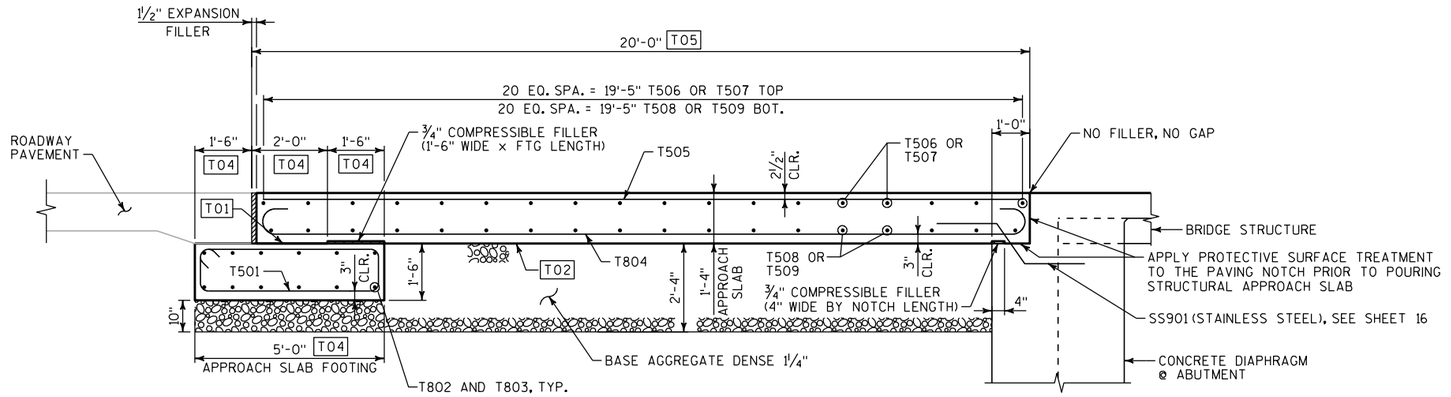
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STATE PROJECT NUMBER

1060-33-80



SECTION A-A



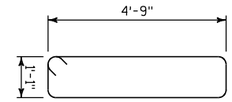
SECTION THRU APPROACH SLAB B-B

BILL OF BARS

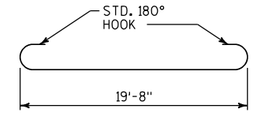
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
T501	X	128	12'-3"	X		STIRRUP - FOOTING
T802	X	24	30'-0"	-		TRANSVERSE - FOOTING
T803	X	24	40'-2"	-		TRANSVERSE - FOOTING
T804	X	211	21'-6"	X		ALONG R/L - BOT
T505	X	128	19'-8"	-		ALONG R/L - TOP
T506	X	42	30'-0"	-		TRANSVERSE - TOP
T507	X	42	37'-4"	-		TRANSVERSE - TOP
T508	X	42	30'-0"	-		TRANSVERSE - BOT
T509	X	42	37'-0"	-		TRANSVERSE - BOT
T510	X	80	4'-1"	X		TRANSVERSE - OUTSIDE
T511	X	124	4'-5"	X		PARAPET-SLAB BAR

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

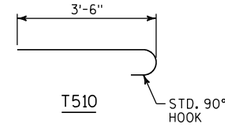
BENDING DIAGRAMS

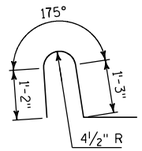


T501



T804





T511

LEGEND

T01 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

T02 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

T04 MEASURED NORMAL TO ABUTMENT

T05 MEASURE ALONG USH 45 NB PGL

NOTES

1. SEE PARAPET SHEETS FOR PARAPET REINFORCING AND TIE PLACEMENT REQUIRED IN APPROACH SLABS.
2. IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.
3. FOR STRUCTURAL APPROACH SLAB PLAN, SEE SHEET 21.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

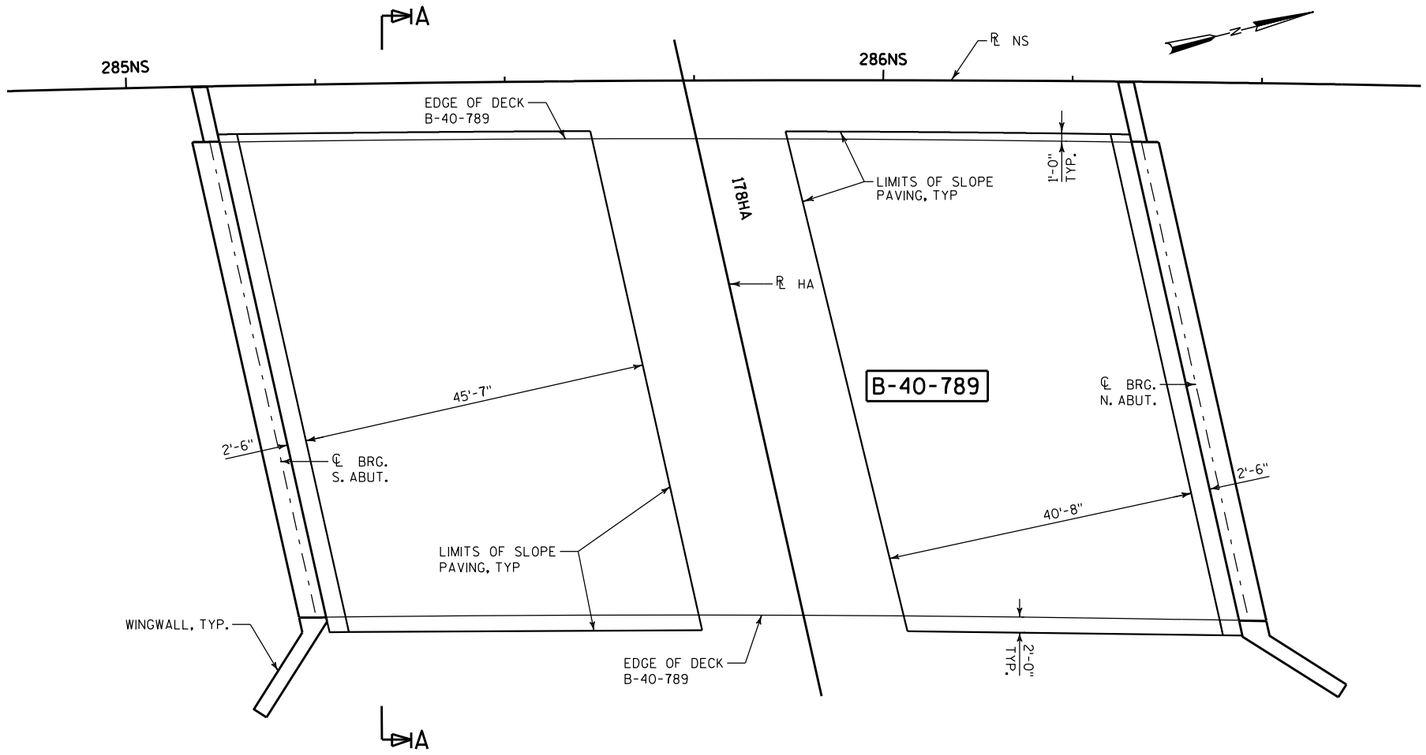
STRUCTURAL APPROACH SLAB DETAILS

SHEET 22 OF 24

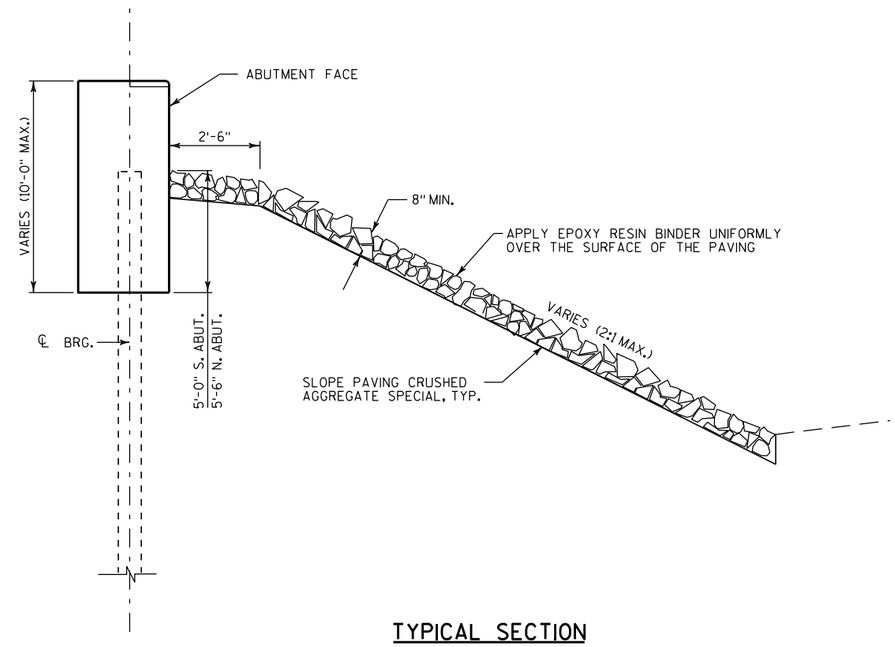
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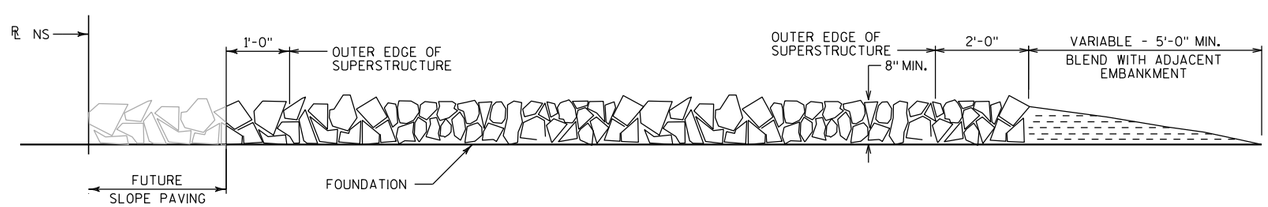
STATE PROJECT NUMBER
1060-33-80



PLAN



TYPICAL SECTION



SECTION A-A

NOTES

1. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
2. WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

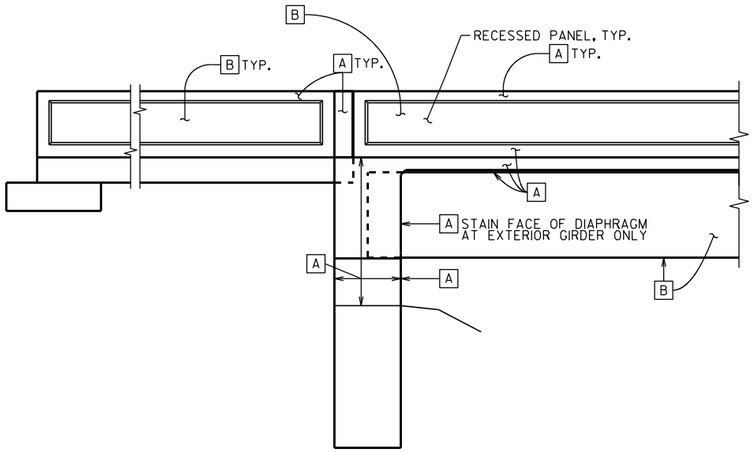
SLOPE PAVING DETAILS

SHEET 23 OF 24

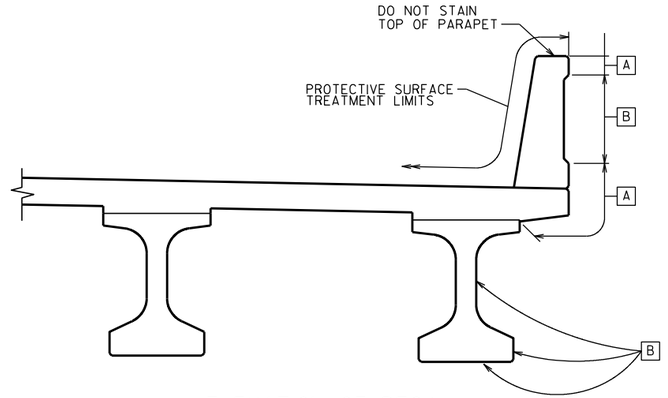
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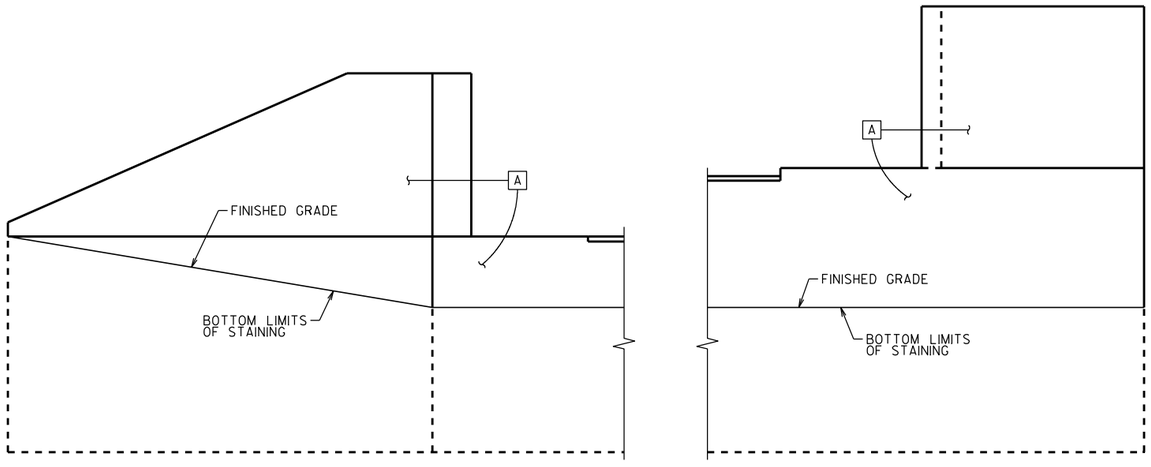
STATE PROJECT NUMBER
1060-33-80



OUTSIDE ELEVATION OF PARAPET



ELEVATION OF DECK



ABUTMENT ELEVATION

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	OUTSIDE FACE, EXCEPT AS NOTED FOR ACCENT COLORS
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO 6" BELOW TOP OF SLOPE PAVING OR TOP OF PROPOSED GROUND
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON EXTERIOR FACE
		GIRDERS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW.

BASE COLOR : FEDERAL COLOR - 36424
ACCENT COLOR #1: FEDERAL COLOR - 33522

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

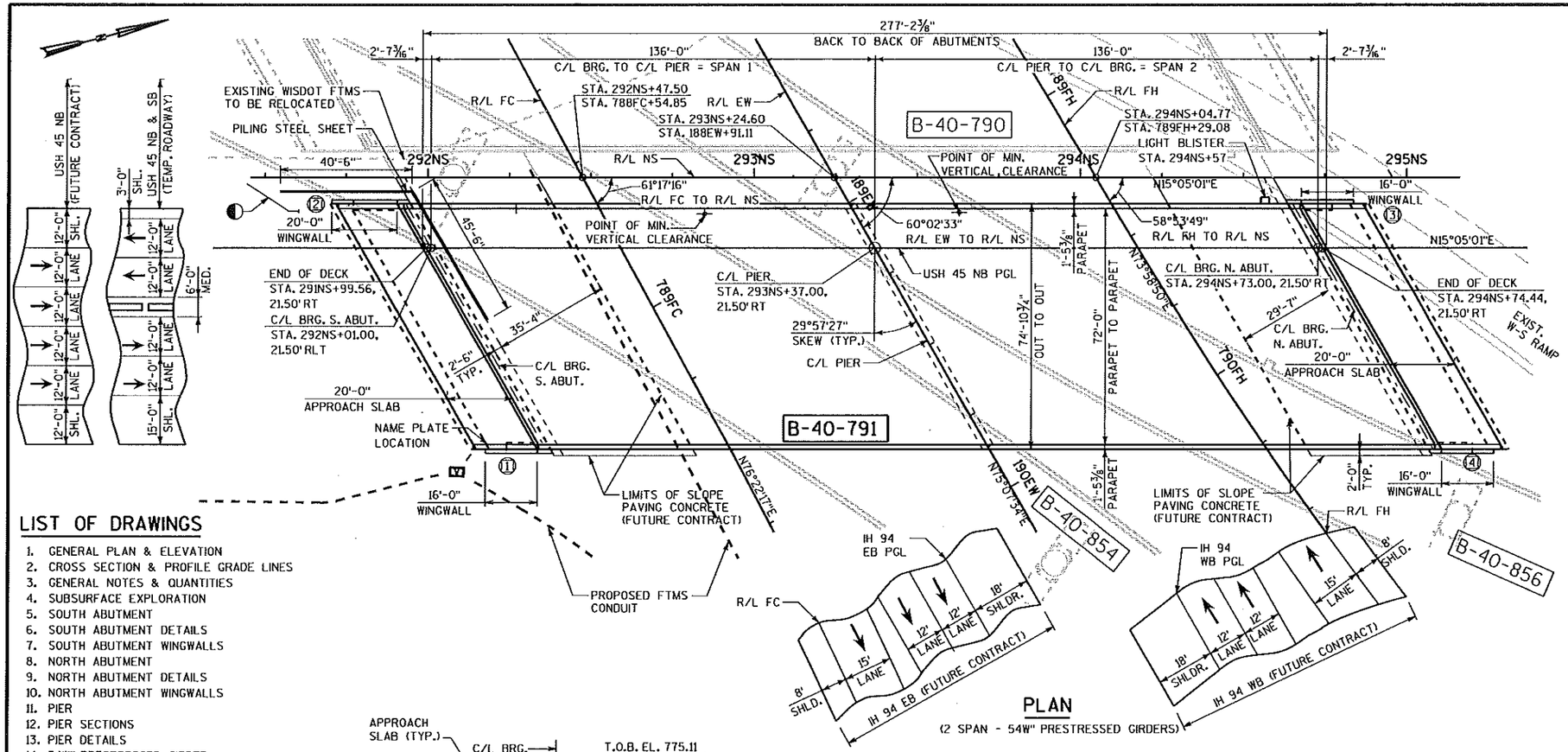
STRUCTURE B-40-789

DRAWN BY MM | PLANS CK'D. MHZ

AESTHETIC DETAILS

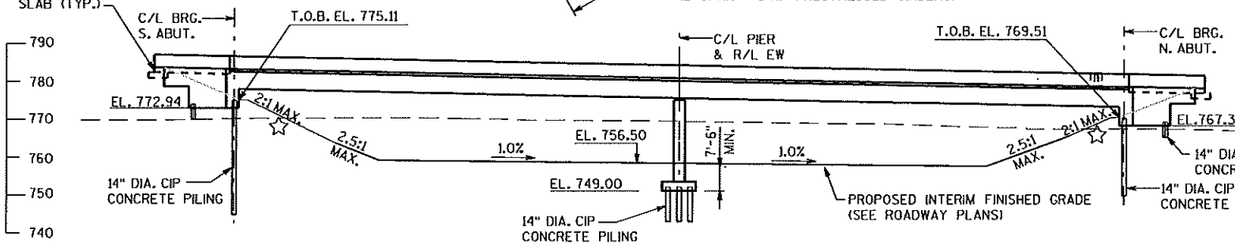
SHEET 24 OF 24

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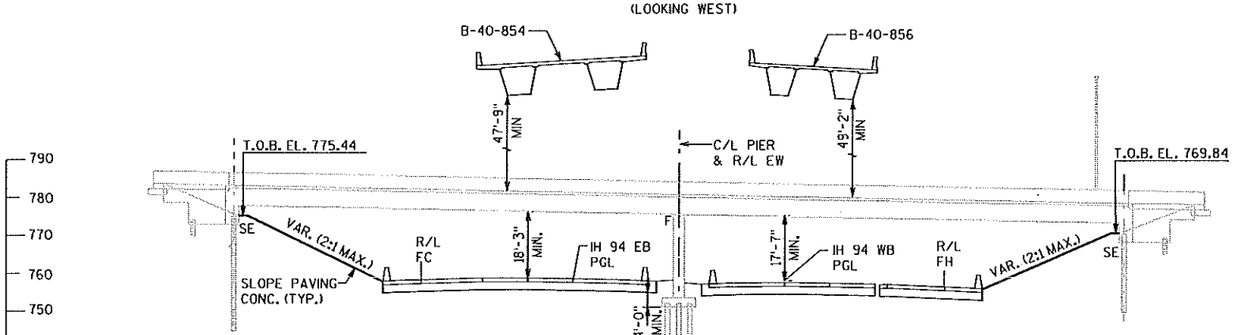
PLAN

(2 SPAN - 54W" PRESTRESSED GIRDERS)



INTERIM ELEVATION

(LOOKING WEST)



FINAL ELEVATION (FUTURE CONTRACT)

(LOOKING WEST)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & PROFILE GRADE LINES
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS
7. SOUTH ABUTMENT WINGWALLS
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS
10. NORTH ABUTMENT WINGWALLS
11. PIER
12. PIER SECTIONS
13. PIER DETAILS
14. 54W" PRESTRESSED GIRDER
15. 54W" PRESTRESSED GIRDER DETAILS
16. SUPERSTRUCTURE FRAMING PLAN
17. STEEL DIAPHRAGM
18. SUPERSTRUCTURE REINFORCEMENT
19. SUPERSTRUCTURE CROSS SECTIONS
20. SUPERSTRUCTURE DETAILS
21. SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 3)
22. SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 3)
23. SINGLE SLOPE PARAPET 42SS MODIFIED (3 OF 3)
24. LIGHT SUPPORT DETAILS
25. LIGHT SUPPORT REINFORCEMENT
26. STRUCTURAL APPROACH SLAB
27. STRUCTURAL APPROACH SLAB DETAILS
28. AESTHETIC DETAILS

LEGEND

- → DIRECTION OF TRAFFIC
- T.O.B. TOP OF BERM
- (X) WINGWALL NUMBER
- ☆ SLOPE STABILIZATION PER ROADWAY PLANS (ROADWAY ITEM)
- ◐ "PIPE UNDERDRAIN UNPERFORATED 6-INCH" CONNECT TO "APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH" APPROX. INVERT EL. 772 FOR RODENT SHIELD DETAILS SEE SHEET 6.

DESIGN DATA

STATE PROJECT NUMBER: 1060-33-80

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.13
OPERATING RATING FACTOR: RF = 1.60
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- CIP CONCRETE PILING ..... f'c = 3,500 psi
- 54W-INCH PRESTRESSED GIRDERS ..... f'c = 8,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi
STEEL PILE SHELLS SHALL BE ASTM A252, GRADE 3.... Fy = 45,000 psi
PILING STEEL SHEET PERMANENT:
- MINIMUM SECTION MODULUS ..... Sx = 30.20 in^3/ft
- MAXIMUM SECTION DEPTH ..... d = 15.00 in
- YIELD STRENGTH ASTM A572, GRADE 50 ..... Fy = 50,000 psi

FOUNDATION DATA

USING THE MODIFIED GATES ACCEPTANCE METHOD:

ABUTMENTS AND PIER SHALL BE SUPPORTED ON 14" DIA. CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50 USING MODIFIED GATES ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:
- SOUTH ABUTMENT ..... 64 FEET
- NORTH ABUTMENT ..... 68 FEET
- PIER ..... 55 FEET

TRAFFIC DATA

USH 45 NB
ADT = 42,200 (2015)
ADT = 65,500 (2035)
RDS = 60 MPH

IH 94 EB
ADT = 36,400 (2015)
ADT = 44,900 (2035)
RDS = 60 MPH

IH 94 WB
ADT = 34,600 (2015)
ADT = 44,900 (2035)
RDS = 60 MPH

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/07/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN
RAMANJANEYULU TATIRAJU
E-43041-6
WAUKESHA
WISCONSIN
PROFESSIONAL ENGINEER
05/01/2014

STRUCTURE B-40-791

USH 45 NB BRIDGE OVER IH 94

COUNTY	CITY
MILWAUKEE	MILWAUKEE

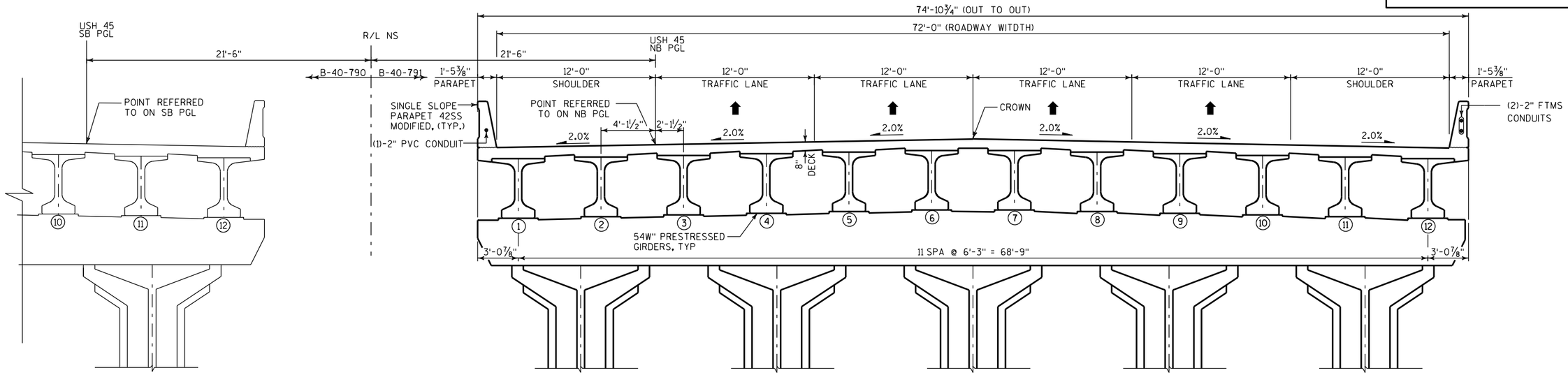
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RT	SWS	MM	MHZ

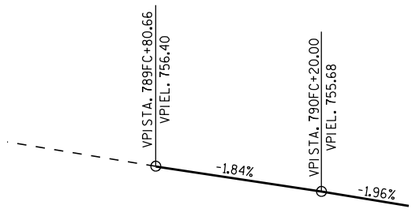
GENERAL PLAN & ELEVATION

SHEET 1 OF 28

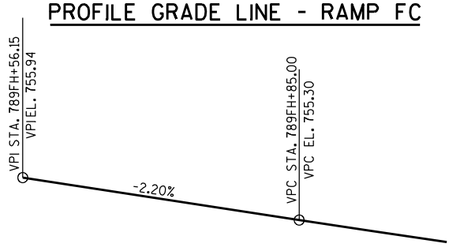
STATE PROJECT NUMBER
1060-33-80



BRIDGE FINAL CROSS SECTION B-40-791

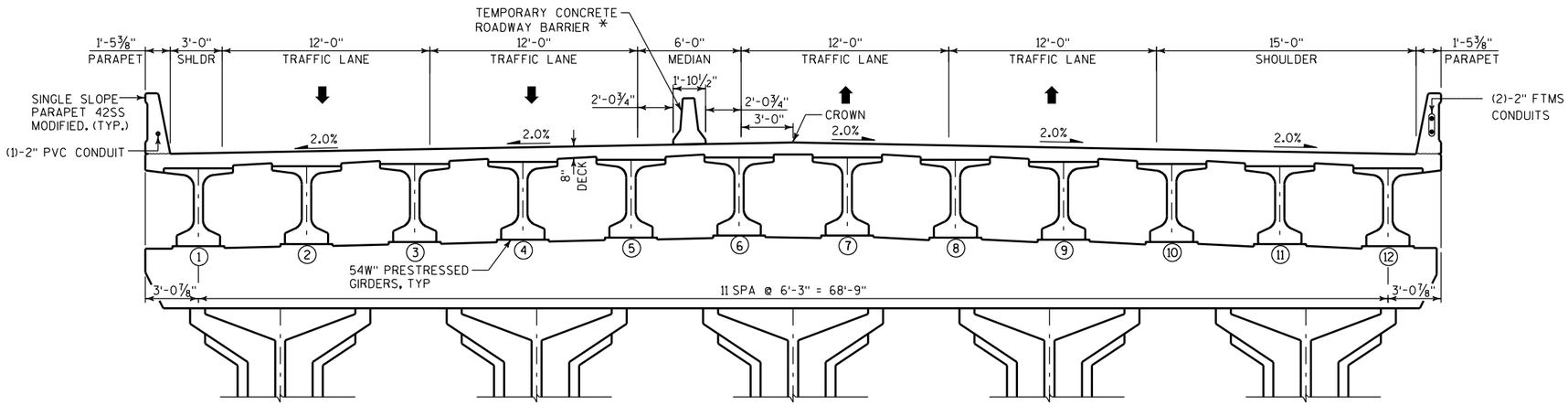


PROFILE GRADE LINE - RAMP FC



PROFILE GRADE LINE - RAMP FH

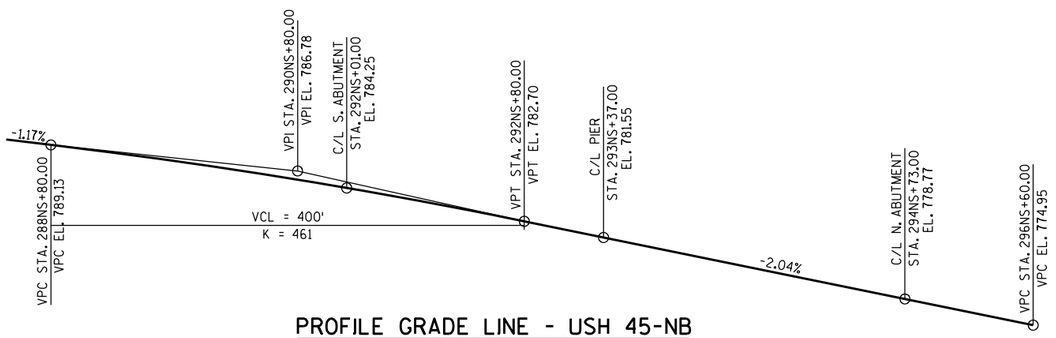
(LOOKING NORTH)
ALL DIMENSIONS ARE MEASURED NORMAL TO NB PGL



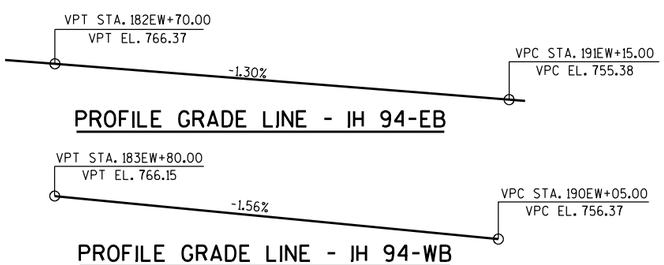
BRIDGE INTERIM CROSS SECTION B-40-791

(LOOKING NORTH)

* ONLY UNANCHORED TEMPORARY CONCRETE BARRIER ALLOWED



PROFILE GRADE LINE - USH 45-NB



PROFILE GRADE LINE - IH 94-EB

PROFILE GRADE LINE - IH 94-WB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY RT | PLANS CK'D. MHZ

CROSS SECTION & PROFILE GRADE LINES

SHEET 2 OF 28

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SOUTH APPROACH SLAB	SOUTH ABUTMENT	PIER	NORTH ABUTMENT	NORTH APPROACH SLAB	SUPER	TOTAL
206.1000.0004	EXCAVATION FOR STRUCTURES BRIDGES B-40-791	LS	--------	--------	--------	--------	--------	--------	1
210.0100	BACKFILL STRUCTURE	CY	--------	249	--------	253	--------	--------	501
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	--------	229	--------	228	--------	--------	457
502.0100	CONCRETE MASONRY BRIDGES	CY	21	90	170	86	21	--------	388
502.3200	PROTECTIVE SURFACE TREATMENT	SY	180	--------	--------	--------	180	2,470	2,830
503.0155	PRESTRESSED GIRDER TYPE 154W-INCH	LF	--------	--------	--------	--------	--------	3,273	3,273
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	--------	--------	4,416	--------	--------	--------	4,416
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	16,829	8,618	32,092	7,824	16,829	172,709	254,900
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	--------	12	24	12	--------	--------	48
506.4000.0004	STEEL DIAPHRAGMS B-40-791	EACH	--------	--------	--------	--------	--------	44	44
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	--------	2,236	--------	--------	--------	--------	2,236
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	--------	2,236	--------	--------	--------	--------	2,236
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--------	15	--------	15	--------	--------	30
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	--------	1,024	2,475	1,088	--------	--------	4,587
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	--------	20	--------	35	--------	--------	55
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--------	120	--------	100	--------	--------	220
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	69	--------	--------	--------	69	30	168
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	--------	--------	48	--------	--------	--------	48
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	--------	--------	--------	--------	--------	795	795
653.0220	JUNCTION BOXES 18 X 6 X 6-INCH	EACH	--------	--------	--------	--------	--------	1	1
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	--------	--------	--------	--------	--------	2	2
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	--------	--------	--------	--------	--------	1	1
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	79	--------	--------	--------	79	859	1,017
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	--------	--------	--------	--------	--------	2,584	2,584
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,440	--------	--------	--------	1,440	19,792	22,672
	NON-BID ITEMS								
	PREFORMED JOINT FILLER	SIZE	--------	--------	--------	--------	--------	--------	3/4"
	NON-BITUMINOUS JOINT FILLER	SIZE	--------	--------	--------	--------	--------	--------	1/2"
	CORK FILLER	SIZE	--------	--------	--------	--------	--------	--------	3/4"
	NAME PLATE	EACH	--------	--------	--------	--------	--------	--------	1

ALL ITEMS ARE CATEGORY 2030

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE FILL SLOPE IN FRONT OF THE ABUTMENTS SHALL BE CONSTRUCTED TO RECEIVE CONCRETE SLOPE PAVING IN THE FUTURE CONTRACT.

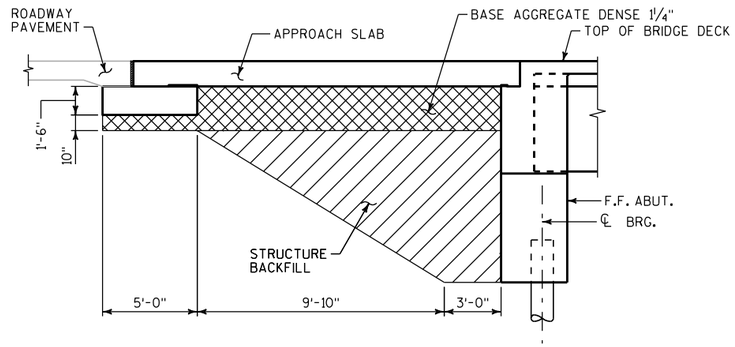
TEMPORARY ROADWAY CONCRETE BARRIER SHALL NOT BE ANCHORED TO DECK SLAB.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAIL SHEET.

THE PARAPET CONCRETE QUANTITY FOR SINGLE SLOPE FACE PARAPET SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES"

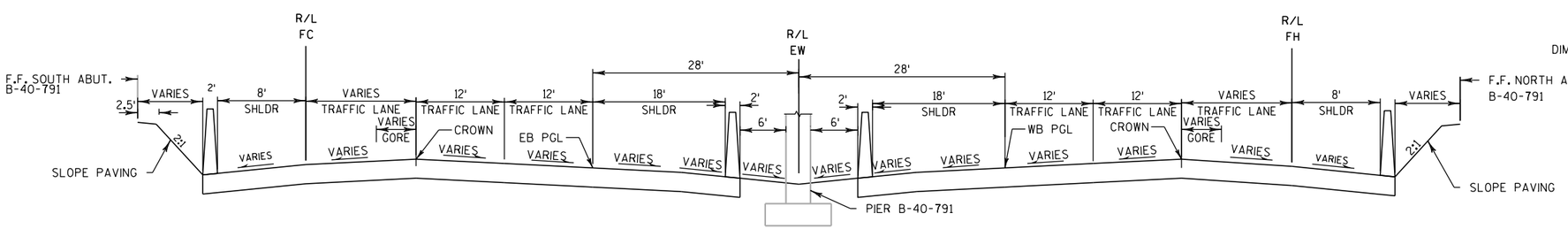
THE EXISTING BRIDGE B-40-101 IS A FOUR SPAN CONTINUOUS CONCRETE VOIDED SLAB BRIDGE. THE EXISTING BRIDGE B-40-753 IS A SINGLE SPAN STEEL GIRDER BRIDGE. BOTH STRUCTURES WILL BE REMOVED UNDER FUTURE CONTRACT IN ACCORDANCE WITH PROJECT CONSTRUCTION STAGING PLANS.

BRIDGE B-40-790 WILL BE CONSTRUCTED IN FUTURE CONTRACT.



BACKFILL LIMITS

DIMENSIONS ARE MEASURED NORMAL TO ABUTMENT



TYPICAL FINISHED SECTION IH 94 UNDER B-40-791 (FUTURE CONTRACT)

(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY RT | PLANS CK'D. MHZ

GENERAL NOTES & QUANTITIES

SHEET 3 OF 28

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-791\cds\B791_080104_qu.dgn PLOT DATE : 01-MAY-2014 10:24 PLOT BY : MSCM1M PLOT NAME : B791_080104_qu PLOT SCALE : 8:1

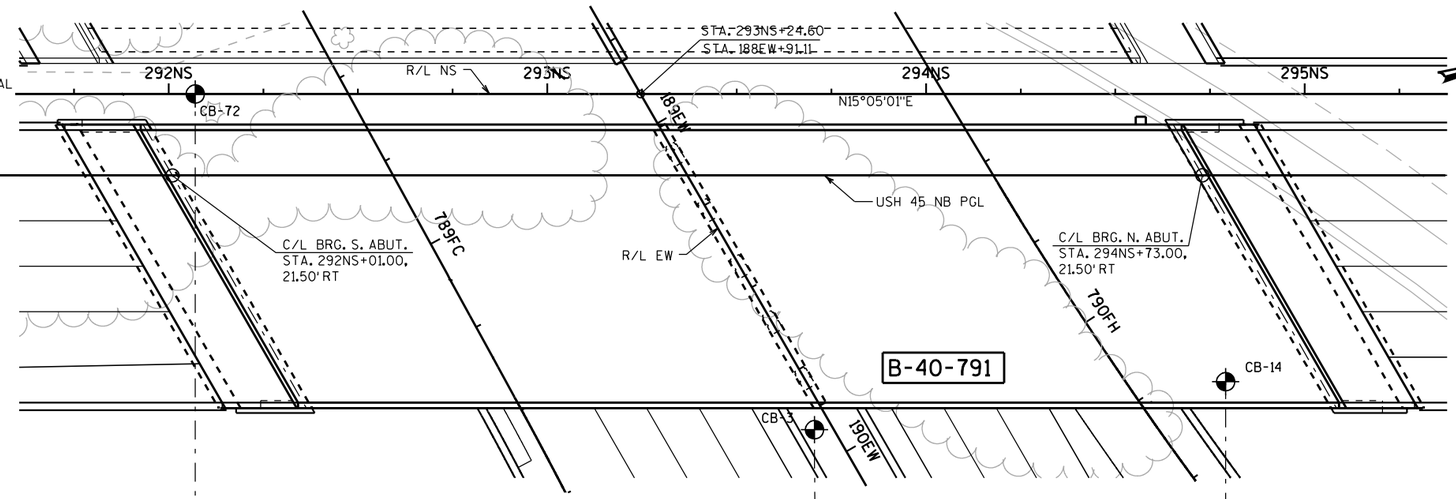
NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

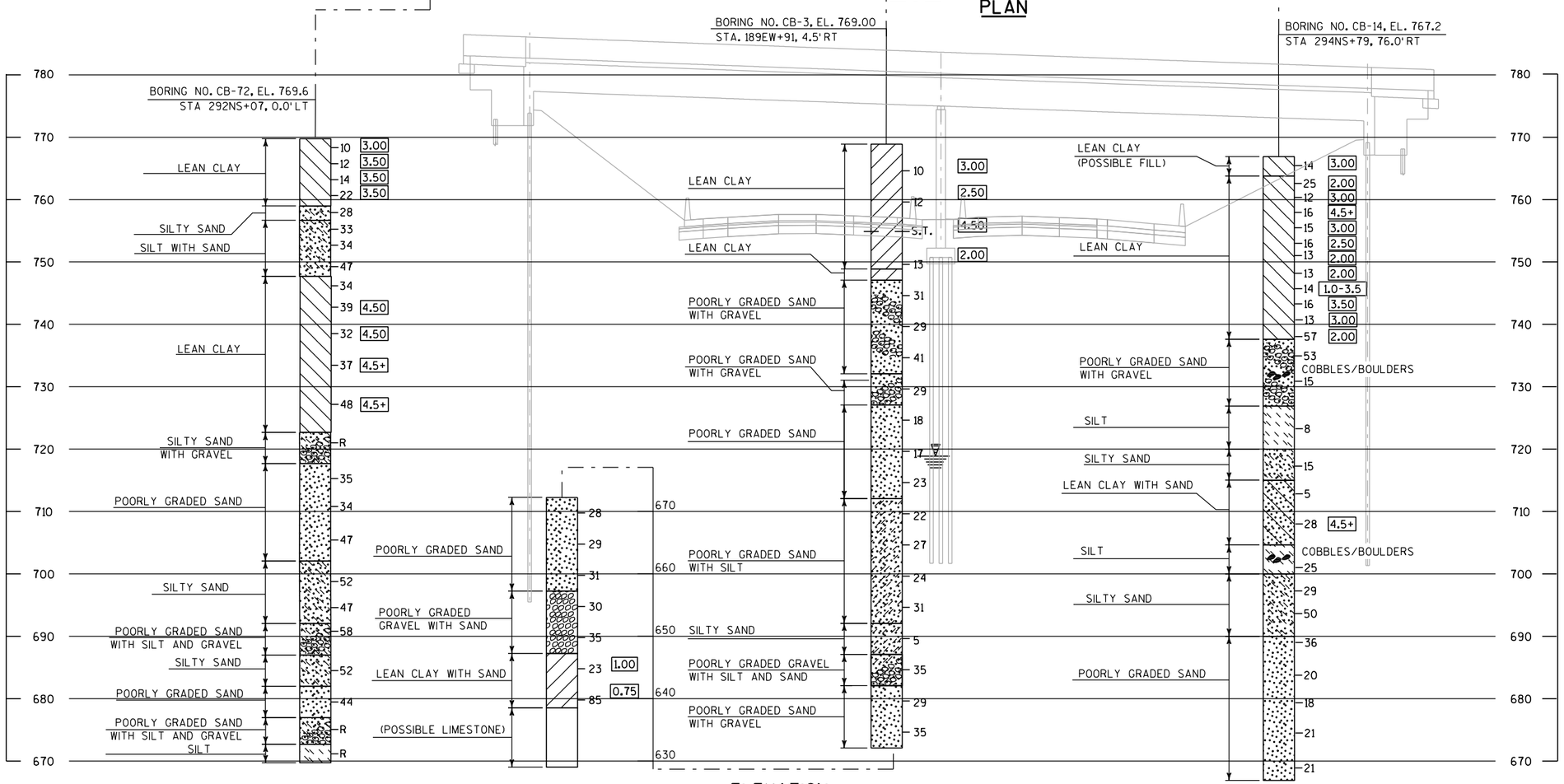
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
MARCH 06 2012 - BORING CB-14
MAY 27 2012 - BORING CB-3
JULY 13 2012 - BORING CB-72



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

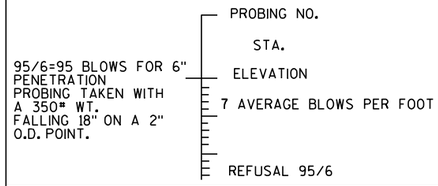
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

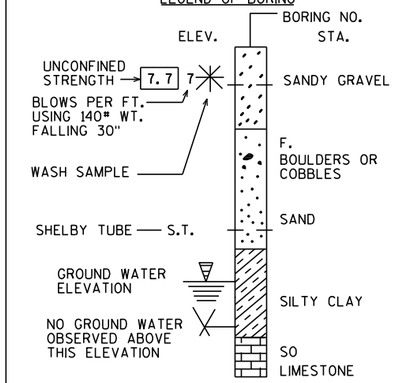
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION

SHEET 4 OF 28

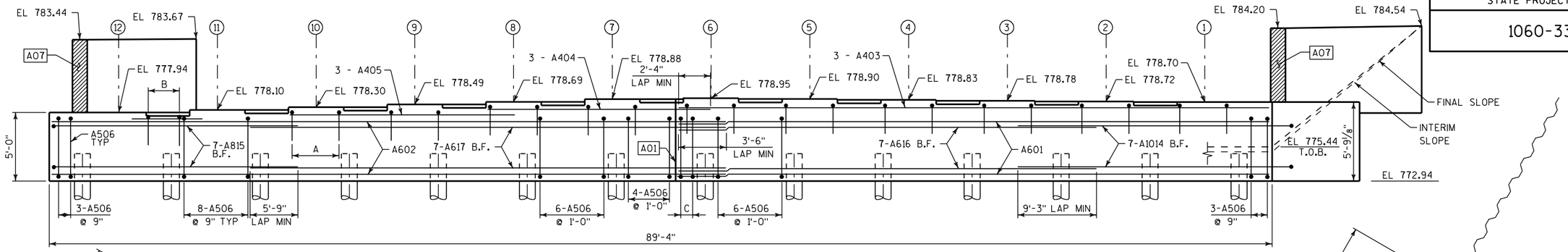
8

8

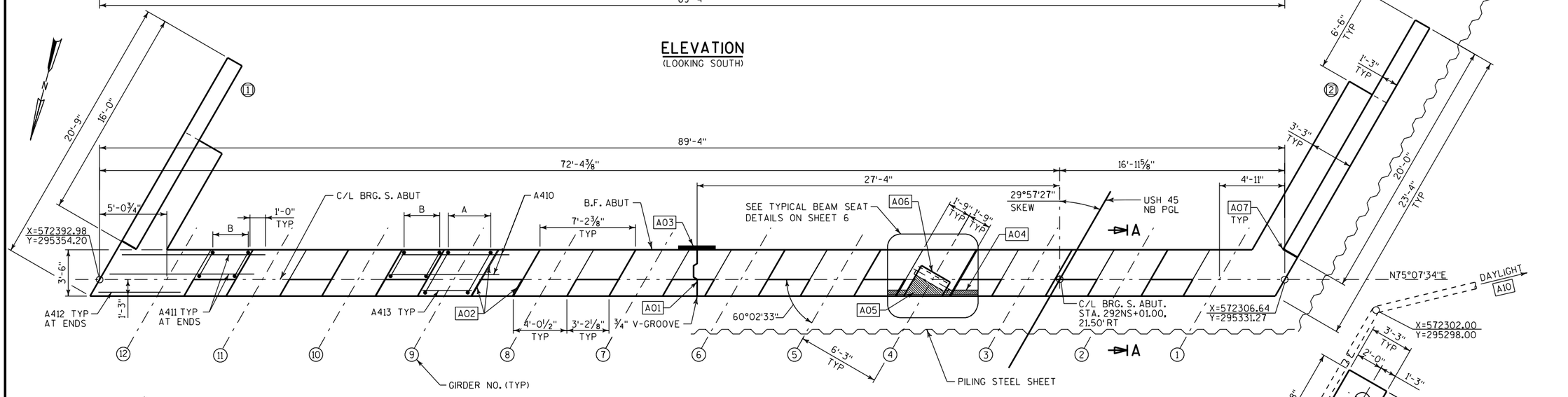
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STATE PROJECT NUMBER

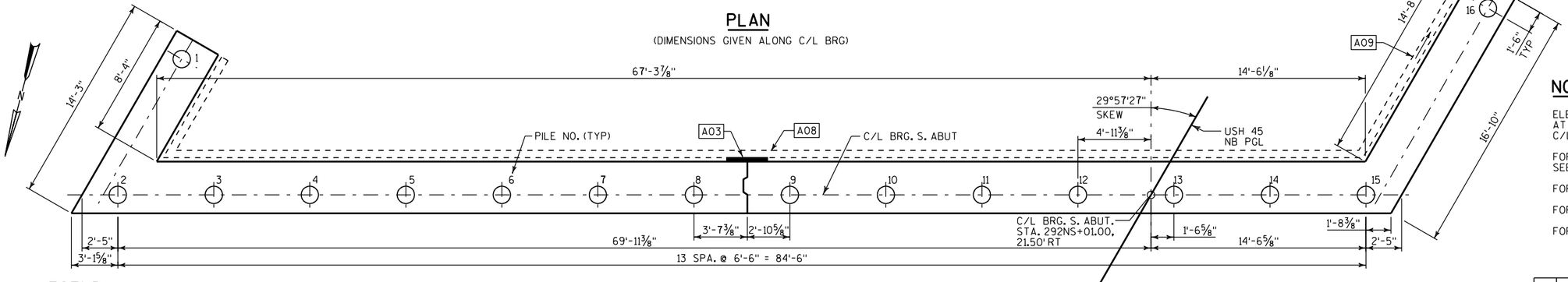
1060-33-80



ELEVATION
(LOOKING SOUTH)



PLAN
(DIMENSIONS GIVEN ALONG C/L BRG)



NOTES

ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE GIRDER & C/L BEARING.

FOR TYPICAL SECTION THRU ABUTMENT BODY SEE SHEET 6.

FOR SECTION A-A SEE SHEET 6.

FOR REINFORCEMENT BILL OF BARS SEE SHEET 6.

FOR WINGWALL REINFORCEMENT SEE SHEET 7.

LEGEND

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8". REINFORCEMENT EXTENDS THROUGH JOINT.
- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 4" X¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A05 ¾" FILLER UNDER GIRDERS, TYP.
- A06 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A07 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
- A08 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A09 PIPE UNDERDRAIN WILL BE CONNECTED TO INLET STRUCTURE CONSTRUCTED IN FUTURE CONTRACT.
- A10 DAYLIGHT PIPE UNDERDRAIN WRAPPED USING PIPE UNDERDRAIN UNPERFORATED CONNECTED TO APRON ENDWALL. SEE SHEET 1.

PILE PLAN

- ○ 14" DIAMETER, 0.375" WALL CIP CONCRETE PILING.
- T.O.B. TOP OF BERM
- (X) WINGWALL NUMBER
- A - 5 - A507 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 1 THRU 10
- B - 4 - A409 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)
- C - 3 - A506 @ 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

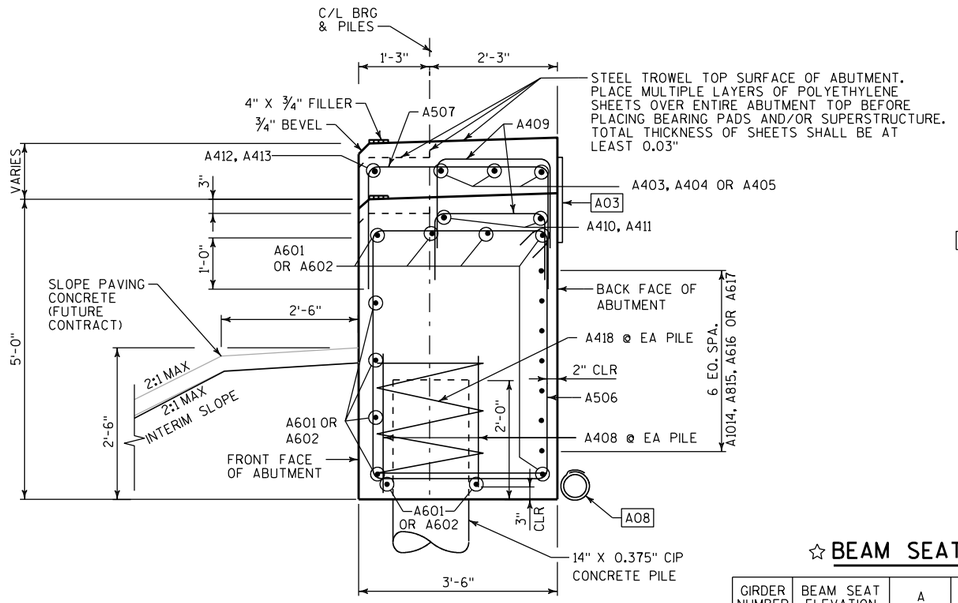
SOUTH ABUTMENT

SHEET 5 OF 28

8

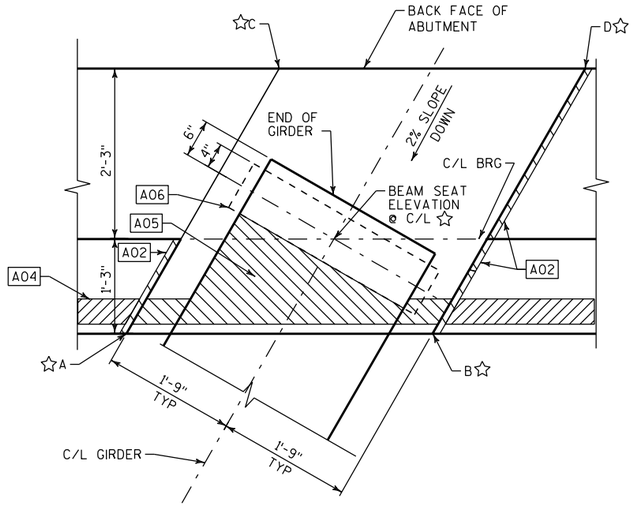
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STATE PROJECT NUMBER
1060-33-80



SECTION THRU ABUTMENT BODY

(LOOKING EAST)



TYPICAL BEAM SEAT DETAIL

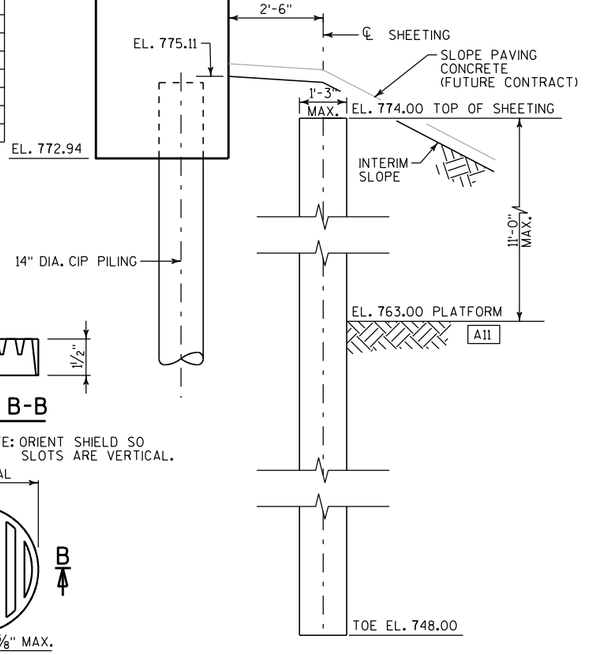
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601	X	11	43'-3"	-	-	ABUTMENT BODY - LONG.
A602	X	11	49'-3"	-	-	ABUTMENT BODY - LONG.
A403	X	3	43'-3"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
A404	X	3	16'-2"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
A405	X	3	16'-9"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
A506	X	105	15'-7"	X	-	ABUTMENT BODY - VERT.
A507	X	50	8'-1"	X	-	ABUTMENT TOP - VERT. ADDITIONAL
A408	X	28	2'-3"	-	-	ABUTMENT BOT. - VERT. AT PILE
A409	X	44	5'-1"	X	-	ABUTMENT TOP - VERT.
A410	X	20	8'-3"	-	-	ABUTMENT TOP - LONG. GDR 2 THRU 11
A411	X	4	11'-1"	-	-	ABUTMENT TOP - LONG. GDR 1 & 12
A412	X	2	6'-8"	-	-	ABUTMENT SEAT - LONG. GDR 1 & 12
A413	X	10	3'-8"	-	-	ABUTMENT SEAT - LONG. GDR 2 THRU 11
A1014	X	7	23'-5"	X	-	ABUTMENT BODY - LONG. B.F.
A815	X	7	19'-8"	X	-	ABUTMENT BODY - LONG. B.F.
A616	X	7	34'-7"	-	-	ABUTMENT BODY - LONG. B.F.
A617	X	7	36'-10"	-	-	ABUTMENT BODY - LONG. B.F.
A418	X	14	28'-0"	X		ABUTMENT BODY - SPIRAL AT PILE

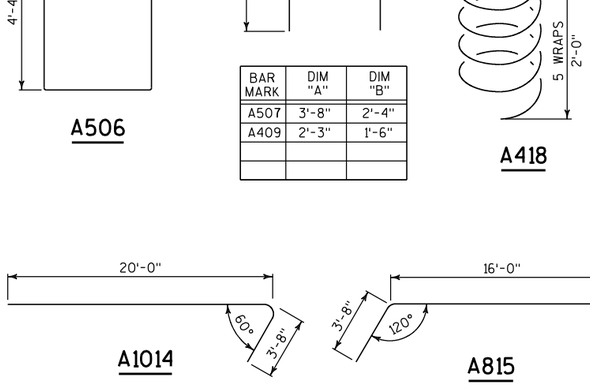
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

☆BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	778.70	-0.05	-0.01	+0.03	+0.07
2	778.72	-0.05	-0.01	+0.03	+0.07
3	778.78	-0.05	-0.01	+0.03	+0.07
4	778.83	-0.05	-0.01	+0.03	+0.07
5	778.90	-0.05	-0.01	+0.03	+0.07
6	778.95	-0.05	-0.01	+0.03	+0.07
7	778.88	-0.05	-0.01	+0.03	+0.07
8	778.69	-0.05	-0.01	+0.03	+0.07
9	778.49	-0.05	-0.01	+0.03	+0.07
10	778.30	-0.05	-0.01	+0.03	+0.07
11	778.10	-0.05	-0.01	+0.03	+0.07
12	777.94	-0.05	-0.01	+0.03	+0.07



SECTION A-A



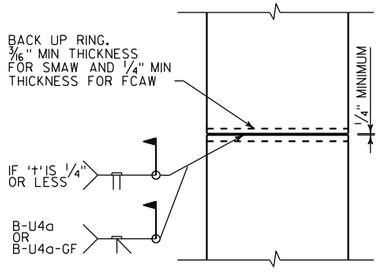
BAR MARK	DIM "A"	DIM "B"
A507	3'-8"	2'-4"
A409	2'-3"	1'-6"

A506

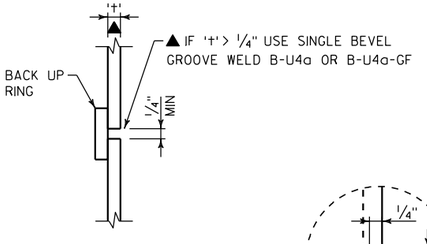
A418

A1014

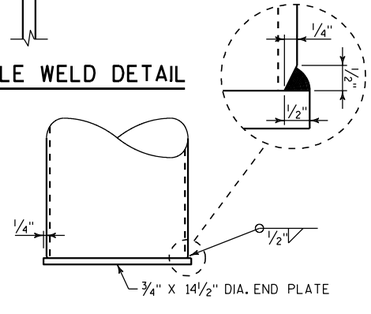
A815



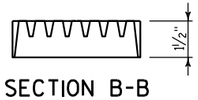
CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL

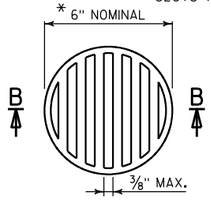


CIP PILE END PLATE DETAIL



SECTION B-B

NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



RODENT SHIELD A12

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

LEGEND

- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A05 ¾" FILLER UNDER GIRDERS, TYP.
- A06 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A08 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A11 PLATFORM CONSTRUCTION AND EXCAVATION WILL BE PERFORMED IN FUTURE CONTRACT. PLATFORM ELEVATION FOR INFORMATION ONLY.
- A12 THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NOTES

FOR ABUTMENT PLAN & ELEVATION SEE SHEET 5.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

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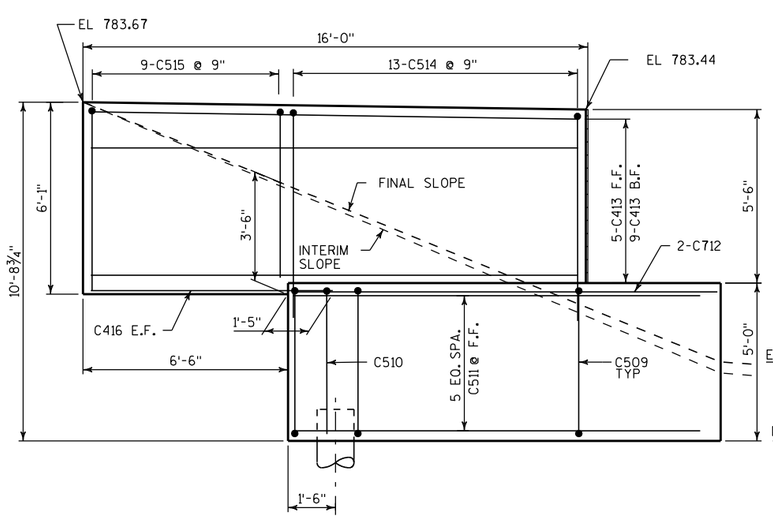
SOUTH ABUTMENT DETAILS

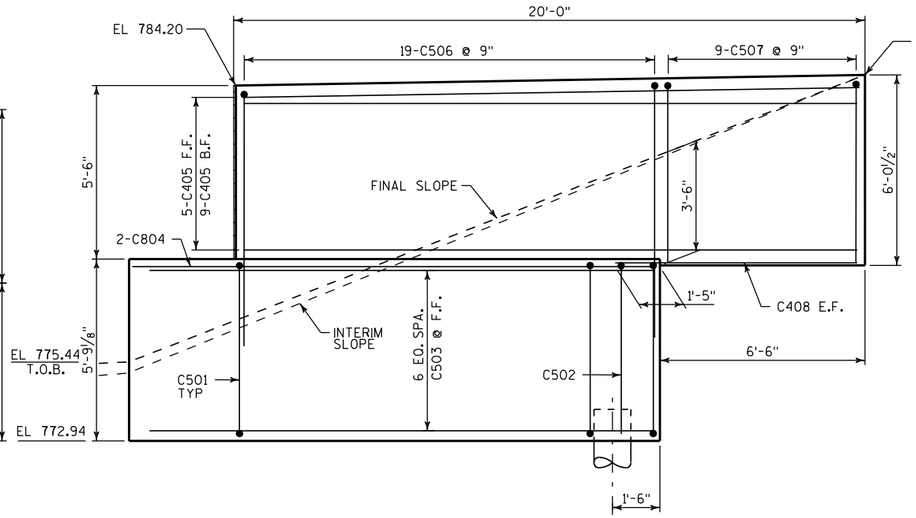
SHEET 6 OF 28

8

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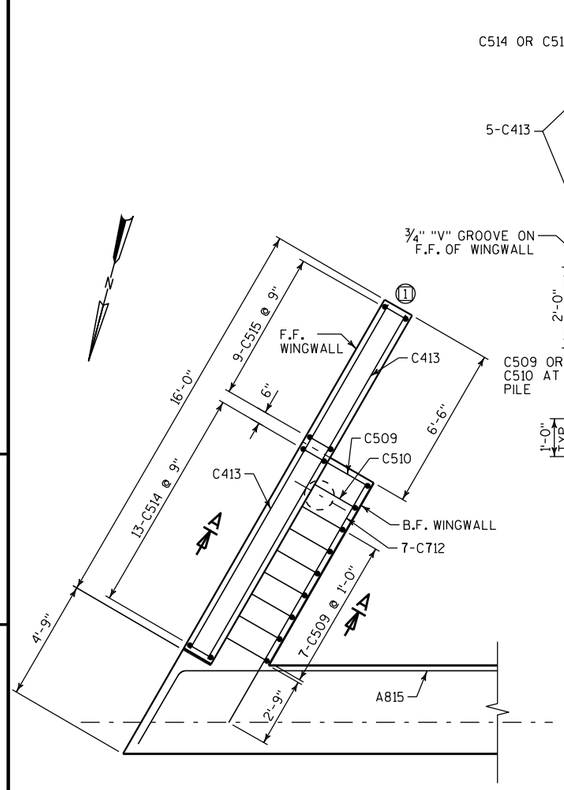
STATE PROJECT NUMBER
1060-33-80





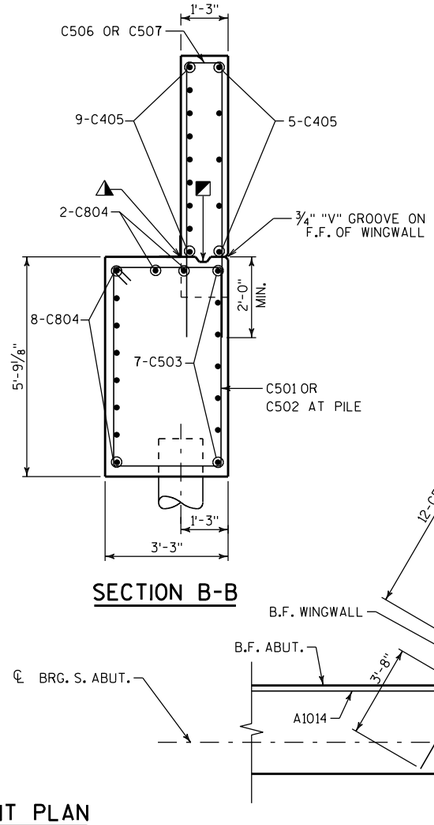
REINFORCEMENT ELEVATION

(EAST WINGWALL 1 FRONT FACE)



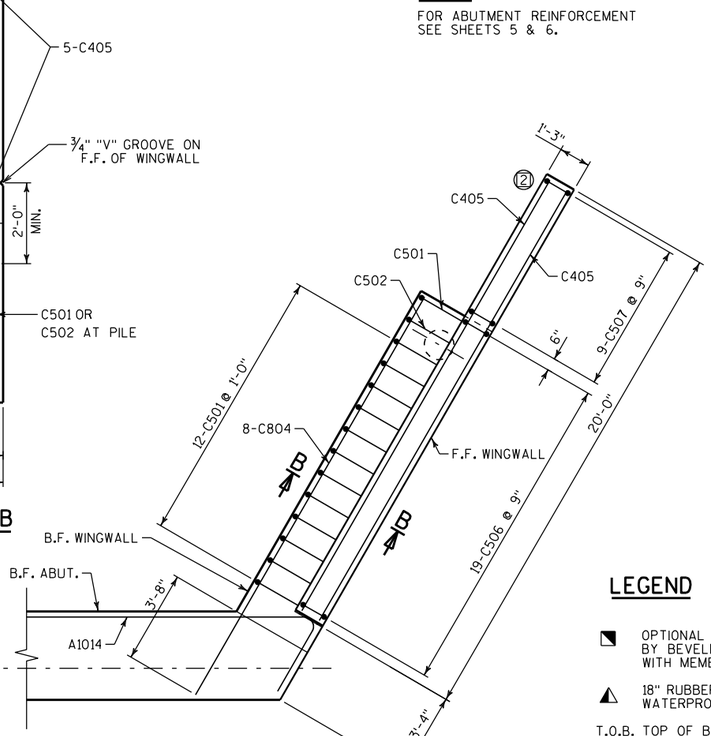
REINFORCEMENT ELEVATION

(WEST WINGWALL 2 FRONT FACE)



SECTION A-A

SECTION B-B



REINFORCEMENT PLAN

(ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY)

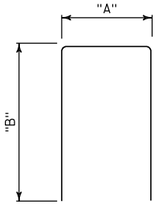
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C501	X	13	17'-1"	X	-	WEST WINGWALL BOT. - VERT.
C502	X	1	13'-4"	X	-	WEST WINGWALL BOT. - VERT. AT PILE
C503	X	7	15'-3"	-	-	WEST WINGWALL BOT. - LONG. F.F.
C804	X	10	18'-4"	-	-	WEST WINGWALL BOT. - LONG. B.F.
C405	X	14	19'-8"	-	-	WEST WINGWALL TOP - LONG. F.F. & B.F.
C506	X	19	15'-5"	X	-	WEST WINGWALL TOP - VERT.
C507	X	9	12'-1"	X	-	WEST WINGWALL TOP - VERT.
C408	X	2	7'-8"	-	-	WEST WINGWALL BOT. - LONG. F.F.
C509	X	8	15'-7"	X	-	EAST WINGWALL BOT. - VERT.
C510	X	1	11'-10"	X	-	EAST WINGWALL BOT. - VERT. AT PILE
C511	X	6	11'-3"	-	-	EAST WINGWALL BOT. - LONG. F.F.
C712	X	9	11'-2"	-	-	EAST WINGWALL BOT. - LONG. B.F.
C413	X	14	15'-8"	-	-	EAST WINGWALL TOP - LONG. F.F. & B.F.
C514	X	13	15'-5"	X	-	EAST WINGWALL TOP - VERT.
C515	X	9	12'-3"	X	-	EAST WINGWALL TOP - VERT.
C416	X	2	7'-8"	-	-	EAST WINGWALL BOT. - LONG. F.F.

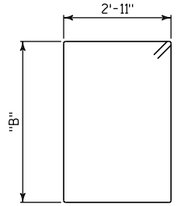
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

NOTE

FOR ABUTMENT REINFORCEMENT SEE SHEETS 5 & 6.



BAR MARK	DIM "A"	DIM "B"
C502	2'-11"	5'-4"
C506	1'-0"	7'-4"
C507	1'-0"	5'-8"
C510	2'-11"	4'-7"
C514	1'-0"	7'-4"
C515	1'-0"	5'-9"



BAR MARK	DIM "B"
C501	5'-4"
C509	4'-7"

LEGEND

- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACK FACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING.
- T.O.B. TOP OF BERM
- (X) WINGWALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

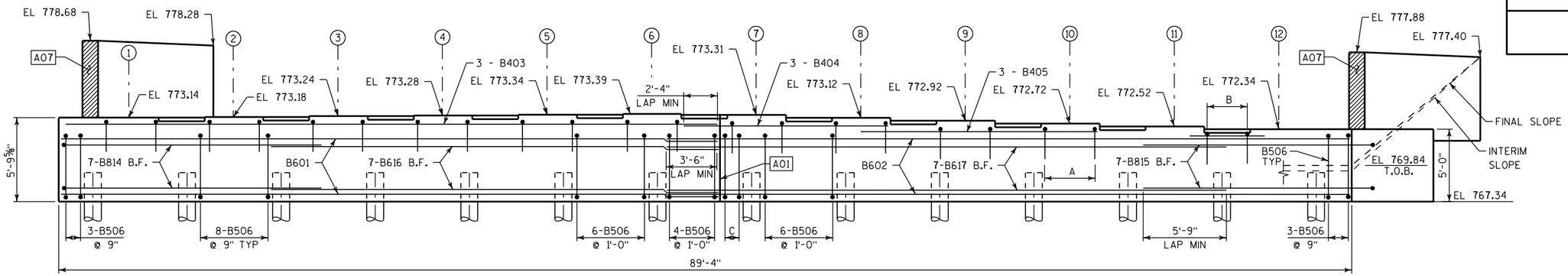
SOUTH ABUTMENT WINGWALLS

SHEET 7 OF 28

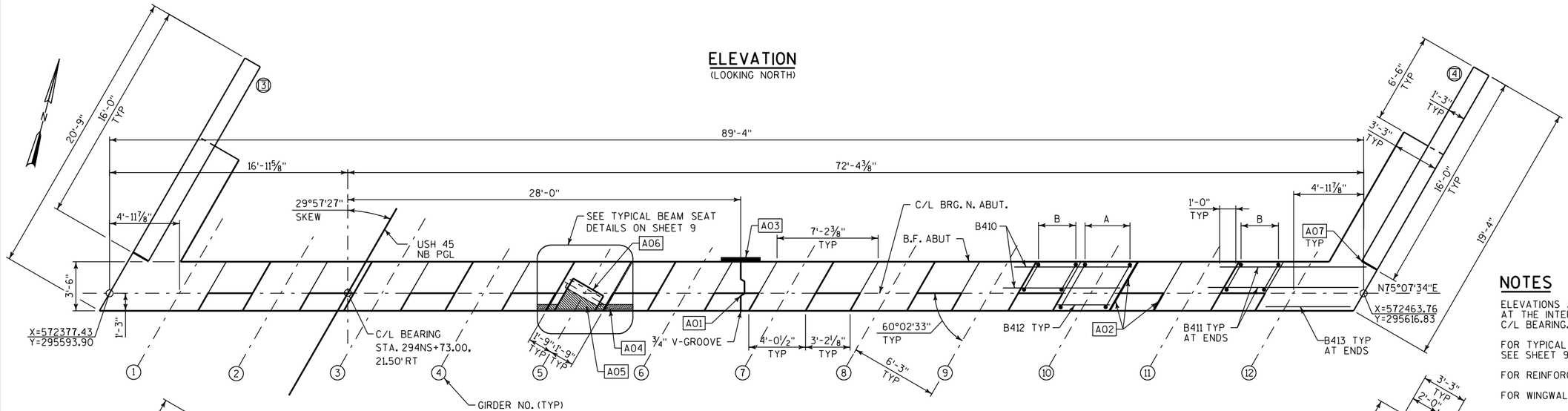
8

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STATE PROJECT NUMBER
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ELEVATION
(LOOKING NORTH)



NOTES

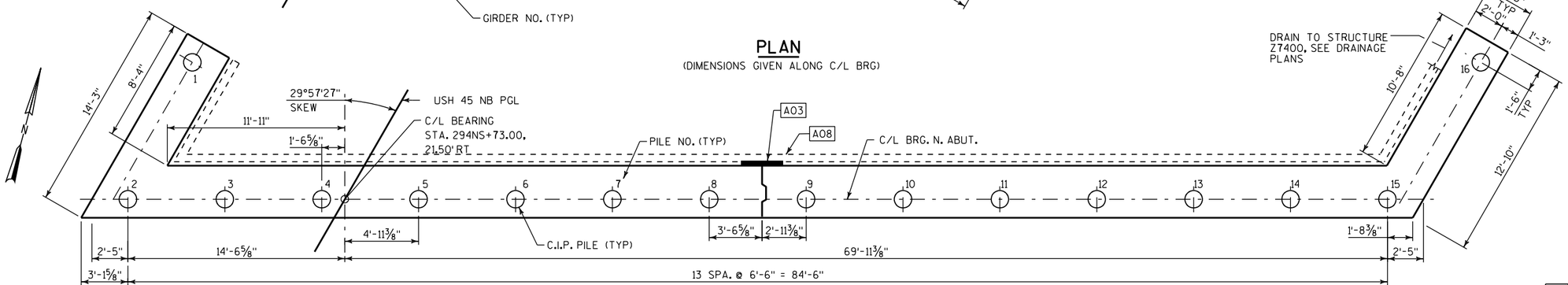
ELEVATIONS ARE GIVEN AT TOP OF CONCRETE AT THE INTERSECTION OF THE GIRDER & C/L BEARING.

FOR TYPICAL SECTION THRU ABUTMENT BODY SEE SHEET 9.

FOR REINFORCEMENT BILL OF BARS SEE SHEET 9.

FOR WINGWALL REINFORCEMENT SEE SHEET 10.

PLAN
(DIMENSIONS GIVEN ALONG C/L BRG)



LEGEND

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8". REINFORCEMENT EXTENDS THROUGH JOINT.
- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 4" X¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A05 ¾" FILLER UNDER GIRDERS, TYP.
- A06 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A07 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
- A08 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A09 PIPE UNDERDRAIN WILL BE CONNECTED TO INLET STRUCTURE CONSTRUCTED IN FUTURE CONTRACT.
- ◯ 14" DIAMETER, 0.375" WALL CIP CONCRETE PILING.
- T.O.B. TOP OF BERM
- (X) WINGWALL NUMBER

PILE PLAN

A - 5 - B507 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 1 THRU 10

B - 4 - B409 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)

C - 3 - B506 @ 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

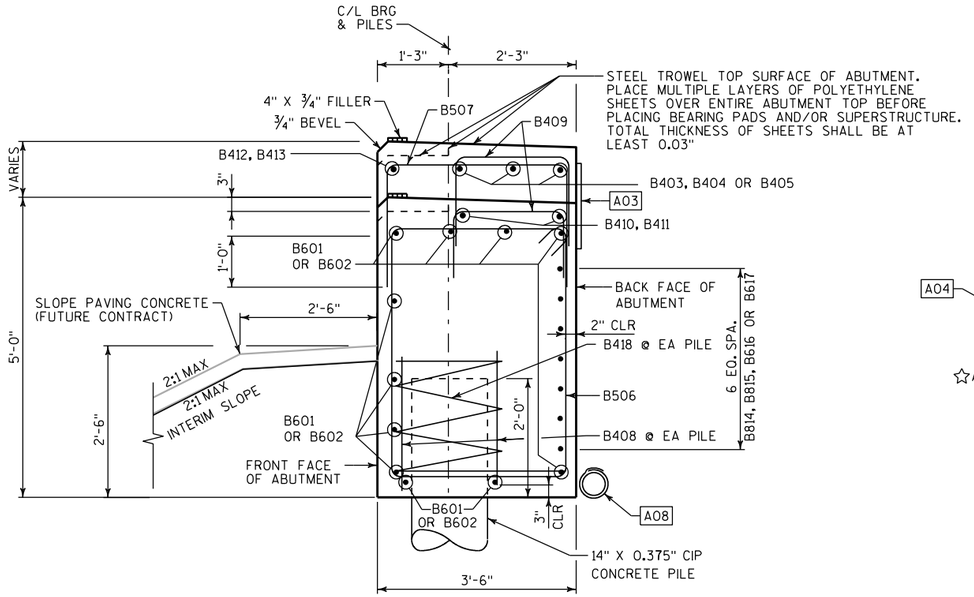
NORTH ABUTMENT

SHEET 8 OF 28

8

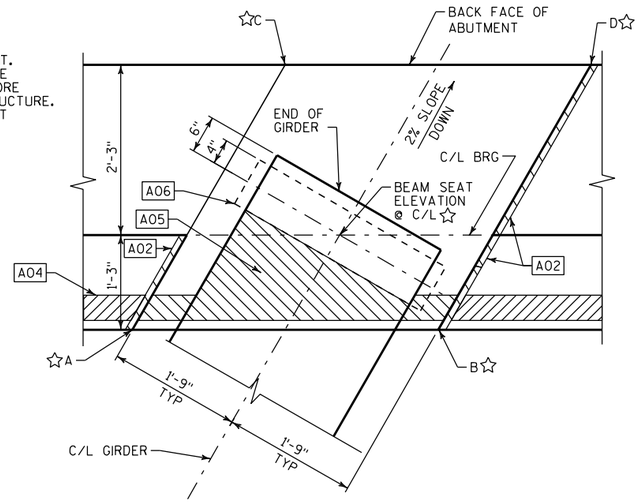
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PLOT BY : MSCM1M
PLOT NAME : B791_080311_ab
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



SECTION THRU ABUTMENT BODY

(LOOKING WEST)



TYPICAL BEAM SEAT DETAIL

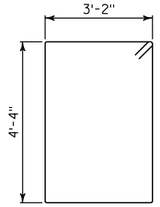
☆ BEAM SEAT TABLE

GIRDER NUMBER	BEAM SEAT ELEVATION	A	B	C	D
1	773.14	+0.05	+0.01	-0.03	-0.07
2	773.18	+0.05	+0.01	-0.03	-0.07
3	773.24	+0.05	+0.01	-0.03	-0.07
4	773.28	+0.05	+0.01	-0.03	-0.07
5	773.34	+0.05	+0.01	-0.03	-0.07
6	773.39	+0.05	+0.01	-0.03	-0.07
7	773.31	+0.05	+0.01	-0.03	-0.07
8	773.12	+0.05	+0.01	-0.03	-0.07
9	772.92	+0.05	+0.01	-0.03	-0.07
10	772.72	+0.05	+0.01	-0.03	-0.07
11	772.52	+0.05	+0.01	-0.03	-0.07
12	772.34	+0.05	+0.01	-0.03	-0.07

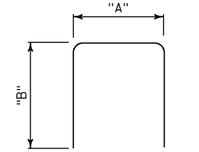
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B601	X	11	43'-4"	-	-	ABUTMENT BODY - LONG.
B602	X	11	49'-2"	-	-	ABUTMENT BODY - LONG.
B403	X	3	43'-4"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
B404	X	3	16'-2"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
B405	X	3	16'-10"	-	-	ABUTMENT SEAT - LONG. ADDITIONAL
B506	X	105	15'-7"	X	-	ABUTMENT BODY - VERT.
B507	X	50	8'-1"	X	-	ABUTMENT TOP - VERT. ADDITIONAL
B408	X	28	2'-3"	-	-	ABUTMENT BOT. - VERT. AT PILE
B409	X	44	5'-1"	X	-	ABUTMENT TOP - VERT.
B410	X	20	8'-3"	-	-	ABUTMENT TOP - LONG. GDR 2 THRU 11
B411	X	4	11'-1"	-	-	ABUTMENT TOP - LONG. GDR 1 & 12
B412	X	10	3'-8"	-	-	ABUTMENT SEAT - LONG. GDR 2 THRU 11
B413	X	2	6'-8"	-	-	ABUTMENT SEAT - LONG. GDR 1 & 12
B814	X	7	19'-8"	X	-	ABUTMENT BODY - LONG. B.F.
B815	X	7	19'-6"	X	-	ABUTMENT BODY - LONG. B.F.
B616	X	7	33'-1"	-	-	ABUTMENT BODY - LONG. B.F.
B617	X	7	38'-9"	-	-	ABUTMENT BODY - LONG. B.F.
B418	X	14	28'-0"	X		ABUTMENT BODY - SPIRAL AT PILE

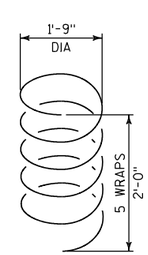
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



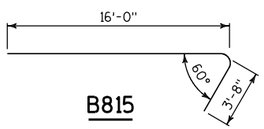
B506



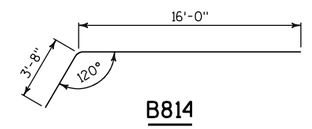
BAR MARK	DIM "A"	DIM "B"
B507	3'-8"	2'-4"
B409	2'-3"	1'-6"



B418



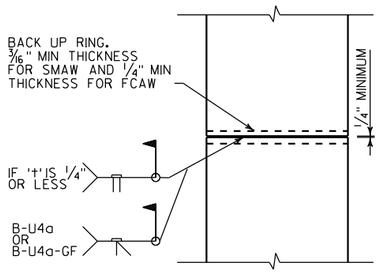
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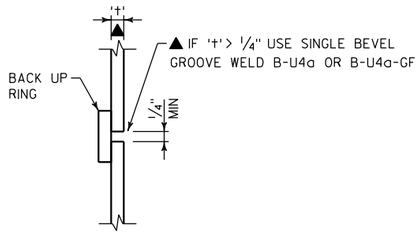
B814

NOTES

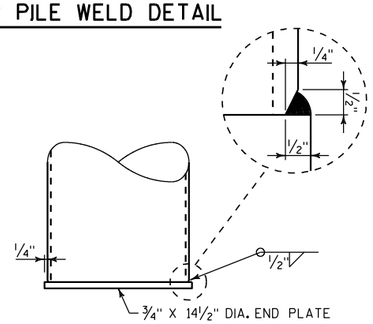
FOR ABUTMENT PLAN & ELEVATION SEE SHEET 8.



CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL

LEGEND

- A02 ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- A03 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- A04 4" X ¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- A05 ¾" FILLER UNDER GIRDERS, TYP.
- A06 ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- A08 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

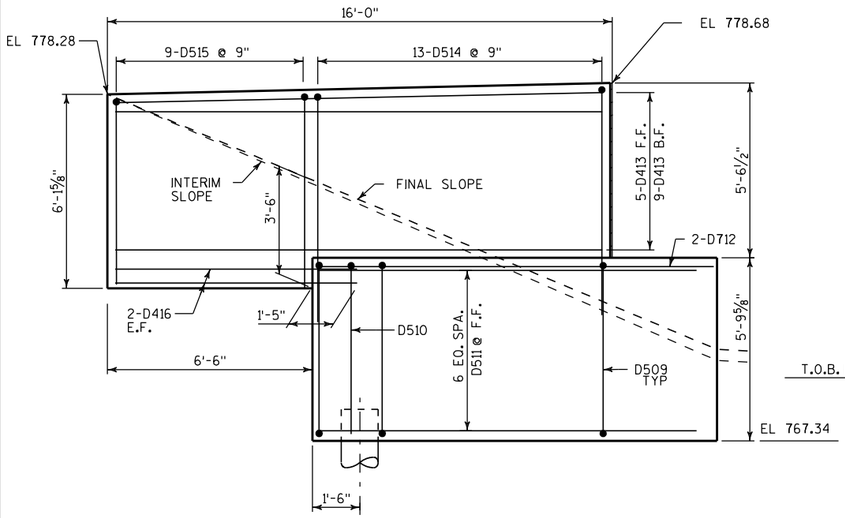
NORTH ABUTMENT DETAILS

SHEET 9 OF 28

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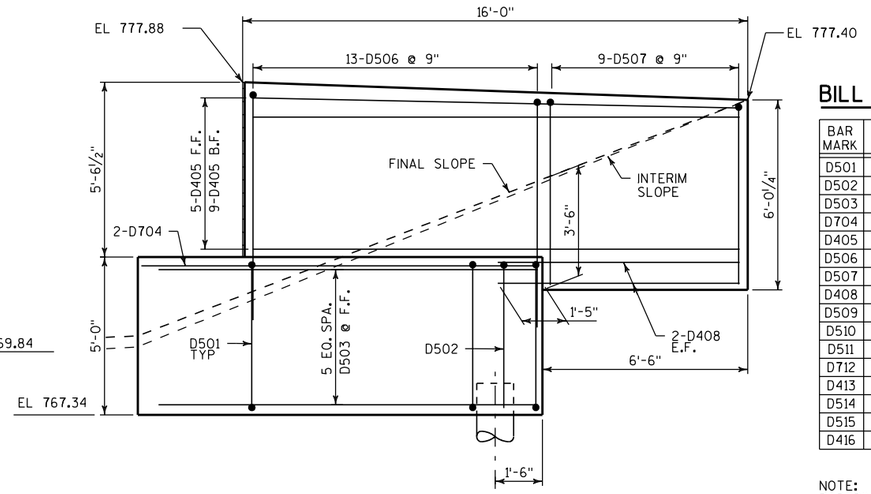
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REINFORCEMENT ELEVATION

(WEST WINGWALL 3 FRONT FACE)



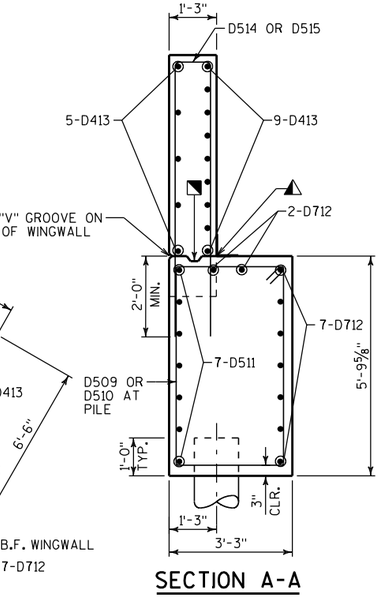
REINFORCEMENT ELEVATION

(EAST WINGWALL 4 FRONT FACE)

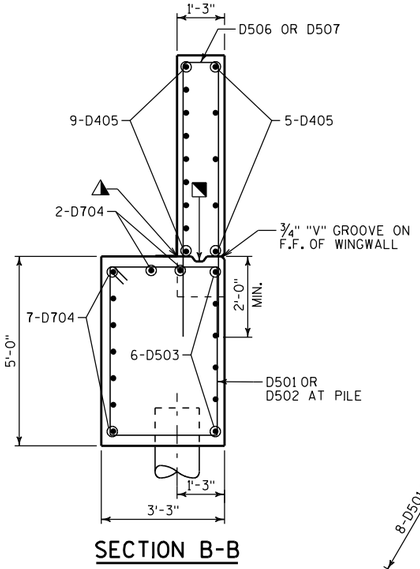
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D501	X	9	15'-7"	X	-	EAST WINGWALL BOT. - VERT.
D502	X	1	11'-10"	X	-	EAST WINGWALL BOT. - VERT. AT PILE
D503	X	6	11'-3"	-	-	EAST WINGWALL BOT. - LONG. F.F.
D704	X	9	13'-5"	-	-	EAST WINGWALL BOT. - LONG. B.F.
D405	X	14	15'-8"	-	-	EAST WINGWALL TOP - LONG. F.F. & B.F.
D506	X	13	15'-5"	X	-	EAST WINGWALL TOP - VERT.
D507	X	9	12'-1"	X	-	EAST WINGWALL TOP - VERT.
D408	X	4	7'-8"	-	-	EAST WINGWALL BOT. - LONG. F.F.
D509	X	8	17'-1"	X	-	WEST WINGWALL BOT. - VERT.
D510	X	1	13'-4"	X	-	WEST WINGWALL BOT. - VERT. AT PILE
D511	X	7	11'-3"	-	-	WEST WINGWALL BOT. - LONG. F.F.
D712	X	9	11'-2"	-	-	WEST WINGWALL BOT. - LONG. B.F.
D413	X	14	15'-8"	-	-	WEST WINGWALL TOP - LONG. F.F. & B.F.
D514	X	13	15'-5"	X	-	WEST WINGWALL TOP - VERT.
D515	X	9	12'-3"	X	-	WEST WINGWALL TOP - VERT.
D416	X	4	7'-8"	-	-	WEST WINGWALL BOT. - LONG. F.F.

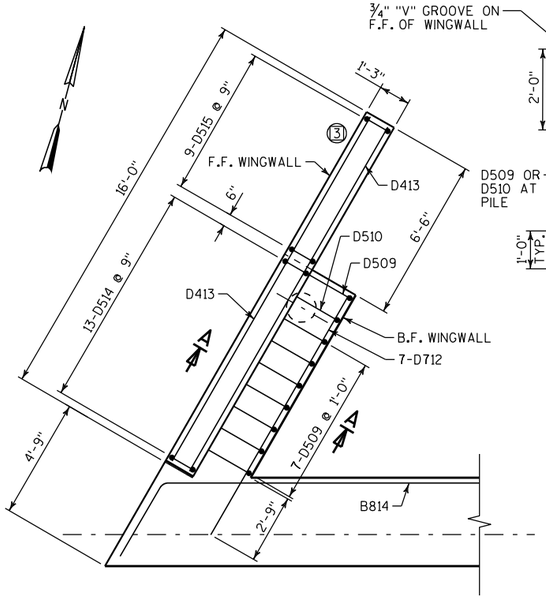
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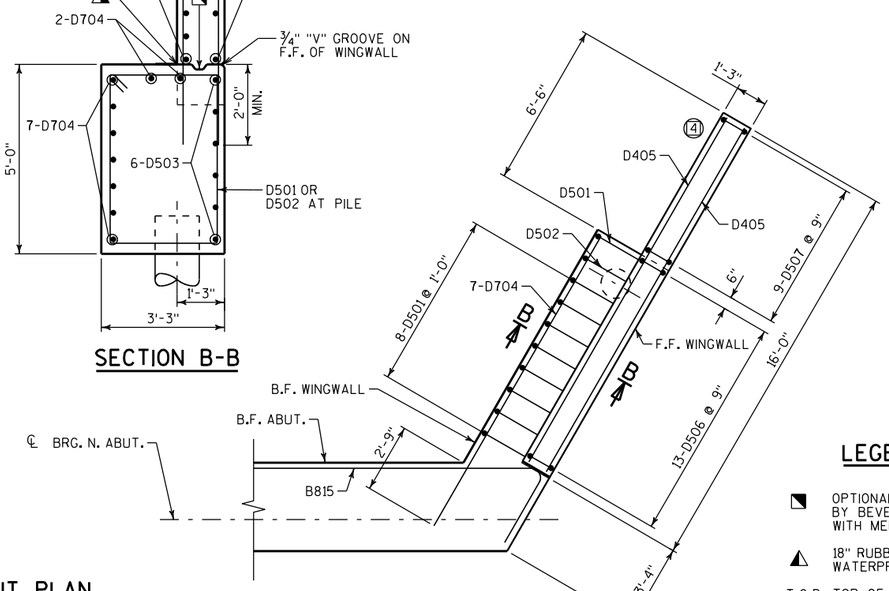


SECTION A-A



SECTION B-B



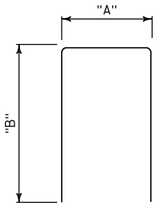


REINFORCEMENT PLAN

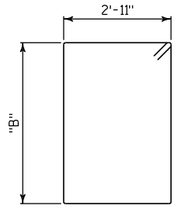
(ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY)

NOTE

FOR ABUTMENT REINFORCEMENT
SEE SHEETS 8 & 9.



BAR MARK	DIM "A"	DIM "B"
D502	2'-11"	4'-7"
D506	1'-0"	7'-4"
D507	1'-0"	5'-8"
D510	2'-11"	5'-4"
D514	1'-0"	7'-4"
D515	1'-0"	5'-9"



BAR MARK	DIM "B"
D501	4'-7"
D509	5'-4"

LEGEND

- OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACK FACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING.
- T.O.B. TOP OF BERM
- (X) WINGWALL NUMBER

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

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NORTH ABUTMENT WINGWALLS

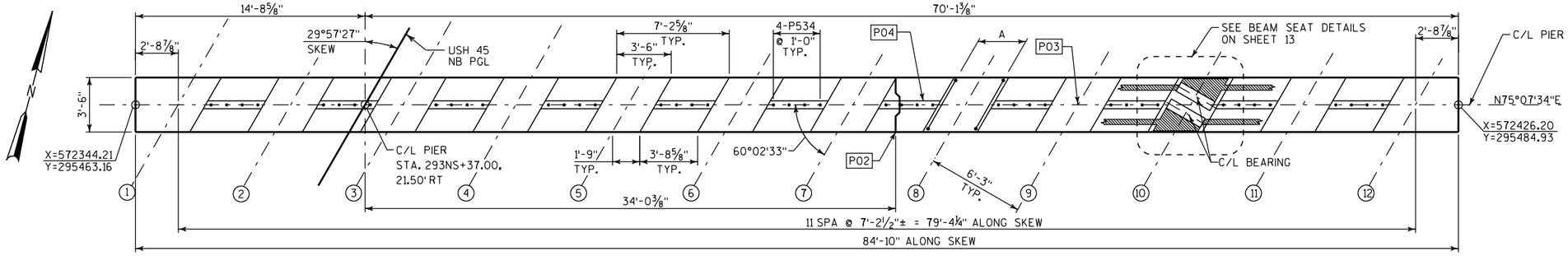
SHEET 10 OF 28

8

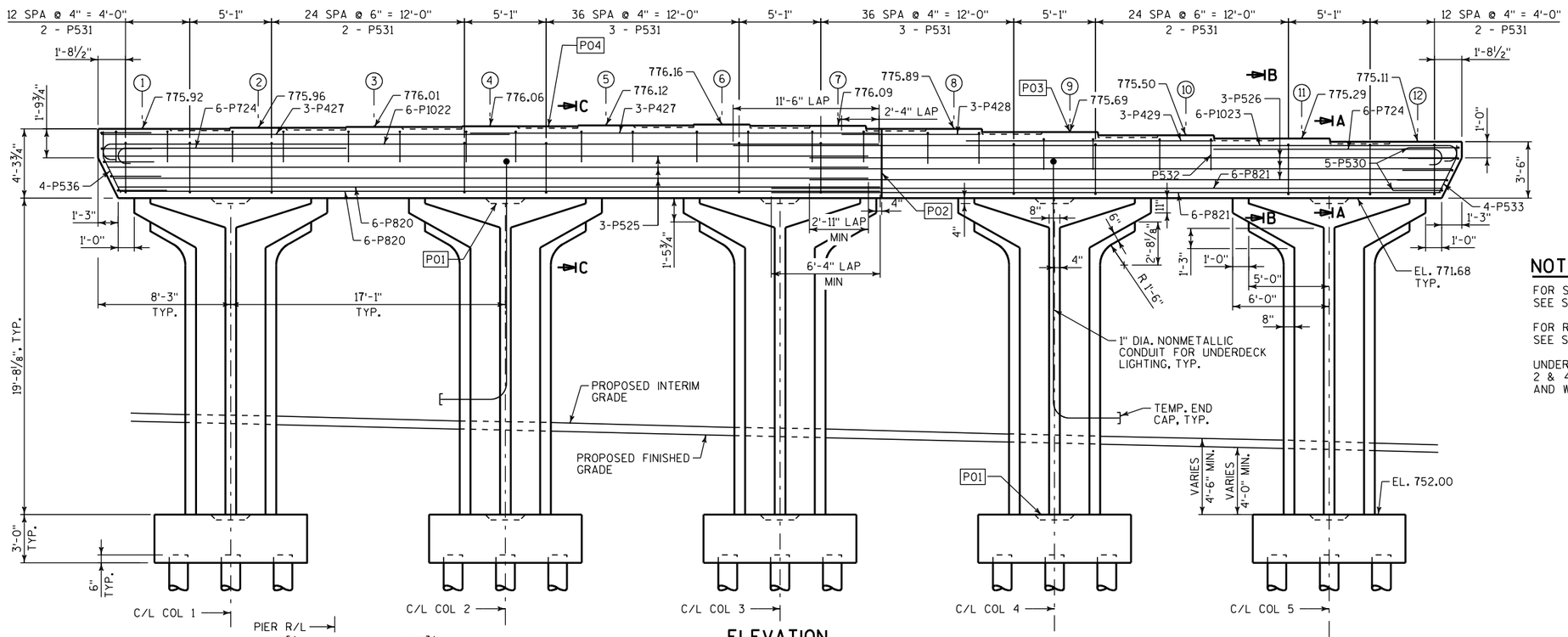
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STATE PROJECT NUMBER
1060-33-80



PIER CAP PLAN



ELEVATION

LEGEND

P01	KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 4" X 1'-3" X 2'-6" TYPICAL AT TOP AND BOTTOM OF COLUMNS.
P02	KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 2" X 8" IN PIER CAP.
P03	FOR BEAM SEAT ELEVATION SEE SHEET 13.
P04	2" x 6" BEVELED KEYWAY BETWEEN BEAM SEATS.
A -	4 - P532 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 1 THRU 10
○	14" DIA., 0.375" WALL CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AS DETERMINED BY THE MODIFIDED GATES ACCEPTANCE METHOD. ESTIMATED PILE LENGTH = 55 FEET. SEE SHEET 6 FOR PILING DETAILS.

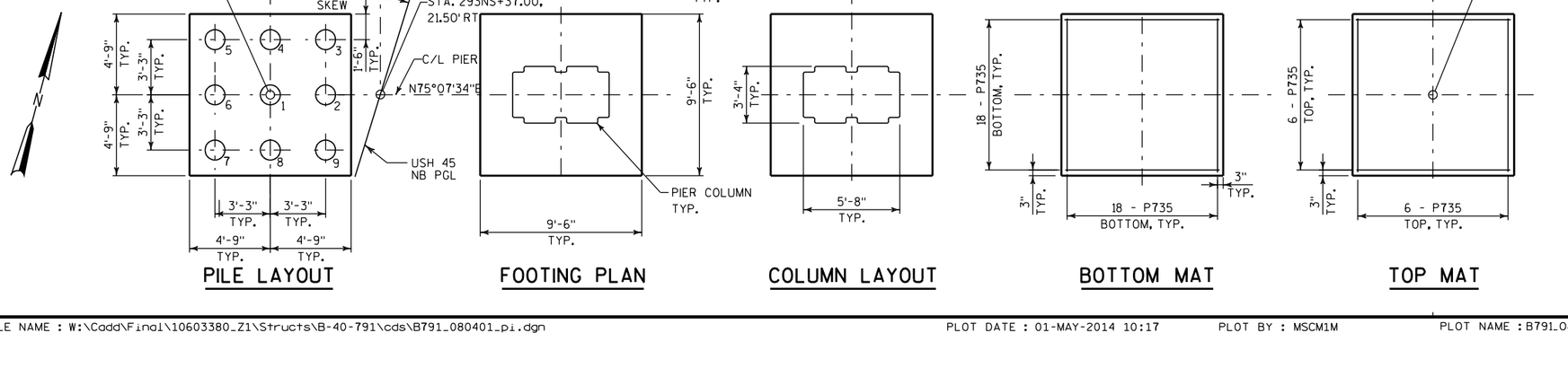
NOTES

FOR SECTIONS A-A, B-B & C-C SEE SHEET 12.

FOR REINFORCEMENT BILL OF BARS SEE SHEET 13.

UNDERDECK LIGHTING AT COLUMNS 2 & 4 FOR IH 94 EASTBOUND TRAFFIC AND WESTBOUND TRAFFIC.

END VIEW
(LOOKING WEST)



PILE LAYOUT

FOOTING PLAN

COLUMN LAYOUT

BOTTOM MAT

TOP MAT

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STRUCTURE B-40-791

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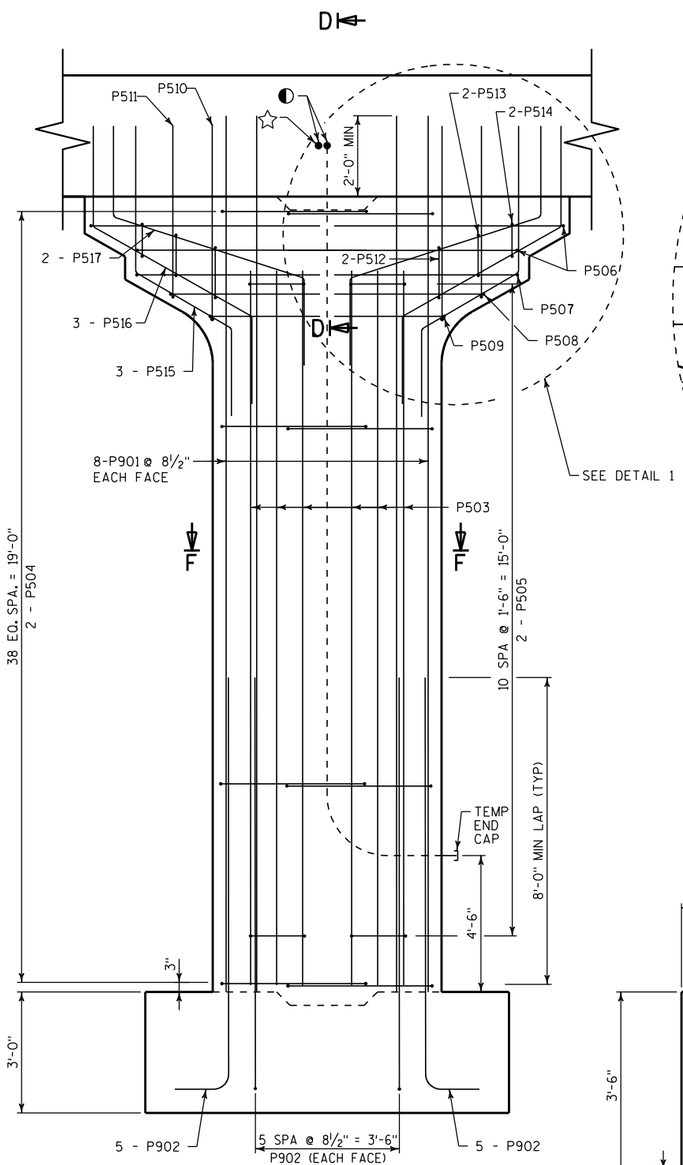
PIER

SHEET 11 OF 28

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-791\cds\B791_080401_pi.dgn
PLOT DATE : 01-MAY-2014 10:17
PLOT BY : MSCM1M
PLOT NAME : B791_080401_pi
PLOT SCALE : 8:1

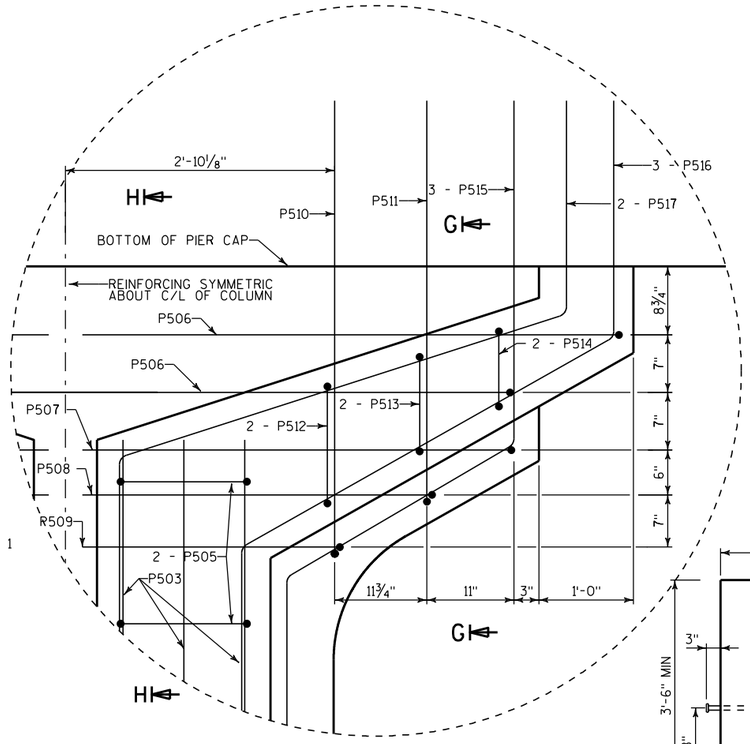
STATE PROJECT NUMBER

1060-33-80



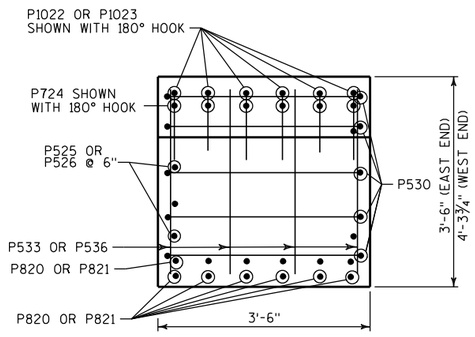
COLUMN ELEVATION

(LOOKING NORTH)

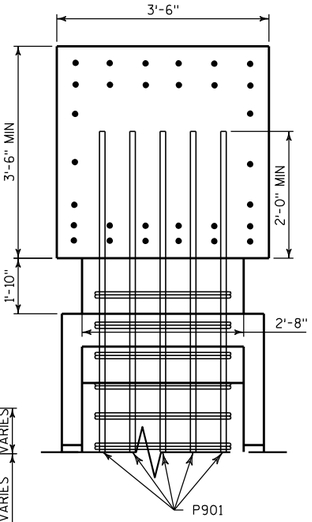


DETAIL 1

SECONDARY REINFORCEMENT SHOWN ONLY
(LOOKING NORTH)

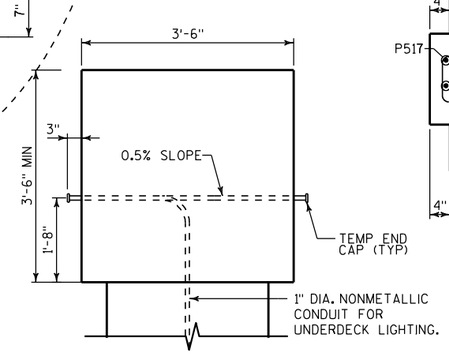


END OF PIER CAP



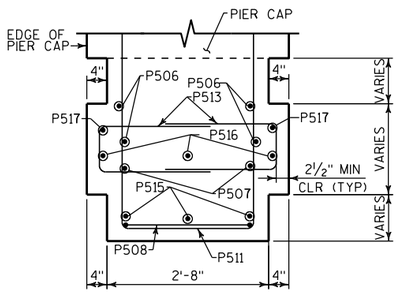
SECTION H-H

(SHOWING REINFORCEMENT)

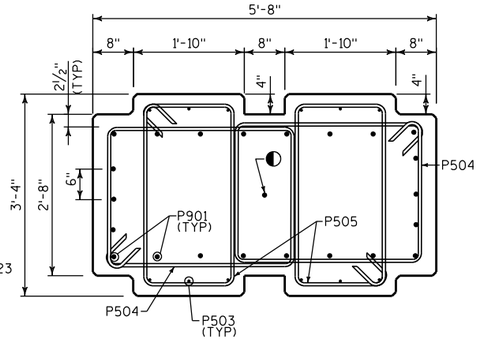


SECTION D-D

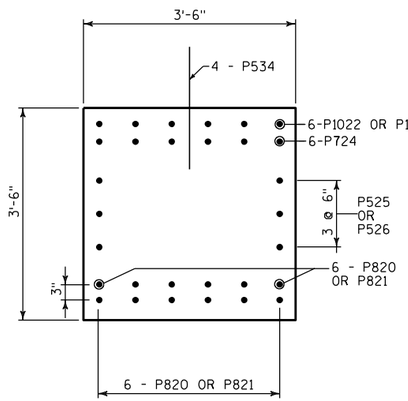
(SHOWING CONDUIT)
(TYP. COLS 2 & 4)



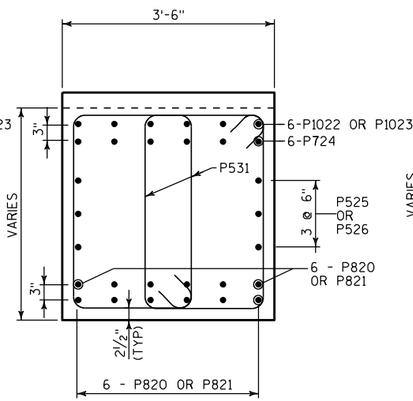
SECTION G-G



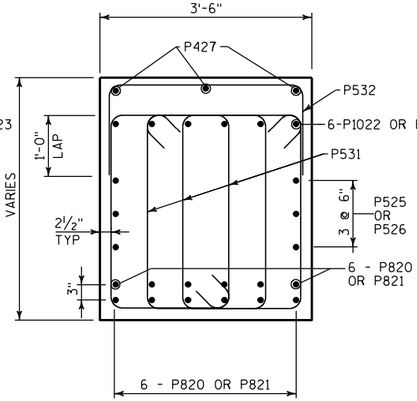
SECTION F-F



SECTION A-A



SECTION B-B



SECTION C-C

LEGEND

◐ 1" DIA. NONMETALLIC CONDUIT FOR UNDERDECK LIGHTING TYP FOR COLS 2 AND 4.

☆ CONDUIT COMPLETE THRU PIER CAP BOTH ENDS.

NO.	DATE	REVISION	BY

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STRUCTURE B-40-791

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PIER SECTIONS

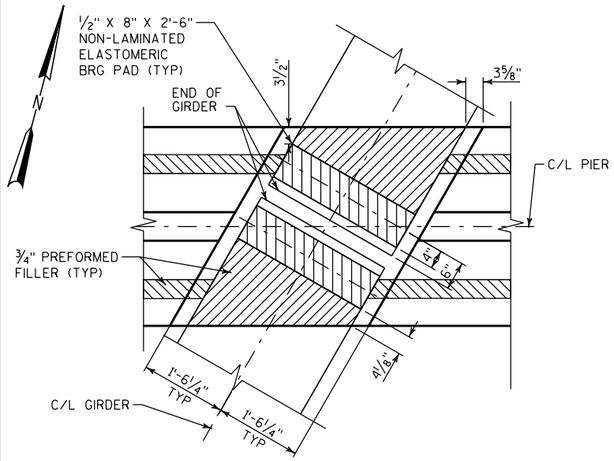
SHEET 12 OF 28

8

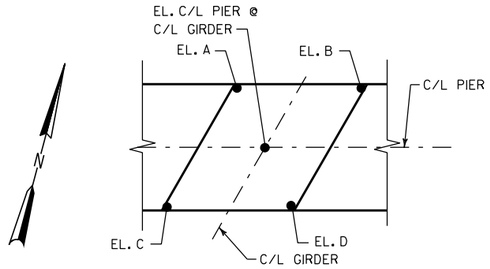
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STATE PROJECT NUMBER

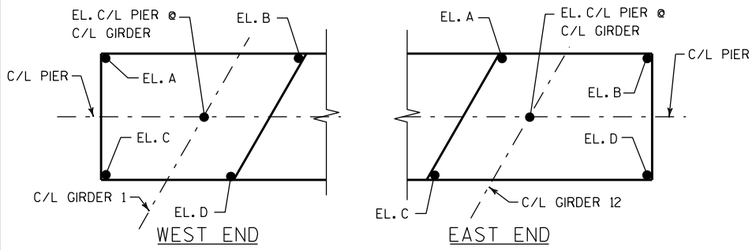
1060-33-80



TYPICAL BEAM SEAT DETAIL



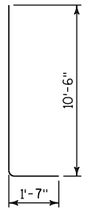
TYPICAL BEAM SEAT ELEVATIONS



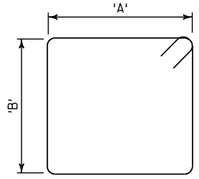
BEAM SEAT ELEVATIONS AT PIER END

BEAM SEAT ELEVATION DATA

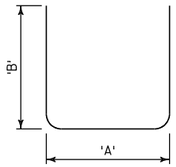
GR No.	C/L PIER ELEVATION	EL. A	EL. B	EL C	EL. D
GR 1	775.92	775.92	775.86	775.98	775.94
GR 2	775.96	775.94	775.91	776.02	775.99
GR 3	776.01	775.99	775.95	776.07	776.03
GR 4	776.06	776.04	776.01	776.12	776.09
GR 5	776.12	776.10	776.06	776.18	776.14
GR 6	776.16	776.14	776.11	776.22	776.19
GR 7	776.09	776.07	776.04	776.15	776.12
GR 8	775.89	775.87	775.83	775.95	775.91
GR 9	775.69	775.67	775.64	775.75	775.72
GR 10	775.50	775.48	775.44	775.56	775.52
GR 11	775.29	775.27	775.24	775.35	775.32
GR 12	775.11	775.09	775.05	775.17	775.11



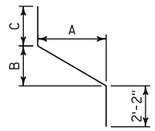
P902



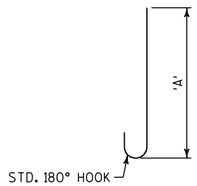
BAR MARK	DIM. 'A'	DIM. 'B'
P504	3'-0"	2'-3"
P505	2'-11"	1'-5"
P531	1'-11"	3'-0"



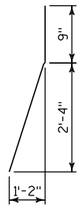
BAR MARK	DIM. 'A'	DIM. 'B'
P506	2'-3"	5'-8"
P507	2'-3"	4'-9"
P508	2'-3"	4'-3"
P509	2'-3"	3'-0"
P510	2'-3"	5'-5"
P511	2'-3"	4'-10"
P512	1'-4"	2'-1"
P513	1'-1"	2'-1"
P514	0'-11"	2'-1"
P530	3'-0"	1'-9"
P532	3'-8"	2'-6"



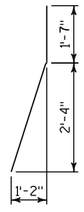
BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C
P515	2'-5"	1'-5"	3'-8"
P516	3'-11"	2'-3"	2'-6"
P517	4'-9"	1'-7"	2'-3"



BAR MARK	DIM. 'A'
P1022	48'-4"
P1023	47'-7"
P724	14'-2"



P533



P536

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P901	X	110	21'-5"			VERTICAL COLUMN (PRIMARY)
P902	X	110	11'-10"	X		VERTICAL COLUMN - DOWEL BARS
P503	X	60	17'-6"			VERTICAL COLUMN - AESTHETIC DETAIL (PRIMARY)
P504	X	390	11'-2"	X		COLUMN STIRRUP (PRIMARY)
P505	X	110	9'-3"	X		COLUMN STIRRUP (AESTHETIC)
P506	X	20	13'-4"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P507	X	10	11'-6"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P508	X	10	10'-6"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P509	X	10	8'-0"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P510	X	10	12'-10"	X		VERTICAL COLUMN-TIE - SECONDARY
P511	X	10	11'-8"	X		VERTICAL COLUMN-TIE - SECONDARY
P512	X	20	5'-3"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P513	X	20	5'-0"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P514	X	20	4'-10"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P515	X	30	8'-7"	X		OUTSIDE OF COLUMN - BENT (SECONDARY)
P516	X	30	9'-1"	X		OUTSIDE OF COLUMN - BENT (SECONDARY)
P517	X	20	9'-4"	X		OUTSIDE OF COLUMN - BENT (SECONDARY)
P820	X	12	47'-0"			BOTTOM OF PIER CAP - LONG
P821	X	12	41'-2"			BOTTOM OF PIER CAP - LONG
P1022	X	6	49'-9"	X		TOP OF PIER CAP - LONG
P1023	X	6	49'-0"	X		TOP OF PIER CAP - LONG
P724	X	12	15'-0"	X		TOP OF PIER CAP - LONG-ENDS
P525	X	6	47'-7"			BODY OF PIER CAP - LONG- SIDE
P526	X	6	39'-10"			BODY OF PIER CAP - LONG -SIDE
P427	X	6	25'-8"			TOP OF PIER CAP - LONG
P428	X	3	9'-3"			TOP OF PIER CAP - LONG
P429	X	3	17'-4"			TOP OF PIER CAP - LONG
P530	X	10	6'-3"	X		ENDS OF PIER CAP - LONG.
P531	X	374	10'-5"	X		BODY OF CAP - STIRRUPS
P532	X	40	8'-5"	X		TOP OF CAP - ADDITIONAL REINF. UNDER BEAM SEATS
P533	X	4	3'-5"	X		ENDS OF CAP - TIE
P534	X	44	2'-0"			VERICAL PIER CAP - BETWEEN BEAM SEATS
P735		240	9'-0"			FOOTING - TOP AND BOT. MAT
P536	X	4	4'-3"	X		ENDS OF CAP - TIE

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

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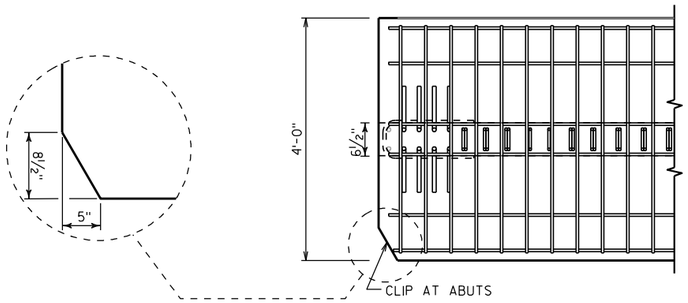
STRUCTURE B-40-791

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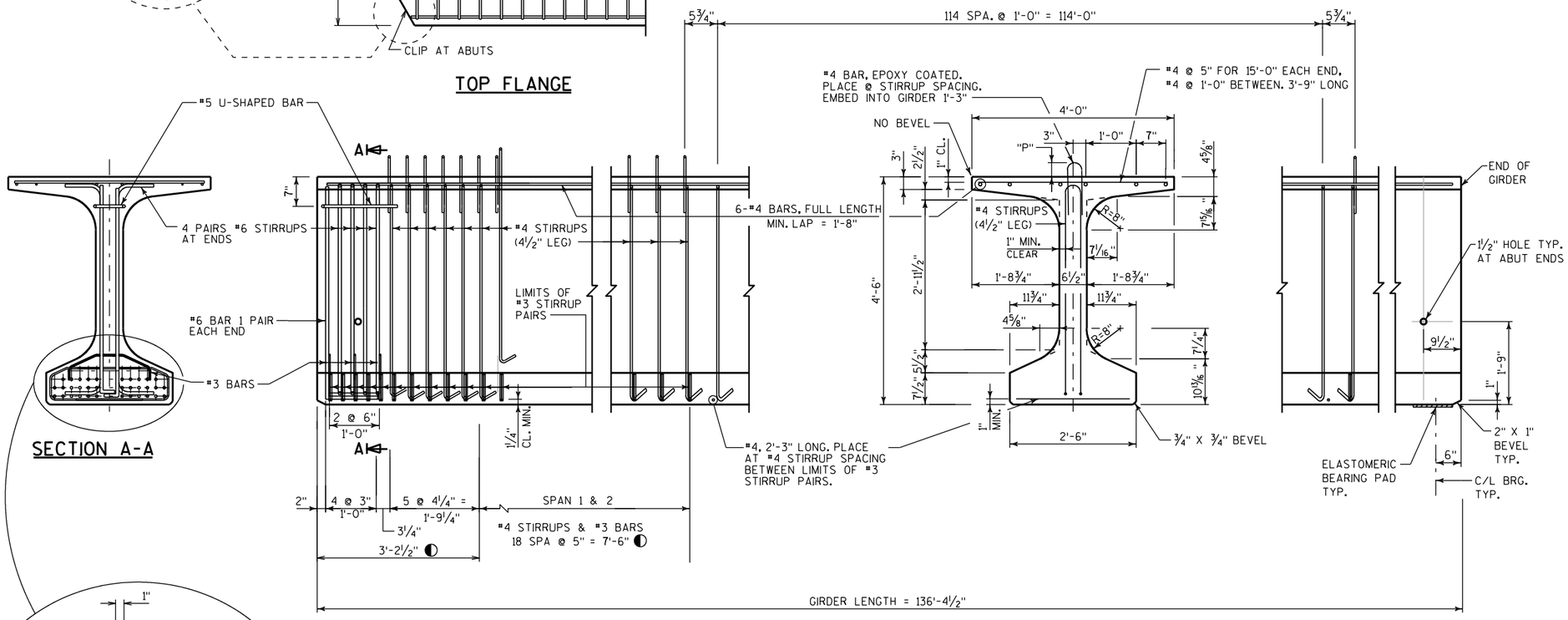
PIER DETAILS

SHEET 13 OF 28

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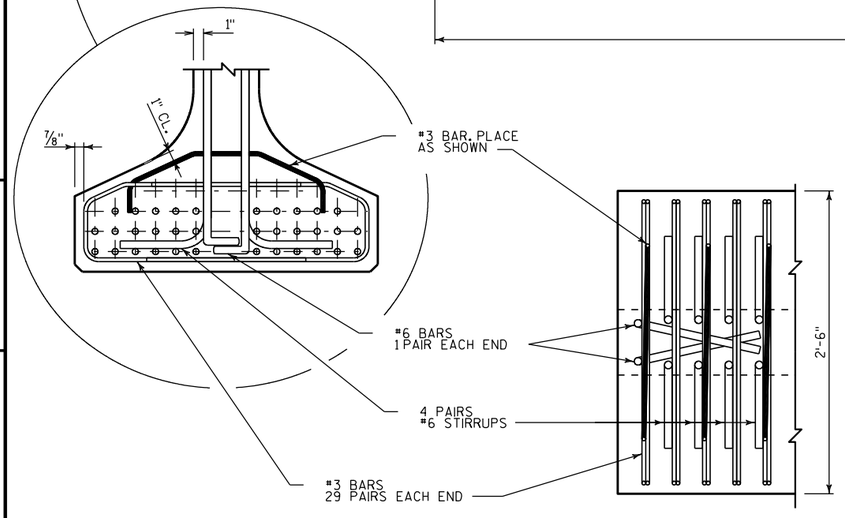
TOP FLANGE



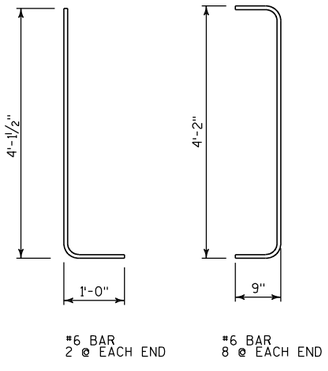
SIDE VIEW & TYP. SECTION IN SPAN

◐ DETAIL TYP. AT EACH END

"P" - SEE GIRDER DATA TABLE ON SHEET 15

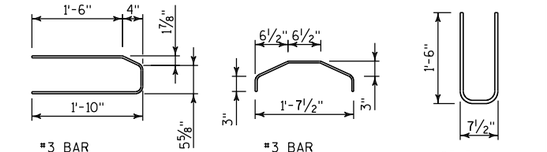


BOTTOM FLANGE



#6 BAR
2 @ EACH END

#6 BAR
8 @ EACH END



#3 BAR
29 PAIRS EACH END
(EPOXY COATED)

#3 BAR
3 @ EACH END
(EPOXY COAT)

#5 BAR
1 @ EACH END

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER AND ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-791

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54W" PRESTRESSED GIRDER

SHEET 14 OF 28

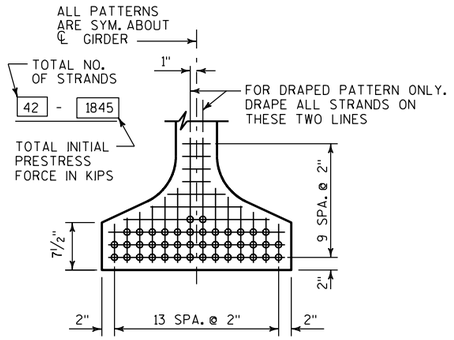
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8

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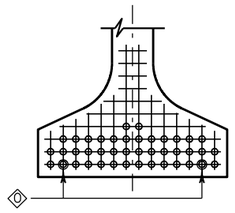
STATE PROJECT NUMBER

1060-33-80



STRAND PATTERN

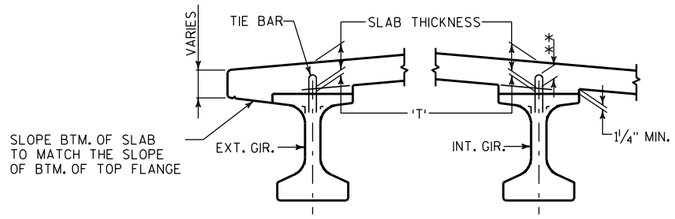
ALL GIRDERS
0.6" DIA. STRANDS



DEBONDED STRANDS

DEBONDING BOTH ENDS

◇ DEBOND LENGTH = 2'-0" (2 STRANDS)



SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

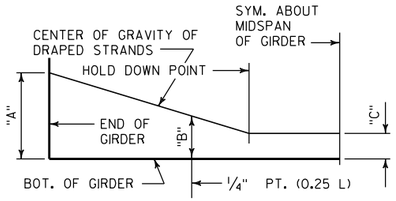
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

SPAN	PRESTRESS CAMBER (A*) (IN.)	DEAD LOAD DEFLECTION (B) (IN.)	RESIDUAL CAMBER (C) (IN.)
1	4⅝"	3"	1⅝"
2	4⅝"	3"	1⅝"

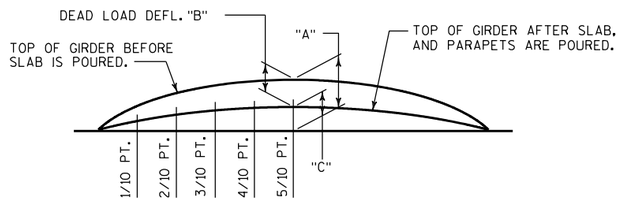
*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

THESE VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM

GIRDER DATA

SPAN	GIRDER	LOCATION	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	NO. OF DEBONDED STRANDS
1 & 2	G2 - G11	INTERIOR	136'-4½"	⅞	1¾	2½	2⅞	3	8000	8"	7"	8"	0.6	42	6800	49	16	19	5	2
1 & 2	G1 & G12	EXTERIOR	136'-4½"	⅞	1¾	2½	2⅞	3	8000	8"	7"	8"	0.6	42	6800	49	16	19	5	2

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

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54W" PRESTRESSED GIRDER DETAILS

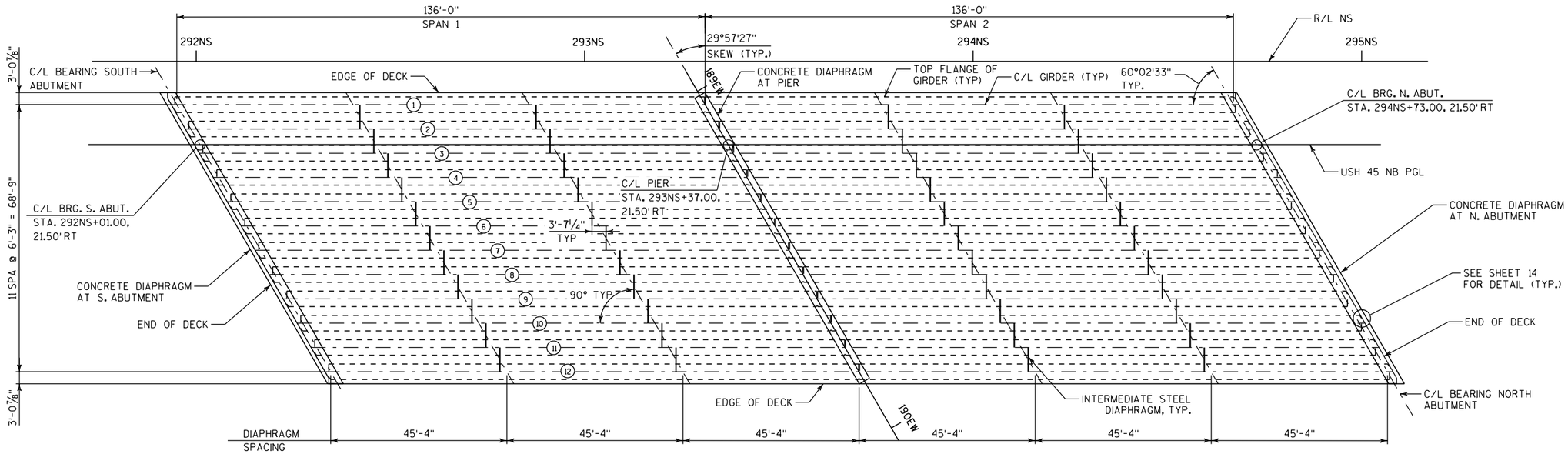
SHEET 15 OF 28

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-791\cds\B791_080502_gr.dgn PLOT DATE : 23-APR-2014 11:41 PLOT BY : MSCM1M PLOT NAME : B791_080502_gr PLOT SCALE : 2:1

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FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	S ABUT BRG	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	C/L PIER	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	N ABUT BRG
W EDGE OF DECK	784.16	783.90	783.65	783.38	783.12	782.85	782.57	782.30	782.02	781.74	781.47	781.19	780.91	780.63	780.36	780.08	779.80	779.52	779.25	778.97	778.69
W FLOW LINE	784.14	783.89	783.63	783.37	783.10	782.83	782.56	782.28	782.00	781.73	781.45	781.17	780.89	780.62	780.34	780.06	779.78	779.51	779.23	778.95	778.67
C/L GIRDER 1	784.16	783.90	783.64	783.38	783.12	782.85	782.57	782.29	782.02	781.74	781.46	781.18	780.91	780.63	780.35	780.07	779.80	779.52	779.24	778.96	778.69
C/L GIRDER 2	784.22	783.96	783.70	783.44	783.17	782.90	782.62	782.35	782.07	781.79	781.51	781.24	780.96	780.68	780.40	780.13	779.85	779.57	779.29	779.02	778.74
NB PGL	784.25	784.00	783.74	783.47	783.21	782.93	782.66	782.38	782.10	781.82	781.55	781.27	780.99	780.71	780.44	780.16	779.88	779.61	779.33	779.05	778.77
C/L GIRDER 3	784.27	784.02	783.76	783.49	783.22	782.95	782.67	782.40	782.12	781.84	781.56	781.29	781.01	780.73	780.45	780.18	779.90	779.62	779.35	779.07	778.79
C/L GIRDER 4	784.33	784.07	783.81	783.55	783.28	783.00	782.73	782.45	782.17	781.89	781.62	781.34	781.06	780.78	780.51	780.23	779.95	779.67	779.40	779.12	778.84
C/L GIRDER 5	784.39	784.13	783.87	783.60	783.33	783.05	782.78	782.50	782.22	781.95	781.67	781.39	781.11	780.84	780.56	780.28	780.00	779.73	779.45	779.17	779.17
C/L GIRDER 6	784.44	784.19	783.92	783.65	783.38	783.11	782.83	782.55	782.27	782.00	781.72	781.44	781.16	780.89	780.61	780.33	780.05	779.78	779.50	779.22	778.94
CROWN	784.47	784.21	783.95	783.68	783.41	783.13	782.85	782.58	782.30	782.02	781.75	781.47	781.19	780.91	780.64	780.36	780.08	779.80	779.53	779.25	778.97
C/L GIRDER 7	784.38	784.12	783.85	783.58	783.31	783.03	782.76	782.48	782.20	781.92	781.65	781.37	781.09	780.81	780.54	780.26	779.98	779.70	779.43	779.15	778.87
C/L GIRDER 8	784.18	783.92	783.66	783.39	783.11	782.83	782.56	782.28	782.00	781.72	781.45	781.17	780.89	780.61	780.34	780.06	779.78	779.51	779.23	778.95	778.67
C/L GIRDER 9	783.99	783.73	783.46	783.19	782.91	782.64	782.36	782.08	781.80	781.53	781.25	780.97	780.69	780.42	780.14	779.86	779.58	779.31	779.03	778.75	778.47
C/L GIRDER 10	783.79	783.53	783.26	782.99	782.71	782.44	782.16	781.88	781.61	781.33	781.05	780.77	780.50	780.22	779.94	779.66	779.39	779.11	778.83	778.55	778.28
C/L GIRDER 11	783.60	783.34	783.07	782.79	782.52	782.24	781.96	781.68	781.41	781.13	780.85	780.57	780.30	780.02	779.74	779.46	779.19	778.91	778.63	778.35	778.08
C/L GIRDER 12	783.41	783.14	782.87	782.60	782.32	782.04	781.76	781.49	781.21	780.93	780.65	780.38	780.10	779.82	779.54	779.27	778.99	778.71	778.43	778.16	777.88
E FLOW LINE	783.35	783.09	782.82	782.54	782.27	781.99	781.71	781.43	781.16	780.88	780.60	780.32	780.05	779.77	779.49	779.21	778.94	778.66	778.38	778.10	777.83
E EDGE OF DECK	783.34	783.07	782.80	782.53	782.25	781.97	781.69	781.42	781.14	780.86	780.58	780.31	780.03	779.75	779.47	779.20	778.92	778.64	778.37	778.09	777.81

NOTES

SEE SHEET 20 FOR CONCRETE DIAPHRAGM AT ABUTMENTS AND PIERS

SEE SHEET 17 FOR INTERMEDIATE STEEL DIAPHRAGMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

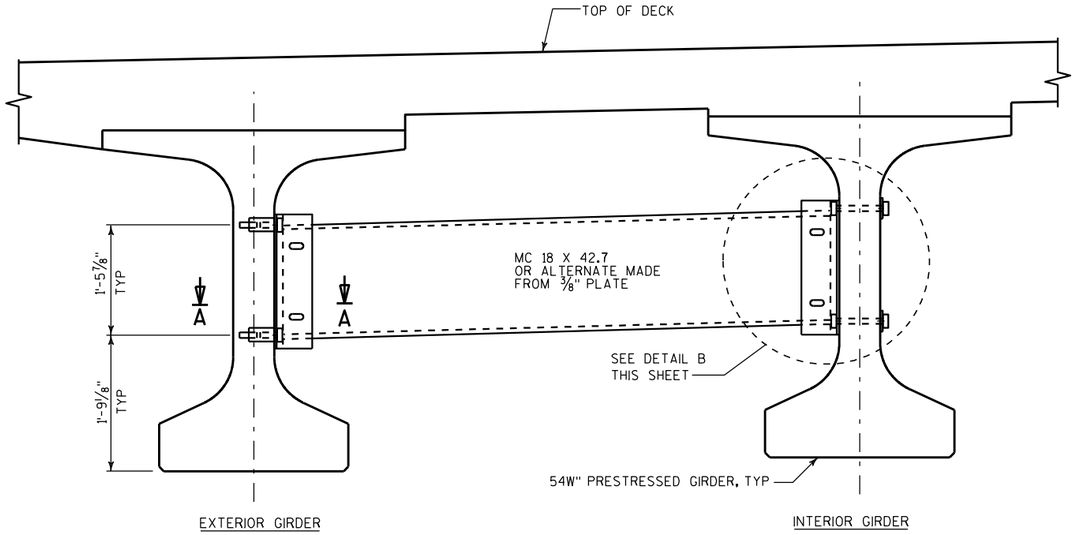
SUPERSTRUCTURE FRAMING PLAN

SHEET 16 OF 28

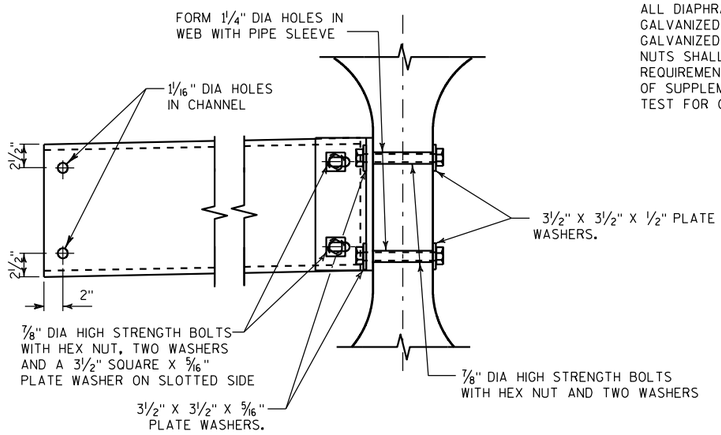
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STATE PROJECT NUMBER
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PART TRANSVERSE SECTION AT DIAPHRAGM



DETAIL B

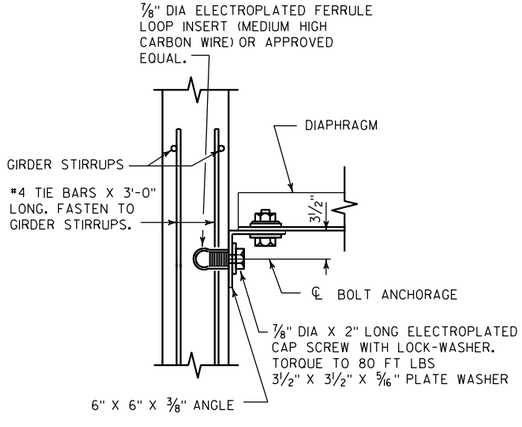
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-791", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

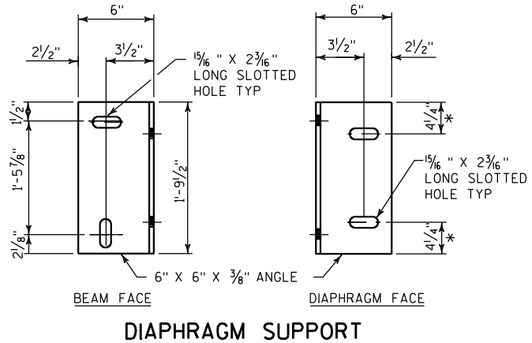
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

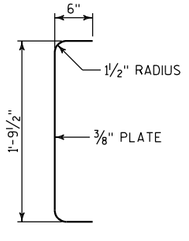


SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT



SECTION THRU ALTERNATE DIAPHRAGM

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

NO.	DATE	REVISION	BY

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STRUCTURE B-40-791

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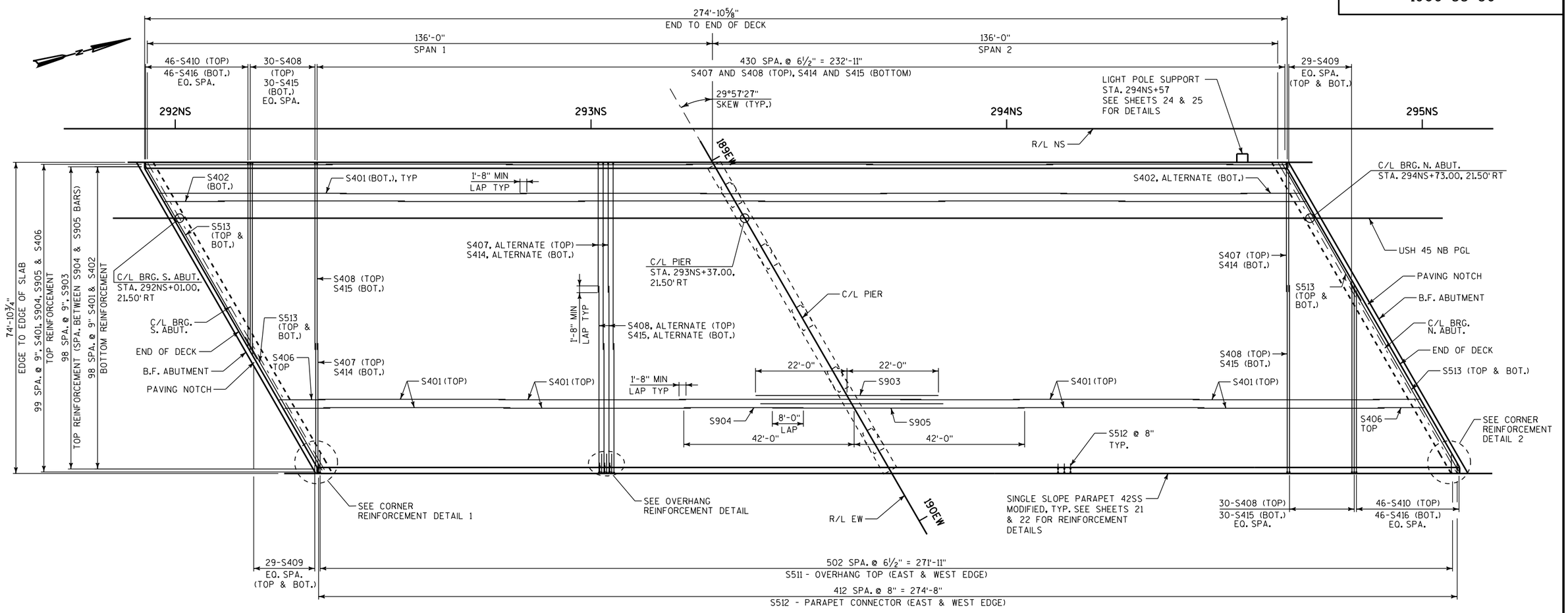
STEEL DIAPHRAGM

SHEET 17 OF 28

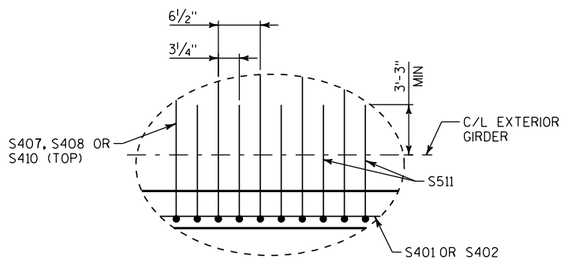
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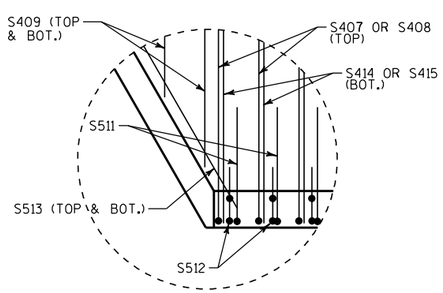
STATE PROJECT NUMBER
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DECK REINFORCEMENT PLAN

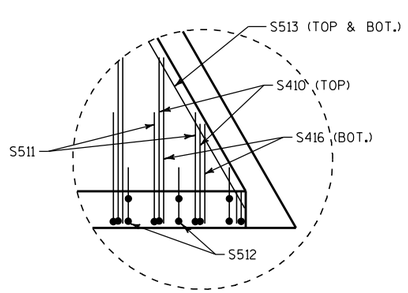


OVERHANG REINFORCEMENT DETAIL



CORNER REINFORCEMENT DETAIL 1

(S-E CORNER SHOWN, N-W CORNER SIMILAR)



CORNER REINFORCEMENT DETAIL 2

(N-E CORNER SHOWN, S-W CORNER SIMILAR)

NOTES

SEE SHEET 19 FOR SUPERSTRUCTURE CROSS SECTION THRU DECK.

SEE SHEET 20 FOR SUPERSTRUCTURE BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

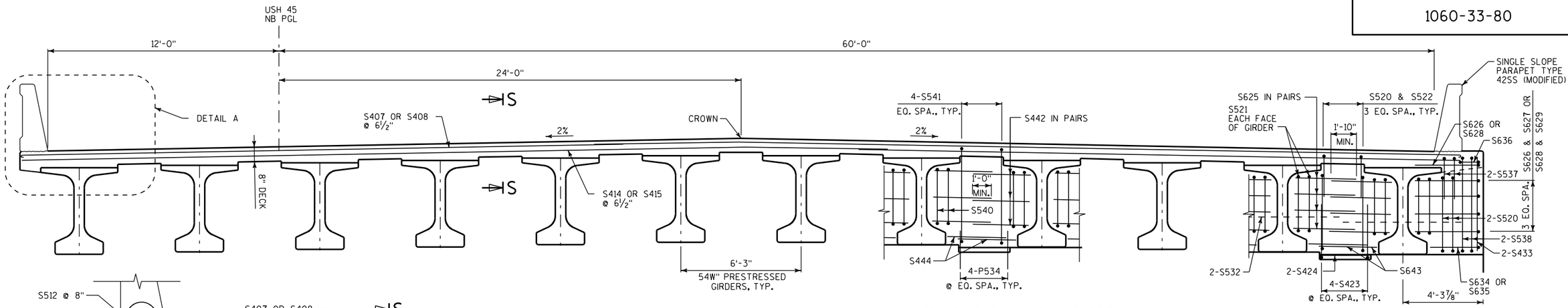
STRUCTURE B-40-791

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SUPERSTRUCTURE REINFORCEMENT

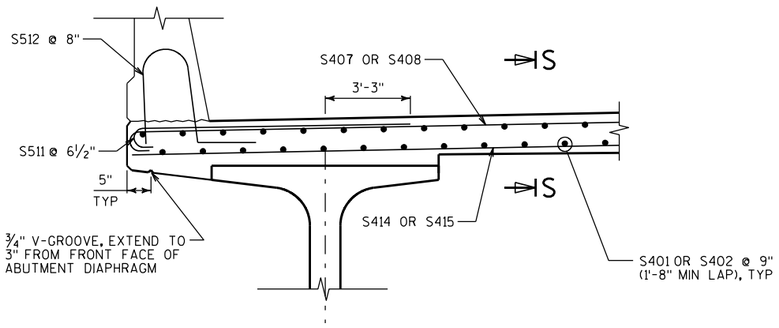
SHEET 18 OF 28

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1060-33-80



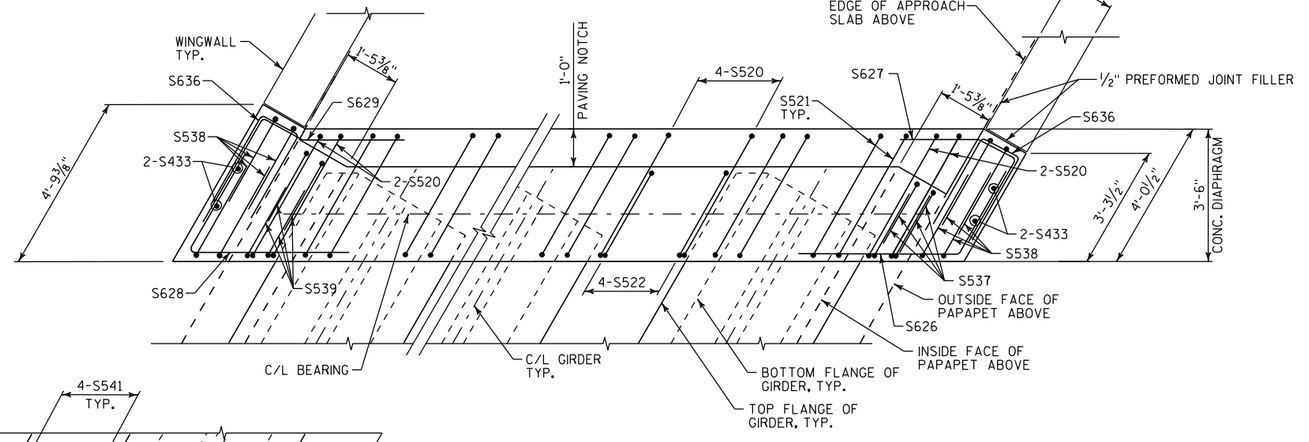
CONCRETE DIAPHRAGM AT PIER
TYPICAL

CONCRETE DIAPHRAGM AT ABUTMENT
TYPICAL
(BACK FACE HORIZONTAL BARS S630 AND S631
NOT SHOWN FOR CLARITY)

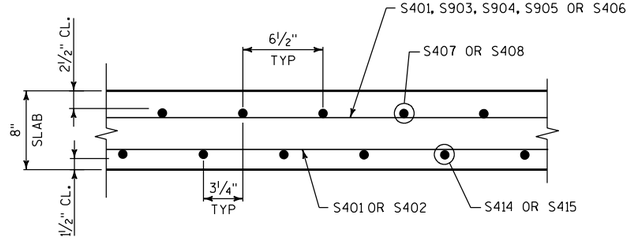


DETAIL A

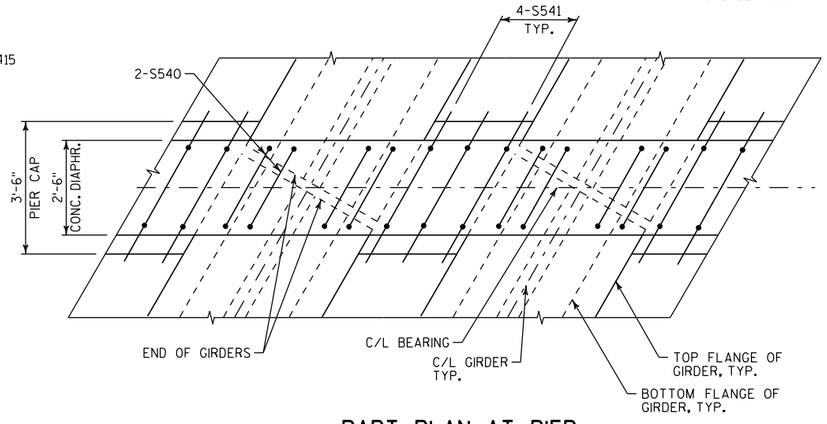
CROSS SECTION THRU DECK
(LOOKING NORTH)
(LONGITUDINAL REINFORCEMENT NOT SHOWN FOR CLARITY)



PART PLAN AT ABUTMENT
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)



SECTION S-S



PART PLAN AT PIER
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

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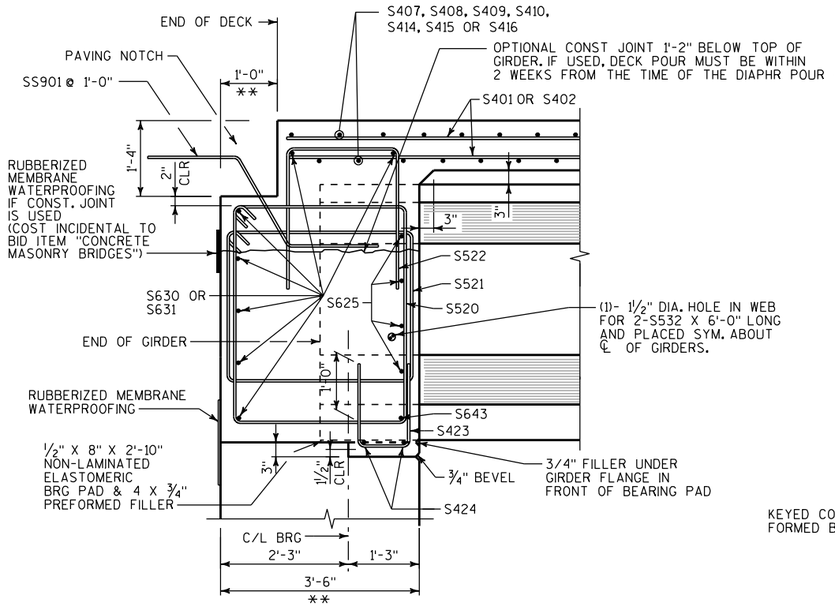
SUPERSTRUCTURE
CROSS SECTIONS

SHEET 19 OF 28

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-791\cds\B791_080514_ss.dgn
PLOT DATE : 23-APR-2014 11:41
PLOT BY : MSCM1M
PLOT NAME : B791_080514_ss
PLOT SCALE : 4:1

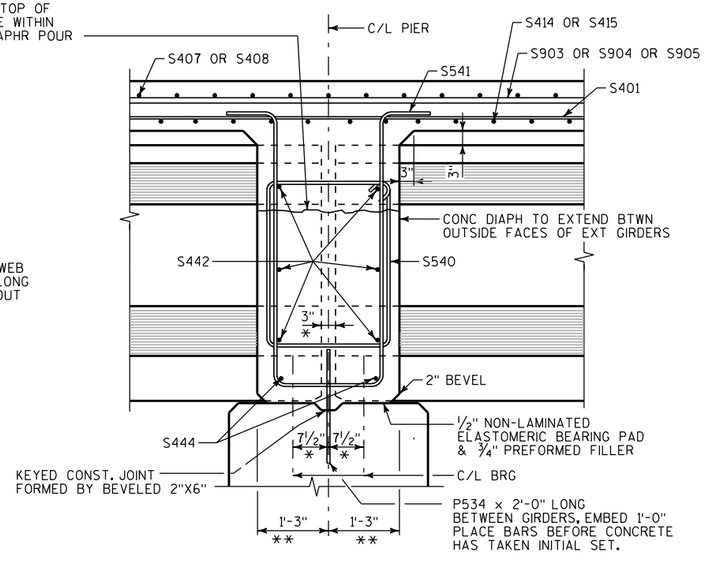
STATE PROJECT NUMBER

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PART LONGITUDINAL SECTION AT ABUTMENT

CONC DIAPH TO EXTEND OUT TO OUT OF BRIDGE DECK
(SEE SHEETS 5 AND 8 FOR ABUTMENT BEAM SEAT DETAILS)



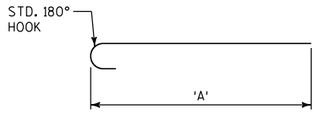
PART LONGITUDINAL SECTION AT PIER

CONC DIAPH TO EXTEND BETWEEN INSIDE WEB FACES OF EXTERIOR GIRDERS
(SEE SHEET 13 FOR PIER BEAM SEAT DETAILS)

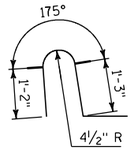
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	994	45'-0"			DECK LONG TOP & BOTTOM
S402	X	100	13'-0"			DECK LONG BOTTOM
S903	X	99	44'-0"			CONTINUITY REINFORCEMENT
S904	X	100	32'-0"			CONTINUITY REINFORCEMENT
S905	X	100	60'-0"			CONTINUITY REINFORCEMENT
S406	X	200	10'-4"			DECK LONG TOP
S407	X	431	31'-9"	X		DECK TRANSVERSE TOP
S408	X	491	45'-6"	X		DECK TRANSVERSE TOP
S409	X	116	16'-4"		X	DECK TRANSVERSE TOP & BOTTOM N. & S. END
S410	X	92	23'-3"	X	X	DECK TRANSVERSE TOP N. & S. END
S511	X	1006	6'-9"	X		DECK TRANSVERSE TOP AT OVERHANG
S512	X	826	4'-5"	X		DECK - PARAPET VERT
S513	X	8	45'-0"			DECK LONG TOP & BOTTOM AT END OF DECK
S414	X	431	31'-3"			DECK TRANSVERSE BOTTOM
S415	X	491	45'-0"			DECK TRANSVERSE BOTTOM
S416	X	92	22'-9"		X	DECK TRANSVERSE BOTTOM N. & S. END
S520	X	96	15'-5"	X		ABUTMENT DIAPHRAGM VERT
S521	X	96	13'-7"	X		ABUTMENT DIAPHRAGM VERT BETWEEN GIRDER FLANGES
S522	X	88	8'-5"	X		ABUTMENT DIAPHRAGM VERT
S423	X	88	3'-9"	X		ABUTMENT DIAPHRAGM VERT BETWEEN BEAM SEATS
S424	X	44	2'-9"			ABUTMENT DIAPHRAGM HORIZ FRONT FACE
S625	X	176	4'-2"			ABUTMENT DIAPHRAGM HORIZ FRONT FACE
S626	X	10	7'-4"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S627	X	10	5'-9"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S628	X	10	7'-8"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S629	X	10	6'-3"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR
S630	X	28	30'-0"			ABUTMENT DIAPHRAGM HORIZ BACK FACE
S631	X	14	36'-2"			ABUTMENT DIAPHRAGM HORIZ BACK FACE
S532	X	48	6'-0"			ABUTMENT DIAPHRAGM THRU GIRDER WEBS
S433	X	8	5'-1"			ABUTMENT DIAPHRAGM VERT EXTERIOR
S634	X	2	6'-1"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR BOTTOM
S635	X	2	6'-5"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR BOTTOM
S636	X	4	5'-11"	X		ABUTMENT DIAPHRAGM HORIZ EXTERIOR TOP
S537	X	8	4'-7"	X		ABUTMENT DIAPHRAGM VERT EXTERIOR
S538	X	16	10'-6"	X		ABUTMENT DIAPHRAGM VERT EXTERIOR
S539	X	8	5'-5"	X		ABUTMENT DIAPHRAGM VERT EXTERIOR
S540	X	44	11'-3"	X		PIER DIAPHRAGM VERT
S541	X	44	13'-2"	X		PIER DIAPHRAGM VERT
S442	X	132	3'-8"			PIER DIAPHRAGM HORIZ
S643	X	44	3'-1"			ABUTMENT DIAPHRAGM HORIZ FRONT FACE, BOTTOM
S444	X	44	2'-7"			PIER DIAPHRAGM HORIZ, BOTTOM
SS901	-	152	5'-0"	X		ABUT. DIAPHRAGM TO APPROACH SLAB (STAINLESS STEEL)

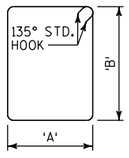
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



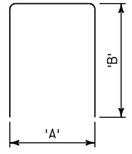
BAR MARK	DIM. 'A'
S407	31'-3"
S408	45'-0"
S410	1'-10" TO 43'-8"
S511	6'-2"



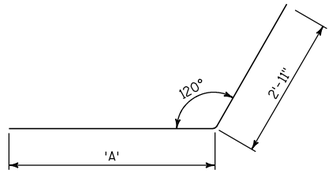
S512



BAR MARK	DIM. 'A'	DIM. 'B'
S520	3'-8"	3'-9"
S521	3'-8"	2'-10"
S540	2'-6"	2'-10"



BAR MARK	DIM. 'A'	DIM. 'B'
S522	2'-8"	3'-0"
S423	11"	1'-6"



BAR MARK	DIM. 'A'
S626	4'-5"
S634	3'-2"

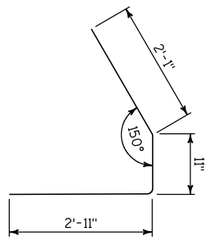
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
S409	4 SERIES OF 29	2'-8" TO 30'-0"
S410	2 SERIES OF 46	2'-4" TO 44'-2"
S416	2 SERIES OF 46	1'-10" TO 43'-8"

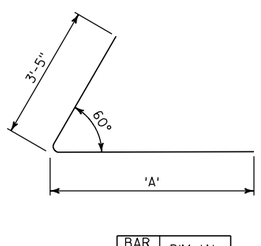
LEGEND:

* DIMENSION IS TAKEN PARALLEL TO C/L GIRDERS

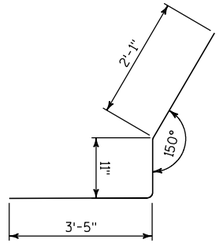
** DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNIT



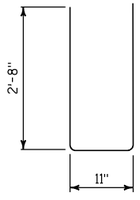
S627



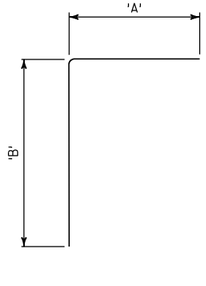
BAR MARK	DIM. 'A'
S628	4'-5"
S635	3'-2"



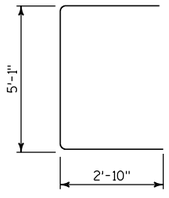
S629



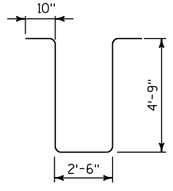
S636



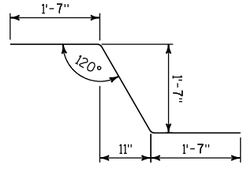
BAR MARK	DIM. 'A'	DIM. 'B'
S537	1'-8"	3'-0"
S539	2'-6"	3'-0"



S538



S541



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

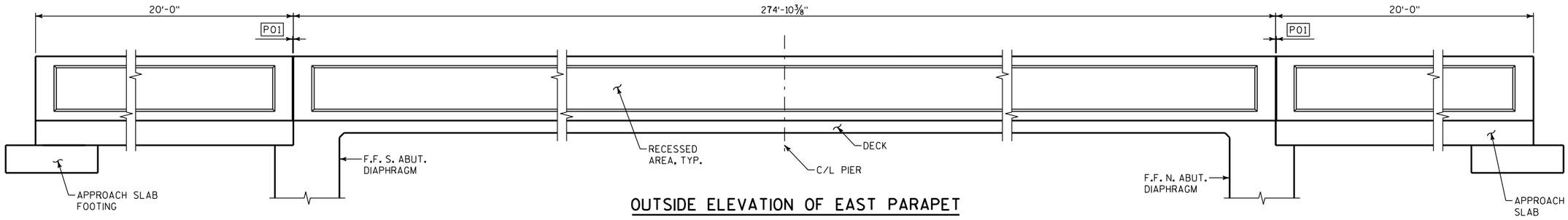
SUPERSTRUCTURE DETAILS

SHEET 20 OF 28

8

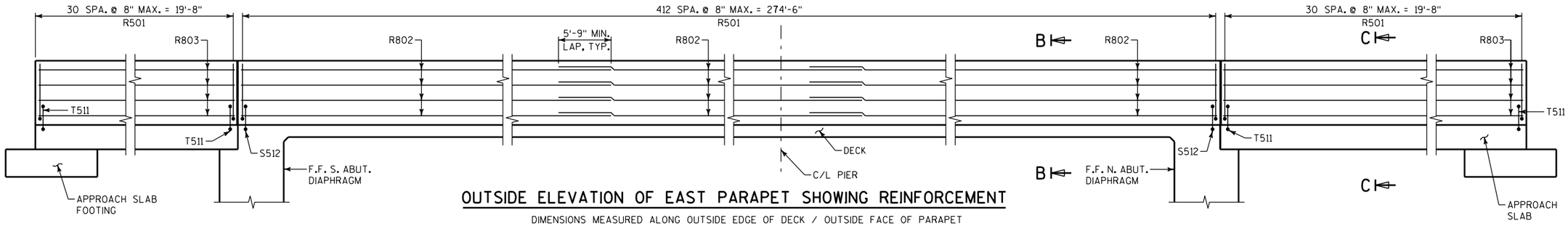
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STATE PROJECT NUMBER
1060-33-80



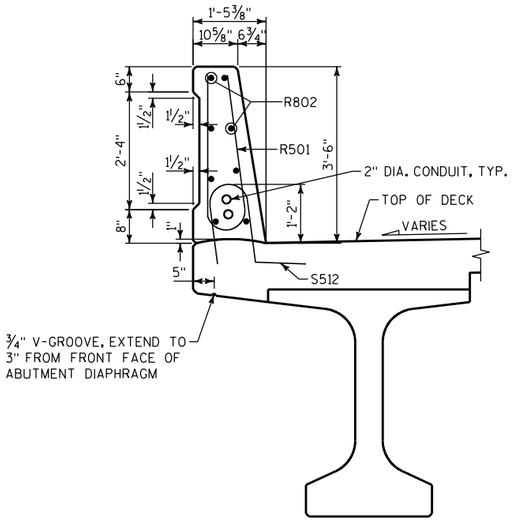
OUTSIDE ELEVATION OF EAST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)

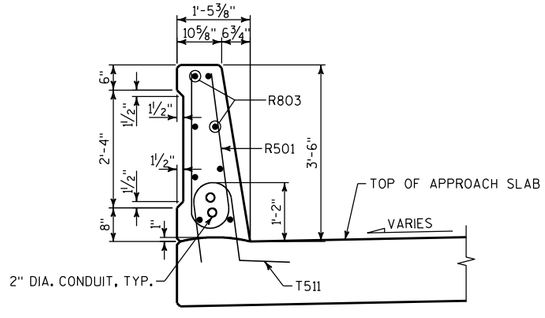


OUTSIDE ELEVATION OF EAST PARAPET SHOWING REINFORCEMENT

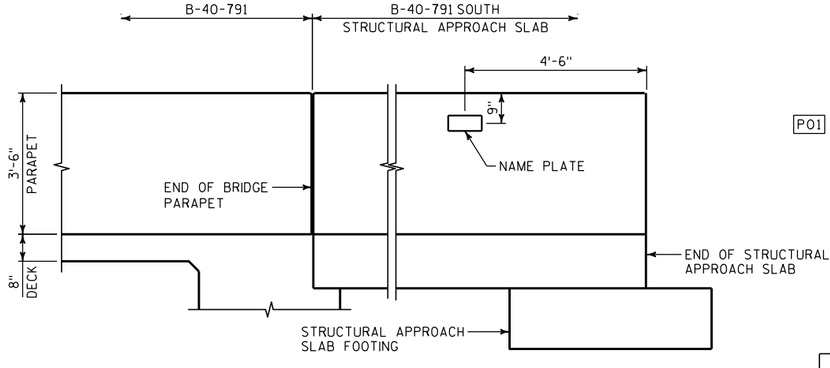
DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING WEST)



SECTION B-B



SECTION C-C



INSIDE FACE OF EAST PARAPET

(SOUTH END, LOOKING EAST)
(DIMENSIONS GIVEN AT INSIDE FACE OF PARAPET)

NOTE

FOR PARAPET BILL OF BARS, SEE SHEET 22.

LEGEND

P01 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

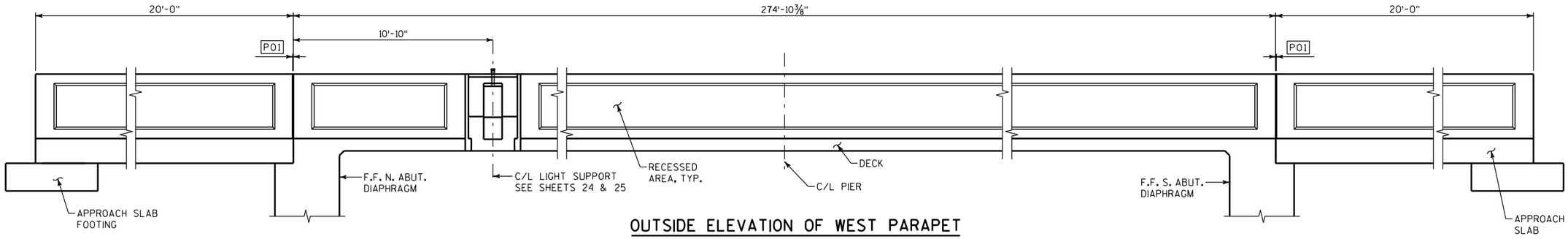
DRAWN BY MM | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (1 OF 3)

SHEET 21 OF 28

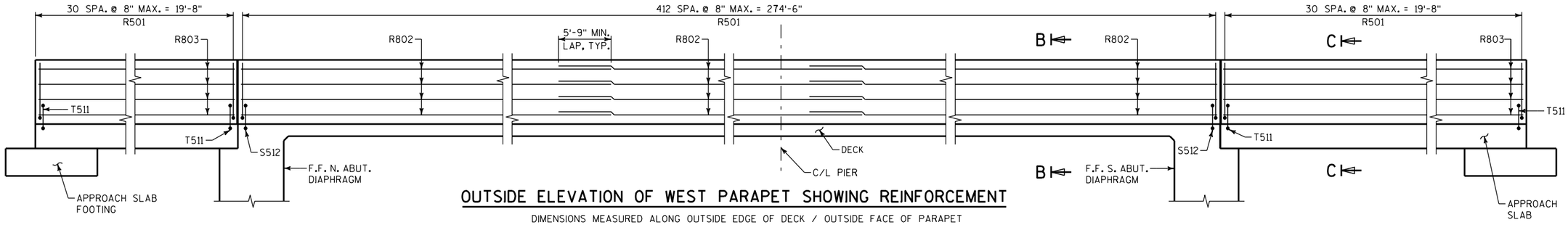
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STATE PROJECT NUMBER
1060-33-80



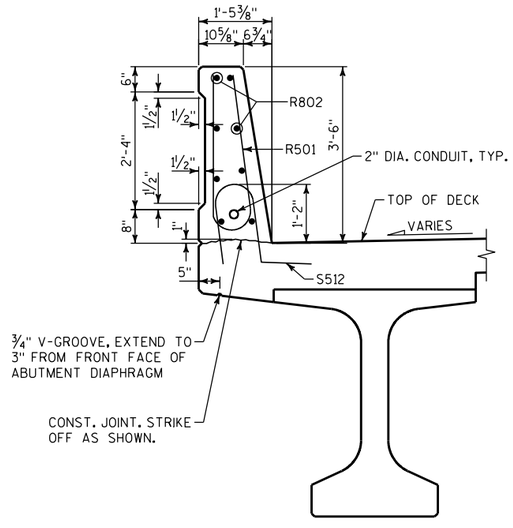
OUTSIDE ELEVATION OF WEST PARAPET

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)

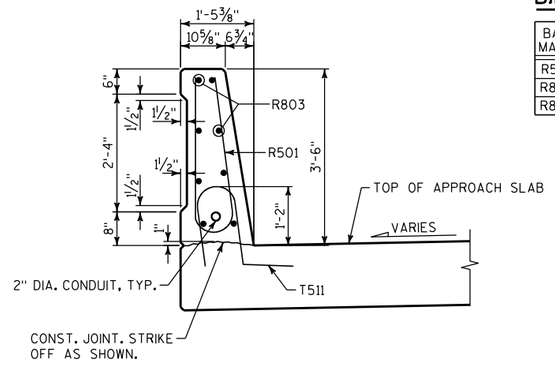


OUTSIDE ELEVATION OF WEST PARAPET SHOWING REINFORCEMENT

DIMENSIONS MEASURED ALONG OUTSIDE EDGE OF DECK / OUTSIDE FACE OF PARAPET
(LOOKING EAST)



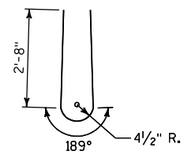
SECTION B-B



SECTION C-C

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	950	6'-8"	X	-	W. & E. PARAPET - VERTICAL
R802	X	80	59'-6"	-	-	W. & E. PARAPET - LONG. OVER DECK
R803	X	32	19'-8"	-	-	W. & E. PARAPET - LONG. OVER APPROACH SLAB



R501

BENDING DIAGRAM

LEGEND

P01 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

SINGLE SLOPE PARAPET 42SS MODIFIED (2 OF 3)

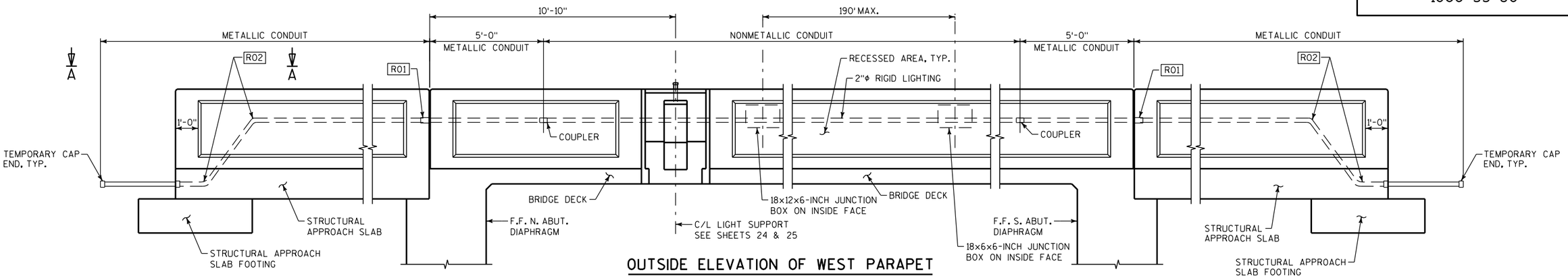
SHEET 22 OF 28

8

8

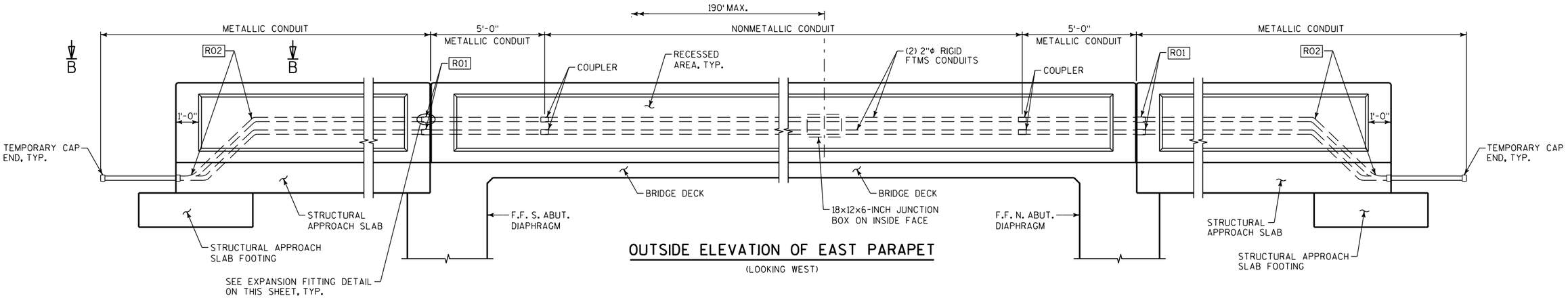
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STATE PROJECT NUMBER
1060-33-80



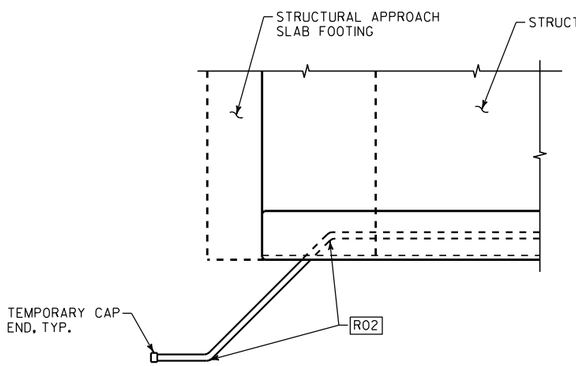
OUTSIDE ELEVATION OF WEST PARAPET

(LOOKING EAST)



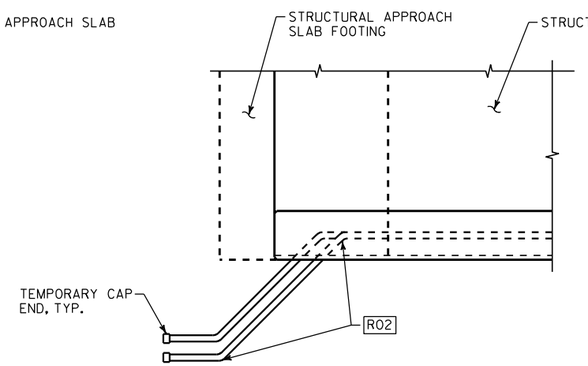
OUTSIDE ELEVATION OF EAST PARAPET

(LOOKING WEST)



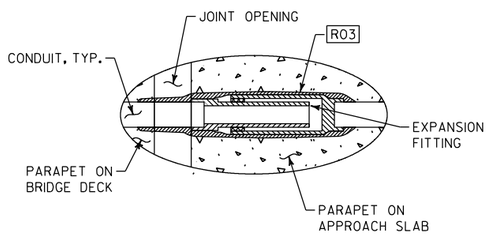
SECTION A-A

(NORTH END SHOWN,
SOUTH END SIMILAR BUT OPPOSITE HAND)



SECTION B-B

(SOUTH END SHOWN,
NORTH END SIMILAR BUT OPPOSITE HAND)



EXPANSION FITTING DETAIL

LEGEND

R01 METALLIC CONDUIT EXPANSION FITTING (O-Z/GEDNEY TYP AX-200 & BONDING JUMPER) WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCLUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

R02 45° BEND IN CONDUIT, USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

R03 WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. 1¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY	MM	PLANS CK'D.	MHZ

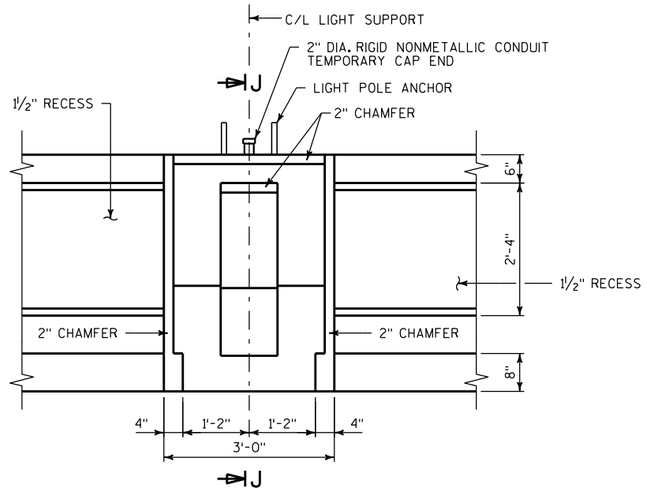
SINGLE SLOPE PARAPET 42SS MODIFIED (3 OF 3)

SHEET 23 OF 28

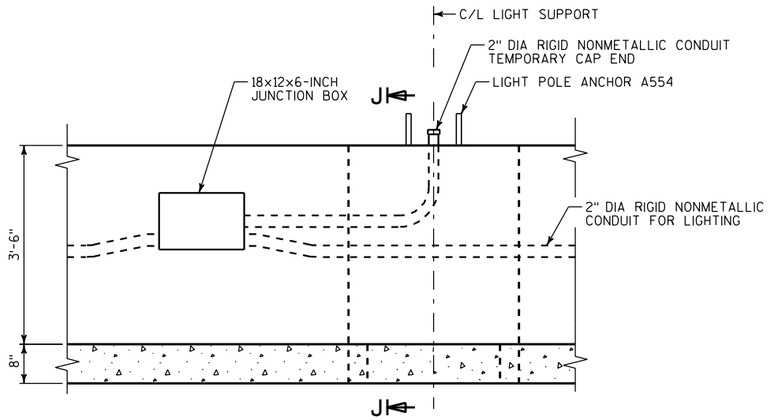
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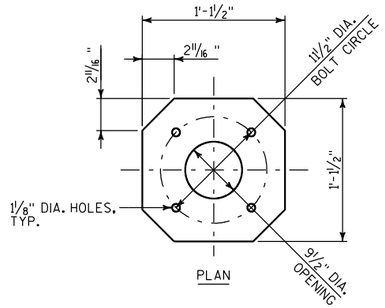
STATE PROJECT NUMBER
1060-33-80

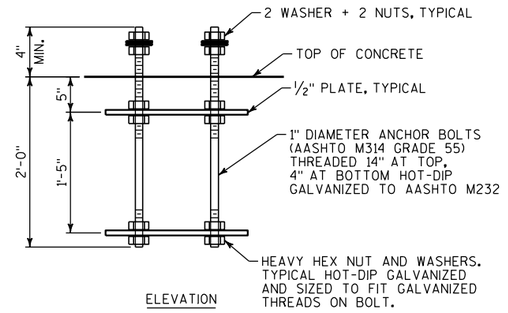


OUTSIDE ELEVATION AT LIGHT SUPPORT

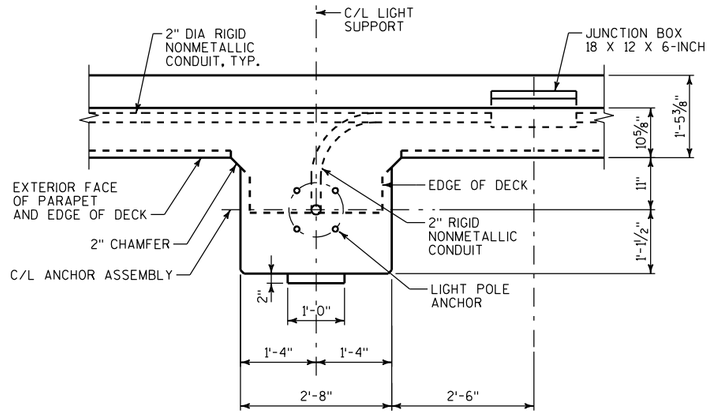


INSIDE ELEVATION AT LIGHT SUPPORT

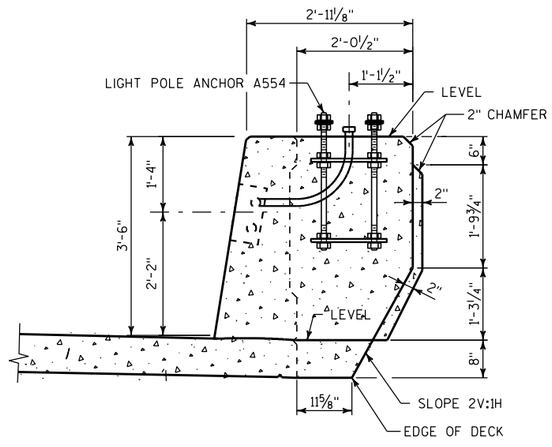




ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



PLAN



SECTION J-J

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. RT

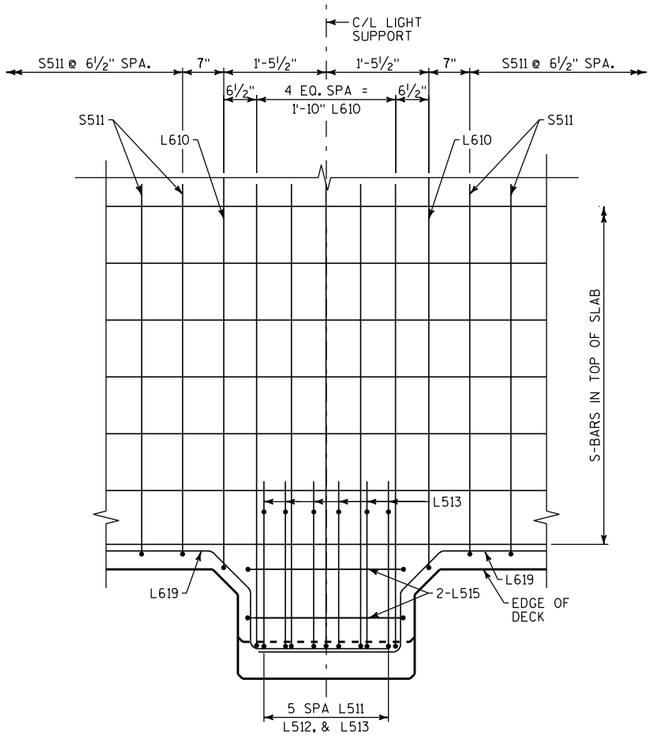
LIGHT SUPPORT DETAILS

SHEET 24 OF 28

8

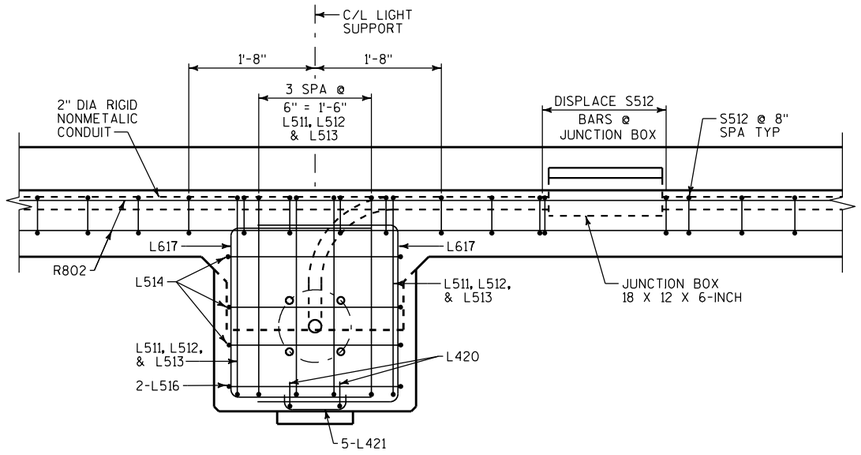
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STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING REINFORCEMENT IN DECK

(S407, S408 & S410 NOT SHOWN FOR CLARITY)

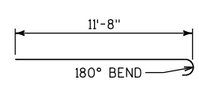


PLAN SHOWING REINFORCEMENT

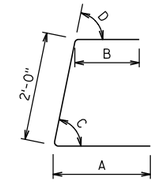
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

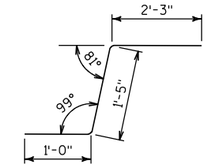
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
L610	X	7	12'-4"	X	LIGHT BLISTER - DECK OVERHANG
L511	X	6	5'-3"	X	LIGHT BLISTER - VERTICAL (OUTSIDE)
L512	X	6	5'-4"	X	LIGHT BLISTER - VERTICAL (OUTSIDE WITH SLAB)
L513	X	6	4'-8"	X	LIGHT BLISTER - VERTICAL (WITH SLAB)
L514	X	6	7'-5"	X	LIGHT BLISTER - VERTICAL (BODY)
L515	X	4	6'-2"	X	LIGHT BLISTER - VERTICAL (LOWER BODY)
L516	X	2	6'-6"	X	LIGHT BLISTER - VERTICAL (OUTSIDE)
L617	X	8	6'-5"	X	LIGHT BLISTER - HORIZONTAL (TOP)
L618	X	2	6'-1"	X	LIGHT BLISTER - HORIZONTAL (BODY)
L619	X	2	4'-9"	X	LIGHT BLISTER - HORIZONTAL (BOTTOM)
L420	X	2	3'-5"	X	LIGHT BLISTER - OUTSIDE FACE
L421	X	5	1'-1"	X	LIGHT BLISTER - OUTSIDE FACE



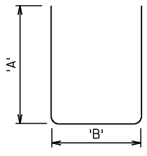
L610



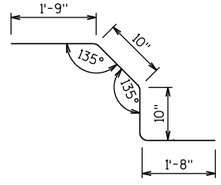
BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C'	DIM. 'D'
L511	2'-0"	1'-6"	67°	67°
L512	2'-4"	1'-1"	90°	27°



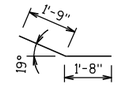
L513



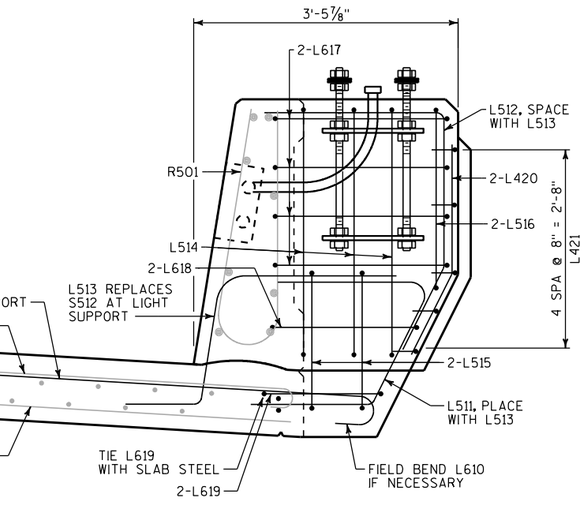
BAR MARK	DIM. 'A'	DIM. 'B'
L514	2'-3"	3'-2"
L515	2'-3"	1'-11"
L516	2'-3"	2'-3"
L617	2'-3"	2'-3"
L618	2'-3"	1'-11"
L421	0'-4"	0'-7"



L619

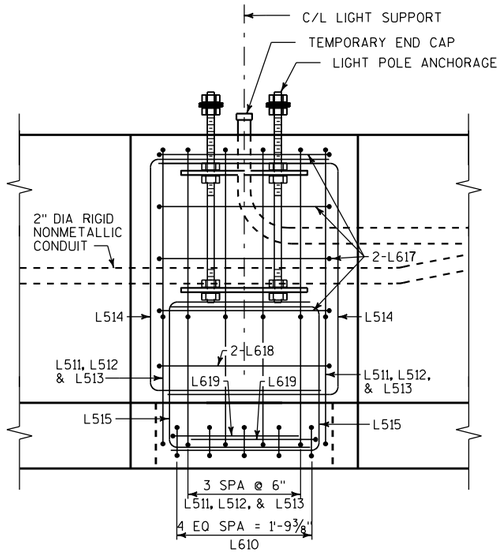


L420



SIDE VIEW SHOWING REINFORCEMENT

CROSS SECTION AT LIGHT SUPPORT



INTERIOR ELEVATION SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. RT

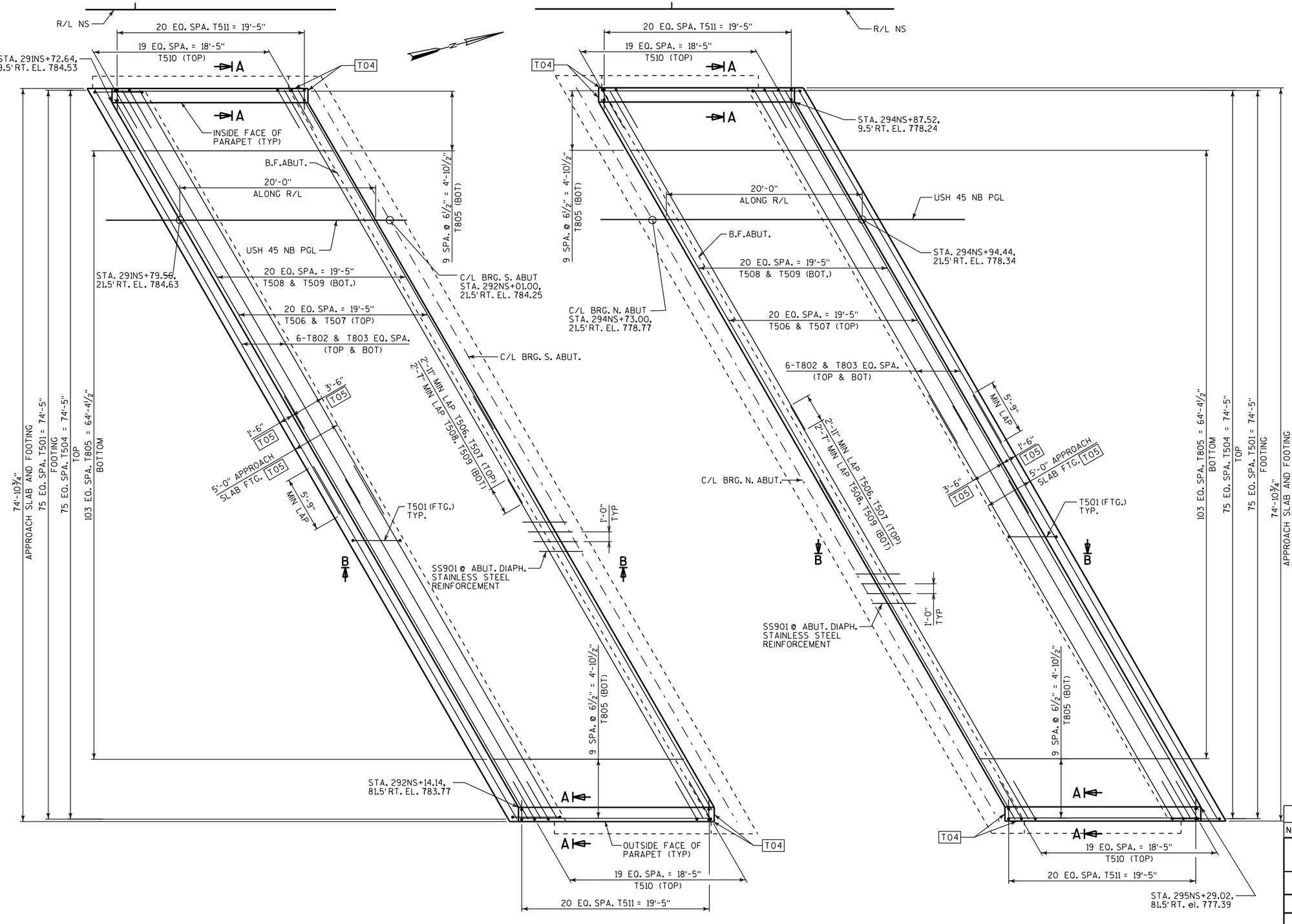
LIGHT SUPPORT REINFORCEMENT

SHEET 25 OF 28

8

8

STATE PROJECT NUMBER
1060-33-80



LEGEND

T04 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

T05 MEASURED NORMAL TO ABUTMENT

NOTES

FOR SECTIONS A-A & B-B, SEE SHEET 27.

FOR REINFORCEMENT BILL OF BARS, SEE SHEET 27.

FOR STIANLESS STEEL BARS SEE SHEET 20.

FOR PARAPET REINFORCEMENT SHEET, SEE SHEET 21.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

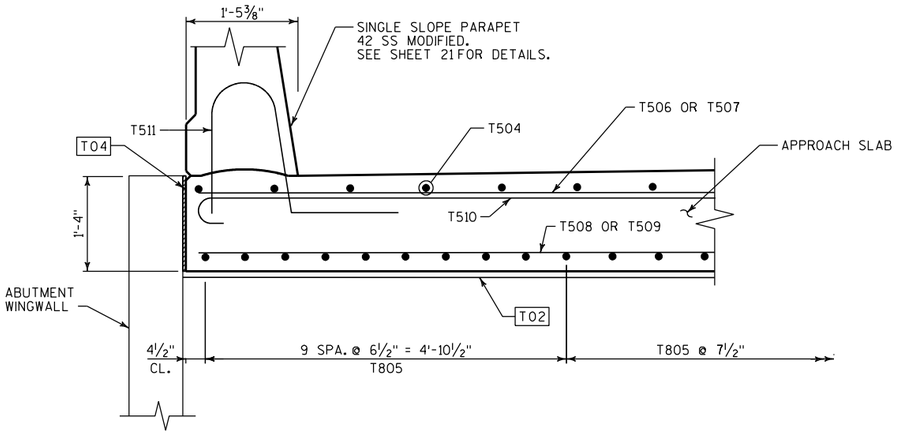
DRAWN BY MM | PLANS CK'D. MHZ

STRUCTURAL APPROACH SLAB

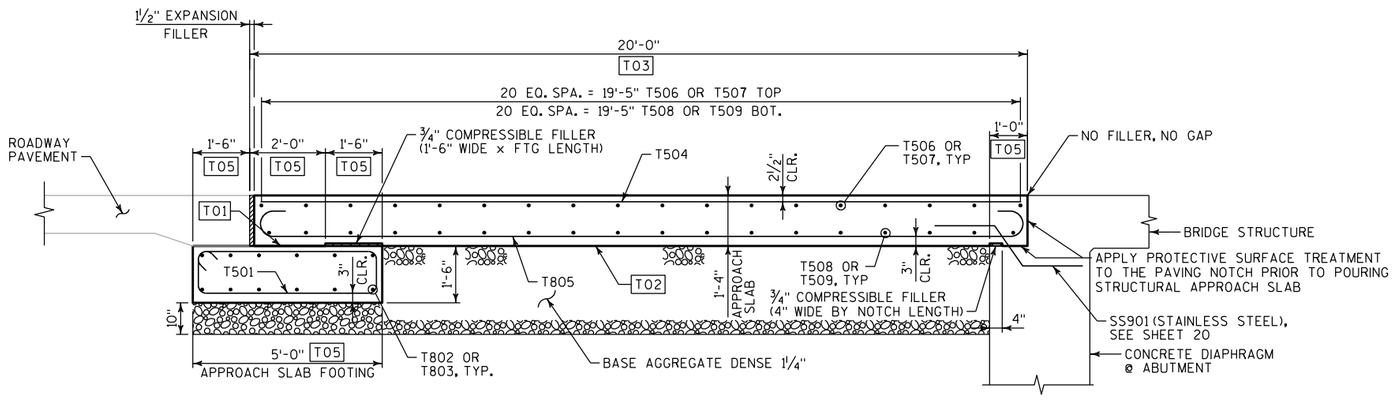
SHEET 26 OF 28

8

8



SECTION A-A

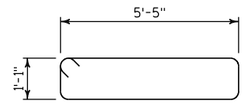


SECTION THRU APPROACH SLAB B-B

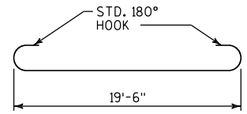
BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
T501	X	152	13'-7"	X		STIRRUP - FOOTING
T802	X	24	50'-0"	-		TRANSVERSE - FOOTING
T803	X	24	41'-11"	-		TRANSVERSE - FOOTING
T504	X	152	19'-8"	-		ALONG R/L - TOP
T805	X	244	21'-4"	X		ALONG R/L - BOT
T506	X	42	40'-0"	-		TRANSVERSE - TOP
T507	X	42	49'-0"	-		TRANSVERSE - TOP
T508	X	42	40'-0"	-		TRANSVERSE - BOT
T509	X	42	48'-8"	-		TRANSVERSE - BOT
T510	X	80	4'-1"	X		TRANSVERSE - OUTSIDE
T511	X	84	5'-5"	X		PARAPET-SLAB BAR

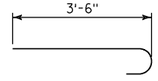
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



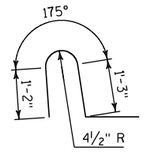
T501



T805



T510



T511

LEGEND

T01 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

T02 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

T03 MEASURE ALONG USH 45 NB PGL

T04 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

T05 MEASURED NORMAL TO ABUTMENT

APPROACH SLAB NOTES

SEE PARAPET SHEETS FOR PARAPET REINFORCING AND TIE PLACEMENT REQUIRED IN APPROACH SLABS.

IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

DRAWN BY MM | PLANS CK'D. MHZ

STRUCTURAL APPROACH SLAB DETAILS

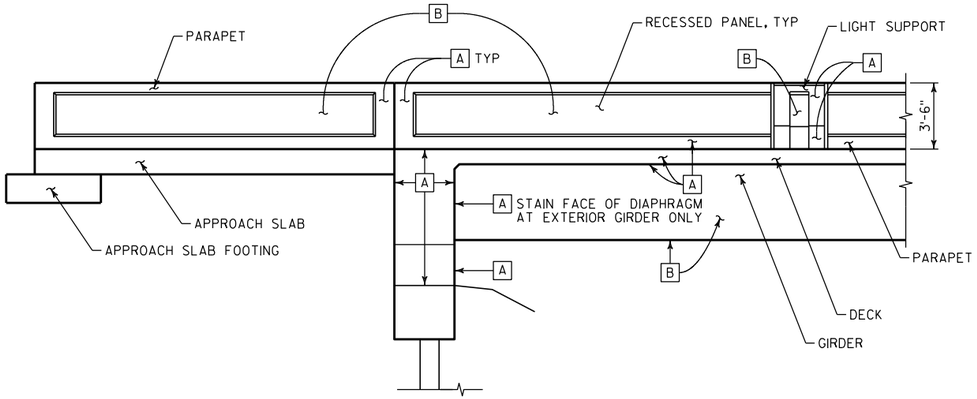
SHEET 27 OF 28

8

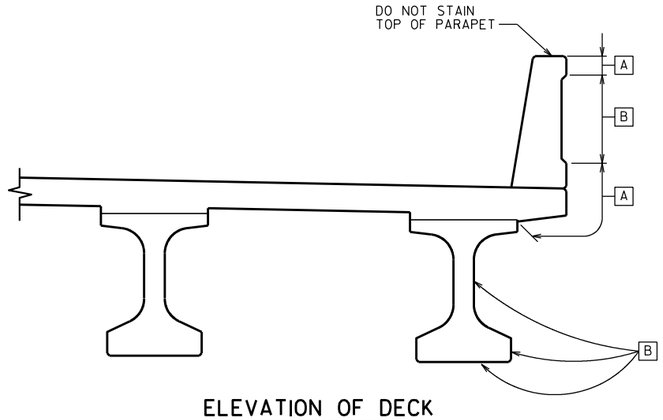
8

STATE PROJECT NUMBER

1060-33-80



OUTSIDE ELEVATION OF PARAPET



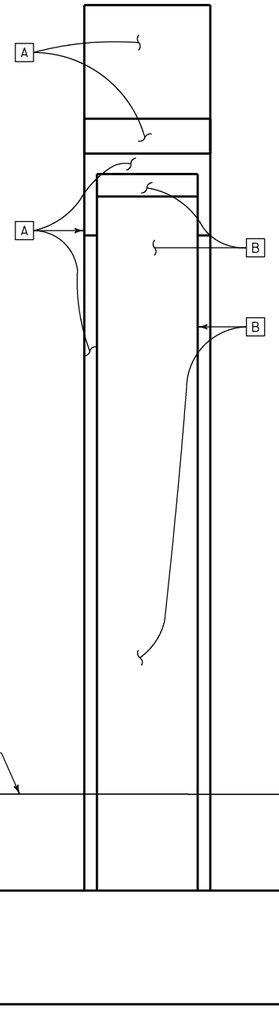
ELEVATION OF DECK

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		SIDEWALKS	FASCIA & EXPOSED UNDERSIDE
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENTS	FRONT FACE FROM TOP OF ABUTMENT TO 6" BELOW TOP OF SLOPE PAVING OR TOP OF PROPOSED GROUND
		PIER	SIDES OF GIRDER PEDESTALS, SIDES AND BOTTOM OF CAP BEAM AND COLUMNS TO FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON BOTH SIDES
		GIRDERS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS
		PIER	REVEALS ON COLUMNS

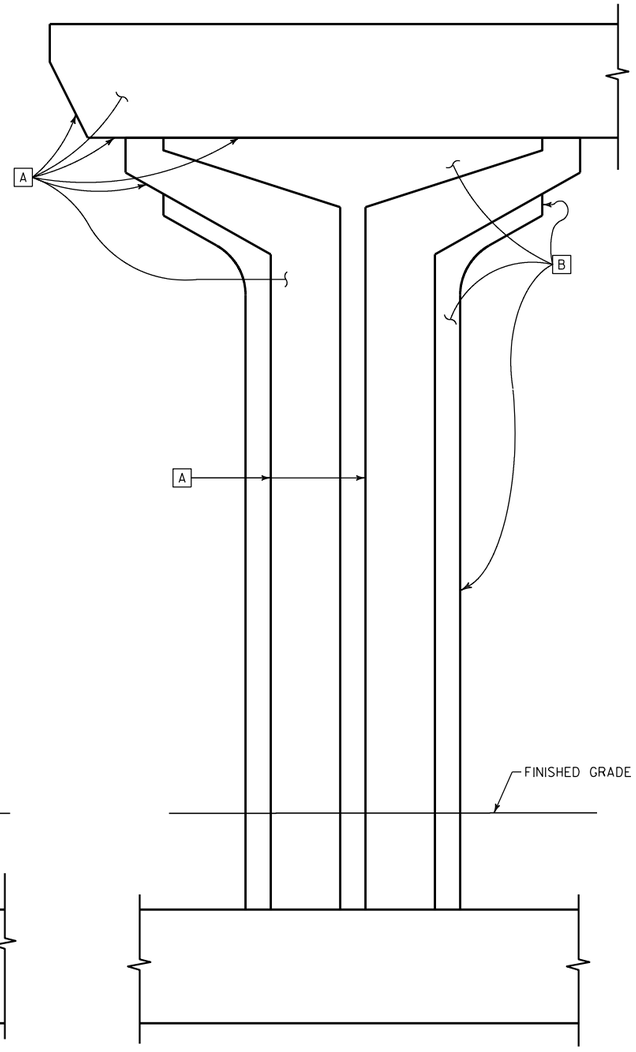
THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:

BASE COLOR : FEDERAL COLOR - 36424
ACCENT COLOR #1: FEDERAL COLOR - 33522



ELEVATION OF PIER

(END VIEW)



ELEVATION OF PIER

(FRONT VIEW)

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-791

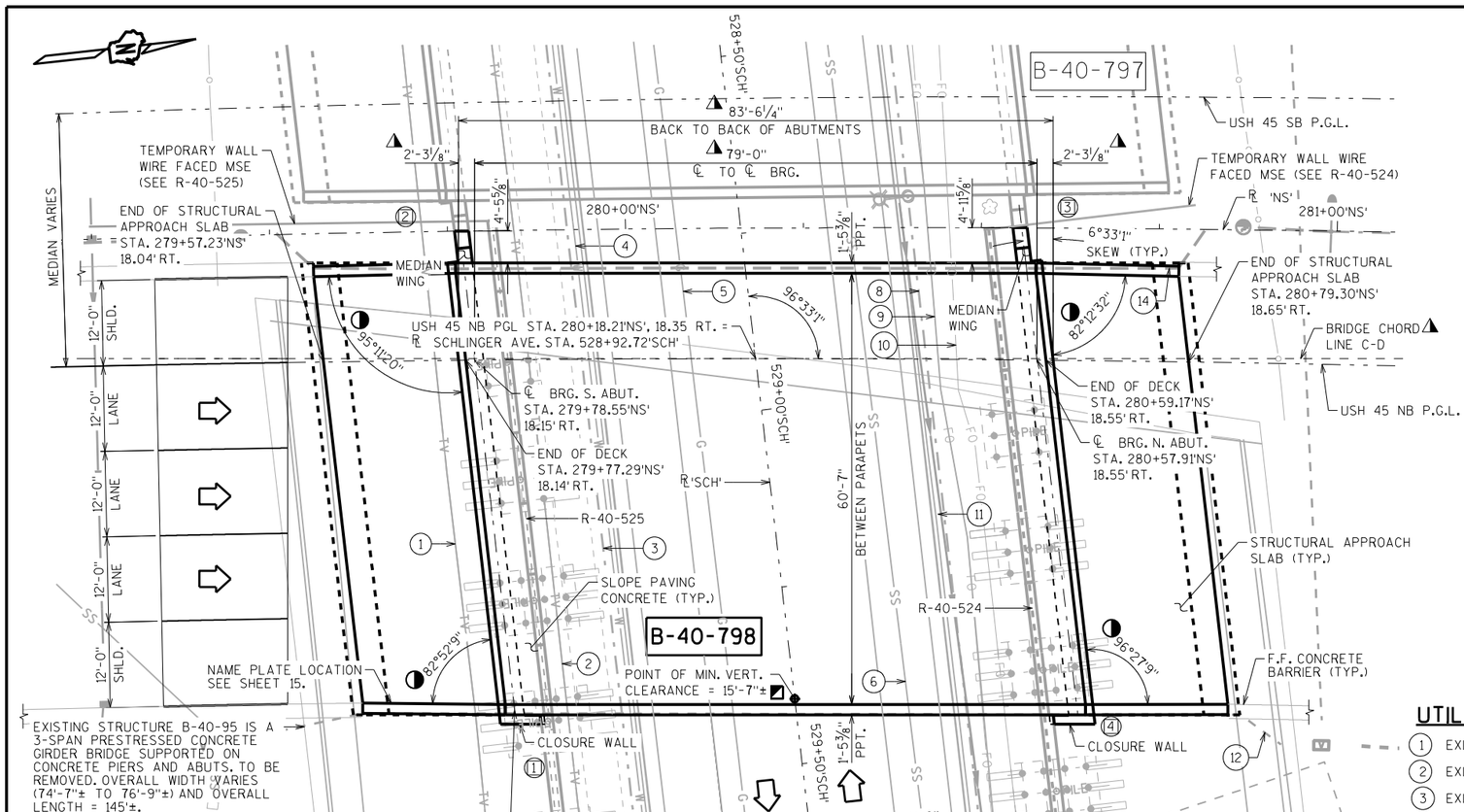
DRAWN BY RT | PLANS CK'D. MHZ

AESTHETIC DETAILS

SHEET 28 OF 28

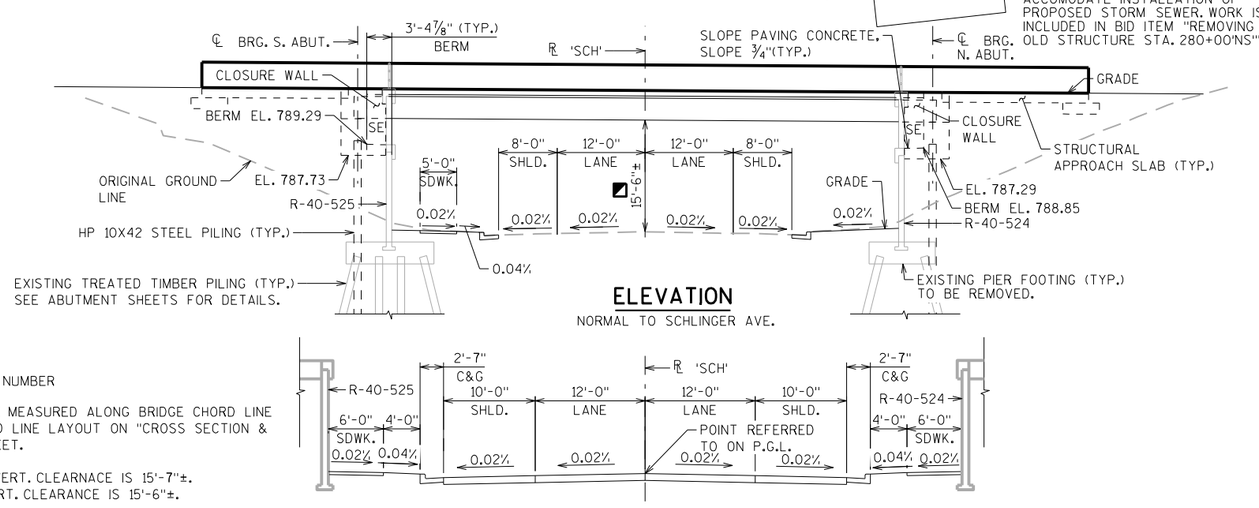
8

8



PLAN

(SINGLE SPAN 36W" PRESTRESSED GIRDERS)



ELEVATION

NORMAL TO SCHLINGER AVE.

TYPICAL FINISHED SECTION THRU SCHLINGER AVE.

LOOKING WEST (CONSTRUCTED UNDER FUTURE CONTRACT 1060-30-88)

▢ INDICATES WING NUMBER

▲ DIMENSIONS ARE MEASURED ALONG BRIDGE CHORD LINE C-D. SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

◪ ULTIMATE MIN. VERT. CLEARNACE IS 15'-7"±. INTERIM MIN. VERT. CLEARANCE IS 15'-6"±.

◑ APPROACH SLABS PPTS. ANGLED TO MEET F.F. OF CONCRETE BARRIER (TYP.)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.11
OPERATING RATING FACTOR: RF=1.44
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 230 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

B-40-798 IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC)	f'c = 4,000 P.S.I.
	SUBSTRUCTURE	f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60		fy = 60,000 P.S.I.
STAINLESS STEEL BAR REINFORCEMENT, GRADE 60		fy = 60,000 P.S.I.
36W" PRESTRESSED GIRDERS, CONCRETE MASONRY STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.		f'c = 8,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING. REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD:

SOUTH ABUTMENT ____ 175 TONS PER PILE
NORTH ABUTMENT ____ 175 TONS PER PILE

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:

SOUTH ABUTMENT ____ 100 FEET
NORTH ABUTMENT ____ 95 FEET

UTILITY NOTES

1. EXISTING TIME WARNER CABLE TV LINE ABANDONED IN PLACE
2. EXISTING TIME WARNER CABLE TV LINE ABANDONED IN PLACE
3. EXISTING CITY OF WEST ALLIS LIGHTING CABLE TO BE RELOCATED
4. EXISTING CITY OF WEST ALLIS WATER TO REMAIN
5. EXISTING WE ENERGIES GAS MAIN TO REMAIN
6. EXISTNG WISDOT STORM SEWER TO BE RELOCATED
8. EXISTING CITY OF WEST ALLIS LIGHTING CABLE ABANDONED IN PLACE
9. EXISTING AT&T CORP FIBER OPTIC ABANDONED IN PLACE
10. EXISTING TCA FIBER OPTIC TO BE RELOCATED
11. PROPOSED WISDOT STORM SEWER 24" ϕ
12. PROPOSED WISDOT FTMS CONDUIT
13. PROPOSED WISDOT STORM SEWER 60" ϕ
14. PROPOSED WISDOT LIGHTING CONDUIT

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. 36W" PRESTRESSED GIRDER
9. 36W" PRESTRESSED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. STRUCTURAL APPROACH SLAB - SOUTH ABUTMENT
14. STRUCTURAL APPROACH SLAB - NORTH ABUTMENT
15. SINGLE SLOPE PARAPET 42SS (MODIFIED)
16. PARAPET 42SS ELECTRICAL WORK
17. PIPE RAILING DETAILS
18. ALTERNATE CONSTRUCTION JOINT
19. AESTHETIC DETAILS

TRAFFIC VOLUME

USH 45 NB 'NS'	SCHLINGER AVE. 'SCH'
A.D.T.=59,900 (2035)	A.D.T.=3,800 (2035)
R.D.S.=60 M.P.H.	R.D.S.=30 M.P.H.

CURVE DATA

℞ 'NS'- USH 45

P.I. = STA. 281+16.88 'NS'
Δ = 15° 24' 03.44" RT.
D = 1° 24' 27.93"
T = 550.32
L = 1094.01
R = 4070.00
S.E. = 3.5%
P.C. = STA. 275+66.56 'NS'
P.T. = STA. 286+60.56 'NS'

STRUCTURE DESIGN CONTACTS:

RUTH COISMAN	(608) 261-8205
LAURA SHADEWALD	(608) 267-9592

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 5/8/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-798

US 45 NB OVER SCHLINGER AVE.

COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~ WEST ALLIS
DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.	
DESIGNED BY: RAC	DESIGN CK'D. TAB
DRAWN BY: RAC	PLANS CK'D. TAB

GENERAL PLAN

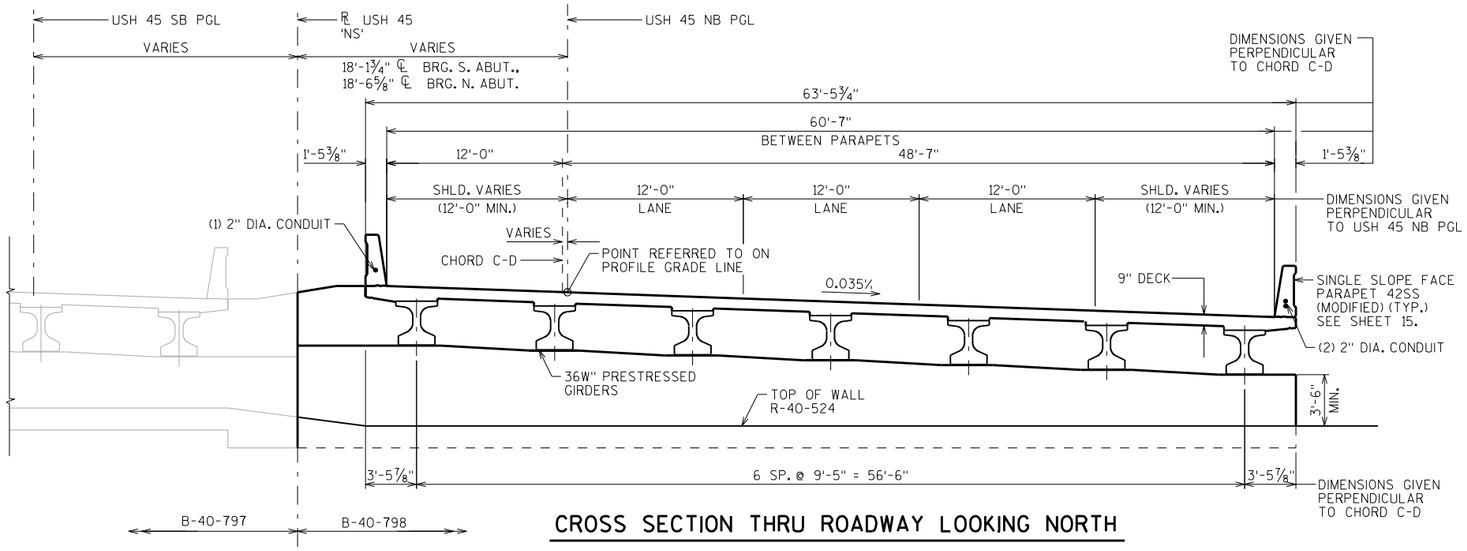
SHEET 1 OF 19

2417

I.D. 1060-33-07C

DATE: MAY 2014

SCALE = 10



CROSS SECTION THRU ROADWAY LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH SLAB	SOUTH ABUT.	NORTH ABUT.	NORTH APPROACH SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 280+00'NS'	LS						1
203.0210.S.0006	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-95	LS						1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-798	LS						1
210.0100	BACKFILL STRUCTURE	CY			190	190		380
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON		190			190	380
502.0100	CONCRETE MASONRY BRIDGES	CY		18	57	57	18	150
502.3200	PROTECTIVE SURFACE TREATMENT	SY	630	175			175	980
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	560					560
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB			4,230	4,240		8,470
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	36,260	14,350	400	420	14,350	65,780
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH			7	7		14
506.4000	STEEL DIAPHRAGMS B-40-798	EACH	6					6
513.2000	PIPE RAILING B-40-798	LS						1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			17	17		34
550.0500	PILE POINTS	EACH			12	12		24
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF			1,200	1,140		2,340
604.0400	SLOPE PAVING CONCRETE	SY			20	20		40
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	18	60			60	138
652.0225	CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH	LF	230					230
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	235	69			69	373
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH			2	2		4
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH			2	2		4
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	2,210					2,210
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	4,939	1,205			1,207	7,351
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———			½" & ¾"

ALL ITEMS ARE CATEGORY 2040

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL ALL EXPOSED EDGES 3/4" UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND TOP OF APPROACH SLAB SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

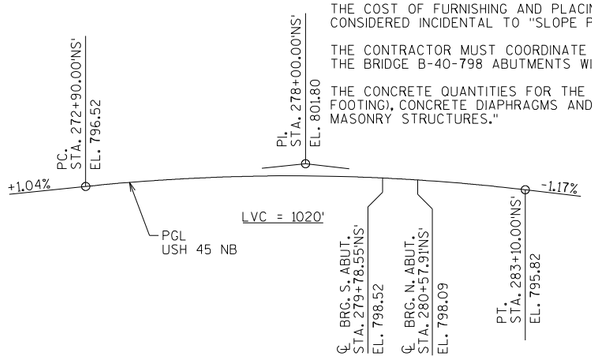
EMBEDDED CONDUIT IN THE WEST & EAST PARAPETS FOR FUTURE LIGHTING OF USH 45 AND FTMS ARE INCLUDED IN THE BRIDGE PLANS.

THE EXISTING BRIDGE B-40-95 IS A THREE SPAN PRESTRESSED CONCRETE GIRDER BRIDGE. THE ENTIRE STRUCTURE SHALL BE REMOVED. EXISTING PILING WITHIN THE FOOTPRINT OF THE PROPOSED MSE WALLS AT THE ABUTMENTS SHALL BE CUT OFF 1'-0" BELOW THE BOTTOM OF THE PROPOSED MSE LEVELING PAD. SEE R-40-524 AND R-40-525 PLANS FOR PROPOSED BOTTOM OF LEVELING PAD ELEVATIONS. DRIVE THE PROPOSED PILES FOR THE NEW ABUTMENTS WITHOUT REMOVING ANY EXISTING PILES THAT ARE LOCATED WITHIN THE FOOTPRINT OF THE PROPOSED ABUTMENTS. SEE ABUTMENT SHEETS FOR DETAILS. ALL OTHER EXISTING PILING, EXCEPT FOR EXISTING NORTHEAST COLUMN OF PIER 2 PILING, SHALL BE CUT OFF 2'-0" BELOW SUBGRADE. SEE THE "GENERAL PLAN" SHEET FOR THE EXISTING NORTHEAST COLUMN OF PIER 2 REMOVAL DETAILS. ALL REMOVAL WORK IS INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE STA. 280+00'NS'".

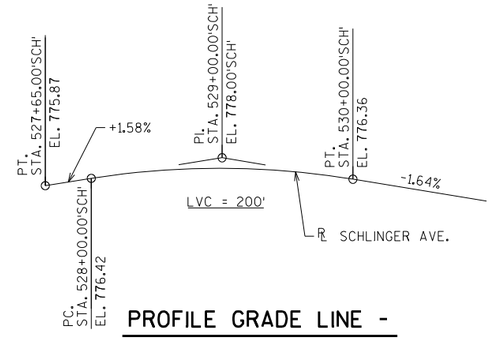
THE COST OF FURNISHING AND PLACING THE SIZE 2 COARSE AGGREGATE UNDER THE SLOPE PAVING SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE."

THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING STRUCTURE B-40-95 AND CONSTRUCTION OF THE BRIDGE B-40-798 ABUTMENTS WITH RETAINING WALLS R-40-524 AND R-40-525.

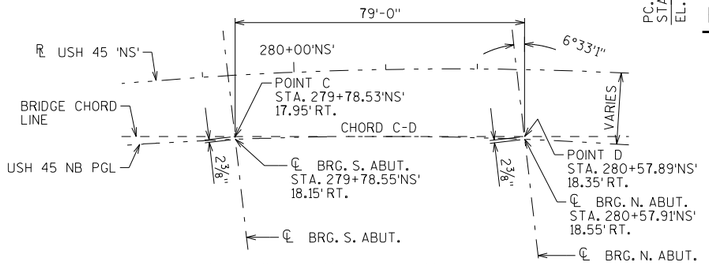
THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLABS (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTURES."



PROFILE GRADE LINE - USH 45 'NS'



PROFILE GRADE LINE - SCHLINGER AVENUE



CHORD LINE LAYOUT

NOTE: NOT DRAWN TO SCALE. CURVATURE EXAGGERATED FOR CLARITY.

STATE PROJECT NUMBER

1060-33-80

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

CROSS SECTION & QUANTITIES

SHEET 2

2418

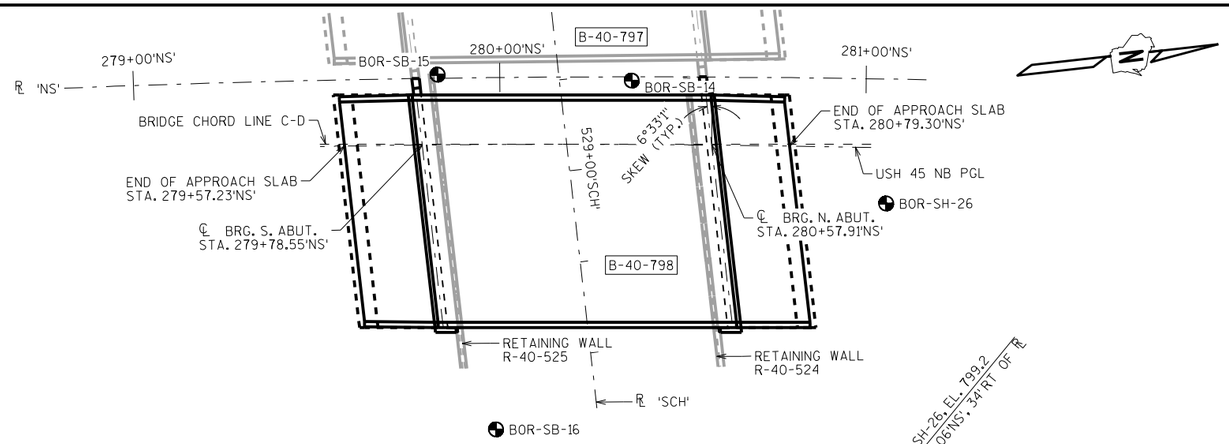
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8

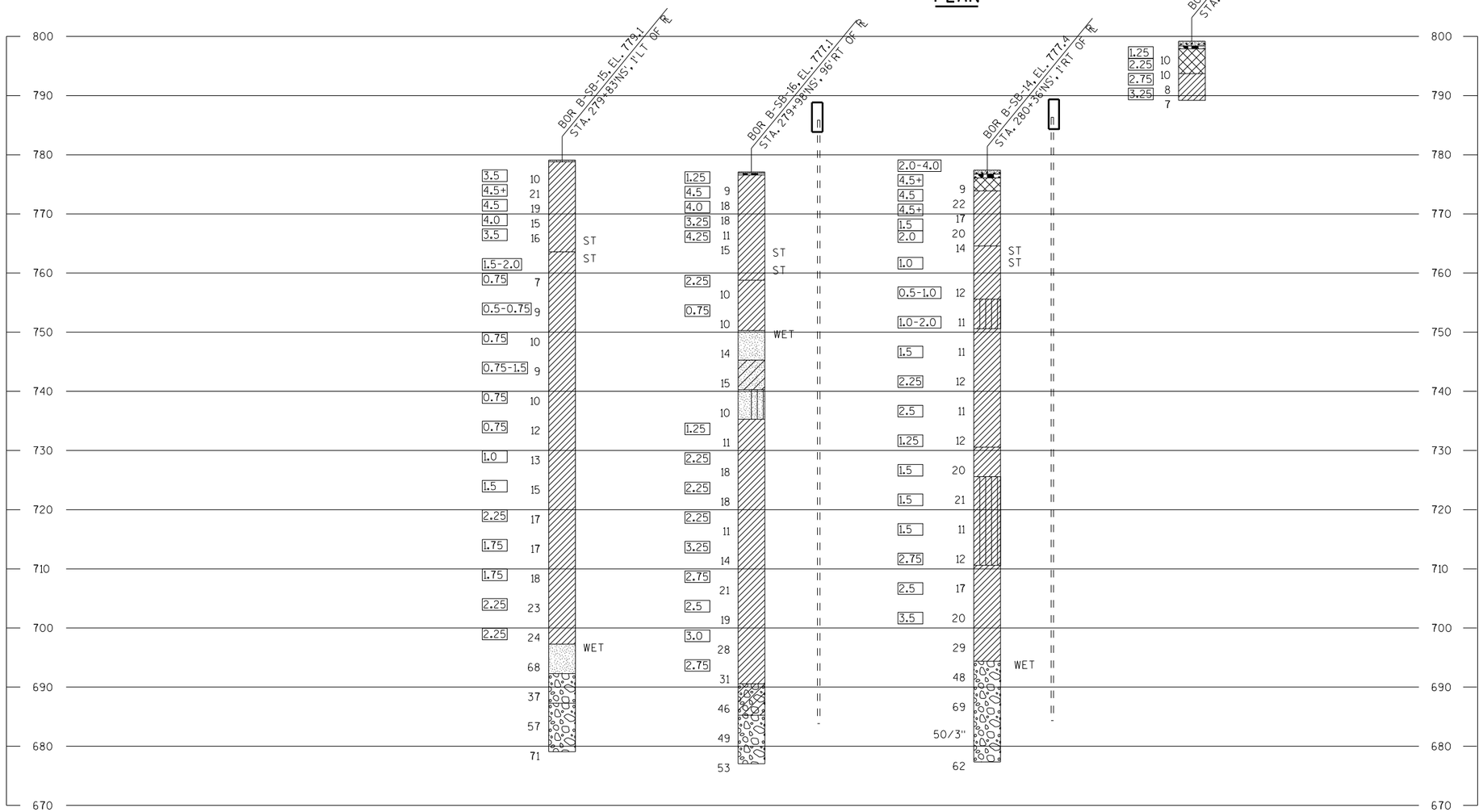
SCALE = 5

ZOO INTERCHANGE
USH 45 NB OVER SCHLINGER AVE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-14	1/27/2012	294206	572048
SB-15	2/2/2012	294155	572041
SB-16	2/6/2012	294153	572137
SH-26	2/2/2012	294273	572087
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: CH2M HILL			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY			



PLAN



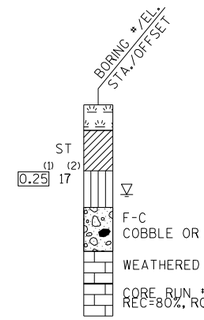
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY PR/RAC | PLANS CK'D. TAB

SUBSURFACE EXPLORATION

SHEET 3

2419

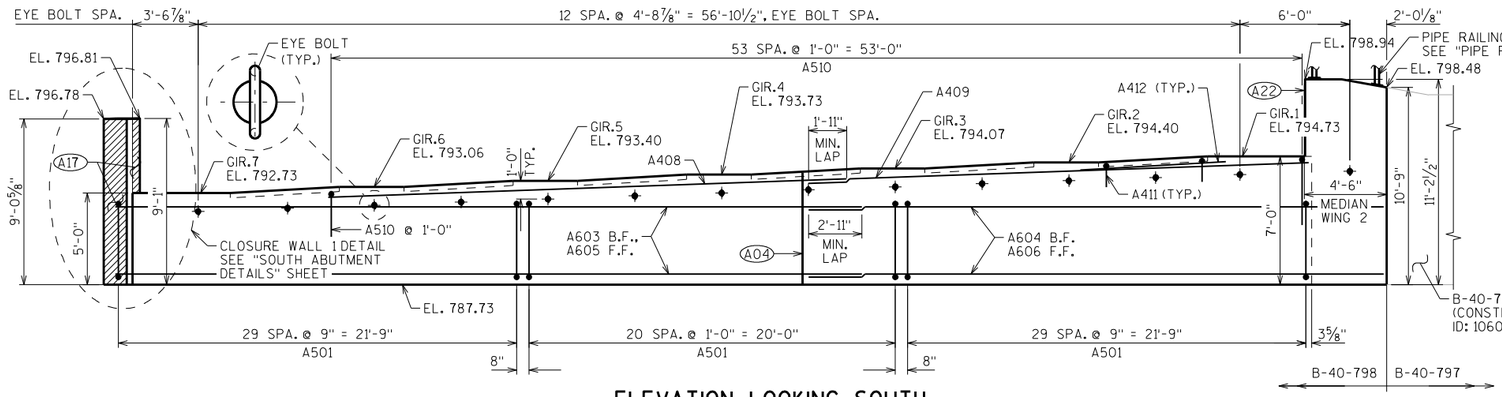
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STATE PROJECT NUMBER

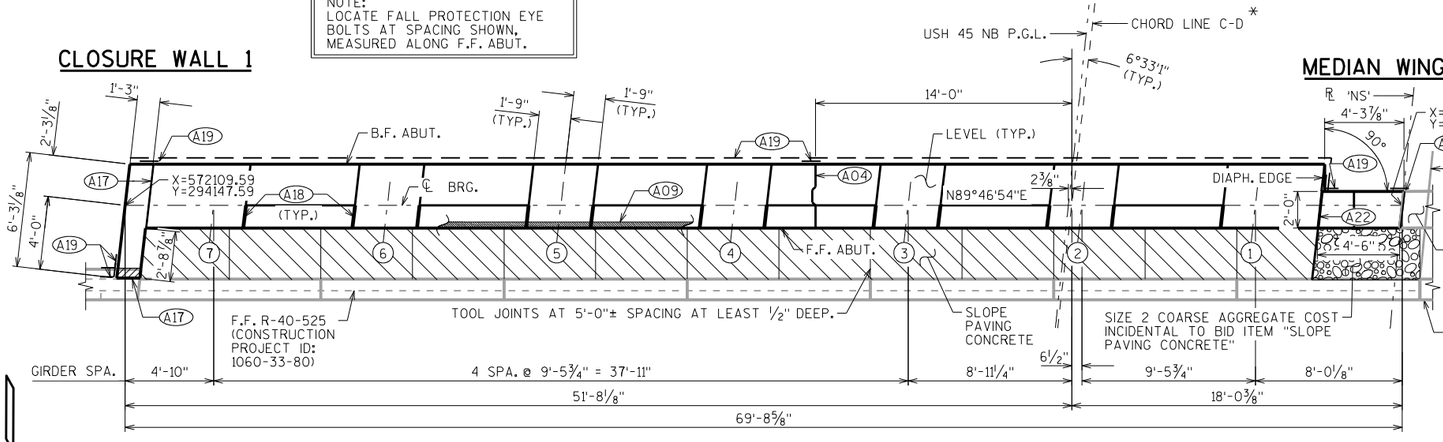
1060-33-80



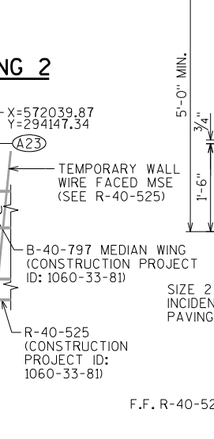
ELEVATION LOOKING SOUTH

NOTE:
LOCATE FALL PROTECTION EYE BOLTS AT SPACING SHOWN, MEASURED ALONG F.F. ABUT.

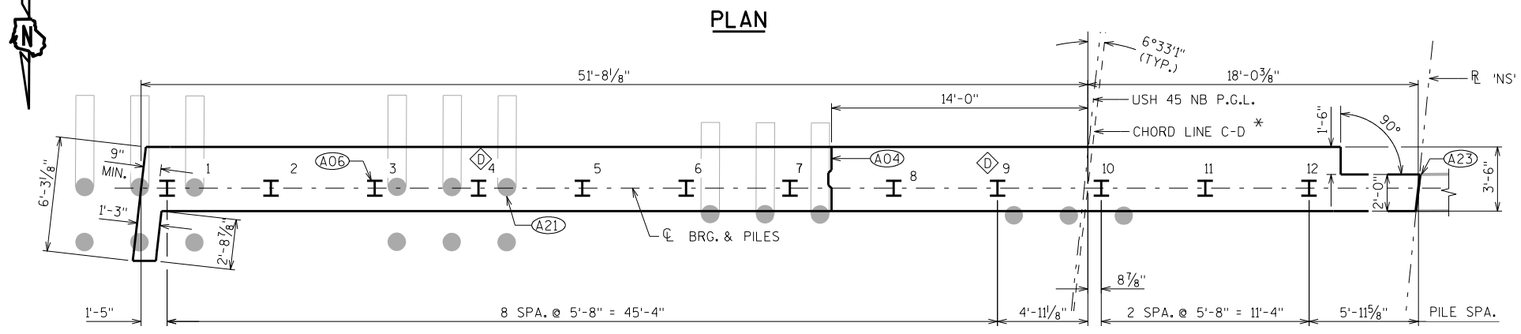
CLOSURE WALL 1



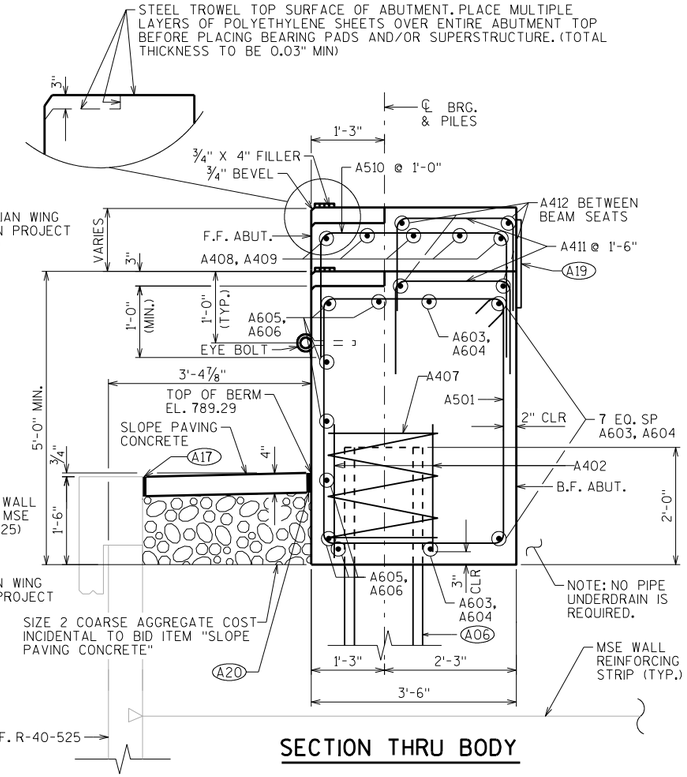
MEDIAN WING 2



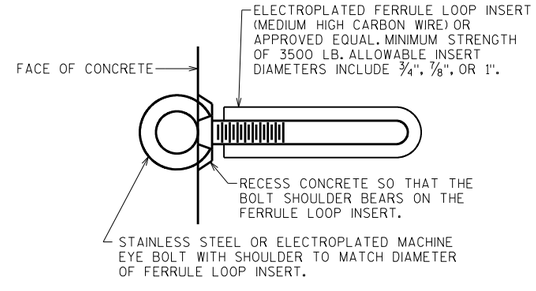
PLAN



PILE PLAN



SECTION THRU BODY



EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A06 SUPPORT ABUTMENT ON HP 10x42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 175 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS ARE REQUIRED. ESTIMATED PILE LENGTH = 100 FEET

NOTE - PROPOSED PILES MAY BE MOVED UP TO 1'-0" ALONG ℄ BRG. TO AVOID CONFLICTS WITH EXISTING PILES. IF GREATER ADJUSTMENT IS NECESSARY, CONTACT THE ENGINEER FOR ADDITIONAL INSTRUCTIONS BEFORE PROCEEDING. THE DISTANCE FROM THE EDGE OF ANY PILE TO THE NEAREST EDGE OF FOOTING SHALL NOT BE LESS THAN 9".

A09 3/4" X 4" FILLER (OUT TO OUT OF ABUT.)

A17 3/4" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A20 1" EXPANDED POLYSTYRENE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

A21 CUT OFF PILING IN EXISTING PIER FOOTINGS THAT IS IN THE FOOTPRINT OF THE PROPOSED MSE WALL 1'-0" BELOW BOTTOM OF PROPOSED MSE WALL LEVELING PAD. LOCATION OF EXISTING PILES IS SHOWN BASED ON AS-BUILT INFORMATION ONLY. FIELD VERIFY PILE LOCATIONS IMMEDIATELY AFTER EXPOSURE AND NOTIFY THE ENGINEER OF ANY DEVIATIONS NOTED.

A22 1/2" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

A23 1" JOINT FILLER: TO BE INSTALLED DURING CONSTRUCTION OF B-40-797 UNDER CONSTRUCTION PROJECT ID: 1060-33-81.

* SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

◇D DYNAMIC PILE LOAD TESTING.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

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SOUTH ABUTMENT

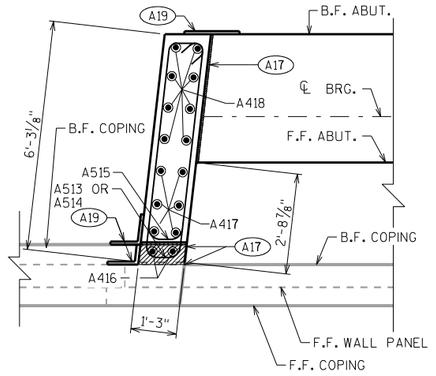
SHEET 4

2420

SCALE = 4

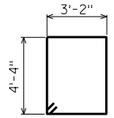
STATE PROJECT NUMBER

1060-33-80

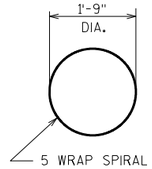


CLOSURE WALL 1 PLAN

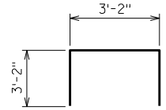




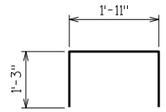
A501



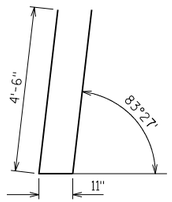
A407



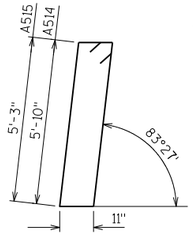
A510



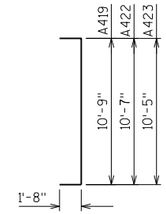
A411



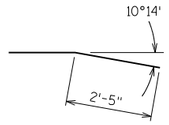
A513



A514, A515

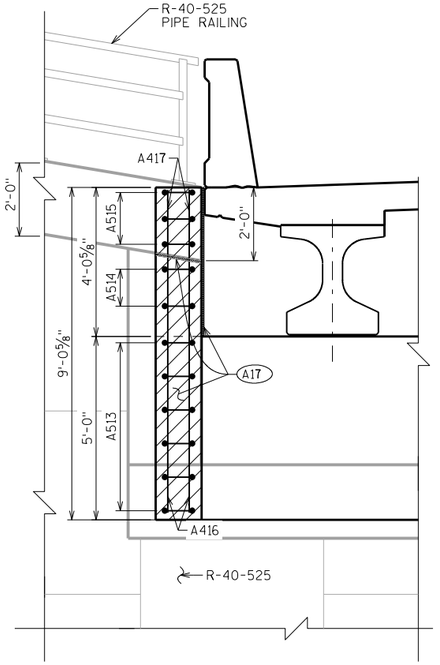


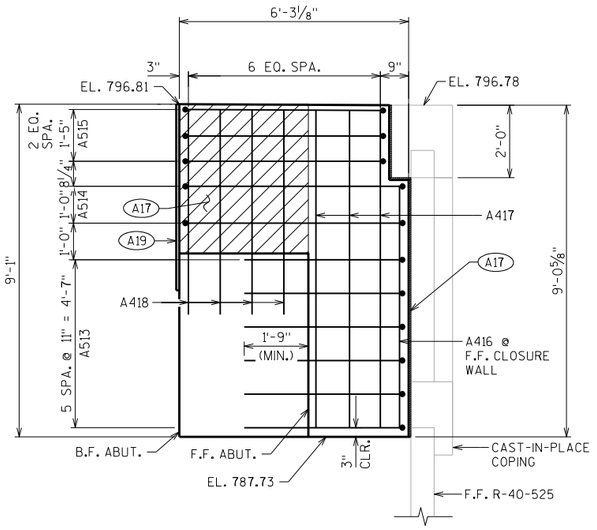
A419, A422, A423



A421

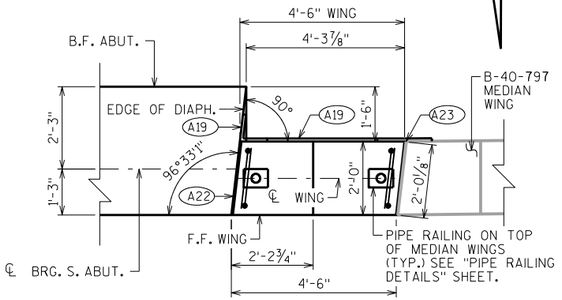




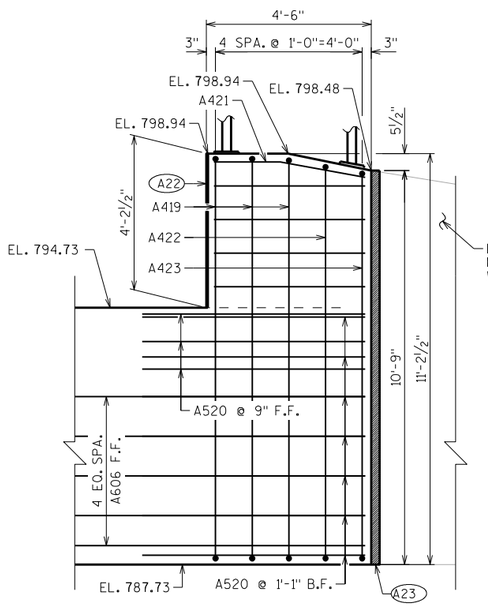


CLOSURE WALL 1 ELEVATION - LOOKING SOUTH

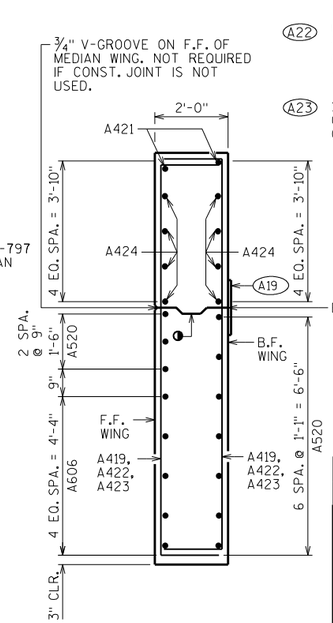
CLOSURE WALL 1 SECTION - LOOKING WEST



MEDIAN WING 2 PLAN



MEDIAN WING 2 ELEVATION - LOOKING AT F.F. WING



MEDIAN WING 2 SECTION - LOOKING EAST

◑ OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2"X6"

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

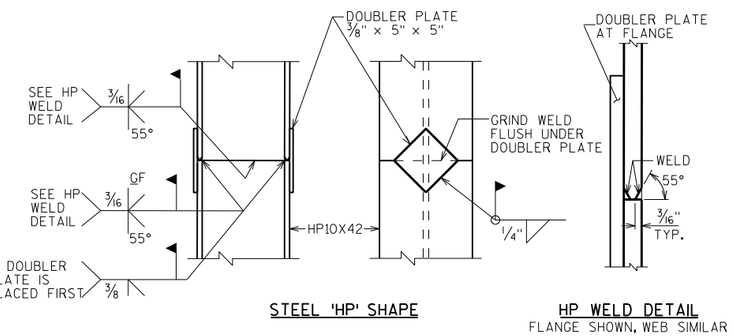
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		81	15'-8"	X		BODY - STIRRUPS - VERT.
A402		24	2'-3"			BODY - VERT. - 2 PER PILE
A603		10	40'-11"			BODY - HORIZ. - B.F.
A604		10	27'-0"			BODY - HORIZ. - B.F.
A605		7	40'-11"			BODY - HORIZ. - F.F.
A606		7	31'-5"			BODY - HORIZ. - F.F.
A407		12	28'-0"	X		BODY - SPIRAL - VERT. - 1 PER PILE
A408		5	27'-5"			BODY - TOP - HORIZ. UNDER BEAM SEATS 1-6
A409		5	27'-0"			BODY - TOP - HORIZ. UNDER BEAM SEATS 1-6
A510		54	9'-4"	X		BODY - TOP - VERT. - UNDER BEAM SEATS 1-6
A411		30	4'-4"	X		BODY - TOP - VERT. - BETWEEN BEAM SEATS
A412		12	8'-0"			BODY -TOP - HORIZ. BETWEEN BEAM SEATS
A513	X	6	9'-9"	X		CLOSURE WALL 1 - HORIZ. - BOT.
A514	X	2	14'-2"	X		CLOSURE WALL 1 - HORIZ. - MID.
A515	X	3	13'-0"	X		CLOSURE WALL 1 - HORIZ. TOP
A416	X	2	6'-7"			CLOSURE WALL 1 - VERT. F.F.
A417	X	6	8'-7"			CLOSURE WALL 1 - VERT. MID.
A418	X	8	5'-9"			CLOSURE WALL 1 - VERT. BACK
A419	X	6	14'-0"	X		MEDIAN WING 2 - VERT.
A520	X	10	6'-3"			MEDIAN WING 2 - HORIZ.
A421	X	2	4'-2"	X		MEDIAN WING 2 - TOP
A422	X	2	13'-9"	X		MEDIAN WING 2 - VERT.
A423	X	2	13'-7"	X		MEDIAN WING 2 - VERT.
A424	X	8	4'-1"			MEDIAN WING - HORIZ.

(A17) 3/4" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A23) 1" JOINT FILLER: TO BE INSTALLED DURING CONSTRUCTION OF B-40-797 UNDER CONSTRUCTION PROJECT ID: 1060-33-81.



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

SOUTH ABUTMENT DETAILS

SHEET 5

2421

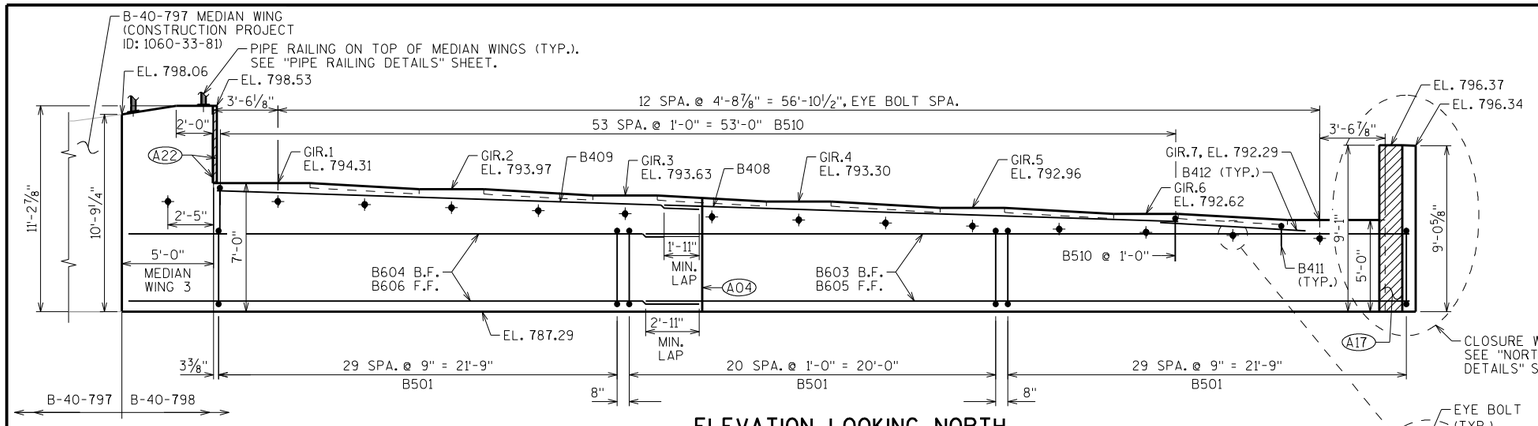
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STATE PROJECT NUMBER

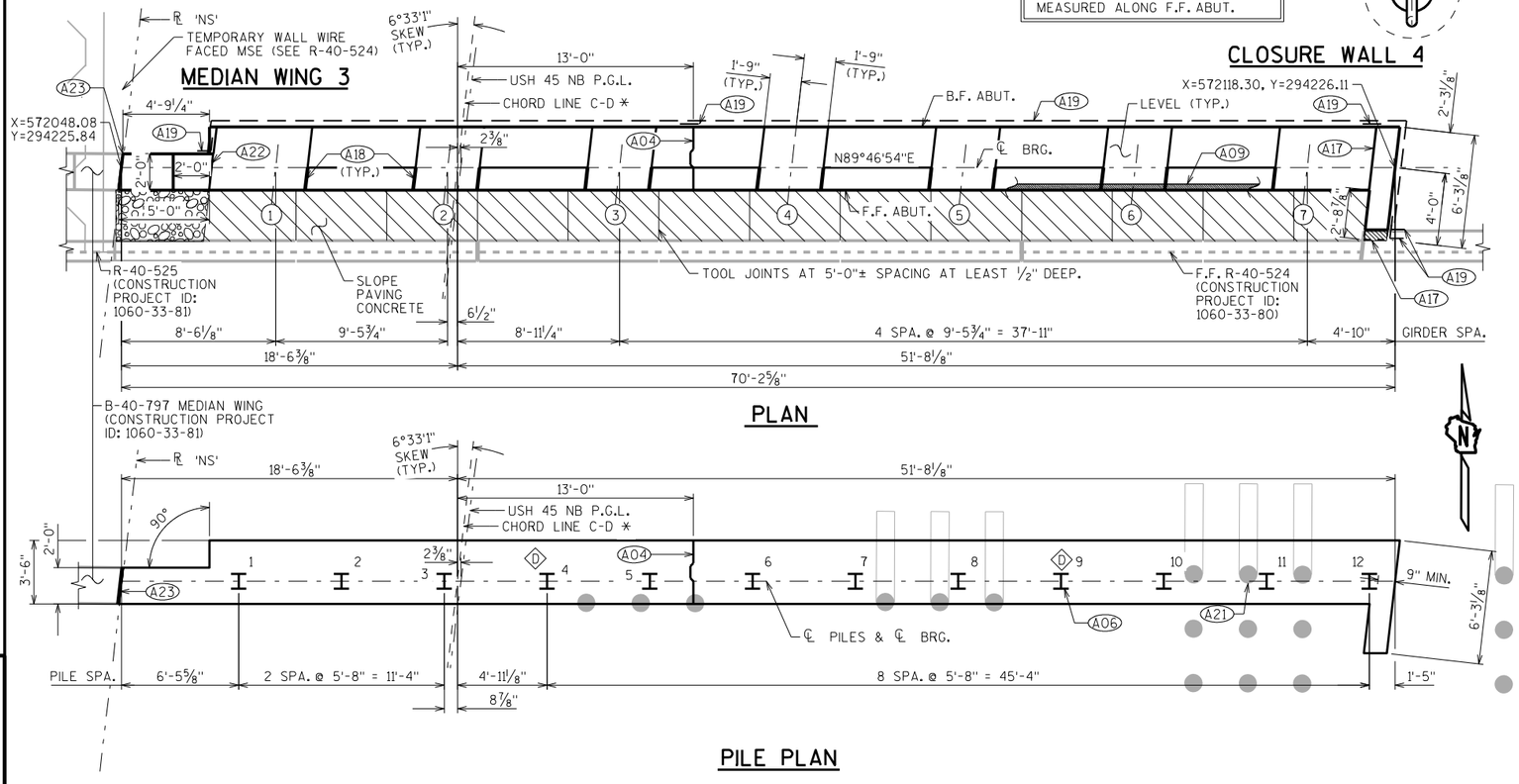
1060-33-80



ELEVATION LOOKING NORTH

NOTE:
LOCATE FALL PROTECTION EYE BOLTS AT SPACING SHOWN, MEASURED ALONG F.F. ABUT.

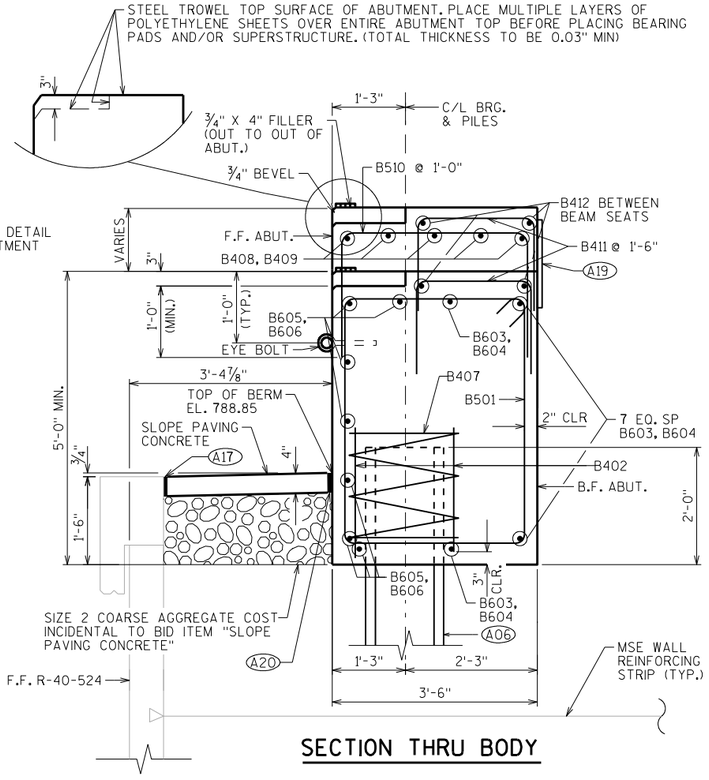
EYE BOLT (TYP.)



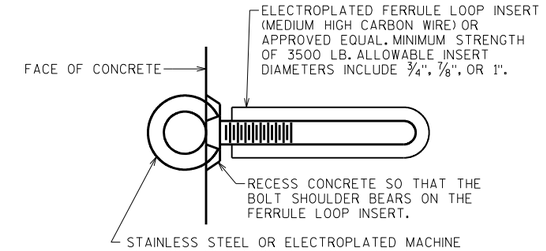
CLOSURE WALL 4

PLAN

PILE PLAN



SECTION THRU BODY



EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10x42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 175 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS ARE REQUIRED. ESTIMATED PILE LENGTH = 95 FEET

NOTE - PROPOSED PILES MAY BE MOVED UP TO 1'-0" ALONG ℄ BRG. TO AVOID CONFLICTS WITH EXISTING PILES. IF GREATER ADJUSTMENT IS NECESSARY, CONTACT THE ENGINEER FOR ADDITIONAL INSTRUCTIONS BEFORE PROCEEDING. THE DISTANCE FROM THE EDGE OF ANY PILE TO THE NEAREST EDGE OF FOOTING SHALL NOT BE LESS THAN 9".

(A09) 3/4" X 4" FILLER (CUT TO CUT OF ABUT.)

(A17) 3/4" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1"±8" BELOW SURFACE OF CONCRETE).

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A20) 1" EXPANDED POLYSTYRENE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A21) CUT OFF PILING IN EXISTING PIER FOOTINGS THAT IS IN THE FOOTPRINT OF THE PROPOSED MSE WALL 1'-0" BELOW BOTTOM OF PROPOSED MSE WALL LEVELING PAD. LOCATION OF EXISTING PILES IS SHOWN BASED ON AS-BUILT INFORMATION ONLY. FIELD VERIFY PILE LOCATIONS IMMEDIATELY AFTER EXPOSURE AND NOTIFY THE ENGINEER OF ANY DEVIATIONS NOTED.

(A22) 1/2" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A23) 1" JOINT FILLER: TO BE INSTALLED DURING CONSTRUCTION OF B-40-797 UNDER CONSTRUCTION PROJECT ID: 1060-33-81.

* SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

◇D DYNAMIC PILE LOAD TESTING.

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STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

NORTH ABUTMENT

SHEET 6

2422

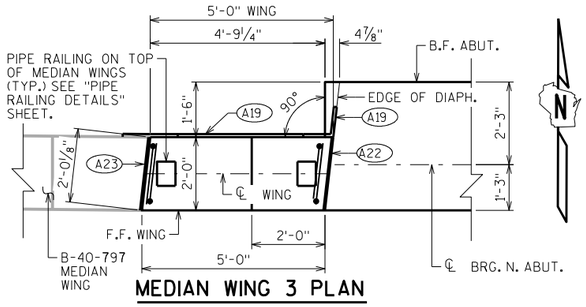
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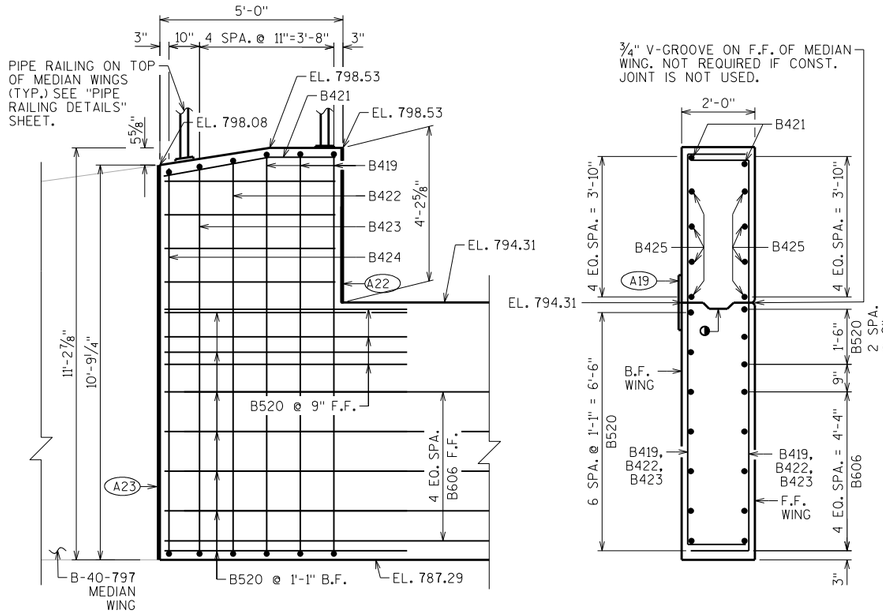
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STATE PROJECT NUMBER

1060-33-80



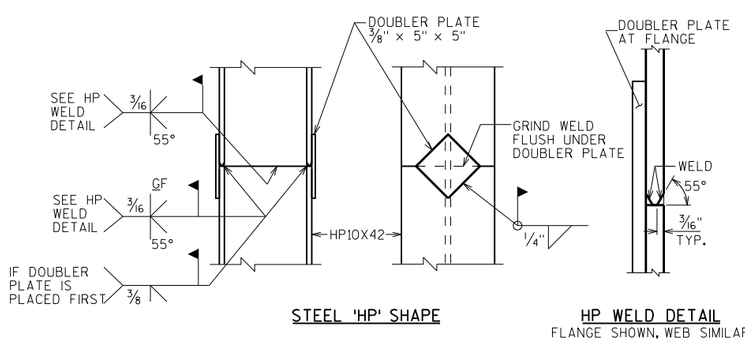
MEDIAN WING 3 PLAN



MEDIAN WING 3 ELEVATION - LOOKING AT F.F. WING

MEDIAN WING 3 SECTION - LOOKING EAST

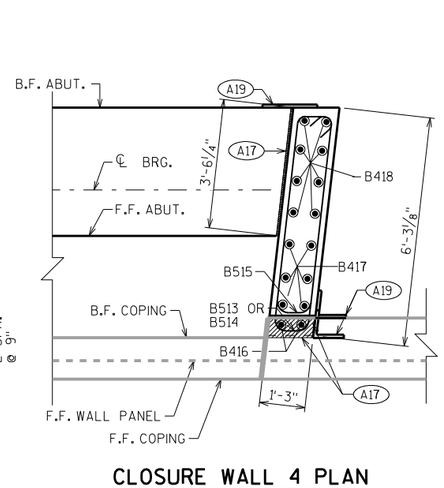
◑ OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2"X6"



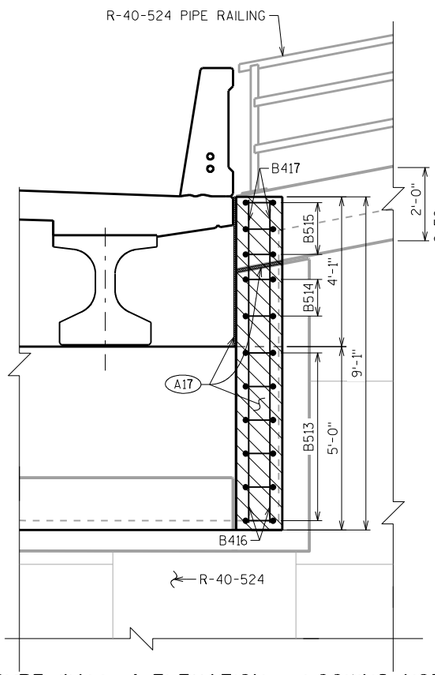
STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

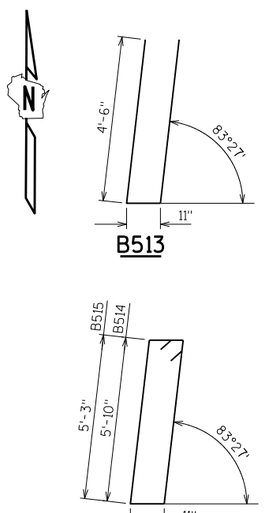
PILE DETAILS



CLOSURE WALL 4 PLAN

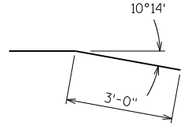


CLOSURE WALL 4 ELEVATION - LOOKING NORTH

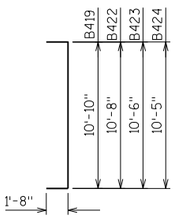


B513

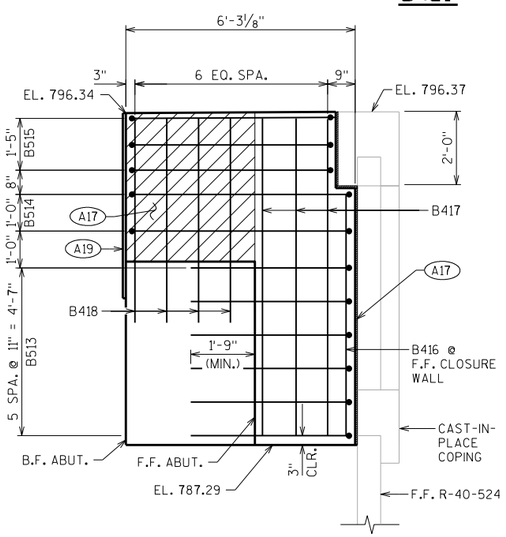
B514, B515



B421



B419, B422, B423, B424



CLOSURE WALL 4 SECTION - LOOKING EAST

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		81	15'-8"	X		BODY - STIRRUPS - VERT.
B402		24	2'-3"			BODY - VERT. - 2 PER PILE
B603		10	42'-2"			BODY - HORIZ. - B.F.
B604		10	26'-1"			BODY - HORIZ. - B.F.
B605		7	41'-6"			BODY - HORIZ. - F.F.
B606		7	31'-3"			BODY - HORIZ. - F.F.
B407		12	28'-0"	X		BODY - SPIRAL - VERT. - 1 PER PILE
B408		5	28'-8"			BODY - TOP - HORIZ. UNDER BEAM SEATS 1-6
B409		5	26'-0"			BODY - TOP - HORIZ. UNDER BEAM SEATS 1-6
B510		54	9'-4"	X		BODY - TOP - VERT. - UNDER BEAM SEATS 1-6
B411		30	4'-4"	X		BODY - TOP - VERT. - BETWEEN BEAM SEATS
B412		12	8'-0"			BODY -TOP - HORIZ. BETWEEN BEAM SEATS
B513	X	6	9'-9"	X		CLOSURE WALL 4 - HORIZ. - BOT.
B514	X	2	14'-2"	X		CLOSURE WALL 4 - HORIZ. - MID.
B515	X	3	13'-0"	X		CLOSURE WALL 4 - HORIZ. TOP
B416	X	2	6'-7"			CLOSURE WALL 4 - VERT. F.F.
B417	X	6	8'-8"			CLOSURE WALL 4 - VERT. MID.
B418	X	8	5'-8"			CLOSURE WALL 4 - VERT. BACK
B419	X	6	14'-1"	X		MEDIAN WING 3 - VERT.
B520	X	10	6'-9"			MEDIAN WING 3 - HORIZ.
B421	X	2	4'-9"	X		MEDIAN WING 3 - TOP
B422	X	2	13'-9"	X		MEDIAN WING 3 - VERT.
B423	X	2	13'-7"	X		MEDIAN WING 3 - VERT.
B424	X	2	13'-7"	X		MEDIAN WING 3 - VERT.
B425	X	8	4'-7"			MEDIAN WING 3 - HORIZ.

(A17) 3/4" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A23) 1" JOINT FILLER: TO BE INSTALLED DURING CONSTRUCTION OF B-40-797 UNDER CONSTRUCTION PROJECT ID: 1060-33-81.

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

NORTH ABUTMENT DETAILS

SHEET 7

2423

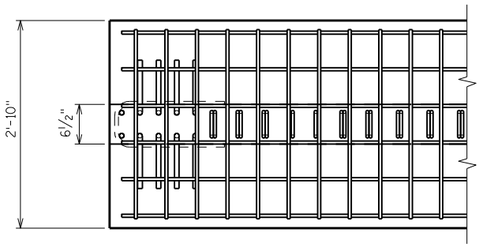
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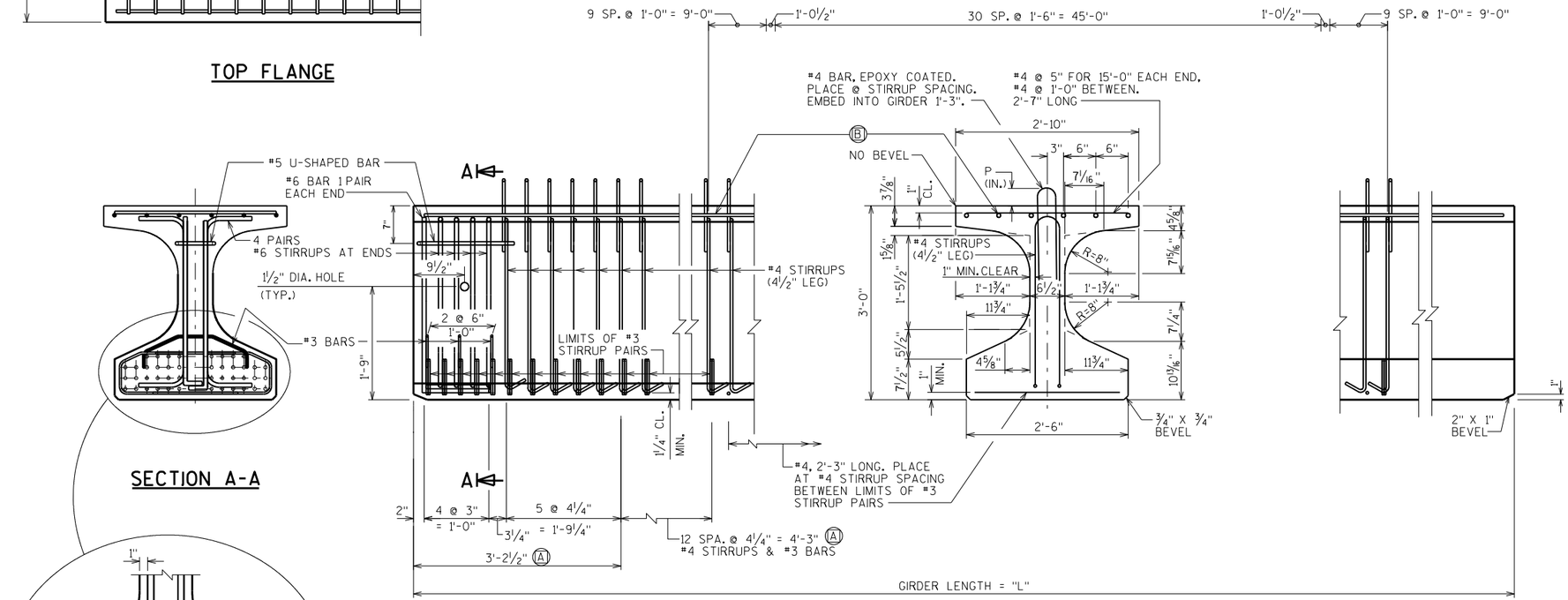
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TOP FLANGE

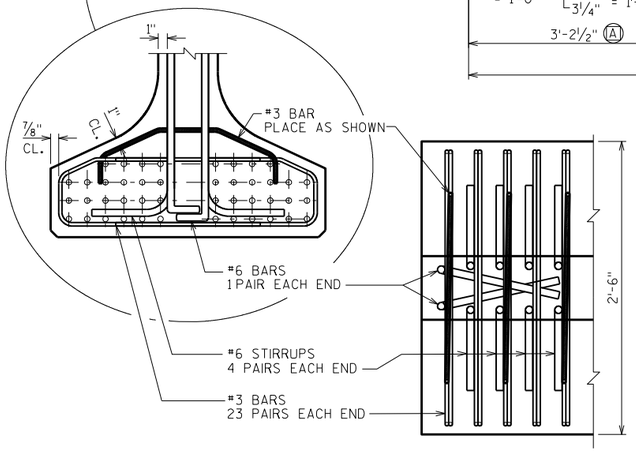


SECTION A-A

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

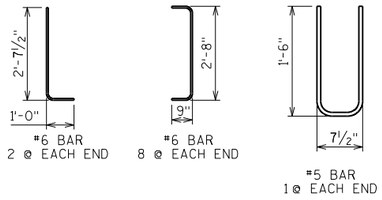
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1-7	80.00	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8000	7.25	7.25	7.25	0.60	32	6800	31.0	11.5	14.5	5.0		

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36W" PRESTRESSED GIRDER

SHEET 8

2424

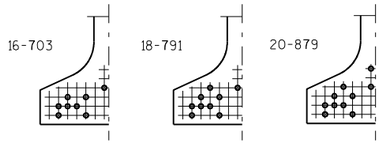
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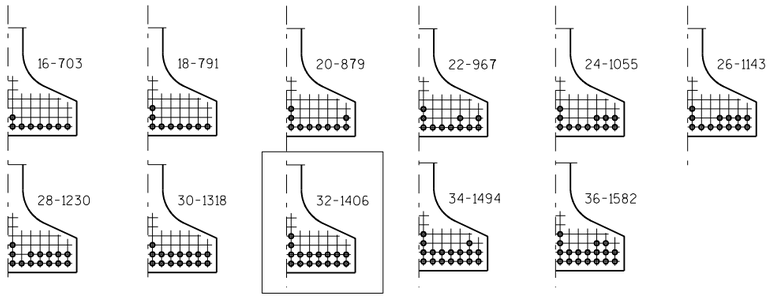
STATE PROJECT NUMBER

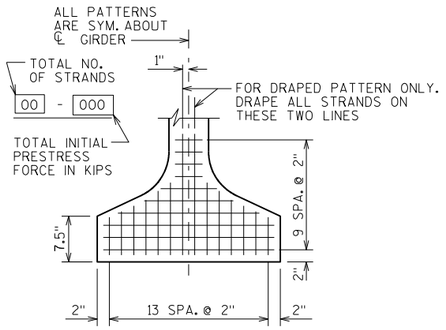
1060-33-80



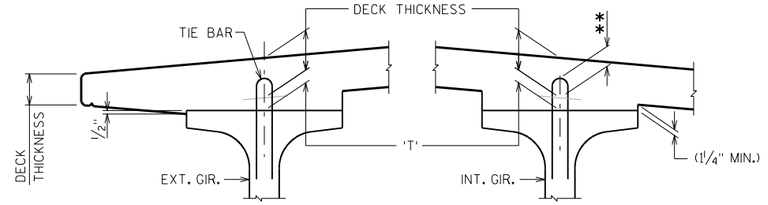
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS





TYP. STRAND PATTERN



DECK HAUNCH DETAIL

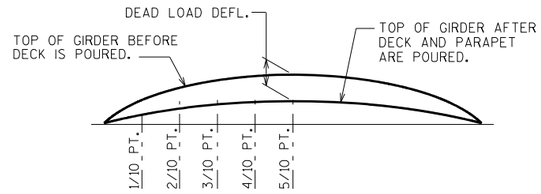
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

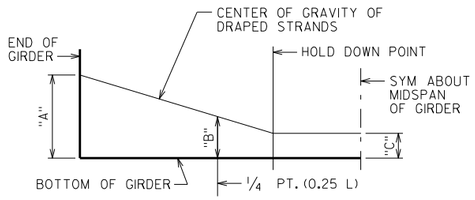
NOTE: AN AVERAGE HAUNCH ('T') OF 3.4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER *
1	3.28

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

8

8

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36W" PRESTRESSED GIRDER DETAILS

SHEET 9

2425

SCALE = 1

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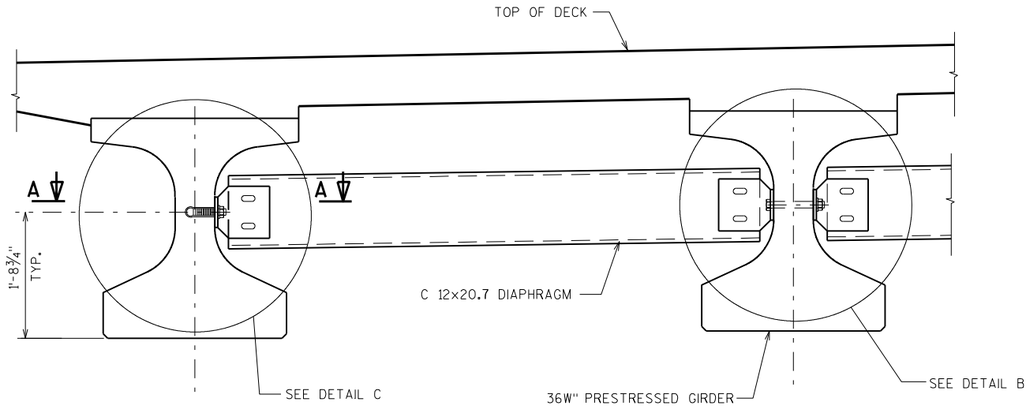
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-798", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

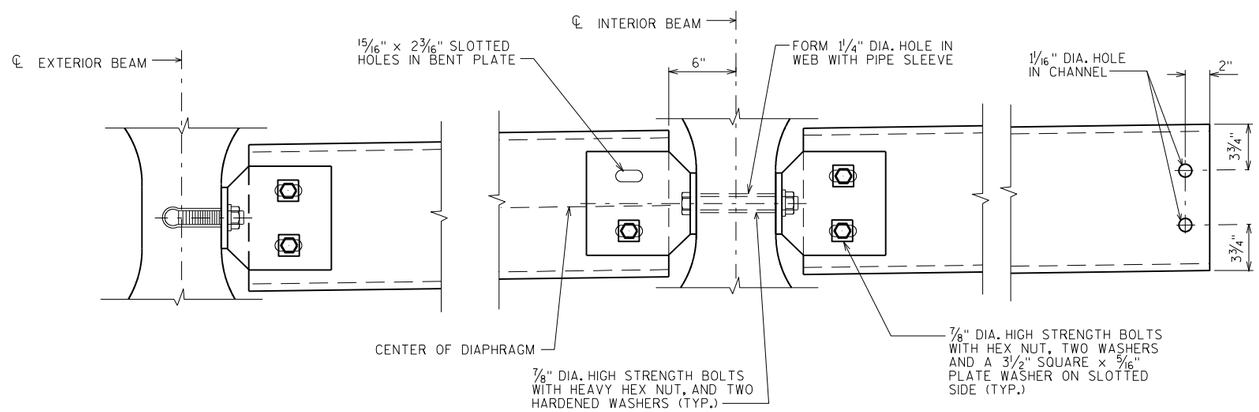
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.



EXTERIOR GIRDER

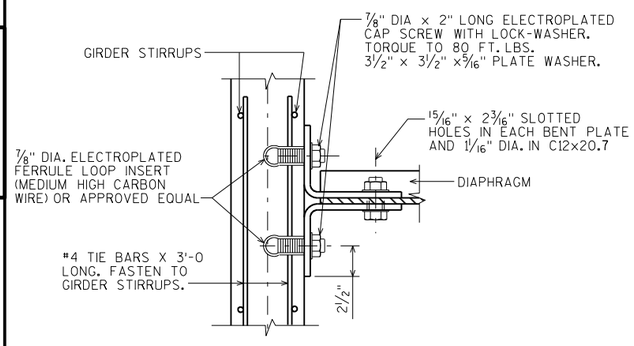
INTERIOR GIRDER

PART TRANSVERSE SECTION AT DIAPHRAGM



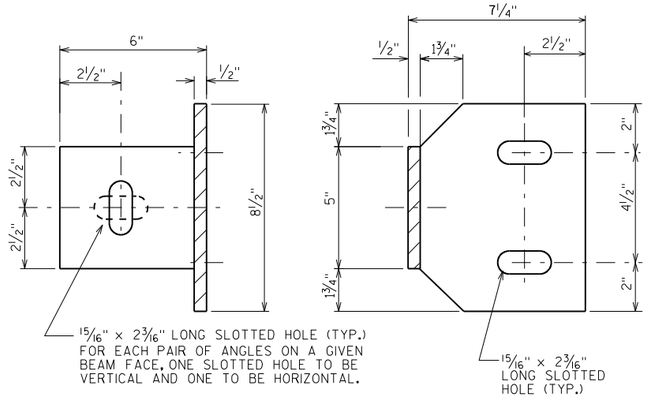
DETAIL C

DETAIL B



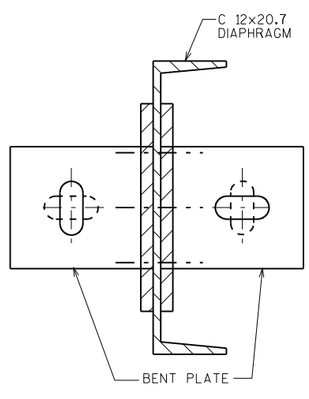
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

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STEEL DIAPHRAGM

SHEET 10

2426

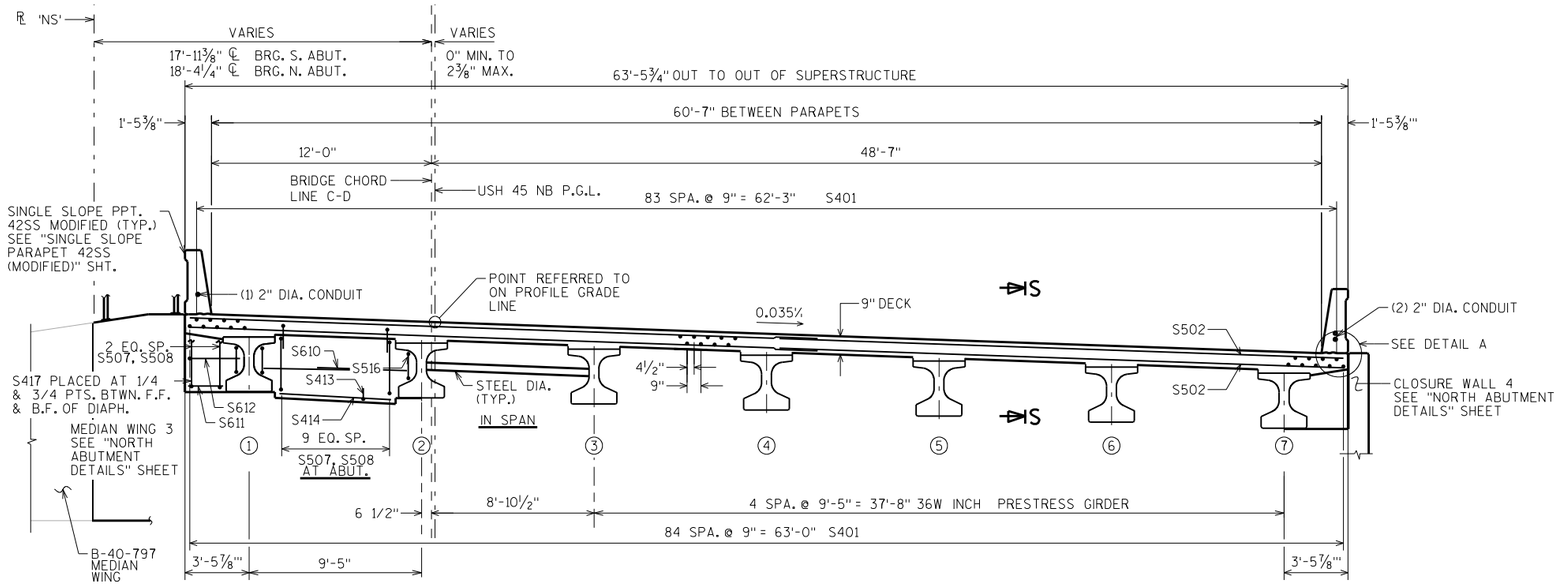
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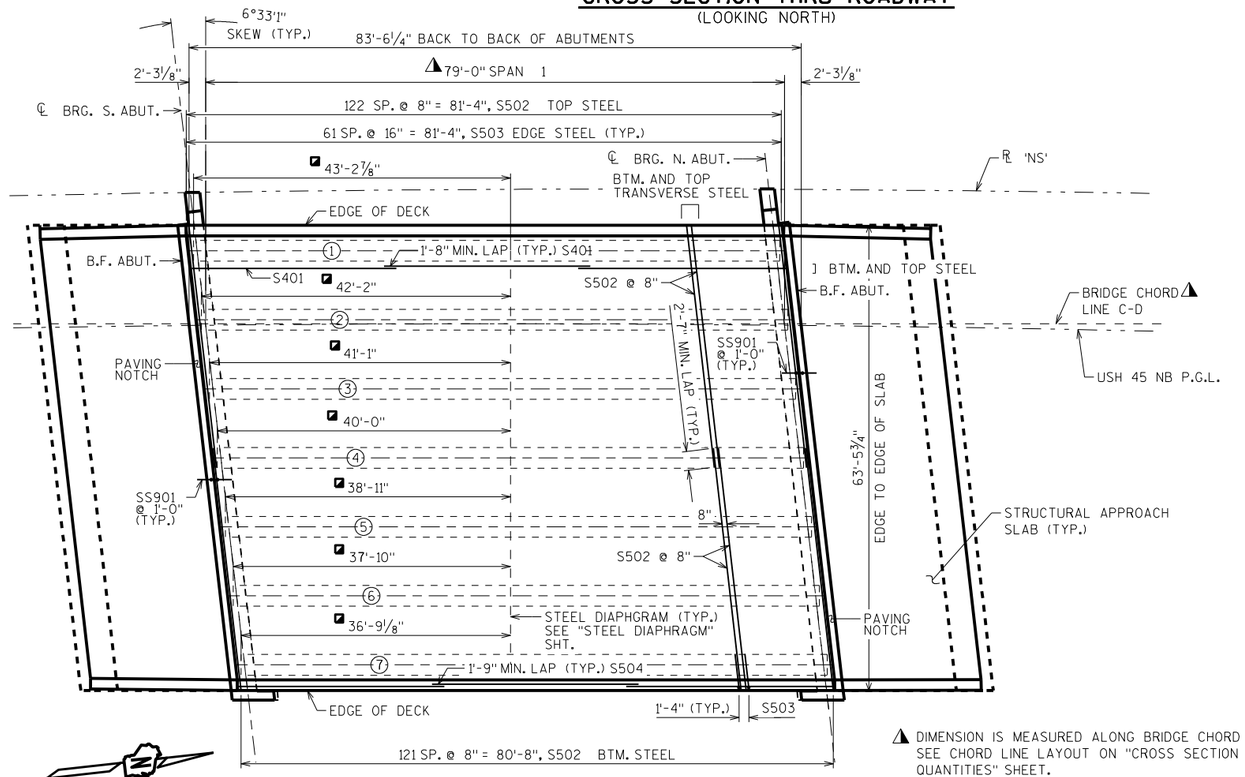
8

STATE PROJECT NUMBER

1060-33-80



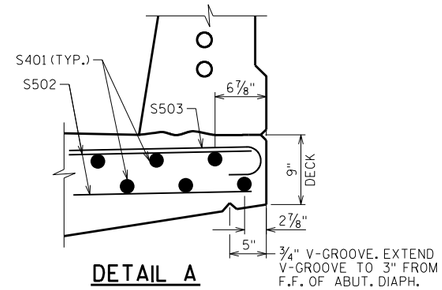
CROSS SECTION THRU ROADWAY
(LOOKING NORTH)



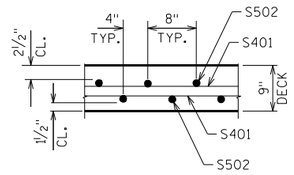
PLAN

▲ DIMENSION IS MEASURED ALONG BRIDGE CHORD LINE C-D. SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

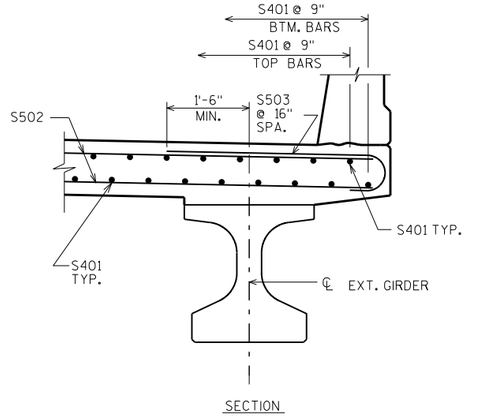
◪ STEEL DIAPHRAGM SPA. MEASURED FROM END OF GIRDER TO ℄ DIAPHRAGM.



DETAIL A



SECTION S-S



ADDITIONAL REINF. DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

SUPERSTRUCTURE

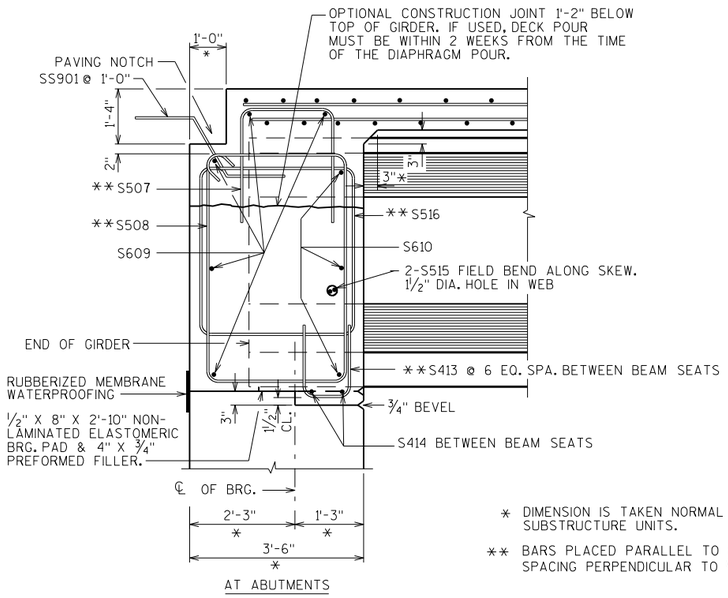
SHEET 11

2427

SCALE = 10

STATE PROJECT NUMBER

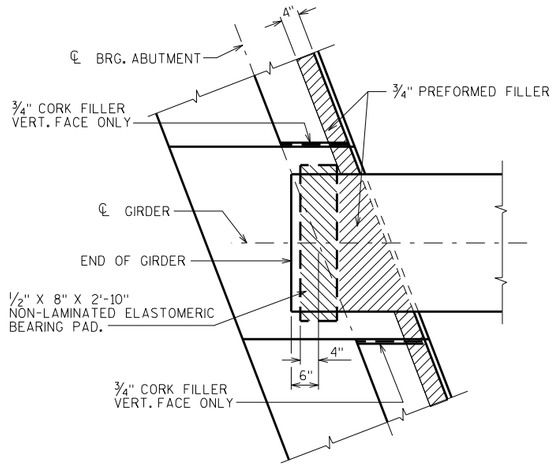
1060-33-80



PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



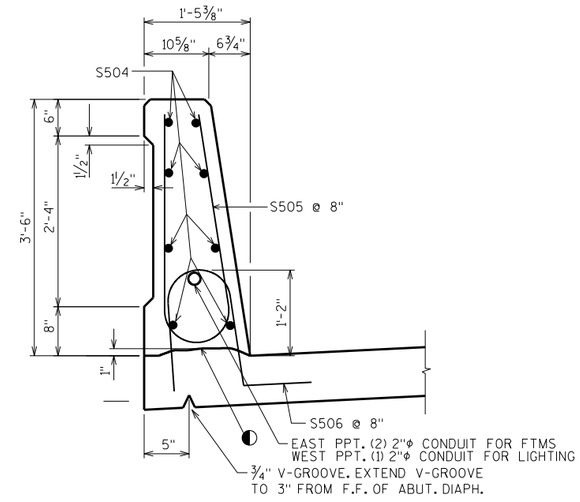
BEARING PAD DETAIL

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

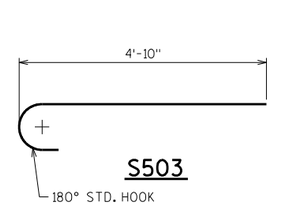
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	507	28'-4"			LONGITUDINAL - TOP & BOTTOM
S502	X	490	33'-0"			TRANSVERSE - TOP & BOTTOM
S503	X	124	5'-5"	X		TRANSVERSE - TOP - EDGE OF DECK
S504	X	48	28'-4"			PPT. HORIZ.
S505	X	246	6'-8"	X		PPT. VERT.
S506	X	246	4'-5"	X		PPT. VERT.
S507	X	132	5'-9"	X		ABUT. DIAPH. - VERT.
S508	X	132	11'-8"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S609	X	20	33'-5"			ABUT. DIAPH. - HORIZ.
S610	X	72	5'-4"			ABUT. DIAPH. - HORIZ.
S611	X	4	1'-11"			ABUT. DIAPH. - HORIZ. - EXTERIOR
S612	X	8	8'-5"	X		ABUT. DIAPH. - HORIZ. - EXTERIOR
S413	X	84	3'-3"	X		ABUT. DIAPH. - VERT. - BTWN. BEAM SEATS
S414	X	24	5'-7"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS
S515	X	28	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRS.
S516	X	28	9'-8"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S417	X	8	2'-8"			ABUT. DIAPH. - VERT. - EXTERIOR FACES
SS901		130	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

STAINLESS STEEL →

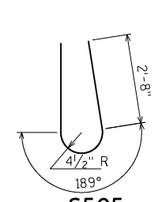


SECTION THRU PARAPET ON BRIDGE

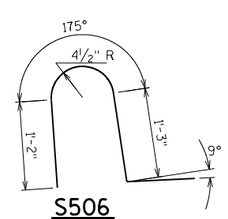
◐ CONST. JOINT - STRIKE OFF AS SHOWN



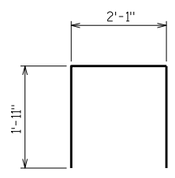
S503



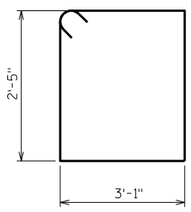
S505



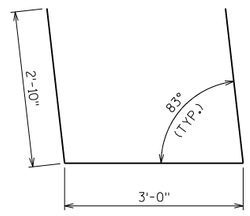
S506



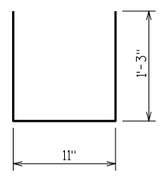
S507



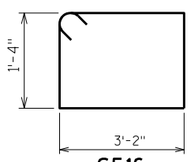
S508



S612



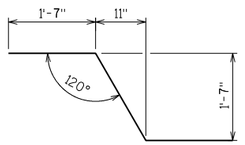
S413



S516

TOP OF DECK ELEVATIONS

	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
EOD	798.95	798.91	798.87	798.83	798.79	798.75	798.70	798.66	798.61	798.57	798.52
GIR. 1	798.88	798.84	798.80	798.76	798.71	798.67	798.63	798.59	798.54	798.50	798.45
GIR. 2	798.54	798.50	798.46	798.42	798.38	798.34	798.29	798.25	798.20	798.16	798.11
GIR. 3	798.21	798.17	798.13	798.09	798.04	798.00	797.96	797.91	797.87	797.82	797.78
GIR. 4	797.87	797.83	797.79	797.75	797.71	797.67	797.62	797.58	797.53	797.49	797.44
GIR. 5	797.54	797.50	797.46	797.42	797.37	797.33	797.29	797.24	797.20	797.15	797.10
GIR. 6	797.20	797.16	797.12	797.08	797.04	796.99	796.95	796.91	796.86	796.81	796.77
GIR. 7	796.87	796.83	796.79	796.75	796.70	796.66	796.61	796.57	796.52	796.48	796.43
EOD	796.80	796.76	796.71	796.67	796.63	796.59	796.54	796.50	796.45	796.40	796.36



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

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SUPERSTRUCTURE DETAILS

SHEET 12

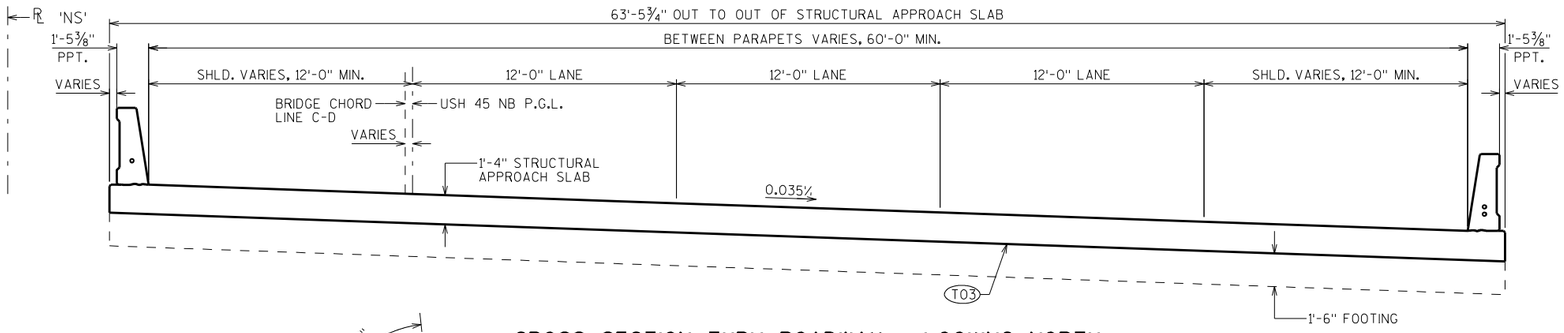
2428

SCALE = 2.667

8

8

STATE PROJECT NUMBER
1060-33-80

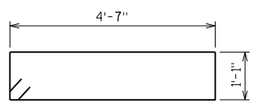


CROSS SECTION THRU ROADWAY - LOOKING NORTH

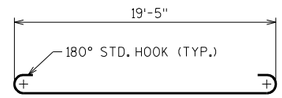
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

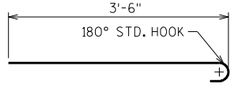
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	64	12'-0"	X		FOOTING STIRRUP
T802	X	24	34'-9"			FOOTING - TRANSVERSE - HORIZ.
T803	X	104	21'-3"	X		APPROACH SLAB - LONGIT. - BOT.
T504	X	64	19'-6"			APPROACH SLAB - LONGIT. - TOP
T505	X	42	33'-4"			APPROACH SLAB - TRANS. - BOT.
T506	X	42	33'-6"			APPROACH SLAB - TRANS. - TOP
T507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



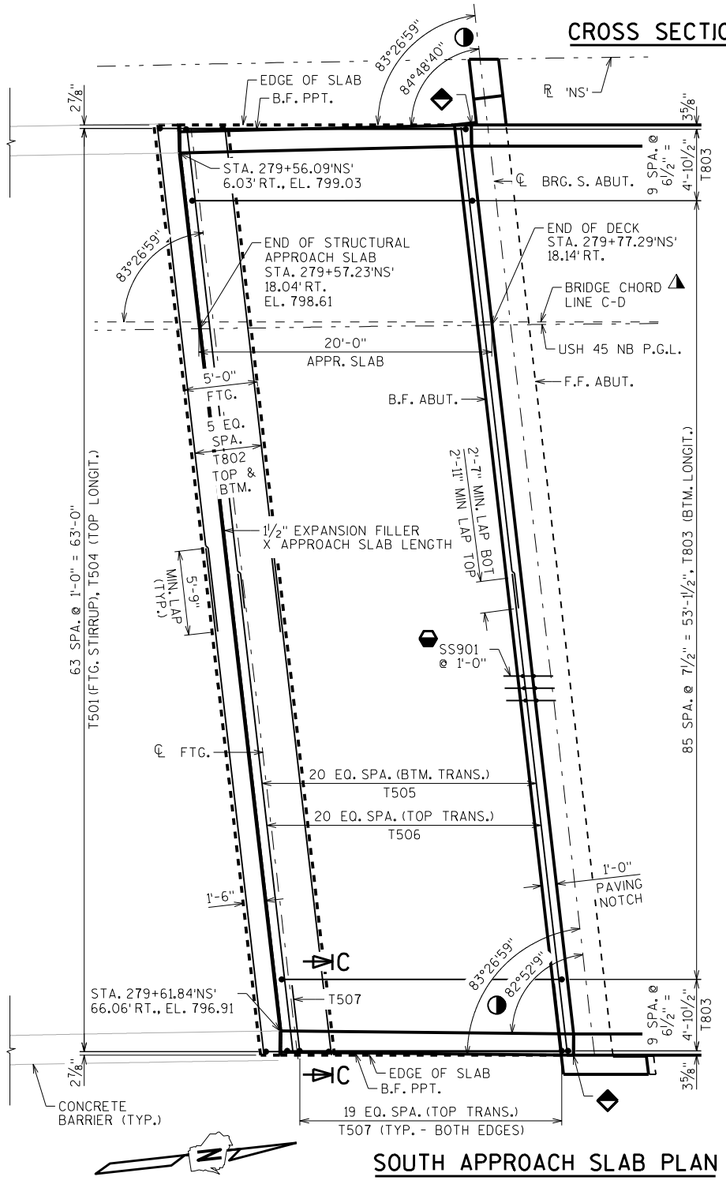
T501



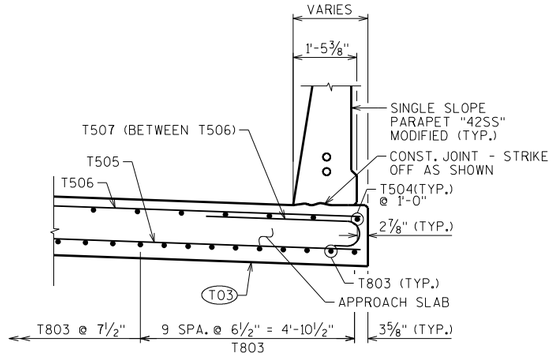
T803



T507

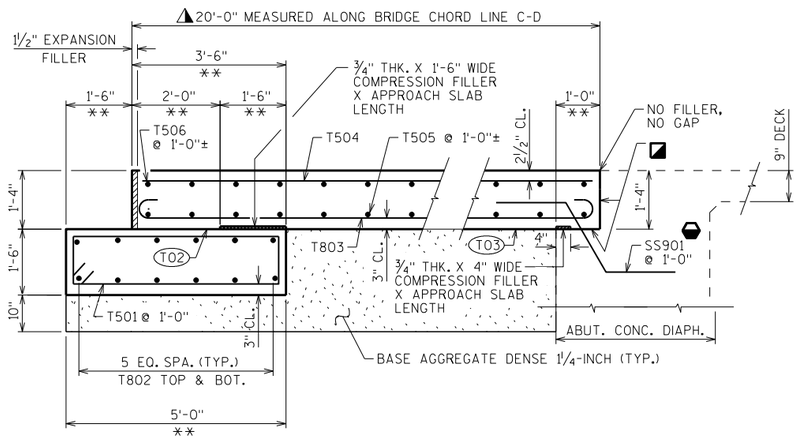


SOUTH APPROACH SLAB PLAN



SECTION C-C

** DIMENSION MEASURED NORMAL TO ABUTMENT BODY



SECTION THRU APPROACH SLAB

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

◆ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

△ DIMENSIONS ARE MEASURED ALONG BRIDGE CHORD LINE C-D. SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

◑ APPROACH SLABS PPTS. ANGLED TO MEET F.F. OF CONCRETE BARRIER (TYP.)

⬬ SPACE PERPENDICULAR TO BRIDGE CHORD LINE C-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY: RAC | PLANS CK'D.: TAB

STRUCTURAL APPROACH SLAB-SOUTH ABUTMENT

SHEET 13

2429

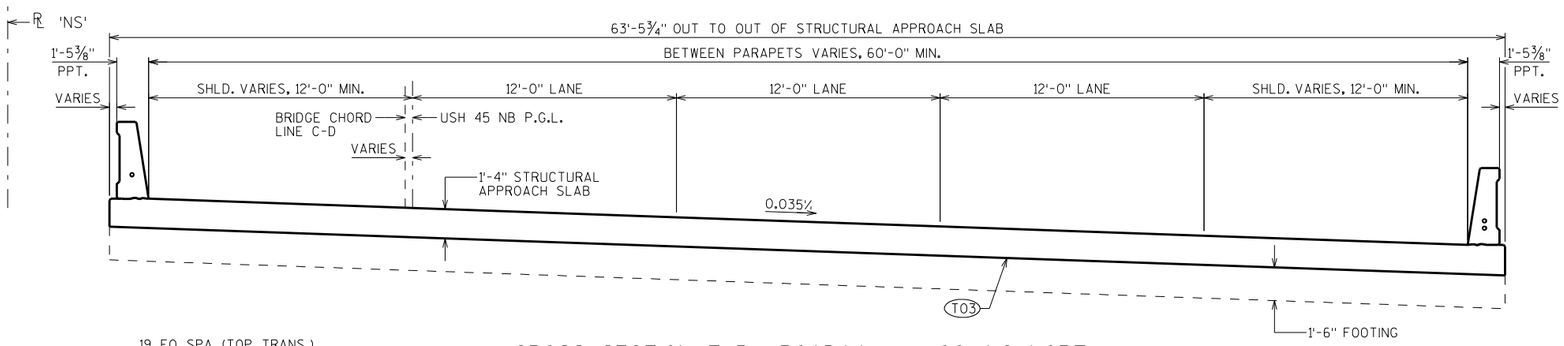
SCALE = 5

8

8

STATE PROJECT NUMBER

1060-33-80

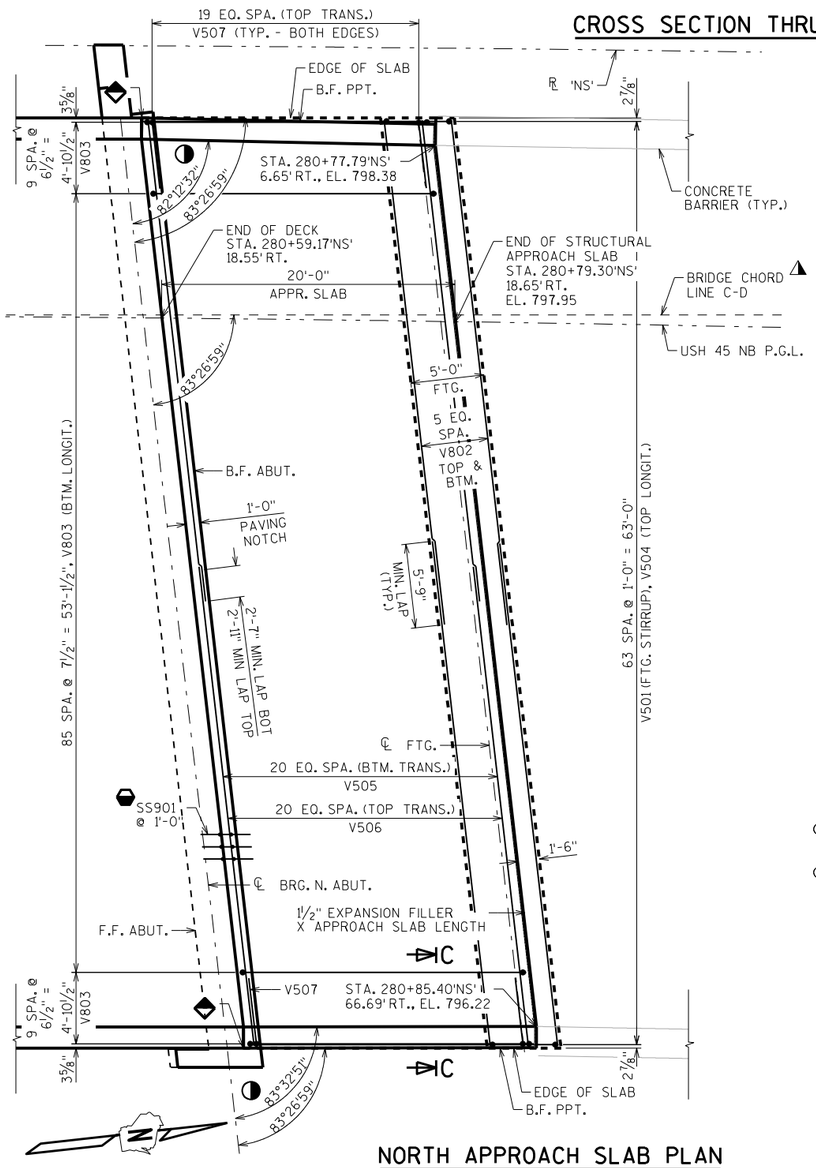


BILL OF BARS

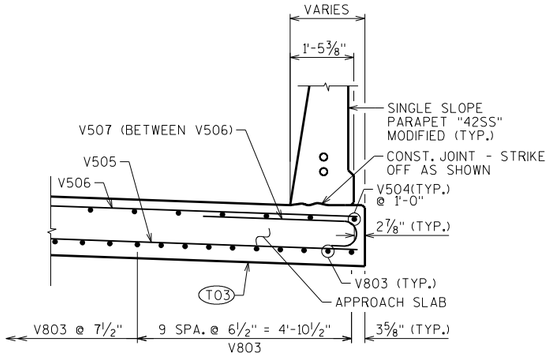
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
V501	X	64	12'-0"	X		FOOTING STIRRUP
V802	X	24	34'-9"			FOOTING - TRANSVERSE - HORIZ.
V803	X	104	21'-3"	X		APPROACH SLAB - LONGIT. - BOT.
V504	X	64	19'-6"			APPROACH SLAB - LONGIT. - TOP
V505	X	42	33'-4"			APPROACH SLAB - TRANS. - BOT.
V506	X	42	33'-6"			APPROACH SLAB - TRANS. - TOP
V507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE

CROSS SECTION THRU ROADWAY - LOOKING NORTH



NORTH APPROACH SLAB PLAN



SECTION C-C

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

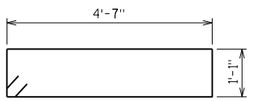
◆ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

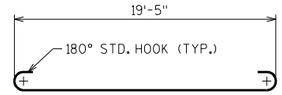
◭ DIMENSIONS ARE MEASURED ALONG BRIDGE CHORD LINE C-D. SEE CHORD LINE LAYOUT ON "CROSS SECTION & QUANTITIES" SHEET.

◑ APPROACH SLABS PPTS. ANGLED TO MEET F.F. OF CONCRETE BARRIER (TYP.)

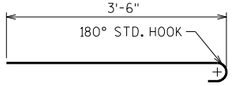
⬬ SPACE PERPENDICULAR TO BRIDGE CHORD LINE C-D



V501

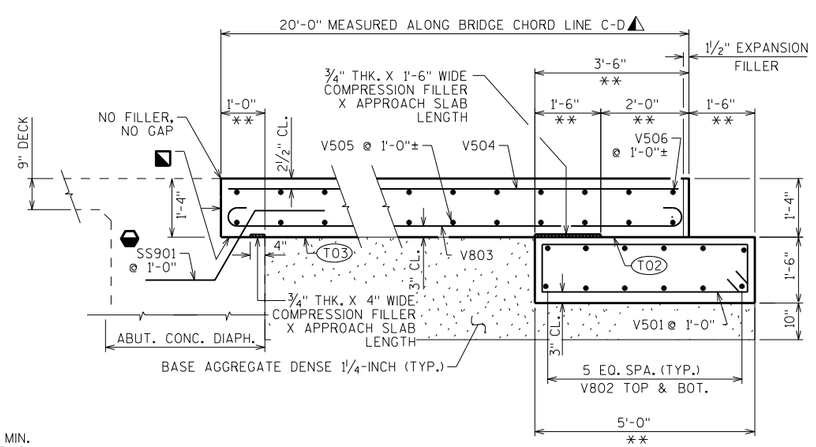


V803



V507

** DIMENSION MEASURED NORMAL TO ABUTMENT BODY



SECTION THRU APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

STRUCTURAL APPROACH SLAB-NORTH ABUTMENT

SHEET 14

2430

SCALE = 5

STATE PROJECT NUMBER

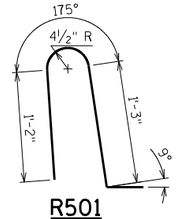
1060-33-80

BILL OF BARS

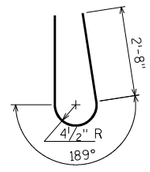
FOR APPROACH SLAB PARAPETS

BAR MARK	COAT	S. APPR.	N. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	60	60	4'-5"	X		PARAPET VERT.
R502	X	60	60	6'-8"	X		PARAPET VERT.
R503	X	8	16	19'-6"			PARAPET HORIZ. SE, NW, & NE
R504	X	8		19'-5"			PARAPET HORIZ. SW

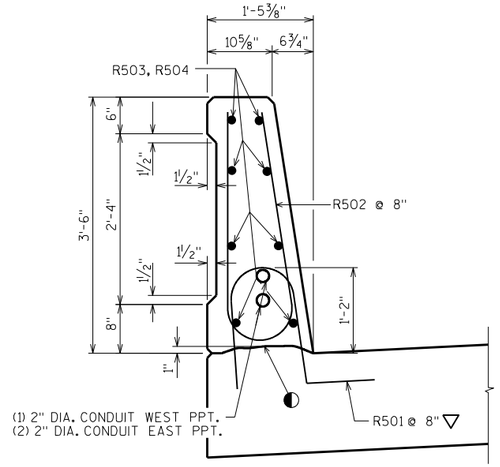
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



R501



R502

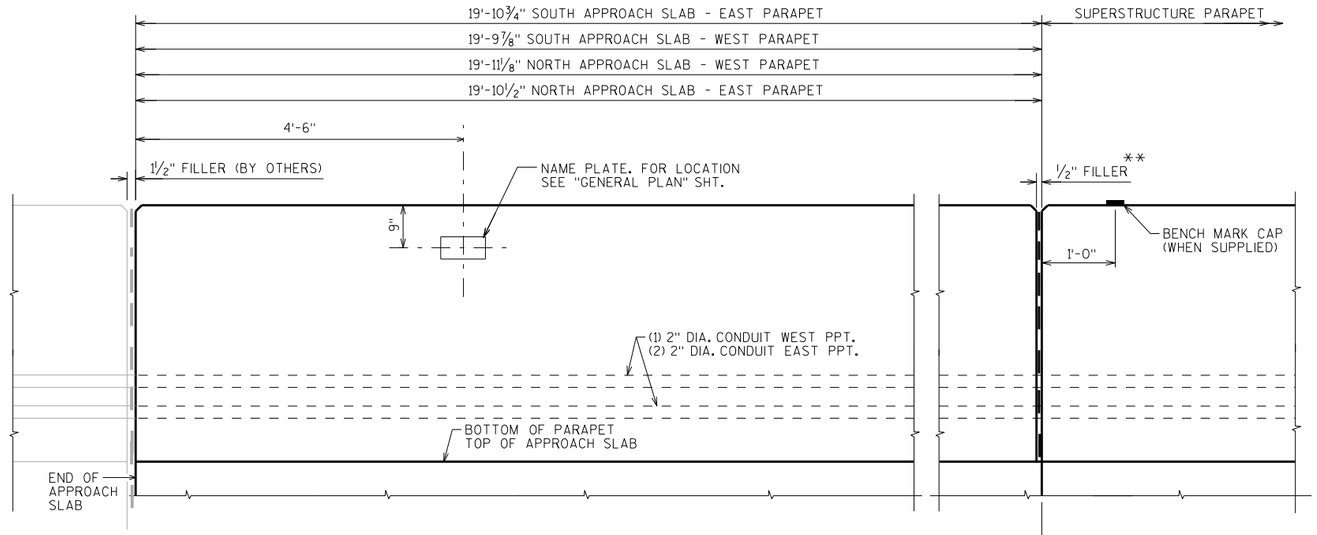


SECTION C-C

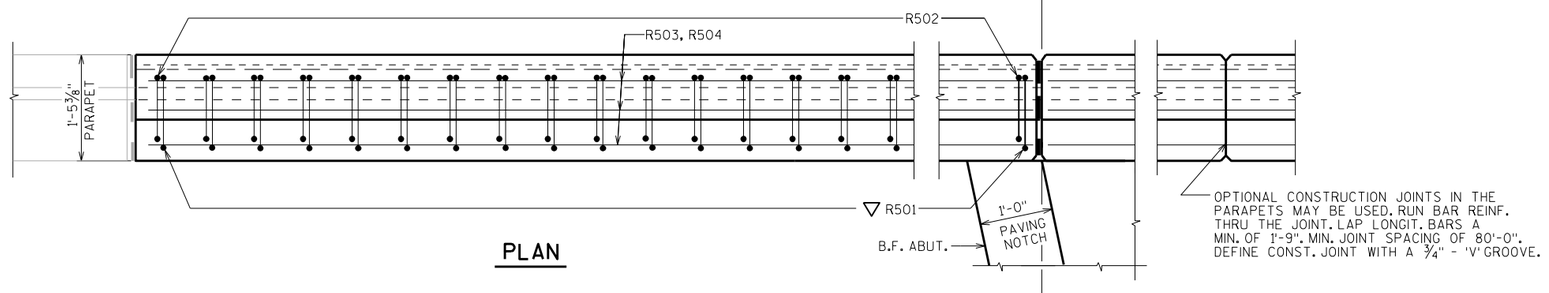
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH STEEL BEFORE APPROACH SLAB IS POURED.

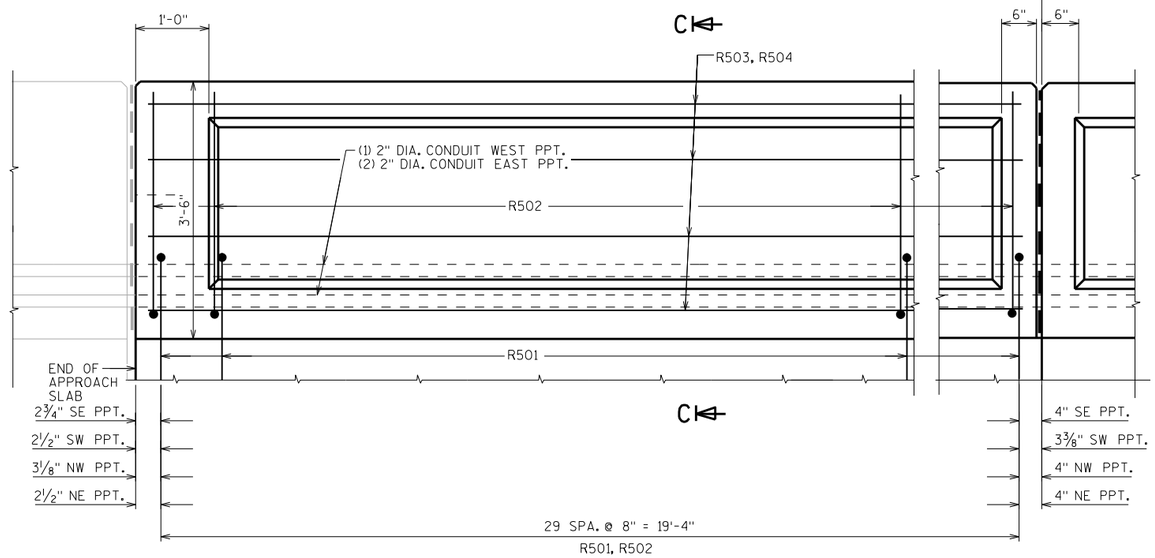
** SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)



INSIDE ELEVATION



PLAN



OUTSIDE ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

SINGLE SLOPE PARAPET 42SS (MODIFIED)

SHEET 15

2431

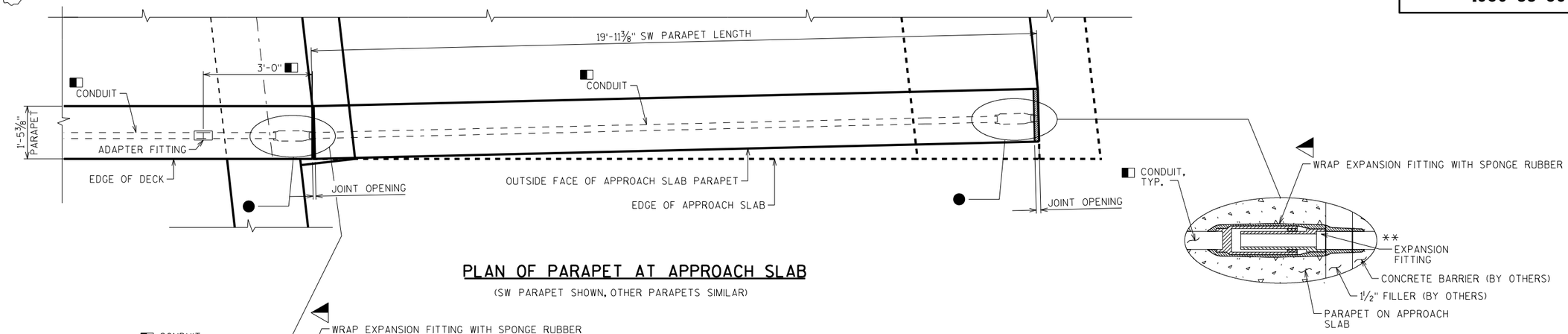
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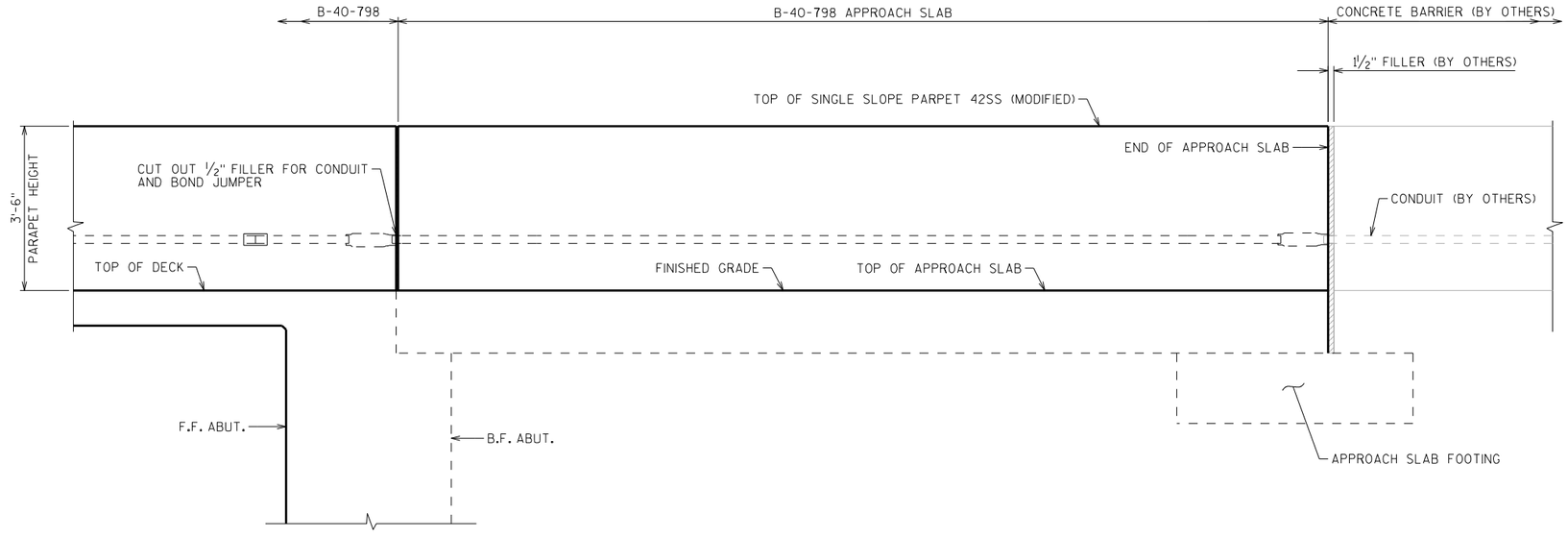
STATE PROJECT NUMBER

1060-33-80



PLAN OF PARAPET AT APPROACH SLAB

(SW PARAPET SHOWN, OTHER PARAPETS SIMILAR)



OUTSIDE ELEVATION PARAPET AT APPROACH SLAB

LOOKING EAST
(SW PARAPET SHOWN, OTHER PARAPETS SIMILAR)

NOTES

BID ITEMS SHALL BE:

"CONDUIT RIGID METALLIC 2-INCH"

"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS FOR RIGID METALLIC CONDUIT TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

APPROVED MANUFACTURER OR EQUIVALANT - EXPANSION FITTING

** O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

■ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING AND ENTIRE LENGTH OF STRUCTURAL APPROACH SLAB. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK.

◢ SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. ¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

● POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

PARAPET 42SS ELECTRICAL WORK

SHEET 16

2432

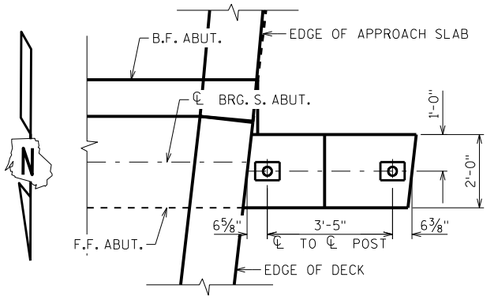
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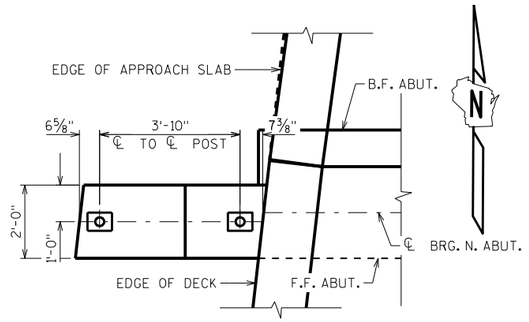
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STATE PROJECT NUMBER

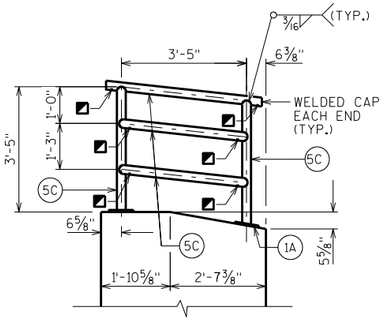
1060-33-80



RAILING PLAN - MEDIAN WING 2

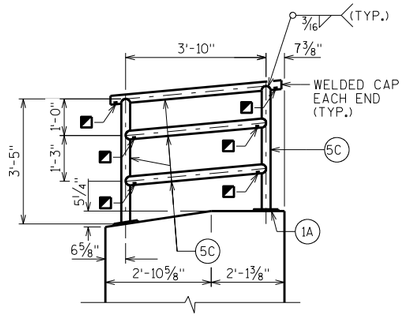


RAILING PLAN - MEDIAN WING 3



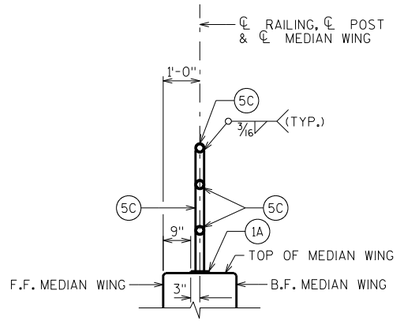
RAILING ELEVATION - MEDIAN WING 2

DIMENSIONS GIVEN ALONG ℄ OF MEDIAN WING

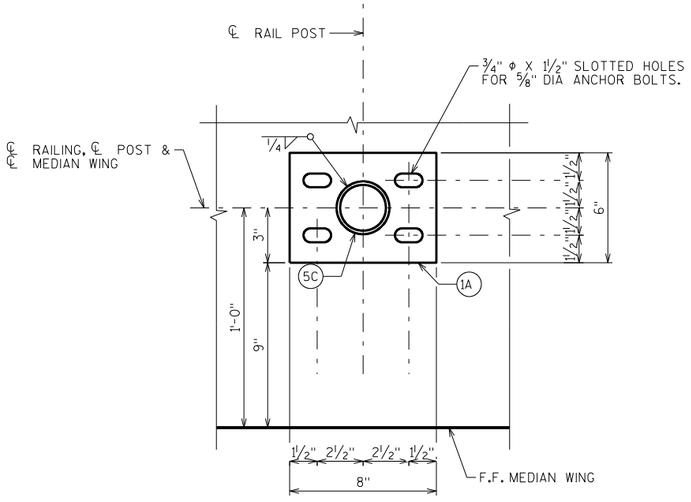


RAILING ELEVATION - MEDIAN WING 3

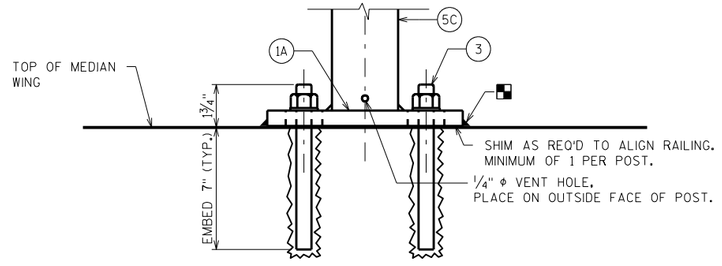
DIMENSIONS GIVEN ALONG ℄ OF MEDIAN WING



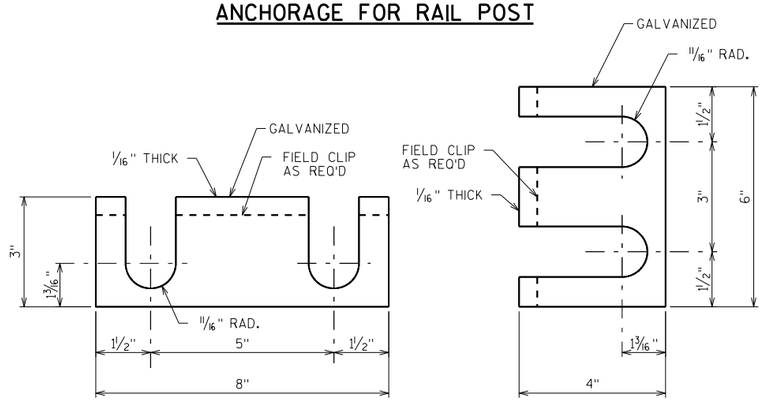
SECTION THRU RAILING



TYPICAL RAIL POST BASE PLATE



ANCHORAGE FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

LEGEND

(1A) PLATE ⅝" × 6" × 8" WITH ¾" × 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS TYPE S ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS.

(5C) STRUCTURAL TUBING 2½"Φ (STANDARD SIZE) (2.875" O.D.) WELD TO NO. 1A AND NO. 5C.

◩ ½" Φ DRAIN HOLE AT BOTTOM OF EACH RAIL END.

NOTES

BID ITEM "RAILING PIPE B-40-798" INCLUDES ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. NO. 5C SHALL CONFORM TO A.S.T.M. A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1A AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038, BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

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PIPE RAILING DETAILS

SHEET 17

2433

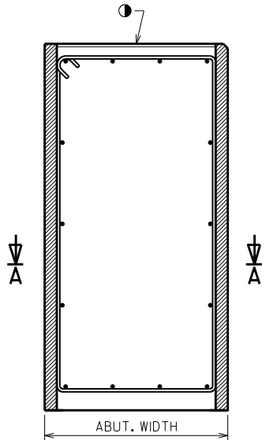
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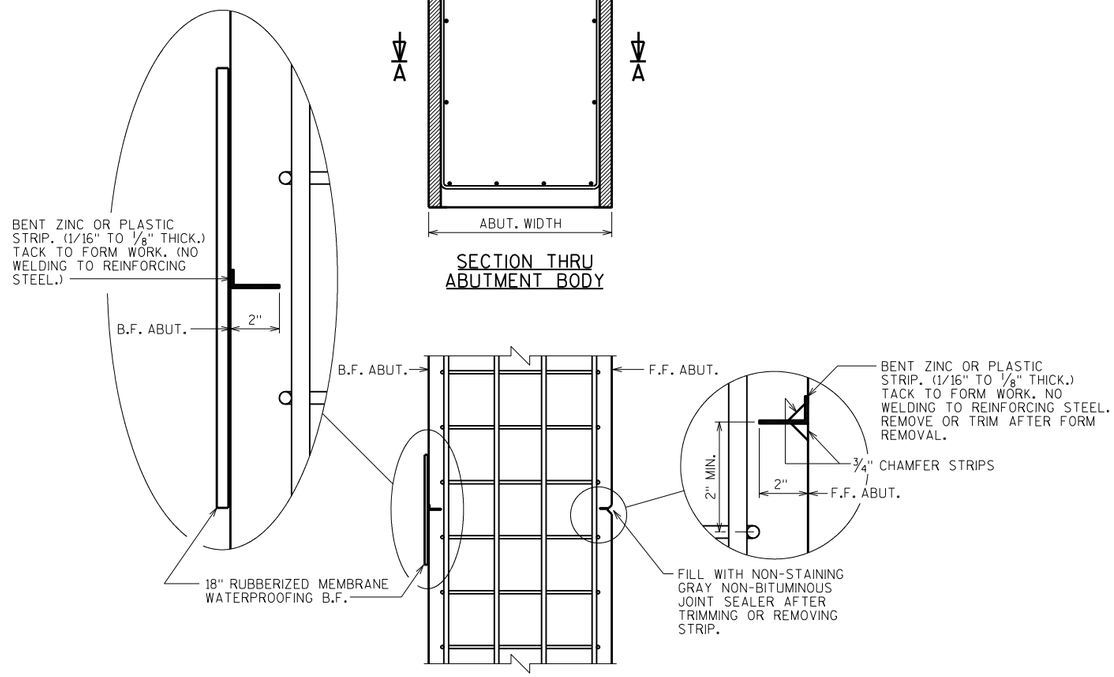
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STATE PROJECT NUMBER

1060-33-80



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

DRAWN BY RAC | PLANS CK'D. TAB

ALTERNATE CONSTRUCTION JOINT

SHEET 18

2434

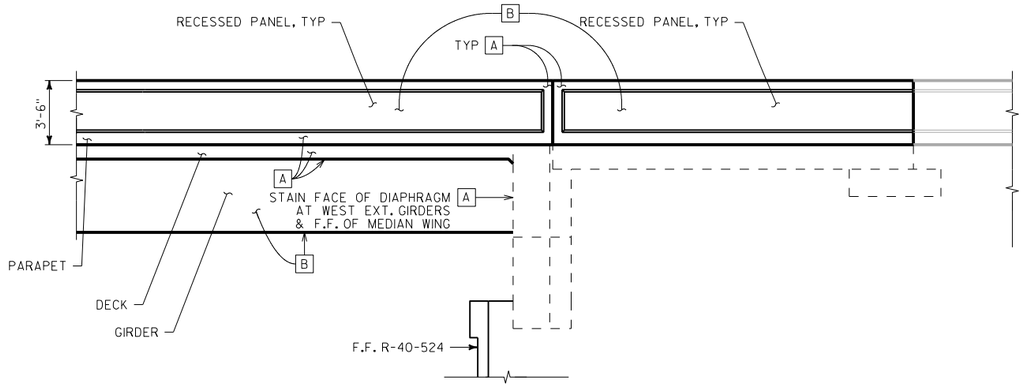
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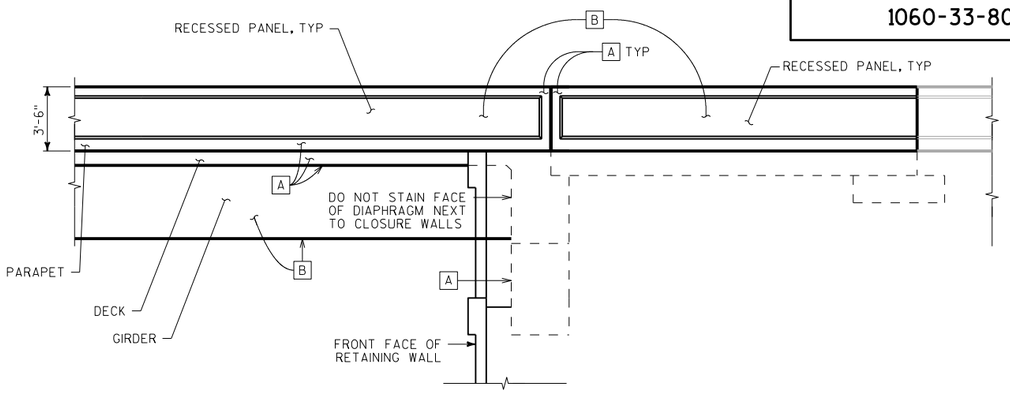
STATE PROJECT NUMBER

1060-33-80



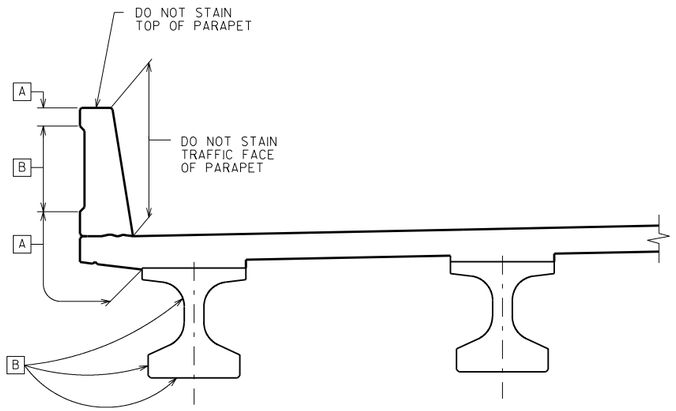
OUTSIDE ELEVATION OF PARAPET & APPROACH SLAB AT MEDIAN WINGS

LOOKING EAST
(MEDIAN WING 2 SHOWN, MEDIAN WING 3 SIMILAR)

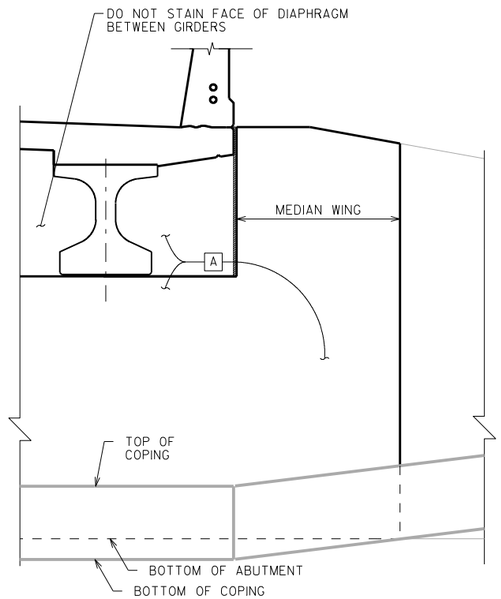


OUTSIDE ELEVATION OF PARAPET & APPROACH SLAB AT CLOSURE WALLS

LOOKING WEST
(CLOSURE WALL 4 SHOWN, CLOSURE WALL 1 SIMILAR)

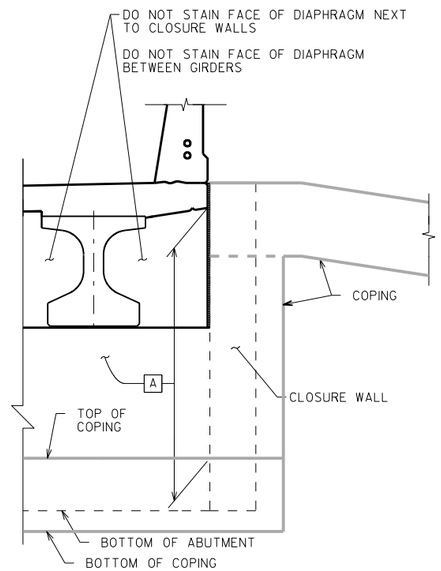


ELEVATION OF DECK



ELEVATION OF MEDIAN WING

LOOKING SOUTH
(MEDIAN WING 2 SHOWN, MEDIAN WING 3 SIMILAR)



ELEVATION OF CLOSURE WALL

LOOKING NORTH
(CLOSURE WALL 4 SHOWN, CLOSURE WALL 1 SIMILAR)

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE OF BODY FROM TOP OF BODY TO TOP OF SLOPE PAVING, INTERIOR FACE OF CLOSURE WALL FROM BOTTOM OF DECK TO TOP OF SLOPE PAVING, FRONT FACE OF DIAPHRAGM AT WEST EXT. GIRDERS, FRONT FACE OF MEDIAN WINGS
B	ACCENT COLOR #1	GIRDERS, PARAPETS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS, REVEALS ON PARAPETS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW.

BASE COLOR : FEDERAL COLOR - #33564
ACCENT COLOR #1: FEDERAL COLOR - #33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-798

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AESTHETIC DETAILS

SHEET 19

2435

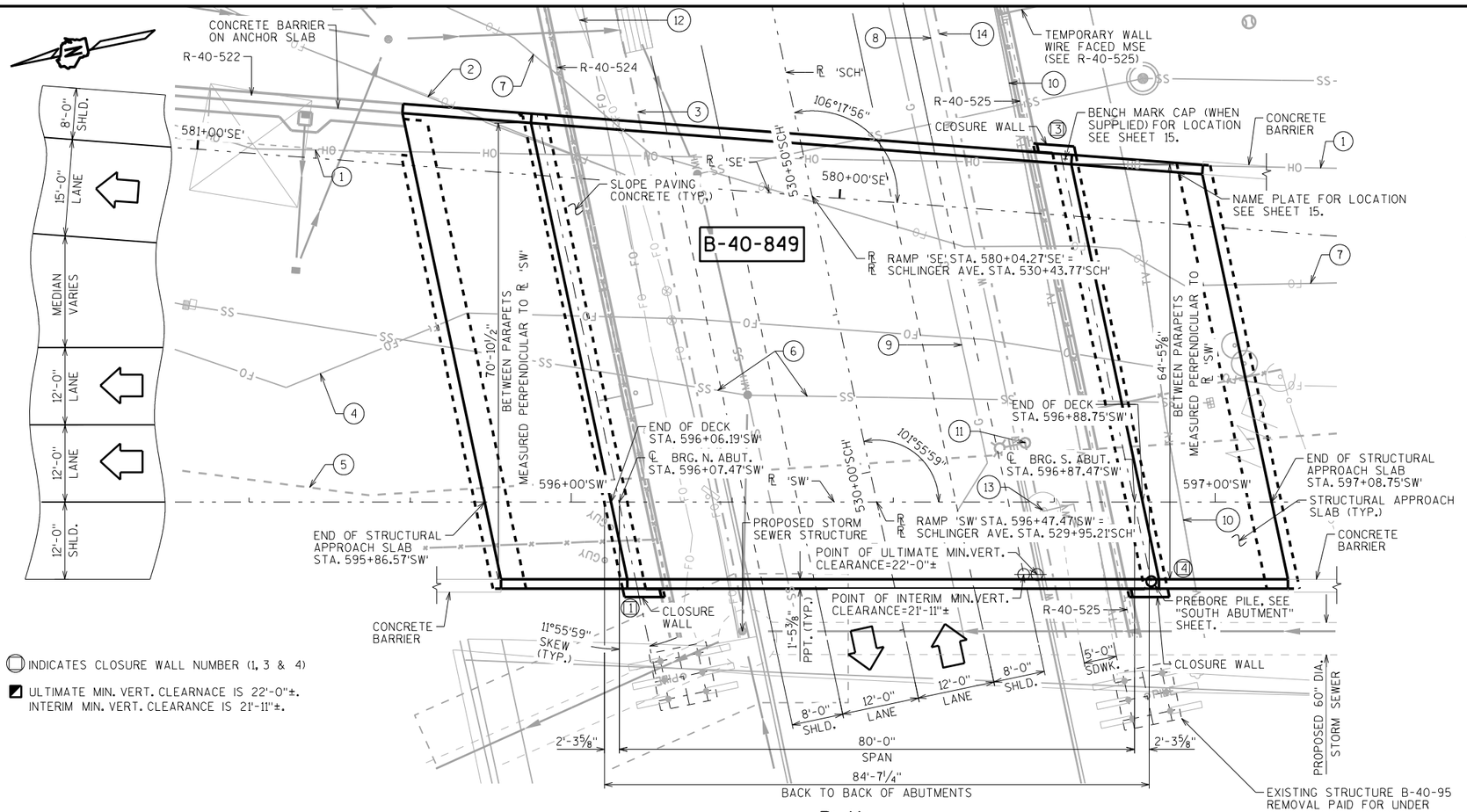
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STATE PROJECT NUMBER

1060-33-80

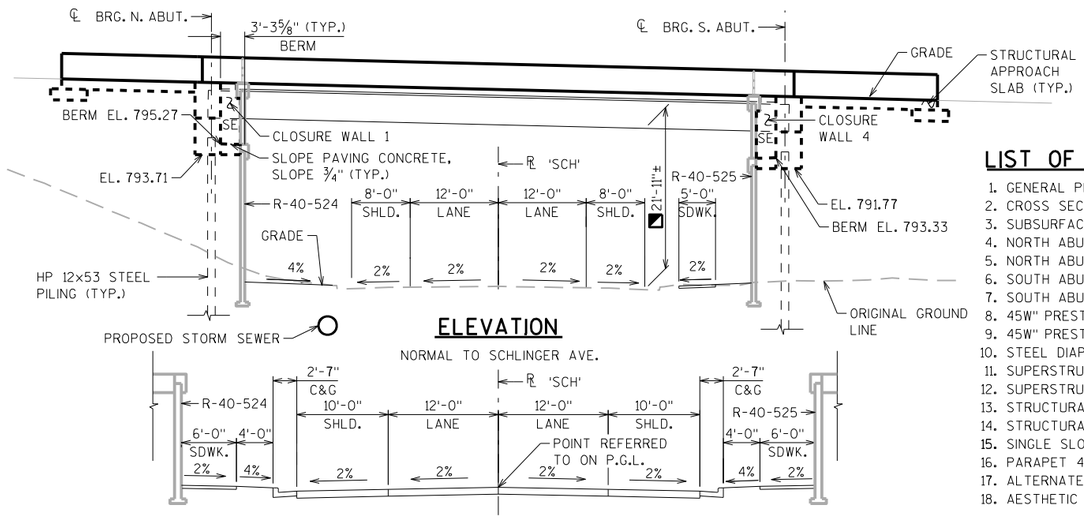


INDICATES CLOSURE WALL NUMBER (1, 3 & 4)

ULTIMATE MIN. VERT. CLEARNACE IS 22'-0"±.
INTERIM MIN. VERT. CLEARANCE IS 21'-11"±.

PLAN

(SINGLE SPAN 45W" PRESTRESSED GIRDERS)



ELEVATION

NORMAL TO SCHLINGER AVE.

TYPICAL FINISHED SECTION THRU SCHLINGER AVE.

LOOKING EAST (CONSTRUCTED UNDER FUTURE CONTRACT 1060-33-88)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.06
OPERATING RATING FACTOR: RF=1.37
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

B-40-849 IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC)	f'c = 4,000 P.S.I.
	ALL OTHER	f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60		fy = 60,000 P.S.I.
STAINLESS STEEL BAR REINFORCEMENT, GRADE 60		fy = 60,000 P.S.I.
45W" PRESTRESSED GIRDERS, CONCRETE MASONRY		f'c = 8,000 P.S.I.
	STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.	

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12X53 STEEL PILING. REQUIRED DRIVNG RESISTANCE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD:

NORTH ABUTMENT _____ 205 TONS PER PILE
SOUTH ABUTMENT _____ 200 TONS PER PILE

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:
NORTH ABUTMENT _____ 75 FEET
SOUTH ABUTMENT, PILE NO. 1 THRU PILE NO. 9 _____ 60 FEET
SOUTH ABUTMENT, PILE NO. 10 _____ 85 FEET

TRAFFIC VOLUME

RAMPS 'SW'/'SE'	SCHLINGER AVE. 'SCH'
A.D.T.=50,500 (2035)	A.D.T.=3,800 (2035)
R.D.S.=50 M.P.H.	R.D.S.=30 M.P.H.

UTILITY NOTES

1. EXISTING ATC OVERHEAD ELECTRIC TO BE RELOCATED
2. EXISTING TCA FIBER OPTIC LINE TO REMAIN
3. EXISTING CITY OF WEST ALLIS LIGHTING CABLE TO BE ABANDONED
4. EXISTING AT&T CORP FIBER OPTIC LINE TO BE RELOCATED
5. EXISTING WISDOT FTMS CONDUIT TO BE RELOCATED
6. EXISTING WISDOT STORM SEWER TO BE REMOVED
7. EXISTING WINDSTREAM FIBER OPTIC LINE TO BE RELOCATED
8. EXISTING CITY OF WEST ALLIS WATER TO REMAIN
9. EXISTING WE ENERGIES GAS MAIN TO REMAIN
10. EXISTING TIME WARNER CABLE TV LINE ABANDONED IN PLACE
11. EXISTING TIME WARNER CABLE TV LINE ABANDONED IN PLACE
12. EXISTING AT&T CORP FIBER OPTIC TO BE ABANDONED
13. EXISTING CITY OF WEST ALLIS HYDRANT TO REMAIN
14. EXISTING CITY OF WEST ALLIS LIGHTING CABLE TO BE ABANDONED

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. NORTH ABUTMENT
5. NORTH ABUTMENT DETAILS
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT DETAILS
8. 45W" PRESTRESSED GIRDER
9. 45W" PRESTRESSED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. STRUCTURAL APPROACH SLAB - NORTH ABUTMENT
14. STRUCTURAL APPROACH SLAB - SOUTH ABUTMENT
15. SINGLE SLOPE PARAPET 42SS (MODIFIED)
16. PARAPET 42SS ELECTRICAL WORK
17. ALTERNATE CONSTRUCTION JOINT
18. AESTHETIC DETAILS

STRUCTURE DESIGN CONTACTS:
RUTH COISMAN (608) 261-8205
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — 5/8/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-849

USH 45 SW / SE RAMP OVER SCHLINGER AVE.

COUNTY: MILWAUKEE — ~~TOWN/CITY/VILLAGE~~ WEST ALLIS

DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RAC	JDL	RAC	JDL

GENERAL PLAN

SHEET 1 OF 18

2436

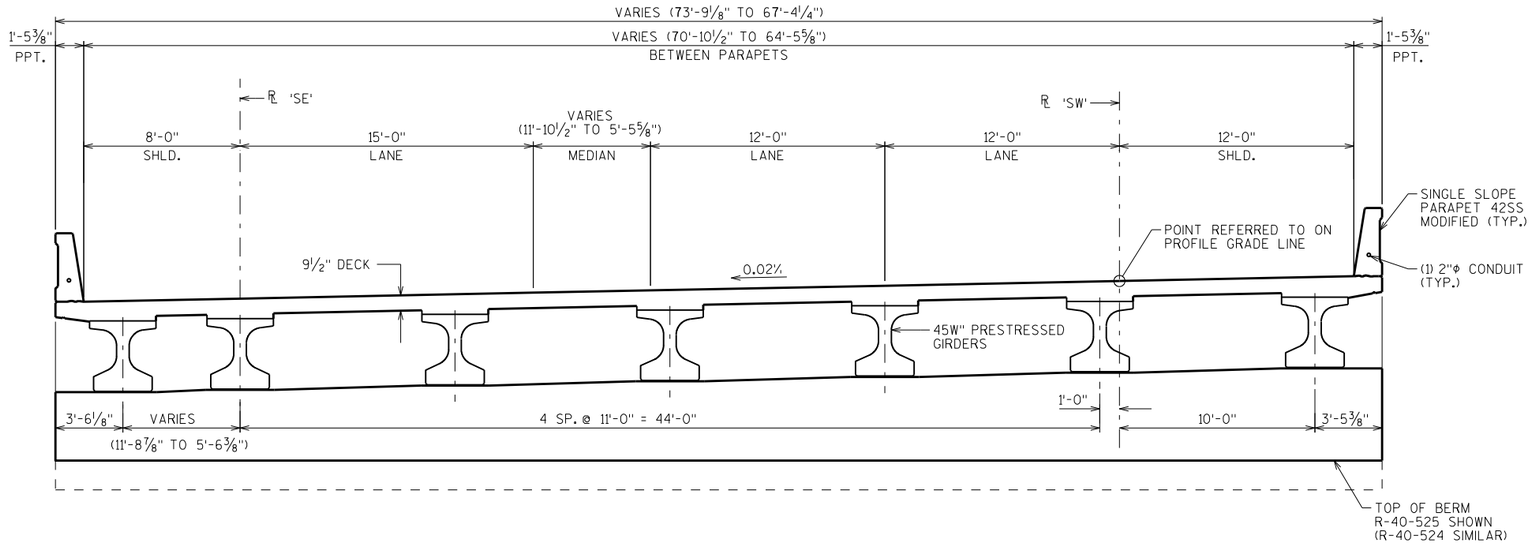
I.D. 1060-33-07M

DATE: MAY 2014

SCALE = 10

8

8



CROSS SECTION THRU ROADWAY LOOKING SOUTH

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	NORTH APPR. SLAB	NORTH ABUT.	SOUTH ABUT.	SOUTH APPR. SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-849	LS	—	—	—	—	—	1
210.0100	BACKFILL STRUCTURE	CY	—	—	190	190	—	380
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	210	—	—	200	410
502.0100	CONCRETE MASONRY BRIDGES	CY	—	20	57	55	19	151
502.3200	PROTECTIVE SURFACE TREATMENT	SY	705	195	—	—	180	1,080
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	569	—	—	—	—	569
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	—	4,320	3,990	—	8,310
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	44,660	16,470	240	460	15,250	77,080
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	—	—	7	7	—	14
506.4000	STEEL DIAPHRAGMS B-40-849	EACH	6	—	—	—	—	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	17	18	—	35
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	—	—	—	25	—	25
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	—	—	750	625	—	1,375
604.0400	SLOPE PAVING CONCRETE	SY	—	—	22	20	—	42
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	12	41	—	—	41	94
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	155	—	—	—	—	155
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	281	78	—	—	72	431
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	—	—	2	3	—	5
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	—	—	2	3	—	5
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	2,380	—	—	—	—	2,380
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	5,590	1,410	—	—	1,270	8,270
	NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	—	1/2", 3/4", 1", 1 1/2"
	EXPANDED POLYSTYRENE	SIZE	—	—	—	—	—	1"

ALL ITEMS ARE CATEGORY 2050

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL ALL EXPOSED EDGES 3/4" UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND TOP OF APPROACH SLAB SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

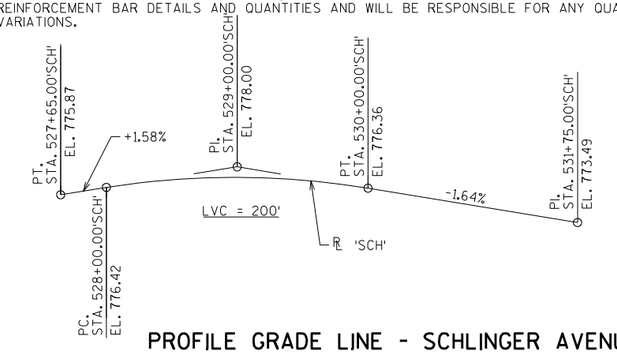
EMBEDDED CONDUIT IN THE WEST AND EAST PARAPETS IS FOR FUTURE LIGHTING OF RAMP 'SW'.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COARSE AGGREGATE UNDER THE SLOPE PAVING SHALL BE INCIDENTAL TO "SLOPE PAVING CONCRETE."

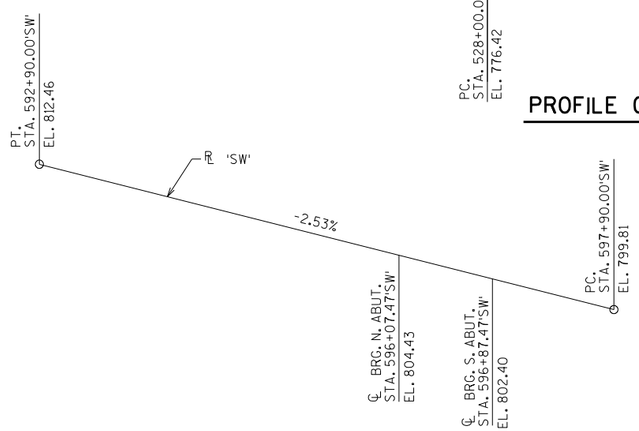
THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLABS (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTURES."

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE BRIDGE B-40-849 ABUTMENTS WITH RETAINING WALLS R-40-522, R-40-524 AND R-40-525.

PLANS, DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS FOR R-40-524/525 OF 7 1/2 INCHES. FOR PANEL THICKNESSES OTHER THAN 7 1/2 INCHES, THE CONTRACTOR SHALL VERIFY CLOSURE WALL REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.



PROFILE GRADE LINE - SCHLINGER AVENUE



PROFILE GRADE LINE - RAMP 'SW'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

CROSS SECTION & QUANTITIES

SHEET 2

2437

STATE PROJECT NUMBER

1060-33-80

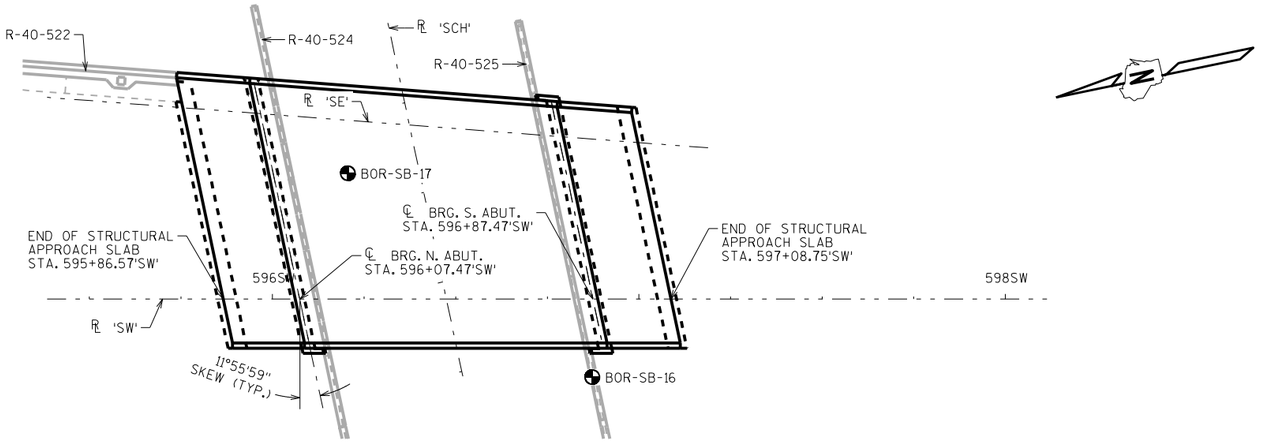
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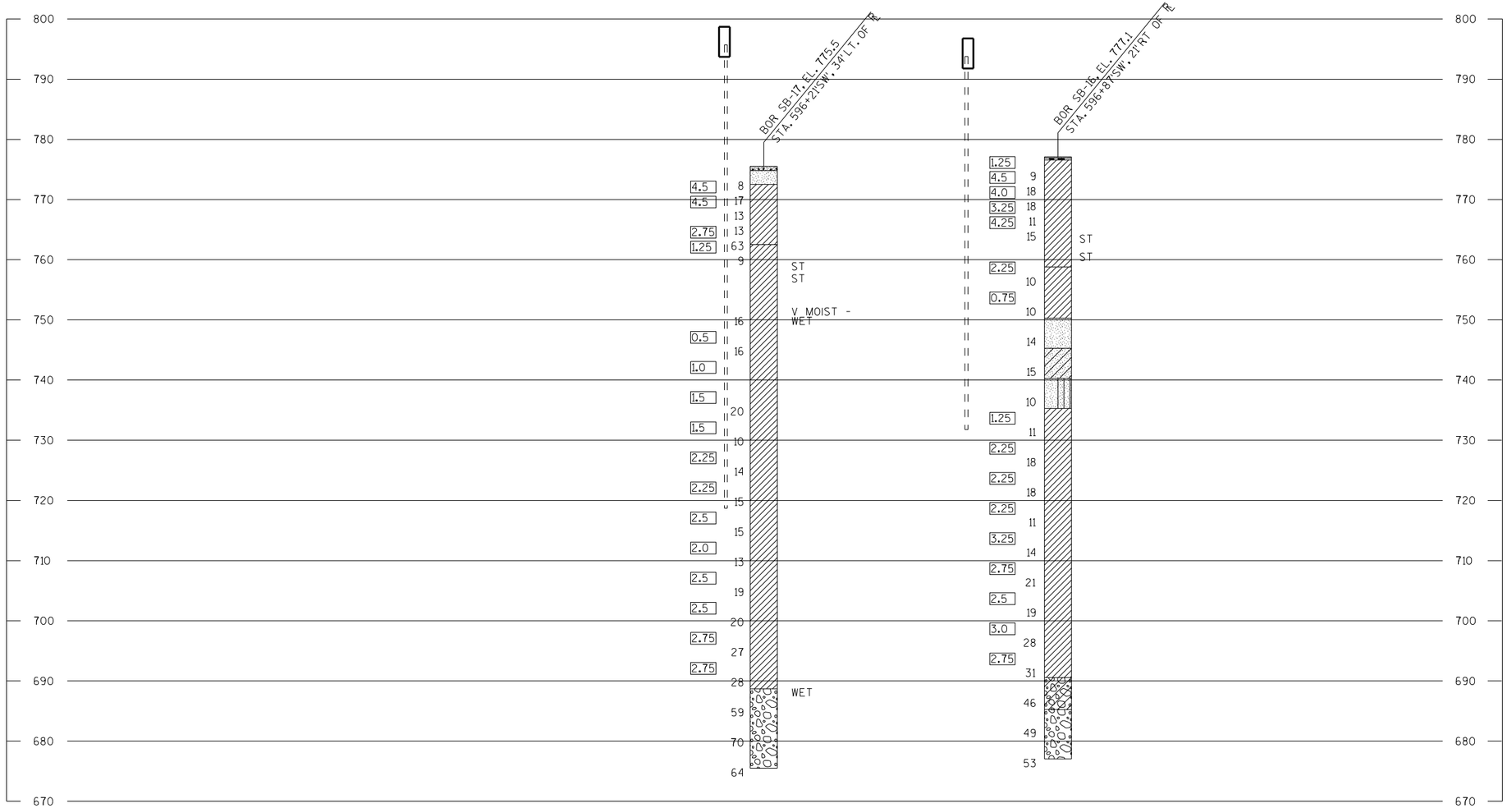
8

SCALE = 7.5

ZOO INTERCHANGE
USH 45 SW/SE RAMP OVER SCHLINGER AVE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-16	2/6/2012	294153	572137
SB-17	2/3/2012	294207	572205
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: HNTB			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY			





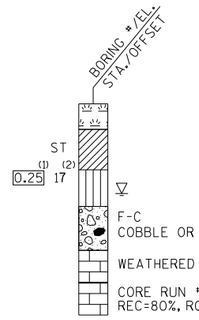
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT · TOPSOIL · PEAT
CONCRETE · FILL · GRAVEL
SAND · CLAY · SILT
BOULDERS OR COBBLES · LIMESTONE · BEDROCK (UNKNOWN)
SHALE · SANDSTONE · IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▼ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY PR/RAC · PLANS CK'D. JDL

SUBSURFACE EXPLORATION

SHEET 3

2438

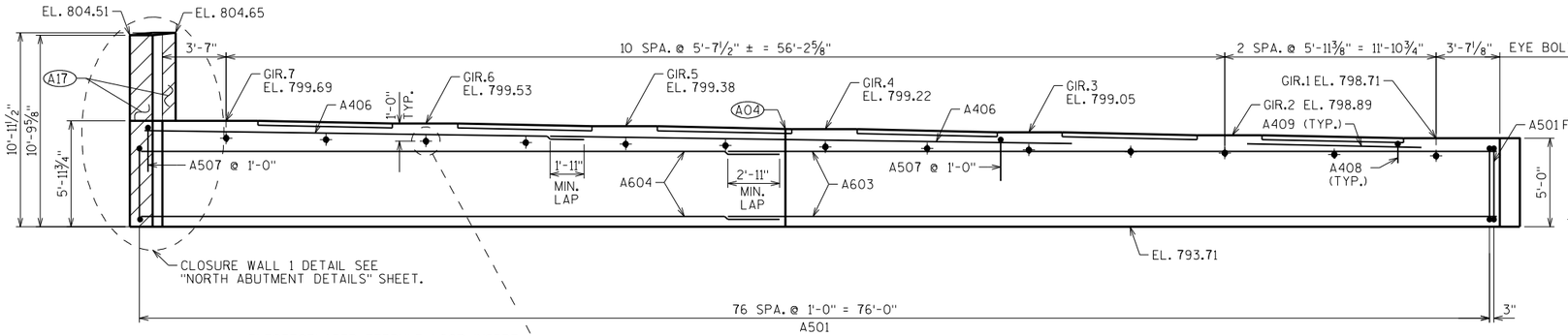
8

8

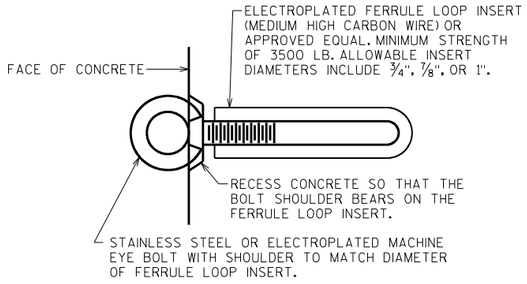
SCALE = 20

STATE PROJECT NUMBER

1060-33-80

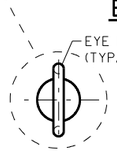


ELEVATION LOOKING NORTH

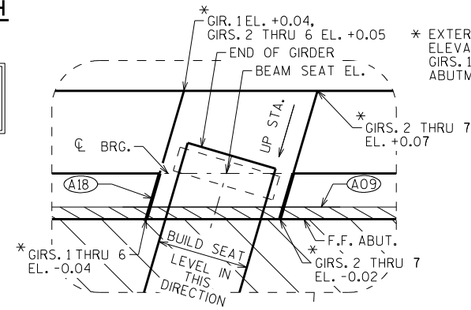


EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".



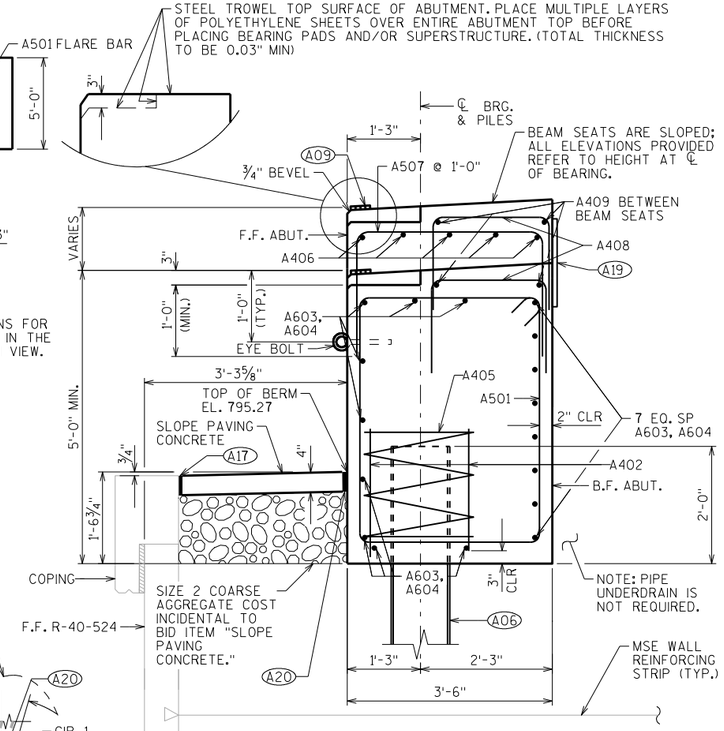
NOTE:
LOCATE FALL PROTECTION EYE BOLTS AT SPACING SHOWN, MEASURED ALONG F.F. ABUT.



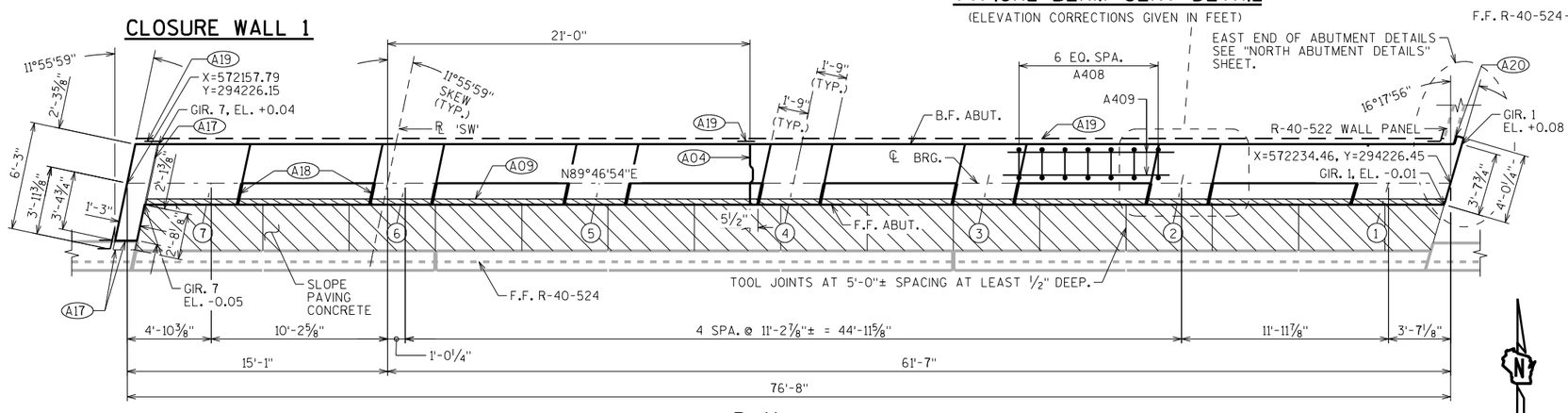
* EXTERIOR BEAM SEAT ELEVATION CORRECTIONS FOR GIRS. 1 & 7 ARE GIVEN IN THE ABUTMENT BODY PLAN VIEW.

TYPICAL BEAM SEAT DETAIL

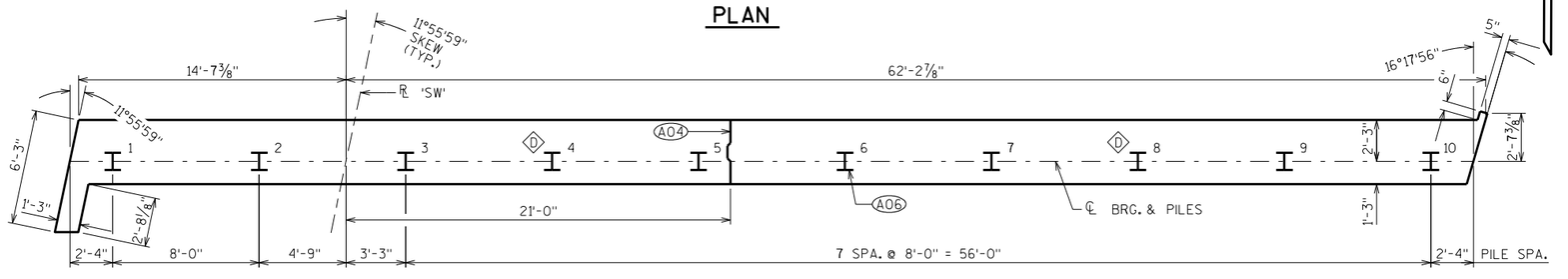
(ELEVATION CORRECTIONS GIVEN IN FEET)



SECTION THRU BODY



PLAN



PILE PLAN

◇D DYNAMIC PILE LOAD TESTING.

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A06 SUPPORT ABUTMENT ON HP 12x53 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 205 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
ESTIMATED PILE LENGTH:
PILES 1 THRU 10 = 75 FEET

A09 3/4" X 4" FILLER (OUT TO OUT OF ABUT.)

A17 3/4" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A20 1" EXPANDED POLYSTYRENE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

NORTH ABUTMENT

SHEET 4

2439

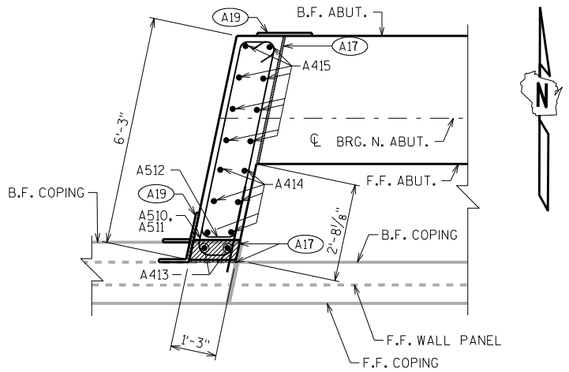
SCALE = 4

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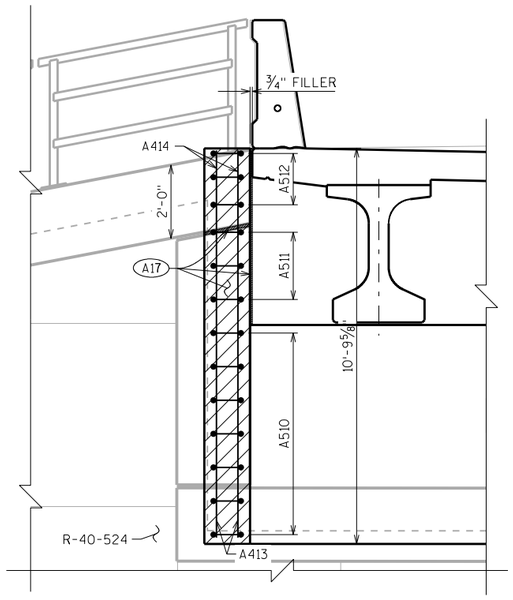
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STATE PROJECT NUMBER

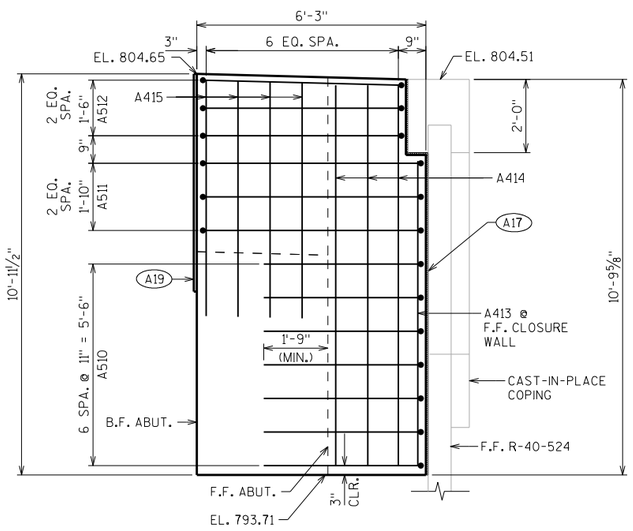
1060-33-80



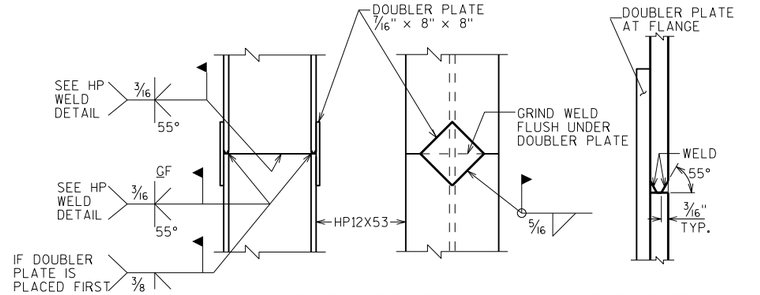
CLOSURE WALL 1 PLAN



CLOSURE WALL 1 ELEVATION - LOOKING NORTH



CLOSURE WALL 1 SECTION - LOOKING EAST



STEEL 'HP' SHAPE

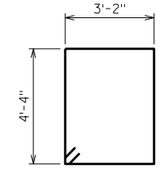
HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

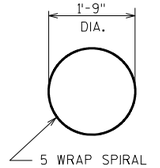
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

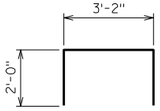
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		78	15'-8"	X		BODY - STIRRUPS
A402		20	2'-3"			PILES - 2 PER PILE
A603		17	45'-0"			BODY - HORIZ.
A604		17	35'-0"			BODY - HORIZ.
A405		10	28'-0"	X		PILES - 1 PER PILE
A406		10	26'-9"			BODY - HORIZ. UNDER GIRS. 3 - 7
A507		51	6'-11"	X		BODY - TOP UNDER GIRS. 3 - 7
A408		42	4'-3"	X		BODY - VERT. - BETWEEN BEAM SEATS
A409		12	10'-5"			BODY - HORIZ. - TOP
A510	X	7	9'-6"	X		CLOSURE WALL - HORIZ. BOT.
A511	X	3	14'-2"	X		CLOSURE WALL - HORIZ. MID.
A512	X	3	13'-0"	X		CLOSURE WALL - HORIZ. TOP
A413	X	2	8'-3"			CLOSURE WALL - VERT.
A414	X	6	10'-4"			CLOSURE WALL - VERT.
A415	X	8	6'-6"			CLOSURE WALL - VERT.
A416		6	4'-6"	X		BODY - HORIZ. - EAST END EXTENSION
A417		5	4'-7"			BODY - VERT. - EAST END



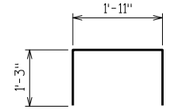
A501



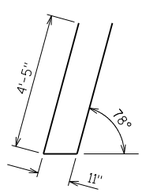
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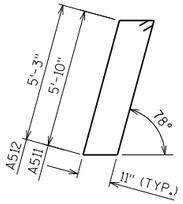
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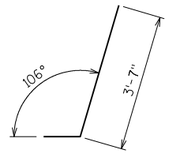
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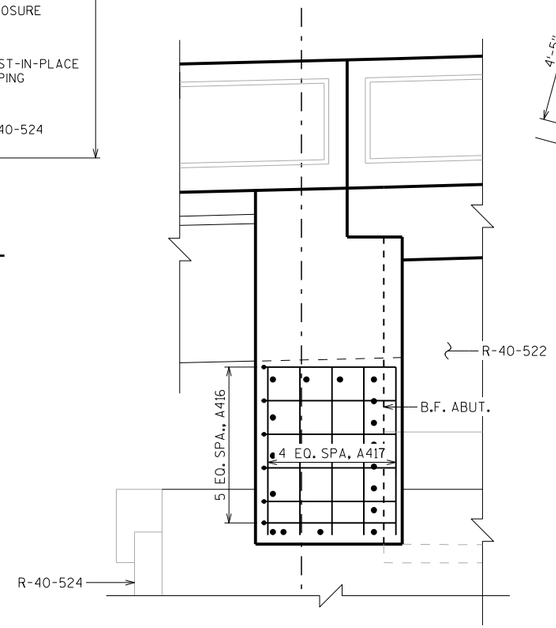
A510



A511, A512



A416



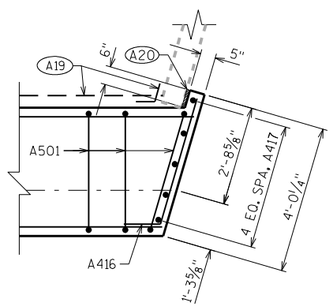
ELEVATION - EAST END
(LOOKING WEST)

(A17) 3/4" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

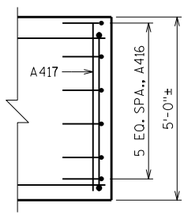
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A20) 1" EXPANDED POLYSTYRENE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).





PLAN - EAST END



BODY SECTION - EAST END
(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

NORTH ABUTMENT DETAILS

SHEET 5

2440

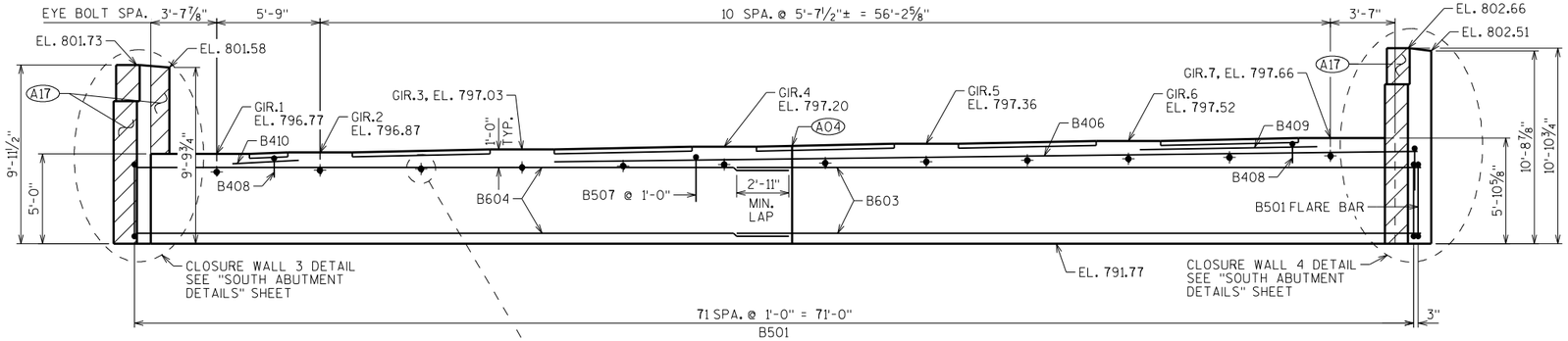
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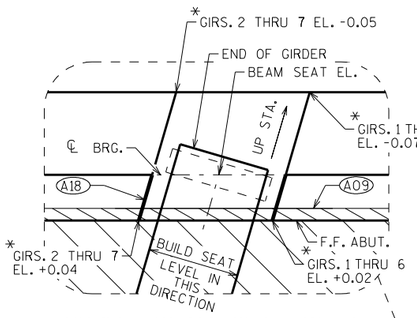
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STATE PROJECT NUMBER

1060-33-80

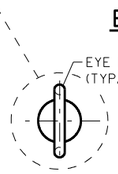


ELEVATION LOOKING SOUTH



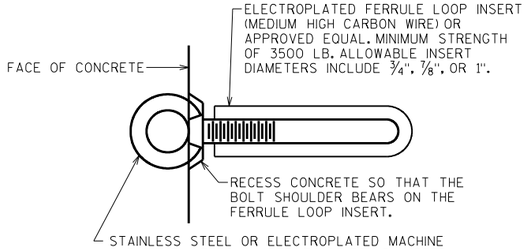
TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)



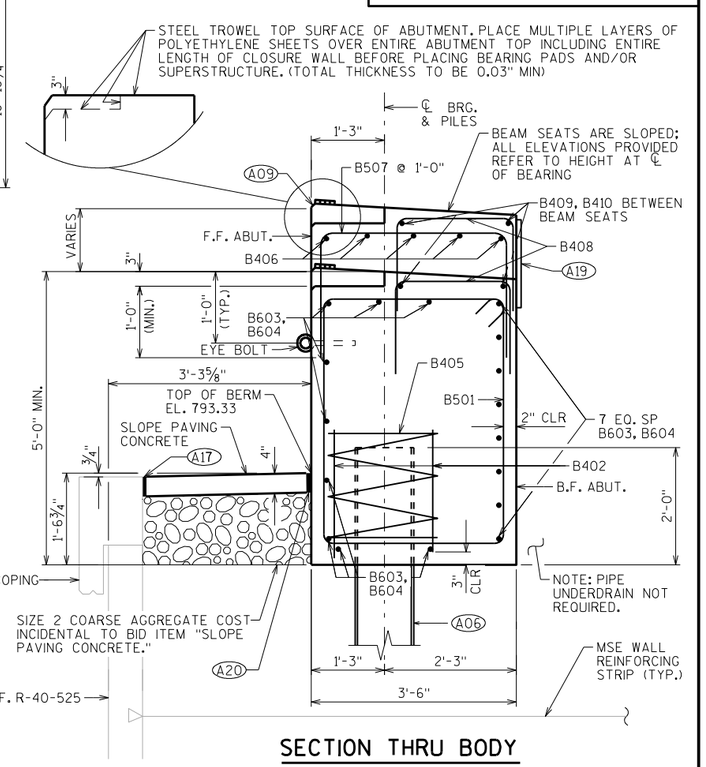
NOTE:
LOCATE FALL PROTECTION EYE BOLTS AT SPACING SHOWN, MEASURED ALONG F.F. ABUT.

*EXTERIOR BEAM SEAT ELEVATION CORRECTIONS FOR GIRS. 1 & 7 ARE GIVEN IN THE ABUTMENT BODY PLAN VIEW.



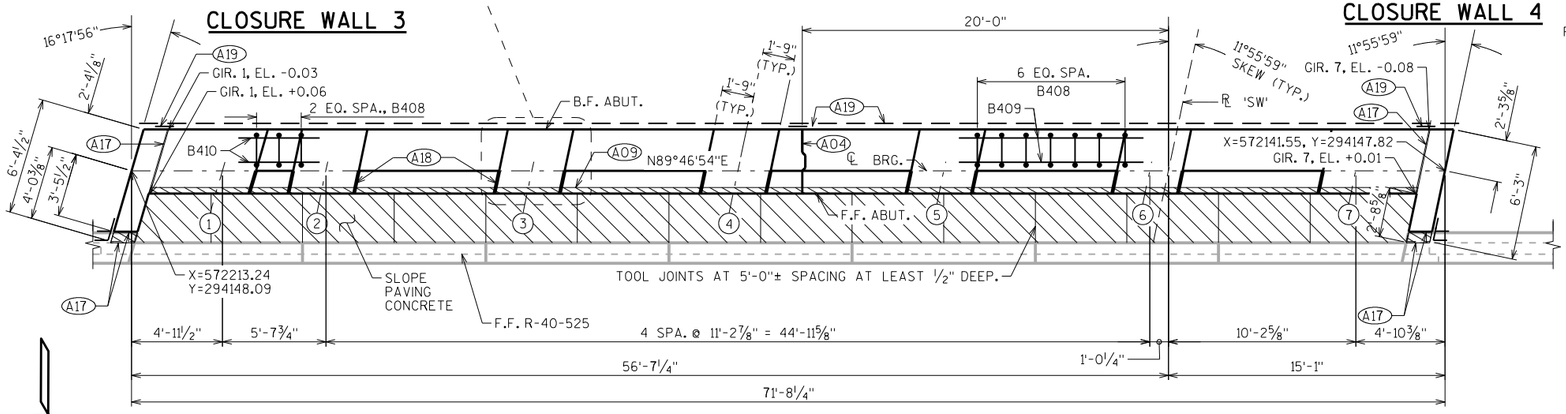
EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".



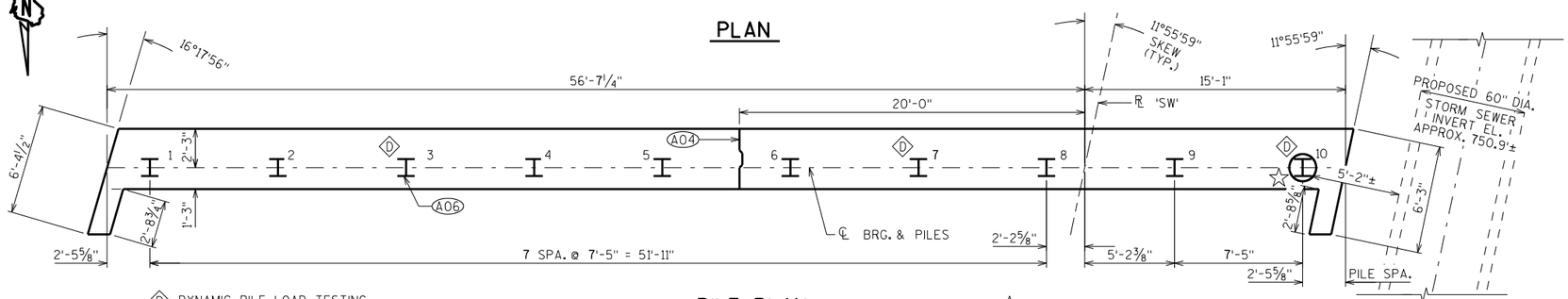
SECTION THRU BODY

CLOSURE WALL 3



CLOSURE WALL 4

PLAN



D DYNAMIC PILE LOAD TESTING.

PILE PLAN

☆ PREBORE TO STORM SEWER INVERT EL. APPROX. 750' AT PILE 10 ONLY.

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A06 SUPPORT ABUTMENT ON HP 12x53 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
ESTIMATED PILE LENGTH:
PILES 1 THRU 9: 60 FEET
PILE 10: 85 FEET

A09 3/4" X 4" FILLER (OUT TO OUT OF ABUT.)

A17 3/4" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A20 1" EXPANDED POLYSTYRENE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

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SOUTH ABUTMENT

SHEET 6

2441

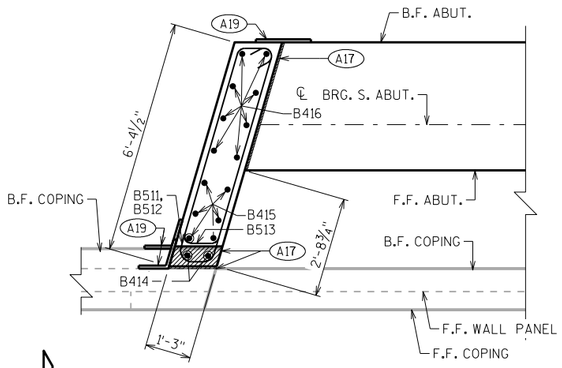
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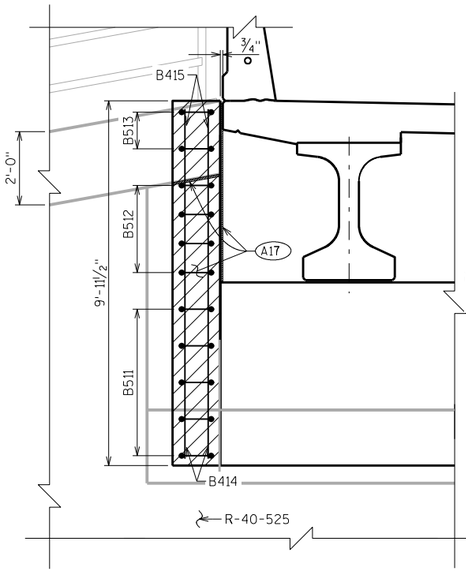
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STATE PROJECT NUMBER

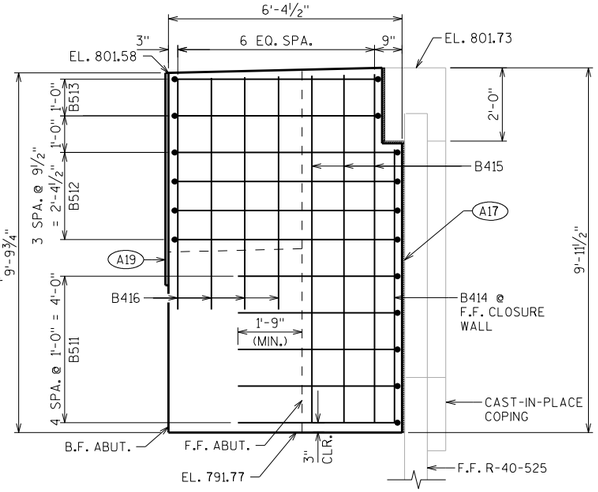
1060-33-80



CLOSURE WALL 3 PLAN



CLOSURE WALL 3 ELEVATION - LOOKING SOUTH

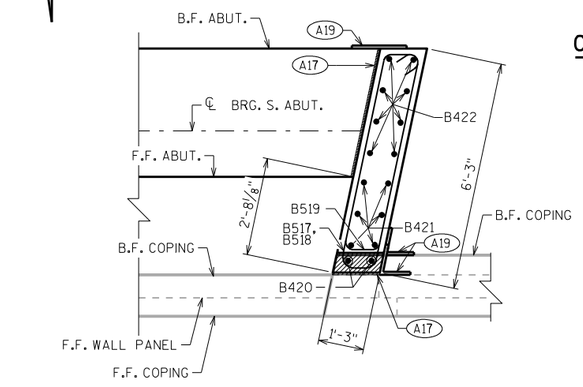


CLOSURE WALL 3 SECTION - LOOKING WEST

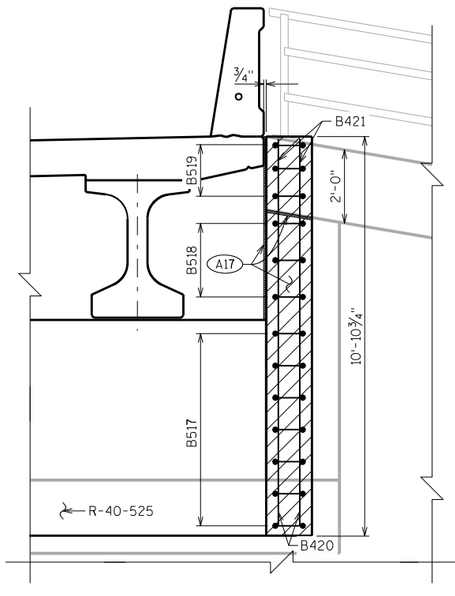
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

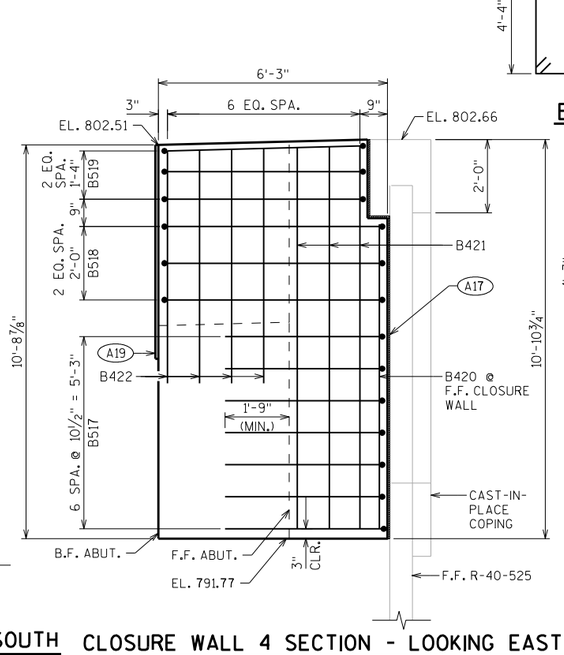
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		73	15'-8"	X		BODY - STIRRUPS
B402		20	2'-3"			PILES - 2 PER PILE
B603		17	39'-6"			BODY - HORIZ.
B604		17	35'-6"			BODY - HORIZ.
B405		10	28'-0"	X		PILES - 1 PER PILE
B406		5	45'-0"			BODY - HORIZ. UNDER GIRS. 3 - 7
B507		46	6'-11"	X		BODY - TOP UNDER GIRS. 3 - 7
B408		38	4'-3"	X		BODY - VERT. - BETWEEN BEAM SEATS
B409		10	9'-10"			BODY - HORIZ. - TOP
B410		2	4'-1"			BODY - HORIZ. - TOP - BETWEEN GIRS. 1 & 2
B511	X	5	9'-6"	X		CLOSURE WALL 3 - HORIZ. BOT.
B512	X	4	14'-4"	X		CLOSURE WALL 3 - HORIZ. MID.
B513	X	2	13'-2"	X		CLOSURE WALL 3 - HORIZ. TOP
B414	X	2	7'-5"			CLOSURE WALL 3 - VERT.
B415	X	6	9'-5"			CLOSURE WALL 3 - VERT.
B416	X	8	6'-6"			CLOSURE WALL 3 - VERT.
B517	X	7	9'-6"	X		CLOSURE WALL 4 - HORIZ. BOT.
B518	X	3	14'-2"	X		CLOSURE WALL 4 - HORIZ. MID.
B519	X	3	13'-0"	X		CLOSURE WALL 4 - HORIZ. TOP
B420	X	2	8'-4"			CLOSURE WALL 4 - VERT.
B421	X	6	10'-4"			CLOSURE WALL 4 - VERT.
B422	X	8	6'-6"			CLOSURE WALL 4 - VERT.



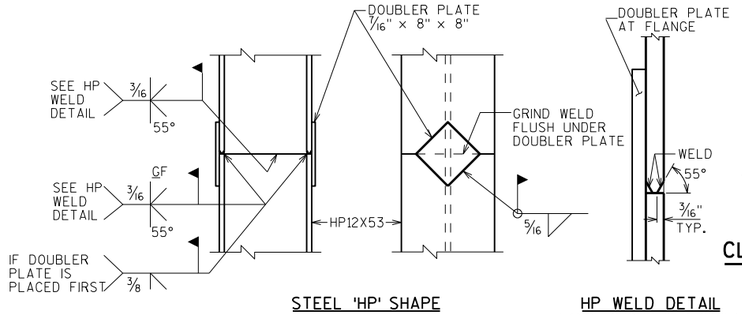
CLOSURE WALL 4 PLAN



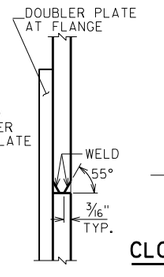
CLOSURE WALL 4 ELEVATION - LOOKING SOUTH



CLOSURE WALL 4 SECTION - LOOKING EAST

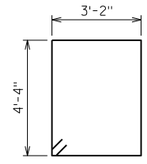


STEEL 'HP' SHAPE

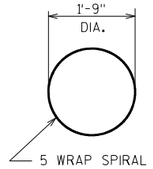


HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

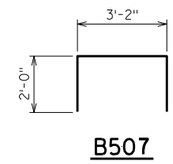
PILE DETAILS



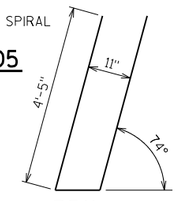
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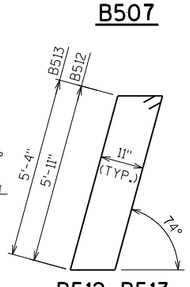
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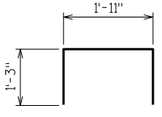
B507



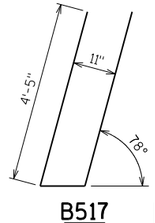
B511



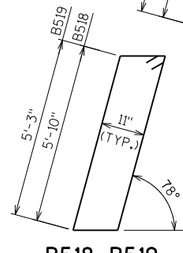
B512, B513



B408



B517



B518, B519

A17 3/4" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 3/4" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

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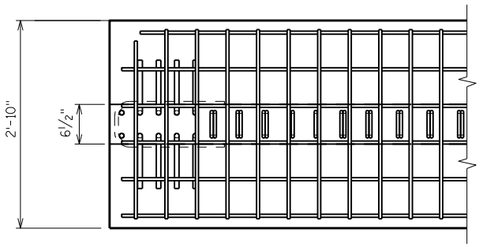
SOUTH ABUTMENT DETAILS

SHEET 7

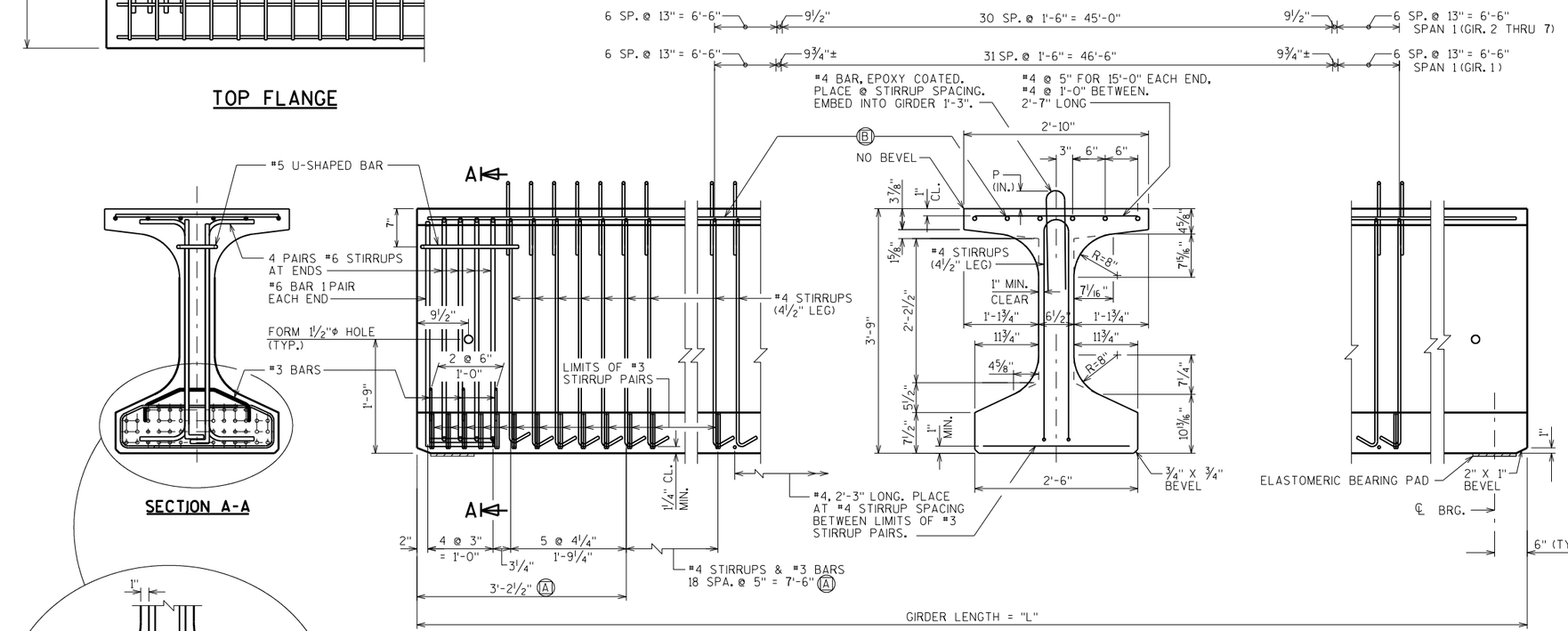
2442

SCALE = 2

STATE PROJECT NUMBER
1060-33-80



TOP FLANGE

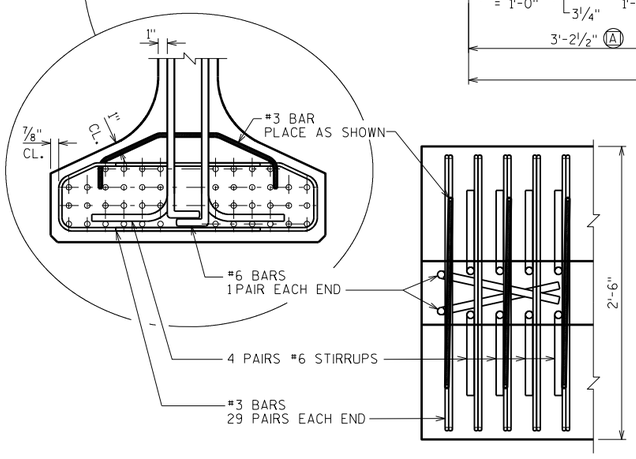


SECTION A-A

SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS FULL LENGTH, 1'-11" MIN. LAP



BOTTOM FLANGE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

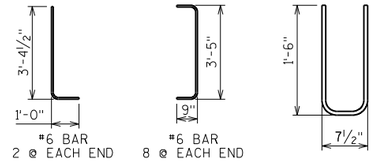
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

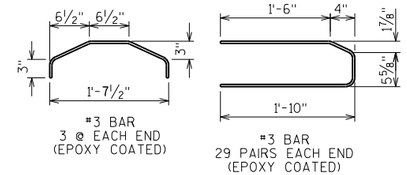
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1	82.55	0.3	0.7	0.9	1.0	1.1	1.0	0.9	0.7	0.3	8000	7.00	7.00	7.00	0.6	28	6400	41.0	13.25	16.25	4		
1	2-7	81.00	0.4	0.7	1.0	1.1	1.2	1.1	1.0	0.7	0.4	8000	7.00	7.00	7.00	0.6	28	6400	41.0	13.25	16.25	4		

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STRUCTURE B-40-849

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45W" PRESTRESSED GIRDER

SHEET 8

2443

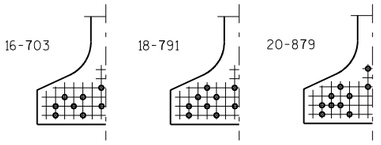
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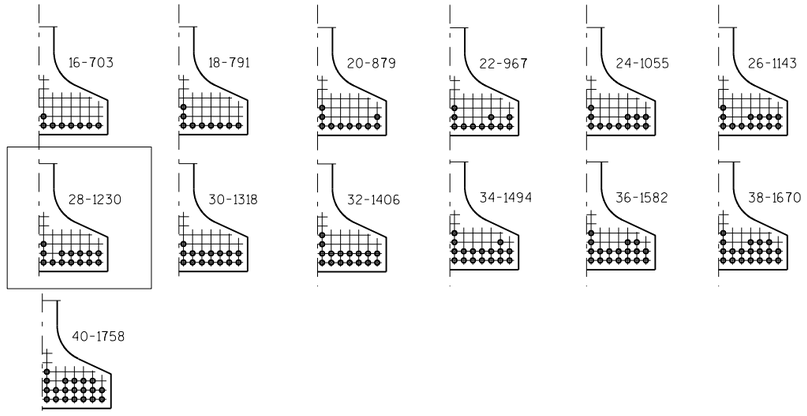
STATE PROJECT NUMBER

1060-33-80



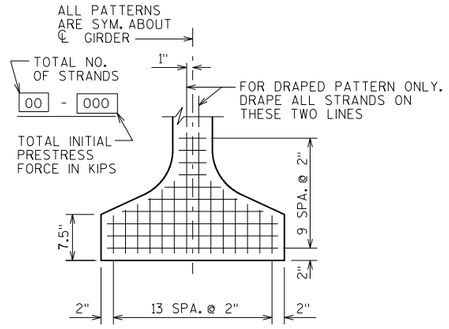
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

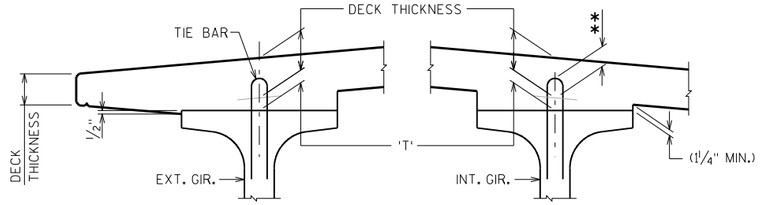


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

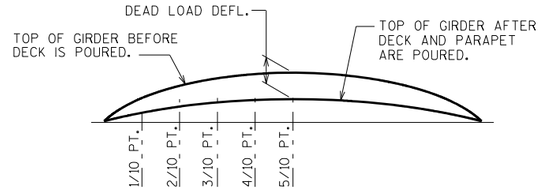
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

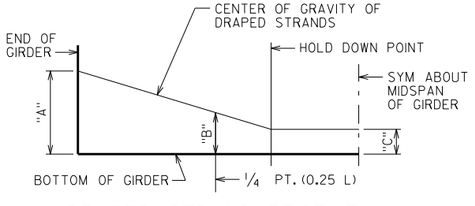
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2.9" WAS USED IN THE QUANTITY "HPC MASONRY STRUCTURES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	GIR	CAMBER (IN.) *
1	1	2.4
1	2-7	2.3

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-40-849

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45W" PRESTRESSED GIRDER DETAILS

SHEET 9

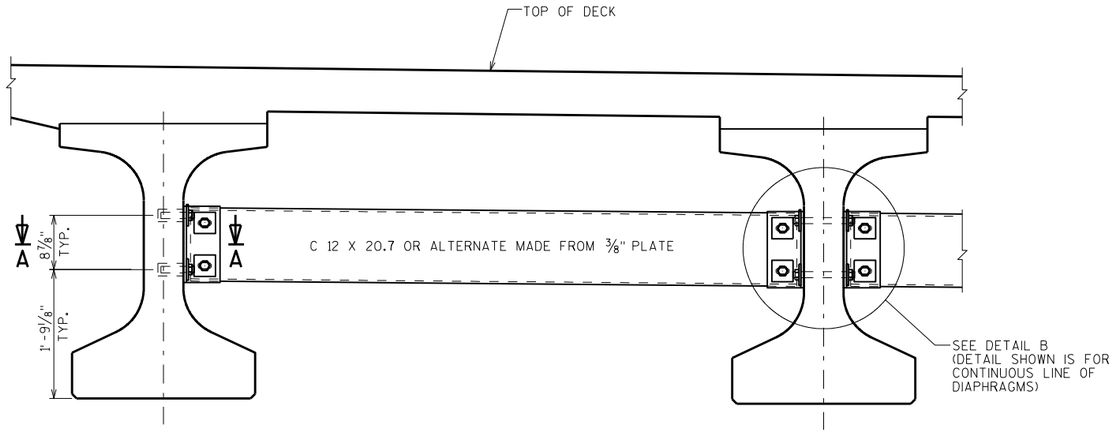
2444

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8

SCALE = 2.5

STATE PROJECT NUMBER
1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM

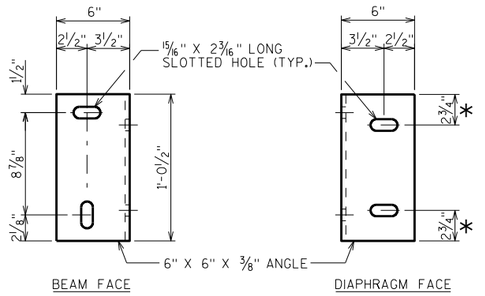
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-849", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

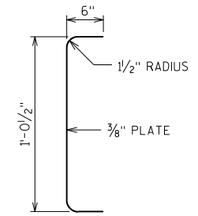
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

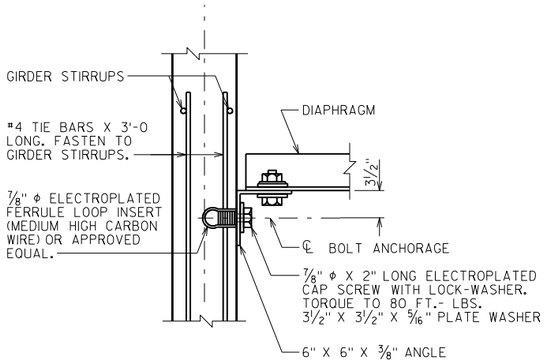


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

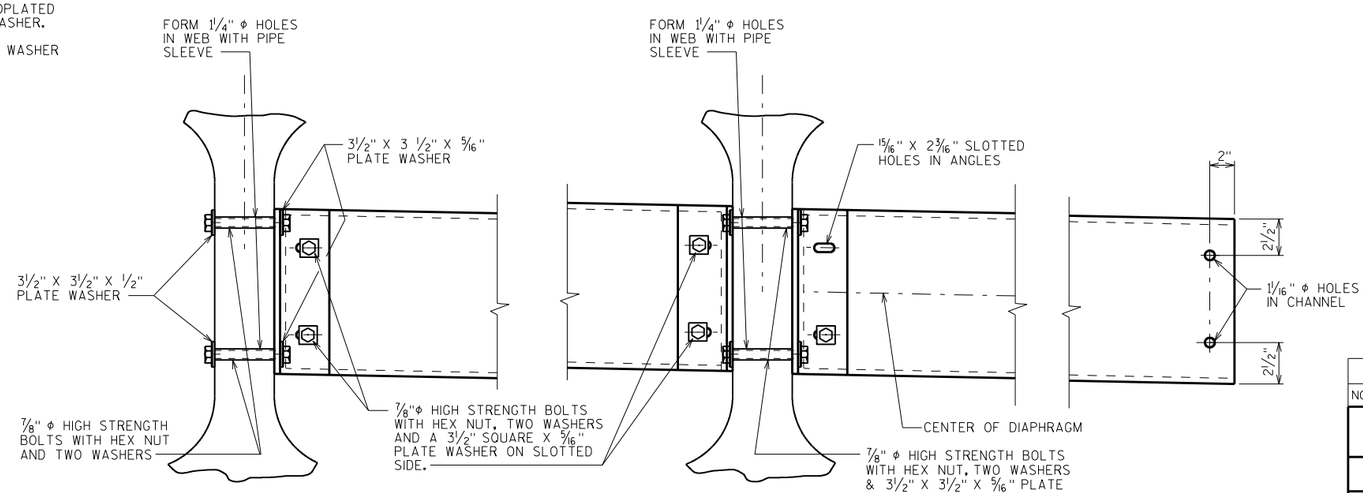


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

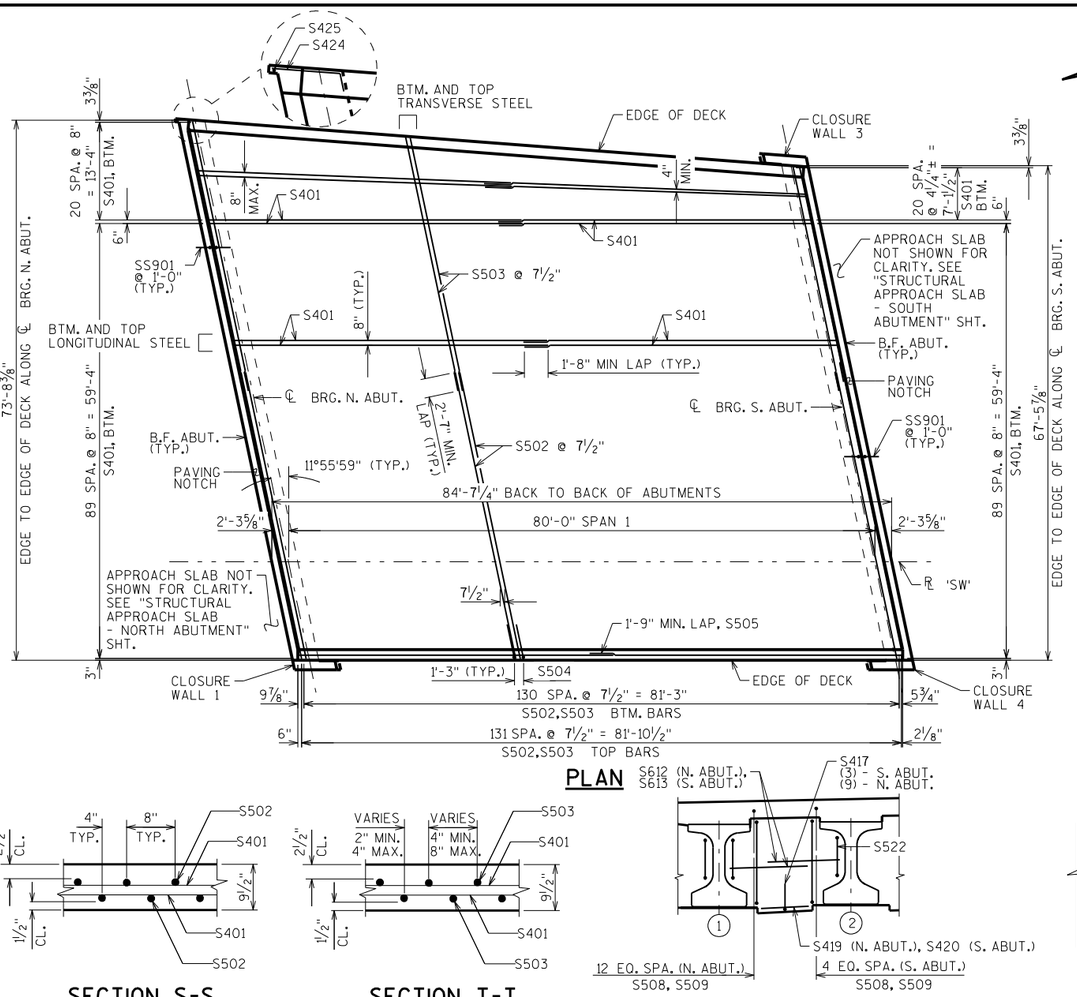
STEEL DIAPHRAGM

SHEET 10

2445

SCALE = 2

STATE PROJECT NUMBER
1060-33-80

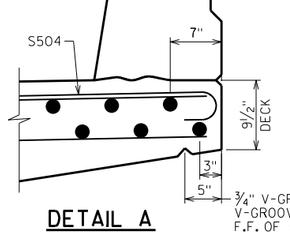


PLAN

SECTION S-S

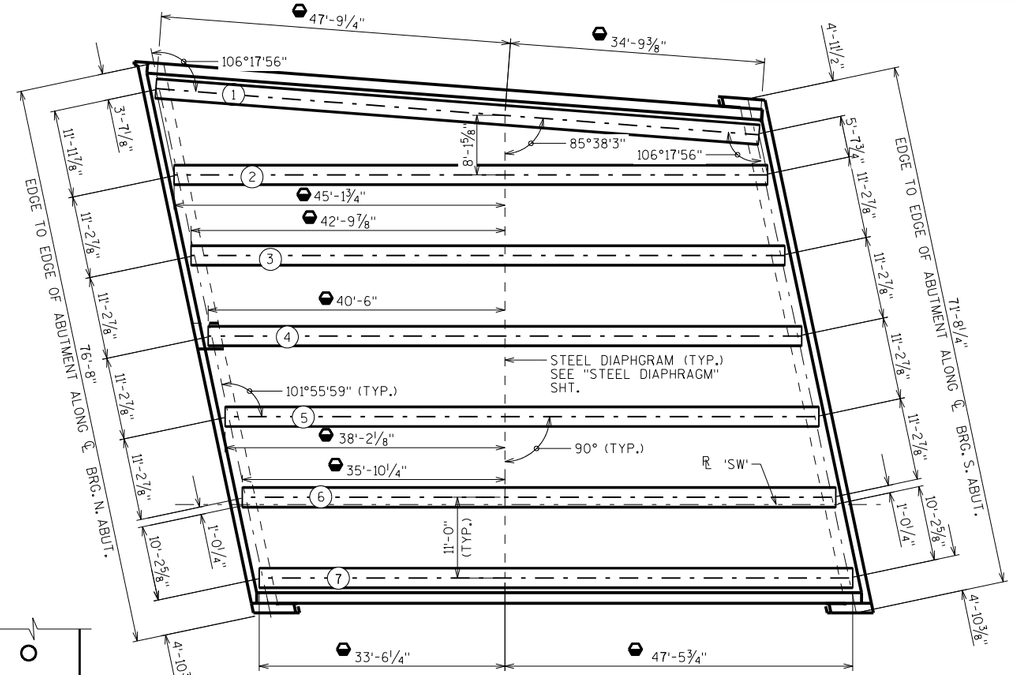
SECTION T-T

BAY 1 DIAPHRAGM REINF.



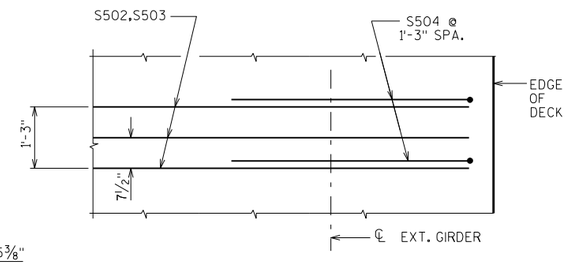
DETAIL A

⬟ MEASURED FROM END OF GIRDER TO ℄ STEEL DIAPHRAGM



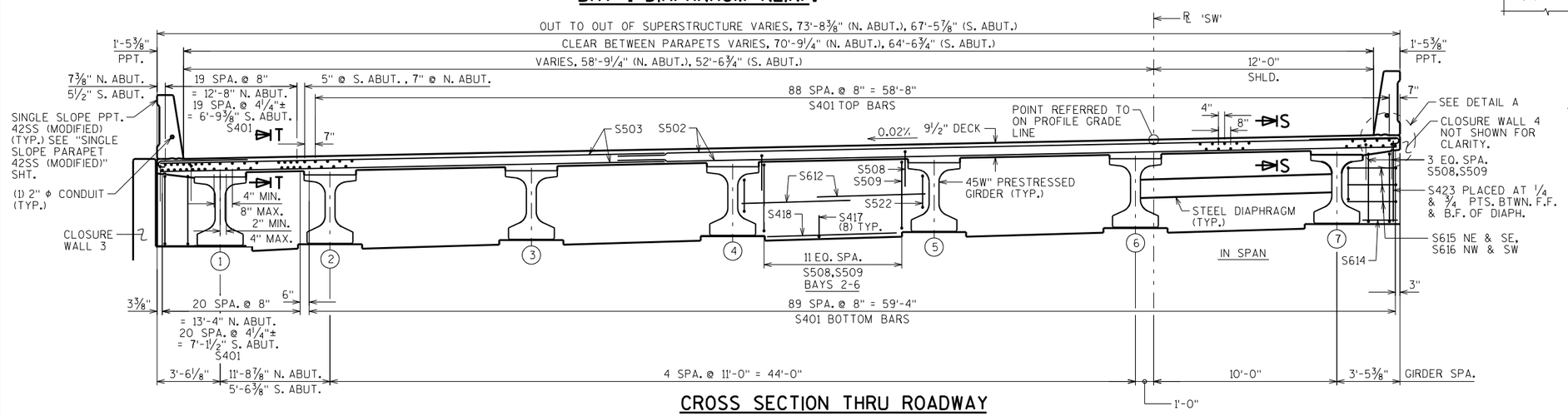
FRAMING PLAN

BAY 1 = BTWN. GIRDERS 1&2
BAY 2 = BTWN. GIRDERS 2&3
BAY 3 = BTWN. GIRDERS 3&4
BAY 4 = BTWN. GIRDERS 4&5
BAY 5 = BTWN. GIRDERS 5&6
BAY 6 = BTWN. GIRDERS 6&7



PLAN

ADDITIONAL REINF. DETAIL



CROSS SECTION THRU ROADWAY

(LOOKING SOUTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

SUPERSTRUCTURE

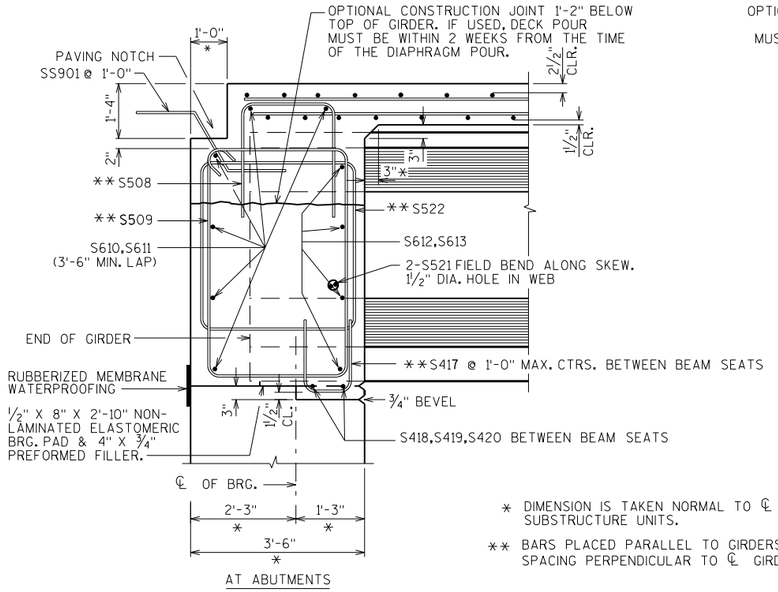
SHEET 11

2446

SCALE = 10

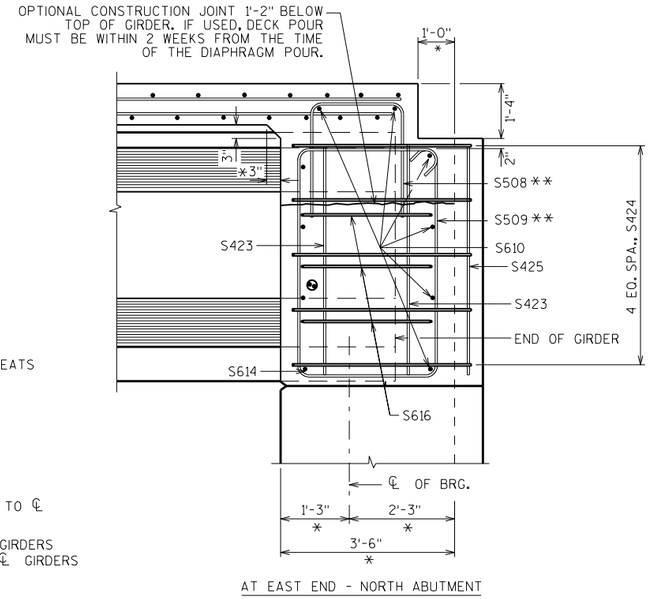
STATE PROJECT NUMBER

1060-33-80



* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



AT EAST END - NORTH ABUTMENT

PART LONGIT. SECTION

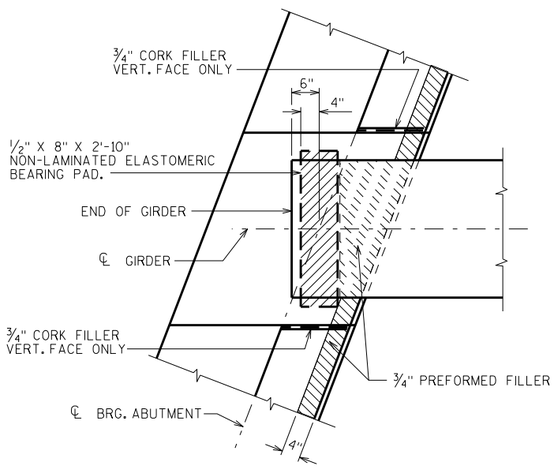
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

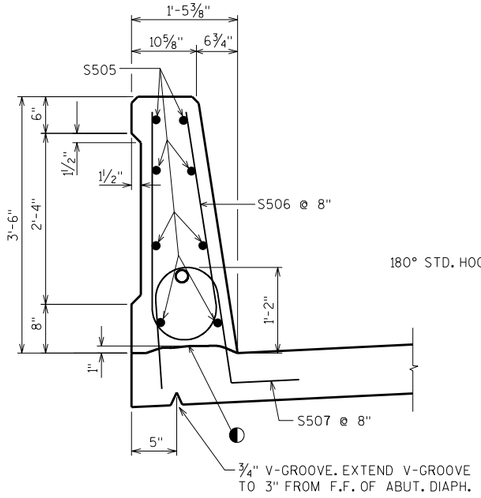
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	442	42'-10"			LONGITUDINAL - TOP & BOTTOM
S502	X	263	40'-0"			TRANSVERSE - TOP & BOTTOM - WEST
S503	X	263	34'-6"		▲	TRANSVERSE - TOP & BOTTOM - EAST
S504	X	132	5'-6"	X		TRANSVERSE - TOP - EDGE OF DECK
S505	X	32	43'-0"			PPT. HORIZ.
S506	X	252	6'-8"	X		PPT. VERT.
S507	X	252	4'-5"	X		PPT. VERT.
S508	X	154	6'-5"	X		ABUT. DIAPH. - VERT.
S509	X	154	13'-2"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S610	X	12	40'-0"			ABUT. DIAPH. - HORIZ. - B.F. - N. ABUT.
S611	X	12	37'-5"			ABUT. DIAPH. - HORIZ. - B.F. - S. ABUT.
S612	X	88	6'-7"			ABUT. DIAPH. - HORIZ. - F.F. - BAYS 2-6 & BAY 1 (N. ABUT. ONLY)
S613	X	8	3'-4"			ABUT. DIAPH. - HORIZ. - F.F. - BAY 1 (S. ABUT. ONLY)
S614	X	4	1'-10"			ABUT. DIAPH. - HORIZ. - EXTERIOR
S615	X	6	8'-7"	X		ABUT. DIAPH. - HORIZ. - EXTERIOR - NE & SE
S616	X	6	8'-7"	X		ABUT. DIAPH. - HORIZ. - EXTERIOR - NW & SW
S417	X	92	3'-3"	X		ABUT. DIAPH. - VERT. - BTWN. BEAM SEATS
S418	X	20	7'-4"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS - BAYS 2-6
S419	X	2	8'-0"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS - BAY 1 (N. ABUT. ONLY)
S420	X	2	1'-9"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS - BAY 1 (S. ABUT. ONLY)
S521	X	28	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRS.
S522	X	28	11'-4"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S423	X	8	3'-4"			ABUT. DIAPH. - VERT. - EXTERIOR FACES
S424	X	5	4'-6"	X		ABUT. DIAPH. - HORIZ. - N. ABUT. - EXTERIOR FACE
S425	X	1	3'-2"			ABUT. DIAPH. - VERT. - N. ABUT. - EXTENSION
SS901		140	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

STAINLESS STEEL →

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



BEARING PAD DETAIL



SECTION THRU PARAPET ON BRIDGE

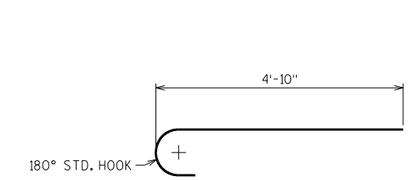
◐ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN

TOP OF DECK ELEVATIONS

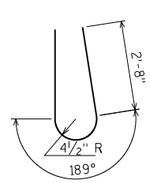
	N. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	S. ABUT.
EOD	803.57	803.37	803.18	802.99	802.79	802.60	802.41	802.21	802.02	801.83	801.63
GIR. 1	803.60	803.40	803.21	803.02	802.82	802.63	802.44	802.24	802.05	801.86	801.66
GIR. 2	803.77	803.57	803.36	803.16	802.96	802.76	802.55	802.35	802.15	801.95	801.75
GIR. 3	803.93	803.73	803.53	803.32	803.12	802.92	802.72	802.51	802.31	802.11	801.91
GIR. 4	804.09	803.89	803.69	803.48	803.28	803.08	802.88	802.67	802.47	802.27	802.07
GIR. 5	804.25	804.05	803.85	803.65	803.44	803.24	803.04	802.84	802.63	802.43	802.23
GIR. 6	804.41	804.21	804.01	803.81	803.60	803.40	803.20	803.00	802.79	802.59	802.39
GIR. 7	804.58	804.37	804.17	803.97	803.77	803.56	803.36	803.16	802.96	802.75	802.55
EOD	804.60	804.40	804.20	804.00	803.79	803.59	803.39	803.19	802.99	802.78	802.58

BAR SERIES TABLE

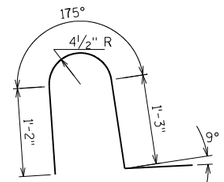
BAR MARK	NO. REQ'D.	LENGTH
S503	2 SERIES, 1 OF 131 1 OF 132	31'-4" TO 37'-8"



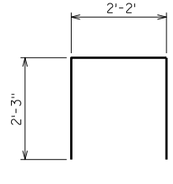
S504



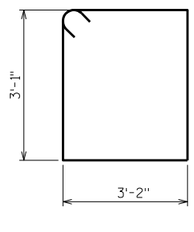
S506



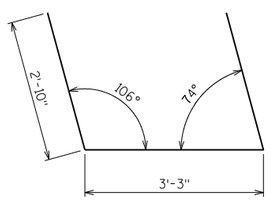
S507



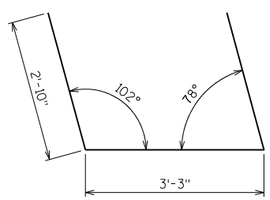
S508



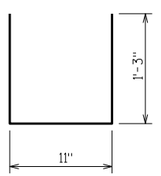
S509



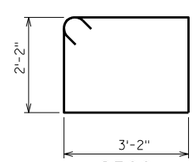
S615



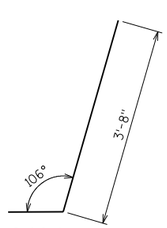
S616



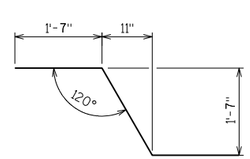
S417



S522



S424



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

SUPERSTRUCTURE DETAILS

SHEET 12

2447

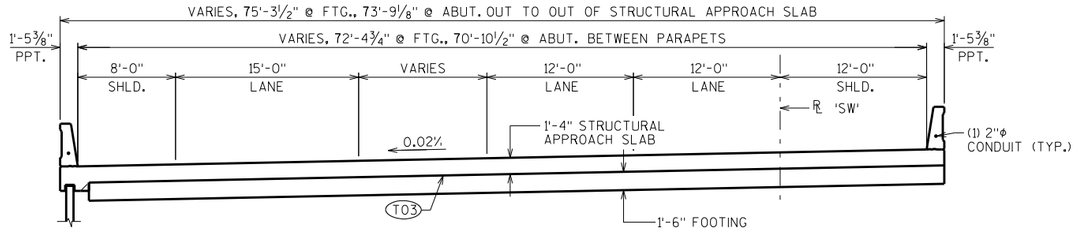
SCALE = 2

8

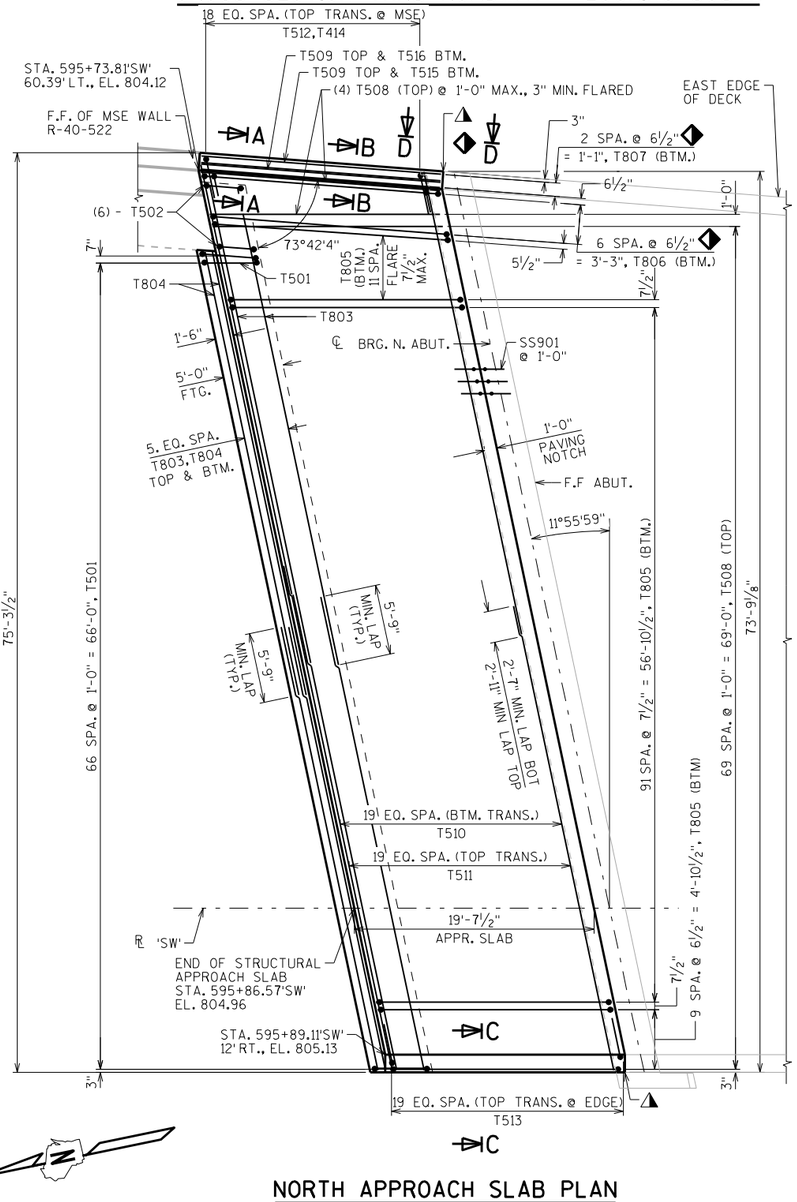
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STATE PROJECT NUMBER

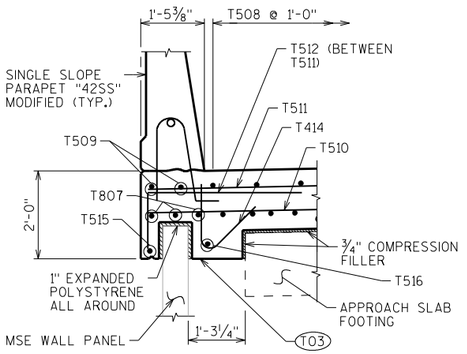
1060-33-80



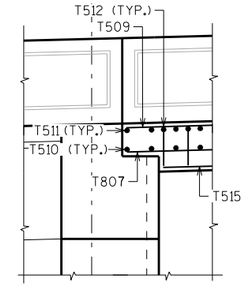
CROSS SECTION THRU ROADWAY - LOOKING SOUTH



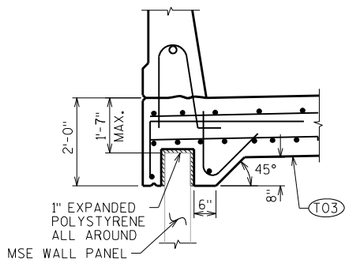
NORTH APPROACH SLAB PLAN



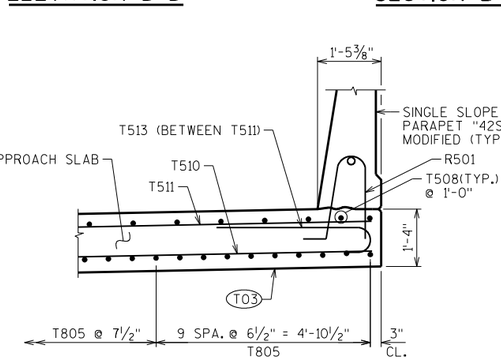
SECTION A-A



ELEVATION D-D



SECTION B-B

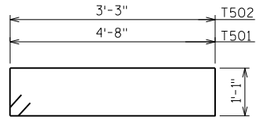


SECTION C-C

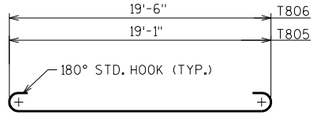
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

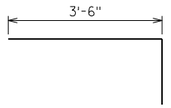
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	68	12'-2"	X		FOOTING STIRRUP
T502	X	6	9'-4"	X		FOOTING STIRRUP - NOTCH
T803	X	16	39'-11"			FOOTING - TRANSVERSE - HORIZ.
T804	X	8	37'-3"			FOOTING - TRANSVERSE - HORIZ. - NOTCH
T805	X	114	20'-11"	X		APPROACH SLAB - LONGIT. - BOT.
T806	X	7	21'-4"	X		APPROACH SLAB - LONGIT. - BOT.
T807	X	3	19'-8"			APPROACH SLAB - LONGIT. - BOT. - WALL
T508	X	74	19'-1"			APPROACH SLAB - LONGIT. - TOP
T509	X	2	19'-6"			APPROACH SLAB - LONGIT. - TOP - WALL
T510	X	40	40'-0"			APPROACH SLAB - TRANS. - BOT.
T511	X	40	40'-0"			APPROACH SLAB - TRANS. - TOP
T512	X	19	5'-0"	X		APPROACH SLAB - TRANS. - TOP - WALL
T513	X	20	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE
T414	X	19	3'-0"	X		APPROACH SLAB - TRANS. - WALL
T515	X	1	17'-10"			APPROACH SLAB - LONGIT. - BOT. - WALL
T516	X	1	18'-6"			APPROACH SLAB - LONGIT. - BOT. - WALL



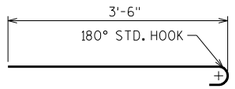
T501, T502



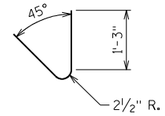
T805, T806



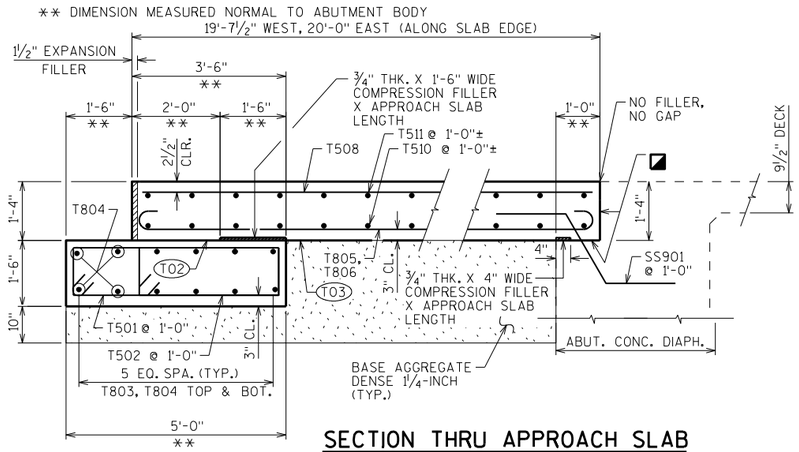
T512



T513



T414



SECTION THRU APPROACH SLAB

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

◆ DIMENSION TAKEN PERPENDICULAR TO EAST EDGE OF DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

STRUCTURAL APPROACH SLAB- NORTH ABUTMENT

SHEET 13

2448

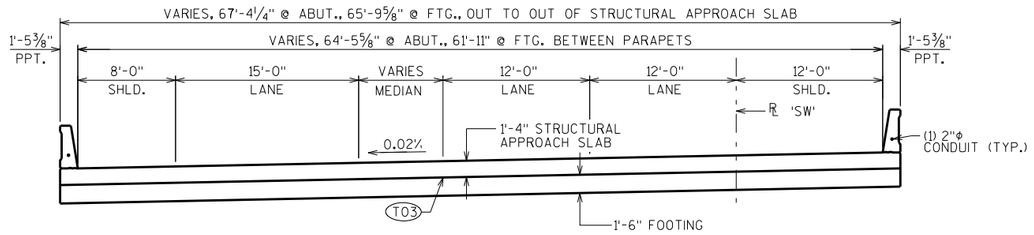
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8

SCALE = 6

STATE PROJECT NUMBER

1060-33-80

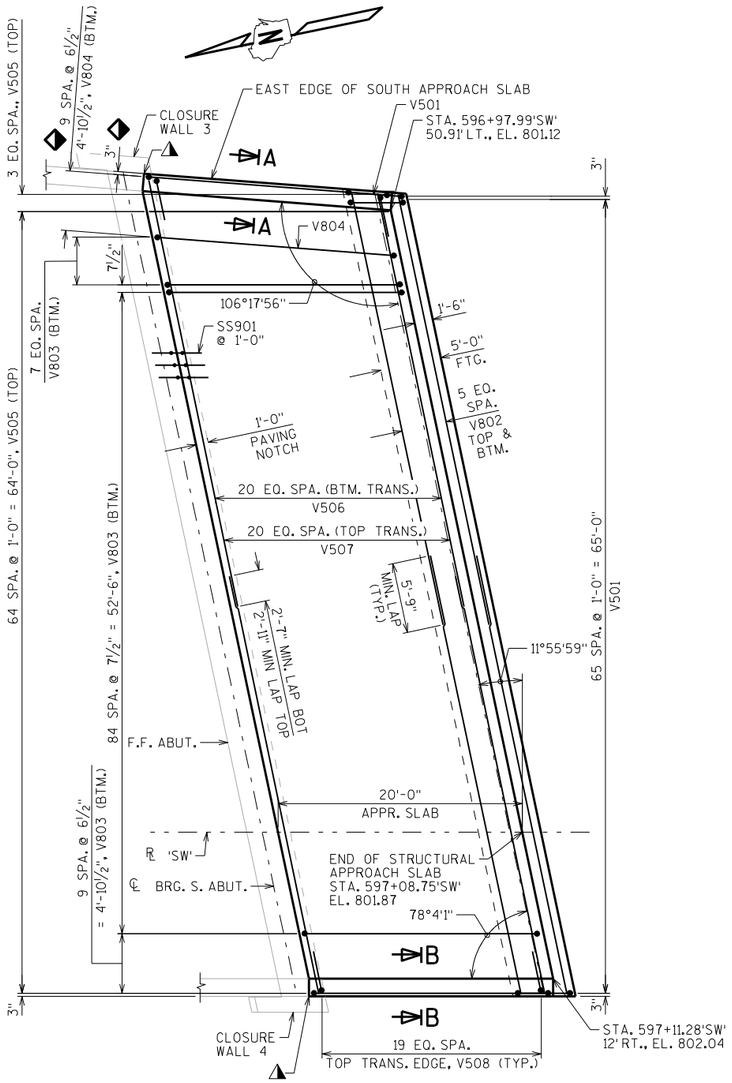


CROSS SECTION THRU ROADWAY - LOOKING SOUTH

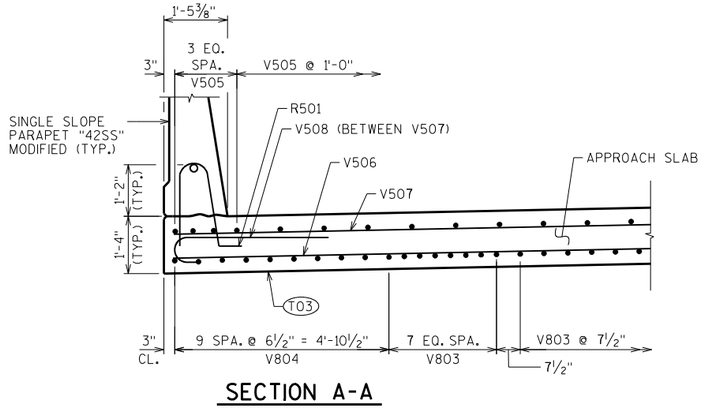
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

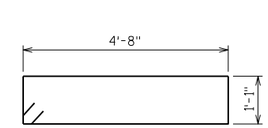
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
V501	X	67	12'-2"	X		FOOTING STIRRUP
V802	X	24	36'-7"			FOOTING - TRANSVERSE - HORIZ.
V803	X	101	21'-4"	X		APPROACH SLAB - LONGIT. - BOT.
V804	X	10	21'-9"	X		APPROACH SLAB - LONGIT. - BOT.
V505	X	68	19'-6"			APPROACH SLAB - LONGIT. - TOP
V506	X	42	35'-8"			APPROACH SLAB - TRANS. BOT.
V507	X	42	35'-10"			APPROACH SLAB - TRANS. TOP
V508	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



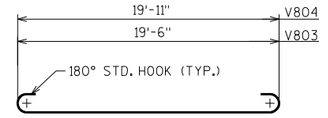
SOUTH APPROACH SLAB PLAN



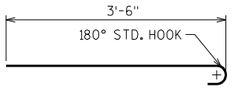
SECTION A-A



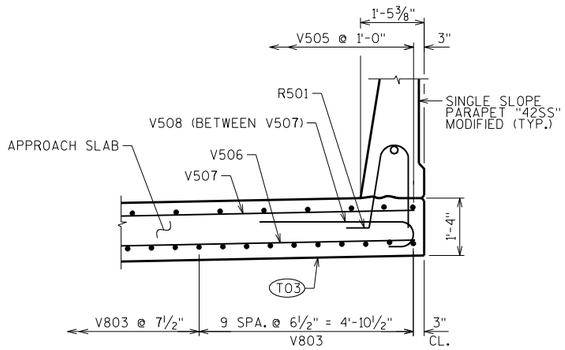
V501



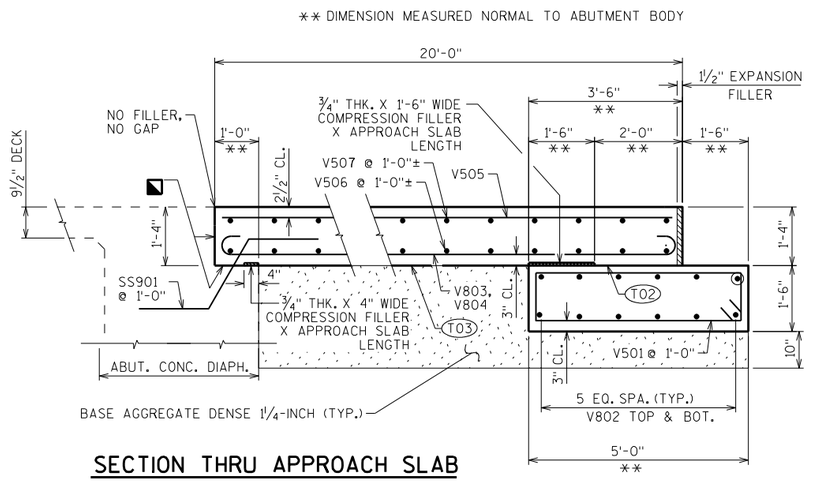
V803, V804



V508



SECTION B-B



SECTION THRU APPROACH SLAB

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

◆ DIMENSION TAKEN PERPENDICULAR TO EAST EDGE OF SOUTH APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

STRUCTURAL APPROACH SLAB-SOUTH ABUTMENT

SHEET 14

2449

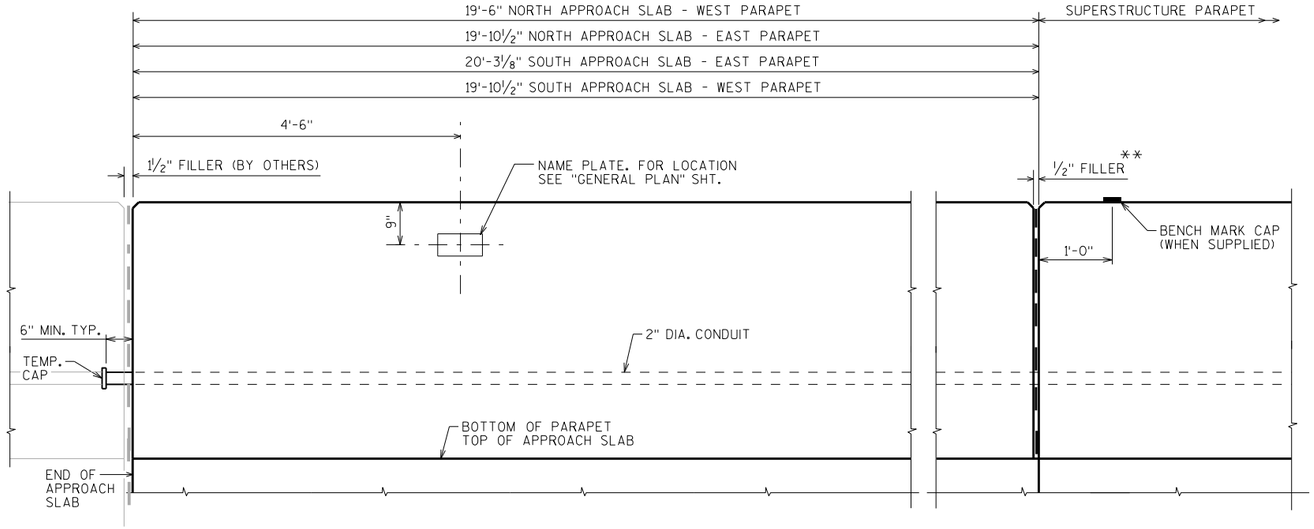
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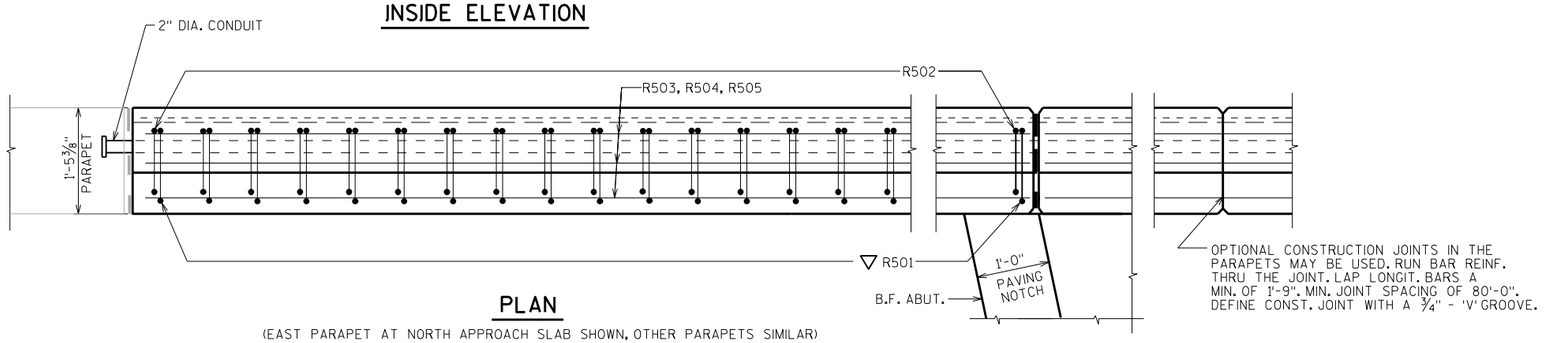
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STATE PROJECT NUMBER

1060-33-80

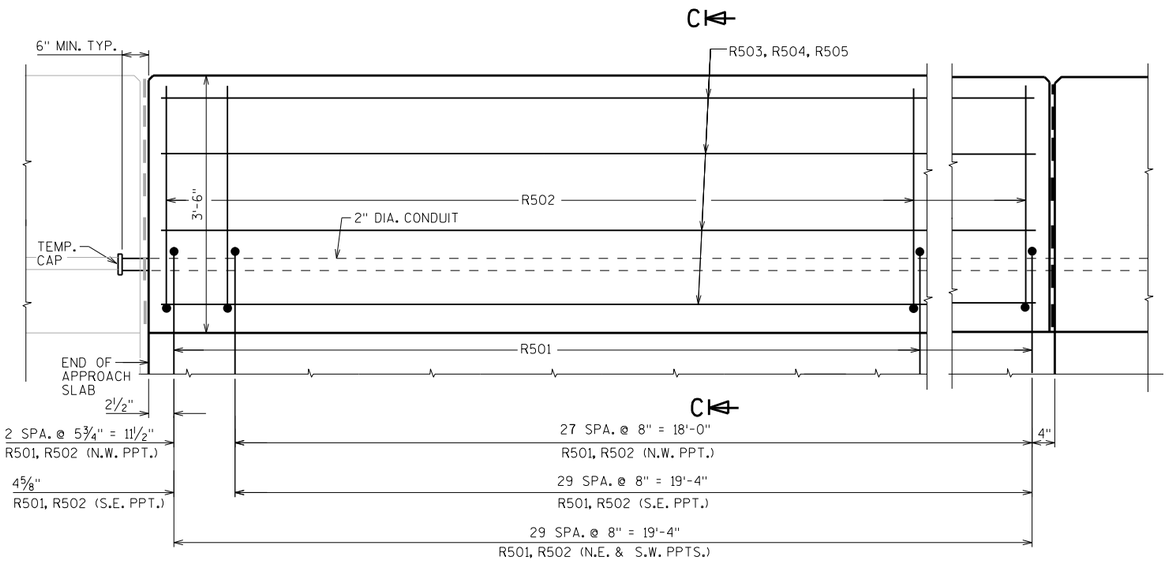


INSIDE ELEVATION



PLAN

(EAST PARAPET AT NORTH APPROACH SLAB SHOWN, OTHER PARAPETS SIMILAR)



OUTSIDE ELEVATION

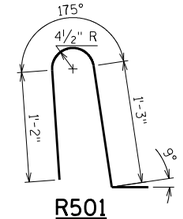
OUTSIDE ELEVATION AESTHETICS NOT SHOWN FOR CLARITY. SEE "AESTHETIC DETAILS" SHEET.

BILL OF BARS

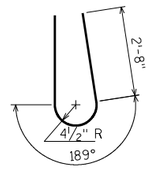
FOR APPROACH SLAB PARAPETS

BAR MARK	COAT	N. APPR.	S. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	60	61	4'-5"	X		PARAPET VERT.
R502	X	60	61	6'-8"	X		PARAPET VERT.
R503	X	8	——	19'-1"			PARAPET HORIZ. N.W.
R504	X	8	8	19'-6"			PARAPET HORIZ. N.E. & S.W.
R505	X	——	8	19'-10"			PARAPET HORIZ. S.E.

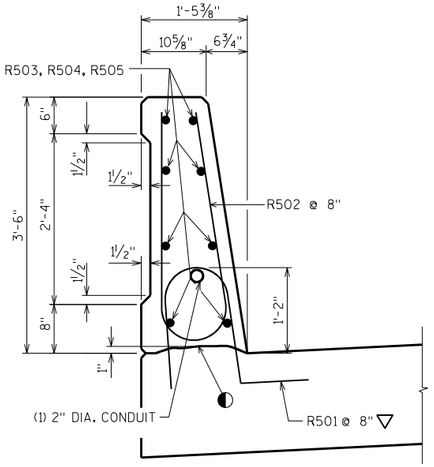
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



R501



R502



SECTION C-C

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH STEEL BEFORE APPROACH SLAB IS POURED.

** SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

SINGLE SLOPE PARAPET 42SS (MODIFIED)

SHEET 15

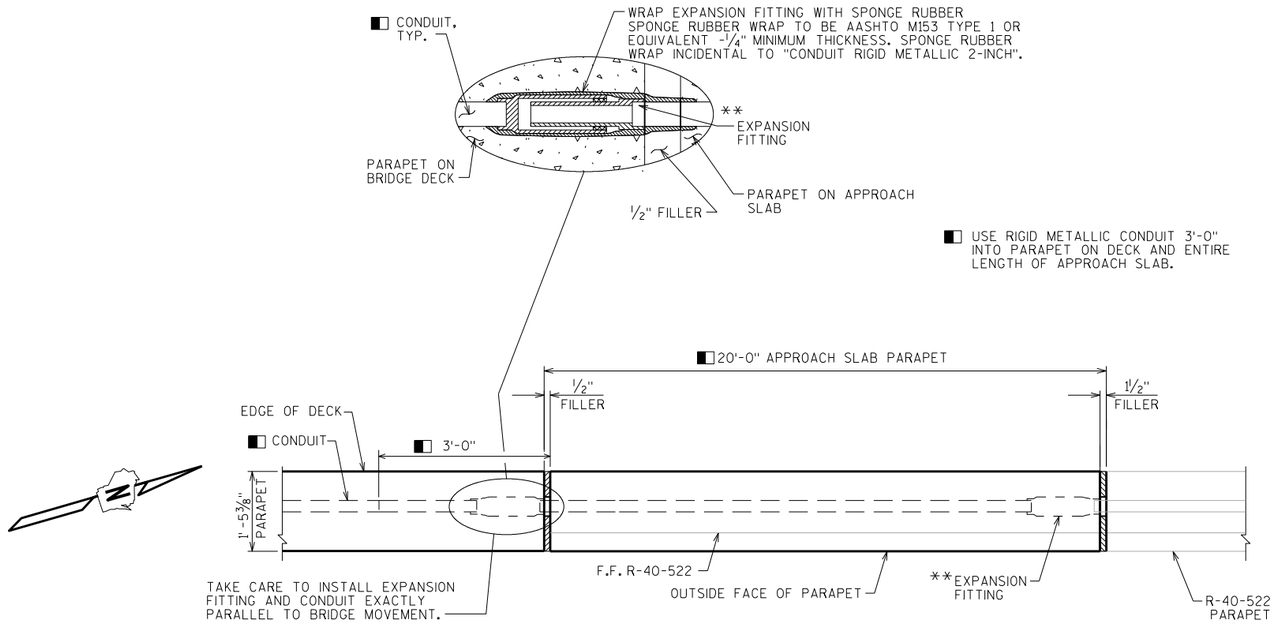
2450

8

8

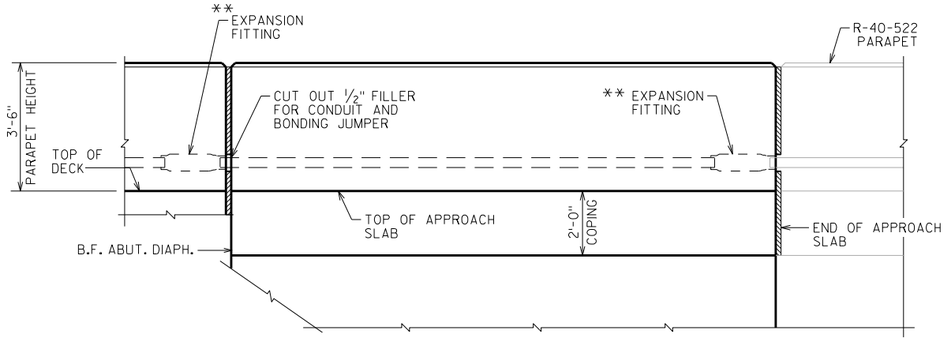
SCALE = 1

STATE PROJECT NUMBER
1060-33-80



PLAN OF PARAPET APPROACH SLAB

(EAST PARAPET AT NORTH APPROACH SLAB SHOWN, OTHER PARAPETS SIMILAR)
NOTE: AESTHETICS NOT SHOWN FOR CLARITY.



OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB

(EAST PARAPET AT NORTH APPROACH SLAB SHOWN, OTHER PARAPETS SIMILAR)
NOTE: AESTHETICS NOT SHOWN FOR CLARITY.

NOTES

BID ITEMS SHALL BE:

"CONDUIT RIGID METALLIC 2-INCH"

"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS FOR RIGID METALLIC CONDUIT TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

APPROVED MANUFACTURER OR EQUIVALANT - EXPANSION FITTING

** O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

PARAPET 42SS ELECTRICAL WORK

SHEET 16

2451

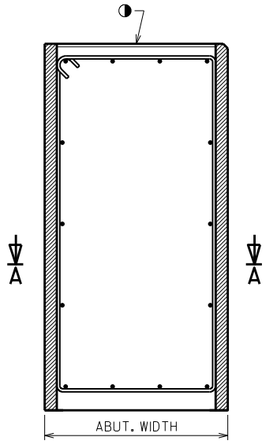
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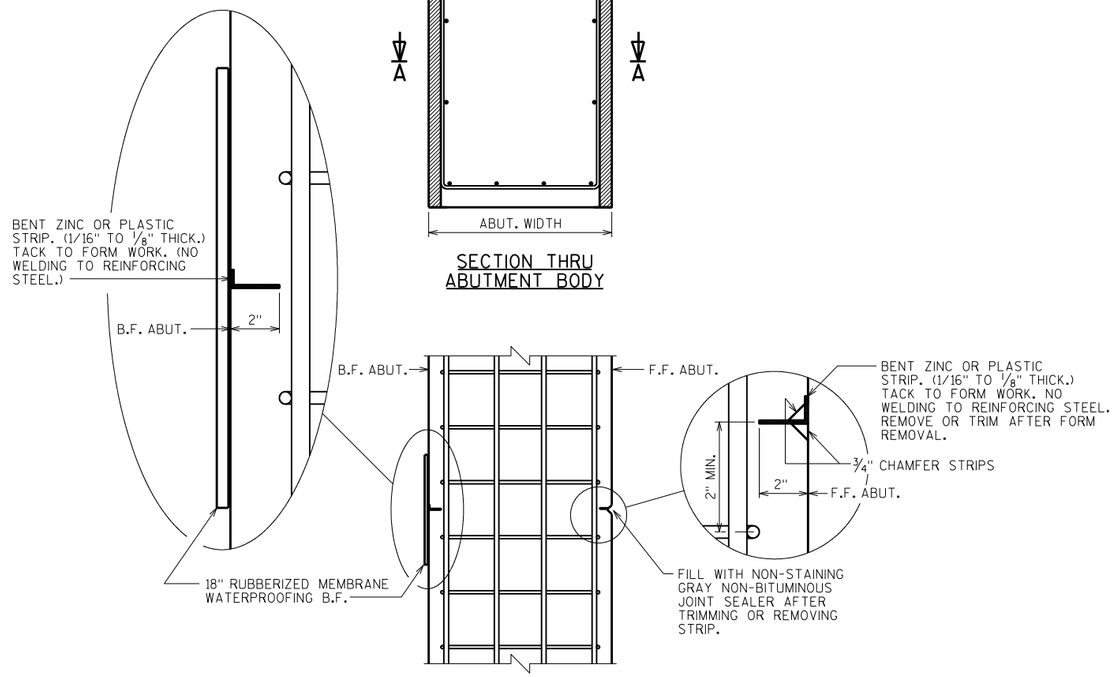
8

STATE PROJECT NUMBER

1060-33-80



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

ALTERNATE CONSTRUCTION JOINT

SHEET 17

2452

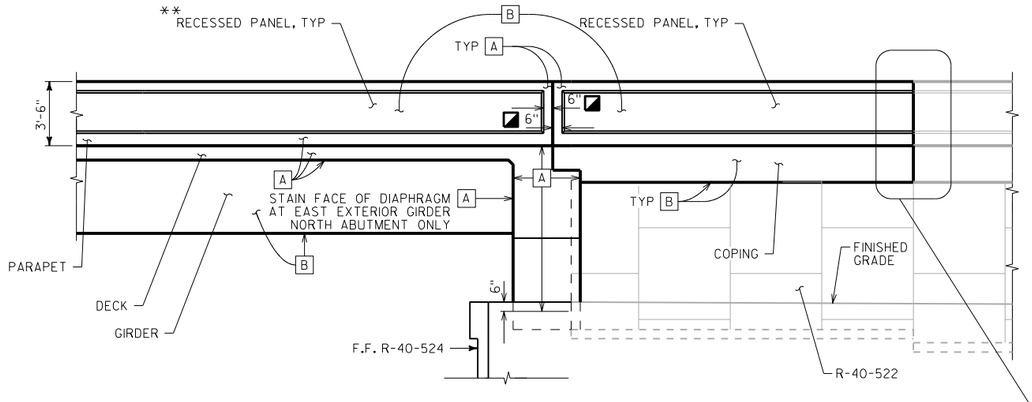
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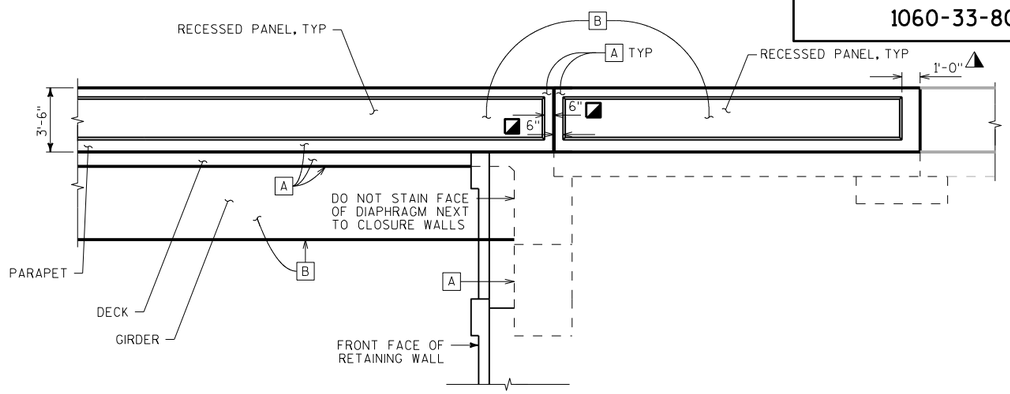
STATE PROJECT NUMBER

1060-33-80



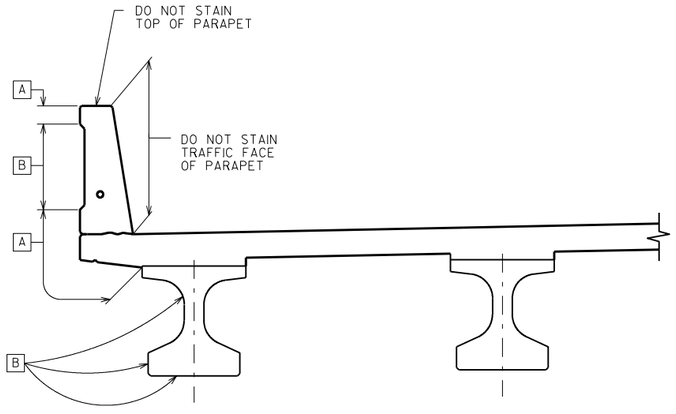
OUTSIDE ELEVATION OF PARAPET & APPROACH SLAB

LOOKING WEST
(NORTH ABUTMENT AT R-40-522)

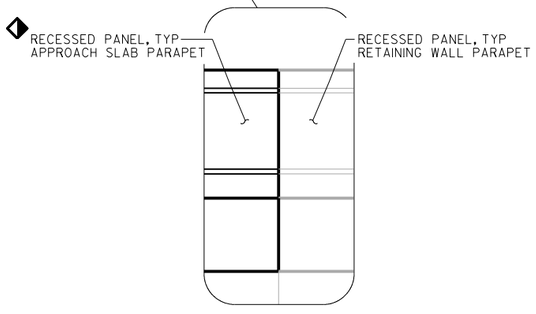


OUTSIDE ELEVATION OF PARAPET & APPROACH SLAB AT CLOSURE WALLS

LOOKING EAST
(CLOSURE WALL 4 SHOWN, CLOSURE WALLS 1 & 3 SIMILAR)



ELEVATION OF DECK

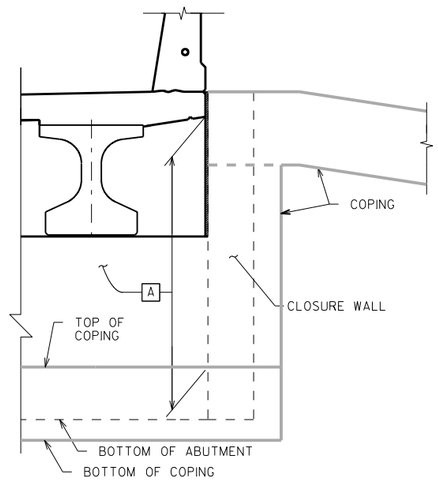


OUTSIDE ELEVATION OF APPROACH SLAB ADJACENT TO RETAINING WALL

◪ THE RECESSED PANEL ENDS 6" FROM THE END OF PARAPET WHEN THE PARAPET IS ADJACENT TO THE END OF BRIDGE DECK.

◭ THE RECESSED PANEL ENDS 1'-0" FROM THE END OF THE PARAPET WHEN THE PARAPET IS ADJACENT TO ROADWAY BARRIER.

◆ THE RECESSED PANEL ENDS AT THE END OF PARAPET WHEN THE PARAPET IS ADJACENT TO A RETAINING WALL.



ELEVATION OF CLOSURE WALL

(LOOKING SOUTH)
(CLOSURE WALL 4 SHOWN, CLOSURE WALLS 1 & 3 SIMILAR)

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO TOP OF SLOPE PAVING, INTERIOR FACE OF CLOSURE WALL FROM BOTTOM OF DECK TO TOP OF SLOPE PAVING, EXTERIOR FACE OF BODY & DIAPHRAGM FROM BOTTOM OF DECK TO 6" BELOW FINISHED GRADE.
B	ACCENT COLOR #1	GIRDERS, PARAPETS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS, REVEALS ON PARAPETS
		COPING	FACE & UNDERSIDE

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW.

BASE COLOR : FEDERAL COLOR - #33564
ACCENT COLOR #1: FEDERAL COLOR - #33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-849

DRAWN BY RAC | PLANS CK'D. JDL

AESTHETIC DETAILS

SHEET 18

2453

SCALE = 4

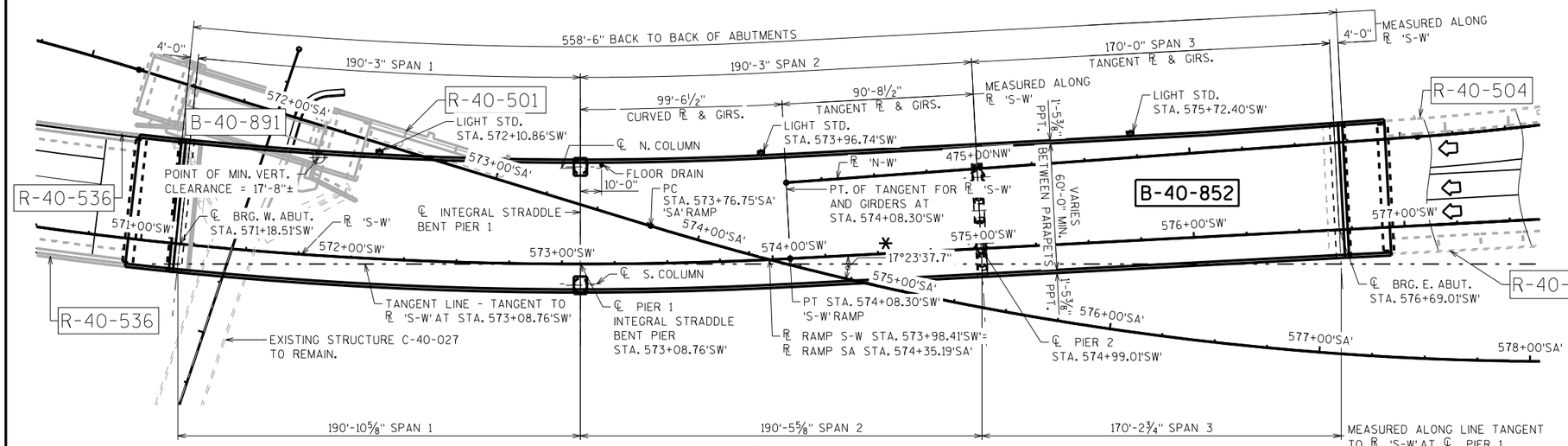
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8

STATE PROJECT NUMBER
1060-33-80

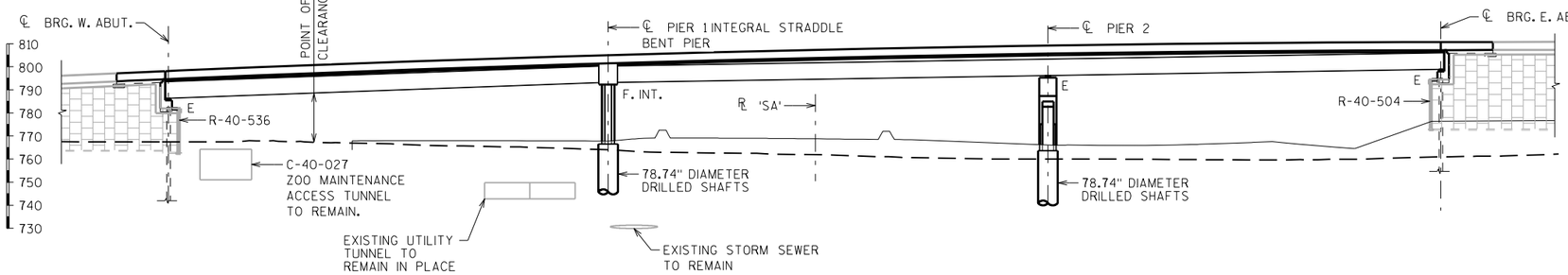
* ANGLE BETWEEN TANGENTS OF REFERENCE LINES AT POINT OF INTERSECTION

NOTE: ALL SUBSTRUCTURE UNITS ARE NORMAL TO ℄ 'S-W'



PLAN

(THREE SPAN 84-INCH STEEL PLATE GIRDERS)



ELEVATION ALONG ℄ 'SW'

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION & GENERAL NOTES
3. QUANTITIES & ROADWAY GEOMETRY
4. PLAN & ELEV. SPAN 1
5. PLAN & ELEV. SPAN 2
6. PLAN & ELEV. SPAN 3
7. SUBSURFACE EXPLORATION
8. SUBSURFACE EXPLORATION 1
9. WEST ABUTMENT
10. WEST ABUTMENT DETAILS
11. EAST ABUTMENT
12. EAST ABUTMENT DETAILS
13. EAST ABUTMENT DETAILS 2
14. INTEGRAL PIER 1
15. INTEGRAL PIER CAP REINF.
16. INTEGRAL PIER 1 DETAIL A
17. STEEL GIRDER DETAIL @ INTEGRAL PIER 1
18. TENDON & DUCT DETAILS
19. DUCT DETAILS
20. PIER REINF. & CAP/COLUMN DETAILS
21. DRILLED SHAFT DETAILS PIER 1
22. PIER 2
23. PIER 2 DETAILS
24. PIER 2 REINF. DETAILS
25. DRILLED SHAFT DETAILS PIER 2
26. BEARING LAYOUT
27. BEARING DETAILS
28. FRAMING PLAN GIRDER LAYOUT
29. FIELD SPLICE AND GIRDER DETAILS
30. CROSS BRACING DETAILS
31. CAMBER & BLOCKING
32. CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 1&2
33. CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 3&4
34. CAMBER AND BLOCKING DATA FOR FIELD SECTION 5
35. DEAD LOAD DEFLECTION DIAGRAM
36. SUPERSTRUCTURE CROSS SECTION
37. SUPER REINF. DETAILS
38. SUPERSTRUCTURE DETAILS
39. EXPANSION DEVICE WEST ABUTMENT
40. COVER PLATE DETAILS WEST ABUTMENT
41. MODULAR JOINT DETAILS EAST ABUTMENT
42. COVER PLATES FOR SINGLE SLOPE PARAPET
43. WEST STRUCTURAL APPROACH SLAB DETAILS
44. EAST STRUCTURAL APPROACH SLAB DETAILS
45. SINGLE SLOPE PARAPET 42SS MODIFIED WITH
46. STRUCTURAL APPROACH SLAB SINGLE SLOPE PARAPET 42SS ELECTRICAL
47. FLOOR DRAIN TYPE 'GC'
48. DOWNSPOUT DETAILS
49. AESTHETIC DETAILS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.3
OPERATING RATING FACTOR: RF=2.3
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

B-40-852 IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC)	f'c =	4,000 P.S.I.
	SUBSTRUCTURE ABUTMENTS, PIER 2	f'c =	4,000 P.S.I.
	SUBSTRUCTURE, PIER 1 (INTEGRAL CAP & COLUMNS)	f'c =	5,000 P.S.I.
	DRILLED SHAFTS	f'c =	4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60		fy =	60,000 P.S.I.
STAINLESS STEEL BAR REINFORCEMENT, GRADE 60		fy =	60,000 P.S.I.
HIGH STRENGTH STRUCTURAL STEEL ASTM A709 GRADE 50		Fy =	50,000 P.S.I.
POST TENSIONING STEEL	LOW RELAXATION, AASHTO M203 GRADE 270	fpu =	270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12X53 STEEL PILING.
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 80'-0" LONG (WEST ABUTMENT)
ESTIMATED 70'-0" LONG (EAST ABUTMENT).
PILE POINTS REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

PIERS SHALL BE SUPPORTED ON BASE GROUTED DRILLED SHAFTS. SHAFT DIAMETERS, FACTORED AXIAL RESISTANCES, TOP OF SHAFT AND BOTTOM OF SHAFT ELEVATIONS AND CORRESPONDING SHAFT LENGTHS FOR EACH DRILLED SHAFT ARE GIVEN IN THE TABLE BELOW.

THE MINIMUM FACTORED AXIAL RESISTANCE OF DRILLED SHAFTS IN COMPRESSION USED FOR DESIGN IS THE REQUIRED AXIAL RESISTANCE MULTIPLTIED BY A SHAFT RESISTANCE FACTOR OF .56. THE RESISTANCE FACTOR INCLUDES A 20% REDUCTION FOR NON-REDUNDENCY.

DRILLED SHAFT DATA

SUBSTRUCTURE	SHAFT LOCATION	SHAFT DIAMETER (IN.)	FACTORIAL AXIAL RESISTANCE (KIPS)	TOP OF SHAFT EL.	BOTTOM OF SHAFT EL.	SHAFT LENGTH (FT.)
PIER 1	NORTH COLUMN	78.74	3575	758.50	690.00	68.50
	SOUTH COLUMN	78.74	3575	761.67	683.00	78.67
PIER 2	NORTH COLUMN	78.74	3400	755.00	686.00	69.00
	SOUTH COLUMN	78.74	3400	755.00	682.00	73.00

TRAFFIC VOLUME

RAMP 'S-W'/'N-W'	RAMP 'SA'
A.D.T.=43,100 (2035)	A.D.T.=7,500 (2035)
R.D.S.=50 M.P.H.	R.D.S.=50 M.P.H.

STRUCTURE DESIGN CONTACTS:
STEVE REVELLO (608) 266-5095
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 5/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-852

IH 94 'S-W' RAMP AND 'N-W' RAMP OVER 'SA' RAMP

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SDR	CAD	RAC	SDR

GENERAL PLAN

SHEET 1 OF 49

2454

SCALE = 30:1

I.D. 1060-33-07G

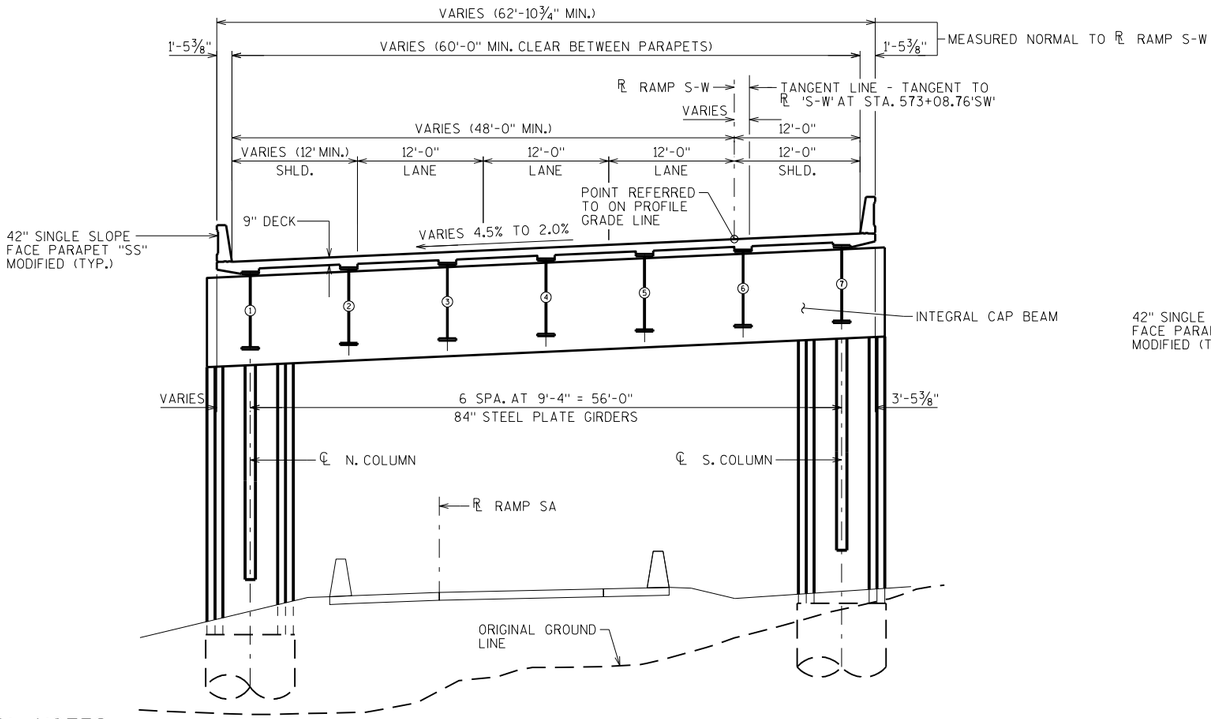
DATE: APRIL 2014

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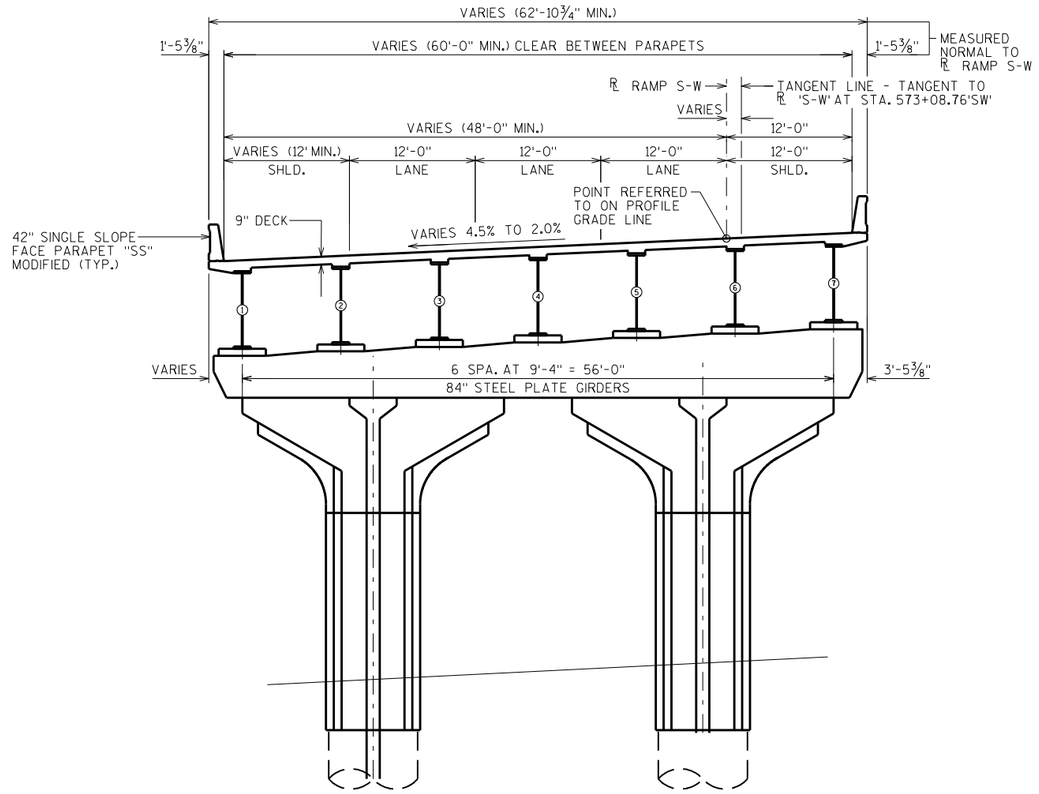
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STATE PROJECT NUMBER

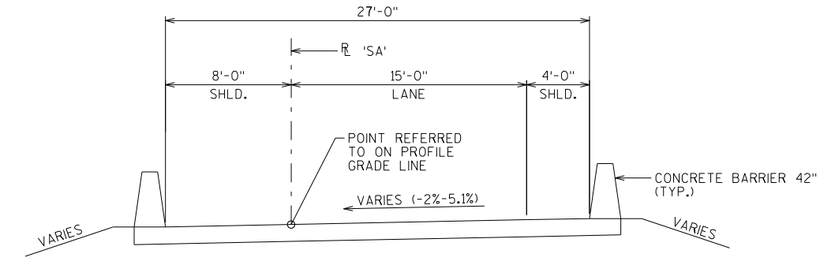
1060-33-80



CROSS SECTION THRU ROADWAY LOOKING EAST - PIER 1



CROSS SECTION THRU ROADWAY LOOKING EAST - PIER 2



TYPICAL FINISHED SECTION THRU SA RAMP

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

BEVEL ALL EXPOSED EDGES ¾".

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW BRIDGE OR RETAINING WALL REINFORCED ZONE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETERMINED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPETS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

EMBEDDED CONDUIT AND JUNCTION BOXES IN THE NORTH PARAPET FOR FUTURE LIGHTING OF IH 94 RAMPS ARE INCLUDED IN THE BRIDGE PLANS.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COARSE AGGREGATE SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE."

THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLABS (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCHES OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTUIRES".

THE CONTRACTOR MUST COORDINATE CONSTRUCTION OF THE BRIDGE B-40-852 ABUTMENTS WITH RETAINING WALLS R-40-504 AND R-40-536.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS BELOW EXPANSION DEVICES.

ALL FIELD CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER A325 HIGH STRENGTH BOLTS UNLESS OTHERWISE SHOWN OR NOTED.

SUCESSFUL INSTALLATION AND ENGINEER ACCEPTANCE OF THE ITEM, TRIAL DRILLED FOUNDATION SHAFT 98.43-INCH INCLUDED IN THIS CONTRACT WITH THE QUANTITIES FOR B-40-855 IS REQUIRED PRIOR TO BEGINNING THE CONSTRUCTION OF THE ITEM DRILLED FOUNDATION SHAFT 78.74-INCH FOR B-40-852.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING A 4⅜" HAUNCH HEIGHT MEASURED FROM THE UNDERSIDE OF THE TOP FLANGE (TOP OF WEB) TO THE UNDERSIDE OF THE DECK. THE CONCRETE HAUNCH QUANTITY IS BASED ON THE 4⅜" HAUNCH DEPTH EXCLUDING THE VOLUME TAKEN UP BY THE TOP FLANGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY RAC | PLANS CK'D. SDR

TYPICAL SECTION & GENERAL NOTES | SHEET 2 | 2455

8

8

SCALE = 7:1

STATE PROJECT NUMBER

1060-33-80

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH SLAB	TOTALS
206.1000.0007	EXCAVATION FOR STRUCTURES BRIDGES B-40-852	LS	———	———	———	———	———	———	———	1
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TONS	———	198	———	———	———	———	202	400
502.0100	CONCRETE MASONRY BRIDGES	CY	———	17	140	268	170	141	17	753
502.3100	EXPANSION DEVICE B-40-852	LS	———	———	———	———	———	———	———	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	4,240	155	———	———	———	———	160	4,555
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	———	5,240	64,040	52,400	4,955	———	126,635
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	265,045	14,220	6,275	44,770	42,900	9,515	14,335	397,060
506.0605	STRUCTURAL STEEL HS	LB	2,234,295	———	———	———	———	———	———	2,234,295
506.3020	WELDED STUD SHEAR CONNECTORS 7/8" X 7-INCH	EACH	11,536	———	———	———	———	———	———	11,536
514.0445	FLOOR DRAINS TYPE GC	EACH	1	———	———	———	———	———	———	1
514.2625	DOWNSPOUT 6-INCH	LF	50	———	———	———	———	———	———	50
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	8	———	———	8	———	16
517.0600.0001	PAINTING EPOXY SYSTEM B-40-852	LS	———	———	———	———	———	———	———	1
550.0500	PILE POINTS	EACH	———	———	22	———	———	26	———	48
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	1,760	———	———	1,820	———	3,580
604.0400	SLOPE PAVING CONCRETE	SY	———	———	20	———	———	20	———	40
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	3	———	———	———	———	3	12
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	540	18	———	———	———	———	18	576
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	3	———	———	———	———	———	———	3
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	3	———	———	———	———	———	———	3
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	1,212	71	1	———	———	1	71	1,356
SPV.0060.4100	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH	———	———	———	———	———	2	———	2
SPV.0060.4125	BEARINGS HIGH LOAD MULTI-ROTATIONAL GUIDED	EACH	———	———	7	———	7	7	———	21
SPV.0060.4160	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	———	———	———	2	2	———	———	4
SPV.0060.4170	THERMAL INTEGRITY PROFILER (TIP) TESTING, DRILLED FOUNDATION SHAFT 78.74-INCH	EACH	———	———	———	2	2	———	———	4
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	———	———	———	8	8	———	———	16
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	———	1,160	———	1,190	———	———	1,160	3,510
SPV.0085.4310	POST-TENSIONING INTERGAL PIER CAP	LB	———	———	———	8,795	———	———	———	8,795
SPV.0090.4430	PILING SLEEVES	LF	———	———	591	———	———	615	———	1,206
SPV.0090.4455	DRILLED FOUNDATION SHAFT 78.74-INCH	LF	———	———	———	147.2	142.0	———	———	289.2
SPV.0105.4550	EXPANSION DEVICE MODULAR LRFD B-40-852	LS	———	———	———	———	———	———	———	1
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	31,400	1,160	———	———	———	———	1,170	33,730
	NON-BID ITEMS									
	BRIDGE SEAT PROTECTION	LS	———	———	———			———	———	1
	FILLER	SIZE	———	———	———			———	———	½" & ¾"

ALL ITEMS ARE CATEGORY 2060

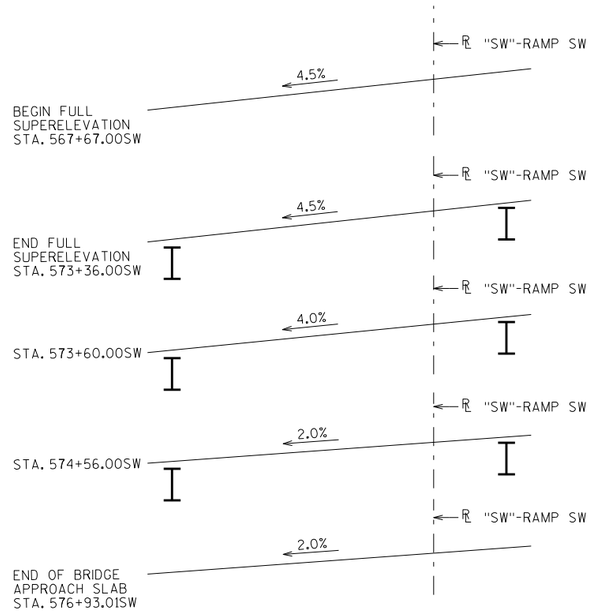
CURVE DATA

℄ 'SW' - RAMP SW

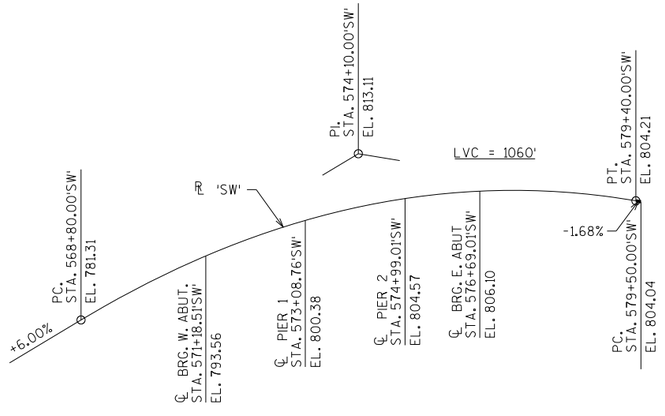
P.I. = STA. 570+55.67 'SW'
∠ = 21° 31' 26.24" LT.
D = 3° 00' 56.04"
T = 361.14
L = 713.76
R = 1900.00
S.E. = VARIES
P.C. = STA. 566+94.54 'SW'
P.T. = STA. 574+08.30 'SW'

℄ 'SA' - RAMP SA

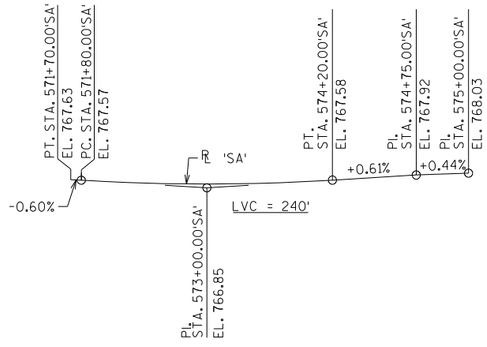
P.I. = STA. 576+78.54 'SA'
Δ = 23° 07' 35.52" LT.
D = 3° 53' 04.05"
T = 301.79
L = 595.36
R = 1475.00
S.E. = VARIES
P.C. = STA. 573+76.75 'SA'
P.T. = STA. 579+72.11 'SA'



DECK SLOPE TRANSITION
(LOOKING UPSTATION)



PROFILE GRADE LINE - RAMP S-W



PROFILE GRADE LINE - RAMP SA

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY RAC/DDS | PLANS CK'D. SDR

QUANTITIES & ROADWAY GEOMETRY

SHEET 3

2456

SCALE = 7:1

8

8

STATE PROJECT NUMBER

1060-33-80

NOTE: ALL SUBSTRUCTURE UNITS ARE NORMAL TO ℄ 'S-W'

UTILITY NOTES

(1) EXISTING WISDOT 84" STORM SEWER TO REMAIN

(3) ABANDONED AT&T CORP. FIBER OPTIC LINE

(4) EXISTING MMSD 39" SANITARY SEWER TO REMAIN

(5) EXISTING MILWAUKEE COUNTY ELECTRIC LINE TO REMAIN

(6) ABANDONED MILWAUKEE COUNTY COMMUNICATIONS LINE

(7) EXISTING MILWAUKEE COUNTY COMMUNICATIONS LINE TO BE REMAIN

(8) ABANDONED MILWAUKEE COUNTY ELECTRIC LINE

(9) EXISTING WISDOT 12" STORM SEWER TO BE REMOVED

(10) ABANDONED WE ENERGIES GAS MAIN

(11) EXISTING WISDOT 12" STORM SEWER TO BE REMOVED

(12) EXISTING MILWAUKEE COUNTY WATER MAIN TO REMAIN

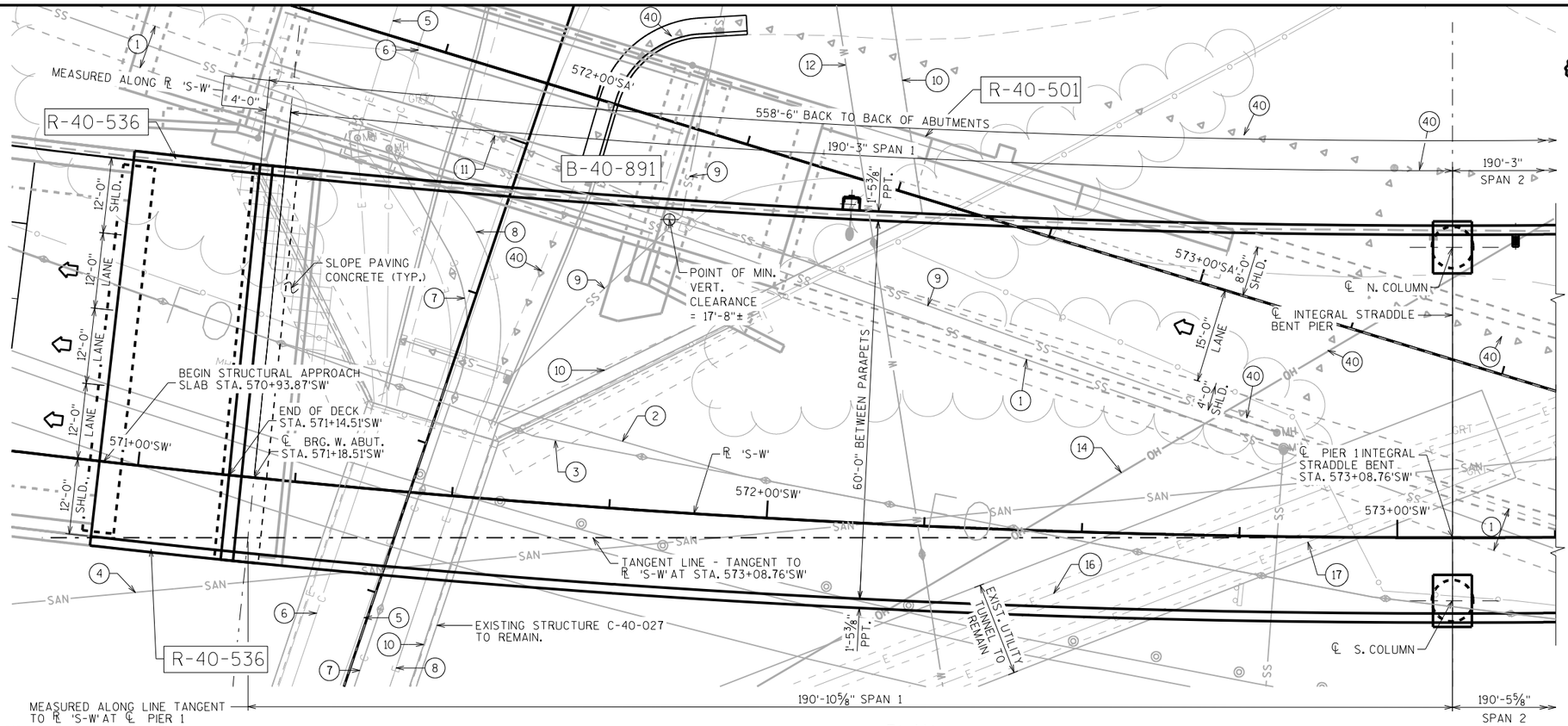
* (14) EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN

(16) EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN

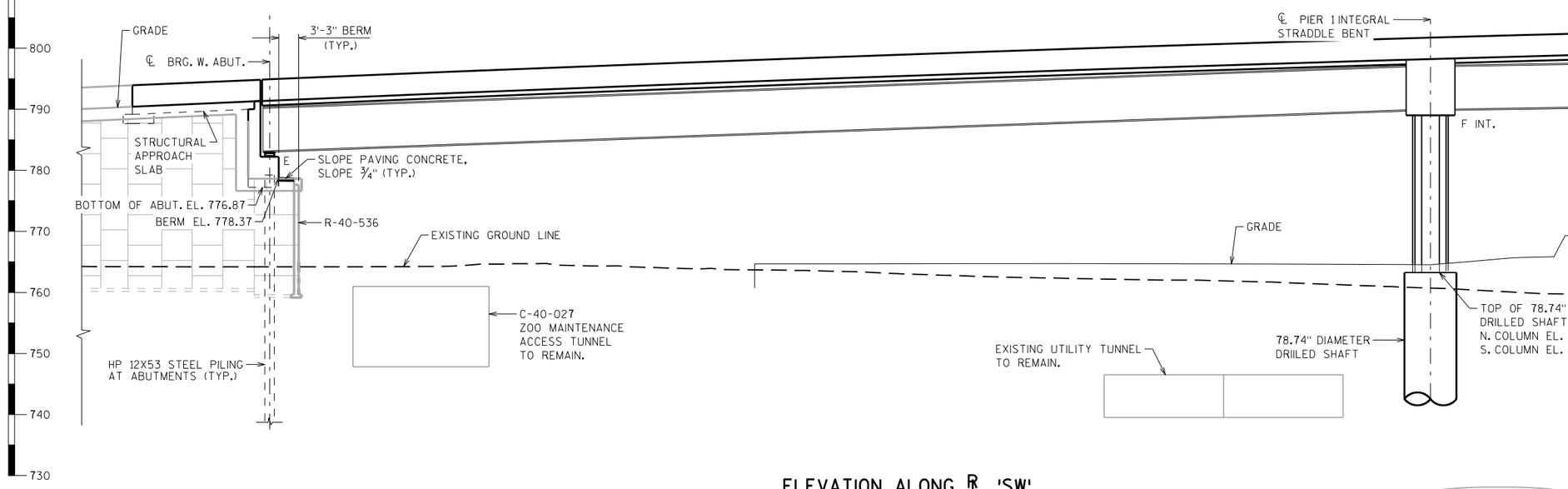
(17) EXISTING WE ENEGIES ELECTRIC LINE TO REMAIN

(18) EXISTING WISDOT 12" STORM SEWER TO REMAIN

(40) PROPOSED STORM SEWER



PLAN



ELEVATION ALONG ℄ 'SW'

* CONSTRUCTION OF B-40-852 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRASMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY RAC | PLANS CK'D. SDR

PLAN & ELEV. SPAN 1

SHEET 4

2457

SCALE = 10

STATE PROJECT NUMBER

1060-33-80

NOTE: ALL SUBSTRUCTURE UNITS ARE NORMAL TO ℄ 'S-W'

UTILITY NOTES

1. EXISTING WISDOT 84" STORM SEWER TO REMAIN
2. ABANDONED AT&T CORP. FIBER OPTIC LINE
4. EXISTING MMSD 39" SANITARY SEWER TO REMAIN
11. EXISTING WISDOT 12" STORM SEWER TO BE REMOVED
* 14. EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN
16. EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
17. EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
18. EXISTING WISDOT 12" STORM SEWER TO REMAIN
20. EXISTING WE ENERGIES ELECTRIC LINE TO BE REMOVED
21. EXISTING WE ENERGIES ELECTRIC LINE TO BE REMOVED
22. EXISTING WE ENERGIES ELECTRIC LINE TO BE REMOVED
23. EXISTISTING ATC ELECTRIC LINE TO BE RELOCATED
* 24. EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN
40. PROPOSED STORM SEWER
45. PROPOSED INLET

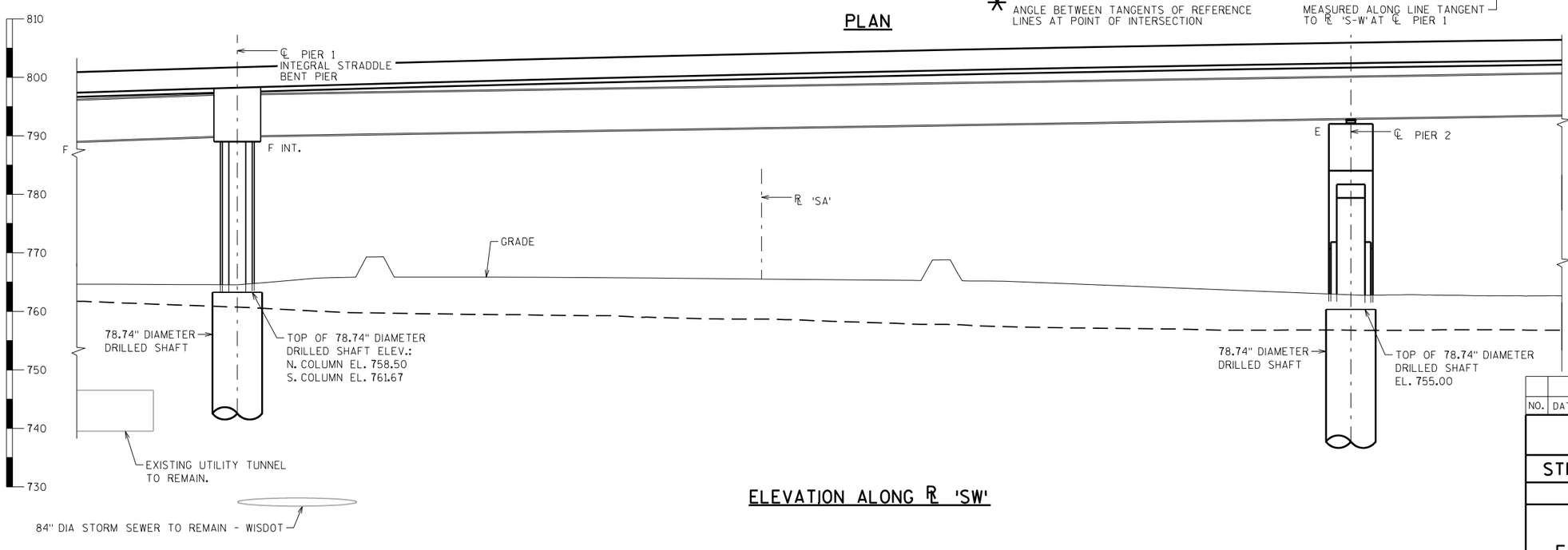
MEAURED ALONG ℄ 'S-W'
558'-6" BACK TO BACK OF ABUTMENTS
190'-3" SPAN 1
190'-3" SPAN 2
170'-0" SPAN 3
99'-6½" CURVED ℄ AND GIRDERS
90'-8½" TANGENT ℄ AND GIRDERS
10'-0"
FLOOR DRAIN
℄ N. COLUMN
8'-0" SHLD.
15'-0" LANE
4'-0" SHLD.
℄ INTEGRAL STRADDLE BENT PIER
℄ INTEGRAL STRADDLE BENT PIER STA. 573+08.76'SW'
℄ S. COLUMN
EXIST. UTILITY TUNNEL TO REMAIN
PC STA. 573+76.75'SA' 'SA' RAMP
573+00'SW'
574+00'SW'
TANGENT LINE - TANGENT TO ℄ 'S-W' AT STA. 573+08.76'SW'
℄ RAMP S-W STA. 573+98.41'SW' = ℄ RAMP SA STA. 574+35.19'SA'
474+08.30'NW'
PT. OF TANGENT FOR ℄ 'S-W' AND GIRDERS AT STA. 574+08.30'SW'
PT STA. 574+08.30'SW' 'S-W' RAMP
℄ 'N-W'
475+00'NW'
℄ DRILLED SHAFT
℄ 'S-W'
575+00'SW'
℄ DRILLED SHAFT
℄ PIER 2 STA. 574+99.01'SW'
17°23'37.7"
PAVEMENT LINE WORK IS IN FUTURE CONTRACT. SHOWN FOR INFORMATION ONLY.
℄ 'SA'
190'-10⅝" SPAN 1
190'-5⅝" SPAN 2
170'-2¾" SPAN 3

PLAN

* ANGLE BETWEEN TANGENTS OF REFERENCE LINES AT POINT OF INTERSECTION

MEASURED ALONG LINE TANGENT TO ℄ 'S-W' AT ℄ PIER 1

* CONSTRUCTION OF B-40-852 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRASMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.



ELEVATION ALONG ℄ 'SW'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY RAC | PLANS CK'D. SDR

PLAN & ELEV. SPAN 2

SHEET 5

2458

SCALE = 10

8

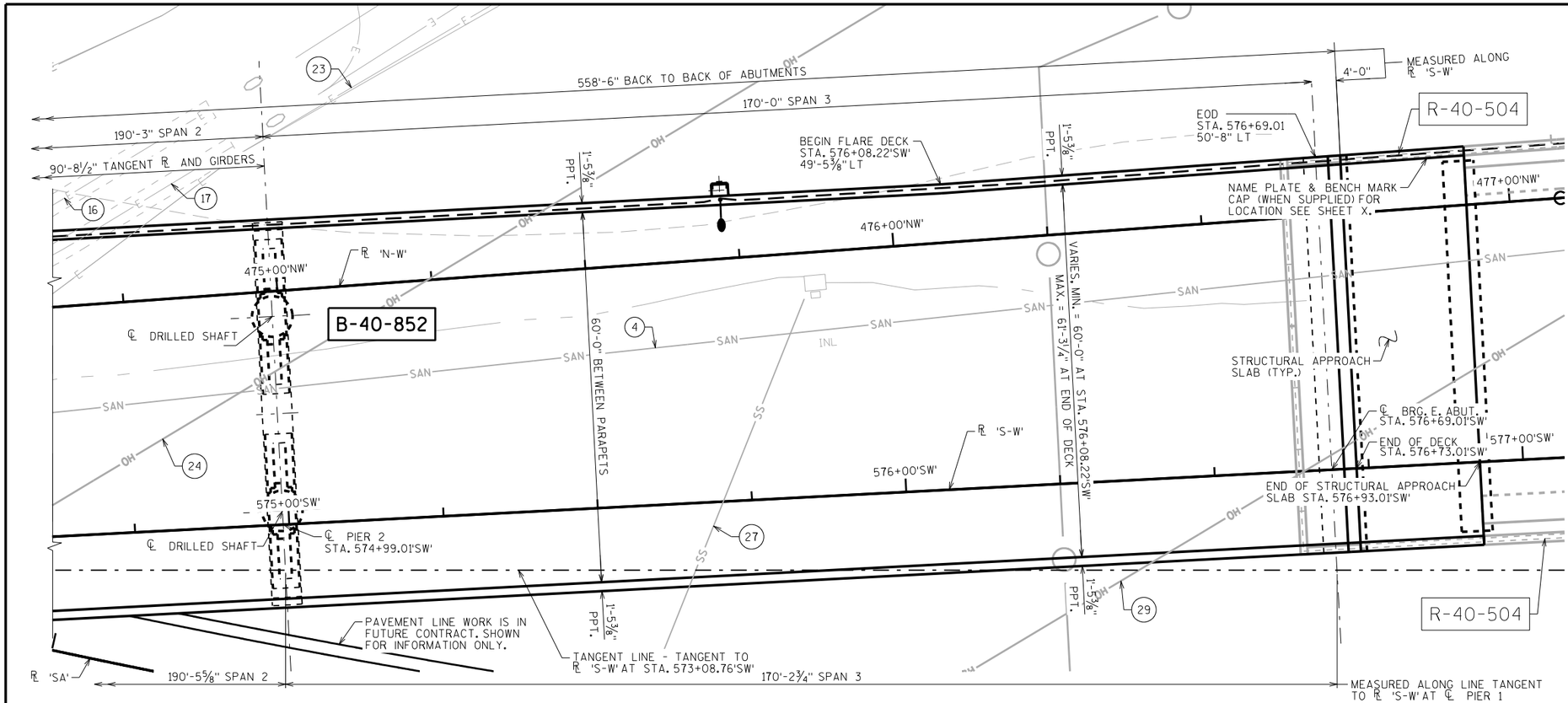
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STATE PROJECT NUMBER
1060-33-80

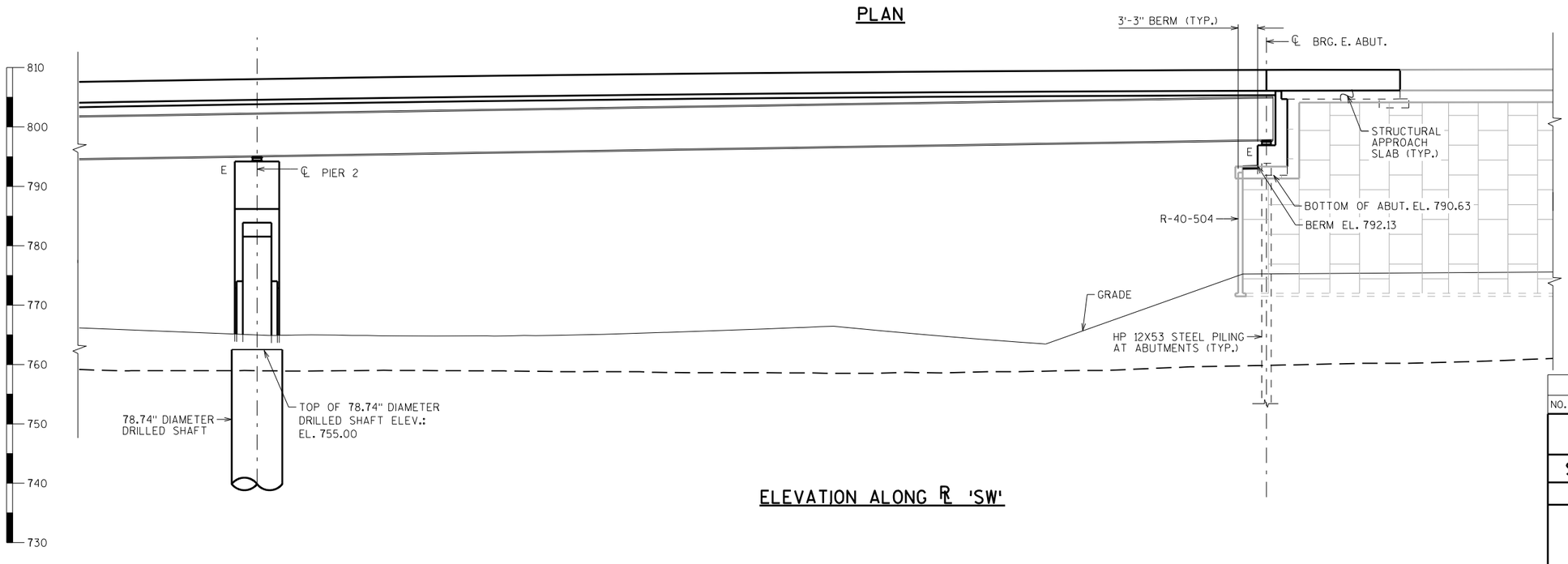
NOTE: ALL SUBSTRUCTURE UNITS ARE NORMAL TO ℄ 'S-W'

UTILITY NOTES

- (4) EXISTING MMSD 39" SANITARY SEWER TO REMAIN
- (16) EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
- (17) EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
- (23) ABANDONED ATC ELECTRIC LINE
- * (24) EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN
- (27) EXISTING 12" STORM SEWER TO BE REMOVED
- * (29) EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN



PLAN



ELEVATION ALONG ℄ 'SW'

* CONSTRUCTION OF B-40-852 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRASMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY RAC | PLANS CK'D. SDR

PLAN & ELEV. SPAN 3

SHEET 6

2459

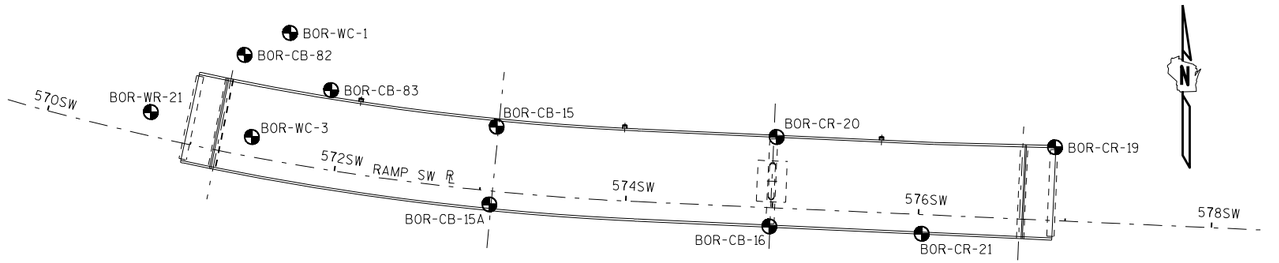
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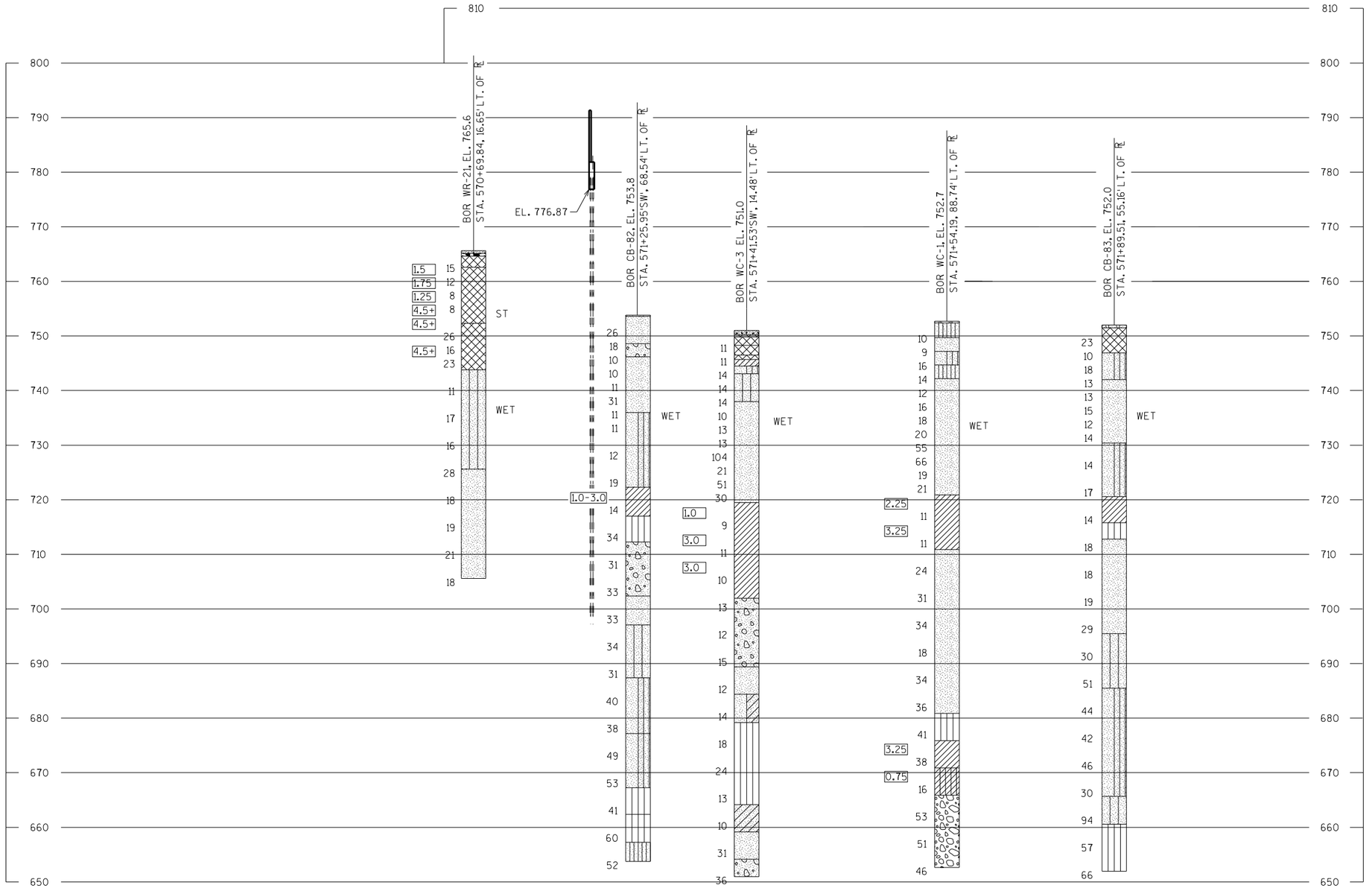
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8

ZOO INTERCHANGE
IH 94 'SW' RAMP AND 'NW' RAMP OVER 'SA' RAMP

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
WR-21	11/17/2011	295538	570581
CB-82	11/20/2012	295577	570645
WC-3	2/29/2012	295521	570650
WC-1	2/9/2012	295592	570676
CB-83	11/19/2012	295553	570704
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: HNTB			
ALL COORDINATES REFERENCED TO WISCRS NAVD 88 MILWAUKEE COUNTY			





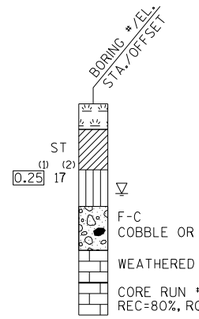
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY PR/DDS | PLANS CK'D. SDR

SUBSURFACE EXPLORATION

SHEET 7

2460

8

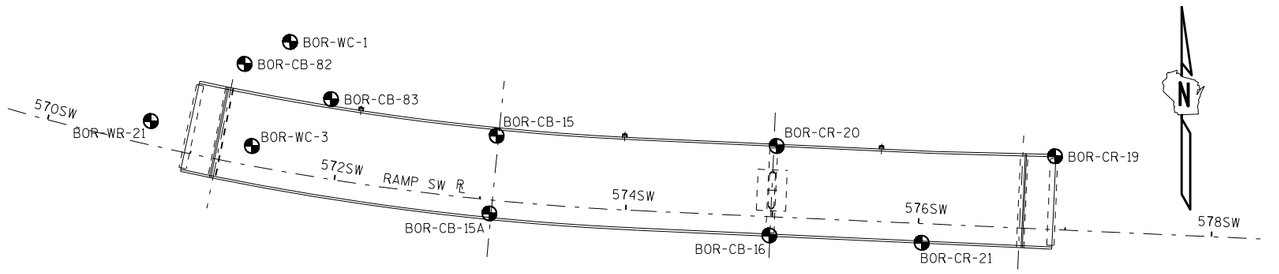
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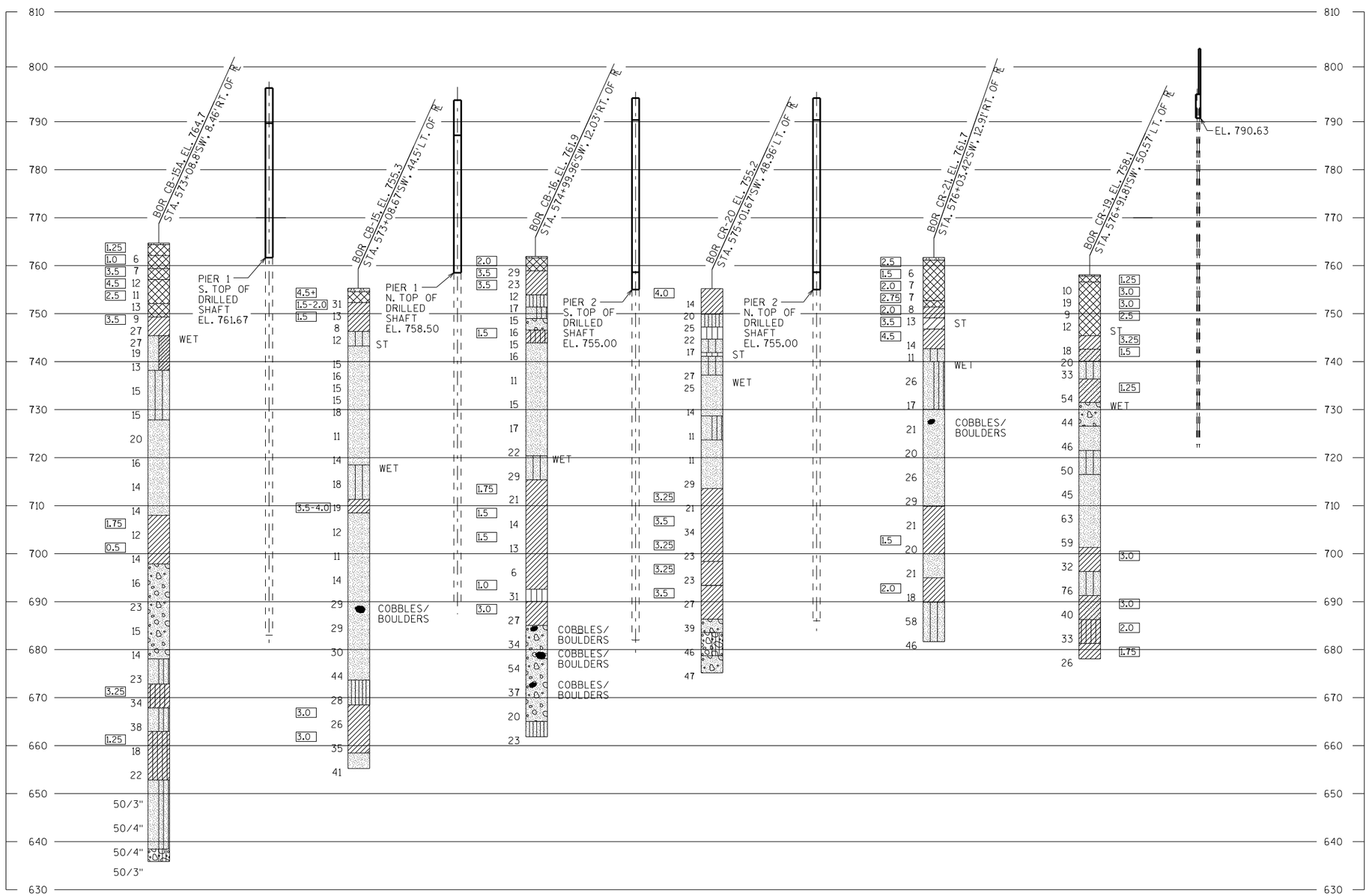
SCALE = 50

ZOO INTERCHANGE
USH 45 NB OVER SCHLINGER AVE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
CB-15A	6/24/2013	295475	570812
CB-15	3/5/2012	295528	570817
CB-16	4/6/2012	295460	571003
CR-20	5/23/2012	295521	571008
CR-21	5/30/2012	295455	571107
CR-19	5/10/2012	295514	571198

BORINGS COMPLETED BY: GESTRA/RIVER VALLEY TESTING
REPORT COMPLETED BY: HNTB
ALL COORDINATES REFERENCED TO WISCRS NAVD 88 MILWAUKEE COUNTY





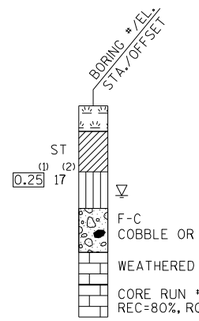
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

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LEGEND OF BORING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY PR/DDS | PLANS CK'D. SDR

SUBSURFACE EXPLORATION 1

SHEET 8

2461

SCALE = 50

(A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

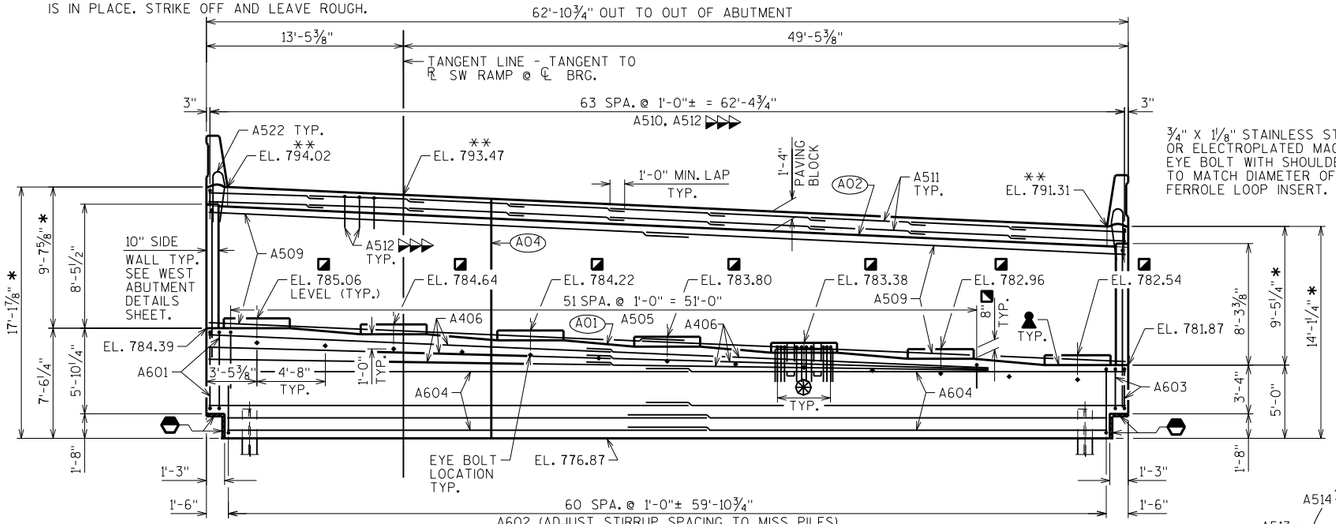
(A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 80'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

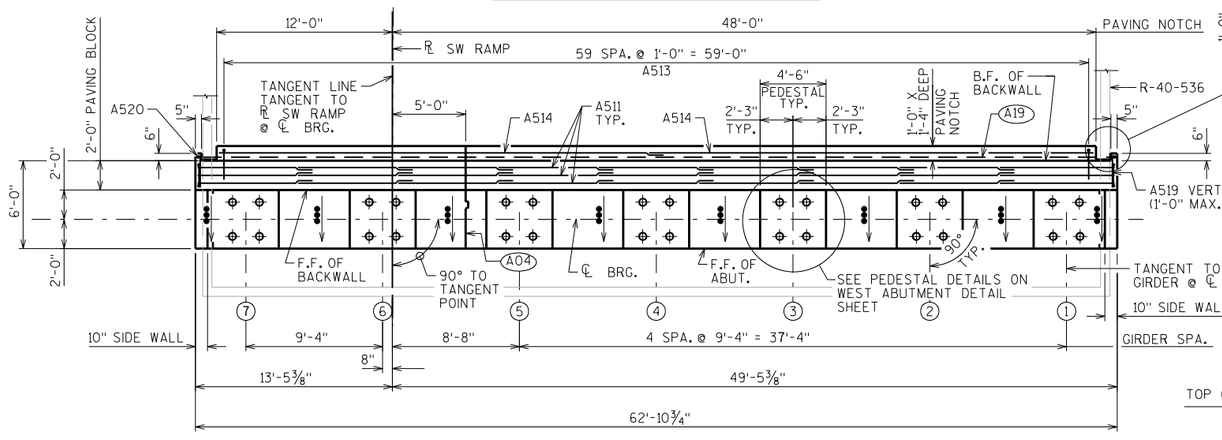
▶▶▶ ANCHOR REBAR INTO PLACE WITH EPOXY RESIN AFTER THE MODULAR JOINT IS IN POSITION FOLLOW STD. SPEC. FOR MASONRY ANCHORS TYPE S WITH A MIN. EMBEDDEDMENT OF 12".

STATE PROJECT NUMBER

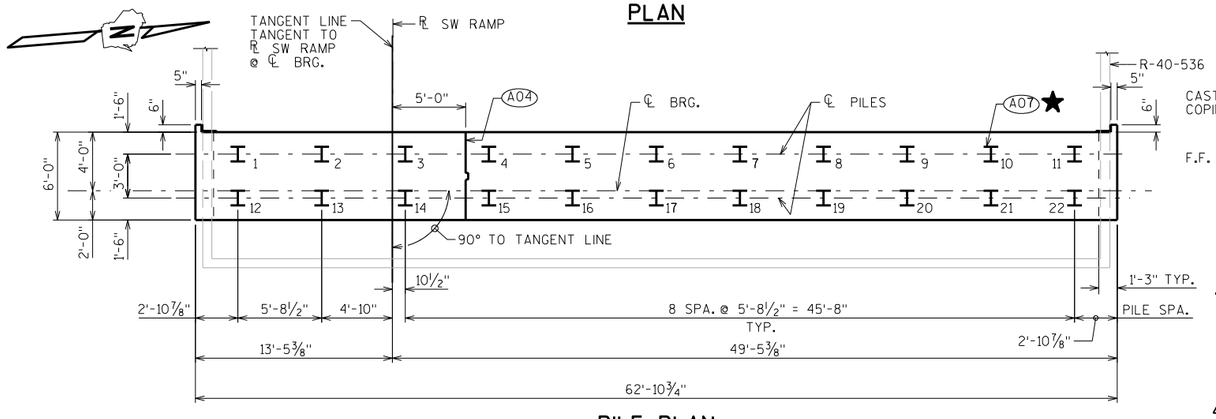
1060-33-80



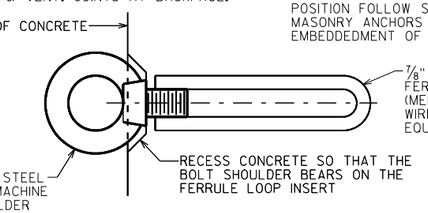
ELEVATION - LOOKING WEST



PLAN



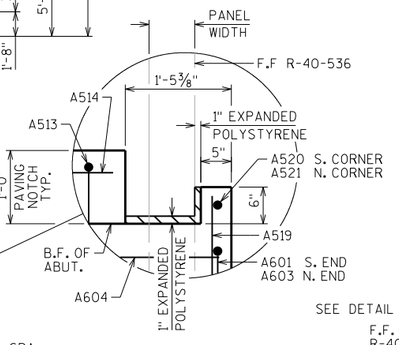
PILE PLAN



EYE BOLT DETAIL

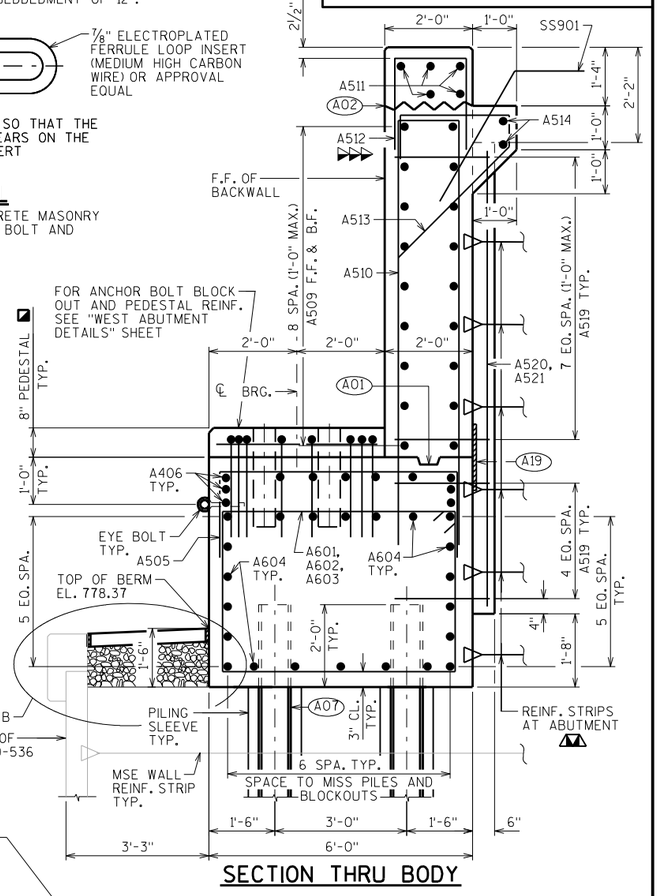
COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT 3,500 LB.

NOTE:
LOCATE FALL PROTECTION EYE BOLTS DIRECTLY BENEATH EACH GIRDER AND AT 4'-8" SPA.

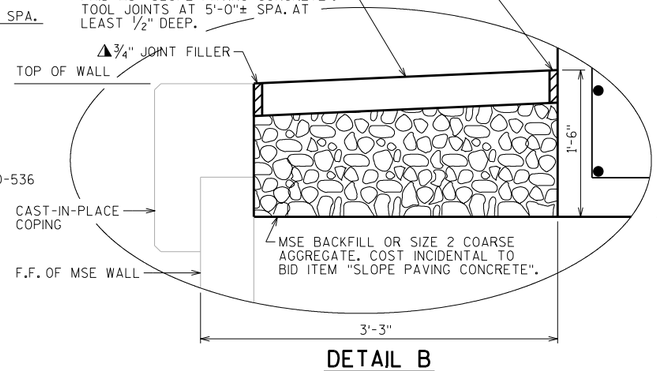


CORNER DETAIL

NORTH CORNER SHOWN
SOUTH CORNER SIMILAR



SECTION THRU BODY



DETAIL B

LEGEND

- ⬬ = 1½" VERT. & 2" HORIZ. PREFORMED JOINT FILLER. BASED ON 7½" MSE WALL PANEL THICKNESS. SEAL EXPOSED SURFACES WITH NON-BITUMINOUS JOINT SEALER TO MATCH COLOR OF STAIN.
- ◪ = ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.
- * = MEASURED AT F.F. OF BACKWALL
- ** = ELEVATION AT TOP & F.F. OF BACKWALL
- ⊛ = ANCHOR BOLT BLOCKOUT TYP. SEE "WEST ABUTMENT DETAIL" SHEET.
- = ROUGHEN CONSTRUCTION JOINT UNDER PEDESTALS (TYP.)
- = SLOPE 1" BETWEEN PEDESTALS

LEGEND (CONTINUED)

★ = PILE SLEEVES REQUIRED. COORDINATE PILE SLEEVE LOCATIONS WITH RETAINING WALL R-40-536. PILE SLEEVES SHALL BE PLACED FROM THE BOTTOM OF MSE WALL TO THE BOTTOM OF ABUTMENT.

▲ = SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

▲▲ = REINFORCEMENT STRIP QUANTITIES & LOCATIONS AT ABUTMENT TO BE DETERMINED BY WALL CONTRACTOR. REINFORCING STRIPS SHALL BE DESIGNED TO RESIST A UNFACTORED SUPERSTRUCTURE LATERAL LOAD OF 3K/LF OF ABUTMENT LENGTH. IN ADDITION TO THE LIVE LOAD SURCHARGE AND EARTH PRESSURE ON THE BACK OF THE ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY	DDS	PLANS CK'D.	SDR

WEST ABUTMENT

SHEET 9

2462

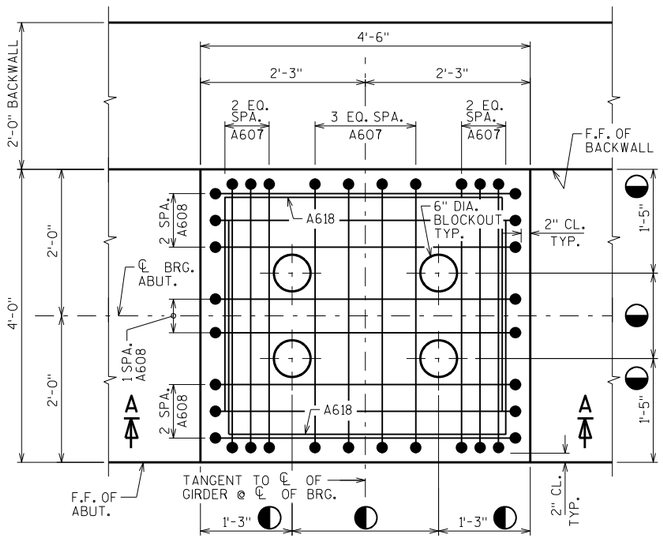
SCALE = 5

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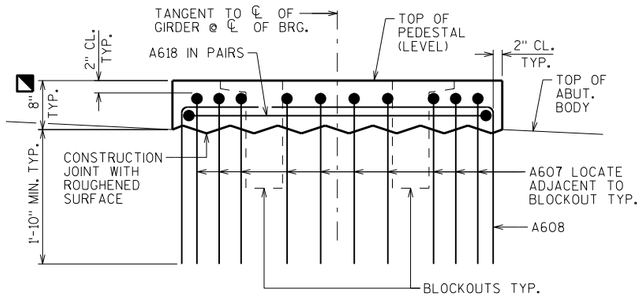
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STATE PROJECT NUMBER

1060-33-80



PEDESTAL PLAN



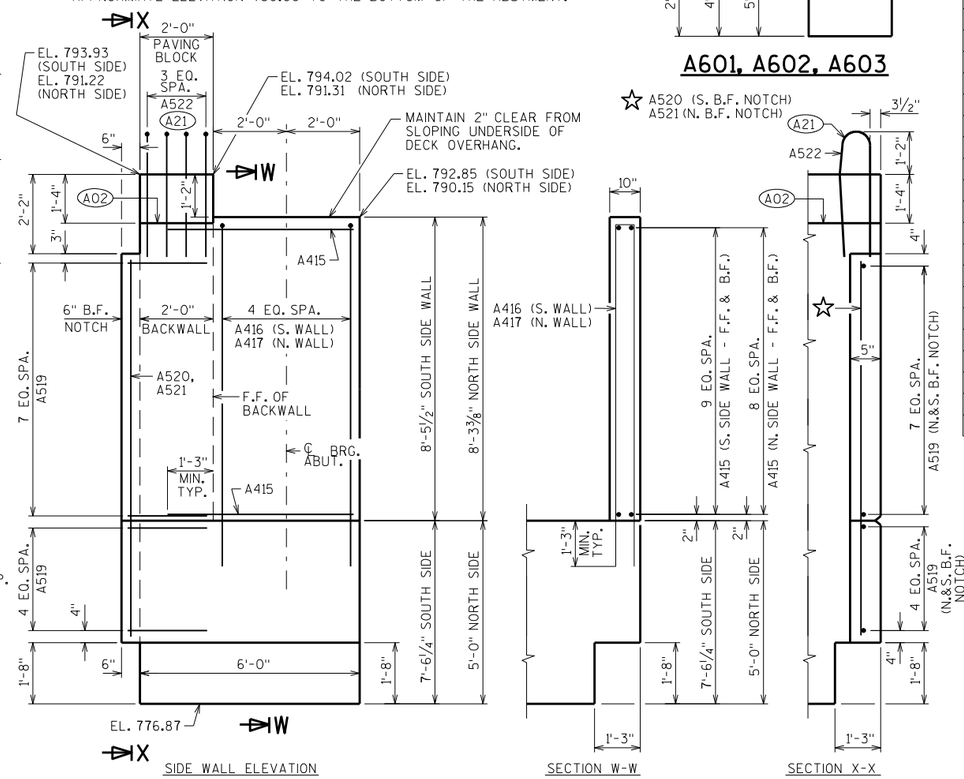
SECTION A-A

◐ SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION VERIFY LOCATIONS WITH BEARING MANUFACTURER.

◪ ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.

PILING SLEEVE NOTES:

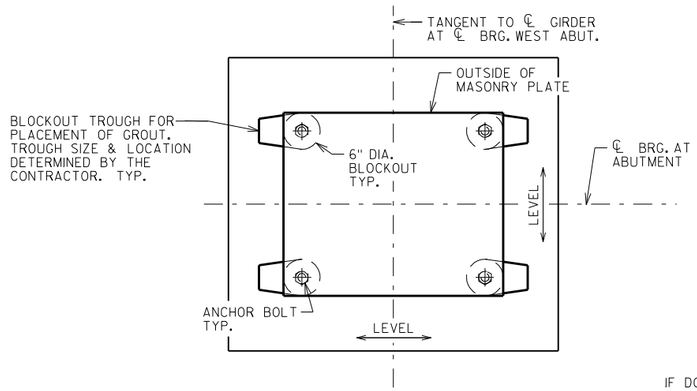
1. PILING SLEEVES MUST BE USED AT LOCATIONS SHOWN ON THE PLANS. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES" AND ARE INCLUDED UNDER THE BID ITEM "PILING SLEEVES".
2. PILING SLEEVES SHALL BE CONSTRUCTED AS STATED IN THE SPECIAL PROVISION. IF THE PILE SLEEVE MATERIAL IS CORRAGATED STEEL PIPE. THEN 24" DIA. PIPE SHALL BE USED.
3. COORDINATE SLEEVE LOCATIONS WITH RETAINING WALL R-40-536.
4. PILING SLEEVES SHALL BE PLACED FROM BOTTOM OF MSE WALL AT APPROXIMATE ELEVATION 750.00 TO THE BOTTOM OF THE ABUTMENT.



SIDE WALL & B.F. NOTCH REINFORCEMENT DETAIL

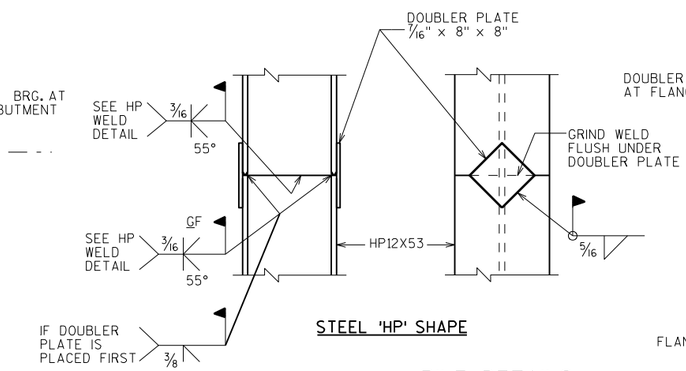
(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

(A21) FOR PPT. BARS & DIMENSION SEE PARAPET SHT.

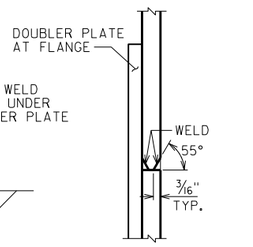


PLAN - TOP OF PEDESTAL

SEE "BEARING DETAIL" SHEET



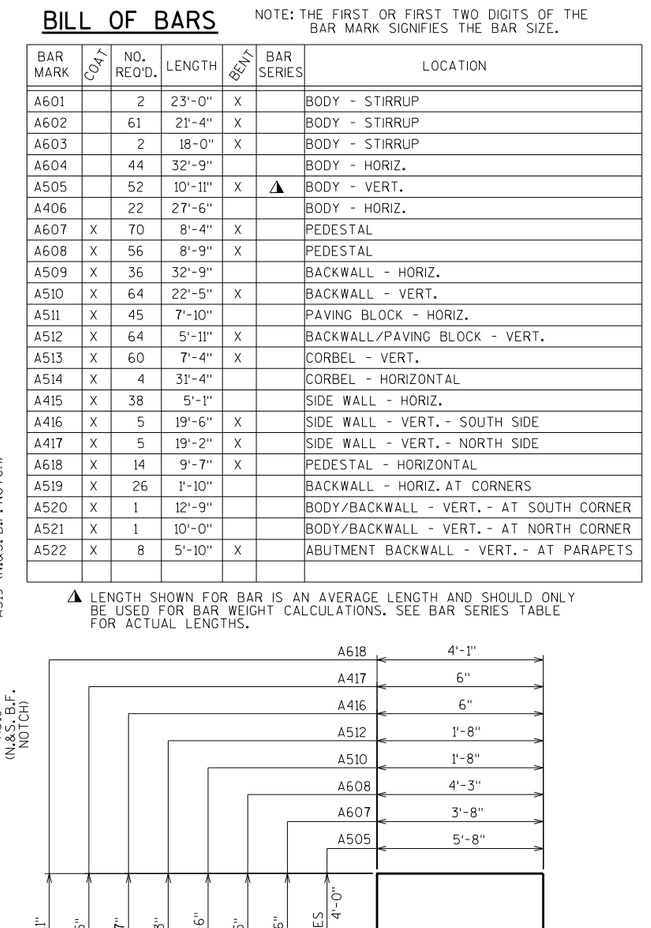
STEEL 'HP' SHAPE



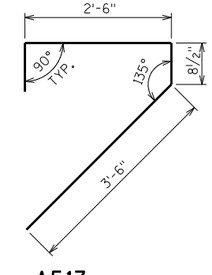
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

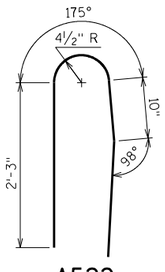
PILE DETAILS



A505, A607, A608, A510, A512, A416, A417, A618



A513



A522

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A601		2	23'-0"	X		BODY - STIRRUP
A602		61	21'-4"	X		BODY - STIRRUP
A603		2	18-0"	X		BODY - STIRRUP
A604		44	32'-9"			BODY - HORIZ.
A505		52	10'-11"	X	⚠	BODY - VERT.
A406		22	27'-6"			BODY - HORIZ.
A607	X	70	8'-4"	X		PEDESTAL
A608	X	56	8'-9"	X		PEDESTAL
A509	X	36	32'-9"			BACKWALL - HORIZ.
A510	X	64	22'-5"	X		BACKWALL - VERT.
A511	X	45	7'-10"			PAVING BLOCK - HORIZ.
A512	X	64	5'-11"	X		BACKWALL/PAVING BLOCK - VERT.
A513	X	60	7'-4"	X		CORBEL - VERT.
A514	X	4	31'-4"			CORBEL - HORIZONTAL
A415	X	38	5'-1"			SIDE WALL - HORIZ.
A416	X	5	19'-6"	X		SIDE WALL - VERT. - SOUTH SIDE
A417	X	5	19'-2"	X		SIDE WALL - VERT. - NORTH SIDE
A618	X	14	9'-7"	X		PEDESTAL - HORIZONTAL
A519	X	26	1'-10"			BACKWALL - HORIZ. AT CORNERS
A520	X	1	12'-9"			BODY/BACKWALL - VERT. - AT SOUTH CORNER
A521	X	1	10'-0"			BODY/BACKWALL - VERT. - AT NORTH CORNER
A522	X	8	5'-10"	X		ABUTMENT BACKWALL - VERT. - AT PARAPETS

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
A505	1 SERIES OF 52	8'-5" TO 13'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

WEST ABUTMENT DETAILS

SHEET 10

2463

8

8

SCALE = 5

STATE PROJECT NUMBER

1060-33-80

A01 CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

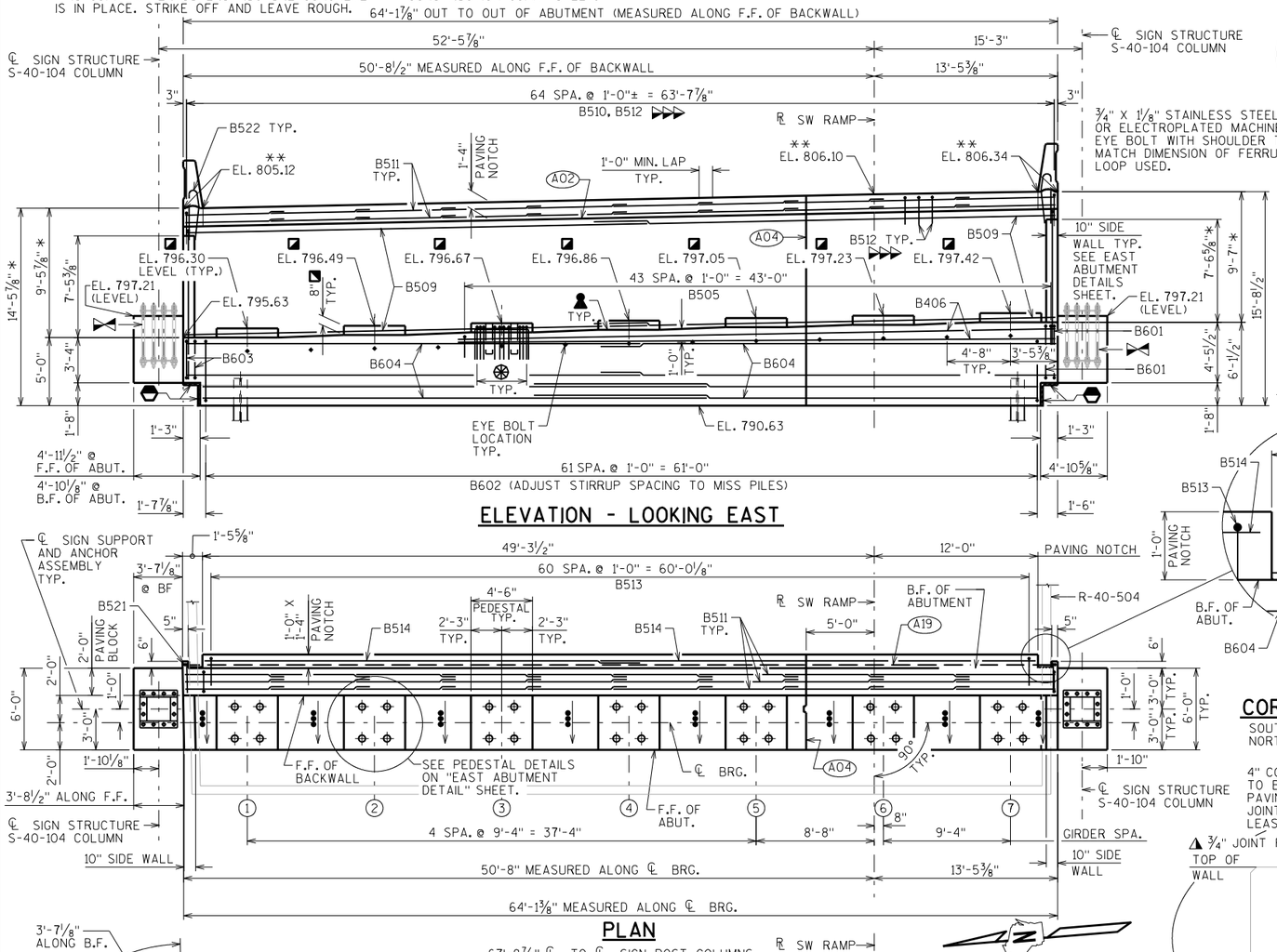
A02 CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

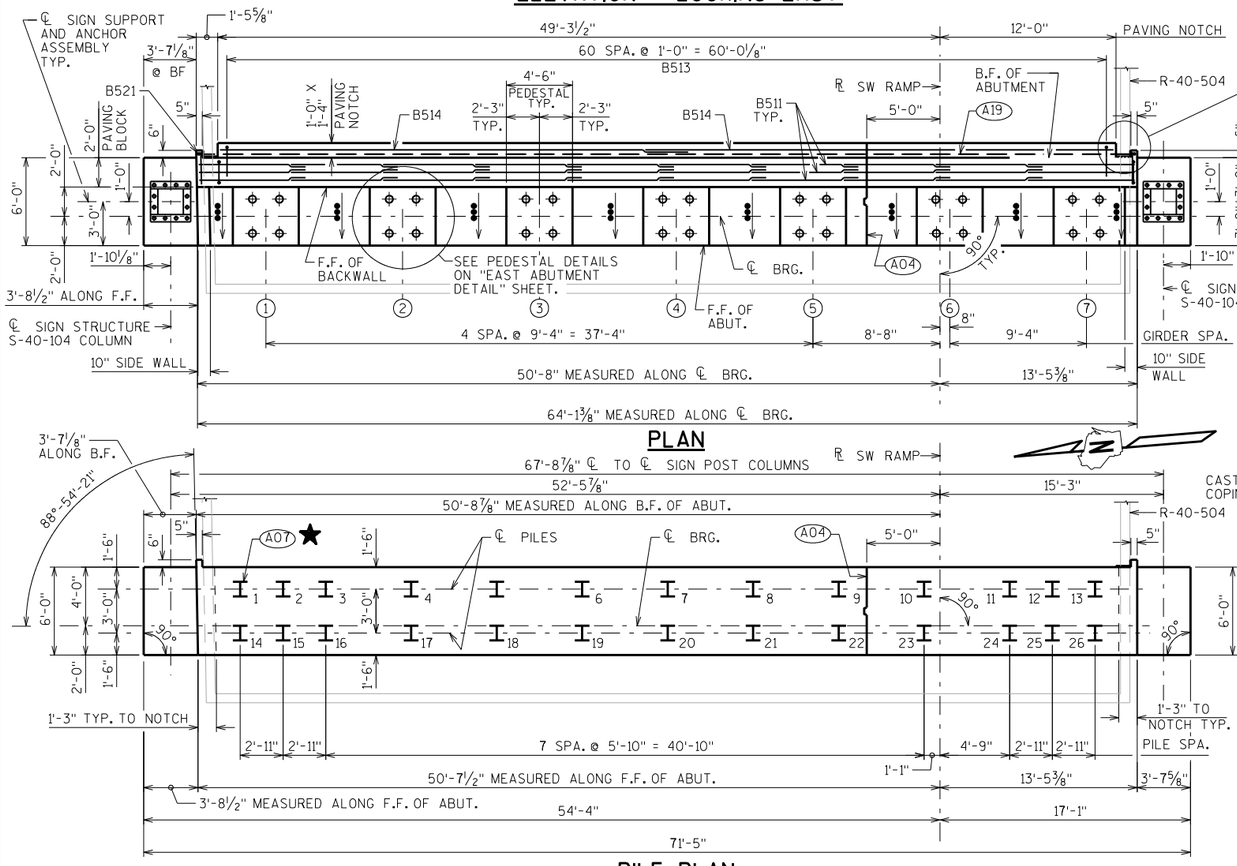
A07 SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

▶▶▶ ANCHOR REBAR INTO PLACE WITH EPOXY RESIN AFTER THE MODULAR JOINT IS IN POSITION FOLLOW STD. SPEC. FOR MASONRY ANCHORS TYPE S WITH A MIN. EMBEDDEDMENT OF 12".

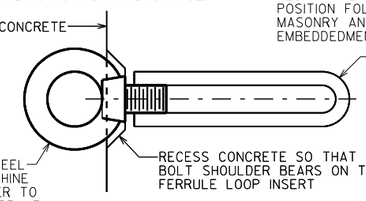


ELEVATION - LOOKING EAST



PLAN

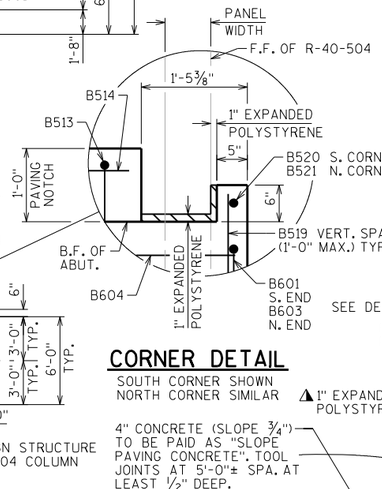
PILE PLAN



EYE BOLT DETAIL

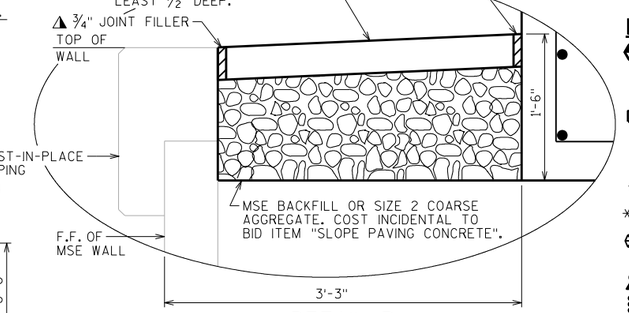
COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND FERRULE LOOP INSERT IS 3,500 LB.

NOTE:
LOCATE FALL PROTECTION EYE BOLTS DIRECTLY BENEATH EACH GIRDER AND AT 4'-8" SPA.

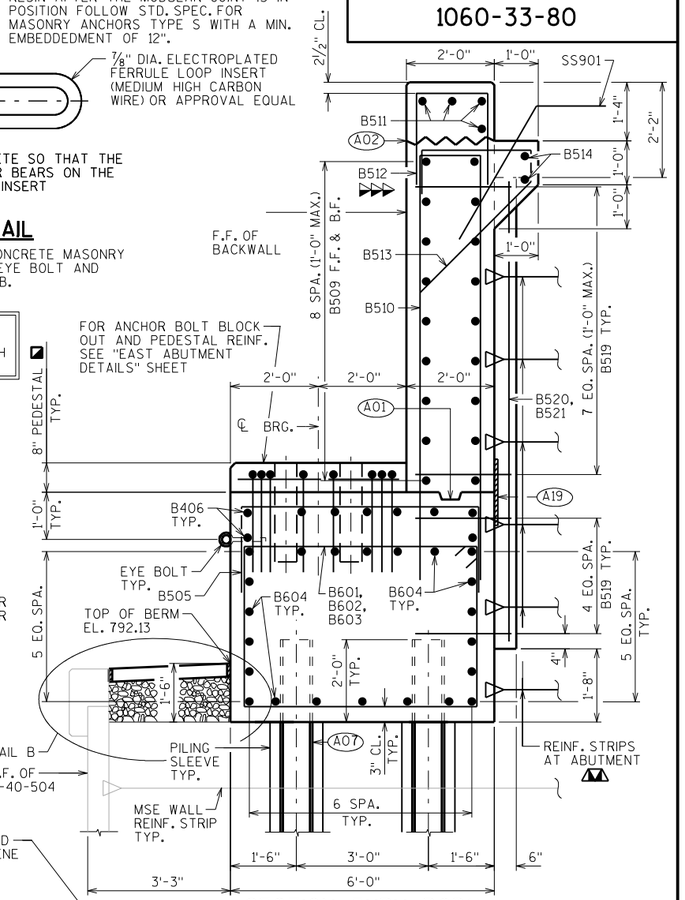


CORNER DETAIL

SOUTH CORNER SHOWN
NORTH CORNER SIMILAR



DETAIL B



SECTION THRU BODY

LEGEND

- ⬬ = 1½" VERT. & 2" HORIZ. PREFORMED JOINT FILLER. BASED ON 7½" MSE WALL PANEL THICKNESS. SEAL EXPOSED SURFACES WITH NON-BITUMINOUS JOINT SEALER TO MATCH COLOR OF STAIN.
- ◪ = ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.
- * = MEASURED AT F.F. OF BACKWALL
- ** = ELEVATION AT TOP & F.F. OF BACKWALL
- ⊛ = ANCHOR BOLT BLOCKOUT TYP. SEE "EAST ABUTMENT DETAIL" SHEET.
- ▲ = ROUGHEN CONSTRUCTION JOINT UNDER PEDESTALS (TYP.)
- ⋮ = SLOPE 1" BETWEEN PEDESTALS

LEGEND (CONTINUED)

- ★ = PILE SLEEVES REQUIRED. COORDINATE PILE SLEEVE LOCATIONS WITH RETAINING WALL R-40-504. PILE SLEEVES SHALL BE PLACED FROM THE BOTTOM OF MSE WALL TO THE BOTTOM OF ABUTMENT.
- ⋈ = SIGN SUPPORT S-40-104. FOR REINFORCEMENT AND ANCHOR ASSEMBLY DETAILS SEE "EAST ABUTMENT DETAILS" SHEET.
- ▲ = SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.
- ▲▲ = REINFORCEMENT STRIP QUANTITIES & LOCATIONS AT ABUTMENT TO BE DETERMINED BY WALL CONTRACTOR. REINFORCING STRIPS SHALL BE DESIGNED TO RESIST A UNFACTORED SUPERSTRUCTURE LATERAL LOAD OF 3K/LF OF ABUTMENT LENGTH. IN ADDITION TO THE LIVE LOAD SURCHARGE AND EARTH PRESSURE ON THE BACK OF THE ABUTMENT.

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STRUCTURE B-40-852

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EAST ABUTMENT

SHEET 11

2464

SCALE = 5

8

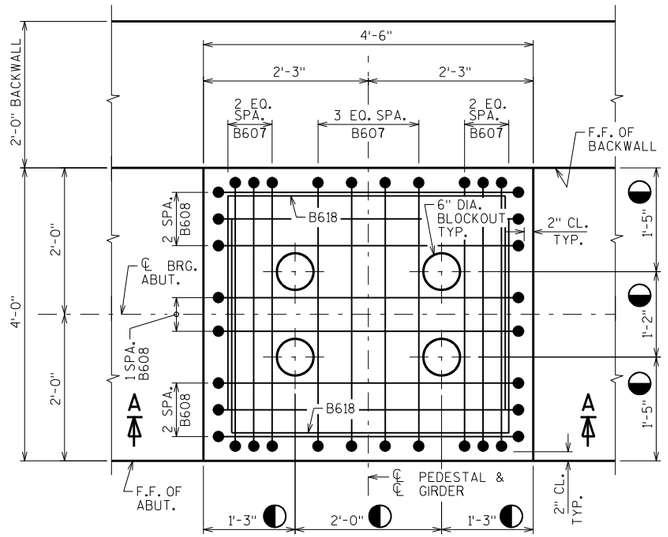
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STATE PROJECT NUMBER

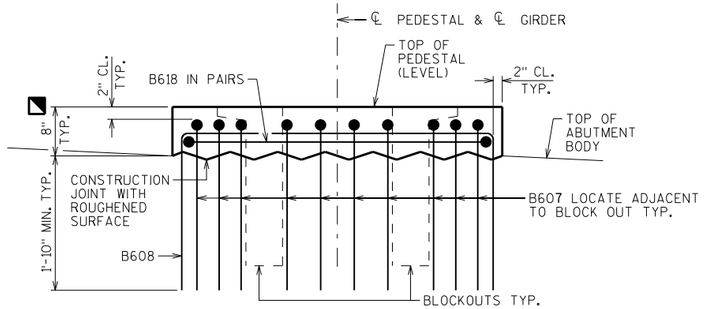
1060-33-80

A02 CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

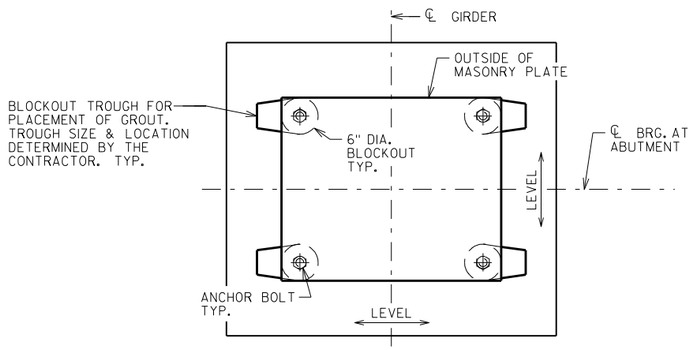
A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHT.



PEDESTAL PLAN

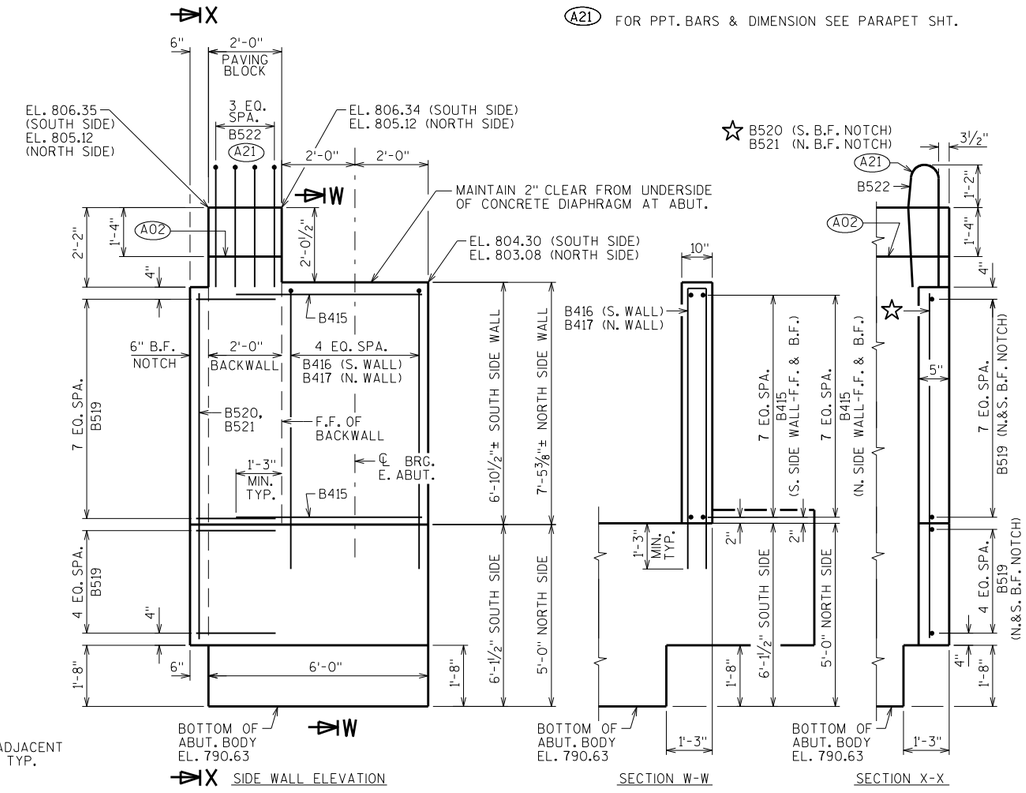


SECTION A-A

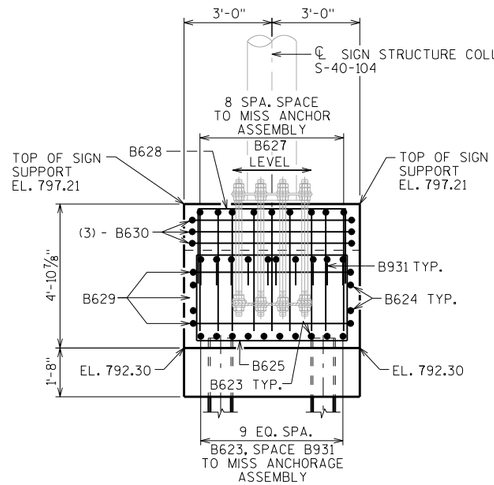


PLAN - TOP OF PEDESTAL

SEE "BEARING DETAIL" SHEET

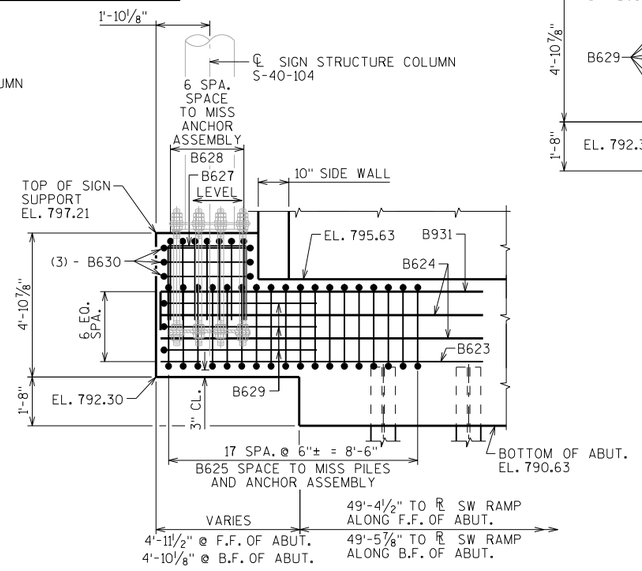


SIDE WALL & B.F. NOTCH REINFORCEMENT DETAIL



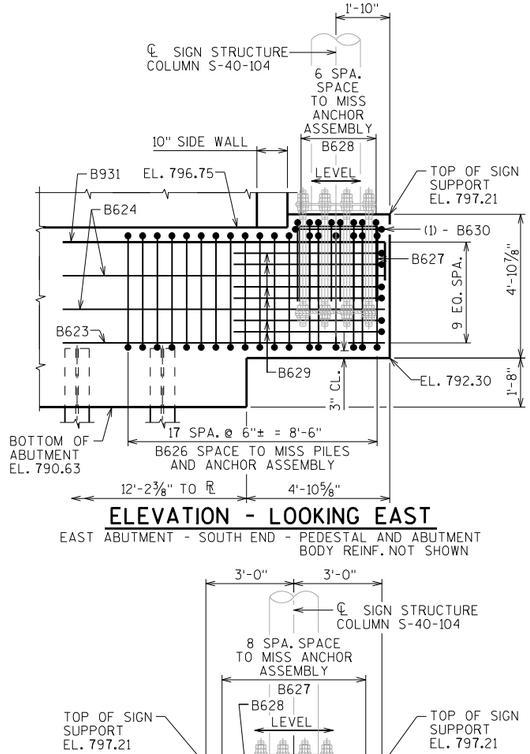
ELEVATION - END VIEW

EAST ABUTMENT - NORTH END LOOKING SOUTH



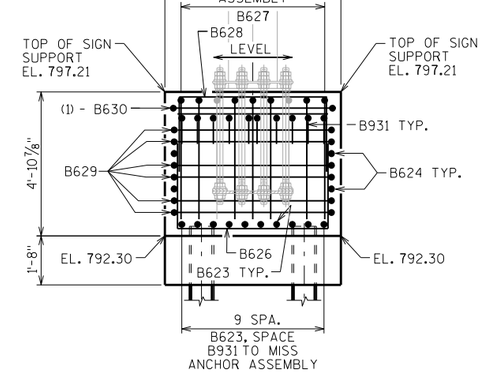
ELEVATION - LOOKING EAST

EAST ABUTMENT - NORTH END - PEDESTAL AND ABUTMENT BODY REINF. NOT SHOWN



ELEVATION - LOOKING EAST

EAST ABUTMENT - SOUTH END - PEDESTAL AND ABUTMENT BODY REINF. NOT SHOWN



ELEVATION - END VIEW

EAST ABUTMENT - SOUTH END LOOKING NORTH

◐ SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION VERIFY LOCATIONS WITH BEARING MANUFACTURER.

◪ ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.

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STRUCTURE B-40-852

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EAST ABUTMENT DETAILS

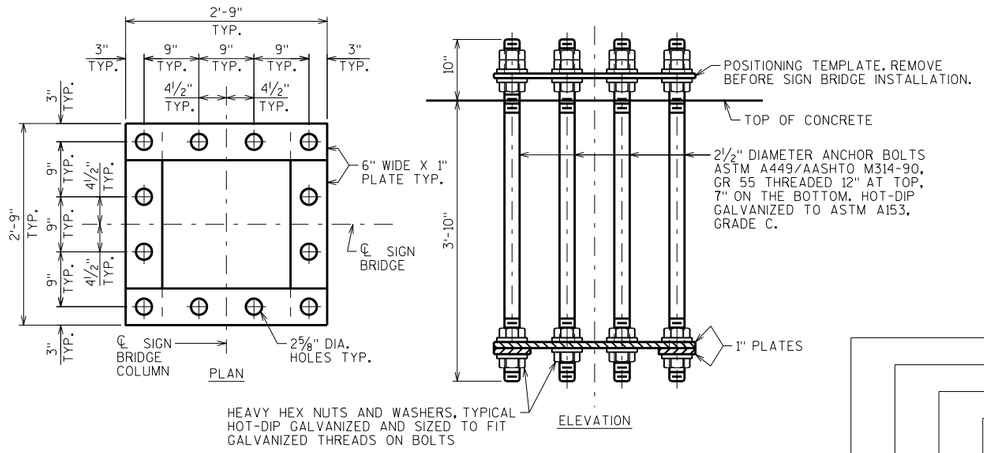
SHEET 12

2465

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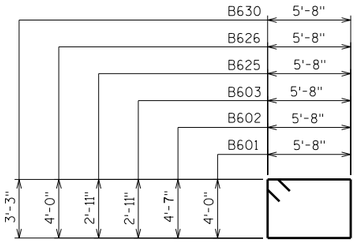
SCALE = 5



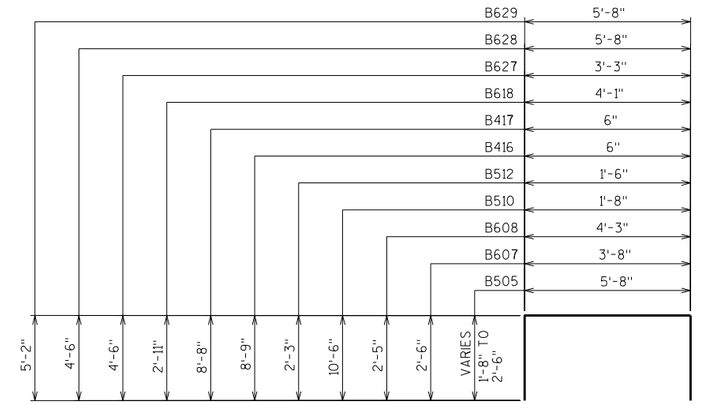
ANCHOR ASSEMBLY SIGN STRUCTURE

PILING SLEEVE NOTES:

1. PILING SLEEVES MUST BE USED AT LOCATIONS SHOWN ON THE PLANS. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES" AND ARE INCLUDED UNDER THE BID ITEM "PILING SLEEVES".
2. PILING SLEEVES SHALL BE CONSTRUCTED AS STATED IN THE SPECIAL PROVISION. IF THE PILE SLEEVE MATERIAL IS CORRUGATED STEEL PIPE. THEN 24" DIA. PIPE SHALL BE USED.
3. COORDINATE SLEEVE LOCATIONS WITH RETAINING WALL R-40-504.
4. PILING SLEEVES SHALL BE PLACED FROM BOTTOM OF MSE WALL AT APPROXIMATE ELEVATION 767.00 TO THE BOTTOM OF THE ABUTMENT.



B601, B602, B603, B625, B626, B630



B505, B607, B608, B510, B512, B416, B417, B618, B627, B628, B629

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

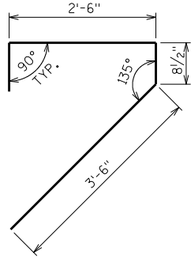
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		2	20'-2"	X		BODY - STIRRUP
B602		61	21'-4"	X		BODY - STIRRUP
B603		2	18-0"	X		BODY - STIRRUP
B604		44	33'-0"			BODY - HORIZ.
B505		44	9'-7"	X	⚠	BODY - VERT.
B406		9	43'-11"			BODY - HORIZ.
B607	X	70	8'-4"	X		PEDESTAL
B608	X	56	8'-9"	X		PEDESTAL
B509	X	36	33'-5"			BACKWALL - HORIZ.
B510	X	65	22'-5"	X		BACKWALL - VERT.
B511	X	40	7'-4"			PAVING BLOCK - HORIZ.
B512	X	65	5'-9"	X		BACKWALL/PAVING BLOCK - VERT.
B513	X	61	7'-4"	X		CORBEL - VERT.
B514	X	4	31'-11"			CORBEL - HORIZONTAL
B415	X	32	5'-1"			SIDE WALL - HORIZ.
B416	X	5	17'-10"	X		SIDE WALL - VERT. - SOUTH SIDE
B417	X	5	17'-8"	X		SIDE WALL - VERT. - NORTH SIDE
B618	X	14	9'-7"	X		PEDESTAL - HORIZONTAL
B519	X	26	1'-10"			BACKWALL - HORIZ. - AT CORNERS
B520	X	1	11'-6"			BODY/BACKWALL - VERT. - AT SOUTH CORNER
B521	X	1	10'-3"			BODY/BACKWALL - VERT. - AT NORTH CORNER
B522	X	8	5'-10"	X		ABUTMENT BACKWALL - VERT. - AT PPTS.
B623	X	20	11'-0"			SIGN SUPPORT - HORIZ. - N&S ENDS OF ABUT.
B624	X	8	11'-0"			SIGN SUPPORT - HORIZ. - N&S ENDS OF ABUT.
B625	X	18	18'-0"	X		SIGN SUPPORT - VERT. - N END OF ABUT.
B626	X	18	20'-2"	X		SIGN SUPPORT - VERT. - S. END OF ABUT.
B627	X	18	11'-11"	X		SIGN SUPPORT - VERT. - N&S ENDS OF ABUT
B628	X	14	14'-4"	X		SIGN SUPPORT - VERT. - N&S ENDS OF ABUT.
B629	X	9	15'-8"	X		SIGN SUPPORT - HORIZ. - N&S ENDS OF ABUT.
B630	X	4	18'-8"	X		SIGN SUPPORT - HORIZ. - N&S ENDS OF ABUT.
B931	X	20	12'-4"	X		SIGN SUPPORT - HORIZ. - N&S ENDS OF ABUT.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

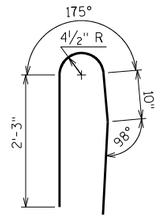
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
B505	1 SERIES OF 44	8'-9" TO 10'-5"

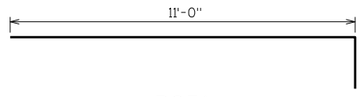
BUNDLE AND TAG EACH SERIES SEPARATELY.



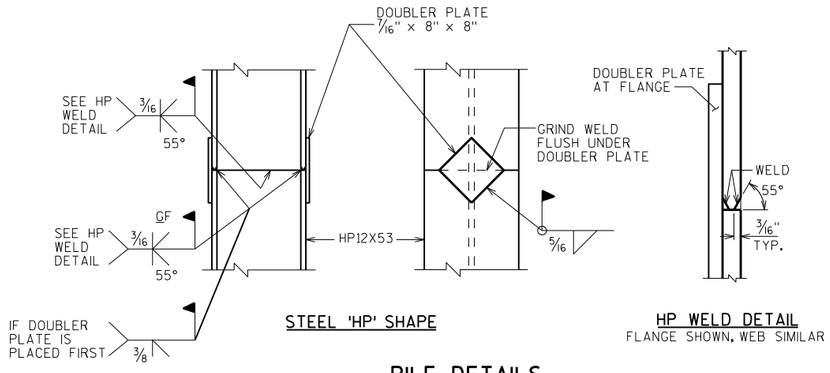
B513



B522



B931



PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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EAST ABUTMENT DETAILS 2

SHEET 13

2466

STATE PROJECT NUMBER

1060-33-80

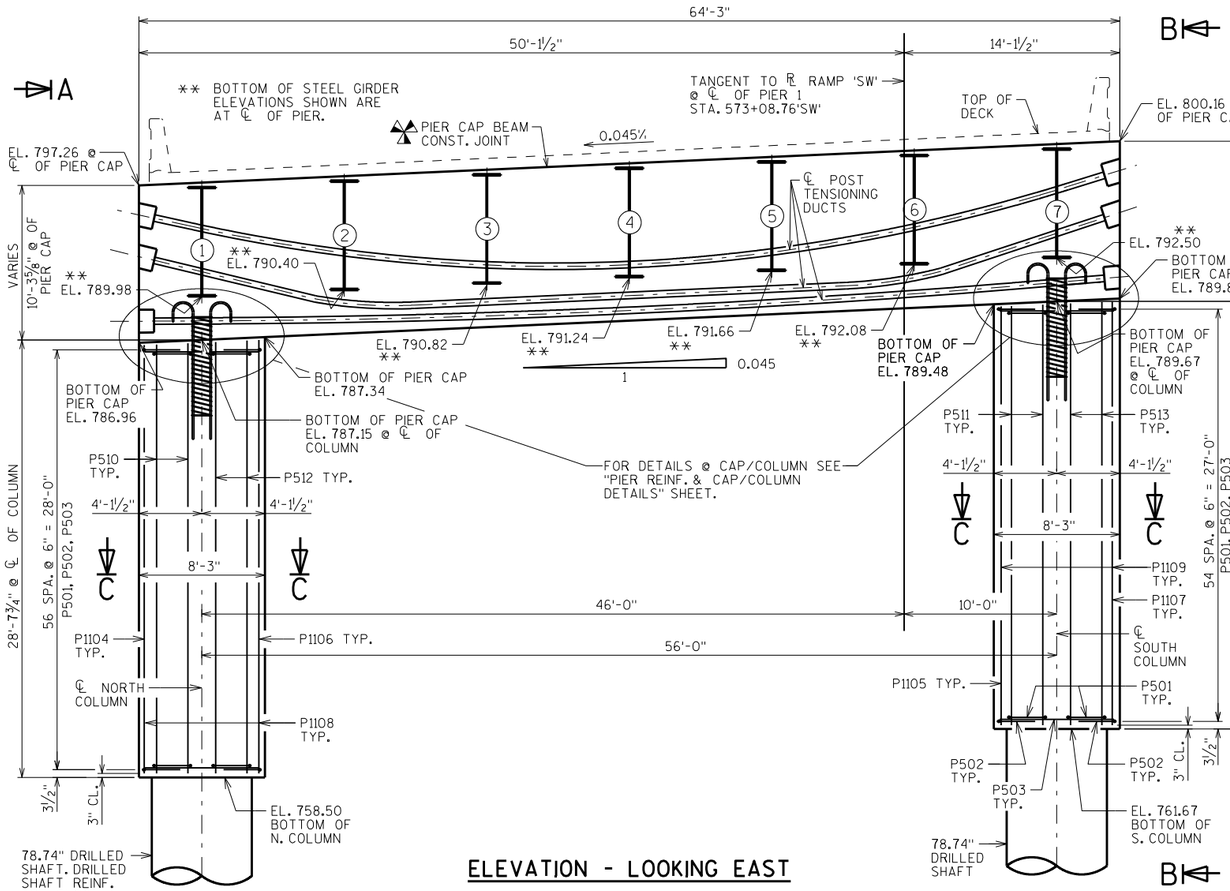
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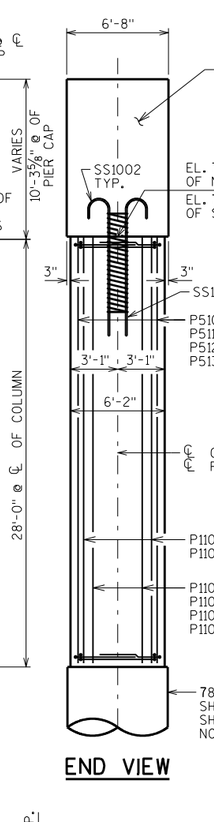
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STATE PROJECT NUMBER

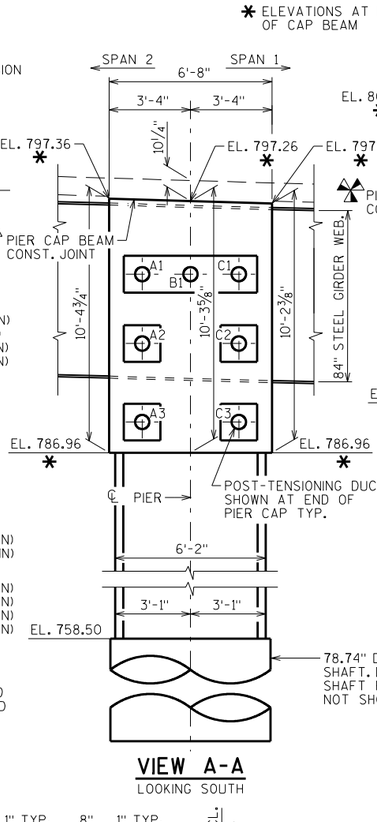
1060-33-80



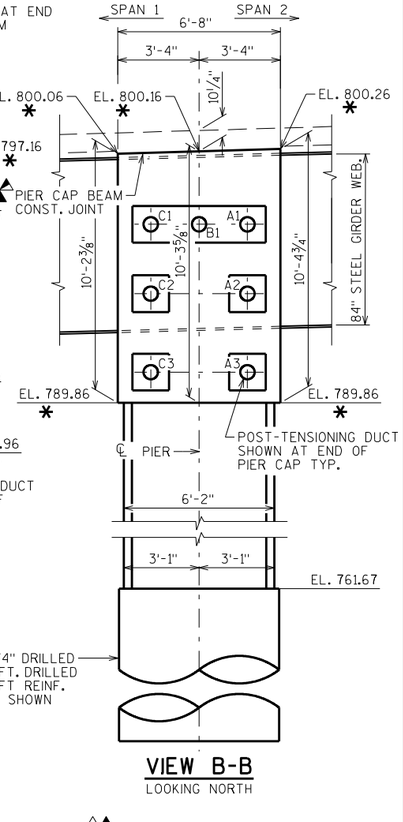
ELEVATION - LOOKING EAST



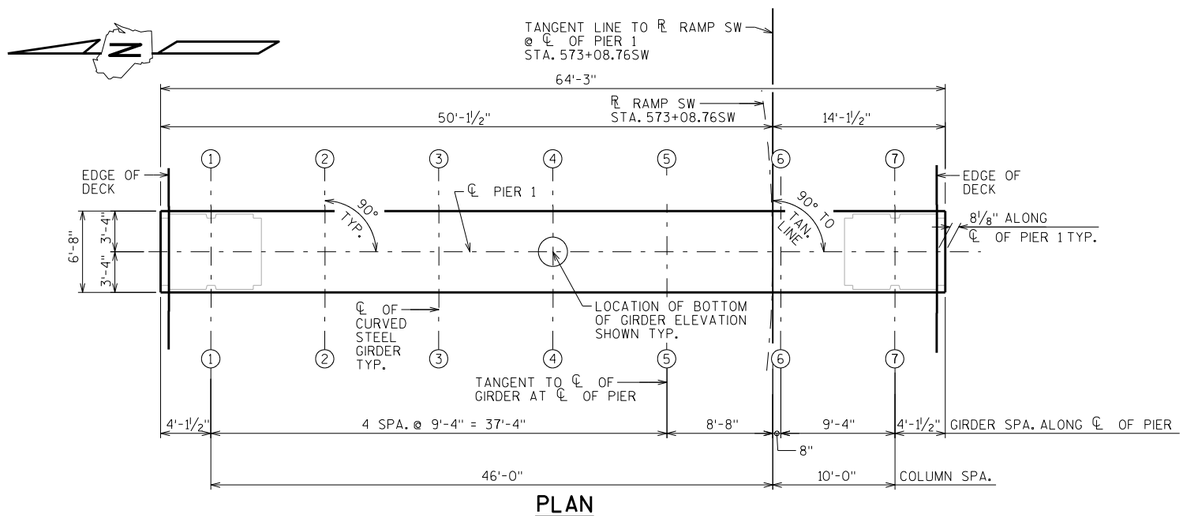
END VIEW



VIEW A-A
LOOKING SOUTH

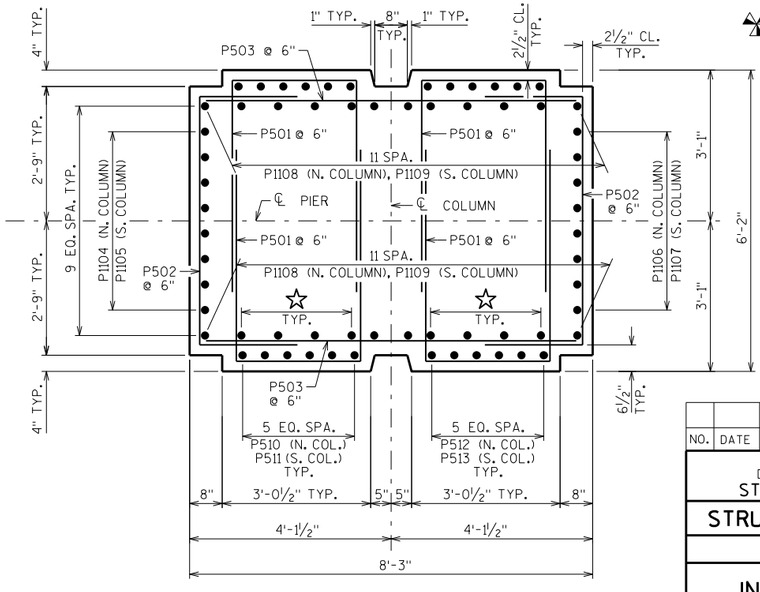


VIEW B-B
LOOKING NORTH



PLAN

℄ PIER 1 IS RADIAL TO ℞ RAMP 'SW' AND TO ℄ OF GIRDERS



SECTION C-C

☆ 3 SPA. SPACE TO MISS VERTICAL DRILLED SHAFT REINF.

PLACE PIER CAP BEAM CONSTRUCTION JOINT 10¼" BELOW TOP OF DECK. WHEN POURING THE PIER CAP BEAM, RECESS CONCRETE TO THE TOP FLANGE OF THE STEEL GIRDERS. STRIKE OFF AND LEAVE ROUGH WITHIN LIMITS OF DECK.

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INTEGRAL PIER 1

SHEET 14

2467

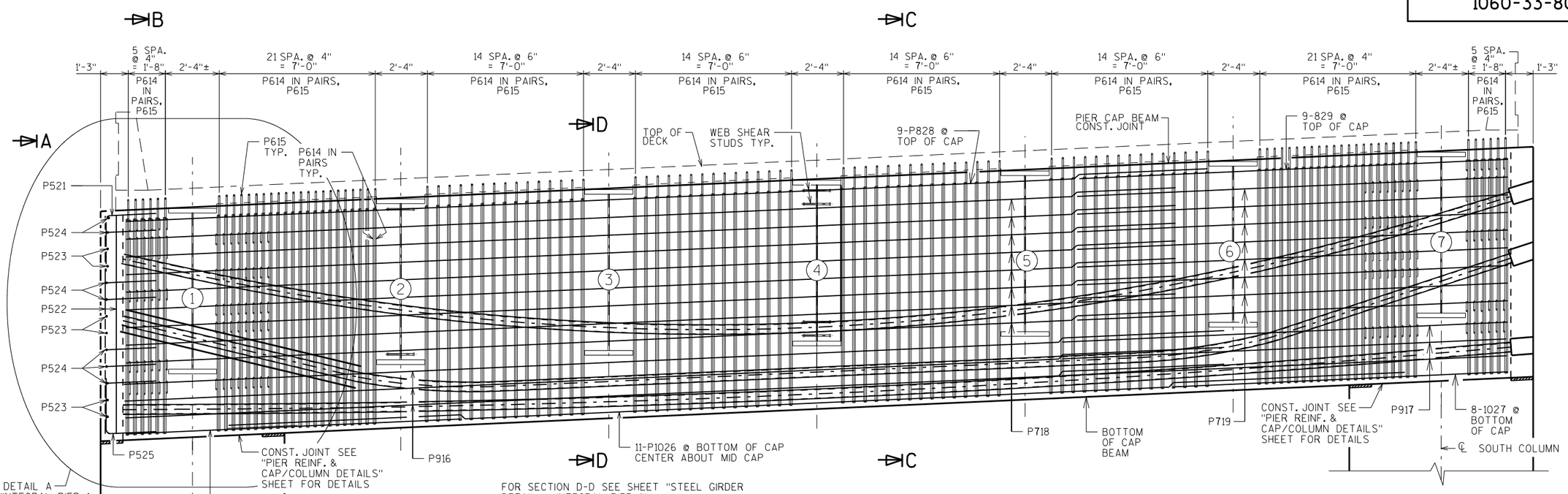
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STATE PROJECT NUMBER

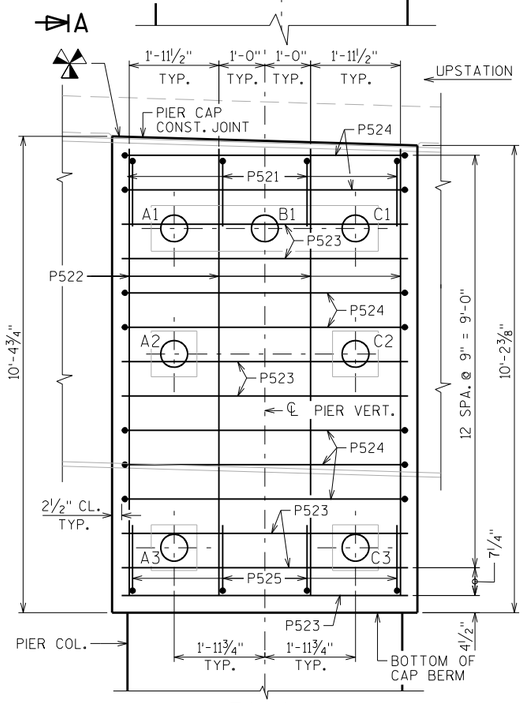
1060-33-80



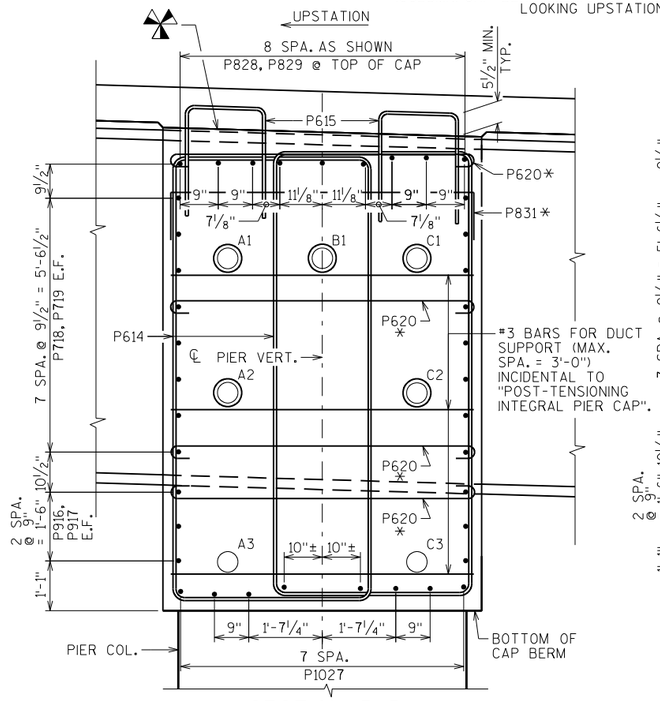
* SEE DETAIL A FOR LOCATION, SEE SHEET "INTEGRAL PIER CAP DETAIL A".

ELEVATION INTEGRAL PIER 1 - LOOKING EAST

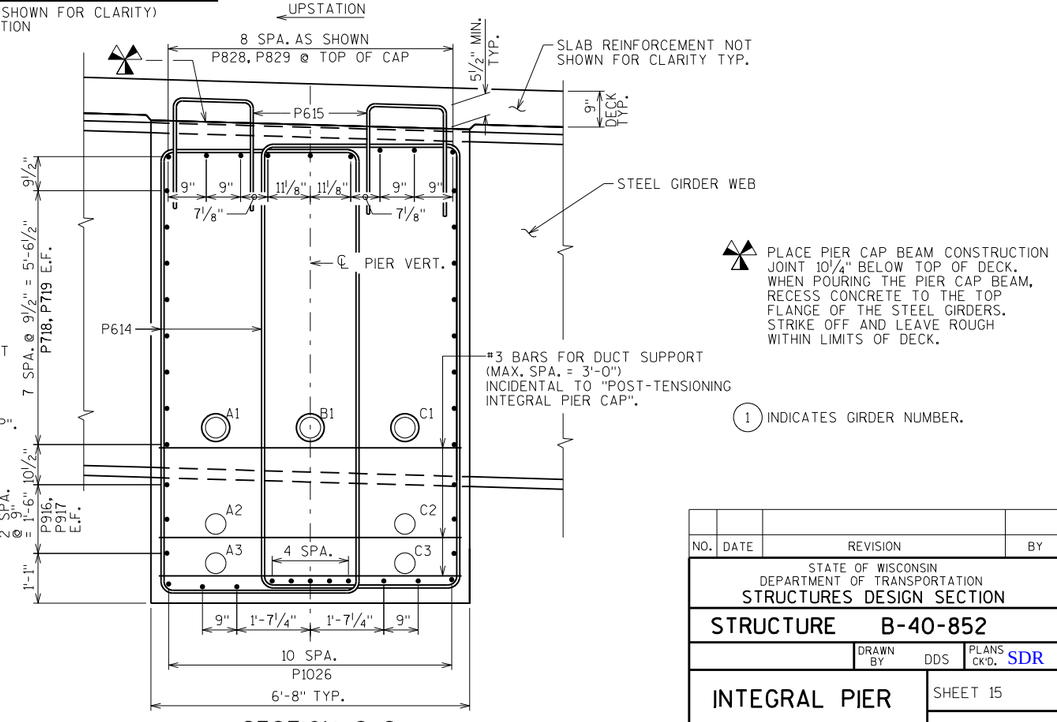
(COLUMN/CAP BEAM REINF. NOT SHOWN FOR CLARITY)
LOOKING UPSTATION



VIEW A-A



SECTION B-B



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

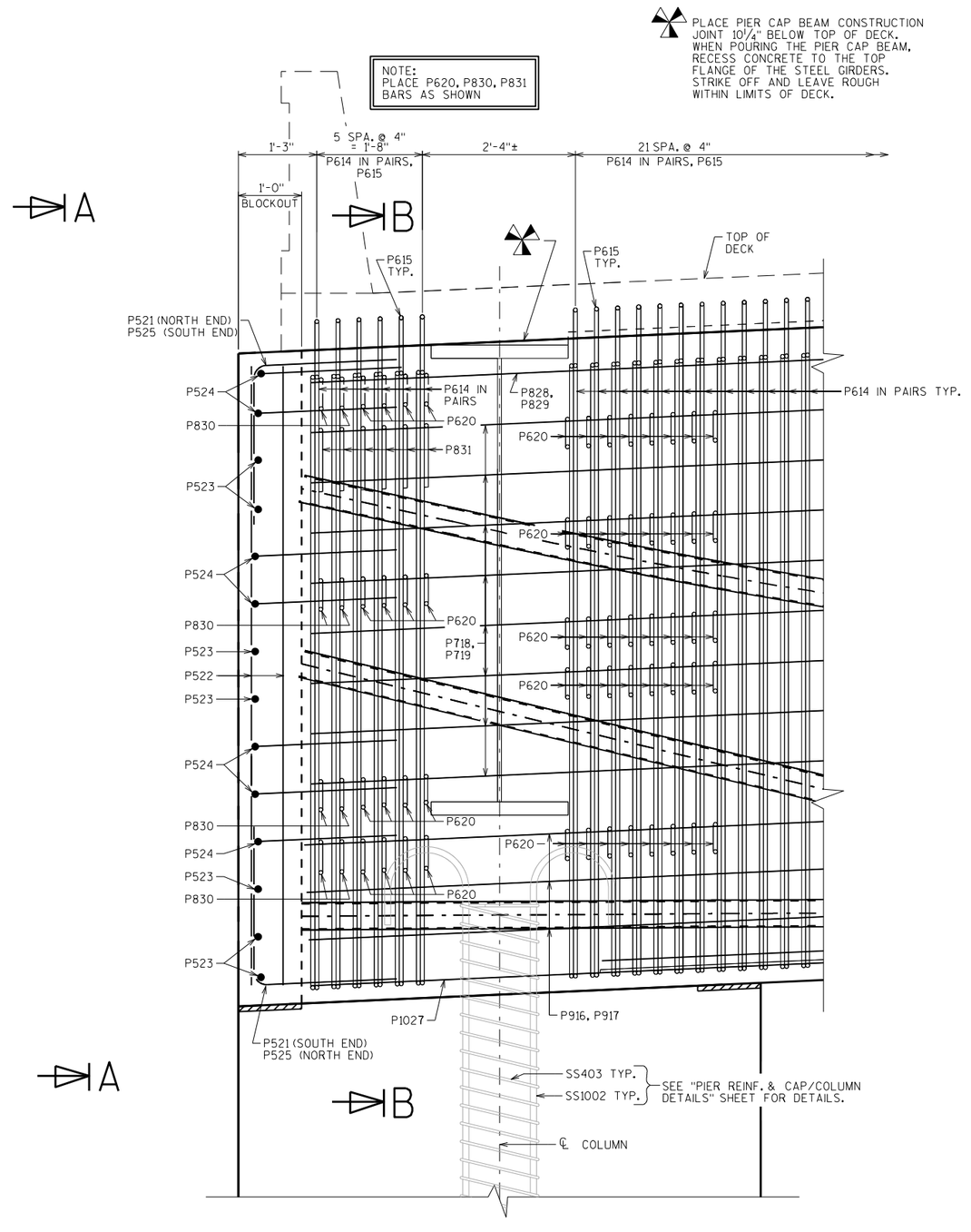
DRAWN BY DDS | PLANS CK'D. SDR

INTEGRAL PIER CAP REINF.

SHEET 15

2468

SCALE = 100



DETAIL A

FOR SECTIONS A-A & B-B SEE SHEET "INTEGRAL PIER CAP REINF."
TYP. BOTH NORTH AND SOUTH ENDS OF CAP

STATE PROJECT NUMBER

1060-33-80

CONSTRUCTION SEQUENCE:

1. CONSTRUCT TEMPORARY FALSEWORK TO SUPPORT STEEL GIRDERS AND CONCRETE PIER CAP. FALSEWORK SUPPORTING STEEL GIRDERS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE PIER AND REMAIN IN PLACE UNTIL POST-TENSIONING IS COMPLETE.
2. ERECT STEEL GIRDERS USING TEMPORARY FALSEWORK FOR SUPPORT.
3. CONSTRUCT PIER CAP. PLACE CAP CONCRETE TO PIER CAP CONSTRUCTION JOINT AT TOP OF PIER CAP.
4. STRESS ALL TENDONS AS PER STRESSING SEQUENCE AFTER CONCRETE HAS REACHED A MINIMUM STRENGTH OF 4,000 P.S.I.
5. GROUT ALL TENDONS UPON ENGINEER'S APPROVAL AND REMOVE TEMPORARY FALSE WORK AT PIER.
6. CONSTRUCT CONCRETE DECK SLAB.
7. CONSTRUCT BRIDGE BARRIERS.

NOTES:

PIER 1 (POST-TENSIONED CAP BEAM AND COLUMNS) CONCRETE SHALL BE f'c = 5,000 P.S.I. THE MINIMUM COMPRESSION STRENGTH OF THE CONCRETE AT THE TIME OF POST-TENSIONING SHALL BE 4,000 P.S.I.

DUCTS SHALL BE EITHER POLYPROPYLENE (PP) OR POLYETHYLENE (HDPE) DUCTS. 5⅛" OUTSIDE DIAMETER WERE ASSUMED IN DESIGN.

0.6" DIA. LOW RELAXATION STRANDS GRADE 270 KSI SHALL BE USED. AREA OF 1 STRAND = 0.217 SQ. IN. ALL TENDONS ARE 27 STRAND.

DESIGN IS BASED ON A WOBBLE COEFFICENT OF K=0.0002, A FRICTION COEFFICENT OF u=.14 AND AN ANCHOR SET OF 0.375".

SINGLE END STRESSING SHALL BE PERFORMED FROM THE JACKING END ANCHORAGE ONLY.

SPIRAL AND OTHER LOCAL ANCHORAGE ZONE REINFORCEMENT IS TO BE DESIGNED BY THE POST-TENSIONING SUPPLIER AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

REINFORCING THAT INTERFERES WITH POST-TENSIONING TENDONS SHALL BE ADJUSTED AS APPROVED BY THE ENGINEER.

STRESSING SEQUENCE, JACKING LOCATION, TENDON FORCE

TENDON	STRESSING SEQUENCE	TENDON SIZE	TENDON TO BE STRESSED AT	JACKING FORCE (KIPS)
B1	1	27 X 0.6 IN.	NORTH END OF CAP	1186
A2	2	27 X 0.6 IN.	NORTH END OF CAP	1186
C2	3	27 X 0.6 IN.	NORTH END OF CAP	1186
A1	4	27 X 0.6 IN.	NORTH END OF CAP	1186
C1	5	27 X 0.6 IN.	NORTH END OF CAP	1186
A3	6	27 X 0.6 IN.	NORTH END OF CAP	1186
C3	7	27 X 0.6 IN.	NORTH END OF CAP	1186

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STRUCTURE B-40-852

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INTEGRAL PIER 1
DETAIL A

SHEET 16

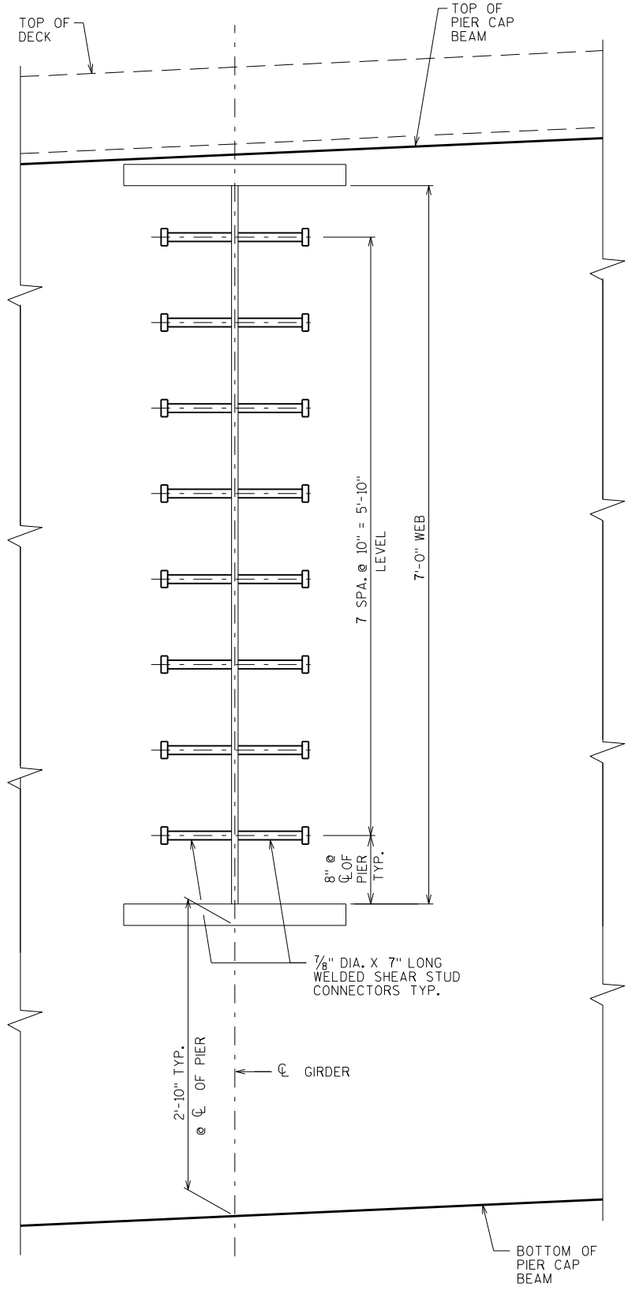
2469

SCALE =

STATE PROJECT NUMBER

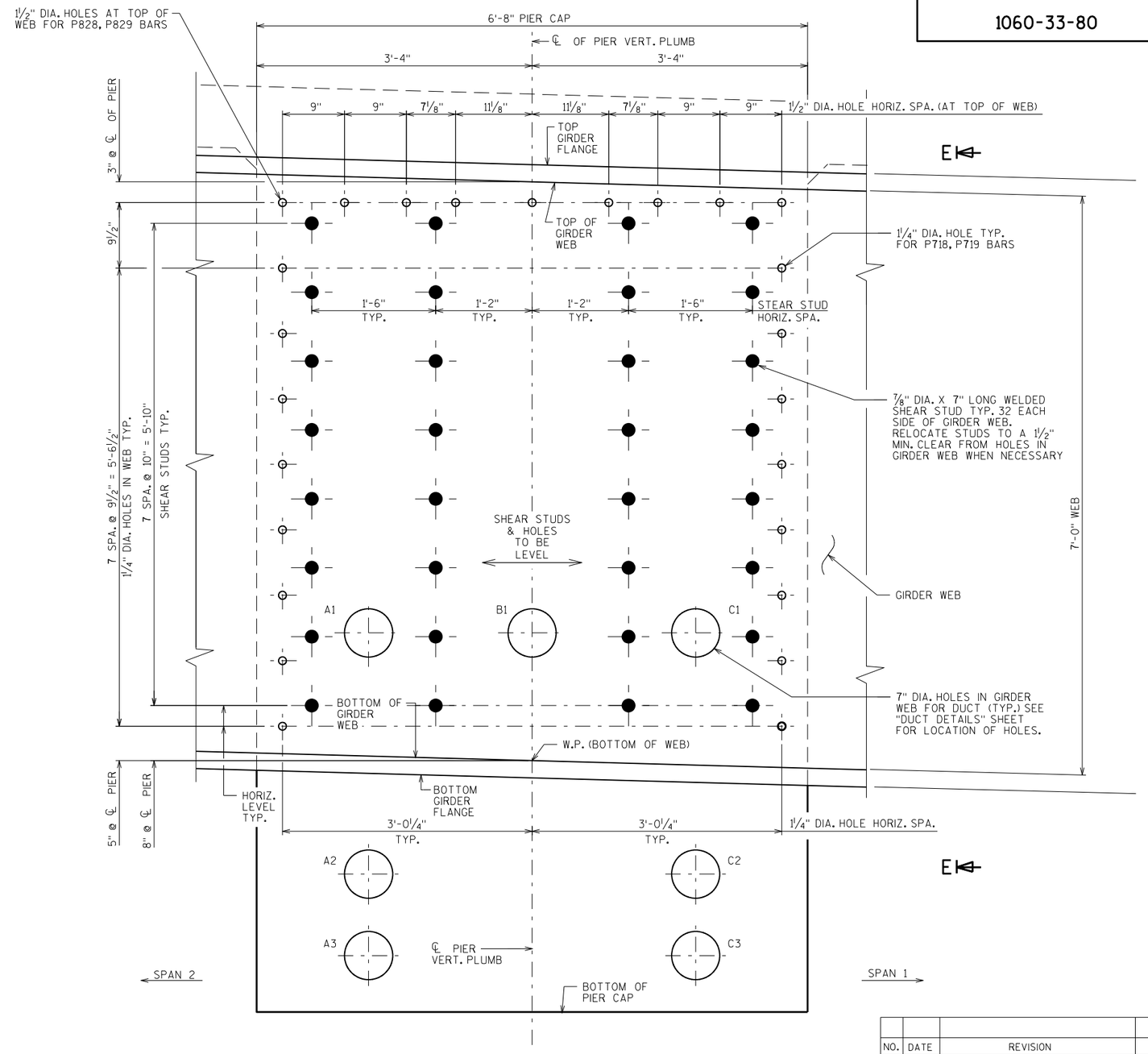
1060-33-80

NOTE:
SHEAR STUDS ON TOP FLANGE NOT SHOWN.



SECTION E-E

TYP. GIRDER SECTION AT PIER 1
64 WEB SHEAR STUDS PER GIRDER



SECTION D-D

TYPICAL GIRDER ELEVATION @ PIER 1
TYP. ALL GIRDERS
(SHOWING GIRDER WEB SHEAR STUDS AND HOLES IN WEB FOR PIER REINF.)
PIER CAP BEAM REINF. NOT SHOWN

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STRUCTURE B-40-852

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STEEL GIRDER DETAIL @ INTEGRAL PIER 1

SHEET 17

2470

SCALE = 5

8

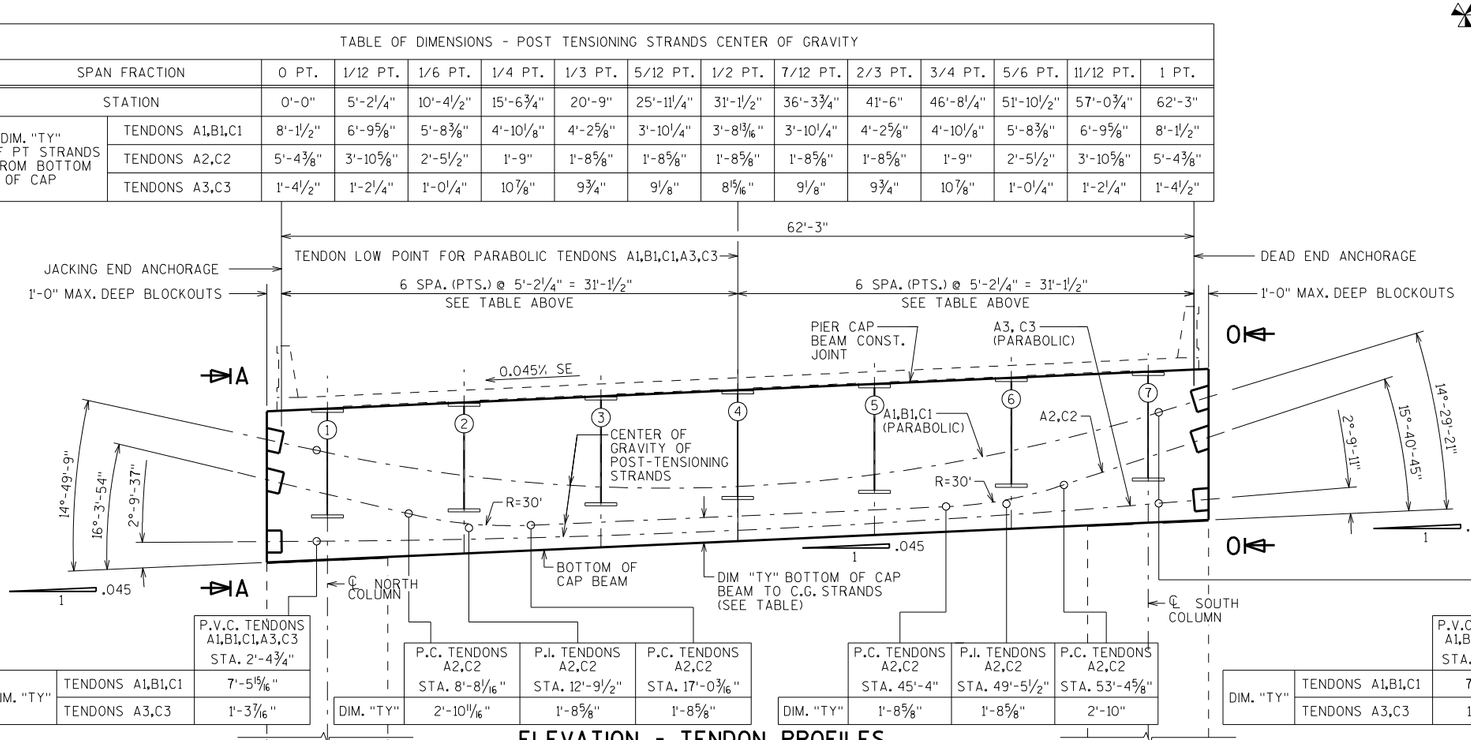
8

TABLE OF DIMENSIONS - POST TENSIONING STRANDS CENTER OF GRAVITY														
SPAN FRACTION		0 PT.	1/12 PT.	1/6 PT.	1/4 PT.	1/3 PT.	5/12 PT.	1/2 PT.	7/12 PT.	2/3 PT.	3/4 PT.	5/6 PT.	11/12 PT.	1 PT.
STATION		0'-0"	5'-2 1/4"	10'-4 1/2"	15'-6 3/4"	20'-9"	25'-11 1/4"	31'-1 1/2"	36'-3 3/4"	41'-6"	46'-8 1/4"	51'-10 1/2"	57'-0 3/4"	62'-3"
DIM. "TY" CG OF PT STRANDS DIM. FROM BOTTOM OF CAP	TENDONS A1,B1,C1	8'-1 1/2"	6'-9 5/8"	5'-8 3/8"	4'-10 1/8"	4'-2 5/8"	3'-10 1/4"	3'-8 13/16"	3'-10 1/4"	4'-2 5/8"	4'-10 1/8"	5'-8 3/8"	6'-9 5/8"	8'-1 1/2"
	TENDONS A2,C2	5'-4 3/8"	3'-10 5/8"	2'-5 1/2"	1'-9"	1'-8 5/8"	1'-8 5/8"	1'-8 5/8"	1'-8 5/8"	1'-8 5/8"	1'-9"	2'-5 1/2"	3'-10 5/8"	5'-4 3/8"
	TENDONS A3,C3	1'-4 1/2"	1'-2 1/4"	1'-0 1/4"	10 7/8"	9 3/4"	9 1/8"	8 15/16"	9 1/8"	9 3/4"	10 7/8"	1'-0 1/4"	1'-2 1/4"	1'-4 1/2"

PLACE PIER CAP BEAM CONSTRUCTION JOINT 10 1/4" BELOW TOP OF DECK. WHEN POURING THE PIER CAP BEAM, RECESS CONCRETE TO THE TOP FLANGE OF THE STEEL GIRDERS. STRIKE OFF AND LEAVE ROUGH WITHIN LIMITS OF DECK.

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		P.V.C. TENDONS A1,B1,C1,A3,C3 STA. 2'-4 3/4"
DIM. "TY"	TENDONS A1,B1,C1	7'-5 15/16"
	TENDONS A3,C3	1'-3 7/16"

	P.C. TENDONS A2,C2 STA. 8'-8 1/16"	P.I. TENDONS A2,C2 STA. 12'-9 1/2"	P.C. TENDONS A2,C2 STA. 17'-0 3/16"
DIM. "TY"	2'-10 11/16"	1'-8 5/8"	1'-8 5/8"

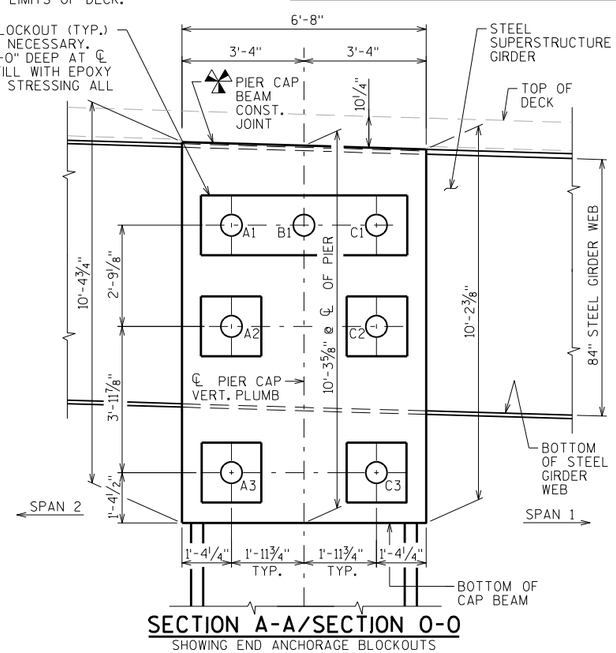
	P.C. TENDONS A2,C2 STA. 45'-4"	P.I. TENDONS A2,C2 STA. 49'-5 1/2"	P.C. TENDONS A2,C2 STA. 53'-4 5/8"
DIM. "TY"	1'-8 5/8"	1'-8 5/8"	2'-10"

		P.V.C. TENDONS A1,B1,C1,A3,C3 STA. 59'-10 1/4"
DIM. "TY"	TENDONS A1,B1,C1	7'-5 15/16"
	TENDONS A3,C3	1'-3 7/16"

4'-1 1/2" 4'-1 1/2" 4'-1 1/2" 4'-1 1/2"

ELEVATION - TENDON PROFILES

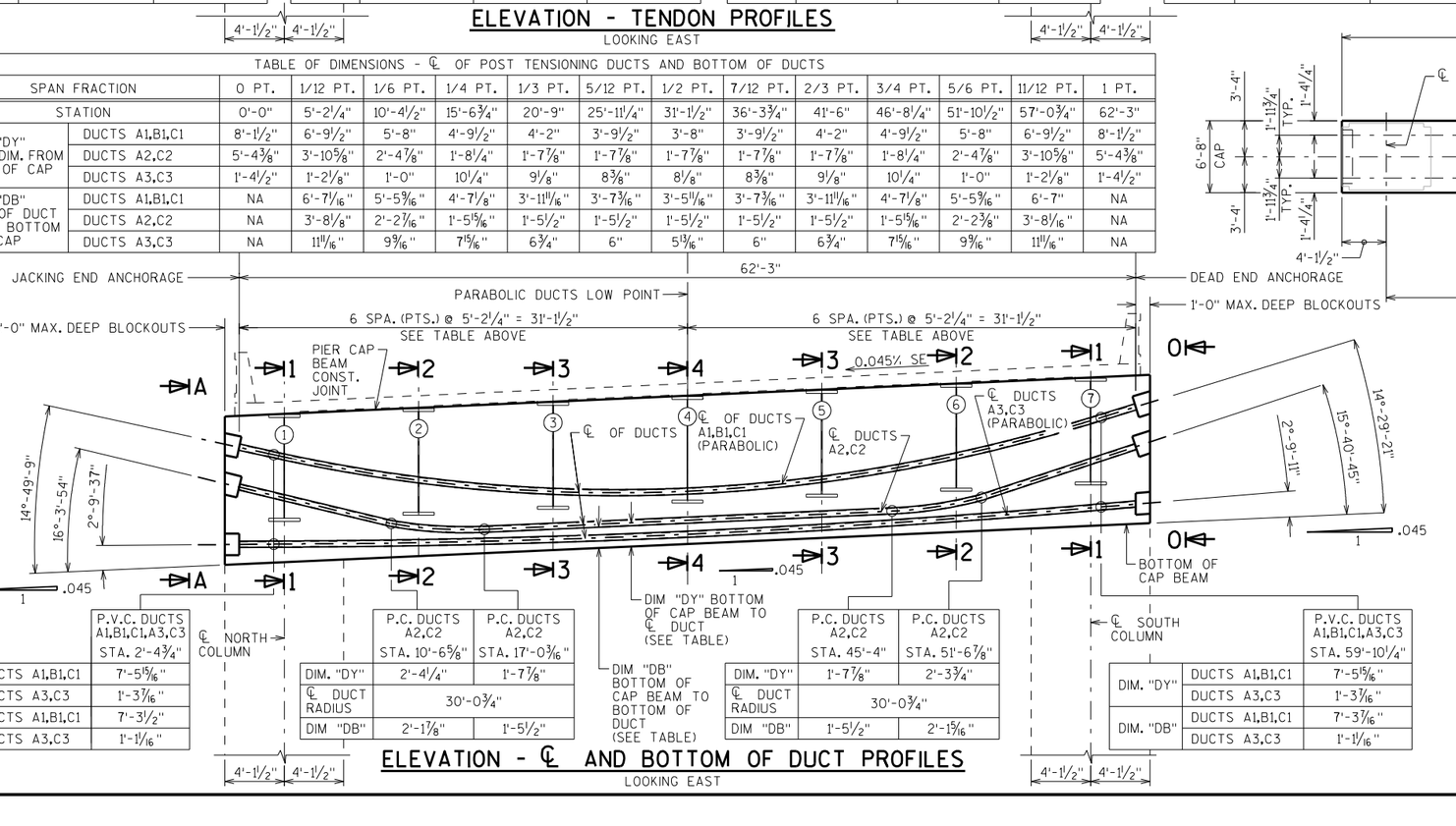
LOOKING EAST



SECTION A-A/SECTION 0-0

SHOWING END ANCHORAGE BLOCKOUTS
NORTH END SHOWN - SOUTH END MIRRORED

TABLE OF DIMENSIONS - ℄ OF POST TENSIONING DUCTS AND BOTTOM OF DUCTS														
SPAN FRACTION		0 PT.	1/12 PT.	1/6 PT.	1/4 PT.	1/3 PT.	5/12 PT.	1/2 PT.	7/12 PT.	2/3 PT.	3/4 PT.	5/6 PT.	11/12 PT.	1 PT.
STATION		0'-0"	5'-2 1/4"	10'-4 1/2"	15'-6 3/4"	20'-9"	25'-11 1/4"	31'-1 1/2"	36'-3 3/4"	41'-6"	46'-8 1/4"	51'-10 1/2"	57'-0 3/4"	62'-3"
DIM. "DY" ℄ DUCT DIM. FROM BOTTOM OF CAP	DUCTS A1,B1,C1	8'-1 1/2"	6'-9 1/2"	5'-8"	4'-9 1/2"	4'-2"	3'-9 1/2"	3'-8"	3'-9 1/2"	4'-2"	4'-9 1/2"	5'-8"	6'-9 1/2"	8'-1 1/2"
	DUCTS A2,C2	5'-4 3/8"	3'-10 5/8"	2'-4 7/8"	1'-8 1/4"	1'-7 7/8"	1'-7 7/8"	1'-7 7/8"	1'-7 7/8"	1'-7 7/8"	1'-8 1/4"	2'-4 7/8"	3'-10 5/8"	5'-4 3/8"
	DUCTS A3,C3	1'-4 1/2"	1'-2 1/8"	1'-0"	10 1/4"	9 1/8"	8 3/8"	8 1/8"	8 3/8"	9 1/8"	10 1/4"	1'-0"	1'-2 1/8"	1'-4 1/2"
DIM. "DB" BOTTOM OF DUCT DIM. FROM BOTTOM OF CAP	DUCTS A1,B1,C1	NA	6'-7 1/16"	5'-5 5/16"	4'-7 1/8"	3'-11 11/16"	3'-7 3/16"	3'-5 11/16"	3'-7 3/16"	3'-11 11/16"	4'-7 1/8"	5'-5 5/16"	6'-7"	NA
	DUCTS A2,C2	NA	3'-8 1/8"	2'-2 7/16"	1'-5 5/16"	1'-5 1/2"	1'-5 1/2"	1'-5 1/2"	1'-5 1/2"	1'-5 1/2"	1'-5 5/16"	2'-2 3/8"	3'-8 1/16"	NA
	DUCTS A3,C3	NA	11 11/16"	9 3/16"	7 15/16"	6 3/4"	6"	5 13/16"	6"	6 3/4"	7 15/16"	9 3/16"	11 11/16"	NA



		P.V.C. DUCTS A1,B1,C1,A3,C3 STA. 2'-4 3/4"
DIM. "DY"	DUCTS A1,B1,C1	7'-5 15/16"
	DUCTS A3,C3	1'-3 7/16"
DIM. "DB"	DUCTS A1,B1,C1	7'-3 1/2"
	DUCTS A3,C3	1'-1 1/16"

	P.C. DUCTS A2,C2 STA. 10'-6 5/8"	P.C. DUCTS A2,C2 STA. 17'-0 3/16"
DIM. "DY"	2'-4 1/4"	1'-7 7/8"
℄ DUCT RADIUS	30'-0 3/4"	
DIM "DB"	2'-1 7/8"	1'-5 1/2"

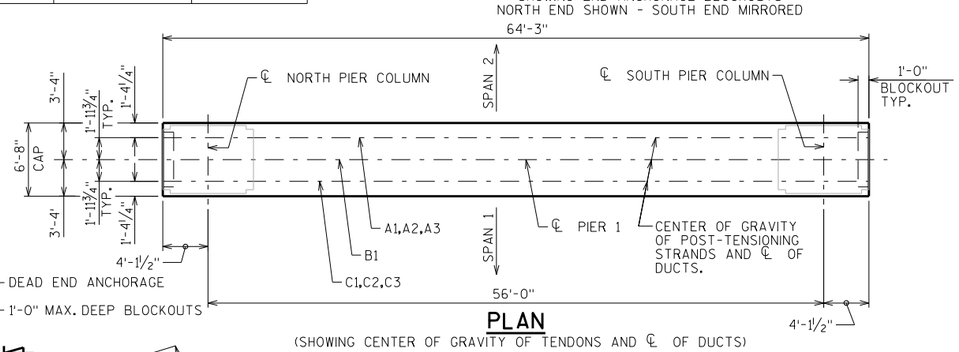
	P.C. DUCTS A2,C2 STA. 45'-4"	P.C. DUCTS A2,C2 STA. 51'-6 7/8"
DIM. "DY"	1'-7 7/8"	2'-3 3/4"
℄ DUCT RADIUS	30'-0 3/4"	
DIM "DB"	1'-5 1/2"	2'-1 5/16"

		P.V.C. DUCTS A1,B1,C1,A3,C3 STA. 59'-10 1/4"
DIM. "DY"	DUCTS A1,B1,C1	7'-5 15/16"
	DUCTS A3,C3	1'-3 7/16"
DIM. "DB"	DUCTS A1,B1,C1	7'-3 7/16"
	DUCTS A3,C3	1'-1 1/16"

4'-1 1/2" 4'-1 1/2" 4'-1 1/2" 4'-1 1/2"

ELEVATION - ℄ AND BOTTOM OF DUCT PROFILES

LOOKING EAST



PLAN

(SHOWING CENTER OF GRAVITY OF TENDONS AND ℄ OF DUCTS)

NOTE:
FOR CROSS SECTIONS 1-1, 2-2, 3-3 & 4-4 SEE DUCT DETAILS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

TENDON & DUCT DETAILS

SHEET 18

2471

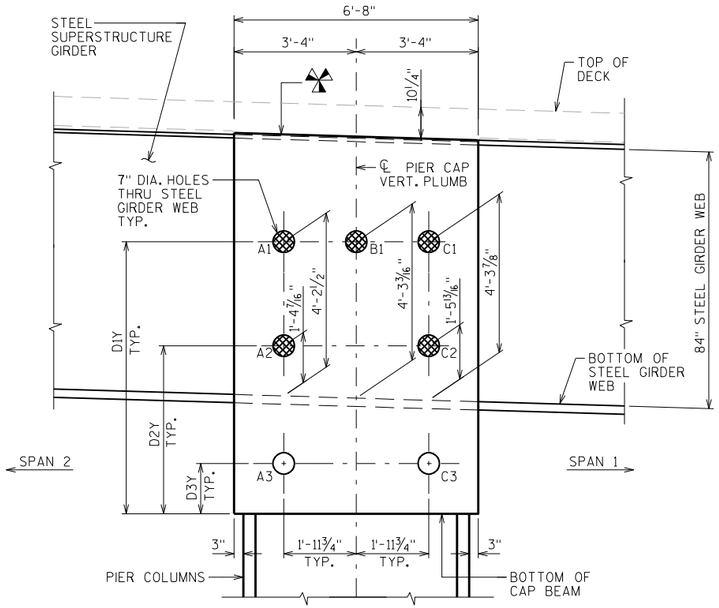
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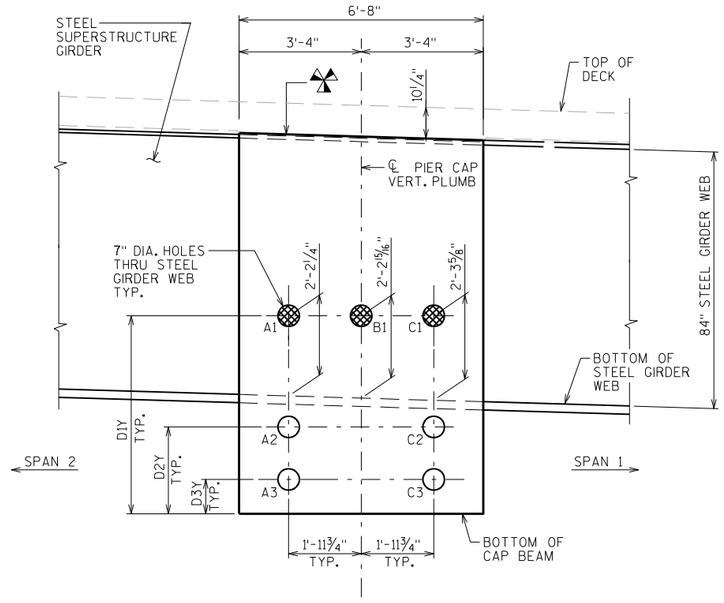
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STATE PROJECT NUMBER

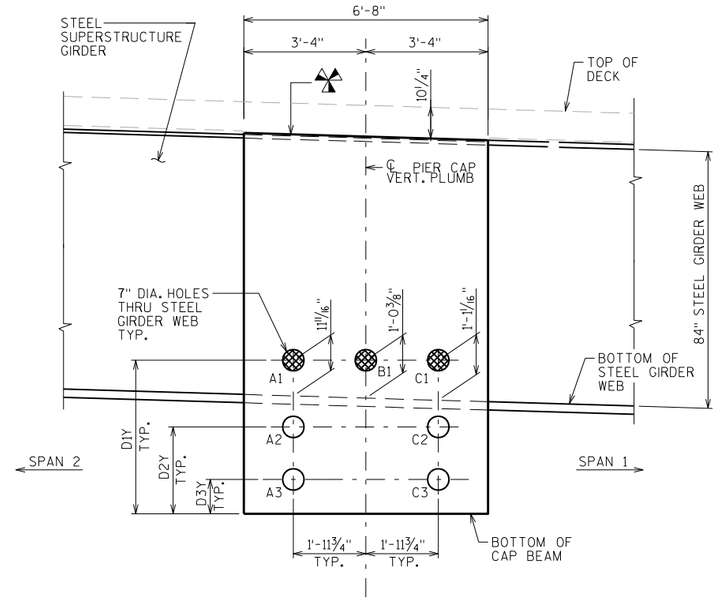
1060-33-80



SECTION 1-1
GIRDERS 1&7
LOOKING SOUTH



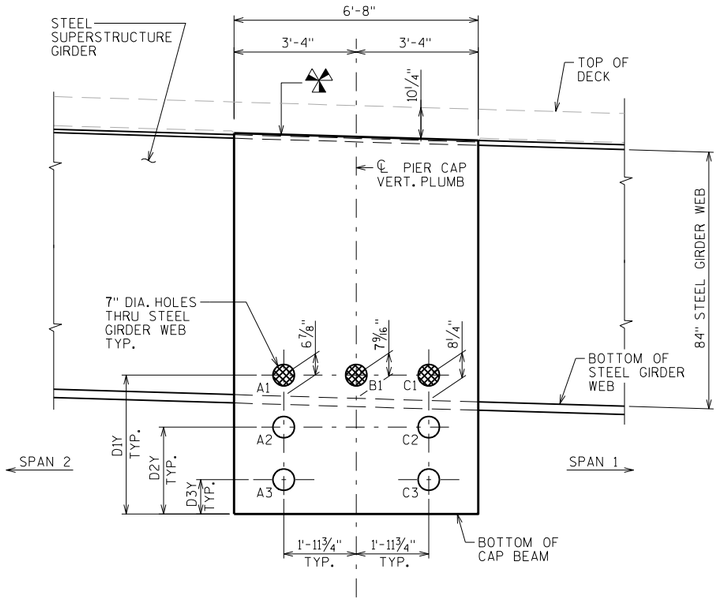
SECTION 2-2
GIRDERS 2&6
LOOKING SOUTH



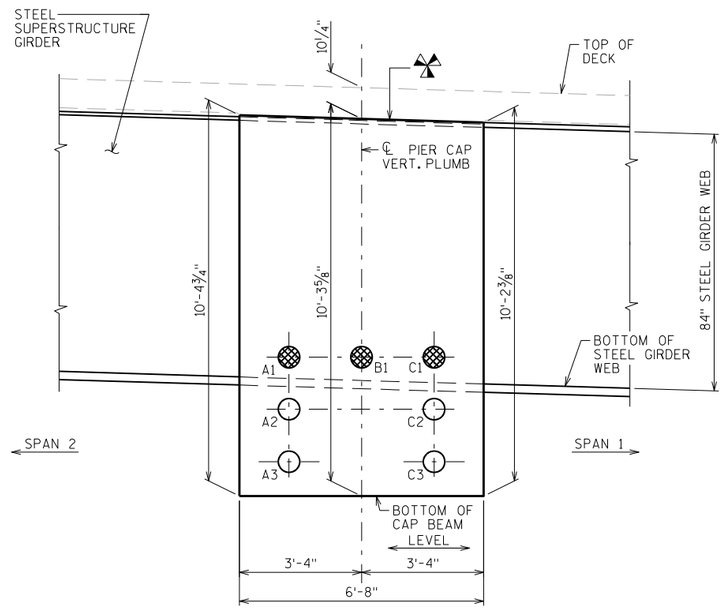
SECTION 3-3
GIRDERS 3&5
LOOKING SOUTH

= 7" DIA. HOLE THRU STEEL PLATE GIRDER WEB

= PIER CAP BEAM CONST. JOINT. PLACE 10¼" BELOW TOP OF DECK. STRIKE OFF AND LEAVE ROUGH WITHIN LIMITS OF DECK. WHEN POURING THE PIER CAP BEAM RECESS CONCRETE TO THE TOP FLANGE OF THE STEEL GIRDERS.



SECTION 4-4
GIRDER 4
LOOKING SOUTH



CAP BEAM DIMENSIONS
TYP. AT ALL SECTIONS

℄ OF DUCT DIMENSION FROM THE BOTTOM OF PIER CAP BEAM MEASURED AT THE ℄ OF GIRDER WEB.

	D1Y	D2Y	D3Y
GIRDER 1	7'-3¹¹⁄₁₆"	4'-5⅝"	1'-3¹⁄₁₆"
GIRDER 2	5'-3⅞"	2'-0"	11¼"
GIRDER 3	4'-0⅞"	1'-7⅞"	8¹⁵⁄₁₆"
GIRDER 4	3'-8¹⁄₁₆"	1'-7⅞"	8⅜"
GIRDER 5	4'-0⅞"	1'-7⅞"	8¹⁵⁄₁₆"
GIRDER 6	5'-3⅞"	2'-0"	11¼"
GIRDER 7	7'-3¹¹⁄₁₆"	4'-5⅝"	1'-3¹⁄₁₆"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

DUCT DETAILS

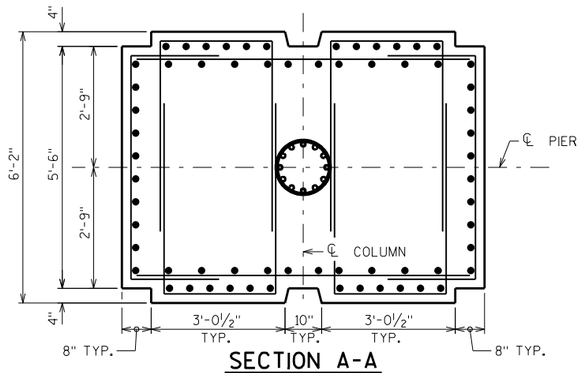
SHEET 19

2472

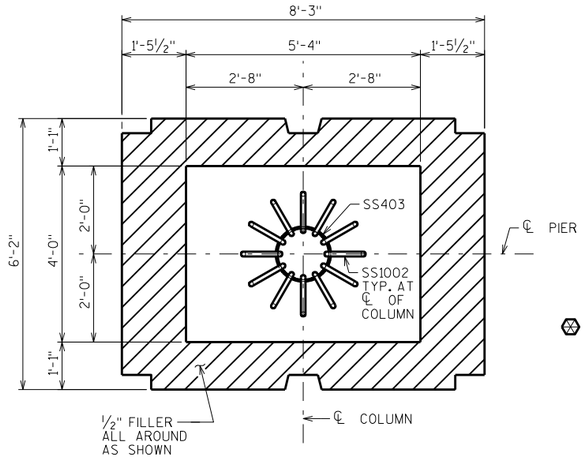
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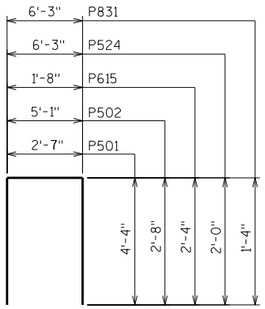
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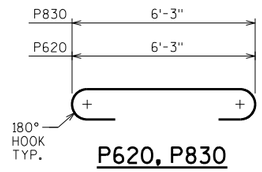
SECTION A-A



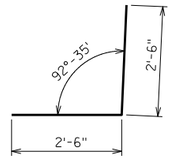
PLAN VIEW - TOP OF PIER COLUMN



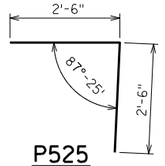
P501, P502, P615, P524, P831



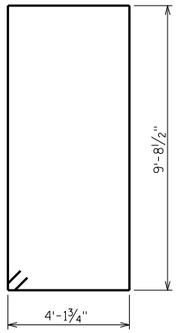
P620, P830



P521

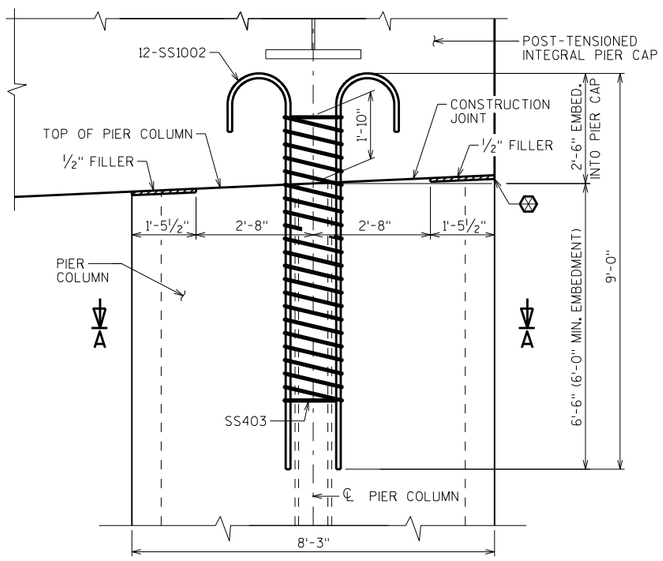


P525



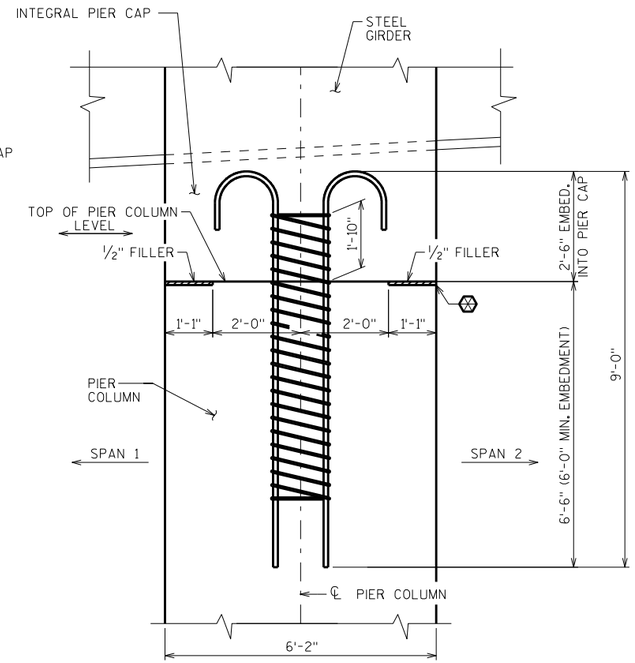
P614

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



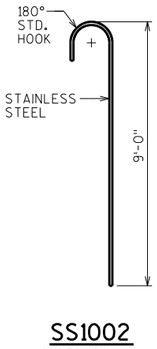
ELEVATION - LOOKING EAST

SOUTH COLUMN SHOWN - NORTH COLUMN SIMILAR



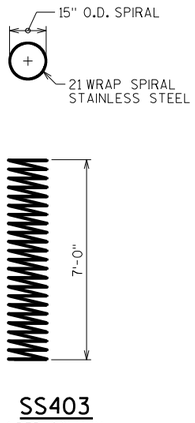
END VIEW

SOUTH COLUMN SHOWN - NORTH COLUMN SIMILAR



SS1002

12 PER COLUMN



SS403

1 PER COLUMN

STATE PROJECT NUMBER

1060-33-80

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P501	X	448	11'-0"	X		PIER COLUMNS - HORIZ.
P502	X	224	10'-2"	X		PIER COLUMNS - HORIZ.
P503	X	224	7'-9"			PIER COLUMNS - HORIZ.
P1104	X	8	28'-1"			NORTH PIER COLUMN - VERT.
P1105	X	8	27'-4"			SOUTH PIER COLUMN - VERT.
P1106	X	8	28'-5"			NORTH PIER COLUMN - VERT.
P1107	X	8	27'-9"			SOUTH PIER COLUMN - VERT.
P1108	X	24	28'-3"		⚠	NORTH PIER COLUMN - VERT.
P1109	X	24	27'-6"		⚠	SOUTH PIER COLUMN - VERT.
P510	X	12	28'-1"			NORTH PIER COLUMN - VERT.
P511	X	12	27'-5"			SOUTH PIER COLUMN - VERT.
P512	X	12	28'-3"			NORTH PIER COLUMN - VERT.
P513	X	12	27'-7"			SOUTH PIER COLUMN - VERT.
P614	X	232	28'-7"	X		PIER CAP - STIRRUP
P615	X	116	6'-0"	X		PIER CAP - DECK TIE BARS
P916	X	6	49'-3"			PIER CAP - SIDES - HORIZ.
P917	X	6	21'-3"			PIER CAP - SIDES - HORIZ.
P718	X	16	48'-0"			PIER CAP - SIDES - HORIZ.
P719	X	16	19'-10"			PIER CAP - SIDES - HORIZ.
P620	X	112	7'-7"	X		PIER CAP - HORIZ. - AT CAP ENDS
P521	X	8	4'-11"	X		PIER CAP ENDS
P522	X	12	9'-8"			PIER CAP ENDS - VERT.
P523	X	14	6'-3"			PIER CAP ENDS - HORIZ.
P524	X	14	11'-0"	X		PIER CAP ENDS - HORIZ.
P525	X	8	4'-11"	X		PIER CAP ENDS
P1026	X	11	52'-9"			PIER CAP - BOTTOM - HORIZ.
P1027	X	16	15'-0"			PIER CAP - BOTTOM AT ENDS - HORIZ.
P828	X	9	48'-6"			PIER CAP - TOP - HORIZ.
P829	X	9	20'-6"			PIER CAP - TOP - HORIZ.
P830	X	16	8'-1"	X		PIER CAP - HORIZ. AT CAP ENDS
P831	X	12	8'-6"	X		PIER CAP - HORIZ. AT CAP ENDS
SS1002		24	10'-5"	X		COLUMN/PIER DOWELS
SS403		2	82'-9"	X		COLUMN/PIER CAP SPIRAL

STAINLESS STEEL

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
P1108	2 SERIES OF 12	28'-1" TO 28'-5"
P1109	2 SERIES OF 12	27'-4" TO 27'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

PIER REINF. & CAP /COLUMN DETAILS

SHEET 20

2473

SCALE = 5

8

8

STATE PROJECT NUMBER

1060-33-80

DRILLED SHAFT DATA

DRILLED SHAFT LOCATION	TOP OF SHAFT ELEVATION	BOTTOM OF SHAFT ELEVATION	SHAFT LENGTH (FT.)	SHAFT VOLUME (CY.)	INSTRUMENTATION
NORTH COLUMN	758.50	690.00	68.5	86.0	CSL TUBES/TIP TESTING
SOUTH COLUMN	761.67	683.00	78.67	99.0	CSL TUBES/TIP TESTING

■ 8-2" DIA. CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE GROUT THE PIER DRILLED SHAFT.

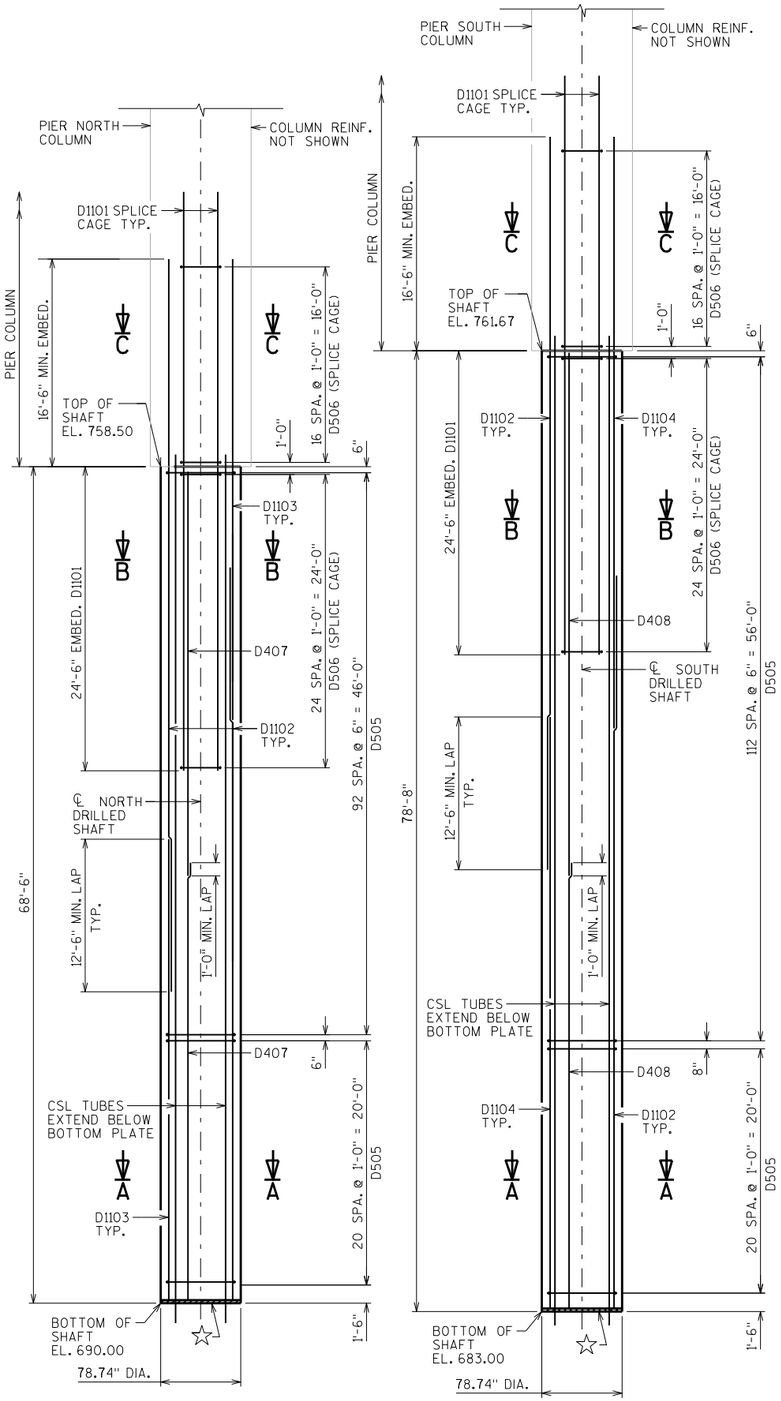
◭ 8-THERMAL WIRE FOR TIP TESTING DISTRIBUTE 7 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINF. TIED TO VERTICAL BARS AND 1 THERMAL WIRE OFFSET 2 TO 3 INCHES.

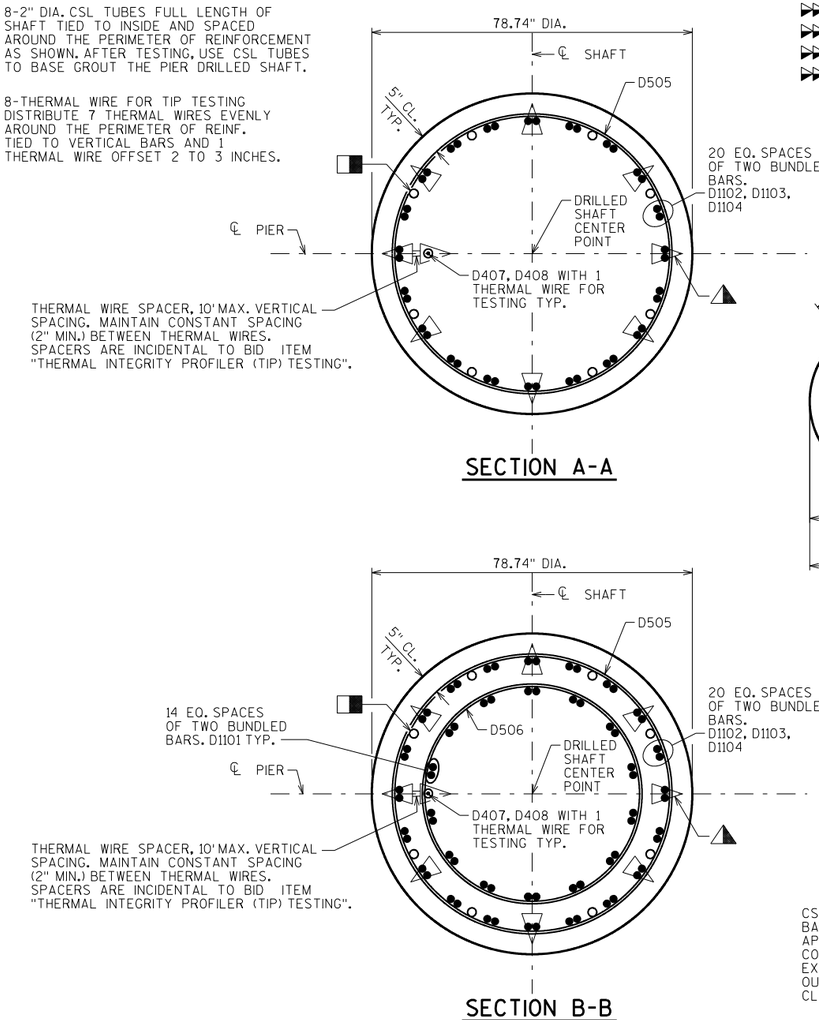
BILL OF BARS

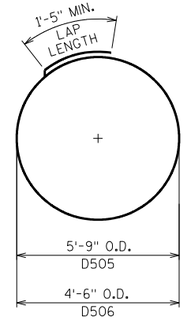
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
▶▶▶ D1101		56	47'-0"			SPLICE CAGE - VERT.
▶▶▶ D1102		80	60'-0"			DRILLED SHAFT - VERT.
▶▶▶ D1103		40	38'-0"			NORTH DRILLED SHAFT - VERT.
▶▶▶ D1104		40	48'-0"			SOUTH DRILLED SHAFT - VERT.
D505		248	19'-6"	X		DRILLED SHAFT - HORIZ.
D506		84	15'-8"	X		SPLICE CAGE - HORIZ.
D407		2	34'-9"			NORTH DRILLED SHAFT - LONGIT. THERMAL BAR
D408		2	39'-10"			SOUTH DRILLED SHAFT - LONGIT. THERMAL BAR

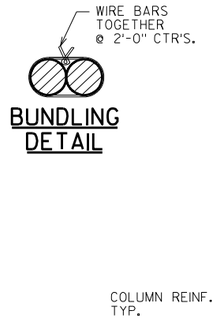
▶▶▶ SEE BUNDLING DETAIL



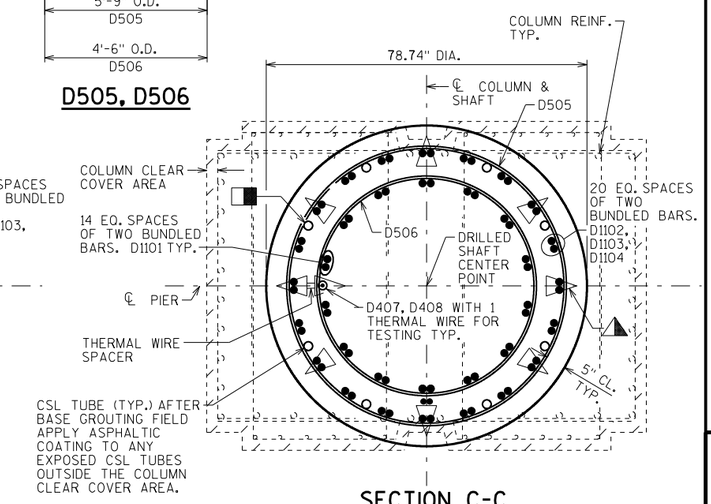




D505, D506



BUNDLING DETAIL



SECTION C-C

DRILLED SHAFT CONNECTION DETAIL

NOTES:

ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES, CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.

BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY IN THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING TO ALL EXPOSED AREAS OF CUT BARS. ASPHALTIC MATERIAL TO CONFORM TO AASHTO M190 COST INCIDENTAL TO BID ITEM "DRILLED FOUNDATION SHAFT 78.74". (TYP.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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DRILLED SHAFT DETAILS PIER 1

SHEET 21

2474

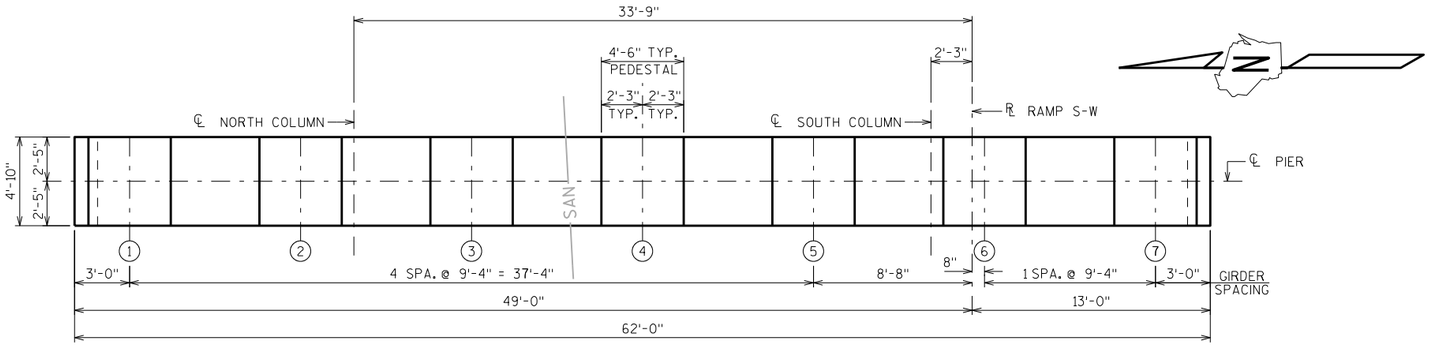
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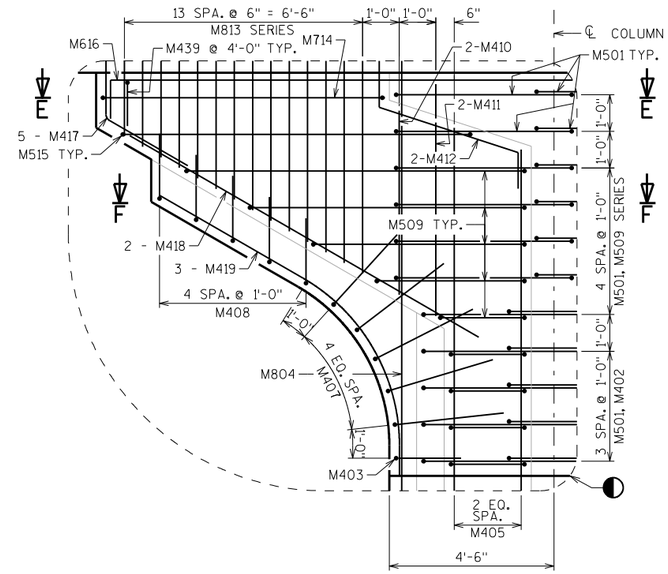
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STATE PROJECT NUMBER

1060-33-80

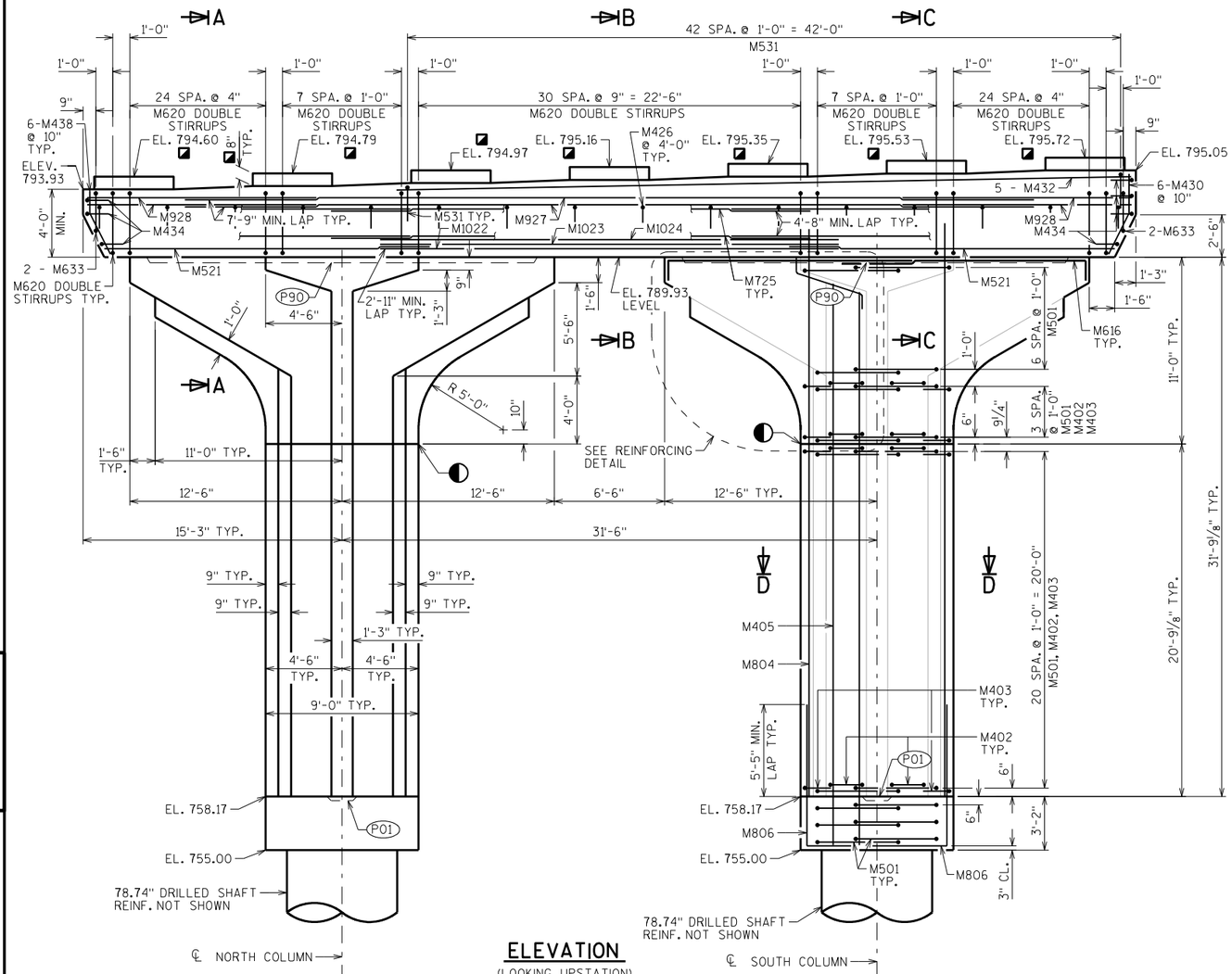


CAP PLAN



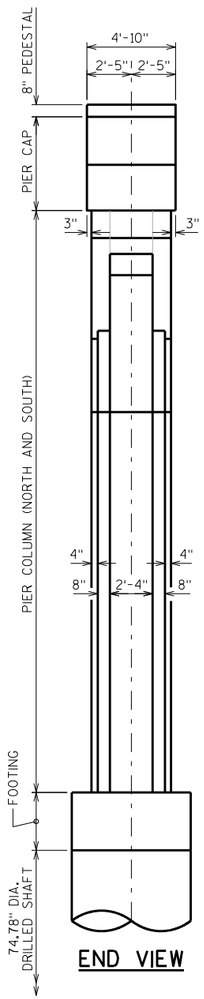
REINFORCING DETAIL

M804 BARS NOT SHOWN FOR CLARITY
REINFORCEMENT SYMMETRIC ABOUT
℄ COLUMN



ELEVATION

(LOOKING UPSTATION)
DIMENSIONS AND REINFORCEMENT ARE SYMMETRIC ABOUT ℄ PIER AND ℄ COLUMNS



END VIEW

NOTE:
FOR SECTION DETAILS SEE "PIER 2 DETAILS" SHEET.

◪ ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.

◐ OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED KEYWAY 2" DEEP X 1'-3" X 1'-3". EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

(P01) CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY 4" DEEP X 1'-3" WIDE X 1'-3" LONG. EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

(P90) CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY 4" DEEP X 1'-3" WIDE X 21'-0" LONG. EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DFD/DDS | PLANS CK'D. SDR

PIER 2

SHEET 22

2475

SCALE = 4.0

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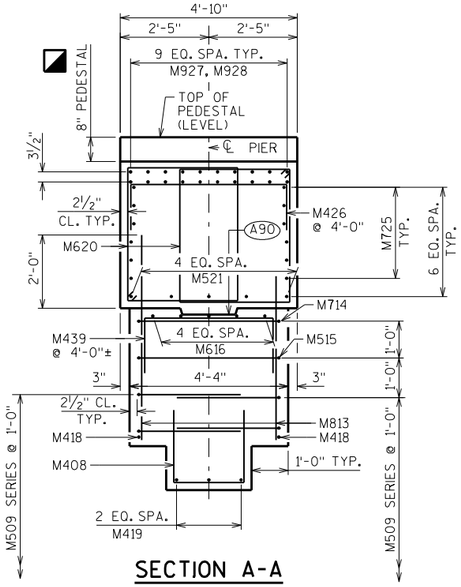
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STATE PROJECT NUMBER

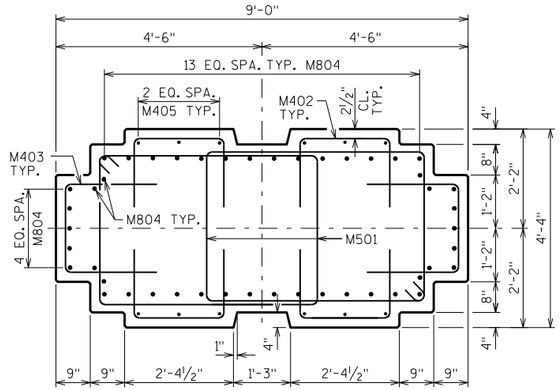
1060-33-80

FOUNDATION DATA

SUPPORT PIER ON 78.74" DIAMETER DRILLED SHAFTS. 73'-0" LONG @ SOUTH COLUMN AND 69'-0" LONG @ NORTH COLUMN. SHAFT FACTORED AXIAL CAPACITY IS 3,400 KIPS BASED ON 0.56 RESISTANCE FACTORS FOR BOTH SKIN FRICTION AND END BEARING.

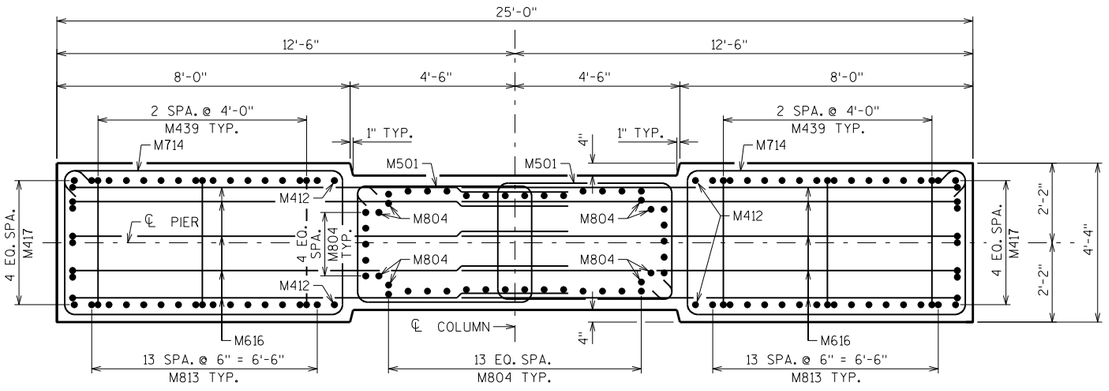


SECTION A-A



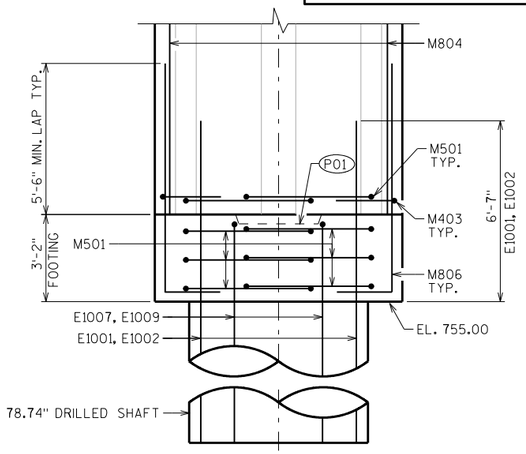
SECTION D-D

REINFORCEMENT SYMMETRIC ABOUT ℄ COLUMN



SECTION E-E

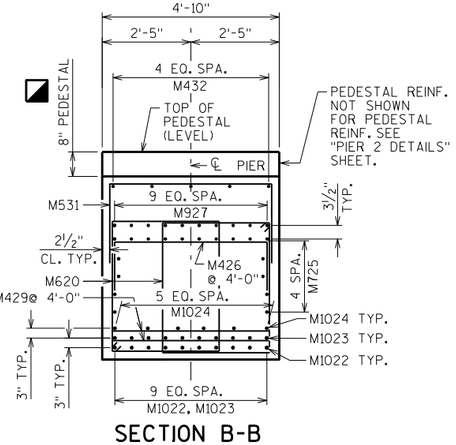
REINFORCEMENT SYMMETRIC ABOUT ℄ COLUMN



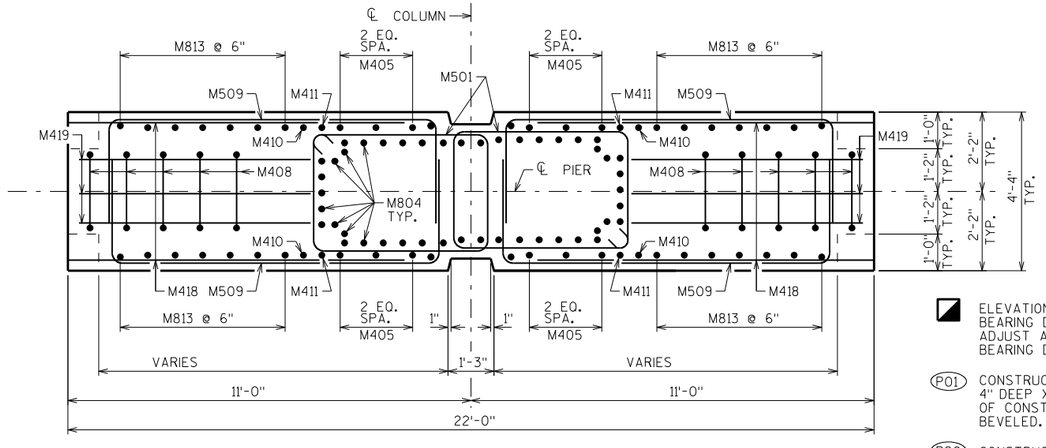
DRILLED SHAFT DETAIL

DRILLED SHAFT CONNECTION TO PIER COLUMN

SECTION C-C



SECTION B-B



SECTION F-F

℄ ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.

(P01) CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY 4" DEEP X 1'-3" WIDE X 1'-3" LONG. EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

(P90) CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY 4" DEEP X 1'-3" WIDE X 21'-0" LONG. EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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PIER 2 DETAILS

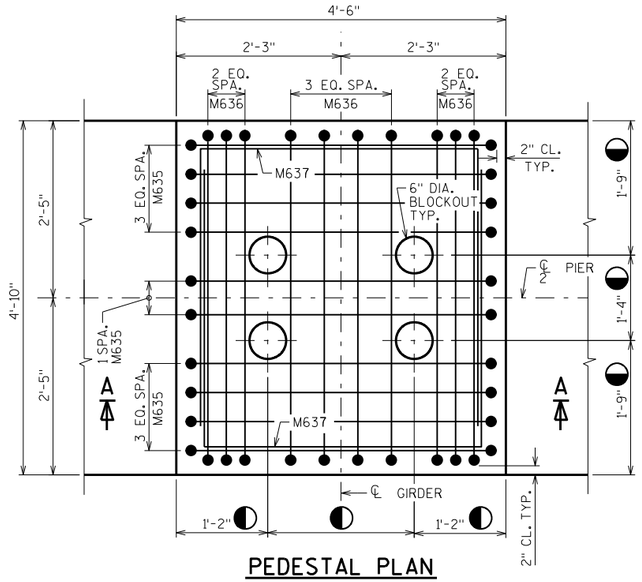
SHEET 23

2476

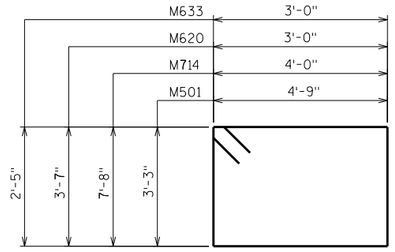
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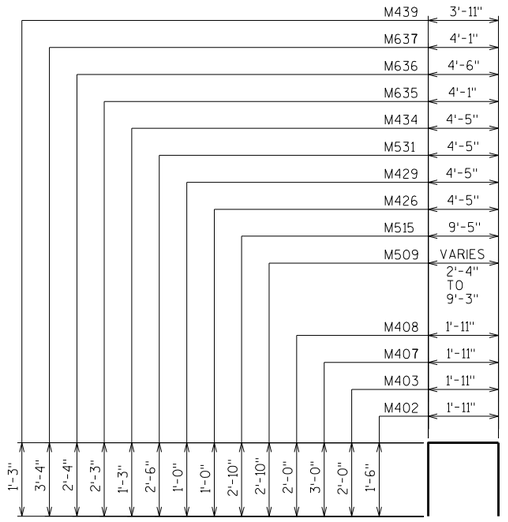
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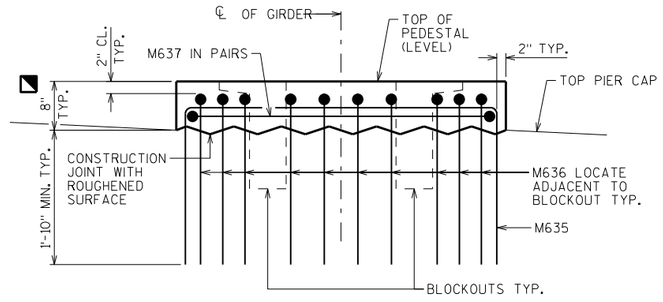
PEDESTAL PLAN



M501, M714, M620, M633



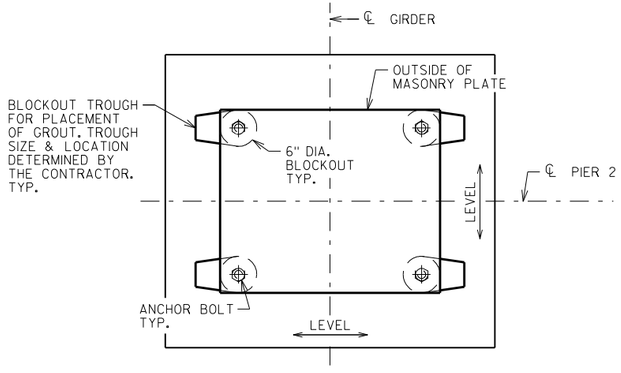
M402, M403, M407, M408, M509, M515, M426 M429, M531, M434, M635, M636, M637, M439



SECTION A-A

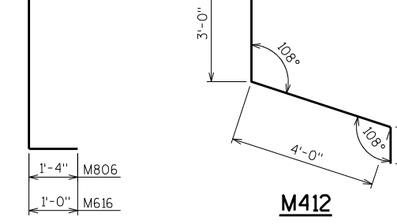
◐ SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION VERIFY LOCATIONS WITH BEARING MANUFACTURER.

◪ ELEVATIONS AND DIMENSIONS BASED ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT ACTUAL SELECTED BEARING DIMENSIONS.



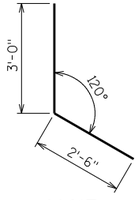
PLAN - TOP OF PEDESTAL

SEE "BEARING DETAIL" SHEET

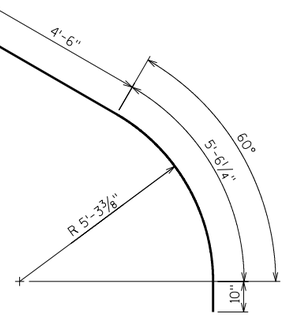


M806, M616

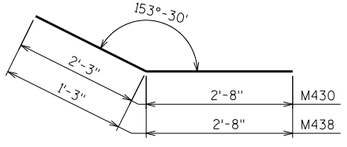
M412



M417



M419



M430, M438

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
M501	X	140	16'-8"	X		PIER SHAFT - STIRRUPS
M402	X	200	4'-9"	X		PIER SHAFT - HORIZ. - SIDES
M403	X	104	5'-9"	X		PIER SHAFT - HORIZ. - ENDS
M804	X	92	33'-9"			PIER SHAFT - VERT.
M405	X	24	29'-9"		◭	PIER SHAFT - VERT.
M806	X	92	9'-8"	X		PIER SHAFT/FOOTING - VERT.
M407	X	20	7'-9"	X		PIER SHAFT - VERT. - ENDS
M408	X	20	5'-9"	X		PIER SHAFT - VERT. - ENDS
M509	X	40	11'-3"	X	◭	PIER SHAFT - STIRRUPS
M410	X	8	5'-0"			PIER SHAFT - VERT
M411	X	8	5'-3"			PIER SHAFT - VERT.
M412	X	8	7'-10"	X		PIER SHAFT/CAP - VERT.
M813	X	112	5'-8"		◭	PIER SHAFT/CAP - VERT.
M714	X	4	24'-4"	X		PIER SHAFT - STIRRUPS
M515	X	8	14'-10"	X		PIER SHAFT - STIRRUPS
M616	X	20	14'-11"	X		PIER SHAFT - HORIZ. - TOP
M417	X	20	5'-5"	X		PIER SHAFT - VERT.
M418	X	8	11'-0"			PIER SHAFT - VERT.
M419	X	12	10'-10"	X		PIER SHAFT - VERT.
M620	X	198	14'-0"	X		PIER CAP - STIRRUP
M521	X	10	19'-2"			PIER CAP - HORIZ. - BOTTOM
M1022	X	10	27'-0"			PIER CAP - HORIZ. - BOTTOM
M1023	X	10	27'-0"			PIER CAP - HORIZ. - BOTTOM
M1024	X	6	27'-0"			PIER CAP - HORIZ. - BOTTOM
M725	X	24	33'-1"			PIER CAP - HORIZ. - SIDES
M426	X	16	6'-3"	X		PIER CAP - VERT. - TOP
M927	X	20	50'-0"			PIER CAP - HORIZ.- TOP
M928	X	40	13'-7"			PIER CAP - HORIZ. - TOP
M429	X	12	6'-3"	X		PIER CAP - VERT. - BOTTOM
M430	X	6	5'-0"	X		PIER CAP - VERT. - S. END
M531	X	43	9'-2"	X		PIER CAP - VERT. - TOP
M432	X	5	43'-4"			PIER CAP - HORIZ. - TOP
M633	X	4	11'-8"	X		PIER CAP - STIRRUP - ENDS
M434	X	7	6'-9"	X		PIER CAP - ENDS
M635	X	70	8'-3"	X		PEDESTAL - VERT.
M636	X	70	8'-10"	X		PEDESTAL - VERT.
M637	X	14	10'-5"	X		PEDESTAL - HORIZ.
M438	X	6	4'-0"	X		PIER CAP - VERT. - N. END
M439	X	12	6'-3"	X		PIER SHAFT - VERT. - TOP

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
M405	8 SERIES OF 3	29'-6" TO 30'-0"
M509	4 SERIES OF 5	7'-9" TO 14'-8"
M813	8 SERIES OF 14	3'-10" TO 7'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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PIER 2
REINF. DETAILS

SHEET 24

2477

STATE PROJECT NUMBER

1060-33-80

8

8

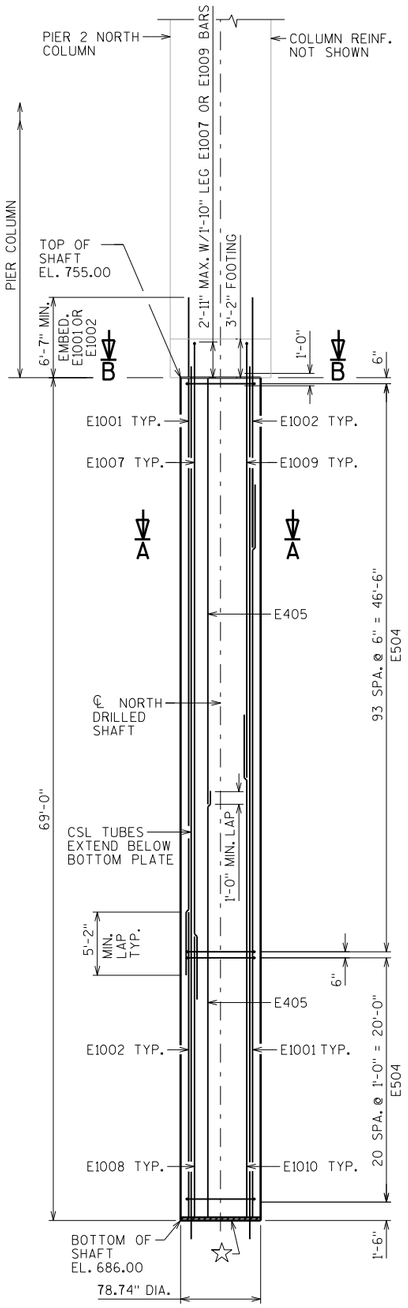
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STATE PROJECT NUMBER

1060-33-80

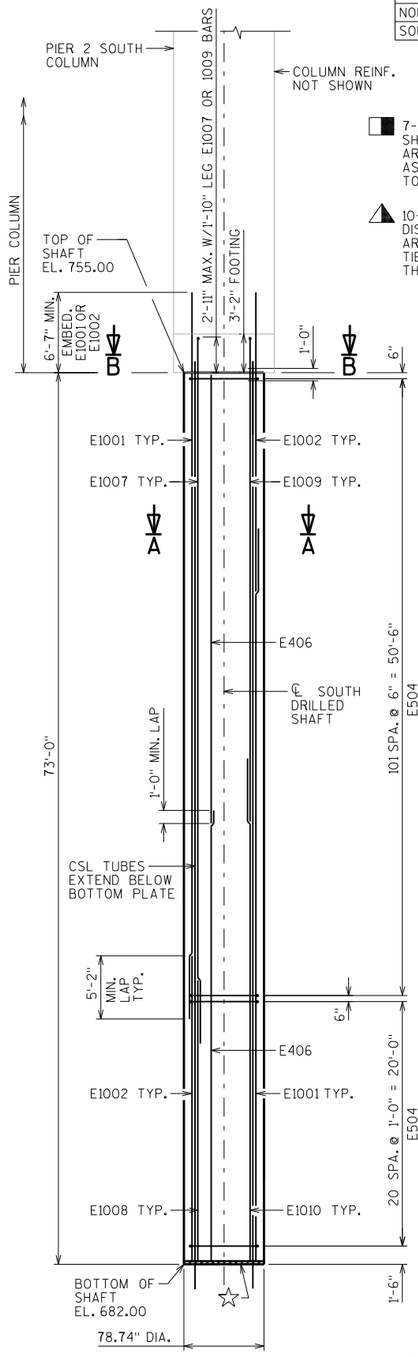
DRILLED SHAFT DATA

DRILLED SHAFT LOCATION	TOP OF SHAFT ELEVATION	BOTTOM OF SHAFT ELEVATION	SHAFT LENGTH (FT.)	SHAFT VOLUME (CY.)	INSTRUMENTATION
NORTH COLUMN	755.00	686.00	69.0	86.4	CSL TUBES/TIP TESTING
SOUTH COLUMN	755.00	682.00	73.0	91.4	CSL TUBES/TIP TESTING



NORTH DRILLED SHAFT

STAGGER LAPS SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION. INDIVIDUAL BAR LAPS WITHIN A BUNDLE SHALL NOT OVERLAP.

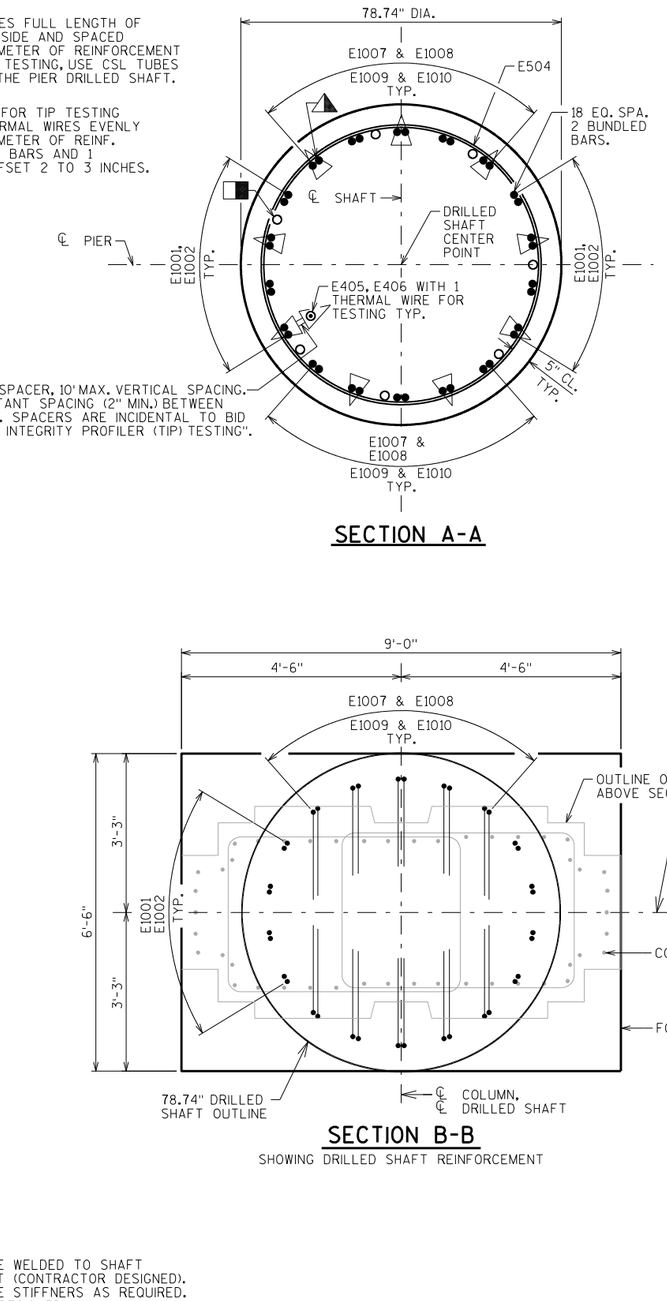


SOUTH DRILLED SHAFT

STAGGER LAPS SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION. INDIVIDUAL BAR LAPS WITHIN A BUNDLE SHALL NOT OVERLAP.

7-2" DIA. CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE GROUT THE PIER DRILLED SHAFT.

10-THERMAL WIRE FOR TIP TESTING DISTRIBUTE 9 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINF. TIED TO VERTICAL BARS AND 1 THERMAL WIRE OFFSET 2 TO 3 INCHES.



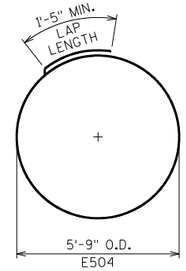
SECTION A-A

BILL OF BARS

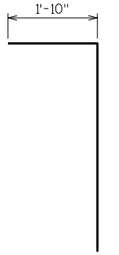
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
E1001		32	60'-0"			DRILLED SHAFT - VERT.
E1002		32	25'-0"			DRILLED SHAFT - VERT.
E1003		NOT	USED			———
E504		238	19'-6"	X		DRILLED SHAFT - HORIZ.
E405		2	35'-0"			NORTH DRILLED SHAFT - LONGIT. THERMAL BAR
E406		2	37'-0"			SOUTH DRILLED SHAFT - LONGIT. THERMAL BAR
E1007		20	60'-0"	X		DRILLED SHAFT - VERT.
E1008		20	23'-0"			DRILLED SHAFT - VERT.
E1009		20	47'-0"	X		DRILLED SHAFT - VERT.
E1010		20	36'-0"			DRILLED SHAFT - VERT.

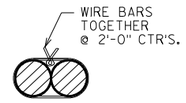
▶▶▶ SEE BUNDLING DETAIL



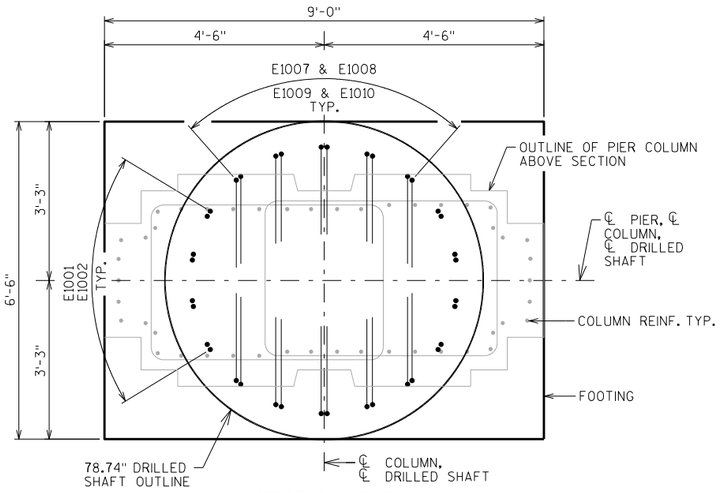
E504



E1007, E1009



BUNDLING DETAIL



SECTION B-B

SHOWING DRILLED SHAFT REINFORCEMENT

☆ BOTTOM PLATE WELDED TO SHAFT REINFORCEMENT (CONTRACTOR DESIGNED). BOTTOM PLATE STIFFNERS AS REQUIRED. (CONTRACTOR DESIGNED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

DRILLED SHAFT DETAILS PIER 2

SHEET 25

2478

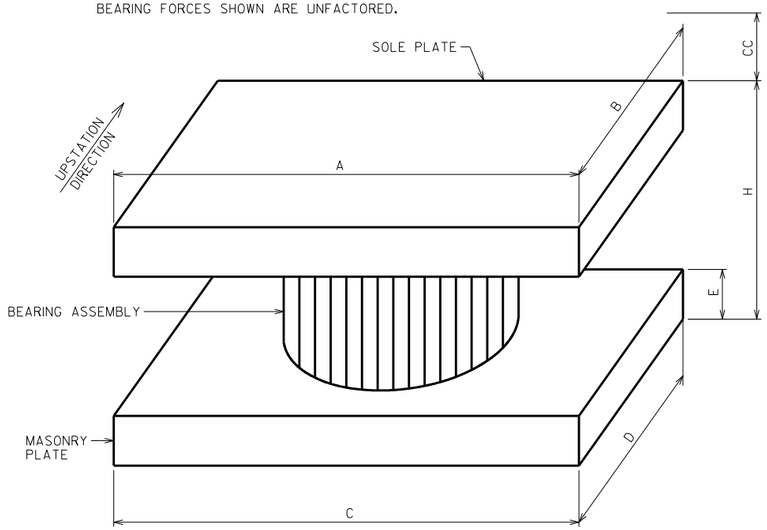
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STATE PROJECT NUMBER

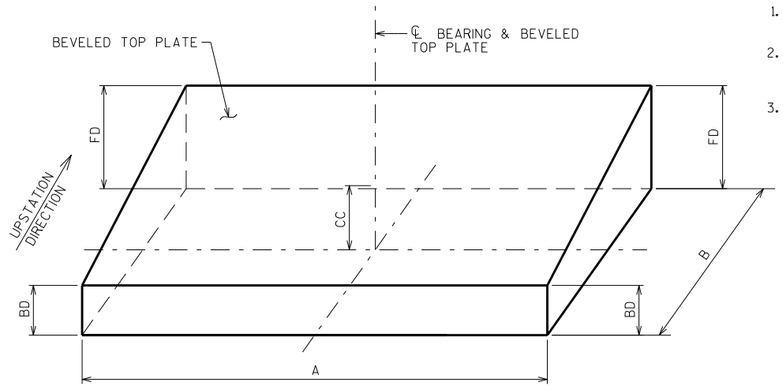
1060-33-80

LOCATION	BEARING MARK	TYPE	VERTICAL						TRANSVERSE				LONGITUDINAL				MOVEMENT (FOR 90 DEG.) LONGITUDINAL (IN.)	NOMINAL BEVELED TOP PLATE THICKNESS			NOMINAL BEARING DIMENSIONS							MINIMUM ANCHOR BOLTS
			DC (KIPS)	LL+1 (KIPS)	DW (KIPS)	WS (KIPS)	WL (KIPS)	CE (KIPS)	WS (KIPS)	WL (KIPS)	TU (KIPS)	CE (KIPS)	WS (KIPS)	WL (KIPS)	TU (KIPS)	BR (KIPS)		BD (IN.)	FD (IN.)	CC (IN.)	A (IN.)	B (IN.)	C (IN.)	D (IN.)	E (IN.)	H (IN.)	TH (IN.)	
WEST ABUTMENT	WAG1 THRU WAG7	GUIDED	160	121	18	4.5	2	7	10	2	12.5	4	4	1	18	10	2	1	1 7/8"	1 7/16"	22	24	30	20	1 3/4	6 5/8	8 1/16	4 - 1 1/2" DIA.
PIER 2	P2G1 THRU P2G7	GUIDED	401	215	42	8	3	7	19	3	7	4	4	1	45	10	2	1	1 1/2"	1 1/4"	24	28 1/2	32	22	1 3/4	7 3/4	9	4 - 1 1/2" DIA.
EAST ABUTMENT	EAG1 THRU EAG7	GUIDED	130	108	15	4	1.5	0	10	2	0	0	4	1	15	10	3	1	1 1/8"	1 1/16"	22	24	30	20	1 3/4	6 5/8	7 11/16	4 - 1 1/2" DIA.

BEARING FORCES SHOWN ARE UNFACTORED.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

NOTES:

1. THE MOVEMENT VALUES IN THE TABLE ARE IN ONE DIRECTION FOR A 90°F TEMPERATURE CHANGE.
2. BEARING DIMENSIONS SHOWN ARE NOMINAL VALUES ONLY AND WILL VARY WITH THE SELECTED MANUFACTURER, MAKE ALL NECESSARY ADJUSTMENTS TO DIMENSIONS AND ELEVATIONS AS REQUIRED TO INCORPORATE THE SPECIFIC BEARINGS SELECTED.
3. TRANSVERSE AND LONGITUDINAL FORCES SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED FORCES. DESIGN BEARINGS FOR THESE VALUES OR 15 PERCENT OF THE VERTICAL PERMANENT LOAD, WHICHEVER IS LARGER.

BEARING LEGEND



MULTIROTATIONAL UNI-DIRECTIONAL (GUIDED) ARROWHEADS DENOTE MOVEMENT DIRECTIONS.

DC DEADLOAD OF STRUCTURAL COMPONENTS AND NONSTRUCTURAL ATTACHMENTS.

DW DEAD LOAD OF POLYMER OVERLAY AND FUTURE WEARING SURFACE.

LL+1 VEHICULAR LIVE LOAD AND DYNAMIC LOAD ALLOWANCE.

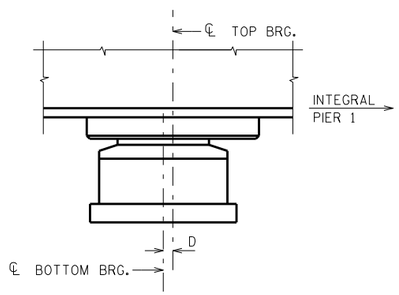
WS WIND ON STRUCTURE.

WL WIND ON LIVE LOAD.

TU FORCE EFFECT DUE TO UNIFORM TEMPERATURE.

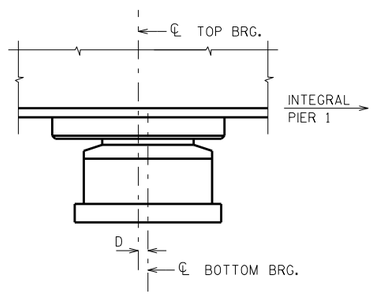
CE VEHICULAR CENTRIFUGAL FORCE.

BR VEHICULAR BREAKING FORCE.



BELOW 60°F

MOVE BOTTOM BEARING AWAY FROM INTEGRAL PIER 1



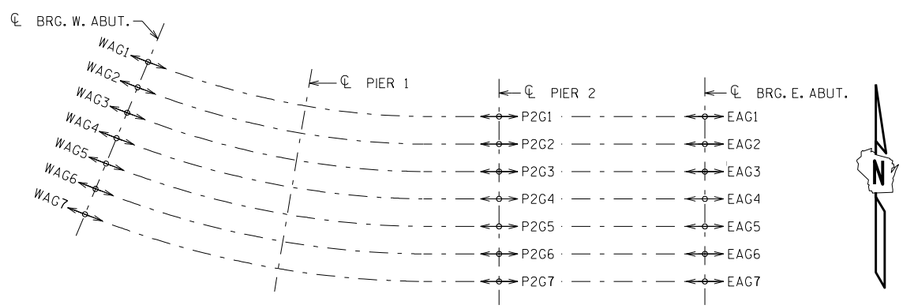
ABOVE 60°F

MOVE BOTTOM BEARING TOWARDS INTEGRAL PIER 1

NOTE:
BEARING MOVEMENT RANGE IS BASED ON BEARING CENTERED AT 60°F AND ACCOMMODATING. 90°F OF MOVEMENT IN EITHER DIRECTION.

LOCATION	BRG. TYPE	EXPANSION LENGTH (FEET)	"D" DIMENSION FOR EVERY 10°F CHANGE FROM 60°F
WEST ABUTMENT	E	190	1/8"
PIER 1	I	——	——
PIER 2	E	190	1/8"
EAST ABUTMENT	E	360	1/4"

E = EXPANSION BRG.
I = INTEGRAL



BEARING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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BEARING LAYOUT

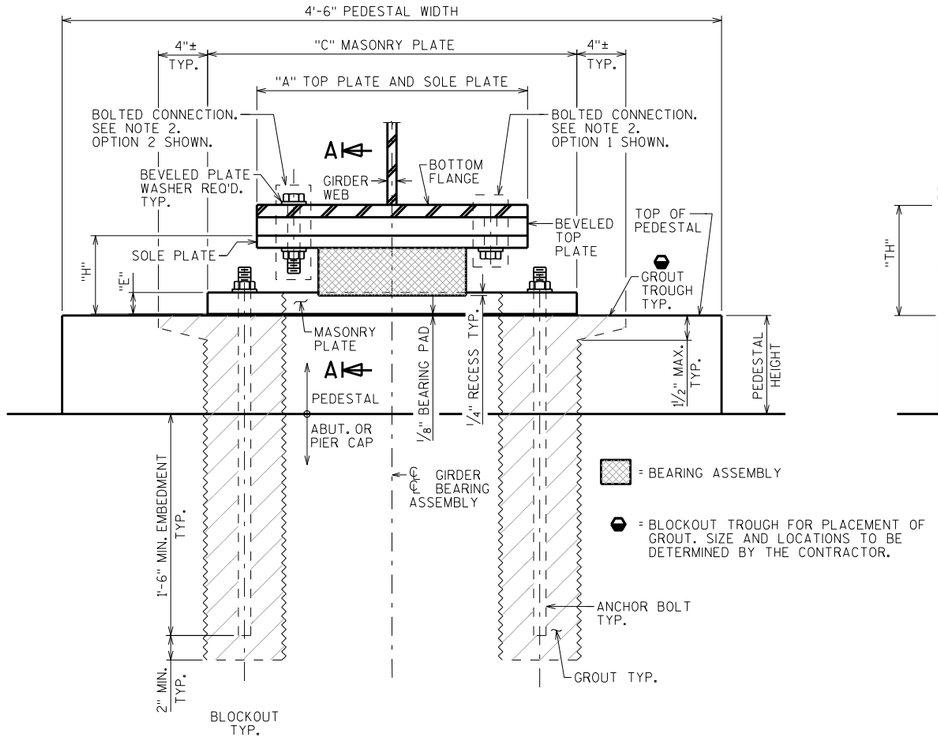
SHEET 26

2479

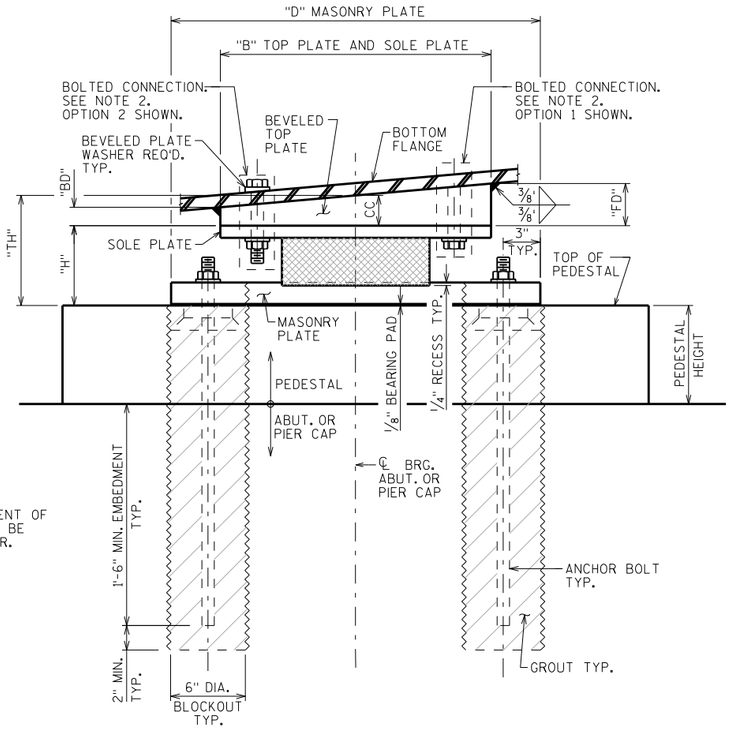
SCALE = 1

8

8



ELEVATION
LOOKING UPSTATION



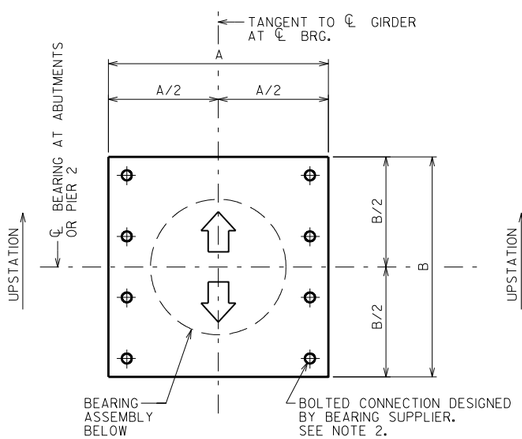
SECTION A-A

BEARING NOTES

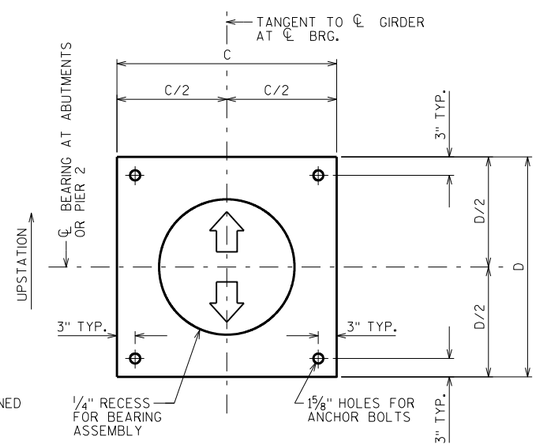
1. SEE "BEARING LAYOUT" SHEET FOR BEARING LAYOUT AND LOCATION-SPECIFIC DIMENSIONS.
2. DESIGN BOLTED CONNECTION BETWEEN SOLE PLATE AND BEVELED TOP PLATE FOR A MINIMUM OF 1.25 TIMES THE COMBINED SPECIFIED HORIZONTAL LOADS SHOWN ON THE BEARING LAYOUT SHEET PER AASHTO LRFD AND THE WISDOT BRIDGE MANUAL. ARRANGE CONNECTION TO ENSURE ALL BOLTS CAN BE REMOVED WITHOUT INTERFERENCE FROM ANCHOR RODS OR OTHER OBSTRUCTIONS AFTER BEARING IS INSTALLED.

   BOLTED CONNECTION OPTION 1: TAP HOLES COMPLETELY THROUGH TOP PLATE. ENGAGE BOLTS TO WITHIN 1/4" OF BOTTOM FLANGE.

   BOLTED CONNECTION OPTION 2: BOLT DOWNWARD THROUGH BOTTOM FLANGE, BEVELED TOP PLATE AND SOLE PLATE.
3. SOLE PLATE THICKNESS TO BE SELECTED BY THE BEARING MANUFACTURER MINIMUM 1".
4. HOLES IN SOLE PLATE MAY BE SLOTTED OR OVERSIZED AS REQUIRED TO FACILITATE STEEL ERECTION. IF OVERSIZED OR SLOTTED HOLES ARE USED, THE CONNECTION SHALL BE DESIGNED AS SLIP-RESISTANT.
5. MASONRY PLATE THICKNESS TO BE CONFIRMED BY THE BEARING DESIGNER AND INCREASED IF REQUIRED. NO REDUCTION PERMITTED.
6. HOLES IN MASONRY PLATE SHALL BE A MAXIMUM OF 1/8" LARGER THAN THE SPECIFIED ANCHOR BOLT DIAMETER.
7. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM F1554 (GRADE 105) AND HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M232.
8. PROVIDE A 1/8" THICK BEARING PAD THE SAME SIZE AS THE MASONRY PLATE. THE THICKNESS OF THE PAD IS NOT INCLUDED IN HEIGHT ('H' OR 'TH') OF THE BEARING ASSEMBLY.
9. NON-SHRINK GROUT USED IN FILLING THE ANCHOR BOLT BLOCKOUTS SHALL BE PROVIDED AS STATED IN THE BEARING SPECIAL PROVISIONS. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 6.0 K.S.I. GROUTING MATERIALS AND INSTALLATION ARE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR THE BEARING ASSEMBLY.
10. THE TYPE OF BLOCKOUT SHALL BE DETERMINED BY THE CONTRACTOR. TEMPORARY BLOCKOUTS OR BLOCKOUTS WITH STAY IN PLACE FORMS ARE ALLOWED. IF BLOCKOUTS CONSISTING OF STAY IN PLACE FORMS ARE USED, THE TOP OF THE FORM MUST BE AT OR BELOW THE TOP OF THE PEDESTAL CONCRETE. THE CONTRACTOR SHALL PREVENT WATER FROM FREEZING AND EXPANDING WITHIN THE BLOCKOUT.

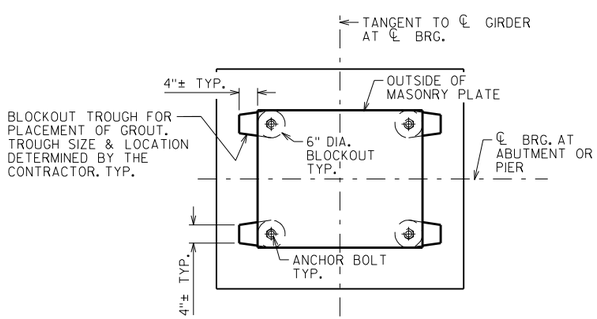


PLAN - SOLE PLATE
BOLTS ARE SHOWN FOR ORIENTATION PURPOSES ONLY. SIZE, NUMBER AND SPACING TO BE DETERMINED PER DESIGN.



PLAN - MASONRY PLATE

LEGEND
= DIRECTION OF MOVEMENT FOR GUIDED BEARINGS



PLAN - TOP OF PEDESTAL

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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BEARING DETAILS

SHEET 27

2480

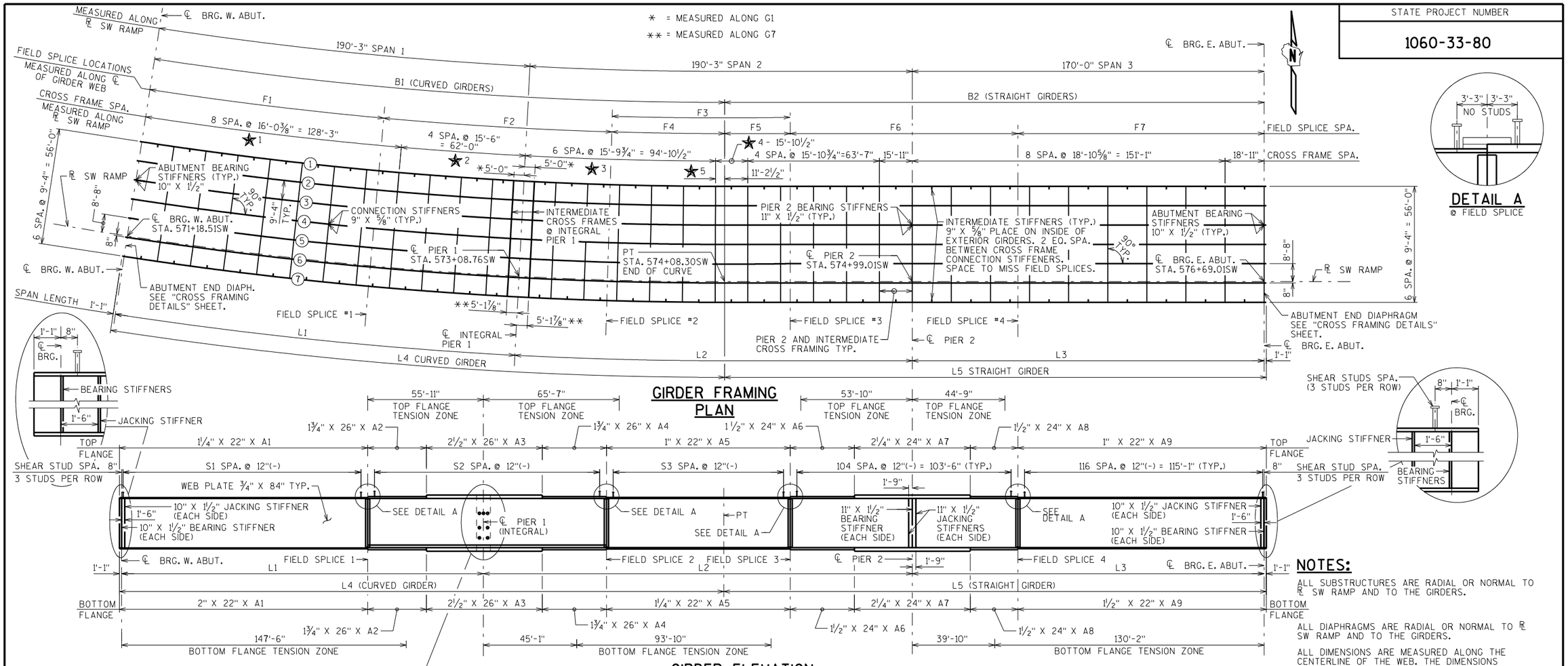
SCALE = 1

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STATE PROJECT NUMBER

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GIRDER FRAMING PLAN

GIRDER ELEVATION

CONNECTION STIFFENERS NOT SHOWN FOR CLARITY

LOCATION	F1	F2	F3	F4	F5	F6	F7
GIRDER 1	115'-5 3/16"	111'-11 1/2"	87'-13/16"	55'-4 11/16"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 2	116'-0 1/8"	112'-6 3/16"	87'-4 9/16"	55'-8 1/16"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 3	116'-7 1/8"	113'-1"	87'-7 7/8"	55'-11 3/8"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 4	117'-2 1/16"	113'-7 11/16"	87'-11 1/4"	56'-2 3/4"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 5	117'-9 1/16"	114'-2 1/2"	88'-2 5/8"	56'-6 1/8"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 6	118'-4 1/16"	114'-9 1/4"	88'-5 15/16"	56'-9 7/16"	31'-8 1/2"	110'-0"	119'-0"
GIRDER 7	118'-11"	115'-4"	88'-9 3/8"	57'-0 3/4"	31'-8 1/2"	110'-0"	119'-0"

LOCATION	CROSS FRAMING SPACING MEASURED ALONG ℄ OF WEB OF EXTERIOR GIRDERS (#1 & #7)				MEASURED ALONG ℄ OF WEB
	★1	★2	★3	★4	★5
GIRDER 1	8 SPA. @ 15'-7 3/4" = 125'-2"	4 SPA. @ 15'-1 1/2" = 60'-6"	6 SPA. @ 15'-5 1/8" = 92'-6 3/4"	15'-9 1/8"	4'-6 5/8"
GIRDER 2					4'-6 7/8"
GIRDER 3					4'-7 3/16"
GIRDER 4					4'-7 7/16"
GIRDER 5					4'-7 3/4"
GIRDER 6					4'-8"
GIRDER 7	8 SPA. @ 16'-1 3/8" = 128'-11"	4 SPA. @ 15'-7" = 62'-4"	6 SPA. @ 15'-10 3/4" = 95'-4 1/2"	15'-10 3/4"	4'-8 1/4"

LOCATION	CURVED & STRAIGHT LENGTHS			SPAN AND GIRDER SEGMENT LENGTHS					RADIUS AT ℄ OF CURVED GIRDER & @ ℞
	B1 CURVED	B2 STRAIGHT	B1 + B2 TOTAL	L1	L2	L3	L4	L5	
GIRDER 1	282'-9 5/16"	260'-8 1/2"	543'-5 1/16"	185'-7 3/4"	187'-10 1/16"	170'-0"	283'-10 5/16"	261'-9 1/2"	1854'-0"
GIRDER 2	284'-2 3/8"	260'-8 1/2"	544'-10 7/8"	186'-6 15/16"	188'-3 5/16"	170'-0"	285'-3 3/8"	261'-9 1/2"	1863'-4"
GIRDER 3	285'-7 1/2"	260'-8 1/2"	546'-4"	187'-6 3/16"	188'-9 7/16"	170'-0"	286'-8 1/2"	261'-9 1/2"	1872'-8"
GIRDER 4	287'-0 9/16"	260'-8 1/2"	547'-9 1/16"	188'-5 3/8"	189'-3 1/16"	170'-0"	288'-1 7/16"	261'-9 1/2"	1882'-0"
GIRDER 5	288'-5 5/8"	260'-8 1/2"	549'-2 1/8"	189'-4 9/16"	189'-9 9/16"	170'-0"	289'-6 5/8"	261'-9 1/2"	1891'-4"
GIRDER 6	289'-10 11/16"	260'-8 1/2"	550'-7 3/16"	190'-3 13/16"	190'-3 7/16"	170'-0"	290'-11 11/16"	261'-9 1/2"	1900'-8"
GIRDER 7	291'-3 11/16"	260'-8 1/2"	552'-0 5/16"	191'-3"	190'-9 5/16"	170'-0"	292'-4 13/16"	261'-9 1/2"	1910'-0"
℞ RAMP SW	289'-9 1/2"	260'-8 1/2"	550'-6"	—	—	—	—	—	1900'-0"

LOCATION	FLANGE PLATE LENGTHS									SHEAR STUD SPACING		
	A1	A2	A3	A4	A5	A6	A7	A8	A9	S1	S2	S3
GIRDER 1	116'-6 3/16"	43'-0 7/16"	54'-4 5/16"	14'-6 3/4"	87'-1 3/16"	31'-0"	56'-0"	23'-0"	120'-1"	112	106	81
GIRDER 2	117'-1 1/8"	43'-3"	54'-7 9/16"	14'-7 5/8"	87'-4 9/16"	31'-0"	56'-0"	23'-0"	120'-1"	112	106	81
GIRDER 3	117'-8 1/8"	43'-5 5/8"	54'-10 7/8"	14'-8 1/2"	87'-7 7/8"	31'-0"	56'-0"	23'-0"	120'-1"	113	107	82
GIRDER 4	118'-3 1/16"	43'-8 3/16"	55'-2 1/8"	14'-9 3/8"	87'-11 1/4"	31'-0"	56'-0"	23'-0"	120'-1"	114	108	82
GIRDER 5	118'-10 1/16"	43'-10 13/16"	55'-5 7/16"	14'-10 1/4"	88'-2 5/8"	31'-0"	56'-0"	23'-0"	120'-1"	114	108	82
GIRDER 6	119'-5 1/16"	44'-1 7/16"	55'-8 11/16"	14'-11 1/8"	88'-5 15/16"	31'-0"	56'-0"	23'-0"	120'-1"	115	109	82
GIRDER 7	120'-0"	44'-4"	56'-0"	15'-0"	88'-9 1/4"	31'-0"	56'-0"	23'-0"	120'-1"	115	109	83

NOTES:

ALL SUBSTRUCTURES ARE RADIAL OR NORMAL TO ℞ SW RAMP AND TO THE GIRDERS.

ALL DIAPHRAGMS ARE RADIAL OR NORMAL TO ℞ SW RAMP AND TO THE GIRDERS.

ALL DIMENSIONS ARE MEASURED ALONG THE CENTERLINE OF THE WEB. THE DIMENSIONS SHOWN ARE HORIZONTAL AND DO NOT ACCOUNT FOR CAMBER OR SLOPE OF GRADE.

ALL STEEL SHALL BE ASTM A709 GRADE 50.

ALL BOLTED CONNECTIONS SHALL BE SLIP-CRITICAL (FRICTION) TYPE USING 7/8-INCH DIAMETER HIGH STRENGTH BOLTS (ASTM A325) WITH WASHERS.

OPTIONAL WELDED SHOP SPLICES MAY BE USED FOR ALL FLANGE AND WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION OF THE SPLICE SHALL BE SHOWN ON THE SHOP DRAWINGS AND WILL BE SUBJECT TO APPROVAL OF THE STRUCTURES DESIGN SECTION.

FOR BEARING DETAILS SEE "BEARING DETAILS" SHEET.

FIELD WELDING IS PROHIBITED IN TOP FLANGE TENSION ZONE AREAS, EXCEPT SHEAR CONNECTORS.

FIELD WELDING IS PROHIBITED IN BOTTOM FLANGE TENSION ZONE AREAS.

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

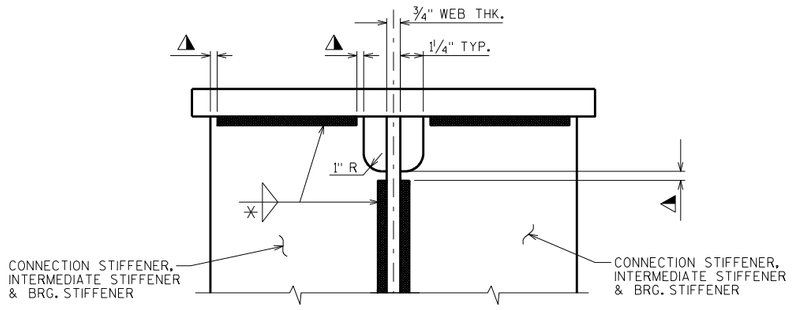
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FRAMING PLAN
GIRDER LAYOUT

SHEET 28

2481

SCALE = 24



▲ = 1/4" MIN., 1/2" MAX. (TYP.)

✳ = SEE TABLE OF FILLET WELDS SIZES

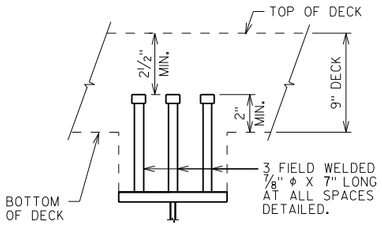
STIFFENER & CONNECTION STIFFENER TO WEB/FLANGE CONNECTION WELDS

✳TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	÷ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	●● 5/16"
OVER 1 1/2" TO 2 1/4"	●● 3/8"
OVER 2 1/4" TO 6"	●● 1/2"

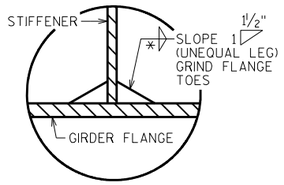
÷ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

●● MIN. PASS SIZE IS 5/16"



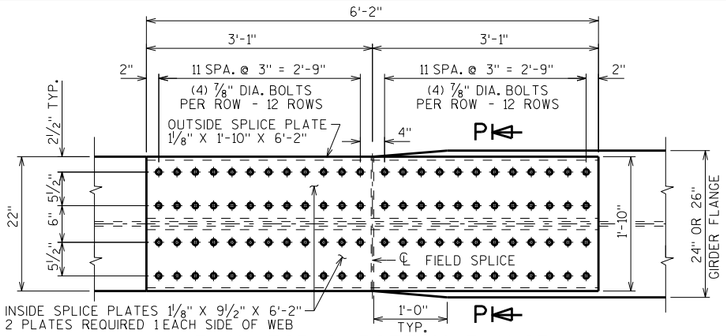
SHEAR CONN. DETAIL

STUDS SHALL NOT BE PLACED OVER FIELD SPLICE LOCATIONS.



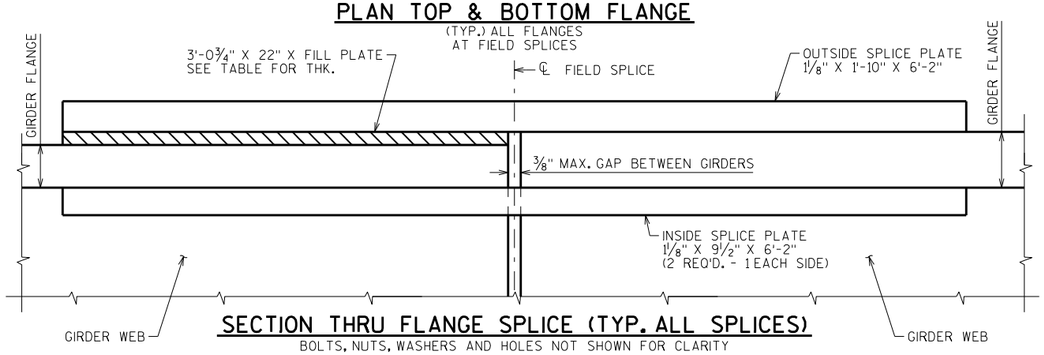
DETAIL "A"

CONNECTION STIFFNER DETAIL @ TENSION FLANGE



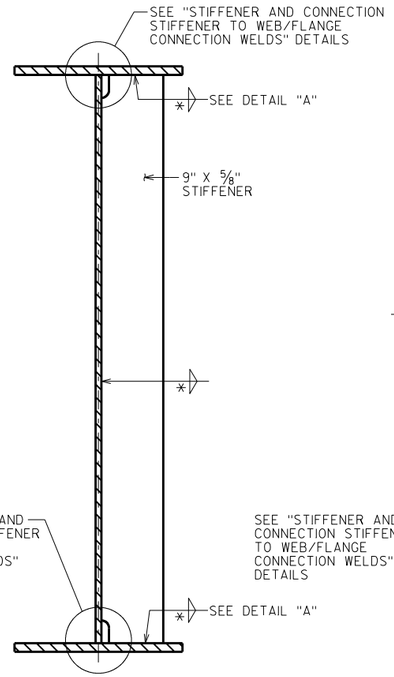
PLAN TOP & BOTTOM FLANGE

(TYP.) ALL FLANGES AT FIELD SPLICES

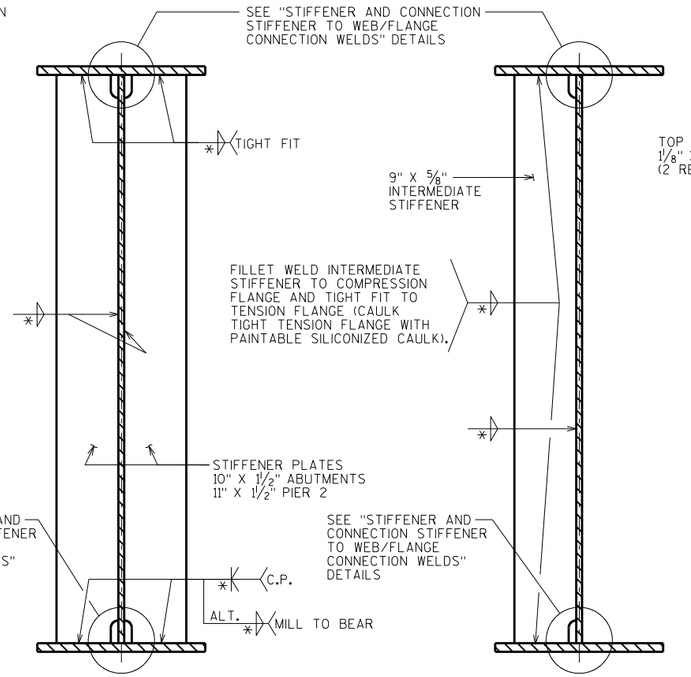


SECTION THRU FLANGE SPLICE (TYP. ALL SPLICES)

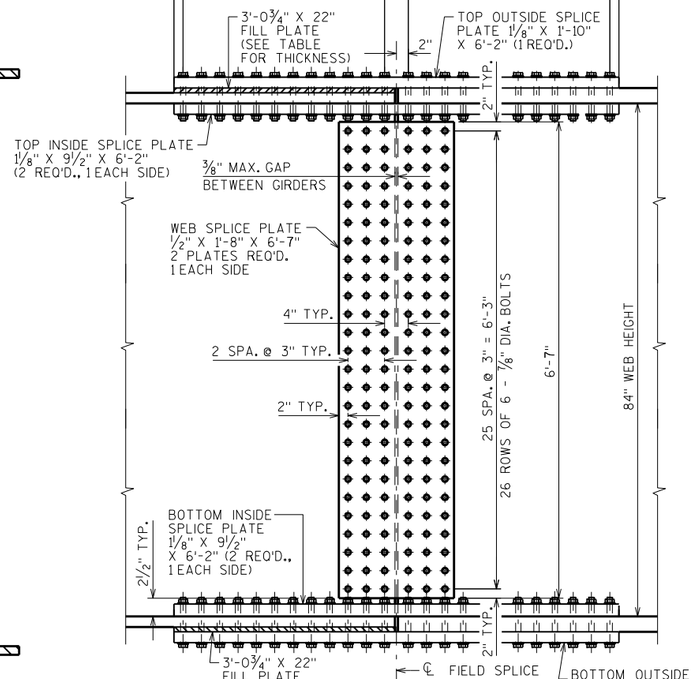
BOLTS, NUTS, WASHERS AND HOLES NOT SHOWN FOR CLARITY



CONNECTION STIFFENER DETAILS

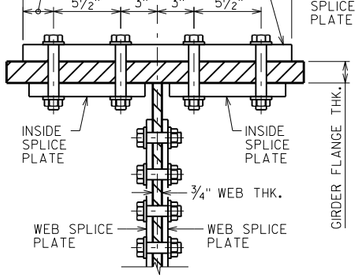


BEARING STIFFENER DETAILS AND JACKING STIFFENERS



SPLICE PLATE DETAIL

(TYP.) ALL FIELD SPLICES



SECTION P-P

TYP.

GIRDER FIELD SPLICE NOTES

1. ALL BOLT HOLES SHALL BE 15/16" DIAMETER STANDARD HOLES.
2. ALL SPLICE PLATES SHALL CONFORM TO ASTM A709, GRADE 50.
3. ALL BOLTS SHALL BE 7/8" DIAMETER A325.
4. ALL BOLTS SHALL BE FABRICATED SUCH THAT THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANES AT FIELD SPLICE CONNECTIONS.

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FILL PLATE TABLE

	FS #1	FS #2	FS #3	FS #4
TOP FILL PLATE THICKNESS	1/2"	3/4"	1/2"	1/2"
BOTTOM FILL PLATE THICKNESS	1/4"	1/2"	1/4"	NONE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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FIELD SPLICE AND GIRDER DETAILS

SHEET 29

2482

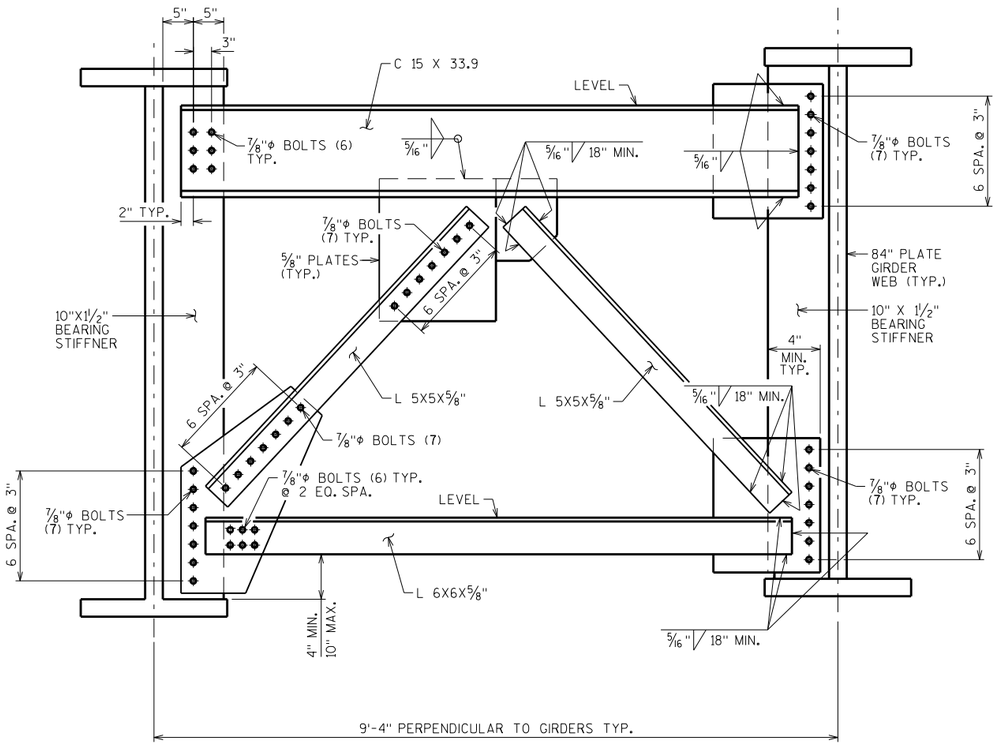
SCALE = 20

8

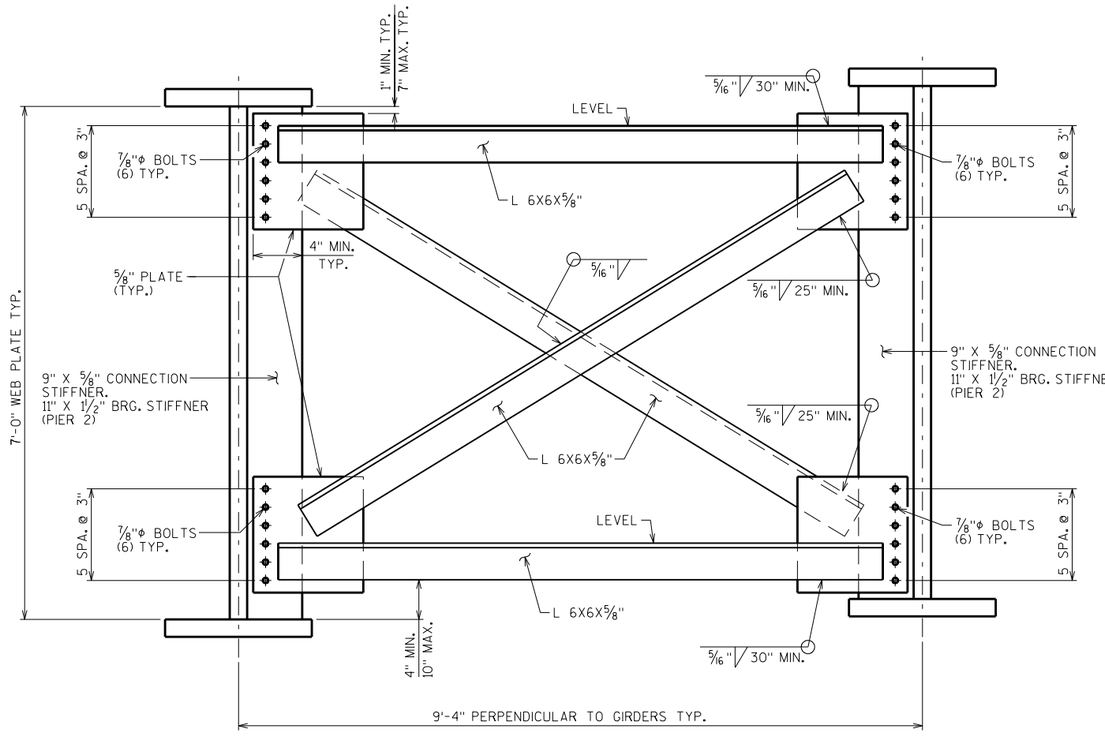
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END CROSS FRAME AT ABUTMENTS



INTERMEDIATE AND PIER 2 CROSS FRAME

NOTES

1. ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING 7/8"ϕ HIGH STRENGTH ASTM A325 BOLTS WITH WASHERS.
2. LOWER CROSS FRAME MEMBERS THAT ARE LEVEL SHALL BE PLACED 4" ABOVE THE TOP OF THE HIGHER BOTTOM FLANGE OF ADJACENT GIRDERS.
3. ALL STEEL SHALL BE ASTM A709 GRADE 50

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

CROSS BRACING DETAILS

SHEET 30

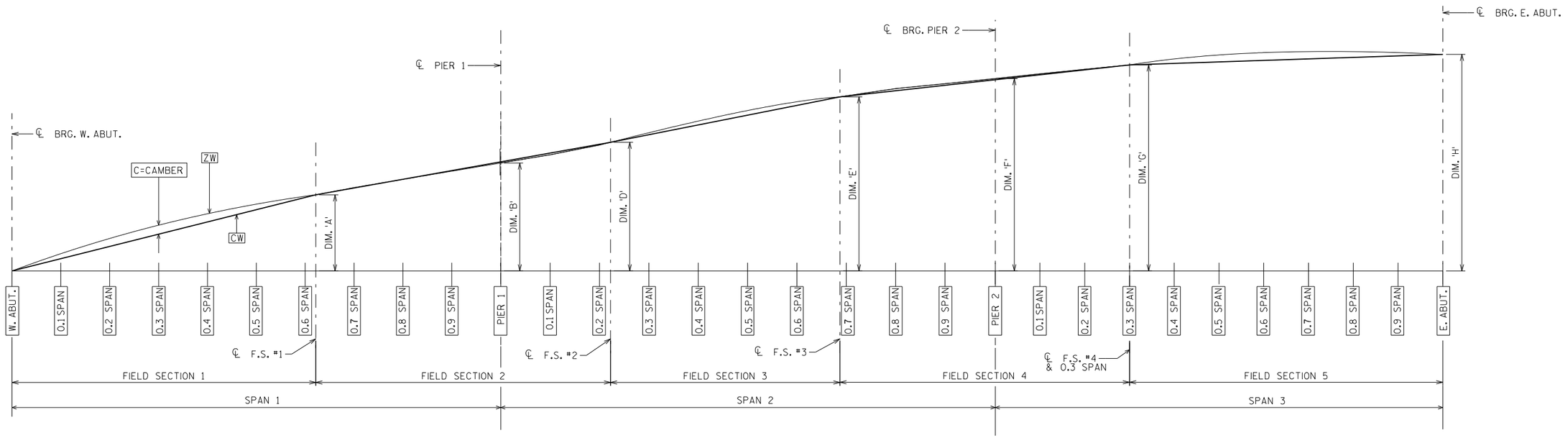
2483

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SCALE = 1

STATE PROJECT NUMBER
1060-33-80



CAMBER AND BLOCKING DIAGRAM

NOTES:

FOR "C" (CAMBER) VALUES, SEE "CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 1&2", "CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 3&4" AND "CAMBER AND BLOCKING DATA FOR FIELD SECTION 5" SHEETS.

BLOCKING DIMENSIONS ARE IN DECIMALS OF A FOOT.

C = CAMBER

ZW = TOP OF WEB NEGLECTING ALL DEFELECTIONS

CW = CHORD LINE JOINING TOP OF WEB AT FIELD SECTION END POINTS

	'A'	'B'	'D'	'E'	'F'	'G'	'H'
GIRDER 1	4.82	6.82	8.13	10.99	12.16	13.02	13.68
GIRDER 2	4.83	6.82	8.10	10.79	11.93	12.80	13.46
GIRDER 3	4.84	6.82	8.06	10.58	11.69	12.56	13.22
GIRDER 4	4.87	6.82	8.03	10.38	11.46	12.33	12.98
GIRDER 5	4.88	6.82	7.99	10.18	11.23	12.10	12.76
GIRDER 6	4.90	6.82	7.96	9.98	10.99	11.86	12.52
GIRDER 7	4.92	6.82	7.92	9.76	10.76	11.63	12.28

BLOCKING DIMENSIONS

BLOCKING DIMENSIONS MEASURED FROM HORIZONTAL LINE (PASSING THROUGH LOWEST TOP OF GIRDER WEB) TO TOP OF WEB AT POINT UNDER CONSIDERATION.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY SDR | PLANS CK'D. CAD

CAMBER & BLOCKING

SHEET 31

2484

SCALE = 110

STATE PROJECT NUMBER

1060-33-80

FIELD SECTION 1

HORIZ. LOC.	VALUE	POSITION ALONG GIRDER AND STATION							
		W. ABUT. 571+18.51	0.1 SPAN 571+37.54	0.2 SPAN 571+56.56	0.3 SPAN 571+75.59	0.4 SPAN 571+94.61	0.5 SPAN 572+13.64	0.6 SPAN 572+32.66	FS #1 572+36.80
CAMBER DATA									
GIRDER 1	TOD	791.49	792.29	793.06	793.81	794.53	795.23	795.89	796.04
	TOS	790.48	791.36	792.21	793.00	793.74	794.44	795.07	795.35
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	790.38	791.30	792.18	793.00	793.75	794.44	795.06	795.20
	CW	790.38	791.16	791.93	792.71	793.48	794.26	795.03	795.20
	SW	0.00	0.04	0.08	0.10	0.11	0.11	0.09	0.09
	DL1	0.00	0.08	0.14	0.18	0.21	0.20	0.18	0.17
	DL2	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02
	C (feet)	0.00	0.14	0.25	0.29	0.27	0.18	0.03	0.00
	BLOCKING (feet)	0.00							4.82
GIRDER 2	TOD	791.91	792.71	793.48	794.23	794.95	795.65	796.31	796.46
	TOS	790.90	791.79	792.64	793.44	794.19	794.88	795.50	795.78
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	790.80	791.73	792.61	793.43	794.20	794.89	795.50	795.63
	CW	790.80	791.58	792.35	793.13	793.91	794.68	795.46	795.63
	SW	0.00	0.04	0.08	0.10	0.12	0.12	0.10	0.09
	DL1	0.00	0.08	0.15	0.20	0.23	0.22	0.18	0.18
	DL2	0.00	0.01	0.02	0.02	0.03	0.03	0.02	0.02
	C (feet)	0.00	0.15	0.26	0.30	0.29	0.21	0.04	0.00
	BLOCKING (feet)	0.00							4.83
GIRDER 3	TOD	792.33	793.13	793.90	794.65	795.37	796.07	796.73	796.88
	TOS	791.32	792.21	793.06	793.86	794.62	795.32	795.94	796.20
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	791.22	792.15	793.04	793.87	794.64	795.34	795.94	796.06
	CW	791.22	792.00	792.78	793.56	794.33	795.11	795.89	796.06
	SW	0.00	0.04	0.08	0.11	0.13	0.13	0.11	0.10
	DL1	0.00	0.08	0.16	0.21	0.23	0.23	0.20	0.18
	DL2	0.00	0.01	0.02	0.02	0.03	0.03	0.02	0.02
	C (feet)	0.00	0.15	0.26	0.31	0.31	0.23	0.05	0.00
	BLOCKING (feet)	0.00							4.84
GIRDER 4	TOD	792.75	793.55	794.32	795.07	795.79	796.49	797.15	797.30
	TOS	791.74	792.64	793.49	794.31	795.05	795.75	796.36	796.64
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	791.64	792.59	793.47	794.32	795.08	795.77	796.37	796.51
	CW	791.64	792.42	793.21	793.99	794.77	795.56	796.34	796.51
	SW	0.00	0.05	0.08	0.12	0.13	0.13	0.11	0.11
	DL1	0.00	0.09	0.17	0.23	0.25	0.24	0.21	0.20
	DL2	0.00	0.01	0.02	0.03	0.03	0.03	0.02	0.02
	C (feet)	0.00	0.17	0.26	0.33	0.31	0.21	0.03	0.00
	BLOCKING (feet)	0.00							4.87
GIRDER 5	TOD	793.17	793.97	794.74	795.49	796.21	796.91	797.57	797.72
	TOS	792.16	793.06	793.92	794.74	795.48	796.17	796.80	797.07
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	792.06	793.01	793.91	794.76	795.51	796.20	796.81	796.94
	CW	792.06	792.84	793.63	794.41	795.20	795.98	796.77	796.94
	SW	0.00	0.05	0.09	0.13	0.13	0.13	0.12	0.11
	DL1	0.00	0.09	0.18	0.23	0.26	0.25	0.22	0.21
	DL2	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.02
	C (feet)	0.00	0.17	0.28	0.35	0.31	0.22	0.04	0.00
	BLOCKING (feet)	0.00							4.88
GIRDER 6	TOD	793.59	794.39	795.16	795.91	796.63	797.33	797.99	798.14
	TOS	792.58	793.49	794.35	795.17	795.91	796.61	797.23	797.50
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	792.48	793.43	794.35	795.19	795.95	796.65	797.25	797.38
	CW	792.48	793.27	794.06	794.84	795.63	796.42	797.21	797.38
	SW	0.00	0.05	0.10	0.13	0.14	0.14	0.13	0.12
	DL1	0.00	0.10	0.18	0.24	0.27	0.27	0.23	0.22
	DL2	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.02
	C (feet)	0.00	0.16	0.29	0.35	0.32	0.23	0.04	0.00
	BLOCKING (feet)	0.00							4.90
GIRDER 7	TOD	794.01	794.81	795.58	796.33	797.05	797.75	798.41	798.56
	TOS	793.00	793.91	794.78	795.59	796.35	797.04	797.66	797.94
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	792.90	793.86	794.77	795.62	796.39	797.09	797.69	797.82
	CW	792.90	793.69	794.48	795.27	796.06	796.85	797.65	797.82
	SW	0.00	0.06	0.10	0.13	0.15	0.15	0.13	0.13
	DL1	0.00	0.10	0.19	0.25	0.28	0.28	0.23	0.23
	DL2	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.02
	C (feet)	0.00	0.17	0.29	0.35	0.33	0.24	0.04	0.00
	BLOCKING (feet)	0.00							4.92

FIELD SECTION 2

HORIZ. LOC.	VALUE	POSITION ALONG GIRDER AND STATION							
		FS #1 572+36.80	0.7 SPAN 572+51.68	0.8 SPAN 572+70.71	0.9 SPAN 572+89.74	PIER 1 573+08.76	0.1 SPAN "A"	0.2 SPAN "B"	FS #2 573+51.53
CAMBER DATA									
GIRDER 1	TOD	796.04	796.54	797.15	797.74	798.31	798.85	799.47	799.63
	TOS	795.35	795.72	796.26	796.87	797.40	797.94	798.49	798.76
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	795.20	795.64	796.16	796.68	797.20	797.72	798.34	798.51
	CW	795.20	795.63	796.18	796.73	797.28	797.83	798.39	798.51
	SW	0.09	0.07	0.04	0.02	0.00	-0.01	-0.01	-0.01
	DL1	0.17	0.13	0.08	0.04	0.00	0.00	0.00	0.00
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.01	-0.02	-0.05	-0.08	-0.11	-0.05	0.00
	BLOCKING (feet)	4.82				6.82			8.13
GIRDER 2	TOD	796.46	796.96	797.57	798.16	798.73	799.27	799.87	800.02
	TOS	795.78	796.15	796.69	797.29	797.82	798.36	798.89	799.14
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	795.63	796.08	796.60	797.10	797.62	798.14	798.74	798.90
	CW	795.63	796.05	796.60	797.14	797.68	798.23	798.78	798.90
	SW	0.09	0.08	0.05	0.02	0.00	-0.01	-0.01	-0.01
	DL1	0.18	0.14	0.09	0.04	0.00	0.00	0.00	0.00
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.03	0.00	-0.04	-0.06	-0.09	-0.04	0.00
	BLOCKING (feet)	4.83				6.82			8.10
GIRDER 3	TOD	796.88	797.38	797.99	798.58	799.15	799.69	800.27	800.41
	TOS	796.20	796.58	797.12	797.72	798.24	798.78	799.29	799.53
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	796.06	796.52	797.03	797.53	798.04	798.56	799.14	799.28
	CW	796.06	796.48	797.01	797.54	798.08	798.62	799.16	799.28
	SW	0.10	0.08	0.05	0.03	0.00	-0.01	-0.01	-0.01
	DL1	0.18	0.16	0.10	0.04	0.00	0.00	0.00	0.00
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.04	0.02	-0.01	-0.04	-0.06	-0.02	0.00
	BLOCKING (feet)	4.84				6.82			8.06
GIRDER 4	TOD	797.30	797.80	798.41	799.00	799.57	800.11	800.66	800.80
	TOS	796.64	797.01	797.55	798.14	798.66	799.19	799.68	799.92
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	796.51	796.94	797.45	797.95	798.46	798.97	799.52	799.67
	CW	796.51	796.92	797.44	797.97	798.49	799.02	799.54	799.67
	SW	0.11	0.08	0.05	0.03	0.00	-0.01	-0.02	-0.01
	DL1	0.20	0.16	0.10	0.04	0.00	-0.01	0.00	0.00
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.02	0.01	-0.02	-0.03	-0.05	-0.02	0.00
	BLOCKING (feet)	4.87				6.82			8.03
GIRDER 5	TOD	797.72	798.22	798.83	799.42	799.99	800.53	801.06	801.19
	TOS	797.07	797.44	797.97	798.56	799.08	799.61	800.08	800.31
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	796.94	797.38	797.88	798.38	798.88	799.39	799.92	800.05
	CW	796.94	797.34	797.86	798.37	798.89	799.41	799.92	800.05
	SW	0.11	0.09	0.06	0.03	0.00	-0.01	-0.02	-0.02
	DL1	0.21	0.17	0.10	0.04	0.00	-0.01	-0.01	0.00
	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.04	0.02	0.01	-0.01	-0.02	0.00	0.00
	BLOCKING (feet)	4.88				6.82			7.99
GIRDER 6	TOD	798.14	798.64	799.25	799.84	800.41	800.94	801.45	801.58
	TOS	797.50	797.86	798.40	798.98	799.50	800.02	800.46	800.70
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	797.38	797.80	798.31	798.80	799.30	799.79	800.30	800.44
	CW	797.38	797.78	798.28	798.79	799.30	799.81	800.31	800.44
	SW	0.12	0.09	0.06	0.03	0.00	-0.02	-0.02	-0.02
	DL1	0.22	0.17	0.11	0.04	0.00	-0.01	-0.01	0.00
	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.02	0.03	0.01	0.00	-0.02	-0.01	0.00
	BLOCKING (feet)	4.90				6.82			7.96
GIRDER 7	TOD	798.56	799.06	799.67	800.26	800.83	801.36	801.85	801.97
	TOS	797.94	798.28	798.82	799.40	799.92	800.44	800.86	801.08
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	797.82	798.24	798.74	799.22	799.72	800.21	800.70	800.82
	CW	797.82	798.21	798.71	799.20	799.70	800.20	800.69	800.82
	SW	0.13	0.10	0.07	0.03	0.00	-0.02	-0.02	-0.02
	DL1	0.23	0.18	0.11	0.04	0.00	-0.01	-0.01	-0.01
	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.03	0.03	0.02	0.02	0.01	0.01	0.00
	BLOCKING (feet)	4.92				6.82			7.92

FOR LEGEND AND NOTES SEE SHEET "CAMBER AND BLOCKING DATA FOR FIELD SECTION 5"

NOTE: 0.1 SPAN STATIONING VARIES FOR EACH GIRDER IN SPAN 2 DUE TO THE END OF CURVE AT PT. STA. 574+08.30

GIRDER	0.1 SPAN "A"	0.2 SPAN "B"
1	573+28.01	573+47.26
2	573+27.96	573+47.17
3	573+27.92	573+47.08
4	573+27.87	573+46.98
5	573+27.83	573+46.89
6	573+27.78	573+46.80
7	573+27.74	573+46.72

"A" AND "B" STATIONING IN FIELD SECTION 2

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY SDR | PLANS CK'D. CAD

CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 1&2

SHEET 32

2485

SCALE =

STATE PROJECT NUMBER

1060-33-80

FIELD SECTION 3

HORIZ. LOC.	VALUE	POSITION ALONG GIRDER AND STATION					
		FS #2 573+51.53	0.3 SPAN "C"	0.4 SPAN "D"	0.5 SPAN "E"	0.6 SPAN "F"	FS #3 574+40.01
CAMBER DATA							
GIRDER 1	TOD	799.63	800.15	800.80	801.42	802.00	802.48
	TOS	798.76	799.13	799.79	800.41	800.99	801.59
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	798.51	799.04	799.71	800.34	800.92	801.37
	CW	798.51	798.99	799.61	800.23	800.84	801.37
	SW	-0.01	0.00	0.00	0.01	0.01	0.00
	DL1	0.00	0.01	0.03	0.03	0.03	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.05	0.10	0.11	0.08	0.00
	BLOCKING (feet)	8.13					10.99
GIRDER 2	TOD	800.02	800.51	801.11	801.70	802.24	802.70
	TOS	799.14	799.49	800.10	800.69	801.23	801.81
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	798.90	799.40	800.02	800.62	801.15	801.59
	CW	798.90	799.35	799.93	800.51	801.09	801.59
	SW	-0.01	-0.01	0.00	0.01	0.00	0.00
	DL1	0.00	0.02	0.03	0.03	0.03	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.05	0.09	0.11	0.06	0.00
	BLOCKING (feet)	8.10					10.79
GIRDER 3	TOD	800.41	800.86	801.43	801.98	802.49	802.91
	TOS	799.53	799.84	800.42	800.97	801.48	802.02
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	799.28	799.75	800.33	800.89	801.40	801.80
	CW	799.28	799.70	800.24	800.78	801.33	801.80
	SW	-0.01	-0.01	0.00	0.00	0.00	0.00
	DL1	0.00	0.02	0.02	0.03	0.03	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.05	0.09	0.11	0.07	0.00
	BLOCKING (feet)	8.06					10.58
GIRDER 4	TOD	800.80	801.22	801.75	802.26	802.73	803.13
	TOS	799.92	800.19	800.74	801.25	801.72	802.24
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	799.67	800.10	800.65	801.17	801.64	802.02
	CW	799.67	800.06	800.56	801.07	801.57	802.02
	SW	-0.01	-0.01	0.00	0.00	0.00	0.00
	DL1	0.00	0.00	0.02	0.03	0.03	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.04	0.09	0.10	0.07	0.00
	BLOCKING (feet)	8.03					10.38
GIRDER 5	TOD	801.19	801.58	802.07	802.54	802.98	803.35
	TOS	800.31	800.55	801.06	801.53	801.97	802.46
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	800.05	800.46	800.96	801.45	801.88	802.24
	CW	800.05	800.41	800.88	801.35	801.82	802.24
	SW	-0.02	-0.01	-0.01	0.00	0.00	0.00
	DL1	0.00	0.01	0.02	0.03	0.02	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.05	0.08	0.10	0.06	0.00
	BLOCKING (feet)	7.99					10.18
GIRDER 6	TOD	801.58	801.94	802.39	802.82	803.23	803.57
	TOS	800.70	800.91	801.37	801.81	802.22	802.68
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	800.44	800.81	801.28	801.72	802.13	802.46
	CW	800.44	800.77	801.20	801.64	802.07	802.46
	SW	-0.02	-0.02	-0.01	0.00	0.00	0.00
	DL1	0.00	0.01	0.02	0.02	0.02	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.04	0.08	0.08	0.06	0.00
	BLOCKING (feet)	7.96					9.98
GIRDER 7	TOD	801.97	802.29	802.71	803.11	803.47	803.78
	TOS	801.08	801.25	801.69	802.10	802.46	802.89
	DK	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	800.82	801.15	801.60	802.00	802.36	802.66
	CW	800.82	801.11	801.51	801.90	802.30	802.66
	SW	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
	DL1	-0.02	0.00	0.02	0.02	0.02	0.01
	DL2	0.00	0.00	0.00	0.00	0.00	0.00
	C (feet)	0.00	0.04	0.09	0.10	0.06	0.00
	BLOCKING (feet)	7.92					9.76

FIELD SECTION 4

HORIZ. LOC.	VALUE	POSITION ALONG GIRDER AND STATION							
		FS #3 574+40.01	0.7 SPAN "G"	0.8 SPAN "H"	0.9 SPAN "I"	PIER 2 574+99.01	0.1 SPAN 575+16.01	0.2 SPAN 575+33.01	0.3 SPAN & FS #4
CAMBER DATA									
GIRDER 1	TOD	802.48	802.55	803.03	803.35	803.65	803.90	804.12	804.33
	TOS	801.59	801.57	802.04	802.42	802.72	803.01	803.21	803.57
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	801.37	801.44	801.92	802.22	802.54	802.84	803.12	803.40
	CW	801.37	801.42	801.77	802.12	802.47	802.78	803.09	803.40
	SW	0.00	0.00	0.00	-0.01	0.00	0.02	0.03	0.05
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.02	0.15	0.10	0.07	0.06	0.03	0.00
	BLOCKING (feet)	10.99				12.16			13.02
GIRDER 2	TOD	802.70	802.76	803.22	803.54	803.84	804.08	804.31	804.52
	TOS	801.81	801.78	802.23	802.61	802.91	803.19	803.40	803.76
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	801.59	801.65	802.10	802.41	802.73	803.02	803.31	803.60
	CW	801.59	801.64	801.98	802.33	802.67	802.98	803.29	803.60
	SW	0.00	0.00	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.01	0.12	0.08	0.06	0.04	0.02	0.00
	BLOCKING (feet)	10.79				11.93			12.80
GIRDER 3	TOD	802.91	802.97	803.40	803.73	804.02	804.27	804.50	804.70
	TOS	802.02	801.99	802.40	802.80	803.09	803.38	803.59	803.94
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	801.80	801.86	802.27	802.60	802.91	803.21	803.50	803.78
	CW	801.80	801.84	802.18	802.52	802.86	803.17	803.47	803.78
	SW	0.00	0.00	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.02	0.09	0.08	0.05	0.04	0.03	0.00
	BLOCKING (feet)	10.58				11.69			12.56
GIRDER 4	TOD	803.13	803.18	803.59	803.91	804.21	804.46	804.68	804.89
	TOS	802.24	802.20	802.59	802.98	803.28	803.57	803.77	804.13
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	802.02	802.07	802.46	802.78	803.10	803.40	803.68	803.97
	CW	802.02	802.06	802.39	802.73	803.06	803.37	803.67	803.97
	SW	0.00	0.00	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.01	0.07	0.05	0.04	0.03	0.01	0.00
	BLOCKING (feet)	10.38				11.46			12.33
GIRDER 5	TOD	803.35	803.39	803.77	804.10	804.40	804.64	804.87	805.08
	TOS	802.46	802.41	802.77	803.17	803.47	803.75	803.96	804.32
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	802.24	802.28	802.64	802.97	803.29	803.58	803.87	804.16
	CW	802.24	802.28	802.61	802.94	803.27	803.57	803.86	804.16
	SW	0.00	0.00	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.00	0.03	0.03	0.02	0.01	0.01	0.00
	BLOCKING (feet)	10.18				11.23			12.10
GIRDER 6	TOD	803.57	803.60	803.96	804.28	804.58	804.83	805.06	805.26
	TOS	802.68	802.62	802.96	803.35	803.65	803.94	804.15	804.50
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	802.46	802.49	802.83	803.15	803.47	803.77	804.06	804.34
	CW	802.46	802.49	802.82	803.14	803.47	803.76	804.05	804.34
	SW	0.00	-0.01	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	0.00	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
	BLOCKING (feet)	9.98				10.99			11.86
GIRDER 7	TOD	803.78	803.81	804.14	804.47	804.77	805.02	805.24	805.45
	TOS	802.89	802.83	803.14	803.54	803.84	804.13	804.33	804.69
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	802.66	802.70	803.01	803.34	803.66	803.96	804.24	804.53
	CW	802.66	802.69	803.01	803.34	803.66	803.95	804.24	804.53
	SW	-0.01	-0.01	-0.01	-0.01	0.00	0.02	0.03	0.06
	DL1	0.01	0.01	-0.01	0.00	0.00	0.03	0.08	0.13
	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C (feet)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
	BLOCKING (feet)	9.76				10.76			11.63

FOR LEGEND AND NOTES SEE SHEET "CAMBER AND BLOCKING DATA FOR FIELD SECTION 5"

NOTE: 0.1 SPAN STATIONING VARIES FOR EACH GIRDER IN SPAN 2 DUE TO THE END OF CURVE AT PT. STA. 574+08.30

GIRDER	0.3 SPAN "C"	0.4 SPAN "D"	0.5 SPAN "E"	0.6 SPAN "F"
1	573+66.51	573+85.76	574+05.01	574+23.87
2	573+66.37	573+85.57	574+04.78	574+23.68
3	573+66.23	573+85.39	574+04.55	574+23.48
4	573+66.10	573+85.21	574+04.32	574+23.29
5	573+65.96	573+85.03	574+04.09	574+23.09
6	573+65.82	573+84.85	574+03.87	574+22.90
7	573+65.69	573+84.67	574+03.65	574+22.70

"C","D","E","F" STATIONING IN FIELD SECTION 3

GIRDER	0.7 SPAN "G"	0.8 SPAN "H"	0.9 SPAN "I"
1	574+42.66	574+61.44	574+80.23
2	574+42.51	574+61.34	574+80.18
3	574+42.36	574+61.24	574+80.13
4	574+42.22	574+61.15	574+80.08
5	574+42.07	574+61.05	574+80.03
6	574+41.92	574+60.95	574+79.98
7	574+41.78	574+60.85	574+79.93

"G","H","I" STATIONING IN FIELD SECTION 4

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY SDR | PLANS CK'D. CAD

CAMBER AND BLOCKING DATA FOR FIELD SECTIONS 3&4

SHEET 33

2486

SCALE =

STATE PROJECT NUMBER

1060-33-80

FIELD SECTION 5

HORIZ. LOC.	VALUE	POSITION ALONG GIRDER AND STATION							
		0.3 SPAN & FS #4	0.4 SPAN 575+67.01	0.5 SPAN 575+84.01	0.6 SPAN 576+01.01	0.7 SPAN 576+18.01	0.8 SPAN 576+35.01	0.9 SPAN 576+52.01	E. ABUT. 576+69.01
CAMBER DATA									
GIRDER 1	TOD	804.33	804.51	804.68	804.82	804.94	805.04	805.12	805.18
	TOS	803.57	803.66	803.86	804.00	804.10	804.15	804.17	804.14
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	803.40	803.65	803.86	804.00	804.09	804.12	804.12	804.06
	CW	803.40	803.49	803.59	803.68	803.78	803.87	803.97	804.06
	SW	0.05	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.20	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.16	0.27	0.32	0.31	0.25	0.15	0.00
	BLOCKING (feet)	13.02							13.68
GIRDER 2	TOD	804.52	804.70	804.86	805.01	805.13	805.23	805.31	805.37
	TOS	803.76	803.85	804.04	804.20	804.29	804.34	804.36	804.34
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	803.60	803.84	804.04	804.20	804.28	804.31	804.31	804.26
	CW	803.60	803.69	803.79	803.88	803.98	804.07	804.17	804.26
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.21	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.15	0.25	0.32	0.30	0.24	0.14	0.00
	BLOCKING (feet)	12.80							13.46
GIRDER 3	TOD	804.70	804.89	805.05	805.19	805.31	805.42	805.50	805.55
	TOS	803.94	804.04	804.23	804.38	804.47	804.53	804.55	804.52
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	803.78	804.03	804.23	804.38	804.46	804.50	804.50	804.44
	CW	803.78	803.87	803.97	804.06	804.16	804.25	804.35	804.44
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.21	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.16	0.26	0.32	0.30	0.25	0.15	0.00
	BLOCKING (feet)	12.56							13.22
GIRDER 4	TOD	804.89	805.07	805.24	805.38	805.50	805.60	805.68	805.74
	TOS	804.13	804.22	804.42	804.57	804.66	804.71	804.73	804.70
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	803.97	804.21	804.42	804.57	804.65	804.68	804.68	804.62
	CW	803.97	804.06	804.16	804.25	804.34	804.43	804.53	804.62
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.21	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.15	0.26	0.32	0.31	0.25	0.15	0.00
	BLOCKING (feet)	12.33							12.98
GIRDER 5	TOD	805.08	805.26	805.42	805.57	805.69	805.79	805.87	805.93
	TOS	804.32	804.41	804.60	804.76	804.85	804.90	804.92	804.90
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	804.16	804.40	804.60	804.76	804.84	804.87	804.87	804.82
	CW	804.16	804.25	804.35	804.44	804.54	804.63	804.73	804.82
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.21	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.15	0.25	0.32	0.30	0.24	0.14	0.00
	BLOCKING (feet)	12.10							12.76
GIRDER 6	TOD	805.26	805.45	805.61	805.75	805.87	805.98	806.06	806.11
	TOS	804.50	804.60	804.79	804.94	805.03	805.09	805.11	805.08
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	804.34	804.59	804.79	804.94	805.02	805.06	805.06	805.00
	CW	804.34	804.43	804.53	804.62	804.72	804.81	804.91	805.00
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.21	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.16	0.26	0.32	0.30	0.25	0.15	0.00
	BLOCKING (feet)	11.86							12.52
GIRDER 7	TOD	805.45	805.63	805.80	805.94	806.06	806.16	806.24	806.30
	TOS	804.69	804.78	804.98	805.12	805.22	805.27	805.29	805.26
	DK	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	ZW	804.53	804.77	804.98	805.12	805.21	805.24	805.24	805.18
	CW	804.53	804.62	804.72	804.81	804.91	805.00	805.09	805.18
	SW	0.06	0.08	0.08	0.08	0.08	0.06	0.03	0.00
	DL1	0.13	0.16	0.20	0.20	0.17	0.13	0.08	0.00
	DL2	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00
	C (feet)	0.00	0.15	0.26	0.31	0.30	0.24	0.15	0.00
	BLOCKING (feet)	11.63							12.28

TABULUTED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB
= TOD - DK

TOD FINISHED TOP OF DECK ELEVATION

TOS TOP OF ERECTED STEEL ELEVATION
= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS
= TOD + SW + DL1+ DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB
ELEVATION ZW AT FIELD SPLICES AND END SUPPORTS

BLOCKING BLOCKING HEIGHT CORRESPONDING TO THE
UNDEFLECTED POSITION OF THE TOP OF WEB

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS INCLUDING ALL
DIAPHRAGMS, STIFFENERS

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED
TO BARE STEEL SECTION

DL2 PARAPETS AND WEARING SURFACE APPLIED
TO COMPOSITE SECTION

CALCULATED VALUES

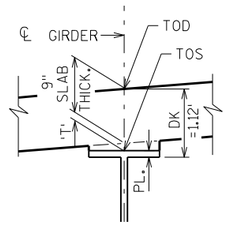
PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = TOP OF WEB TO FINISHED GRADE (TOD)
= 4⅜" HAUNCH + 9" SLAB = 13⅜" = 1.12'

C = CAMBER = ZW - CW

NOTES:

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION END POINTS
4. TOP OF ERECTED STEEL ELEVATIONS,TOS, AT SUPPORTS AND FIELD SPLICES ARE TO TOP OF STEEL (SPLICE PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP OF STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.
5. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING A CONSTANT 4⅜" HAUNCH HEIGHT. MEASURED FROM THE TOP OF THE WEB TO THE BOTTOM OF THE DECK.



CONCRETE HAUNCH DETAILS

'T' = CONCRETE HAUNCH HEIGHT AT CENTERLINE OF GIRDER.

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED. ELEVATIONS OF THE TOP FLANGES, OR TOP OF SPLICE PLATES, WHICHEVER APPLIES, SHALL BE TAKEN TAKEN AT CENTERLINE OF BEARINGS, CENTERLINE OF FIELD SPLICES, AND AT 0.1 POINTS ALONG ℄ OF GIRDERS.

TOP OF DECK (TOD) ELEV. AT FINAL GRADE.

\- TOP OF STEEL (TOS) ELEV. AFTER STEEL ERECTION.

\+ CONCRETE ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED

\- SLAB THICKNESS (9")

= 'T' VALUE FOR SETTING HAUNCH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY SDR | PLANS CK'D. CAD

CAMBER AND BLOCKING DATA FOR FIELD SECTION 5

SHEET 34

2487

SCALE =

8

8

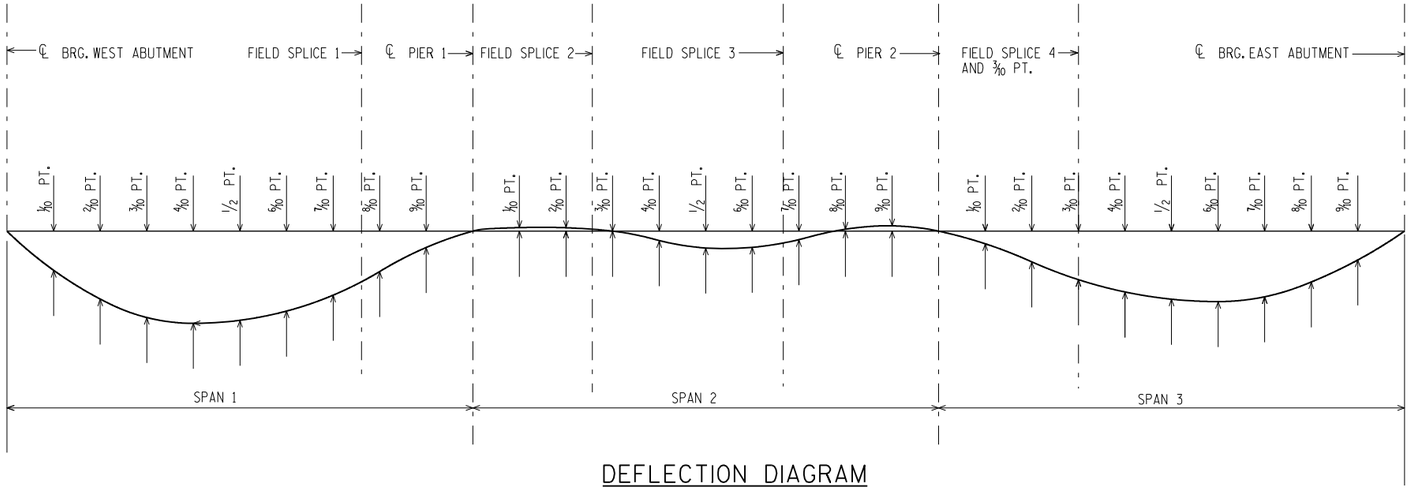
STATE PROJECT NUMBER

1060-33-80

DEAD LOAD DEFLECTIONS

		W. ABUT	1/10	2/10	3/10	4/10	5/10	6/10	FS #1	7/10	8/10	9/10	PIER 1	1/10	2/10	FS #2	3/10	4/10	5/10	6/10	FS #3	7/10	8/10	9/10	PIER 2	1/10	2/10	3/10-FS #4	4/10	5/10	6/10	7/10	8/10	9/10	E. ABUT
GIRD. 1	CONC. ONLY	0.00	0.09	0.16	0.20	0.23	0.22	0.20	0.19	0.15	0.09	0.04	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.22	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.13	0.24	0.30	0.34	0.33	0.29	0.28	0.22	0.13	0.06	0.00	-0.01	-0.01	-0.01	0.01	0.03	0.04	0.04	0.01	0.01	0.00	-0.01	0.00	0.05	0.12	0.19	0.26	0.30	0.30	0.27	0.20	0.12	0.00
GIRD. 2	CONC. ONLY	0.00	0.09	0.17	0.22	0.26	0.25	0.20	0.20	0.16	0.10	0.04	0.00	0.00	0.00	0.00	0.02	0.03	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.23	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.13	0.25	0.32	0.38	0.37	0.30	0.29	0.24	0.15	0.06	0.00	-0.01	-0.01	-0.01	0.01	0.03	0.04	0.03	0.01	0.01	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.31	0.27	0.20	0.12	0.00
GIRD. 3	CONC. ONLY	0.00	0.09	0.18	0.23	0.26	0.26	0.22	0.20	0.18	0.11	0.04	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.23	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.13	0.26	0.34	0.39	0.39	0.33	0.30	0.26	0.16	0.07	0.00	-0.01	-0.01	-0.01	0.01	0.02	0.03	0.03	0.01	0.01	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.61	0.27	0.20	0.12	0.00
GIRD. 4	CONC. ONLY	0.00	0.10	0.19	0.26	0.28	0.27	0.23	0.22	0.18	0.11	0.04	0.00	-0.01	0.00	0.00	0.01	0.02	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.23	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.15	0.27	0.38	0.41	0.40	0.34	0.33	0.26	0.16	0.07	0.00	-0.02	-0.02	-0.01	0.00	0.02	0.03	0.03	0.01	0.01	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.31	0.27	0.20	0.12	0.00
GIRD. 5	CONC. ONLY	0.00	0.10	0.20	0.26	0.29	0.28	0.25	0.23	0.19	0.11	0.05	0.00	-0.01	0.00	0.00	0.01	0.02	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.23	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.15	0.29	0.39	0.42	0.41	0.37	0.34	0.28	0.17	0.08	0.00	-0.02	-0.02	-0.02	0.00	0.01	0.03	0.02	0.01	0.01	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.31	0.27	0.20	0.12	0.00
GIRD. 6	CONC. ONLY	0.00	0.11	0.20	0.27	0.30	0.30	0.26	0.24	0.19	0.12	0.05	0.00	-0.01	-0.01	0.00	0.01	0.02	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.23	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.16	0.30	0.40	0.44	0.44	0.39	0.36	0.28	0.18	0.08	0.00	-0.03	-0.03	-0.02	-0.01	0.01	0.02	0.02	0.01	0.00	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.31	0.27	0.20	0.12	0.00
GIRD. 7	CONC. ONLY	0.00	0.11	0.21	0.28	0.31	0.31	0.26	0.25	0.20	0.12	0.05	0.00	-0.01	-0.01	-0.01	0.00	0.02	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.22	0.22	0.19	0.14	0.09	0.00
	TOTAL	0.00	0.17	0.31	0.41	0.46	0.46	0.39	0.38	0.30	0.19	0.08	0.00	-0.03	-0.03	-0.03	-0.02	0.01	0.01	0.01	0.00	0.00	-0.01	-0.01	0.00	0.05	0.12	0.20	0.26	0.30	0.30	0.27	0.20	0.12	0.00

NOTES: DEFLECTIONS ARE GIVEN TO NEAREST 0.01 FOOT.
NEGATIVE VALUE INDICATES UPWARD DEFLECTION.
1/10 TH POINTS ARE ALONG ℄ OF THE GIRDER.
CONC. ONLY = DL1 + DL2 — SEE CAMBER AND BLOCKING DATA SHEETS
TOTAL = DL1 + DL2 + SW — SEE CAMBER AND BLOCKING DATA SHEETS



DEFLECTION DIAGRAM

TOP OF ERECTED STEEL ELEVATION (TOS)

	℄ BRG. W. ABUT.	F.S. # 1	℄ PIER 1	F.S. # 2	F.S. # 3	℄ PIER 2	F.S. # 4	℄ BRG. E. ABUT.
GIRD. 1	790.48	795.35	797.40	798.76	801.59	802.72	803.57	804.14
GIRD. 2	790.90	795.78	797.82	799.14	801.81	802.91	803.76	804.34
GIRD. 3	791.32	796.20	798.24	799.53	802.02	803.09	803.94	804.52
GIRD. 4	791.74	796.64	798.66	799.92	802.24	803.28	804.13	804.70
GIRD. 5	792.16	797.07	799.08	800.31	802.46	803.47	804.32	804.90
GIRD. 6	792.58	797.50	799.50	800.70	802.68	803.65	804.50	805.08
GIRD. 7	793.00	797.94	799.92	801.08	802.89	803.84	804.69	805.26

TOP OF ERECTED STEEL ELEVATIONS (TOS) ARE TO TOP OF STEEL (SPLICE PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP OF STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY SDR | PLANS CK'D. CAD

DEAD LOAD DEFLECTION DIAGRAM

SHEET 35

2488

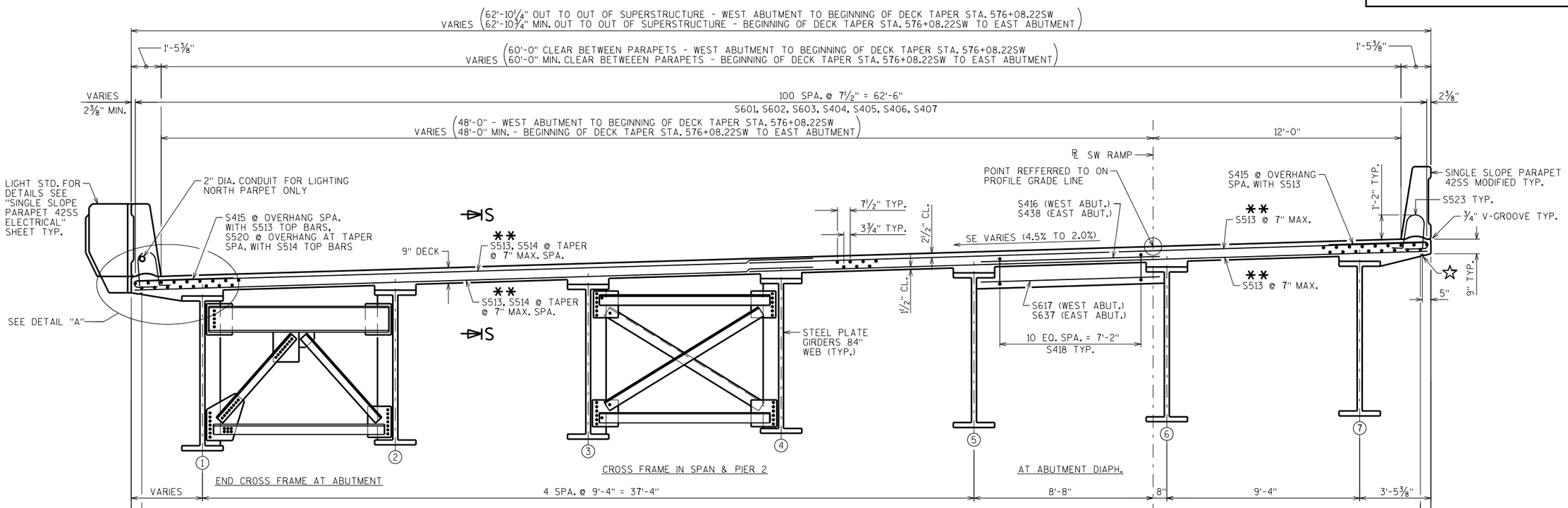
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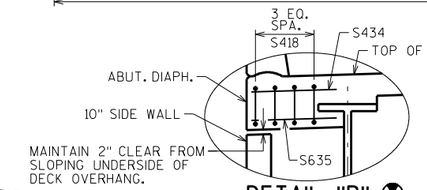
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SCALE =

STATE PROJECT NUMBER

1060-33-80

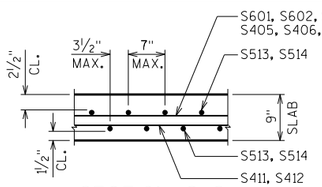




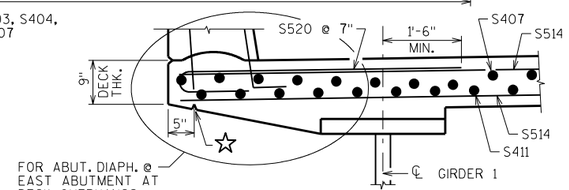
DETAIL "B"

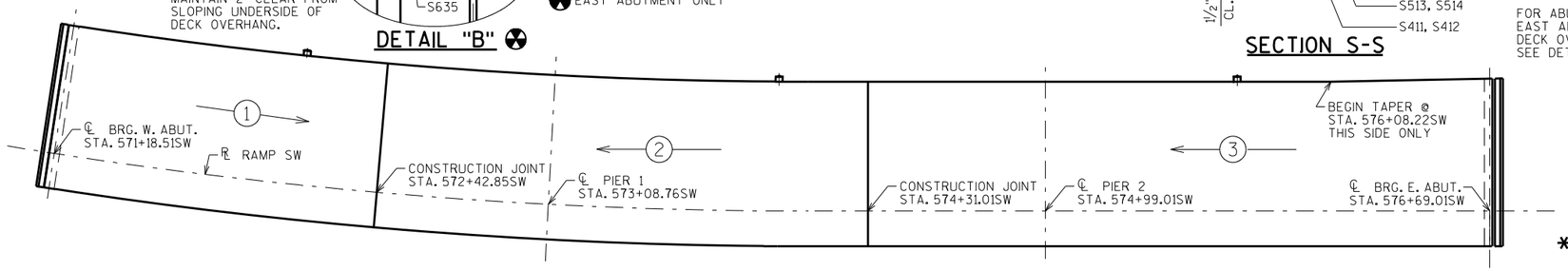
CROSS SECTION THRU ROADWAY - LOOKING EAST

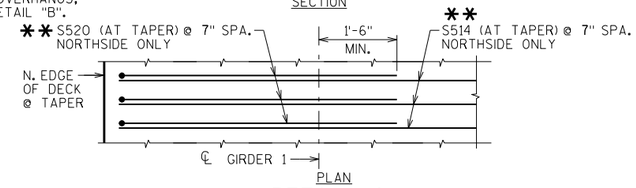
DIMENSIONS ARE NORMAL TO ℄ SW RAMP



SECTION S-S



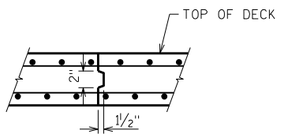




DETAIL "A"

** TRANSVERSE BAR STEEL TO BE PLACED RADIALLY AT CURVED PORTION OF BRIDGE AND PERPENDICULAR TO EDGE OF DECK ON THE STRAIGHT PORTION OF BRIDGE.

☆ ¾" V-GROOVE TERMINATE V-GROOVE 2'-0" FROM FRONT FACE OF ABUTMENTS.



SECTION THRU TRANSVERSE JOINT

DECK POURING SEQUENCE

(1) → INDICATES POUR NUMBER AND DIRECTION

DECK POURING SEQUENCE NOTES

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR, BUT NEED NOT EXCEED 100 CY PER HOUR.

TWO OR MORE ALTERNATE POURS MAY BE PLACED ON THE SAME DAY.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE TO THE STRUCTURES DESIGN SECTION FOR APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

SUPERSTRUCTURE CROSS SECTION

SHEET 36

2489

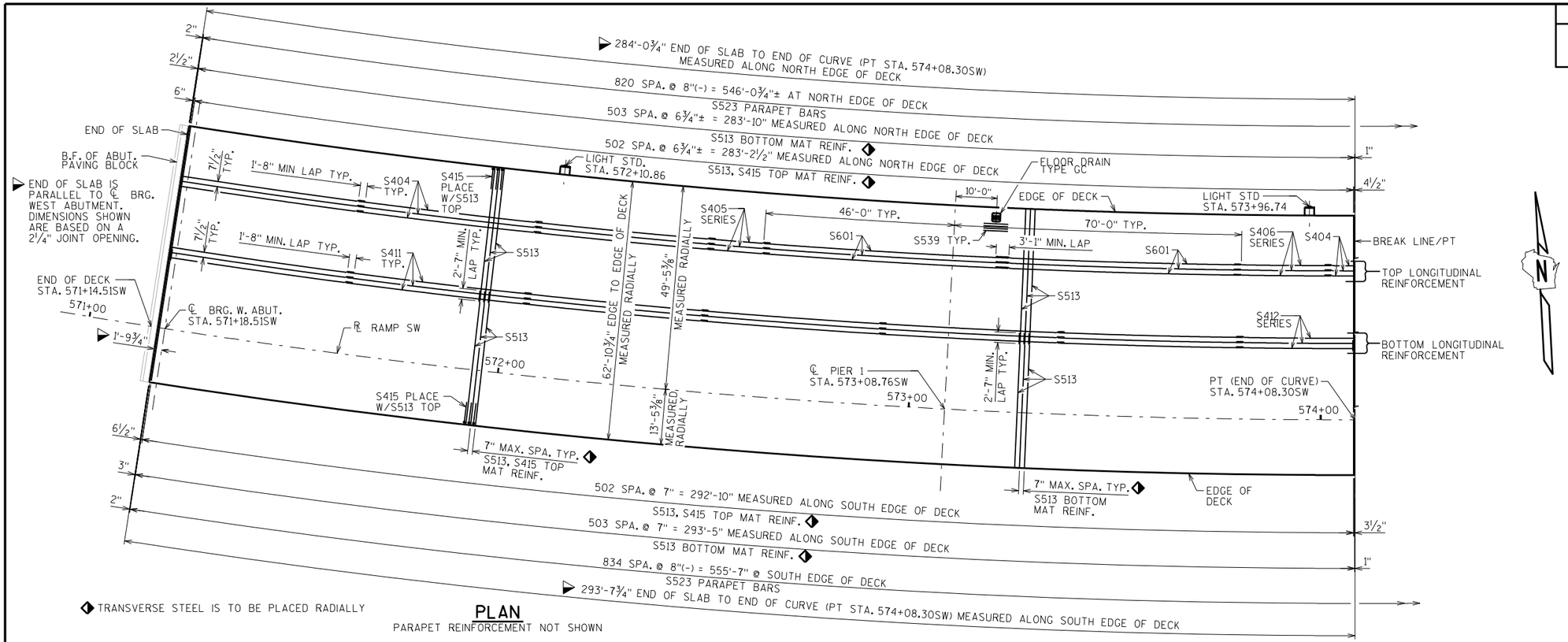
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STATE PROJECT NUMBER

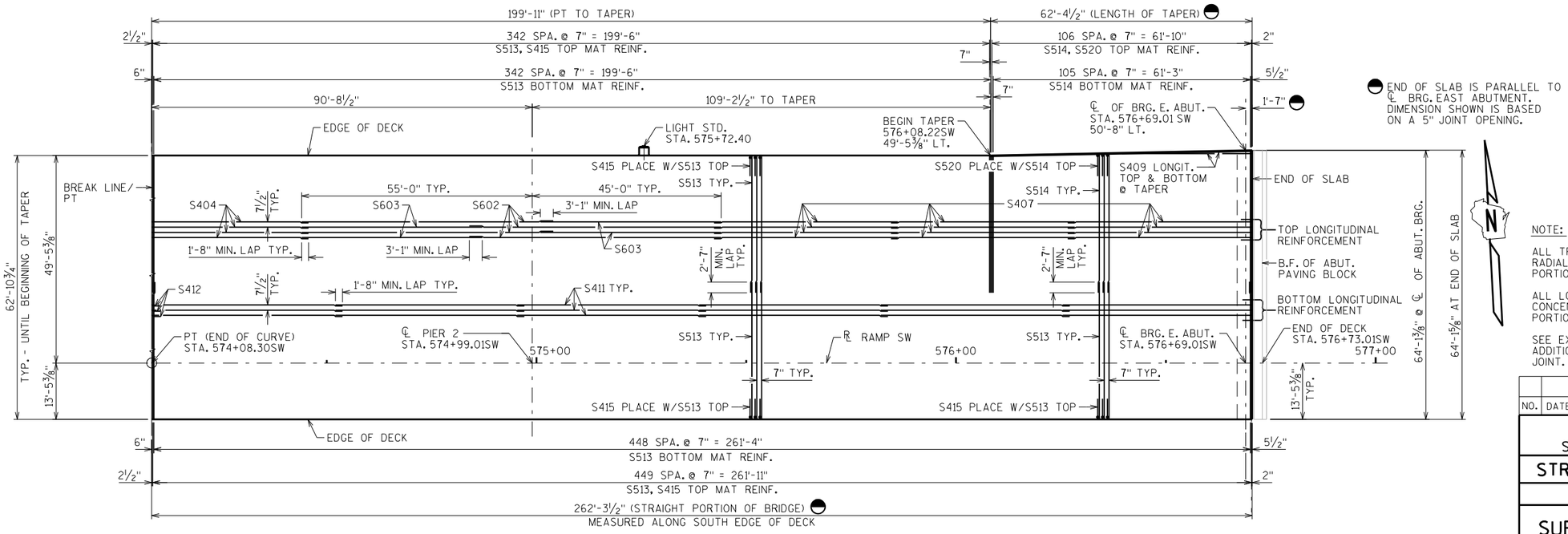
1060-33-80



◆ TRANSVERSE STEEL IS TO BE PLACED RADIALLY

PLAN

PARAPET REINFORCEMENT NOT SHOWN



PLAN

PARAPET REINFORCEMENT NOT SHOWN

NOTE:

ALL TRANSVERSE BAR STEEL SHALL BE PLACED RADIALLY TO RAMP SW ℄ IN THE CURVED PORTION OF DECK

ALL LONGITUDINAL BAR STEEL SHALL BE PLACED CONCENTRIC TO RAMP SW ℄ IN THE CURVED PORTION OF THE DECK.

SEE EXPANSION JOINT SHEETS FOR ADDITIONAL REINFORCEMENT AT EXPANSION JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

SUPER REINF. DETAILS

SHEET 37

2490

8

8

SCALE = 14

STATE PROJECT NUMBER

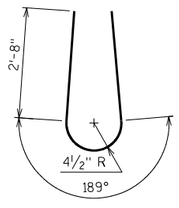
1060-33-80

TOP OF DECK ELEVATIONS

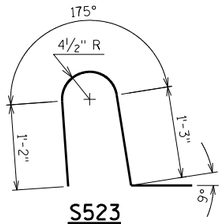
	℄ BRG. WEST ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	1/2 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	1/2 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2
NORTH EDGE OF DECK	791.40	792.20	792.97	793.72	794.44	795.14	795.80	796.45	797.06	797.65	798.22	798.76	799.39	800.07	800.73	801.36	801.95	802.51	802.99	803.31	803.61
GIRDER 1	791.49	792.29	793.06	793.81	794.53	795.23	795.89	796.54	797.15	797.74	798.31	798.85	799.47	800.15	800.80	801.42	802.00	802.55	803.03	803.35	803.65
GIRDER 2	791.91	792.71	793.48	794.23	794.95	795.65	796.31	796.96	797.57	798.16	798.73	799.27	799.87	800.51	801.11	801.70	802.24	802.76	803.22	803.54	803.84
GIRDER 3	792.33	793.13	793.90	794.65	795.37	796.07	796.73	797.38	797.99	798.58	799.15	799.69	800.27	800.86	801.43	801.98	802.49	802.97	803.40	803.73	804.02
GIRDER 4	792.75	793.55	794.32	795.07	795.79	796.49	797.15	797.80	798.41	799.00	799.57	800.11	800.66	801.22	801.75	802.26	802.73	803.18	803.59	803.91	804.21
GIRDER 5	793.17	793.97	794.74	795.49	796.21	796.91	797.57	798.22	798.83	799.42	799.99	800.53	801.06	801.58	802.07	802.54	802.98	803.39	803.77	804.10	804.40
GIRDER 6	793.59	794.39	795.16	795.91	796.63	797.33	797.99	798.64	799.25	799.84	800.41	800.94	801.45	801.94	802.39	802.82	803.23	803.60	803.96	804.28	804.58
GIRDER 7	794.01	794.81	795.58	796.33	797.05	797.75	798.41	799.06	799.67	800.26	800.83	801.36	801.85	802.29	802.71	803.11	803.47	803.81	804.14	804.47	804.77
SOUTH EDGE OF DECK	794.10	794.90	795.67	796.42	797.14	797.84	798.50	799.15	799.76	800.35	800.92	801.45	801.94	802.37	802.78	803.17	803.53	803.86	804.18	804.51	804.81

TOP OF DECK ELEVATIONS (CONTINUED)

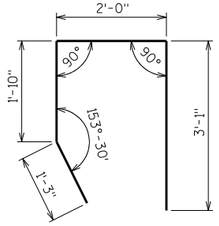
	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	1/2 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. EAST ABUT.
NORTH EDGE OF DECK	803.61	803.86	804.08	804.29	804.47	804.64	804.78	804.90	804.99	805.06	805.12
GIRDER 1	803.65	803.90	804.12	804.33	804.51	804.68	804.82	804.94	805.04	805.12	805.18
GIRDER 2	803.84	804.08	804.31	804.52	804.70	804.86	805.01	805.13	805.23	805.31	805.37
GIRDER 3	804.02	804.27	804.50	804.70	804.89	805.05	805.19	805.31	805.42	805.50	805.55
GIRDER 4	804.21	804.46	804.68	804.89	805.07	805.24	805.38	805.50	805.60	805.68	805.74
GIRDER 5	804.40	804.64	804.87	805.08	805.26	805.42	805.57	805.69	805.79	805.87	805.93
GIRDER 6	804.58	804.83	805.06	805.26	805.45	805.61	805.75	805.87	805.98	806.06	806.11
GIRDER 7	804.77	805.02	805.24	805.45	805.63	805.80	805.94	806.06	806.16	806.24	806.30
SOUTH EDGE OF DECK	804.81	805.06	805.28	805.49	805.67	805.84	805.98	806.10	806.20	806.28	806.34



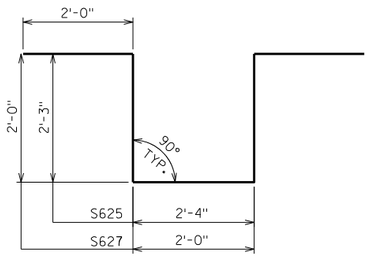
S522



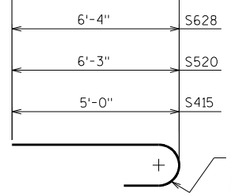
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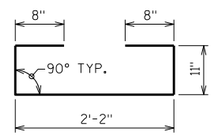
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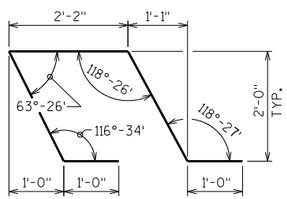
S625, S627



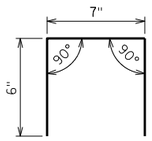
S415, S520, S628, S629



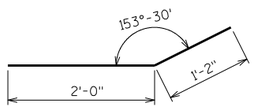
S418



S526



S432



S433

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S601	X	202	59'-7"			TOP LONGITUDINAL - OVER PIER 1
S602	X	101	60'-0"			TOP LONGITUDINAL - OVER PIER 2
S603	X	101	43'-1"			TOP LONGITUDINAL - OVER PIER 2
S404	X	404	45'-0"			LONGITUDINAL - TOP
S405	X	101	16'-6"		⚠	LONGITUDINAL - TOP
S406	X	101	24'-7"		⚠	LONGITUDINAL - TOP
S407	X	303	43'-10"			LONGITUDINAL - TOP
S408	X	NOT	USED			
S409	X	8	30'-10"			LONGITUDINAL - TOP & BOTTOM @ TAPER
S410	X	NOT	USED			
S411	X	1200	45'-0"			LONGITUDINAL - BOTTOM
S412	X	100	35'-0"		⚠	LONGITUDINAL - BOTTOM
S513	X	3599	32'-7"			TRANSVERSE - TOP & BOTTOM
S514	X	212	33'-4"		⚠	TRANSVERSE - TOP & BOTTOM @ TAPER
S415	X	1799	5'-6"	X		TRANSVERSE - TOP - EDGES OF DECK
S416	X	12	8'-10"			WEST ABUT. DIAPH. - HORIZ. @ EXPAN. DEVICE
S617	X	30	8'-10"			WEST ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S418	X	140	5'-0"	X		WEST & EAST ABUT. DIAPH. - VERT.
S419	X	12	8'-10"			WEST ABUT. - BETWEEN GIRDERS @ EXPAN. JOINT
S520	X	107	6'-10"	X		TRANSVERSE - TOP - EDGE OF DECK @ TAPER
S521	X	216	43'-9"			PARAPET. - HORIZ.
S522	X	1656	6'-8"	X		PARAPET - VERT.
S523	X	1656	4'-5"	X		PARAPET - DECK - VERT.
S524	X	12	7'-11"	X		LIGHT STD. - VERT.
S625	X	21	10'-2"	X		LIGHT STD. - HORIZ.
S526	X	12	8'-2"	X		LIGHT STD. - VERT.
S627	X	3	9'-4"	X		LIGHT STD. - HORIZ.
S628	X	24	7'-0"	X		DECK - TRANSVERSE - @ LIGHT STANDARD
S629	X	18	8'-4"	X		DECK - TRANSVERSE - @ LIGHT STANDARD
S530	X	24	6'-4"			DECK - TRANSVERSE - @ LIGHT STANDARD
S531	X	18	7'-8"			DECK - TRANSVERSE - @ LIGHT STANDARD
S432	X	15	1'-5"	X		LIGHT STD. - VERT.
S433	X	6	3'-2"	X		LIGHT STD. - VERT.
S434	X	4	2'-6"			EAST ABUT. DIAPH. @ DECK OVERHANG
S635	X	10	2'-6"			EAST ABUT. DIAPH. @ DECK OVERHANG
S637	X	30	8'-10"			EAST ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S438	X	12	8'-10"			EAST ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S539	X	4	5'-0"			FLOOR DRAIN - HORIZ. - SPAN 2

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQD.	LENGTH
S405	1 SERIES OF 101	13'-0" TO 20'-0"
S406	1 SERIES OF 101	23'-0" TO 26'-2"
S412	1 SERIES OF 100	30'-0" TO 40'-0"
S514	2 SERIES OF 106	32'-8" TO 33'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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SUPERSTRUCTURE DETAILS

SHEET 38

2491

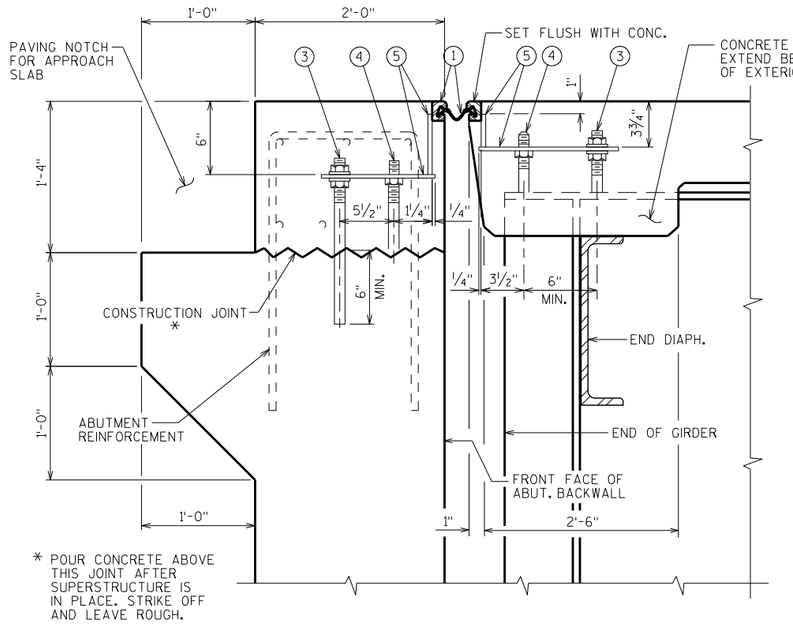
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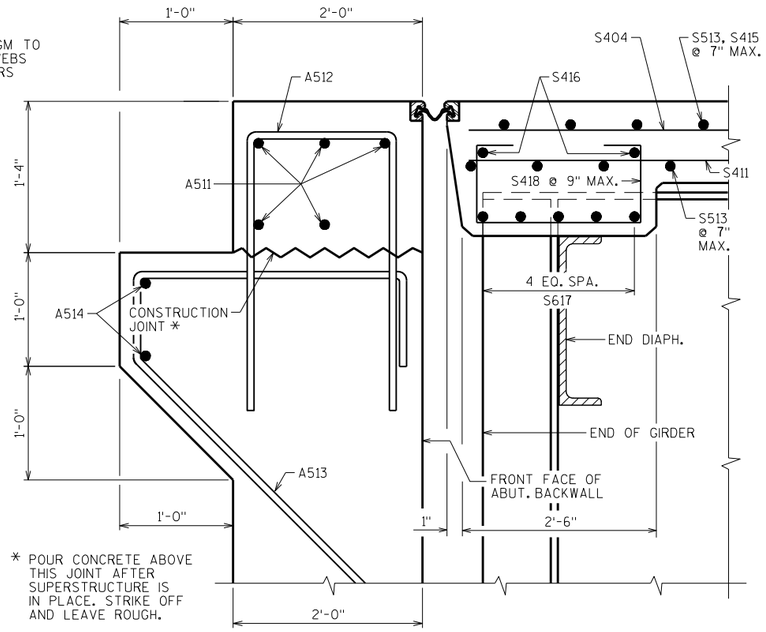
STATE PROJECT NUMBER

1060-33-80



SECTION THRU JOINT AT WEST ABUTMENT ONLY

NORMAL TO ℄ SUBSTRUCTURE

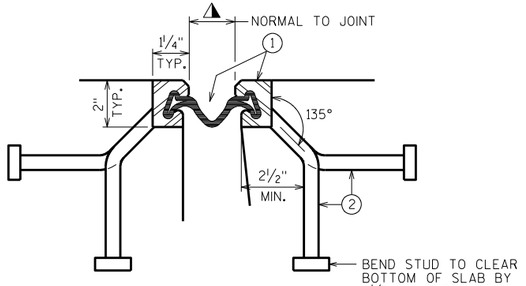


SECTION THRU JOINT AT WEST ABUTMENT ONLY

NORMAL TO ℄ SUBSTRUCTURE

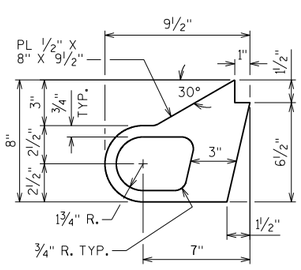
LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS $\frac{5}{8}$"Φ X $6\frac{3}{8}$" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. $\frac{1}{2}$" THICK ANCHOR PLATE WITH $\frac{5}{8}$"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. $\frac{3}{4}$" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. $\frac{3}{4}$"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X $\frac{1}{2}$" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE $1\frac{1}{2}$" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE $\frac{3}{8}$" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.
7. $\frac{3}{4}$"Φ X $1\frac{1}{2}$" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS $\frac{1}{16}$" BELOW PLATE SURFACE.
8. $\frac{3}{4}$"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. $\frac{3}{4}$"Φ X $2\frac{1}{4}$" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

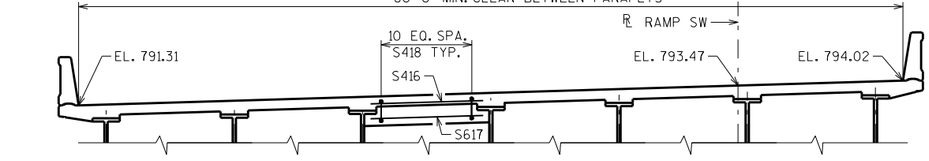


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



ALTERNATE STRIP SEAL ANCHOR



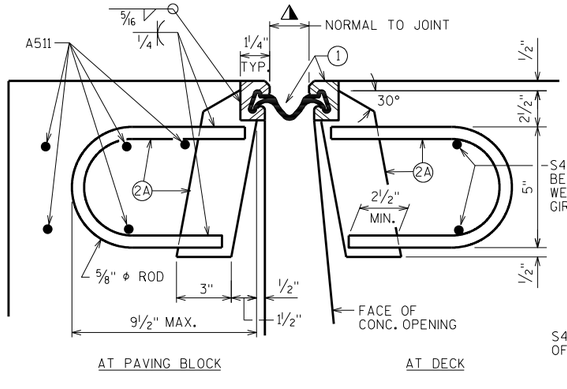
SECTION THRU JOINT AT WEST ABUTMENT - LOOKING EAST

ELEVATIONS AND DIMENSION TAKEN AT F.F. OF BACKWALL

⚠ TEMPERATURE TABLE

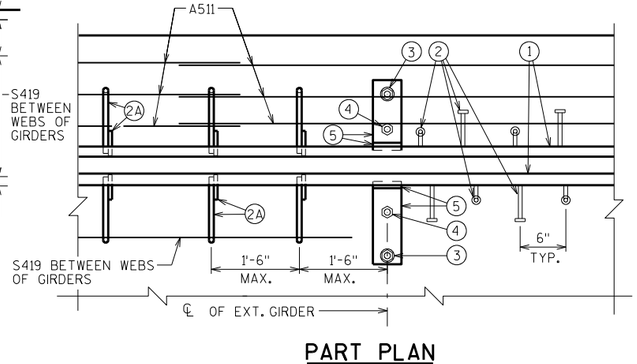
SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	$1\frac{5}{8}$"
75°	$1\frac{3}{4}$"
65°	2"
55°	$2\frac{1}{8}$"
45°	$2\frac{1}{4}$"
35°	$2\frac{3}{8}$"
25°	$2\frac{1}{2}$"
15°	$2\frac{3}{4}$"
5°	$2\frac{7}{8}$"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-852".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

EXPANSION DEVICE WEST ABUTMENT

SHEET 39

2492

JTSS_A_SS
1-14

SCALE = 1

33

29 1

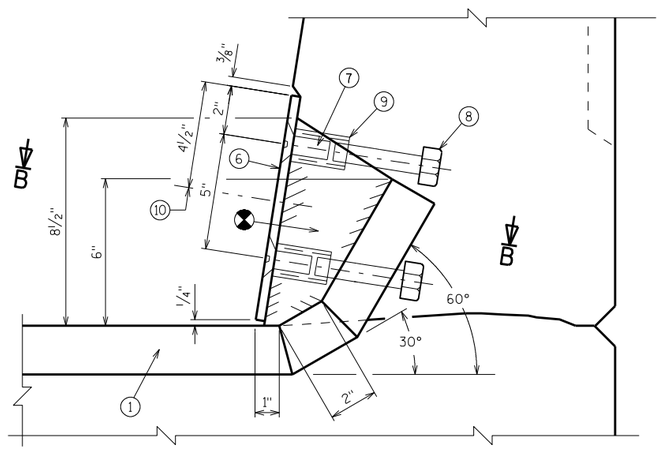
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12 5

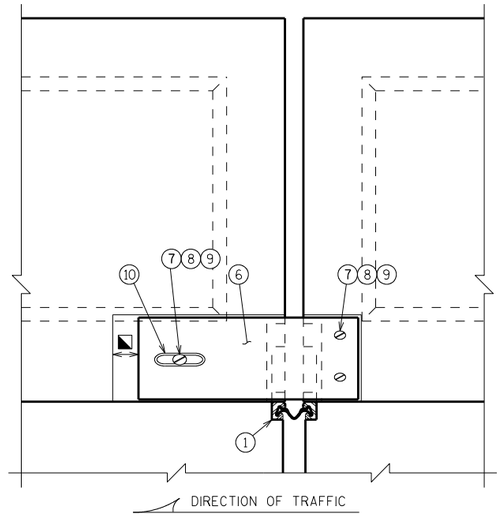
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STATE PROJECT NUMBER

1060-33-80

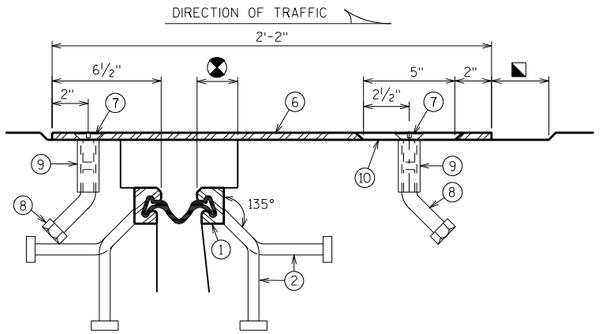


SECTION A-A

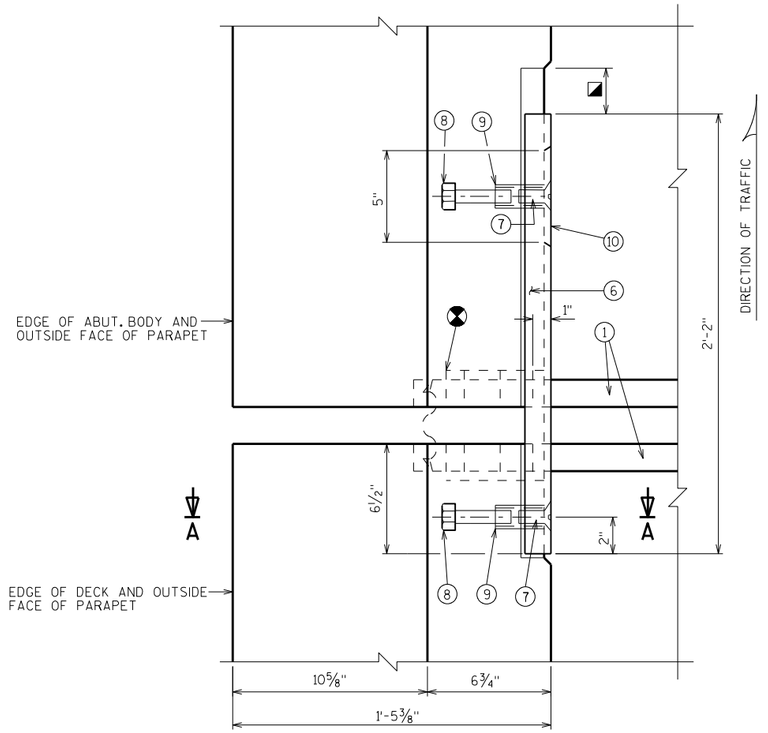


VIEW OF PARAPET PLATE FROM ROADWAY

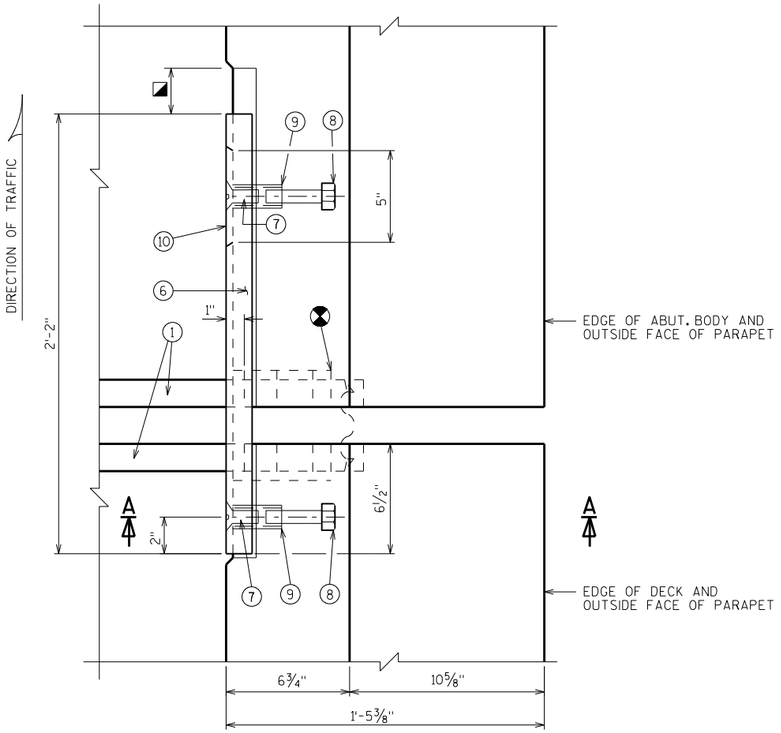
NORTHSIDE SHOWN
SOUTHSIDE SIMILAR



SECTION B-B



SOUTHSIDE PARAPET



NORTHSIDE PARAPET

PLAN
WEST ABUTMENT

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

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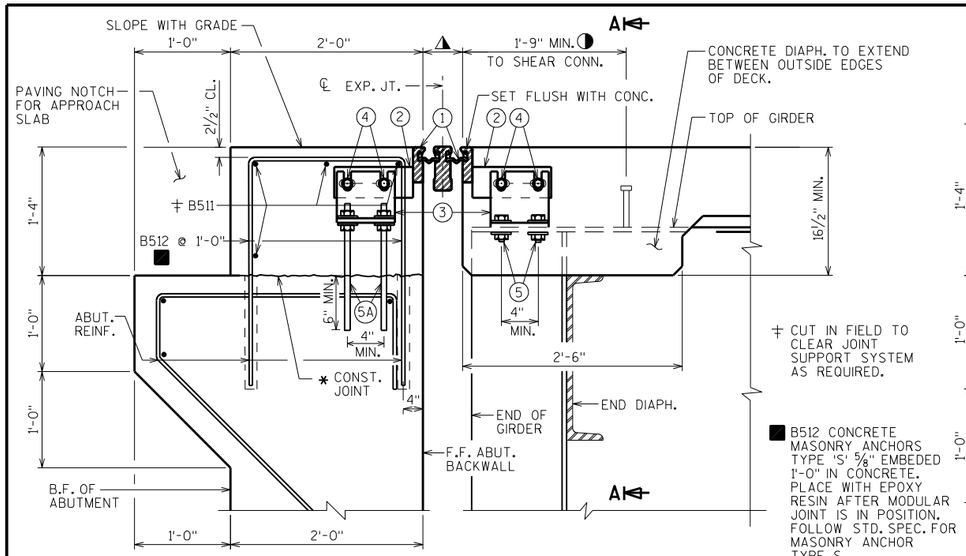
COVER PLATE DETAILS WEST ABUTMENT

SHEET 40

2493

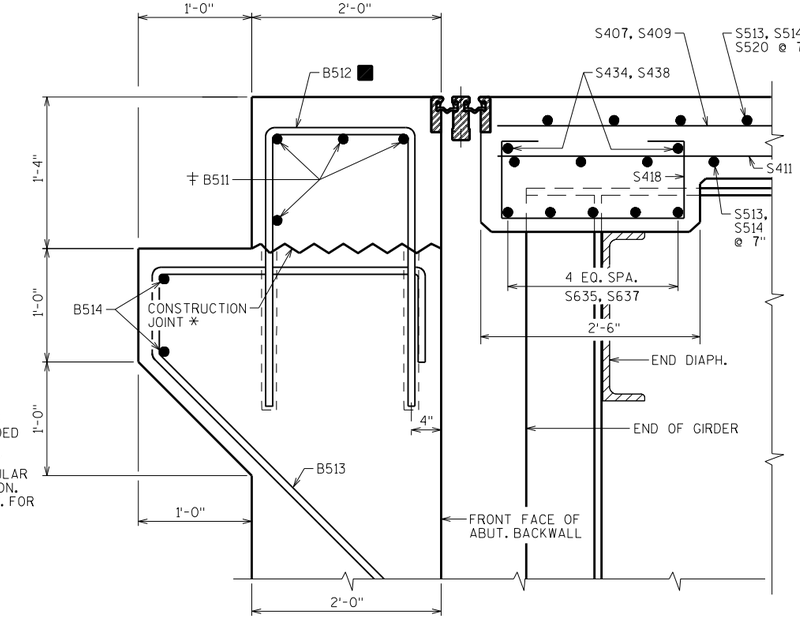
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JTSS_A_SS
1-14



SECTION THRU JOINT @ EAST ABUTMENT

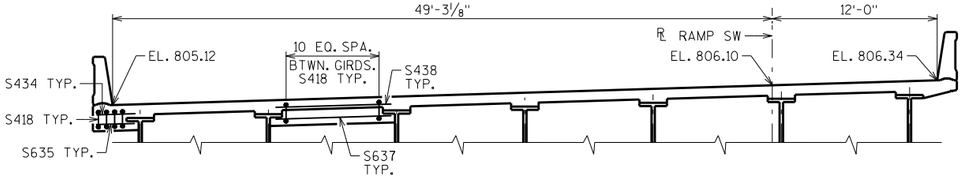
NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT AT EAST ABUTMENT ONLY

NORMAL TO ℄ SUBSTRUCTURE

◑ DIMENSION IS PARALLEL TO ℄ GIRDER.



SECTION THRU JOINT AT EAST ABUTMENT - LOOKING EAST

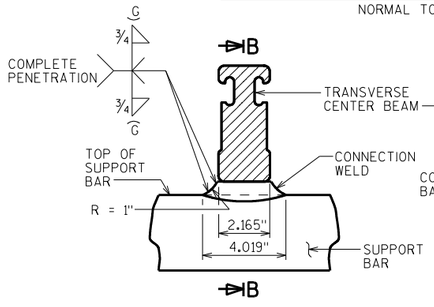
ELEVATIONS AND DIMENSIONS TAKEN AT F.F. OF BACKWALL

LEGEND

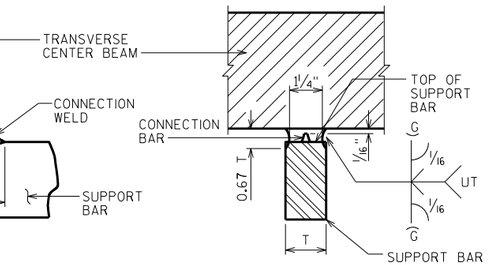
1. MODULAR EXPANSION JOINT DEVICE, 2 CELLS.
2. ½" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
4. ¾" Φ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" Φ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
5A. ¾" Φ THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES.
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET OR SIDEWALK, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7.
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE.
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE.
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. ¾" Φ X 4" LONG STUDS. WELD TO NO. 8 , NO. 7 & NO. 14 AS SHOWN.
12. ¾" Φ X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
13. ½" PLATE WITH ⅝" Φ LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

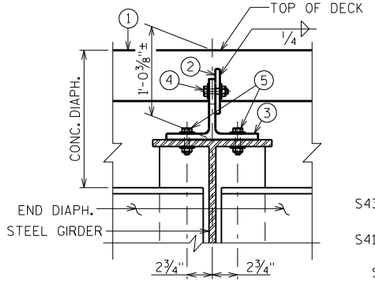
▲ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN ①.



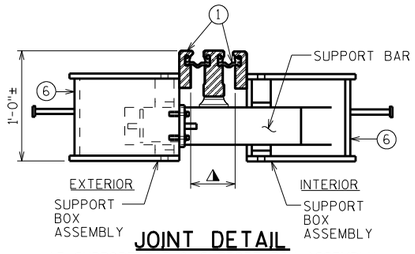
MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION



SECTION B-B

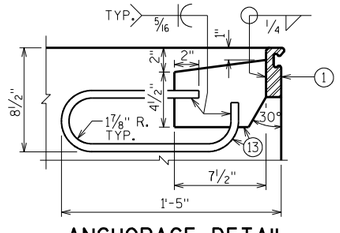


SECTION A-A



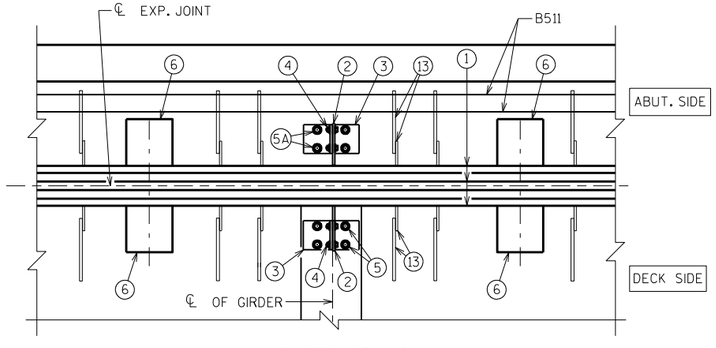
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



PART PLAN

NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS. FABRICATION DRAWING IS SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE, ON PARAPET ROADWAY FACE OR ABOVE SIDEWALK SURFACE (FOR RAISED SIDEWALK).

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. "6 "COMMERICAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES & SIDEWALK PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR B-40-852".

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT., TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. .28 IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-5)°F) TO (+95°F).

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

MODULAR JOINT DETAILS EAST ABUTMENT

SHEET 41

2494

STATE PROJECT NUMBER

1060-33-80

8

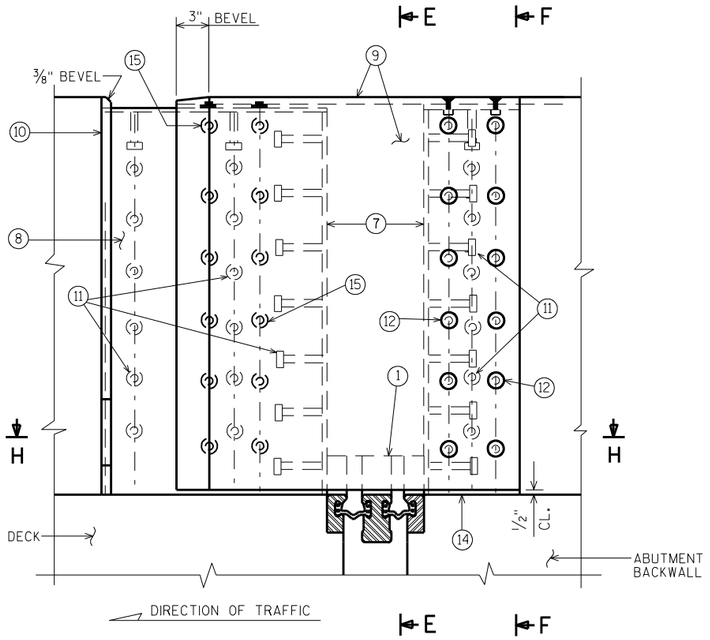
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JTMODDETAILS
7-13

SCALE = 1 2 5

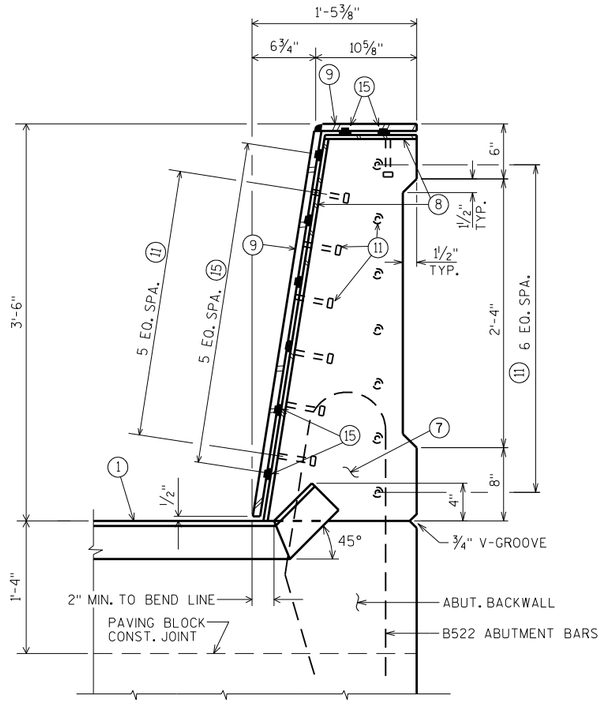
STATE PROJECT NUMBER

1060-33-80

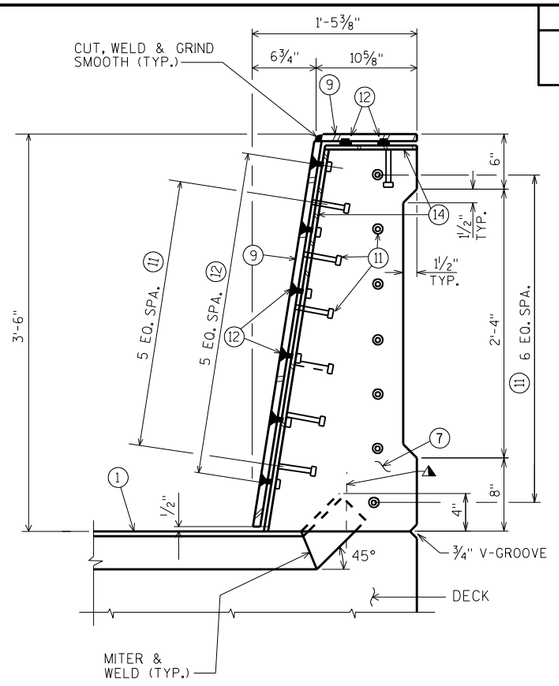


ELEVATION OF SINGLE SLOPE PARAPET

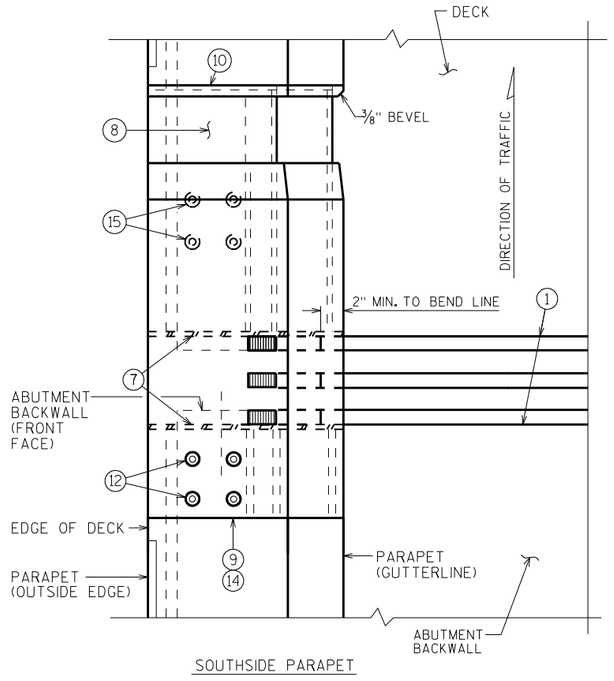
NORTHSIDE SHOWN
SOUTHSIDE SIMILAR



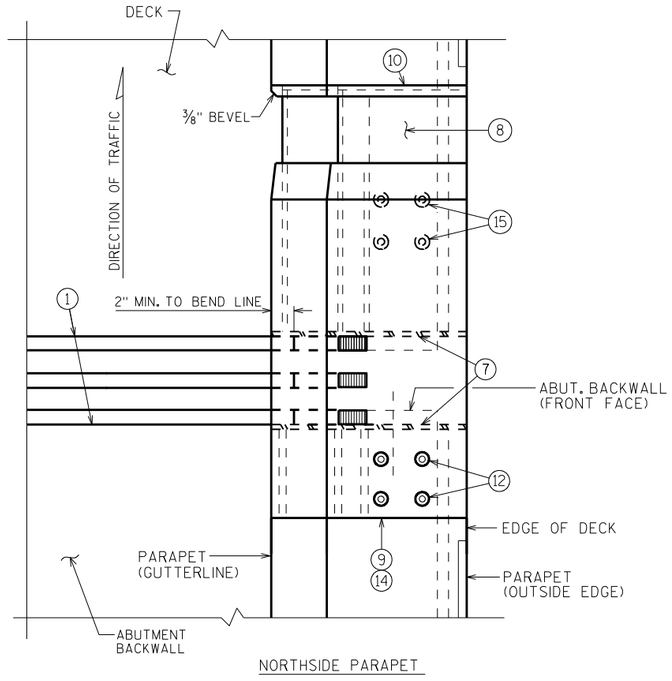
SECTION E-E



SECTION F-F

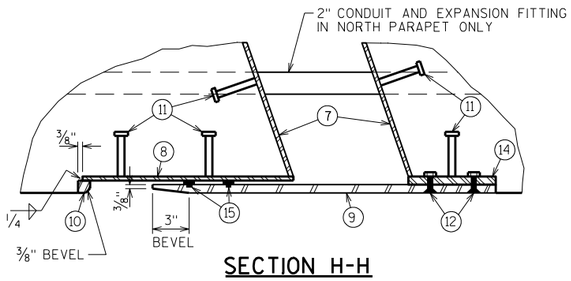


SOUTHSIDE PARAPET

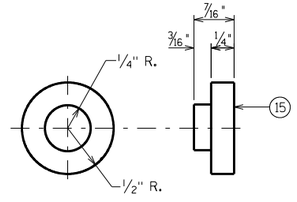


NORTHSIDE PARAPET

PLAN OF SINGLE SLOPE PARAPETS



SECTION H-H



ADIPRENE BUTTON DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

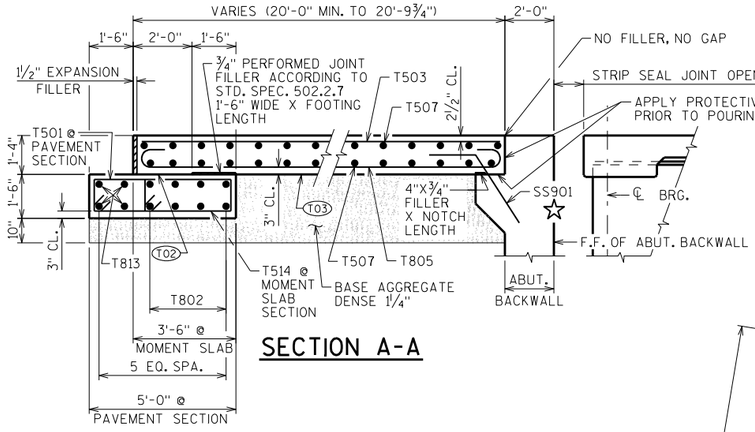
DRAWN BY DDS | PLANS CK'D. SDR

COVER PLATES FOR SINGLE SLOPE PARAPET

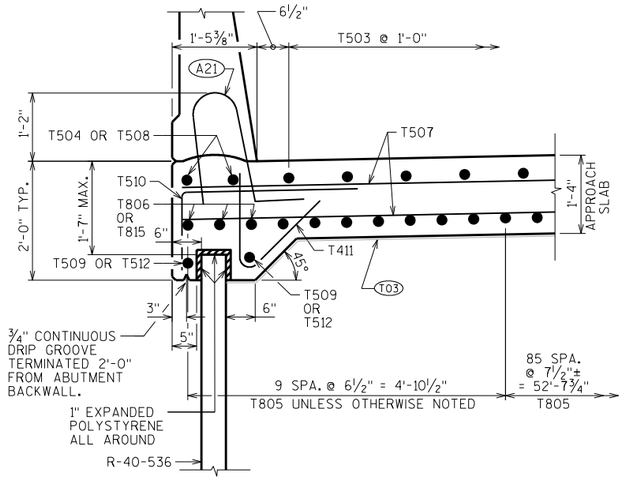
SHEET 42

2495

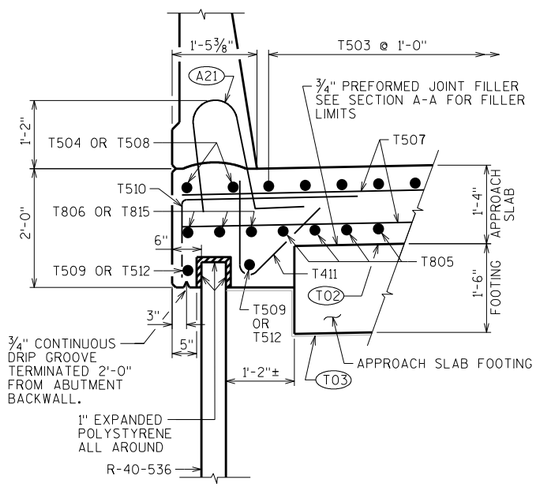
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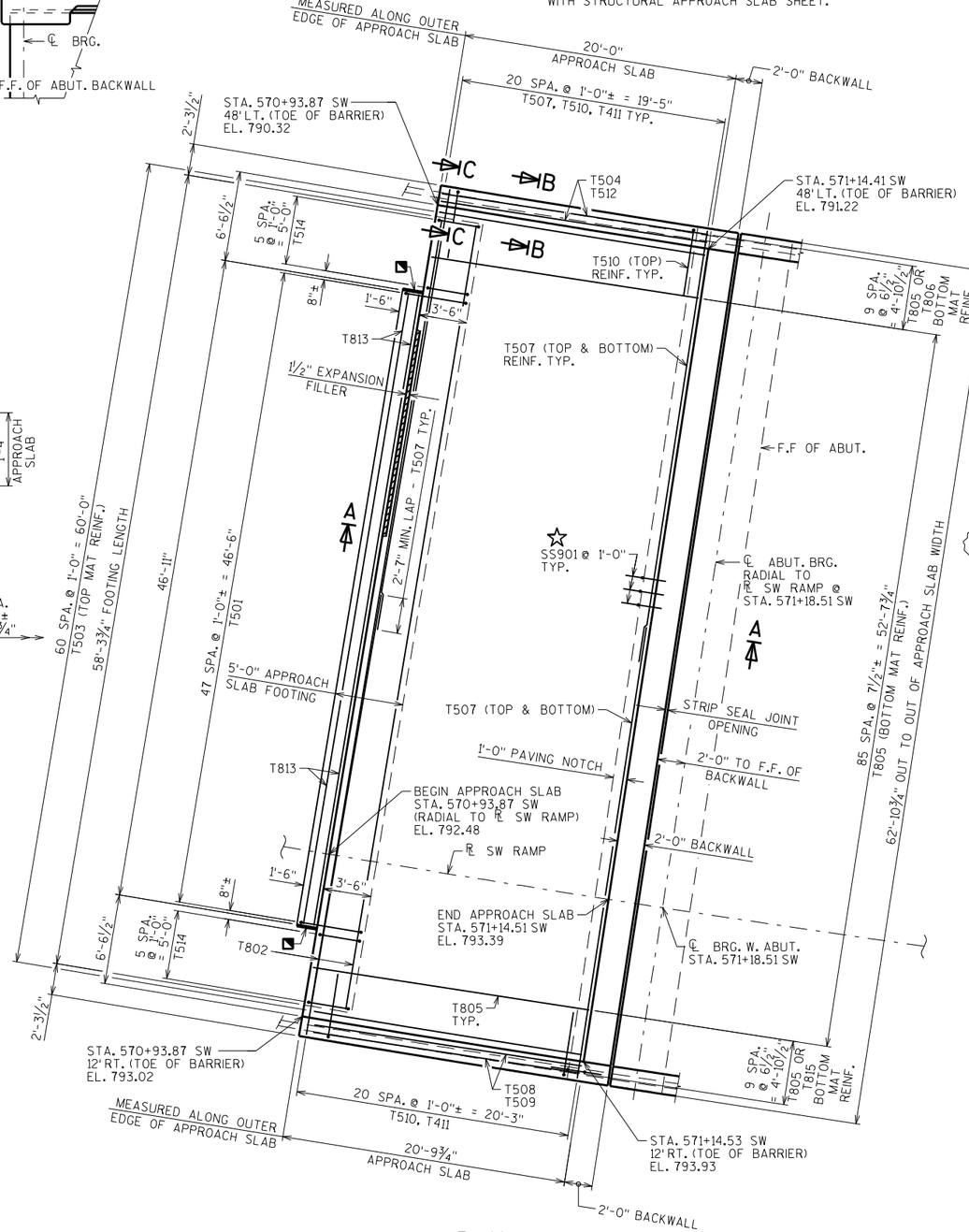
SECTION A-A



SECTION AT B-B
AT WEST ABUTMENT



SECTION AT C-C
AT APPROACH SLAB FOOTING



PLAN

☆ THE BID ITEM FOR SS901 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES".

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN.) TOTAL THK. OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN.) TOTAL THK. OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

A21 R501 BAR, SEE SINGLE SLOPE PARAPET 42SS MODIFIED WITH STRUCTURAL APPROACH SLAB SHEET.

◥ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENTS SLAB.

STATE PROJECT NUMBER

1060-33-80

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	48	12'-2"	X		FOOTING - STIRRUP @ PAVEMENT SECTION
T802	X	8	57'-11"			FOOTING - TRANSVERSE - TOP & BOTTOM
T503	X	61	20'-0"		◭	LONGITUDINAL - TOP
T504	X	2	19'-8"			LONGITUDINAL - TOP - UNDER NORTH PPT.
T805	X	98	21'-10"	X	◭	LONGITUDINAL - BOTTOM
T806	X	3	19'-8"			LONGITUDINAL - BOTTOM - AT NORTH WALL
T507	X	84	32'-10"			TRANSVERSE - TOP & BOTTOM
T508	X	2	20'-5"			LONGITUDINAL -TOP - UNDER SOUTH PPT
T509	X	2	20'-5"			TRANSVERSE - AT SOUTH WALL
T510	X	42	4'-3"	X		TRANSVERSE - TOP - AT WALLS
T411	X	42	3'-0"	X		TRANSVERSE - AT WALLS
T512	X	2	19'-8"			LONGITUDINAL - AT NORTH WALL
T813	X	4	46'-7"			FOOTING - TRANSVERSE TOP & BOTTOM
T514	X	12	9'-2"	X		FOOTING - STIRRUP @ MOMENT SLAB
T815	X	3	20'-5"			LONGITUDINAL - BOTTOM - AT SOUTH WALL
SS901		60	5'-0"	X		CONCRETE BACKWALL TO APPROACH SLAB

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

STAINLESS STEEL

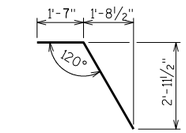
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
T503	1 SERIES OF 61	19'-8" TO 20'-5"
T805	1 SERIES OF 98	21'-6" TO 22'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.

DESIGN DATA

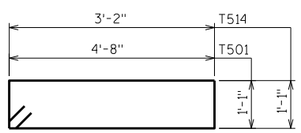
CONCRETE STRENGTH ——— 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 —— fy = 60,000 P.S.I.
ALLOWABLE SOIL BEARING PRESSURE ——— 2,000 P.S.F.



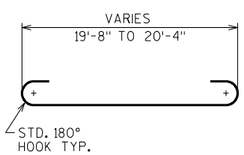
SS901



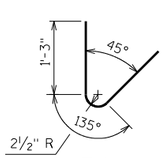
T510



T501, T514



T805



T411

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

WEST STRUCTURAL APPROACH SLAB DETAILS

SHEET 43

2496

SCALE = 5

8

8

STATE PROJECT NUMBER

1060-33-80

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN.) TOTAL THK. OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN.) TOTAL THK. OF POLYETHELENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

(A21) R501 BAR, SEE SINGLE SLOPE PARAPET 42SS MODIFIED WITH STRUCTURAL APPROACH SLAB SHEET.

■ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENTS SLAB.

BILL OF BARS

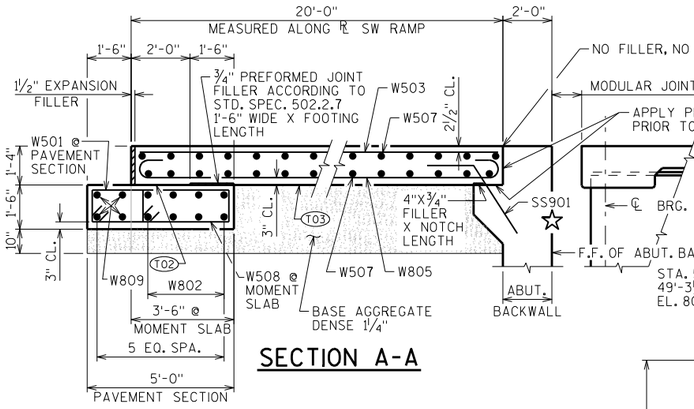
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	49	12'-2"	X		FOOTING - STIRRUP @ PAVEMENT SECTION
W802	X	8	59'-8"			FOOTING - TRANSVERSE - TOP & BOTTOM
W503	X	63	19'-6"			LONGITUDINAL - TOP
W504	X	4	19'-6"			LONGITUDINAL - TOP - UNDER PARAPETS
W805	X	100	21'-5"	X		LONGITUDINAL - BOTTOM
W806	X	6	19'-6"			LONGITUDINAL - BOTTOM - EDGES
W507	X	84	33'-5"			TRANSVERSE - TOP & BOTTOM
W508	X	12	9'-2"	X		FOOTING - STIRRUP @ MOMENT SLAB
W809	X	4	48'-2"			FOOTING - TRANSVERSE TOP & BOTTOM
W510	X	42	4'-3"	X		TRANSVERSE - TOP - WALL
W411	X	42	3'-0"	X		APPROACH SLAB - TRANSVERSE - WALL
W512	X	4	19'-6"			LONGITUDINAL - WALL
SS901		62	5'-0"	X		CONCRETE BACKWALL TO APPROACH SLAB

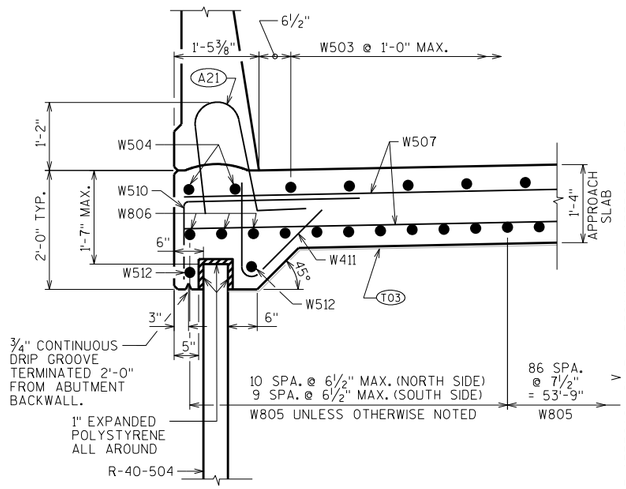
SS901: STAINLESS STEEL

DESIGN DATA

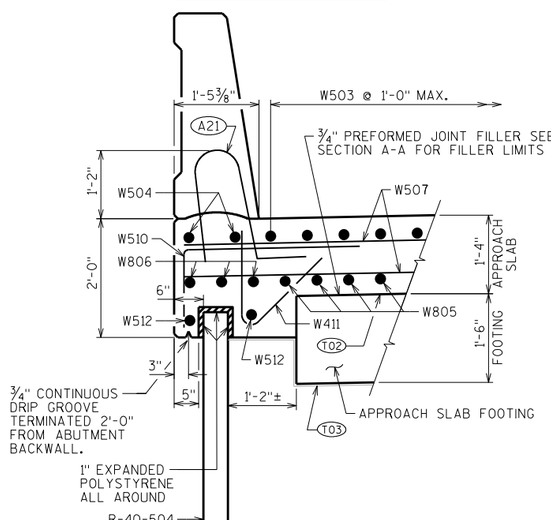
CONCRETE STRENGTH ——— 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.
ALLOWABLE SOIL BEARING PRESSURE ——— 2,000 P.S.F.



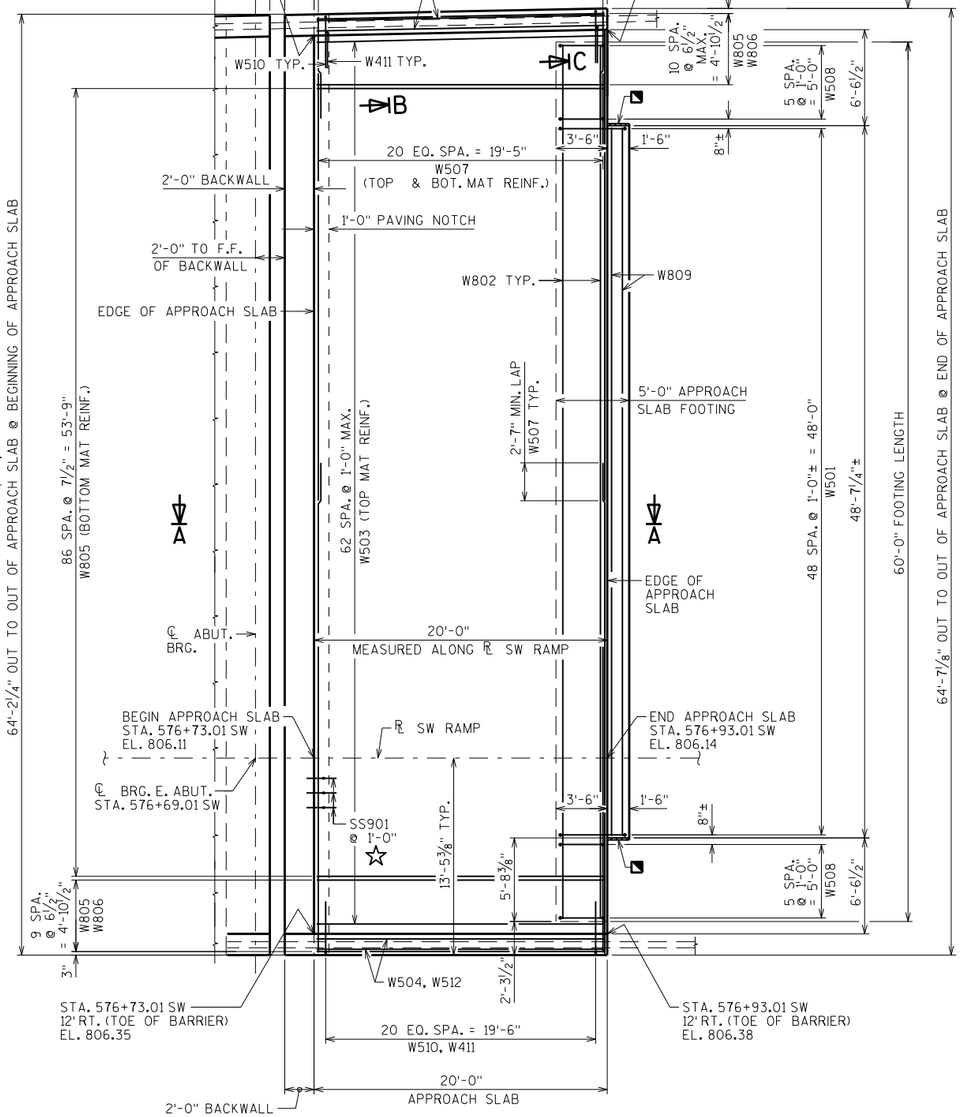
SECTION A-A



SECTION AT B-B

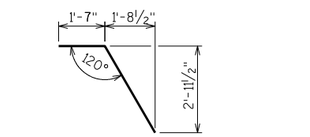


SECTION AT C-C
AT APPROACH SLAB FOOTING

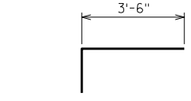


PLAN

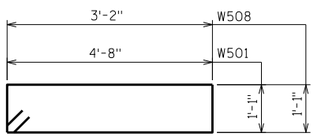
☆ THE BID ITEM FOR SS901 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES".



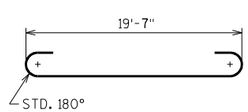
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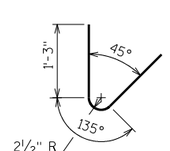
W510



W501, W508



W805



W411

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

EAST STRUCTURAL APPROACH SLAB DETAILS

SHEET 44

2497

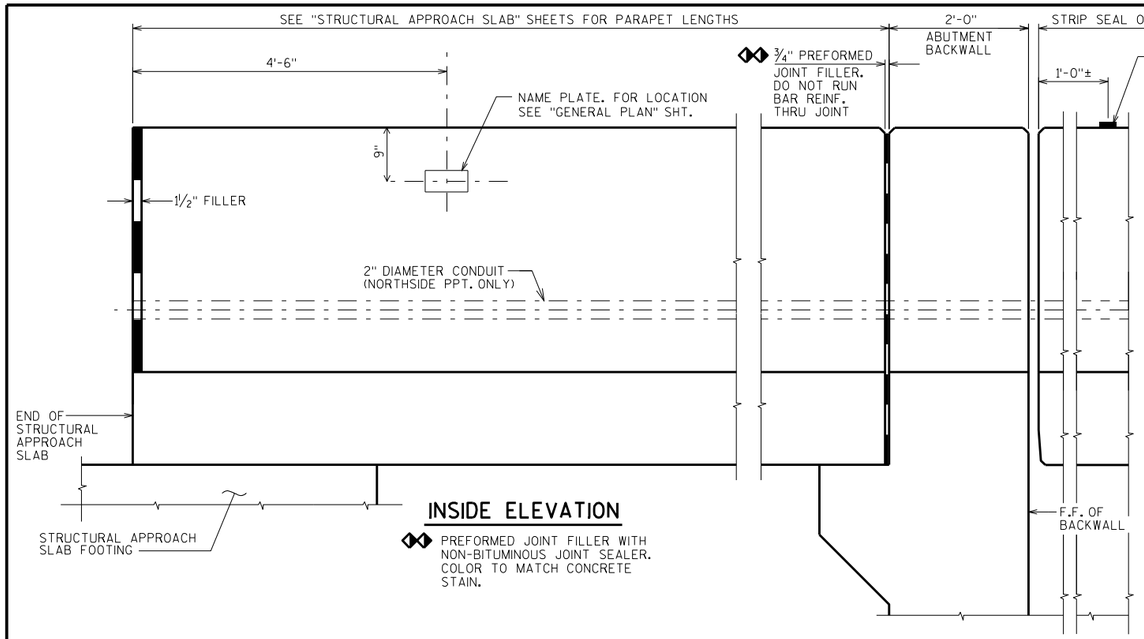
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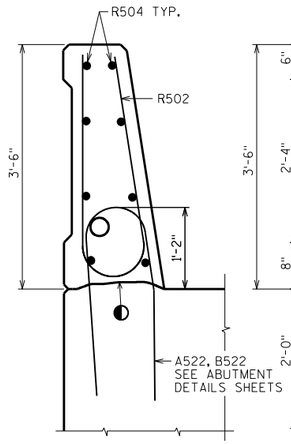
STATE PROJECT NUMBER

1060-33-80

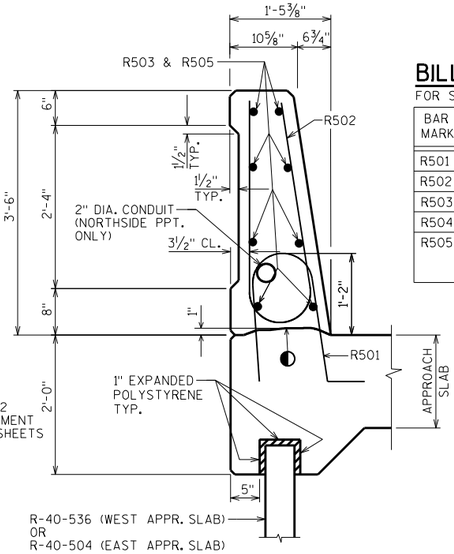


INSIDE ELEVATION

◆◆ PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.



SECTION A-A

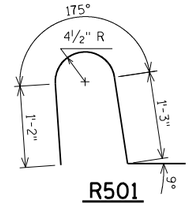


SECTION C-C

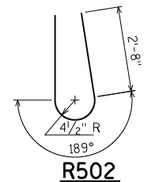
BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

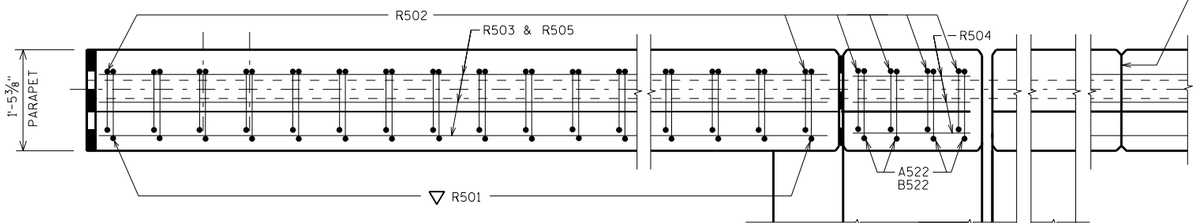
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	63	62	4'-5"	X		PARAPET VERT.
R502	X	71	70	6'-8"	X		PARAPET VERT.
R503	X	16	8	19'-8"			PARAPET HORIZ.
R504	X	16	16	1'-8"			PARAPET HORIZ.
R505	X	—	8	20'-5"			SOUTH PARAPET @ WEST APPROACH SLAB HORIZ.



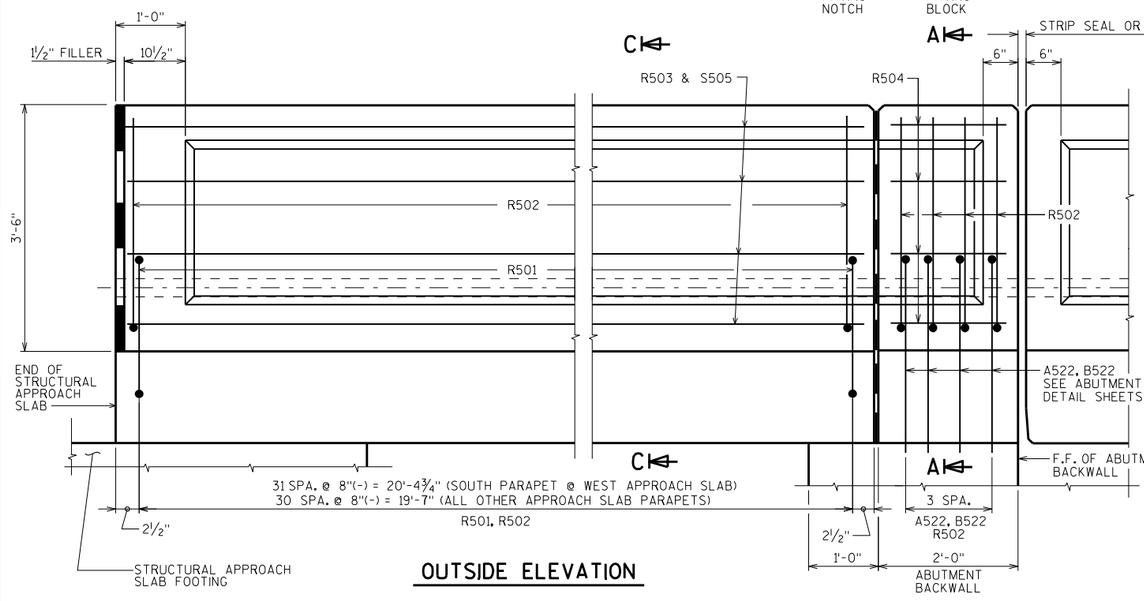
R501



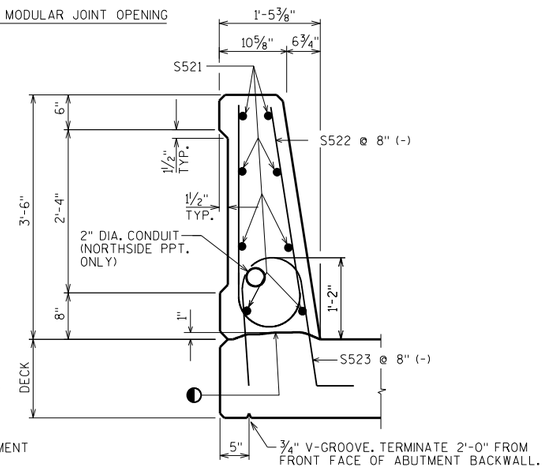
R502



PLAN



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-852

DRAWN BY DDS | PLANS CK'D. SDR

SINGLE SLOPE PARAPET 42SS MODIFIED WITH STRUCTURAL APPROACH SLAB

SHEET 45

2498

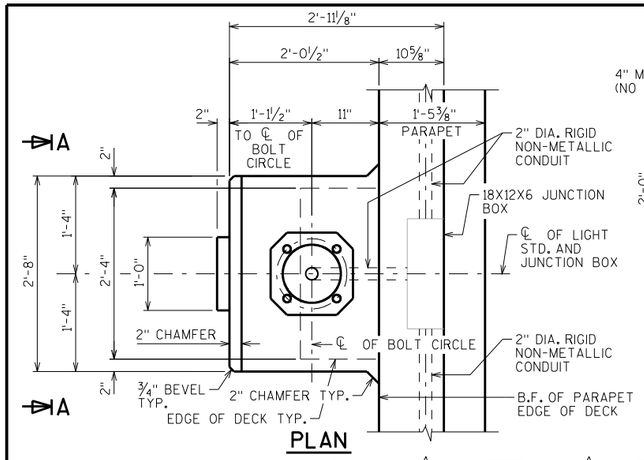
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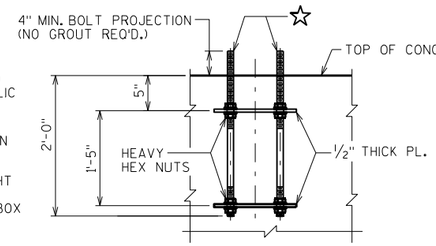
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STATE PROJECT NUMBER

1060-33-80

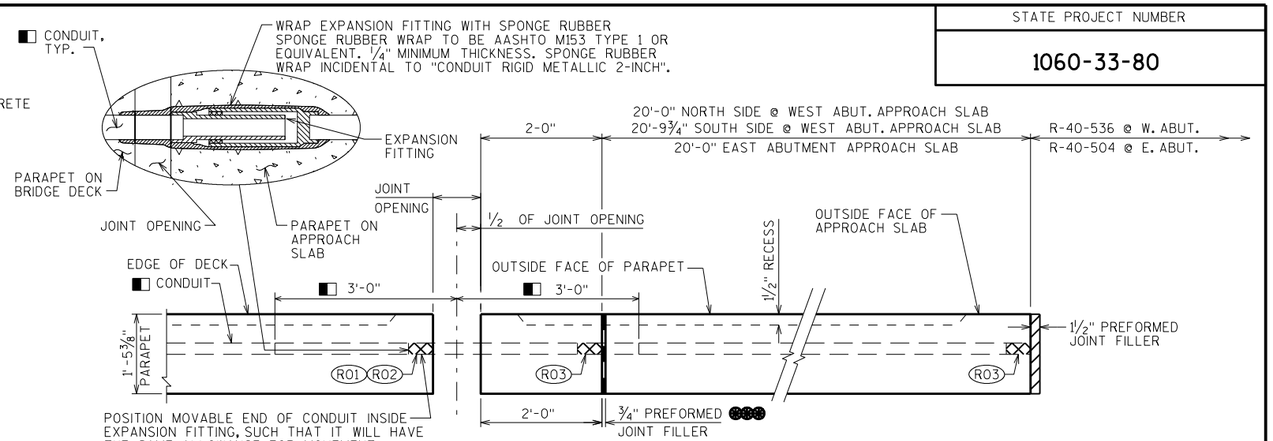


PLAN



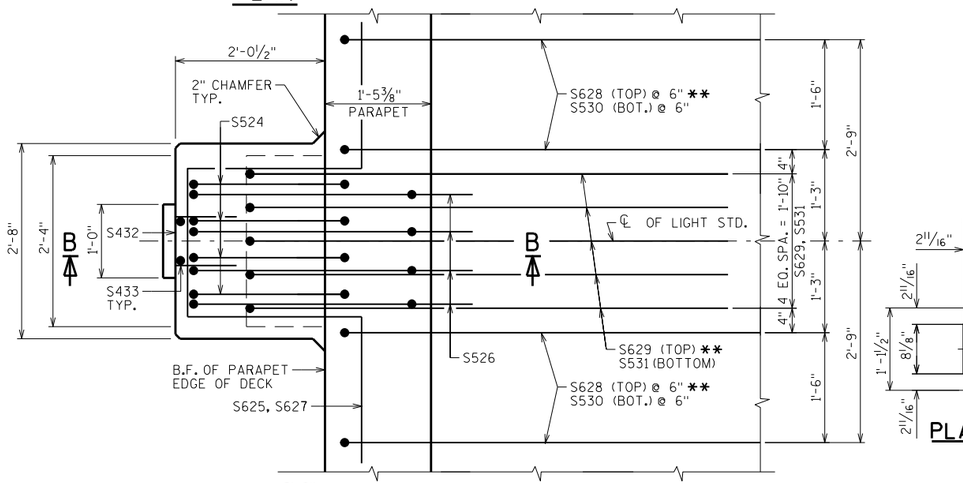
ANCHOR ASSEMBLY LIGHT POLE

(3 REQ'D.)



POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

PLAN OF PARAPET AT APPROACH SLAB



SECTION C-C

S522 & S523 NOT SHOWN FOR CLARITY. DISPLACE S522 @ JUNCTION BOXES.

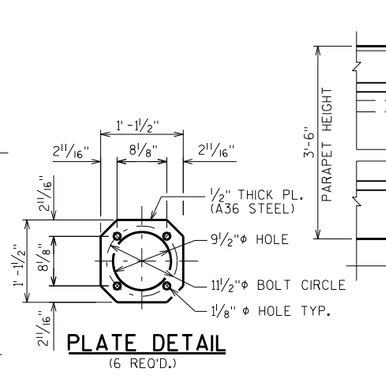
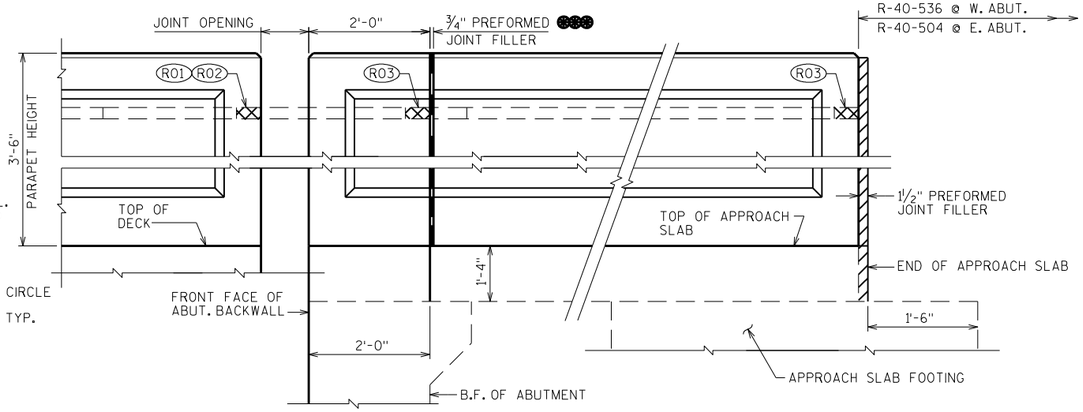
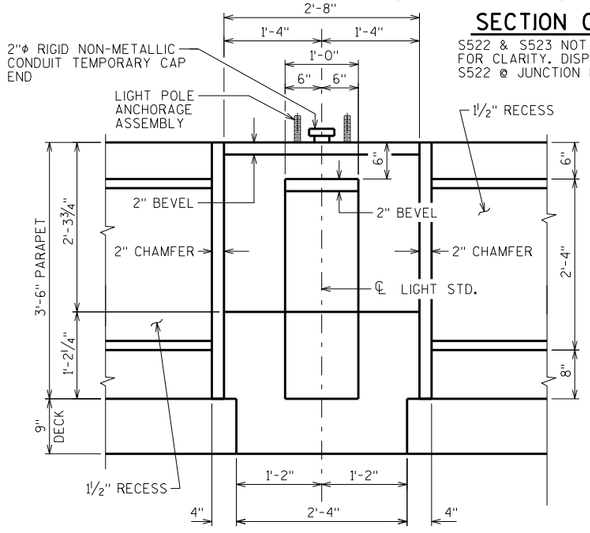


PLATE DETAIL

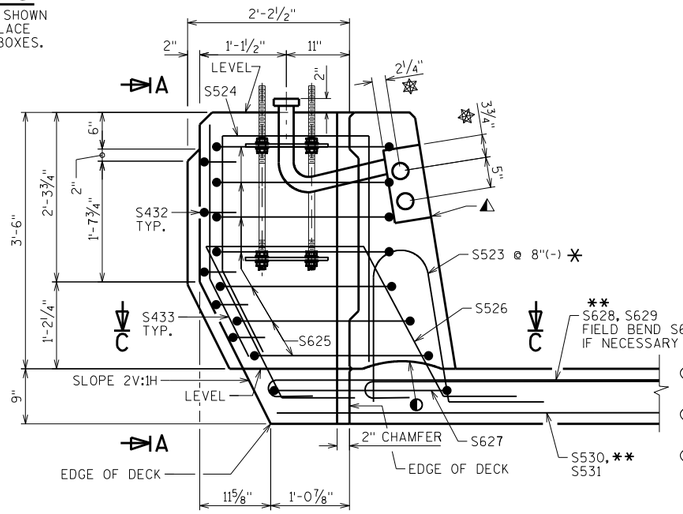
(6 REQ'D.)



OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB



ELEVATION A-A



SECTION B-B

✵ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

** S628, S629 FIELD BEND S628 IF NECESSARY

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE", EACH.
"CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

R01 AT WEST ABUTMENT: EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT. O-Z/GENDNEY TYPE AX200 AND BONDING JUMPER OR APPROVED EQUIVILANT.

R02 AT EAST ABUTMENT: EXPANSION FITTING WITH 8" TOTAL CONDUIT MOVEMENT, O-Z/GENDNEY TYPE AX-8-200 AND BONDING JUMPER OR APPROVED EQUIVILANT.

R03 EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT. O-Z/GENDNEY TYPE AX200 AND BONDING JUMPER OR APPROVED EQUIVILANT.

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

■ USE 2" DIA. RIGID NON-METALLIC CONDUIT EXCEPT AT EXPANSION JOINT. AT EXPANSION JOINT USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON THE DECK AND APPROACH SLAB.

◐ CONSTRUCTION JOINT.

** THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN DECK.

✳ SEE SINGLE SLOPE PARAPET SHEET FOR ADDITIONAL BAR STEEL DETAILS.

☆ 1" DIAMETER ANCHOR BOLTS (AASHTO M314 GR 105) THREADED 14" AT TOP AND 4" AT THE BOTTOM. HOT DIPPED GALVANIZED TO AASHTO M232. HOT DIPPED GALVANIZED HEAVY HEX NUTS AND WASHERS AND SIZE TO FIT HOT DIPPED GALVANIZED THREADS ON BOLTS. PROVIDE DOUBLE FLAT WASHERS AND NUTS.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

●●● PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN.

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STRUCTURE B-40-852

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SINGLE SLOPE PARAPET 42SS ELECTRICAL

SHEET 46

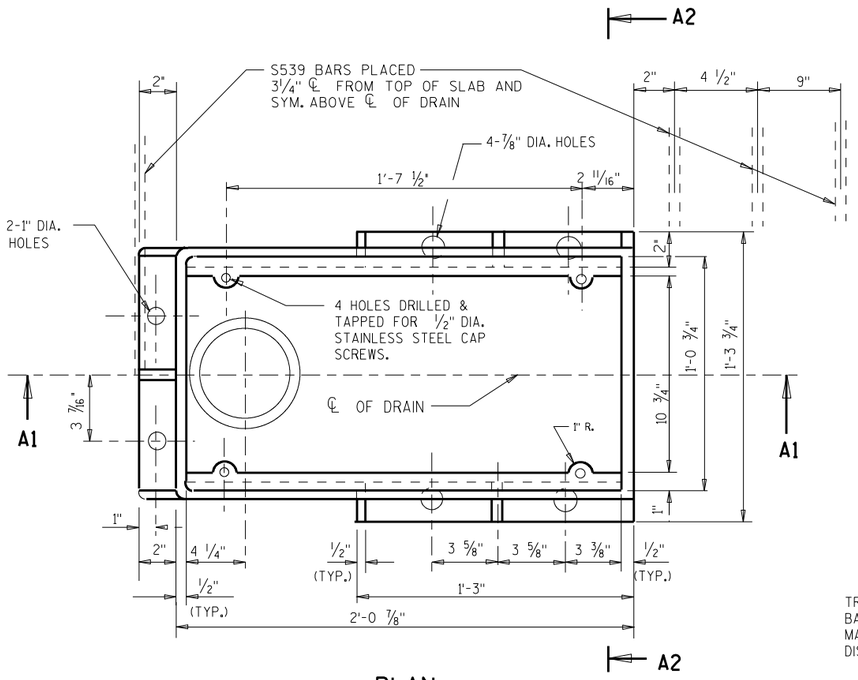
2499

SS42ELEC

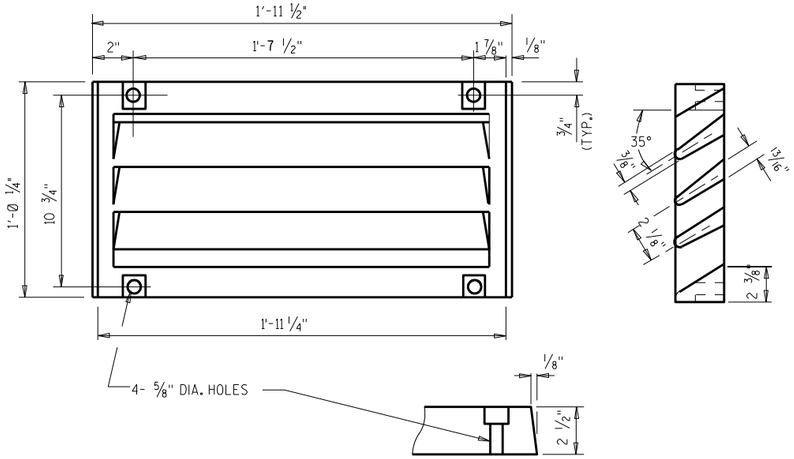
SCALE =

STATE PROJECT NUMBER

1060-33-80



PLAN



GRATE CASTING DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT

GENERAL NOTES

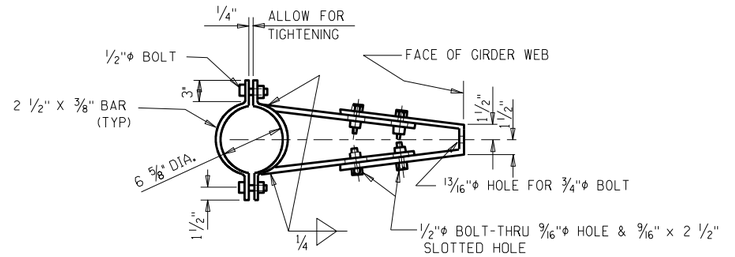
ALL MATERIAL FOR TYPE "GC" CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48, CLASS 30. (APPROX. WEIGHT = 225#)

MATERIAL FOR BRACKETS SHALL CONFORM TO A.S.T.M. A36.

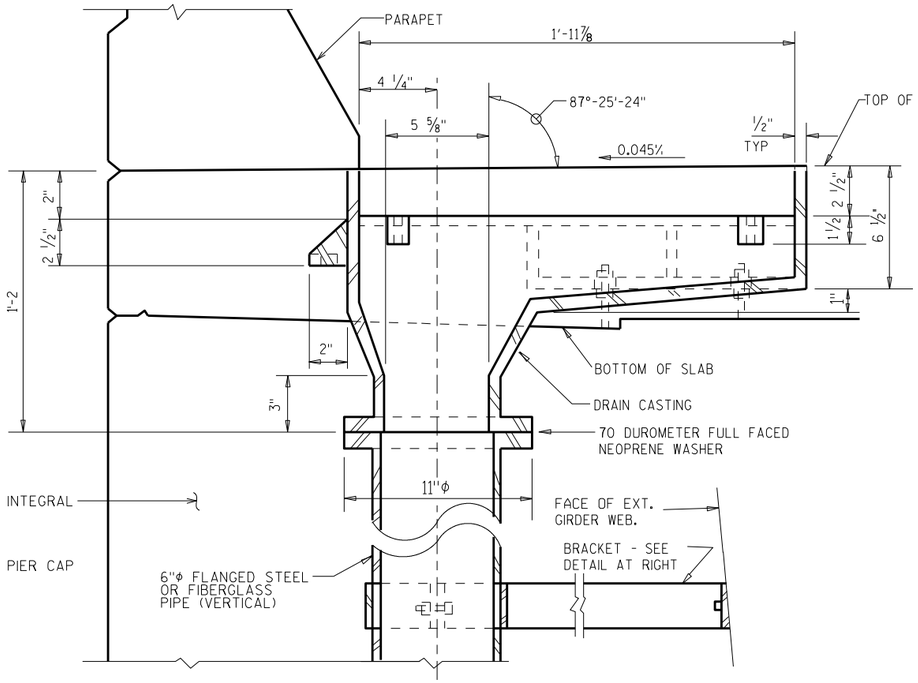
THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

FLANGED 6" DIA. DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.

DO NOT PLACE SHEAR STUDS ON TOP FLANGE WHERE THEY INTERFERE WITH THE FLOOR DRAIN.

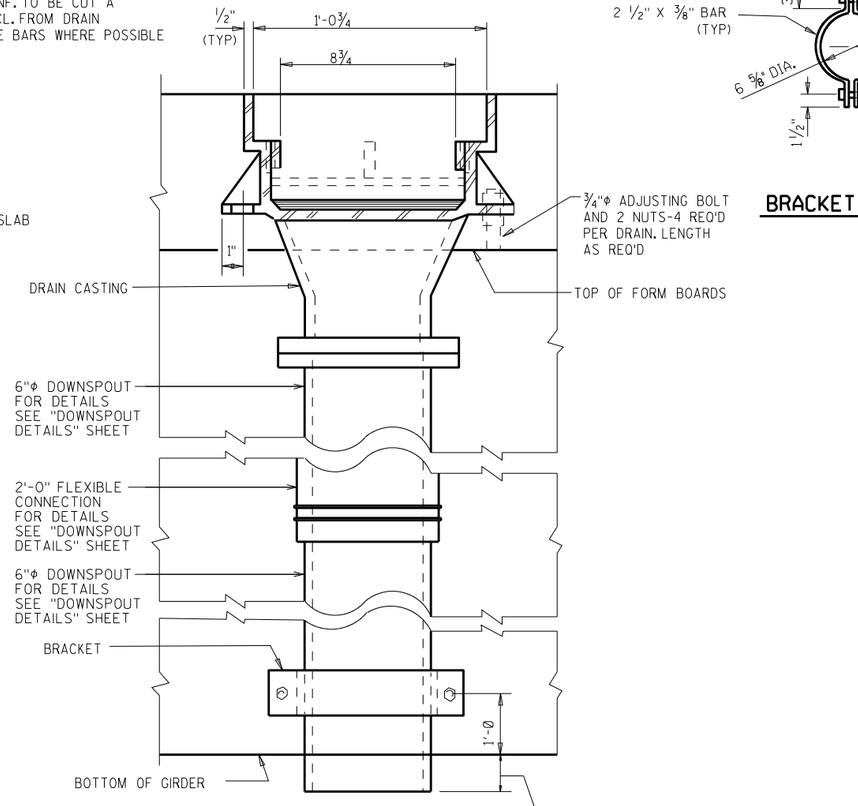


BRACKET DETAIL



SECTION A1

TRANS. AND LONGIT. SLAB BAR REINF. TO BE CUT A MAX. 1" CL. FROM DRAIN DISPLACE BARS WHERE POSSIBLE



SECTION A2

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FLOOR DRAIN TYPE 'GC'

SHEET 47

2500

SCALE = .08866

8

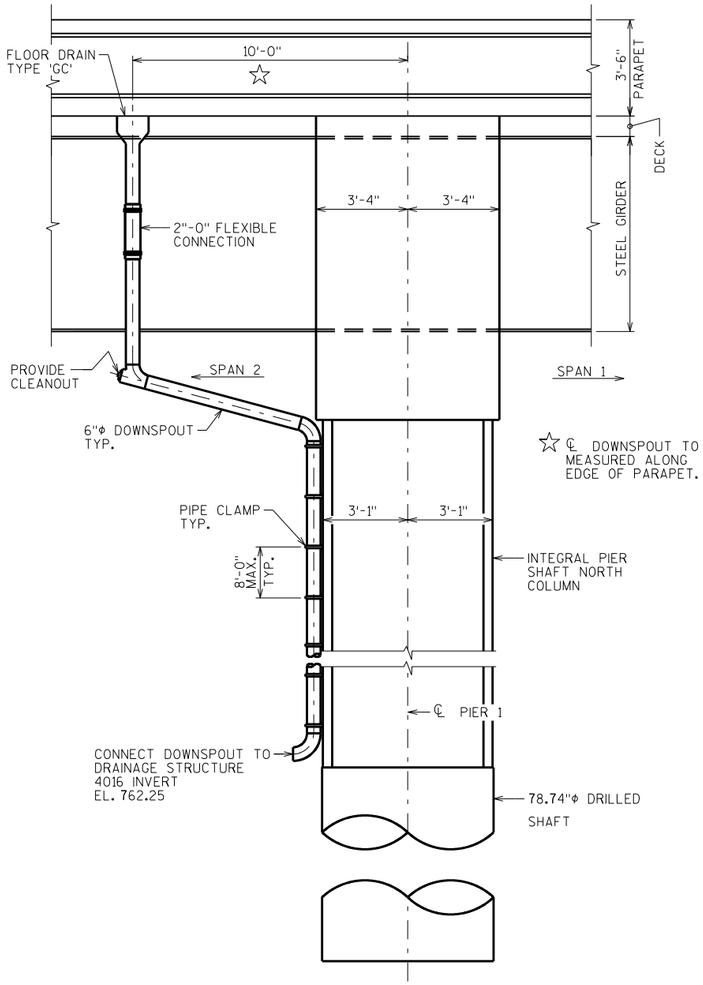
8

4/88

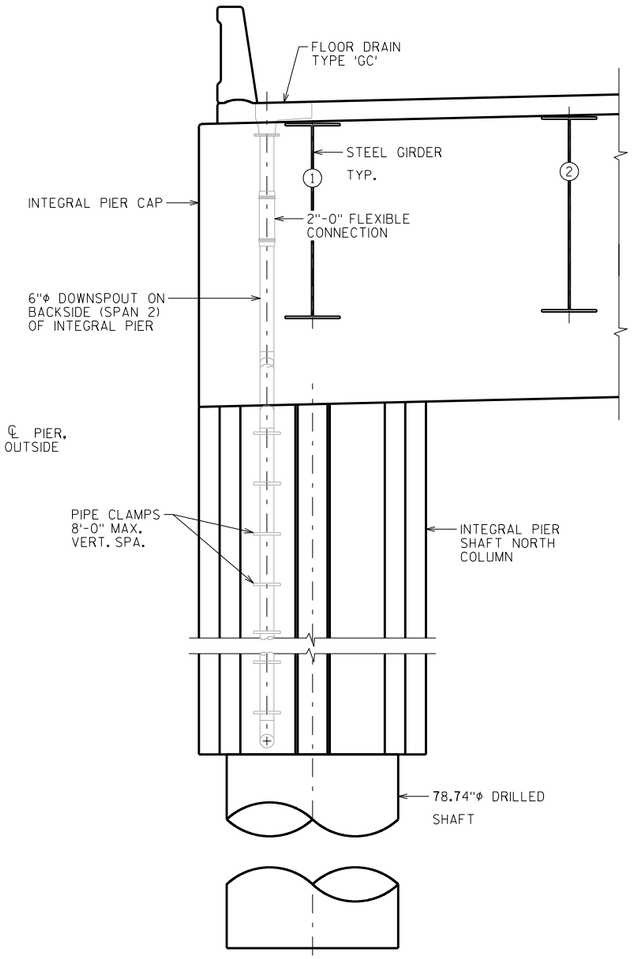
DRAINGC-OUT
1-14

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NORTH ELEVATION
LOOKING SOUTH



ELEVATION
LOOKING EAST

LEGEND

1. FLEXIBLE RUBBER HOSE, MIN. 3/16" THICK WALL TO SUIT DOWNSPOUT.
2. 10 GAGE STAINLESS STEEL CLAMP GRADE 304.
3. 6" DIA. DOWNSPOUT PIPING SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP).
4. 10 GAGE GALV. STEEL SADDLE.
5. 5/8" DIA. STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS OR GALV. ROD.
6. 1/2" DIA. X 8" LONG STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS.
7. 6" LONG SPLIT RTRP STRIP. BOND TO #3, PLACE AT ALL CLAMP LOCATIONS.
8. BENT ANCHOR PLATE-7 GAGE STAINLESS STEEL GRADE 304.
9. 1/2" DIA. ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT & WASHER-TYP.)
10. BREEZE "HI-TORQUE CLAMP #HTM-700 304 HALF HARD STAINLESS STEEL OR EQUIV. (4 REQ'D. PER EACH #1).
11. 7 GAGE STAINLESS STEEL GUSSET PLATE. WELD TO #2 & 8.
12. 3/8" X 1" LG. STAINLESS STEEL HEX HEAD BOLT WITH NUT & LOCK WASHER.

DOWNSPOUT NOTES

CLEVIS, PIPE CLAMPS, HANGERS & MISS. ITEMS ARE INCLUDED IN BID ITEM "DOWNSPOUT 6-INCH".

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR TEMP. EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE.

CONTRACTOR TO FIELD VERFIY ALL DEMINSIONS.

A CLAMP OF EQUAL STRENGTH MAY BE USED AS AN ALTERNATE.

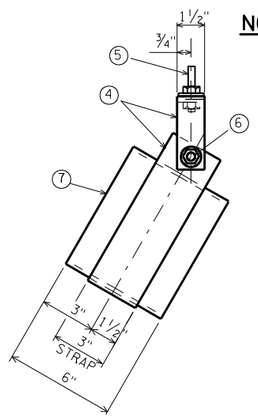
RTRP DOWNSPOUT TO BE SUPPORTED AT 8'-0" MAX. SPACING USING ONE OF THE SHOWN BRACKETS.

INSTALL CLEAN-OUTS AT ELBOWS AS NEEDED.

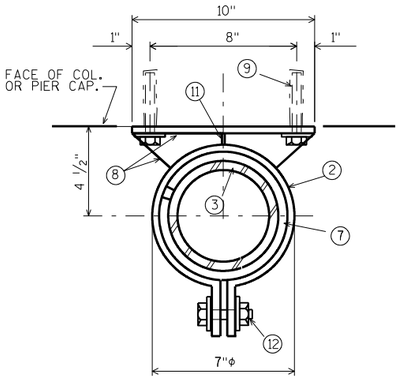
DRAIN WORK TO BE COMPLETED AS DIRECTED BY THE ENGINEER.

INSTALL PIPING AT STEEPEST GRADE POSSIBLE. MINIMUM 2%.

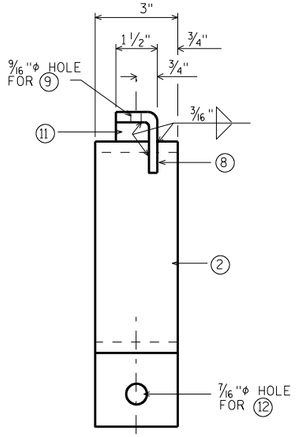
ALL DOWNSPOUTS AND HARDWARE SHALL BE COLOR MATCHED TO THE ADJACENT STEEL GIRDER OR CONCRETE PIER COLUMN.

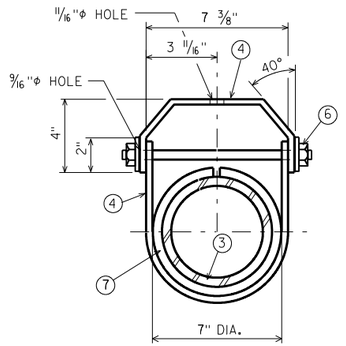


ADJUSTABLE CLEVIS DETAIL &
PIPE HANGER DETAILS

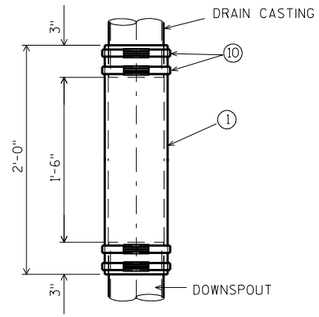


PIPE CLAMP DETAILS





SADDLE



FLEXIBLE CONNECTION

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DOWNSPOUT DETAILS

SHEET 48

2501

SCALE = : .333

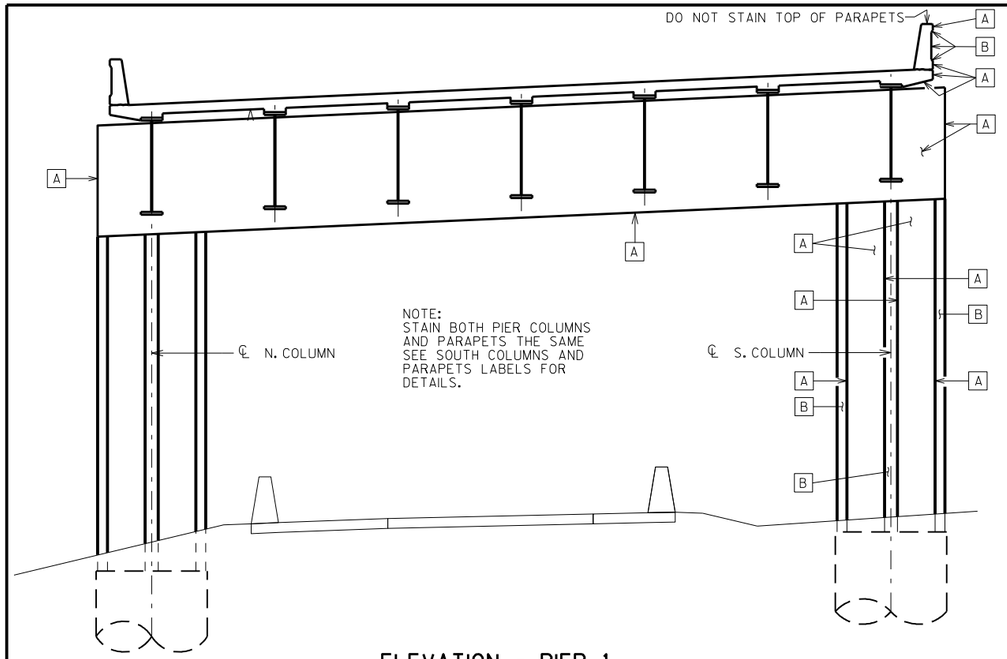
downsp
7-13

8

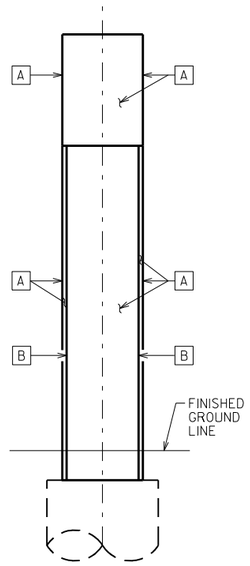
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STATE PROJECT NUMBER

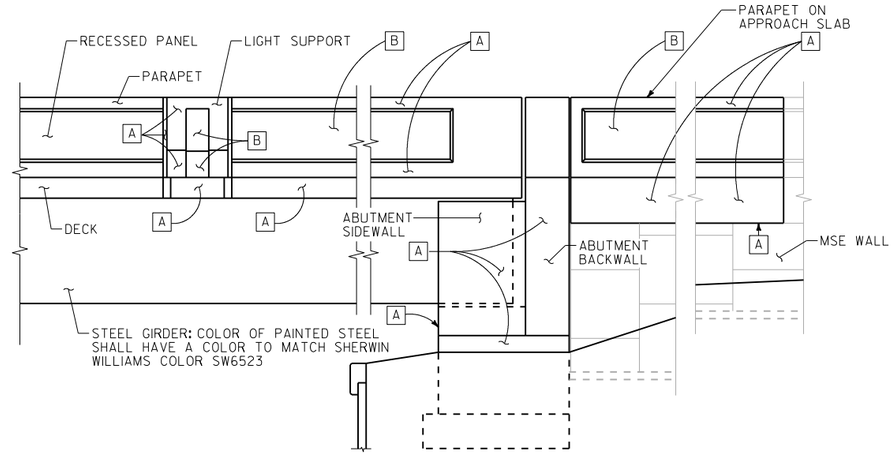
1060-33-80



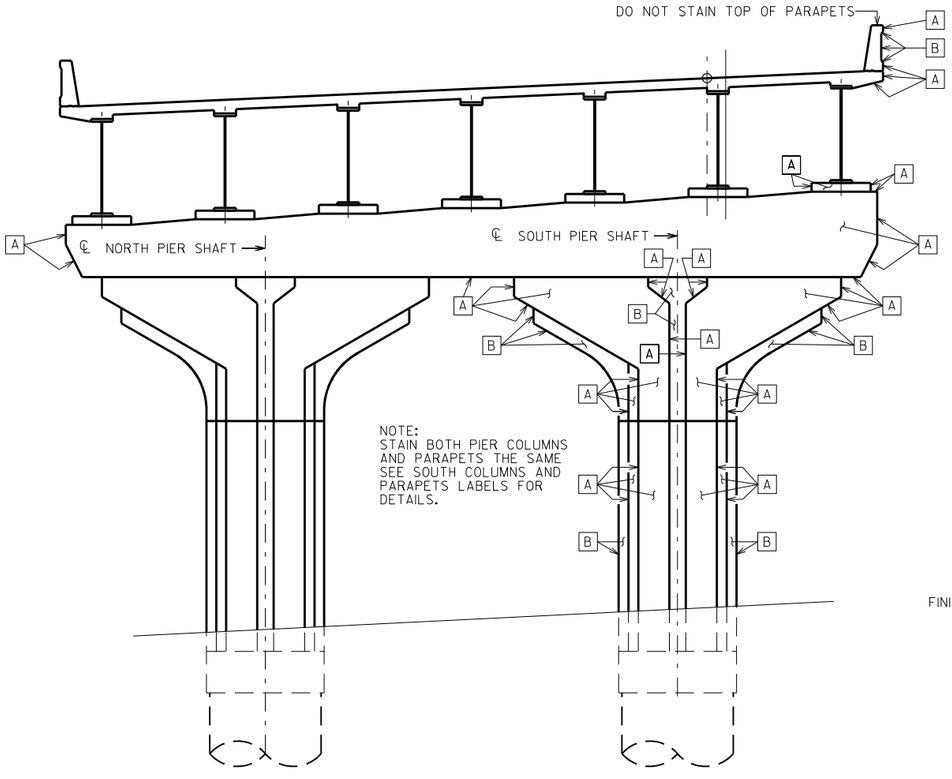
ELEVATION - PIER 1



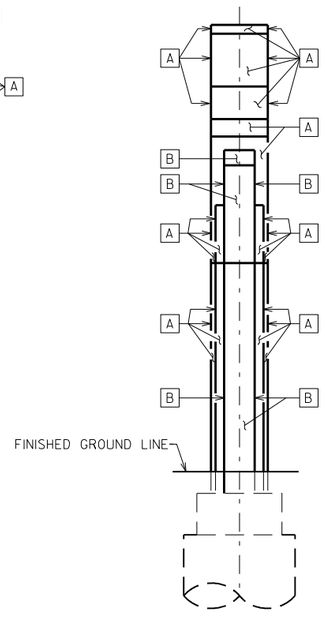
END VIEW - PIER 1



OUTSIDE ELEVATION OF RIGHT PARAPET
(LEFT PARAPET SIMILAR)



ELEVATION - PIER 2
LOOKING EAST



END VIEW - PIER 2

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		APPROACH SLAB	FASCIA AND UNDERSIDE OF COPING
		ABUTMENT	FRONT FACE OF BEAM SEAT FROM TOP OF ABUTMENT TO TOP OF CONCRETE SLOPE PAVING, EXTERIOR EXPOSED FACE OF ABUTMENT BEAM SEAT, EXTERIOR EXPOSED FACE OF BACKWALL, FRONT FACE AND EXTERIOR EXPOSED FACE OF SIDEWALL, EACH SIDE OF GIRDER PEDESTAL AND SIGN BRIDGE BASE.
		PIER	SIDES OF GIRDER PEDESTALS, SIDES AND BOTTOM OF CAP BEAM AND STEM TO 1 FOOT BELOW FINISHED GROUND LINE, EXCEPT AS NOTED FOR ACCENT COLORS.
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON EXTERIOR FACE.
		PIERS	RECESS AREAS AND REVEALS ON PIERS.

THE FINAL COLOR OF THE CONCRTE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:
BASE COLOR: FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE PERFORMED BY OTHERS UNDER FUTURE PROJECT I.D. 1060-33-81.

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AESTHETIC DETAILS

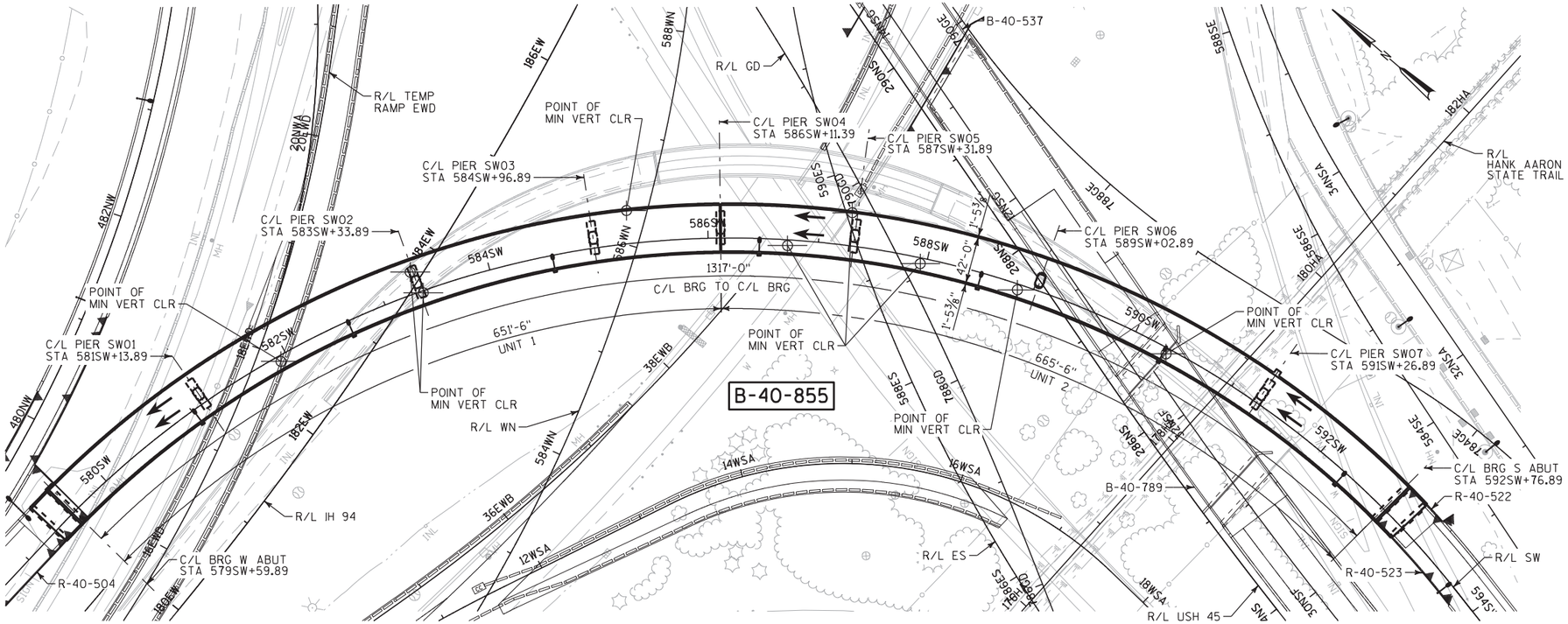
SHEET 49

2502

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8

SCALE = 2645.66


B-40-855
POINT OF MIN VERT CLR
C/L PIER SW01 STA 581SW+13.89
C/L PIER SW02 STA 583SW+33.89
C/L PIER SW03 STA 584SW+96.89
C/L PIER SW04 STA 586SW+11.39
C/L PIER SW05 STA 587SW+31.89
C/L PIER SW06 STA 589SW+02.89
C/L PIER SW07 STA 591SW+26.89
C/L BRG W ABUT STA 579SW+59.89
C/L BRG S ABUT STA 592SW+76.89
1317'-0" C/L BRG TO C/L BRG
651'-6" UNIT 1
665'-6" UNIT 2
42"-0"
1'-5 3/8"
1'-5 3/8"
R/L TEMP RAMP EWD
R/L GD
R/L WN
R/L ES
R/L IH 94
R/L USH 45
R/L HANK AARON STATE TRAIL
R/L SW
B-40-537
B-40-789
R-40-504
R-40-522
R-40-523
480NW
482NW
580SW
582SW
584SW
586SW
588SW
590SW
592SW
594SW
182EW
184EW
186EW
188EW
20EWB
38EWB
36EWB
584WN
588WN
14WSA
16WSA
12WSA
18WSA
28NS
30NS
32NS
34NSA
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DRAWING LIST

MANDATORY

1. GENERAL PLAN & ELEVATION
2. DRAWING LIST
3. TYPICAL SECTION & DESIGN DATA
4. GENERAL NOTES
5. QUANTITIES
6. ROADWAY GEOMETRY (1 OF 2)
7. ROADWAY GEOMETRY (2 OF 2)
8. PLAN & ELEVATION SPANS 1 & 2
9. PLAN & ELEVATION SPANS 3 THRU 6
10. PLAN & ELEVATION SPANS 7 & 8
11. SUBSURFACE EXPLORATION SPANS 1 & 2
12. SUBSURFACE EXPLORATION SPANS 3 THRU 6
13. SUBSURFACE EXPLORATION SPANS 7 & 8
14. CONSTRUCTION STAGING NOTES (1 OF 2)
15. CONSTRUCTION STAGING NOTES (2 OF 2)
16. CONSTRUCTION STAGING (1 OF 5)
17. CONSTRUCTION STAGING (2 OF 5)
18. CONSTRUCTION STAGING (3 OF 5)
19. CONSTRUCTION STAGING (4 OF 5)
20. CONSTRUCTION STAGING (5 OF 5)
21. WEST ABUTMENT PLAN & ELEVATION
22. WEST ABUTMENT DETAILS (1 OF 2)
23. WEST ABUTMENT DETAILS (2 OF 2)
24. SOUTH ABUTMENT PLAN & ELEVATION
25. SOUTH ABUTMENT DETAILS (1 OF 2)
26. SOUTH ABUTMENT DETAILS (2 OF 2)
27. ABUTMENT PEDESTAL REINFORCEMENT
28. ABUTMENT REINFORCEMENT SCHEDULE
29. UNIT 1 BEARING LAYOUT
30. UNIT 2 BEARING LAYOUT
31. BEARING DETAILS
32. JACKING PROVISIONS
33. GIRDER SECTION
34. UNIT 1 FRAMING PLAN
35. UNIT 2 FRAMING PLAN
36. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 1 & 2
37. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 3 & 4
38. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 5 & 6
39. GIRDER PLAN AND ELEVATION: FIELD SECTION 7
40. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 8 & 9
41. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 10 THRU 12
42. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 13 & 14
43. GIRDER PLAN AND ELEVATION: FIELD SECTION 15
44. ACCESS HATCH DETAILS
45. ACCESS DOOR DETAILS
46. MISCELLANEOUS GIRDER DETAILS
47. K-FRAMES AND STRUTS
48. LATERAL BRACING DETAILS

MANDATORY CONT

49. FIELD SPLICE DETAILS
50. ABUTMENT DIAPHRAGM
51. TYPICAL PIER DIAPHRAGM
52. PIER END DIAPHRAGM
53. INTERMEDIATE DIAPHRAGM
54. DIAPHRAGM DETAILS (1 OF 2)
55. DIAPHRAGM DETAILS (2 OF 2)
56. PIER SW06 INTEGRAL CROSS HEAD
57. PIER SW06 INTEGRAL CROSS HEAD DETAILS
58. CAMBER DIAGRAM UNIT 1
59. CAMBER DIAGRAM UNIT 2
60. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 1 & 2
61. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 3 & 4
62. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 5 & 6
63. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 7 & 8
64. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 9 & 10
65. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 11 THRU 13
66. CAMBER AND DECK ELEVATIONS: FIELD SECTION 14 & 15
67. SUPERSTRUCTURE CROSS SECTION
68. DECK REINFORCEMENT (1 OF 3)
69. DECK REINFORCEMENT (2 OF 3)
70. DECK REINFORCEMENT (3 OF 3)
71. DECK DETAILS
72. DECK POURING SEQUENCE AND NOTES
73. DECK REINFORCEMENT SCHEDULE
74. EXPANSION JOINT LAYOUT - ABUTMENT
75. EXPANSION JOINT LAYOUT - PIER
76. EXPANSION JOINT SECTIONS
77. MODULAR EXPANSION JOINT COVER PLATES
78. MODULAR EXPANSION JOINT DETAILS
79. STRUCTURAL APPROACH SLAB
80. STRUCTURAL APPROACH SLAB DETAILS
81. APPROACH SLAB REINFORCEMENT SCHEDULE
82. PARAPET EMBEDDED WORK UNIT 1
83. PARAPET ELEVATIONS UNIT 1
84. PARAPET EMBEDDED WORK UNIT 2
85. PARAPET ELEVATIONS UNIT 2
86. PARAPET SECTIONS & DETAILS
87. LIGHT SUPPORT DETAILS (1 OF 2)
88. LIGHT SUPPORT DETAILS (2 OF 2)
89. SIGN BRIDGE BASE (1 OF 2)
90. SIGN BRIDGE BASE (2 OF 2)
91. PARAPET REINFORCEMENT SCHEDULE
92. FLOOR DRAIN PIPING (1 OF 2)
93. FLOOR DRAIN PIPING (2 OF 2)
94. FLOOR DRAIN SPECIAL
95. AESTHETIC DETAILS
96. SLOPE PAVING DETAILS

PIERS-OPTION A

A1. OPTION A - QUANTITIES
A2. OPTION A - FOUNDATION LAYOUT (1 OF 3)
A3. OPTION A - FOUNDATION LAYOUT (2 OF 3)
A4. OPTION A - FOUNDATION LAYOUT (3 OF 3)
A5. OPTION A - EXCAVATION PLAN (1 OF 4)
A6. OPTION A - EXCAVATION PLAN (2 OF 4)
A7. OPTION A - EXCAVATION PLAN (3 OF 4)
A8. OPTION A - EXCAVATION PLAN (4 OF 4)
A9. OPTION A - DRILLED SHAFT DETAILS (1 OF 2)
A10. OPTION A - DRILLED SHAFT DETAILS (2 OF 2)
A11. OPTION A - DRILLED SHAFT REINFORCEMENT SCHEDULE
A12. OPTION A - TYPICAL PIER LAYOUT
A13. OPTION A - TYPICAL PIER CAP REINFORCEMENT
A14. OPTION A - PIER SW01 DETAILS
A15. OPTION A - PIER SW02 DETAILS
A16. OPTION A - PIER SW03 DETAILS
A17. OPTION A - PIER SW04 DETAILS
A18. OPTION A - PIER SW05 DETAILS
A19. OPTION A - PIER SW07 DETAILS
A20. OPTION A - TYPICAL PEDESTAL REINFORCEMENT
A21. OPTION A - PIER SW06 LAYOUT
A22. OPTION A - PIER SW06 DETAILS
A23. OPTION A - PIER SW06 PEDESTAL REINFORCEMENT
A24. OPTION A - PIER REINFORCEMENT SCHEDULE (1 OF 2)
A25. OPTION A - PIER REINFORCEMENT SCHEDULE (2 OF 2)

PIERS-OPTION B

B1. OPTION B - QUANTITIES
B2. OPTION B - FOUNDATION LAYOUT (1 OF 3)
B3. OPTION B - FOUNDATION LAYOUT (2 OF 3)
B4. OPTION B - FOUNDATION LAYOUT (3 OF 3)
B5. OPTION B - EXCAVATION PLAN (1 OF 4)
B6. OPTION B - EXCAVATION PLAN (2 OF 4)
B7. OPTION B - EXCAVATION PLAN (3 OF 4)
B8. OPTION B - EXCAVATION PLAN (4 OF 4)
B9. OPTION B - DRILLED SHAFT DETAILS (1 OF 2)
B10. OPTION B - DRILLED SHAFT DETAILS (2 OF 2)
B11. OPTION B - DRILLED SHAFT REINFORCEMENT SCHEDULE
B12. OPTION B - TYPICAL PIER LAYOUT
B13. OPTION B - TYPICAL PIER CAP REINFORCEMENT
B14. OPTION B - PIER SW01 DETAILS
B15. OPTION B - PIER SW02 DETAILS
B16. OPTION B - PIER SW03 DETAILS
B17. OPTION B - PIER SW04 DETAILS
B18. OPTION B - PIER SW05 DETAILS
B19. OPTION B - PIER SW07 DETAILS
B20. OPTION B - TYPICAL PEDESTAL REINFORCEMENT
B21. OPTION B - PIER SW06 LAYOUT
B22. OPTION B - PIER SW06 DETAILS
B23. OPTION B - PIER SW06 FOOTING
B24. OPTION B - PIER SW06 PEDESTAL REINFORCEMENT
B25. OPTION B - PIER REINFORCEMENT SCHEDULE (1 OF 2)
B26. OPTION B - PIER REINFORCEMENT SCHEDULE (2 OF 2)

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION.
THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

PIERS - OPTION A
DRILLED SHAFT FOUNDATION AT ALL LOCATIONS
SHEETS A1 THRU A25

PIERS - OPTION B
DRIVEN PILE FOUNDATION AT PIER SW06
DRILLED SHAFT FOUNDATION AT ALL OTHER LOCATIONS
SHEETS B1 THRU B26

WISCONSIN
W. RANDALL THOMAS
E-37361
MILWAUKEE WI
PROFESSIONAL ENGINEER
06/12/2014

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

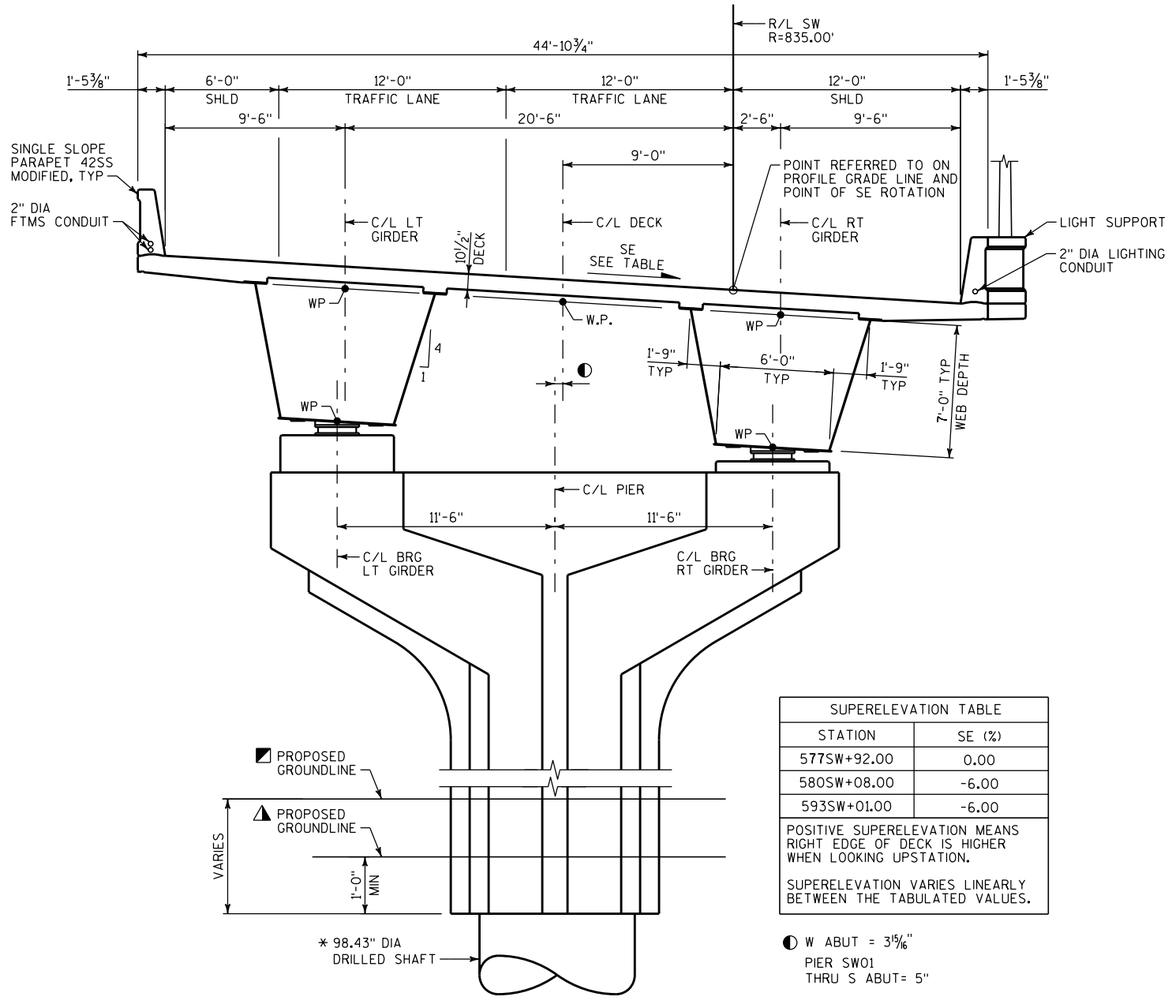
DRAWN BY GLM | PLANS CK'D. WRT

DRAWING LIST

SHEET 2 OF 96

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Mandatory\B855_080102_gn.dgn
PLOT DATE : 02-MAY-2014 11:59
PLOT BY : MSCGLM
PLOT NAME : B855_080102_gn
PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION THRU RAMP SW

LOOKING UPSTATION

SUPERELEVATION TABLE	
STATION	SE (%)
577SW+92.00	0.00
580SW+08.00	-6.00
593SW+01.00	-6.00

POSITIVE SUPERELEVATION MEANS RIGHT EDGE OF DECK IS HIGHER WHEN LOOKING UPSTATION.

SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES.

◐ W ABUT = 3 15/16"
PIER SW01
THRU S ABUT= 5"

* DRILLED SHAFT FOUNDATION SHOWN.
IF OPTION B IS BID, CONSTRUCT DRIVEN PILE FOUNDATION AT PIER SW06.
SEE NOTES ON SHEET 2.

DESIGN DATA

LIVE LOAD

DESIGN LOADING: HL-93

CONTROLLING RATINGS FOR UNIT 1
- INVENTORY RATING FACTOR: RF = 1.19
- OPERATING RATING FACTOR: RF = 1.54
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

CONTROLLING RATINGS FOR UNIT 2
- INVENTORY RATING FACTOR: RF = 1.24
- OPERATING RATING FACTOR: RF = 1.61
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) _____ f'c = 4,000 PSI
- SUBSTRUCTURE, PIERS _____ f'c = 5,000 PSI
- SUBSTRUCTURE, ABUTMENTS _____ f'c = 4,000 PSI
- DRILLED SHAFTS _____ f'c = 4,000 PSI
- C.I.P. CONCRETE PILING _____ f'c = 3,500 PSI

BAR STEEL REINFORCEMENT _____ fy = 60,000 PSI

STRUCTURAL STEEL
- ASTM A709 (AASHTO M270) GRADE HPS 70W _____ Fy = 70,000 PSI
- ASTM A709 (AASHTO M270) GRADE HPS 50W _____ Fy = 50,000 PSI
- ASTM A709 (AASHTO M270) GRADE 50 _____ Fy = 50,000 PSI

TRAFFIC DATA					
ROUTE	RAMP SW	IH 94 EB	IH 94 WB	USH 45 NB	USH 45 SB
A.A.D.T.	29,900	44,900	44,900	59,900	63,600
YEAR	2035	2035	2035	2035	2035
R.D.S. (MPH)	50	60	60	60	60

LEGEND

◩ = INTERIM CONDITION AT COMPLETION OF PROJECT ID 1060-33-80

◭ = ULTIMATE CONDITION AT COMPLETION OF FUTURE PROJECT ID 1060-33-81

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

TYPICAL SECTION & DESIGN DATA

SHEET 3 OF 96

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Mandatory\B855_080103_ts.dgn
PLOT DATE : 02-MAY-2014 21:12
PLOT BY : MSCWRT
PLOT NAME : B855_080103_ts
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

GENERAL

G.1. DRAWINGS SHALL NOT BE SCALED.

G.2. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

G.3. COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

G.4. GIRDERS AND OTHER ELEMENTS OF THE STRUCTURE ARE REFERRED TO AS 'LEFT' AND 'RIGHT'. THESE DIRECTIONS ARE WITH RESPECT TO THE REFERENCE LINE WHEN LOOKING UP STATION.

G.5. TRANSVERSE DIMENSIONS ARE RADIAL TO THE REFERENCE LINE UNLESS NOTED OTHERWISE.

G.6. THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

G.7. EXISTING BRIDGE B-40-755 IS A TWO SPAN CURVED STEEL PLATE GIRDER STRUCTURE. EXISTING BRIDGES B-40-98 & B-40-99 ARE THREE SPAN KINKED STEEL ROLLED BEAM STRUCTURES. ALL THREE BRIDGES WILL BE REMOVED IN THEIR ENTIRETY.

G.8. ABOVE GROUND PORTIONS OF EXISTING BRIDGE B-40-103 WERE REMOVED IN YEAR 2010. CONCRETE ABUTMENTS ON TIMBER PILES AND CONCRETE PIER FOOTINGS ON CIPC PILES REMAIN. REMOVE EAST ABUTMENT TO ELEVATION 784. REMOVE WEST ABUTMENT IN ITS ENTIRETY, INCLUDING PILES. REMOVAL OF PIERS IS NOT REQUIRED. PIER 1 IS CLASSIFIED AS A KNOWN OBSTRUCTION FOR CONSTRUCTION OF DRILLED SHAFT FOUNDATION, SEE SHEET A3 OR B3.

G.9. THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING BRIDGES B-40-755, B-40-89, B-40-99 & B-40-103 AND THE CONSTRUCTION OF BRIDGE B-40-855, WITH PROPOSED WALLS R-40-504, R-40-522 & R-40-523, PROPOSED BRIDGE B-40-789, AND EXISTING BRIDGE B-40-104. SEE STRUCTURE PLANS.

G.10. STRUCTURE PLANS OF EXISTING STRUCTURES ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW STREET, WAUKESHA, WI, OR THROUGH THE WISDOT STRUCTURES WEBSITE.

G.11. SEE CONSTRUCTION STAGING SHEETS FOR INFORMATION ON ASSUMED DEMOLITION AND CONSTRUCTION SEQUENCES.

G.12. THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B. SEE NOTE ON SHEET 2.

EXCAVATION AND BACKFILL

EB.1. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES, BRIDGES B-40-855" SHALL BE AS FOLLOWS:
SOUTH ABUTMENT: EXISTING GROUNDLINE
PIERS: AS DEFINED ON THE EXCAVATION PLAN SHEETS

EB.2. AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW BRIDGE OR RETAINING WALL REINFORCED ZONE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

DESIGN

D.1. DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION, 2012, UNLESS NOTED OTHERWISE.

D.2. LOAD MODIFIERS (AASHTO LRFD 1.3)
DUCTILITY: 1.00
REDUNDANCY: 1.05 FOR STEEL BOX GIRDERS AND DIAPHRAGMS
1.00 ALL OTHER ELEMENTS
OPERATIONAL IMPORTANCE: 1.00

D.3. TEMPERATURE CHANGE USED FOR DETERMINING SUBSTRUCTURE FORCES = 90°F.

D.4. ABSOLUTE TEMPERATURE RANGE FOR DETERMINING BEARING AND EXPANSION JOINT MOVEMENTS = -30°F TO +120°F.

D.5. DESIGN ASSUMED 200 LB/FT ON EACH GIRDER FOR STAY-IN-PLACE METAL FORMS, INCLUDING CONCRETE WITHIN FORM FLUTES.

D.6. DESIGN ASSUMED 10 PSF FOR TEMPORARY FORMWORK IN ADDITION TO STAY-IN-PLACE FORMS.

D.7. LIVE LOAD DEFLECTION LIMIT = SPAN/800 (HL93)

D.8. LOAD RATINGS REPORTED ON SHEET 3 INCLUDE THE FOLLOWING SYSTEM FACTORS: 0.85 FOR FLEXURE, 1.00 FOR SHEAR

STRUCTURAL STEEL

SS.1. STEEL GRADE FOR WEBS AND FLANGES OF GIRDERS AND DIAPHRAGMS, INCLUDING SPLICE PLATES AND ALL PLATES WELDED TO GIRDER WEBS, SHALL BE ASTM A709 GRADE HPS 50W, UNLESS NOTED AS HPS 70W ON GIRDER SHEETS.

SS.2. STEEL GRADE FOR STIFFENERS, K-FRAMES, STRUTS, LATERAL BRACING AND JACKING PADS SHALL BE ASTM A709 GRADE 50.

SS.3. STEEL GRADE FOR MASONRY PLATES, SOLE PLATES, AND BEVELED TOP PLATES FOR THE BEARING ASSEMBLIES SHALL BE ASTM A709 GRADE 50W. FOR STEEL GRADE OF OTHER BEARING COMPONENTS, SEE SPECIAL PROVISIONS FOR BEARINGS.

SS.4. ALL STRUCTURAL STEEL PLATE FOR BOX GIRDER FLANGES AND WEBS IN TENSION ZONES AS SHOWN ON THE PLANS, ALL SPLICE PLATES IN TENSION ZONES, ALL WEB STIFFENERS, AND ALL INTERNAL AND EXTERNAL DIAPHRAGM PLATES SHALL BE CLASSIFIED AS FRACTURE CRITICAL MEMBERS (FCM). ALL WELDS FOR THESE ELEMENTS SHALL BE CONSIDERED FRACTURE CRITICAL WELDS.

SS.5. CHARPY V-NOTCH TOUGHNESS REQUIREMENTS FOR ALL STEEL SHALL CONFORM TO THE REQUIREMENTS FOR ZONE 2.

SS.6. FIELD WELDING ON HIGH PERFORMANCE STEEL (HPS) PLATES IN TENSION IS NOT PERMITTED, EXCEPT FOR FIELD WELDED SHEAR CONNECTORS. THE CONTRACTOR WILL NEED TO ESTABLISH A METHOD OF ATTACHING FORMS WITHOUT WELDING.

SS.7. ALL BOLTS SHALL BE ASTM A325-X TYPE 1. BOLTS SHALL BE 1" DIAMETER UNLESS NOTED OTHERWISE. ALL HOLES SHALL BE STANDARD DIAMETER - NO OVERSIZED HOLES. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS. DESIGN ASSUMED CLASS B FAYING SURFACE FOR SLIP RESISTANCE.

SS.8. PAINT ALL STRUCTURAL STEEL, INCLUDING SURFACES AND BRACING MEMBERS ON THE INSIDE OF THE BOX GIRDERS. FINISH COAT FOR EXTERIOR SURFACES SHALL HAVE A COLOR TO MATCH SHERWIN WILLIAMS COLOR "SW6523". FINISH COAT FOR INTERIOR SURFACES SHALL BE WHITE, FEDERAL COLOR #27925.

SS.9. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING A CONSTANT 4" HAUNCH HEIGHT, MEASURED FROM THE UNDERSIDE OF THE TOP FLANGE TO THE UNDERSIDE OF THE DECK (TOP OF STAY-IN-PLACE METAL FORMS). ANY ADDITIONAL QUANTITIES REQUIRED AS A RESULT OF VARIATION IN THE HAUNCH HEIGHT ARE ASSUMED TO BE INCIDENTAL TO OTHER PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY. THIS INCLUDES ADDITIONAL CONCRETE IN THE HAUNCH, ADDITIONAL OR MORE COMPLICATED FORM WORK, EXTRA SHEAR STUD LENGTH AND ANY REQUIRED REINFORCEMENT IN THE HAUNCH.

SS.10. TEMPORARY SUPPORTS AND FALSE WORK (INCLUDING OVERHANG BRACKETS) SHALL NOT BEAR ON GIRDER WEBS, EXCEPT WITHIN 8 INCHES OF THE BOTTOM FLANGE.

SS.11. ALL PLAN DIMENSIONS ARE BASED ON THE FINAL DEFLECTED SHAPE AT 60° F.

REINFORCING STEEL

RS.1. ALL REINFORCING BARS ARE ENGLISH DESIGNATION AND THE FIRST DIGIT OF A 3-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A 4-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

RS.2. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS NOTED OTHERWISE.

RS.3. FOR BARS NOTED IN THE BILL OF BAR TABLES AS STAINLESS STEEL, PROVIDE STAINLESS STEEL REINFORCEMENT PER THE SPECIAL PROVISION "BAR STEEL REINFORCEMENT STAINLESS BRIDGES".

CONCRETE

C.1. THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH OF 4" MEASURED FROM TOP OF WEB TO UNDERSIDE OF SLAB (EXCLUDING THE VOLUME TAKEN UP BY THE TOP FLANGE) WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

C.2. THE PARAPET CONCRETE QUANTITY FOR PARAPET ON THE DECK, ABUTMENT BACKWALL, AND APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

C.3. THE CONCRETE QUANTITY FOR APPROACH SLAB FOOTING SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

C.4. CONCRETE ABOVE THE ABUTMENT UPPER BACKWALL CONSTRUCTION JOINT SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES". THE REMAINING CONCRETE QUANTITY FOR ABUTMENT SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

C.5. THE CONCRETE QUANTITY FOR THE PIERS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

C.6. CHAMFER ALL EXPOSED OUTSIDE CORNERS ¾" UNLESS NOTED OTHERWISE.

FOUNDATION DATA

DRIVEN PILES:

FD.1. ABUTMENTS AND PIERS SHALL BE SUPPORTED ON 16" DIA CIP CONCRETE PILING DRIVEN TO FOLLOWING REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE PDA/CAPWAP METHOD.

REQUIRED DRIVING RESISTANCE:
WEST ABUTMENT: 246 TONS
PIER SW06: 250 TONS (BID OPTION B ONLY)
SOUTH ABUTMENT: 193 TONS

FD.2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.

FD.3. ESTIMATED PILE LENGTHS:
WEST ABUTMENT: 75 FEET
PIER SW06: 70 FEET
SOUTH ABUTMENT: 70 FEET

FD.4. AT THE WEST ABUTMENT, IT IS ANTICIPATED THAT PILES WILL BE DRIVEN PRIOR TO CONSTRUCTION OF MSE WALL R-40-504. PILE DRIVING THROUGH MSE FILL WITHOUT SLEEVES IS PROHIBITED.

FD.5. PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.

DRILLED SHAFTS:

FD.6. PIERS SHALL BE SUPPORTED ON BASE GROUTED DRILLED SHAFTS. SHAFT DIAMETERS, FACTORED AXIAL RESISTANCES, TOP OF SHAFT AND BOTTOM OF SHAFT ELEVATIONS, AND CORRESPONDING SHAFT LENGTHS FOR EACH DRILLED SHAFT ARE GIVEN IN THE TABLE BELOW.

FD.7. THE MINIMUM FACTORED AXIAL RESISTANCE OF DRILLED SHAFTS IN COMPRESSION USED FOR DESIGN IS THE REQUIRED AXIAL RESISTANCE MULTIPLIED BY A SHAFT RESISTANCE FACTOR OF 0.56. THE RESISTANCE FACTOR INCLUDES A 20% REDUCTION FOR NON-REDUNDANCY.

DRILLED SHAFT DATA

SHAFT LOCATION	SHAFT DIA (IN)	MINIMUM FACTORED AXIAL RESIST (KIP)	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)
PIER SW01	98.43	5400	765.0	697.0	68.0
PIER SW02	98.43	5300	762.0	691.0	71.0
PIER SW03	98.43	4300	750.0	699.0	51.0
PIER SW04	98.43	3200	758.0	714.0	44.0
PIER SW05	98.43	4400	772.0	694.0	78.0
PIER SW06*	98.43	5200	787.0	692.0	95.0
PIER SW07	98.43	5500	767.0	679.0	88.0

* BID OPTION A ONLY

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

GENERAL NOTES

SHEET 4 OF 96

2506

STATE PROJECT NUMBER

1060-33-80

ESTIMATED QUANTITIES - MANDATORY ITEMS

ITEM CATEGORY	ITEM NO.	BID ITEMS	UNIT	W APPR SLAB	WEST ABUTMENT	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	SOUTH ABUTMENT	S APPR SLAB	SUPER UNIT 1	SUPER UNIT 2	TOTAL
2070	203.0200.0002	REMOVING OLD STRUCTURE STATION 586SW+76.79	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1*
2070	203.0200.0003	REMOVING OLD STRUCTURE STATION 590SW+89.63	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1*
2070	203.0200.0004	REMOVING OLD STRUCTURE STATION 591SW+15.01	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1*
2070	203.0200.0014	REMOVING OLD STRUCTURE STATION 587SW+01.22	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1*
2070	203.0210.S.0007	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-98	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1
2070	203.0210.S.0008	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-99	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1
2070	210.0100	BACKFILL STRUCTURE	CY	---	---	---	---	---	---	---	---	---	142	---	---	---	142
2070	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	130	---	---	---	---	---	---	---	---	---	130	---	---	260
2070	502.0100	CONCRETE MASONRY BRIDGES	CY	11.3	102.4	---	---	---	---	---	---	---	128.0	10.3	---	---	252
2070	502.3200	PROTECTIVE SURFACE TREATMENT	SY	119	20	---	---	---	---	---	---	---	20	119	3,733	3,813	7,824
2070	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	---	---	---	---	---	---	---	---	---	840	---	---	---	840
2070	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	840	6,760	---	---	---	---	---	---	---	6,180	760	---	---	14,540
2070	506.0605	STRUCTURAL STEEL HS	LB	---	---	---	---	---	---	---	---	---	---	---	1,459,100	1,534,200	2,993,300
2070	506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH	---	---	---	---	---	---	---	---	---	---	---	9,623	9,532	19,155
2070	514.2608	DOWNSPOUT 8-INCH	LF	---	---	61	58	62	69	59	---	61	---	---	---	---	370
2070	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	8	---	---	---	---	---	---	---	8	---	---	---	16
2070	550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF	---	825	---	---	---	---	---	---	---	1,050	---	---	---	1,875
2070	604.0400	SLOPE PAVING CONCRETE	SY	---	14	---	---	---	---	---	---	---	---	---	---	---	14
2070	606.0200	RIPRAP MEDIUM	CY	---	---	1	1	1	1	1	---	1	---	---	---	---	6
2070	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	---	---	---	---	---	---	---	45	---	---	---	45
2070	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	68	---	---	---	---	---	---	---	---	---	68	25	25	186
2070	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	---	---	---	---	---	---	---	---	---	---	---	2,000	2,050	4,050
2070	653.0220	JUNCTION BOXES 18x6x6-INCH	EACH	---	---	---	---	---	---	---	---	---	---	---	1	1	2
2070	653.0222	JUNCTION BOXES 18x12x6-INCH	EACH	---	---	---	---	---	---	---	---	---	---	---	5	6	11
2070	657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	---	---	---	---	---	---	---	---	---	---	---	3	4	7
2070	SPV.0035.4000	HPC MASONRY STRUCTURES	CY	52	5	---	---	---	---	---	---	---	5	52	1,223	1,250	2,587
2070	SPV.0060.4100	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH	---	---	---	---	---	---	---	---	---	---	---	---	1	1
2070	SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	---	2	---	---	---	---	---	---	---	2	---	---	---	4
2070	SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	---	2	---	---	---	---	---	---	---	2	---	---	---	4
2070	SPV.0060.4120	BEARINGS HIGH-LOAD MULTI-ROTATIONAL FIXED	EACH	---	---	---	2	---	---	---	2	---	---	---	---	---	4
2070	SPV.0060.4125	BEARINGS HIGH-LOAD MULTI-ROTATIONAL GUIDED	EACH	---	2	2	---	2	4	2	---	2	2	---	---	---	16
2070	SPV.0060.4130	FLOOR DRAIN SPECIAL	EACH	---	---	---	---	---	---	---	---	---	---	---	4	3	7
2070	SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	7,140	1,600	---	---	---	---	---	---	---	1,590	7,220	316,330	340,780	674,660
2070	SPV.0105.4500	PAINTING POLYSILOXANE SYSTEM STRUCTURE B-40-855	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1
2070	SPV.0105.4555	EXPANSION DEVICE MODULAR LRFD B-40-855	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1
2070	SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	867	74	---	---	---	---	---	---	---	74	867	27,742	28,336	57,960
2070	SPV.0180.4800	SLOPE PAVING CRUSHED AGGREGATE SPECIAL	SY	---	---	---	---	---	---	---	---	---	98	---	---	---	98
		NON-BID ITEMS															
		BRIDGE SEAT PROTECTION	LS														1
		PREFORMED JOINT FILLER	SIZE														¾",1½",2"
		NAME PLATE	EACH														1
		SIZE 2 COARSE AGGREGATE	SY														---
		EXPANDED POLYSTYRENE	SIZE														1"

8

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE MANDATORY AND ARE REQUIRED WITH PIER OPTION A AND PIER OPTION B. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET A1 FOR OPTION A AND SHEET B1 FOR OPTION B.

* THE STATIONS GIVEN FOR REMOVING OLD STRUCTURES CORRESPOND TO THE FOLLOWING EXISTING STRUCTURE NUMBERS:
  STA 586SW+76.79: B-40-755
  STA 590SW+89.63: B-40-98
  STA 591SW+15.01: B-40-99
  STA 587SW+01.22: B-40-103

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

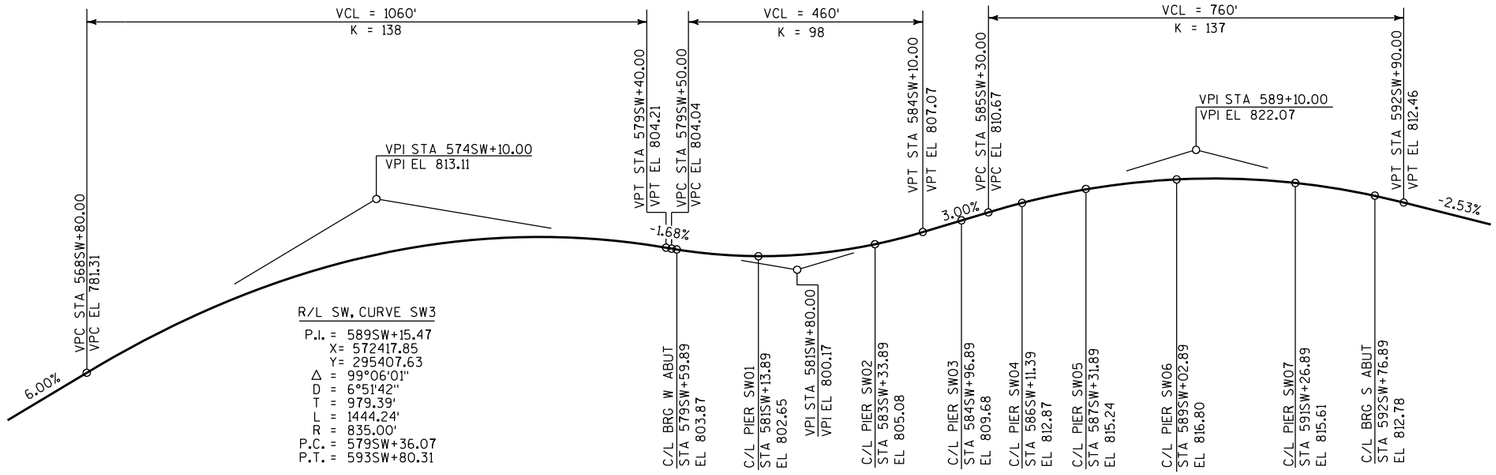
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QUANTITIES

SHEET 5 OF 96

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Mandatory\B855_080105_qu.dgn
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PLOT BY : MSCGLM
PLOT NAME : B855_080105_qu
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

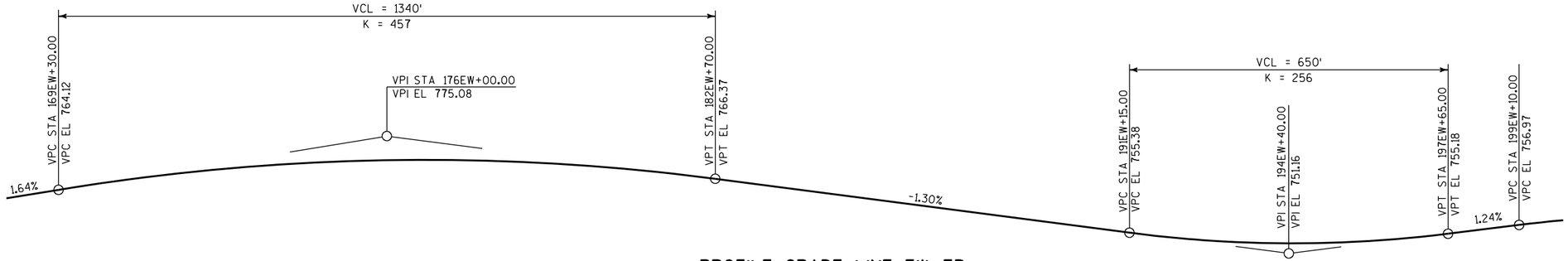


R/L SW, CURVE SW3

P.I. = 589SW+15.47
X= 572417.85
Y= 295407.63
Δ = 99°06'01"
D = 6°51'42"
T = 979.39'
L = 1444.24'
R = 835.00'
P.C. = 579SW+36.07
P.T. = 593SW+80.31

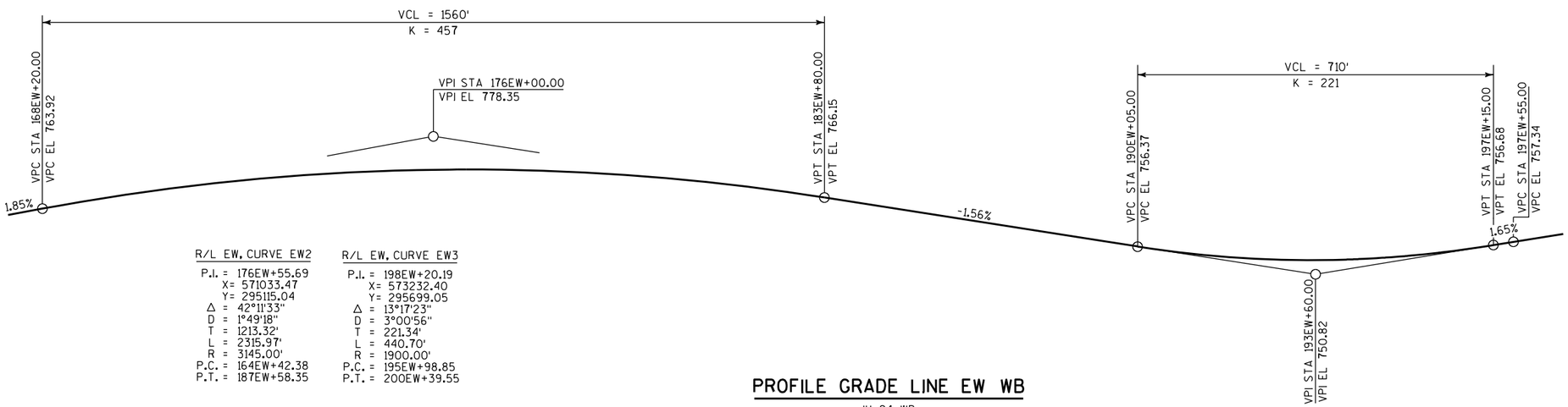
PROFILE GRADE LINE SW

RAMP SW



PROFILE GRADE LINE EW EB

IH 94 EB



R/L EW, CURVE EW2

P.I. = 176EW+55.69
X= 571033.47
Y= 295115.04
Δ = 42°11'33"
D = 1°49'18"
T = 1213.32'
L = 2315.97'
R = 3145.00'
P.C. = 164EW+42.38
P.T. = 187EW+58.35

R/L EW, CURVE EW3

P.I. = 198EW+20.19
X= 573232.40
Y= 295699.05
Δ = 13°17'23"
D = 3°00'56"
T = 221.34'
L = 440.70'
R = 1900.00'
P.C. = 195EW+98.85
P.T. = 200EW+39.55

PROFILE GRADE LINE EW WB

IH 94 WB

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

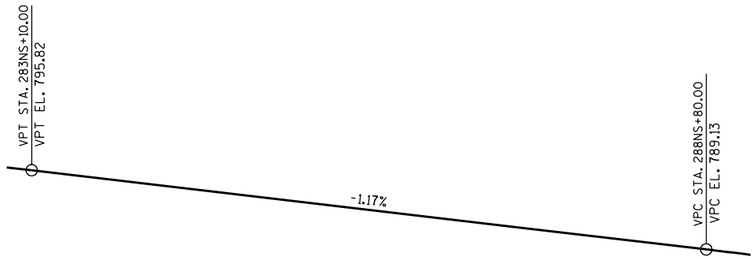
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ROADWAY GEOMETRY (1 OF 2)

SHEET 6 OF 96

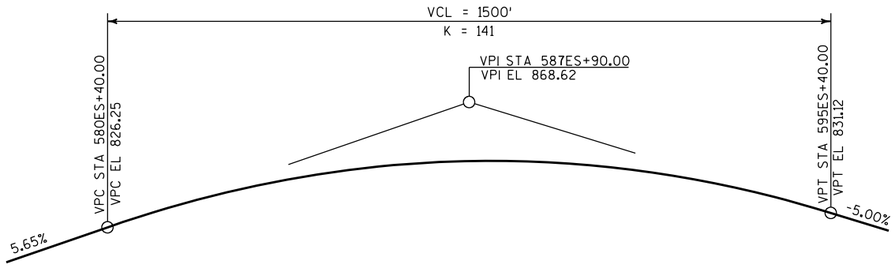
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PLOT DATE : 02-MAY-2014 11:59
PLOT BY : MSCGLM
PLOT NAME : B855_080106_gm
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



PROFILE GRADE LINE NS NB & PROFILE GRADE LINE NS SB

USH 45 NB & SB

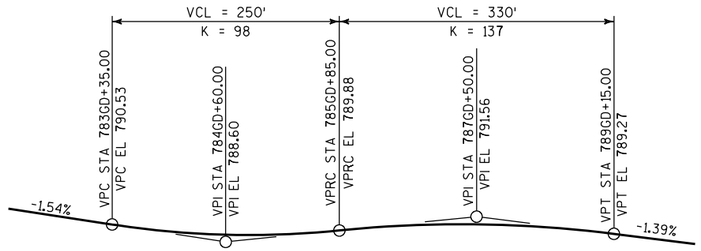


R/L ES, CURVE ES3

P.I. = 596ES+89.51
X= 571931.07
Y= 295860.01
Δ = 90°54'49"
D = 3°50'15"
T = 1517.00'
L = 2369.01'
R = 1493.00'
P.C. = 581ES+72.50
P.T. = 605ES+41.51

PROFILE GRADE LINE ES

RAMP ES



R/L GD, CURVE GD5

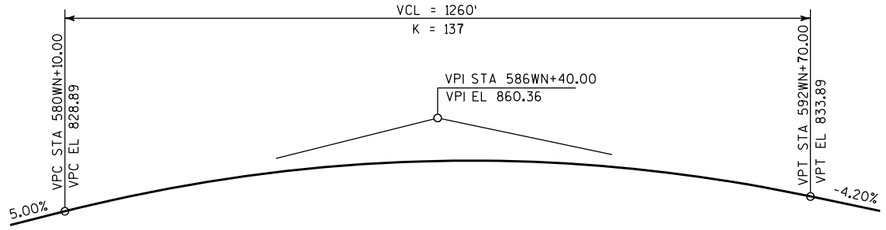
P.I. = 783GD+09.01
X= 571841.37
Y= 294479.81
Δ = 28°29'51"
D = 9°57'52"
T = 146.02'
L = 285.99'
R = 575.00'
P.C. = 781GD+62.99
P.T. = 784GD+48.99

R/L GD, CURVE GD6

P.I. = 789GD+70.98
X= 572156.84
Y= 295068.65
Δ = 13°05'48"
D = 2°01'54"
T = 323.71'
L = 644.59'
R = 2820.00'
P.C. = 786GD+47.28
P.T. = 792GD+91.87

PROFILE GRADE LINE GD

RAMP GD

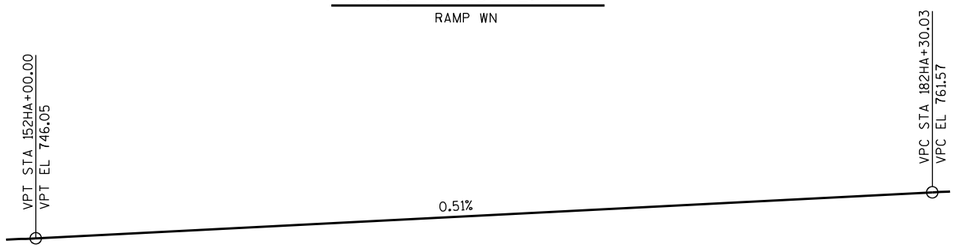


R/L WN, CURVE WN2

P.I. = 593WN+87.45
X= 572730.07
Y= 294711.15
Δ = 101° 45'17"
D = 4°03'59"
T = 1732.38'
L = 2502.32'
R = 1409.00'
P.C. = 576WN+55.07
P.T. = 601WN+57.39

PROFILE GRADE LINE WN

RAMP WN

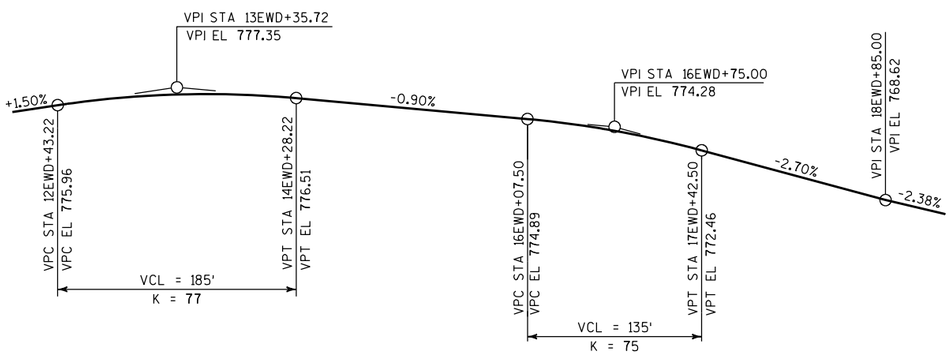


R/L HA, CURVE HA1

P.I. = 165HA+07.60
X= 570829.86
Y= 294768.68
Δ = 25°10'43"
D = 1°10'53"
T = 1083.15'
L = 2131.33'
R = 4850.00'
P.C. = 154HA+24.45
P.T. = 175HA+55.78

PROFILE GRADE LINE HA

HANK ARRON STATE TRAIL



TEMP EWD, CURVE EWD1

P.I. = 15EWD+92.47
X= 571472.49
Y= 295249.40
Δ = 46°57'55"
D = 4°40'38"
T = 532.20'
L = 1004.13'
R = 1225.00'
P.C. = 10EWD+60.26
P.T. = 20EWD+64.39

PROFILE GRADE LINE EWD

TEMPORARY RAMP EWD

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

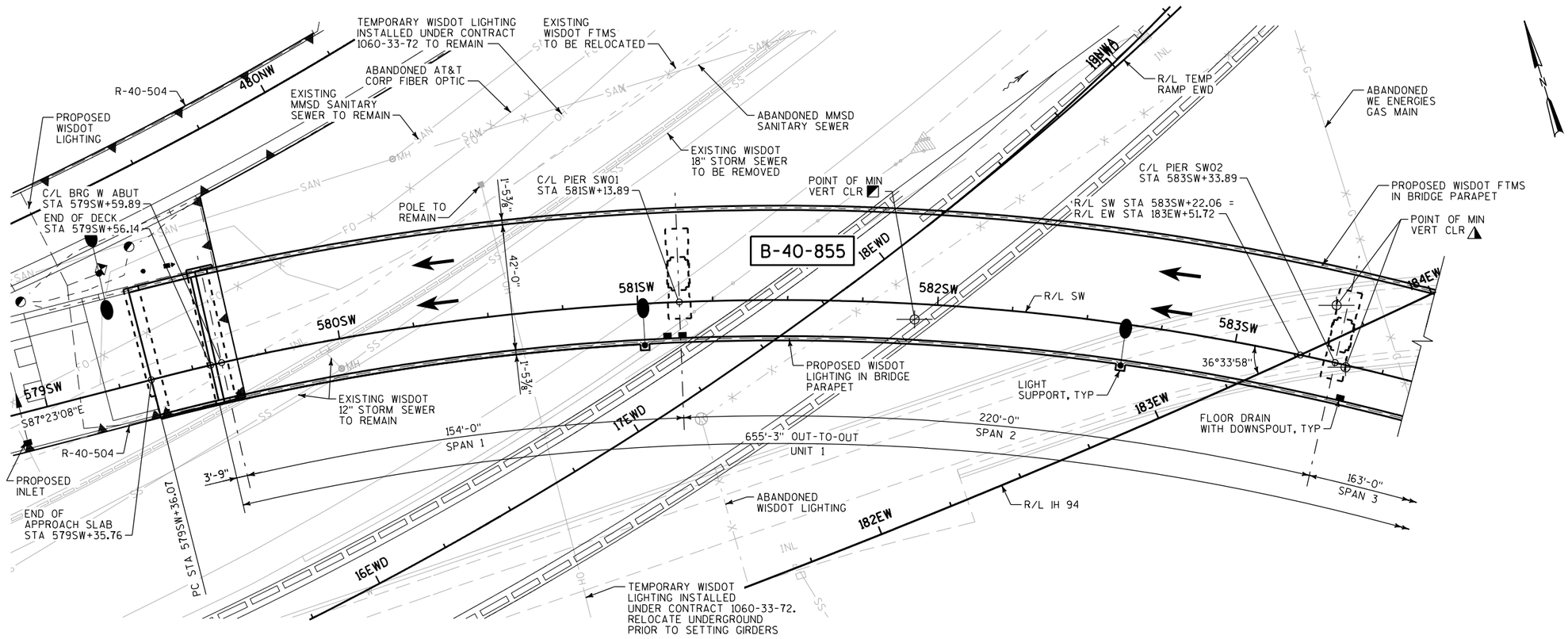
DRAWN BY GLM | PLANS CK'D. WRT

ROADWAY GEOMETRY (2 OF 2)

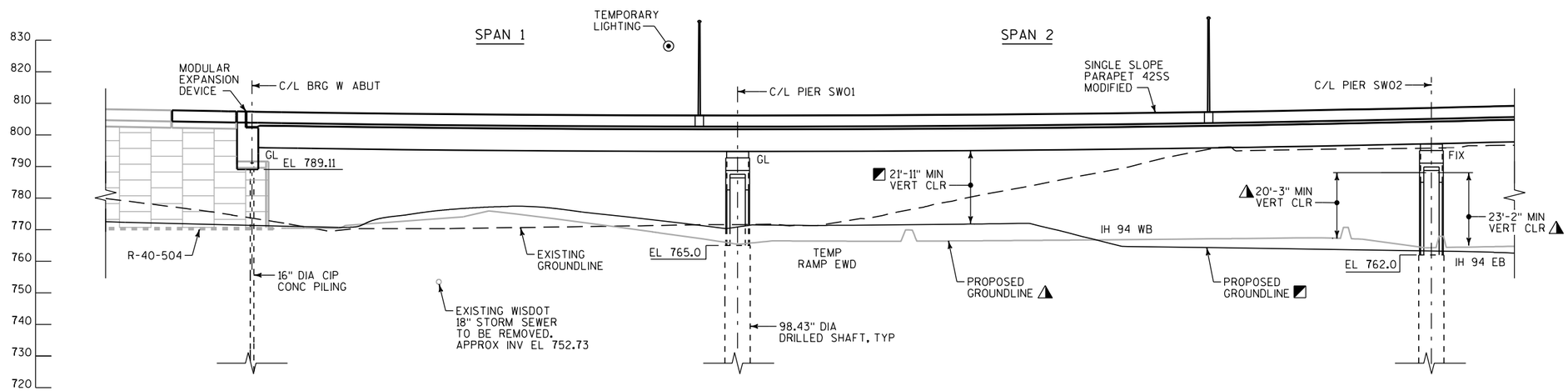
SHEET 7 OF 96

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PLOT DATE : 02-MAY-2014 11:59
PLOT BY : MSCGLM
PLOT NAME : B855_080107_gm
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



PLAN



ELEVATION

ALONG R/L SW

LEGEND

- ← INDICATES LANE LOCATION AND DIRECTION OF TRAVEL
- FIX = FIXED BEARINGS
- GL = GUIDED BEARINGS
- ◪ = INTERIM CONDITION AT COMPLETION OF PROJECT ID 1060-33-80
- ◭ = ULTIMATE CONDITION AT COMPLETION OF FUTURE PROJECT ID 1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

PLAN & ELEVATION SPANS 1 & 2

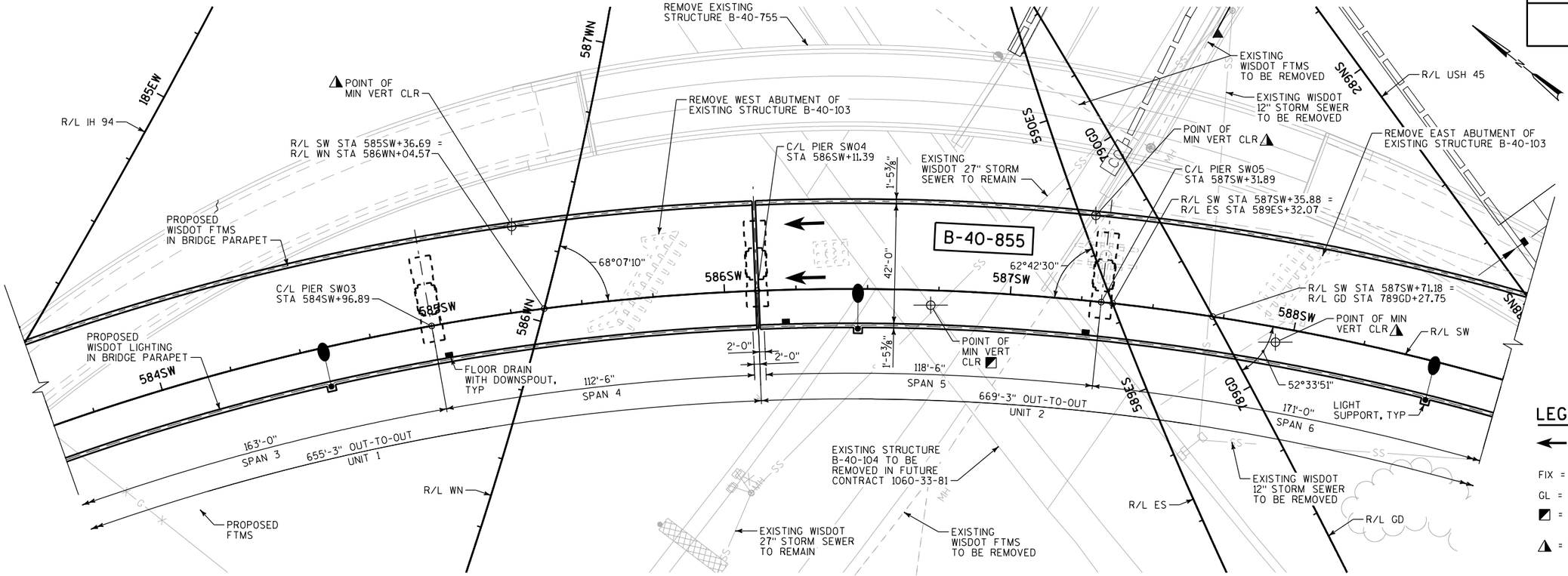
SHEET 8 OF 96

8

8

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PLOT BY : MSCGLM
PLOT NAME : B855_080108_gp
PLOT SCALE : 40:1

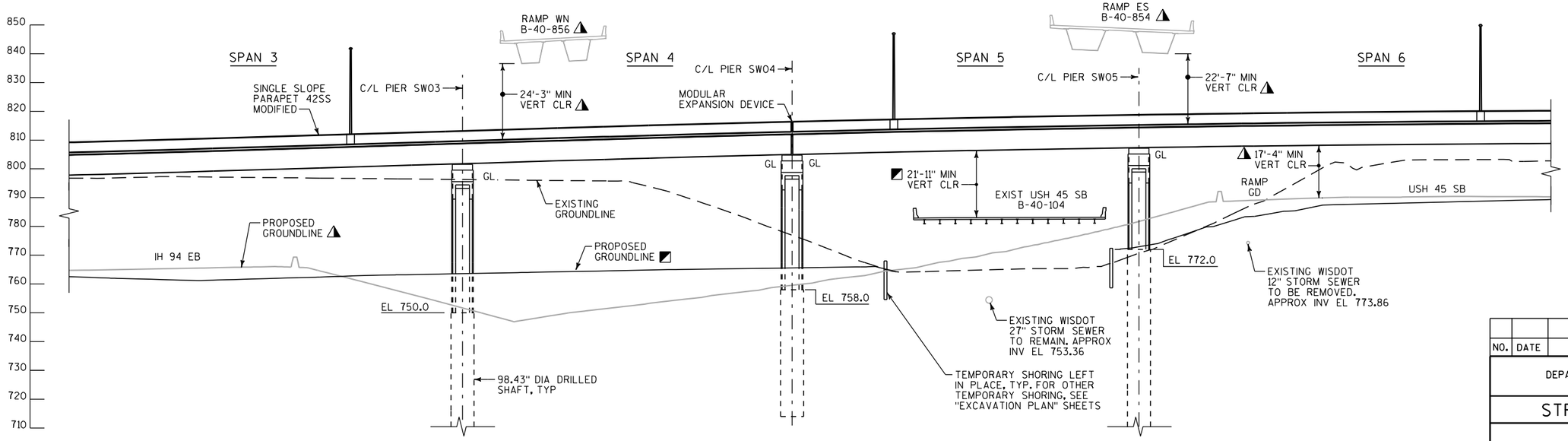
STATE PROJECT NUMBER
1060-33-80



PLAN

LEGEND

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- FIX = FIXED BEARINGS
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ELEVATION

ALONG R/L SW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

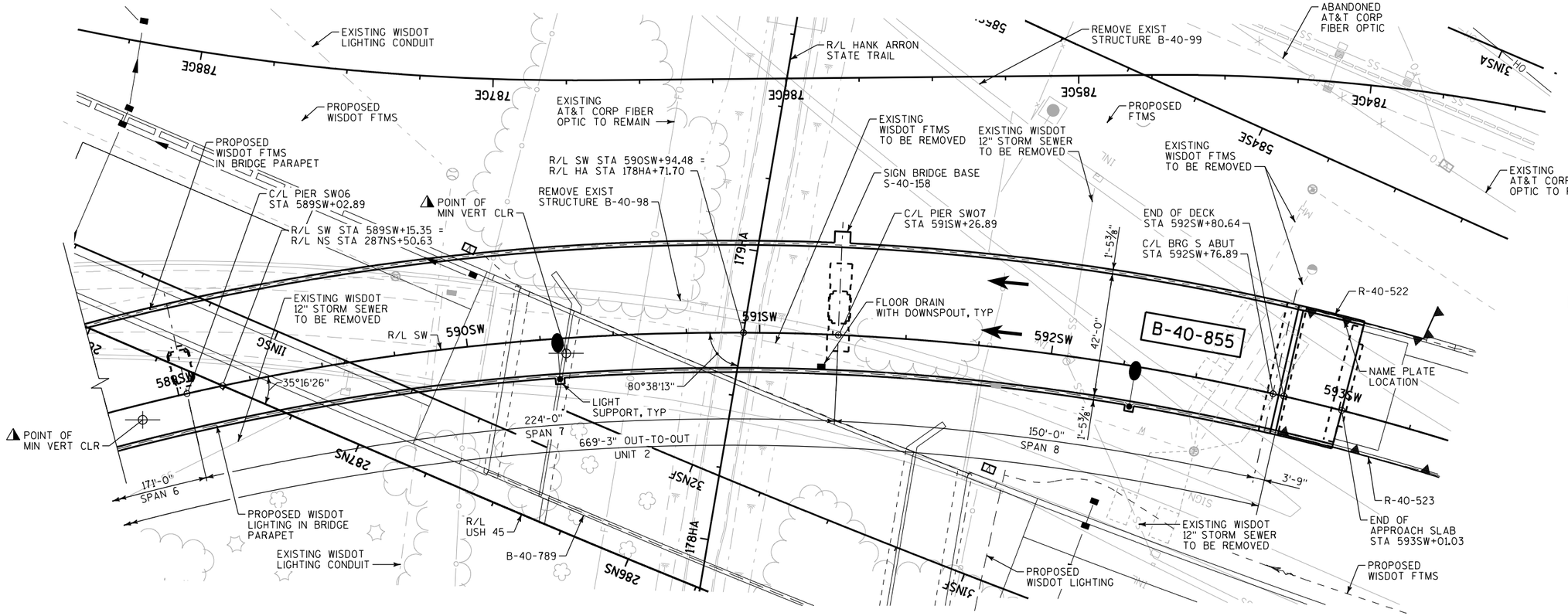
PLAN & ELEVATION SPANS 3 THRU 6

SHEET 9 OF 96

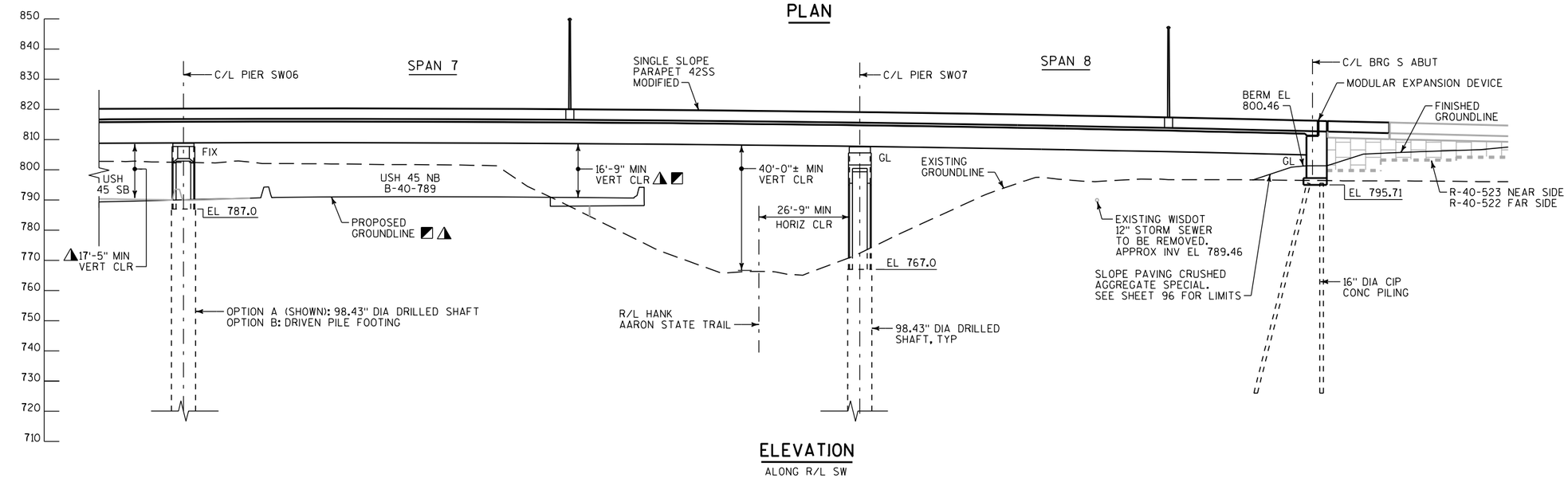
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8

STATE PROJECT NUMBER
1060-33-80



PLAN



ELEVATION

ALONG R/L SW

NO.	DATE	REVISION	BY

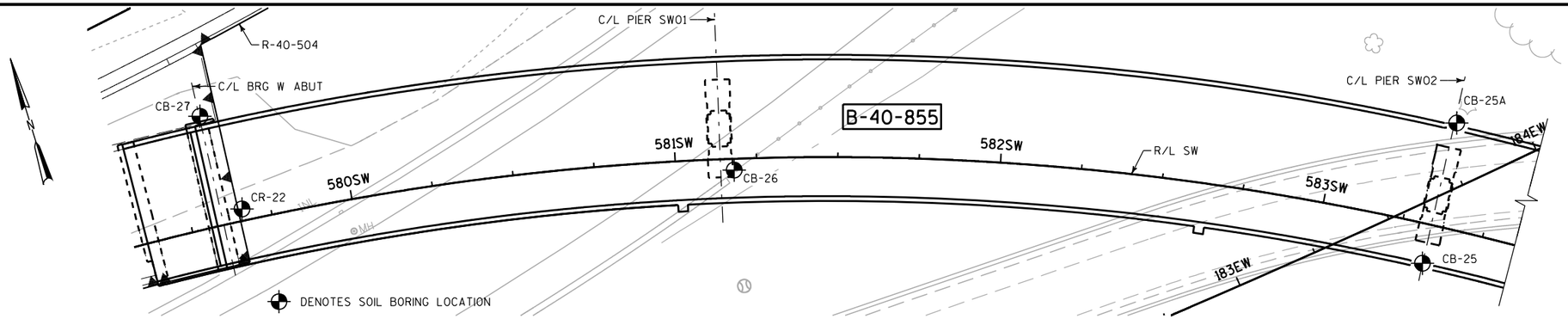
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

PLAN & ELEVATION SPANS 7 & 8

SHEET 10 OF 96

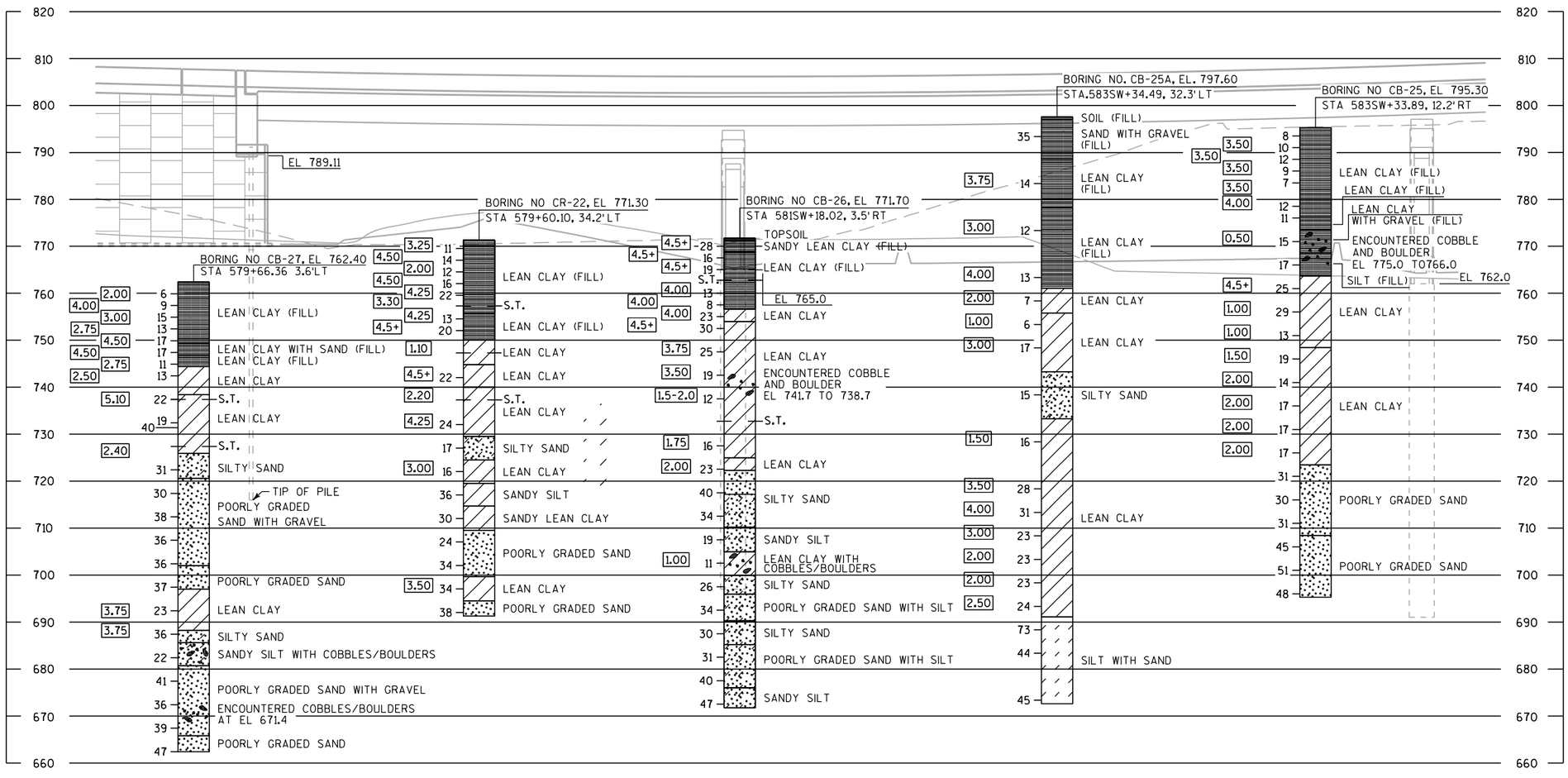


NOTES

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SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
MAY 12, 2012 = BORING CR-22
APRIL 4, 2012 = BORING CB-25
JUNE 25, 2012 = BORING CB-26
APRIL 26, 2012 = BORING CB-27
JANUARY 26, 2013 = BORING CB-25A



STATE PROJECT NUMBER

1060-33-80

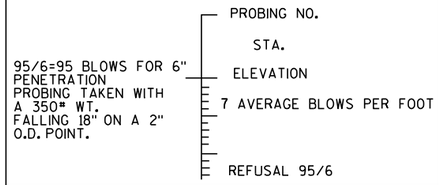
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

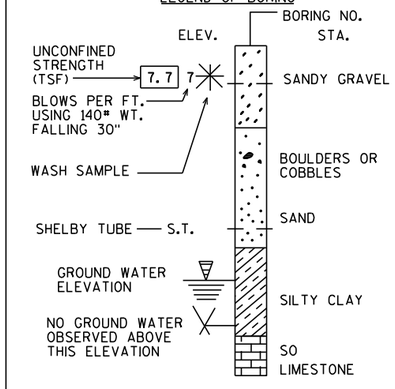
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

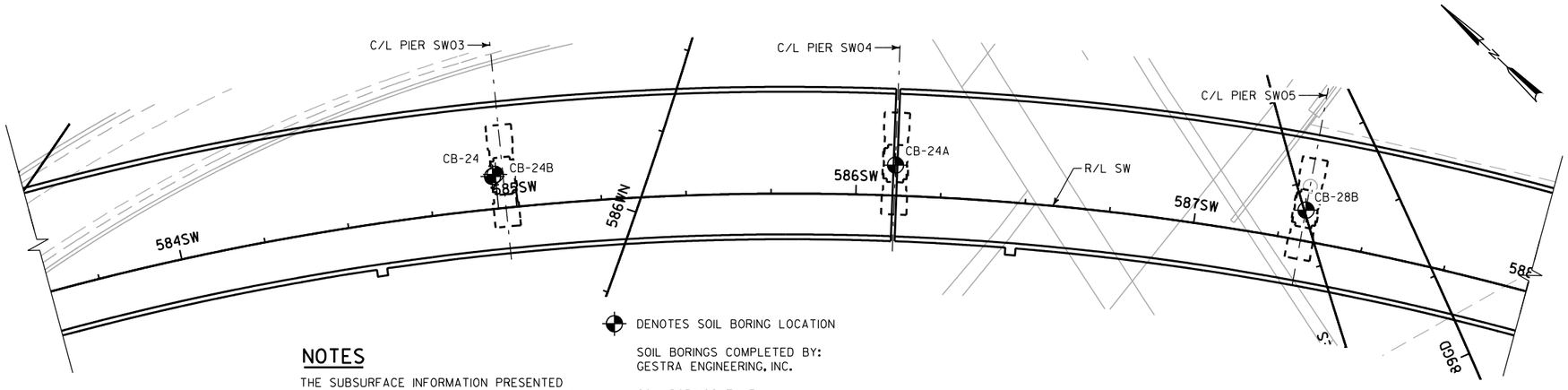
SUBSURFACE EXPLORATION SPANS 1 & 2

SHEET 11 OF 96

2513

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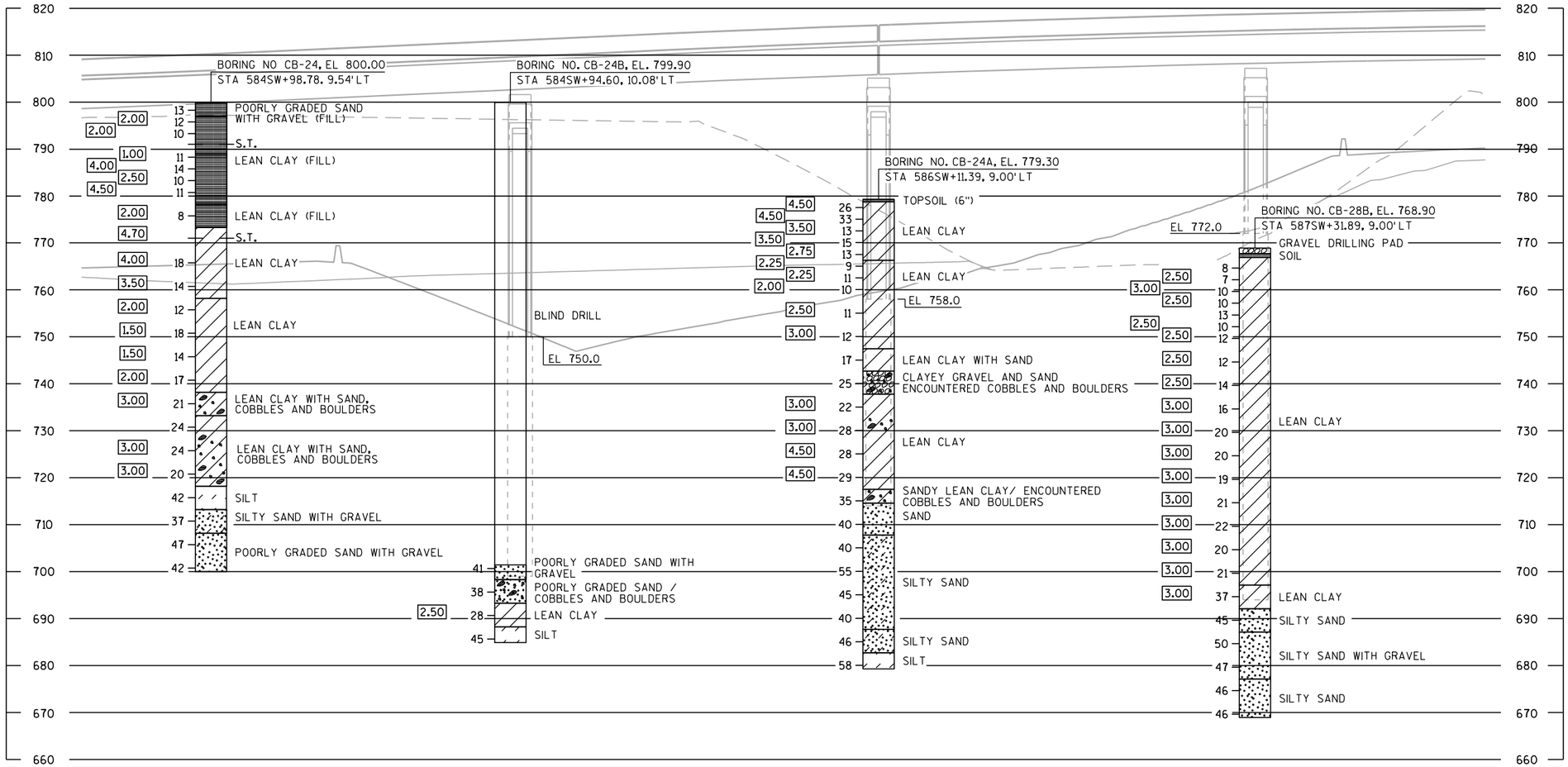
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
APRIL 3, 2012 = BORING CB-24
JANUARY 15, 2013 = BORING CB-24A
JANUARY 16, 2013 = BORING CB-24B
FEBRUARY 4, 2013 = BORING CB-28B

NOTES

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STATE PROJECT NUMBER

1060-33-80

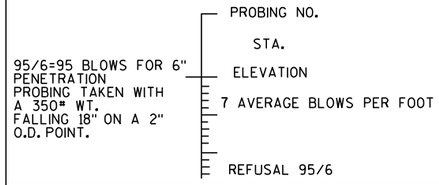
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

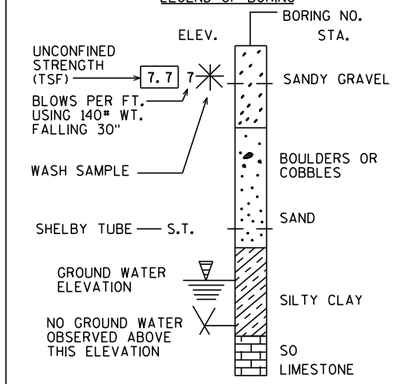
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

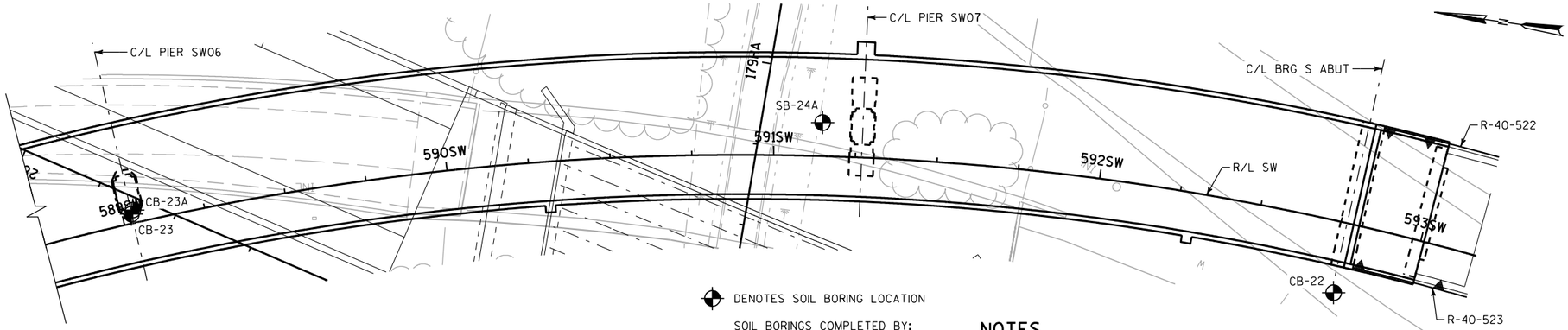
DRAWN BY GLM | PLANS CK'D. WRT

SUBSURFACE EXPLORATION SPANS 3 THRU 6

SHEET 12 OF 96

8

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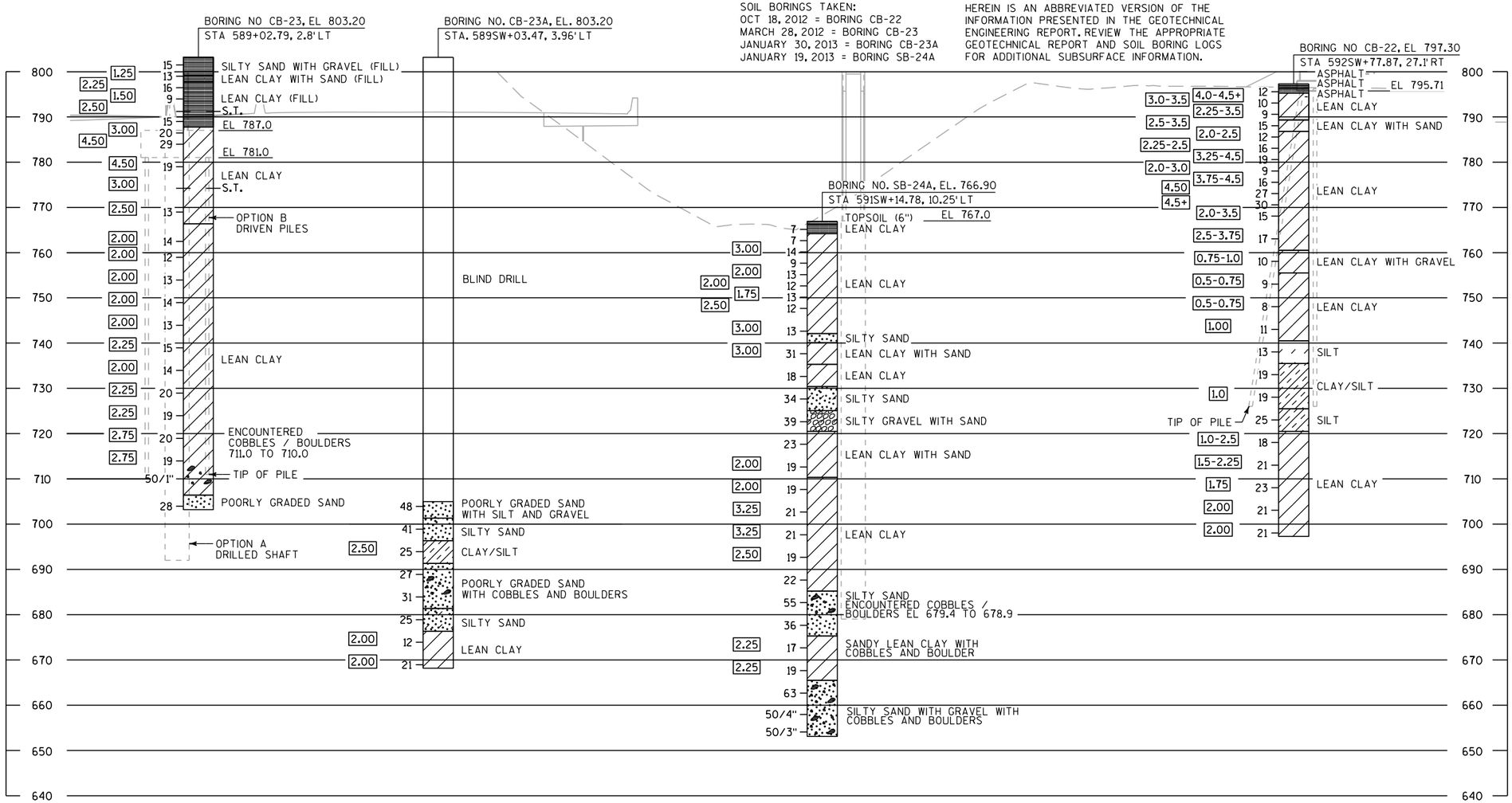
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
OCT 18, 2012 = BORING CB-22
MARCH 28, 2012 = BORING CB-23
JANUARY 30, 2013 = BORING CB-23A
JANUARY 19, 2013 = BORING SB-24A

NOTES

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STATE PROJECT NUMBER
1060-33-80

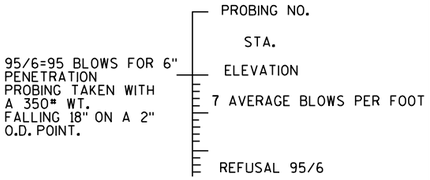
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WS — WEATHERED SO — SOUND

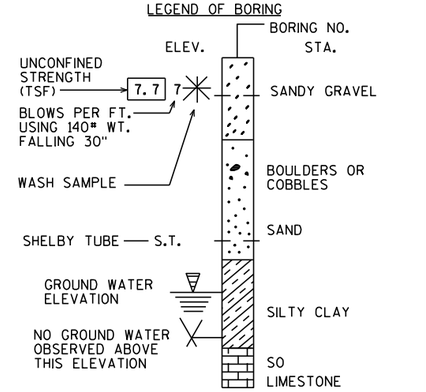
MATERIAL SYMBOLS

TOPSOIL / FILL	SILT	SANDSTONE
SAND	PEAT	LIMESTONE
GRAVEL	CLAY	IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

SUBSURFACE EXPLORATION SPANS 7 & 8

SHEET 13 OF 96

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STATE PROJECT NUMBER

1060-33-80

CONSTRUCTION STAGING NOTES

N1. THE CONSTRUCTION STAGING NOTES OUTLINED BELOW APPLY TO ALL CONSTRUCTION STAGING SHEETS.

N2. THE ASSUMED CONSTRUCTION SEQUENCE DESCRIBED AND SHOWN IN THIS PLAN SET IS ONLY ONE POTENTIAL CONSTRUCTION SEQUENCE AND IS PRESENTED FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE SEQUENCE OF CONSTRUCTION EVEN IF THE EXACT SEQUENCE IN THE PLANS IS FOLLOWED.

N3. DETERMINE THE CONSTRUCTION SEQUENCE BEST SUITED TO THE MEANS AND METHODS AVAILABLE AND SUBJECT TO THE RESTRICTIONS PRESENTED BY THE OVERALL PROJECT STAGING, SITE RESTRICTIONS AND OTHER LIMITATIONS.

N4. THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

N5. UTILITY INFORMATION IS SHOWN MORE CLEARLY ELSEWHERE WITHIN THIS PLAN SET AND WITHIN THE COMPLETE CONTRACT DOCUMENT PACKAGE - ENSURE THAT ALL SOURCES OF UTILITY INFORMATION ARE PROPERLY CONSIDERED.

N6. THE CONSTRUCTION STAGING PLANS SHOW EXISTING AND PROPOSED STRUCTURES EXPECTED OR ASSUMED TO BE IN PLACE AS CONSTRUCTION PROCEEDS. THE STRUCTURES ACTUALLY IN PLACE MAY VARY FROM THOSE SHOWN DEPENDING ON THE OVERALL SCHEDULE SELECTED BY THE CONTRACTOR. THE CONSTRUCTION SEQUENCE SHOWN IN THIS PLAN SET INCLUDES ONLY MAJOR CONSTRUCTION TASKS AND IS NOT INTENDED TO BE ALL-INCLUSIVE.

N7. ACCESS TO THE CRANE LOCATIONS, ASSEMBLY AND STAGING AREAS SHOWN MAY REQUIRE CONSTRUCTION OF TEMPORARY DRIVING AND WORKING PLATFORMS NOT EXPLICITLY DESCRIBED IN THE CONSTRUCTION SEQUENCE.

N8. ENSURE THE STABILITY OF PARTIALLY ERECTED STEEL THROUGH THE USE OF TEMPORARY CROSS FRAMES, SUPPORTS, BRACES OR OTHER MEANS AND METHODS AS DEEMED NECESSARY. TEMPORARILY LOCK EXPANSION BEARINGS OR PROVIDE ALTERNATIVE MEANS OF RESTRAINT AS REQUIRED TO MAINTAIN STABILITY AT ALL TIMES.

N9. COMPUTE ALL LOADS ON TEMPORARY SHORING TOWERS AND DESIGN ACCORDINGLY. ENSURE THAT THE POTENTIAL FOR UPLIFT IS PROPERLY ASSESSED AND THAT SHORING TOWER DESIGN, FOUNDATION DESIGN AND STEEL CONNECTION DETAILS ACCOUNT FOR ANY EXPECTED UPLIFT FORCES.

N10. CRANE LOADS SPECIFIED IN THE TABLE ARE BASED ON THE NOMINAL FIELD SECTION WEIGHTS SHOWN PLUS A SMALL PERCENTAGE TO ALLOW FOR VARIABILITY IN THE LOAD DISTRIBUTION. THESE LOADS ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATION ONLY. VERIFY ALL CRANE LOADS BASED ON APPROVED SHOP DRAWINGS AND THE FINAL SELECTED ERECTION SEQUENCE.

ASSUMED CONSTRUCTION SEQUENCE

REFER TO SHEET 16 FOR THE FOLLOWING STAGES:

1. BEGIN ROADWAY GRADING TO REMOVE THE EXISTING SW RAMP BERM PRIOR TO THE START OF BRIDGE CONSTRUCTION. REMOVE EXISTING STRUCTURES B-40-755, B-40-98 AND B-40-99 AND REMOVE THE REMAINING PORTION OF THE ABUTMENTS OF B-40-103. INSTALL TEMPORARY SHORING NEAR PIERS SW04, SW05 AND SW07. SEE ROADWAY GRADING SHEETS FOR GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF TEMPORARY SHORING AND LOCAL EXCAVATION AT EACH PIER.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

2. BEGIN CONSTRUCTION OF DRILLED SHAFTS AT PIERS SW02, SW03, SW04, SW05, AND SW07. AT PIER SW06, BEGIN CONSTRUCTION OF DRILLED SHAFT (OPTION A) OR PILE FOUNDATION (OPTION B). PROPOSED DRILLING ELEVATION FOR ALL PIERS IS ASSUMED TO MATCH THE INTERIM GRADING INDICATED ON THE EXCAVATION PLAN SHEETS. WHERE DRILLING ELEVATION IS ABOVE TOP-OF-SHAFT ELEVATION, THE NEED FOR TEMPORARY HOLE BRACING IS ANTICIPATED PRIOR TO COLUMN CONSTRUCTION. TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD.

3. BEGIN CONSTRUCTION OF SOUTH ABUTMENT. DRIVE PILE AND CONSTRUCT PILE CAP. COORDINATE WITH STRUCTURES R-40-523 AND R-40-522.

4. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, BEGIN CONSTRUCTION OF THE HAMMERHEAD PIER COLUMN AND CAP AT PIERS SW02, SW03, SW04, SW05, SW06, AND SW07.

REFER TO SHEET 17 FOR THE FOLLOWING STAGES:

5. CONTINUE CONSTRUCTION OF PIERS SW02, SW03, SW04, SW05, SW06, AND SW07 AND CONTINUE CONSTRUCTION OF SOUTH ABUTMENT. UPON COMPLETION OF THE HAMMERHEAD PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS. PROVIDE COLUMN PROTECTION WHERE INDICATED. REMOVE TEMPORARY SHORING AT PIER SW07.

6. BEGIN CONSTRUCTION OF DRILLED SHAFT AT PIER SW01. PROPOSED DRILLING ELEVATION SHALL CORRESPOND TO THE GRADING INDICATED ON THE EXCAVATION PLAN SHEETS.

7. BEGIN CONSTRUCTION OF WEST ABUTMENT. DRIVE PILE AND CONSTRUCT PILE CAP. COORDINATE WITH STRUCTURE R-40-504.

8. AFTER INSTALLATION OF THE DRILLED SHAFT AT PIER SW01, BEGIN CONSTRUCTION OF THE HAMMERHEAD PIER COLUMN AND CAP. UPON COMPLETION OF THE HAMMERHEAD PIER COLUMN, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS. PROVIDE COLUMN PROTECTION WHERE INDICATED.

REFER TO SHEET 18 FOR THE FOLLOWING STAGES:

9. TRANSPORT AND GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 6 AND 7 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #6 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

10. TRANSPORT AND GROUND ASSEMBLE RIGHT GIRDERS OF FIELD SECTIONS 6 AND 7 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #6 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

11. TRANSPORT AND GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 4 AND 5 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #4 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

12. TRANSPORT AND GROUND ASSEMBLE RIGHT GIRDERS OF FIELD SECTIONS 4 AND 5 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #4 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

13. TRANSPORT AND GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 2 AND 3 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #2 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

14. TRANSPORT AND GROUND ASSEMBLE RIGHT GIRDERS OF FIELD SECTIONS 2 AND 3 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #2 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

15. TRANSPORT LEFT GIRDER OF FIELD SECTION 1 AND MAKE READY FOR ERECTION.

16. TRANSPORT RIGHT GIRDER OF FIELD SECTION 1 AND MAKE READY FOR ERECTION.

17. INSTALL TEMPORARY SHORING TOWER T3 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

18. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW03 AND UNIT 1 SIDE AT PIER SW04.

19. USING TWO CRANES LOCATED AT POSITIONS L1 AND L2, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 6 AND 7. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 6 AND 7. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 6 AND 7.

20. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW02.

21. USING TWO CRANES LOCATED AT POSITIONS L3 AND L4, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 4 AND 5. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #5. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 4 AND 5. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #5. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 4 AND 5.

22. INSTALL TEMPORARY SHORING TOWER T2 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

23. BEGIN DETOUR OF WB IH 94 TRAFFIC.

24. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW01.

25. USING TWO CRANES LOCATED AT POSITIONS L5 AND L6, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 2 AND 3. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #3. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 2 AND 3. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #3. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 2 AND 3.

26. REMOVE TEMPORARY SHORING TOWER T3.

27. INSTALL TEMPORARY SHORING TOWER T1 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

28. INSTALL LEFT AND RIGHT SIDE BEARINGS AT WEST ABUTMENT.

29. USING TWO CRANES LOCATED AT POSITIONS L7 AND L8, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 1. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #1. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 1. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #1. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 1.

30. REMOVE TEMPORARY SHORING TOWERS T1 & T2.

31. END DETOUR OF WB IH 94 TRAFFIC.

REFER TO SHEET 19 FOR THE FOLLOWING STAGES:

32. TRANSPORT LEFT GIRDER OF FIELD SECTION 15 AND MAKE READY FOR ERECTION.

33. TRANSPORT RIGHT GIRDER OF FIELD SECTION 15 AND MAKE READY FOR ERECTION.

34. TRANSPORT AND GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 13 AND 14 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #12 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

35. TRANSPORT AND GROUND ASSEMBLE RIGHT GIRDERS OF FIELD SECTIONS 13 AND 14 AND MAKE READY FOR ERECTION. INSTALL BOLTS AT FIELD SPLICE #12 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE.

36. TRANSPORT LEFT GIRDER OF FIELD SECTION 12 AND MAKE READY FOR ERECTION.

37. TRANSPORT RIGHT GIRDER OF FIELD SECTION 12 AND MAKE READY FOR ERECTION.

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STRUCTURE B-40-855

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CONSTRUCTION STAGING NOTES (1 OF 2)

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ASSUMED CONSTRUCTION SEQUENCE, CONT.

38. TRANSPORT FIELD SECTION 11 AND MAKE READY FOR ERECTION. TEMPORARY BRACING MAY BE REQUIRED TO TRANSPORT INTEGRAL CROSS HEAD TO SITE.

39. TRANSPORT LEFT GIRDER OF FIELD SECTION 10 AND MAKE READY FOR ERECTION.

40. TRANSPORT RIGHT GIRDER OF FIELD SECTION 10 AND MAKE READY FOR ERECTION.

41. INSTALL LEFT AND RIGHT SIDE BEARINGS AT SOUTH ABUTMENT.

42. INSTALL TEMPORARY SHORING TOWER T7 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

43. USING TWO CRANES LOCATED AT POSITIONS L9 AND L10, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 15. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 15. INSTALL DIAPHRAGMS FOR FIELD SECTION 15.

44. INSTALL TEMPORARY SHORING TOWER T6 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

45. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW07.

46. USING TWO CRANES LOCATED AT POSITIONS L11 AND L12, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 13 AND 14. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #13. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. TEMPORARILY BRACE GIRDER FOR STABILITY. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 13 AND 14. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #13. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 13 AND 14.

47. INSTALL TEMPORARY SHORING TOWER T5 UNDER LEFT AND RIGHT GIRDERS OF THE INTEGRAL CROSS HEAD. FOUR SUPPORT TOWERS ARE SHOWN, BUT A SINGLE TOWER UNDER THE LEFT GIRDER AND A SINGLE TOWER UNDER THE RIGHT GIRDER MAY BE PROVIDED.

48. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW06.

49. USING TWO CRANES LOCATED AT POSITIONS L13 AND L14, ERECT ASSEMBLY FOR FIELD SECTION 11 (INTEGRAL CROSS HEAD). TEMPORARY BRACING MAY BE REQUIRED TO MAINTAIN SHAPE AND PREVENT TWIST DURING ERECTION OF INTEGRAL CROSS HEAD.

50. USING TWO CRANES LOCATED AT POSITIONS L15 AND L16, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 12. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #10 AND #11. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 12. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #10 AND #11. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICES.

51. REMOVE TEMPORARY SHORING TOWER T7.

52. INSTALL TEMPORARY SHORING TOWER T4 UNDER LEFT AND RIGHT GIRDERS. TWO SUPPORT TOWERS ARE SHOWN, BUT ONE COMBINED TOWER MAY BE PROVIDED.

53. USING TWO CRANES LOCATED AT POSITIONS L17 AND L18, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 10. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #9. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 10. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #9. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 10.

54. BEGIN DETOUR OF EB IH 94 AND SB USH 45 TRAFFIC.

55. INSTALL LEFT AND RIGHT SIDE BEARINGS AT PIER SW05.

56. TRANSPORT LEFT GIRDER OF FIELD SECTION 9 AND MAKE READY FOR ERECTION.

57. TRANSPORT RIGHT GIRDER OF FIELD SECTION 9 AND MAKE READY FOR ERECTION.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

58. USING TWO CRANES LOCATED AT POSITIONS L19 AND L20, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 9. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #8. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 9. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #8. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 9.

59. REMOVE TEMPORARY SHORING TOWER T6.

60. INSTALL LEFT AND RIGHT SIDE BEARINGS FOR UNIT 2 SIDE AT PIER SW04.

61. TRANSPORT LEFT GIRDER OF FIELD SECTION 8 AND MAKE READY FOR ERECTION.

62. TRANSPORT RIGHT GIRDER OF FIELD SECTION 8 AND MAKE READY FOR ERECTION.

63. USING TWO CRANES LOCATED AT POSITIONS L21 AND L22, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 8. INSTALL BOLTS IN LEFT GIRDER AT FIELD SPLICE #7. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 8. INSTALL BOLTS IN RIGHT GIRDER AT FIELD SPLICE #7. INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 8.

64. REMOVE TEMPORARY SHORING TOWERS T4 & T5.

65. END DETOUR OF EB IH 94 AND SB USH 45 TRAFFIC.

66. REMOVE TEMPORARY SHORING NEAR PIER SW05.

REFER TO SHEET 20 FOR THE FOLLOWING STAGES:

67. POUR THE DECK SLAB IN EACH UNIT USING AN APPROVED POUR SEQUENCE, EXCLUDING THE BLOCKOUTS AT THE EXPANSION JOINTS.

68. POUR THE LEFT AND RIGHT PARAPETS OVER THE FULL LENGTH OF EACH UNIT, EXCLUDING ZONES ADJACENT TO THE EXPANSION JOINTS.

69. INSTALL THE EXPANSION JOINTS AND PLACE CONCRETE IN BLOCKOUTS.

70. CONSTRUCT APPROACH SLAB AT WEST AND SOUTH ABUTMENTS.

71. POUR THE PARAPETS IN ZONES ADJACENT TO THE EXPANSION JOINTS AND POUR PARAPETS ON APPROACH SLAB.

CRANE LOCATION AND LIFT SUMMARY

LOC'N ID	LIFT DESC'N	SEQ. NO.	WEIGHT (TONS)	RADIUS (FEET)	HEIGHT (FEET)
L1	FS#6L + FS#7L	19	45	40	50
L1	FS#6R + FS#7R	19	40	40	50
L2	FS#6L + FS#7L	19	45	40	50
L2	FS#6R + FS#7R	19	40	40	50
L3	FS#4L + FS#5L	21	50	40	40
L3	FS#4R + FS#5R	21	45	40	40
L4	FS#4L + FS#5L	21	50	40	40
L4	FS#4R + FS#5R	21	45	40	40
L5	FS#2L + FS#3L	25	65	55	40
L5	FS#2R + FS#3R	25	55	55	40
L6	FS#2L + FS#3L	25	65	55	30
L6	FS#2R + FS#3R	25	55	55	30
L7	FS#1L	29	30	50	30
L7	FS#1R	29	30	50	30
L8	FS#1L	29	30	55	30
L8	FS#1R	29	30	55	30
L9	FS#15L	43	30	75	25
L9	FS#15R	43	30	75	25
L10	FS#15L	43	30	75	25
L10	FS#15R	43	30	75	25
L11	FS#13L + FS#14L	46	65	80	30
L11	FS#13R + FS#14R	46	60	80	30
L12	FS#13L + FS#14L	46	65	60	30
L12	FS#13R + FS#14R	46	60	60	30
L13	FS#11	49	20	45	35
L14	FS#11	49	20	45	35
L15	FS#12L	50	15	70	35
L15	FS#12R	50	15	70	35
L16	FS#12L	50	15	70	35
L16	FS#12R	50	15	70	35
L17	FS#10L	53	35	45	35
L17	FS#10R	53	30	45	35
L18	FS#10L	53	35	45	30
L18	FS#10R	53	30	45	30
L19	FS#9L	58	25	50	30
L19	FS#9R	58	25	35	30
L20	FS#9L	58	25	90	50
L20	FS#9R	58	25	80	50
L21	FS#8L	63	25	70	50
L21	FS#8R	63	20	50	50
L22	FS#8L	63	25	70	50
L22	FS#8R	63	20	50	50

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STRUCTURE B-40-855

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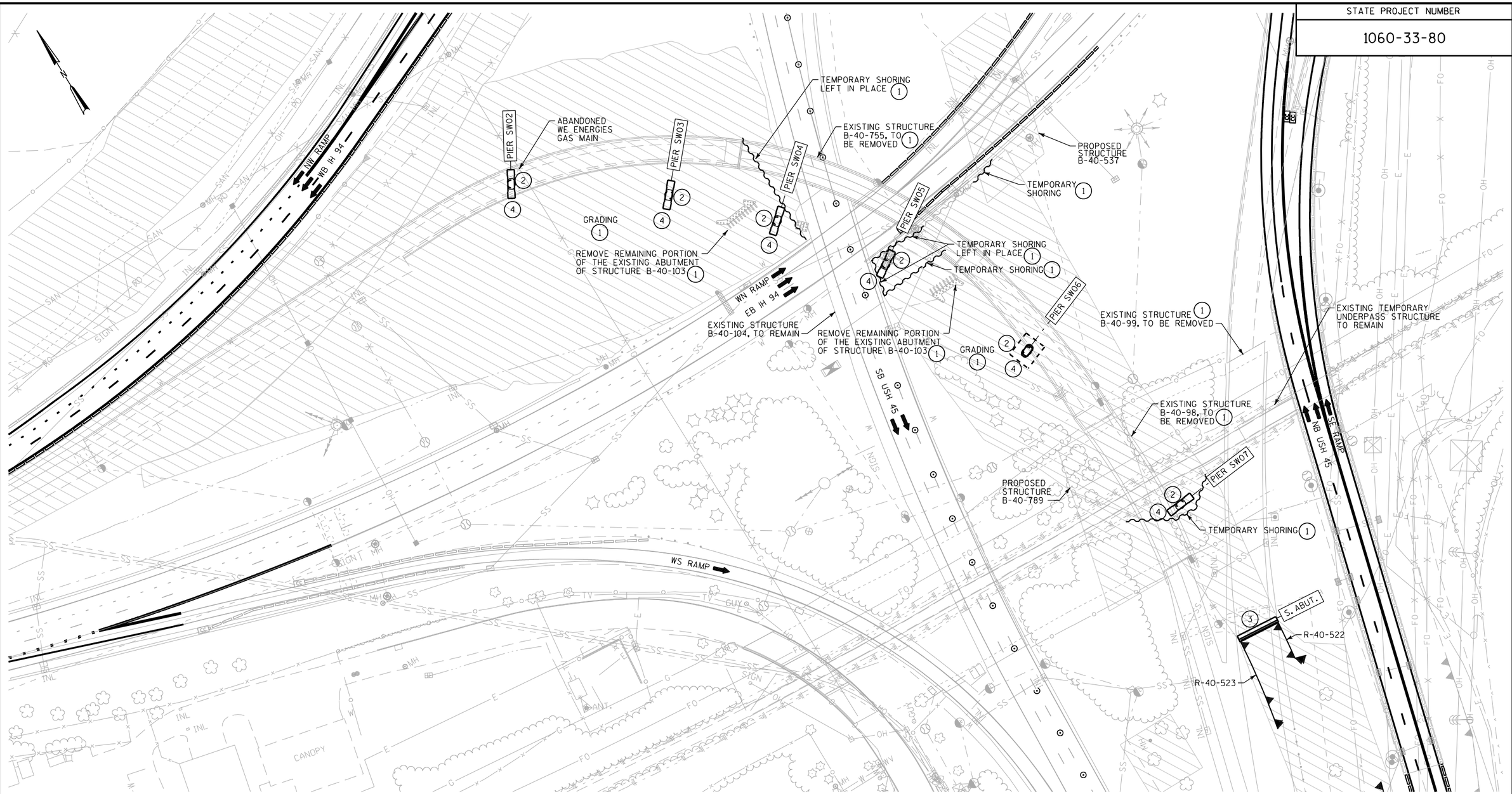
CONSTRUCTION STAGING NOTES (2 OF 2)

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LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 2A, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PLAN - UNIT 1 & UNIT 2

CONSTRUCTION STAGE 2A TRAFFIC SHOWN

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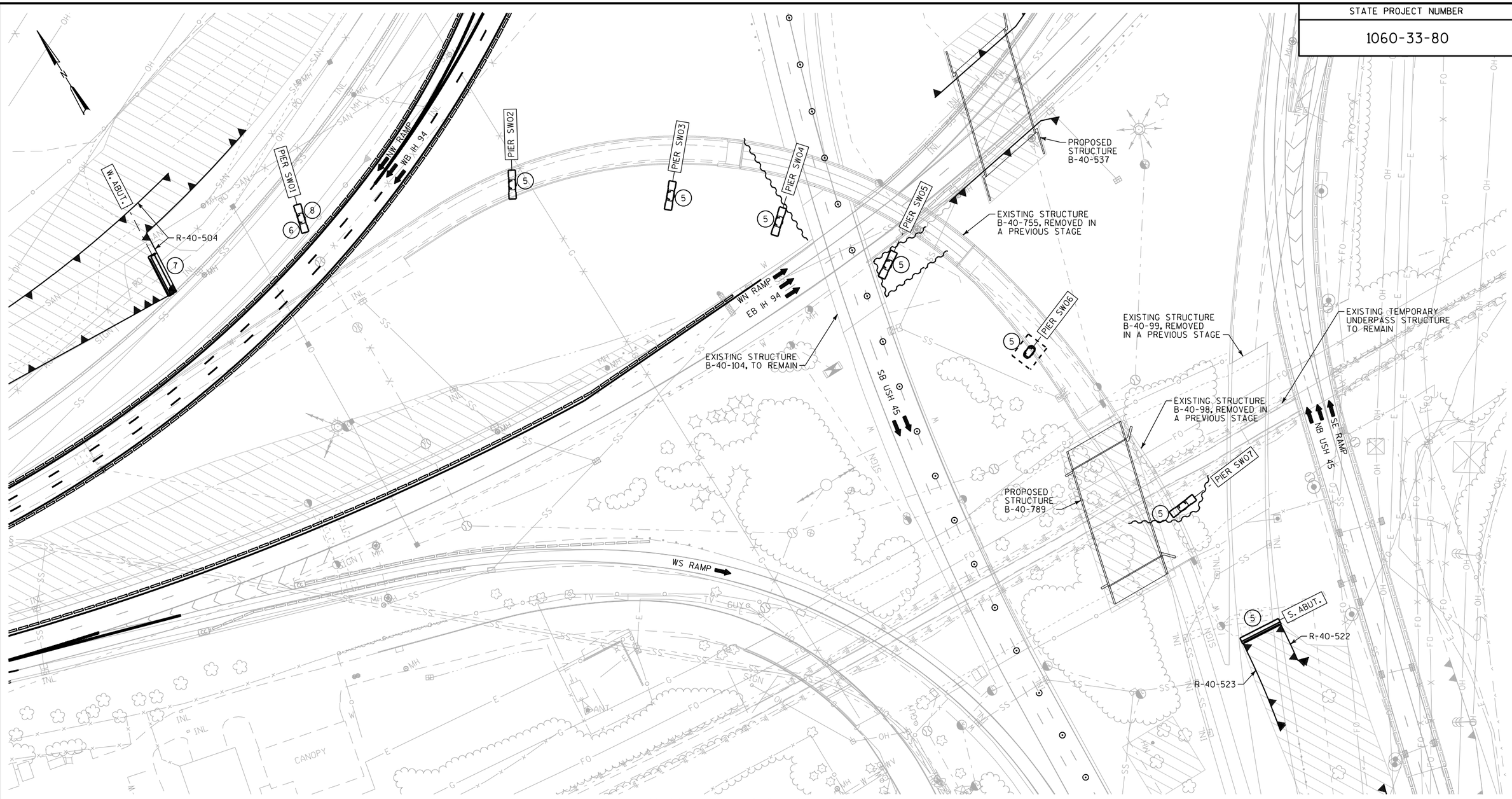
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CONSTRUCTION STAGING (1 OF 5)

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LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 2B. STAGE 2C & 3 SIMILAR, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PLAN - UNIT 1 & UNIT 2

CONSTRUCTION STAGE 2B TRAFFIC SHOWN
CONSTRUCTION STAGE 2C & STAGE 3 TRAFFIC SIMILAR

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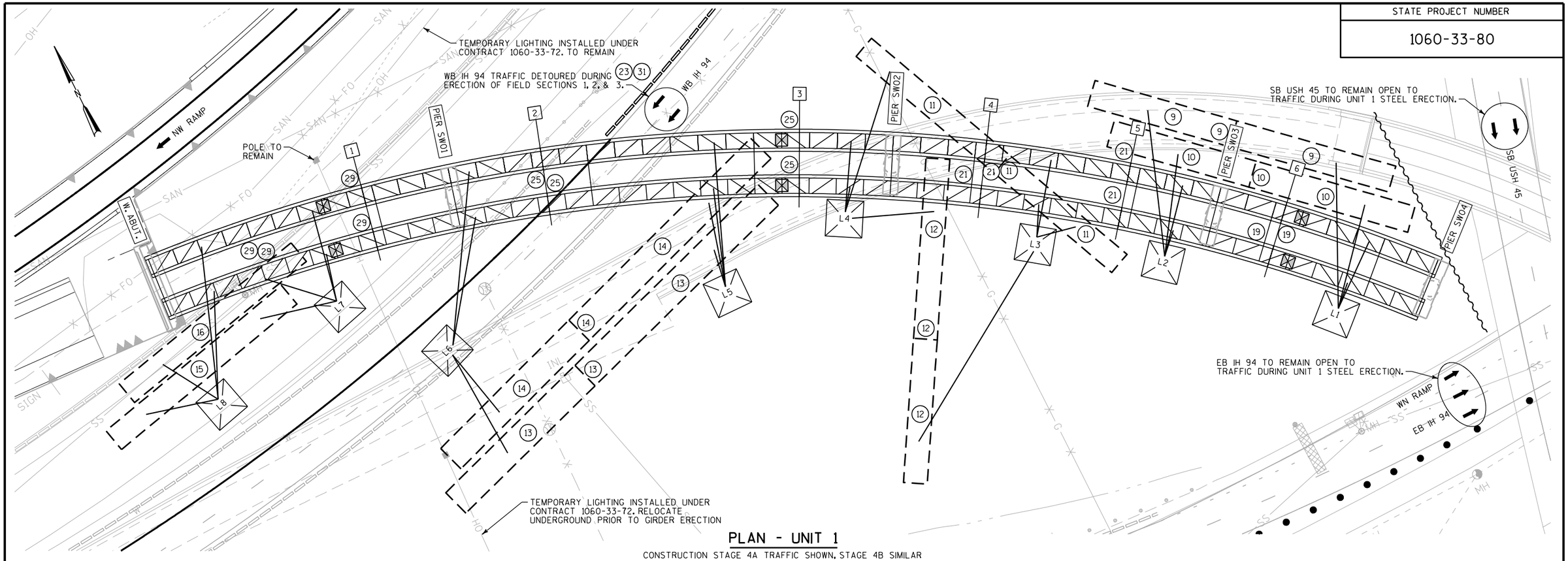
CONSTRUCTION STAGING (2 OF 5)

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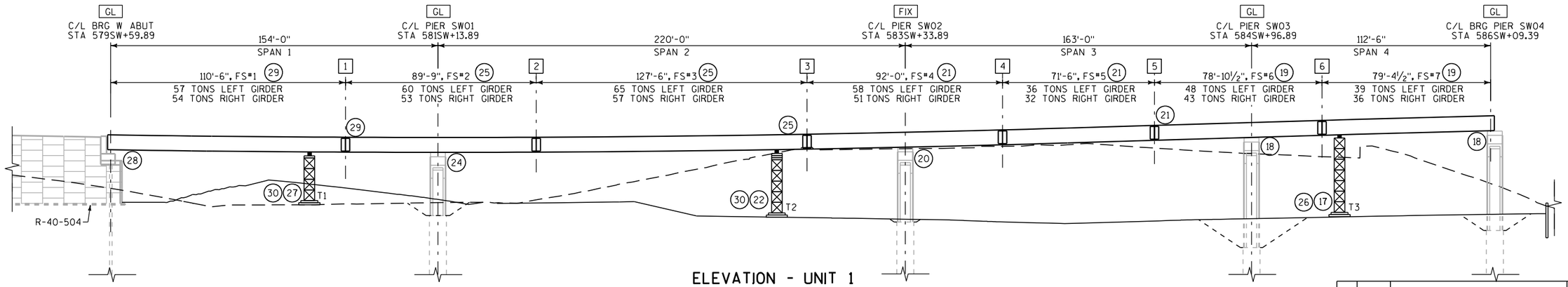
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PLAN - UNIT 1

CONSTRUCTION STAGE 4A TRAFFIC SHOWN, STAGE 4B SIMILAR



ELEVATION - UNIT 1

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- (3) — CONSTRUCTION SEQUENCE NUMBER
- [1] — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

FIELD SECTION WEIGHTS SHOWN ARE GIVEN FOR INFORMATION ONLY. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS. THE WEIGHT IS THE APPROXIMATE TOTAL WEIGHT FOR THE LEFT OR RIGHT GIRDER INCLUDING INTERNAL DIAPHRAGMS, STRUTS, K-FRAMES, AND BRACING. THE WEIGHT OF EXTERNAL DIAPHRAGMS IS NOT INCLUDED. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS ONLY.

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STRUCTURE B-40-855

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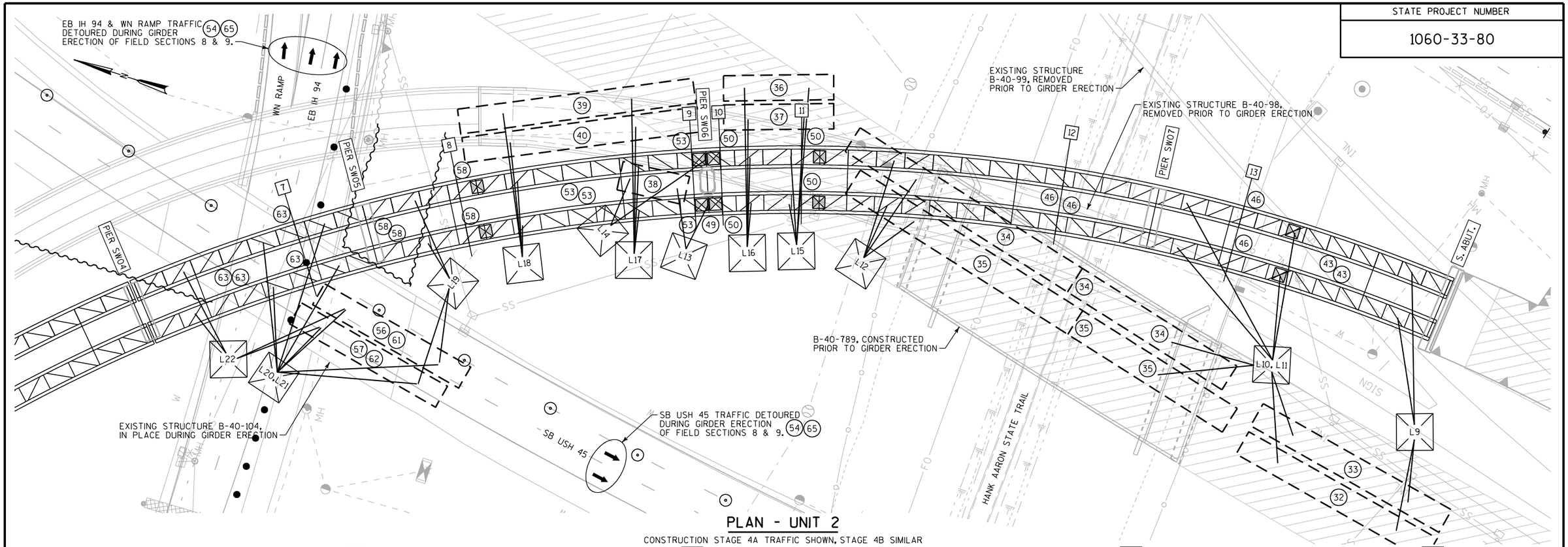
CONSTRUCTION STAGING (3 OF 5)

SHEET 18 OF 96

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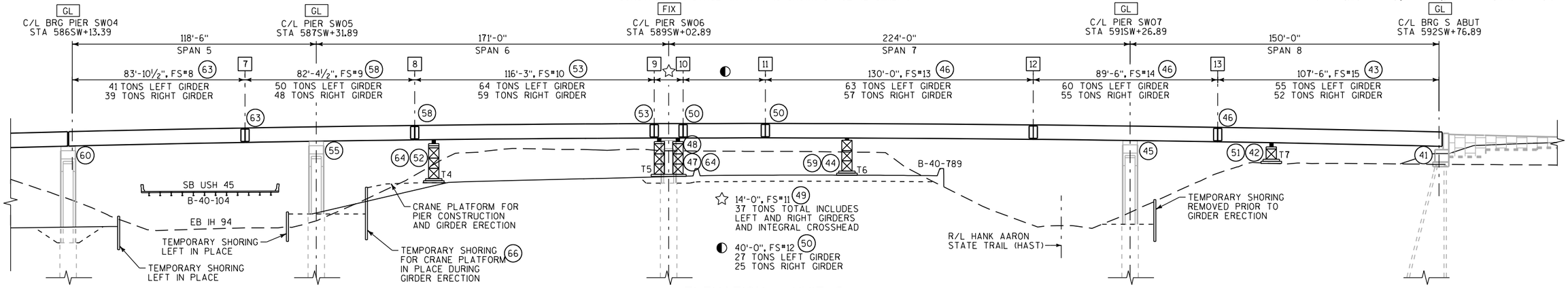
8

STATE PROJECT NUMBER
1060-33-80



PLAN - UNIT 2

CONSTRUCTION STAGE 4A TRAFFIC SHOWN, STAGE 4B SIMILAR



ELEVATION - UNIT 2

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- 3 — CONSTRUCTION SEQUENCE NUMBER
- 1 — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER
- PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 4A OR 4B, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

FIELD SECTION WEIGHTS SHOWN ARE GIVEN FOR INFORMATION ONLY. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS. THE WEIGHT IS THE APPROXIMATE TOTAL WEIGHT FOR THE LEFT OR RIGHT GIRDER INCLUDING INTERNAL DIAPHRAGMS, STRUTS, K-FRAMES, AND BRACING. THE WEIGHT OF EXTERNAL DIAPHRAGMS IS NOT INCLUDED. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

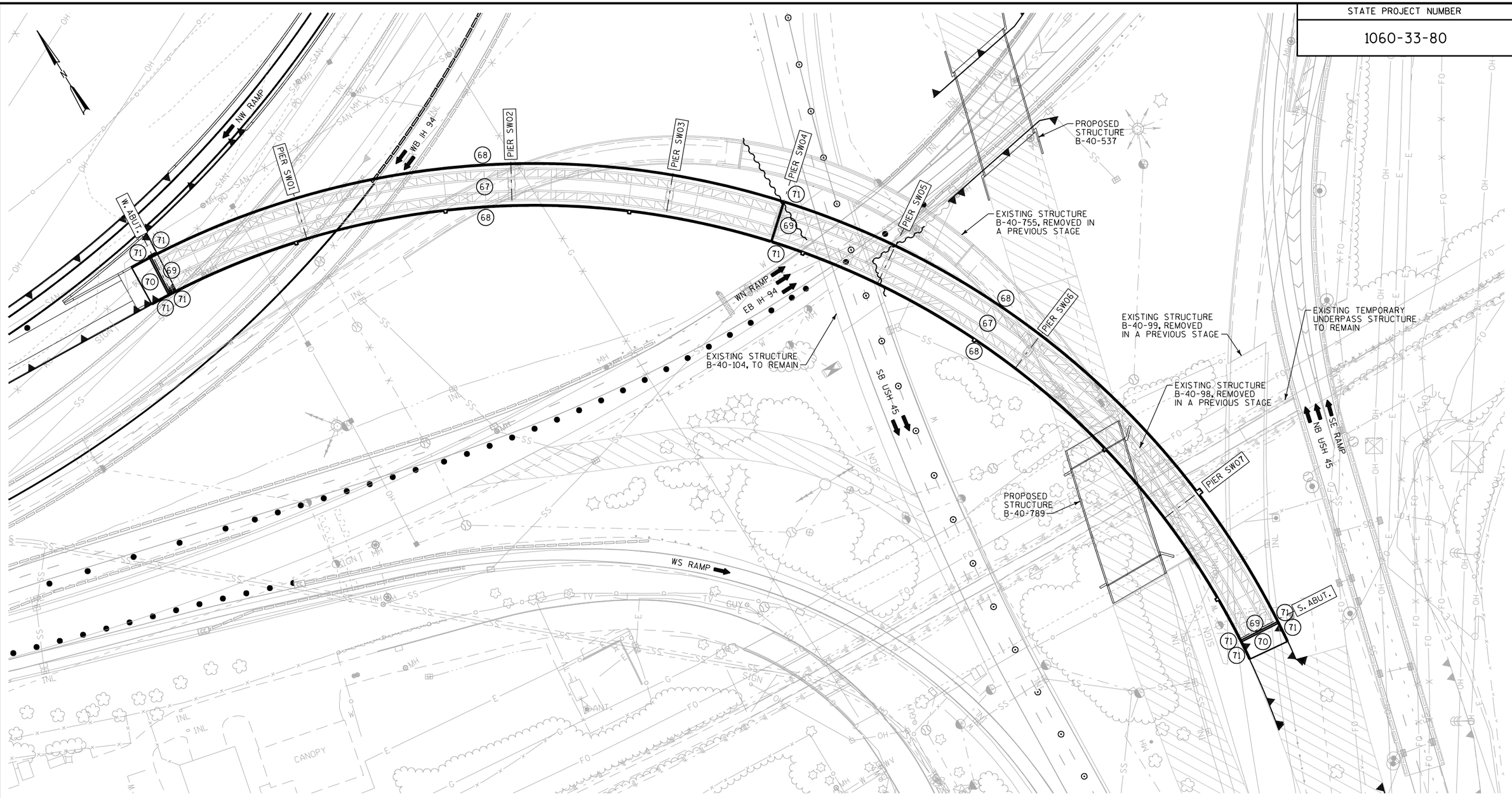
STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CONSTRUCTION STAGING (4 OF 5)

SHEET 19 OF 96

STATE PROJECT NUMBER
1060-33-80



8

8

LEGEND

- (3) CONSTRUCTION SEQUENCE NUMBER
- TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS
- PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 4A OR 4B, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEET FOR GENERAL CONSTRUCTION STAGING NOTES.

PLAN - UNIT 1 & UNIT 2

CONSTRUCTION STAGE 4A TRAFFIC SHOWN, STAGE 4B SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

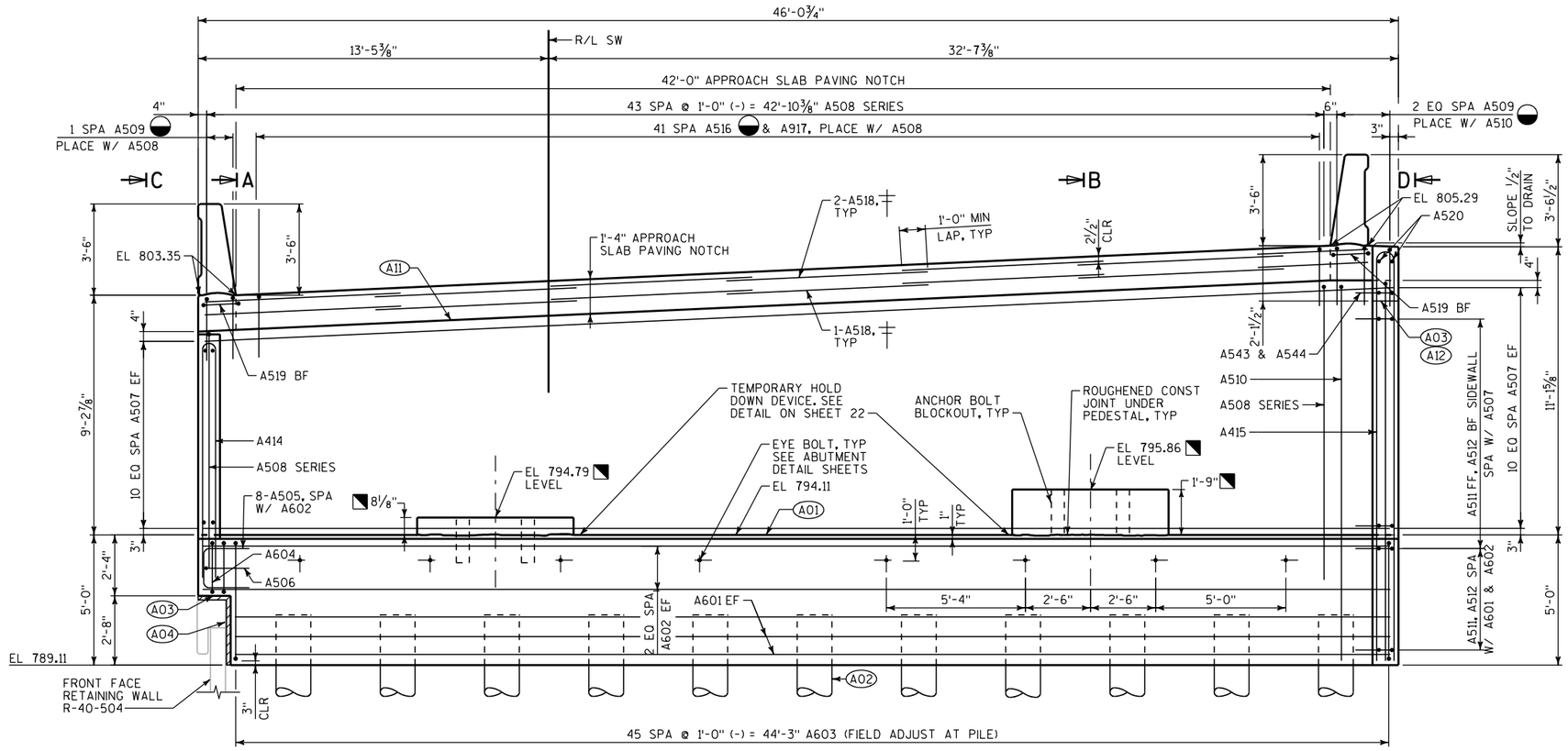
CONSTRUCTION STAGING (5 OF 5)

SHEET 20 OF 96

2522

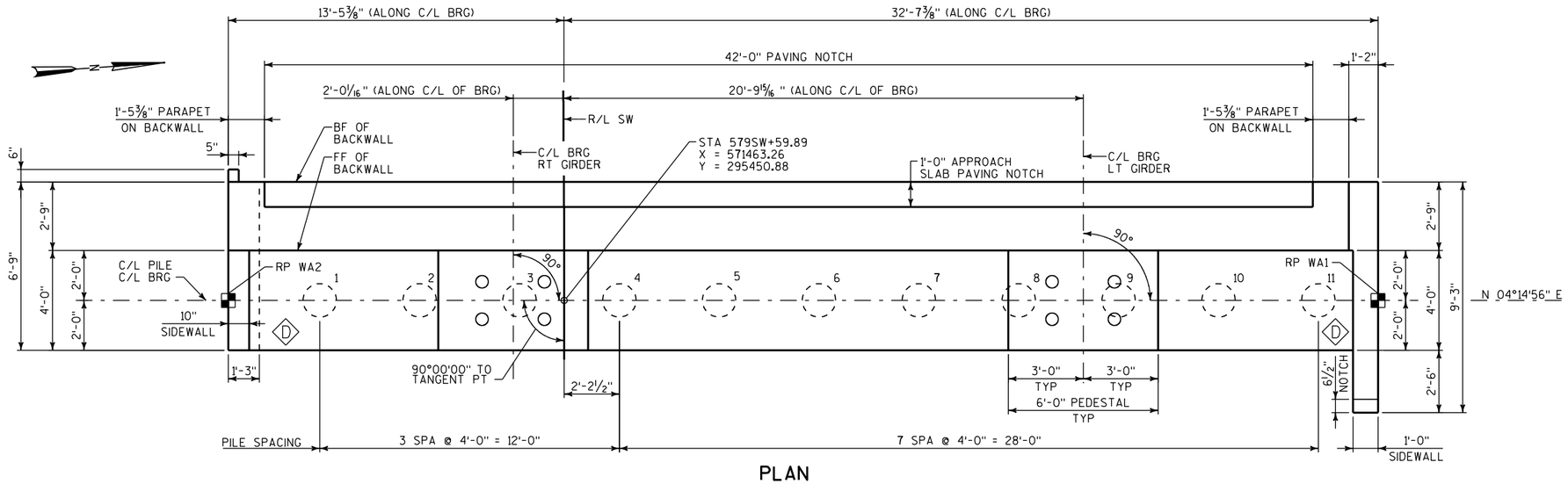
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STATE PROJECT NUMBER
1060-33-80



ELEVATION

LOOKING DOWN STATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL.



PLAN

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x6" KEYWAY AT BASE OF BACKWALL.
- (A02) ABUTMENT SUPPORTED ON 16" DIA CIP PILING WITH A REQUIRED DRIVING RESISTANCE OF 246 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

  ESTIMATED PILE LENGTH = 75'.
- (A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (A04) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.
- (A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A12) OPTIONAL CONST JT ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.
- ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6" MAXIMUM PEDESTAL HEIGHT INCREASE = 3".
- (D) DYNAMIC PILE LOAD TESTING.

  ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".
- REFERENCE POINT, SEE SHEET A2 OR B2.
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.

NOTES

FOR SECTIONS A-A & B-B, SEE WEST ABUTMENT DETAILS (1 OF 2).

FOR SECTIONS C-C & D-D, SEE WEST ABUTMENT DETAILS (2 OF 2).

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT AND BEARING DETAILS SHEETS.

FOR DETAILS OF PEDESTALS AND ANCHOR BOLT BLOCKOUTS, SEE ABUTMENT PEDESTAL REINFORCEMENT SHEET.

FOR DETAILS OF EXPANSION JT, SEE EXPANSION JOINT SHEETS.

FOR DETAILS OF PARAPET ON BACKWALL, SEE PARAPET SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. DGS

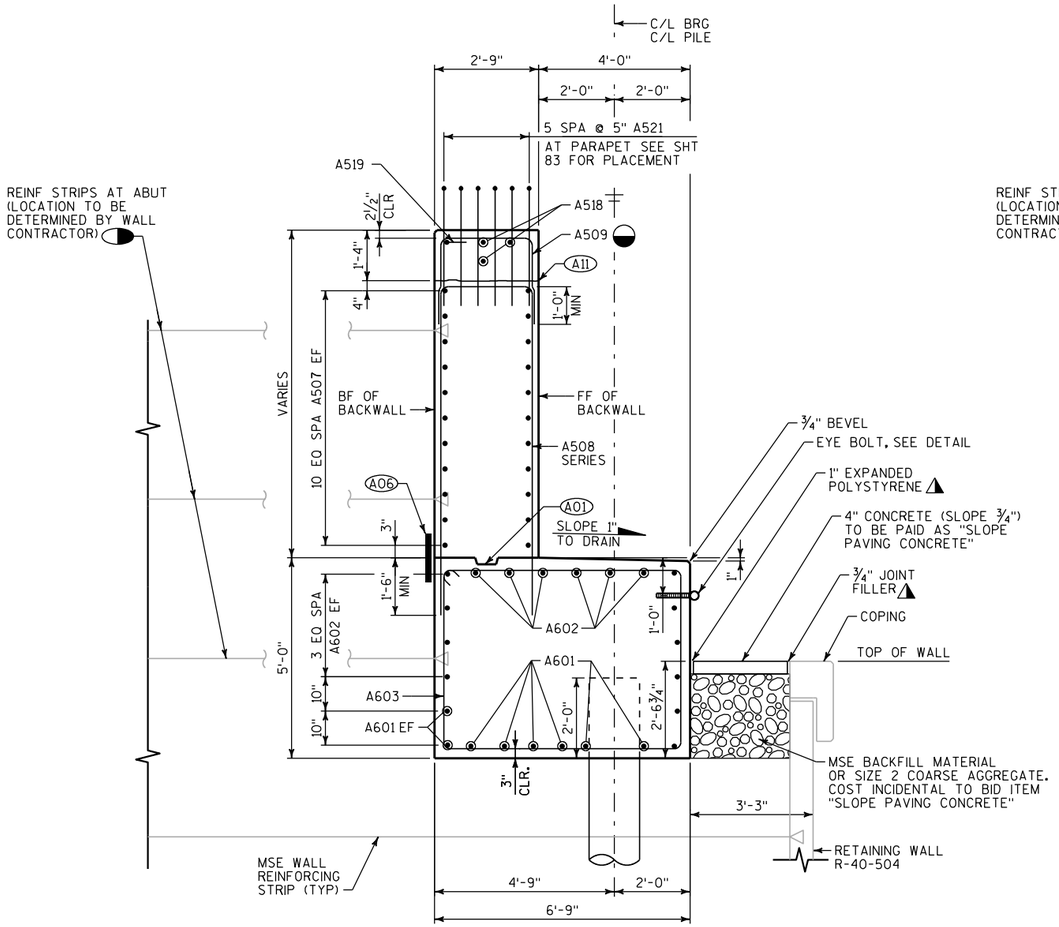
WEST ABUTMENT PLAN & ELEVATION

SHEET 21 OF 96

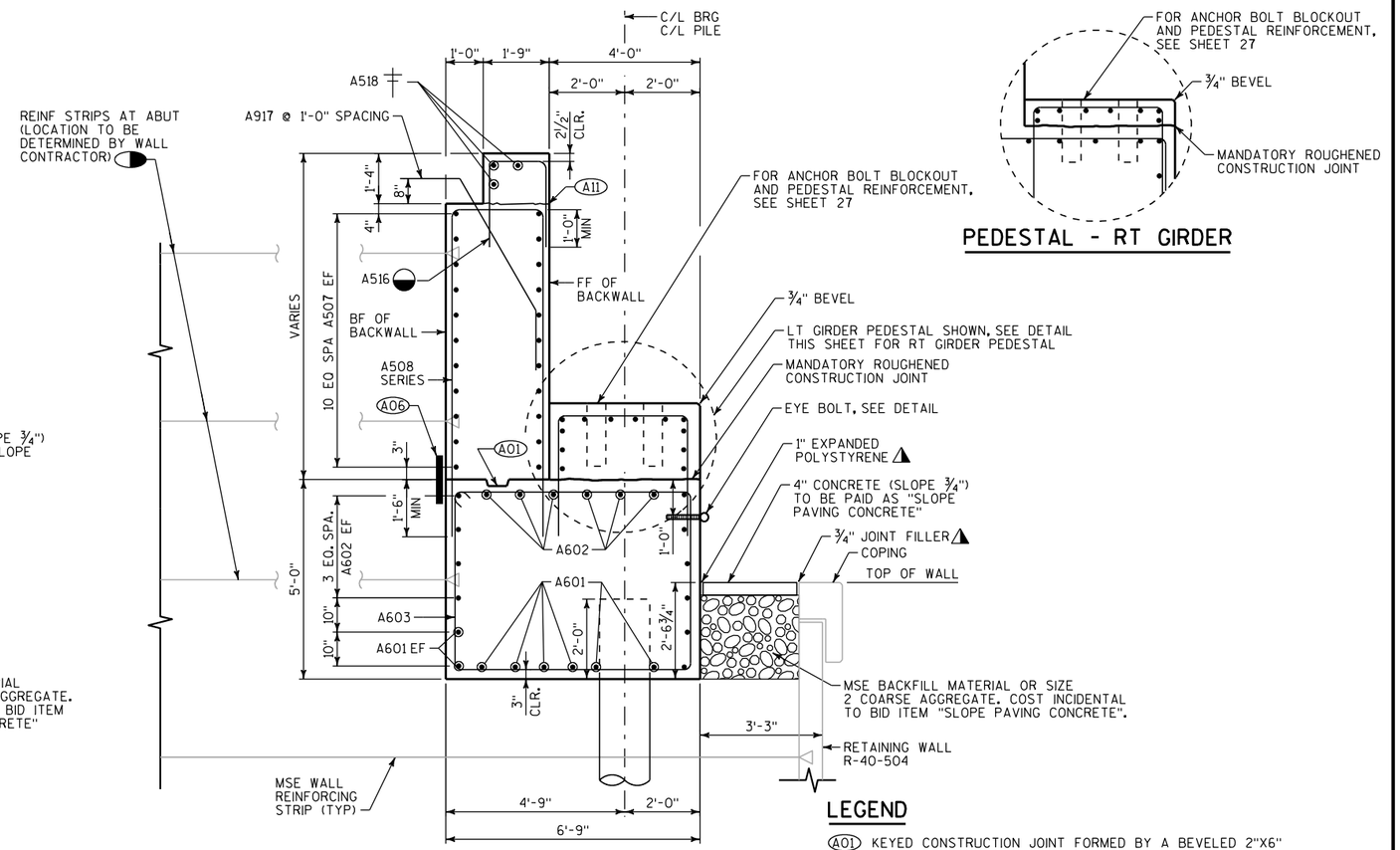
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STATE PROJECT NUMBER
1060-33-80

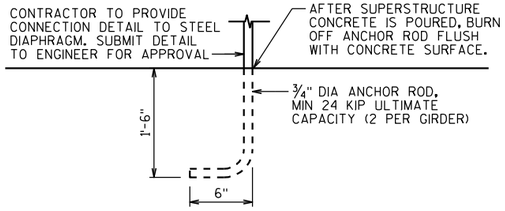


SECTION A-A



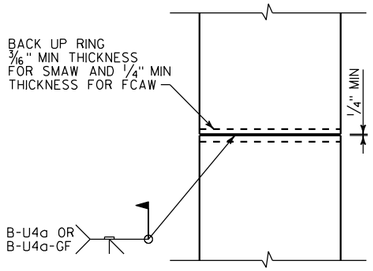
SECTION B-B

PEDESTAL - RT GIRDER

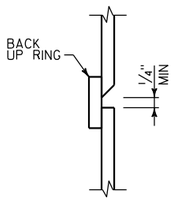


TEMPORARY HOLD DOWN DEVICE

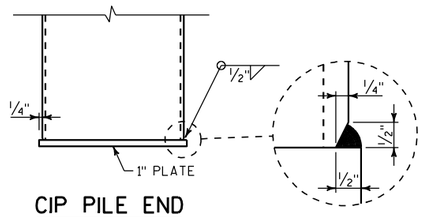
LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"



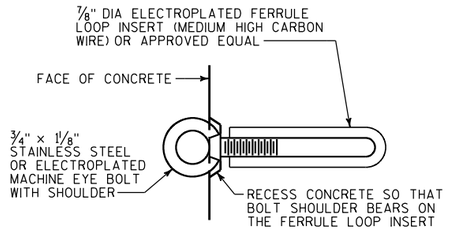
CIP PILE SPLICE DETAIL



CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"
- (A06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- REINFORCING STRIPS SHALL BE DESIGNED TO RESIST AN UNFACTORED SUPERSTRUCTURE LATERAL LINE LOAD OF 2.4 K/LF OF ABUTMENT LENGTH. THE LINE LOAD IS A SUMMATION OF AASHTO LOADS BR, WS, WL, AND TU.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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WEST ABUTMENT DETAILS (1 OF 2)

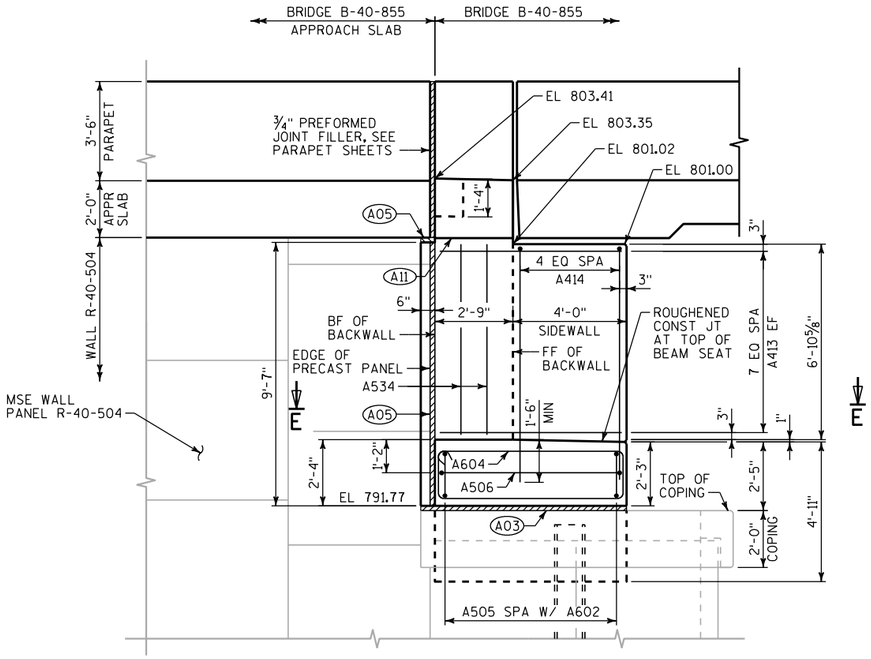
SHEET 22 OF 96

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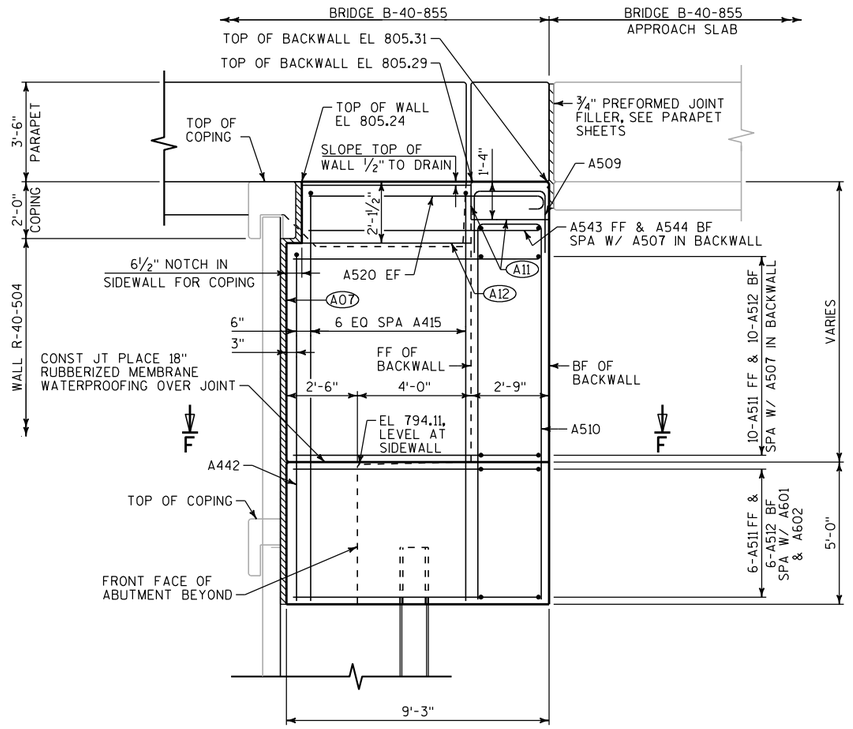
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STATE PROJECT NUMBER
1060-33-80



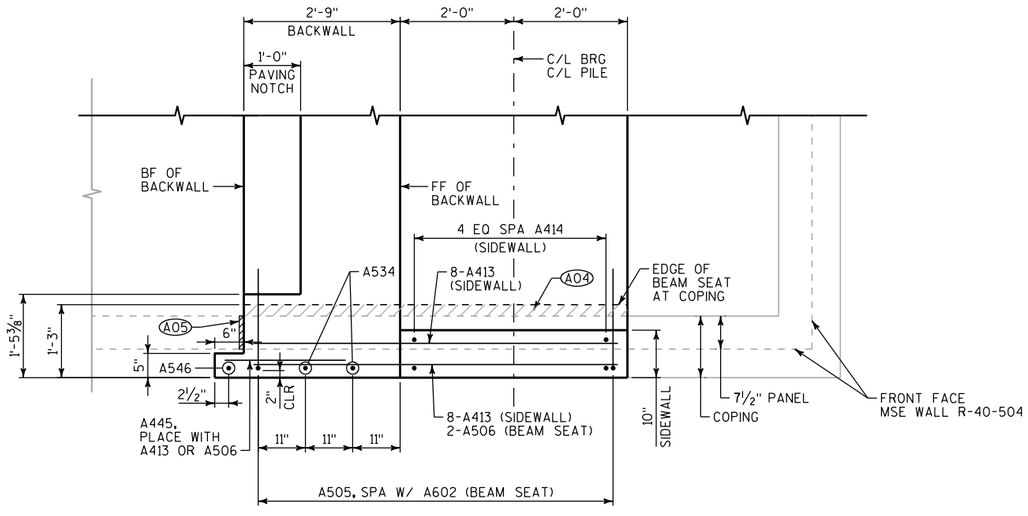
SECTION C-C

(LOOKING NORTH)

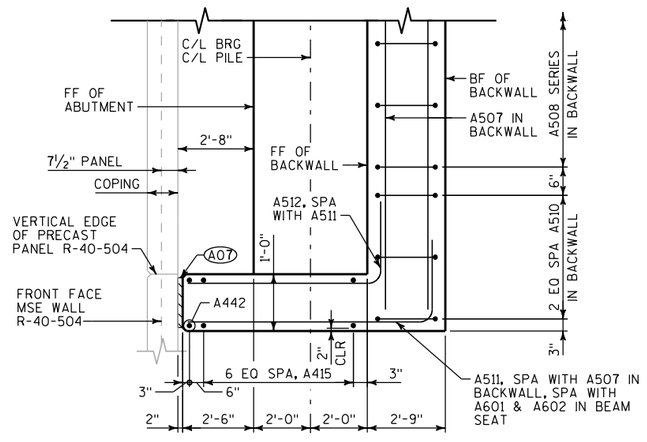


SECTION D-D

(LOOKING SOUTH)



SECTION E-E



SECTION F-F

LEGEND

(A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

(A04) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(A05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-504. COLOR TO MATCH CONCRETE STAIN.

(A07) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN ABUTMENT SIDEWALL AND WALL R-40-504. COLOR TO MATCH CONCRETE STAIN.

(A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

(A12) OPTIONAL CONST JT ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

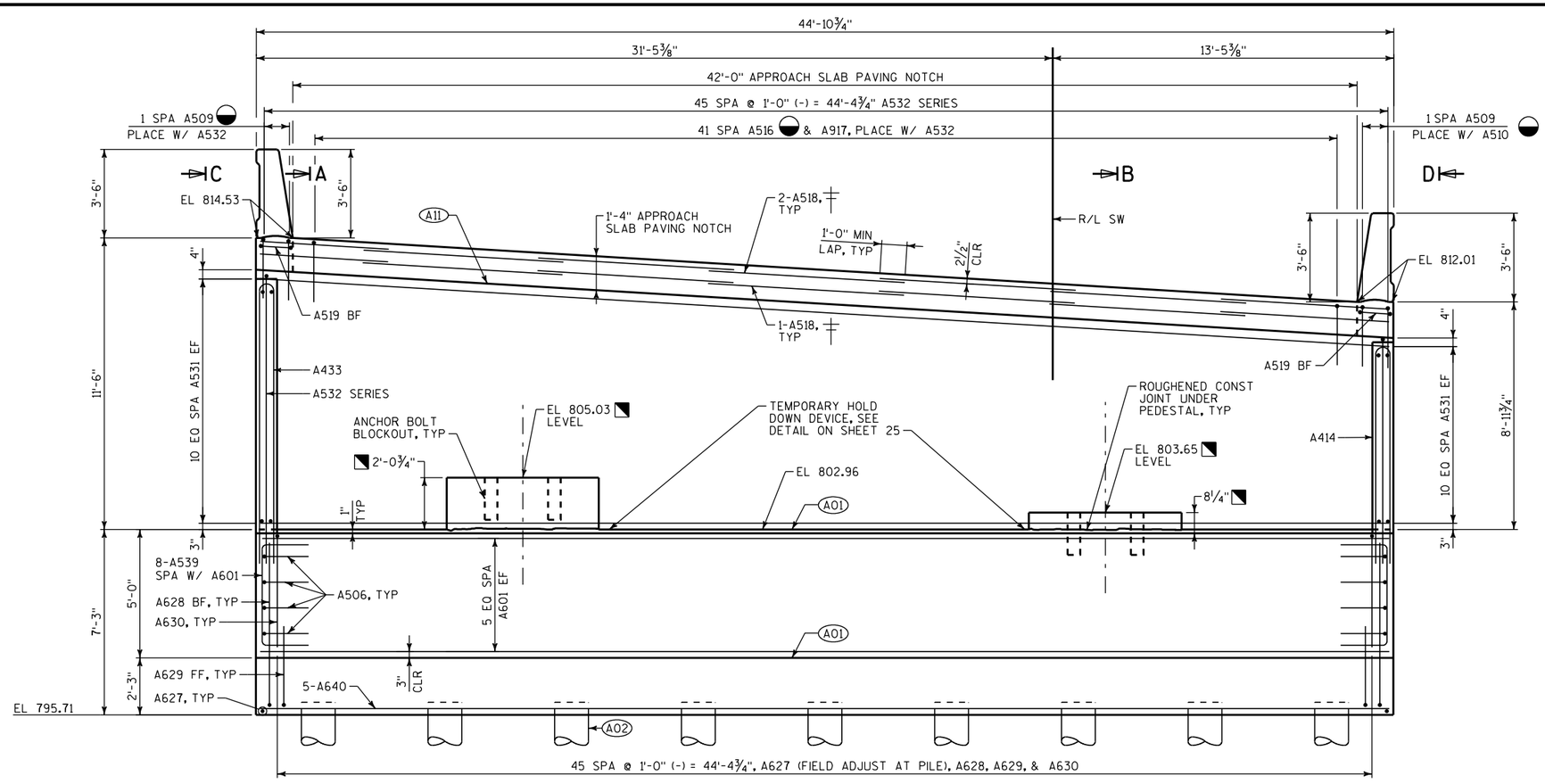
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WEST ABUTMENT DETAILS (2 OF 2)

SHEET 23 OF 96

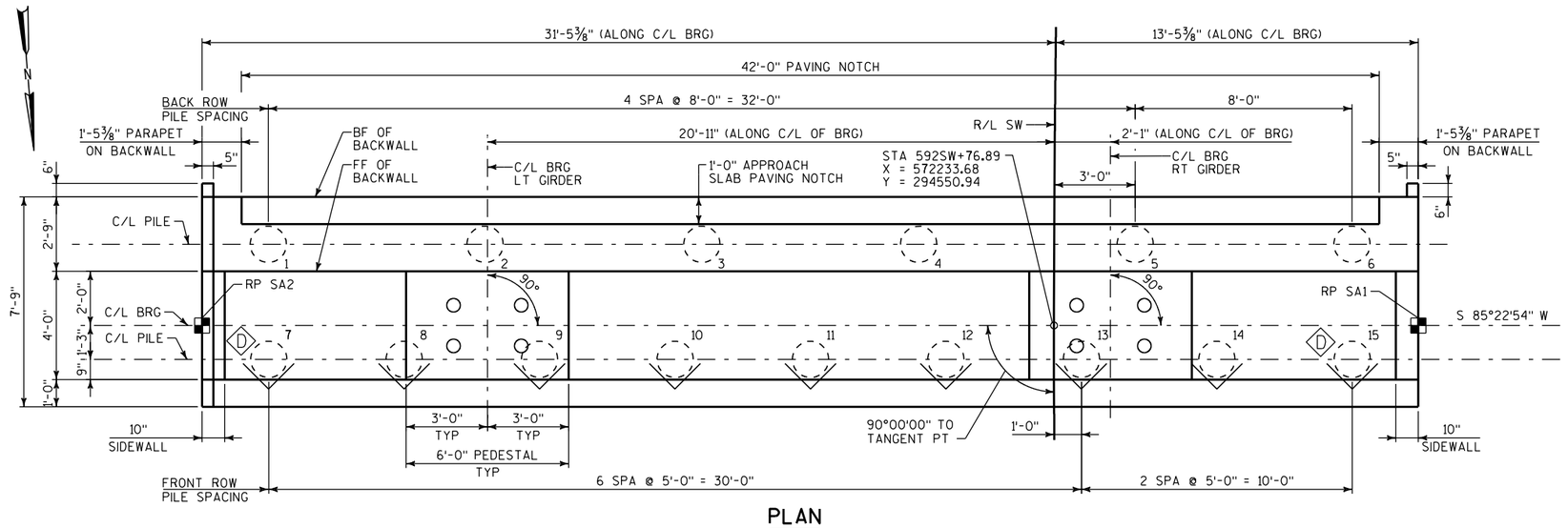
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PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION

LOOKING UPSTATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL



PLAN

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x6".
- (A02) ABUTMENT SUPPORTED ON 16" DIA CIP PILING WITH A REQUIRED DRIVING RESISTANCE OF 193 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. BATTER FRONT ROW 4:12.

  ESTIMATED PILE LENGTH = 70'.
- (A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6" MAXIMUM PEDESTAL HEIGHT INCREASE = 3"
- (D) DYNAMIC PILE LOAD TESTING
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".
- REFERENCE POINT, SEE SHEET A4 OR B4.
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.

NOTES

FOR SECTIONS A-A & B-B, SEE SOUTH ABUTMENT DETAILS (1 OF 2).

FOR SECTIONS C-C & D-D, SEE SOUTH ABUTMENT DETAILS (2 OF 2).

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT AND BEARING DETAILS SHEETS.

FOR DETAILS OF PEDESTALS AND ANCHOR BOLT BLOCKOUTS, SEE ABUTMENT PEDESTAL REINFORCEMENT SHEET.

FOR DETAILS OF EXPANSION JT, SEE EXPANSION JOINT SHEETS.

FOR DETAILS OF PARAPET ON BACKWALL, SEE PARAPET SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. DGS

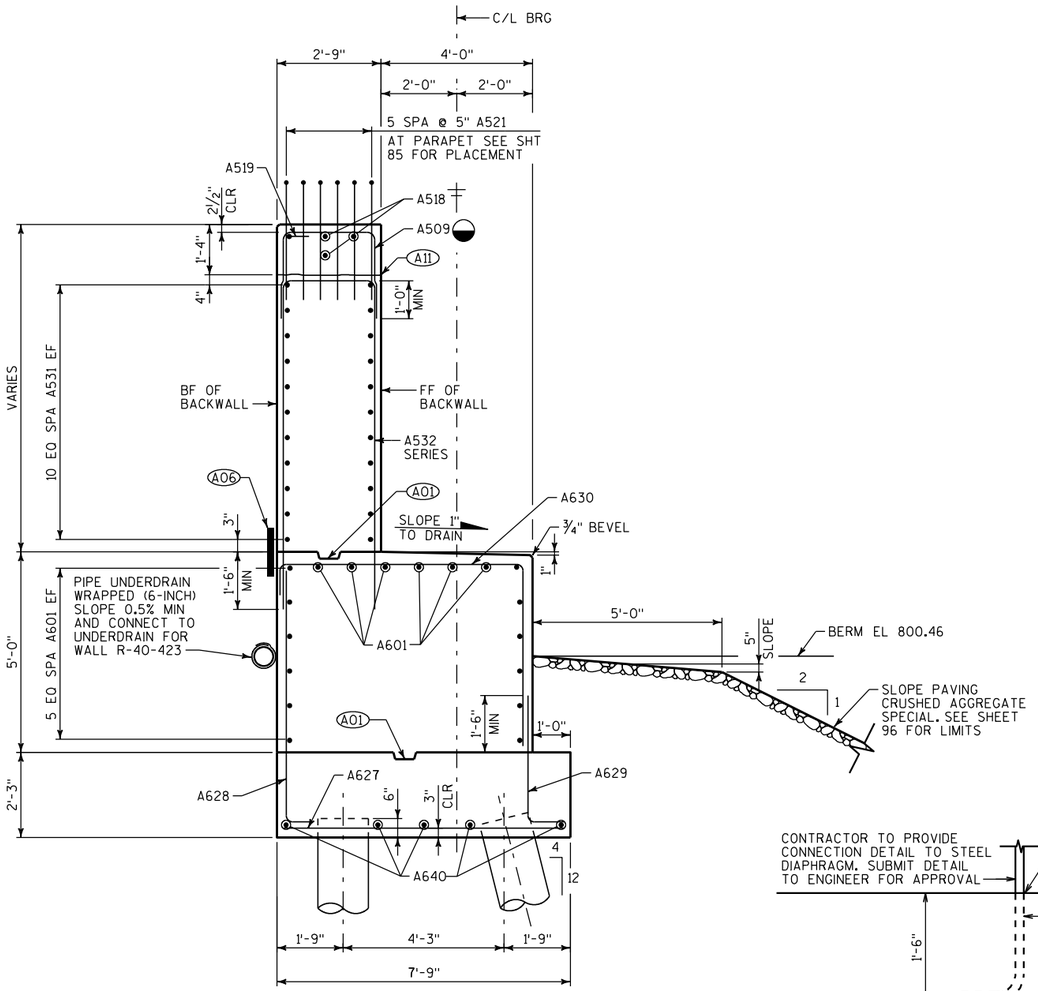
SOUTH ABUTMENT PLAN & ELEVATION

SHEET 24 OF 96

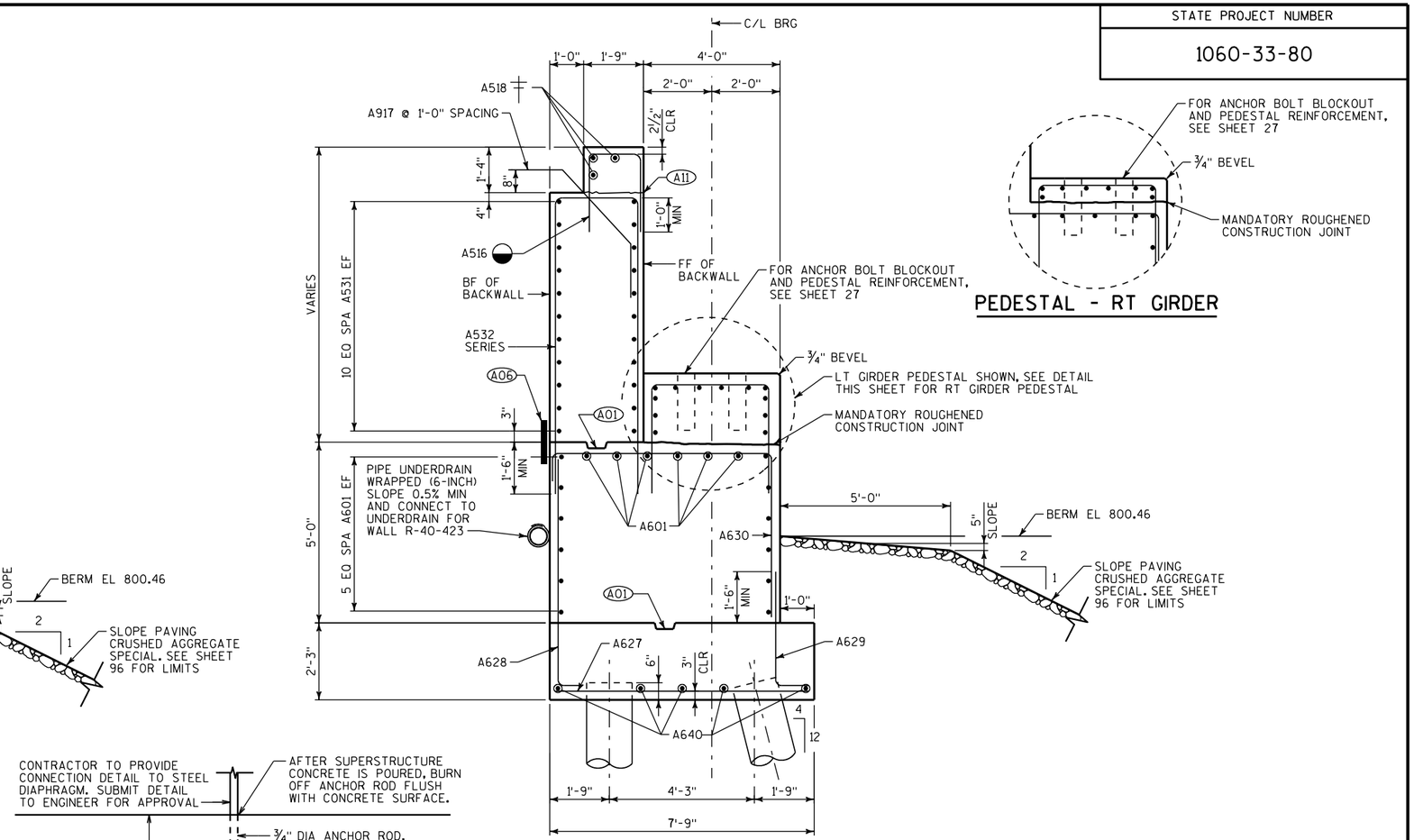
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STATE PROJECT NUMBER
1060-33-80

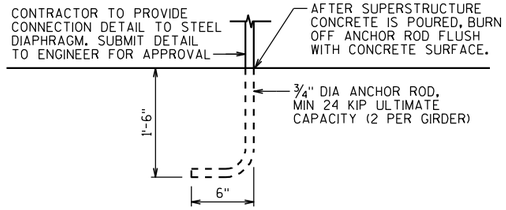


SECTION A-A



SECTION B-B

PEDESTAL - RT GIRDER

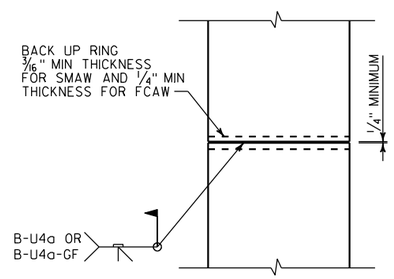


TEMPORARY HOLD DOWN DEVICE

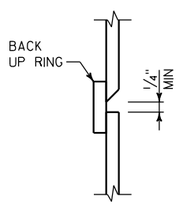
LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"

LEGEND

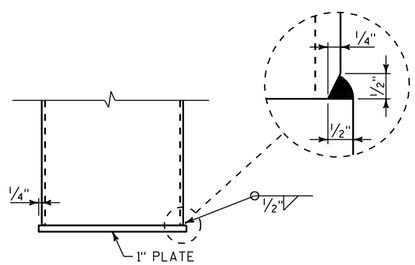
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"
- (A06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.



CIP PILE SPLICE DETAIL



CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

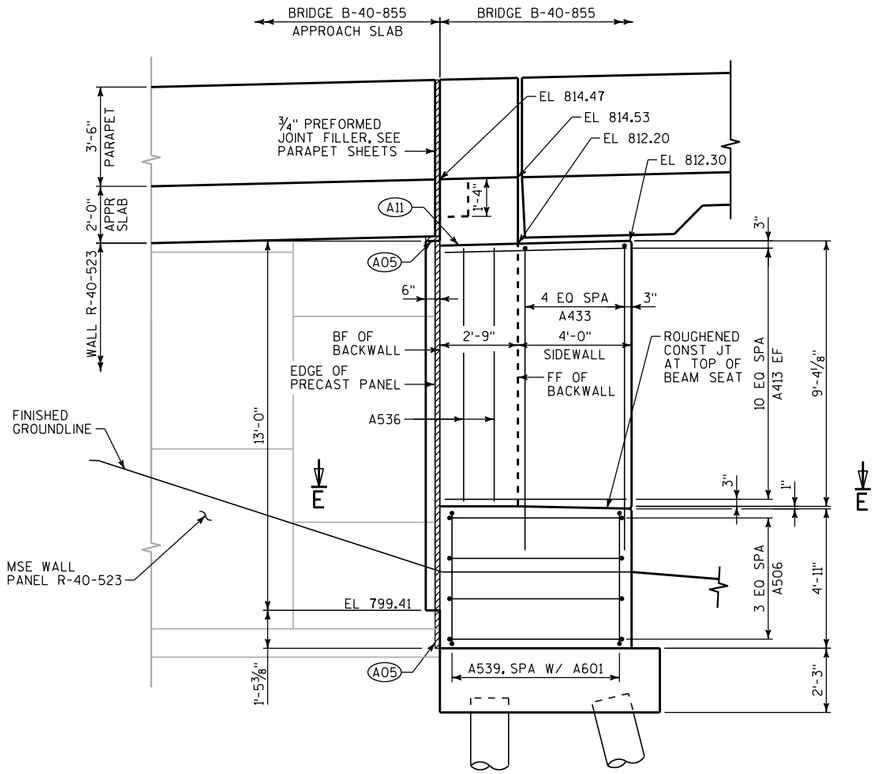
STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. DGS

SOUTH ABUTMENT DETAILS (1 OF 2)

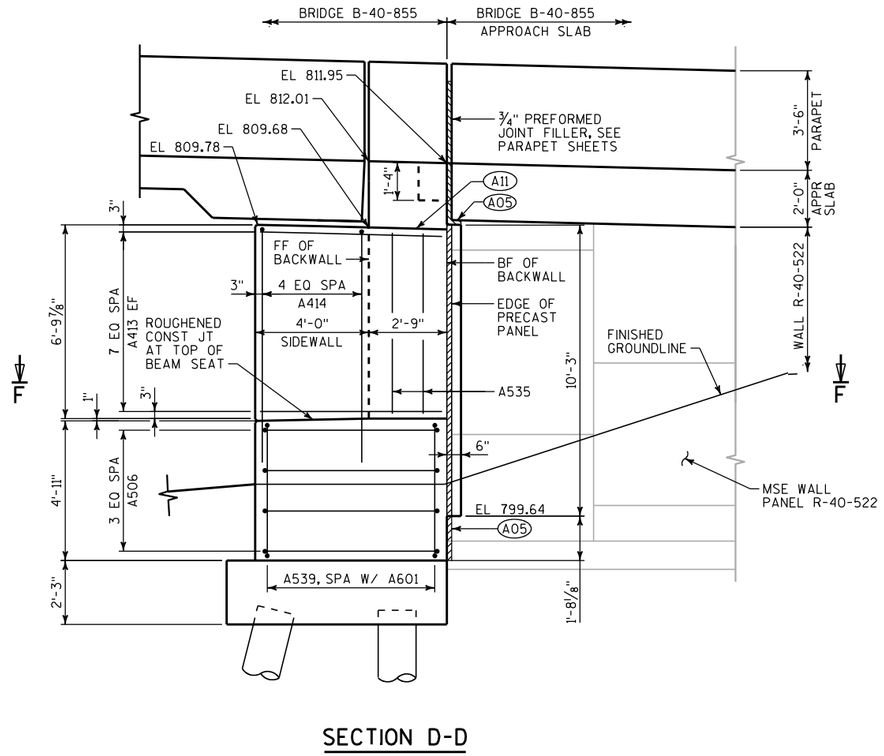
SHEET 25 OF 96

STATE PROJECT NUMBER
1060-33-80



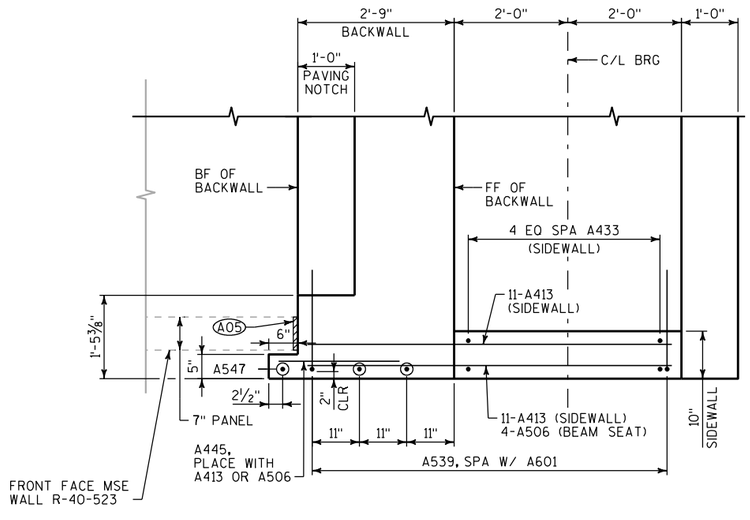
SECTION C-C

(LOOKING WEST)

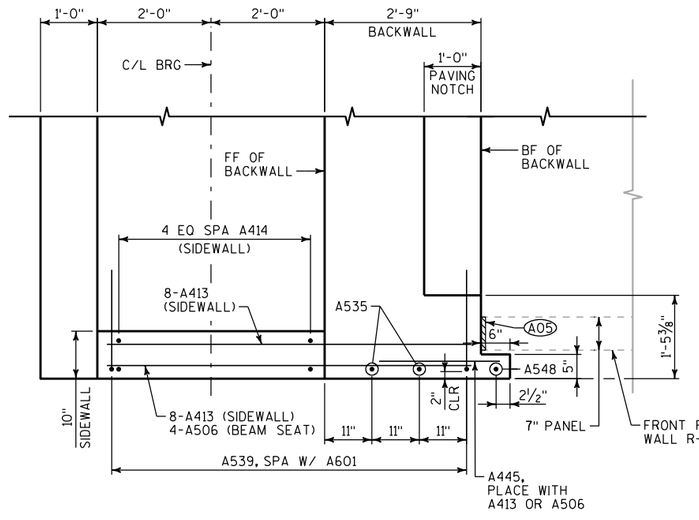


SECTION D-D

(LOOKING EAST)



SECTION E-E



SECTION F-F

LEGEND

(A05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-523 AND R-40-522. COLOR TO MATCH CONCRETE STAIN.

(A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. DGS

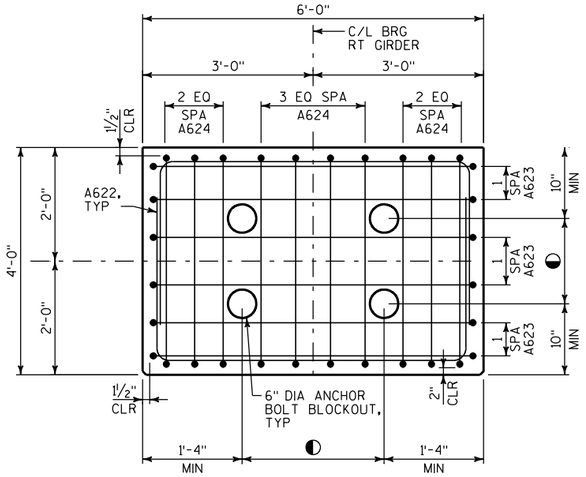
SOUTH ABUTMENT DETAILS (2 OF 2)

SHEET 26 OF 96

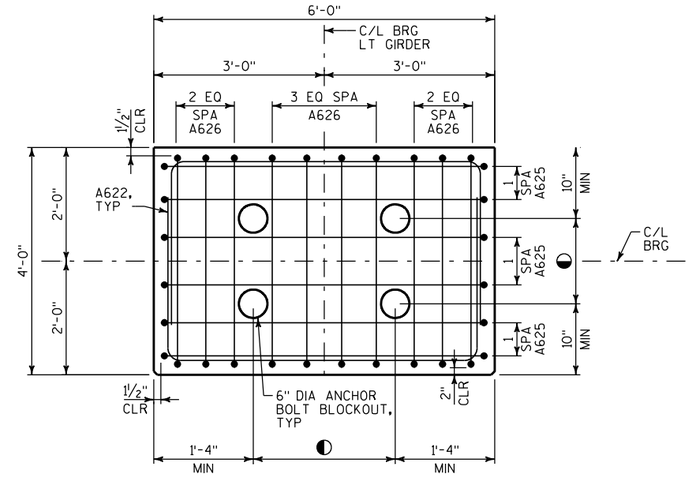
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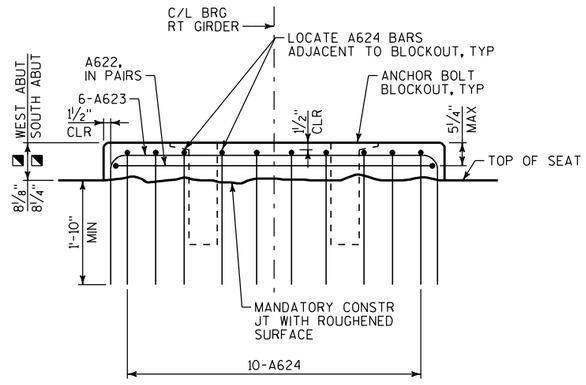
STATE PROJECT NUMBER
1060-33-80



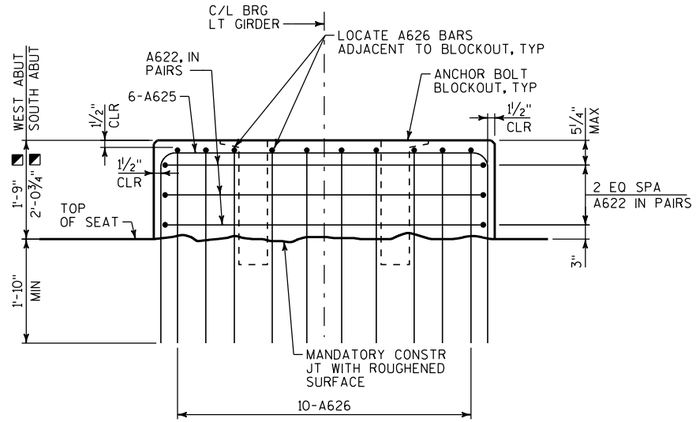
PEDESTAL PLAN - RIGHT GIRDER



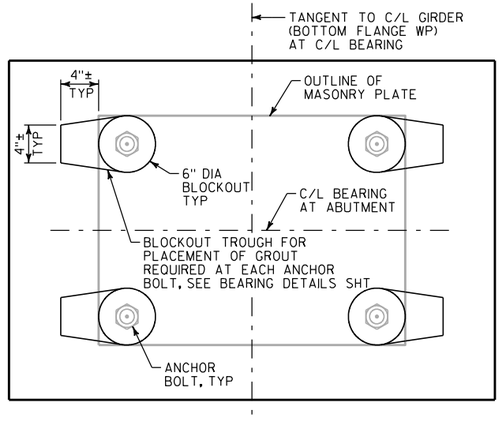
PEDESTAL PLAN - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEET AND BEARING DETAILS SHEET.

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL FABRICATED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6". MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◐ SEE BEARING LAYOUT SHEETS FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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ABUTMENT PEDESTAL REINFORCEMENT

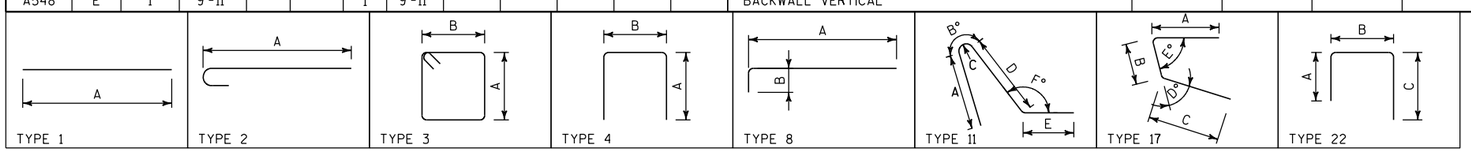
SHEET 27 OF 96

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Mandatory\B855_080307_ab.dgn
PLOT DATE : 02-MAY-2014 12:03
PLOT BY : MSCGLM
PLOT NAME : B855_080307_ab
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
A601	E	28	44'-4"			1	44'-4"						BODY HORIZONTAL					
A602	E	14	45'-7"			1	45'-7"						BODY HORIZONTAL					
A603	E	46	22'-8"	X		3	4'-6"	6'-5"					BODY STIRRUP					
A604	E	2	17'-4"	X		3	1'-10"	6'-5"					BODY STIRRUP					
A505	E	8	4'-11"	X		4	1'-9"	1'-8"					BODY HORIZONTAL					
A506	E	9	9'-8"	X		4	1'-10"	6'-3"					BODY HORIZONTAL					
A507	E	22	45'-8"			1	45'-8"						BACKWALL HORIZONTAL					
A508	E	44	22'-9"	X	X	4	10'-3½"	2'-5"					BACKWALL VERTICAL	A	9'-4"	11'-3"	1 SERIES OF 44	20'-10" TO 24'-8"
A509	S	9	7'-2"	X		4	2'-6"	2'-5"					BACKWALL VERTICAL					
A510	E	3	31'-0"	X		4	14'-5"	2'-5"					BACKWALL VERTICAL					
A511	E	16	9'-6"	X		8	8'-9"	0'-10"					SIDEWALL HORIZONTAL					
A512	E	16	7'-3"	X		8	6'-6"	0'-10"					SIDEWALL HORIZONTAL					
A413	E	54	6'-5"			1	6'-5"						SIDEWALL HORIZONTAL					
A414	E	10	18'-6"	X		4	9'-1"	0'-6"					SIDEWALL VERTICAL					
A415	E	7	31'-10"	X		4	15'-8"	0'-8"					SIDEWALL VERTICAL					
A516	S	84	6'-0"	X		4	2'-6"	1'-3"					BACKWALL VERTICAL					
A917	S	84	7'-3"	X		17	1'-7"	4'-1"	1'-7"	150	60		BACKWALL APPROACH TIE					
A518	S	42	8'-0"			1	8'-0"						BACKWALL HORIZONTAL					
A519	S	4	2'-2"	X		4	0'-8"	1'-1"					BACKWALL HORIZONTAL					
A520	E	2	8'-10"	X		2	8'-3"						SIDEWALL HORIZTONAL					
A521	S	24	6'-10"	X		11	2'-10"	172	0'-4½"	0'-10"	2'-0"	188	PARAPET TIE					
A622	E	16	11'-1"	X		4	2'-11"	5'-7"					RIGHT & LEFT PEDESTAL					
A623	E	12	10'-1"	X		4	2'-4"	5'-9"					RIGHT PEDESTAL					
A624	E	20	8'-3"	X		4	2'-5"	3'-9"					RIGHT PEDESTAL					
A625	E	12	12'-11"	X		4	3'-9"	5'-9"					LEFT PEDESTAL					
A626	E	20	10'-11"	X		4	3'-9"	3'-9"					LEFT PEDESTAL					
A627	U	46	7'-4"			1	7'-4"						FOOTING HORIZONTAL					
A628	E	46	7'-6"	X		8	6'-8"	1'-0"					BODY VERTICAL					
A629	E	46	4'-4"	X		8	3'-6"	1'-0"					BODY VERTICAL					
A630	E	46	11'-9"	X		22	1'-0"	6'-5"	4'-8"				BODY VERTICAL					
A531	E	22	44'-5"			1	44'-5"						BACKWALL HORIZONTAL					
A532	E	46	22'-8"	X	X	4	10'-3"	2'-5"					BACKWALL VERTICAL	A	9'-0"	11'-6"	1 SERIES OF 46	20'-2" TO 25'-2"
A433	E	5	23'-4"	X		4	11'-6"	0'-6"					SIDEWALL VERTICAL					
A534	E	2	7'-6"			1	7'-6"						SIDEWALL VERTICAL					
A535	E	2	7'-3"			1	7'-3"						SIDEWALL VERTICAL					
A536	E	2	9'-10"			1	9'-10"						SIDEWALL VERTICAL					
A539	E	16	7'-9"	X		4	1'-9"	4'-6"					BODY HORIZONTAL					
A640	U	5	44'-6"			1	44'-6"						FOOTING HORIZONTAL					
A442	E	1	27'-6"	X		4	13'-6"	0'-8"					SIDEWALL VERTICAL					
A543	E	1	9'-0"	X		8	8'-3"	0'-10"					BODY HORIZONTAL					
A544	E	1	6'-9"	X		8	6'-0"	0'-10"					BODY HORIZONTAL					
A445	E	37	2'-5"			1	2'-5"						BACKWALL HORIZONTAL					
A546	E	1	8'-8"			1	8'-8"						BACKWALL VERTICAL					
A547	E	1	12'-8"			1	12'-8"						BACKWALL VERTICAL					
A548	E	1	9'-11"			1	9'-11"						BACKWALL VERTICAL					

BAR MARK BREAKDOWN				
BAR MARK	WEST ABUTMENT	SOUTH ABUTMENT	TOTAL NO	WEIGHT
A601	10	18	28	1864
A602	14	0	14	959
A603	46	0	46	1566
A604	2	0	2	52
A505	8	0	8	41
A506	1	8	9	91
A507	22	0	22	1048
A508	44	0	44	1044
A509	5	4	9	67
A510	3	0	3	97
A511	16	0	16	159
A512	16	0	16	121
A413	16	38	54	231
A414	5	5	10	124
A415	7	0	7	149
A516	42	42	84	526
A917	42	42	84	2071
A518	21	21	42	350
A519	2	2	4	9
A520	2	0	2	18
A521	12	12	24	171
A622	8	8	16	266
A623	6	6	12	182
A624	10	10	20	248
A625	6	6	12	233
A626	10	10	20	328
A627	0	46	46	507
A628	0	46	46	518
A629	0	46	46	299
A630	0	46	46	812
A531	0	22	22	1019
A532	0	46	46	1088
A433	0	5	5	78
A534	2	0	2	16
A535	0	2	2	15
A536	0	2	2	21
A539	0	16	16	129
A640	0	5	5	334
A442	1	0	1	18
A543	1	0	1	9
A544	1	0	1	7
A445	10	27	37	60
A546	1	0	1	9
A547	0	1	1	13
A548	0	1	1	10
TOT WEIGHT	8364	8613		16977



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
U - STEEL, HIGH STRENGTH, UNCOATED.
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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ABUTMENT REINFORCEMENT SCHEDULE

SHEET 28 OF 96

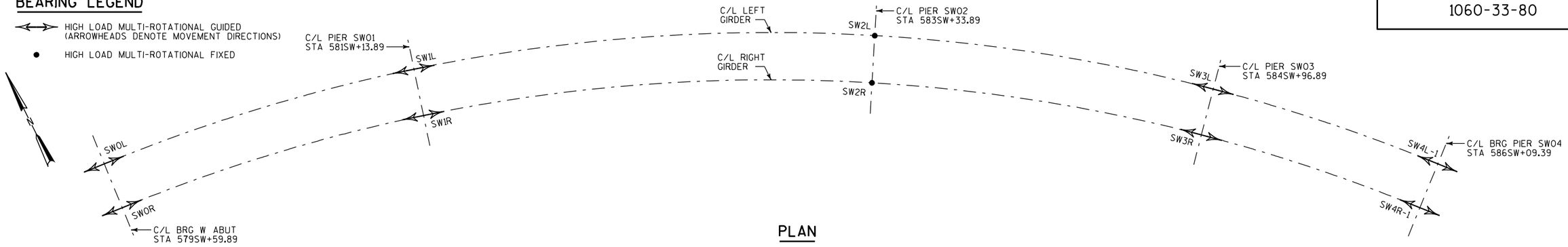
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STATE PROJECT NUMBER
1060-33-80

BEARING LEGEND

HIGH LOAD MULTI-ROTATIONAL GUIDED
(ARROWHEADS DENOTE MOVEMENT DIRECTIONS)

HIGH LOAD MULTI-ROTATIONAL FIXED

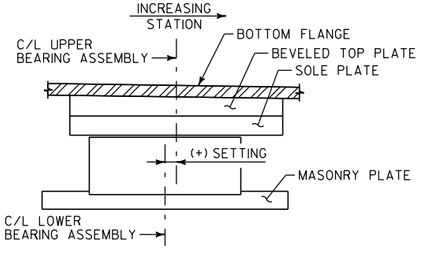


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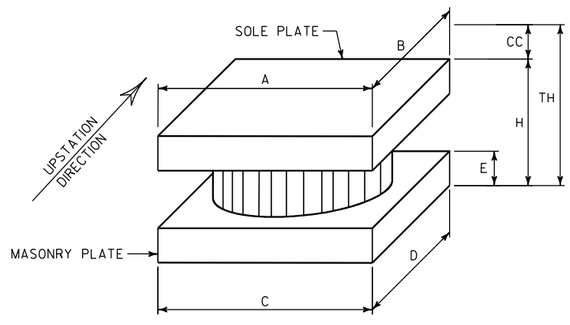
BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS												ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					PERMANENT	TOTAL	TOTAL	SERVICE	STRENGTH	SERVICE	STRENGTH	TRANS	LONGIT	STRENGTH	LB	RB	LA	RA	CC	A	B	C	D	E	H	TH	
					(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(IN)	(IN)	RADIANS	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	
SW0L	GUIDED	0°	796.58	795.86	280	530	790	20	30	40	40	---	3¼"	0.014	2.873	1.474	2.399	1.000	1.937	30"	30"	36"	22"	1¼"	6⅝"	8⅜16"	4 - 1" DIA.
SW0R			795.50	794.79	290	560	830	20	30	40	40	---	3¼"	0.012	2.873	1.474	2.399	1.000	1.937	30"	30"	36"	22"	1¼"	6⅝"	8⅜16"	4 - 1" DIA.
SW01L	GUIDED	0°	795.51	794.54	1190	1740	2480	60	110	140	140	---	2¼"	0.013	3.525	1.005	3.520	1.000	2.262	42"	38"	48"	32"	1¼"	9⅜"	11⅝"	6 - 1½" DIA.
SW01R			794.15	793.18	1230	1780	2510	60	110	140	140	---	2¼"	0.010	3.525	1.005	3.520	1.000	2.262	42"	38"	48"	32"	1¼"	9⅜"	11⅝"	6 - 1½" DIA.
SW02L	FIXED	N/A	797.94	796.98	1130	1690	2420	60	120	100	120	---	---	0.013	3.280	1.000	3.992	1.712	2.496	38"	32"	44"	34"	1¼"	9"	11½"	6 - 1½" DIA.
SW02R			796.58	795.63	1140	1690	2410	60	120	100	120	---	---	0.010	3.280	1.000	3.992	1.712	2.496	38"	32"	44"	34"	1¼"	9"	11½"	6 - 1½" DIA.
SW03L	GUIDED	0°	802.60	801.68	770	1240	1790	30	50	90	90	---	1¾"	0.004	3.280	1.000	4.240	1.960	2.620	38"	32"	44"	28"	1¼"	8⅜"	11"	4 - 1½" DIA.
SW03R			801.24	800.32	770	1230	1790	30	50	90	90	---	1¾"	0.003	3.280	1.000	4.240	1.960	2.620	38"	32"	44"	28"	1¼"	8⅜"	11"	4 - 1½" DIA.
SW04L-1	GUIDED	0°	805.80	805.08	220	450	670	20	30	30	30	---	2"	0.007	2.800	1.000	3.430	1.630	2.215	30"	26"	36"	22"	1¼"	6⅜"	8⅜16"	4 - 1" DIA.
SW04R-1			804.43	803.72	250	480	720	20	30	30	30	---	2"	0.008	2.800	1.000	3.430	1.630	2.215	30"	26"	36"	22"	1¼"	6⅜"	8⅜16"	4 - 1" DIA.

BEARING TEMPERATURE SETTING DATA

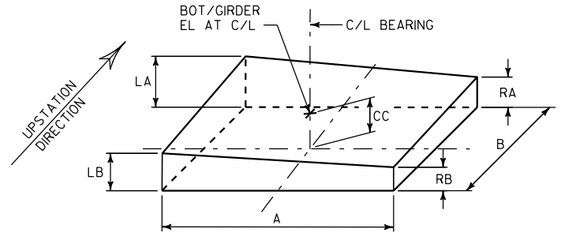
TEMP (°F)	WEST ABUT (IN)	SW01 (IN)	SW03 (IN)	SW04 (IN)
120°	-2.14	-1.49	1.20	1.31
110°	-1.78	-1.24	1.00	1.09
100°	-1.42	-0.99	0.80	0.87
90°	-1.07	-0.74	0.60	0.66
80°	-0.71	-0.50	0.40	0.44
70°	-0.36	-0.25	0.20	0.22
60°	0.00	0.00	0.00	0.00
50°	0.36	0.25	-0.20	-0.22
40°	0.71	0.50	-0.40	-0.44
30°	1.07	0.74	-0.60	-0.66
20°	1.42	0.99	-0.80	-0.87
10°	1.78	1.24	-1.00	-1.09
0°	2.14	1.49	-1.20	-1.31
-10°	2.49	1.74	-1.40	-1.53
-20°	2.85	1.98	-1.60	-1.75
-30°	3.20	2.23	-1.80	-1.97



NOTE:
DATA IS PROVIDED FOR BEARING MANUFACTURER. FIELD SETTING SHALL BE BASED ON TABLE IN FINAL APPROVED SHOP DRAWINGS PER SPECIAL PROVISION FOR HLMR BEARINGS.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

LB = LEFT BACK STATION
LA = LEFT AHEAD STATION
RB = RIGHT BACK STATION
RA = RIGHT AHEAD STATION

NOTES

1. FOR TYPICAL BEARING DETAILS, SEE BEARING DETAILS SHEET.
2. BEARING DIMENSIONS SHOWN ARE NOMINAL VALUES ONLY AND WILL VARY WITH THE SELECTED MANUFACTURER. MAKE ALL NECESSARY ADJUSTMENTS TO DIMENSIONS AND ELEVATIONS AS REQUIRED TO INCORPORATE THE SPECIFIC BEARINGS SELECTED.
3. FORCES SPECIFIED ARE MAXIMUM EFFECTS FOR LRFD LOAD COMBINATIONS, INCLUDING DYNAMIC LOAD ALLOWANCE.
4. HORIZONTAL FORCES SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED FORCES. DESIGN BEARINGS FOR THESE VALUES OR 15 PERCENT OF THE VERTICAL PERMANENT LOAD, WHICHEVER IS LARGER.
5. DESIGN BEARINGS FOR THE ROTATION VALUES SHOWN IN THE TABLE OR 0.02 RADIANS, WHICHEVER IS LARGER.

   ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIANS FOR UNCERTANTIES.

   FOR POT BEARINGS, INCREASE THE ROTATIONAL DEMAND BY AN ADDITIONAL 0.005 RADIANS TO ACCOUNT FOR CONSTRUCTION TOLERANCES.
6. FOR DEFINITION OF SKEW ANGLE 'SK', SEE "PLAN - MASONRY PLATE" ON THE BEARING DETAILS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

UNIT 1
BEARING
LAYOUT

SHEET 29 OF 96

8

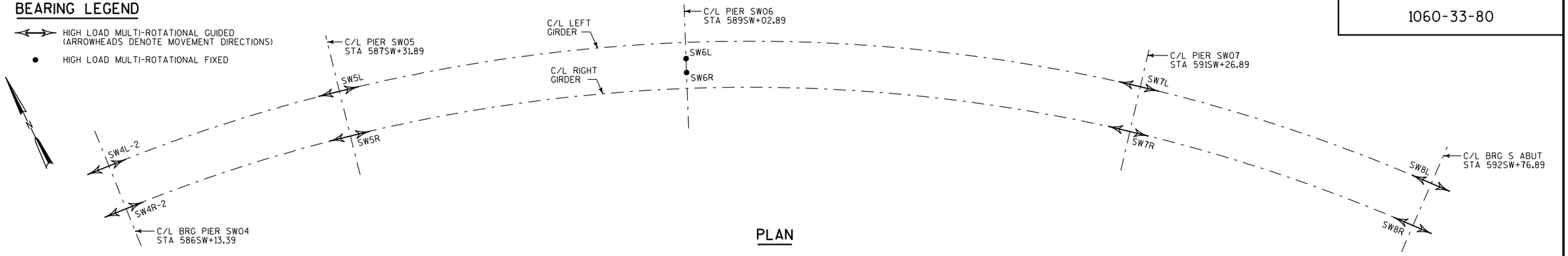
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STATE PROJECT NUMBER
1060-33-80

BEARING LEGEND

HIGH LOAD MULTI-ROTATIONAL GUIDED
(ARROWHEADS DENOTE MOVEMENT DIRECTIONS)

HIGH LOAD MULTI-ROTATIONAL FIXED

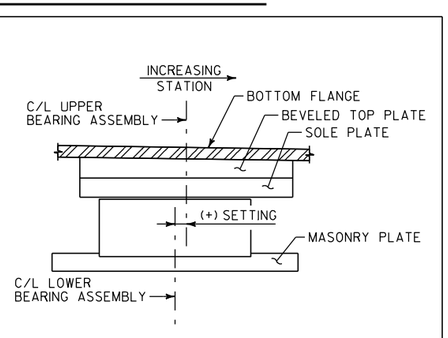


PLAN

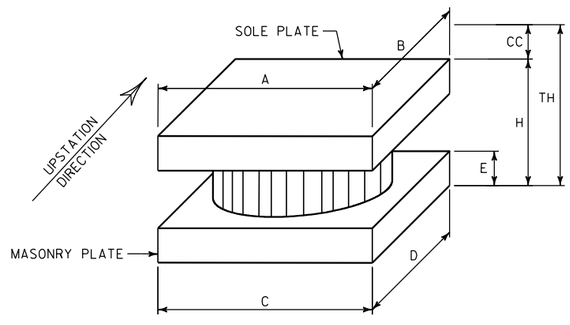
BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS												ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					PERMANENT	TOTAL	TOTAL	SERVICE	STRENGTH	SERVICE	STRENGTH	TRANS	LONGIT	STRENGTH	LB	RB	LA	RA	CC	A	B	C	D	E	H	TH	
					(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(IN)	(IN)	RADIANS	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	
SW04L-2	GUIDED	0°	805.89	805.18	230	460	700	20	30	30	30	---	2½"	0.006	2.800	1.000	3.422	1.622	2.211	30"	26"	36"	22"	1¼"	6⅜"	8⅜16"	4 - 1" DIA.
SW04R-2			804.53	803.81	260	500	750	20	30	30	30	---	2½"	0.007	2.800	1.000	3.422	1.622	2.211	30"	26"	36"	22"	1¼"	6⅜"	8⅜16"	4 - 1" DIA.
SW05L	GUIDED	0°	808.17	807.26	820	1300	1880	30	60	100	100	---	1½"	0.007	3.400	1.000	3.921	1.521	2.460	40"	34"	46"	30"	1¼"	8½"	10⅝16"	4 - 1½" DIA.
SW05R			806.79	805.88	820	1300	1880	30	60	100	100	---	1½"	0.006	3.400	1.000	3.921	1.521	2.460	40"	34"	46"	30"	1¼"	8½"	10⅝16"	4 - 1½" DIA.
SW06L	FIXED	N/A	809.24	808.25	1160	2030	3000	80	150	100	120	---	---	0.016	3.160	1.000	3.280	1.120	2.140	36"	42"	38"	48"	1¼"	9¾"	11⅞"	6 - 1½" DIA.
SW06R			808.82	807.83	1220	2080	3040	80	150	100	120	---	---	0.013	3.160	1.000	3.280	1.120	2.140	36"	42"	38"	48"	1¼"	9¾"	11⅞"	6 - 1½" DIA.
SW07L	GUIDED	0°	808.48	807.49	1200	1750	2480	40	80	140	140	---	1⅞"	0.012	4.030	1.510	3.520	1.000	2.515	42"	38"	48"	32"	1¼"	9⅜"	11⅞"	6 - 1½" DIA.
SW07R			807.12	806.13	1220	1750	2480	40	80	140	140	---	1⅞"	0.014	4.030	1.510	3.520	1.000	2.515	42"	38"	48"	32"	1¼"	9⅜"	11⅞"	6 - 1½" DIA.
SW08L	GUIDED	0°	805.77	805.03	270	500	740	20	40	40	40	---	3⅛"	0.013	3.530	1.730	2.800	1.000	2.265	30"	30"	36"	22"	1¼"	6⅝"	8⅞"	4 - 1" DIA.
SW08R			804.39	803.65	270	510	770	20	40	40	40	---	3⅛"	0.011	3.530	1.730	2.800	1.000	2.265	30"	30"	36"	22"	1¼"	6⅝"	8⅞"	4 - 1" DIA.

BEARING TEMPERATURE SETTING DATA

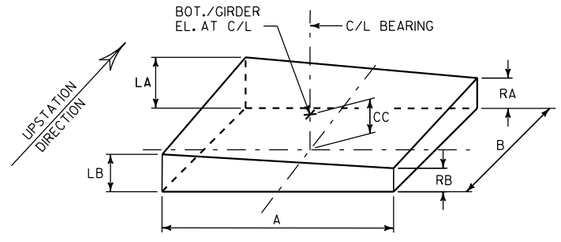
TEMP (°F)	SW04 (IN)	SW05 (IN)	SW07 (IN)	SOUTH ABUT (IN)
120°	-1.70	-1.04	1.27	2.08
110°	-1.42	-0.87	1.06	1.73
100°	-1.14	-0.69	0.85	1.39
90°	-0.85	-0.52	0.64	1.04
80°	-0.57	-0.35	0.42	0.69
70°	-0.28	-0.17	0.21	0.35
60°	0.00	0.00	0.00	0.00
50°	0.28	0.17	-0.21	-0.35
40°	0.57	0.35	-0.42	-0.69
30°	0.85	0.52	-0.64	-1.04
20°	1.14	0.69	-0.85	-1.39
10°	1.42	0.87	-1.06	-1.73
0°	1.70	1.04	-1.27	-2.08
-10°	1.99	1.21	-1.48	-2.43
-20°	2.27	1.39	-1.70	-2.77
-30°	2.56	1.56	-1.91	-3.12



NOTE:
DATA IS PROVIDED FOR BEARING MANUFACTURER. FIELD SETTING SHALL BE BASED ON TABLE IN FINAL APPROVED SHOP DRAWINGS PER SPECIAL PROVISION FOR HLMR BEARINGS.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

LB = LEFT BACK STATION
LA = LEFT AHEAD STATION
RB = RIGHT BACK STATION
RA = RIGHT AHEAD STATION

NOTES

1. FOR TYPICAL BEARING DETAILS, SEE BEARING DETAILS SHEET.
2. BEARING DIMENSIONS SHOWN ARE NOMINAL VALUES ONLY AND WILL VARY WITH THE SELECTED MANUFACTURER. MAKE ALL NECESSARY ADJUSTMENTS TO DIMENSIONS AND ELEVATIONS AS REQUIRED TO INCORPORATE THE SPECIFIC BEARINGS SELECTED.
3. FORCES SPECIFIED ARE MAXIMUM EFFECTS FOR LRFD LOAD COMBINATIONS, INCLUDING DYNAMIC LOAD ALLOWANCE.
4. HORIZONTAL FORCES SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED FORCES. DESIGN BEARINGS FOR THESE VALUES OR 15 PERCENT OF THE VERTICAL PERMANENT LOAD, WHICHEVER IS LARGER.
5. DESIGN BEARINGS FOR THE ROTATION VALUES SHOWN IN THE TABLE OR 0.02 RADIANS, WHICHEVER IS LARGER.

   ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIANS FOR UNCERTANTIES.

   FOR POT BEARINGS, INCREASE THE ROTATIONAL DEMAND BY AN ADDITIONAL 0.005 RADIANS TO ACCOUNT FOR CONSTRUCTION TOLERANCES.
6. FOR DEFINITION OF SKEW ANGLE 'SK', SEE "PLAN - MASONRY PLATE" ON THE BEARING DETAILS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

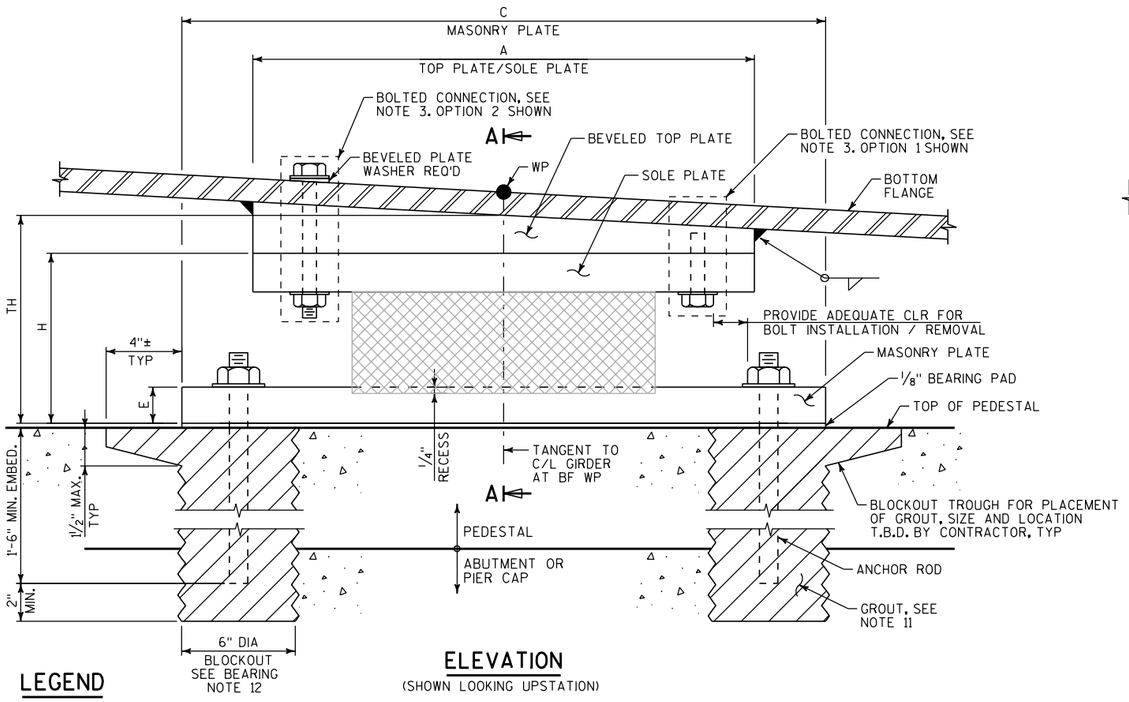
UNIT 2
BEARING
LAYOUT

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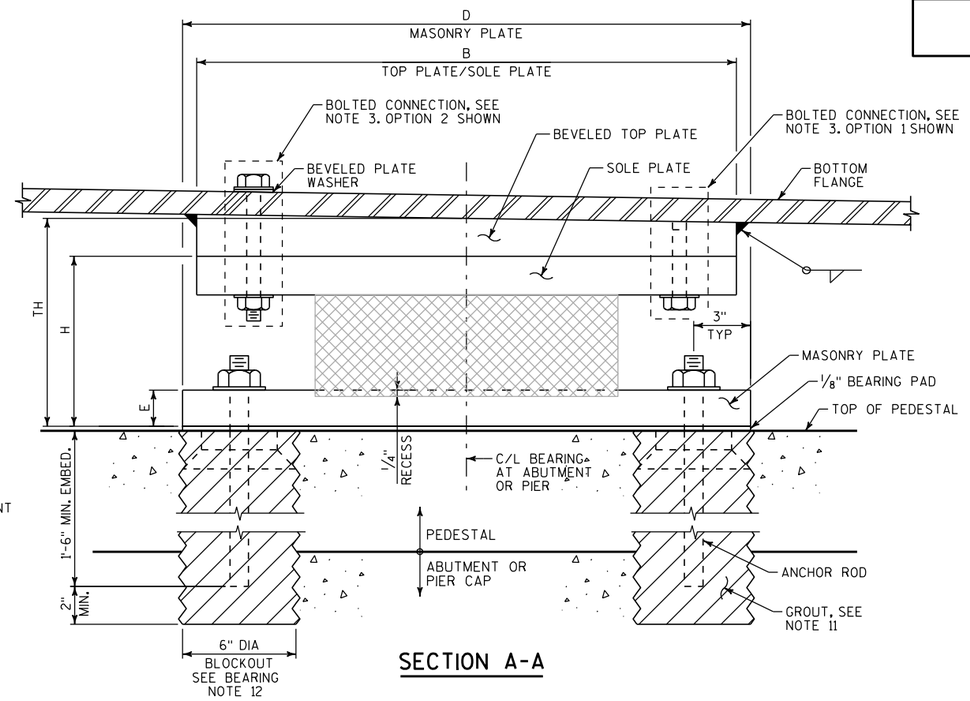
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ELEVATION

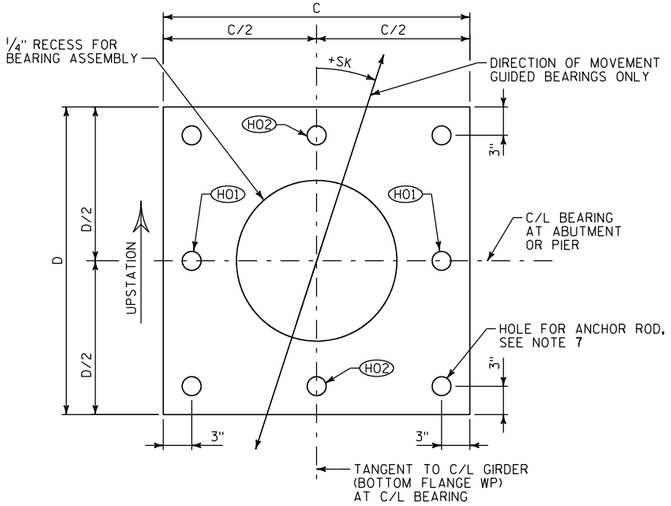
(SHOWN LOOKING UPSTATION)



SECTION A-A

LEGEND

CROSSHATCHING INDICATES PART OF THE BEARING ASSEMBLY THAT IS TO BE SUPPLIED AND DESIGNED BY THE BEARING MANUFACTURER. THE MASONRY PLATE AND SOLE PLATE ARE TO BE PROVIDED BY THE BEARING MANUFACTURER AND SIZED ACCORDING TO BEARING NOTES 4 & 6. THE BEVELED TOP PLATE DIMENSIONS SHOULD BE COORDINATED BETWEEN THE STEEL FABRICATOR AND THE BEARING MANUFACTURER. THE BEVELED TOP PLATE IS INCLUDED IN THE QUANTITY FOR "STRUCTURAL STEEL HS".

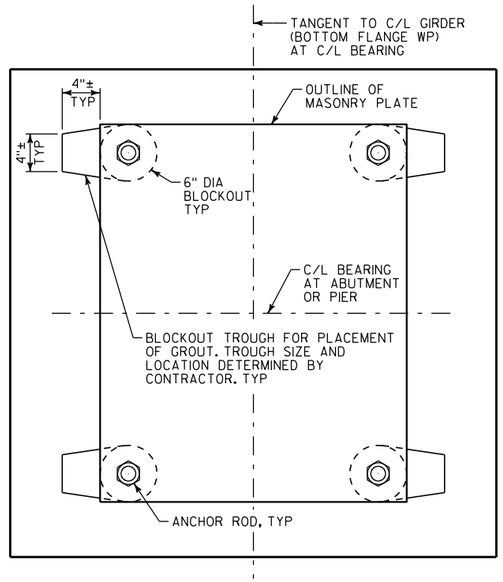


PLAN - MASONRY PLATE

A POSITIVE SKEW ANGLE (+SK) IS SHOWN ABOVE AND INDICATED BY A CLOCKWISE OR LEFT HAND FORWARD ROTATION

(H01) HOLE REQ'D AT PIERS SW01, SW02 & SW07 ONLY

(H02) HOLE REQ'D AT PIER SW06 ONLY



PLAN - TOP OF PEDESTAL

BEARING NOTES

1. SEE BEARING LAYOUT SHEETS FOR BEARING LAYOUT AND LOCATION SPECIFIC DIMENSIONS.
2. SEE JACKING PROVISIONS SHEET FOR LOCATION AND SIZE OF BEARING REPLACEMENT JACKING PADS ATTACHED TO BOTTOM OF GIRDER FLANGE.
3. DESIGN BOLTED CONNECTION BETWEEN SOLE PLATE AND BEVELED TOP PLATE FOR A MINIMUM OF 1.25 TIMES THE COMBINED SPECIFIED HORIZONTAL LOADS. ARRANGE CONNECTION TO ENSURE ALL BOLTS CAN BE REMOVED WITHOUT INTERFERENCE FROM ANCHOR RODS OR OTHER OBSTRUCTIONS AFTER BEARING IS INSTALLED.

   BOLTED CONNECTION OPTION 1: TAP HOLES COMPLETELY THROUGH TOP PLATE. ENGAGE BOLTS TO WITHIN 1/4" OF BOTTOM FLANGE.

   BOLTED CONNECTION OPTION 2: BOLT DOWNWARD THROUGH BOTTOM FLANGE, BEVELED TOP PLATE, & SOLE PLATE.
4. SOLE PLATE THICKNESS TO BE SELECTED BY THE BEARING MANUFACTURER. MINIMUM 1".
5. HOLES IN SOLE PLATE MAY BE SLOTTED OR OVERSIZED AS REQUIRED TO FACILITATE STEEL ERECTION. IF OVERSIZED OR SLOTTED HOLES ARE USED, THE CONNECTION SHALL BE DESIGNED AS SLIP-RESISTANT.
6. MASONRY PLATE THICKNESS TO BE CONFIRMED BY THE BEARING DESIGNER AND INCREASED IF REQUIRED. NO REDUCTION PERMITTED.
7. HOLES IN MASONRY PLATE SHALL BE A MAXIMUM OF 1/8" LARGER THAN THE SPECIFIED ANCHOR BOLT DIAMETER. SEE BEARING LAYOUT SHEETS FOR NUMBER AND SIZE OF ANCHOR RODS.

BEARING NOTES, CONTINUED

8. ANCHOR RODS SHALL BE IN ACCORDANCE WITH ASTM F1554 (GRADE 105) AND HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.
9. BEARINGS SHALL BE DESIGNED TO PERMIT REPLACEMENT BY JACKING THE BRIDGE A MAXIMUM OF 1/2".
10. PROVIDE A 1/8" THICK BEARING PAD THE SAME SIZE AS THE MASONRY PLATE. THE THICKNESS OF THE PAD IS NOT INCLUDED IN THE HEIGHT ("H" OR "TH") OF THE BEARING ASSEMBLY.
11. NON-SHRINK GROUT USED IN FILLING THE ANCHOR BOLT BLOCKOUTS SHALL BE PROVIDED AS STATED IN THE BEARING SPECIAL PROVISION. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH SHALL BE 6.0 KSI. GROUTING MATERIALS AND INSTALLATION ARE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR THE BEARING ASSEMBLY.
12. THE TYPE OF BLOCKOUT SHALL BE DETERMINED BY THE CONTRACTOR. TEMPORARY BLOCKOUTS OR BLOCKOUTS WITH STAY-IN-PLACE FORMS ARE ALLOWED. IF BLOCKOUTS CONSISTING OF STAY-IN-PLACE FORMS ARE USED, THE TOP OF THE FORM MUST BE AT OR BELOW THE TOP OF THE PEDESTAL CONCRETE. THE CONTRACTOR SHALL PREVENT WATER FROM FREEZING AND EXPANDING WITHIN THE BLOCKOUT.
13. THE BEARING ASSEMBLIES SHALL BE PAINTED OR ZINC METALIZED AS OUTLINED IN THE BEARING SPECIAL PROVISION. IF BEARING ASSEMBLIES ARE PAINTED, THE COLOR SHALL MATCH THE COLOR OF THE EXTERIOR OF THE BOX GIRDER.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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BEARING DETAILS

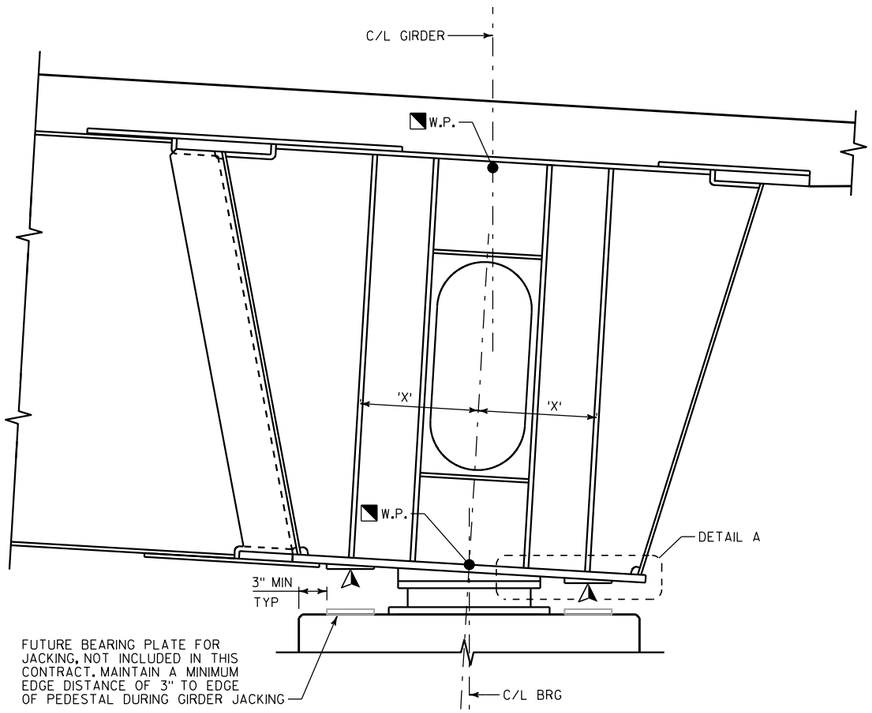
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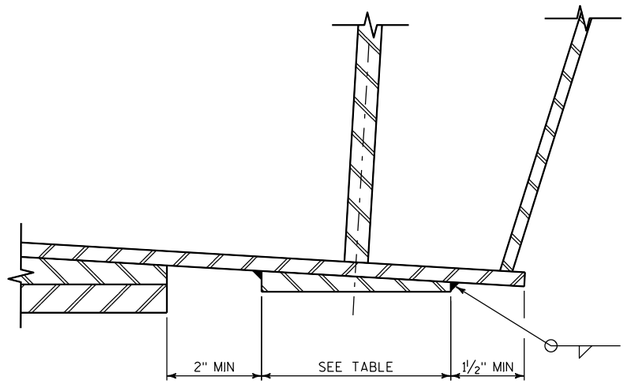
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SECTION AT TYPICAL PIER

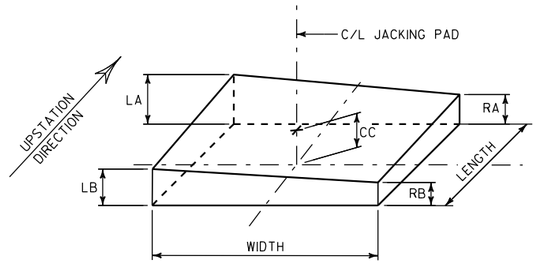
(PIER SW06 SIMILAR)



DETAIL A

LOCATION	UNIT	NUMBER OF PADS PER GIRDER	JACKING PAD DIMENSIONS							OFFSET 'X' *	MIN. JACK FORCE (KIPS) **
			WIDTH (IN) *	LENGTH (IN) *	LB (IN)	RB (IN)	LA (IN)	RA (IN)	CC (IN)		
WEST ABUT	UNIT 1	2	8"	1'-6"	1.157	0.785	0.873	0.500	0.829	2'-1"	145
PIER SW01	UNIT 1	2	8"	2'-0"	0.983	0.503	0.980	0.500	0.742	2'-4"	615
PIER SW02	UNIT 1	2	8"	2'-0"	0.980	0.500	1.514	1.034	1.007	2'-4"	570
PIER SW03	UNIT 1	2	8"	2'-0"	0.980	0.500	1.700	1.220	1.100	2'-4"	385
PIER SW04	UNIT 1	2	8"	1'-6"	0.980	0.500	1.416	0.936	0.958	2'-1"	125
PIER SW04	UNIT 2	2	8"	1'-6"	0.980	0.500	1.411	0.931	0.955	2'-1"	130
PIER SW05	UNIT 2	2	8"	2'-0"	0.980	0.500	1.348	0.868	0.924	2'-4"	410
PIER SW06	UNIT 2	2	8"	2'-4"	0.980	0.500	1.060	0.580	0.780	2'-5"	610
PIER SW07	UNIT 2	2	8"	2'-0"	1.302	0.822	0.980	0.500	0.901	2'-4"	610
SOUTH ABUT	UNIT 2	2	8"	1'-6"	1.418	0.938	0.980	0.500	0.959	2'-1"	135

* SEE NOTE 2
** SEE NOTE 4, FORCE SHOWN IS PER PAD



JACKING PAD DIMENSION KEY

LB = LEFT BACK STATION
LA = LEFT AHEAD STATION
RB = RIGHT BACK STATION
RA = RIGHT AHEAD STATION

LEGEND

SUGGESTED JACKING LOCATIONS FOR FUTURE BEARING REPLACEMENT

SEE GIRDER SECTION SHEET FOR DEFINITION OF WORKING POINTS

NOTES

1. THIS DRAWING SHOWS DETAILS AND LOCATION OF JACKING PADS AND ADDITIONAL WEB STIFFENERS REQUIRED FOR FUTURE BEARING REPLACEMENT.

2. JACKING PAD DIMENSIONS AND LOCATIONS ARE BASED ON THE MINIMUM CLEARANCES SHOWN AND THE NOMINAL BEARING DIMENSIONS GIVEN ON BEARING LAYOUT SHEET. MAKE ADJUSTMENTS AS REQUIRED TO ACCOMMODATE ACTUAL BEARINGS SUPPLIED.

3. JACKING PADS ARE PROVIDED TO GIVE A JACKING SURFACE THAT IS APPROXIMATELY LEVEL AND TO ENSURE THAT JACKING LOADS ARE APPLIED TO THE CORRECT LOCATION.

   TAKE MEASURES TO CORRECT FOR ANY UNINTENDED SLOPE AND TO ENSURE THAT JACKS ARE POSITIVELY HELD IN POSITION ON THE JACKING PADS.

4. ESTIMATED JACKING FORCE IS GIVEN AT EACH PAD AND IS BASED ON UNFACTORED DEAD LOAD REACTIONS ONLY - NO LIVE LOAD IS INCLUDED AND NO ADDITIONAL ALLOWANCES HAVE BEEN MADE. MULTIPLE JACKS ARE ANTICIPATED AT EACH PAD.

   THESE FORCES MUST BE INCREASED TO ALLOW FOR JACK FRICTION AND OTHER FACTORS. RECOMMENDED MINIMUM JACK CAPACITY IS 2 TIMES THE TABULATED VALUES.

5. FORCES AND RECOMMENDATIONS ARE PROVIDED FOR INFORMATION ONLY AND MUST BE VERIFIED BY THE ENGINEER RESPONSIBLE FOR JACKING OPERATIONS.

6. JACKING PROVISIONS HAVE BEEN DESIGNED ASSUMING THAT THE STRUCTURE IS CLOSED TO TRAFFIC AT ALL TIMES THAT THE STRUCTURE IS NOT RESTING ON THE PERMANENT BEARINGS.

7. CONTROL JACKS TO ENSURE THAT FORCES APPLIED TO ALL JACKING PADS AT A SINGLE BEARING LOCATION ARE APPROXIMATELY EQUAL.

   IF THIS REQUIREMENT IS NOT MET, A COMPLETE ANALYSIS OF THE ABUTMENT AND PIER DIAPHRAGM SYSTEM WILL BE REQUIRED IN ORDER TO ACCOUNT FOR THE REDISTRIBUTION OF FORCES WITHIN THE SYSTEM.

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STRUCTURE B-40-855

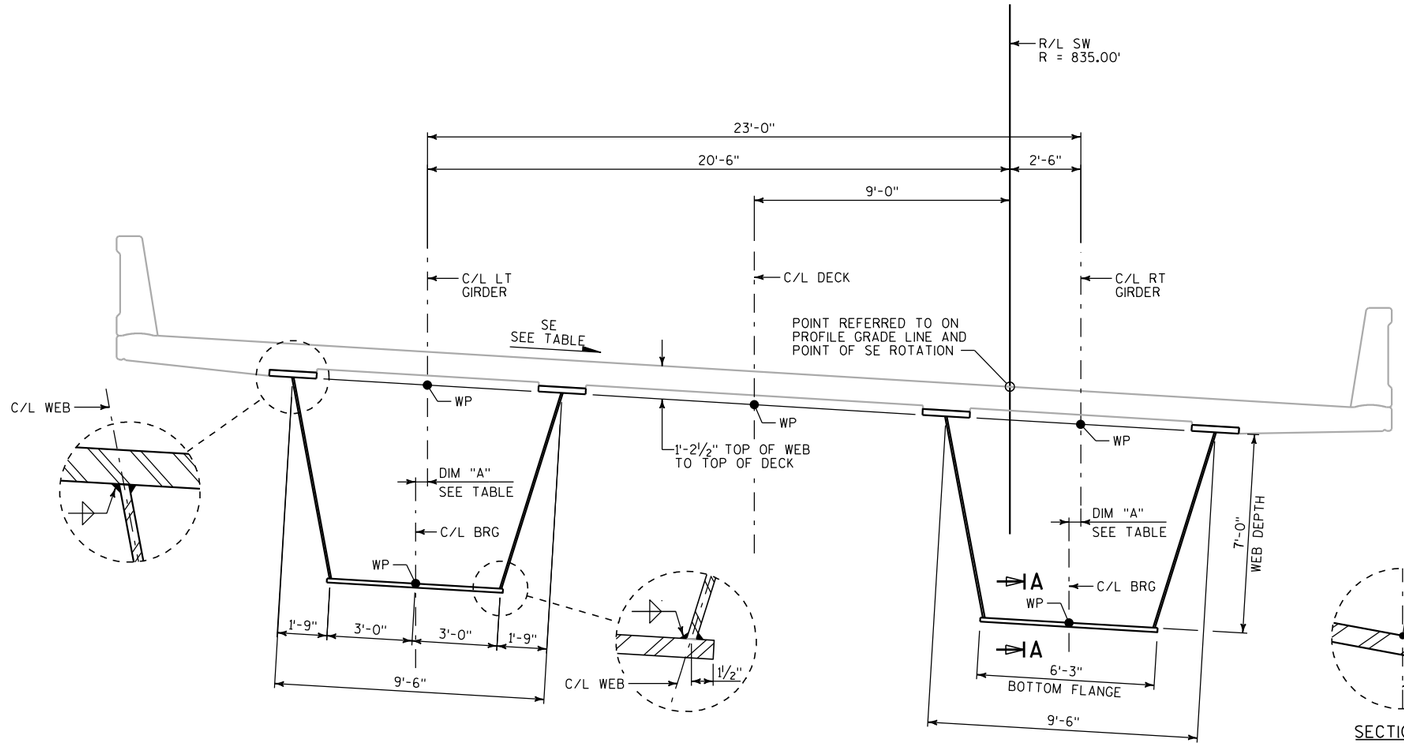
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JACKING PROVISIONS

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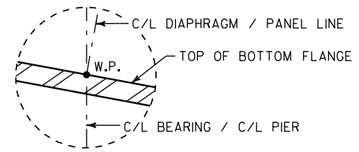
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TYPICAL SECTION

LOOKING UPSTATION



SECTION A-A

SUPERELEVATION TABLE		
STATION	SE (%)	DIM. "A"
577SW+92.00	0.00	-
579SW+59.89 C/L BRG W ABUT	-4.66	3 15/16"
580SW+08.00	-6.00	5"
581SW+13.89 C/L PIER SW01	-6.00	5"
583WH+33.89 C/L PIER SW02	-6.00	5"
584SW+96.89 C/L PIER SW03	-6.00	5"
586SW+11.39 C/L PIER SW04	-6.00	5"
587SW+31.89 C/L PIER SW05	-6.00	5"
589SW+02.89 C/L PIER SW06	-6.00	5"
591SW+26.89 C/L PIER SW07	-6.00	5"
592SW+76.89 C/L BRG S ABUT	-6.00	5"
593SW+01.00	-6.00	-

POSITIVE SUPERELEVATION MEANS RIGHT EDGE OF DECK IS HIGHER WHEN LOOKING UPSTATION.

SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES.

NOTES

1. FOR ADDITIONAL STRUCTURAL STEEL NOTES, SEE GENERAL NOTES SHEET.
2. ENSURE THE STABILITY OF ALL COMPONENTS DURING FABRICATION, HANDLING, TRANSPORTATION AND ERECTION UNTIL THE STRUCTURAL STEEL IS IN FINAL POSITION WITH ALL PERMANENT BRACING, CONNECTIONS AND SUPPORTS IN PLACE AND THE CONCRETE IN THE DECK HAS REACHED THE SPECIFIED DESIGN STRENGTH.

   DESIGN AND USE TEMPORARY CROSS FRAMES, SUPPORTS, BRACES OR WHATEVER OTHER MEANS AND METHODS DEEMED NECESSARY.
3. CARRY OUT DESIGN CALCULATIONS AS REQUIRED TO VERIFY MATERIAL STRESSES AND SUPPORT FORCES (INCLUDING UPLIFT) DURING ALL STAGES OF ERECTION AS REQUIRED BY AASHTO LRFD SPECIFICATIONS.
4. MINIMUM FILLET WELD SIZE:

THICKNESS OF THICKER PART JOINED, "T"	MINIMUM FILLET WELD SIZE
T <= ½"	3/16"
½" < T <= ¾"	¼"
¾" < T <= 1½"	5/16"
T > 1½"	⅜"

MINIMUM WELD SIZES SHOWN IN TABLE ABOVE SHALL BE USED WHEN A SIZE IS NOT OTHERWISE SPECIFIED OR SHOWN.

WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART BEING JOINED.

FOR ALL WELDS 5/16" OR LARGER, THE MINIMUM PASS SIZE SHALL BE 5/16".

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STRUCTURE B-40-855

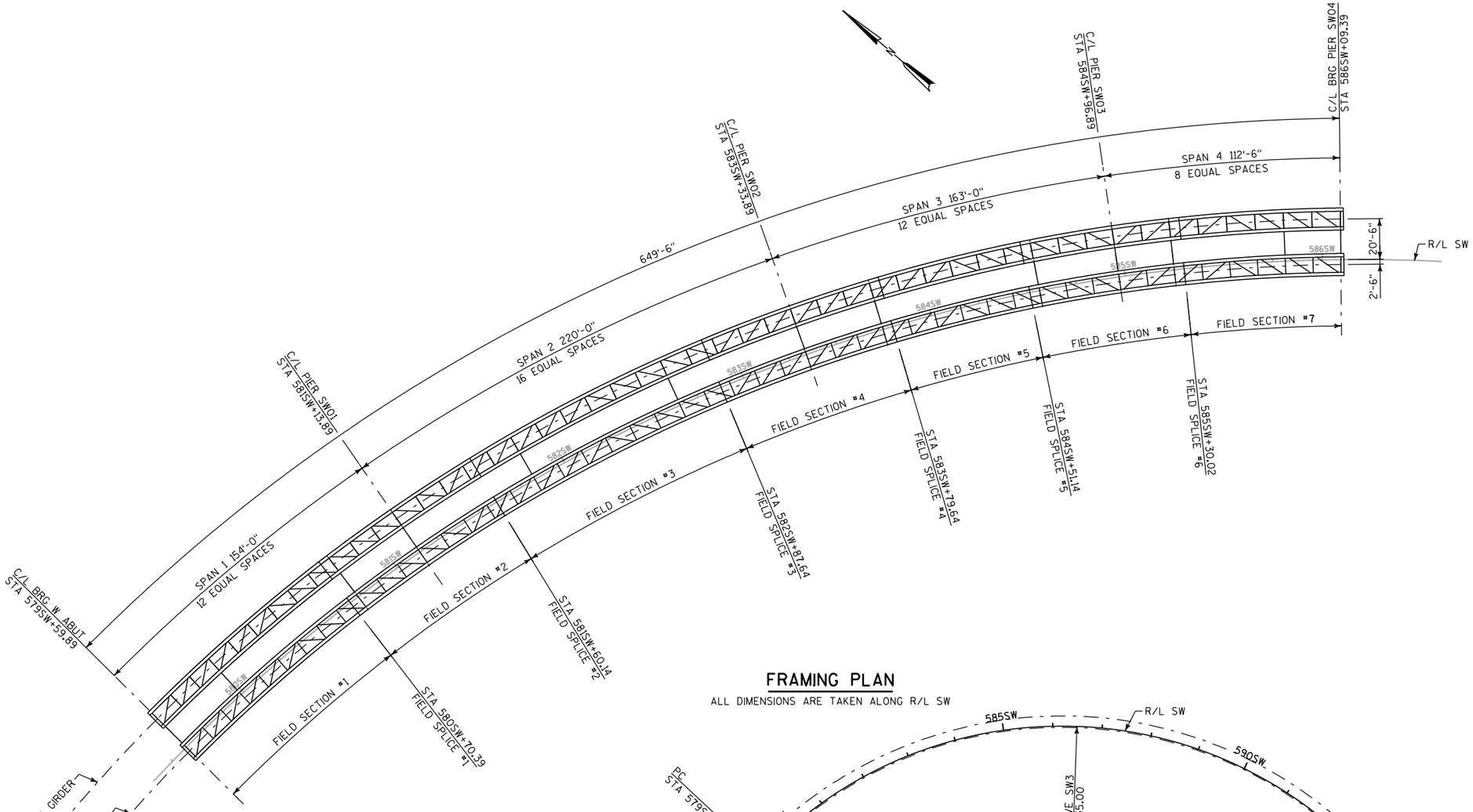
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GIRDER SECTION

SHEET 33 OF 96

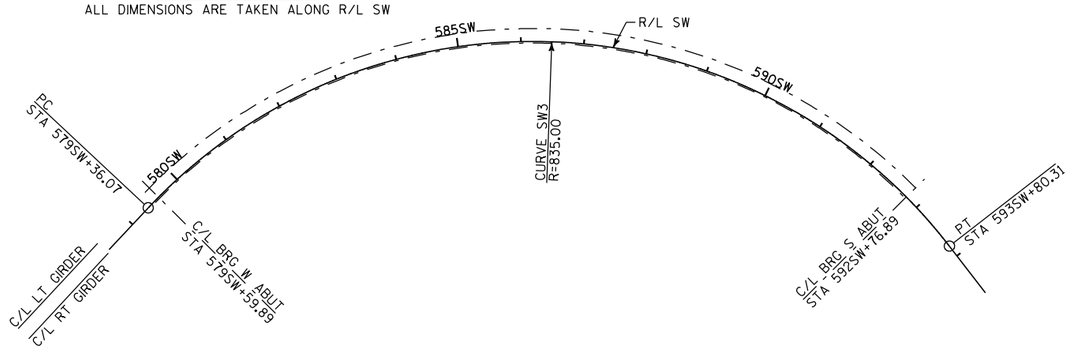
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FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG R/L SW



PLAN LAYOUT SKETCH

NOT TO SCALE

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STRUCTURE B-40-855

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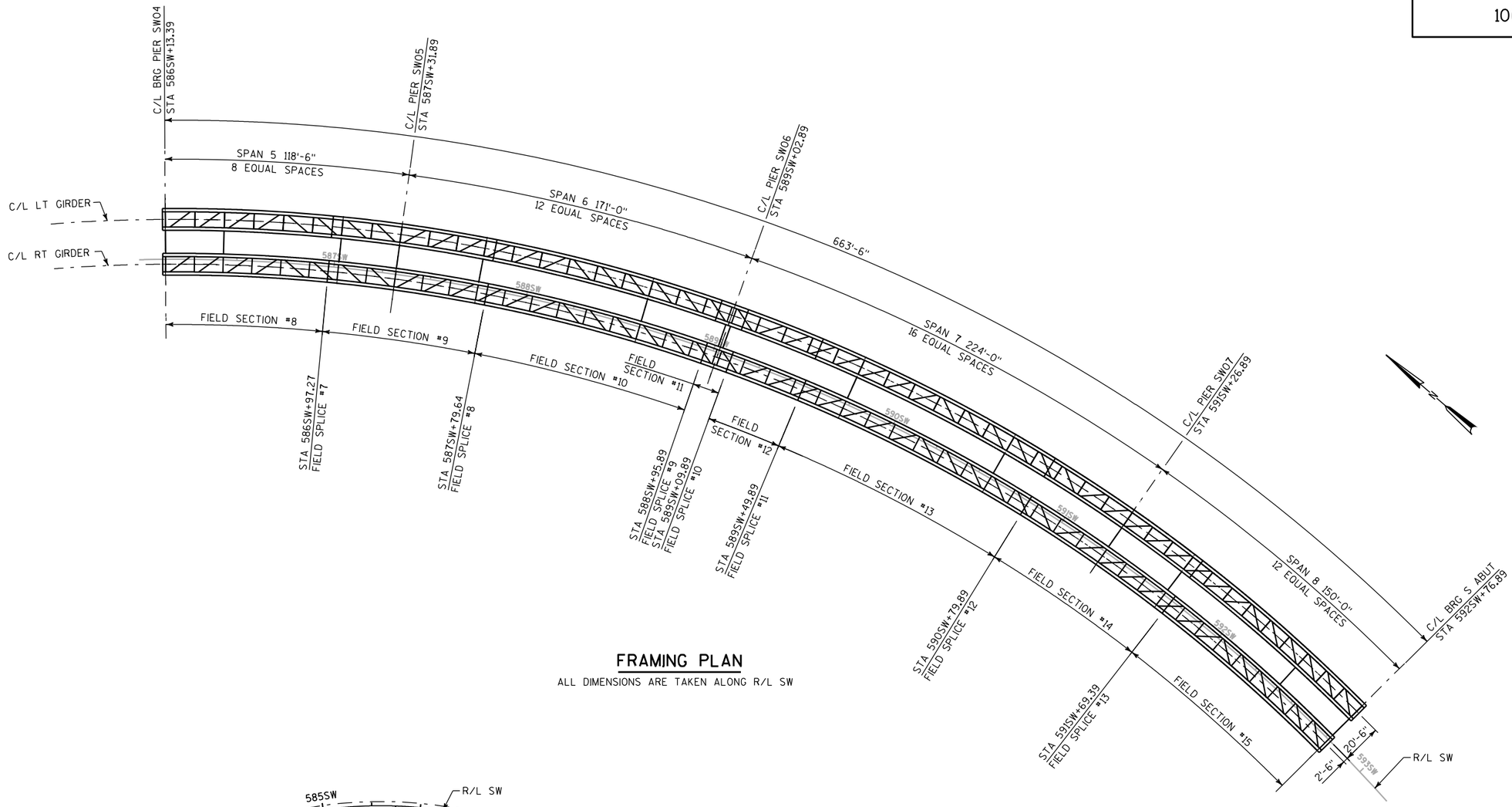
UNIT 1
FRAMING PLAN

SHEET 34 OF 96

8

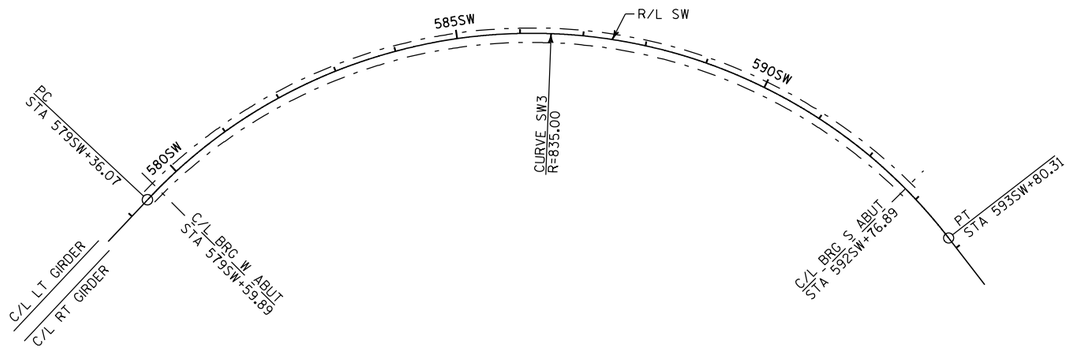
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STATE PROJECT NUMBER
1060-33-80



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG R/L SW



PLAN LAYOUT SKETCH

NOT TO SCALE

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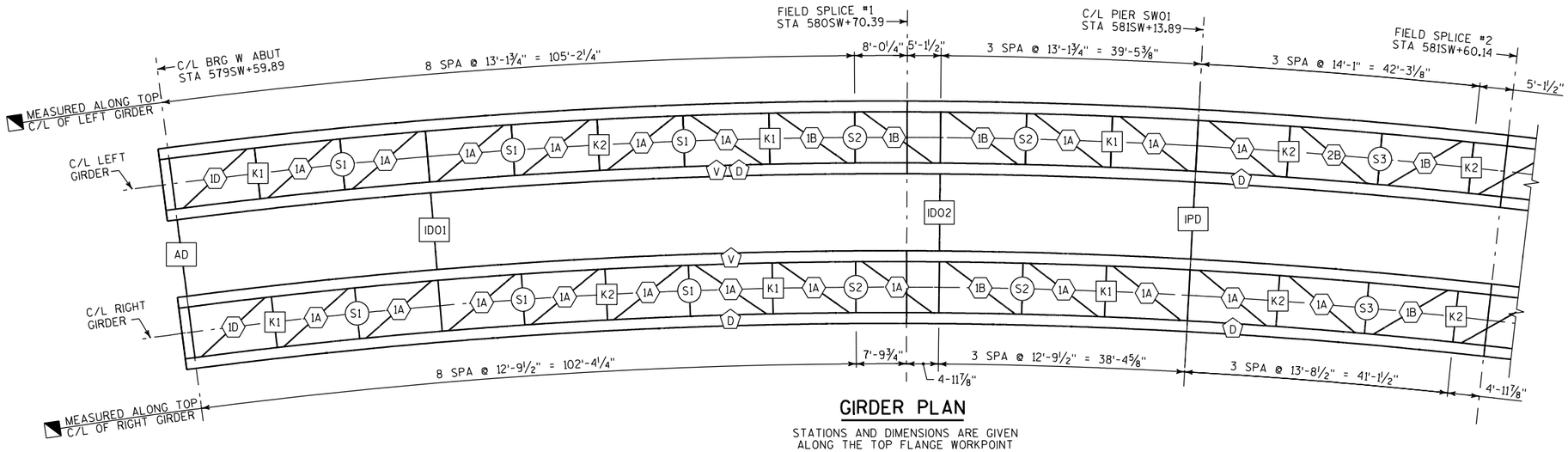
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UNIT 2
FRAMING PLAN

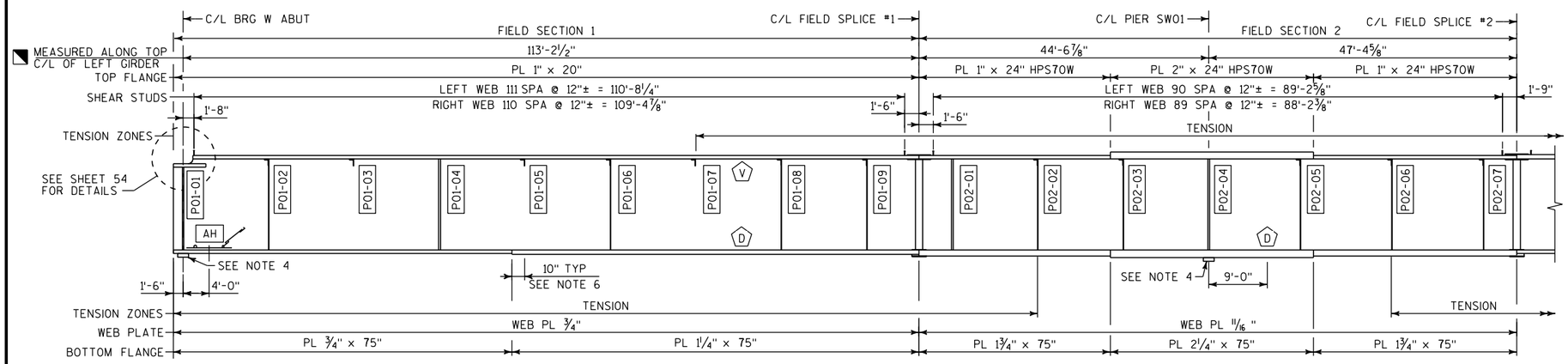
SHEET 35 OF 96

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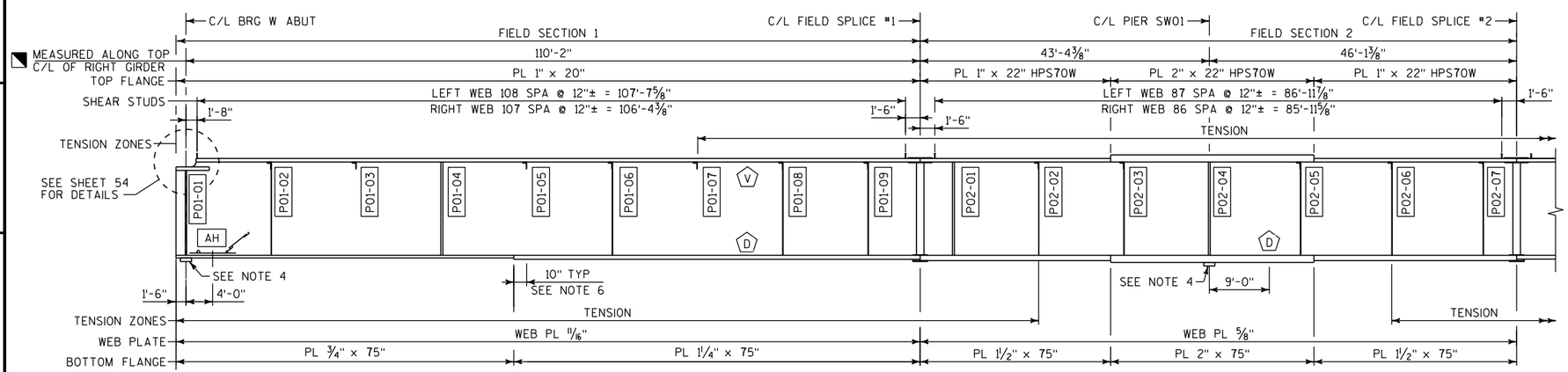


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
PED	PIER END DIAPHRAGM, SEE SHEETS 52, 54 & 55.
ICH	PIER SW06 INTEGRAL CROSS HEAD, SEE SHEETS 56 & 57.
IDXX	INTERMEDIATE DIAPHRAGM, SEE SHEETS 53, 54 & 55. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE SHEET 48 FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE SHEET 46.
V	WEB PLATE VENT HOLE, SEE SHEET 46.
AH	BOTTOM FLANGE ACCESS HATCH, SEE SHEET 44.
AC	END DIAPHRAGM ACCESS DOOR, SEE SHEET 45.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE MISCELLANEOUS GIRDER DETAILS SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. 'TENSION' DENOTES ZONES OF TOP AND BOTTOM FLANGES ASSUMED TO CARRY TENSILE STRESS IN THE COMPLETED STRUCTURE. FIELD WELDING TO TENSION FLANGES AND WEB IS PROHIBITED, EXCEPT FOR SHEAR STUD CONNECTIONS TO THE TOP FLANGE.
4. BEVELED TOP PLATE, SEE BEARING SHEETS FOR DETAILS. THE DIMENSIONS OF THE BEVELED TOP PLATE SHALL BE COORDINATED WITH THE BEARING MANUFACTURER. PAYMENT FOR THE BEVELED TOP PLATE IS INCLUDED WITH THE BID ITEM "STRUCTURAL STEEL HS".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.
6. LOCATE FLANGE SHOP SPLICE 10" FROM PANEL POINT, TYP. SEE DETAIL ON SHEET 46.

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

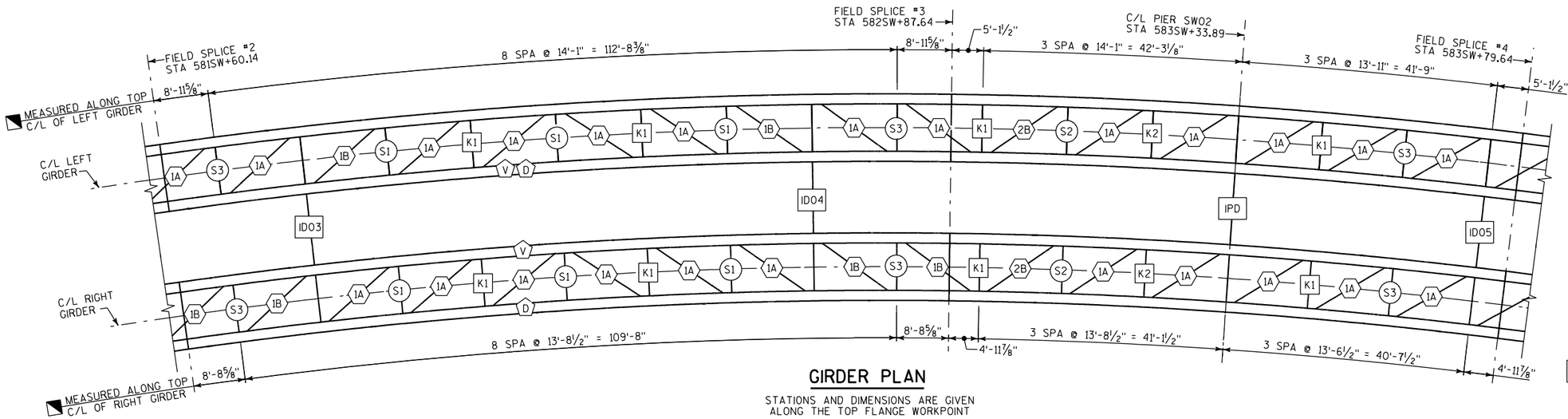
STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 1 & 2

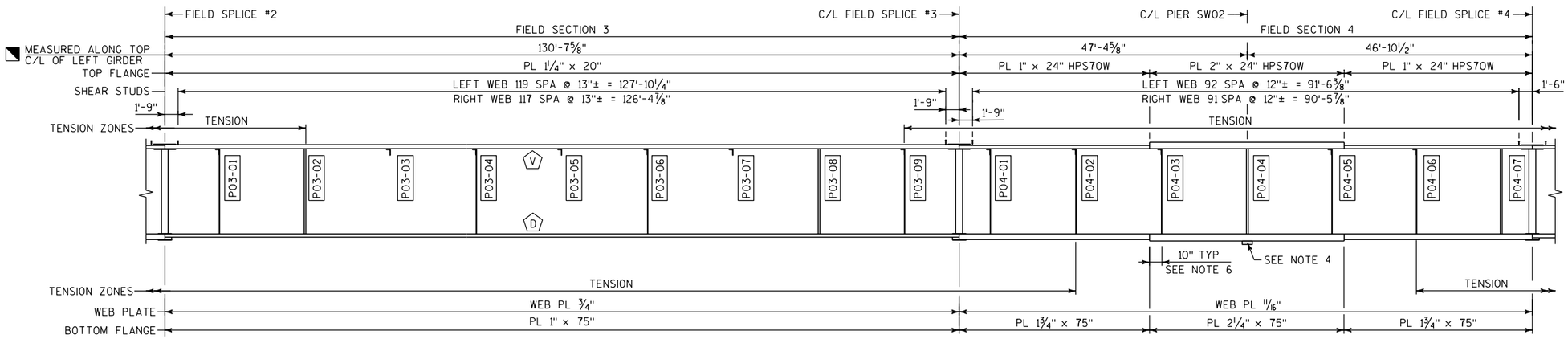
SHEET 36 OF 96

STATE PROJECT NUMBER
1060-33-80

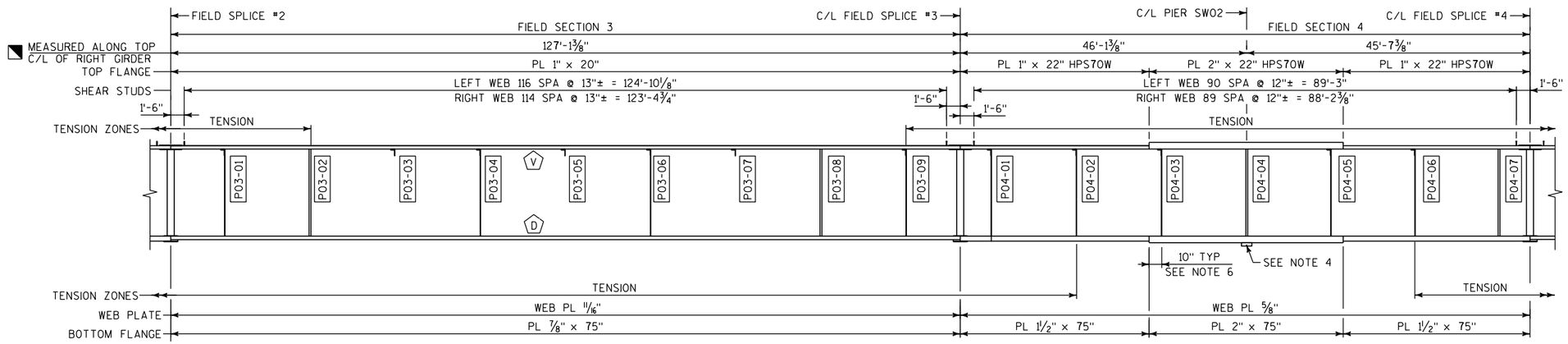


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
PED	PIER END DIAPHRAGM, SEE SHEETS 52, 54 & 55.
ICH	PIER SW06 INTEGRAL CROSS HEAD, SEE SHEETS 56 & 57.
IDXX	INTERMEDIATE DIAPHRAGM, SEE SHEETS 53, 54 & 55. "XX" INDICATES DIAPHRAGM NUMBER.
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D	BOTTOM FLANGE DRAIN HOLE, SEE SHEET 46.
V	WEB PLATE VENT HOLE, SEE SHEET 46.
AH	BOTTOM FLANGE ACCESS HATCH, SEE SHEET 44.
AC	END DIAPHRAGM ACCESS DOOR, SEE SHEET 45.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
	SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE MISCELLANEOUS GIRDER DETAILS SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
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5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.
6. LOCATE FLANGE SHOP SPLICE 10" FROM PANEL POINT, TYP. SEE DETAIL ON SHEET 46.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

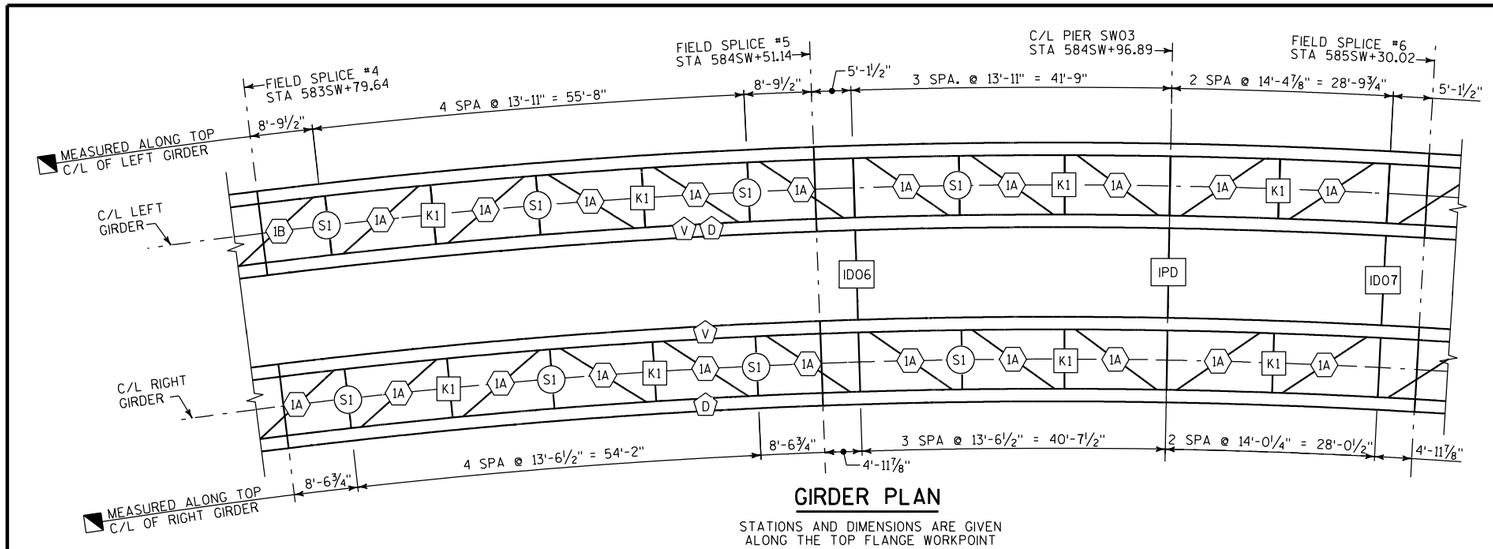
STRUCTURE B-40-855

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 3 & 4

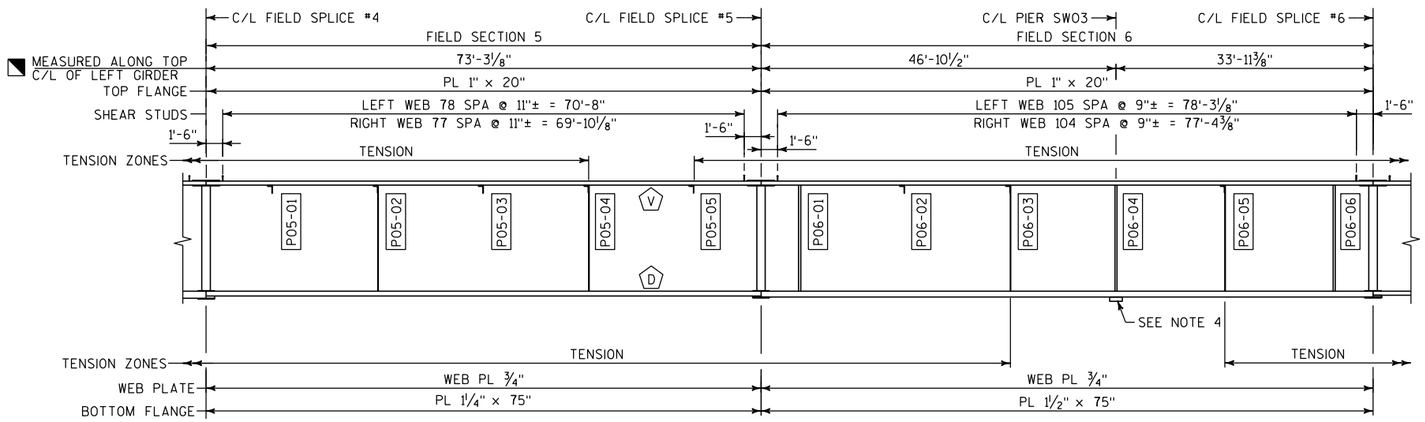
SHEET 37 OF 96

STATE PROJECT NUMBER
1060-33-80

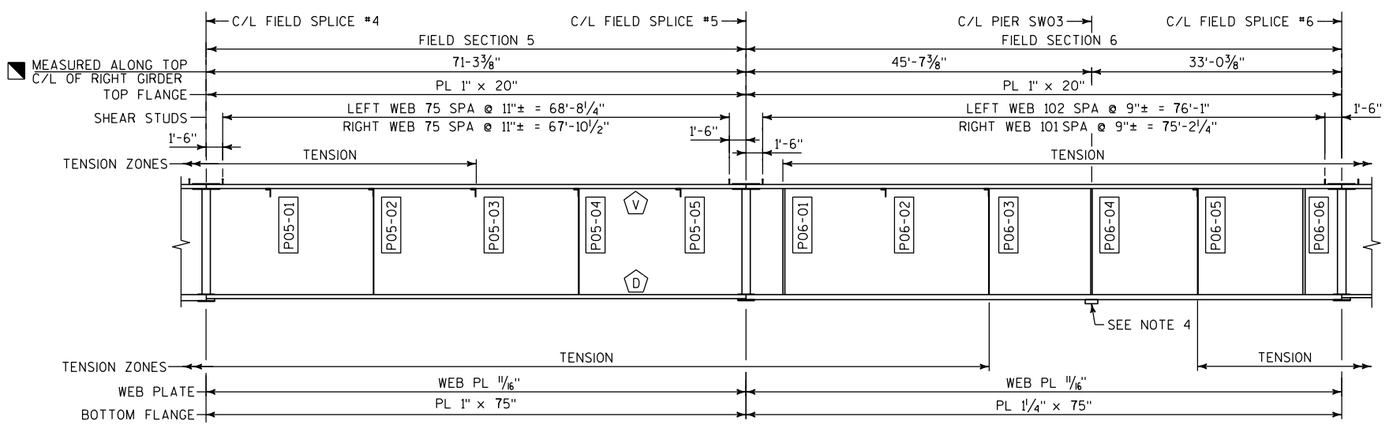


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
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PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

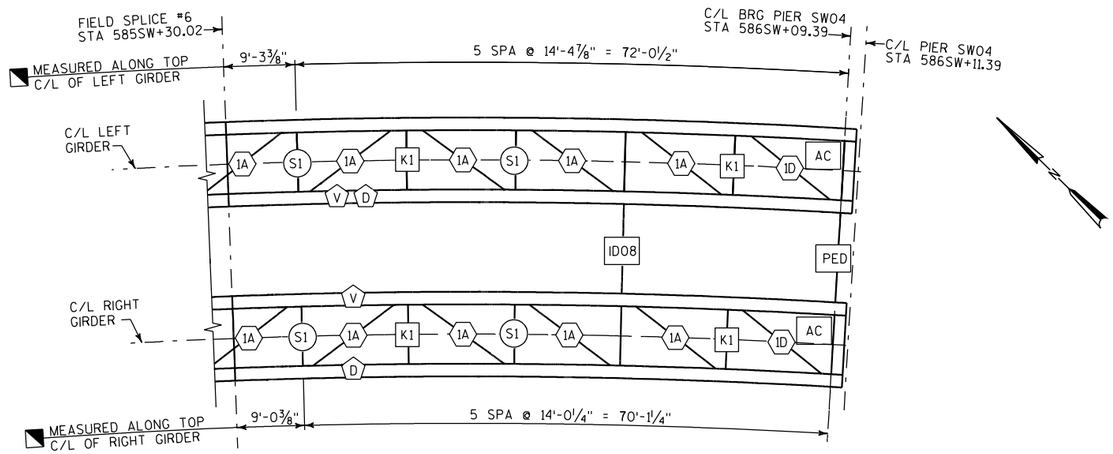
STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 5 & 6

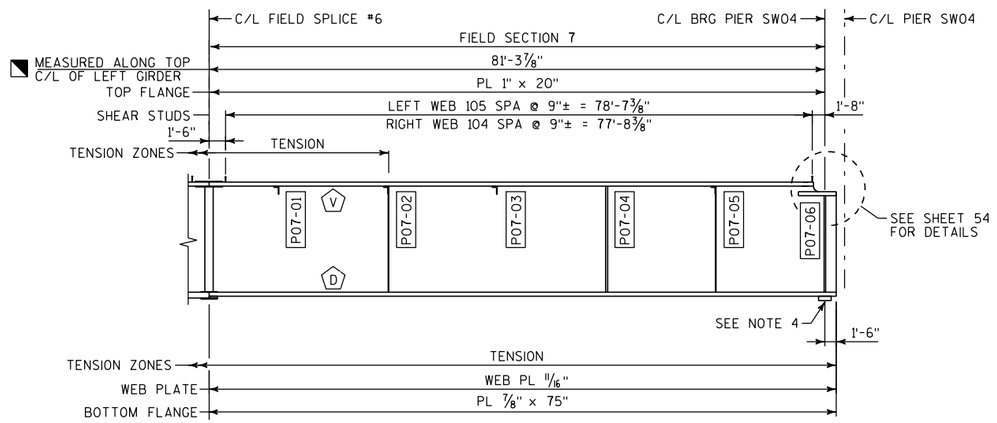
SHEET 38 OF 96

STATE PROJECT NUMBER
1060-33-80

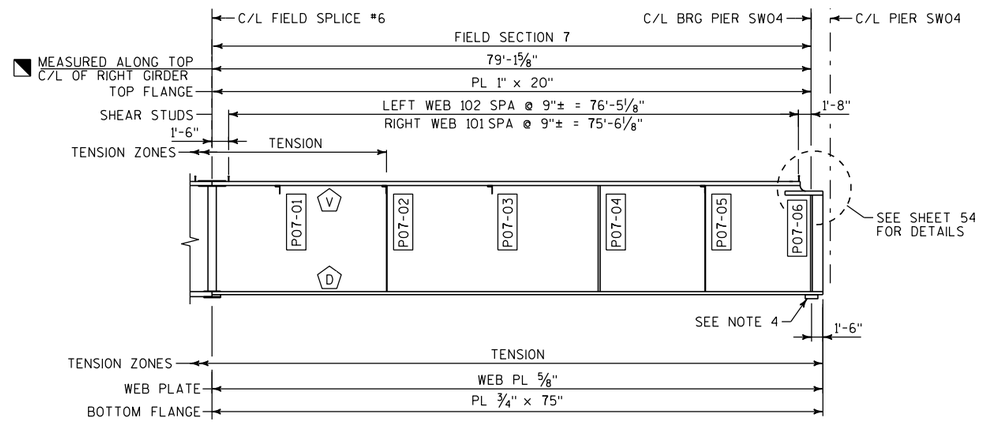


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN
ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
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PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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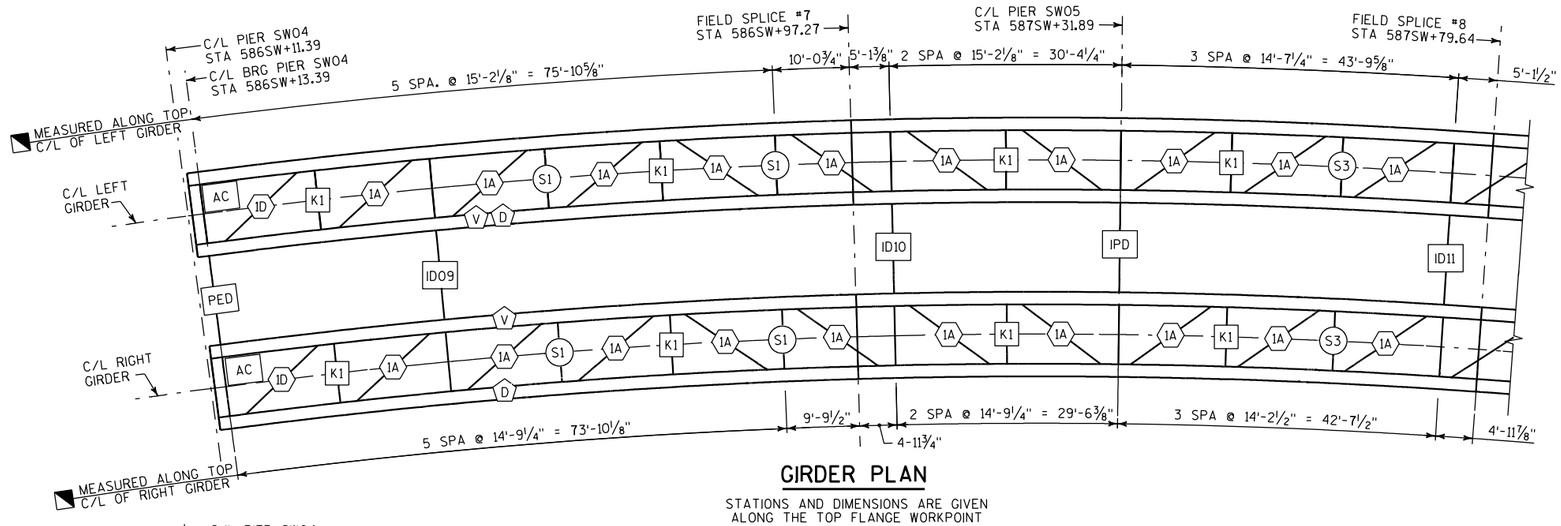
GIRDER PLAN AND ELEVATION: FIELD SECTION 7

SHEET 39 OF 96

8

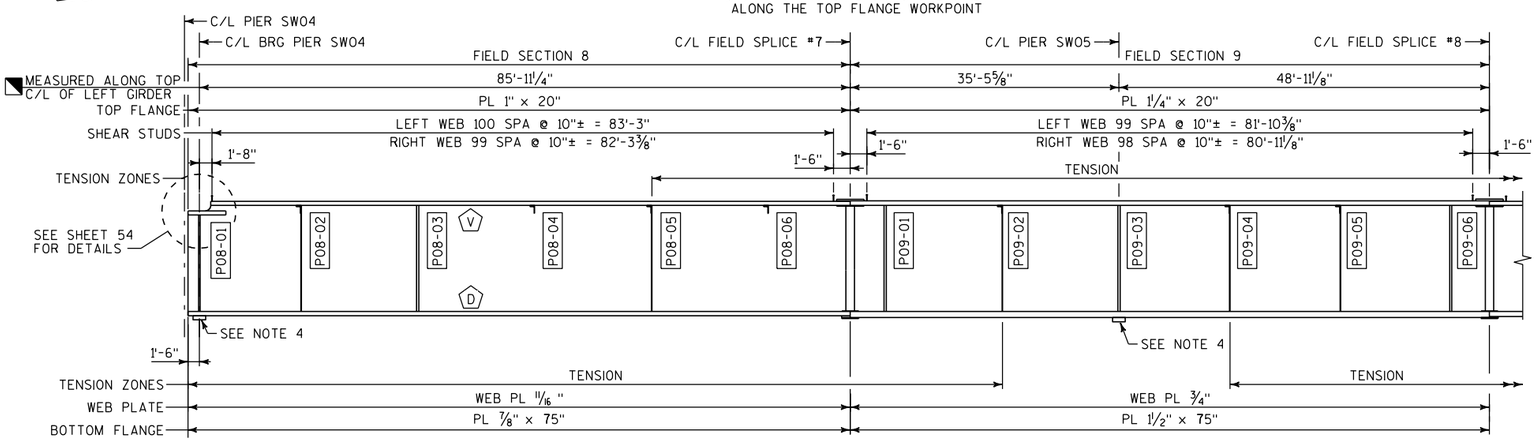
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STATE PROJECT NUMBER
1060-33-80

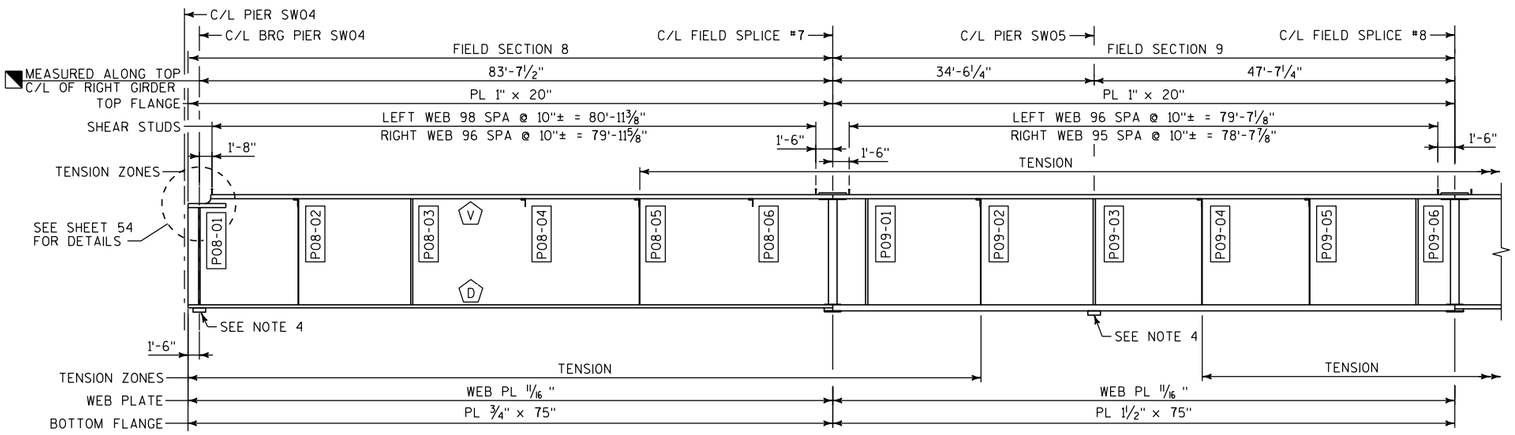


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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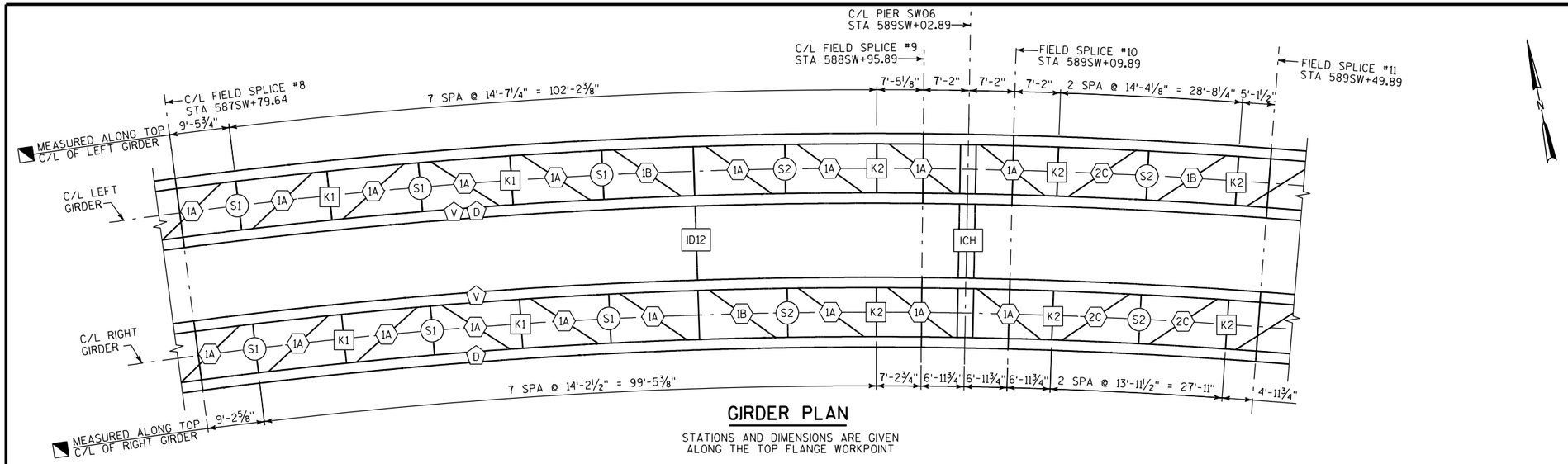
GIRDER PLAN AND ELEVATION: FIELD SECTIONS 8 & 9

SHEET 40 OF 96

8

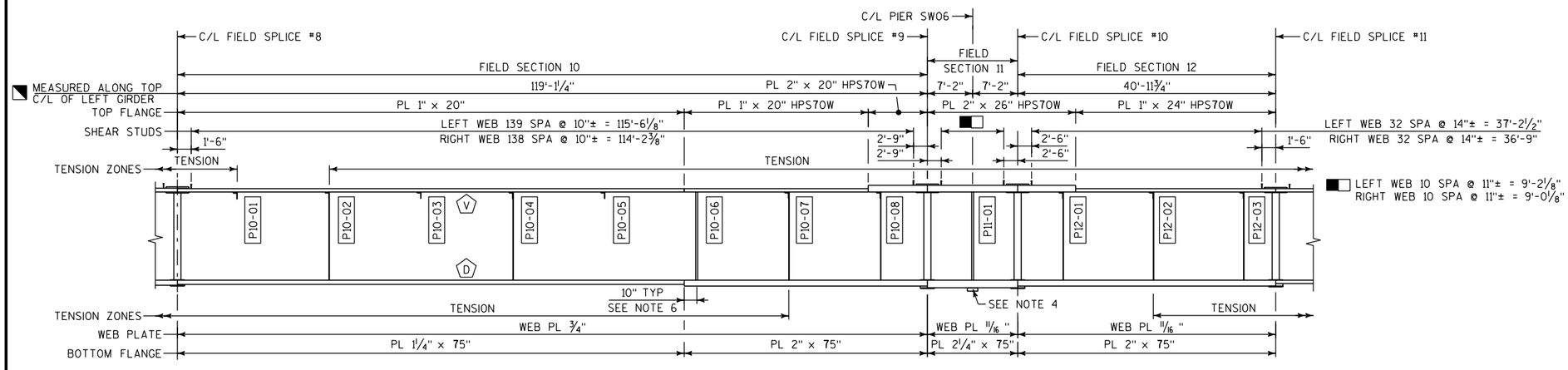
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STATE PROJECT NUMBER
1060-33-80

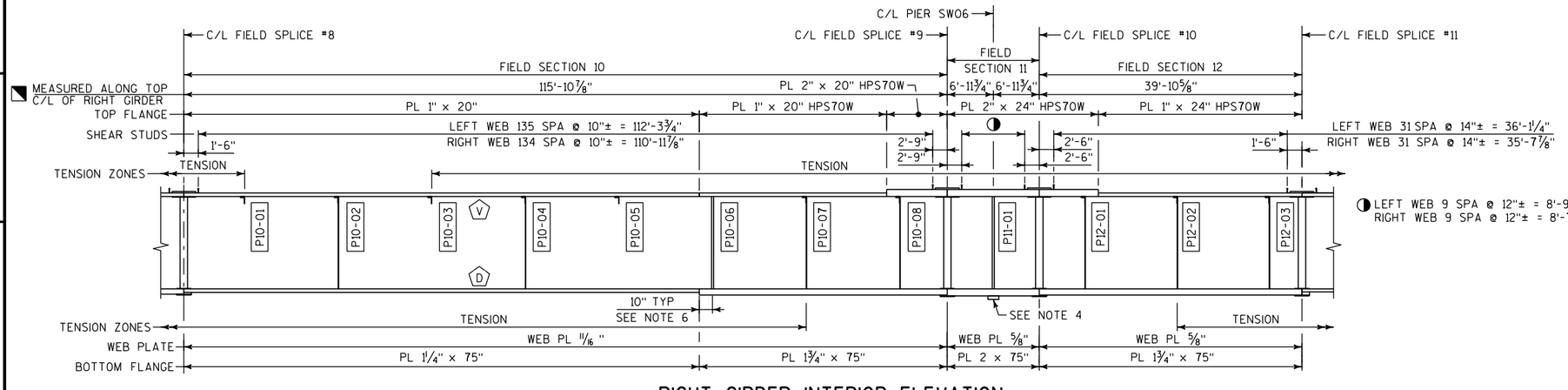


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
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6. LOCATE FLANGE SHOP SPLICE 10" FROM PANEL POINT, TYP. SEE DETAIL ON SHEET 46.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

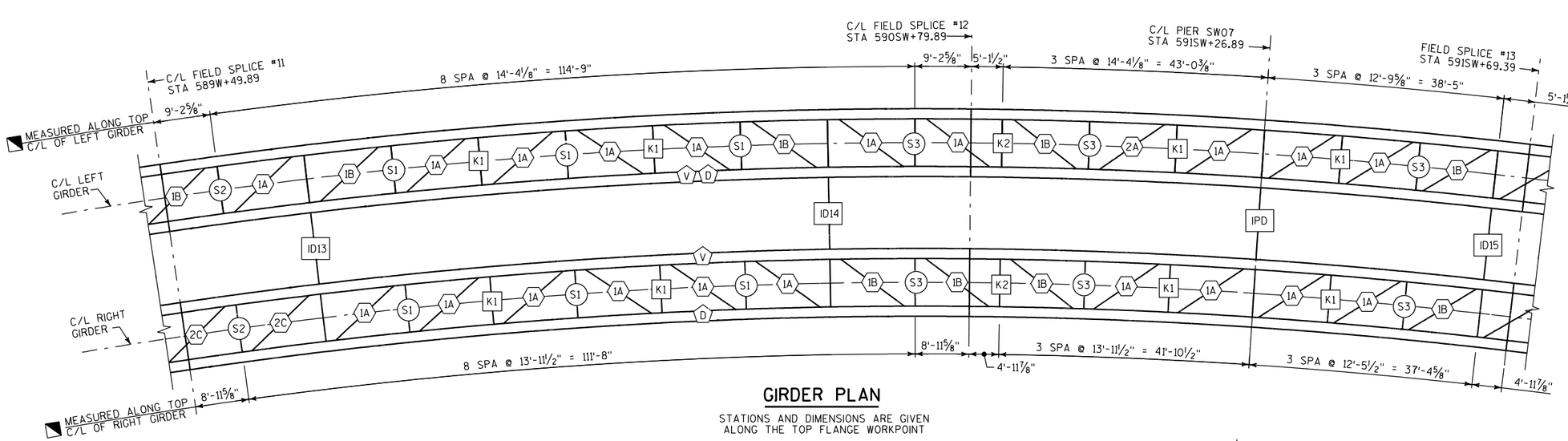
STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 10 THRU 12

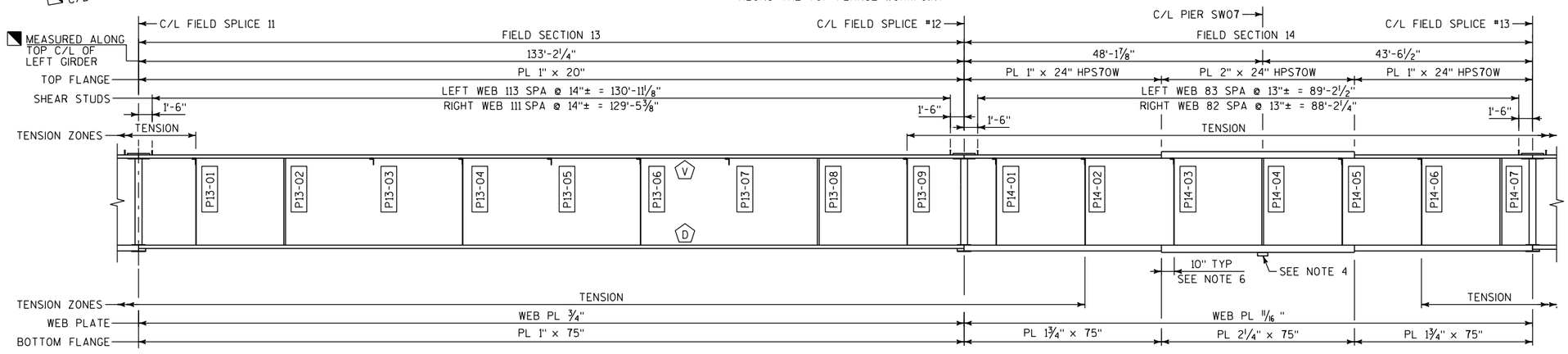
SHEET 41 OF 96

STATE PROJECT NUMBER
1060-33-80

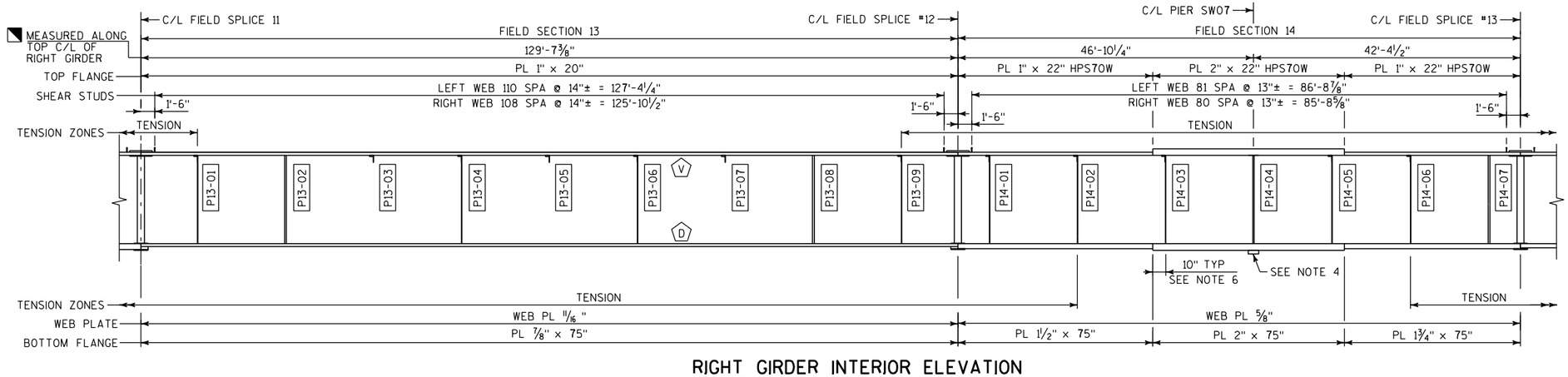


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
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4. BEVELED TOP PLATE, SEE BEARING SHEETS FOR DETAILS. THE DIMENSIONS OF THE BEVELED TOP PLATE SHALL BE COORDINATED WITH THE BEARING MANUFACTURER. PAYMENT FOR THE BEVELED TOP PLATE IS INCLUDED WITH THE BID ITEM "STRUCTURAL STEEL HS".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.
6. LOCATE FLANGE SHOP SPLICE 10" FROM PANEL POINT, TYP. SEE DETAIL ON SHEET 46.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

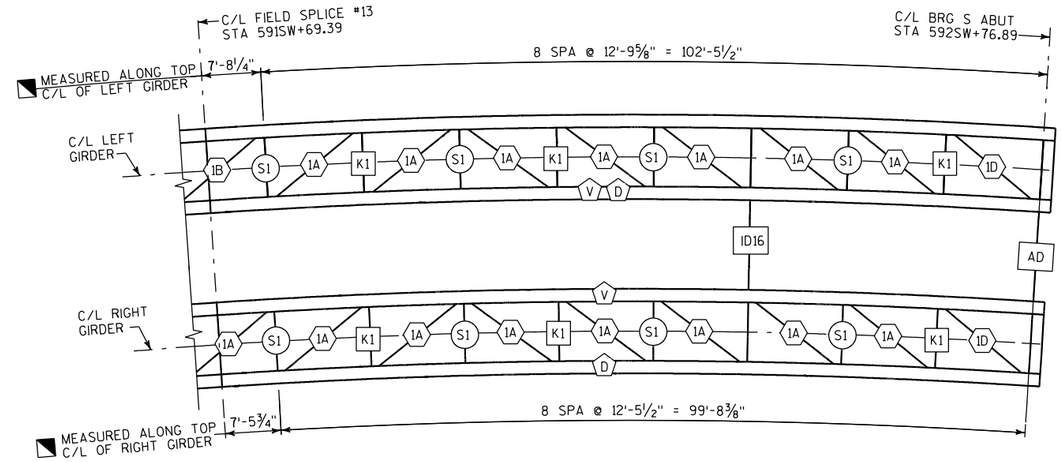
STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 13 & 14

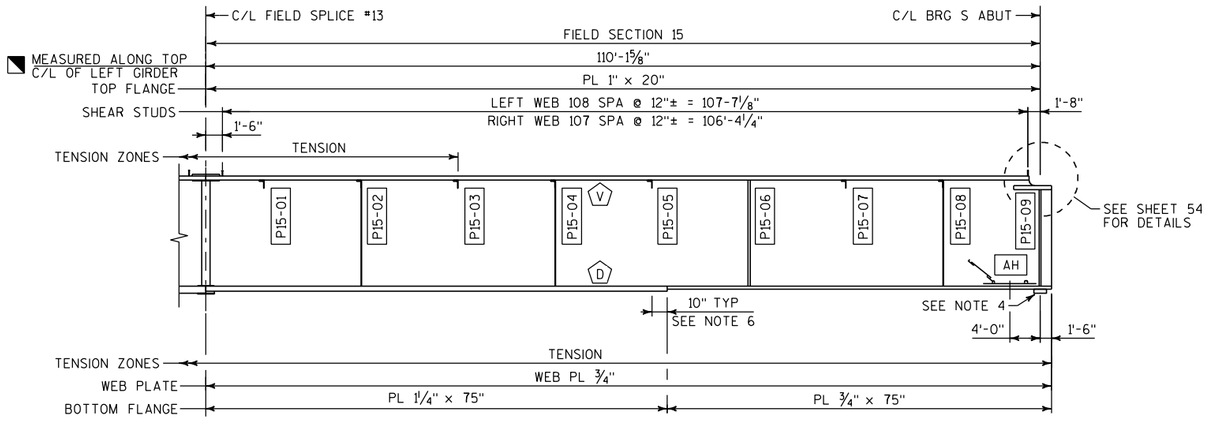
SHEET 42 OF 96

STATE PROJECT NUMBER
1060-33-80

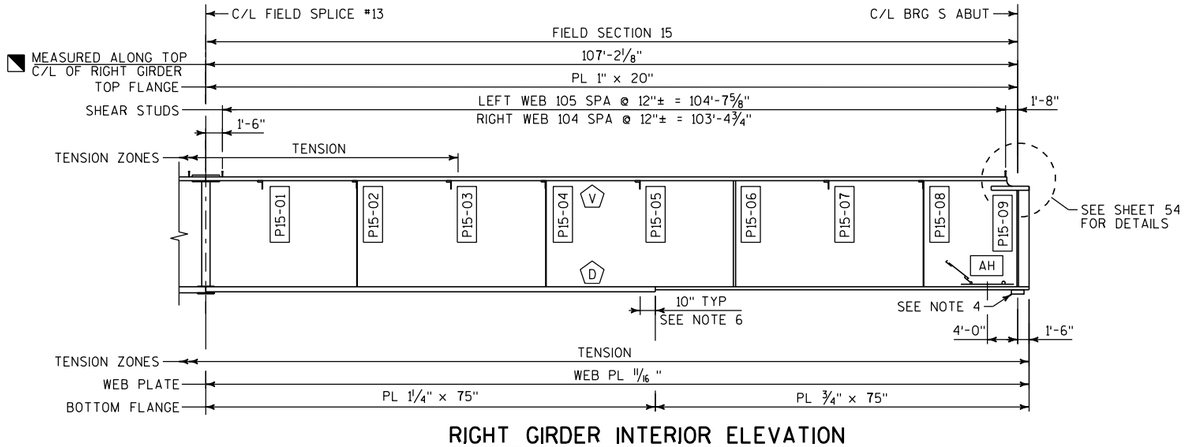


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE SHEET 47.
S1	TRANSVERSE STRUT IDENTIFIER, SEE SHEET 47.
AD	ABUTMENT DIAPHRAGM, SEE SHEETS 50, 54 & 55.
IPD	INTERIOR PIER DIAPHRAGM, SEE SHEETS 51, 54 & 55.
PED	PIER END DIAPHRAGM, SEE SHEETS 52, 54 & 55.
ICH	PIER SW06 INTEGRAL CROSS HEAD, SEE SHEETS 56 & 57.
IDXX	INTERMEDIATE DIAPHRAGM, SEE SHEETS 53, 54 & 55. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE SHEET 48 FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE SHEET 46.
V	WEB PLATE VENT HOLE, SEE SHEET 46.
AH	BOTTOM FLANGE ACCESS HATCH, SEE SHEET 44.
AC	END DIAPHRAGM ACCESS DOOR, SEE SHEET 45.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE MISCELLANEOUS GIRDER DETAILS SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. 'TENSION' DENOTES ZONES OF TOP AND BOTTOM FLANGES ASSUMED TO CARRY TENSILE STRESS IN THE COMPLETED STRUCTURE. FIELD WELDING TO TENSION FLANGES AND WEB IS PROHIBITED, EXCEPT FOR SHEAR STUD CONNECTIONS TO THE TOP FLANGE.
4. BEVELED TOP PLATE, SEE BEARING SHEETS FOR DETAILS. THE DIMENSIONS OF THE BEVELED TOP PLATE SHALL BE COORDINATED WITH THE BEARING MANUFACTURER. PAYMENT FOR THE BEVELED TOP PLATE IS INCLUDED WITH THE BID ITEM "STRUCTURAL STEEL HS".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.
6. LOCATE FLANGE SHOP SPLICE 10" FROM PANEL POINT, TYP. SEE DETAIL ON SHEET 46.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

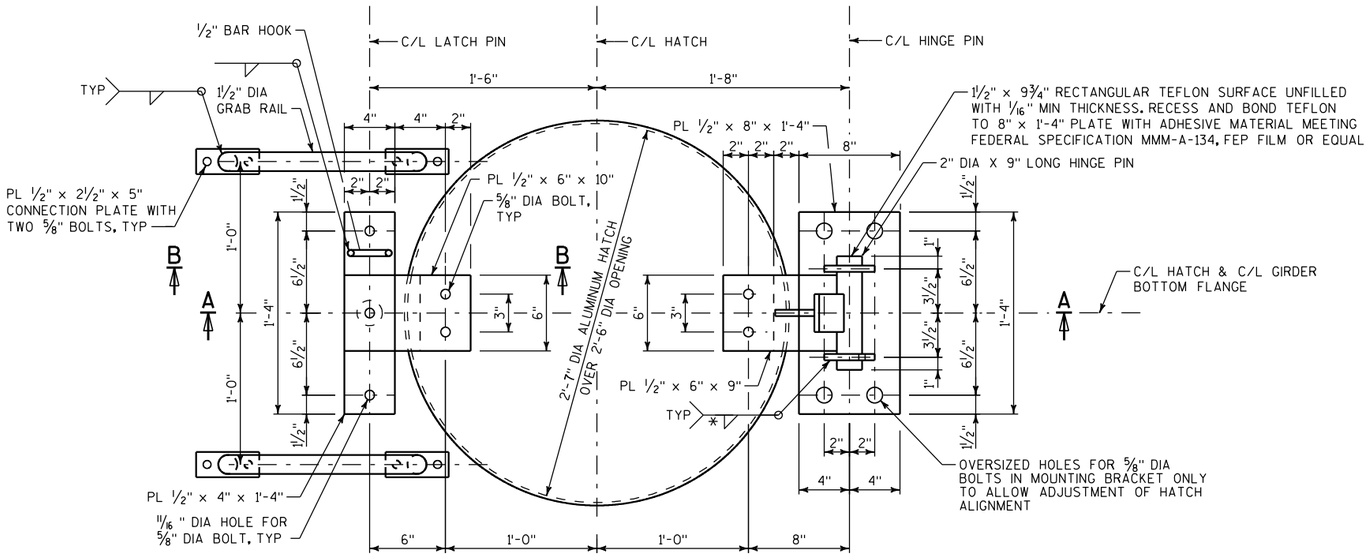
GIRDER PLAN AND ELEVATION: FIELD SECTION 15

SHEET 43 OF 96

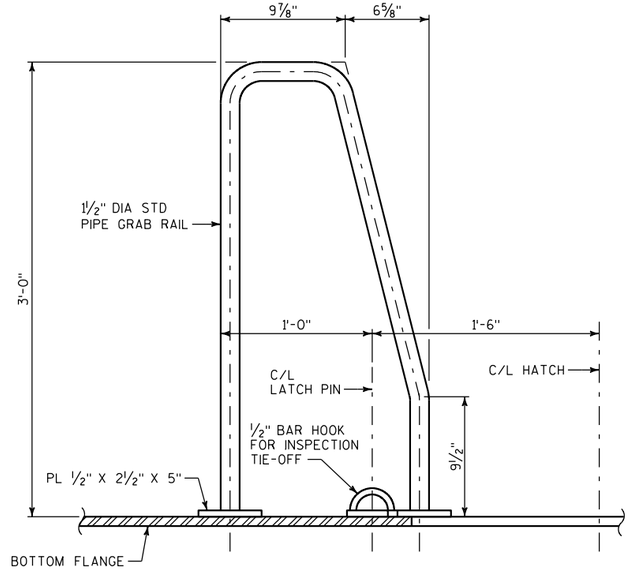
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8

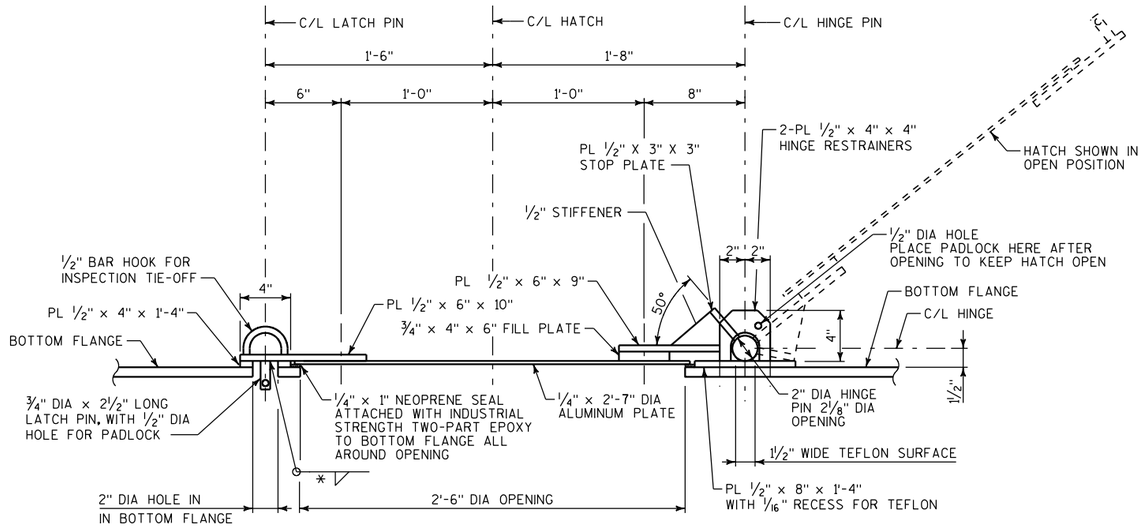
STATE PROJECT NUMBER
1060-33-80



ACCESS HATCH PLAN



SECTION B-B



SECTION A-A

*SEE TABLE OF FILLET WELD SIZES ON GIRDER SECTION SHEET.

NOTES:

1. ALL BOLTS SHOWN ARE ⅝" DIAMETER ASTM A325 TYPE 1.
2. FOUR ACCESS HATCHES REQUIRED. SEE GIRDER PLAN AND ELEVATIONS SHEETS FOR HATCH LOCATIONS.
3. STEEL FOR HATCH IS ASTM A709 GRADE 50, EXCEPT THE HATCH PLATE SHALL BE MADE OF ALUMINUM PLATE CONFORMING TO ASTM B209, ALLOY 6061-T651 AND THE PIPE GRAB RAIL SHALL BE ASTM A53.
4. THE INTERIOR COMPONENTS OF THE HATCH INCLUDING THE PIPE GRAB RAIL SHALL BE PAINTED TO MATCH THE INTERIOR COLOR OF THE BOX GIRDER.
5. ALL EXTERIOR COMPONENTS OF THE HATCH AND THE ALUMINUM PLATE SHALL BE PAINTED TO MATCH THE EXTERIOR COLOR OF THE BOX GIRDER. THE CONTRACTOR SHALL FOLLOW THE COATING MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION AND PRIMING OF THE ALUMINUM PLATE.
6. ALL MATERIALS SHOWN ON THIS SHEET FOR THE ACCESS HATCH AND GRAB RAIL WILL BE PAID FOR AT THE UNIT BID FOR "STRUCTURAL STEEL HS".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

ACCESS HATCH DETAILS

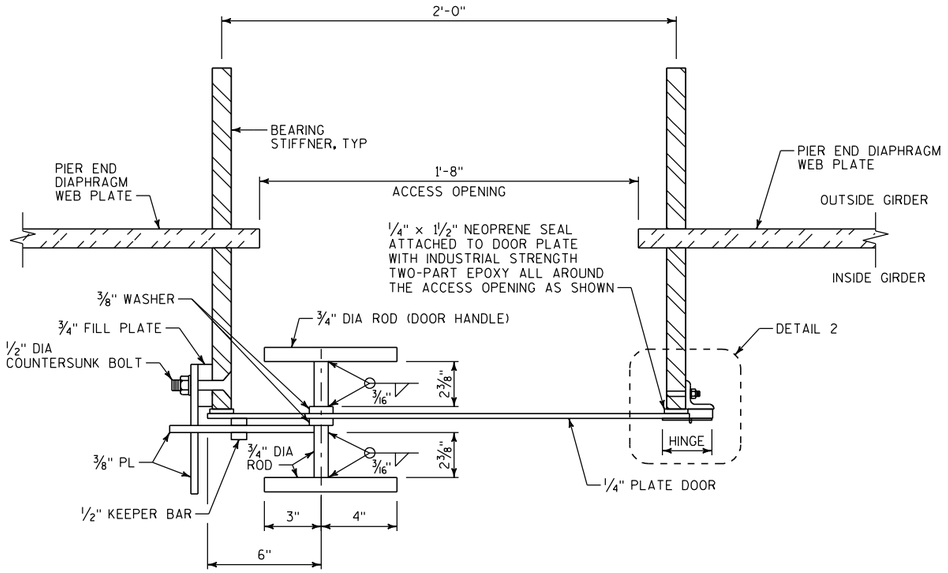
SHEET 44 OF 96

8

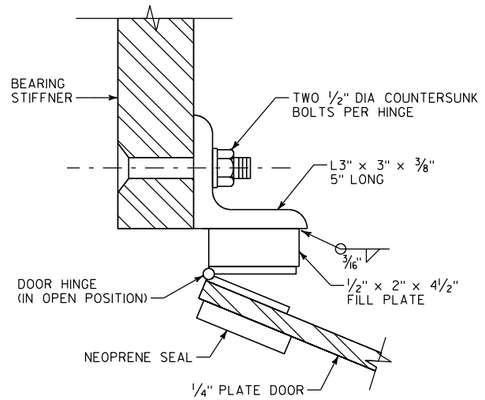
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STATE PROJECT NUMBER

1060-33-80

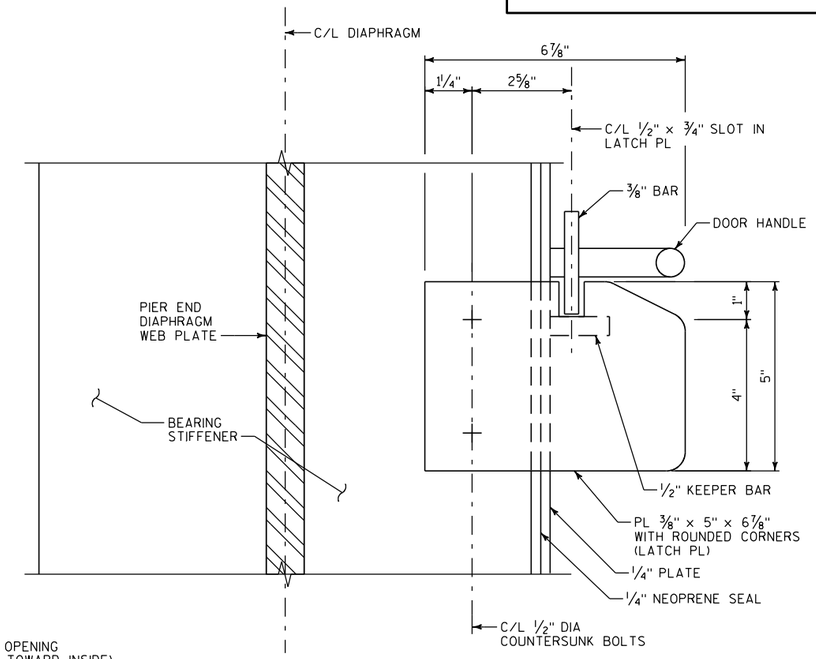


SECTION A-A

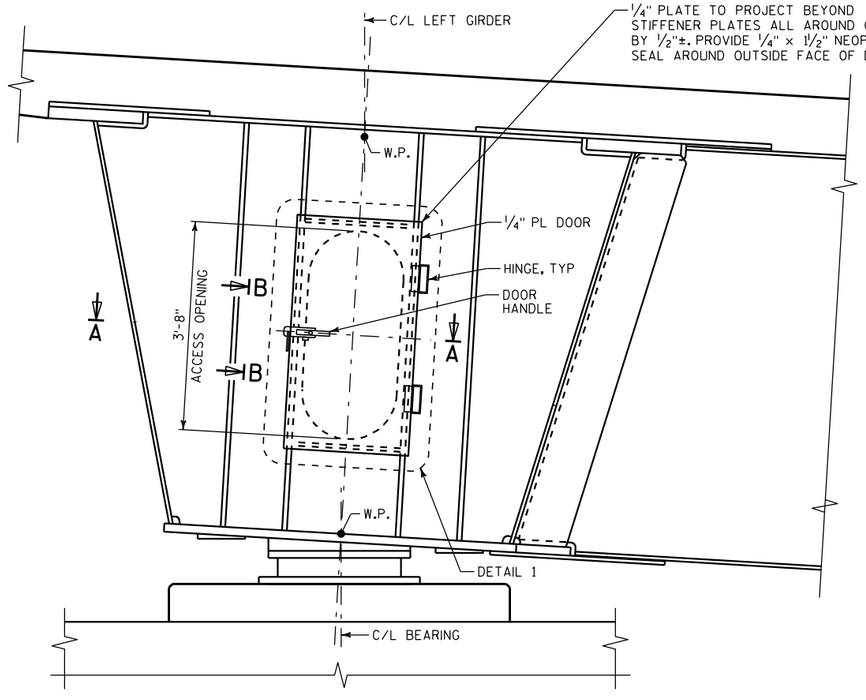


DETAIL 2

(WITH DOOR OPEN)

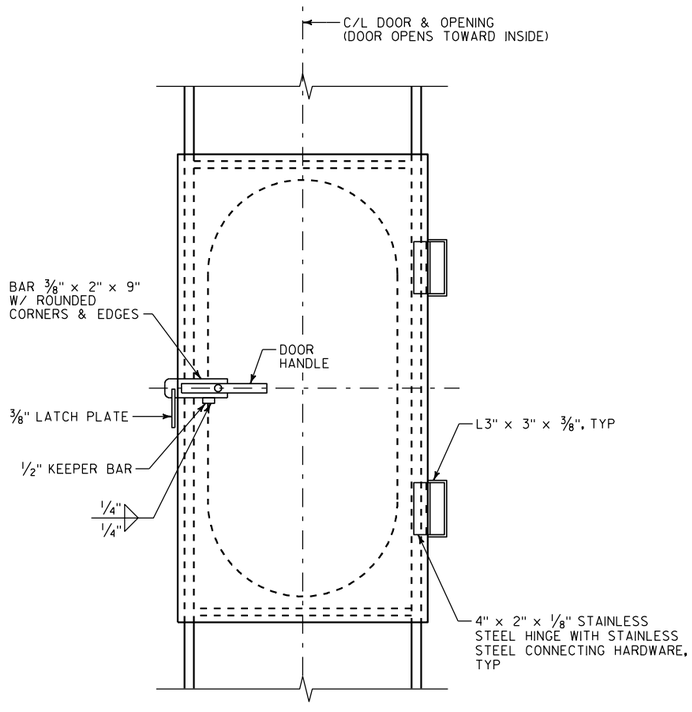


SECTION B-B



ELEVATION

LEFT GIRDER SHOWN, RIGHT GIRDER SIMILAR



DETAIL 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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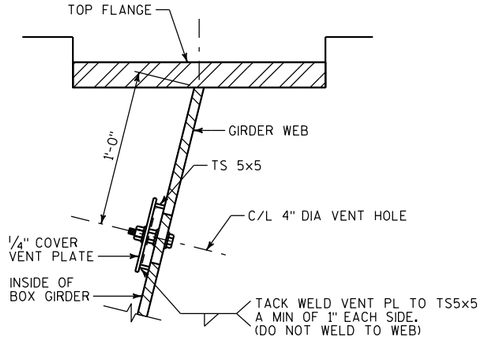
ACCESS DOOR DETAILS

SHEET 45 OF 96

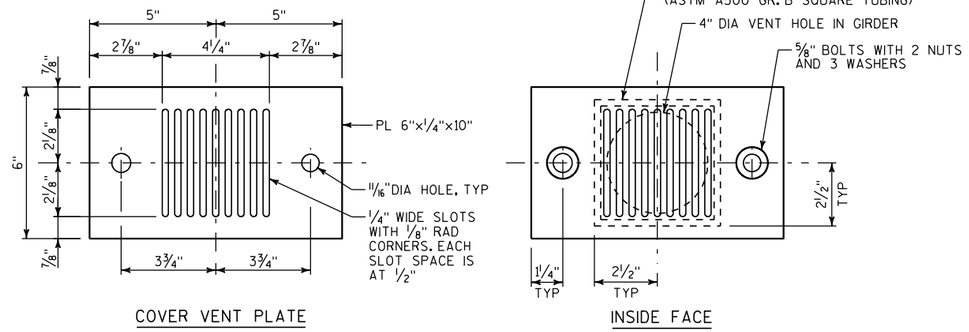
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8

STATE PROJECT NUMBER
1060-33-80



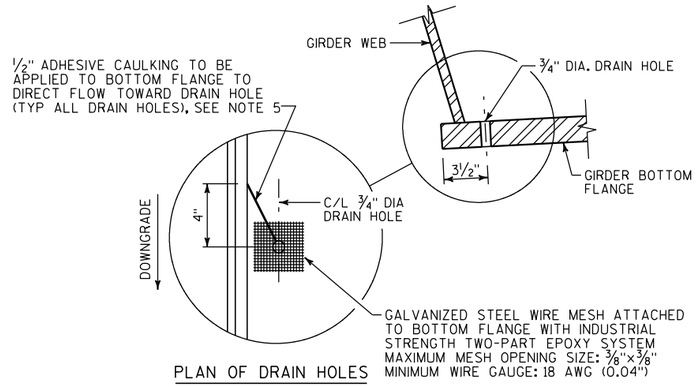
VENT HOLE LOCATION



COVER VENT PLATE INSIDE FACE

VENT HOLE COVER ASSEMBLY

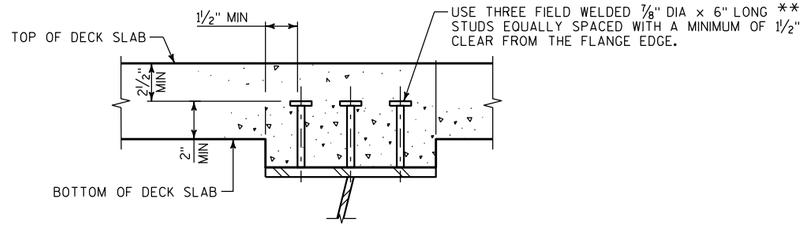
NOT TO SCALE



PLAN OF DRAIN HOLES

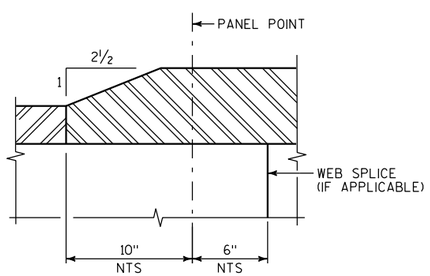
DRAIN HOLE DETAILS

NOT TO SCALE



SHEAR CONNECTOR DETAIL

** USE DIFFERENT LENGTH STUDS IF 2 1/2" MIN. CLEARANCE OR 2" EXTENSION CRITERIA IS VIOLATED.



SHOP SPLICE DETAIL

NOTES

1. SEE GIRDER PLAN AND ELEVATION SHEETS FOR DRAIN AND VENT HOLE LOCATION.
2. LOCATE ALL VENT HOLES ON THE INTERIOR WEBS - I.E. THE RIGHT WEB OF THE LEFT GIRDER AND THE LEFT WEB OF THE RIGHT GIRDER.
3. VENT HOLE COVER ASSEMBLIES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION AND INSTALLED AFTER GIRDERS ARE PAINTED. PAYMENT FOR VENT HOLE COVER ASSEMBLIES IS INCLUDED WITH COST OF "STRUCTURAL STEEL HS".
4. LOCATE ALL DRAIN HOLES ON THE LOW SIDE OF THE GIRDER AS SHOWN.
5. COST OF ADHESIVE CAULKING AND WIRE MESH ATTACHMENT AT DRAIN HOLES IS INCLUDED IN THE COST OF "STRUCTURAL STEEL HS".

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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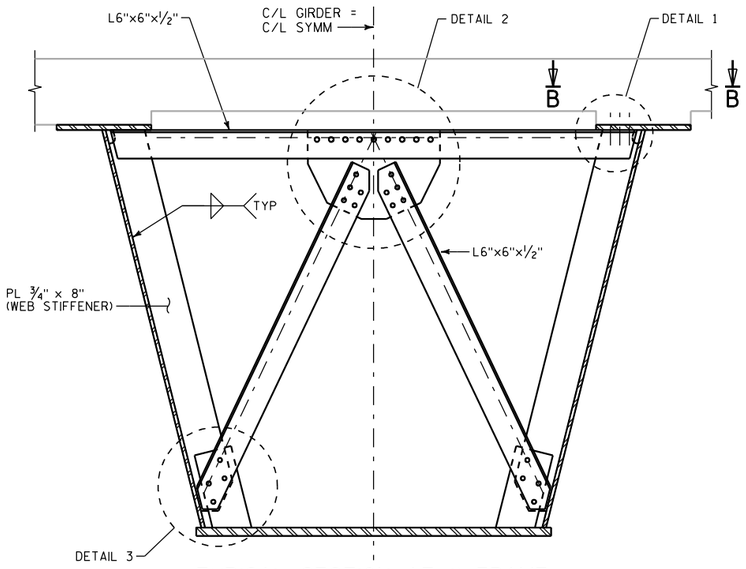
MISCELLANEOUS GIRDER DETAILS

SHEET 46 OF 96

8

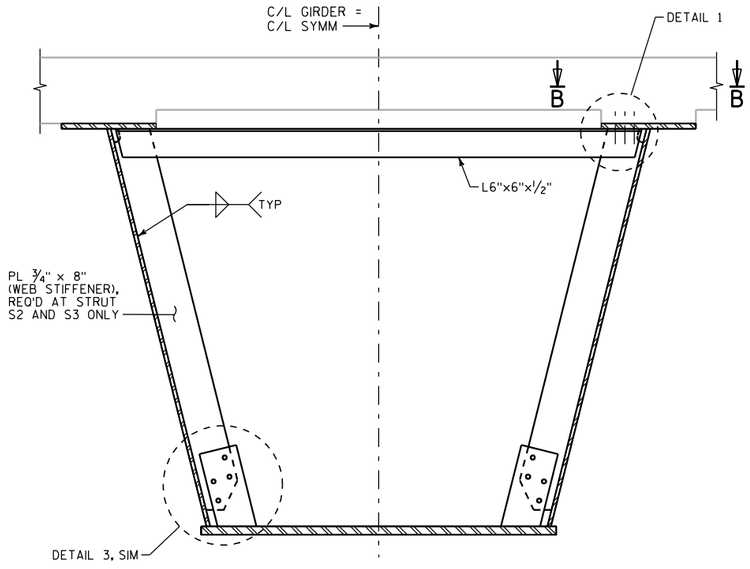
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STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION AT K-FRAME

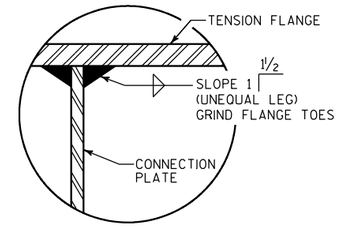
FOR LOCATION OF K-FRAMES K1 AND K2
SEE GIRDER PLAN AND ELEVATION SHEETS



TYPICAL SECTION AT STRUT

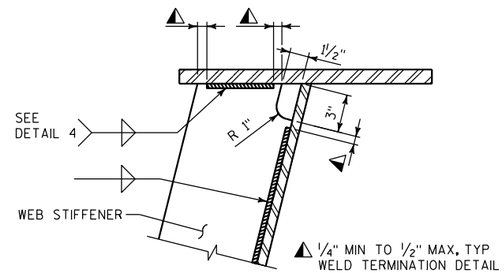
FOR LOCATION OF STRUTS S1, S2, AND S3
SEE GIRDER PLAN AND ELEVATION SHEETS

KEY TO K-FRAME AND STRUT IDENTIFIERS		
ID	NO. OF BOLTS REQ'D AT DETAIL 1	WEB STIFFENERS REQUIRED
K1	3	YES
K2	6	YES
S1	3	NO
S2	6	YES
S3	3	YES

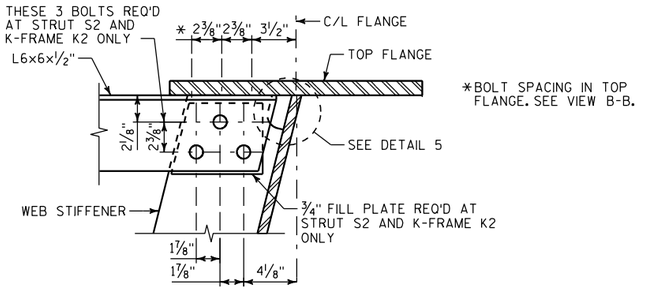


DETAIL 4

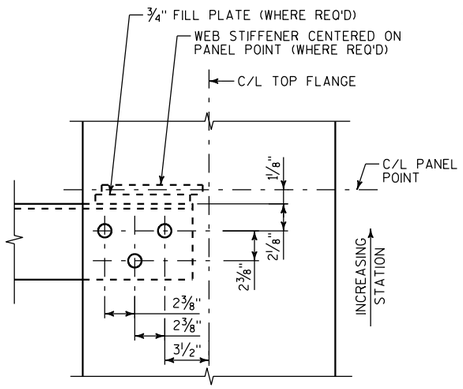
WEB STIFFENER DETAIL
AT TENSION FLANGE



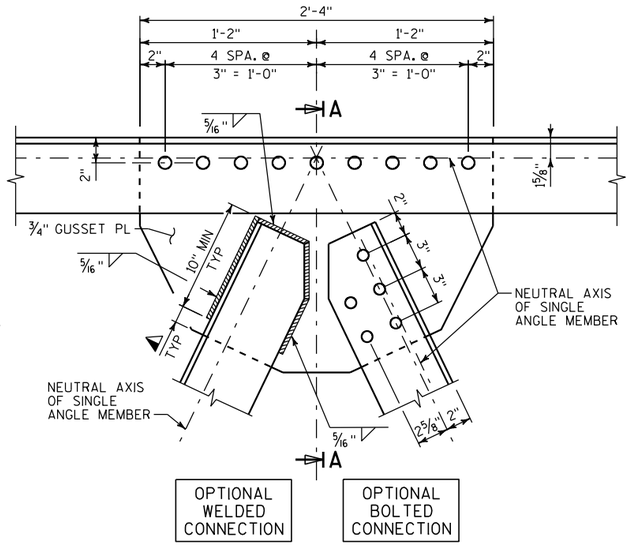
DETAIL 5



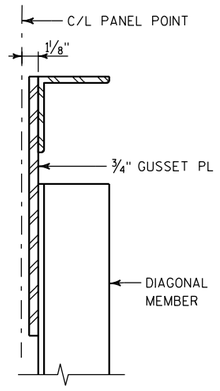
DETAIL 1



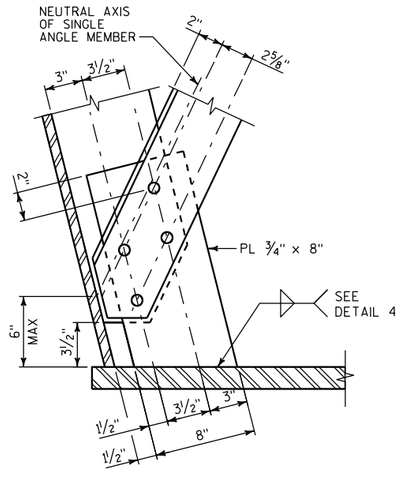
VIEW B-B



DETAIL 2



SECTION A-A



DETAIL 3

NOTES

1. ALL BOLTS IN K-FRAME OR STRUT CONNECTIONS ARE ⅞" DIAMETER ASTM A325 TYPE 1.
2. K-FRAMES AND STRUTS ARE ALIGNED NORMAL TO THE GIRDER BOTTOM FLANGE UNLESS NOTED OTHERWISE.
3. ALL DIAGONALS AT EACH SPECIFIC K-FRAME LOCATION SHALL USE THE SAME CONNECTION DETAIL, EITHER BOLTED OR WELDED.

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STRUCTURE B-40-855

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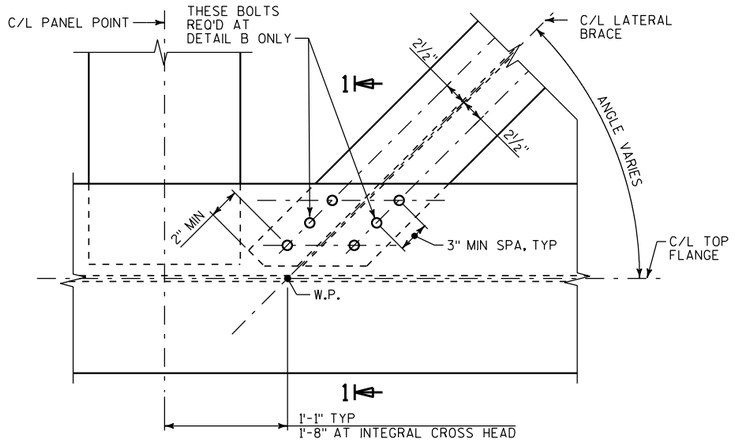
K-FRAMES AND STRUTS

SHEET 47 OF 96

8

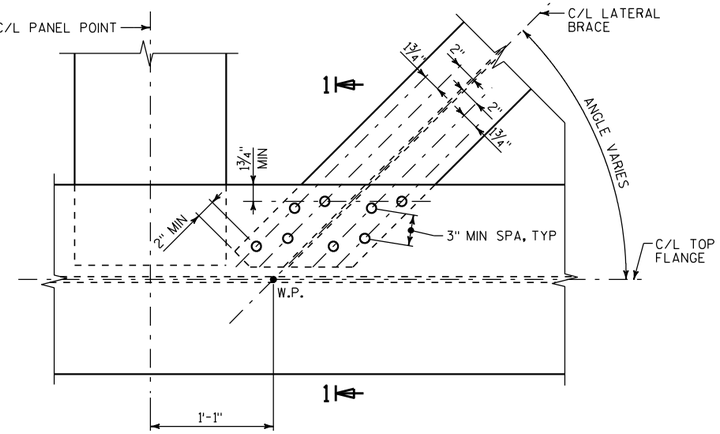
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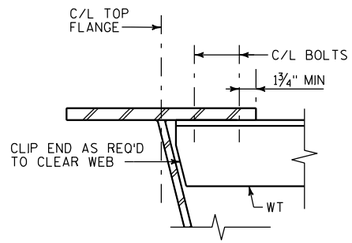


DETAIL A
4 BOLT CONNECTION

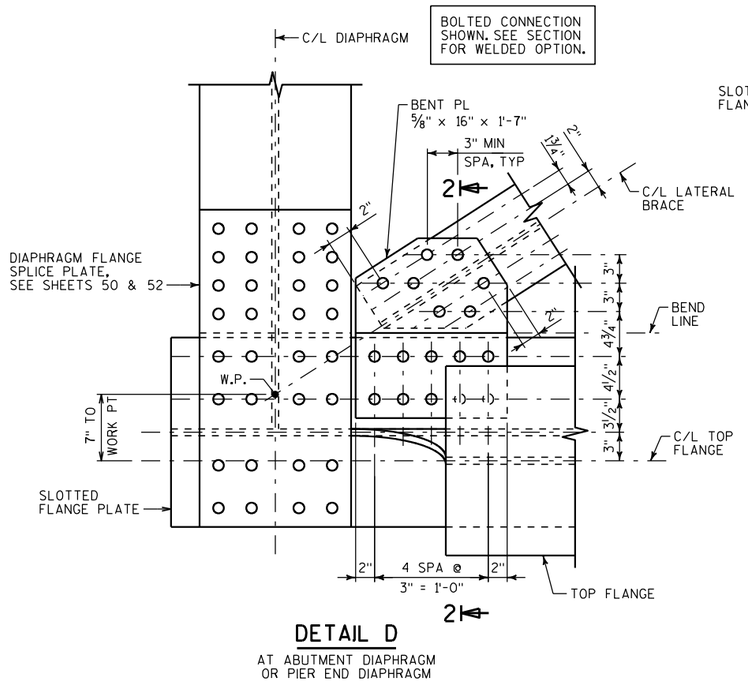
DETAIL B
6 BOLT CONNECTION



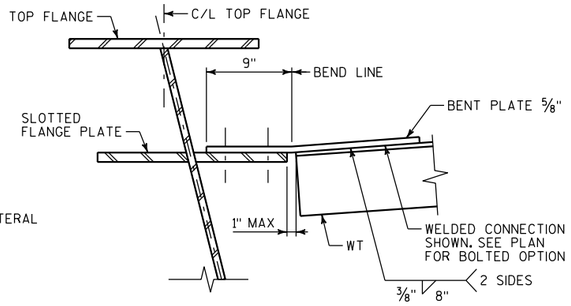
DETAIL C
8 BOLT CONNECTION



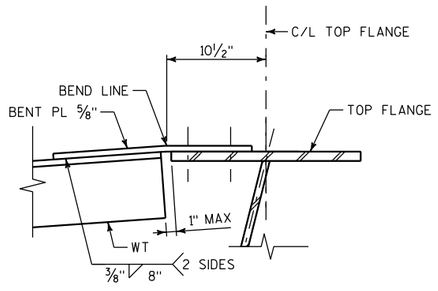
SECTION 1-1



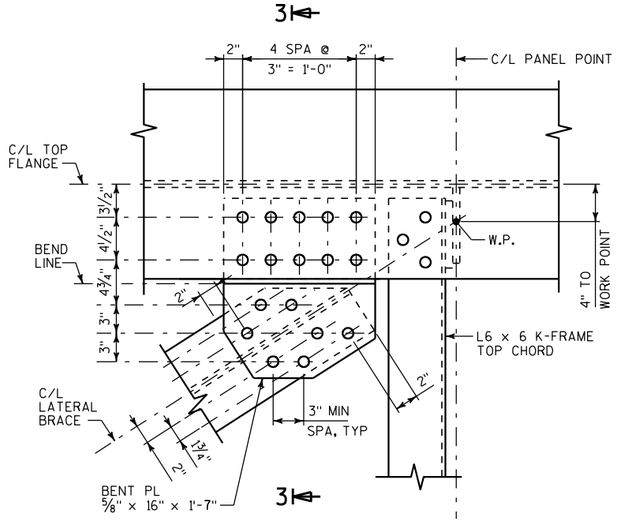
DETAIL D
AT ABUTMENT DIAPHRAGM OR PIER END DIAPHRAGM



SECTION 2-2



SECTION 3-3



DETAIL D
AT FIRST K-FRAME

SECTION MARKS

THE FIRST CHARACTER OF THE LATERAL BRACING INTENTIFIER SPECIFIES THE MEMBER SIZE AS FOLLOWS:

1 WT 7 x 30.5

2 WT 8 x 33.5

3 WT 8 x 38.5

THE SECOND CHARACTER OF THE LATERAL BRACING IDENTIFIER SPECIFIES THE END CONNECTION DETAIL AND RELATES DIRECTLY TO DETAILS A THRU D ON THIS SHEET.

NOTES:

1. ALL BOLTS CONNECTING LATERAL BRACING MEMBERS ARE 1" DIAMETER ASTM A325 TYPE 1.
2. ALL HOLES ARE STD. HOLES.
3. DETAILS ON THIS SHEET SHOW TYPICAL DIMENSIONS ONLY AND WILL HAVE TO BE MIRRORED OR REVERSED AS REQUIRED.
4. SEE GIRDER FRAMING PLANS FOR ORIENTATION OF EACH LATERAL BRACE.

NO.	DATE	REVISION	BY

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STRUCTURE B-40-855

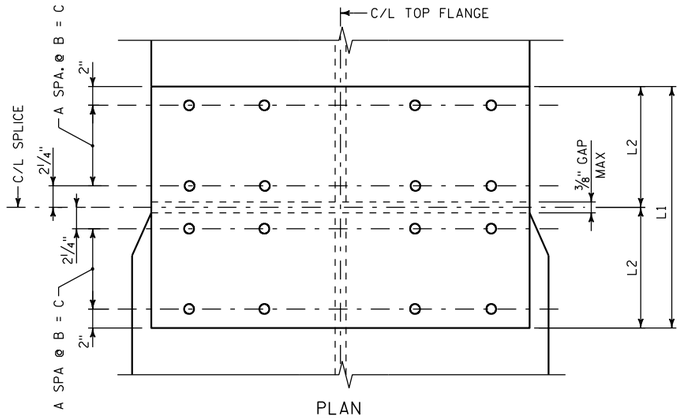
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LATERAL BRACING DETAILS

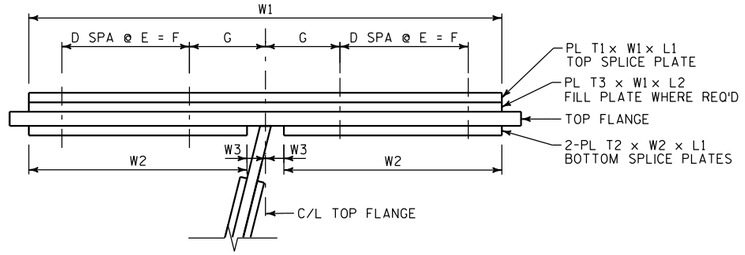
SHEET 48 OF 96

8

8

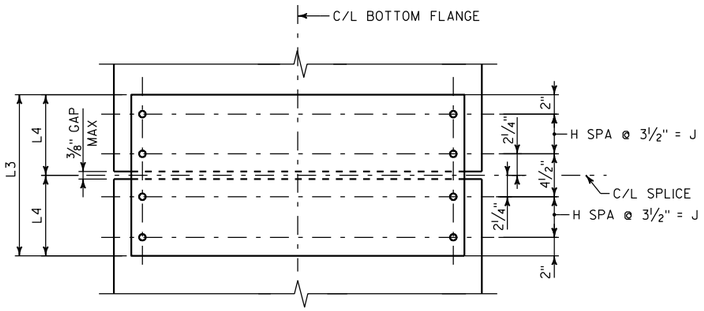


PLAN

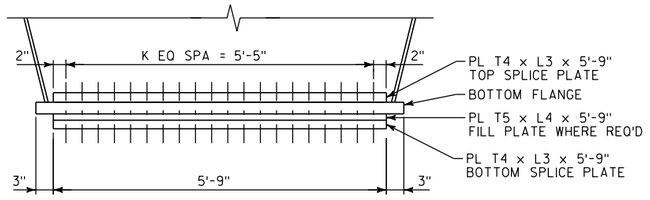


SECTION

TOP FLANGE SPLICE

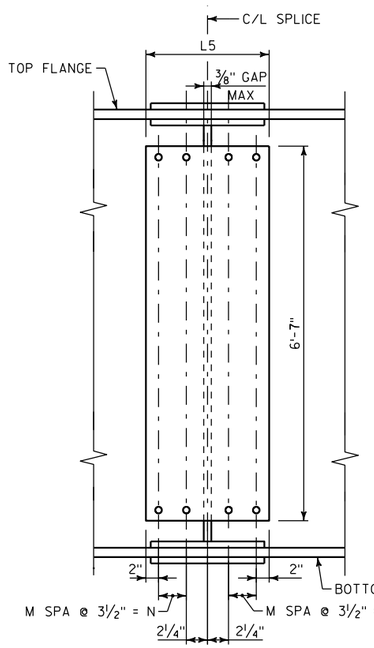


PLAN

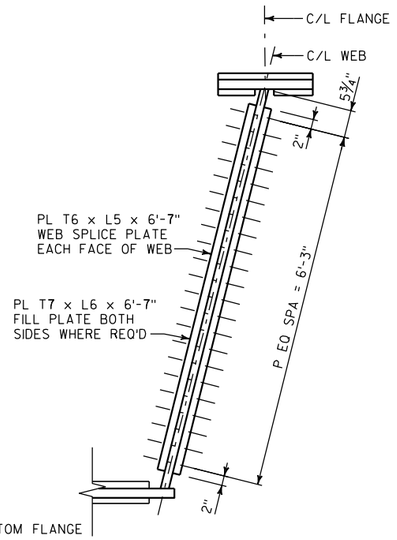


SECTION

BOTTOM FLANGE SPLICE



ELEVATION



SECTION

WEB SPLICE

FLANGE SPLICE TABLE

FIELD SPLICE NUMBER	GIRDER	TOP FLANGE SPLICE															BOTTOM FLANGE SPLICE							WEB SPLICE						
		T1	T2	T3	L1	L2	W1	W2	W3	A	B	C	D	E	F	G	T4	T5	L3	L4	H	J	K	T6	T7	L5	L6	M	N	P
1	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	¼"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
2	LT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	4½"	4½"	3¼"	⅝"	¾"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
3	LT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	4½"	4½"	3¼"	⅝"	¾"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
4	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
5	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	¼"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	¼"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
6	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
7	LT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	4½"	4½"	3¼"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	¾"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
8	LT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	4½"	4½"	3¼"	⅝"	¼"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	¼"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
9	LT	1¼"	1¼"	-	4'-9½"	2'-4¾"	1'-8"	9"	1"	7	3½"	2'-0½"	1	4½"	4½"	3¼"	1"	¼"	2'-5½"	1'-2¾"	3	10½"	21	⅝"	-	1'-10½"	11¼"	2	7"	18
	RT	1¼"	1¼"	-	4'-9½"	2'-4¾"	1'-8"	9"	1"	7	3½"	2'-0½"	1	4½"	4½"	3¼"	1"	¼"	2'-5½"	1'-2¾"	3	10½"	21	⅝"	-	1'-10½"	11¼"	2	7"	18
10	LT	1¼"	1⅜"	-	4'-2½"	2'-1¼"	2'-0"	11"	1"	6	3½"	1'-9"	2	3½"	7"	3¼"	1"	¼"	2'-5½"	1'-2¾"	3	10½"	21	½"	-	1'-10½"	11¼"	2	7"	18
	RT	1¼"	1⅜"	-	4'-2½"	2'-1¼"	2'-0"	11"	1"	6	3½"	1'-9"	2	3½"	7"	3¼"	1"	¼"	2'-5½"	1'-2¾"	3	10½"	21	½"	-	1'-10½"	11¼"	2	7"	18
11	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	1"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	⅞"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
12	LT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	¾"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	½"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
13	LT	⅝"	⅝"	-	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	4½"	4½"	3¼"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16
	RT	½"	½"	-	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	4½"	4½"	3¼"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	11¼"	2	7"	16

FIELD SPLICE NOTES

1. ALL BOLTS SHOWN FOR FIELD SPLICES ARE 1" DIAMETER ASTM A325 TYPE 1.
2. ALL HOLES SHALL BE STANDARD DIAMETER - NO OVERSIZE HOLES.
3. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS.
4. ALL SPLICE PLATES SHALL BE GRADE HPS 50W.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

FIELD SPLICE DETAILS

SHEET 49 OF 96

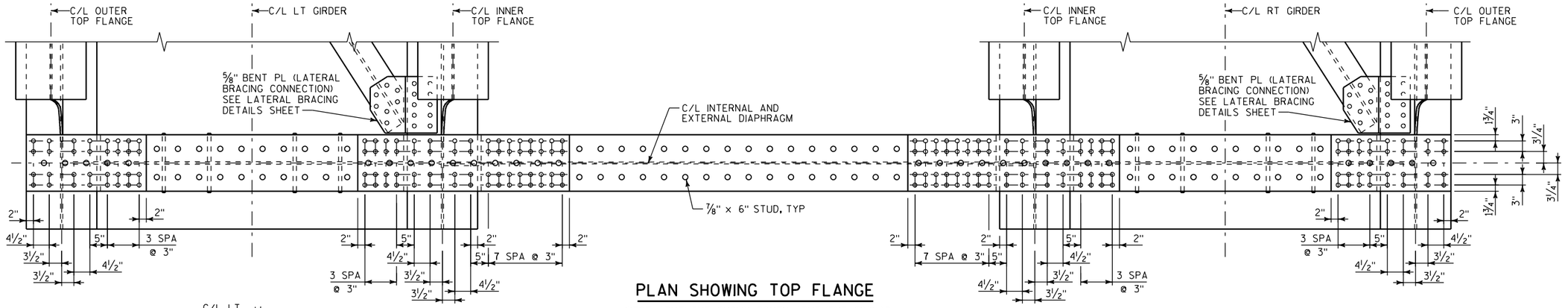
STATE PROJECT NUMBER

1060-33-80

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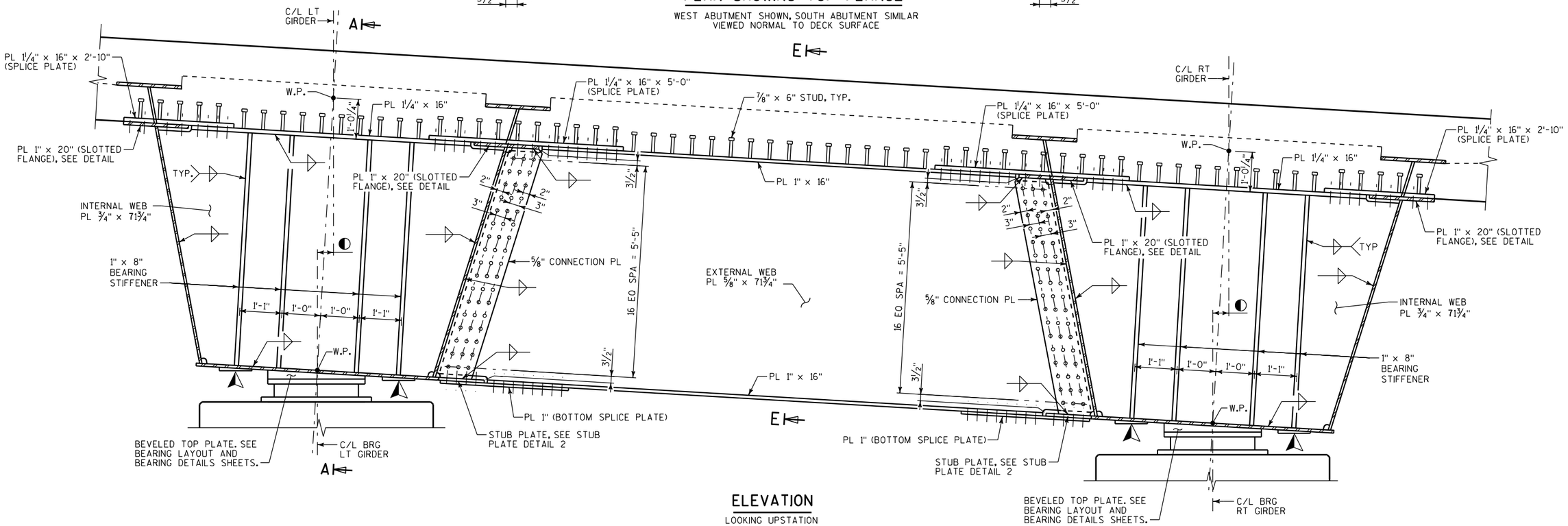
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STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING TOP FLANGE

WEST ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

NOTES

1. DIAPHRAGM WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE DIAPHRAGM DETAILS (2 OF 2) SHEET.
4. SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.
5. FOR SECTIONS, SEE SHEET 54.

LEGEND

- ⚠ SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE JACKING PROVISIONS SHEET FOR DETAILS.
- ◐ 3 15/16" W. ABUT, 5" S. ABUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

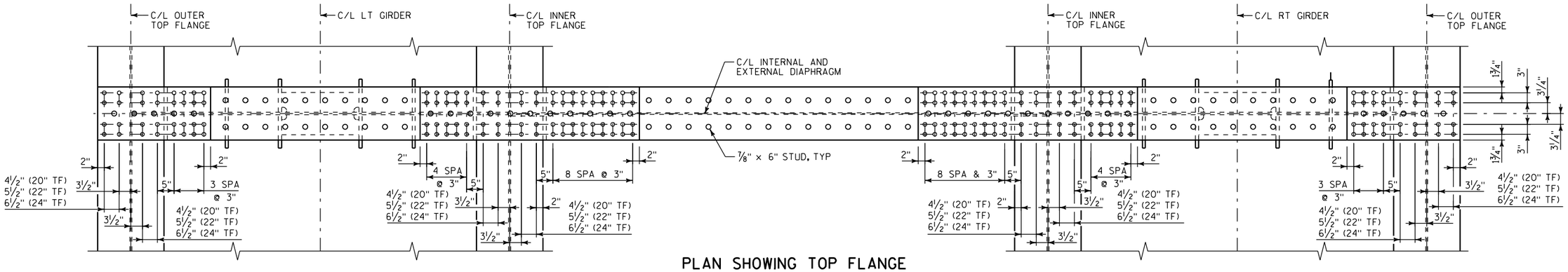
STRUCTURE B-40-855

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ABUTMENT DIAPHRAGM

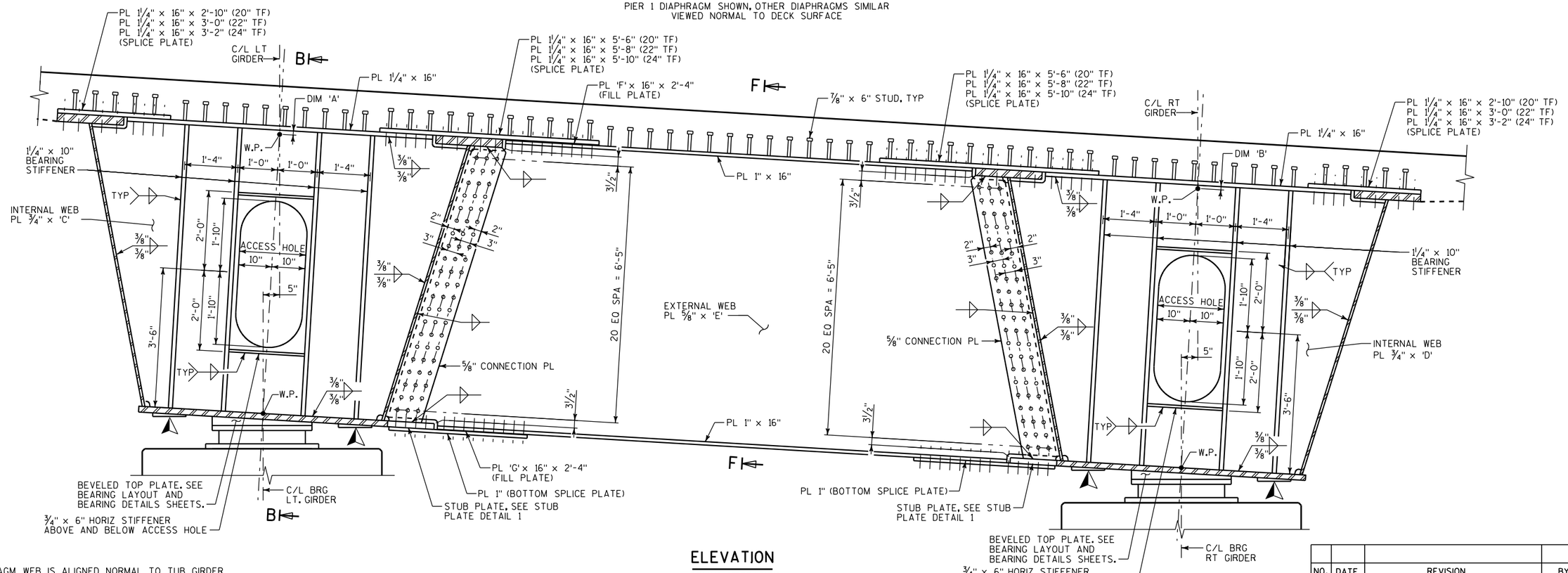
SHEET 50 OF 96

STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING TOP FLANGE

PIER 1 DIAPHRAGM SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE



NOTES

1. DIAPHRAGM WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE DIAPHRAGM DETAILS (2 OF 2) SHEET.
4. SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.
5. FOR SECTIONS SEE SHEET 54.

LEGEND

A SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE JACKING PROVISIONS SHEET FOR DETAILS.

ELEVATION

LOOKING UPSTATION

DIAPHRAGM LOCATION	DIMENSIONS						
	'A'*	'B'*	'C'	'D'	'E'	'F'	'G'
PIER SW01	3/4"	3/4"	84 3/4"	84 3/4"	86"	0"	1/4"
PIER SW02	3/4"	3/4"	84 3/4"	84 3/4"	86"	0"	1/4"
PIER SW03	-1/4"	-1/4"	83 3/4"	83 3/4"	84 1/4"	0"	1/4"
PIER SW05	0"	-1/4"	84"	83 3/4"	84 1/2"	1/4"	0"
PIER SW07	3/4"	3/4"	84 3/4"	84 3/4"	86"	0"	1/4"

* A NEGATIVE DIMENSION IN DIMENSION 'A' OR 'B' REPRESENTS A DIMENSION TO THE TOP FLANGE WORKING POINT THAT FALLS WITHIN THE DIAPHRAGM TOP FLANGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

TYPICAL PIER DIAPHRAGM

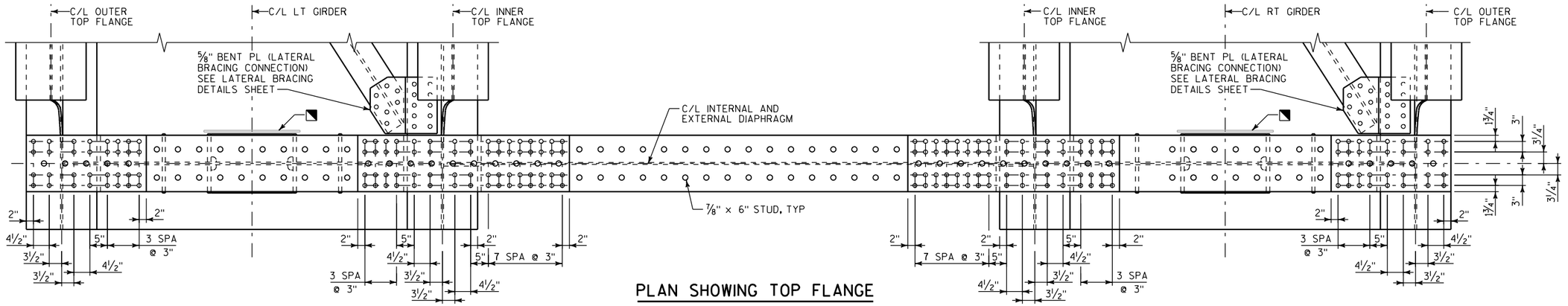
SHEET 51 OF 96

8

8

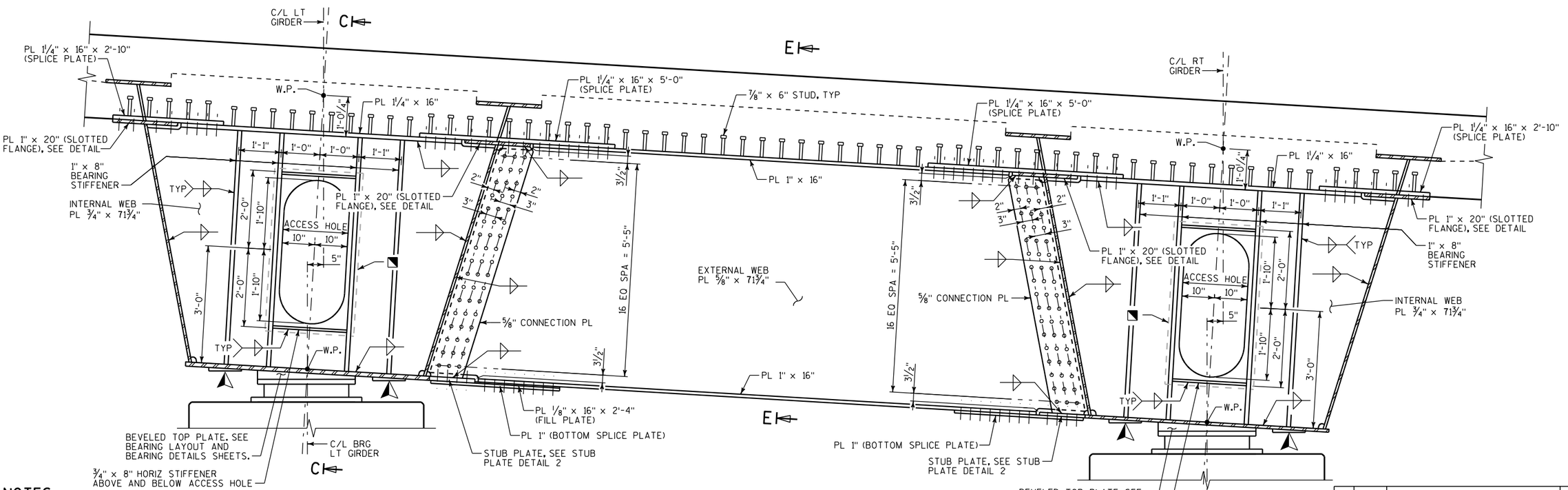
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PLOT BY : MSCGLM
PLOT NAME : B855_080523_ss
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING TOP FLANGE

UNIT 2 DIAPHRAGM SHOWN, UNIT 1 DIAPHRAGM SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

NOTES

1. DIAPHRAGM WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE DIAPHRAGM DETAILS (2 OF 2) SHEET.
4. SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.
5. FOR SECTIONS, SEE SHEET 54.

LEGEND

- SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE JACKING PROVISIONS SHEET FOR DETAILS.
- OUTLINE OF ACCESS DOOR. SEE ACCESS DOOR DETAILS SHEET. PLACE ACCESS DOOR ON THE INTERIOR SIDE OF THE INTERNAL DIAPHRAGM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

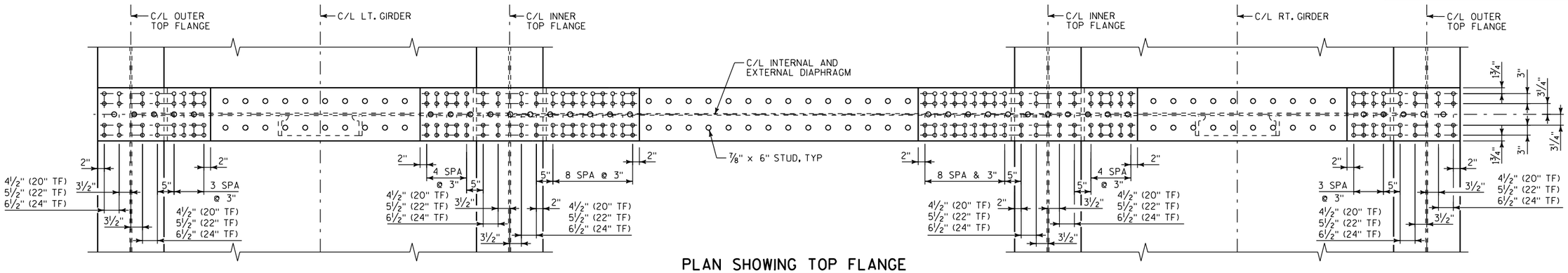
STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

PIER END DIAPHRAGM

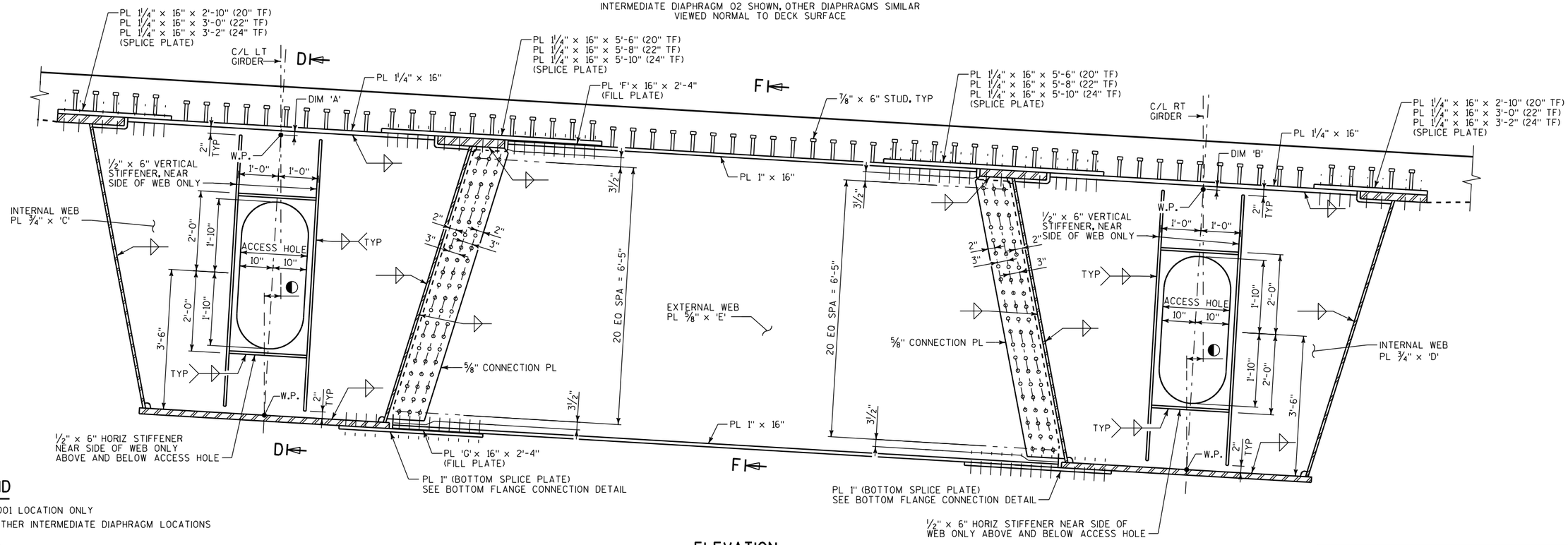
SHEET 52 OF 96

STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING TOP FLANGE

INTERMEDIATE DIAPHRAGM 02 SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE



LEGEND

◐ 4 13/16" ID01 LOCATION ONLY
5" OTHER INTERMEDIATE DIAPHRAGM LOCATIONS

NOTES

1. DIAPHRAGM WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE DIAPHRAGM DETAILS (2 OF 2) SHEET.
4. SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.
5. FOR SECTIONS, SEE SHEET 54.

ELEVATION

LOOKING UPSTATION

DIAPHRAGM LOCATION	DIMENSIONS							DIAPHRAGM LOCATION	DIMENSIONS						
	'A'*	'B'*	'C'	'D'	'E'	'F'	'G'		'A'*	'B'*	'C'	'D'	'E'	'F'	'G'
ID01, ID16	-1/4"	-1/4"	83 3/4"	83 3/4"	83 3/4"	0"	0"	ID08, ID09	-1/4"	-1/4"	83 3/4"	83 3/4"	83 3/4"	0"	1/8"
ID02	-1/4"	-1/4"	83 3/4"	83 3/4"	84 1/2"	0"	1/4"	ID10, ID11	0"	-1/4"	84"	83 3/4"	84 1/2"	1/4"	0"
ID03, ID04	0"	-1/4"	84"	83 3/4"	83 7/8"	1/4"	1/8"	ID12	-1/4"	-1/4"	83 3/4"	83 3/4"	84 3/4"	0"	1/4"
ID05	-1/4"	-1/4"	83 3/4"	83 3/4"	84 1/2"	0"	1/4"	ID13, ID14	-1/4"	-1/4"	83 3/4"	83 3/4"	83 7/8"	0"	1/8"
ID06, ID07	-1/4"	-1/4"	83 3/4"	83 3/4"	84 1/4"	0"	1/4"	ID15	-1/4"	-1/4"	83 3/4"	83 3/4"	84 3/4"	0"	0"

* A NEGATIVE DIMENSION IN DIMENSION 'A' OR 'B' REPRESENTS A DIMENSION TO THE TOP FLANGE WORKING POINT THAT FALLS WITHIN THE DIAPHRAGM TOP FLANGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

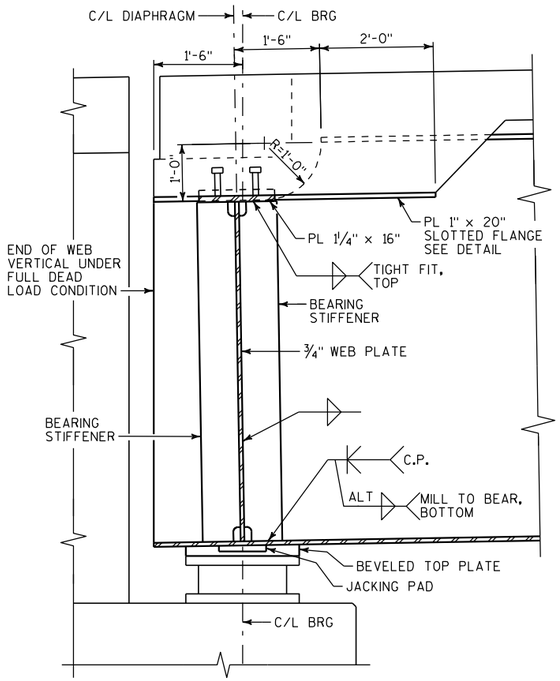
INTERMEDIATE DIAPHRAGM

SHEET 53 OF 96

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PLOT NAME : B855_080525_ss
PLOT SCALE : 2.666667:1

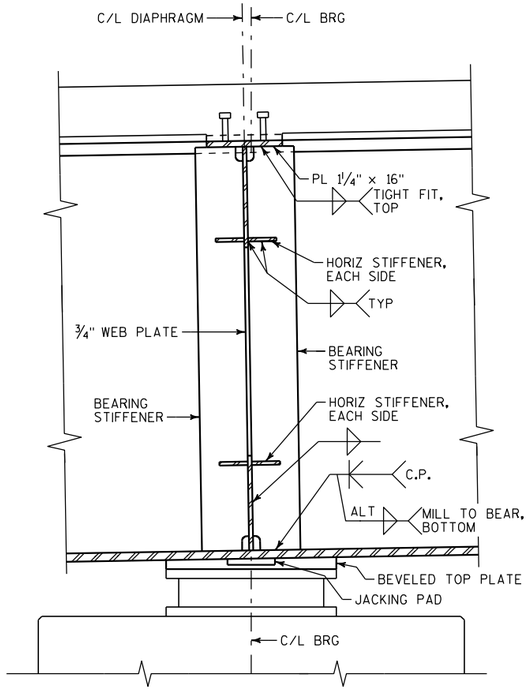
STATE PROJECT NUMBER

1060-33-80



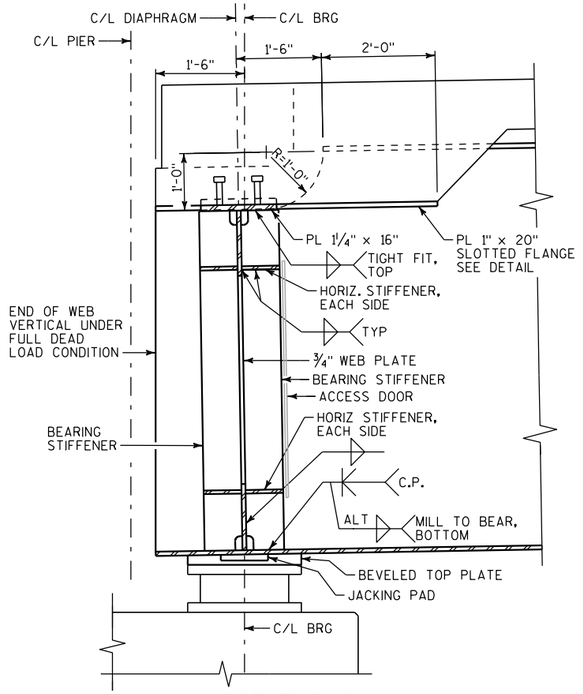
SECTION A-A

INTERNAL DIAPHRAGM AT ABUTMENT DIAPHRAGM



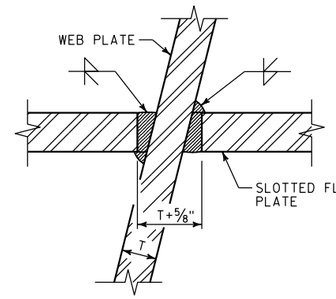
SECTION B-B

INTERNAL DIAPHRAGM AT TYPICAL PIER DIAPHRAGM

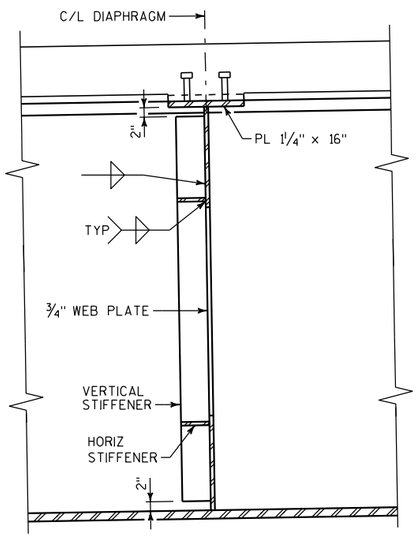


SECTION C-C

INTERNAL DIAPHRAGM AT PIER END DIAPHRAGM

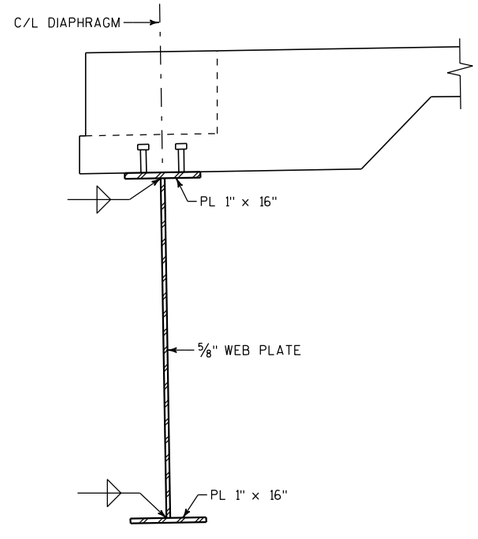


SLOTTED FLANGE DETAIL



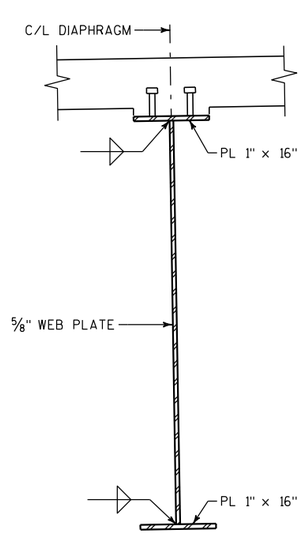
SECTION D-D

INTERNAL DIAPHRAGM AT INTERMEDIATE DIAPHRAGM



SECTION E-E

EXTERNAL DIAPHRAGM AT ABUTMENT DIAPHRAGM AND PIER END DIAPHRAGM



SECTION F-F

EXTERNAL DIAPHRAGM AT TYPICAL PIER DIAPHRAGM AND INTERMEDIATE DIAPHRAGM

NOTES

1. DIAPHRAGM WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE DIAPHRAGM DETAILS (2 OF 2) SHEET.
4. LATERAL BRACING CONNECTIONS ARE NOT SHOWN FOR CLARITY. SEE LATERAL BRACING DETAILS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

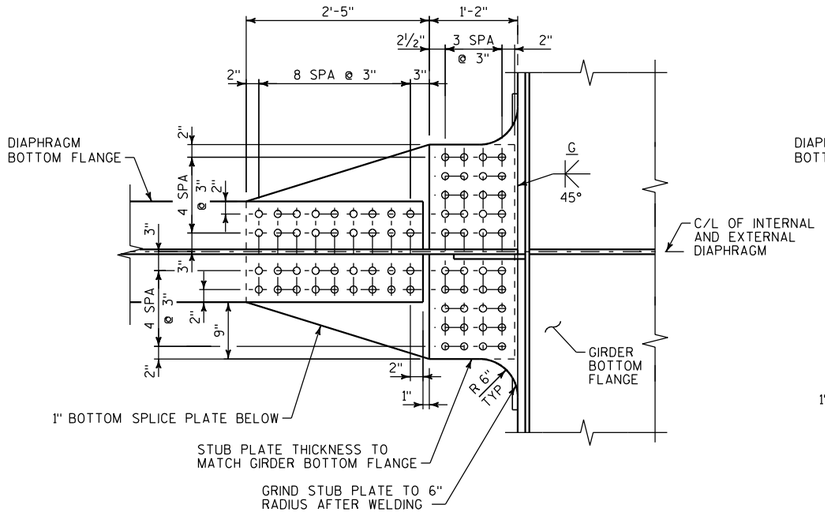
DIAPHRAGM DETAILS (1 OF 2)

SHEET 54 OF 96

8

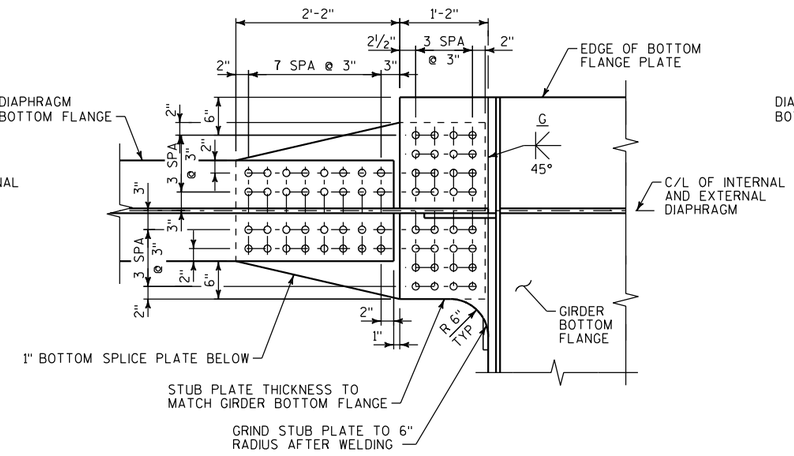
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STATE PROJECT NUMBER
1060-33-80



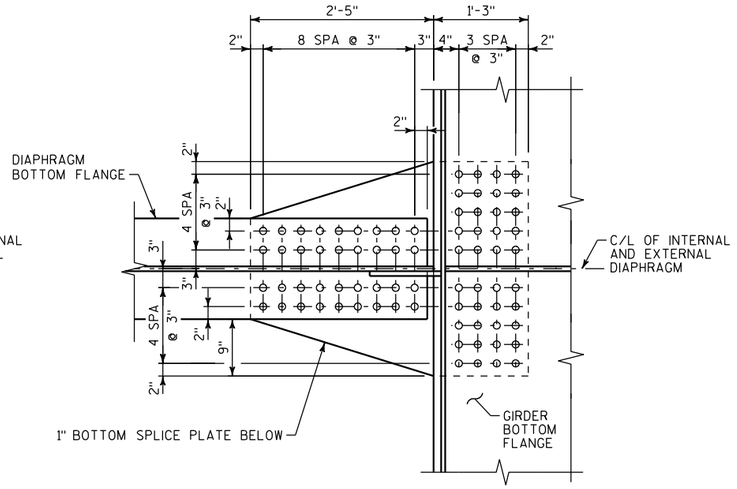
STUB PLATE DETAIL 1

TYPICAL PIER DIAPHRAGM



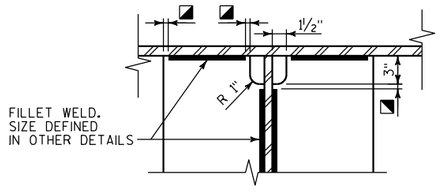
STUB PLATE DETAIL 2

ABUTMENT DIAPHRAGM AND PIER END DIAPHRAGM



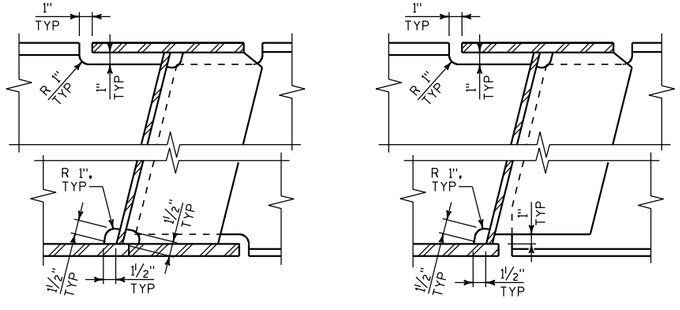
BOTTOM FLANGE CONNECTION DETAIL

INTERMEDIATE DIAPHRAGM ONLY



STANDARD CLIP & WELD TERMINATION DETAIL

◪ ¼" MIN TO ½" MAX, TYP



ABUTMENT & PIER DIAPHRAGMS

INTERMEDIATE DIAPHRAGM

DIAPHRAGM CLIP DETAIL

NOTES:

1. INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.

NO.	DATE	REVISION	BY

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STRUCTURE B-40-855

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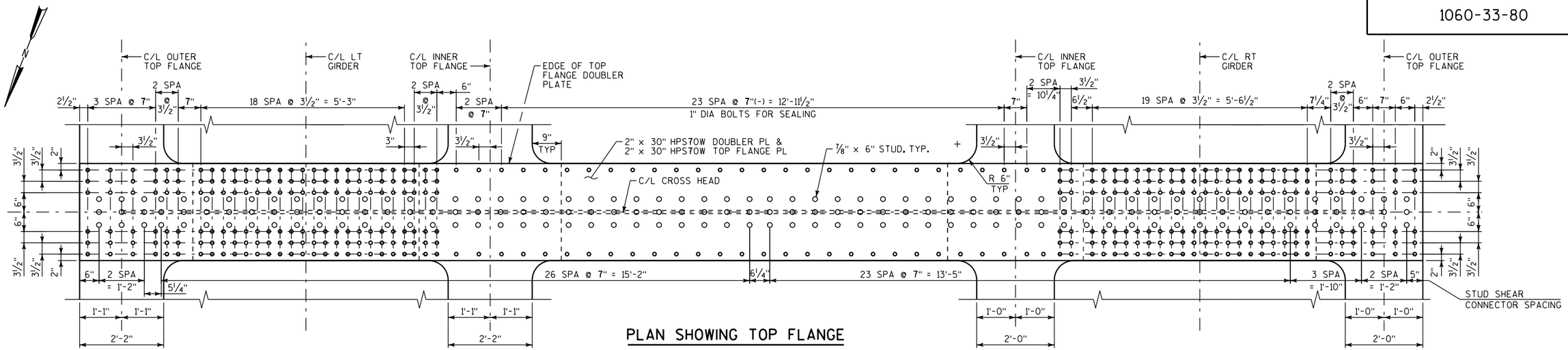
DIAPHRAGM DETAILS (2 OF 2)

SHEET 55 OF 96

8

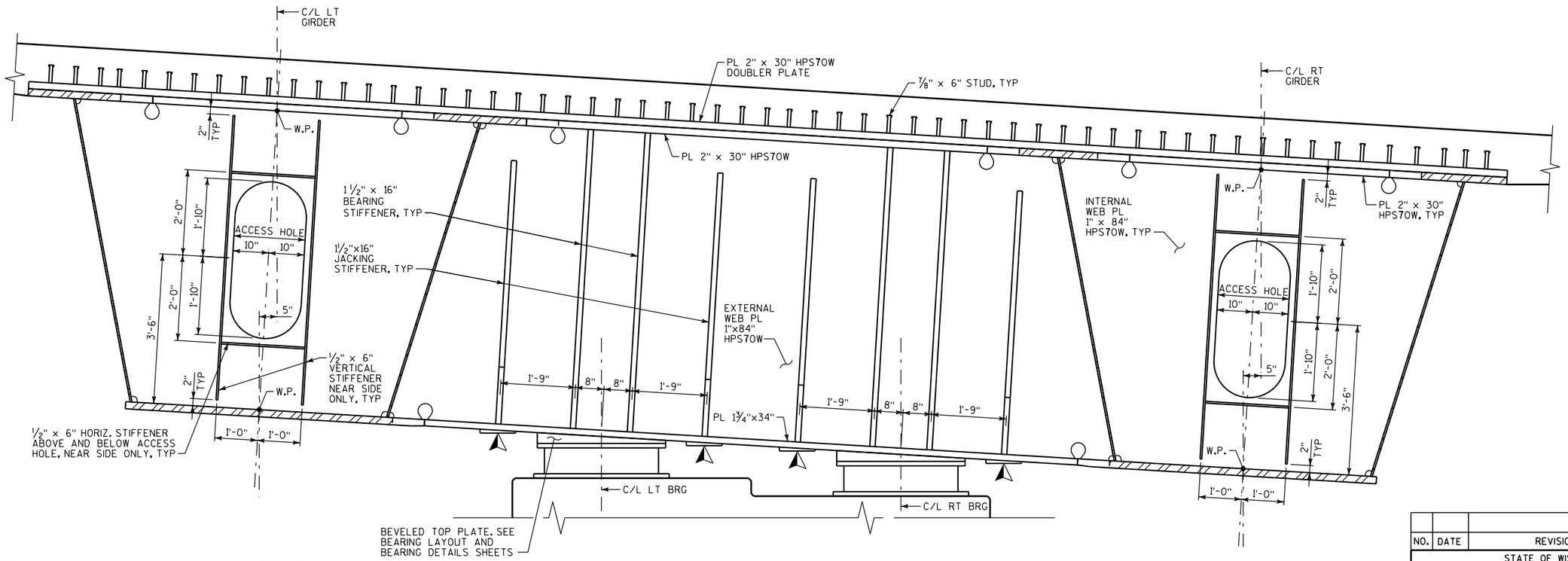
8

STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING TOP FLANGE

VIEWED NORMAL TO DECK SURFACE
LATERAL BRACING NOT SHOWN FOR CLARITY



INTEGRAL CROSS HEAD ELEVATION

LOOKING UPSTATION

LEGEND

⚠ SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. JACKING AT ACCESS HOLE STIFFENERS NOT ALLOWED. SEE JACKING PROVISIONS SHEET FOR DETAILS.

NOTES

1. CROSS HEAD WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN CROSS HEAD ARE 1" DIAMETER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

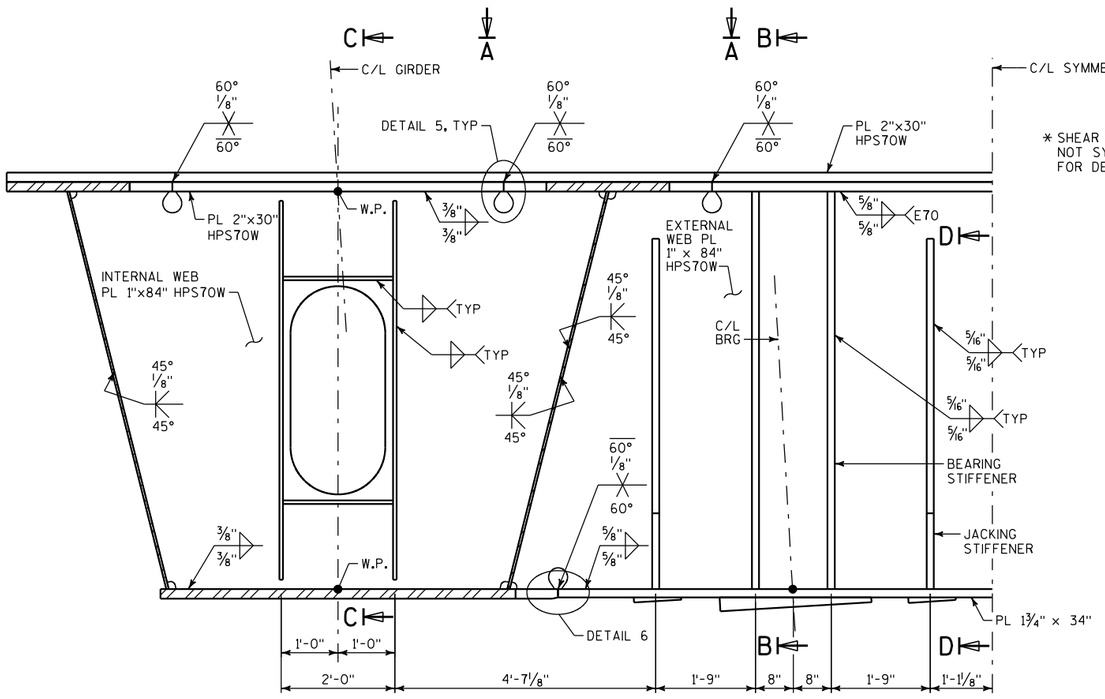
STRUCTURE B-40-855

DRAWN BY CNK | PLANS CK'D. WRT

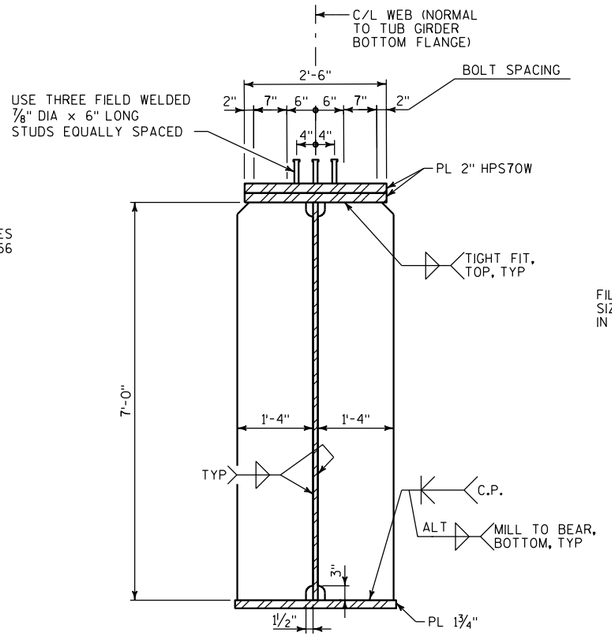
PIER SW06 INTEGRAL CROSS HEAD

SHEET 56 OF 96

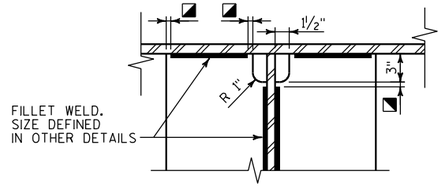
STATE PROJECT NUMBER
1060-33-80



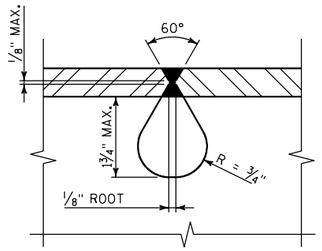
PARTIAL ELEVATION
SHOWING WELDS



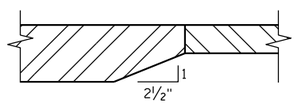
SECTION B-B
BEARING STIFFENERS



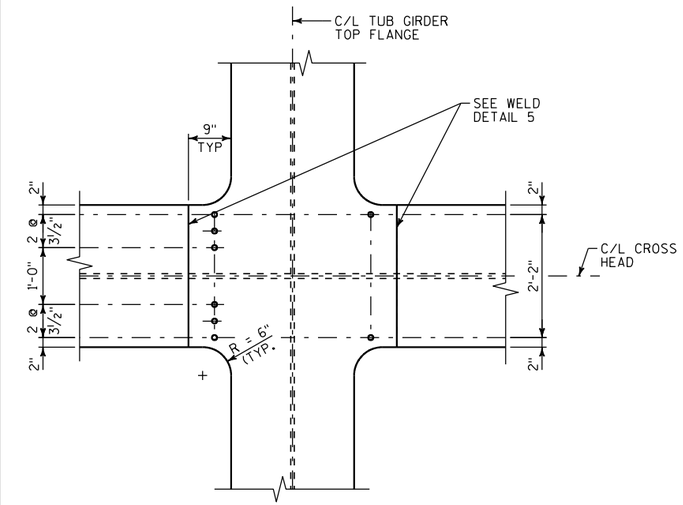
STANDARD CLIP & WELD TERMINATION DETAIL
◪ ¼" MIN TO ½" MAX, TYP



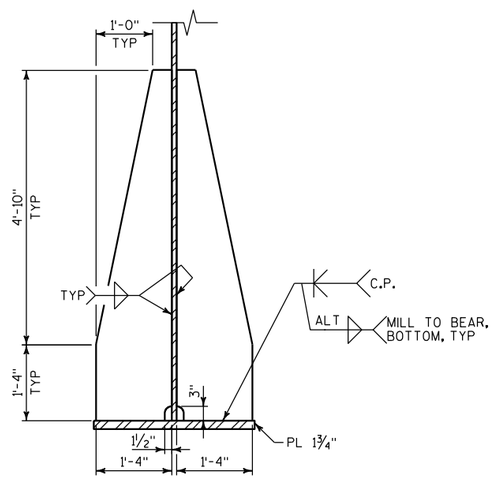
DETAIL 5



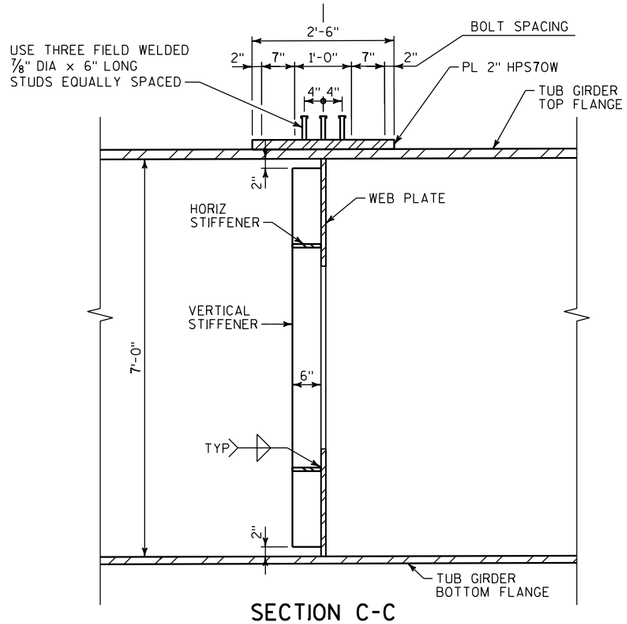
DETAIL 6



VIEW A-A
(DOUBLER PLATE NOT SHOWN FOR CLARITY)



SECTION D-D
JACKING STIFFENERS



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY CNK | PLANS CK'D. WRT

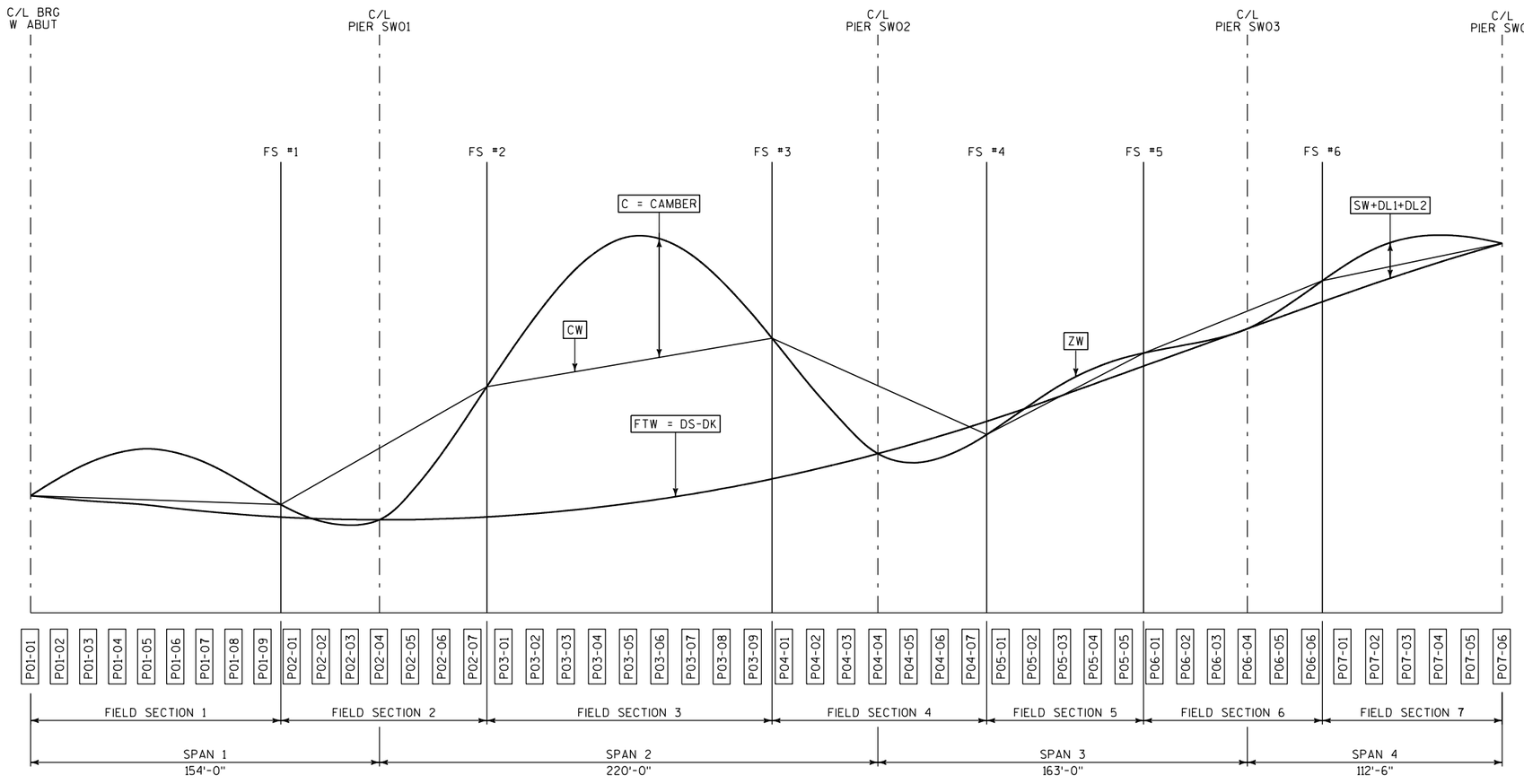
PIER SW06
INTEGRAL CROSS
HEAD DETAILS

SHEET 57 OF 96

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STATE PROJECT NUMBER
1060-33-80



CAMBER DIAGRAM - UNIT 1

VERTICAL PROFILE AND DEFLECTIONS ARE EXAGGERATED TO DIFFERENT DEGREES. THE CAMBERS SHOWN ON THIS DIAGRAM ARE SCHEMATIC ONLY. DIMENSIONS SHOWN ARE ALONG R/L SW

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (1/2").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (1/4") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

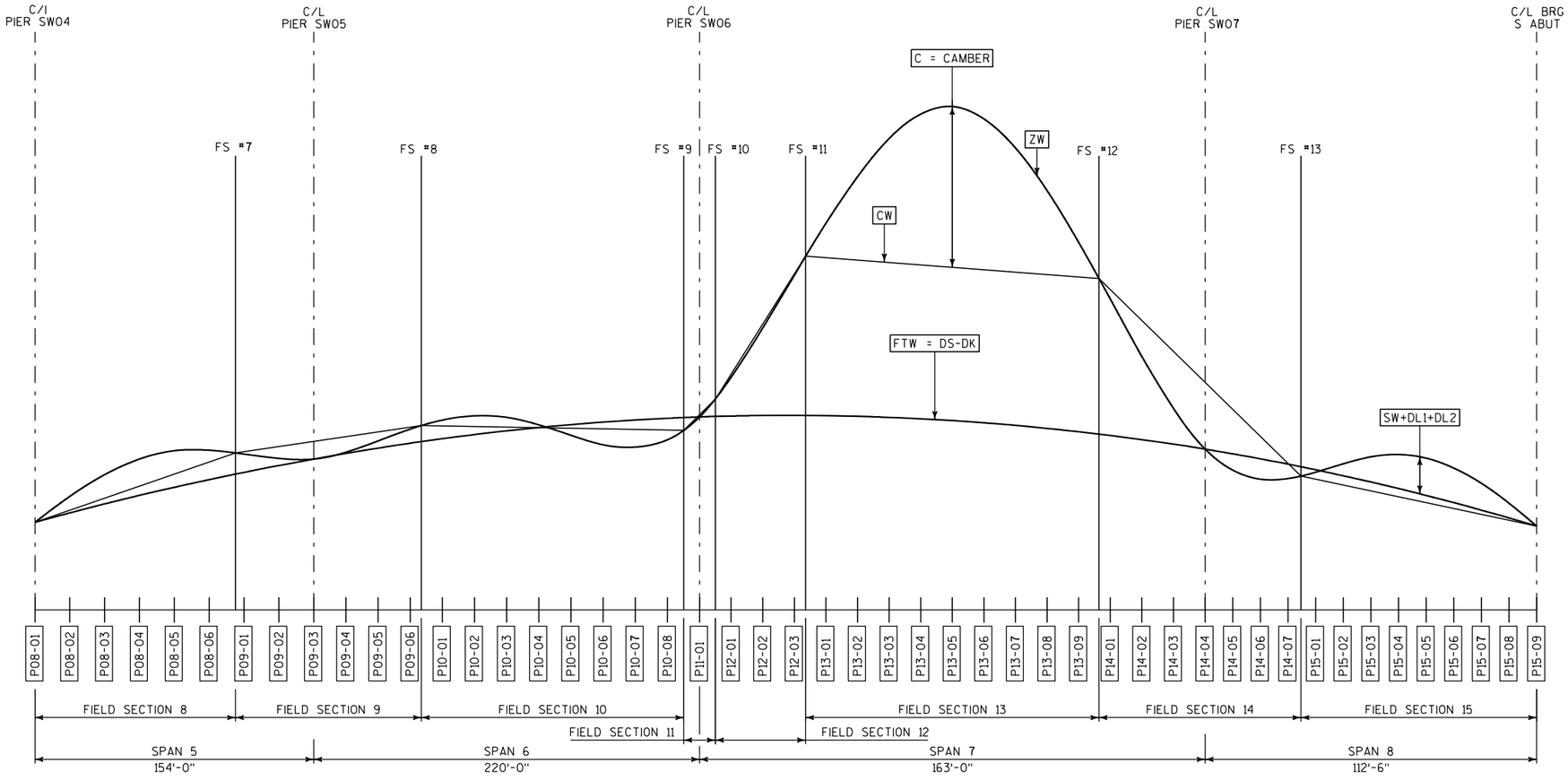
STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

CAMBER DIAGRAM UNIT 1

SHEET 58 OF 96

STATE PROJECT NUMBER
1060-33-80



CAMBER DIAGRAM - UNIT 2

VERTICAL PROFILE AND DEFLECTIONS ARE EXAGGERATED TO DIFFERENT DEGREES. THE CAMBERS SHOWN ON THIS DIAGRAM ARE SCHEMATIC ONLY. DIMENSIONS SHOWN ARE ALONG R/L SW

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER DIAGRAM UNIT 2

SHEET 59 OF 96

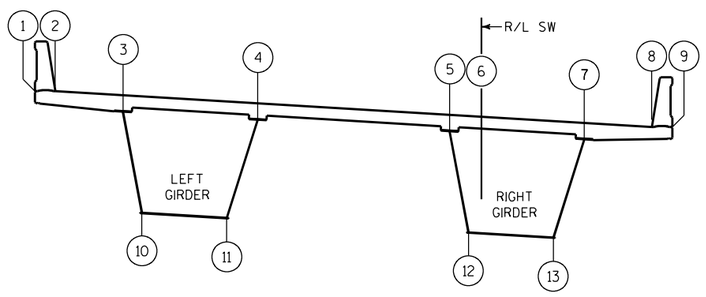
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FIELD SECTION #1

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		P01-01	P01-02	P01-03	P01-04	P01-05	P01-06	P01-07	P01-08	P01-09	FS #1
		579+59.89	579+72.72	579+85.56	579+98.39	580+11.22	580+24.06	580+36.89	580+49.72	580+62.56	580+70.39
FINISHED ELEVATION - TOP OF DECK											
1	DS	805.34	805.26	805.20	805.15	805.09	804.96	804.85	804.75	804.68	804.64
2		805.28	805.19	805.12	805.06	805.00	804.87	804.76	804.67	804.59	804.55
6		803.88	803.68	803.50	803.34	803.20	803.07	802.96	802.87	802.79	802.75
8		803.32	803.08	802.86	802.66	802.48	802.35	802.24	802.15	802.07	802.03
9		803.25	803.01	802.78	802.57	802.39	802.27	802.15	802.06	801.98	801.94
CAMBER DATA											
3	DS	805.05	804.95	804.86	804.79	804.71	804.59	804.48	804.38	804.31	804.27
	TES	803.93	803.87	803.83	803.78	803.72	803.59	803.46	803.33	803.22	803.20
LEFT	ZW	803.85	803.81	803.77	803.74	803.68	803.55	803.41	803.27	803.15	803.09
GIRDER	CW	803.85	803.76	803.67	803.58	803.49	803.41	803.32	803.23	803.14	803.09
	SW	0.00	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.01	0.01
LEFT	DL1	0.00	0.04	0.08	0.11	0.12	0.11	0.09	0.07	0.03	0.02
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.05	0.10	0.16	0.19	0.14	0.09	0.05	0.01	0.00
4	DS	804.61	804.47	804.35	804.25	804.14	804.02	803.91	803.81	803.74	803.70
	TES	803.49	803.40	803.31	803.24	803.14	803.01	802.88	802.76	802.65	802.64
LEFT	ZW	803.40	803.33	803.26	803.19	803.10	802.96	802.83	802.70	802.58	802.52
GIRDER	CW	803.40	803.30	803.20	803.10	802.99	802.89	802.79	802.69	802.59	802.52
	SW	0.00	0.02	0.03	0.04	0.04	0.04	0.03	0.02	0.02	0.01
RIGHT	DL1	0.00	0.04	0.08	0.10	0.11	0.10	0.09	0.06	0.04	0.02
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.06	0.09	0.10	0.07	0.04	0.01	0.00	0.00
5	DS	803.98	803.80	803.63	803.47	803.33	803.21	803.10	803.00	802.93	802.89
	TES	802.86	802.72	802.58	802.46	802.34	802.21	802.08	801.96	801.85	801.84
RIGHT	ZW	802.77	802.65	802.53	802.41	802.29	802.16	802.03	801.91	801.79	801.73
GIRDER	CW	802.77	802.65	802.53	802.41	802.29	802.17	802.05	801.92	801.80	801.73
	SW	0.00	0.01	0.03	0.03	0.04	0.04	0.04	0.03	0.02	0.01
LEFT	DL1	0.00	0.04	0.08	0.10	0.11	0.11	0.10	0.08	0.05	0.03
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	-0.01	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.01	0.00
7	DS	803.54	803.32	803.11	802.93	802.76	802.64	802.53	802.43	802.36	802.32
	TES	802.41	802.24	802.07	801.91	801.76	801.63	801.51	801.39	801.29	801.28
RIGHT	ZW	802.33	802.17	802.02	801.86	801.72	801.59	801.46	801.34	801.23	801.17
GIRDER	CW	802.33	802.20	802.06	801.92	801.79	801.65	801.52	801.38	801.25	801.17
	SW	0.00	0.01	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.02
RIGHT	DL1	0.00	0.04	0.08	0.10	0.11	0.11	0.10	0.08	0.05	0.04
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	-0.03	-0.04	-0.06	-0.07	-0.07	-0.06	-0.05	-0.02	0.00
BLOCKING HEIGHTS											
10	BLK	1.13									0.36
11		0.85									0.00
12		1.42									0.36
13		1.14									0.00

FIELD SECTION #2

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS#1	P02-01	P02-02	P02-03	PIER	P02-05	P02-06	P02-07	FS #2
		580+70.39	580+75.39	580+88.22	581+01.06	581+13.89	581+27.64	581+41.39	581+55.14	581+60.14
FINISHED ELEVATION - TOP OF DECK										
1	DS	804.64	804.62	804.57	804.55	804.54	804.54	804.57	804.62	804.64
2		804.55	804.53	804.49	804.46	804.45	804.46	804.48	804.53	804.55
6		802.75	802.73	802.69	802.66	802.65	802.66	802.68	802.73	802.75
8		802.03	802.01	801.97	801.94	801.93	801.94	801.96	802.01	802.03
9		801.94	801.92	801.88	801.85	801.84	801.85	801.88	801.92	801.95
CAMBER DATA										
3	DS	804.27	804.25	804.20	804.17	804.16	804.17	804.20	804.25	804.27
	TES	803.20	803.12	803.06	803.11	803.12	803.20	803.23	803.38	803.53
LEFT	ZW	803.09	803.04	802.97	802.94	802.96	803.05	803.19	803.37	803.46
GIRDER	CW	803.09	803.11	803.16	803.22	803.27	803.33	803.38	803.44	803.46
	SW	0.01	0.00	0.00	-0.01	0.00	0.02	0.04	0.07	0.09
LEFT	DL1	0.02	0.00	-0.02	-0.02	0.00	0.06	0.14	0.24	0.29
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03
	C	0.00	-0.07	-0.19	-0.28	-0.31	-0.28	-0.19	-0.07	0.00
4	DS	803.70	803.68	803.63	803.60	803.59	803.60	803.63	803.68	803.70
	TES	802.64	802.56	802.49	802.55	802.55	802.62	802.64	802.78	802.93
LEFT	ZW	802.52	802.48	802.41	802.37	802.39	802.46	802.59	802.77	802.86
GIRDER	CW	802.52	802.54	802.59	802.64	802.68	802.74	802.79	802.84	802.86
	SW	0.01	0.01	0.00	0.00	0.00	0.02	0.04	0.07	0.08
RIGHT	DL1	0.02	0.01	-0.01	-0.02	0.00	0.05	0.12	0.21	0.26
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03
	C	0.00	-0.06	-0.18	-0.26	-0.30	-0.27	-0.19	-0.07	0.00
5	DS	802.89	802.87	802.82	802.79	802.78	802.79	802.82	802.87	802.89
	TES	801.84	801.76	801.69	801.74	801.74	801.80	801.82	801.95	802.05
RIGHT	ZW	801.73	801.69	801.61	801.57	801.58	801.65	801.77	801.92	802.00
GIRDER	CW	801.73	801.74	801.78	801.82	801.86	801.90	801.94	801.98	802.00
	SW	0.01	0.01	0.00	0.00	0.00	0.01	0.03	0.06	0.07
LEFT	DL1	0.03	0.02	0.00	-0.01	0.00	0.04	0.11	0.18	0.22
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.06	-0.17	-0.25	-0.28	-0.25	-0.18	-0.06	0.00
7	DS	802.32	802.30	802.25	802.22	802.21	802.22	802.25	802.30	802.32
	TES	801.28	801.20	801.13	801.18	801.17	801.22	801.23	801.36	801.46
RIGHT	ZW	801.17	801.13	801.05	801.01	801.01	801.07	801.18	801.32	801.40
GIRDER	CW	801.17	801.18	801.21	801.25	801.28	801.31	801.35	801.38	801.40
	SW	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.06
RIGHT	DL1	0.04	0.03	0.00	-0.01	0.00	0.04	0.09	0.16	0.20
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02
	C	0.00	-0.05	-0.16	-0.24	-0.27	-0.25	-0.17	-0.06	0.00
BLOCKING HEIGHTS										
10	BLK	0.36								0.73
11		0.00								0.34
12		0.36								0.62
13		0.00								0.24



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 1 & 2

SHEET 60 OF 96

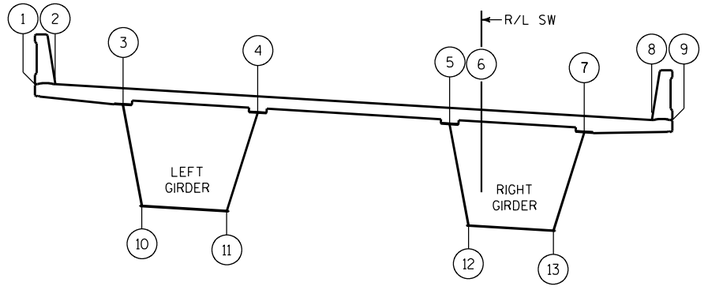
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FIELD SECTION #3

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #2	P03-01	P03-02	P03-03	P03-04	P03-05	P03-06	P03-07	P03-08	P03-09	FS #3
		581+60.14	581+68.89	581+82.64	581+96.39	582+10.14	582+23.89	582+37.64	582+51.39	582+65.14	582+78.89	582+87.64
FINISHED ELEVATION - TOP OF DECK												
1	DS	804.64	804.68	804.77	804.87	805.00	805.14	805.30	805.48	805.68	805.90	806.05
2		804.55	804.60	804.68	804.79	804.91	805.05	805.21	805.39	805.59	805.81	805.96
6		802.75	802.80	802.88	802.99	803.11	803.25	803.41	803.59	803.79	804.01	804.16
8		802.03	802.08	802.16	802.27	802.39	802.53	802.69	802.87	803.07	803.29	803.44
9		801.95	801.99	802.07	802.18	802.30	802.44	802.61	802.79	802.99	803.21	803.36
CAMBER DATA												
3	DS	804.27	804.31	804.40	804.50	804.62	804.77	804.93	805.11	805.31	805.53	805.68
	TES	803.53	803.57	803.76	803.94	804.12	804.29	804.43	804.56	804.69	804.81	804.96
LEFT	ZW	803.46	803.58	803.79	804.00	804.20	804.37	804.51	804.62	804.72	804.82	804.90
GIRDER	CW	803.46	803.56	803.72	803.87	804.03	804.18	804.34	804.49	804.65	804.80	804.90
	SW	0.09	0.11	0.14	0.16	0.18	0.18	0.18	0.16	0.14	0.11	0.10
LEFT	DL1	0.29	0.33	0.42	0.50	0.55	0.57	0.56	0.51	0.44	0.35	0.30
WEB	DL2	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
	C	0.00	0.01	0.07	0.13	0.17	0.19	0.17	0.13	0.08	0.02	0.00
4	DS	803.70	803.74	803.83	803.93	804.05	804.20	804.36	804.54	804.74	804.96	805.11
	TES	802.93	802.97	803.15	803.32	803.49	803.65	803.80	803.94	804.08	804.21	804.36
LEFT	ZW	802.86	802.97	803.17	803.36	803.54	803.70	803.85	803.98	804.10	804.20	804.29
GIRDER	CW	802.86	802.95	803.11	803.26	803.42	803.57	803.73	803.88	804.04	804.19	804.29
	SW	0.08	0.10	0.12	0.14	0.16	0.16	0.16	0.15	0.13	0.10	0.09
RIGHT	DL1	0.26	0.30	0.39	0.45	0.49	0.50	0.49	0.46	0.40	0.32	0.27
WEB	DL2	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.03	0.03
	C	0.00	0.01	0.06	0.10	0.12	0.13	0.13	0.10	0.06	0.01	0.00
5	DS	802.89	802.93	803.02	803.12	803.24	803.39	803.55	803.73	803.93	804.15	804.30
	TES	802.05	802.10	802.27	802.43	802.60	802.76	802.91	803.05	803.19	803.33	803.48
RIGHT	ZW	802.00	802.10	802.29	802.48	802.66	802.82	802.97	803.10	803.22	803.33	803.43
GIRDER	CW	802.00	802.10	802.25	802.41	802.56	802.71	802.87	803.02	803.18	803.33	803.43
	SW	0.07	0.08	0.11	0.13	0.14	0.14	0.14	0.13	0.11	0.09	0.08
LEFT	DL1	0.22	0.26	0.34	0.40	0.44	0.45	0.44	0.40	0.35	0.28	0.24
WEB	DL2	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.03	0.03
	C	0.00	0.00	0.04	0.07	0.10	0.11	0.10	0.08	0.04	0.00	0.00
7	DS	802.32	802.36	802.45	802.55	802.67	802.82	802.98	803.16	803.36	803.58	803.73
	TES	801.46	801.50	801.66	801.82	801.98	802.14	802.29	802.44	802.58	802.73	802.88
RIGHT	ZW	801.40	801.49	801.67	801.85	802.02	802.18	802.33	802.47	802.60	802.72	802.82
GIRDER	CW	801.40	801.50	801.65	801.80	801.96	802.11	802.26	802.42	802.57	802.72	802.82
	SW	0.06	0.07	0.09	0.11	0.12	0.12	0.12	0.11	0.10	0.08	0.07
RIGHT	DL1	0.20	0.24	0.30	0.35	0.39	0.40	0.39	0.36	0.31	0.25	0.21
WEB	DL2	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.03	0.03
	C	0.00	0.00	0.02	0.05	0.06	0.07	0.06	0.05	0.03	0.00	0.00
BLOCKING HEIGHTS												
10	BLK	0.73										2.16
11		0.34										1.78
12		0.62										2.05
13		0.24										1.67

FIELD SECTION #4

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #3	P04-01	P04-02	P04-03	PIER	P04-05	P04-06	P04-07	FS #4
		582+87.64	582+92.64	583+06.39	583+20.14	583+33.89	583+47.47	583+61.06	583+74.64	583+79.64
FINISHED ELEVATION - TOP OF DECK										
1	DS	806.05	806.14	806.40	806.67	806.97	807.28	807.61	807.96	808.10
2		805.96	806.05	806.31	806.59	806.88	807.20	807.53	807.87	808.01
6		804.16	804.25	804.51	804.79	805.08	805.40	805.73	806.07	806.21
8		803.44	803.53	803.79	804.07	804.36	804.68	805.01	805.35	805.49
9		803.36	803.45	803.70	803.98	804.28	804.59	804.92	805.27	805.40
CAMBER DATA										
3	DS	805.68	805.77	806.02	806.30	806.60	806.91	807.24	807.59	807.72
	TES	804.96	804.92	805.07	805.33	805.56	805.83	806.07	806.43	806.61
LEFT	ZW	804.90	804.92	805.04	805.19	805.39	805.65	805.97	806.33	806.48
GIRDER	CW	804.90	804.99	805.22	805.46	805.69	805.93	806.16	806.39	806.48
	SW	0.10	0.08	0.05	0.02	0.00	-0.01	-0.01	-0.01	-0.01
LEFT	DL1	0.30	0.26	0.16	0.07	0.00	-0.03	-0.05	-0.04	-0.03
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.07	-0.18	-0.27	-0.30	-0.27	-0.19	-0.06	0.00
4	DS	805.11	805.20	805.45	805.73	806.03	806.34	806.67	807.02	807.15
	TES	804.36	804.32	804.48	804.75	804.99	805.27	805.51	805.87	806.05
LEFT	ZW	804.29	804.31	804.44	804.61	804.82	805.09	805.42	805.78	805.92
GIRDER	CW	804.29	804.38	804.62	804.87	805.11	805.35	805.59	805.84	805.92
	SW	0.09	0.07	0.04	0.02	0.00	-0.01	-0.01	-0.01	0.00
RIGHT	DL1	0.27	0.23	0.14	0.06	0.00	-0.03	-0.03	-0.03	-0.02
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.07	-0.18	-0.26	-0.29	-0.26	-0.18	-0.06	0.00
5	DS	804.30	804.39	804.64	804.92	805.22	805.53	805.86	806.21	806.34
	TES	803.48	803.48	803.65	803.94	804.18	804.47	804.71	805.08	805.26
RIGHT	ZW	803.43	803.46	803.61	803.79	804.01	804.29	804.62	804.99	805.14
GIRDER	CW	803.43	803.52	803.78	804.03	804.29	804.54	804.79	805.05	805.14
	SW	0.08	0.06	0.04	0.02	0.00	-0.01	-0.01	0.00	0.00
LEFT	DL1	0.24	0.20	0.12	0.05	0.00	-0.02	-0.02	-0.01	0.00
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.06	-0.17	-0.25	-0.28	-0.25	-0.17	-0.05	0.00
7	DS	803.73	803.82	804.07	804.35	804.65	804.96	805.29	805.64	805.77
	TES	802.88	802.89	803.07	803.36	803.61	803.90	804.15	804.52	804.70
RIGHT	ZW	802.82	802.86	803.02	803.21	803.44	803.73	804.07	804.44	804.58
GIRDER	CW	802.82	802.92	803.18	803.44	803.71	803.97	804.23	804.49	804.58
	SW	0.07	0.05	0.03	0.01	0.00	0.00	0.00	0.00	0.01
RIGHT	DL1	0.21	0.17	0.10	0.04	0.00	-0.01	-0.01	0.00	0.01
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.06	-0.17	-0.24	-0.27	-0.24	-0.16	-0.05	0.00
BLOCKING HEIGHTS										
10	BLK	2.16								3.75
11		1.78								3.40
12		2.05								3.77
13		1.67								3.42



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TOROUED.

IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 3 & 4

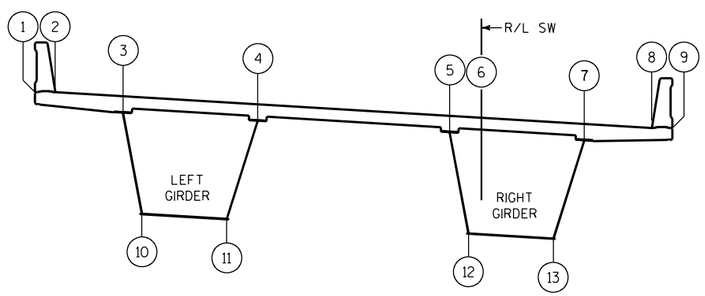
SHEET 61 OF 96

FIELD SECTION #5

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION						
		FS #4	P05-01	P05-02	P05-03	P05-04	P05-05	FS #5
		583+79.64	583+88.22	584+01.81	584+15.39	584+28.97	584+42.56	584+51.14
FINISHED ELEVATION - TOP OF DECK								
1	DS	808.10	808.33	808.72	809.12	809.53	809.94	810.19
2		808.01	808.24	808.63	809.03	809.44	809.85	810.11
6		806.21	806.44	806.83	807.23	807.64	808.05	808.31
8		805.49	805.72	806.11	806.51	806.92	807.33	807.59
9		805.40	805.64	806.02	806.43	806.83	807.24	807.50
CAMBER DATA								
3	DS	807.72	807.96	808.34	808.75	809.16	809.56	809.82
	TES	806.61	806.82	807.23	807.65	808.07	808.47	808.77
LEFT	ZW	806.48	806.73	807.15	807.58	808.00	808.40	808.66
GIRDER	CW	806.48	806.74	807.15	807.57	807.98	808.39	808.66
	SW	-0.01	0.00	0.00	0.01	0.01	0.01	0.01
LEFT	DL1	-0.03	-0.02	0.00	0.02	0.03	0.03	0.03
WEB	DL2	0.00	0.00	0.00	0.01	0.01	0.01	0.00
	C	0.00	-0.01	-0.01	0.01	0.02	0.01	0.00
4	DS	807.15	807.39	807.77	808.18	808.59	808.99	809.25
	TES	806.05	806.25	806.66	807.08	807.50	807.91	808.20
LEFT	ZW	805.92	806.17	806.58	807.01	807.43	807.84	808.09
GIRDER	CW	805.92	806.18	806.60	807.01	807.42	807.83	808.09
	SW	0.00	0.00	0.01	0.01	0.01	0.01	0.01
RIGHT	DL1	-0.02	-0.01	0.01	0.02	0.03	0.03	0.03
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	-0.01	0.00	0.01	0.01	0.00
5	DS	806.34	806.58	806.96	807.37	807.78	808.18	808.44
	TES	805.26	805.47	805.87	806.29	806.71	807.11	807.40
RIGHT	ZW	805.14	805.39	805.80	806.23	806.64	807.04	807.29
GIRDER	CW	805.14	805.40	805.81	806.22	806.63	807.04	807.29
	SW	0.00	0.01	0.01	0.02	0.02	0.02	0.02
LEFT	DL1	0.00	0.01	0.03	0.05	0.05	0.05	0.04
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	0.00	0.01	0.02	0.01	0.00
7	DS	805.77	806.01	806.39	806.80	807.21	807.61	807.87
	TES	804.70	804.91	805.31	805.73	806.14	806.55	806.84
RIGHT	ZW	804.58	804.83	805.25	805.67	806.08	806.48	806.73
GIRDER	CW	804.58	804.84	805.25	805.66	806.07	806.47	806.73
	SW	0.01	0.01	0.01	0.02	0.02	0.02	0.02
RIGHT	DL1	0.01	0.02	0.04	0.05	0.06	0.05	0.05
WEB	DL2	0.00	0.00	0.00	0.01	0.01	0.01	0.00
	C	0.00	-0.01	0.00	0.01	0.02	0.01	0.00
BLOCKING HEIGHTS								
10	BLK	3.75						5.92
11		3.40						5.57
12		3.77						5.92
13		3.42						5.56

FIELD SECTION #6

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION							
		FS #5	P06-01	P06-02	P06-03	PIER	P06-05	P06-06	FS #6
		584+51.14	584+56.14	584+69.72	584+83.31	584+96.89	585+10.95	585+25.02	585+30.02
FINISHED ELEVATION - TOP OF DECK									
1	DS	810.19	810.34	810.75	811.16	811.57	811.99	812.41	812.56
2		810.11	810.26	810.66	811.07	811.48	811.90	812.32	812.47
6		808.31	808.46	808.86	809.27	809.68	810.10	810.52	810.67
8		807.59	807.74	808.14	808.55	808.96	809.38	809.80	809.95
9		807.50	807.65	808.06	808.46	808.87	809.29	809.72	809.87
CAMBER DATA									
3	DS	809.82	809.97	810.38	810.79	811.19	811.62	812.04	812.19
	TES	808.77	808.87	809.27	809.66	810.07	810.51	810.96	811.16
LEFT	ZW	808.66	808.80	809.19	809.58	809.99	810.43	810.88	811.05
GIRDER	CW	808.66	808.81	809.22	809.63	810.05	810.47	810.90	811.05
	SW	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01
LEFT	DL1	0.03	0.02	0.01	0.00	0.00	0.02	0.04	0.05
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	-0.03	-0.05	-0.06	-0.04	-0.02	0.00
4	DS	809.25	809.40	809.81	810.22	810.62	811.05	811.47	811.62
	TES	808.20	808.31	808.70	809.10	809.50	809.94	810.38	810.59
LEFT	ZW	808.09	808.24	808.63	809.02	809.42	809.86	810.31	810.47
GIRDER	CW	808.09	808.24	808.65	809.06	809.47	809.90	810.32	810.47
	SW	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01
RIGHT	DL1	0.03	0.03	0.02	0.00	0.00	0.02	0.04	0.05
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	-0.03	-0.05	-0.06	-0.04	-0.01	0.00
5	DS	808.44	808.59	809.00	809.41	809.81	810.24	810.66	810.81
	TES	807.40	807.51	807.90	808.29	808.69	809.12	809.57	809.77
RIGHT	ZW	807.29	807.44	807.82	808.21	808.61	809.04	809.49	809.66
GIRDER	CW	807.29	807.44	807.85	808.26	808.67	809.09	809.51	809.66
	SW	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.01
LEFT	DL1	0.04	0.04	0.02	0.01	0.00	0.01	0.03	0.04
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	-0.03	-0.05	-0.06	-0.04	-0.01	0.00
7	DS	807.87	808.02	808.43	808.84	809.24	809.67	810.09	810.24
	TES	806.84	806.94	807.33	807.72	808.12	808.55	809.00	809.20
RIGHT	ZW	806.73	806.87	807.26	807.64	808.04	808.47	808.92	809.08
GIRDER	CW	806.73	806.88	807.29	807.69	808.10	808.51	808.93	809.08
	SW	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.01
RIGHT	DL1	0.05	0.04	0.03	0.01	0.00	0.01	0.03	0.04
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.01	-0.03	-0.05	-0.06	-0.04	-0.01	0.00
BLOCKING HEIGHTS									
10	BLK	5.92							8.32
11		5.57							7.95
12		5.92							8.28
13		5.56							7.92



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 5 & 6

SHEET 62 OF 96

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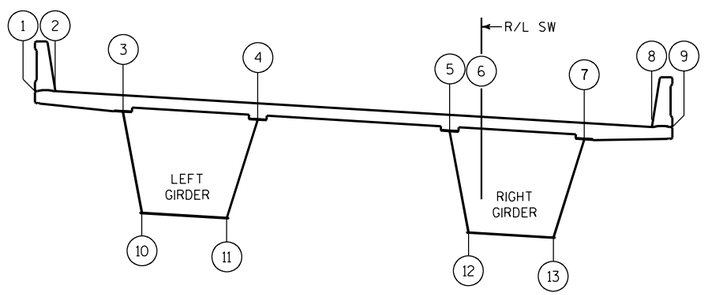
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FIELD SECTION #7

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION						
		FS #6	P07-01	P07-02	P07-03	P07-04	P07-05	P07-06
		585+30.02	585+39.08	585+53.14	585+67.20	585+81.27	585+95.33	586+09.39
FINISHED ELEVATION - TOP OF DECK								
1	DS	812.56	812.83	813.23	813.62	814.00	814.36	814.71
2		812.47	812.74	813.15	813.54	813.91	814.28	814.62
6		810.67	810.94	811.35	811.74	812.11	812.48	812.82
8		809.95	810.22	810.63	811.02	811.39	811.76	812.10
9		809.87	810.13	810.54	810.93	811.31	811.67	812.02
CAMBER DATA								
3	DS	812.19	812.46	812.86	813.25	813.63	813.99	814.34
	TES	811.16	811.40	811.82	812.22	812.57	812.91	813.21
LEFT	ZW	811.05	811.34	811.76	812.15	812.51	812.83	813.13
GIRDER	CW	811.05	811.29	811.66	812.03	812.39	812.76	813.13
	SW	0.01	0.02	0.02	0.02	0.02	0.01	0.00
LEFT	DL1	0.05	0.06	0.08	0.08	0.06	0.04	0.00
WEB	DL2	0.00	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.05	0.11	0.13	0.11	0.07	0.00
4	DS	811.62	811.89	812.29	812.68	813.06	813.42	813.77
	TES	810.59	810.82	811.24	811.64	812.00	812.33	812.64
LEFT	ZW	810.47	810.76	811.18	811.57	811.93	812.26	812.56
GIRDER	CW	810.47	810.71	811.08	811.45	811.82	812.19	812.56
	SW	0.01	0.02	0.02	0.02	0.02	0.01	0.00
RIGHT	DL1	0.05	0.06	0.07	0.07	0.06	0.03	0.00
WEB	DL2	0.00	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.10	0.12	0.11	0.07	0.00
5	DS	810.81	811.08	811.48	811.87	812.25	812.61	812.96
	TES	809.77	810.01	810.43	810.82	811.18	811.52	811.83
RIGHT	ZW	809.66	809.94	810.36	810.76	811.12	811.44	811.75
GIRDER	CW	809.66	809.90	810.27	810.64	811.01	811.38	811.75
	SW	0.01	0.01	0.02	0.02	0.02	0.01	0.00
LEFT	DL1	0.04	0.05	0.07	0.07	0.05	0.03	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.10	0.12	0.11	0.06	0.00
7	DS	810.24	810.51	810.91	811.30	811.68	812.04	812.39
	TES	809.20	809.43	809.85	810.24	810.61	810.95	811.26
RIGHT	ZW	809.08	809.36	809.78	810.18	810.54	810.87	811.18
GIRDER	CW	809.08	809.32	809.69	810.07	810.44	810.81	811.18
	SW	0.01	0.01	0.02	0.02	0.01	0.01	0.00
RIGHT	DL1	0.04	0.05	0.06	0.06	0.05	0.03	0.00
WEB	DL2	0.00	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.09	0.11	0.10	0.06	0.00
BLOCKING HEIGHTS								
10	BLK	8.32						10.40
11		7.95						10.04
12		8.28						10.38
13		7.92						10.02

FIELD SECTION #8

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION						
		P08-01	P08-02	P08-03	P08-04	P08-05	P08-06	FS# 7
		586+13.39	586+28.20	586+43.02	586+57.83	586+72.64	586+87.45	586+97.27
FINISHED ELEVATION - TOP OF DECK								
1	DS	814.81	815.15	815.48	815.80	816.10	816.38	816.56
2		814.72	815.07	815.40	815.71	816.01	816.29	816.47
6		812.92	813.27	813.60	813.91	814.21	814.49	814.67
8		812.20	812.55	812.88	813.19	813.49	813.77	813.95
9		812.11	812.46	812.79	813.11	813.40	813.69	813.87
CAMBER DATA								
3	DS	814.44	814.78	815.11	815.43	815.73	816.01	816.19
	TES	813.31	813.70	814.07	814.40	814.70	814.96	815.20
LEFT	ZW	813.23	813.63	814.01	814.35	814.64	814.90	815.06
GIRDER	CW	813.23	813.55	813.87	814.20	814.52	814.85	815.06
	SW	0.00	0.01	0.02	0.03	0.02	0.02	0.02
LEFT	DL1	0.00	0.04	0.07	0.09	0.09	0.07	0.06
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.08	0.13	0.15	0.12	0.06	0.00
4	DS	813.87	814.21	814.54	814.86	815.16	815.44	815.62
	TES	812.74	813.13	813.49	813.82	814.12	814.39	814.62
LEFT	ZW	812.66	813.06	813.43	813.76	814.06	814.32	814.48
GIRDER	CW	812.66	812.98	813.30	813.62	813.95	814.27	814.48
	SW	0.00	0.01	0.02	0.02	0.02	0.02	0.01
RIGHT	DL1	0.00	0.04	0.07	0.08	0.08	0.07	0.05
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.08	0.13	0.14	0.11	0.05	0.00
5	DS	813.06	813.40	813.73	814.05	814.35	814.63	814.81
	TES	811.93	812.32	812.68	813.01	813.31	813.57	813.78
RIGHT	ZW	811.85	812.24	812.61	812.94	813.24	813.50	813.67
GIRDER	CW	811.85	812.17	812.49	812.81	813.13	813.45	813.67
	SW	0.00	0.01	0.02	0.02	0.02	0.02	0.01
LEFT	DL1	0.00	0.03	0.06	0.08	0.08	0.06	0.05
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.07	0.12	0.13	0.11	0.05	0.00
7	DS	812.49	812.83	813.16	813.48	813.78	814.06	814.24
	TES	811.36	811.74	812.10	812.43	812.73	813.00	813.20
RIGHT	ZW	811.28	811.67	812.03	812.37	812.66	812.93	813.09
GIRDER	CW	811.28	811.60	811.92	812.24	812.56	812.88	813.09
	SW	0.00	0.01	0.02	0.02	0.02	0.01	0.01
RIGHT	DL1	0.00	0.03	0.06	0.07	0.07	0.06	0.05
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.07	0.12	0.13	0.10	0.05	0.00
BLOCKING HEIGHTS								
10	BLK	10.50						12.33
11		10.13						11.96
12		10.47						12.29
13		10.11						11.93



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 7 & 8

SHEET 63 OF 96

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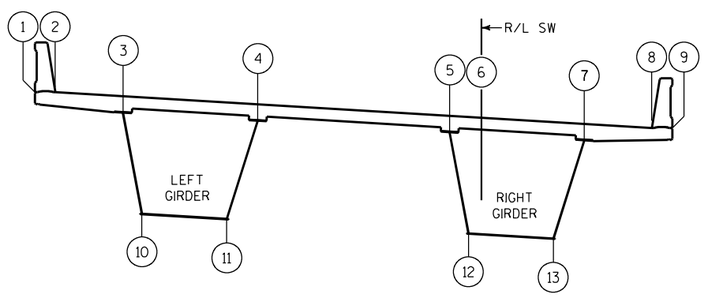
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FIELD SECTION #9

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION							
		FS #7	P09-01	P09-02	PIER	P09-04	P09-05	P09-06	FS #8
		586+97.27	587+02.27	587+17.08	587+31.89	587+46.14	587+60.39	587+74.64	587+79.64
FINISHED ELEVATION - TOP OF DECK									
1	DS	816.56	816.65	816.90	817.13	817.34	817.54	817.72	817.78
2		816.47	816.56	816.81	817.05	817.26	817.45	817.63	817.69
6		814.67	814.76	815.01	815.25	815.46	815.65	815.83	815.89
8		813.95	814.04	814.29	814.53	814.74	814.93	815.11	815.17
9		813.87	813.95	814.20	814.44	814.65	814.85	815.03	815.09
CAMBER DATA									
3	DS	816.19	816.28	816.53	816.76	816.97	817.17	817.35	817.41
	TES	815.20	815.22	815.44	815.66	815.87	816.08	816.28	816.40
LEFT	ZW	815.06	815.13	815.34	815.55	815.77	815.99	816.19	816.26
GIRDER	CW	815.06	815.13	815.35	815.56	815.77	815.98	816.19	816.26
	SW	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02
LEFT	DL1	0.06	0.05	0.02	0.00	0.00	0.01	0.03	0.03
WEB	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	0.00	-0.01	-0.01	0.00	0.01	0.00	0.00
4	DS	815.62	815.71	815.96	816.19	816.40	816.60	816.78	816.84
	TES	814.62	814.65	814.87	815.09	815.30	815.52	815.71	815.83
LEFT	ZW	814.48	814.55	814.77	814.98	815.20	815.42	815.63	815.69
GIRDER	CW	814.48	814.56	814.77	814.99	815.20	815.41	815.62	815.69
	SW	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02
RIGHT	DL1	0.05	0.04	0.02	0.00	0.01	0.02	0.03	0.04
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	-0.01	0.00	0.01	0.01	0.00
5	DS	814.81	814.90	815.15	815.38	815.59	815.79	815.97	816.03
	TES	813.78	813.81	814.04	814.26	814.47	814.69	814.89	815.00
RIGHT	ZW	813.67	813.74	813.96	814.17	814.39	814.62	814.83	814.90
GIRDER	CW	813.67	813.74	813.96	814.18	814.40	814.61	814.82	814.90
	SW	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02
LEFT	DL1	0.05	0.04	0.01	0.00	0.01	0.02	0.04	0.05
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	-0.01	-0.01	0.00	0.01	0.00	0.00
7	DS	814.24	814.33	814.58	814.81	815.02	815.22	815.40	815.46
	TES	813.20	813.24	813.47	813.69	813.91	814.12	814.32	814.43
RIGHT	ZW	813.09	813.16	813.39	813.60	813.83	814.05	814.26	814.33
GIRDER	CW	813.09	813.17	813.39	813.61	813.83	814.04	814.25	814.33
	SW	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02
RIGHT	DL1	0.05	0.04	0.01	0.00	0.01	0.03	0.04	0.05
WEB	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	C	0.00	0.00	0.00	-0.01	0.00	0.01	0.01	0.00
BLOCKING HEIGHTS									
10	BLK	12.33							13.53
11		11.96							13.17
12		12.29							13.52
13		11.93							13.16

FIELD SECTION #10

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #8	P10-01	P10-02	P10-03	P10-04	P10-05	P10-06	P10-07	P10-08	FS #9
		587+79.64	587+88.89	588+03.14	588+17.39	588+31.64	588+45.89	588+60.14	588+74.39	588+88.64	588+95.89
FINISHED ELEVATION - TOP OF DECK											
1	DS	817.78	817.89	818.04	818.18	818.30	818.41	818.50	818.58	818.64	818.67
2		817.69	817.80	817.95	818.09	818.21	818.32	818.41	818.49	818.55	818.58
6		815.89	816.00	816.15	816.29	816.41	816.52	816.61	816.69	816.75	816.78
8		815.17	815.28	815.43	815.57	815.69	815.80	815.89	815.97	816.03	816.06
9		815.09	815.19	815.35	815.48	815.60	815.71	815.80	815.88	815.94	815.97
CAMBER DATA											
3	DS	817.41	817.52	817.67	817.80	817.93	818.03	818.13	818.20	818.27	818.29
	TES	816.40	816.44	816.59	816.72	816.82	816.90	816.97	817.04	817.20	817.35
LEFT	ZW	816.26	816.38	816.53	816.66	816.75	816.82	816.88	816.95	817.02	817.08
GIRDER	CW	816.26	816.32	816.42	816.53	816.63	816.73	816.83	816.93	817.03	817.08
	SW	0.02	0.02	0.02	0.02	0.02	0.01	0.00	-0.01	-0.01	0.00
LEFT	DL1	0.03	0.04	0.04	0.03	0.01	-0.01	-0.03	-0.04	-0.03	-0.01
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.05	0.11	0.13	0.13	0.10	0.06	0.02	0.00	0.00
4	DS	816.84	816.95	817.10	817.23	817.36	817.46	817.56	817.63	817.70	817.72
	TES	815.83	815.87	816.02	816.14	816.25	816.34	816.41	816.47	816.62	816.77
LEFT	ZW	815.69	815.81	815.96	816.08	816.18	816.26	816.33	816.38	816.45	816.50
GIRDER	CW	815.69	815.76	815.86	815.95	816.05	816.15	816.25	816.35	816.45	816.50
	SW	0.02	0.02	0.02	0.02	0.02	0.01	0.00	-0.01	-0.01	0.00
RIGHT	DL1	0.04	0.04	0.04	0.03	0.02	0.00	-0.02	-0.03	-0.03	-0.01
WEB	DL2	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.05	0.10	0.13	0.13	0.11	0.08	0.04	0.00	0.00
5	DS	816.03	816.14	816.29	816.42	816.55	816.65	816.75	816.82	816.89	816.91
	TES	815.00	815.07	815.23	815.36	815.46	815.55	815.62	815.67	815.82	815.96
RIGHT	ZW	814.90	815.01	815.17	815.30	815.40	815.48	815.54	815.59	815.65	815.69
GIRDER	CW	814.90	814.96	815.06	815.15	815.25	815.35	815.45	815.54	815.64	815.69
	SW	0.02	0.03	0.03	0.03	0.02	0.01	0.01	0.00	-0.01	0.00
LEFT	DL1	0.05	0.06	0.06	0.06	0.04	0.02	-0.01	-0.02	-0.02	-0.01
WEB	DL2	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.05	0.12	0.15	0.15	0.13	0.09	0.05	0.01	0.00
7	DS	815.46	815.57	815.72	815.85	815.98	816.08	816.18	816.25	816.32	816.34
	TES	814.43	814.50	814.66	814.79	814.90	814.98	815.05	815.11	815.25	815.40
RIGHT	ZW	814.33	814.45	814.60	814.73	814.84	814.92	814.97	815.03	815.08	815.12
GIRDER	CW	814.33	814.39	814.49	814.59	814.68	814.78	814.88	814.98	815.07	815.12
	SW	0.02	0.03	0.03	0.03	0.02	0.01	0.01	0.00	0.00	0.00
RIGHT	DL1	0.05	0.06	0.06	0.06	0.04	0.02	0.00	-0.02	-0.02	-0.01
WEB	DL2	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.05	0.11	0.15	0.15	0.13	0.10	0.05	0.01	0.00
BLOCKING HEIGHTS											
10	BLK	13.53									14.34
11		13.17									13.98
12		13.52									14.32
13		13.16									13.96



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

   IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 9 & 10

SHEET 64 OF 96

FIELD SECTION #11

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION		
		FS #9	PIER	FS #10
		588+95.89	589+02.89	589+09.89
FINISHED ELEVATION - TOP OF DECK				
1	DS	818.67	818.69	818.71
2		818.58	818.60	818.62
6		816.78	816.80	816.82
8		816.06	816.08	816.10
9		815.97	815.99	816.01
CAMBER DATA				
3	DS	818.29	818.32	818.33
	TES	817.35	817.29	817.45
LEFT	ZW	817.08	817.12	817.19
GIRDER	CW	817.08	817.13	817.19
	SW	0.00	0.00	0.01
LEFT	DL1	-0.01	0.01	0.05
WEB	DL2	0.00	0.00	0.00
	C	0.00	-0.01	0.00
4	DS	817.72	817.75	817.76
	TES	816.77	816.70	816.86
LEFT	ZW	816.50	816.54	816.60
GIRDER	CW	816.50	816.55	816.60
	SW	0.00	0.00	0.01
RIGHT	DL1	-0.01	0.00	0.03
WEB	DL2	0.00	0.00	0.00
	C	0.00	-0.01	0.00
5	DS	816.91	816.94	816.95
	TES	815.96	815.89	816.05
RIGHT	ZW	815.69	815.73	815.78
GIRDER	CW	815.69	815.74	815.78
	SW	0.00	0.00	0.01
LEFT	DL1	-0.01	0.00	0.03
WEB	DL2	0.00	0.00	0.00
	C	0.00	-0.01	0.00
7	DS	816.34	816.37	816.38
	TES	815.40	815.32	815.47
RIGHT	ZW	815.12	815.16	815.21
GIRDER	CW	815.12	815.17	815.21
	SW	0.00	0.00	0.01
RIGHT	DL1	-0.01	0.00	0.02
WEB	DL2	0.00	0.00	0.00
	C	0.00	-0.01	0.00
BLOCKING HEIGHTS				
10	BLK	14.34		14.45
11		13.98		14.08
12		14.32		14.41
13		13.96		14.05

FIELD SECTION #12

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION				
		FS #10	P12-01	P12-02	P12-03	FS #11
		589+09.89	589+16.89	589+30.89	589+44.89	589+49.89
FINISHED ELEVATION - TOP OF DECK						
1	DS	818.71	818.72	818.74	818.74	818.74
2		818.62	818.63	818.65	818.66	818.65
6		816.82	816.83	816.85	816.86	816.85
8		816.10	816.11	816.13	816.14	816.13
9		816.01	816.03	816.04	816.05	816.05
CAMBER DATA						
3	DS	818.33	818.35	818.37	818.37	818.37
	TES	817.45	817.39	817.43	817.54	817.64
LEFT	ZW	817.19	817.25	817.39	817.54	817.61
GIRDER	CW	817.19	817.26	817.41	817.56	817.61
	SW	0.01	0.03	0.05	0.08	0.10
LEFT	DL1	0.05	0.08	0.17	0.27	0.32
WEB	DL2	0.00	0.01	0.02	0.03	0.03
	C	0.00	-0.01	-0.02	-0.02	0.00
4	DS	817.76	817.78	817.80	817.80	817.80
	TES	816.86	816.81	816.84	816.95	817.04
LEFT	ZW	816.60	816.66	816.80	816.94	817.01
GIRDER	CW	816.60	816.67	816.81	816.96	817.01
	SW	0.01	0.02	0.05	0.08	0.09
RIGHT	DL1	0.03	0.06	0.15	0.25	0.30
WEB	DL2	0.00	0.01	0.01	0.02	0.03
	C	0.00	-0.01	-0.01	-0.02	0.00
5	DS	816.95	816.97	816.99	816.99	816.99
	TES	816.05	815.99	816.01	816.11	816.20
RIGHT	ZW	815.78	815.84	815.96	816.09	816.15
GIRDER	CW	815.78	815.85	815.98	816.10	816.15
	SW	0.01	0.02	0.04	0.06	0.08
LEFT	DL1	0.03	0.06	0.13	0.22	0.26
WEB	DL2	0.00	0.01	0.01	0.02	0.03
	C	0.00	-0.01	-0.01	-0.02	0.00
7	DS	816.38	816.40	816.42	816.42	816.42
	TES	815.47	815.41	815.43	815.52	815.61
RIGHT	ZW	815.21	815.26	815.38	815.50	815.55
GIRDER	CW	815.21	815.27	815.39	815.51	815.55
	SW	0.01	0.01	0.03	0.06	0.07
RIGHT	DL1	0.02	0.05	0.12	0.20	0.24
WEB	DL2	0.00	0.01	0.01	0.02	0.03
	C	0.00	-0.01	-0.01	-0.01	0.00
BLOCKING HEIGHTS						
10	BLK	14.45				14.87
11		14.08				14.49
12		14.41				14.77
13		14.05				14.39

FIELD SECTION #13

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #11	P13-01	P13-02	P13-03	P13-04	P13-05	P13-06	P13-07	P13-08	P13-09	FS #12
		589+49.89	589+58.89	589+72.89	589+86.89	590+00.89	590+14.89	590+28.89	590+42.89	590+56.89	590+70.89	590+79.89
FINISHED ELEVATION - TOP OF DECK												
1	DS	818.74	818.73	818.71	818.67	818.62	818.55	818.47	818.38	818.27	818.14	818.05
2		818.65	818.65	818.62	818.58	818.53	818.46	818.38	818.29	818.18	818.05	817.97
6		816.85	816.85	816.82	816.78	816.73	816.66	816.58	816.49	816.38	816.25	816.17
8		816.13	816.13	816.10	816.06	816.01	815.94	815.86	815.77	815.66	815.53	815.45
9		816.05	816.04	816.02	815.98	815.92	815.86	815.78	815.68	815.57	815.45	815.36
CAMBER DATA												
3	DS	818.37	818.36	818.34	818.30	818.25	818.18	818.10	818.00	817.89	817.77	817.68
	TES	817.64	817.64	817.72	817.77	817.77	817.72	817.62	817.47	817.27	817.04	816.94
LEFT	ZW	817.61	817.67	817.78	817.85	817.87	817.83	817.72	817.55	817.33	817.07	816.91
GIRDER	CW	817.61	817.56	817.49	817.41	817.33	817.26	817.18	817.11	817.03	816.96	816.91
	SW	0.10	0.11	0.14	0.17	0.18	0.19	0.18	0.17	0.14	0.11	0.10
LEFT	DL1	0.32	0.37	0.46	0.54	0.59	0.61	0.59	0.54	0.46	0.36	0.31
WEB	DL2	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.05	0.04	0.03	0.03
	C	0.00	0.11	0.30	0.44	0.54	0.57	0.54	0.44	0.30	0.11	0.00
4	DS	817.80	817.79	817.77	817.73	817.68	817.61	817.53	817.43	817.32	817.20	817.11
	TES	817.04	817.05	817.12	817.15	817.14	817.08	816.99	816.85	816.66	816.44	816.34
LEFT	ZW	817.01	817.07	817.17	817.22	817.22	817.17	817.07	816.91	816.71	816.46	816.31
GIRDER	CW	817.01	816.96	816.88	816.81	816.73	816.66	816.58	816.51	816.43	816.35	816.31
	SW	0.09	0.11	0.13	0.15	0.16	0.17	0.16	0.15	0.13	0.10	0.09
RIGHT	DL1	0.30	0.34	0.43	0.49	0.53	0.54	0.53	0.49	0.42	0.34	0.29
WEB	DL2	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
	C	0.00	0.11	0.28	0.41	0.49	0.51	0.49	0.41	0.28	0.11	0.00
5	DS	816.99	816.98	816.96	816.92	816.87	816.80	816.72	816.62	816.51	816.39	816.30
	TES	816.20	816.19	816.26	816.29	816.29	816.24	816.14	815.99	815.81	815.59	815.50
RIGHT	ZW	816.15	816.20	816.30	816.35	816.35	816.31	816.20	816.04	815.84	815.60	815.45
GIRDER	CW	816.15	816.10	816.03	815.95	815.87	815.80	815.72	815.65	815.57	815.50	815.45
	SW	0.08	0.09	0.12	0.14	0.15	0.15	0.15	0.14	0.11	0.09	0.08
LEFT	DL1	0.26	0.31	0.39	0.45	0.50	0.51	0.49	0.45	0.38	0.30	0.25
WEB	DL2	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
	C	0.00	0.10	0.27	0.40	0.48	0.51	0.48	0.39	0.27	0.10	0.00
7	DS	816.42	816.41	816.39	816.35	816.30	816.23	816.15	816.05	815.94	815.82	815.73
	TES	815.61	815.60	815.66	815.68	815.66	815.61	815.51	815.38	815.20	815.00	814.91
RIGHT	ZW	815.55	815.60	815.68	815.72	815.71	815.66	815.56	815.41	815.22	814.99	814.85
GIRDER	CW	815.55	815.50	815.43	815.35	815.28	815.20	815.12	815.05	814.97	814.90	814.85
	SW	0.07	0.08	0.10	0.12	0.13	0.13	0.13	0.12	0.10	0.08	0.07
RIGHT	DL1	0.24	0.28	0.35	0.41	0.44	0.45	0.44	0.40	0.34	0.27	0.23
WEB	DL2	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
	C	0.00	0.10	0.25	0.37	0.44	0.46	0.44	0.36	0.25	0.10	0.00
BLOCKING HEIGHTS												
10	BLK	14.87										14.17
11		14.49										13.79
12		14.77										14.07
13		14.39										13.69

STATE PROJECT NUMBER

1060-33-80

LEGEND

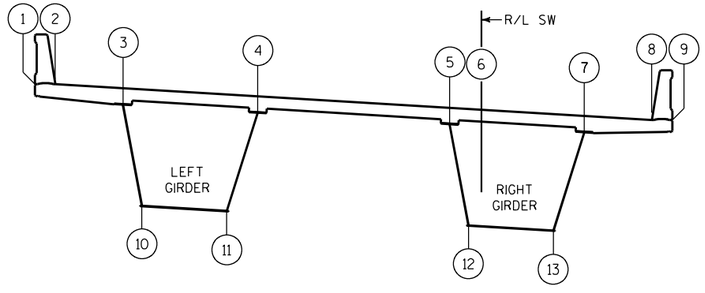
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (1/2").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TOROUED.

IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (1/4") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 11 THRU 13

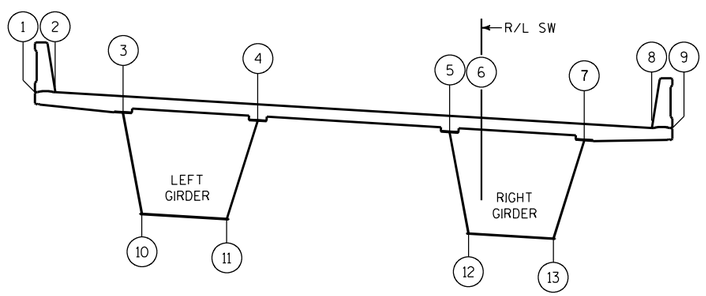
SHEET 65 OF 96

FIELD SECTION #14

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #12	P14-01	P14-02	P14-03	PIER	P14-05	P14-06	P14-07	FS #13
		590+79.89	590+84.89	590+98.89	591+12.89	591+26.89	591+39.39	591+51.89	591+64.39	591+69.39
FINISHED ELEVATION - TOP OF DECK										
1	DS	818.05	818.00	817.85	817.68	817.50	817.33	817.15	816.95	816.87
2		817.97	817.92	817.76	817.60	817.42	817.24	817.06	816.86	816.78
6		816.17	816.12	815.96	815.80	815.62	815.44	815.26	815.06	814.98
8		815.45	815.40	815.24	815.08	814.90	814.72	814.54	814.34	814.26
9		815.36	815.31	815.16	814.99	814.81	814.64	814.45	814.26	814.17
CAMBER DATA										
3	DS	817.68	817.63	817.48	817.31	817.13	816.96	816.77	816.58	816.50
	TES	816.94	816.79	816.53	816.34	816.09	815.89	815.61	815.43	815.41
LEFT	ZW	816.91	816.79	816.49	816.20	815.92	815.71	815.52	815.34	815.28
GIRDER	CW	816.91	816.82	816.56	816.31	816.05	815.83	815.60	815.37	815.28
	SW	0.10	0.08	0.05	0.02	0.00	-0.01	-0.01	0.00	0.00
LEFT	DL1	0.31	0.26	0.16	0.07	0.00	-0.03	-0.03	-0.02	-0.01
WEB	DL2	0.03	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.03	-0.07	-0.11	-0.13	-0.11	-0.08	-0.03	0.00
4	DS	817.11	817.06	816.91	816.74	816.56	816.39	816.20	816.01	815.93
	TES	816.34	816.20	815.94	815.76	815.52	815.32	815.05	814.87	814.85
LEFT	ZW	816.31	816.18	815.89	815.61	815.35	815.15	814.96	814.79	814.72
GIRDER	CW	816.31	816.22	815.97	815.72	815.47	815.25	815.03	814.81	814.72
	SW	0.09	0.07	0.04	0.02	0.00	-0.01	0.00	0.00	0.00
RIGHT	DL1	0.29	0.24	0.14	0.06	0.00	-0.02	-0.03	-0.01	0.00
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.03	-0.07	-0.11	-0.12	-0.10	-0.07	-0.02	0.00
5	DS	816.30	816.25	816.10	815.93	815.75	815.58	815.39	815.20	815.12
	TES	815.50	815.36	815.11	814.95	814.71	814.52	814.25	814.07	814.04
RIGHT	ZW	815.45	815.34	815.07	814.80	814.54	814.35	814.17	813.99	813.93
GIRDER	CW	815.45	815.37	815.13	814.89	814.65	814.44	814.23	814.01	813.93
	SW	0.08	0.06	0.04	0.02	0.00	0.00	0.00	0.00	0.01
LEFT	DL1	0.25	0.21	0.12	0.05	0.00	-0.02	-0.02	0.00	0.01
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.03	-0.06	-0.09	-0.11	-0.09	-0.06	-0.02	0.00
7	DS	815.73	815.68	815.53	815.36	815.18	815.01	814.82	814.63	814.55
	TES	814.91	814.77	814.53	814.37	814.14	813.95	813.69	813.51	813.48
RIGHT	ZW	814.85	814.74	814.48	814.22	813.97	813.78	813.61	813.43	813.37
GIRDER	CW	814.85	814.77	814.54	814.30	814.07	813.87	813.66	813.45	813.37
	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.00	0.01	0.01
RIGHT	DL1	0.23	0.19	0.11	0.04	0.00	-0.01	-0.01	0.01	0.02
WEB	DL2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	-0.03	-0.06	-0.09	-0.10	-0.08	-0.05	-0.02	0.00
BLOCKING HEIGHTS										
10	BLK	14.17								12.55
11		13.79								12.20
12		14.07								12.56
13		13.69								12.20

FIELD SECTION #15

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #13	P15-01	P15-02	P15-03	P15-04	P15-05	P15-06	P15-07	P15-08	P15-09
		591+69.39	591+76.89	591+89.39	592+01.89	592+14.39	592+26.89	592+39.39	592+51.89	592+64.39	592+76.89
FINISHED ELEVATION - TOP OF DECK											
1	DS	816.87	816.74	816.52	816.29	816.05	815.80	815.53	815.26	814.97	814.67
2		816.78	816.65	816.44	816.20	815.96	815.71	815.45	815.17	814.88	814.58
6		814.98	814.85	814.64	814.40	814.16	813.91	813.65	813.37	813.08	812.78
8		814.26	814.13	813.92	813.68	813.44	813.19	812.93	812.65	812.36	812.06
9		814.17	814.05	813.83	813.60	813.36	813.10	812.84	812.56	812.28	811.98
CAMBER DATA											
3	DS	816.50	816.37	816.15	815.92	815.68	815.42	815.16	814.88	814.60	814.30
	TES	815.41	815.25	815.06	814.86	814.64	814.39	814.12	813.83	813.51	813.17
LEFT	ZW	815.28	815.17	814.99	814.80	814.58	814.34	814.07	813.77	813.44	813.09
GIRDER	CW	815.28	815.13	814.87	814.62	814.36	814.11	813.85	813.60	813.34	813.09
	SW	0.00	0.01	0.02	0.02	0.03	0.03	0.03	0.02	0.01	0.00
LEFT	DL1	-0.01	0.00	0.03	0.06	0.07	0.08	0.08	0.06	0.03	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.12	0.18	0.22	0.23	0.21	0.17	0.09	0.00
4	DS	815.93	815.80	815.58	815.35	815.11	814.85	814.59	814.31	814.03	813.73
	TES	814.85	814.68	814.49	814.28	814.06	813.82	813.55	813.26	812.94	812.60
LEFT	ZW	814.72	814.61	814.43	814.23	814.01	813.77	813.50	813.20	812.87	812.52
GIRDER	CW	814.72	814.57	814.31	814.06	813.80	813.54	813.29	813.03	812.78	812.52
	SW	0.00	0.01	0.02	0.02	0.03	0.03	0.03	0.02	0.01	0.00
RIGHT	DL1	0.00	0.01	0.03	0.05	0.07	0.08	0.08	0.06	0.03	0.00
WEB	DL2	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.11	0.17	0.21	0.22	0.21	0.16	0.09	0.00
5	DS	815.12	814.99	814.77	814.54	814.30	814.04	813.78	813.50	813.22	812.92
	TES	814.04	813.89	813.70	813.49	813.26	813.01	812.74	812.44	812.13	811.79
RIGHT	ZW	813.93	813.82	813.64	813.44	813.21	812.96	812.69	812.38	812.06	811.71
GIRDER	CW	813.93	813.77	813.52	813.26	813.00	812.74	812.48	812.23	811.97	811.71
	SW	0.01	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.01	0.00
LEFT	DL1	0.01	0.02	0.05	0.07	0.08	0.09	0.08	0.06	0.03	0.00
WEB	DL2	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.05	0.12	0.18	0.21	0.22	0.20	0.16	0.09	0.00
7	DS	814.55	814.42	814.20	813.97	813.73	813.47	813.21	812.93	812.65	812.35
	TES	813.48	813.33	813.13	812.92	812.69	812.44	812.17	811.88	811.56	811.22
RIGHT	ZW	813.37	813.26	813.07	812.87	812.64	812.39	812.12	811.81	811.49	811.14
GIRDER	CW	813.37	813.21	812.95	812.70	812.44	812.18	811.92	811.66	811.40	811.14
	SW	0.01	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.01	0.00
RIGHT	DL1	0.02	0.03	0.05	0.07	0.08	0.09	0.08	0.06	0.03	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.05	0.12	0.17	0.21	0.22	0.20	0.16	0.09	0.00
BLOCKING HEIGHTS											
10	BLK	12.55									10.36
11		12.20									10.00
12		12.56									10.34
13		12.20									9.98



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.

DS FINISHED ELEVATION AT TOP OF DECK SLAB.

TES TOP OF ERECTED STEEL ELEVATION.

= ZW + PL - SW

ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.

= DS + SW + DL1 + DL2 - DK

CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.

BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.

DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.

DL2 PARAPETS APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES

DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-80

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (½").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (¼") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

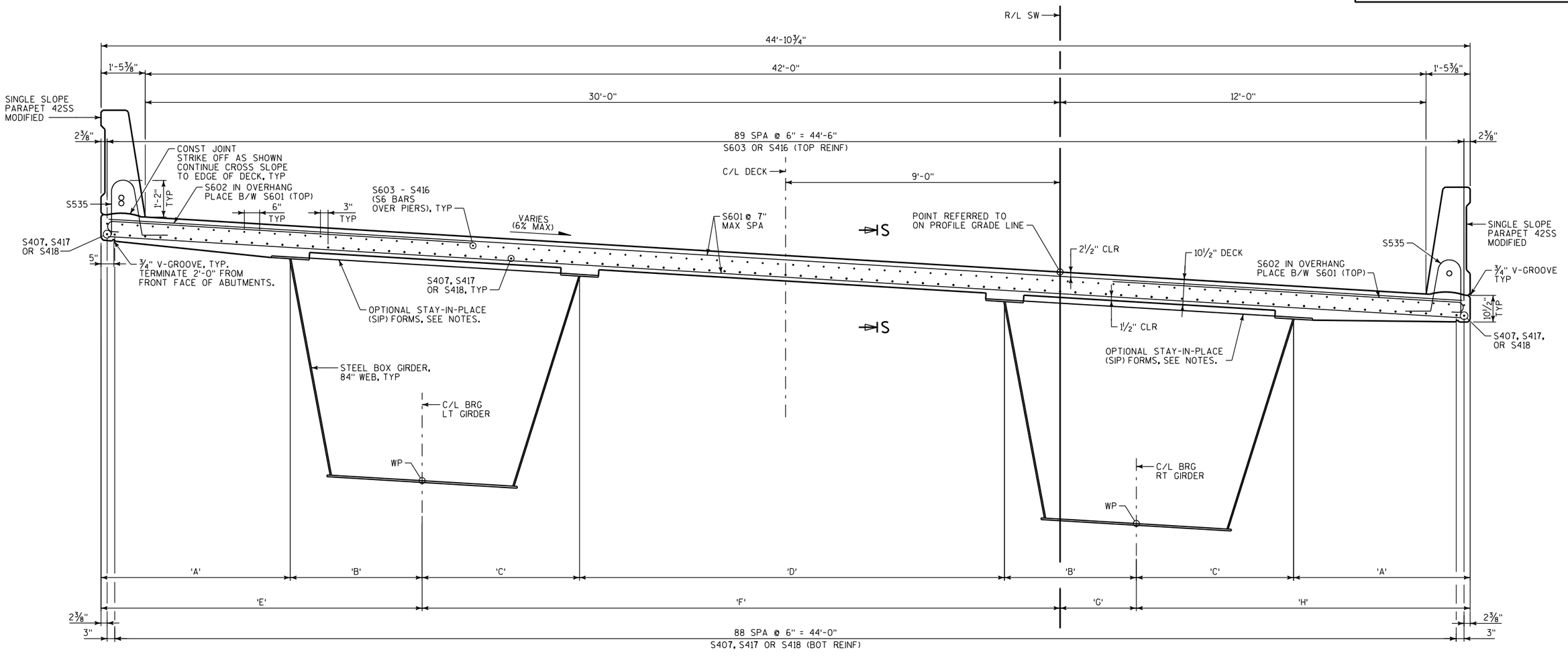
STRUCTURE B-40-855

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CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 14 & 15

SHEET 66 OF 96

STATE PROJECT NUMBER
1060-33-80



CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING UPSTATION - DIMENSIONS ARE NORMAL TO R/L SW)

NOTES

1. STAY-IN-PLACE METAL FORMS WILL ONLY BE PERMITTED INSIDE THE BOX GIRDERS. THE OVERHANGS AND THE ZONE BETWEEN THE GIRDERS SHALL USE CONVENTIONAL TEMPORARY FORMS.

   THE USE OF STAY-IN-PLACE METAL FORMS IS OPTIONAL, CONVENTIONAL FORMWORK MAY BE USED INSIDE THE BOXES BUT MUST BE COMPLETELY REMOVED.

   DESIGN CONNECTION BETWEEN STAY-IN-PLACE METAL FORMS AND GIRDER FLANGES TO PROVIDE ADJUSTMENT OF VERTICAL POSITION BASED ON THE ACTUAL HAUNCH HEIGHT REQUIRED.

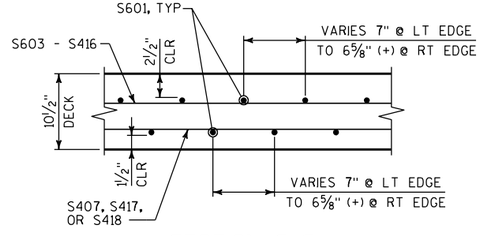
   TOP OF STAY-IN-PLACE METAL FORMS SHALL BE ALIGNED WITH THE UNDERSIDE OF THE DECK SLAB.

   COST OF PERMANENT STAY-IN-PLACE METAL FORMS IS INCIDENTAL TO THE PAY ITEM "HPC MASONRY STRUCTURES". THE SUPERSTRUCTURE CONCRETE QUANTITY DOES NOT INCLUDE THE CONCRETE WITHIN THE STAY-IN-PLACE METAL FORM FLUTES. SUCH CONCRETE IS CONSIDERED INCIDENTAL AND WILL NOT BE PAID FOR SEPARATELY.

2. TO AVOID OVERSTRESSING THE EXTERIOR GIRDER WEBS DURING DECK PLACEMENT, DECK OVERHANG FORMWORK BRACKETS MUST CONTACT THE GIRDER WEB WITHIN 8" OF THE TOP OF THE BOTTOM FLANGE.

TABLE OF DIMENSIONS

STATION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'	DIM 'G'	DIM 'H'
579SW+59.89	6'-2 7/16"	4'-5"	5'-0 7/8"	13'-6 1/8"	10'-7 7/16"	20'-9 5/16"	2'-2 1/16"	11'-3 5/16"
580SW+08.00 TO 592SW+76.89	6'-2½"	4'-3⅞"	5'-1 5/16"	13'-6 3/16"	10'-6⅜"	20'-11"	2'-1"	11'-4⅜"



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

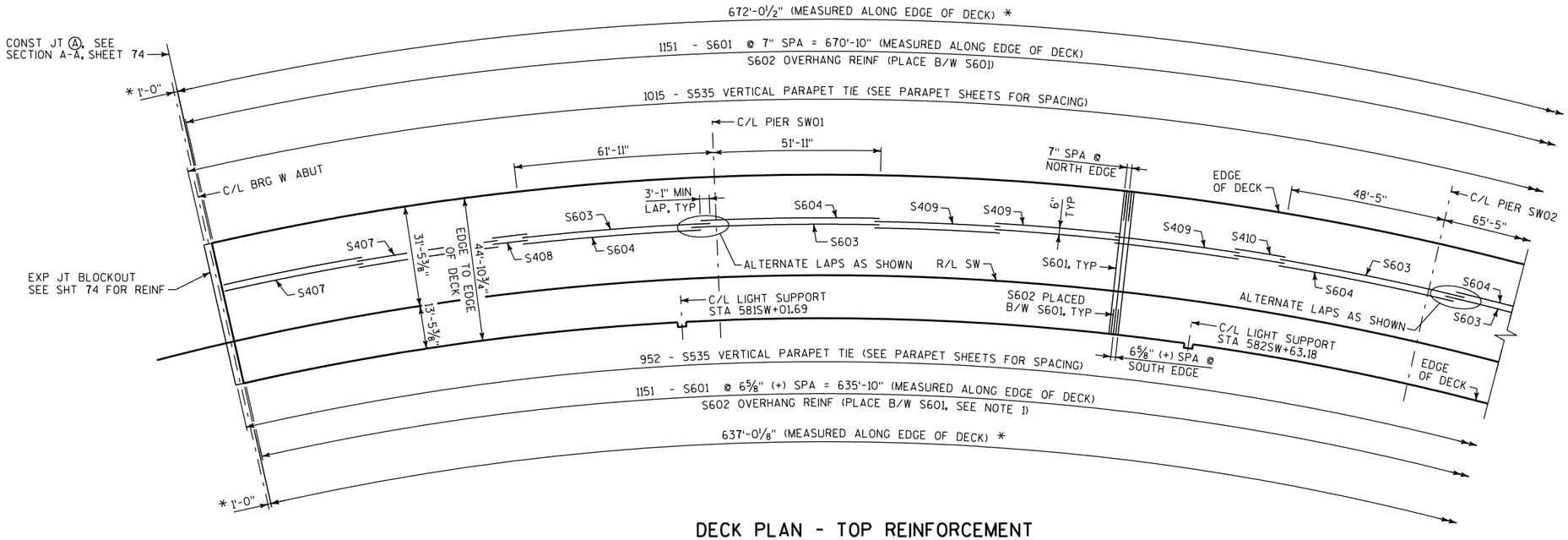
STRUCTURE B-40-855

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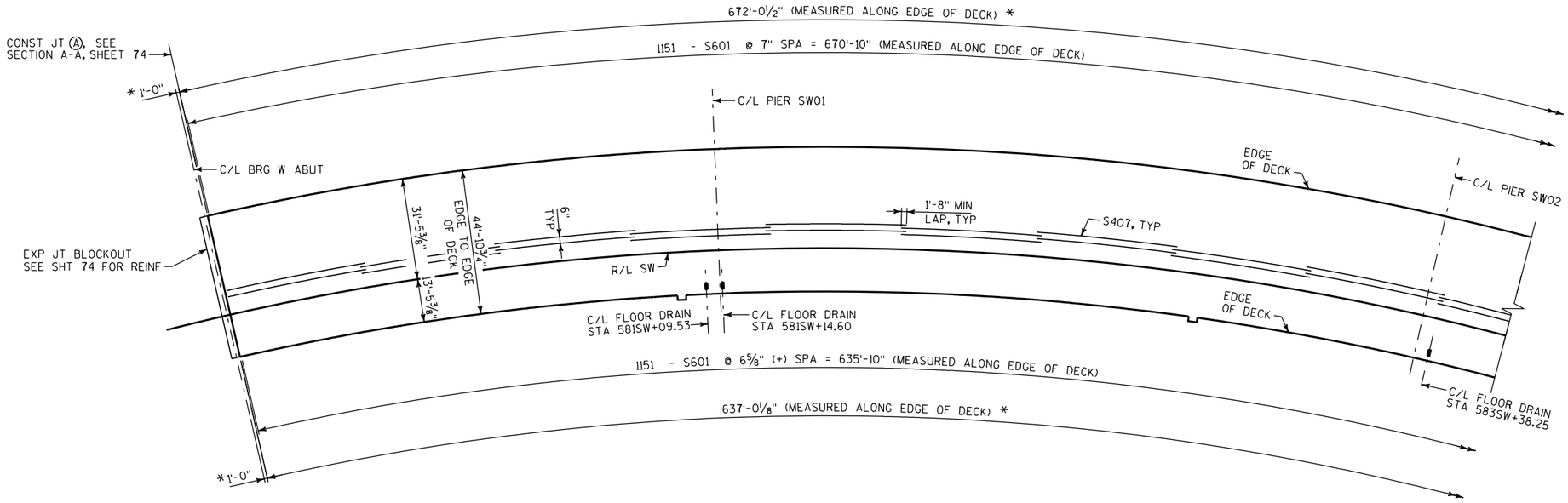
SUPERSTRUCTURE CROSS SECTION

SHEET 67 OF 96

STATE PROJECT NUMBER
1060-33-80



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

* MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R610 BARS AS INDICATED ON LIGHT SUPPORT DETAIL SHEETS. R513 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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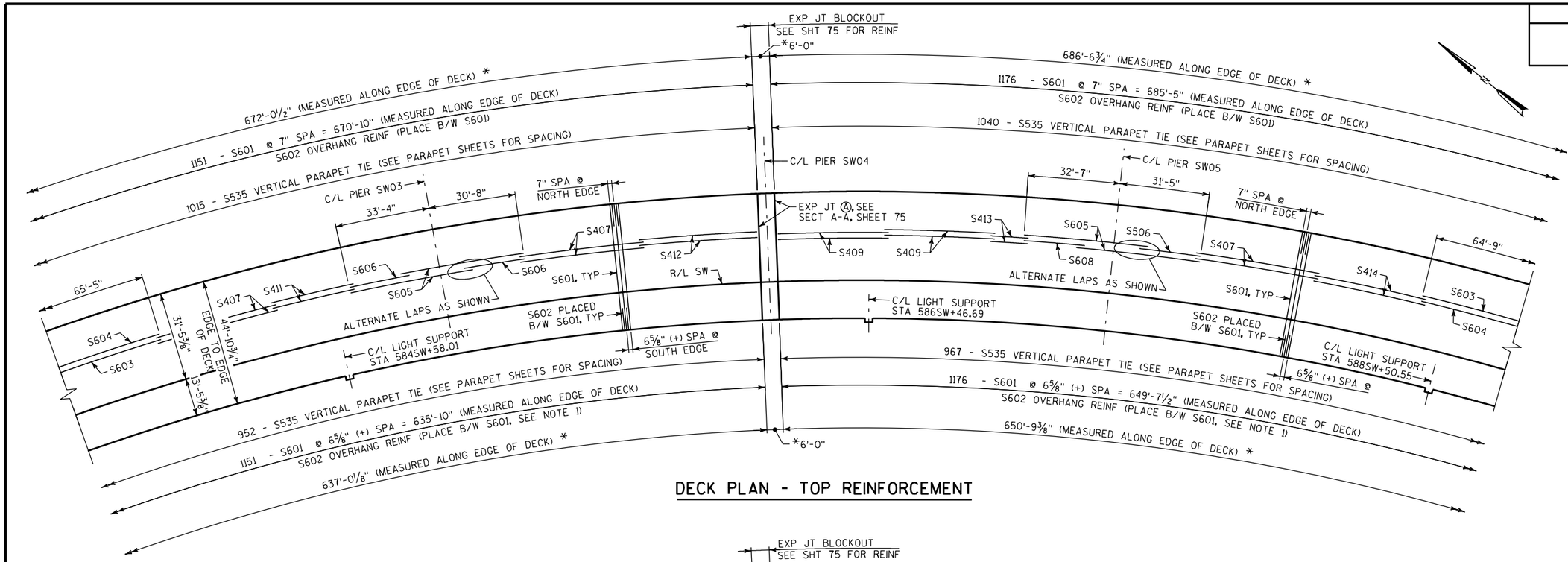
DECK REINFORCEMENT (1 OF 3)

SHEET 68 OF 96

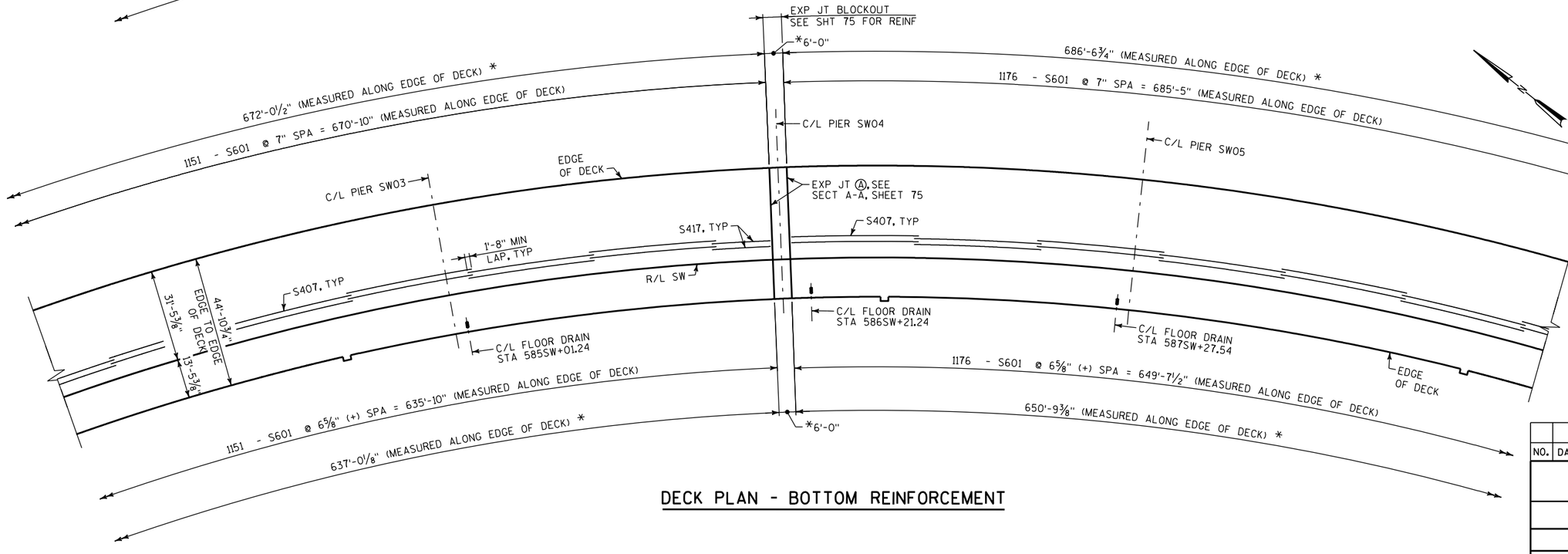
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8

STATE PROJECT NUMBER
1060-33-80



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

* MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R610 BARS AS INDICATED ON LIGHT SUPPORT DETAIL SHEETS. R513 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

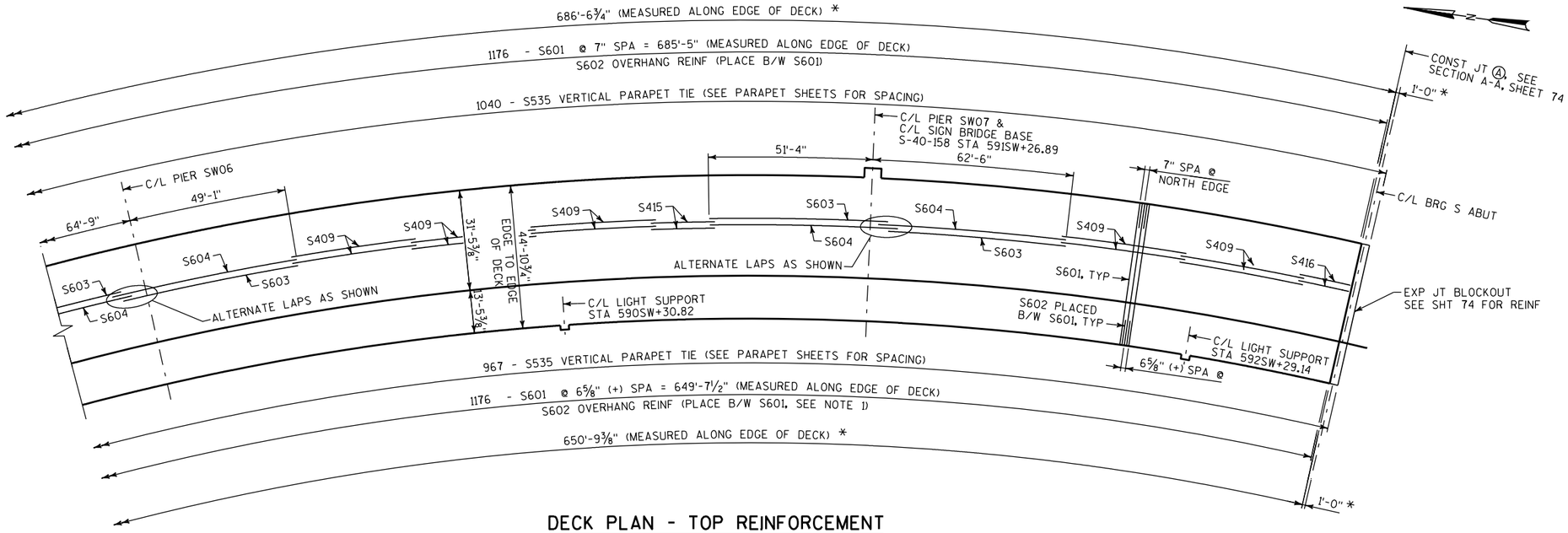
STRUCTURE B-40-855

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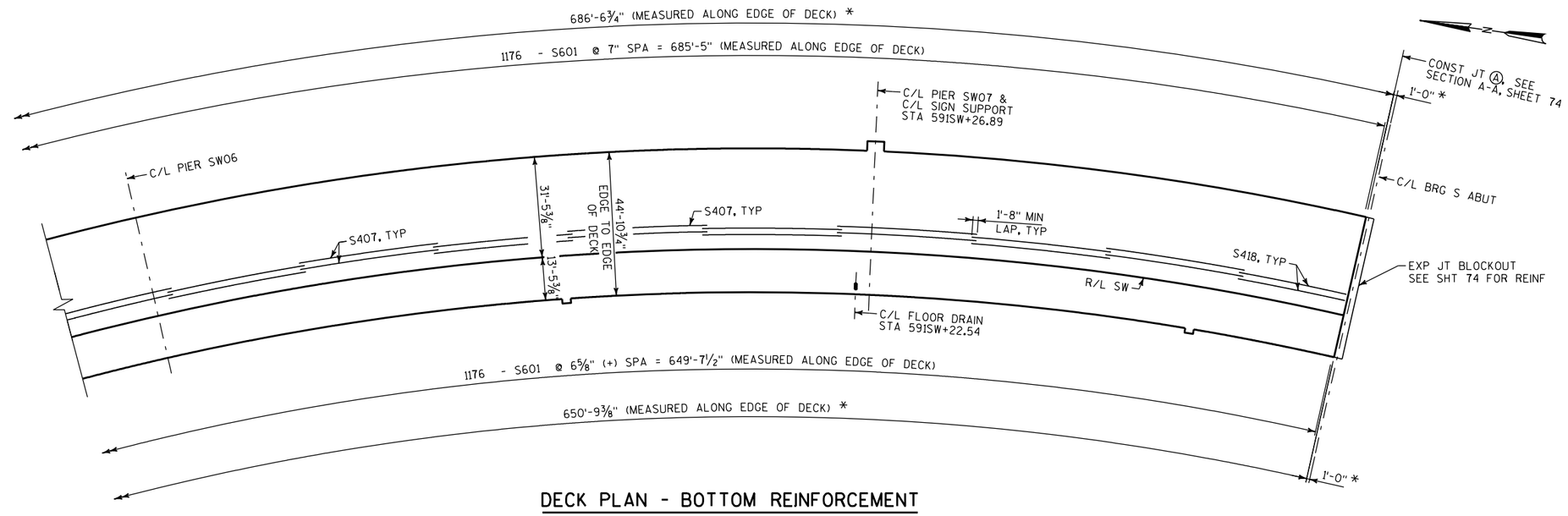
DECK REINFORCEMENT (2 OF 3)

SHEET 69 OF 96

STATE PROJECT NUMBER
1060-33-80



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

* MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R610 BARS AS INDICATED ON LIGHT SUPPORT DETAIL SHEETS. R513 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

DECK REINFORCEMENT (3 OF 3)

SHEET 70 OF 96

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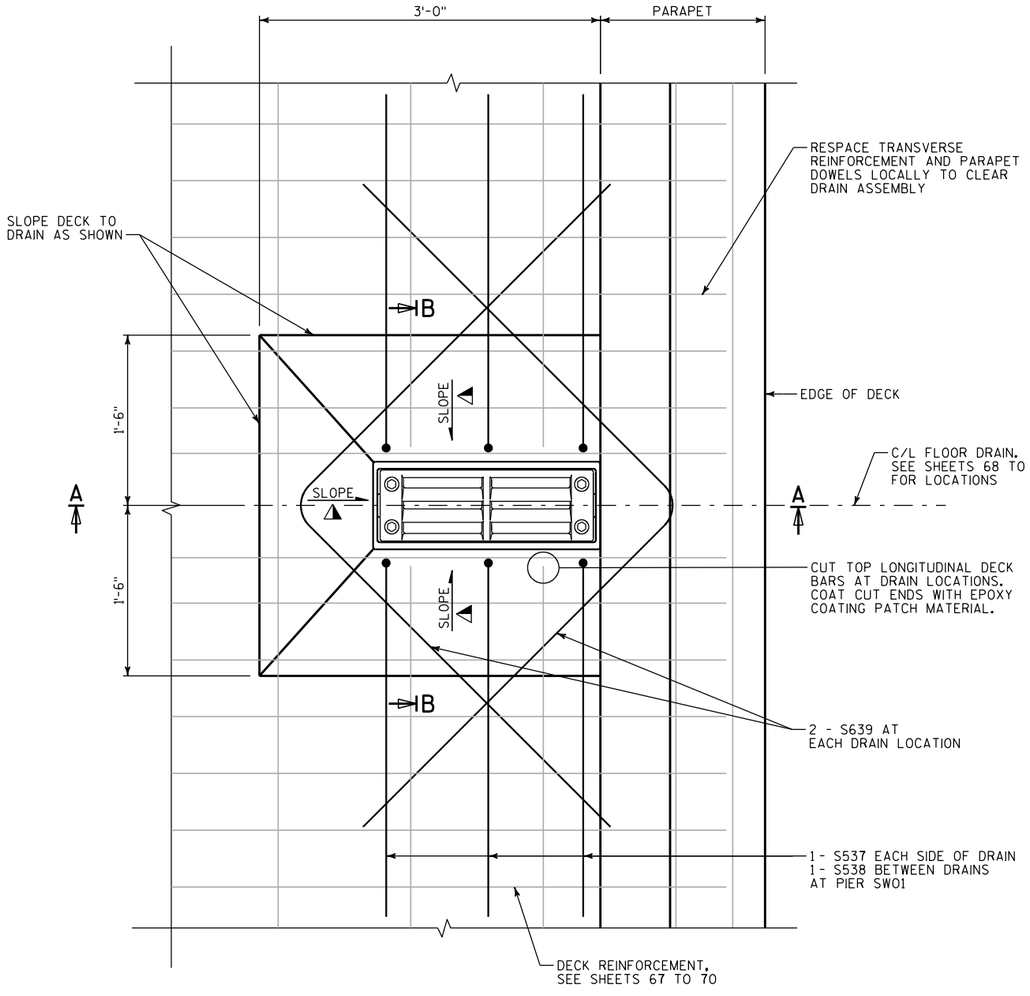
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STATE PROJECT NUMBER
1060-33-80

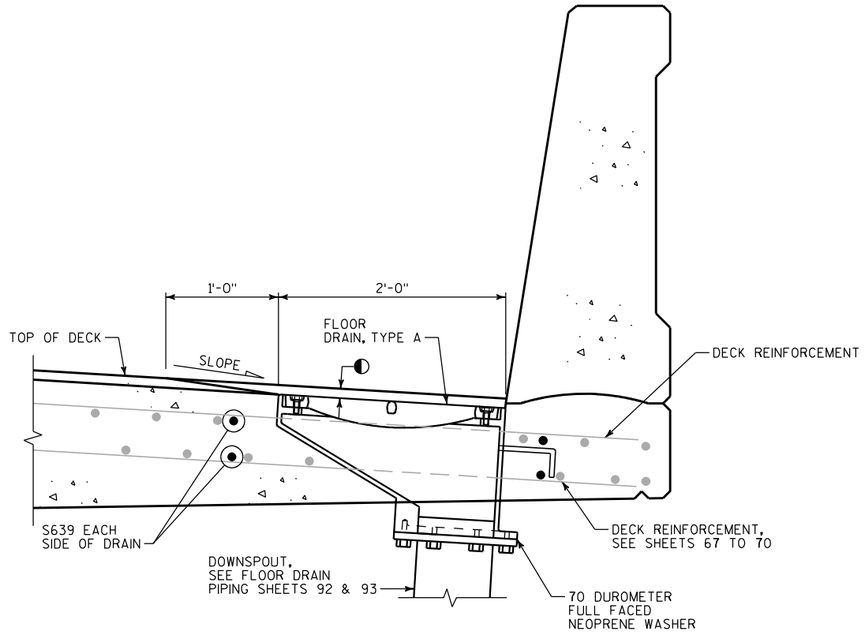
LEGEND

◐ SET TOP OF FLOOR DRAIN 1/2" BELOW TOP OF DECK

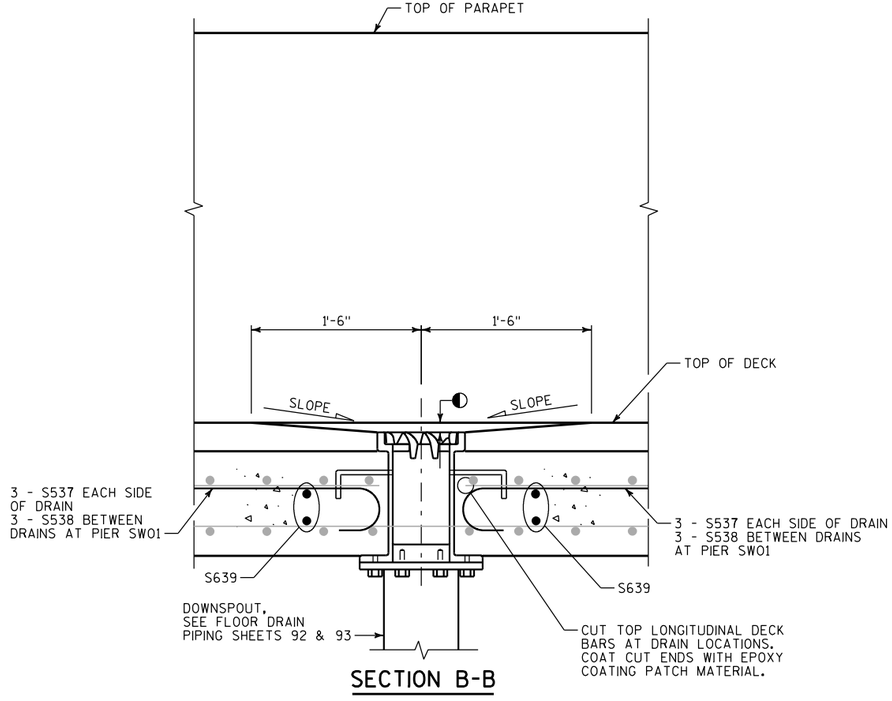
◭ HAND-FINISH SLAB WITHIN THE SLOPED AREA.



PART PLAN AT FLOOR DRAIN



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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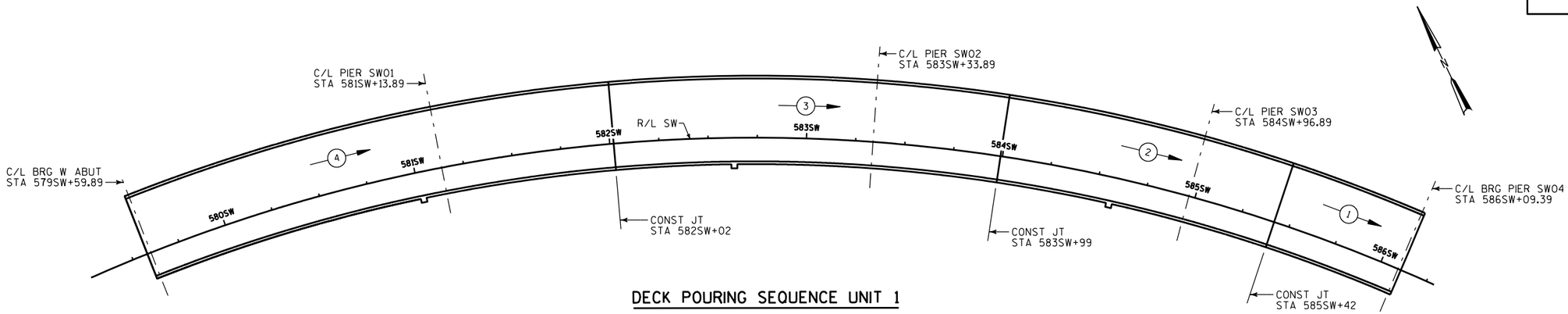
DECK DETAILS

SHEET 71 OF 96

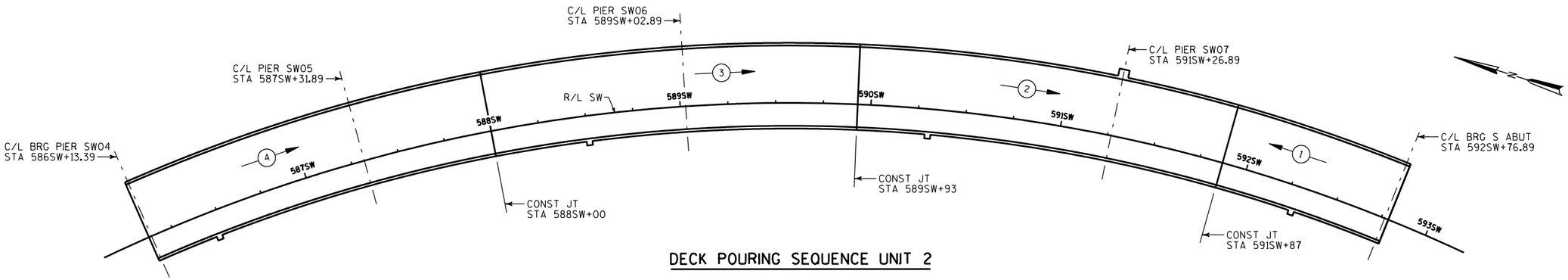
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STATE PROJECT NUMBER
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DECK POURING SEQUENCE UNIT 1



DECK POURING SEQUENCE UNIT 2

(1) → INDICATES POUR NUMBER AND DIRECTION OF POUR

DECK POURING SEQUENCE NOTES

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND COORDINATING DECK POURS TO BEST SUIT THE MEANS AND METHODS AVAILABLE TO HIM.

CONTRACTOR MAY PLACE THE DECK CONTINUOUSLY FROM EITHER END OF THE STRUCTURE PROVIDED THAT ALL OTHER REQUIREMENTS ARE MET. IF MORE THAN ONE POUR IS REQUIRED, BULKHEAD LOCATIONS MUST BE APPROVED BY THE ENGINEER.

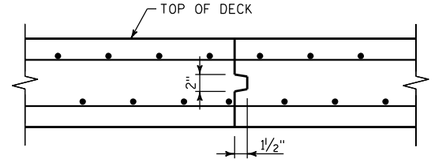
CONTROL POUR SEQUENCE AND PLACEMENT RATE TO ENSURE THAT BEFORE THE CONCRETE IN ANY PIER AREA REACHES THE INITIAL SET CONDITION, THE CONCRETE IN BOTH ADJACENT 'SPAN' AREAS IS ALREADY IN PLACE.

DEPOSIT FRESH CONCRETE FIRST IN THE AREA BETWEEN THE GIRDERS FOLLOWED BY THE OVERHANG AREA TO INSIDE OF THE CURVE AND THEN BY THE OVERHANG AREA TO THE OUTSIDE OF THE CURVE.

CONTROL THE PLACEMENT TO ENSURE THAT THE FURTHEST PROGRESS OF FRESH CONCRETE VARIES BY NO MORE THAN 10 FEET ACROSS THE WIDTH OF THE DECK.

FOLLOW PROCEDURES OUTLINED IN THE STANDARD SPECIFICATIONS.

SOME POUR SEQUENCES COULD TEND TO CAUSE UPLIFT AT ENDS OF UNITS. THEREFORE, TEMPORARY HOLD DOWN DEVICES ARE REQUIRED AT ALL ABUTMENT DIAPHRAGMS AND AT ALL PIER END DIAPHRAGMS.



TRANSVERSE CONSTRUCTION JOINT DETAIL

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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DECK POURING SEQUENCE AND NOTES

SHEET 72 OF 96

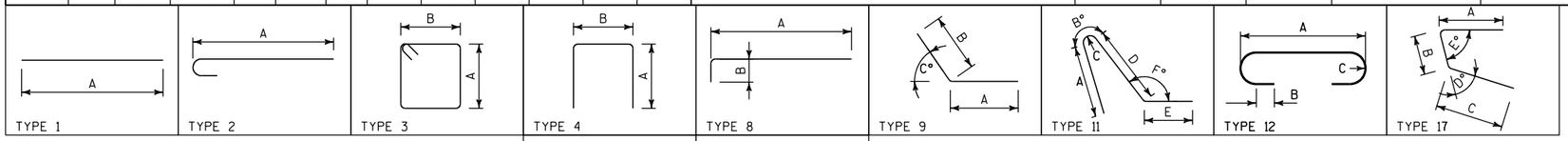
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BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
S601	S	4434	44'-7"			1	44'-7"						DECK TRANSVERSE					
S602	S	2215	12'-7"	X		2	11'-11"						DECK TRANSVERSE AT OVERHANG					
S603	S	360	60'-0"			1	60'-0"						DECK LONG. TOP OVER PIER					
S604	S	360	56'-11"			1	56'-11"						DECK LONG. TOP OVER PIER					
S605	S	180	45'-0"			1	45'-0"						DECK LONG. TOP OVER PIER					
S606	S	180	22'-1"			1	22'-1"						DECK LONG. TOP OVER PIER					
S407	S	3180	45'-0"			1	45'-0"						DECK LONG. TOP & BOT.					
S408	S	90	11'-6"			1	11'-6"						DECK LONG. TOP SPAN 1					
S409	S	900	40'-0"			1	40'-0"						DECK LONG. TOP					
S410	S	90	16'-6"			1	16'-6"						DECK LONG. TOP SPAN 2					
S411	S	90	30'-6"			1	30'-6"						DECK LONG. TOP SPAN 3					
S412	S	90	43'-0"			1	43'-0"						DECK LONG. TOP SPAN 4					
S413	S	90	14'-0"			1	14'-0"						DECK LONG. TOP SPAN 5					
S414	S	90	41'-6"			1	41'-6"						DECK LONG. TOP SPAN 6					
S415	S	90	20'-6"			1	20'-6"						DECK LONG. TOP SPAN 7					
S416	S	90	16'-8"			1	16'-8"						DECK LONG. TOP SPAN 8					
S417	S	91	21'-6"			1	21'-6"						DECK LONG. BOT. SPAN 4					
S418	S	91	36'-6"			1	36'-6"						DECK LONG. BOT. SPAN 8					
S519	S	20	7'-6"	X	X	3	1'-1½"	2'-4"					EXPANSION JOINT STIRRUPS	A	6"	1'-9"	4 SERIES OF 5	6'-3" TO 8'-9"
S520	S	312	8'-9"	X		3	1'-9"	2'-4"					EXPANSION JOINT STIRRUPS					
S421	S	72	4'-10"	X		9	2'-5"	2'-5"	32				EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S622	S	28	44'-7"			1	44'-7"						EXPANSION JOINT TOP OF SLAB TRANSVERSE					
S623	S	56	8'-8"			1	8'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S424	S	320	1'-11"			1	1'-11"						EXPANSION JOINT BLOCKOUT BOT.					
S425	S	640	2'-3"	X		22	0'-4½"	0'-8½"	1'-4"				EXPANSION JOINT BLOCKOUT BOT.					
S426	S	32	39'-8"			1	39'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S527	S	320	8'-2"	X		4	4'-0"	0'-5"					EXPANSION JOINT BOT. OF SLAB LONG.					
S528	S	320	2'-8"	X		4	0'-6"	1'-11"					EXPANSION JOINT BLOCKOUT TOP					
S529	S	312	5'-5"	X		29	1'-9"	1'-11"	45	1'-9"			EXPANSION JOINT SLAB THICKNESS TRANSITION					
S530	S	32	4'-8"	X	X	29	1'-9"	1'-2"	45	1'-9"			EXPANSION JOINT SLAB THICKNESS TRANSITION	B	5½"	1'-10½"	8 SERIES OF 4	3'-10" TO 5'-3"
S431	S	8	44'-7"			1	44'-7"						EXPANSION JOINT BLOCKOUT TOP					
S632	S	56	4'-0"			1	4'-0"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S633	S	14	13'-3"			1	13'-3"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S534	S	312	5'-3"	X		8	4'-6"	0'-10"					EXPANSION JOINT BLOCKOUT TOP					
S535	S	4118	4'-9"	X		11	1'-4"	172	0'-4½"	1'-5"	0'-10"	98	PARAPET TIE					
S636	S	10	6'-0"			1	6'-0"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S537	S	36	4'-7"	X		2	4'-0"						FLOOR DRAIN					
S538	S	3	4'-11"	X		12	3'-9"	0'-2"	0'-2½"				FLOOR DRAIN					
S639	S	28	7'-10"	X		8	4'-0"	4'-0"					FLOOR DRAIN					

BAR MARK BREAKDOWN				
BAR MARK	UNIT 1	UNIT 2	TOTAL NO	WEIGHT
S601	2084	2350	4434	296919
S602	1041	1174	2215	41864
S603	180	180	360	32443
S604	180	180	360	30776
S605	90	90	180	12166
S606	90	90	180	5970
S407	1725	1455	3180	95591
S408	90	0	90	691
S409	270	630	900	24048
S410	90	0	90	992
S411	90	0	90	1834
S412	90	0	90	2585
S413	0	90	90	842
S414	0	90	90	2495
S415	0	90	90	1232
S416	0	90	90	1002
S417	91	0	91	1307
S418	0	91	91	2219
S519	10	10	20	156
S520	156	156	312	2847
S421	36	36	72	232
S622	14	14	28	1875
S623	28	28	56	729
S424	160	160	320	410
S425	320	320	640	962
S426	16	16	32	848
S527	160	160	320	2726
S528	160	160	320	890
S529	156	156	312	1763
S530	16	16	32	156
S431	4	4	8	238
S632	28	28	56	336
S633	7	7	14	279
S534	156	156	312	1708
S535	2039	2079	4118	20402
S636	5	5	10	90
S537	18	18	36	172
S538	3	0	3	15
S639	16	12	28	329
TOT WEIGHT	284898	307243		592141



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

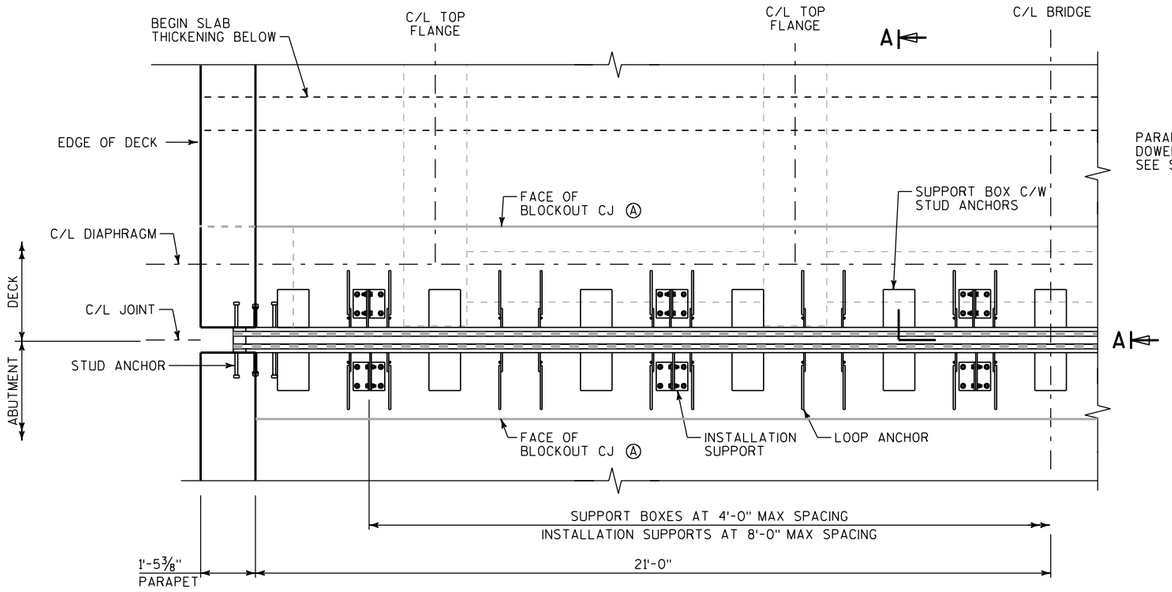
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DECK REINFORCEMENT SCHEDULE

SHEET 73 OF 96

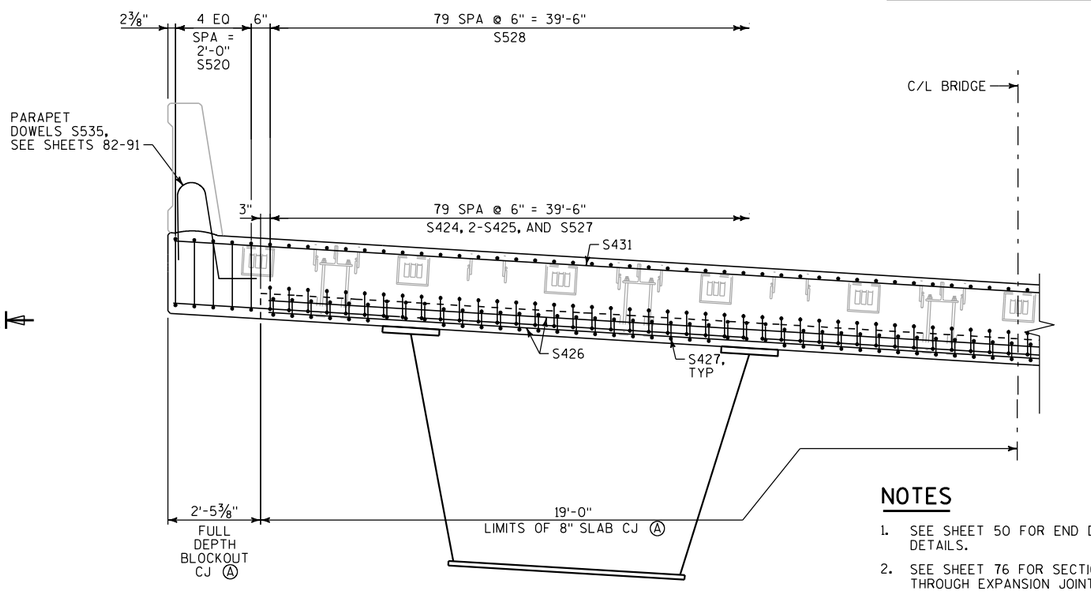
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PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



PLAN - JOINT AT ABUTMENT

JOINT SYMMETRICAL ABOUT C/L



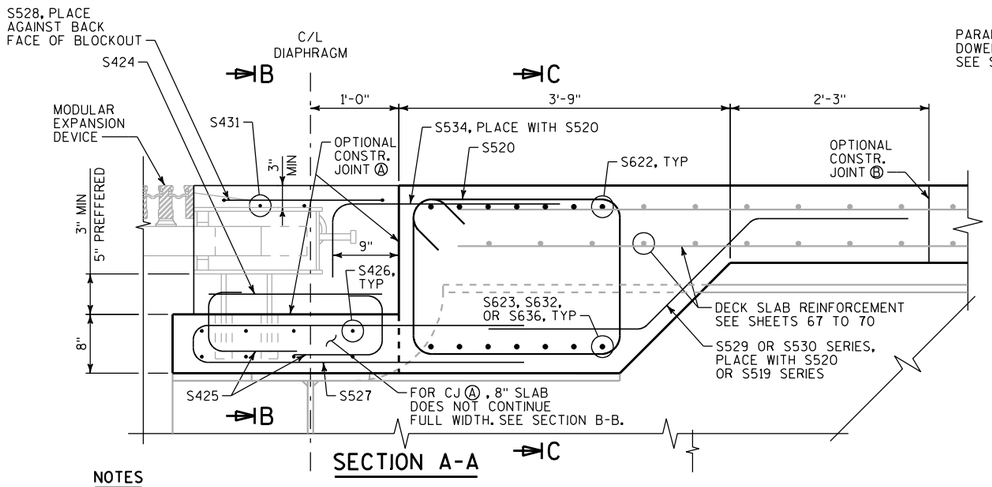
SECTION B-B

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. SEE SHEET 50 FOR END DIAPHRAGM DETAILS.
2. SEE SHEET 76 FOR SECTIONS THROUGH EXPANSION JOINT REGIONS.
3. SEE SHEET 78 FOR DETAILS OF THE MODULAR EXPANSION DEVICES INCLUDING REQUIRED MOVEMENT CAPACITY, NUMBER OF SEALS, ANCHORAGES AND TEMPORARY SUPPORTS.
4. SEE SHEET 77 FOR DETAILS OF THE PARAPET COVER PLATES.

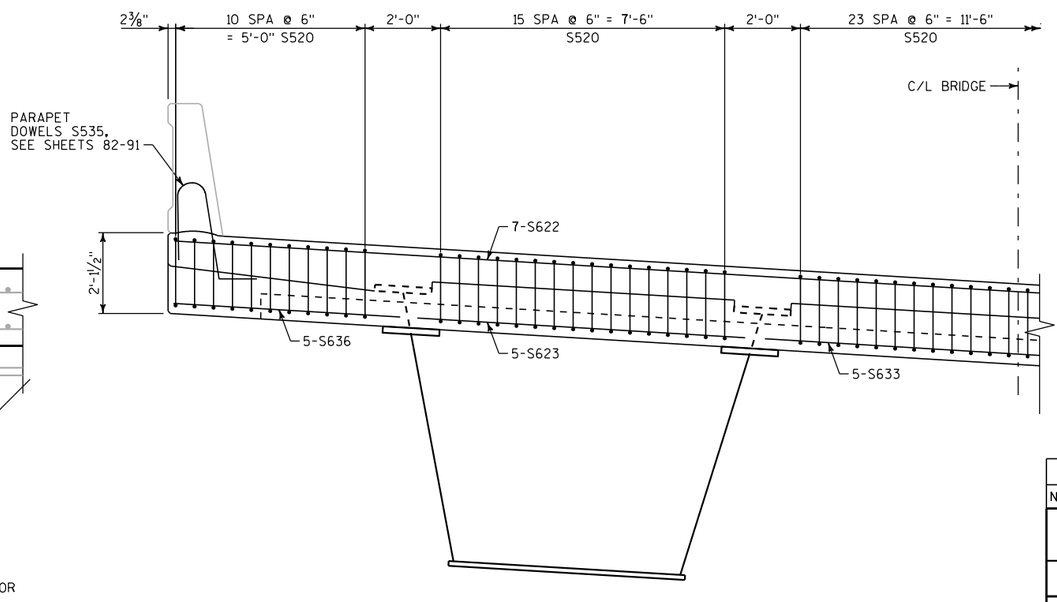
   COVER PLATES ARE REQUIRED AT ALL PARAPETS BUT FOR CLARITY ARE NOT SHOWN ON THIS DRAWING.
5. SUPPORT BOX SIZE AS SHOWN IS APPROXIMATE ONLY AND IS BASED ON A 2-CELL EXPANSION DEVICE. DIMENSIONS WILL VARY FOR DIFFERENT JOINT SIZES AND MANUFACTURERS.
6. EXPANSION DEVICE DETAILS SHOWN ON THIS DRAWING (INCLUDING SIZE AND SPACING OF SUPPORT BOXES, LOOP ANCHORS AND INSTALLATION SUPPORTS) ARE PICTORIAL ONLY.
7. ALL CONSTRUCTION SHALL BE CARRIED OUT USING THE APPROVED EXPANSION JOINT SHOP DRAWINGS ONLY.



SECTION A-A

NOTES

1. THE MODULAR EXPANSION DEVICE SHALL NOT BE POSITIONED IN ITS FINAL LOCATION UNTIL AFTER THE ADJACENT SPANS OF THE DECK HAVE BEEN POURED.
2. THE CONTRACTOR MAY INSTALL EITHER CONSTRUCTION JOINT Ⓐ OR CONSTRUCTION JOINT Ⓑ TO FACILITATE THE POSITIONING AND INSTALLATION OF THE MODULAR EXPANSION DEVICE.
3. IF CONSTRUCTION JOINT Ⓑ IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF A SUITABLE SUPPORT SYSTEM FOR THE MODULAR EXPANSION DEVICE THAT PROPERLY LOCATES AND SECURES THE DEVICE IN POSITION, AND PROVIDES SUPPORT POINTS IN ACCORDANCE WITH THE SPECIFICATIONS. PAYMENT FOR ANY SUPPORT SYSTEM SHALL BE INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE MODULAR LRFD B-40-855".



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

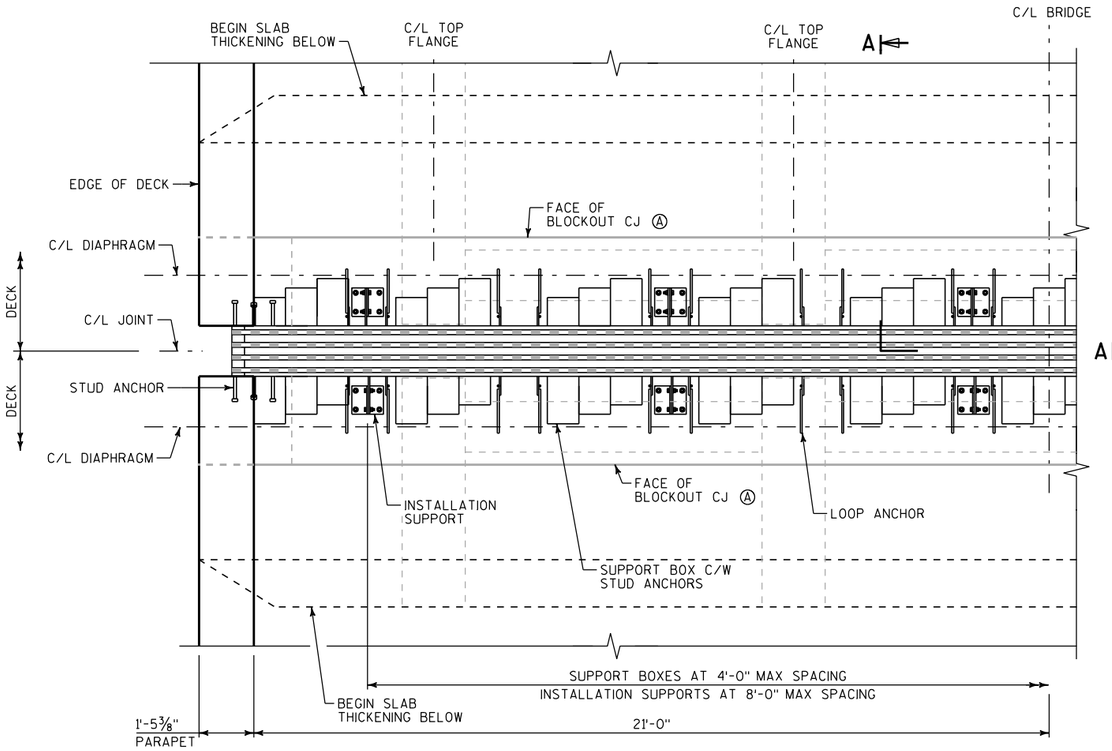
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EXPANSION JOINT LAYOUT - ABUTMENT

SHEET 74 OF 96

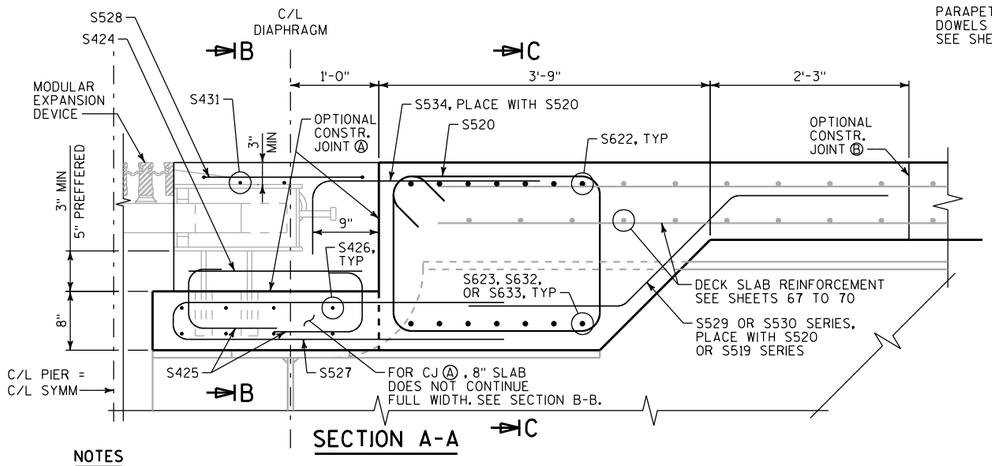
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PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



PLAN - JOINT AT PIER

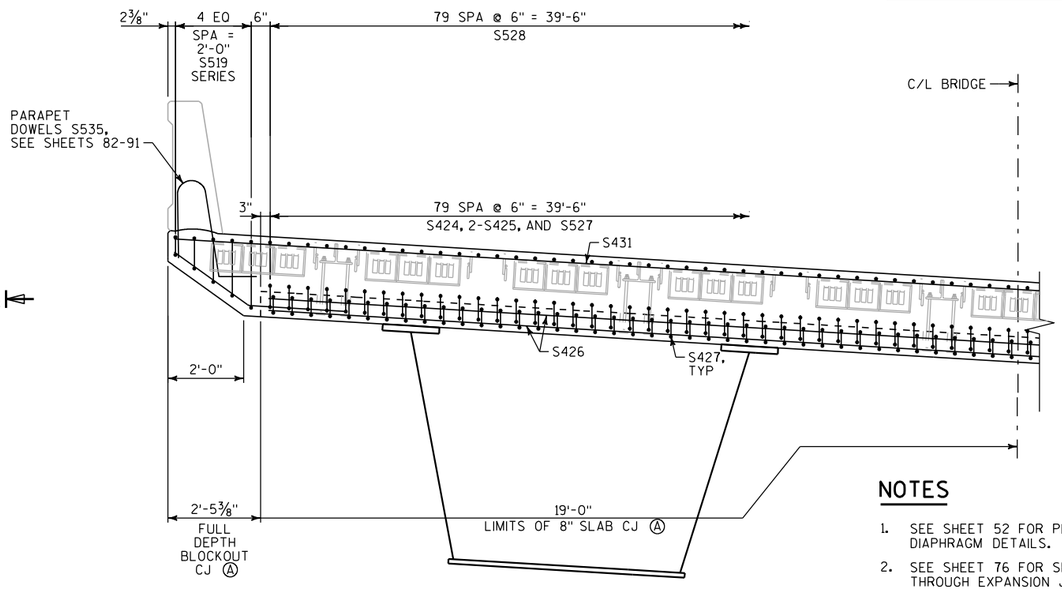
JOINT SYMMETRICAL ABOUT C/L



SECTION A-A

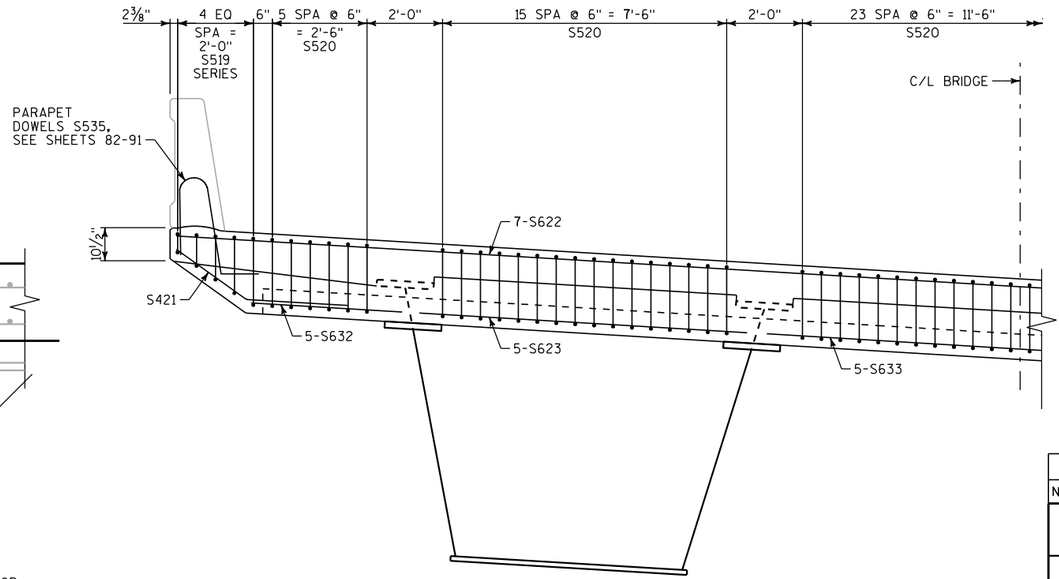
NOTES

1. THE MODULAR EXPANSION DEVICE SHALL NOT BE POSITIONED IN ITS FINAL LOCATION UNTIL AFTER THE ADJACENT SPANS OF THE DECK HAVE BEEN POURED.
2. THE CONTRACTOR MAY INSTALL EITHER CONSTRUCTION JOINT Ⓐ OR CONSTRUCTION JOINT Ⓑ TO FACILITATE THE POSITIONING AND INSTALLATION OF THE MODULAR EXPANSION DEVICE.
3. IF CONSTRUCTION JOINT Ⓑ IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF A SUITABLE SUPPORT SYSTEM FOR THE MODULAR EXPANSION DEVICE THAT PROPERLY LOCATES AND SECURES THE DEVICE IN POSITION, AND PROVIDES SUPPORT POINTS IN ACCORDANCE WITH THE SPECIFICATIONS. PAYMENT FOR ANY SUPPORT SYSTEM SHALL BE INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE MODULAR LRFD B-40-855".



SECTION B-B

DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. SEE SHEET 52 FOR PIER SW04 DIAPHRAGM DETAILS.
2. SEE SHEET 76 FOR SECTIONS THROUGH EXPANSION JOINT REGIONS.
3. SEE SHEET 78 FOR DETAILS OF THE MODULAR EXPANSION DEVICES INCLUDING REQUIRED MOVEMENT CAPACITY, NUMBER OF SEALS, ANCHORAGES AND TEMPORARY SUPPORTS.
4. SEE SHEET 77 FOR DETAILS OF THE PARAPET COVER PLATES.

   COVER PLATES ARE REQUIRED AT ALL PARAPETS BUT FOR CLARITY ARE NOT SHOWN ON THIS DRAWING.
5. SUPPORT BOX SIZE AS SHOWN IS APPROXIMATE ONLY AND IS BASED ON A 4-CELL EXPANSION DEVICE. DIMENSIONS WILL VARY FOR DIFFERENT JOINT SIZES AND MANUFACTURERS.
6. EXPANSION DEVICE DETAILS SHOWN ON THIS DRAWING (INCLUDING SIZE AND SPACING OF SUPPORT BOXES, LOOP ANCHORS AND INSTALLATION SUPPORTS) ARE PICTORIAL ONLY.
7. ALL CONSTRUCTION SHALL BE CARRIED OUT USING THE APPROVED EXPANSION JOINT SHOP DRAWINGS ONLY.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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EXPANSION JOINT LAYOUT - PIER

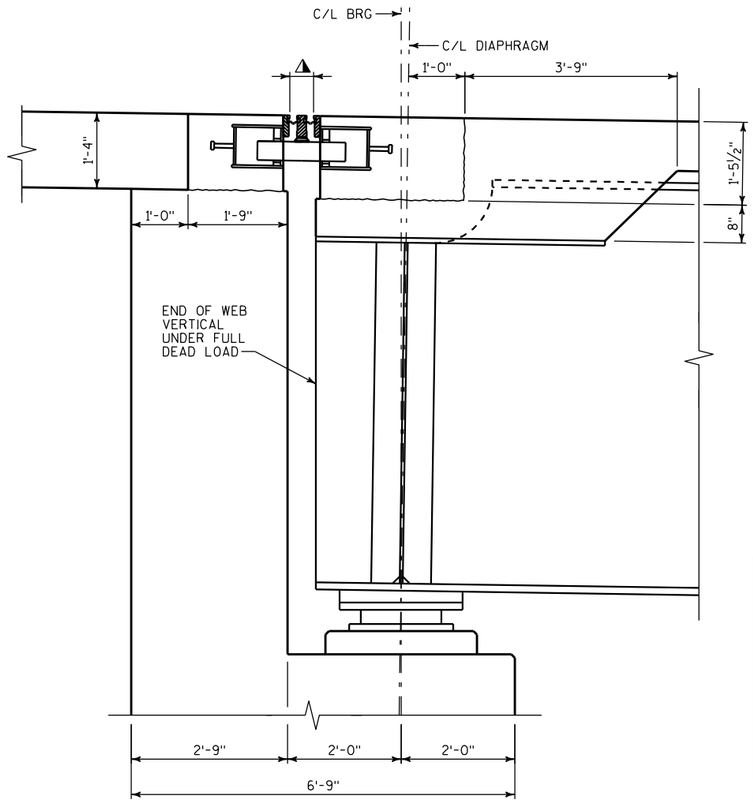
SHEET 75 OF 96

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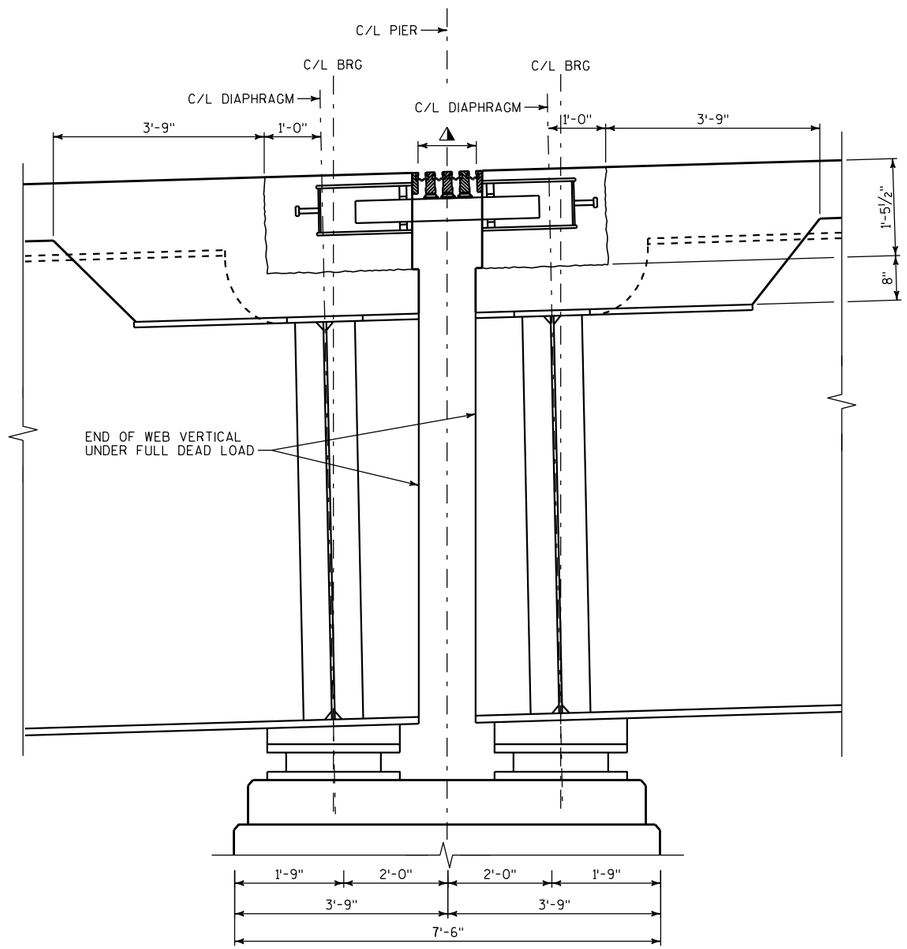
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STATE PROJECT NUMBER
1060-33-80



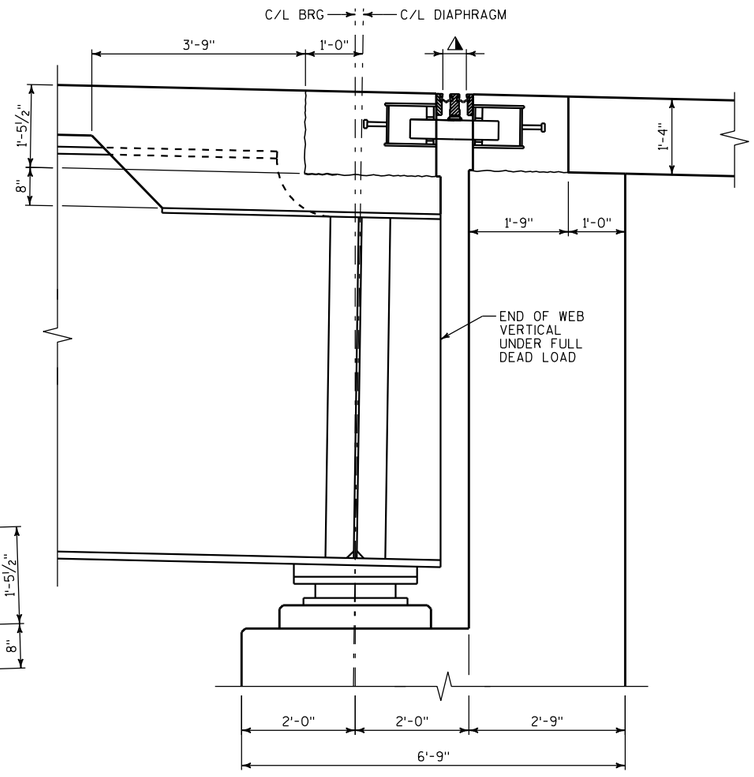
SECTION AT W ABUT

⚠ SEE TEMPERATURE SETTING TABLE



SECTION AT PIER SW04

⚠ SEE TEMPERATURE SETTING TABLE



SECTION AT S ABUT

⚠ SEE TEMPERATURE SETTING TABLE

TEMPERATURE SETTING TABLE

PREPARE AND SUBMIT A TABLE FOR SETTING EACH JOINT OPENING BASED ON THE FOLLOWING CRITERIA:

1. JOINT OPENING SHALL BE AT THE MEDIAN VALUE FOR A TEMPERATURE OF 45°F.
2. ESTIMATED MOVEMENT PER 10°F CHANGE IN TEMPERATURE AS FOLLOWS:

W ABUT	=	3/8"
PIER SW04	=	5/8"
S ABUT	=	3/8"

3. THESE VALUES RELATE TO THE NET OPENING OF THE JOINT AND INCLUDE CONTRIBUTIONS FROM BOTH SIDES.
4. INCLUDE VALUES IN THE TABLE FOR AMBIENT TEMPERATURES FROM -5°F TO 95°F.

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STRUCTURE B-40-855

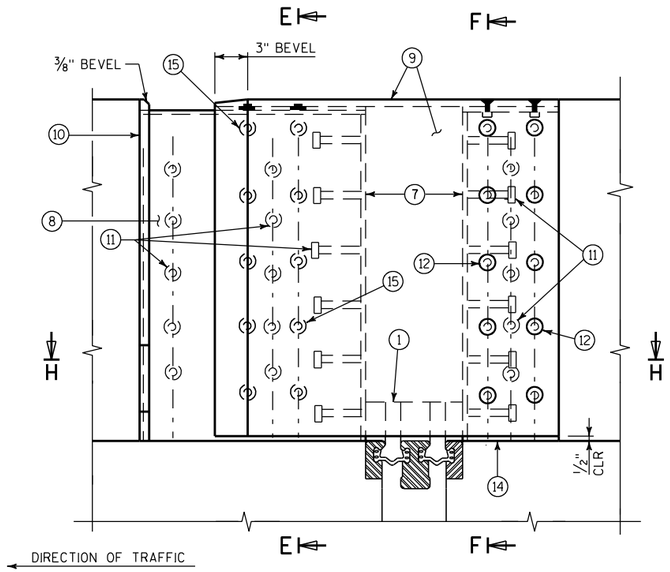
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EXPANSION JOINT SECTIONS

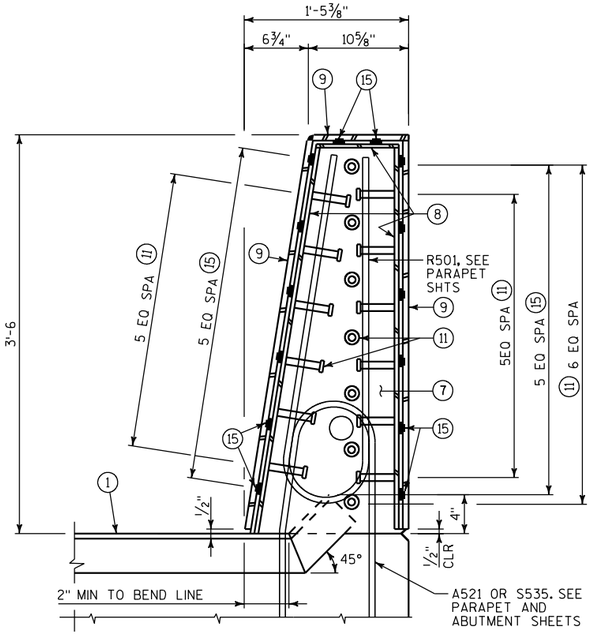
SHEET 76 OF 96

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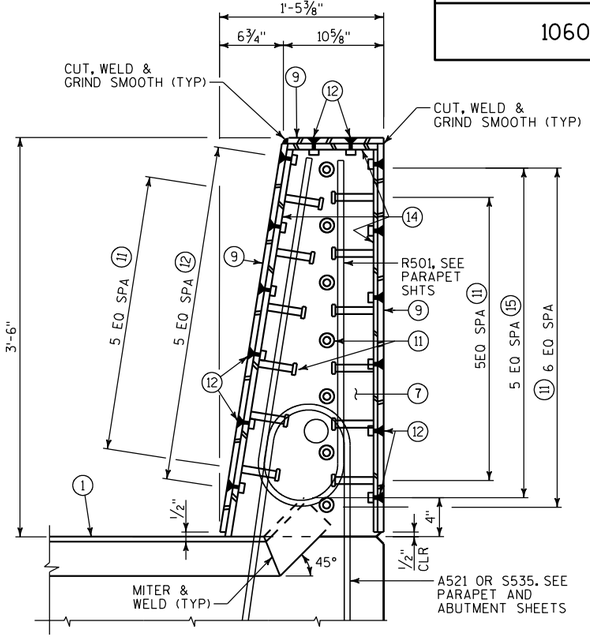
STATE PROJECT NUMBER
1060-33-80



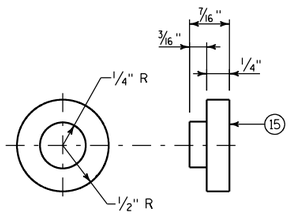
ELEVATION OF SINGLE SLOPE PARAPET



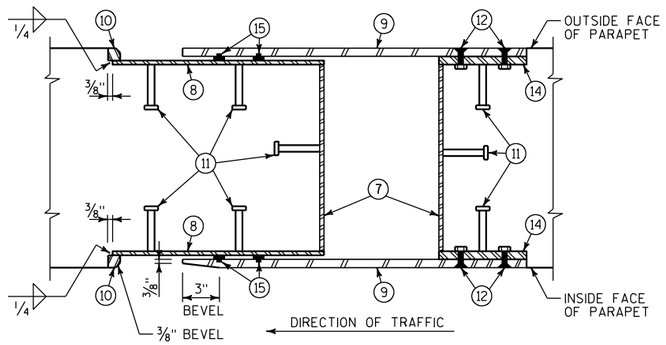
SECTION F-F



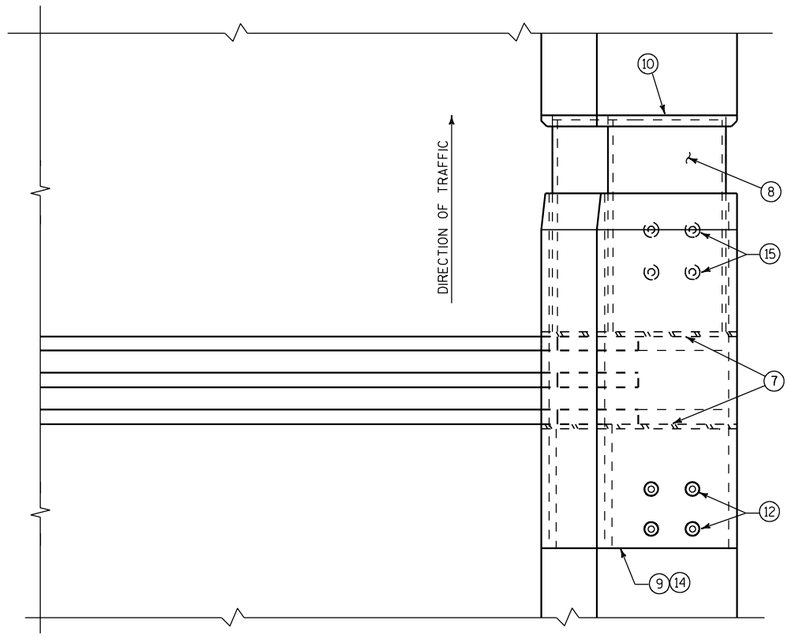
SECTION E-E



ADIPRENE BUTTON DETAIL



SECTION H-H



PLAN OF SINGLE SLOPE PARAPET

8

8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

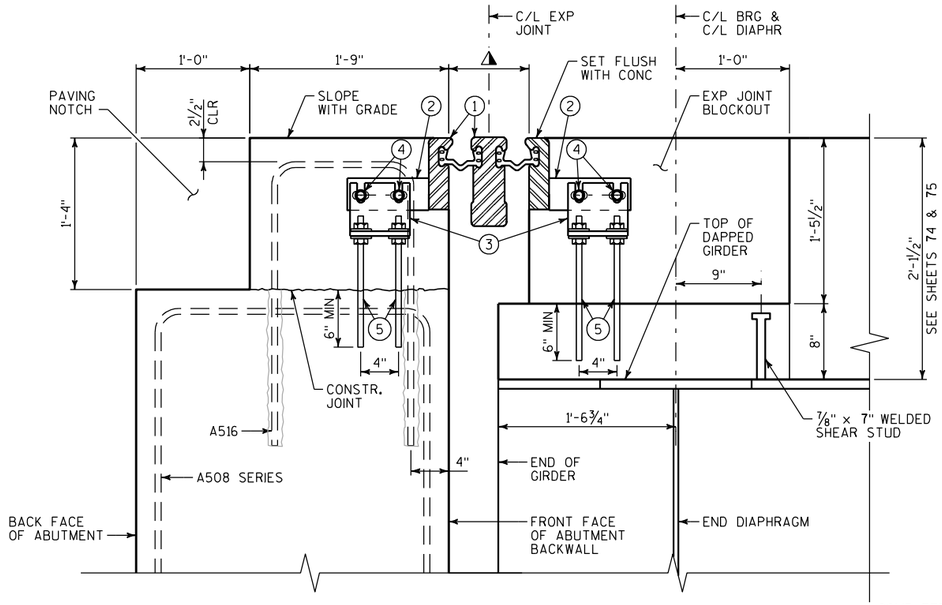
STRUCTURE B-40-855

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MODULAR EXPANSION JOINT COVER PLATES

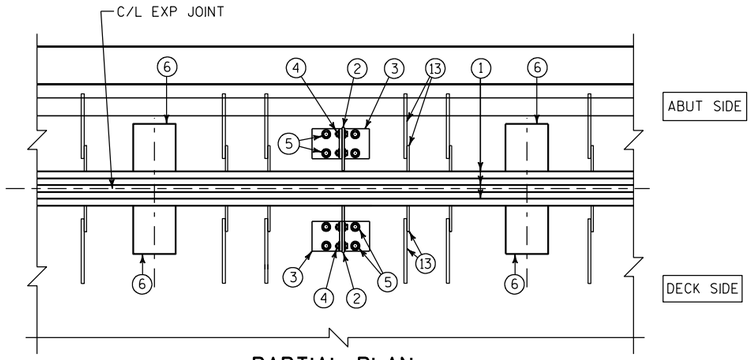
SHEET 77 OF 96

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SECTION THRU JOINT @ ABUTMENT

NORMAL TO C/L SUBSTRUCTURE



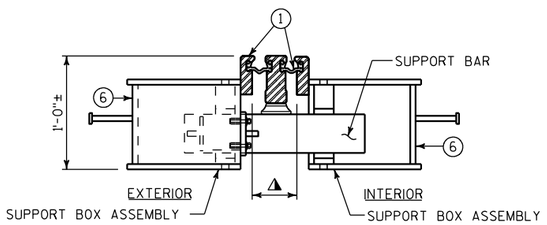
PARTIAL PLAN

NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS. FABRICATION DRAWING IS SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

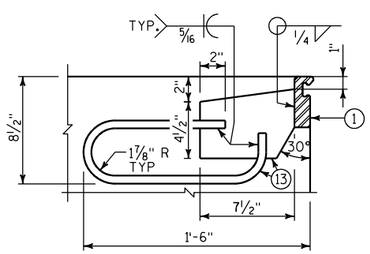
LEGEND

1. MODULAR EXPANSION JOINT DEVICE.
2. ½" PLATE, 8'-0" SPA MAX. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). SPA AT 8'-0" MAX. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
4. ¾" Φ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" Φ THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES.
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7.
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE.
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE.
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. ¾" Φ X 4" LONG STUDS. WELD TO NO. 8 , NO. 7 & NO. 14 AS SHOWN.
12. ¾" Φ X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
13. ½" PLATE WITH ⅝" Φ LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.



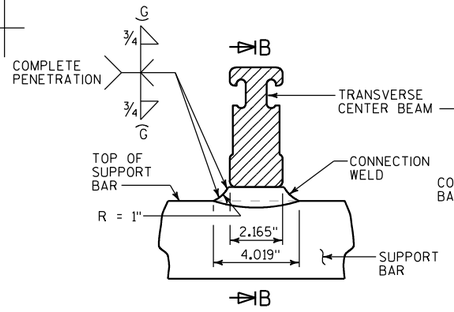
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY

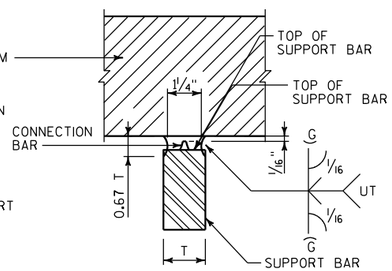


ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION



SECTION B-B

* POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

⚠ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED BELOW:

WEST ABUTMENT	2 CELLS
PIER SW06	4 CELLS
SOUTH ABUTMENT	2 CELLS

◑ DIMENSION IS PARALLEL TO ℄ GIRDER.

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE OR ON PARAPET ROADWAY FACE.

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERICAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR B-40-855".

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY.

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STRUCTURE B-40-855

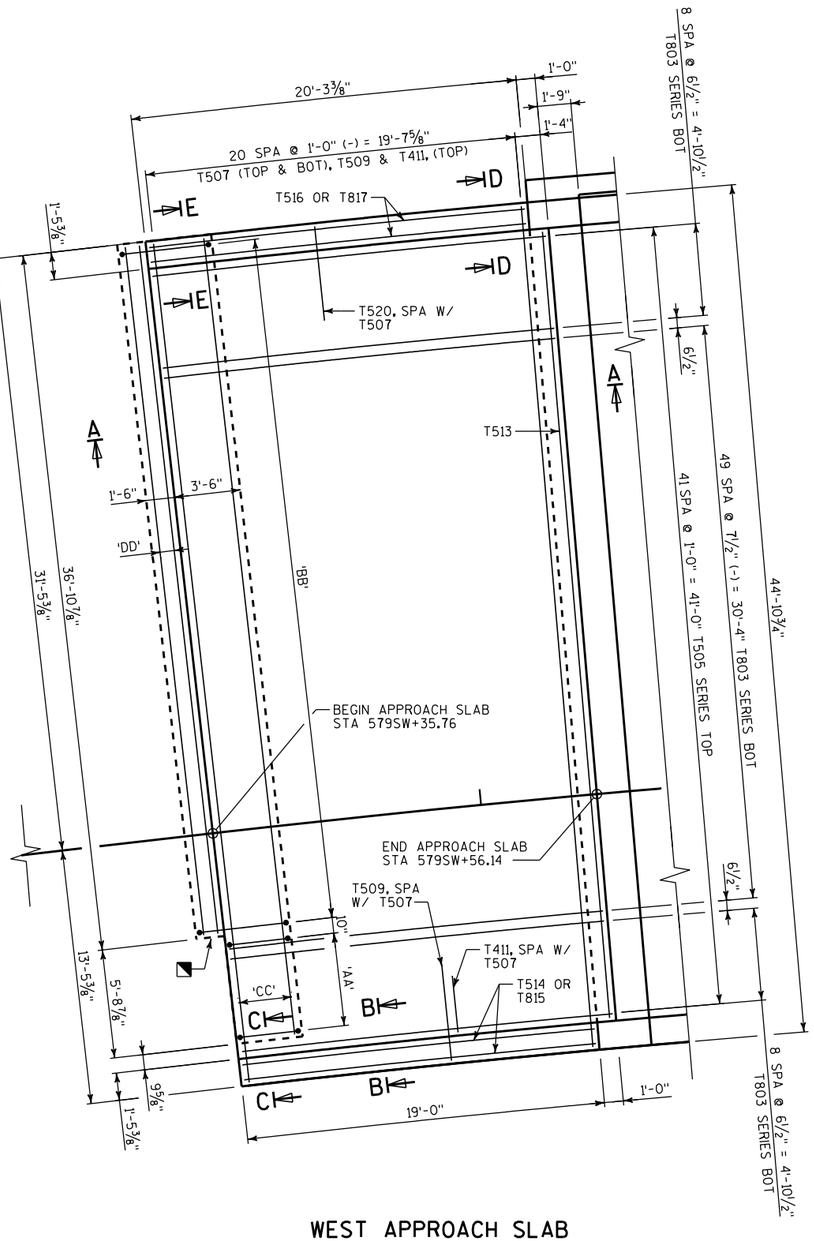
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MODULAR EXPANSION JOINT DETAILS

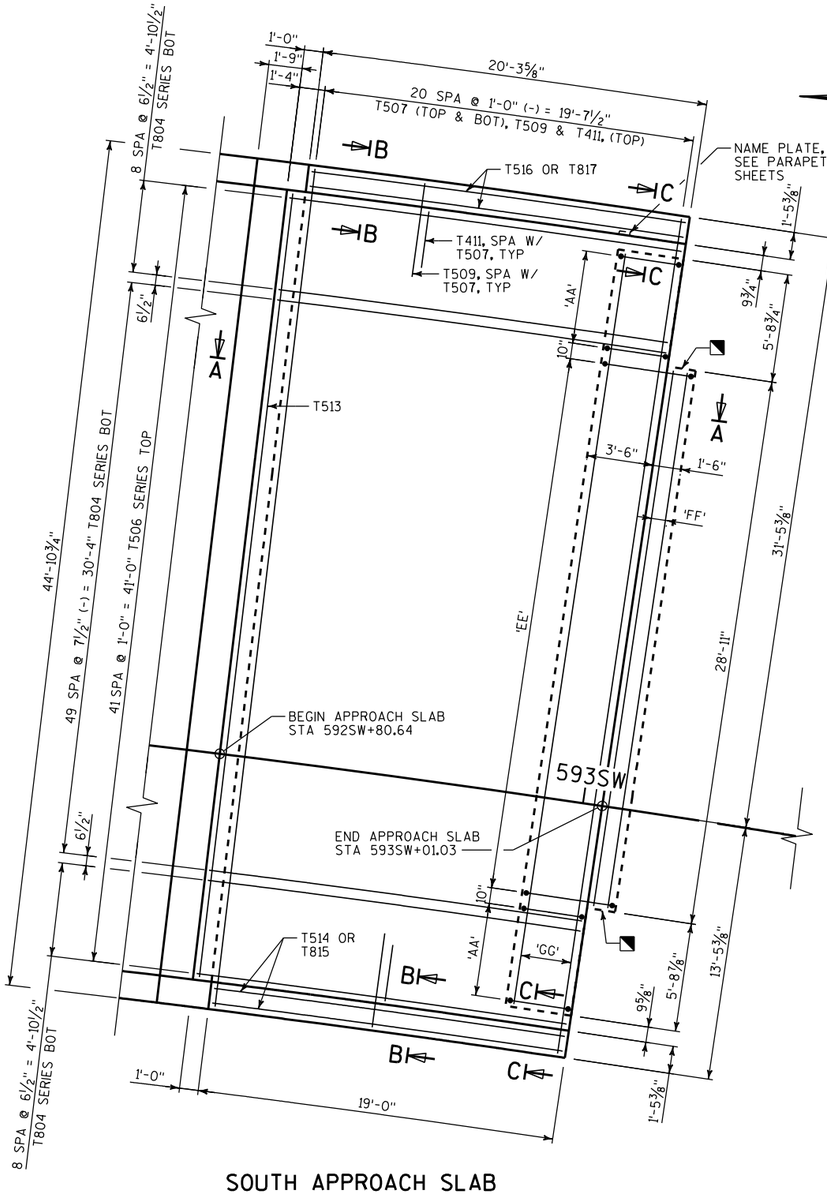
SHEET 78 OF 96

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PLOT BY : MSCGLM
PLOT NAME : B855_080551_ss
PLOT SCALE : 1.333333:1

STATE PROJECT NUMBER
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WEST APPROACH SLAB



SOUTH APPROACH SLAB

TABLE OF ELEVATIONS

FEATURE	STA. 579SW+35.76	579SW+56.14	592SW+80.64	593SW+01.03
LT. EDGE OF SLAB	805.53	805.37	814.58	814.06
TOE OF 42SS BARRIER	805.47	805.30	814.49	813.98
R/L SW	804.28	803.93	812.69	812.18
TOE OF 42SS BARRIER	803.80	803.39	811.97	811.46
RT. EDGE OF SLAB	803.74	803.32	811.88	811.37

LEGEND

PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB.

NOTES

FOR SECTIONS A-A, B-B, C-C, D-D, & E-E, SEE STRUCTURAL APPROACH SLAB DETAILS.

'AA' = 6 SPA @ 10"(-) = 4'-11", T502
'BB' = 40 SPA. @ 11"(-) = 36'-3", T501
'CC' = 3 SPA. @ 1'-0" = 3'-0", T510
'DD' = 1 SPA. @ 9", T508
'EE' = 31 SPA @ 11"(-) = 28'-3", T501
'FF' = 1 SPA. @ 9", T518
'GG' = 3 SPA. @ 1'-0" = 3'-0", T519

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STRUCTURE B-40-855

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STRUCTURAL APPROACH SLAB

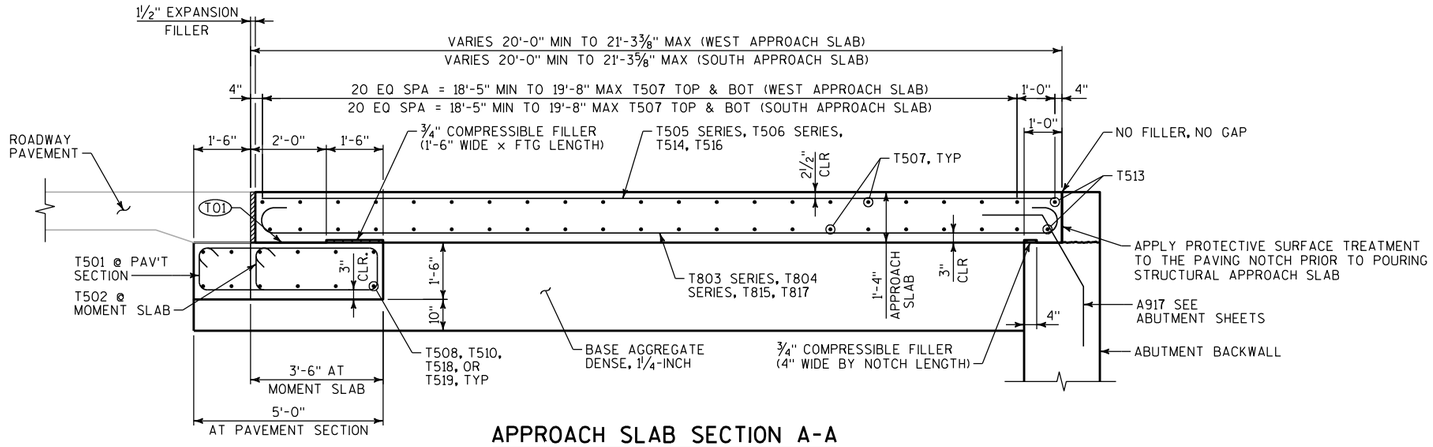
SHEET 79 OF 96

8

8

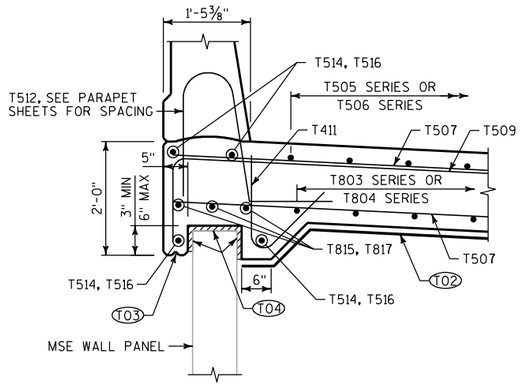
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STATE PROJECT NUMBER
1060-33-80

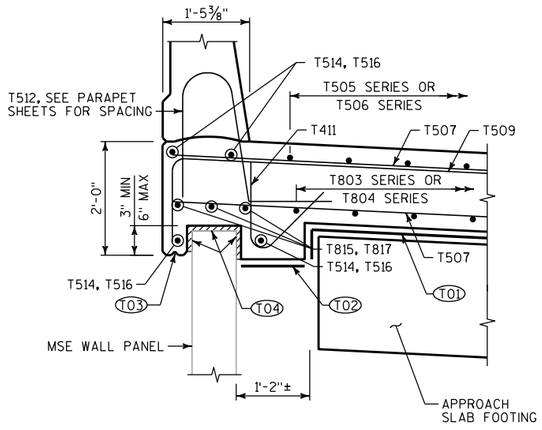


APPROACH SLAB SECTION A-A

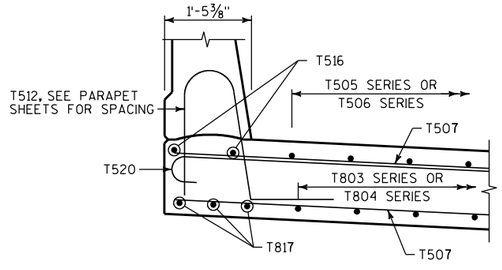
(WEST APPROACH SHOWN,
SOUTH APPROACH SIMILAR BUT OPPOSITE)



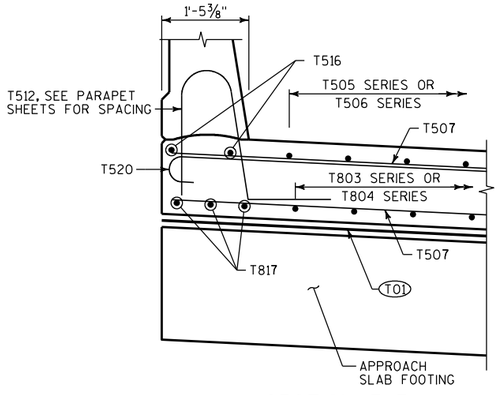
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

LEGEND

(T01) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T02) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

(T03) ¾" CONT. DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENT BACKWALL.

(T04) 1" EXPANDED POLYSTYRENE

APPROACH SLAB NOTES

THE DECK SHALL HAVE A TINE FINISH AS DEFINED IN THE STANDARD SPECIFICATIONS.

SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.

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STRUCTURAL APPROACH SLAB DETAILS

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8

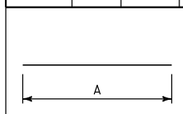
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STATE PROJECT NUMBER

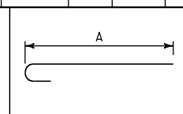
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
T501	E	73	12'-1"	X		3	1'-1"	4'-8"					FTG TIE AT PAV'T SECTION					
T502	E	21	9'-1"	X		3	1'-1"	3'-2"					FTG TIE AT MOMENT SLAB					
T803	S	68	22'-2"	X	X	12	20'-4"	0'-4"	0'-3"				LONG BOT W APPR. SLAB	A	19'-8"	20'-11"	1 SERIES OF 68	21'-6" TO 22'-9"
T804	S	68	22'-2"	X	X	12	20'-4"	0'-4"	0'-3"				LONG BOT S APPR. SLAB	A	19'-8"	20'-11"	1 SERIES OF 68	21'-6" TO 22'-9"
T505	S	42	20'-4"		X	1	20'-4"						LONG TOP W APPR. SLAB	A	19'-8"	20'-11"	1 SERIES OF 42	19'-8" TO 20'-11"
T506	S	42	20'-4"		X	1	20'-4"						LONG TOP S APPR. SLAB	A	19'-8"	20'-11"	1 SERIES OF 42	19'-8" TO 20'-11"
T507	S	42	44'-6"			1	44'-6"						TRANSVERSE, TOP & BOT					
T508	E	2	36'-6"			1	36'-6"						FTG TRANS AT PAV'T SECTION					
T509	S	63	6'-3"	X		8	5'-0"	1'-4"					TRANS TOP EDGES AT MSE WALL					
T510	E	4	42'-3"			1	42'-3"						FTG TRANS AT MOMENT SLAB					
T411	S	63	4'-10"	X		10	1'-3"	135	0'-3"				TRANS AT BF MSE WALL					
T512	S	116	5'-7"	X		11	1'-8"	172	0'-4½"	1'-9"	1'-0"	99	PARAPET TIE					
T513	S	4	41'-8"			1	41'-8"						TRANSVERSE TOP & BOT AT ABUT					
T514	S	8	18'-8"			1	18'-8"						LONG TOP AT PARAPET					
T815	S	6	20'-6"	X		12	18'-8"	0'-4"	0'-3"				LONG BOT AT PARAPET					
T516	S	8	19'-11"			1	19'-11"						LONG TOP AT PARAPET					
T817	S	6	21'-9"	X		12	19'-11"	0'-4"	0'-3"				LONG BOT AT PARAPET					
T518	E	2	28'-7"			1	28'-7"						FTG TRANS AT PAV'T SECTION					
T519	E	4	40'-0"			1	40'-0"						FTG TRANS AT MOMENT SLAB					
T520	S	21	5'-7"	X		2	5'-0"						TRANS TOP EDGES					

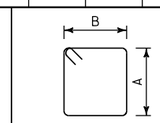
BAR MARK BREAKDOWN				
BAR MARK	WEST APPROACH SLAB	SOUTH APPROACH SLAB	TOTAL NO	WEIGHT
T501	41	32	73	920
T502	7	14	21	199
T803	68	0	68	4025
T804	0	68	68	4025
T505	42	0	42	891
T506	0	42	42	891
T507	21	21	42	1949
T508	2	0	2	76
T509	21	42	63	411
T510	4	0	4	176
T411	21	42	63	203
T512	58	58	116	676
T513	2	2	4	174
T514	4	4	8	156
T815	3	3	6	328
T516	4	4	8	166
T817	3	3	6	348
T518	0	2	2	60
T519	0	4	4	167
T520	21	0	21	122
TOT WEIGHT	7976	7986		15962



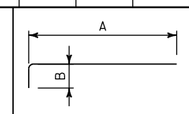
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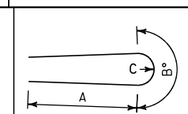
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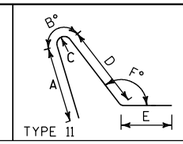
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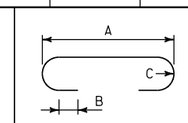
TYPE 8



TYPE 10



TYPE 11



TYPE 12

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

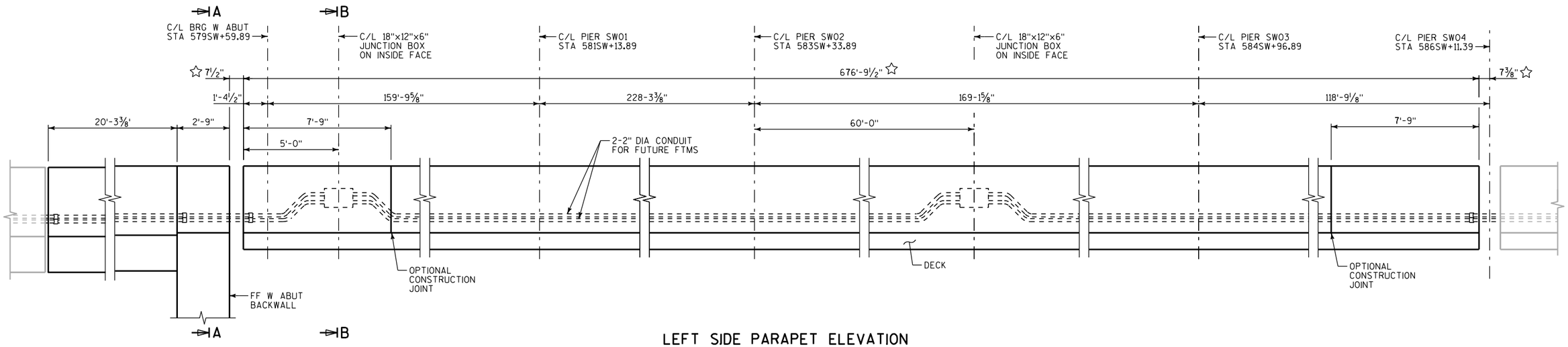
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APPROACH SLAB REINFORCEMENT SCHEDULE

SHEET 81 OF 96

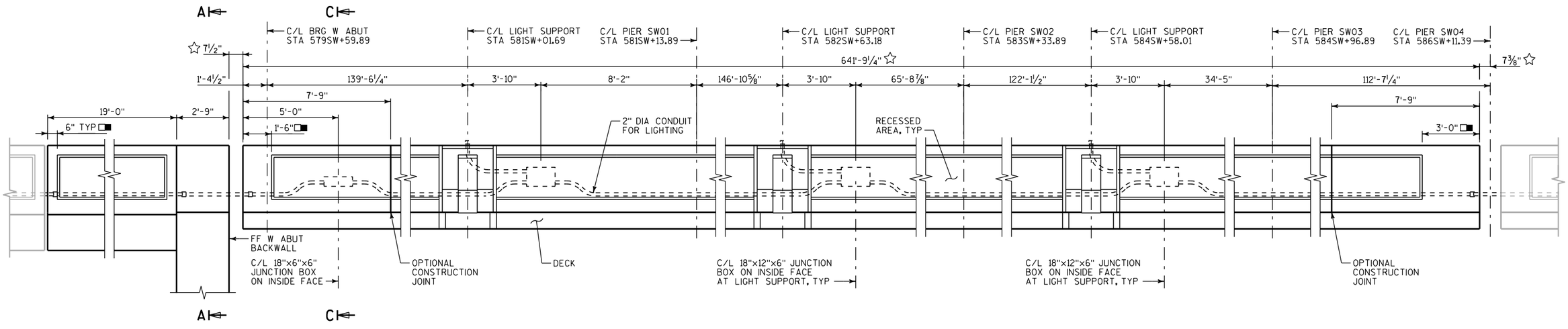
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PLOT DATE : 02-MAY-2014 12:04
PLOT BY : MSCGLM
PLOT NAME : B855_080554_ss
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE))

NOTES

FOR SECTION A-A, B-B & C-C SEE PARAPET SECTIONS & DETAILS SHEET

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 7½" CONCRETE OPENING (5" JOINT OPENING) AT THE ABUTMENT AND AN 1'-2¾" OPENING (1'-0¼" JOINT OPENING) AT PIER SW04 AS SHOWN ON SHEET 76.

□■ DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

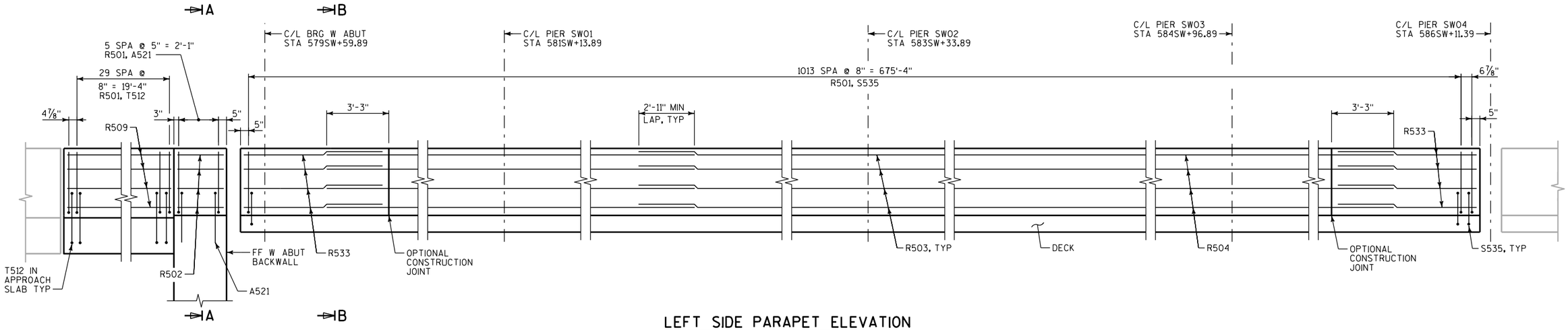
DRAWN BY GLM | PLANS CK'D. WRT

PARAPET
EMBEDED WORK
UNIT 1

SHEET 82 OF 96

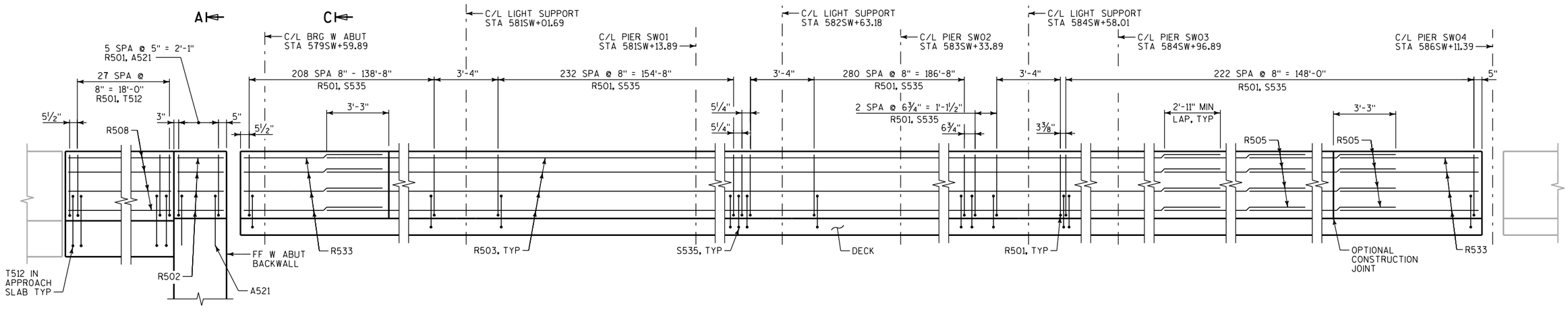
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PLOT BY : MSCGLM
PLOT NAME : B855_080555_rp
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE))

NOTES

FOR SECTION A-A, SEE PARAPET
SECTIONS & DETAILS SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

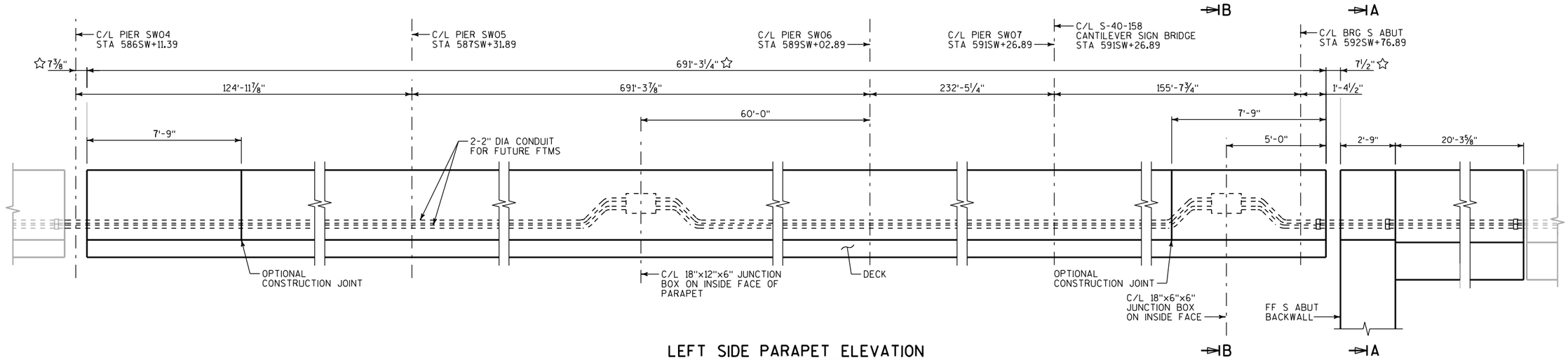
STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

PARAPET ELEVATIONS UNIT 1

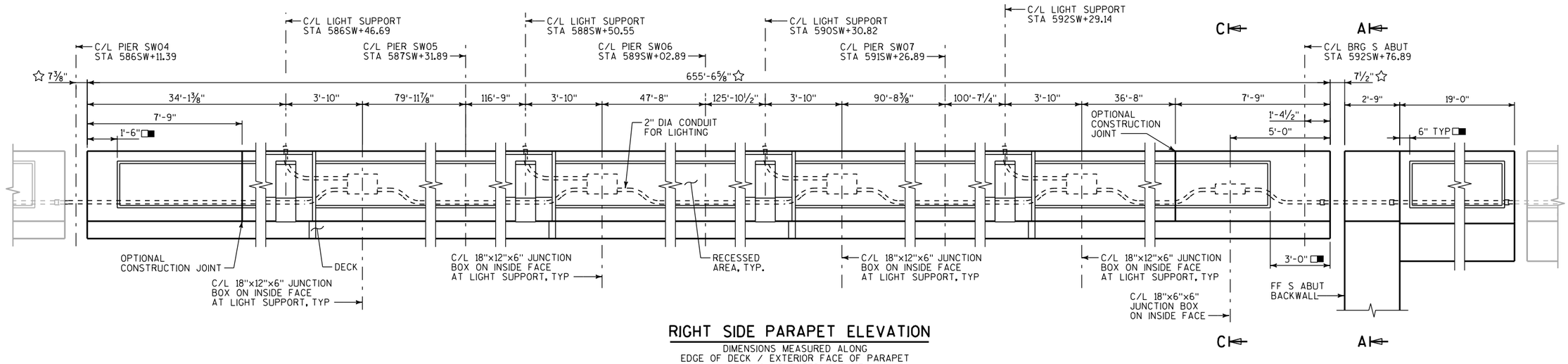
SHEET 83 OF 96

STATE PROJECT NUMBER
1060-33-80



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

8

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 7½" CONCRETE OPENING (5" JOINT OPENING) AT THE ABUTMENT AND AN 1'-2¾" OPENING (1'-0¼" JOINT OPENING) AT PIER SW04 AS SHOWN ON SHEET 76.

■ DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NOTES

FOR SECTIONS A-A, B-B & C-C SEE
PARAPET SECTIONS & DETAILS SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

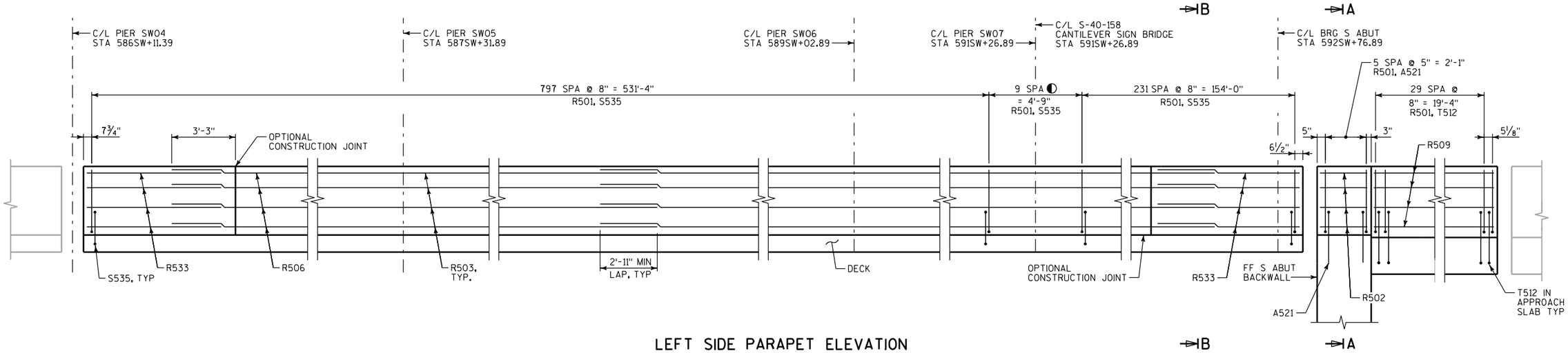
DRAWN BY	GLM	PLANS CK'D.	WRT

PARAPET
EMBEDDED WORK
UNIT 2

SHEET 84 OF 96

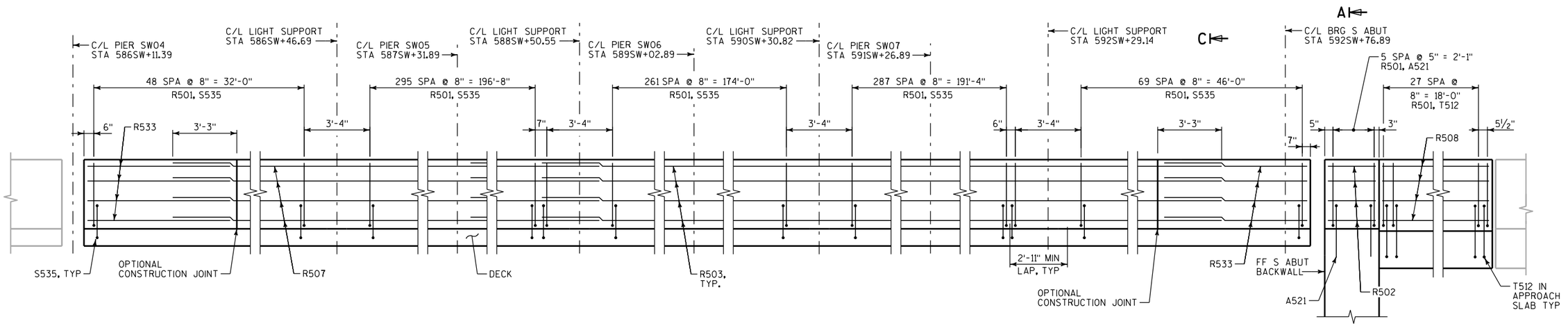
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PLOT DATE : 02-MAY-2014 12:04
PLOT BY : MSCGLM
PLOT NAME : B855_080557_rp
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

LEGEND

◐ REFER TO SIGN BRIDGE BASE SHEETS FOR REINFORCEMENT SPACING

NOTES

FOR SECTIONS A-A & B-B, SEE PARAPET SECTIONS & DETAILS SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

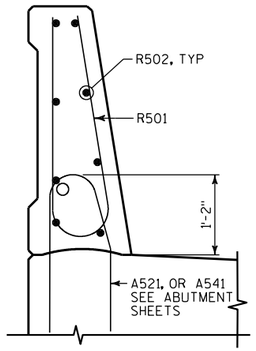
STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

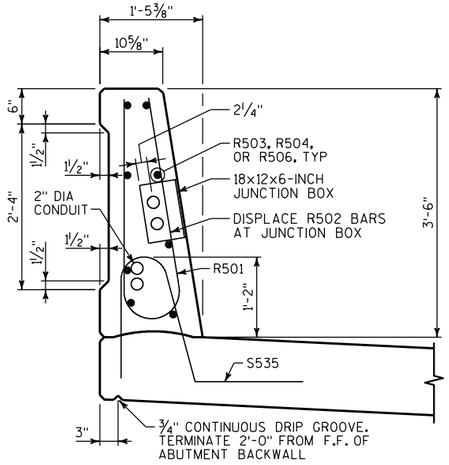
PARAPET ELEVATIONS UNIT 2

SHEET 85 OF 96

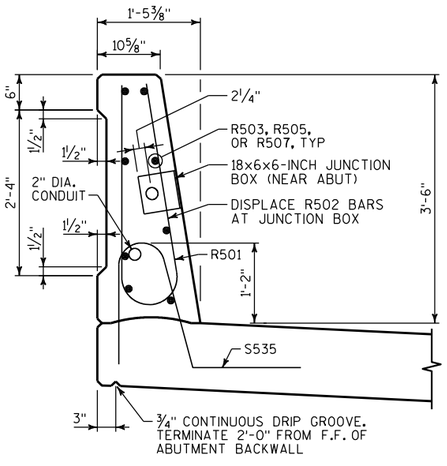
STATE PROJECT NUMBER
1060-33-80



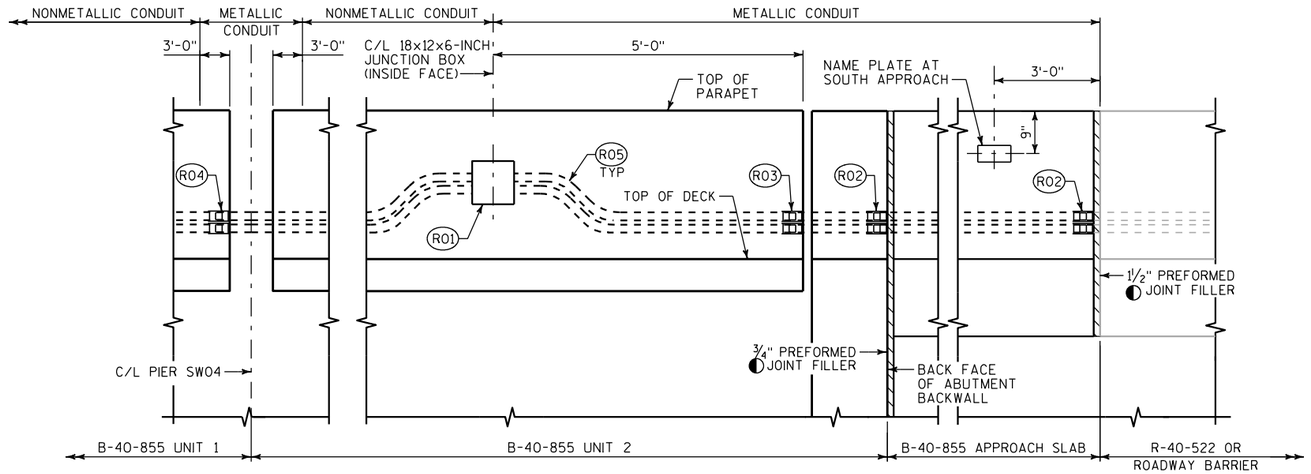
SECTION A



SECTION B

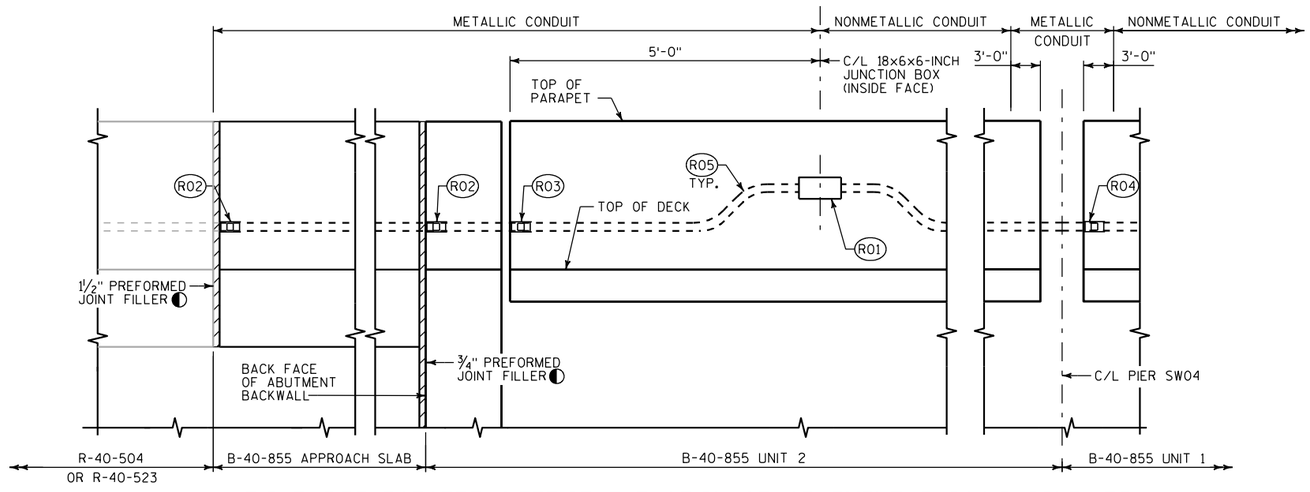


SECTION C



LEFT SIDE PARAPET INTERIOR ELEVATION AT ABUTMENT SHOWING CONDUITS

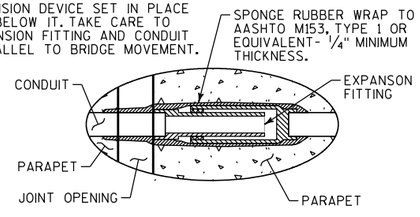
SOUTH ABUTMENT SHOWN, WEST ABUTMENT SIMILAR



RIGHT SIDE PARAPET INTERIOR ELEVATION AT ABUTMENT SHOWING CONDUITS

SOUTH ABUTMENT SHOWN, WEST ABUTMENT SIMILAR

POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.



EXPANSION FITTING DETAIL

LEGEND

(R01) CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE

(R02) EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE AX-200 OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R03) EXPANSION FITTING WITH 8" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE AX-8-200 OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R04) EXPANSION FITTING WITH 10" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE EX-200 WITH PBS-200-12S OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R05) 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

◐ PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

NOTES

EXPANSION FITTINGS, SPONGE RUBBER WRAP, ANGLES, AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, USE ADAPTER FITTINGS LISTED BY UL OR NRTL FOR ELECTRICAL USE.

FOR APPROVED MANUFACTURERS OF JUNCTION BOXES, SEE APPROVED MATERIAL LIST.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

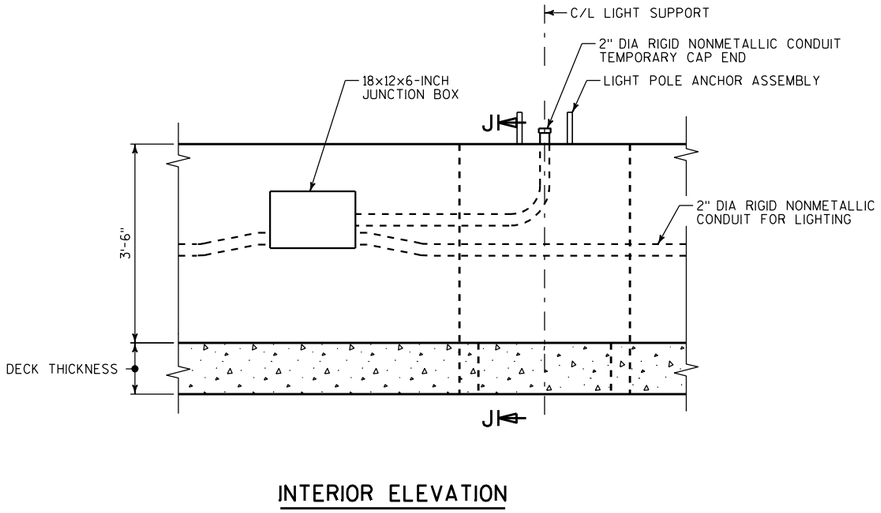
DRAWN BY GLM | PLANS CK'D. WRT

PARAPET SECTIONS & DETAILS

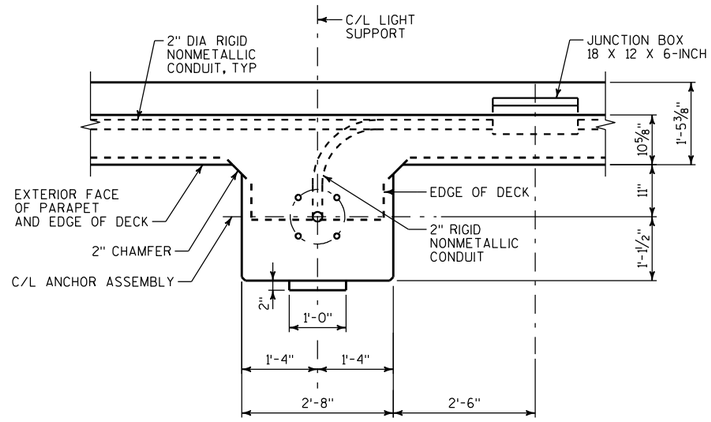
SHEET 86 OF 96

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PLOT DATE : 02-MAY-2014 12:04
PLOT BY : MSCGLM
PLOT NAME : B855_080559_rp
PLOT SCALE : 5.333333:1

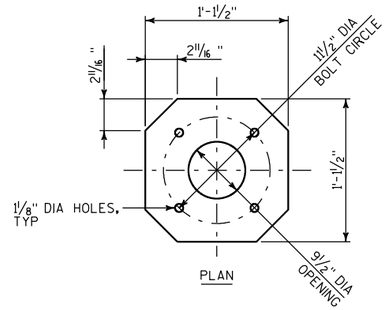
STATE PROJECT NUMBER
1060-33-80

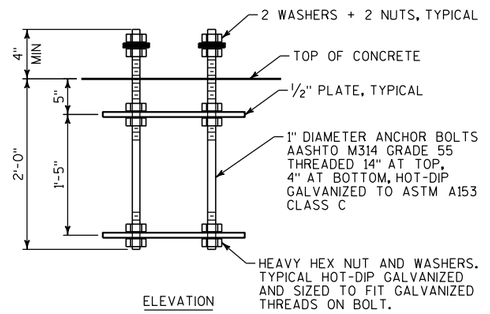


INTERIOR ELEVATION

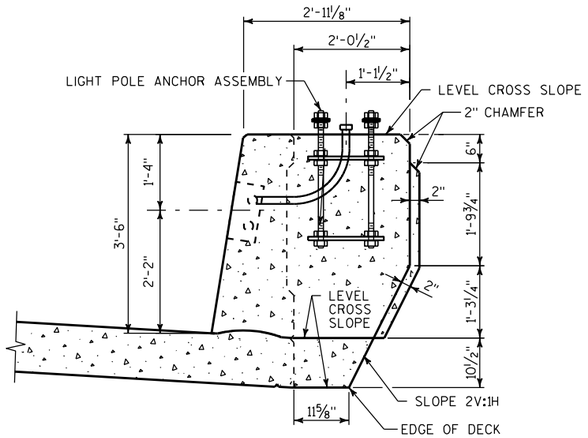


PLAN

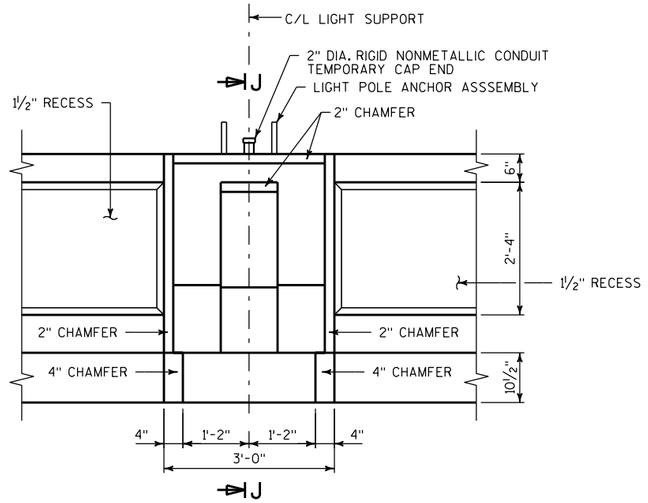




ANCHOR ASSEMBLY
LIGHT POLE ON STRUCTURES



SECTION J-J



EXTERIOR ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

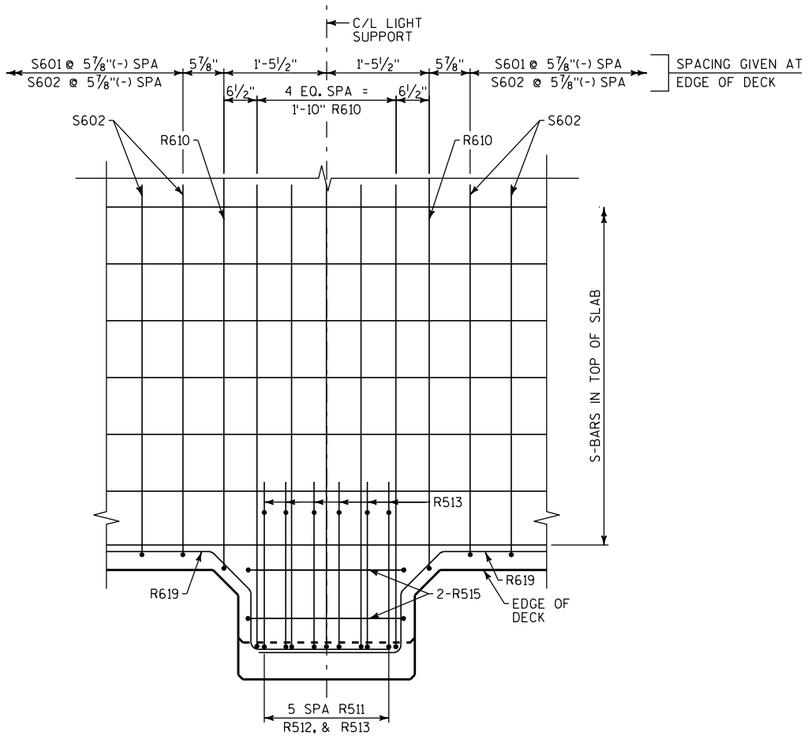
LIGHT SUPPORT DETAILS (1 OF 2)

SHEET 87 OF 96

8

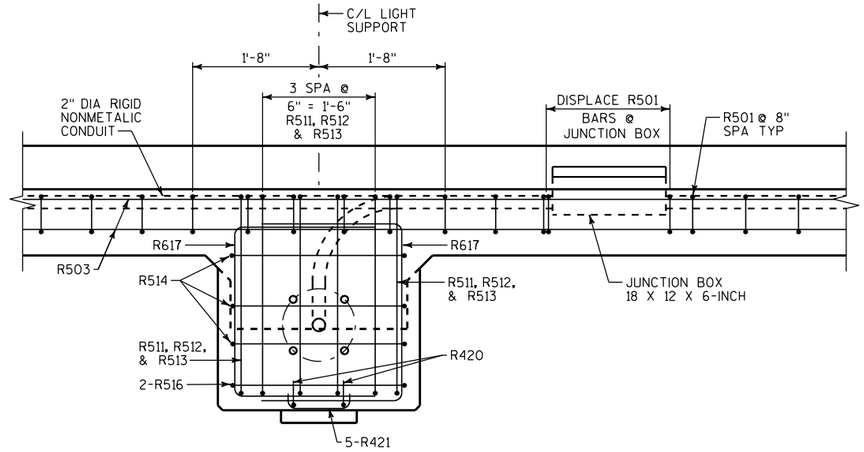
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STATE PROJECT NUMBER
1060-33-80

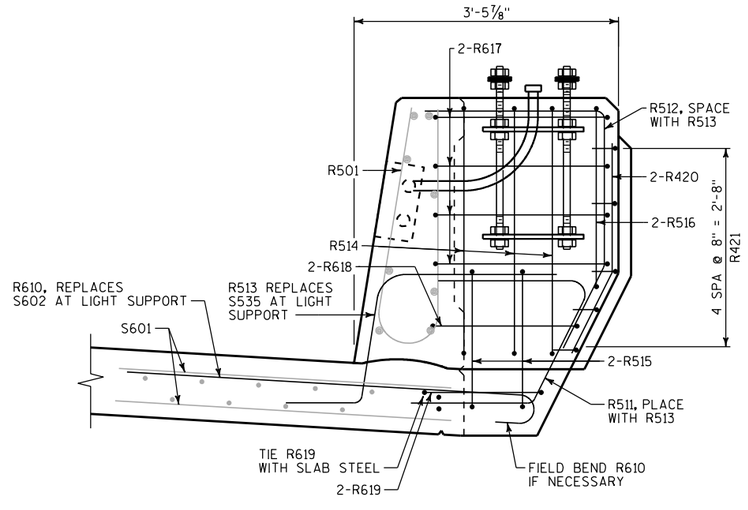


PLAN SHOWING REINFORCEMENT IN DECK

(S535 NOT SHOWN FOR CLARITY)

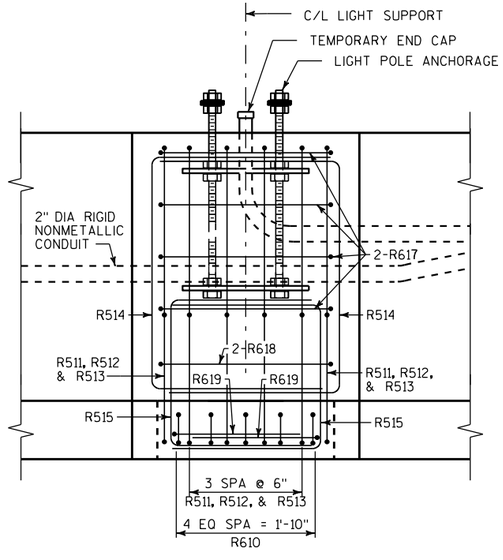


PLAN SHOWING REINFORCEMENT



SIDE VIEW SHOWING REINFORCEMENT

CROSS SECTION AT LIGHT SUPPORT



INTERIOR ELEVATION SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

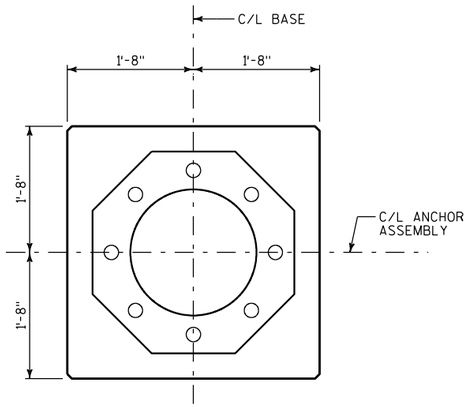
LIGHT SUPPORT DETAILS (2 OF 2)

SHEET 88 OF 96

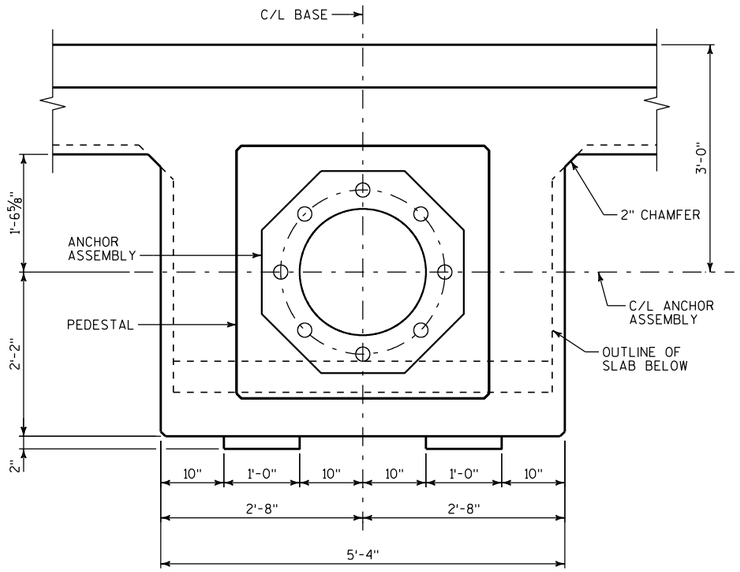
8

8

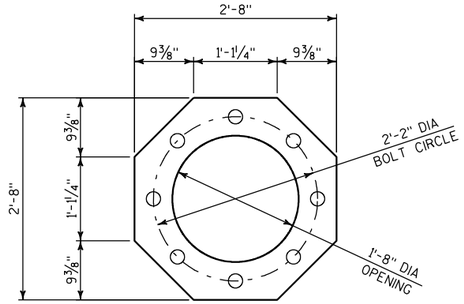
STATE PROJECT NUMBER
1060-33-80



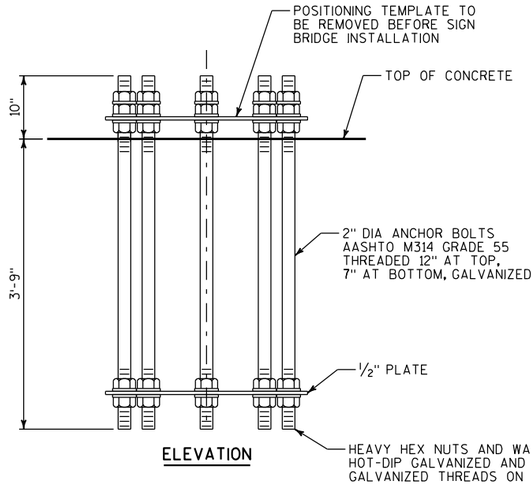
PEDESTAL PLAN



PLAN



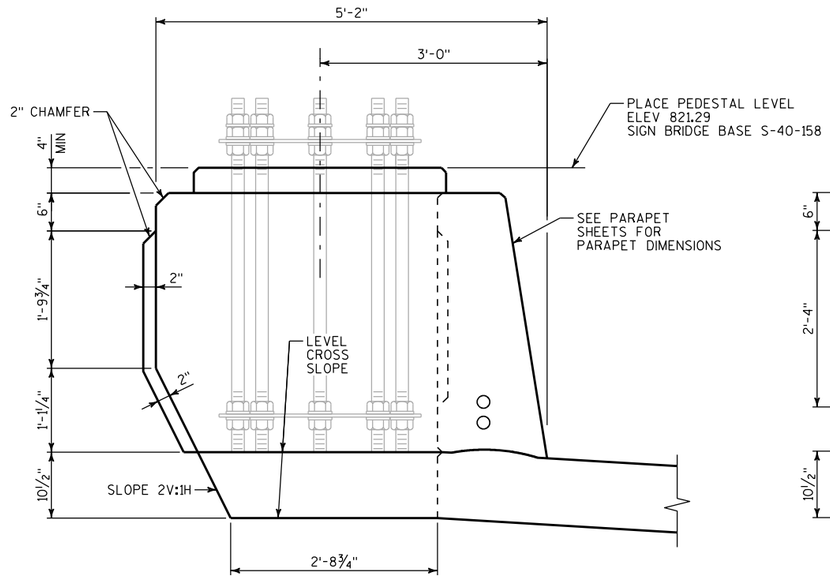
PLAN



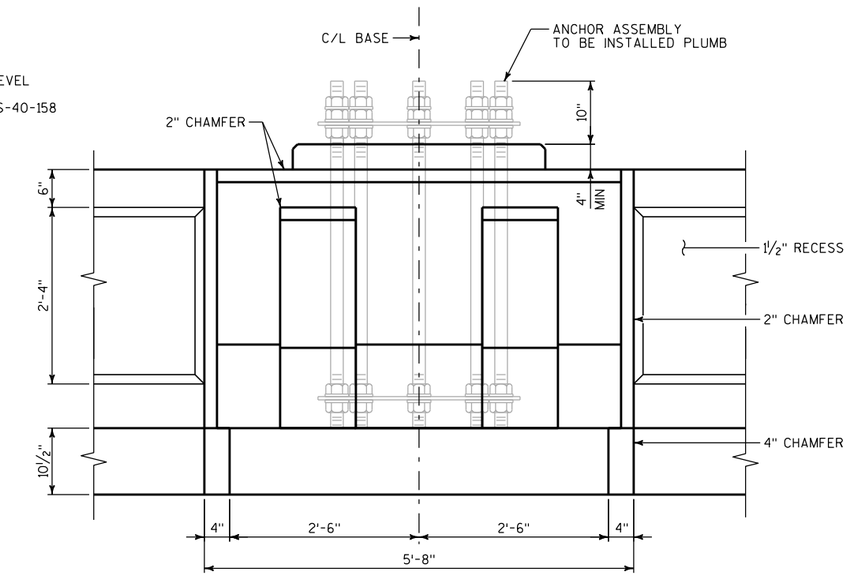
ELEVATION

ANCHOR ASSEMBLY
SIGN BRIDGE STRUCTURES

NOTE:
AN ALTERNATIVE ANCHOR ASSEMBLY MAY BE SUBMITTED FOR REVIEW AND POSSIBLE ACCEPTANCE BY THE ENGINEER. UPON ACCEPTANCE, THE SIGN BRIDGE FABRICATION DRAWINGS MUST MATCH THE EXACT SIZE, NUMBER, AND ORIENTATION OF THE ALTERNATIVE ANCHORAGE ASSEMBLY.



SIDE VIEW



EXTERIOR ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY TGL | PLANS CK'D. WRT

SIGN BRIDGE BASE (1 OF 2)

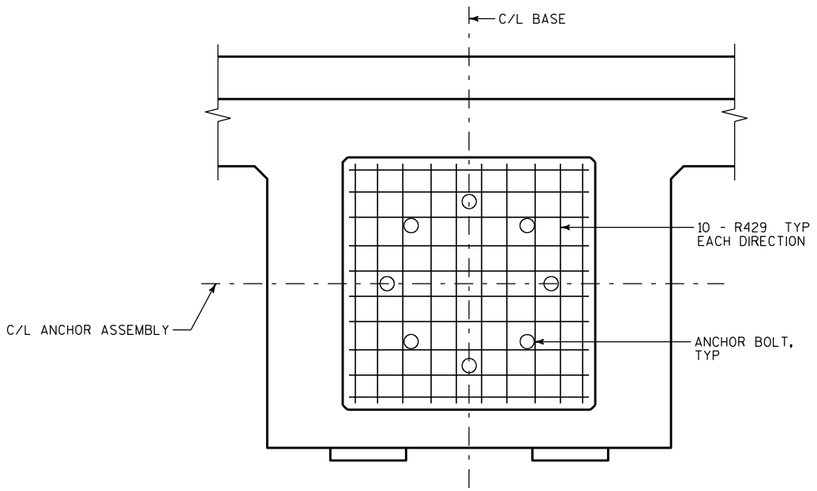
SHEET 89 OF 96

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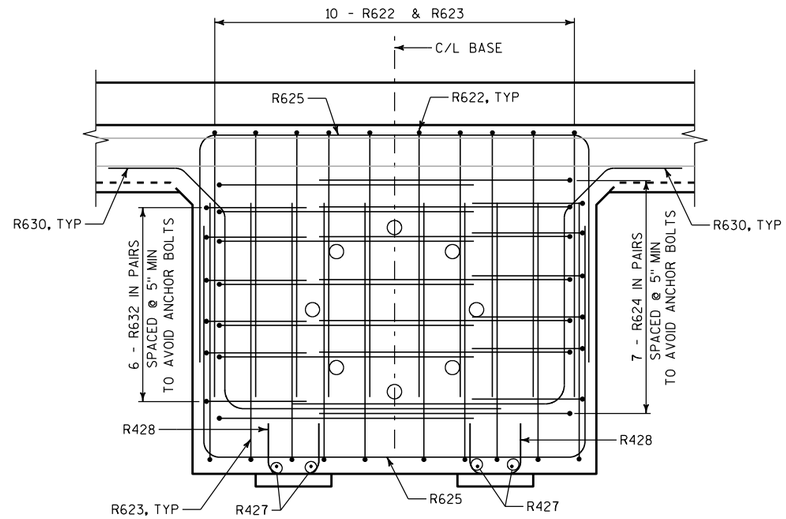
8

STATE PROJECT NUMBER

1060-33-80

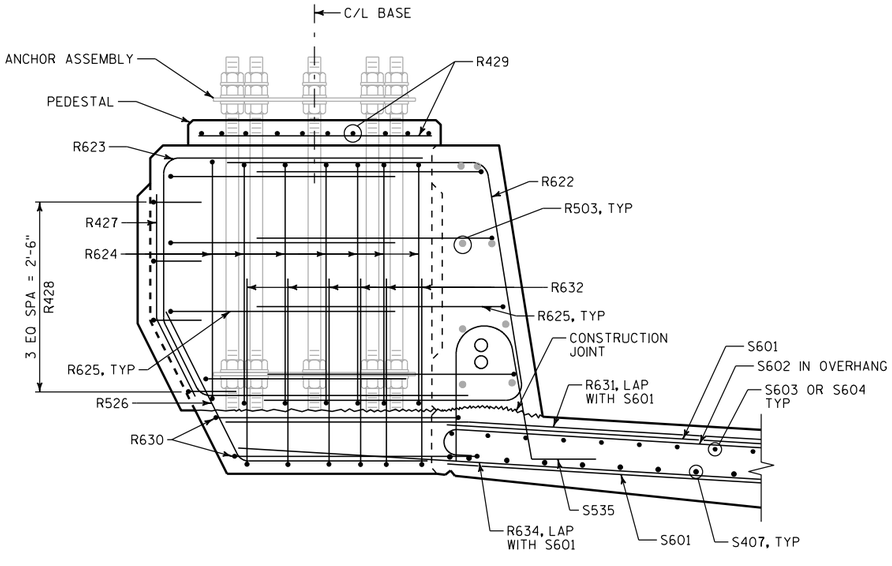


PEDESTAL PLAN SHOWING REINFORCEMENT

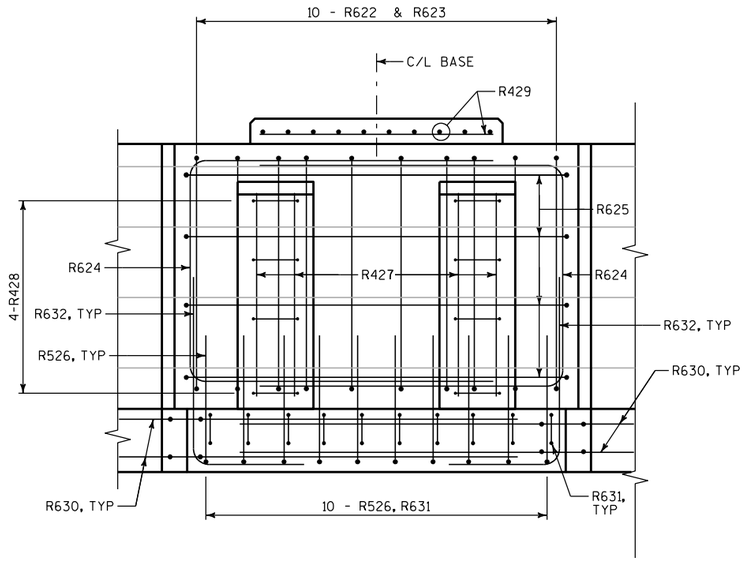


PLAN SHOWING REINFORCEMENT

PEDESTAL REINFORCEMENT NOT SHOWN - SEE PEDESTAL PLAN



SIDE VIEW SHOWING REINFORCEMENT



EXTERIOR ELEVATION SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY TGL | PLANS CK'D. WRT

SIGN BRIDGE
BASE
(2 OF 2)

SHEET 90 OF 96

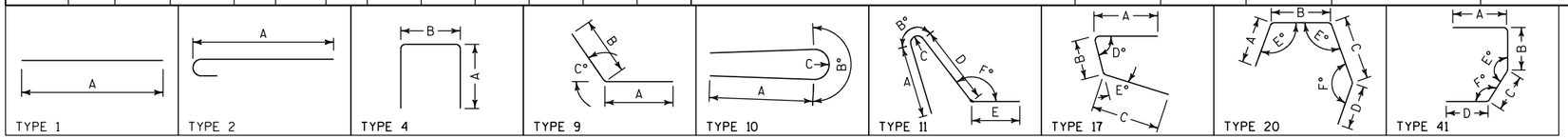
8

8

STATE PROJECT NUMBER
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
R501	S	4118	8'-8"	X		10	2'-8"	189	0'-4½"				PARAPET - 42SS VERTICAL					
R502	S	32	2'-5"			1	2'-5"						PARAPET - BACKWALL HORIZONTAL					
R503	S	344	60'-0"			1	60'-0"						PARAPET - HORIZONTAL					
R504	S	8	39'-10"			1	39'-10"						PARAPET - HORIZONTAL (END UNIT 1 LT)					
R505	S	16	32'-6"			1	32'-6"						PARAPET - HORIZONTAL (END UNIT 1 RT)					
R506	S	8	54'-5"			1	54'-5"						PARAPET - HORIZONTAL (END UNIT 2 LT)					
R507	S	8	18'-8"			1	18'-8"						PARAPET - HORIZONTAL (END UNIT 2 RT)					
R508	S	16	18'-6"			1	18'-6"						PARAPET - APPROACH SLAB RT					
R509	S	16	19'-9"			1	19'-9"						PARAPET - APPROACH SLAB LT					
R610	S	35	12'-4"	X		2	11'-8"						LIGHT BLISTER - DECK OVERHANG					
R511	S	49	5'-3"	X		17	2'-0"	2'-0"	1'-6"	67	67		LIGHT BLISTER - VERTICAL (OUTSIDE)					
R512	S	42	5'-2"	X		17	2'-4"	2'-0"	1'-1"	90	27		LIGHT BLISTER - VERTICAL (OUTSIDE WITH SLAB)					
R513	S	42	4'-11"	X		11	2'-0"	81	0'-4½"	1'-5"	1'-0"	99	LIGHT BLISTER - VERTICAL (WITH SLAB)					
R514	S	42	7'-5"	X		4	2'-3"	3'-2"					LIGHT BLISTER - VERTICAL (BODY)					
R515	S	28	5'-8"	X		4	2'-0"	1'-11"					LIGHT BLISTER - VERTICAL (LOWER BODY)					
R516	S	14	6'-6"	X		4	2'-3"	2'-3"					LIGHT BLISTER - VERTICAL (OUTSIDE)					
R617	S	56	6'-5"	X		4	2'-3"	2'-3"					LIGHT BLISTER - HORIZONTAL (TOP)					
R618	S	14	6'-1"	X		4	2'-3"	1'-11"					LIGHT BLISTER - HORIZONTAL (BODY)					
R619	S	14	4'-9"	X		20	1'-9"	0'-10"	0'-10"	1'-8"	135	270	LIGHT BLISTER - HORIZONTAL (BOTTOM)					
R420	S	14	3'-5"	X		9	1'-8"	1'-9"	19				LIGHT BLISTER - OUTSIDE FACE					
R421	S	35	1'-1"	X		4	0'-4"	0'-7"					LIGHT BLISTER - OUTSIDE FACE					
R622	S	10	10'-1"	X		17	3'-8"	3'-1"	3'-8"	99	99		SIGN BASE SUPPORT - TIE					
R623	S	10	10'-2"	X		41	3'-8"	2'-1"	1'-1"	3'-8"	153	117	SIGN BASE SUPPORT - TIE					
R624	S	14	10'-7"	X		4	4'-0"	2'-11"					SIGN BASE SUPPORT - VERTICAL TIE					
R625	S	8	12'-0"	X		4	3'-8"	5'-0"					SIGN BASE SUPPORT - HORIZONTAL TIE					
R526	S	10	4'-7"	X		9	2'-5"	2'-2"	116				SIGN BASE SUPPORT - VERTICAL TIE					
R427	S	4	2'-10"	X		9	1'-8"	1'-2"	27				SIGN BASE SUPPORT - VERTICAL					
R428	S	8	1'-10"	X		4	0'-8"	0'-8"					SIGN BASE SUPPORT - HORIZONTAL					
R429	S	20	3'-0"			1	3'-0"						SIGN BASE SUPPORT - PEDESTAL					
R630	S	4	8'-10"	X		20	1'-10"	0'-10"	2'-8"	3'-10"	135	270	SIGN BASE SUPPORT - DECK					
R631	S	10	7'-6"	X		9	3'-0"	4'-6"	4				SIGN BASE SUPPORT - TRANSVERSE DECK					
R632	S	12	3'-11"	X		9	2'-5"	1'-6"	90				SIGN BASE SUPPORT - TIE					
R533	S	16	7'-7"			1	7'-7"						PARAPET - HORIZONTAL AT CONST. JOINT					
R634	S	10	7'-0"			1	7'-0"						SIGN BASE SUPPORT - TRANSVERSE DECK					

BAR MARK BREAKDOWN				
BAR MARK	UNIT 1	UNIT 2	TOTAL NO	WEIGHT
R501	2039	2079	4118	37224
R502	16	16	32	81
R503	168	176	344	21528
R504	8	0	8	332
R505	16	0	16	542
R506	0	8	8	454
R507	0	8	8	156
R508	8	8	16	309
R509	8	8	16	330
R610	15	20	35	648
R511	21	28	49	268
R512	18	24	42	226
R513	18	24	42	215
R514	18	24	42	325
R515	12	16	28	165
R516	6	8	14	95
R617	24	32	56	540
R618	6	8	14	128
R619	6	8	14	100
R420	6	8	14	32
R421	15	20	35	25
R622	0	10	10	151
R623	0	10	10	153
R624	0	14	14	223
R625	0	8	8	144
R526	0	10	10	48
R427	0	4	4	8
R428	0	8	8	10
R429	0	20	20	40
R630	0	4	4	53
R631	0	10	10	113
R632	0	12	12	71
R533	8	8	16	127
R634	0	10	10	105
TOT WEIGHT	31429	33539	5087	64968



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

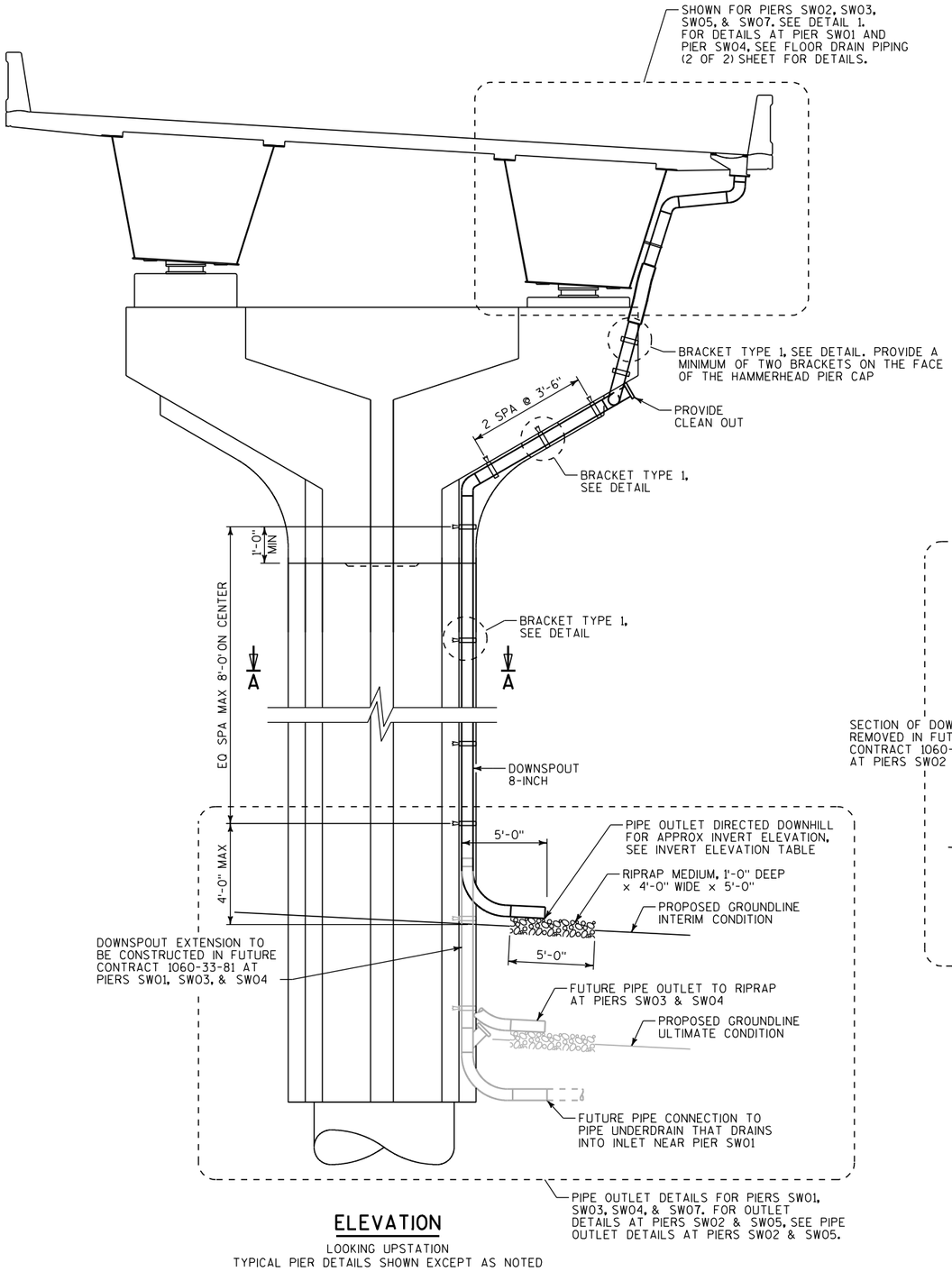
DRAWN BY GLM | PLANS CK'D. WRT

PARAPET REINFORCEMENT SCHEDULE

SHEET 91 OF 96

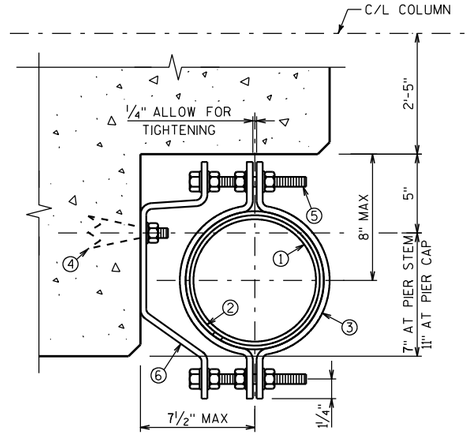
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PLOT DATE : 02-MAY-2014 12:04
PLOT BY : MSCGLM
PLOT NAME : B855_080564_rp
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION

LOOKING UPSTATION
TYPICAL PIER DETAILS SHOWN EXCEPT AS NOTED



BRACKET TYPE 1

LEGEND

1. 8" DIA DOWNSPOUT
2. 6" LONG SPLIT RTRP STRIP, BOND TO #1, PLACE AT ALL BRACKET LOCATIONS
3. 2½" X ⅜" BAR
4. ⅝" DIA TYPE S ANCHOR WITH 1 NUT & 1 WASHER LOCATED TO AVOID CONFLICT WITH REINFORCEMENT IN PIER
5. ⅝" DIA HEADED BOLT WITH 3 NUTS & 4 WASHERS
6. 2½" X ⅜" BAR WITH 11/16 " X 1 3/16" HORIZ SLOTTED HOLE AT MASONRY ANCHOR

NOTES

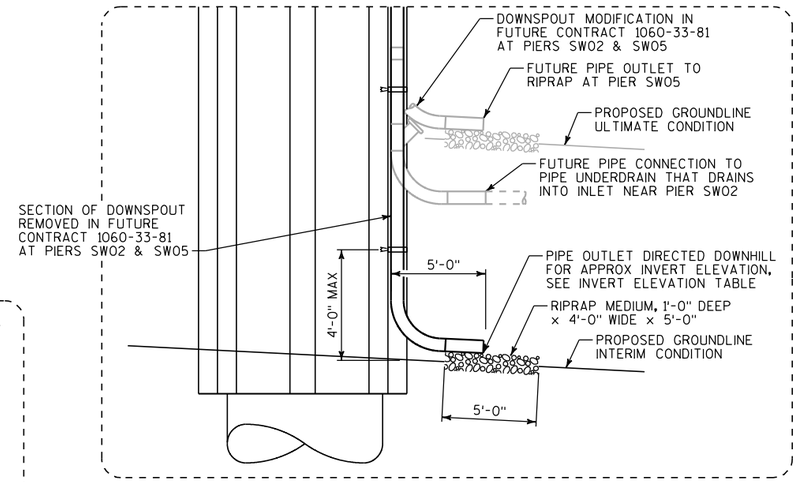
FOR FLOOR DRAIN LOCATIONS, SEE DECK REINFORCEMENT SHEETS.

INSTALL PIPING AT THE STEEPEST GRADE POSSIBLE, MINIMUM 2 PERCENT.

ALL FITTINGS, ELBOWS, CLEANOUTS, MASONRY ANCHORS, BOLTS, AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT SHALL BE INCLUDED IN PAYMENT FOR "DOWNSPOUT 8-INCH".

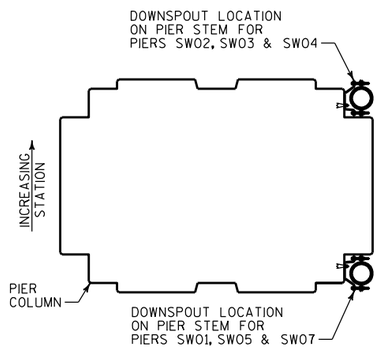
ALL DOWNSPOUT PIPE SHALL BE COLOR MATCHED TO THE OBJECT IT IS ATTACHED TO. FOR SECTIONS ATTACHED TO STEEL TUB GIRDER USE SHERWIN WILLIAMS COLOR SW6523. FOR SECTIONS ATTACHED TO CONCRETE PIER COLUMN USE FEDERAL COLOR 33564.

ALL FASTERNERS, INCLUDING BOLTS, NUTS, WASHERS, AND MASONRY ANCHORS, SHALL BE STAINLESS STEEL MEETING THE MATERIAL REQUIREMENTS IN THE STANDARD SPECIFICATIONS. BARS SHALL BE STAINLESS STEEL MEETING ASTM A276, TYPE 304.



PIPE OUTLET DETAILS AT PIERS SW02 & SW05

INVERT ELEVATION TABLE	
LOCATION	INVERT ELEV
PIER SW01	771.50
PIER SW02	763.50
PIER SW03	764.00
PIER SW04	766.00
PIER SW05	772.50
PIER SW07	770.50



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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FLOOR DRAIN PIPING (1 OF 2)

SHEET 92 OF 96

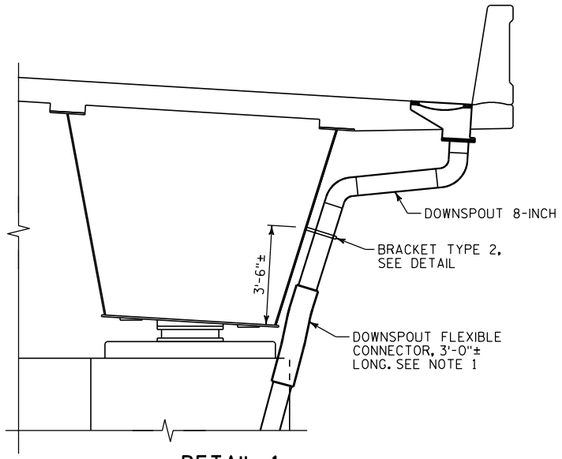
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8

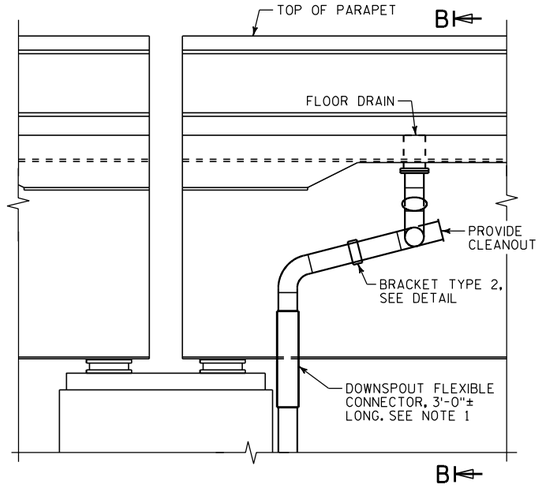
STATE PROJECT NUMBER
1060-33-80

NOTES

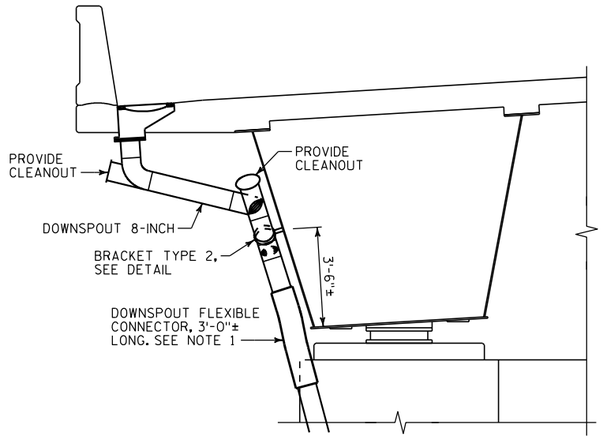
1. PROVIDE FLEXIBLE CONNECTOR THAT IS CAPABLE OF HANDLING THE MOVEMENT GIVEN ON THE BEARING LAYOUT SHEETS. THE MOVEMENT RANGE SHALL PROVIDE FOR TWO WAY MOVEMENT.



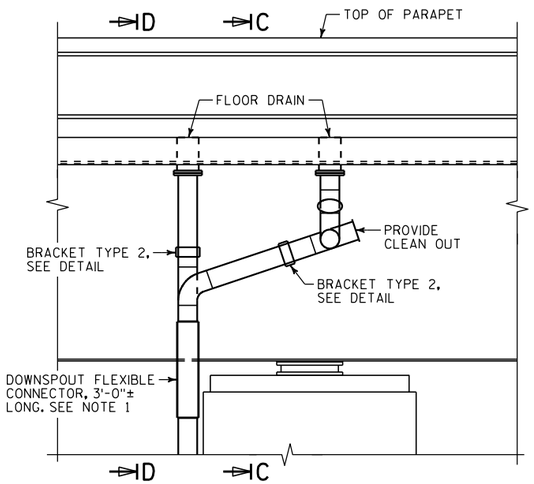
DETAIL 1



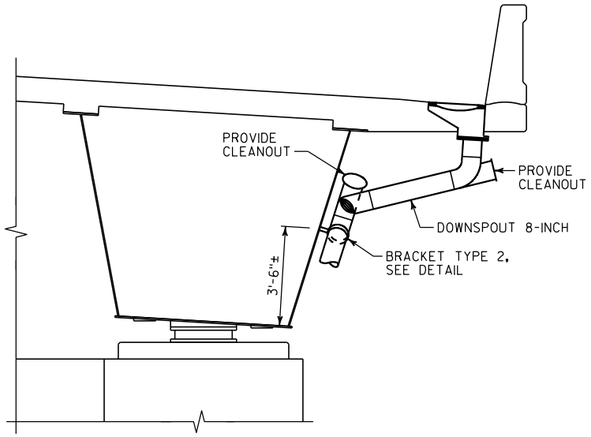
PARTIAL ELEVATION - PIER SW04



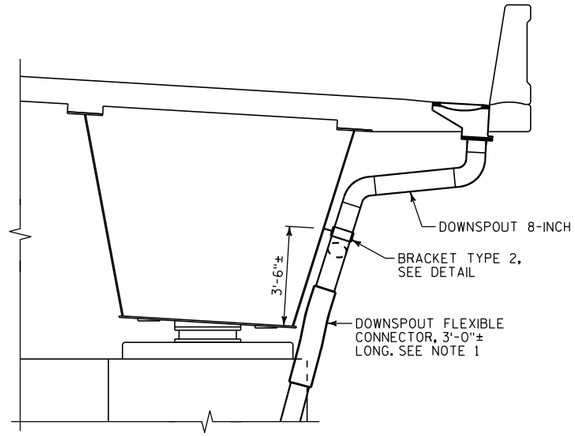
SECTION B-B



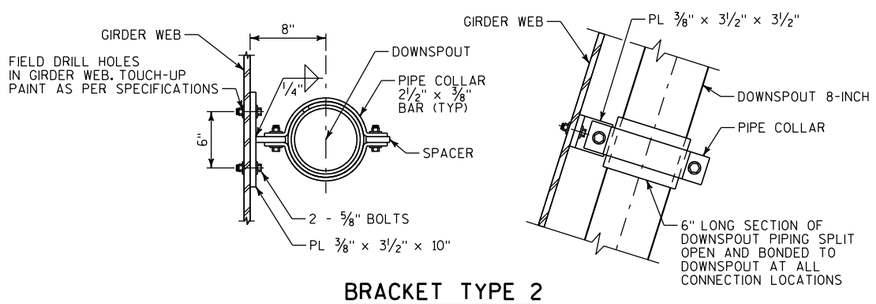
PARTIAL ELEVATION - PIER SW01



SECTION C-C



SECTION D-D



BRACKET TYPE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

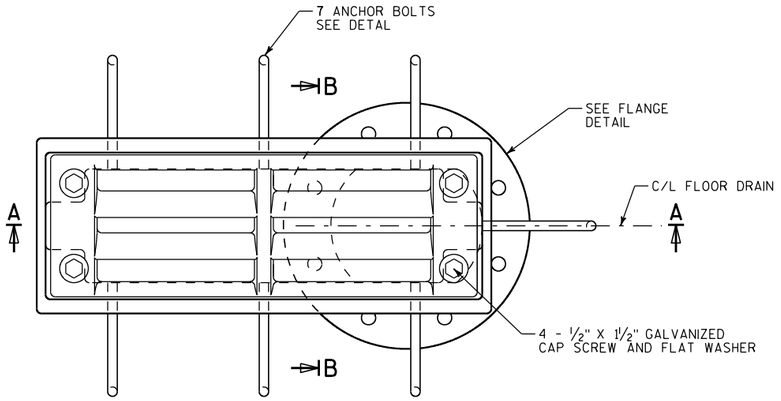
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FLOOR DRAIN PIPING (2 OF 2)

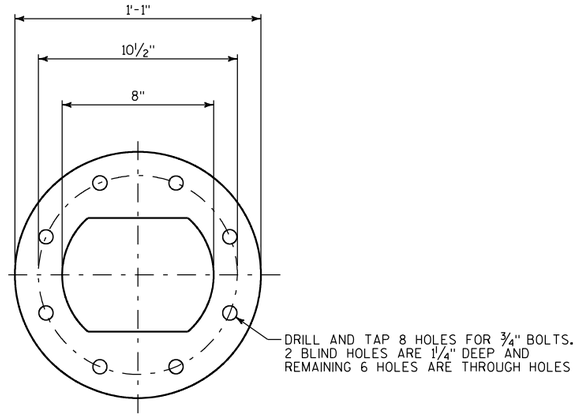
SHEET 93 OF 96

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PLOT DATE : 02-MAY-2014 12:04
PLOT BY : MSCGLM
PLOT NAME : B855_080566_rp
PLOT SCALE : 16:1

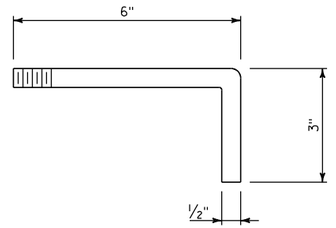
STATE PROJECT NUMBER
1060-33-80



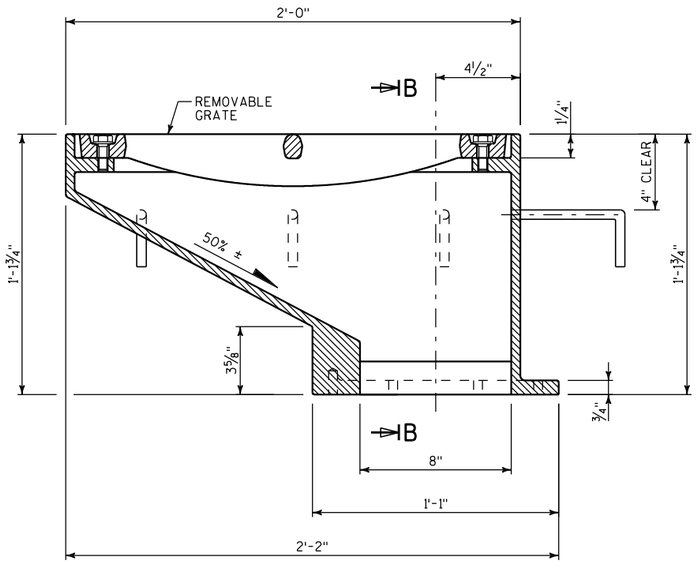
PLAN



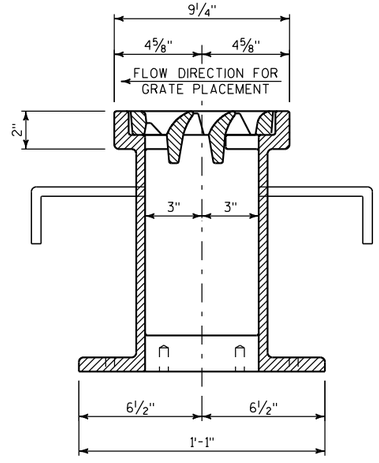
PLAN - FLANGE



ANCHOR BOLT DETAIL



SECTION A-A



SECTION B-B

NOTES

1. THE DRAIN CASTING SHOWN IS BASED ON PART NUMBER R-3921-V1 FROM THE NEENAH FOUNDRY COMPANY WITH MODIFICATIONS AS REQUIRED TO PERMIT AN 8" DOWNSPOUT TO BE USED.
2. A FABRICATED DRAIN ASSEMBLY MAY BE SUBSTITUTED IF THE HYDRAULIC PROPERTIES OF THE SPECIFIED CASTING CAN BE MAINTAINED. IF THE GEOMETRY OF THE PLACEMENT IS ACCEPTABLE AND IF APPROVED BY THE ENGINEER. FABRICATED DRAINS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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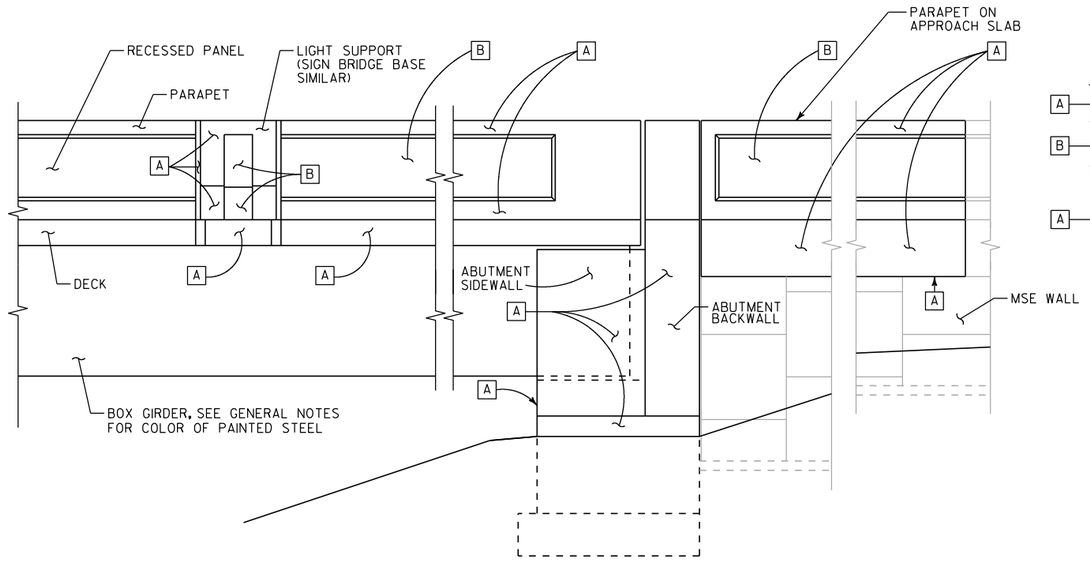
FLOOR DRAIN
SPECIAL

SHEET 94 OF 96

8

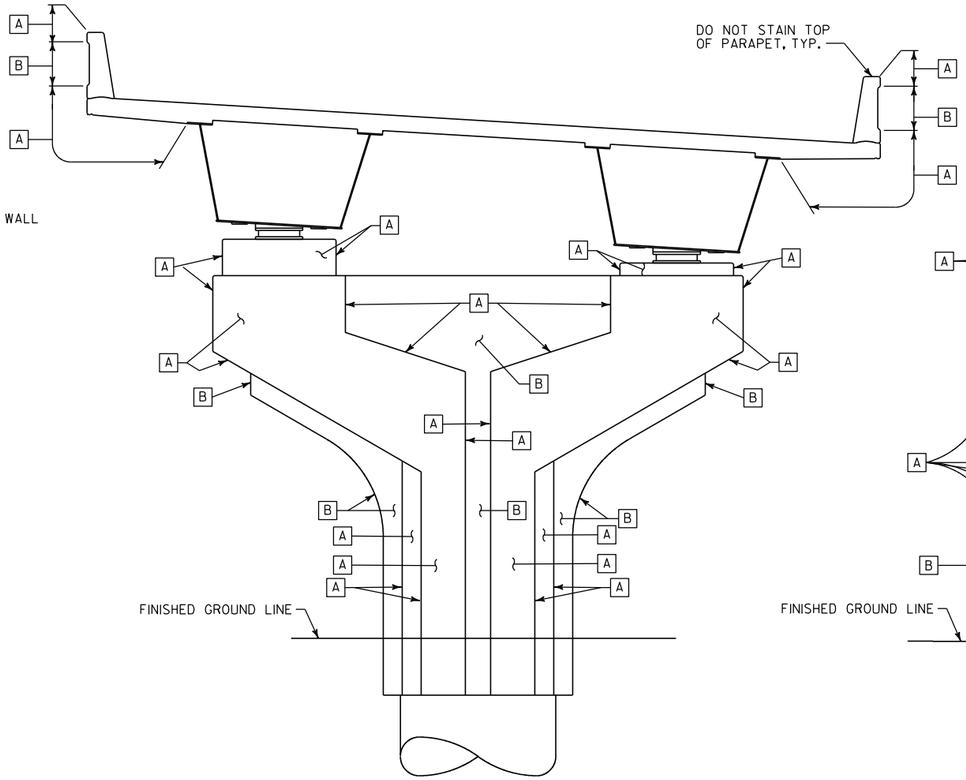
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STATE PROJECT NUMBER
1060-33-80



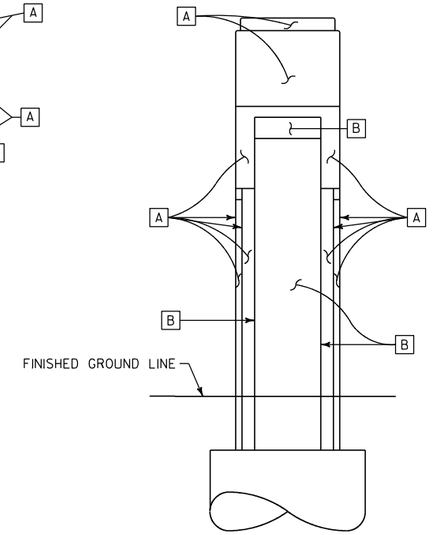
OUTSIDE ELEVATION OF RIGHT PARAPET

(LEFT PARAPET SIMILAR)



ELEVATION OF PIER

(LOOKING UP STATION)



END VIEW OF PIER

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		APPROACH SLAB	FASCIA AND UNDERSIDE OF COPING
		ABUTMENT	FRONT FACE OF BEAM SEAT FROM TOP OF ABUTMENT TO TOP OF CONCRETE SLOPE PAVING, EXTERIOR EXPOSED FACE OF ABUTMENT BEAM SEAT, EXTERIOR EXPOSED FACE OF BACKWALL, FRONT FACE AND EXTERIOR EXPOSED FACE OF SIDEWALL, AND EACH SIDE OF GIRDER PEDESTAL.
		PIER	SIDES OF GIRDER PEDESTALS, SIDES AND BOTTOM OF CAP BEAM AND STEM TO 1 FOOT BELOW FINISHED GROUND LINE, EXCEPT AS NOTED FOR ACCENT COLORS.
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON EXTERIOR FACE.
		PIERS	RECESS AREAS AND REVEALS ON PIERS.

THE FINAL COLOR OF THE CONCRTE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:
BASE COLOR: FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE PERFORMED BY OTHERS UNDER FUTURE PROJECT I.D. 1060-33-81.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

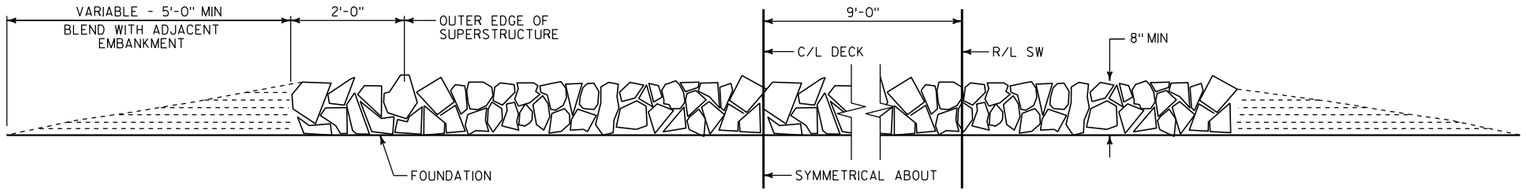
STRUCTURE B-40-855

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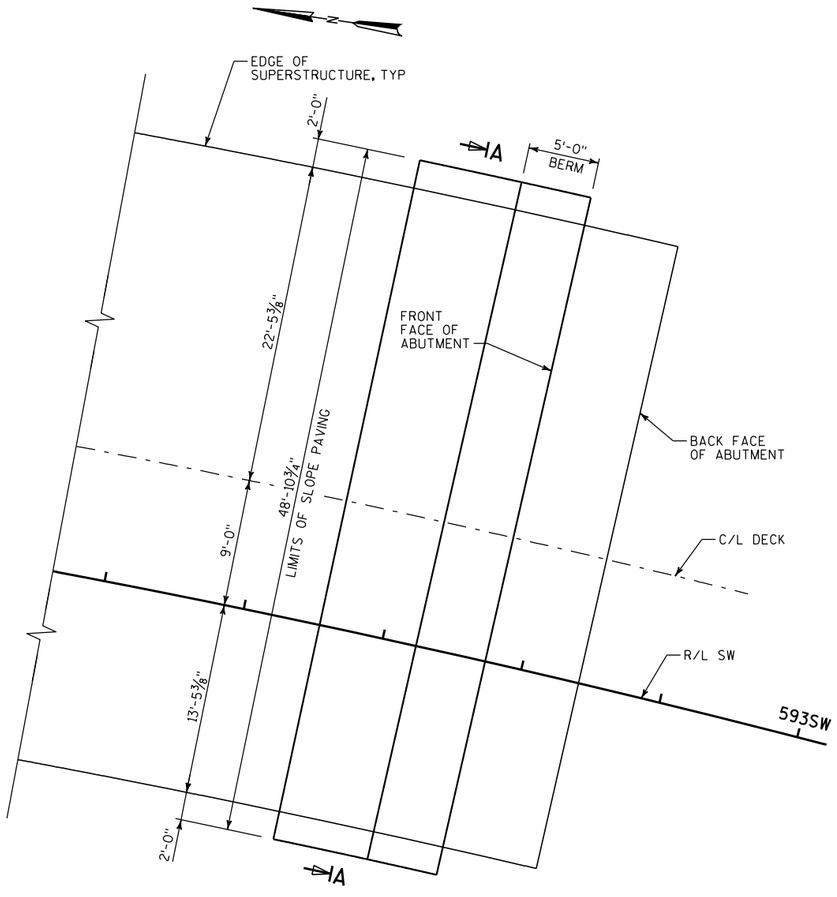
AESTHETIC DETAILS

SHEET 95 OF 96

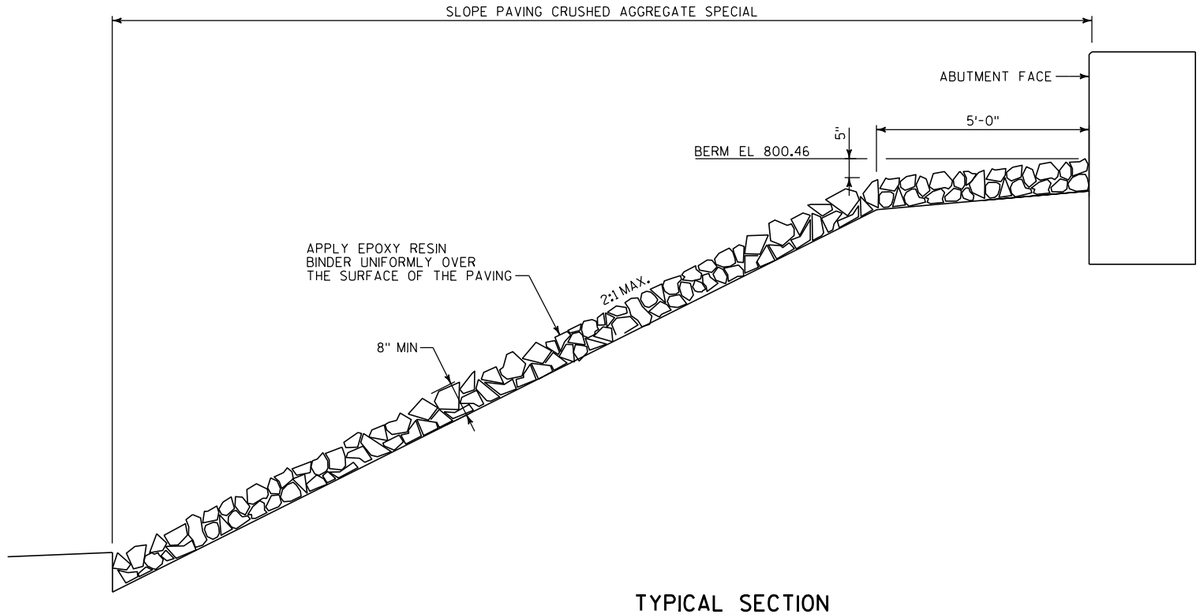
STATE PROJECT NUMBER
1060-33-80



SECTION A-A



PLAN



TYPICAL SECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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SLOPE PAVING DETAILS

SHEET 96 OF 96

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Mandatory\B855_080569_rp.dgn PLOT DATE : 02-MAY-2014 12:05 PLOT BY : MSCGLM PLOT NAME : B855_080569_rp PLOT SCALE : 10.666667:1

STATE PROJECT NUMBER
1060-33-80

ESTIMATED QUANTITIES - PIER OPTION A

ITEM CATEGORY	ITEM NO.	BID ITEMS	UNIT	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL
2071	206.1000.0008	EXCAVATION FOR STRUCTURES BRIDGES B-40-855	LS	---	---	---	---	---	---	---	1
2071	209.0100	BACKFILL GRANULAR	CY	13	---	18	9	---	---	---	40
2071	502.0100	CONCRETE MASONRY BRIDGES	CY	119.9	135.0	181.3	168.4	135.6	60.6	150.2	951
2071	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	29,100	31,900	24,310	19,150	31,980	39,910	37,940	214,290
2071	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	25,840	28,590	37,220	34,970	28,790	13,480	31,480	200,370
2071	511.1200.0001	TEMPORARY SHORING B-40-855	SF	---	---	---	---	905	---	765	1,670
2071	511.2200.0001	TEMPORARY SHORING LEFT IN PLACE B-40-855	SF	---	---	---	625	670	---	---	1,295
2071	SPV.0060.4160	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1	1	1	1	1	1	1	7
2071	SPV.0060.4171	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1	1	1	1	1	1	1	7
2071	SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4	4	4	4	4	4	4	28
2071	SPV.0090.4460	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	68	71	51	44	78	95	88	495
2071	SPV.0105.4510	TRIAL DRILLED FOUNDATION SHAFT 98.43-INCH	LS	---	---	---	---	---	---	---	1

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION.
THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE FOR PIER OPTION A ONLY. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET 5.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

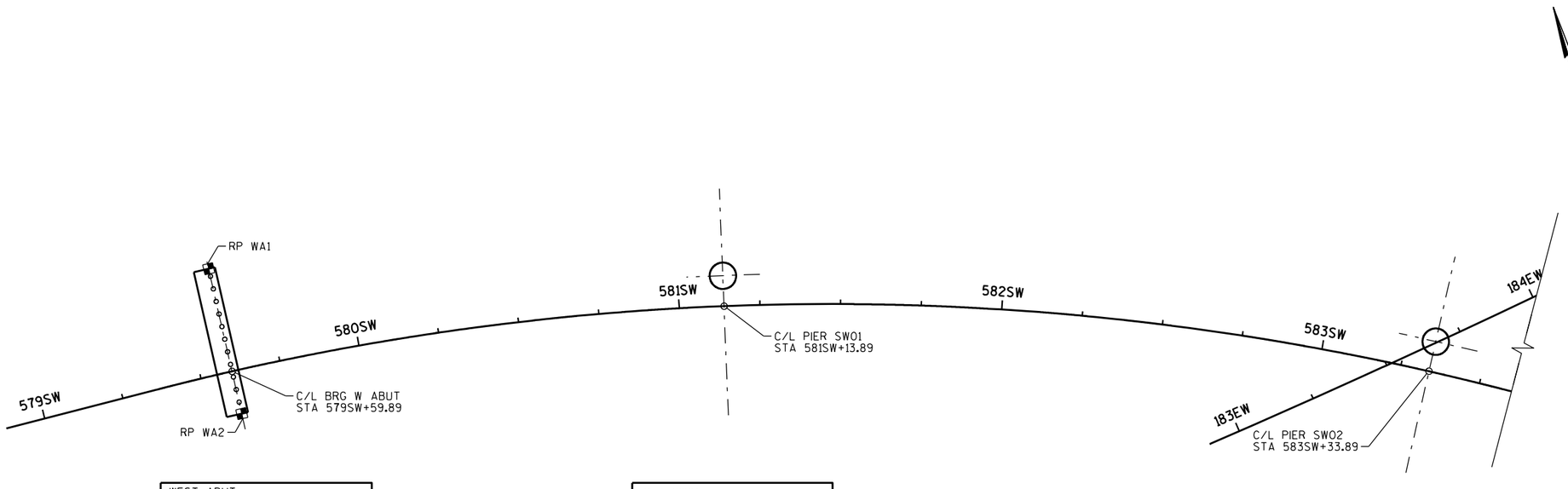
STRUCTURE B-40-855

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OPTION A QUANTITIES

SHEET A1 OF A25

STATE PROJECT NUMBER
1060-33-80



WEST ABUT
11 CIPC PILES, 16" DIA
RP WA1
STA 579SW+59.89, 32.60' LT
X=571465.67, Y=295483.39
RP WA2
STA 579SW+59.89, 13.46' RT
X=571462.26, Y=295437.46
BOTTOM OF FOOTING EL 789.11
ESTIMATED PILE LENGTH 75 FT

PIER SW01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 581SW+13.89, 9.42' LT
X=571617.32, Y=295434.51
TOP OF SHAFT EL 765.00
BOTTOM OF SHAFT EL 697.00

PIER SW02
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 583SW+33.89, 9.42' LT
X=571822.47, Y=295350.11
TOP OF SHAFT EL 762.00
BOTTOM OF SHAFT EL 691.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

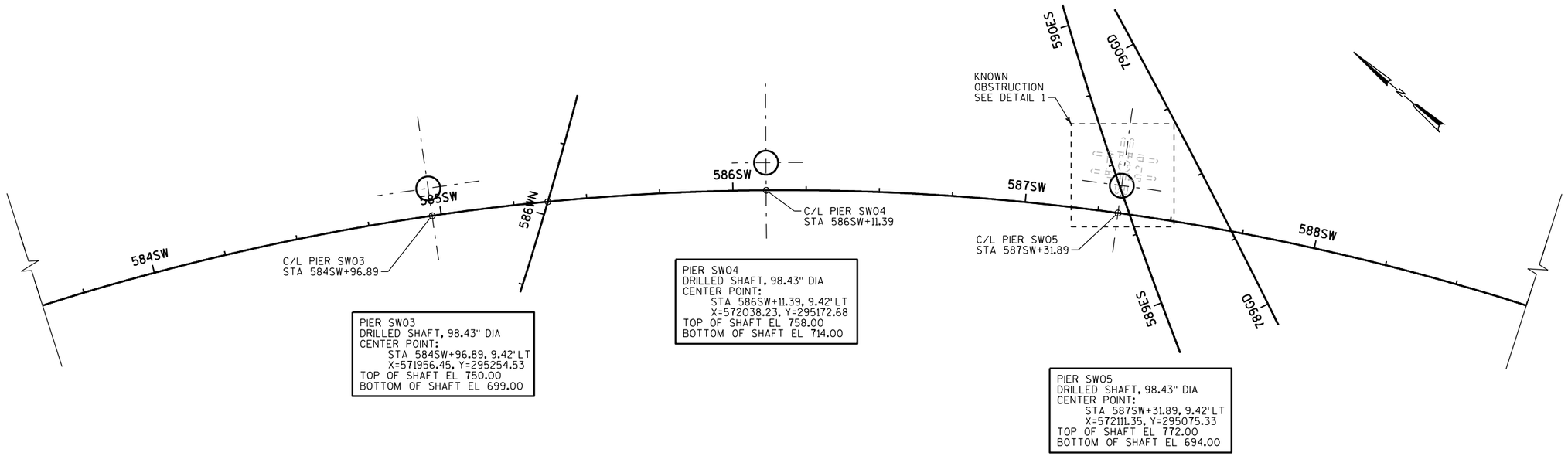
STRUCTURE B-40-855

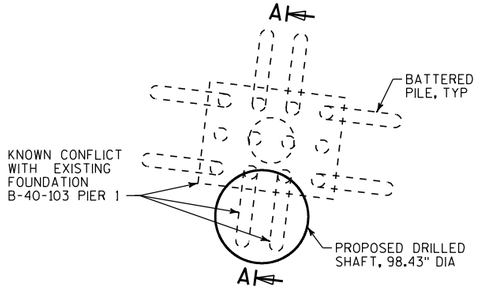
DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
FOUNDATION
LAYOUT (1 OF 3)

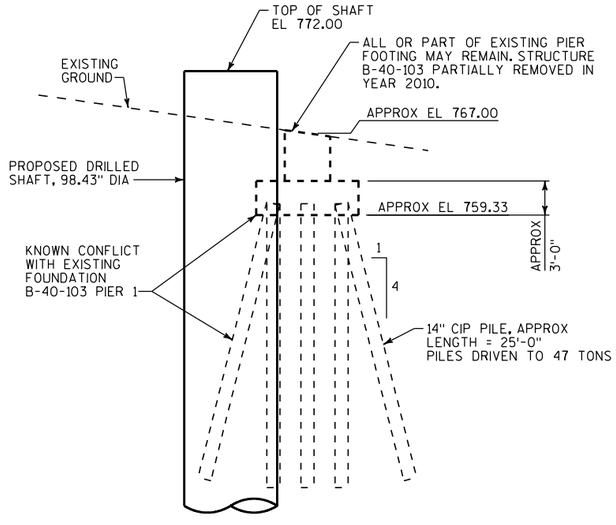
SHEET A2 OF A25

STATE PROJECT NUMBER
1060-33-80

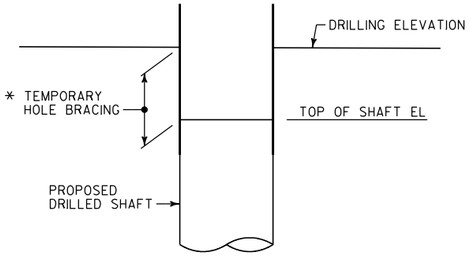




DETAIL 1



SECTION A-A



TEMPORARY HOLE BRACING

AT PIERS SW03 & SW04

* TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD. COST OF TEMPORARY HOLE BRACING SHALL BE INCLUDED WITH COST OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY	GLM	PLANS CK'D.	WRT

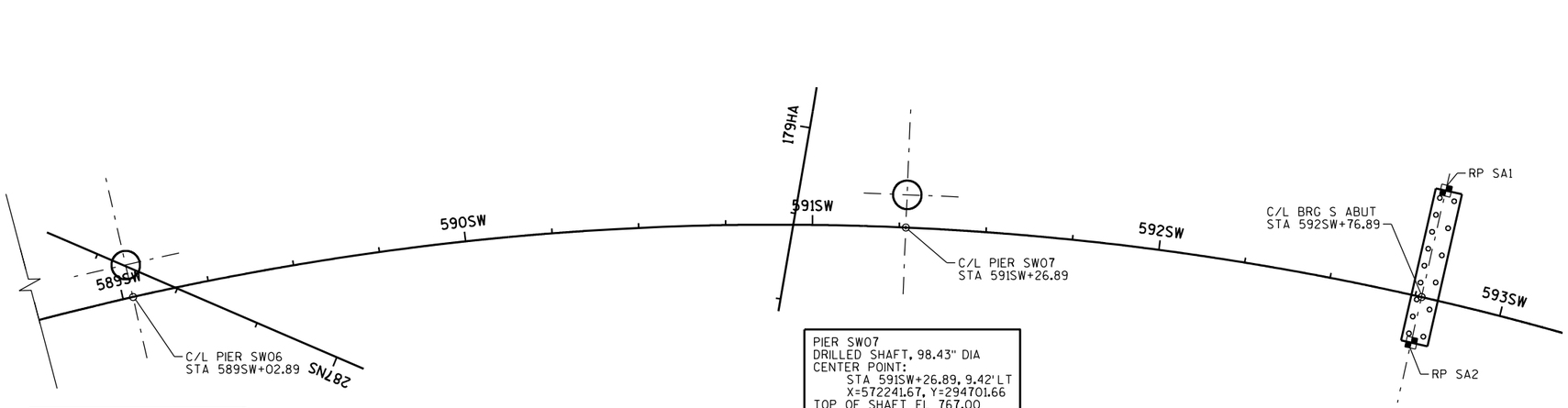
OPTION A
FOUNDATION
LAYOUT (2 OF 3)

SHEET A3 OF A25

8

8

STATE PROJECT NUMBER
1060-33-80



PIER SW06
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 589SW+02.89, 9.42'LT
X=572189.49, Y=294921.40
TOP OF SHAFT EL 787.00
BOTTOM OF SHAFT EL 692.00

PIER SW07
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 591SW+26.89, 9.42'LT
X=572241.67, Y=294701.66
TOP OF SHAFT EL 767.00
BOTTOM OF SHAFT EL 679.00

SOUTH ABUT
15 CIPC PILES, 16" DIA
RP SA1
STA 592SW+76.89, 31.45'LT
X=572265.02, Y=294548.41
RP SA2
STA 592SW+76.89, 13.45'RT
X=572220.27, Y=294552.02
BOTTOM OF FOOTING EL 797.96
ESTIMATED PILE LENGTH 70 FT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

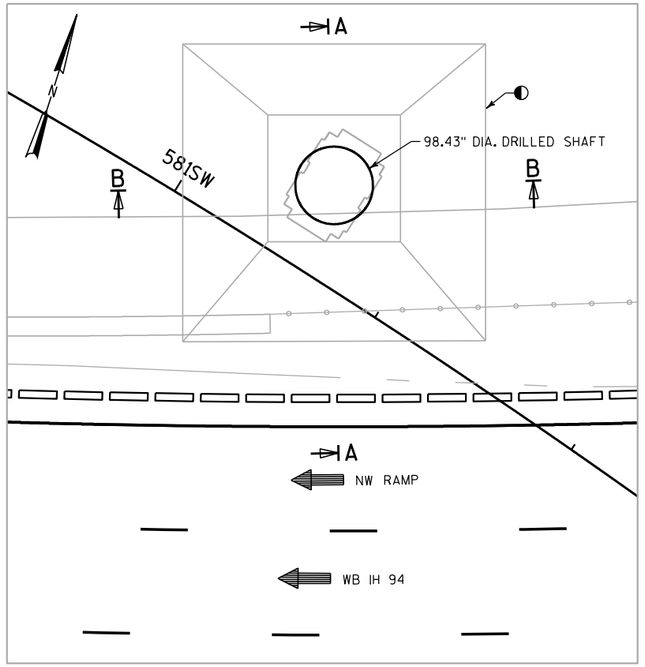
DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
FOUNDATION
LAYOUT (3 OF 3)

SHEET A4 OF A25

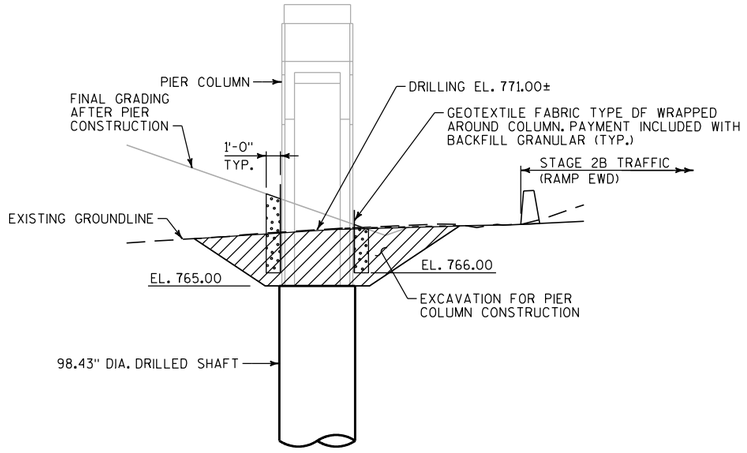
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STATE PROJECT NUMBER
1060-33-80

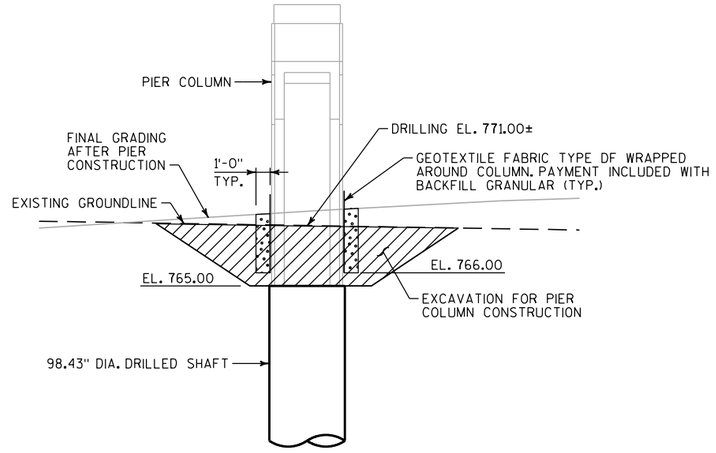


EXCAVATION PLAN - PIER SW01

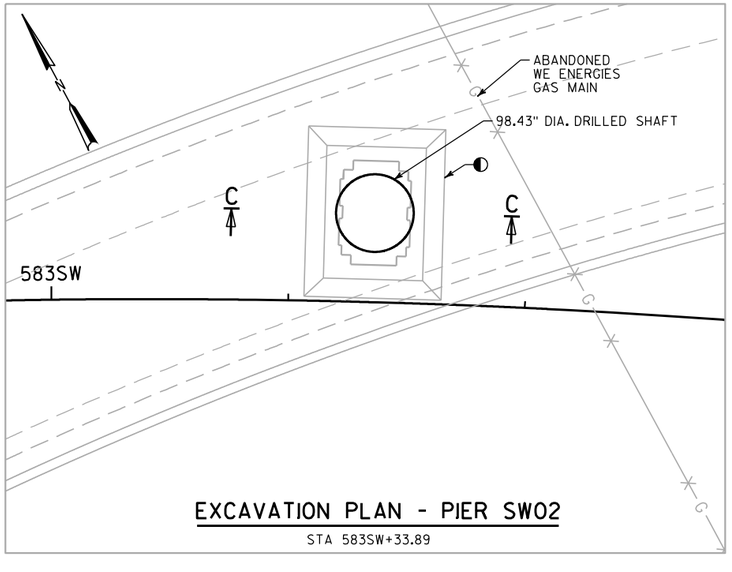
STA 581SW+13.89



SECTION A-A

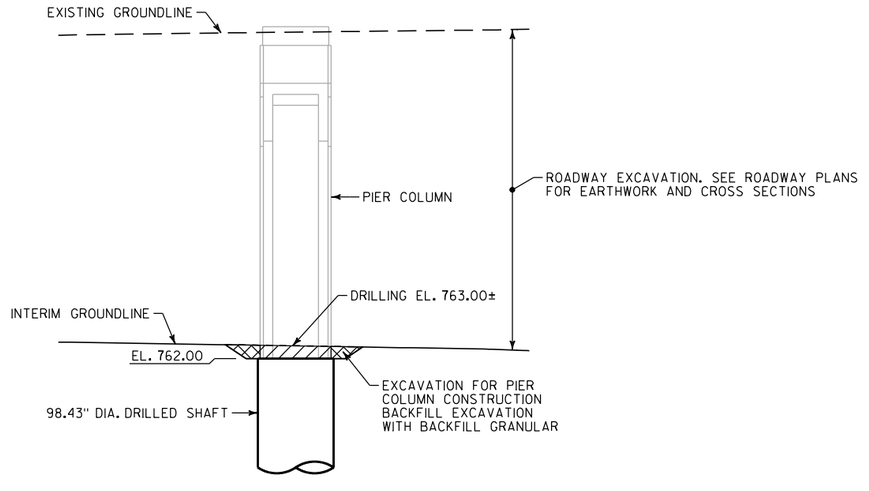


SECTION B-B



EXCAVATION PLAN - PIER SW02

STA 583SW+33.89



SECTION C-C

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

OPTION A
EXCAVATION PLAN
(1 OF 4)

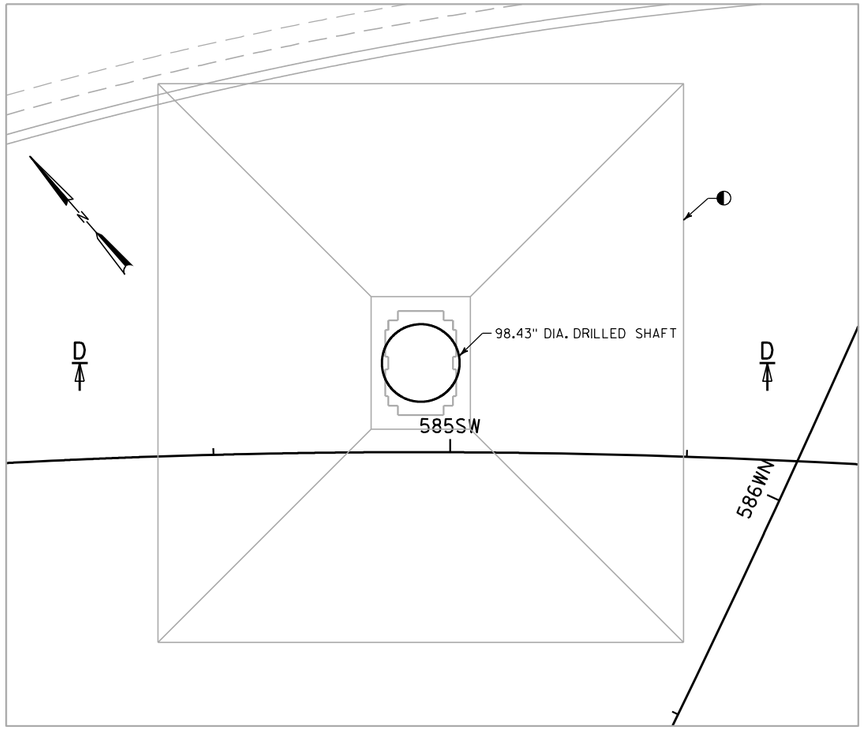
SHEET A5 OF A25

8

8

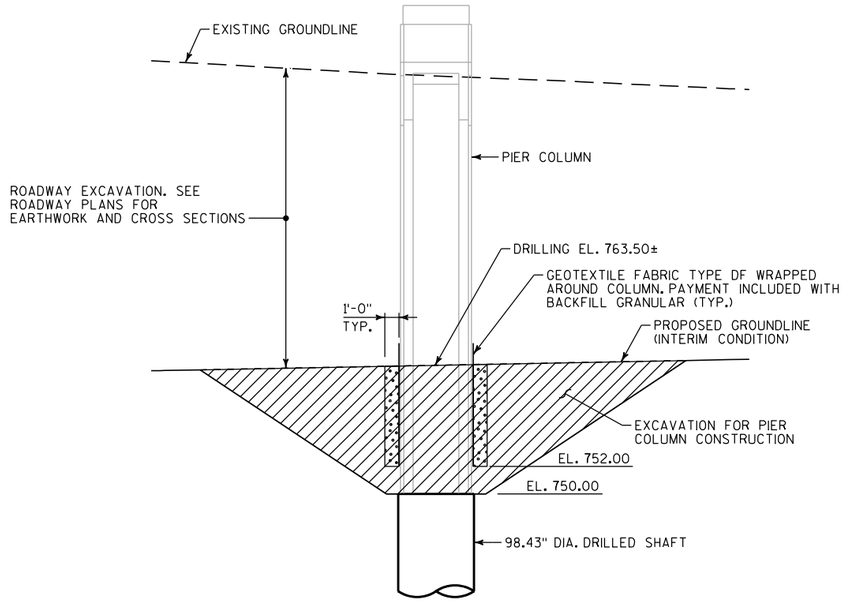
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PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-80



EXCAVATION PLAN - PIER SW03

STA 584SW+96.89



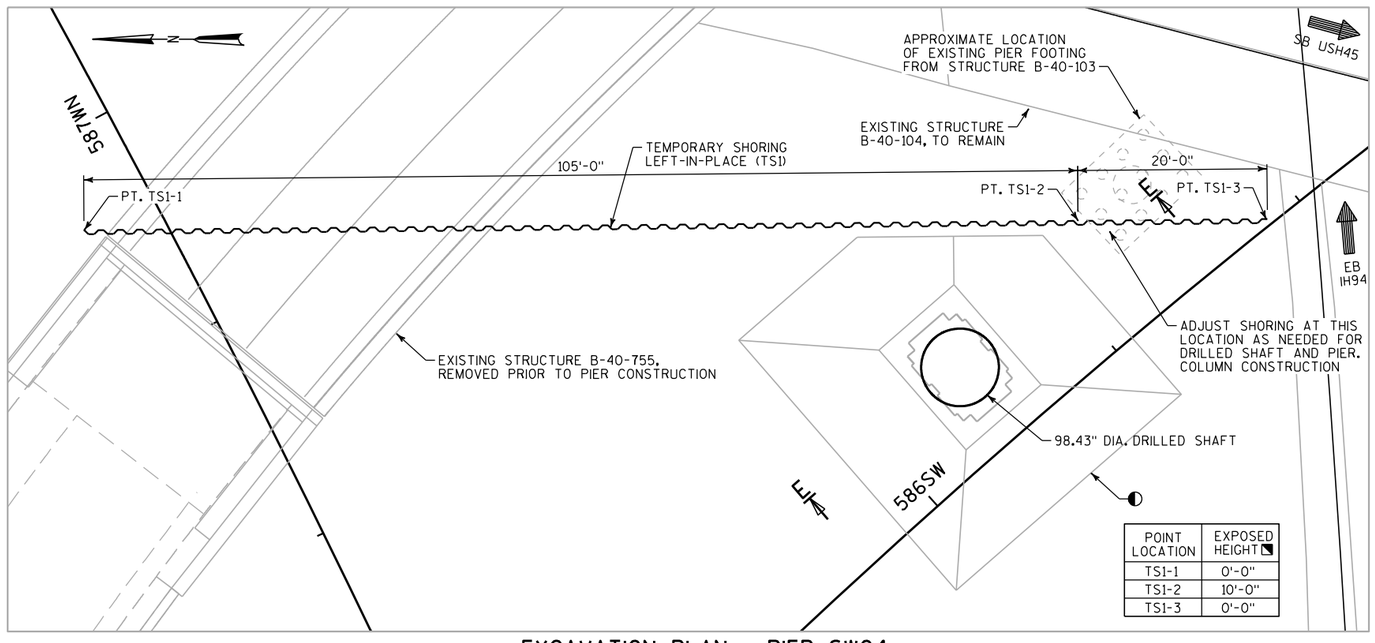
SECTION D-D

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

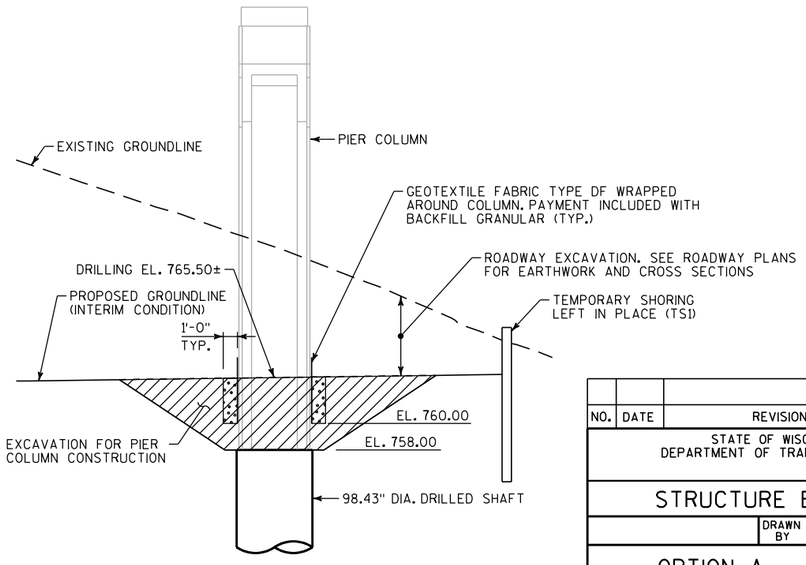
THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.



POINT LOCATION	EXPOSED HEIGHT
TS1-1	0'-0"
TS1-2	10'-0"
TS1-3	0'-0"

EXCAVATION PLAN - PIER SW04

STA 586SW+11.39



SECTION E-E

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

OPTION A
EXCAVATION PLAN
(2 OF 4)

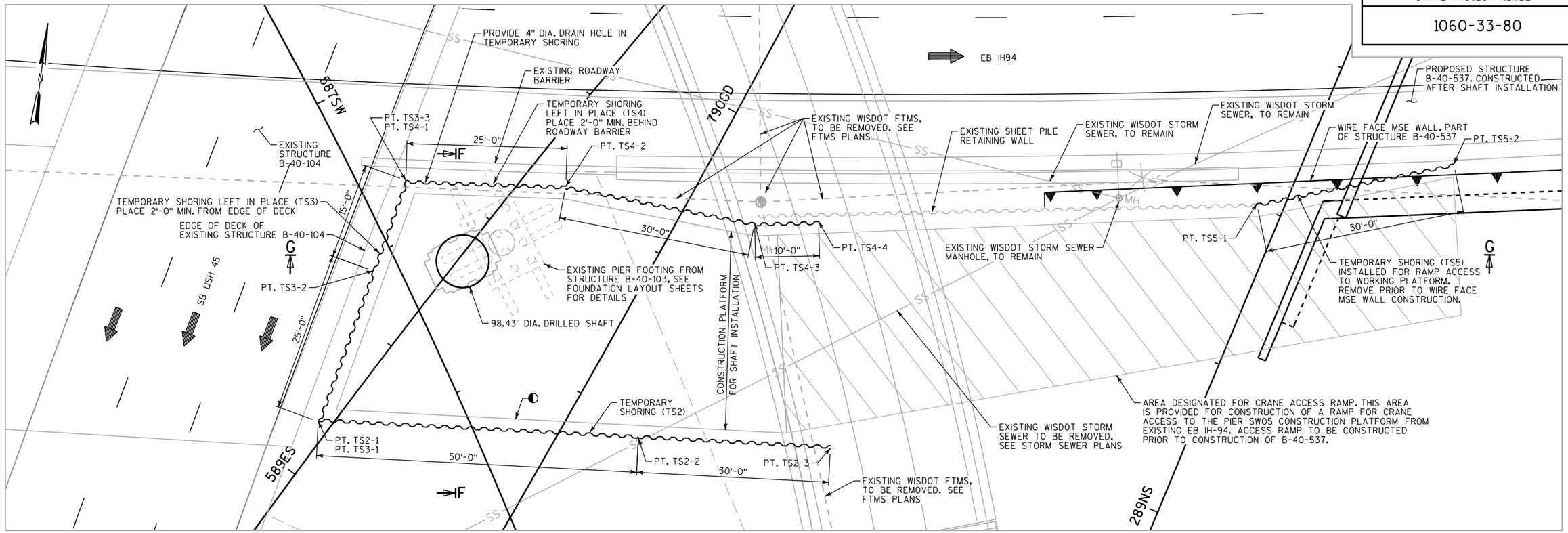
SHEET A6 OF A25

8

8

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PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-80



EXCAVATION PLAN - PIER SW05

STA 587SW+31.89

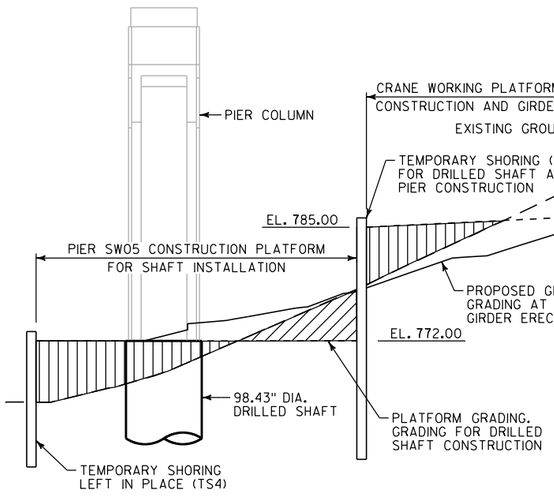
POINT LOCATION	EXPOSED HEIGHT
TS2-1	13'-0"
TS2-2	13'-0"
TS2-3	0'-0"
TS3-1	13'-0"
TS3-2	0'-0"
TS3-3	7'-0"
TS4-1	7'-0"
TS4-2	7'-0"
TS4-3	7'-0"
TS4-4	7'-0"
TS5-1	4'-0"
TS5-2	0'-0"

LEGEND

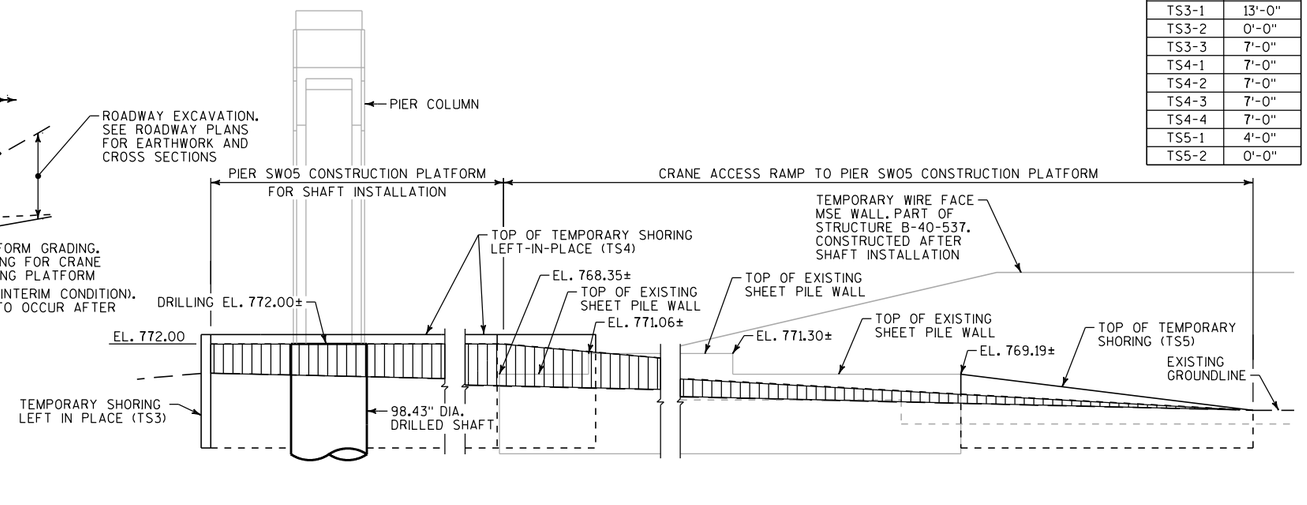
- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- COMPACTED FILL MATERIAL. PAYMENT INCLUDED WITH EXCAVATION FOR STRUCTURES.
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

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SECTION F-F



SECTION G-G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

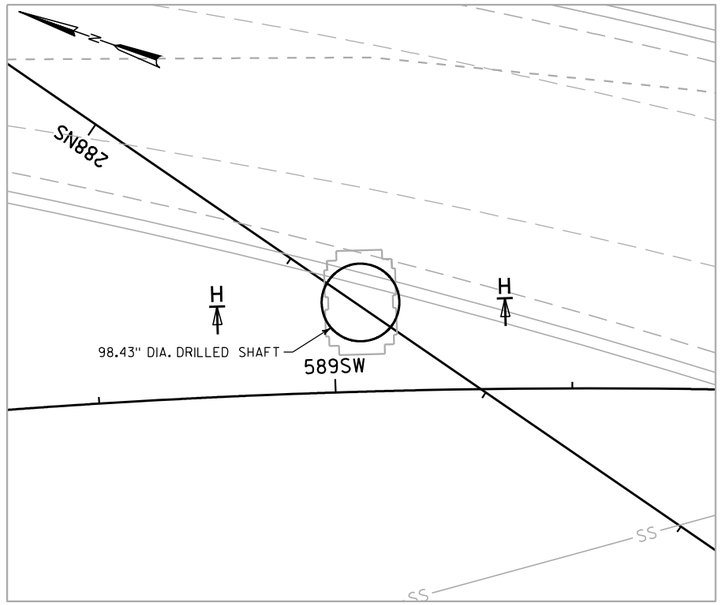
STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

OPTION A
EXCAVATION PLAN
(3 OF 4)

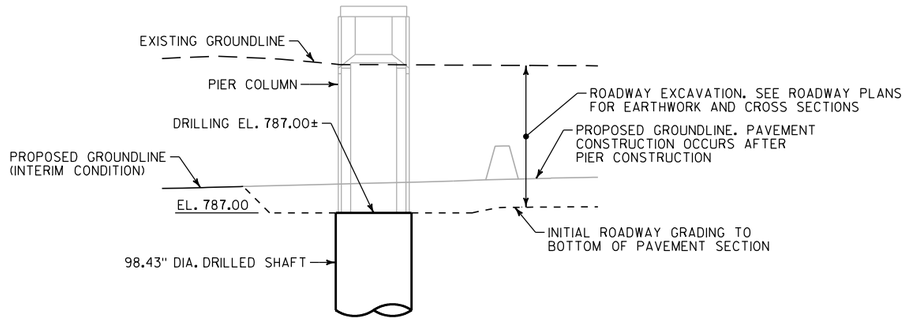
SHEET A7 OF A25

STATE PROJECT NUMBER
1060-33-80

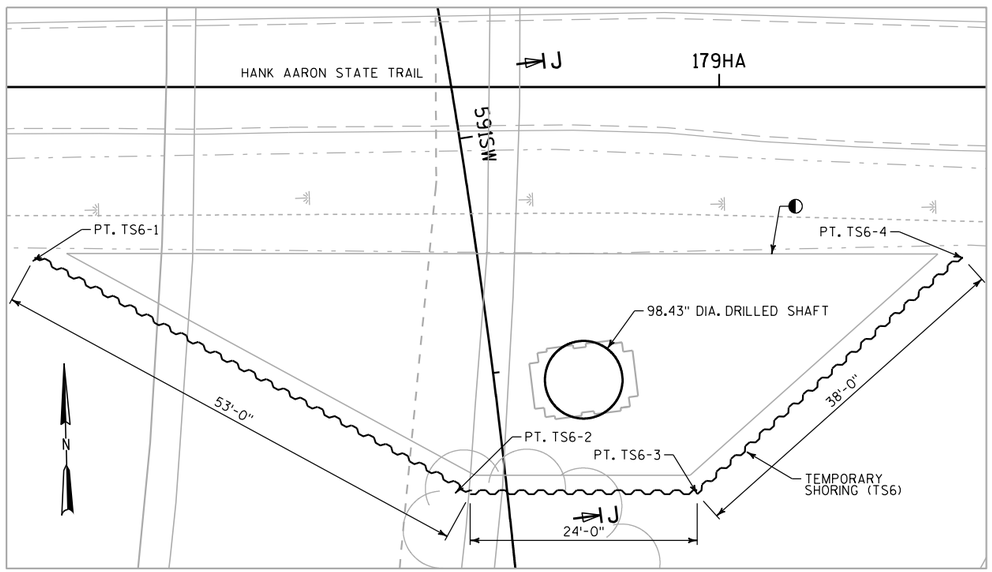


EXCAVATION PLAN - PIER SW06

STA 589SW+02.89



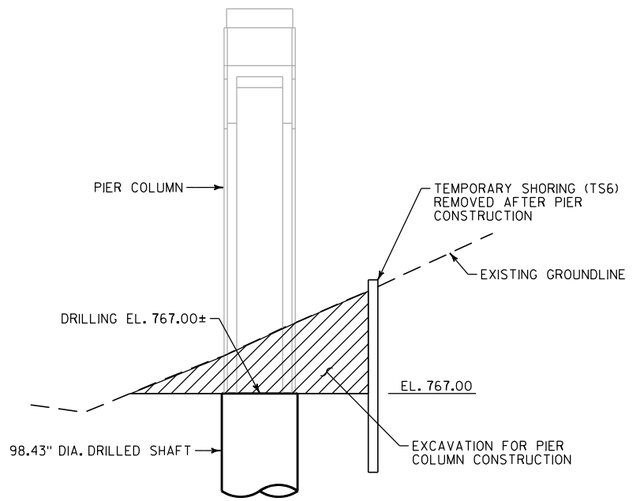
SECTION H-H



POINT LOCATION	EXPOSED HEIGHT
TS6-1	0'-0"
TS6-2	11'-0"
TS6-3	11'-0"
TS6-4	0'-0"

EXCAVATION PLAN - PIER SW07

STA 591SW+26.89



SECTION J-J

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

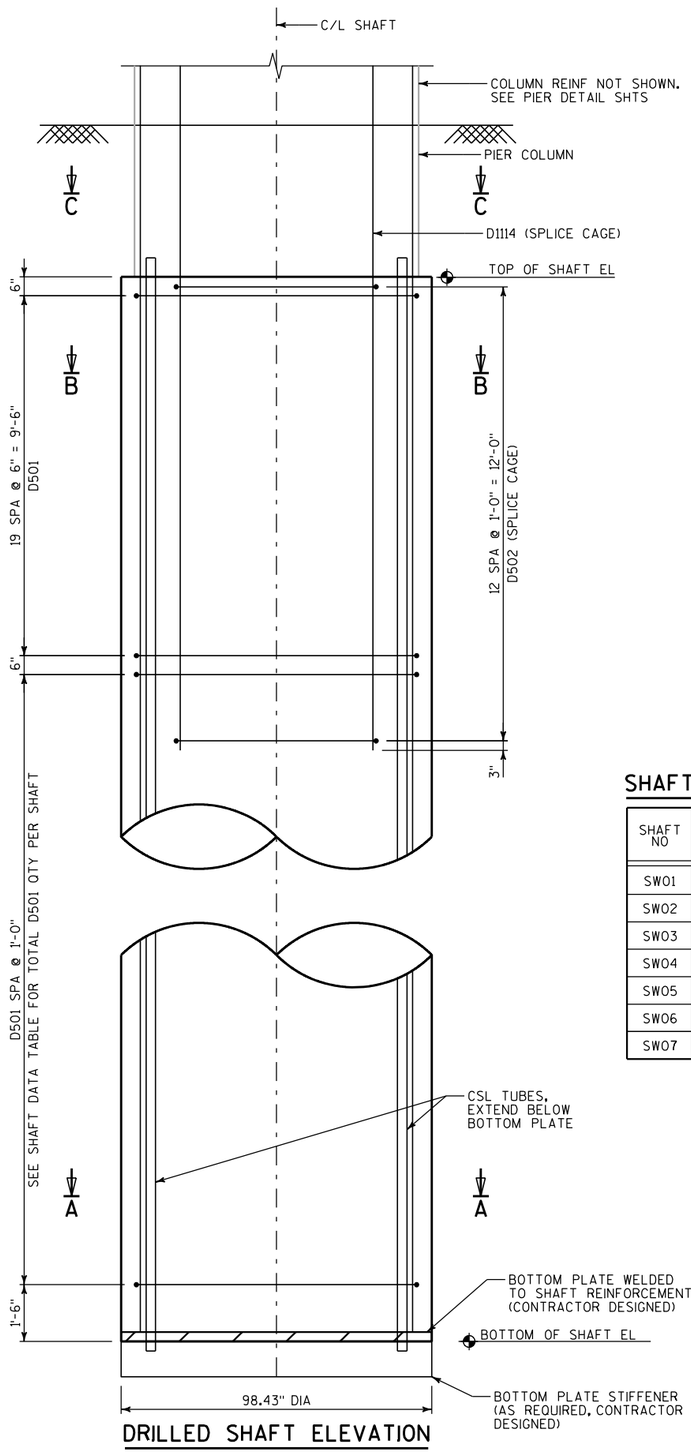
OPTION A
EXCAVATION PLAN
(4 OF 4)

SHEET A8 OF A25

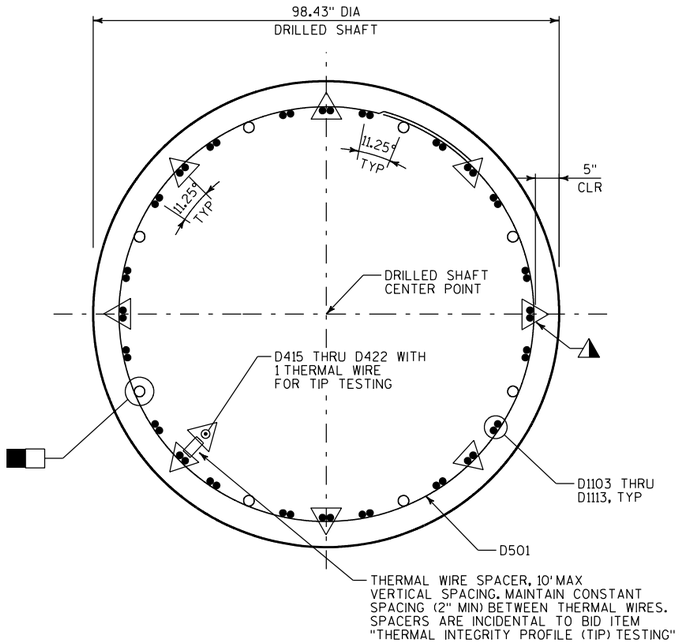
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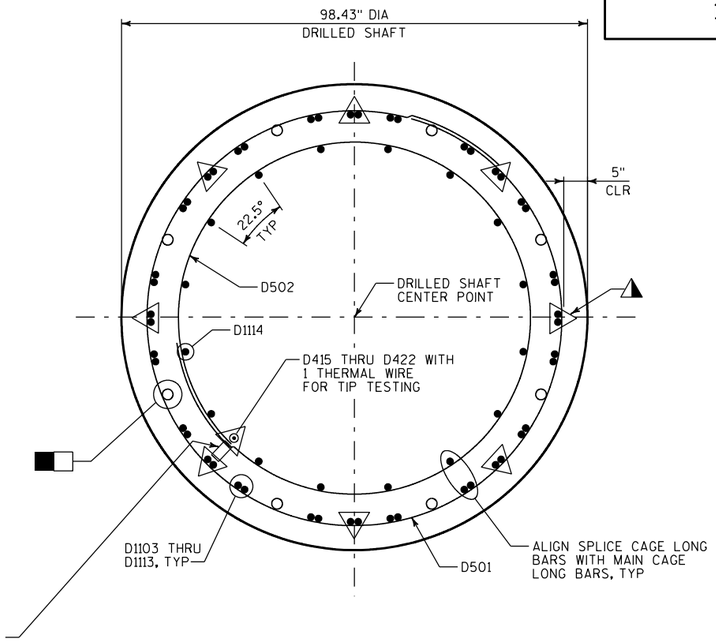
STATE PROJECT NUMBER
1060-33-80



DRILLED SHAFT ELEVATION



SECTION A-A



SECTION B-B

SHAFT DATA

SHAFT NO	SHAFT C/L "X"	SHAFT C/L "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
SW01	571617.32	295434.51	771.00	765.00	697.00	68.00	133.10	77	CSL TUBES/TIP TESTING	425
SW02	571822.47	295350.12	763.00	762.00	691.00	71.00	139.00	80	CSL TUBES/TIP TESTING	300
SW03	571956.45	295254.53	763.50	750.00	699.00	51.00	99.80	60	CSL TUBES/TIP TESTING	325
SW04	572038.23	295172.68	765.50	758.00	714.00	44.00	86.10	53	CSL TUBES/TIP TESTING	225
SW05	572111.35	295075.33	772.00	772.00	694.00	78.00	152.70	87	CSL TUBES/TIP TESTING	400
SW06	572189.49	294921.40	787.00	787.00	692.00	95.00	185.90	104	CSL TUBES/TIP TESTING	500
SW07	572241.67	294701.66	767.00	767.00	679.00	88.00	172.20	97	CSL TUBES/TIP TESTING	500

NOTE

FOR SECTION C-C, SEE SHT A10.

LEGEND

8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.

9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

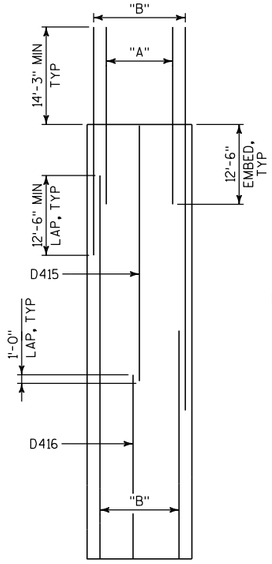
STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

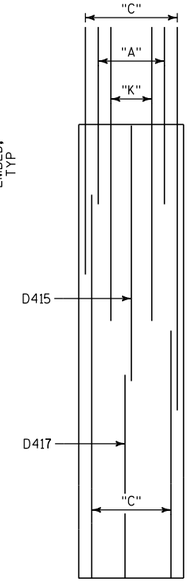
OPTION A
DRILLED SHAFT
DETAILS (1 OF 2)

SHEET A9 OF A25

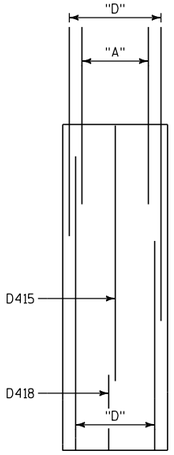
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PLOT BY : MSCGLM
PLOT NAME : B855_080309A_fd
PLOT SCALE : 4:1



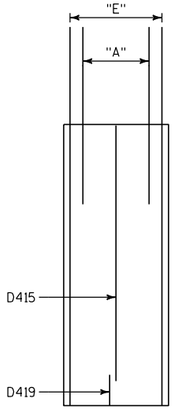
SW01



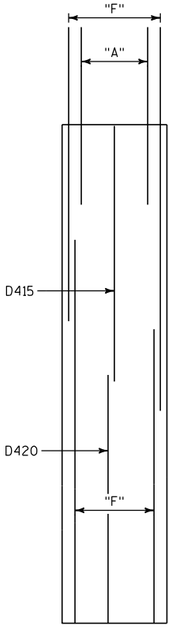
SW02



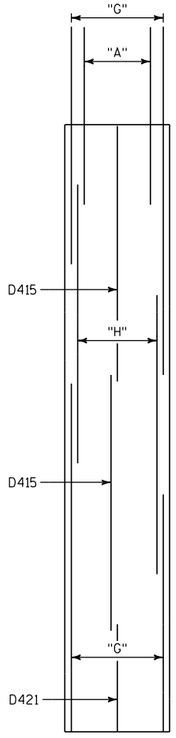
SW03



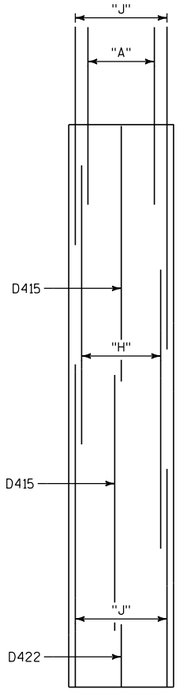
SW04



SW05



SW06



SW07

"A" = 16-D1114 BARS

"B" = 24-D1103 & 24-D1104 BARS

"C" = 24-D1103 & 24-D1105 BARS

"D" = 24-D1106 & 24-D1108 BARS

"E" = 48-D1107 BARS

"F" = 24-D1103 & 24-D1108 BARS

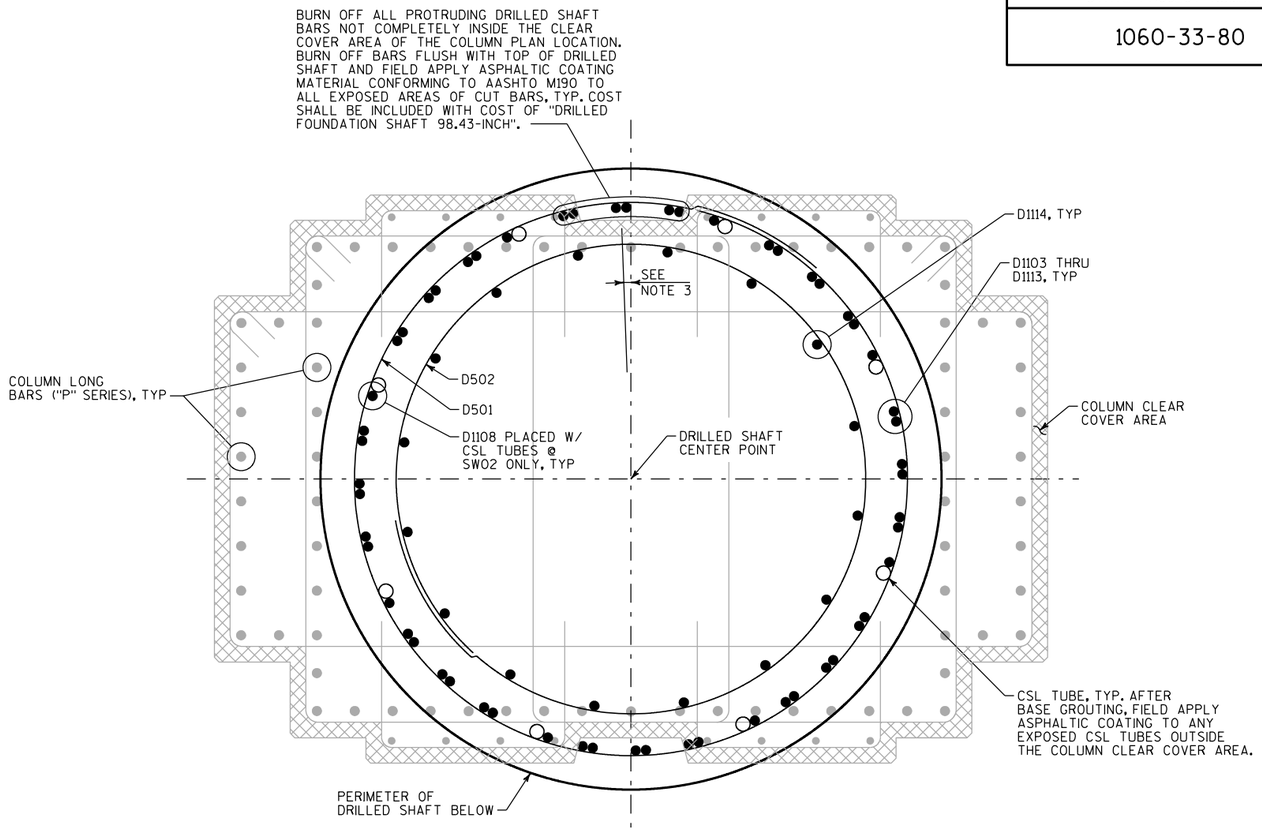
"G" = 24-D1109 & 24-D1110 BARS

"H" = 48-D1111 BARS

"J" = 24-D1112 & 24-D1113 BARS

"K" = 8-D1108 BARS. TIE BAR WITH CSL TUBES.

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC



SECTION C-C
DRILLED SHAFT CONNECTION DETAIL

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE SHEET A9.
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION A
DRILLED SHAFT
DETAILS (2 OF 2)

SHEET A10 OF A25

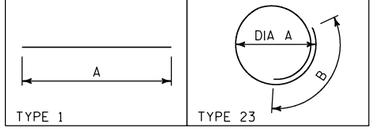
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STATE PROJECT NUMBER
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
D501	U	558	24'-9"	X		23	7'-5"	1'-5"					SHAFT TIE BAR					
D502	U	91	21'-1"	X		23	6'-3"	1'-5"					SPLICE CAGE TIE BAR					
D1103	U	144	60'-0"			1	60'-0"						LONGITUDINAL BAR					
D1104	U	48	35'-9"			1	35'-9"						LONGITUDINAL BAR SW01					
D1105	U	48	38'-9"			1	38'-9"						LONGITUDINAL BAR SW02					
D1106	U	48	32'-9"			1	32'-9"						LONGITUDINAL BAR SW03					
D1107	U	48	59'-3"			1	59'-3"						LONGITUDINAL BAR SW04					
D1108	U	104	46'-0"			1	46'-0"						LONGITUDINAL BAR SW02/SW03/SW05					
D1109	U	48	54'-6"			1	54'-6"						LONGITUDINAL BAR SW06					
D1110	U	48	37'-2"			1	37'-2"						LONGITUDINAL BAR SW06					
D1111	U	96	43'-8"			1	43'-8"						LONGITUDINAL BAR SW06/SW07					
D1112	U	48	50'-6"			1	50'-6"						LONGITUDINAL BAR SW07					
D1113	U	48	34'-2"			1	34'-2"						LONGITUDINAL BAR SW07					
D1114	U	112	27'-9"			1	27'-9"						SPLICE CAGE LONGITUDINAL BAR					
D415	U	9	40'-0"			1	40'-0"						LONGITUDINAL THERMAL BAR					
D416	U	1	29'-0"			1	29'-0"						LONGITUDINAL THERMAL BAR SW01					
D417	U	1	32'-0"			1	32'-0"						LONGITUDINAL THERMAL BAR SW02					
D418	U	1	12'-0"			1	12'-0"						LONGITUDINAL THERMAL BAR SW03					
D419	U	1	5'-0"			1	5'-0"						LONGITUDINAL THERMAL BAR SW04					
D420	U	1	39'-0"			1	39'-0"						LONGITUDINAL THERMAL BAR SW05					
D421	U	1	17'-0"			1	17'-0"						LONGITUDINAL THERMAL BAR SW06					
D422	U	1	10'-0"			1	10'-0"						LONGITUDINAL THERMAL BAR SW07					



BAR MARK BREAKDOWN									
BAR MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL NO	WEIGHT
D501	77	80	60	53	87	104	97	558	14404
D502	13	13	13	13	13	13	13	91	2001
D1103	48	48	0	0	48	0	0	144	45904
D1104	48	0	0	0	0	0	0	48	9117
D1105	0	48	0	0	0	0	0	48	9882
D1106	0	0	48	0	0	0	0	48	8352
D1107	0	0	0	48	0	0	0	48	15110
D1108	0	8	48	0	48	0	0	104	25417
D1109	0	0	0	0	0	48	0	48	13899
D1110	0	0	0	0	0	48	0	48	9478
D1111	0	0	0	0	0	48	48	96	22272
D1112	0	0	0	0	0	0	48	48	12879
D1113	0	0	0	0	0	0	48	48	8713
D1114	16	16	16	16	16	16	16	112	16513
D415	1	1	1	1	1	2	2	9	240
D416	1	0	0	0	0	0	0	1	19
D417	0	1	0	0	0	0	0	1	21
D418	0	0	1	0	0	0	0	1	8
D419	0	0	0	1	0	0	0	1	3
D420	0	0	0	0	1	0	0	1	26
D421	0	0	0	0	0	1	0	1	11
D422	0	0	0	0	0	0	1	1	7
TOT WEIGHT	29097	31897	24312	19153	31976	39908	37937		214279

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

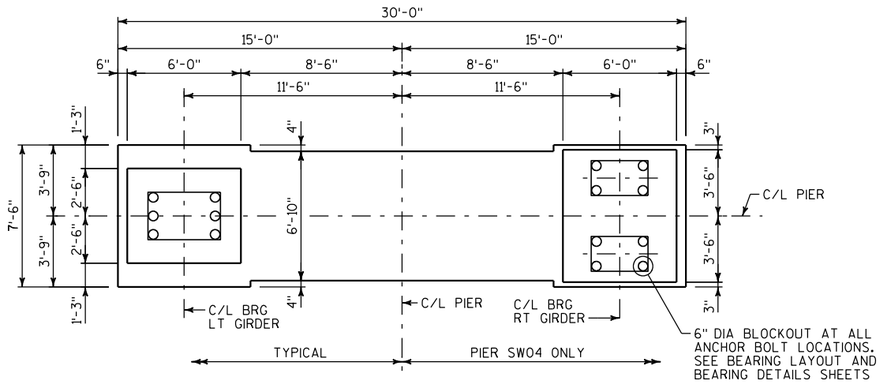
OPTION A
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

SHEET A11 OF A25

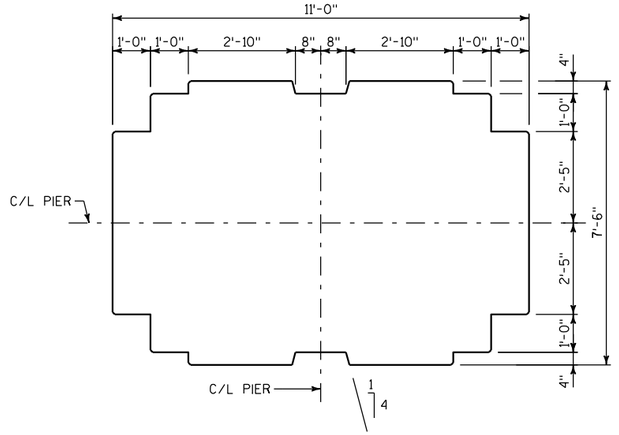
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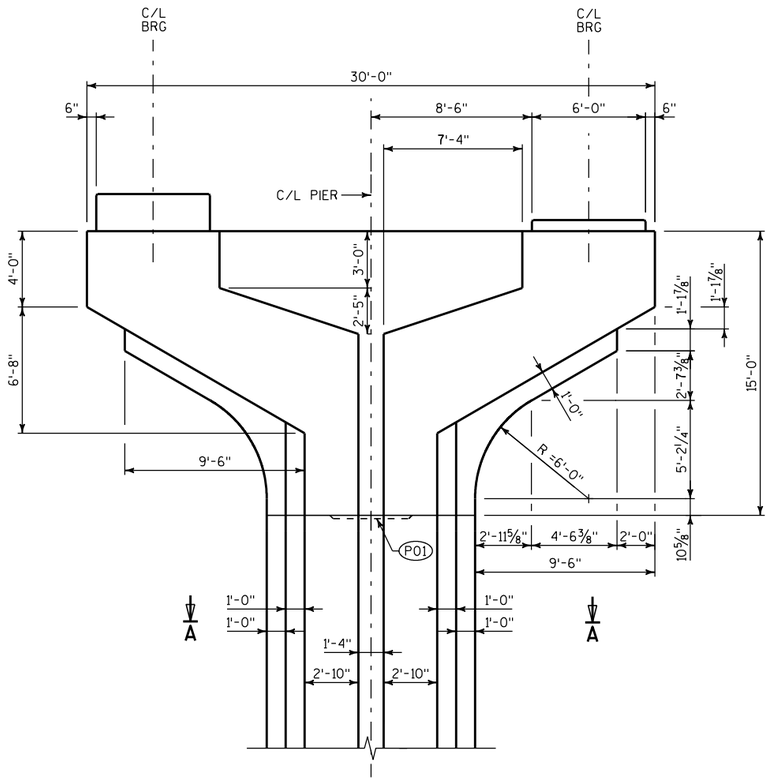
STATE PROJECT NUMBER
1060-33-80



PLAN

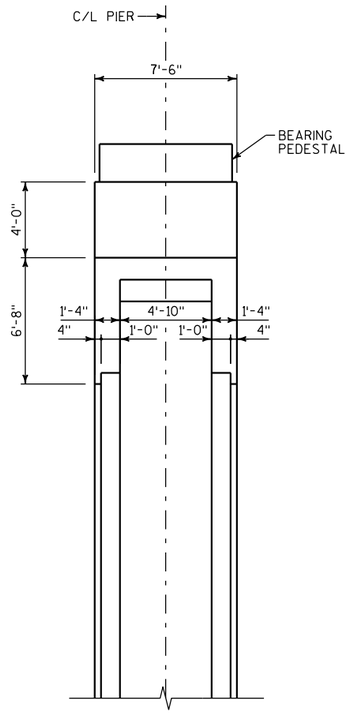


SECTION A-A



FRONT ELEVATION

(LOOKING UPSTATION)



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

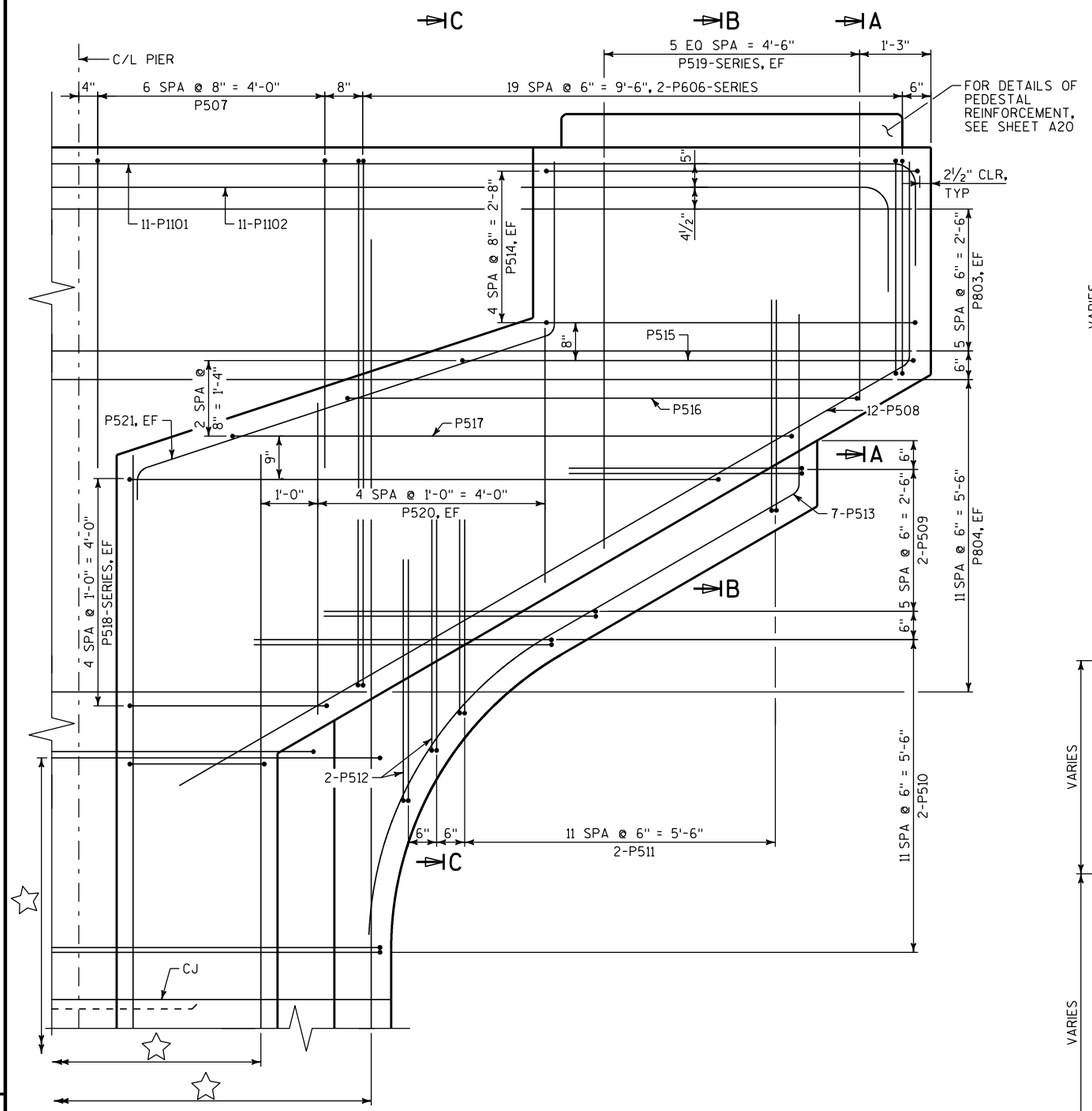
OPTION A
TYPICAL PIER
LAYOUT

SHEET A12 OF A25

8

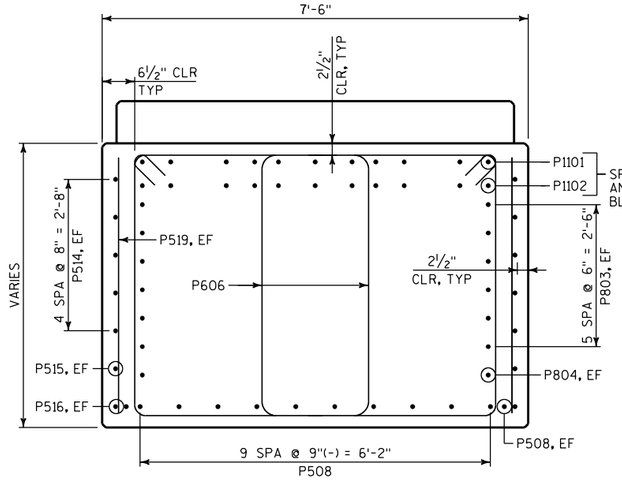
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STATE PROJECT NUMBER
1060-33-80



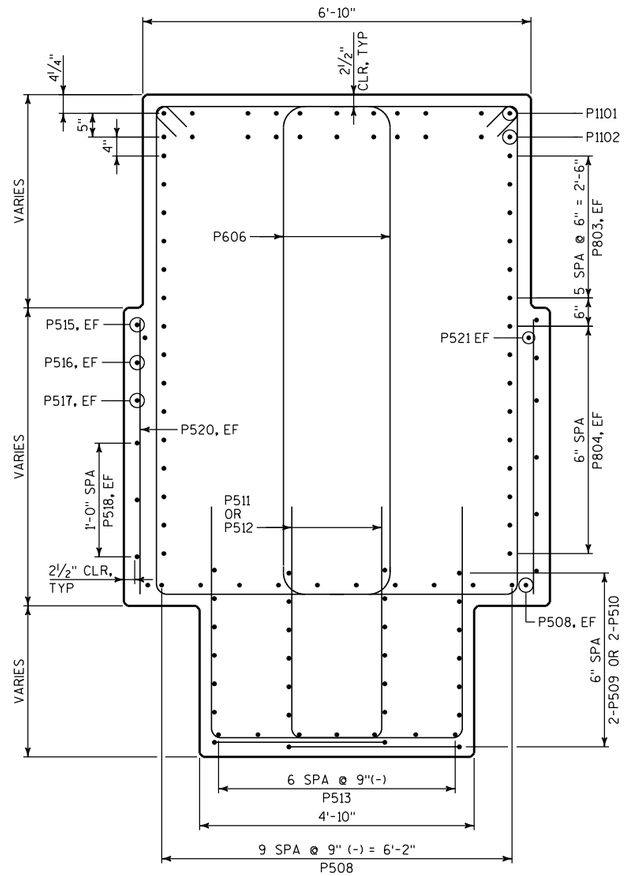
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT C/L PIER)

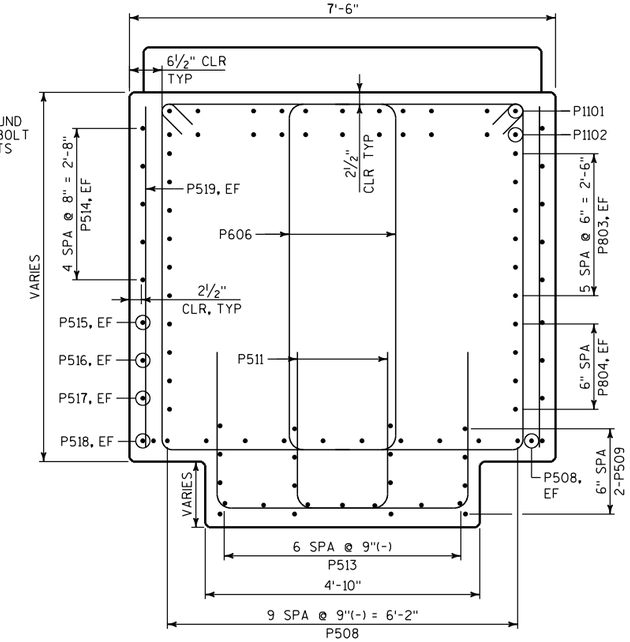


SECTION A-A

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION C-C



SECTION B-B

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)

LEGEND

☆ COLUMN REINFORCEMENT VARIES BY PIER. SEE PIER DETAIL SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY ASW | PLANS CK'D. WRT

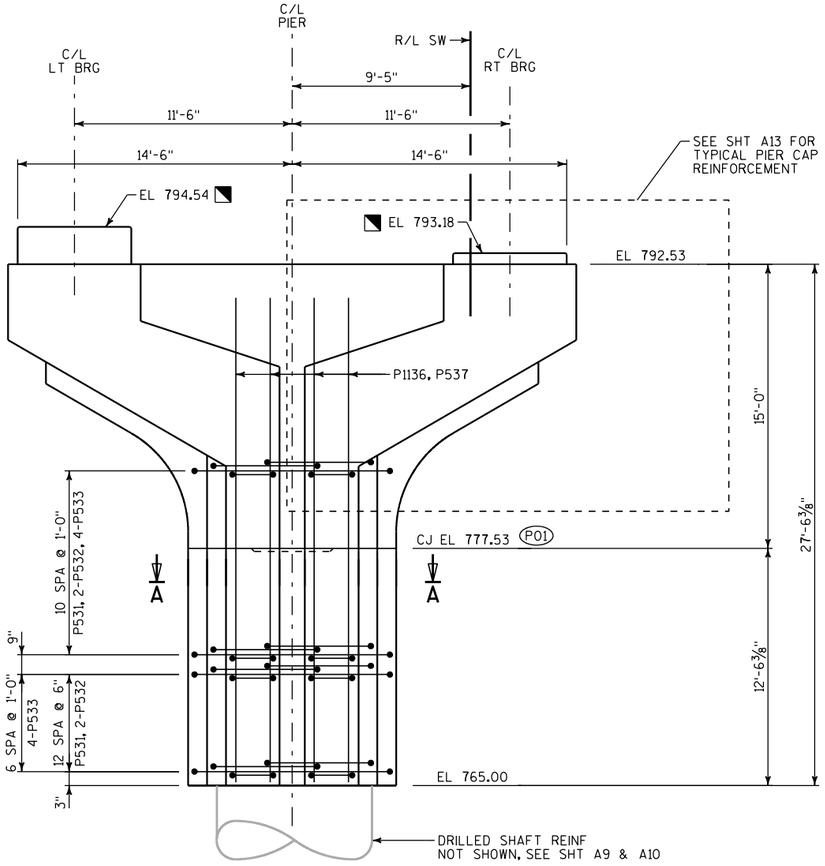
OPTION A
TYPICAL PIER
CAP REINFORCEMENT

SHEET A13 OF A25

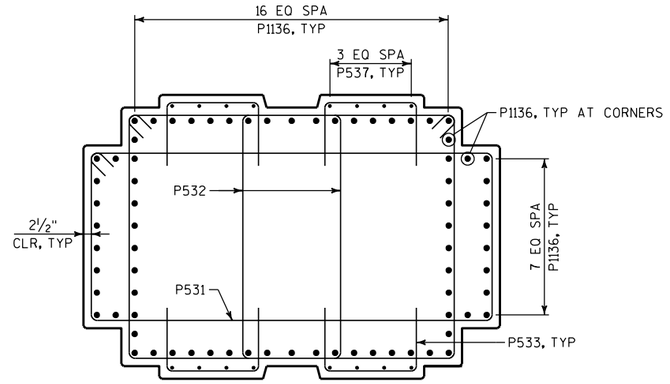
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

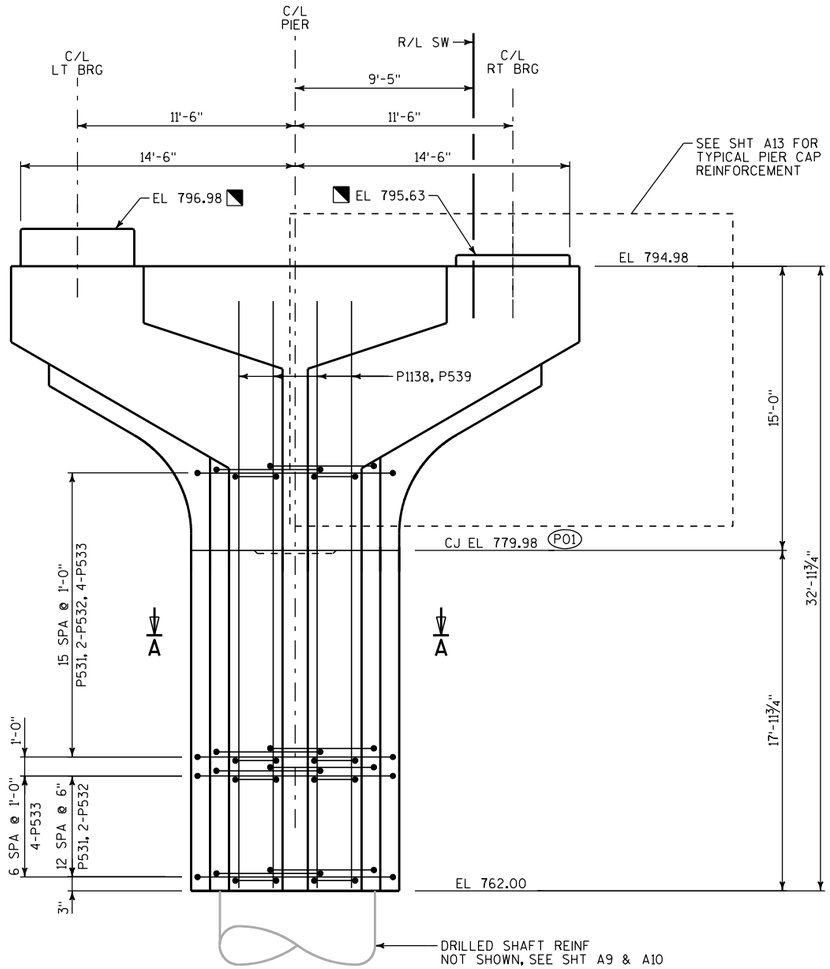
OPTION A
PIER SW01
DETAILS

SHEET A14 OF A25

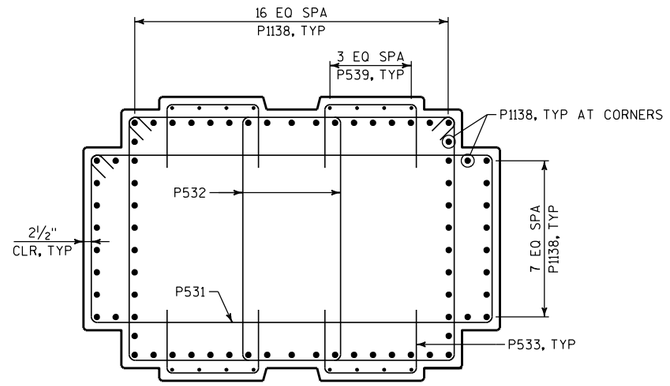
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

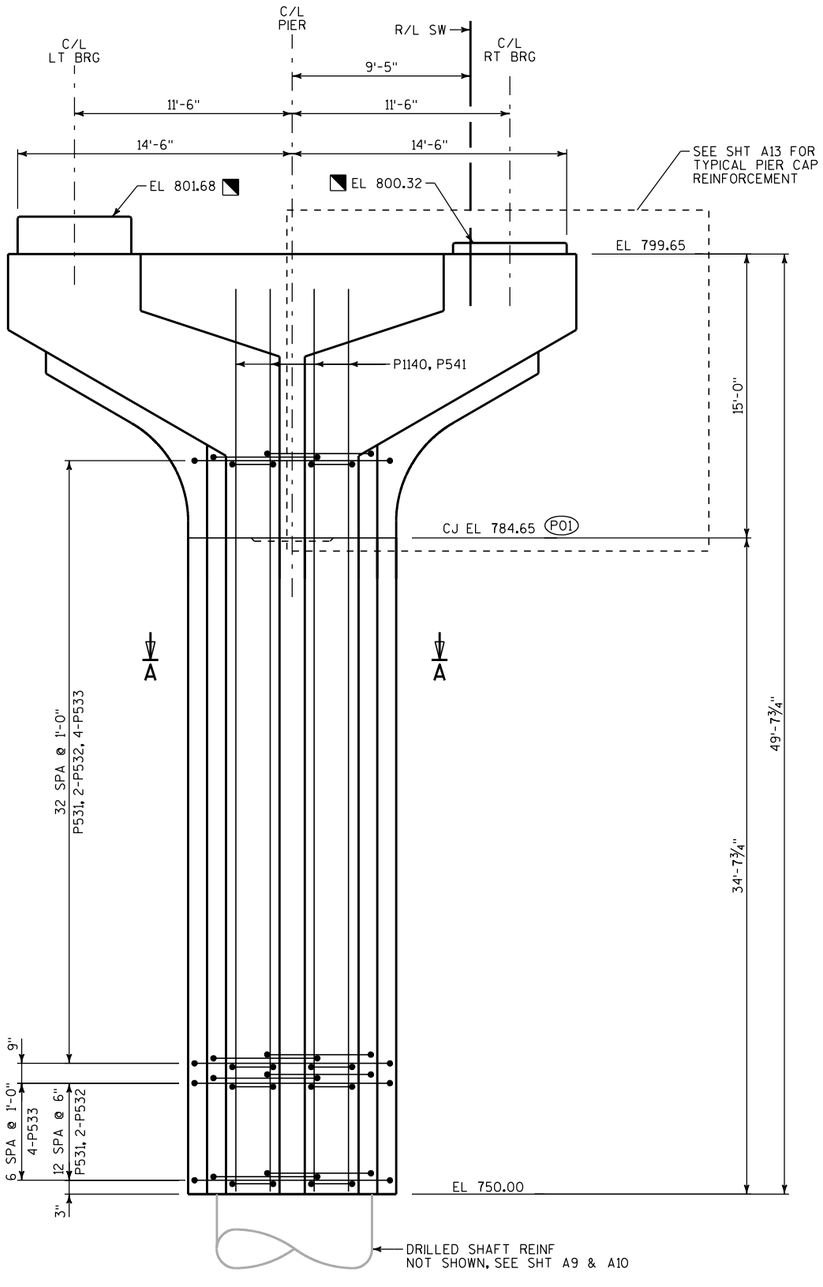
OPTION A
PIER SW02
DETAILS

SHEET A15 OF A25

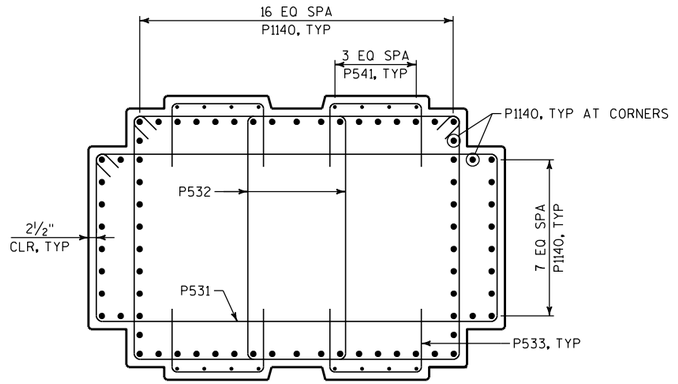
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

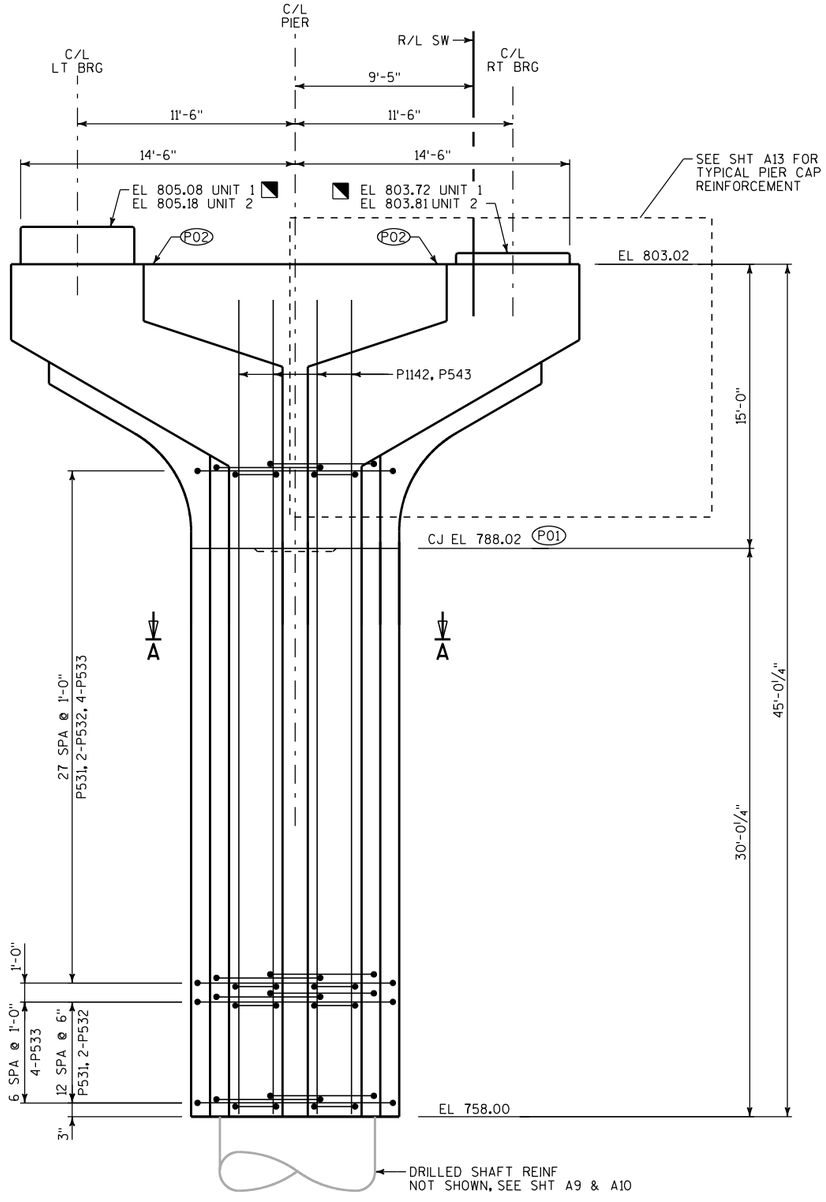
DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
PIER SW03
DETAILS

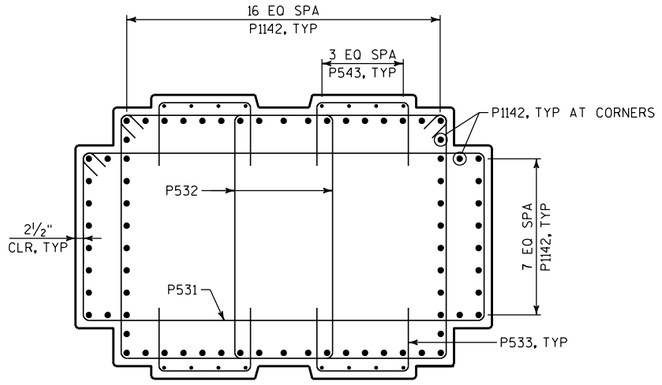
SHEET A16 OF A25

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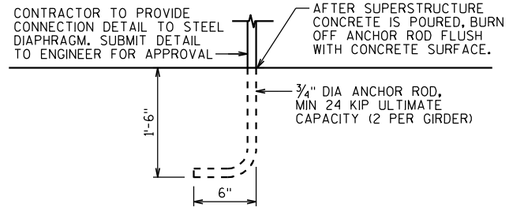
STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A



TEMPORARY HOLD DOWN DEVICE

LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

(P02) TEMPORARY HOLD DOWN DEVICE, SEE DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

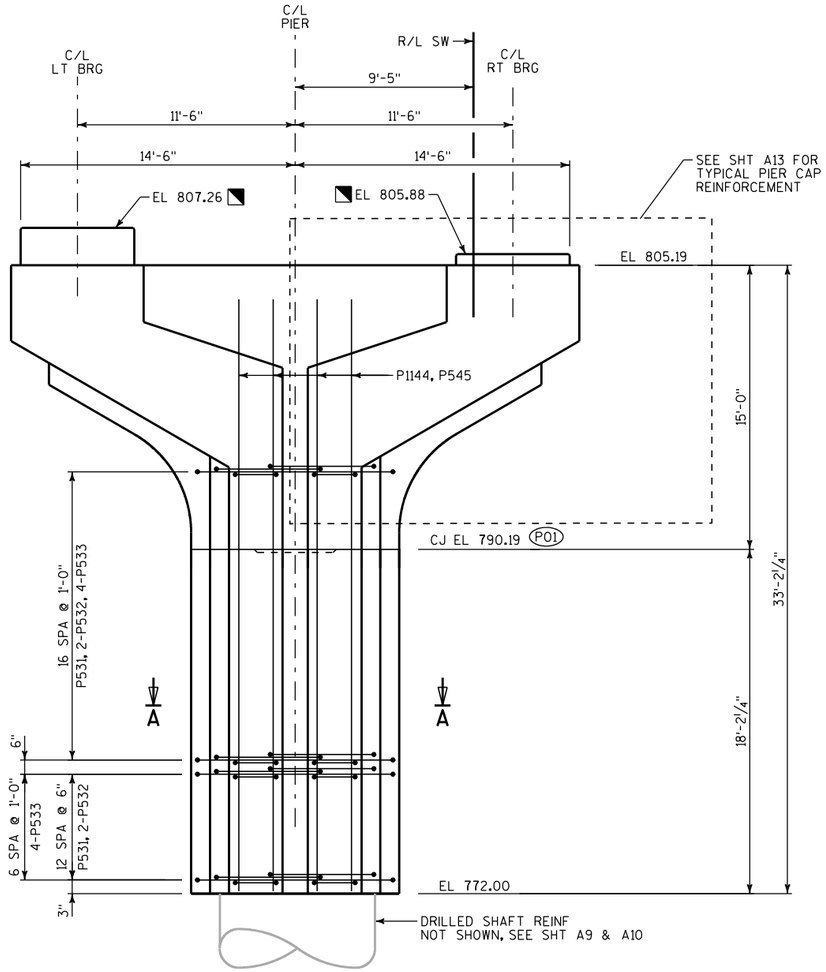
OPTION A
PIER SW04
DETAILS

SHEET A17 OF A25

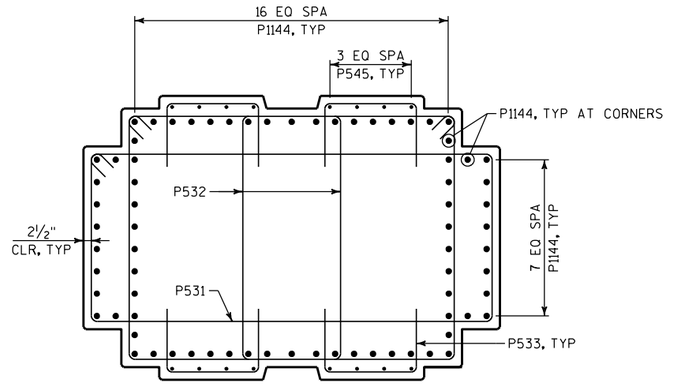
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
PIER SW05
DETAILS

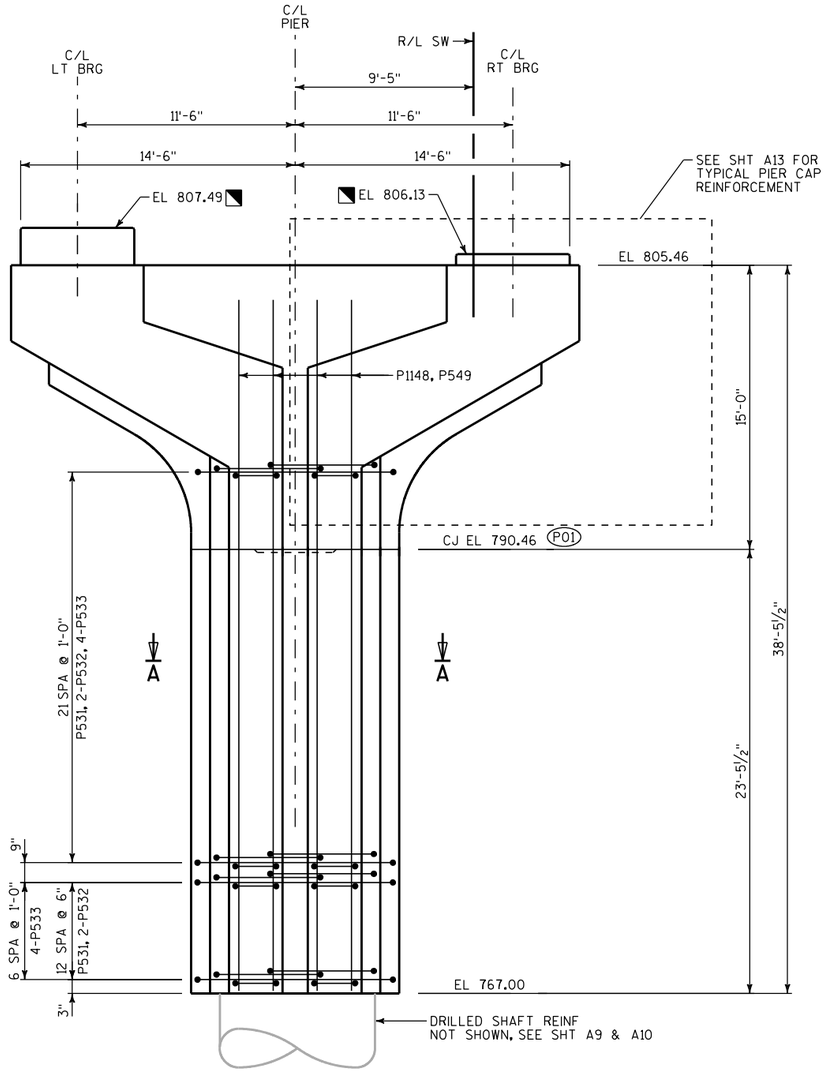
SHEET A18 OF A25

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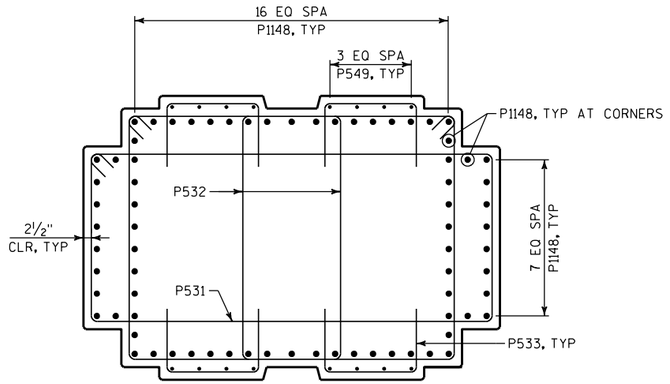
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PLOT BY : MSCGLM
PLOT NAME : B855_080318A_pi
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

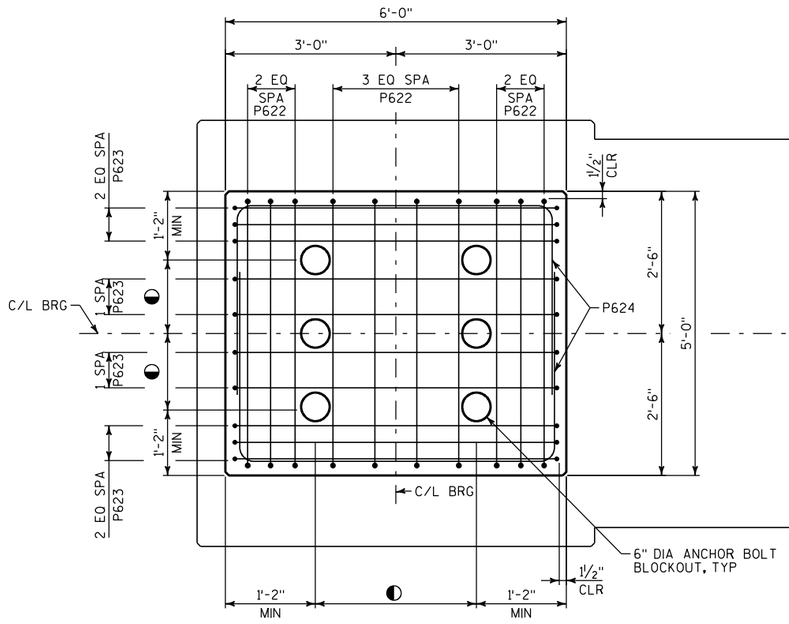
DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
PIER SW07
DETAILS

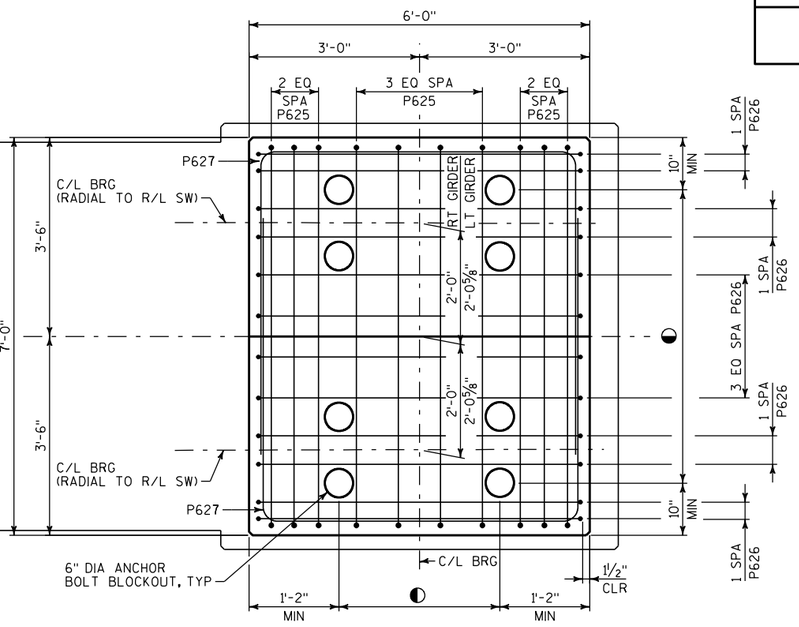
SHEET A19 OF A25

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PLOT DATE : 02-MAY-2014 12:11
PLOT BY : MSCGLM
PLOT NAME : B855_080319A_pi
PLOT SCALE : 8:1

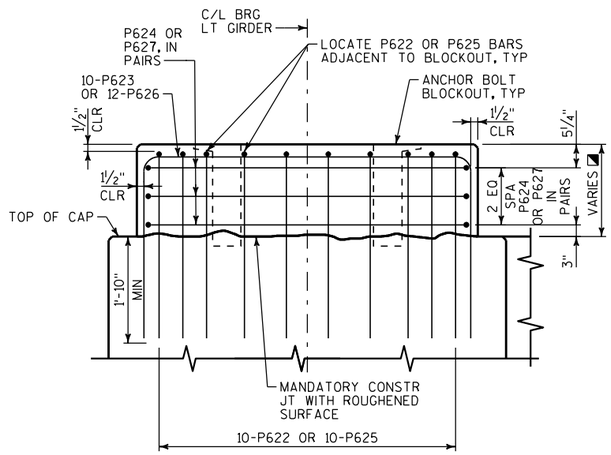
STATE PROJECT NUMBER
1060-33-80



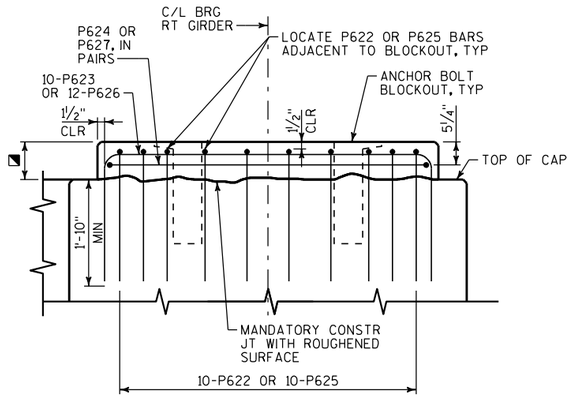
PEDESTAL PLAN
(TYPICAL PIER)



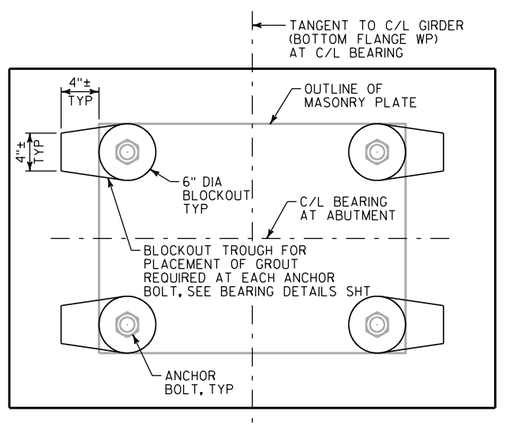
PEDESTAL PLAN
(PIER SW04 ONLY)



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS
SEE BEARING DETAILS SHEET

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS AND BEARING DETAILS SHEET.

LEGEND

◥ DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◐ SEE BEARING LAYOUT SHEETS FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

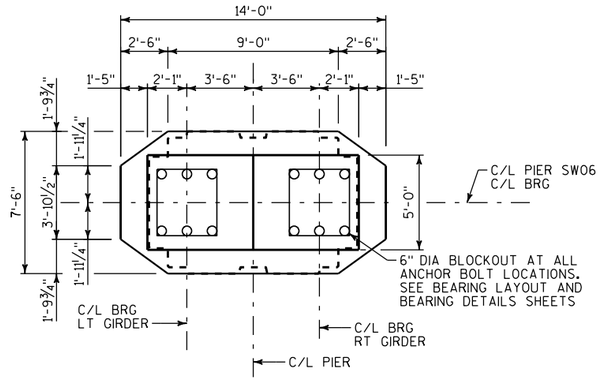
OPTION A
TYPICAL PEDESTAL REINFORCEMENT

SHEET A20 OF A25

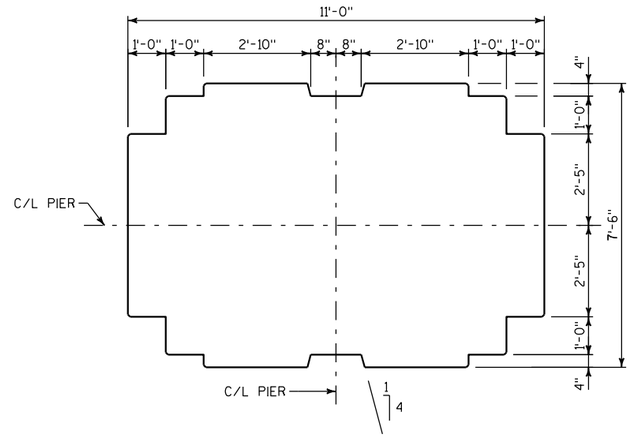
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PLOT SCALE : 2.666667:1

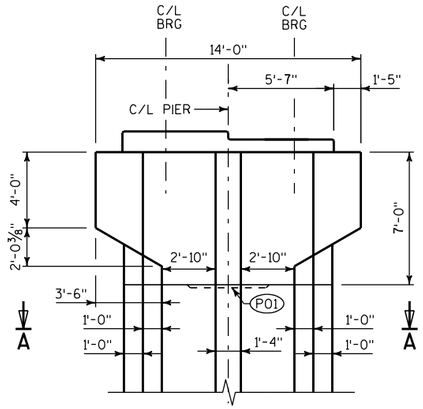
STATE PROJECT NUMBER
1060-33-80



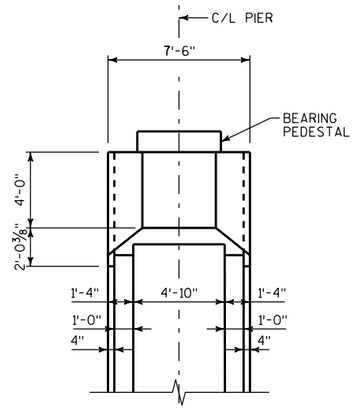
PLAN



SECTION A-A



FRONT ELEVATION



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION A
PIER SW06
LAYOUT

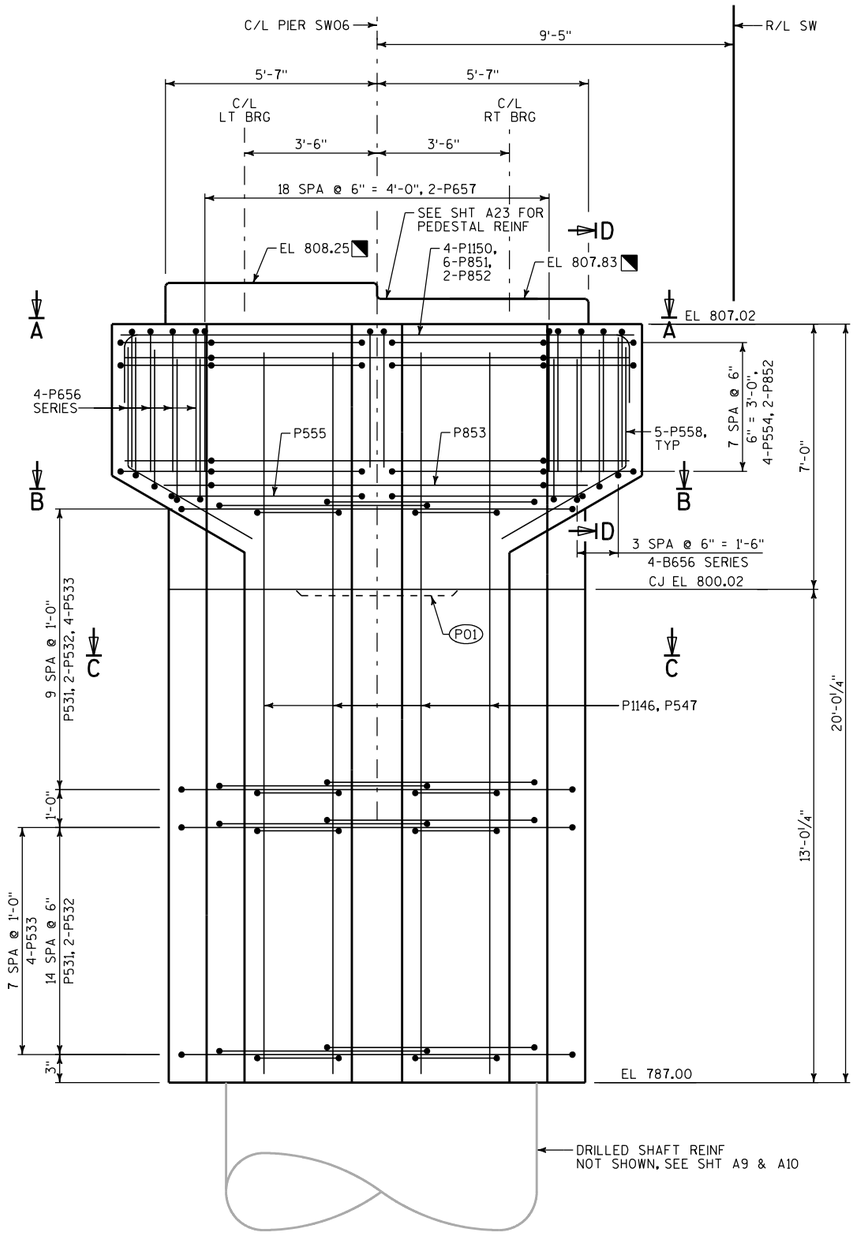
SHEET A21 OF A25

8

8

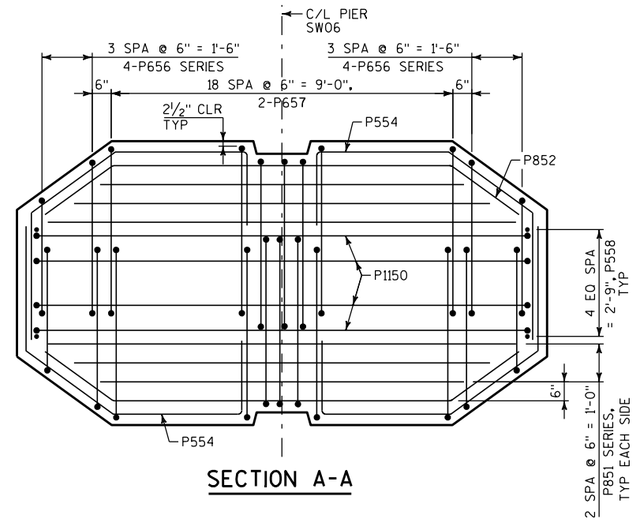
STATE PROJECT NUMBER

1060-33-80

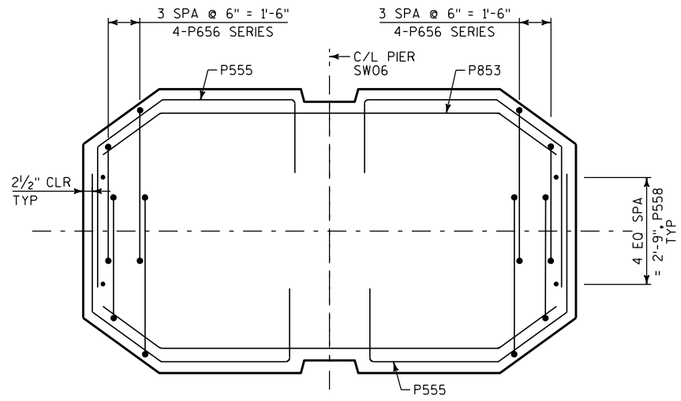


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT C/L OF PIER)



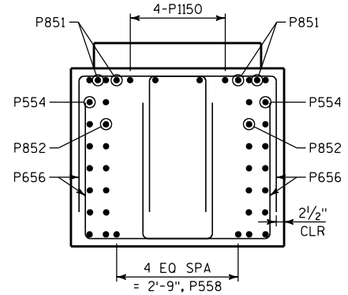
SECTION A-A



SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY

SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT A23

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
PIER SW06
DETAILS

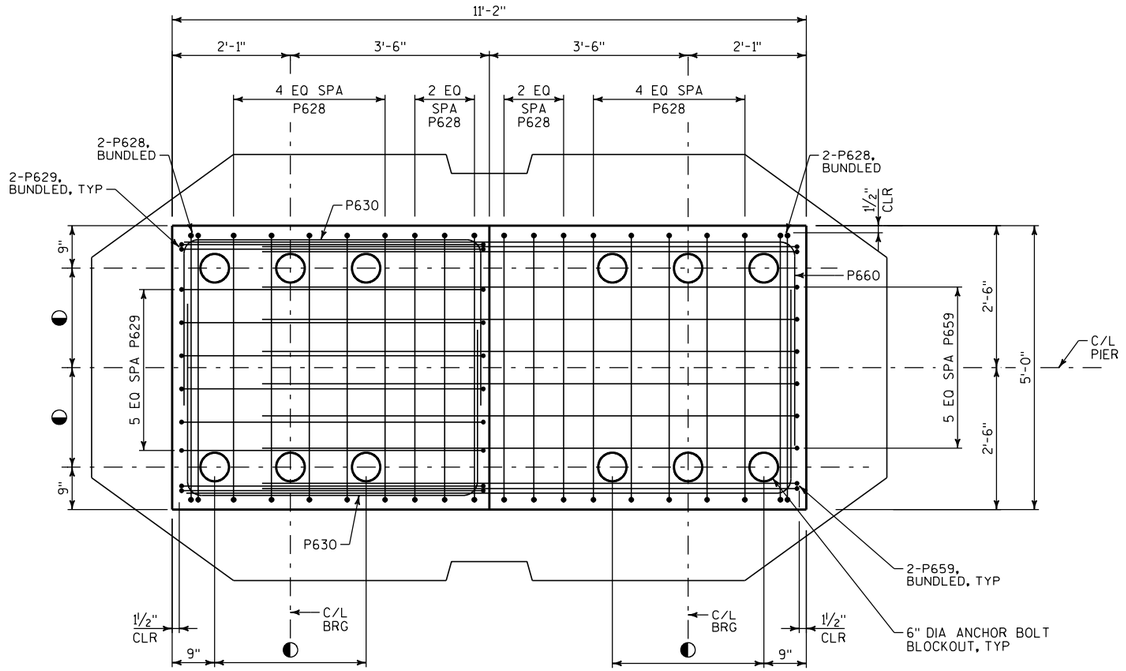
SHEET A22 OF A25

8

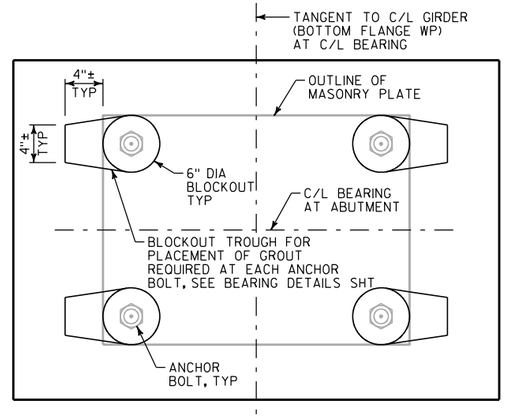
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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option A\B855_080322A_pi.dgn
PLOT DATE : 02-MAY-2014 12:11
PLOT BY : MSCGLM
PLOT NAME : B855_080322A_pi
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80

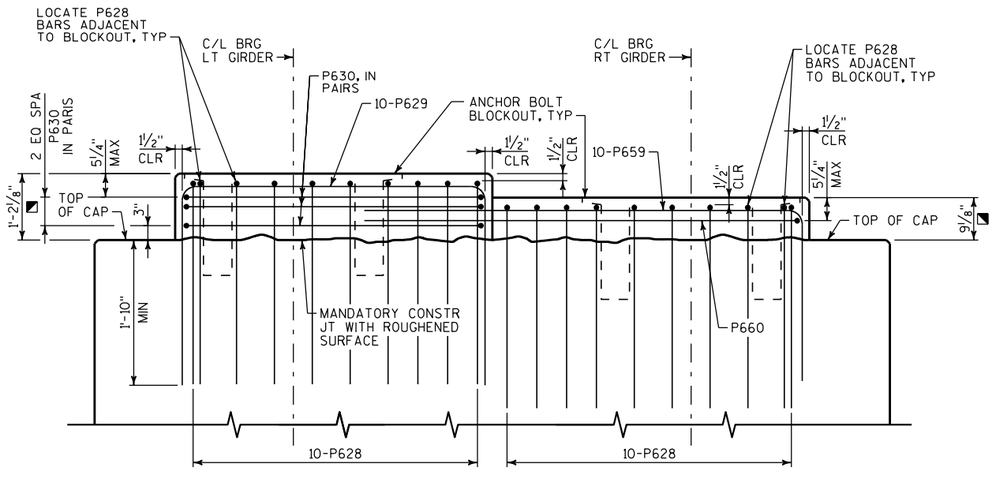


PEDESTAL PLAN



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET



PEDESTAL ELEVATION

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS AND BEARING DETAILS SHEET.

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◐ SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

OPTION A
PIER SW06 PEDESTAL REINFORCEMENT

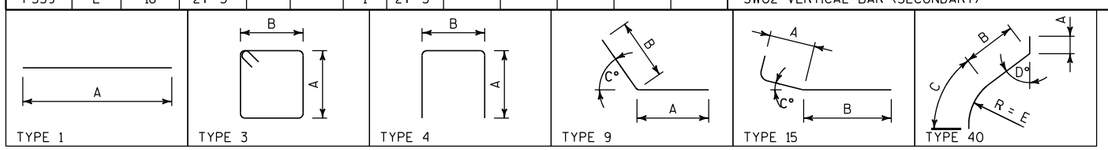
SHEET A23 OF A25

8

8

STATE PROJECT NUMBER
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	66	32'-8"	X		4	2'-0"	29'-4"					TOP TIE BAR					
P1102	E	66	31'-10"	X		4	2'-0"	28'-6"					BOTTOM TIE BAR					
P803	E	72	29'-4"			1	29'-4"						SKIN STEEL - TOP OF CAP					
P804	E	144	19'-5"		X	1	19'-5"						SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	12 SERIES OF 12	10'-0" TO 28'-10"
P606	E	480	21'-11"	X	X	3	4'-2"	6'-4½"					STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	24 SERIES OF 20	16'-4" TO 27'-6"
P507	E	84	17'-11"	X		4	6'-4"	5'-6"					TIE - TOP CENTER OF CAP					
P508	E	144	18'-9"	X		9	3'-6"	15'-3"	60				OUTSIDE FACE OF PIER CAP - TOP					
P509	E	144	11'-3"	X		4	4'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	288	13'-3"	X		4	5'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	288	10'-3"	X		4	3'-9"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	48	11'-3"	X		4	4'-3"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	84	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"		OUTSIDE FACE OF PIER CAP - BOT					
P514	E	120	16'-5"	X		4	5'-1"	6'-6"					TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	24	18'-1"	X		4	5'-1"	8'-2"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	24	18'-10"	X		4	5'-1"	8'-11"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	24	19'-9"	X		4	5'-1"	9'-10"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	120	11'-4"	X	X	4	2'-4"	6'-10½"					TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	24 SERIES OF 5	7'-10" TO 14'-9"
P519	E	144	5'-0"		X	1	5'-0"						ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	24 SERIES OF 6	4'-2" TO 6'-9"
P520	E	120	4'-11"		X	1	4'-11"						ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	24 SERIES OF 5	4'-5" TO 5'-5"
P521	E	24	11'-6"	X		15	7'-9"	3'-0"	72				ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	100	10'-11"	X		4	3'-3"	4'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	100	11'-9"	X		4	3'-2"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	40	12'-5"	X		4	3'-7"	5'-7"					PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	20	12'-11"	X		4	3'-3"	6'-9"					PEDESTAL REINFORCEMENT - SW04 - TOP FACE					
P626	E	24	11'-9"	X		4	3'-2"	5'-9"					PEDESTAL REINFORCEMENT - SW04 - TOP FACE					
P627	E	8	14'-5"	X		4	4'-7"	5'-7"					PEDESTAL REINFORCEMENT - SW04 - SIDE					
P628	E	20	11'-7"	X		4	3'-7"	4'-9"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE					
P629	E	10	12'-0"	X		4	3'-6"	5'-4"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE					
P630	E	6	11'-10"	X		4	3'-6"	5'-2"					PEDESTAL REINFORCEMENT - SW06 - SIDE					
P531	E	230	30'-7"	X		3	10'-7"	4'-5"					COLUMN TRANSVERSE (MAIN)					
P532	E	460	24'-7"	X		3	6'-5"	5'-7"					COLUMN TRANSVERSE (MAIN)					
P533	E	748	5'-6"	X		4	1'-8"	2'-5"					COLUMN TRANSVERSE (SECONDARY)					
P1136	E	74	25'-7"			1	25'-7"						SW01 VERTICAL BAR (MAIN)					
P537	E	16	21'-11"			1	21'-11"						SW01 VERTICAL BAR (SECONDARY)					
P1138	E	74	31'-0"			1	31'-0"						SW02 VERTICAL BAR (MAIN)					
P539	E	16	27'-5"			1	27'-5"						SW02 VERTICAL BAR (SECONDARY)					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION A
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET A24 OF A25

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option A\B855_080324A_pi.dgn PLOT DATE : 02-MAY-2014 12:11 PLOT BY : MSCGLM PLOT NAME : B855_080324A_pi PLOT SCALE : 8:1

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1140	E	74	47'-8"			1	47'-8"						SW03 VERTICAL BAR (MAIN)					
P541	E	16	44'-1"			1	44'-1"						SW03 VERTICAL BAR (SECONDARY)					
P1142	E	74	43'-1"			1	43'-1"						SW04 VERTICAL BAR (MAIN)					
P543	E	16	39'-5"			1	39'-5"						SW04 VERTICAL BAR (SECONDARY)					
P1144	E	74	31'-3"			1	31'-3"						SW05 VERTICAL BAR (MAIN)					
P545	E	16	27'-7"			1	27'-7"						SW05 VERTICAL BAR (SECONDARY)					
P1146	E	74	17'-10"			1	17'-10"						SW06 VERTICAL BAR (MAIN)					
P547	E	16	14'-5"			1	14'-5"						SW06 VERTICAL BAR (SECONDARY)					
P1148	E	74	36'-6"			1	36'-6"						SW07 VERTICAL BAR (MAIN)					
P549	E	16	32'-11"			1	32'-11"						SW07 VERTICAL BAR (SECONDARY)					
P1150	E	4	16'-8"	X		4	2'-0"	13'-4"					SW06 PIER CAP - TOP TIE BAR					
P851	E	6	12'-3"		X	1	12'-3"						SW06 PIER CAP - TOP FACE BAR (SERIES)	A	11'-4"	13'-2"	2 SERIES OF 3	11'-4" TO 13'-2"
P852	E	18	14'-3"	X		24	2'-3"	9'-9"	36				SW06 PIER CAP - HORIZ SKIN STEEL					
P853	E	2	13'-1"	X		24	1'-8"	9'-9"	36				SW06 PIER CAP - HORIZ SKIN STEEL - BOT					
P554	E	32	10'-6"	X		41	3'-3"	2'-10"	3'-5"	1'-3"	126	144	SW06 PIER CAP - FACE SKIN STEEL					
P555	E	4	10'-3"	X		41	3'-7"	2'-3"	3'-5"	1'-3"	126	144	SW06 PIER CAP - FACE SKIN STEEL - BOT					
P656	E	32	10'-4"	X	X	4	3'-7"	3'-6"					SW06 PIER CAP - SHEAR STEEL - EDGE (SERIES)	B	3'-0"	4'-0"	4 SERIES OF 4	9'-10" TO 10'-10"
P657	E	38	11'-2"	X		4	3'-7"	4'-4"					SW06 PIER CAP - SHEAR STEEL - CENTER					
P558	E	10	7'-0"	X		9	3'-2"	3'-10"	70				SW06 PIER CAP - OUTSIDE FACE					
P659	E	10	10'-7"	X		8	7'-9"	3'-0"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE - RIGHT SIDE					
P660	E	2	11'-1"	X		8	7'-9"	3'-6"					PEDESTAL REINFORCEMENT - SW06 - SIDE - RIGHT SIDE					

BAR MARK BREAKDOWN

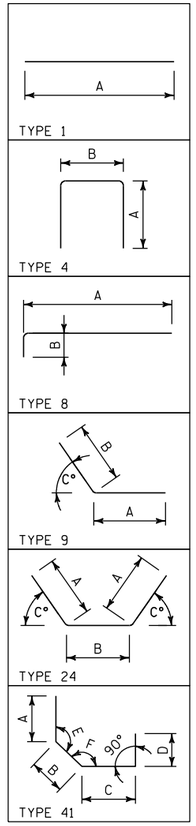
MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL NO	WEIGHT
P1101	11	11	11	11	11	0	11	66	11455
P1102	11	11	11	11	11	0	11	66	11163
P803	12	12	12	12	12	0	12	72	5639
P804	24	24	24	24	24	0	24	144	7465
P606	80	80	80	80	80	0	80	480	15801
P507	14	14	14	14	14	0	14	84	1570
P508	24	24	24	24	24	0	24	144	2816
P509	24	24	24	24	24	0	24	144	1690
P510	48	48	48	48	48	0	48	288	3980
P511	48	48	48	48	48	0	48	288	3079
P512	8	8	8	8	8	0	8	48	563
P513	14	14	14	14	14	0	14	84	1263
P514	20	20	20	20	20	0	20	120	2055
P515	4	4	4	4	4	0	4	24	453
P516	4	4	4	4	4	0	4	24	471
P517	4	4	4	4	4	0	4	24	494
P518	20	20	20	20	20	0	20	120	1418
P519	24	24	24	24	24	0	24	144	751
P520	20	20	20	20	20	0	20	120	615
P521	4	4	4	4	4	0	4	24	288
P622	20	20	20	0	20	0	20	100	1640
P623	20	20	20	0	20	0	20	100	1765
P624	8	8	8	0	8	0	8	40	746
P625	0	0	0	20	0	0	0	20	388
P626	0	0	0	24	0	0	0	24	424
P627	0	0	0	8	0	0	0	8	173
P628	0	0	0	0	0	20	0	20	348
P629	0	0	0	0	0	10	0	10	180
P630	0	0	0	0	0	6	0	6	107
P531	24	29	46	41	30	25	35	230	7337

BAR MARK BREAKDOWN

MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL NO	WEIGHT
P532	48	58	92	82	60	50	70	460	11795
P533	72	92	160	140	96	72	116	748	4291
P1136	74	0	0	0	0	0	0	74	10058
P537	16	0	0	0	0	0	0	16	366
P1138	0	74	0	0	0	0	0	74	12188
P539	0	16	0	0	0	0	0	16	458
P1140	0	0	74	0	0	0	0	74	18741
P541	0	0	16	0	0	0	0	16	736
P1142	0	0	0	74	0	0	0	74	16939
P543	0	0	0	16	0	0	0	16	658
P1144	0	0	0	0	74	0	0	74	12286
P545	0	0	0	0	16	0	0	16	460
P1146	0	0	0	0	0	74	0	74	7011
P547	0	0	0	0	0	16	0	16	241
P1148	0	0	0	0	0	0	74	74	14350
P549	0	0	0	0	0	0	16	16	549
P1150	0	0	0	0	0	4	0	4	354
P851	0	0	0	0	0	6	0	6	196
P852	0	0	0	0	0	18	0	18	685
P853	0	0	0	0	0	2	0	2	70
P554	0	0	0	0	0	32	0	32	350
P555	0	0	0	0	0	4	0	4	43
P656	0	0	0	0	0	32	0	32	497
P657	0	0	0	0	0	38	0	38	637
P558	0	0	0	0	0	10	0	10	73
P659	0	0	0	0	0	10	0	10	159
P660	0	0	0	0	0	2	0	2	33
TOT WEIGHT	25835	28587	37222	34966	28794	13477	31478		200360

STATE PROJECT NUMBER

1060-33-80



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
U - STEEL, HIGH STRENGTH, UNCOATED.
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION A
PIER REINFORCEMENT
SCHEDULE (2 OF 2)

SHEET A25 OF A25

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option A\B855_080325A_pi.dgn
PLOT DATE : 02-MAY-2014 12:11
PLOT BY : MSCGLM
PLOT NAME : B855_080325A_pi
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

ESTIMATED QUANTITIES - PIER OPTION B

ITEM CATEGORY	ITEM NO.	BID ITEMS	UNIT	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL
2072	206.1000.0008	EXCAVATION FOR STRUCTURES BRIDGES B-40-855	LS	---	---	---	---	---	---	---	1
2072	209.0100	BACKFILL GRANULAR	CY	13	---	18	9	---	301	---	341
2072	502.0100	CONCRETE MASONRY BRIDGES	CY	119.9	135.0	181.3	168.4	135.6	209.6	150.2	1,100
2072	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	29,100	31,900	24,310	19,150	31,980	14,590	37,940	188,970
2072	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	25,840	28,590	37,220	34,970	28,790	16,200	31,480	203,090
2072	511.1200.0001	TEMPORARY SHORING B-40-855	SF	---	---	---	---	905	---	765	1,670
2072	511.2200.0001	TEMPORARY SHORING LEFT IN PLACE B-40-855	SF	---	---	---	625	670	---	---	1,295
2072	550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF	---	---	---	---	---	2,100	---	2,100
2072	SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	---	---	---	---	---	2	---	2
2072	SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	---	---	---	---	---	2	---	2
2072	SPV.0060.4160	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1	1	1	1	1	---	1	6
2072	SPV.0060.4171	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1	1	1	1	1	---	1	6
2072	SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4	4	4	4	4	---	4	24
2072	SPV.0090.4460	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	68	71	51	44	78	---	88	400
2071	SPV.0105.4510	TRIAL DRILLED FOUNDATION SHAFT 98.43-INCH	LS	---	---	---	---	---	---	---	1

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION.
THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE FOR PIER OPTION B ONLY. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET 5.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

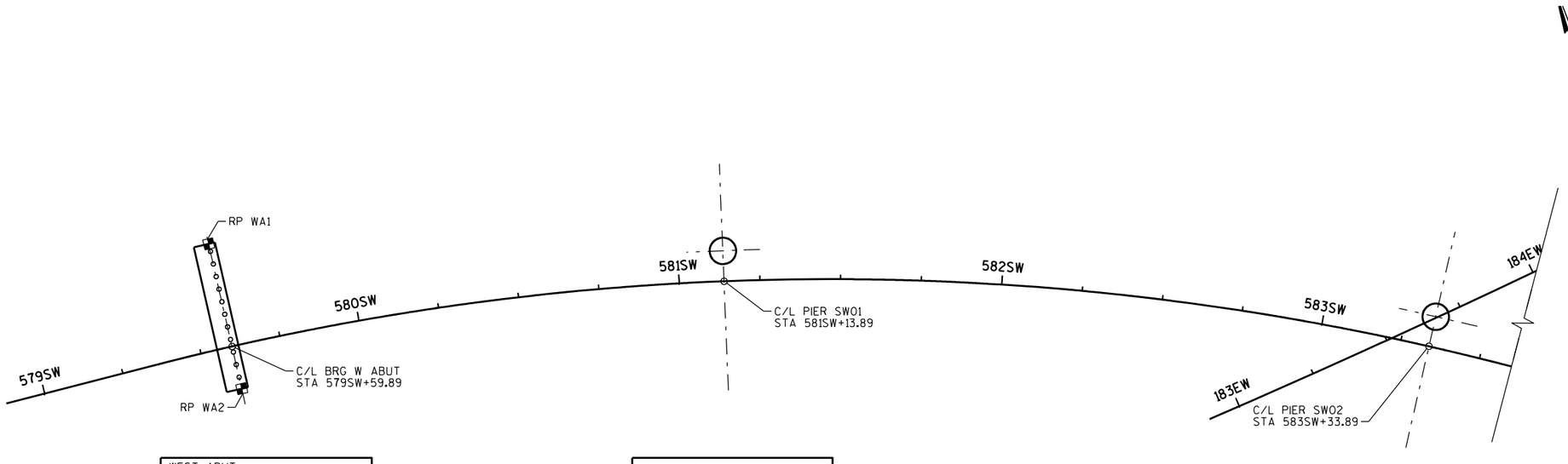
DRAWN BY GLM | PLANS CK'D. WRT

OPTION B QUANTITIES

SHEET B1 OF B26

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option B\B855_080101B_qu.dgn PLOT DATE : 02-MAY-2014 12:12 PLOT BY : MSCGLM PLOT NAME : B855_080101B_qu PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



WEST ABUT
11 CIPC PILES, 16" DIA
RP WA1
STA 579SW+59.89, 32.60' LT
X=571465.67, Y=295483.39
RP WA2
STA 579SW+59.89, 13.46' RT
X=571462.26, Y=295437.46
BOTTOM OF FOOTING EL 789.11
ESTIMATED PILE LENGTH 75 FT

PIER SW01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 581SW+13.89, 9.42' LT
X=571617.32, Y=295434.51
TOP OF SHAFT EL 765.00
BOTTOM OF SHAFT EL 697.00

PIER SW02
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 583SW+33.89, 9.42' LT
X=571822.47, Y=295350.11
TOP OF SHAFT EL 762.00
BOTTOM OF SHAFT EL 691.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

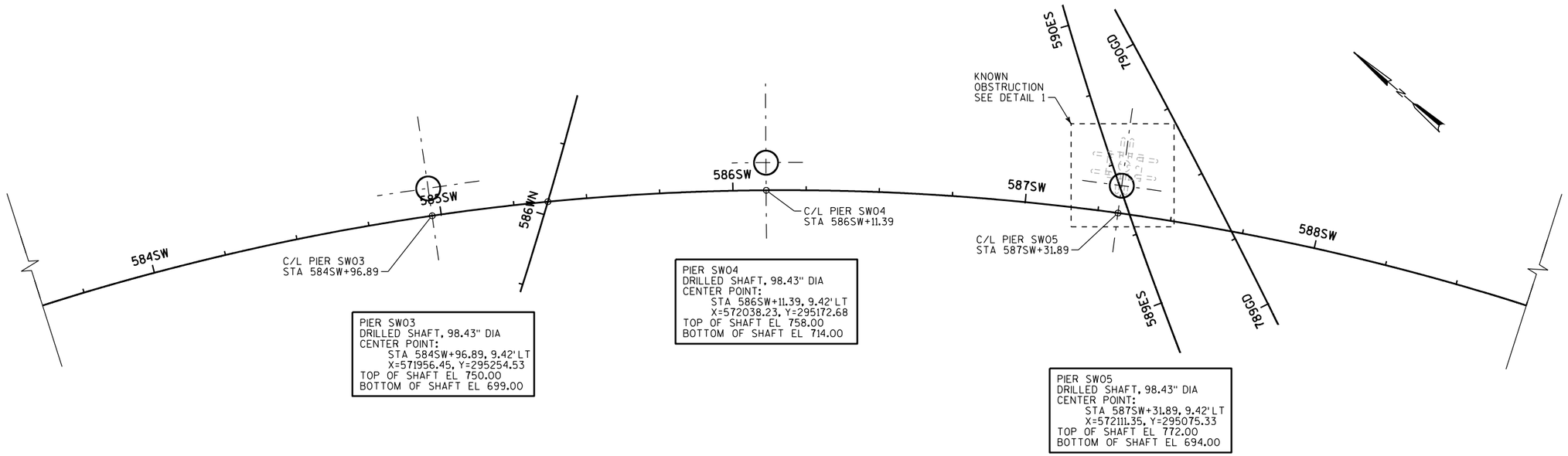
STRUCTURE B-40-855

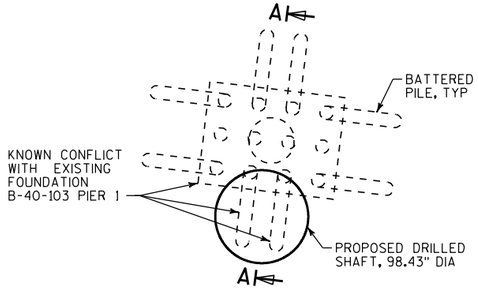
DRAWN BY GLM | PLANS CK'D. WRT

OPTION B
FOUNDATION
LAYOUT (1 OF 3)

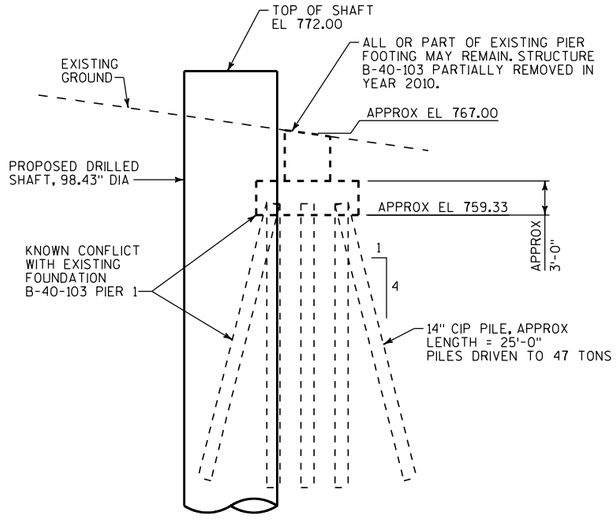
SHEET B2 OF B26

STATE PROJECT NUMBER
1060-33-80

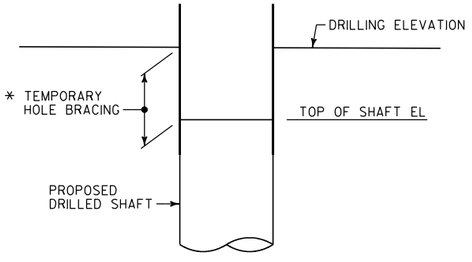




DETAIL 1



SECTION A-A



TEMPORARY HOLE BRACING

AT PIERS SW03 & SW04

* TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD. COST OF TEMPORARY HOLE BRACING SHALL BE INCLUDED WITH COST OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

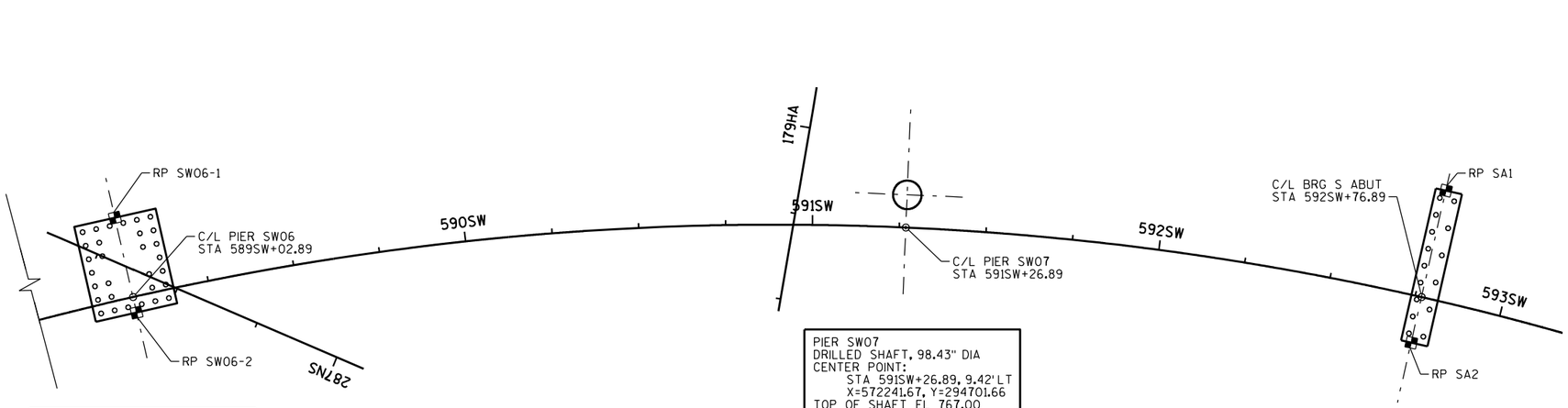
DRAWN BY GLM | PLANS CK'D. WRT

OPTION B
FOUNDATION
LAYOUT (2 OF 3)

SHEET B3 OF B26

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PLOT DATE : 02-MAY-2014 12:12
PLOT BY : MSCGLM
PLOT NAME : B855_080303B_f1
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PIER SW06
30 CIPC PILES, 16" DIA
RP SW06-1
STA 589SW+02.89, 23.42' LT
X=572202.55, Y=294926.43
RP SW06-2
STA 589SW+02.89, 4.58' RT
X=572176.42, Y=294916.37
BOTTOM OF FOOTING 781.00
ESTIMATED PILE LENGTH 70 FT

PIER SW07
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 591SW+26.89, 9.42' LT
X=572241.67, Y=294701.66
TOP OF SHAFT EL 767.00
BOTTOM OF SHAFT EL 679.00

SOUTH ABUT
15 CIPC PILES, 16" DIA
RP SA1
STA 592SW+76.89, 31.45' LT
X=572265.02, Y=294548.41
RP SA2
STA 592SW+76.89, 13.45' RT
X=572220.27, Y=294552.02
BOTTOM OF FOOTING EL 797.96
ESTIMATED PILE LENGTH 70 FT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

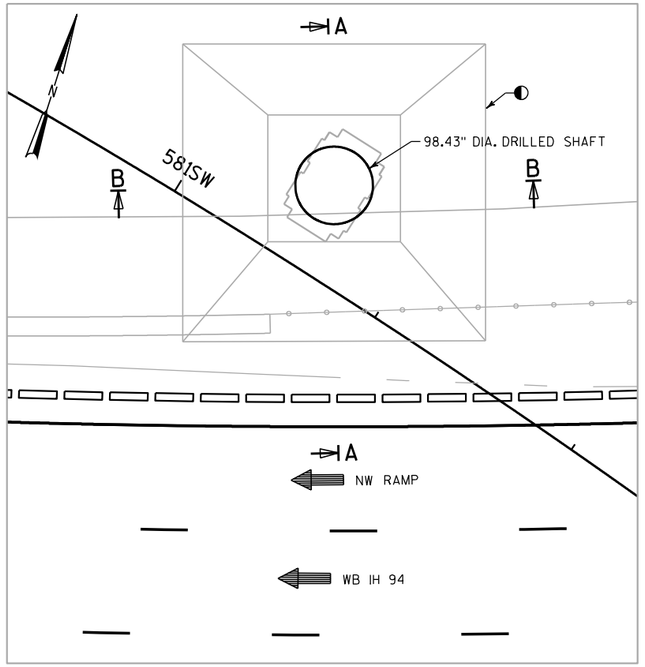
STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

OPTION B
FOUNDATION
LAYOUT (3 OF 3)

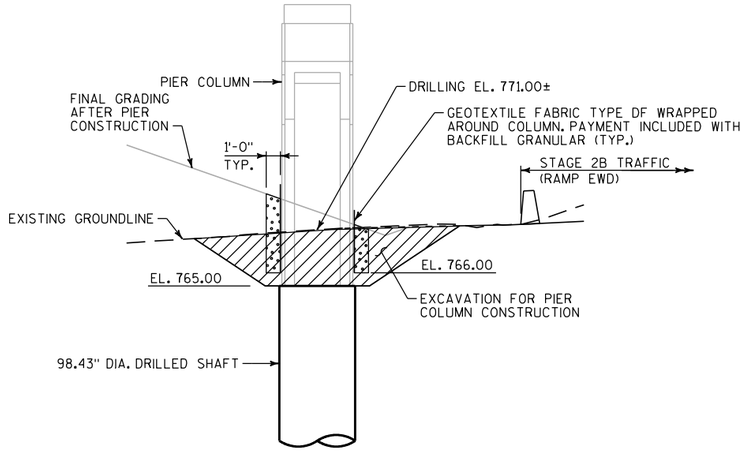
SHEET B4 OF B26

STATE PROJECT NUMBER
1060-33-80

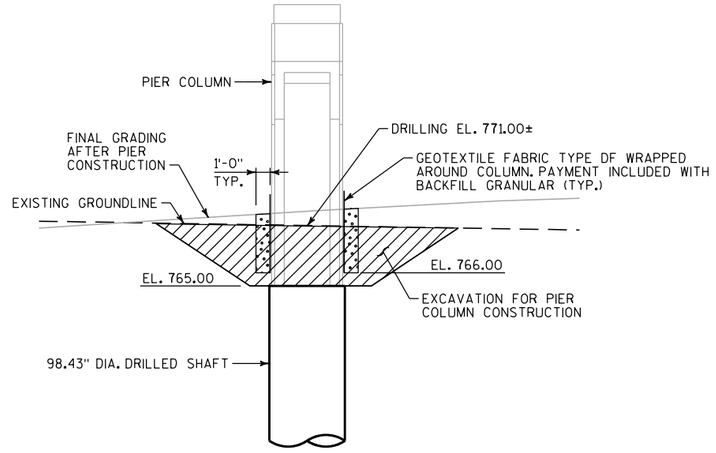


EXCAVATION PLAN - PIER SW01

STA 581SW+13.89



SECTION A-A



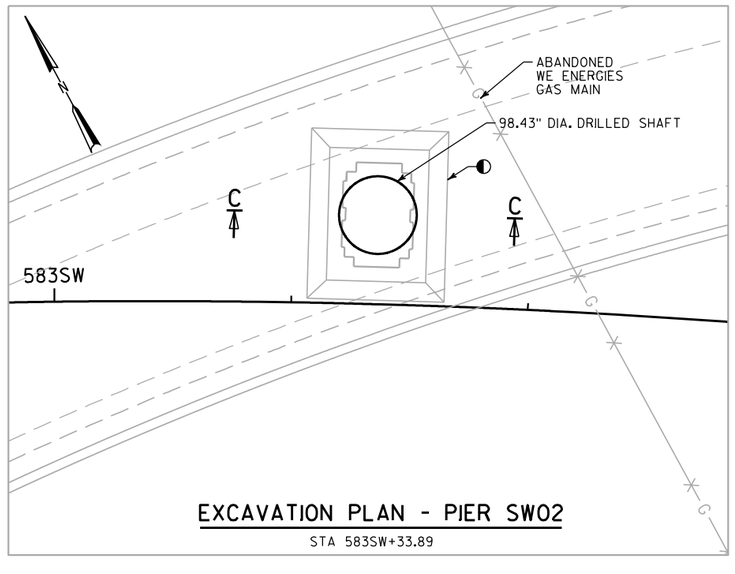
SECTION B-B

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

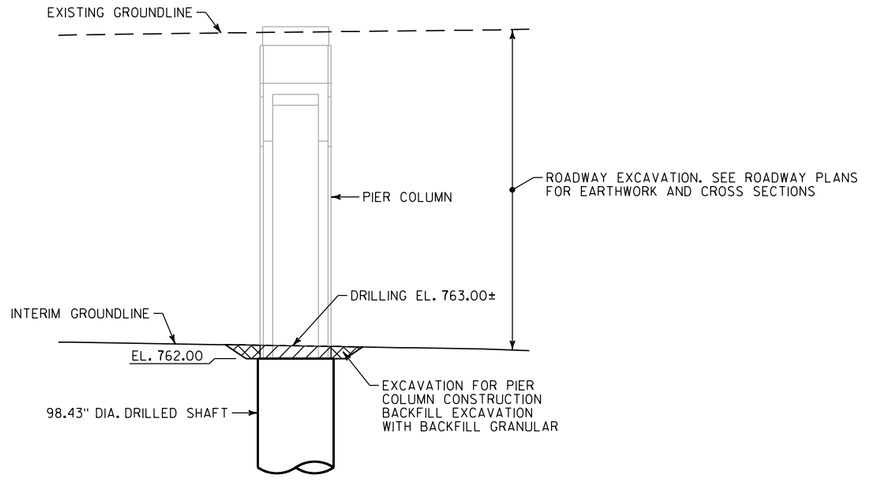
NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.



EXCAVATION PLAN - PIER SW02

STA 583SW+33.89



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
EXCAVATION PLAN
(1 OF 4)

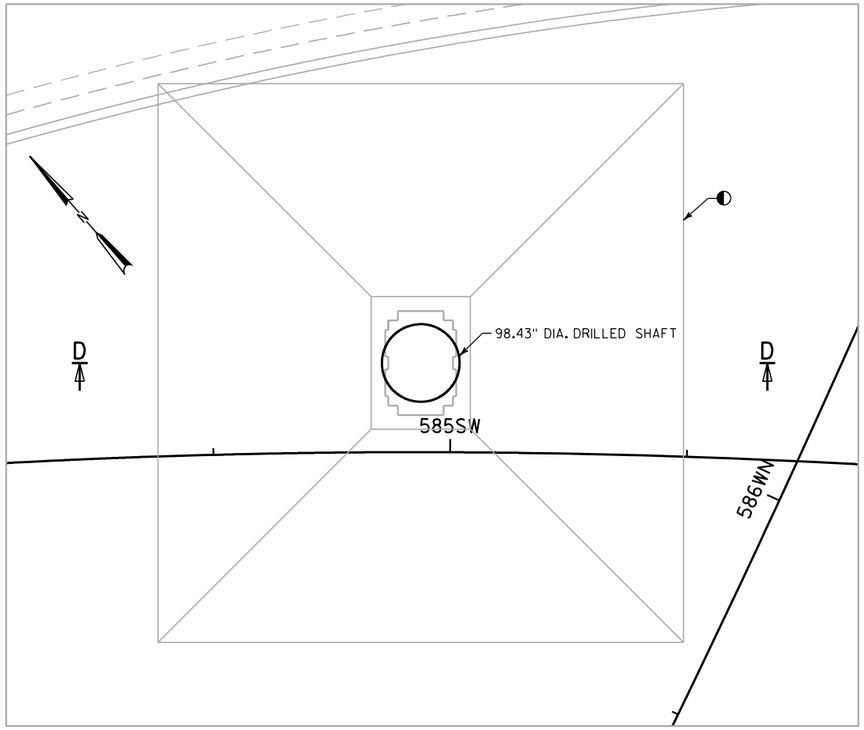
SHEET B5 OF B26

8

8

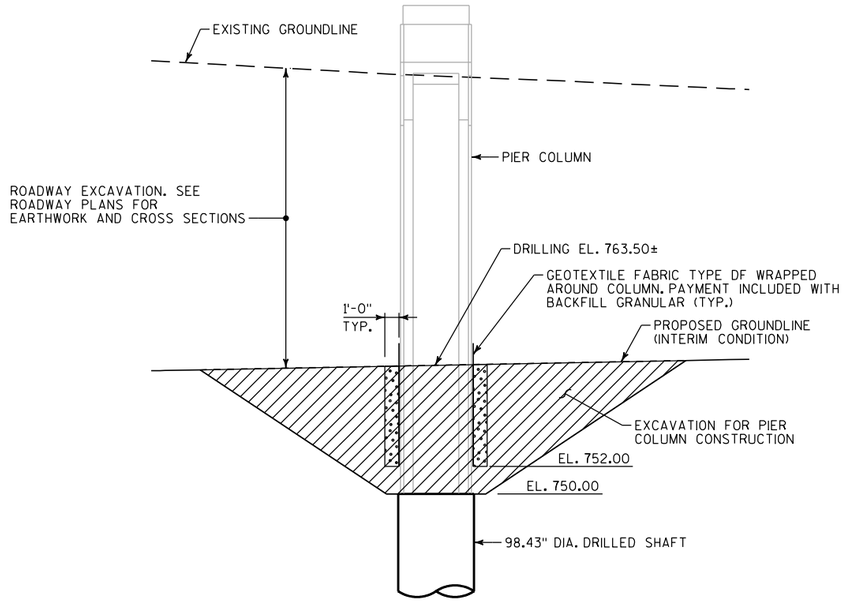
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PLOT BY : MSCGLM
PLOT NAME : B855_080305B_ex
PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-80



EXCAVATION PLAN - PIER SW03

STA 584SW+96.89



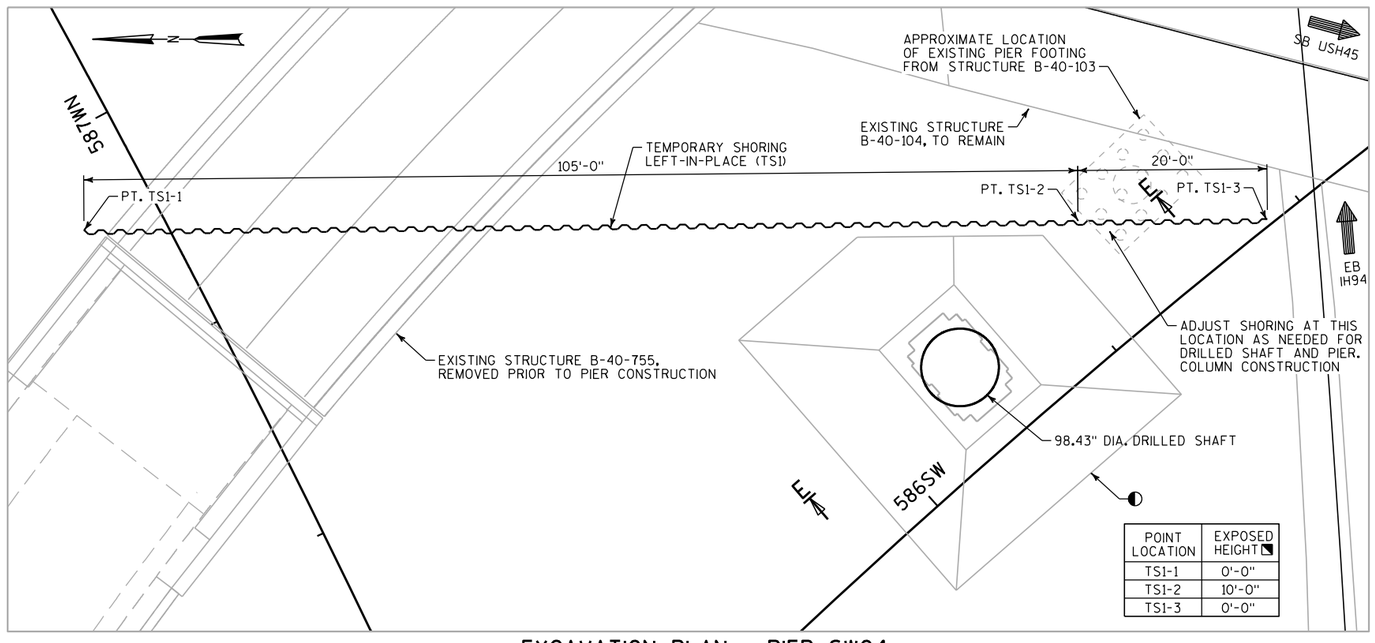
SECTION D-D

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

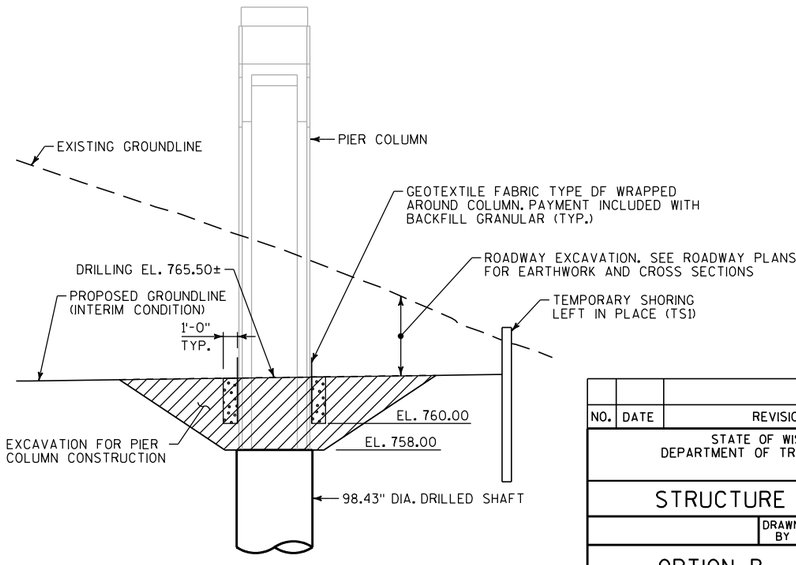
THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.



POINT LOCATION	EXPOSED HEIGHT
TS1-1	0'-0"
TS1-2	10'-0"
TS1-3	0'-0"

EXCAVATION PLAN - PIER SW04

STA 586SW+11.39



SECTION E-E

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

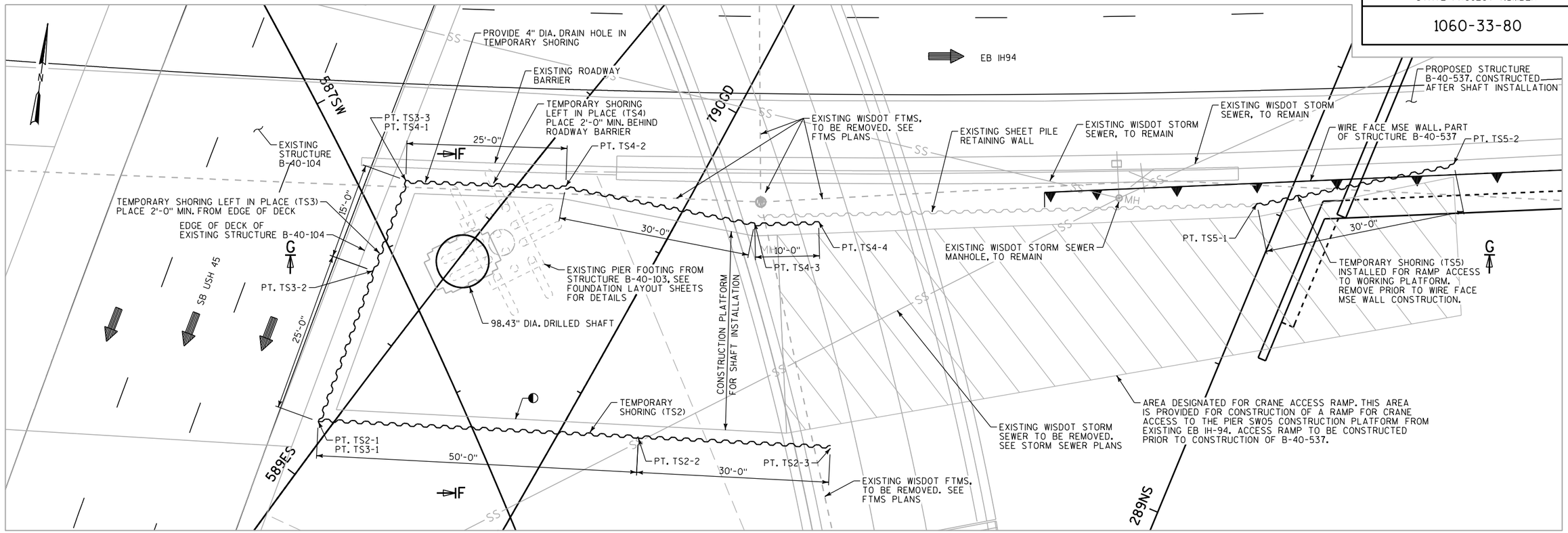
OPTION B
EXCAVATION PLAN
(2 OF 4)

SHEET B6 OF B26

8

8

STATE PROJECT NUMBER
1060-33-80



EXCAVATION PLAN - PIER SW05

STA 587SW+31.89

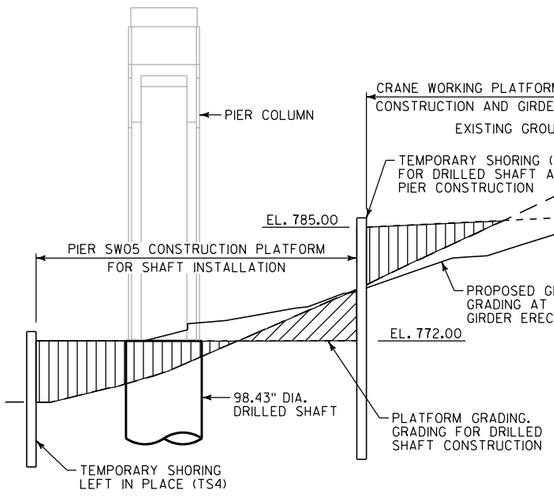
POINT LOCATION	EXPOSED HEIGHT
TS2-1	13'-0"
TS2-2	13'-0"
TS2-3	0'-0"
TS3-1	13'-0"
TS3-2	0'-0"
TS3-3	7'-0"
TS4-1	7'-0"
TS4-2	7'-0"
TS4-3	7'-0"
TS4-4	7'-0"
TS5-1	4'-0"
TS5-2	0'-0"

LEGEND

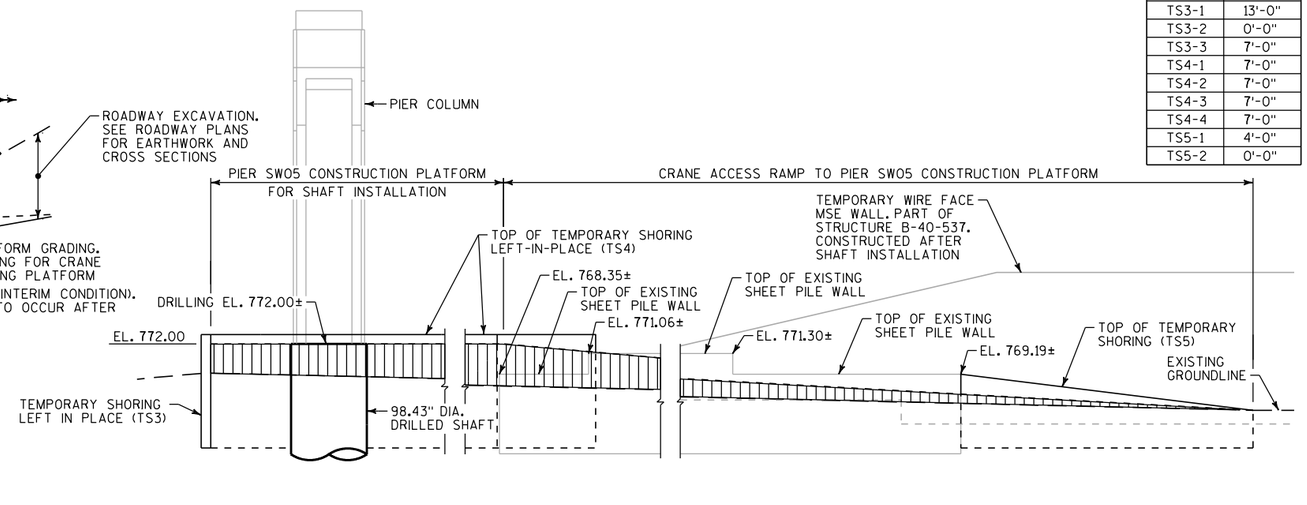
- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- COMPACTED FILL MATERIAL. PAYMENT INCLUDED WITH EXCAVATION FOR STRUCTURES.
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

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SECTION F-F



SECTION G-G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

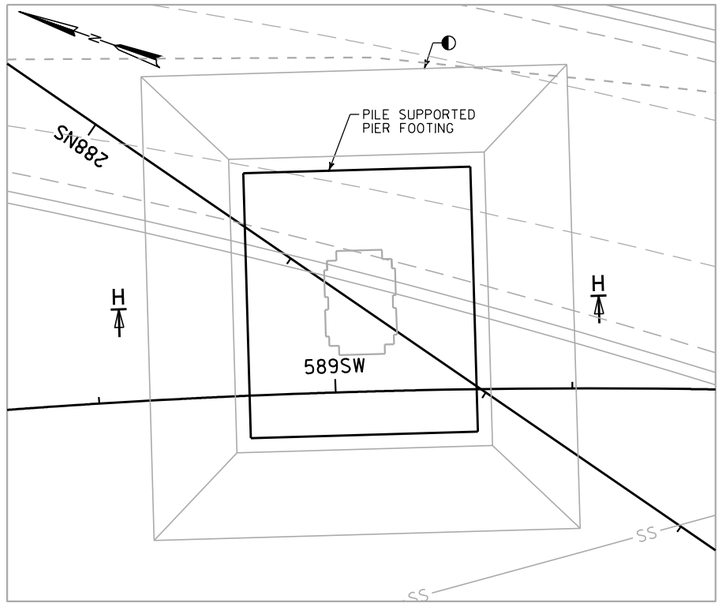
STRUCTURE B-40-855

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OPTION B
EXCAVATION PLAN
(3 OF 4)

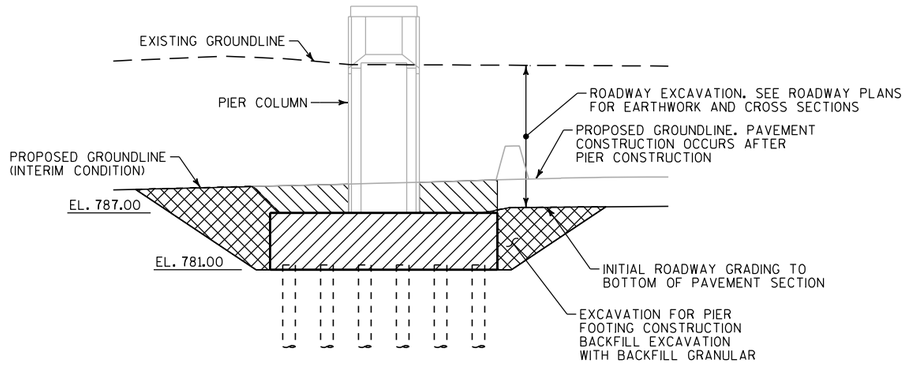
SHEET B7 OF B26

STATE PROJECT NUMBER
1060-33-80

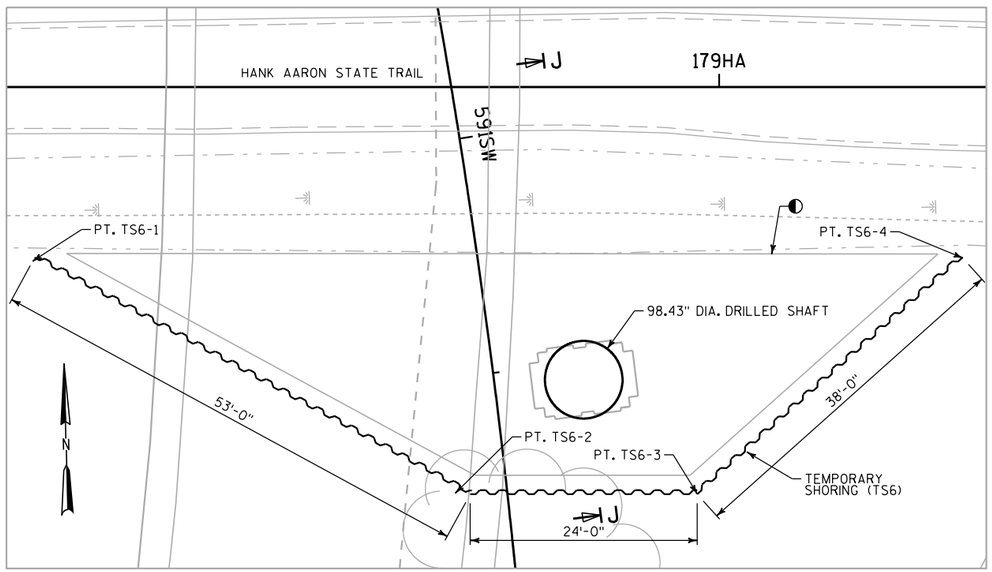


EXCAVATION PLAN - PIER SW06

STA 589SW+02.89



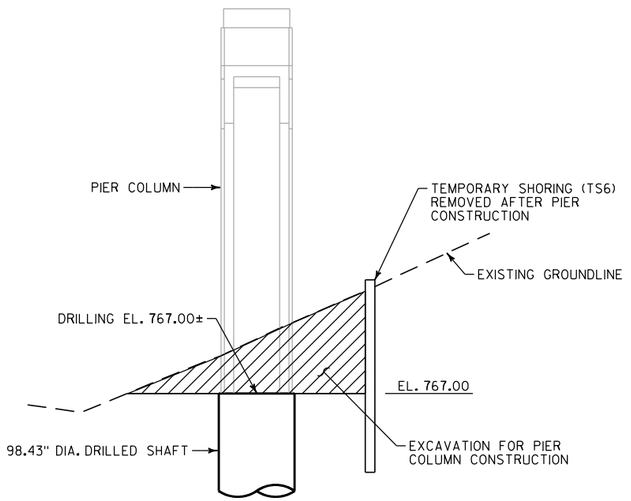
SECTION H-H



POINT LOCATION	EXPOSED HEIGHT
TS6-1	0'-0"
TS6-2	11'-0"
TS6-3	11'-0"
TS6-4	0'-0"

EXCAVATION PLAN - PIER SW07

STA 591SW+26.89



SECTION J-J

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-855".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY BKS | PLANS CK'D. WRT

OPTION B
EXCAVATION PLAN
(4 OF 4)

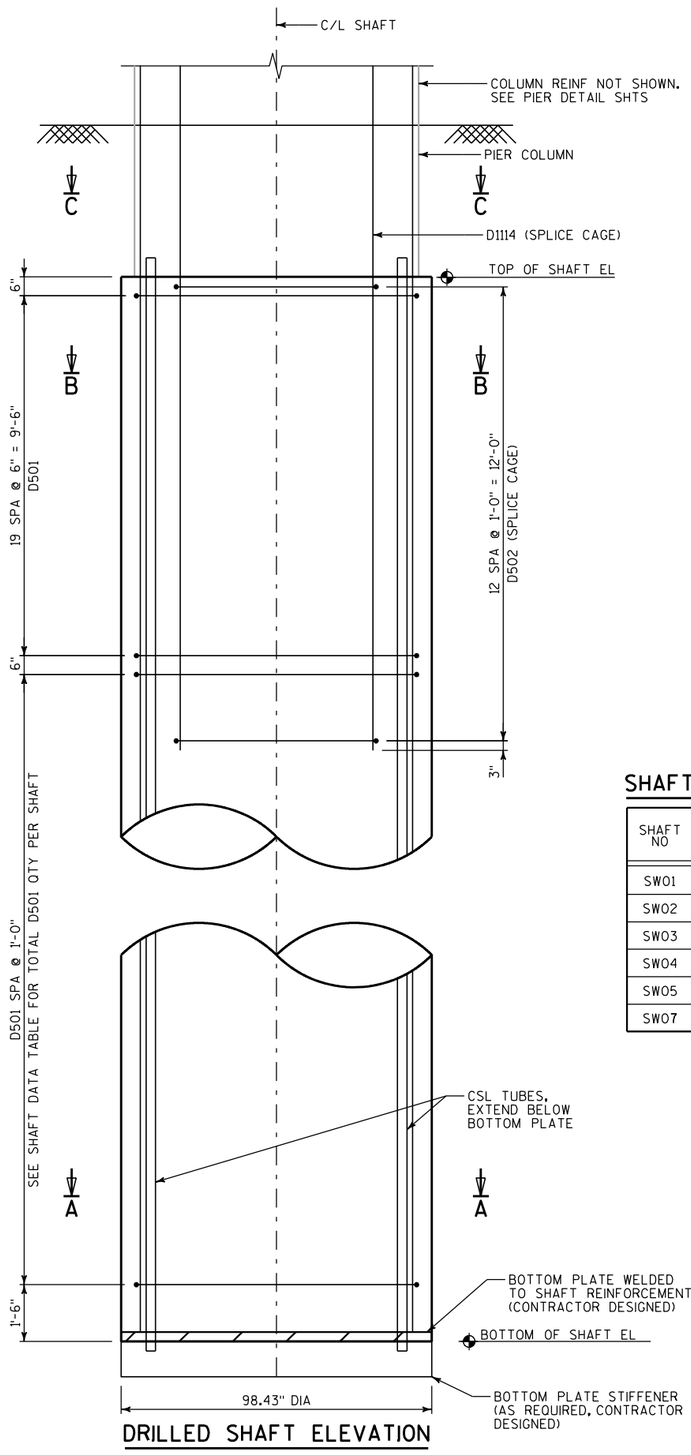
SHEET B8 OF B26

8

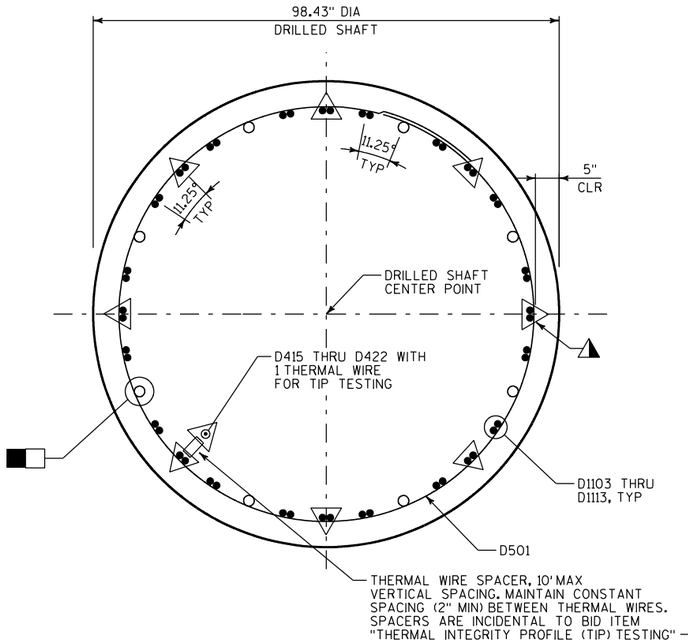
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PLOT NAME : B855_080308B_ex
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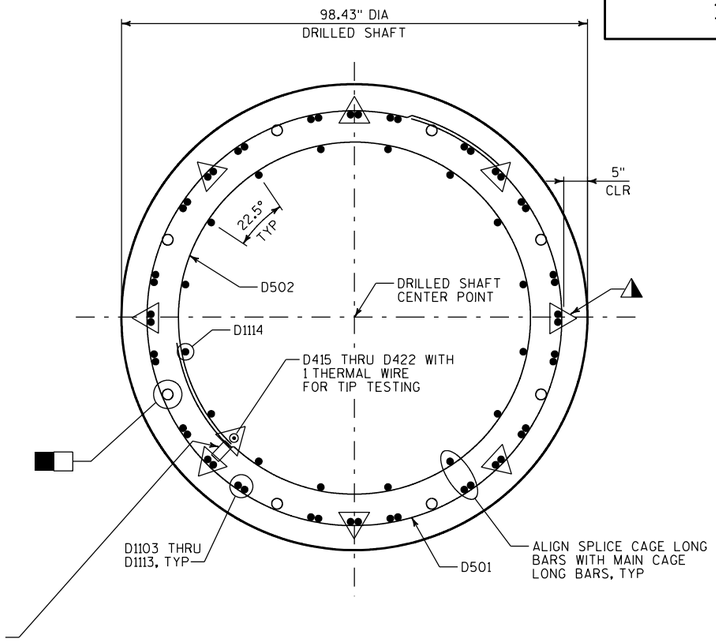
STATE PROJECT NUMBER
1060-33-80



DRILLED SHAFT ELEVATION



SECTION A-A



SECTION B-B

SHAFT DATA

SHAFT NO	SHAFT C/L "X"	SHAFT C/L "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
SW01	571617.32	295434.51	771.00	765.00	697.00	68.00	133.10	77	CSL TUBES/TIP TESTING	425
SW02	571822.47	295350.12	763.00	762.00	691.00	71.00	139.00	80	CSL TUBES/TIP TESTING	300
SW03	571956.45	295254.53	763.50	750.00	699.00	51.00	99.80	60	CSL TUBES/TIP TESTING	325
SW04	572038.23	295172.68	765.50	758.00	714.00	44.00	86.10	53	CSL TUBES/TIP TESTING	225
SW05	572111.35	295075.33	772.00	772.00	694.00	78.00	152.70	87	CSL TUBES/TIP TESTING	400
SW07	572241.67	294701.66	767.00	767.00	679.00	88.00	172.20	97	CSL TUBES/TIP TESTING	500

NOTE

FOR SECTION C-C, SEE SHT B10.

LEGEND

8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.

9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
DRILLED SHAFT
DETAILS (1 OF 2)

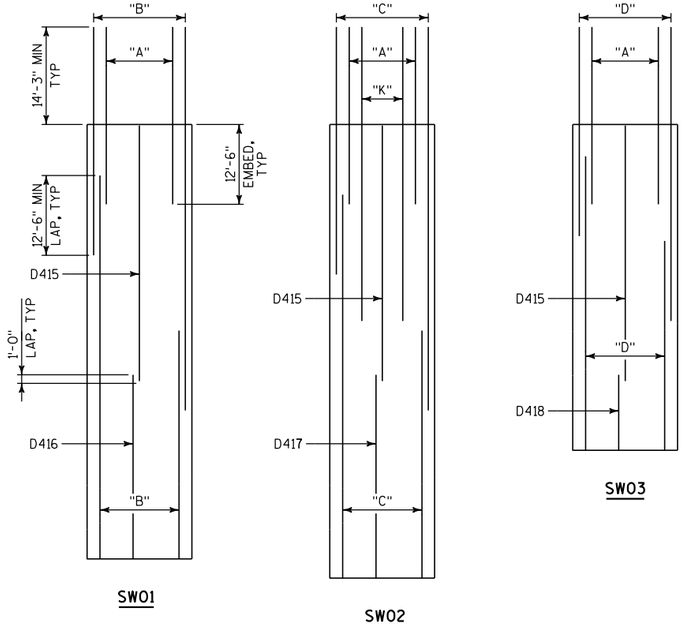
SHEET B9 OF B26

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PLOT SCALE : 4:1

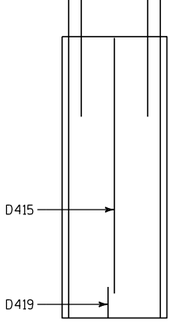
STATE PROJECT NUMBER
1060-33-80



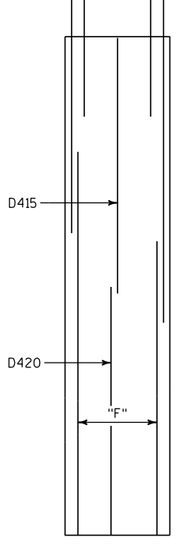
SW01

SW02

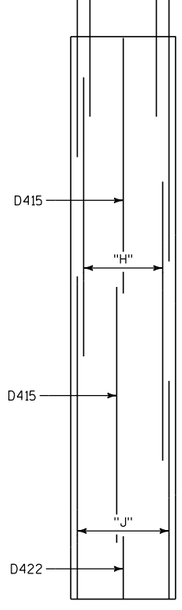
SW03



SW04



SW05



SW07

"A" = 16-D1114 BARS

"B" = 24-D1103 & 24-D1104 BARS

"C" = 24-D1103 & 24-D1105 BARS

"D" = 24-D1106 & 24-D1108 BARS

"E" = 48-D1107 BARS

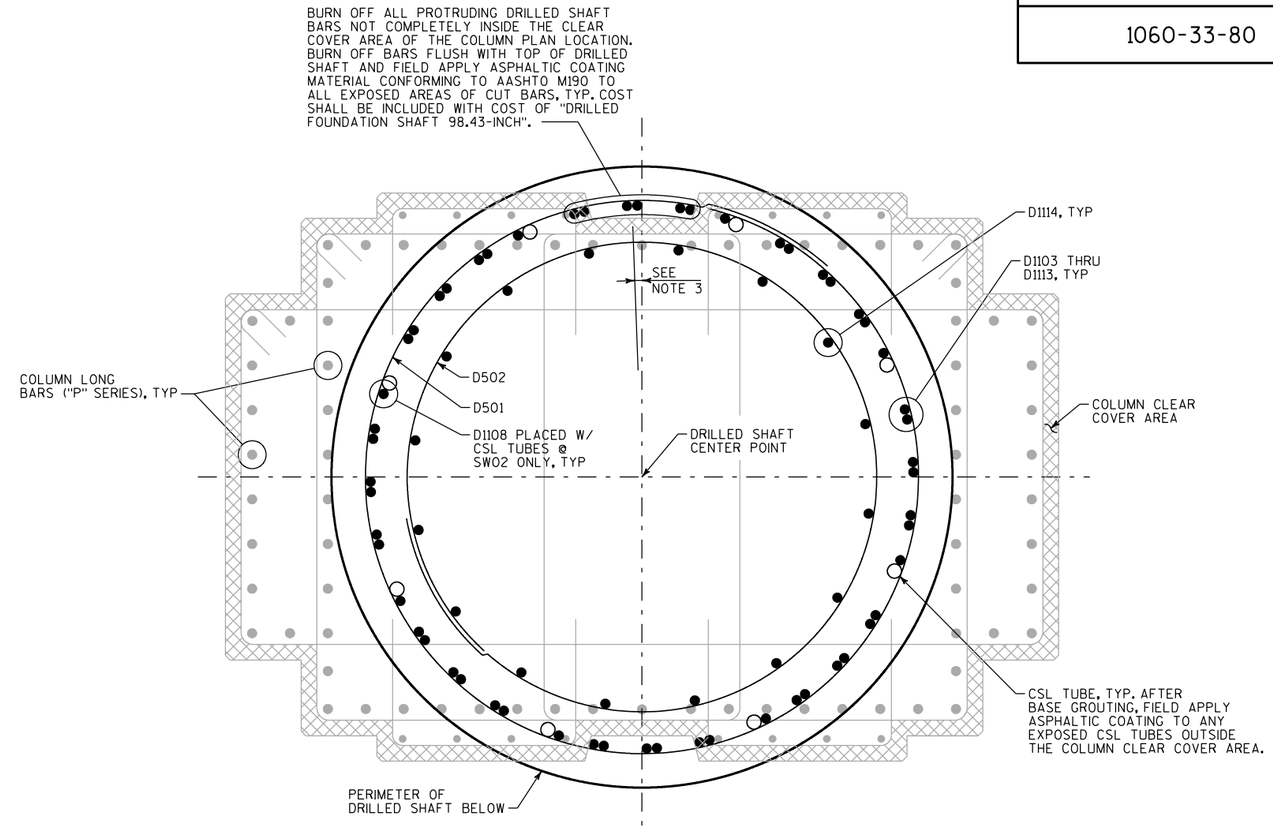
"F" = 24-D1103 & 24-D1108 BARS

"H" = 48-D1111 BARS

"J" = 24-D1112 & 24-D1113 BARS

"K" = 8-D1108 BARS. TIE BAR WITH CSL TUBES.

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC



SECTION C-C
DRILLED SHAFT CONNECTION DETAIL

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE SHEET B9.
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
DRILLED SHAFT
DETAILS (2 OF 2)

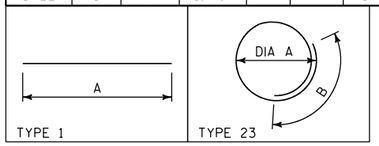
SHEET B10 OF B26

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PLOT DATE : 12-JUN-2014 11:24
PLOT BY : MSCGLM
PLOT NAME : B855_080310B_fd
PLOT SCALE : 8:1

STATE PROJECT NUMBER

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BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM 1	MIN	MAX	NO REQ'D	LENGTH
D501	U	454	24'-9"	X		23	7'-5"	1'-5"					SHAFT TIE BAR					
D502	U	78	21'-1"	X		23	6'-3"	1'-5"					SPLICE CAGE TIE BAR					
D1103	U	144	60'-0"			1	60'-0"						LONGITUDINAL BAR					
D1104	U	48	35'-9"			1	35'-9"						LONGITUDINAL BAR SW01					
D1105	U	48	38'-9"			1	38'-9"						LONGITUDINAL BAR SW02					
D1106	U	48	32'-9"			1	32'-9"						LONGITUDINAL BAR SW03					
D1107	U	48	59'-3"			1	59'-3"						LONGITUDINAL BAR SW04					
D1108	U	104	46'-0"			1	46'-0"						LONGITUDINAL BAR SW02/SW03/SW05					
D1111	U	48	43'-8"			1	43'-8"						LONGITUDINAL BAR SW07					
D1112	U	48	50'-6"			1	50'-6"						LONGITUDINAL BAR SW07					
D1113	U	48	34'-2"			1	34'-2"						LONGITUDINAL BAR SW07					
D1114	U	96	27'-9"			1	27'-9"						SPLICE CAGE LONGITUDINAL BAR					
D415	U	7	40'-0"			1	40'-0"						LONGITUDINAL THERMAL BAR					
D416	U	1	29'-0"			1	29'-0"						LONGITUDINAL THERMAL BAR SW01					
D417	U	1	32'-0"			1	32'-0"						LONGITUDINAL THERMAL BAR SW02					
D418	U	1	12'-0"			1	12'-0"						LONGITUDINAL THERMAL BAR SW03					
D419	U	1	5'-0"			1	5'-0"						LONGITUDINAL THERMAL BAR SW04					
D420	U	1	39'-0"			1	39'-0"						LONGITUDINAL THERMAL BAR SW05					
D422	U	1	10'-0"			1	10'-0"						LONGITUDINAL THERMAL BAR SW07					



TYPE 1

TYPE 23

BAR MARK BREAKDOWN								
BAR MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW07	TOTAL NO	WEIGHT
D501	77	80	60	53	87	97	454	11720
D502	13	13	13	13	13	13	78	1715
D1103	48	48	0	0	48	0	144	45904
D1104	48	0	0	0	0	0	48	9117
D1105	0	48	0	0	0	0	48	9882
D1106	0	0	48	0	0	0	48	8352
D1107	0	0	0	48	0	0	48	15110
D1108	0	8	48	0	48	0	104	25417
D1111	0	0	0	0	0	48	48	11136
D1112	0	0	0	0	0	48	48	12879
D1113	0	0	0	0	0	48	48	8713
D1114	16	16	16	16	16	16	96	14154
D415	1	1	1	1	1	2	7	187
D416	1	0	0	0	0	0	1	19
D417	0	1	0	0	0	0	1	21
D418	0	0	1	0	0	0	1	8
D419	0	0	0	1	0	0	1	3
D420	0	0	0	0	1	0	1	26
D422	0	0	0	0	0	1	1	7
TOT WEIGHT	29097	31897	24312	19153	31976	37937		174372

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
U - STEEL, HIGH STRENGTH, UNCOATED.
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

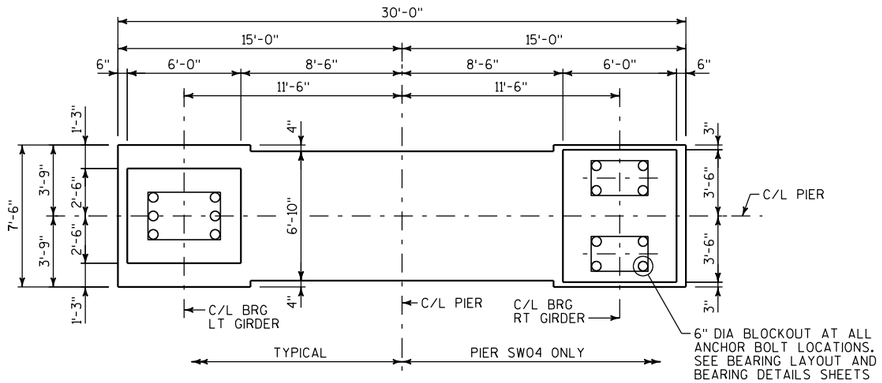
SHEET B11 OF B26

8

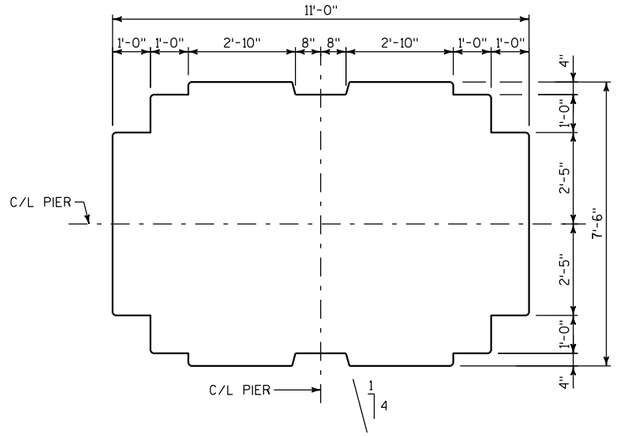
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STATE PROJECT NUMBER

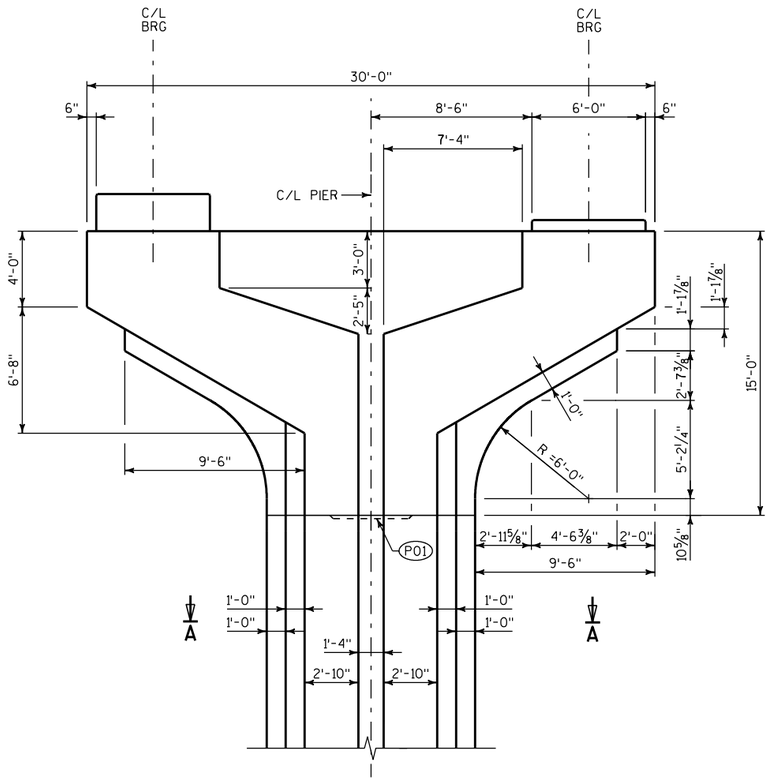
1060-33-80



PLAN

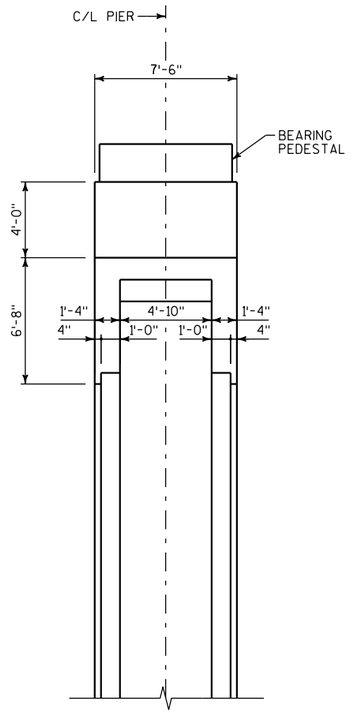


SECTION A-A



FRONT ELEVATION

(LOOKING UPSTATION)



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

OPTION B
TYPICAL PIER
LAYOUT

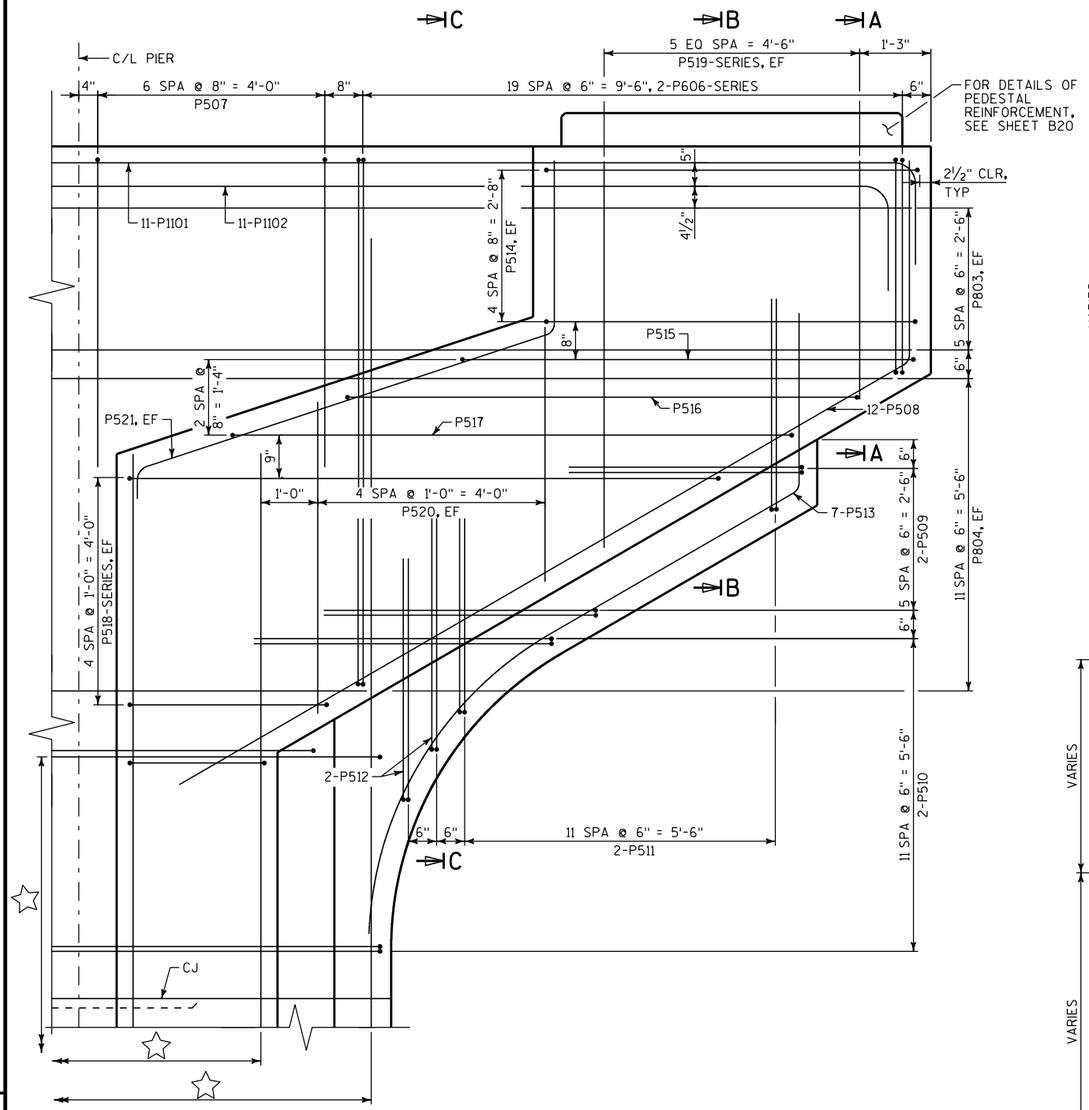
SHEET B12 OF B26

8

8

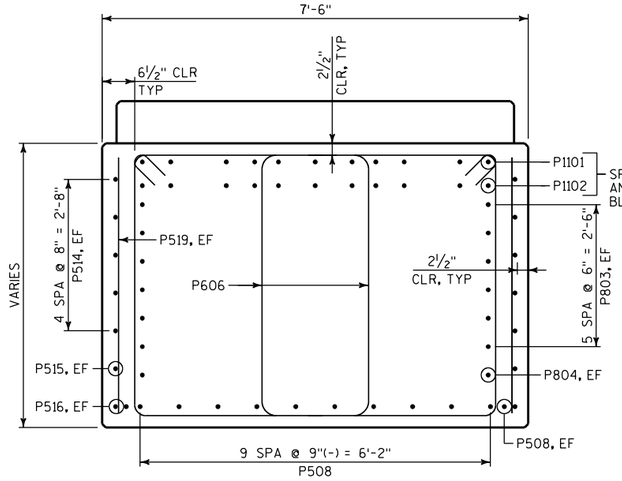
STATE PROJECT NUMBER

1060-33-80



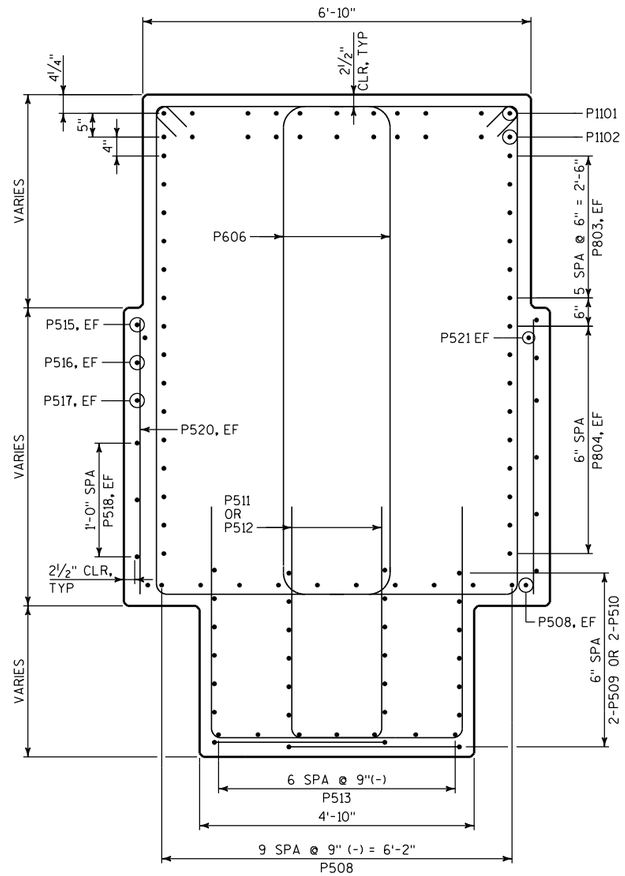
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT C/L PIER)

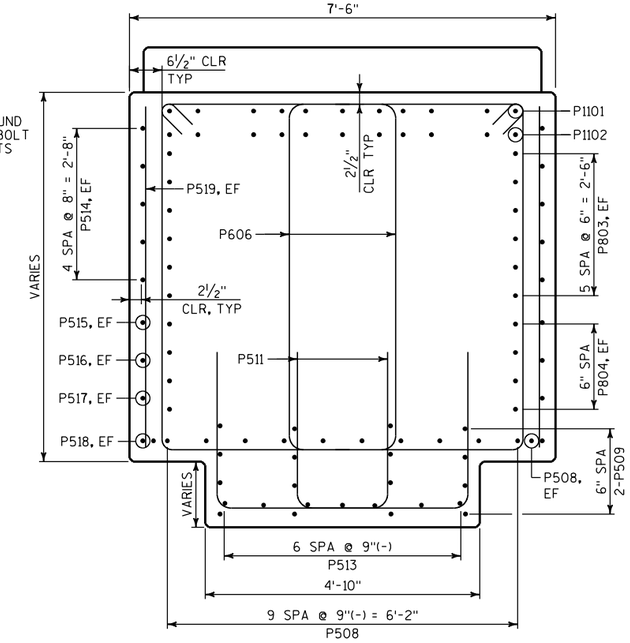


SECTION A-A

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION C-C



SECTION B-B

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)

LEGEND

☆ COLUMN REINFORCEMENT VARIES BY PIER. SEE PIER DETAIL SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY ASW | PLANS CK'D. WRT

OPTION B
TYPICAL PIER
CAP REINFORCEMENT

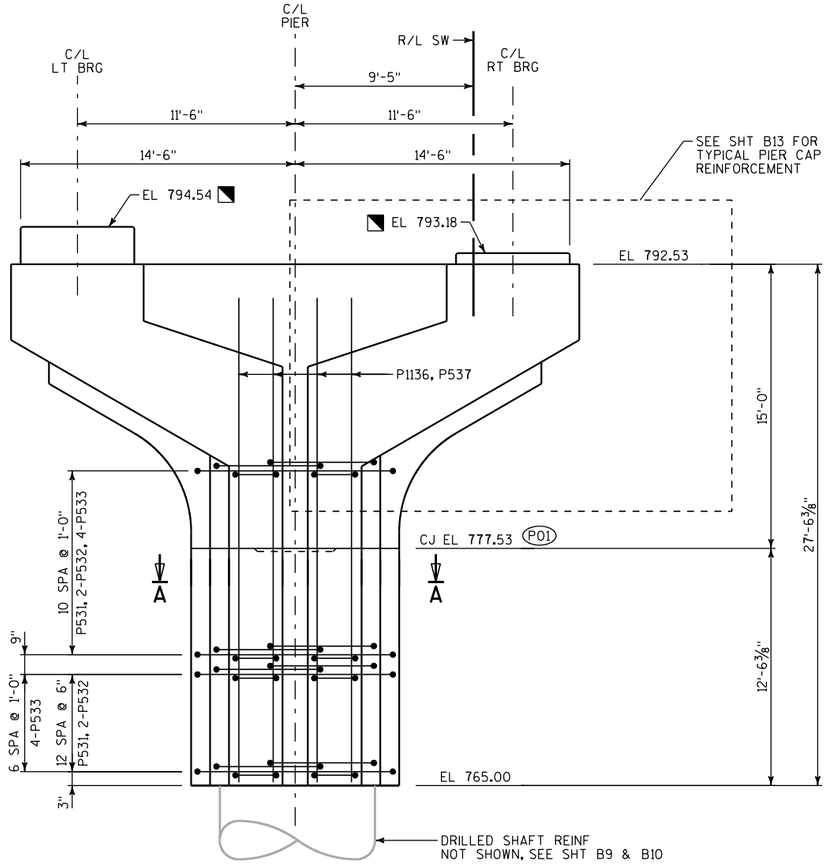
SHEET B13 OF B26

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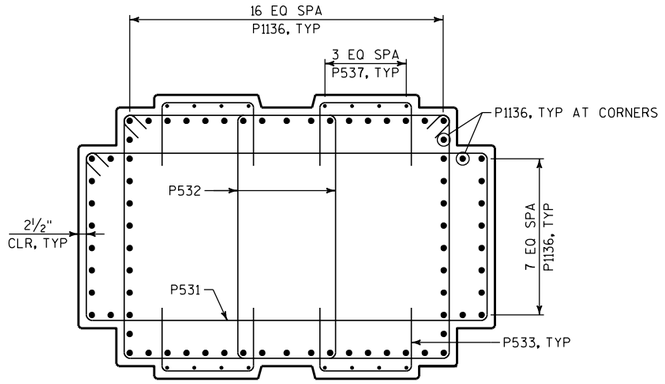
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STATE PROJECT NUMBER

1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

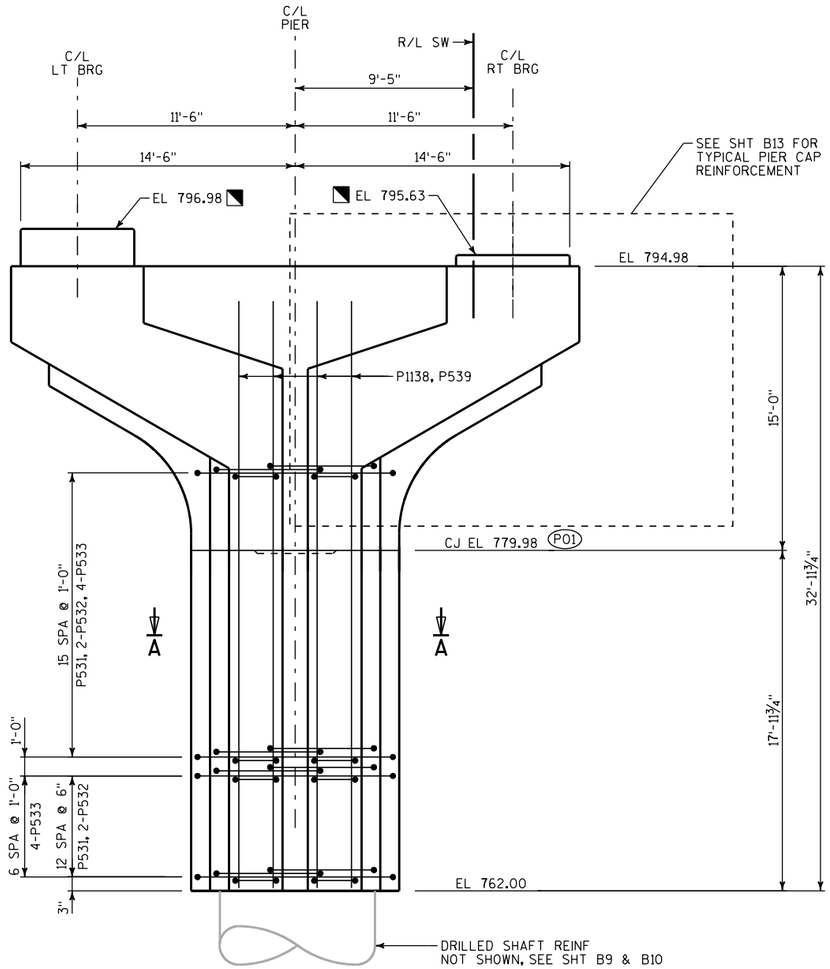
OPTION B
PIER SW01
DETAILS

SHEET B14 OF B26

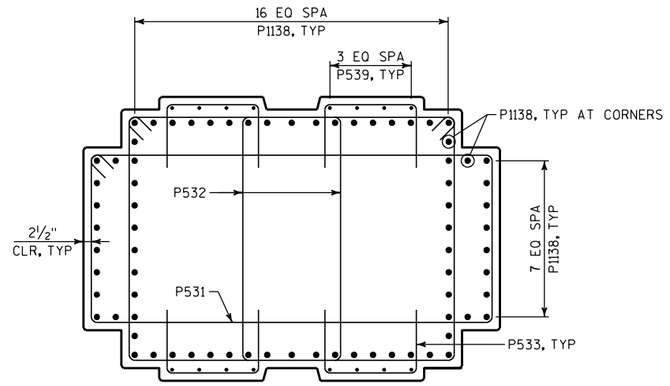
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

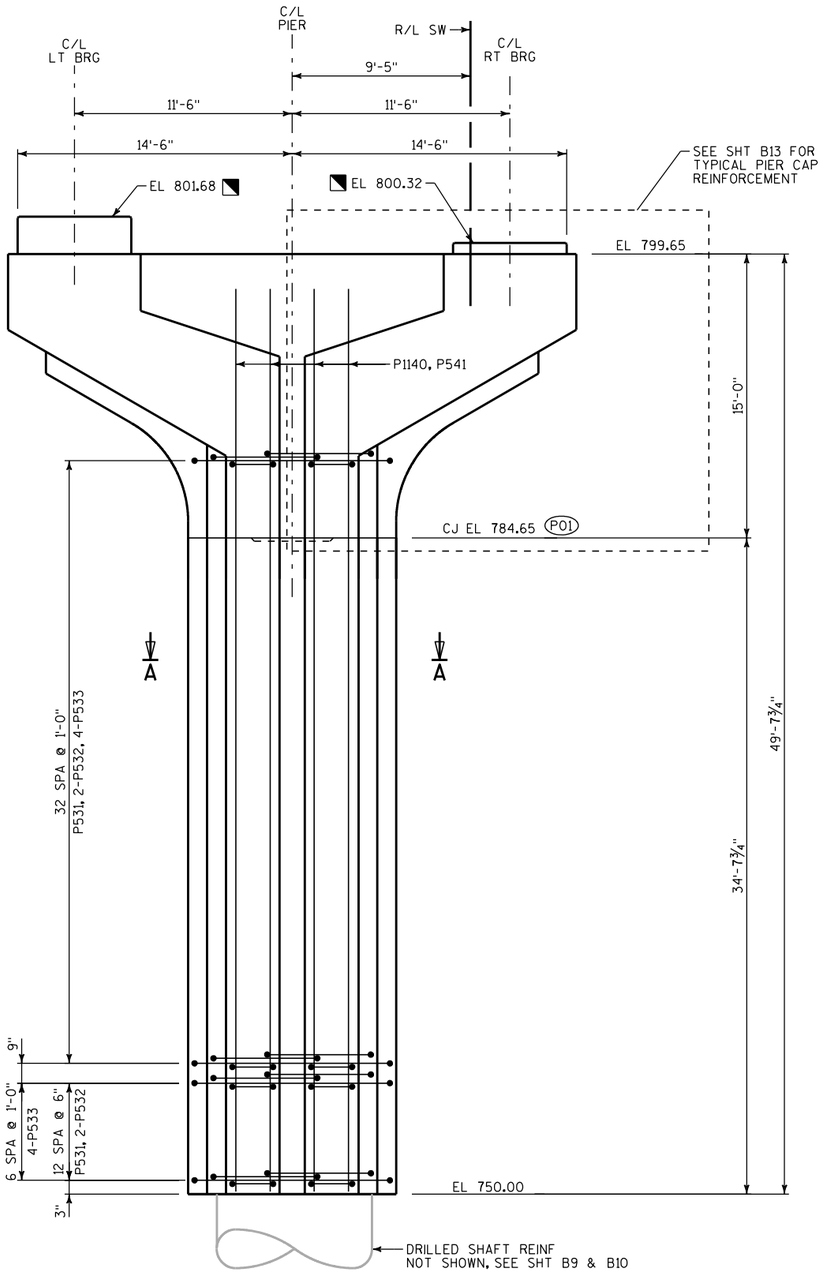
DRAWN BY GLM | PLANS CK'D. WRT

OPTION B
PIER SW02
DETAILS

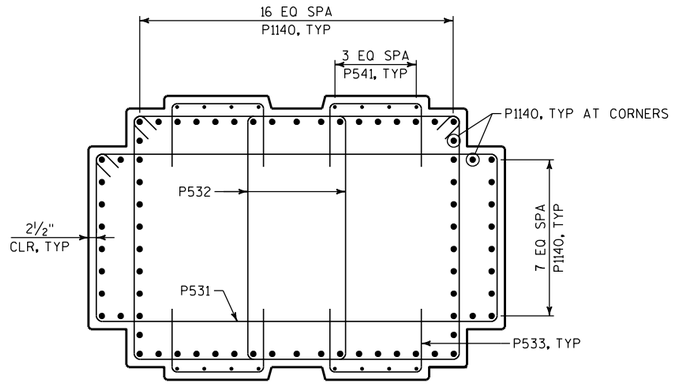
SHEET B15 OF B26

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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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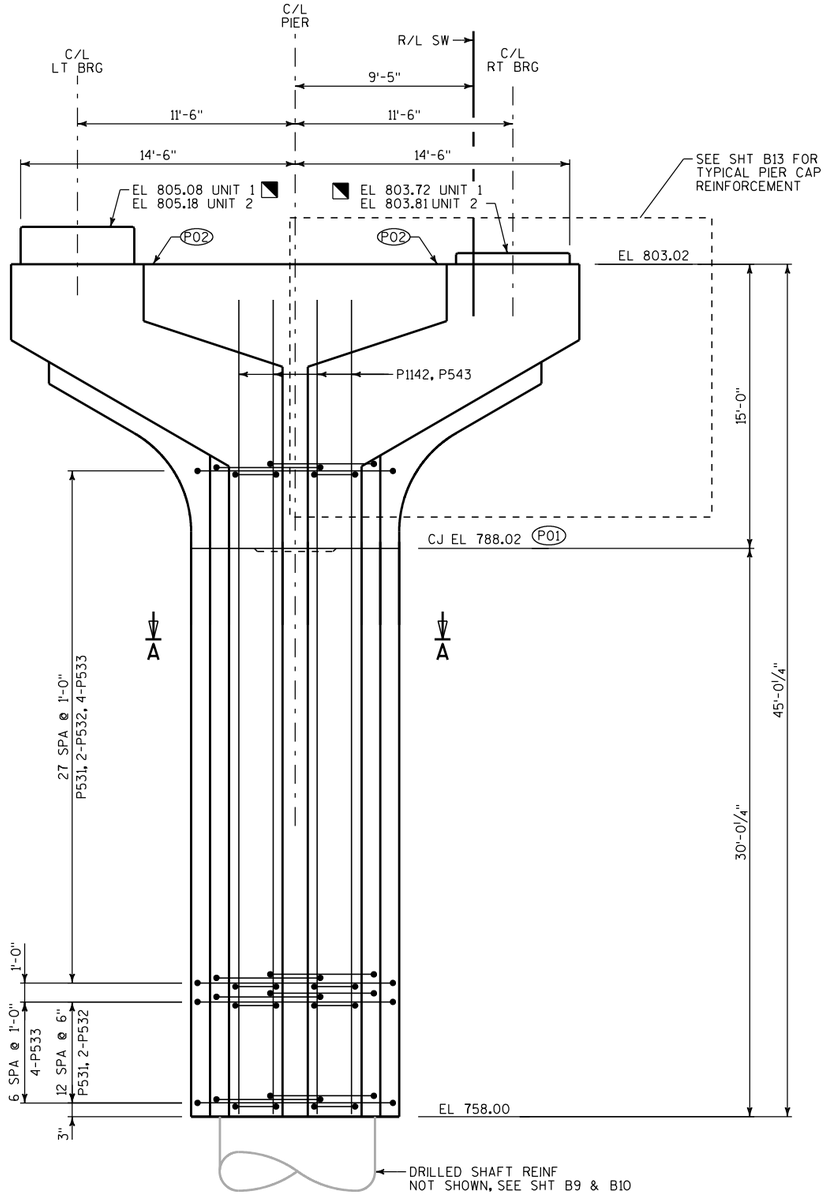
OPTION B
PIER SW03
DETAILS

SHEET B16 OF B26

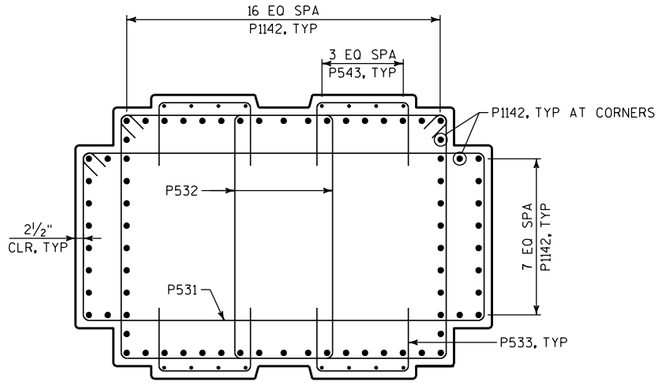
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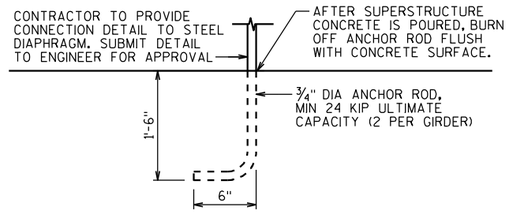
STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A



TEMPORARY HOLD DOWN DEVICE

LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

(P02) TEMPORARY HOLD DOWN DEVICE, SEE DETAIL.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

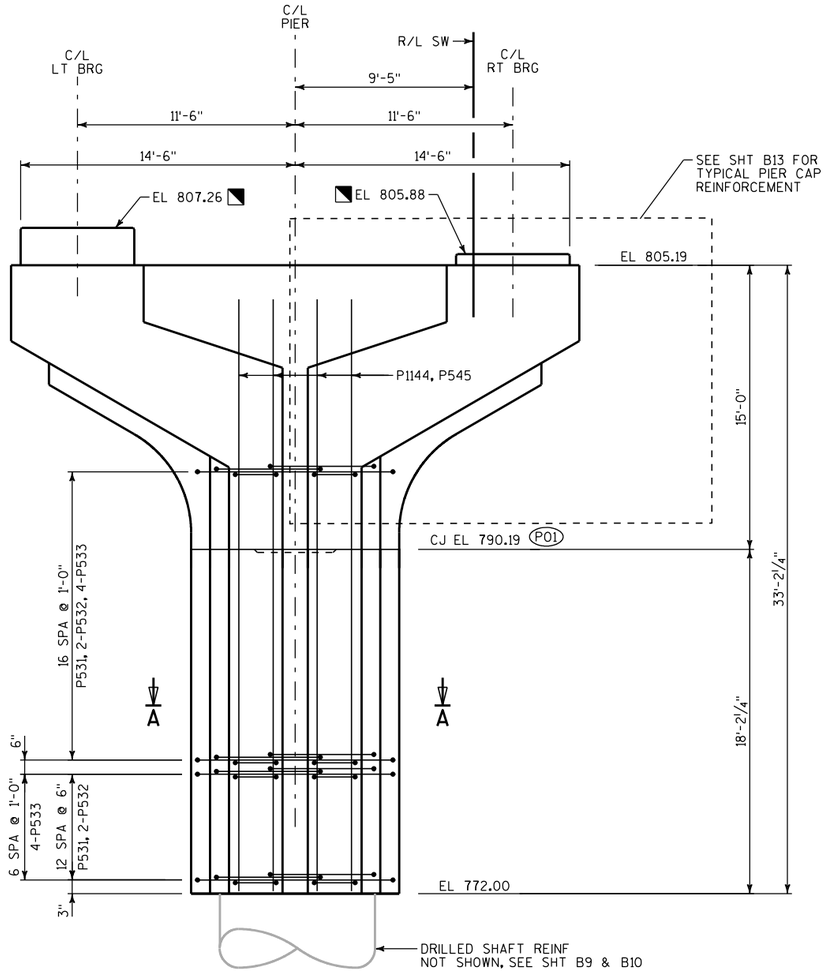
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OPTION B
PIER SW04
DETAILS

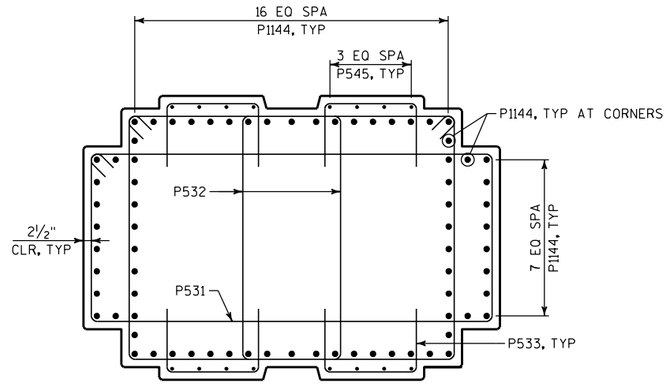
SHEET B17 OF B26

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PLOT BY : MSCGLM
PLOT NAME : B855_080317B_pi
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

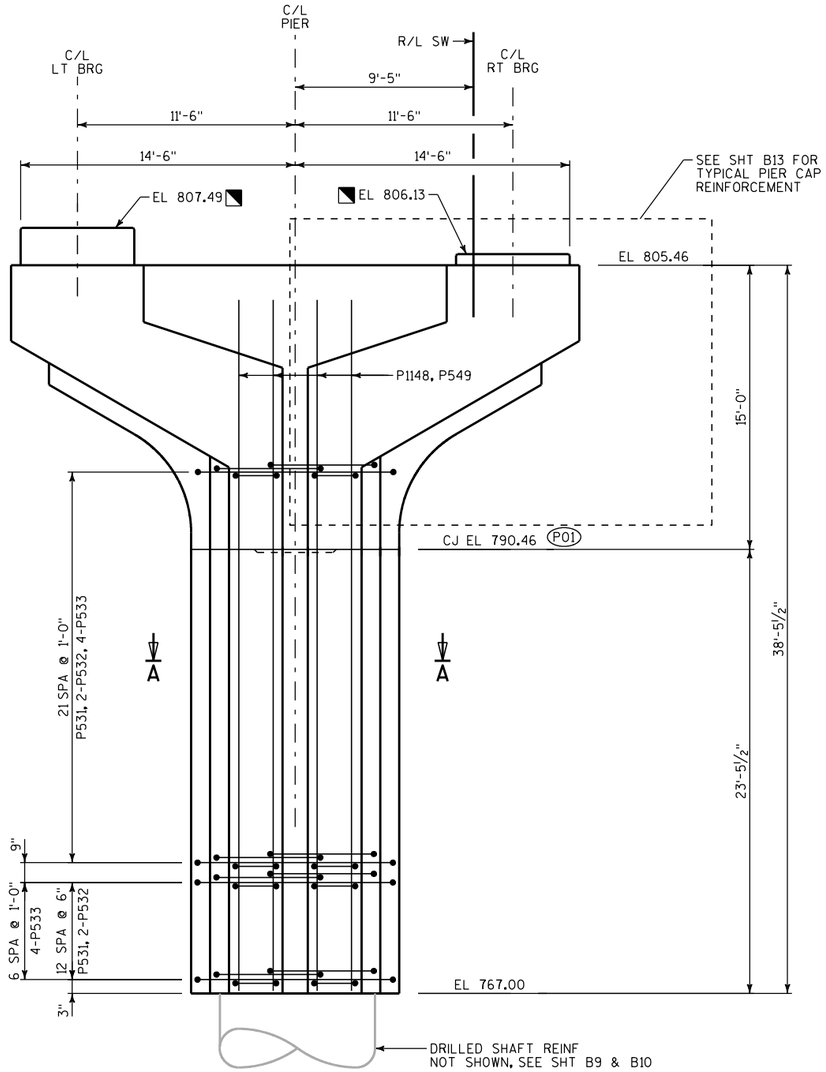
OPTION B
PIER SW05
DETAILS

SHEET B18 OF B26

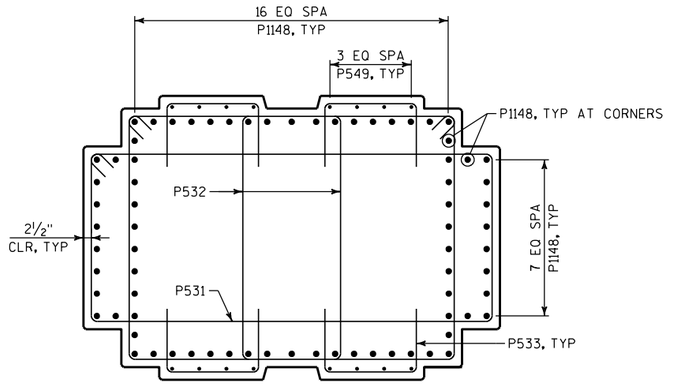
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STATE PROJECT NUMBER
1060-33-80



ELEVATION



SECTION A-A

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

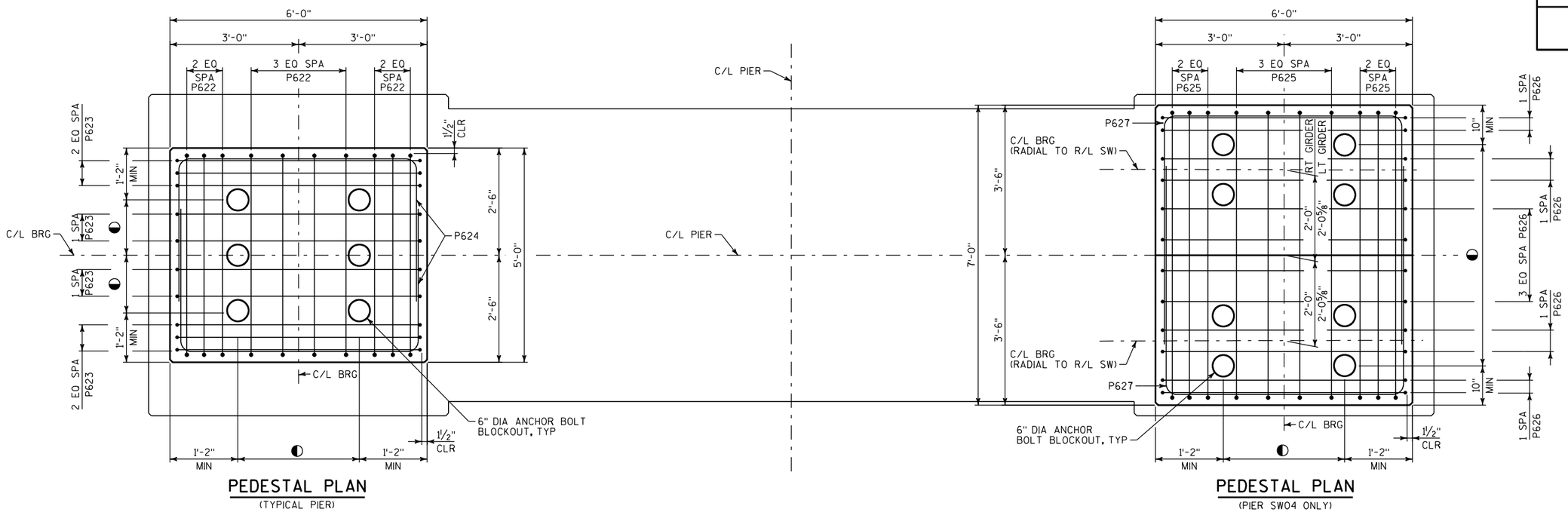
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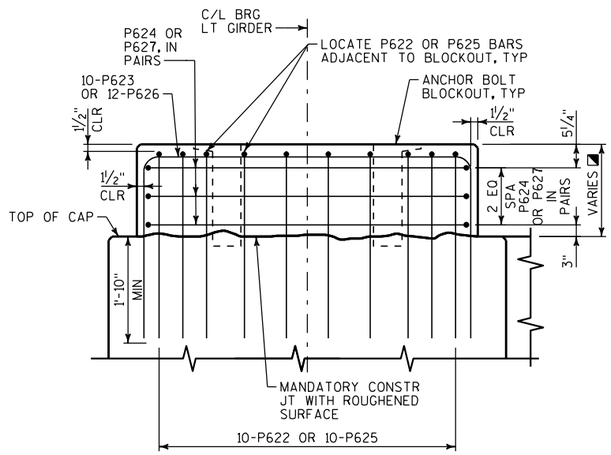
OPTION B
PIER SW07
DETAILS

SHEET B19 OF B26

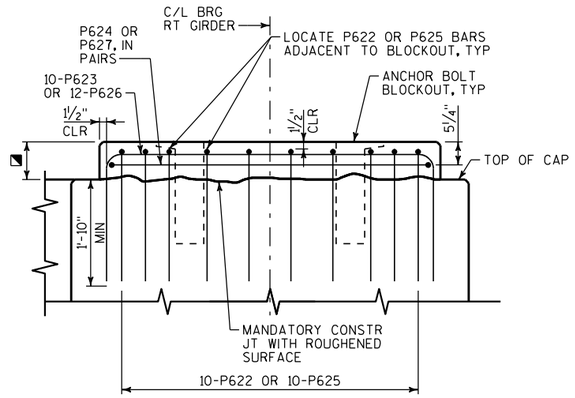
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PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

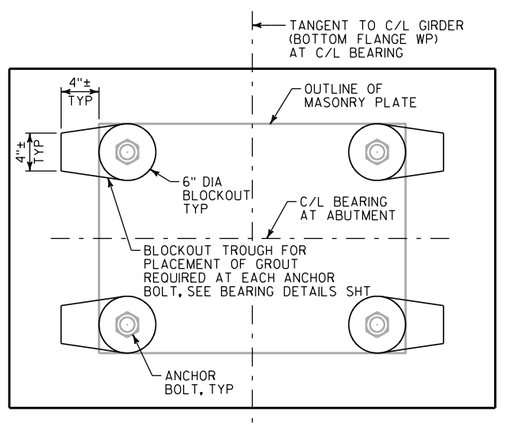




PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS AND BEARING DETAILS SHEET.

LEGEND

◥ DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◐ SEE BEARING LAYOUT SHEETS FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY GLM | PLANS CK'D. WRT

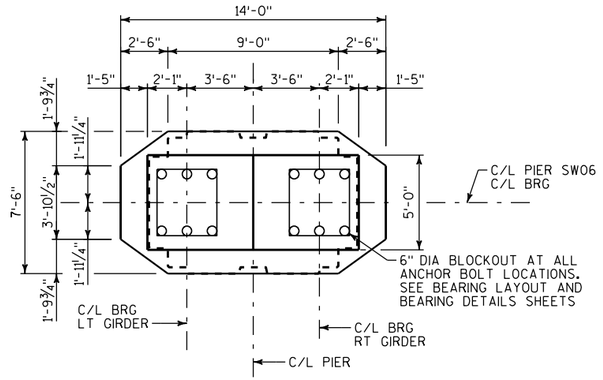
OPTION B
TYPICAL PEDESTAL REINFORCEMENT

SHEET B20 OF B26

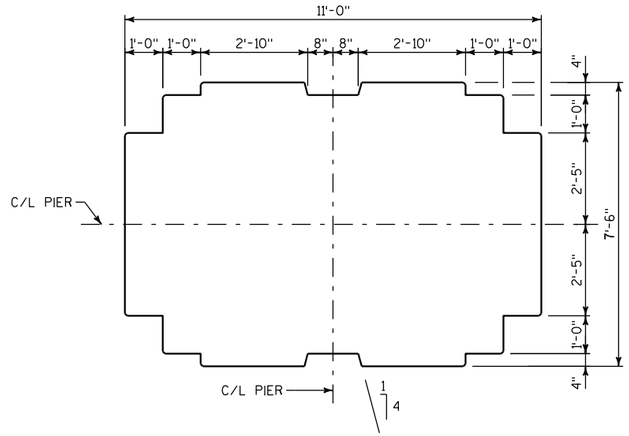
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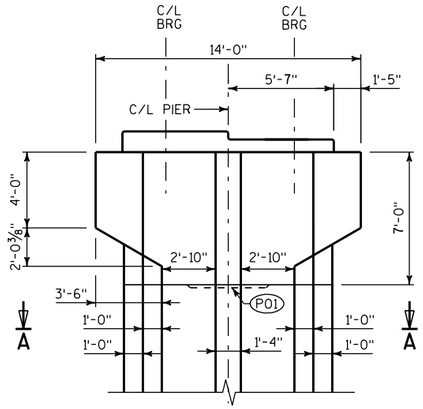
STATE PROJECT NUMBER
1060-33-80



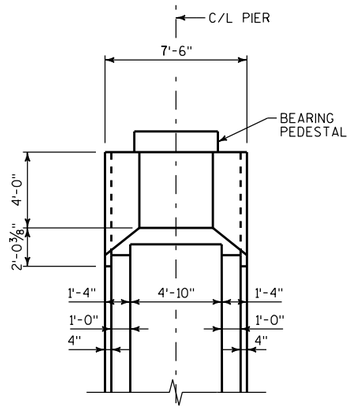
PLAN



SECTION A-A



FRONT ELEVATION



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
PIER SW06
LAYOUT

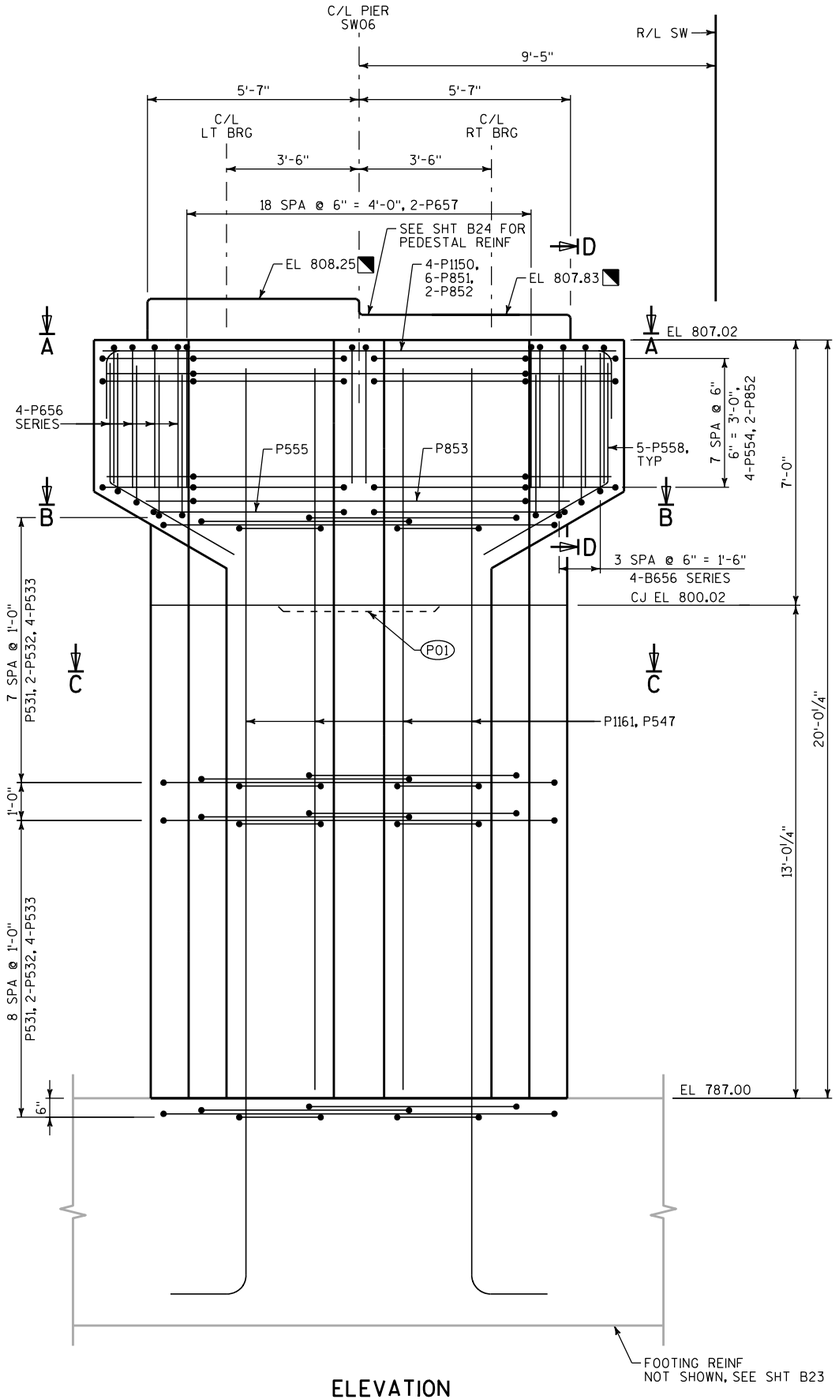
SHEET B21 OF B26

8

8

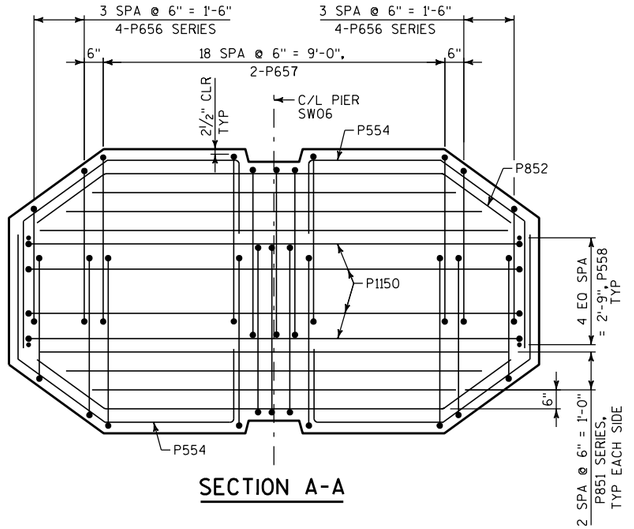
STATE PROJECT NUMBER

1060-33-80

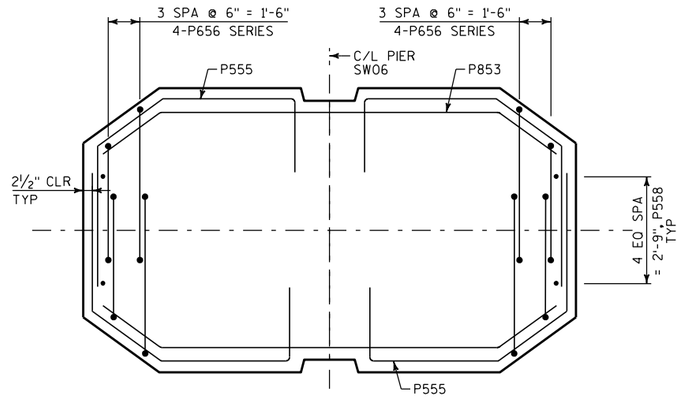


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT C/L OF PIER)

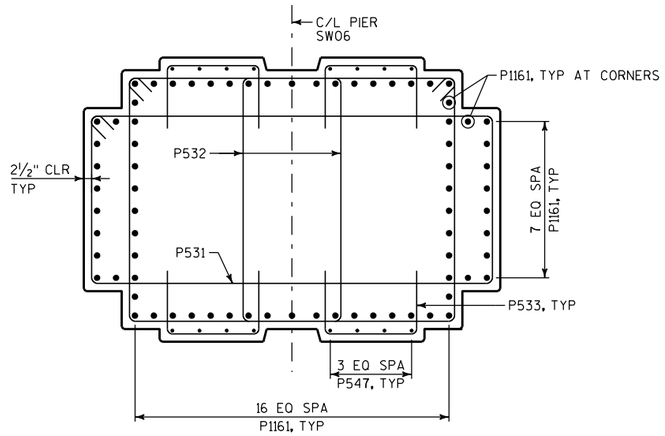


SECTION A-A

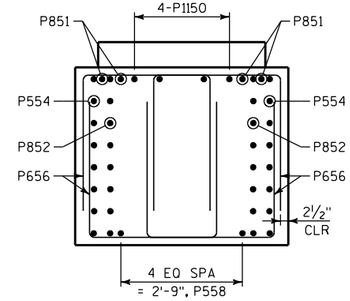


SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT B24

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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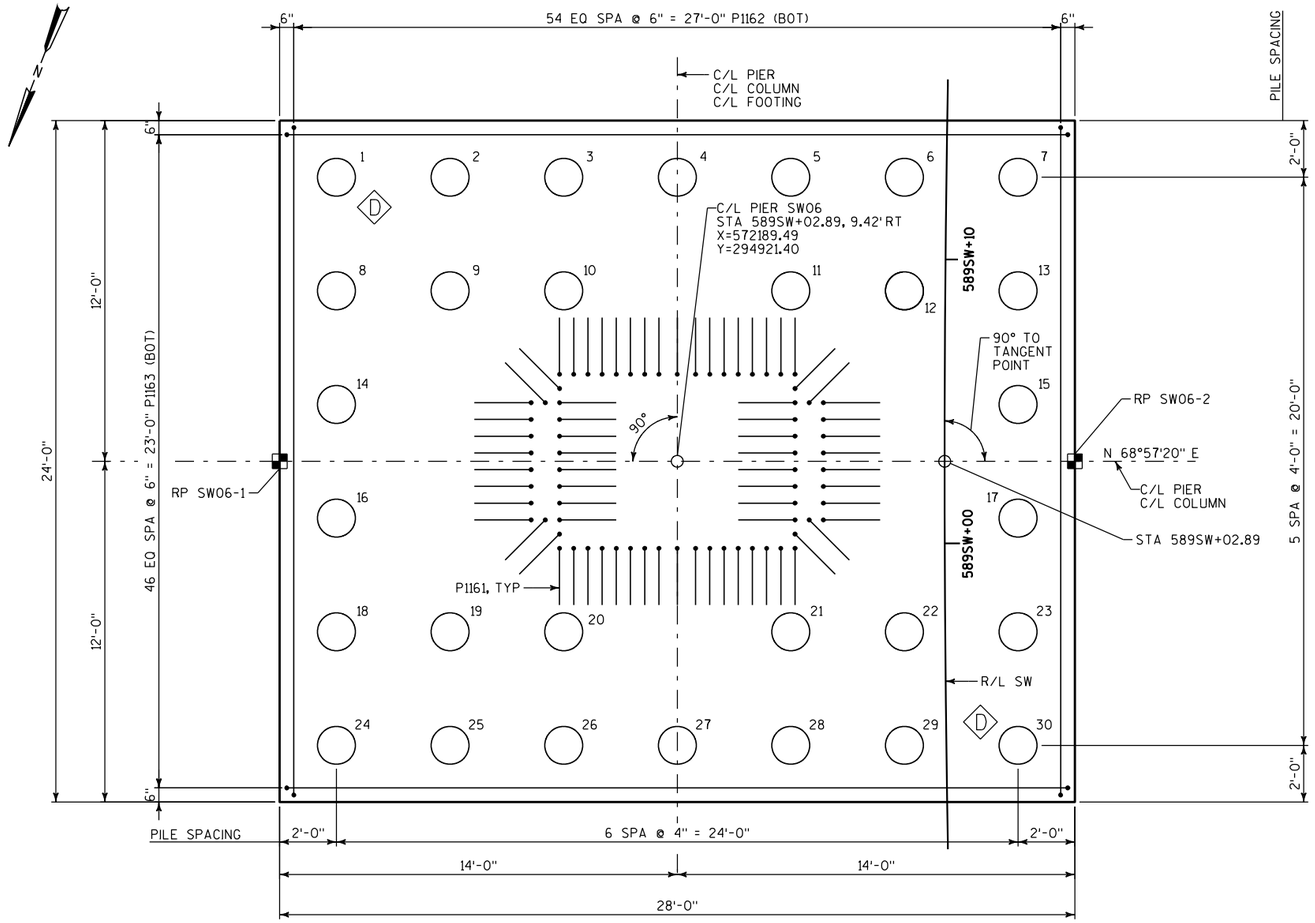
OPTION B
PIER SW06
DETAILS

SHEET B22 OF B26

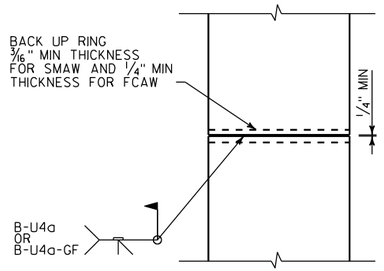
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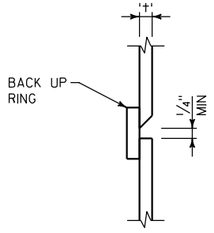
STATE PROJECT NUMBER
1060-33-80



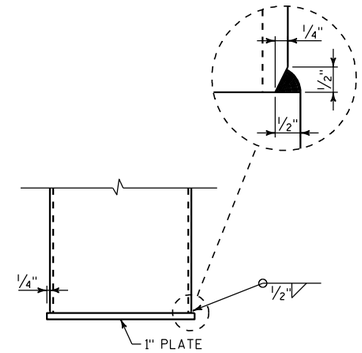
PLAN



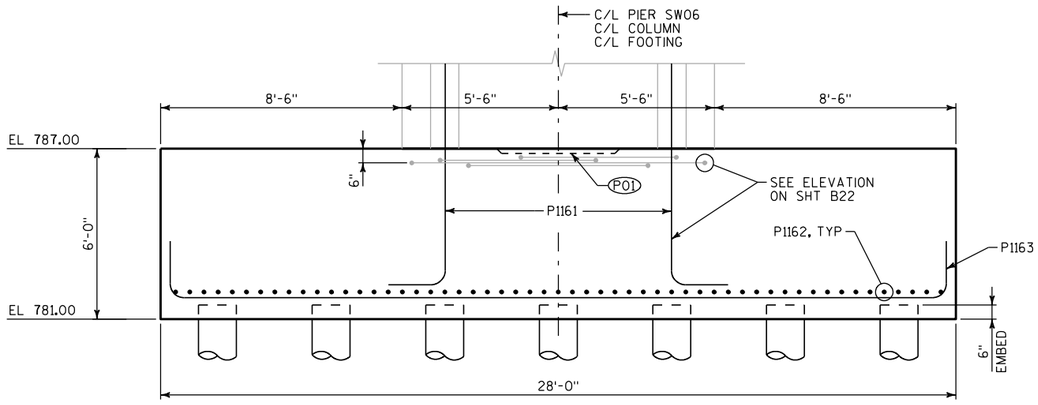
CIP PILE SPLICE DETAIL



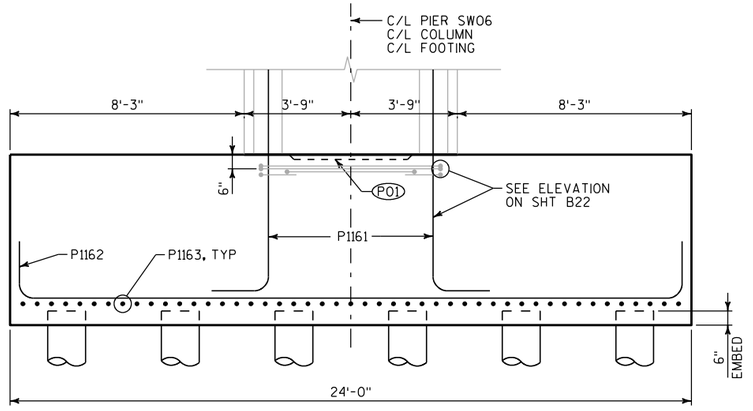
CIP PILE WELD DETAIL



CIP PILE END
PLATE DETAIL



ELEVATION



END VIEW

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BYT THE PDA/ CAPWAP ACCEPTANCE METHOD.

  ESTIMATED PILE LENGTH = 70 FT.
- ■ REFERENCE POINT, SEE SHEET B4.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

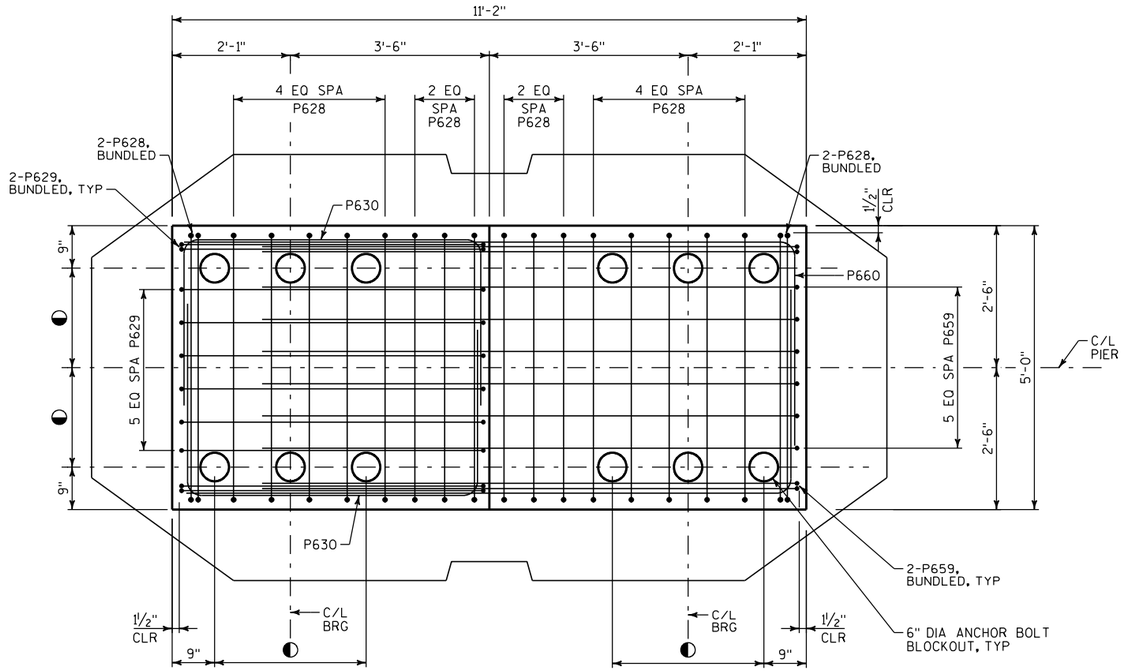
OPTION B
PIER SW06
FOOTING

SHEET B23 OF B26

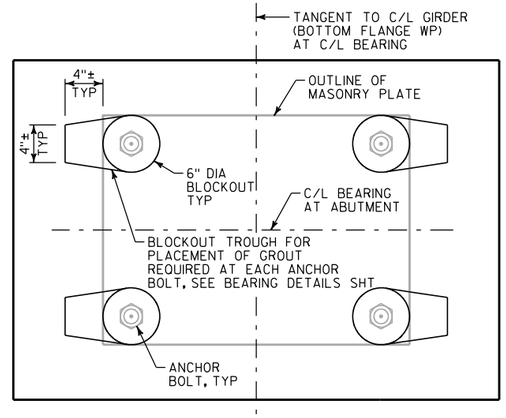
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8

STATE PROJECT NUMBER
1060-33-80

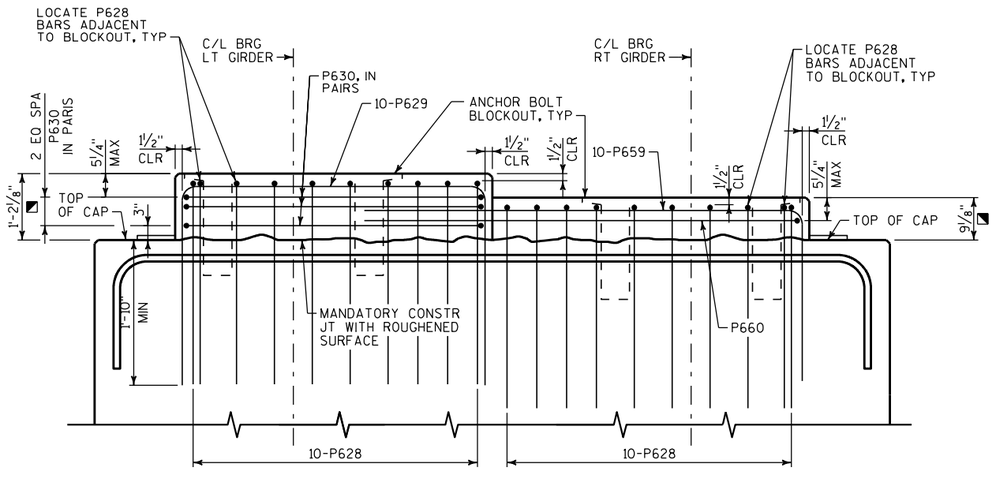


PEDESTAL PLAN



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET



PEDESTAL ELEVATION

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS AND BEARING DETAILS SHEET.

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◐ SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

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OPTION B
PIER SW06
PEDESTAL
REINFORCEMENT

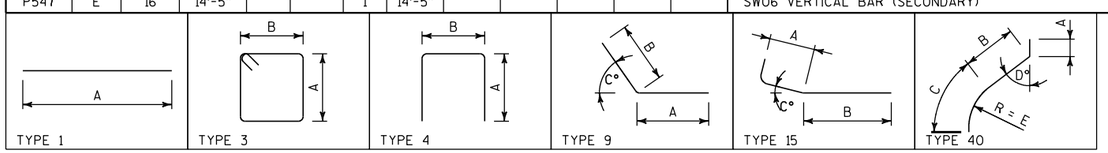
SHEET B24 OF B26

8

8

STATE PROJECT NUMBER
1060-33-80

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	66	32'-8"	X		4	2'-0"	29'-4"					TOP TIE BAR					
P1102	E	66	31'-10"	X		4	2'-0"	28'-6"					BOTTOM TIE BAR					
P803	E	72	29'-4"			1	29'-4"						SKIN STEEL - TOP OF CAP					
P804	E	144	19'-5"		X	1	19'-5"						SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	12 SERIES OF 12	10'-0" TO 28'-10"
P606	E	480	21'-11"	X	X	3	4'-2"	6'-4½"					STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	24 SERIES OF 20	16'-4" TO 27'-6"
P507	E	84	17'-11"	X		4	6'-4"	5'-6"					TIE - TOP CENTER OF CAP					
P508	E	144	18'-9"	X		9	3'-6"	15'-3"	60				OUTSIDE FACE OF PIER CAP - TOP					
P509	E	144	11'-3"	X		4	4'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	288	13'-3"	X		4	5'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	288	10'-3"	X		4	3'-9"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	48	11'-3"	X		4	4'-3"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	84	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"		OUTSIDE FACE OF PIER CAP - BOT					
P514	E	120	16'-5"	X		4	5'-1"	6'-6"					TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	24	18'-1"	X		4	5'-1"	8'-2"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	24	18'-10"	X		4	5'-1"	8'-11"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	24	19'-9"	X		4	5'-1"	9'-10"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	120	11'-4"	X	X	4	2'-4"	6'-10½"					TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	24 SERIES OF 5	7'-10" TO 14'-9"
P519	E	144	5'-0"		X	1	5'-0"						ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	24 SERIES OF 6	4'-2" TO 6'-9"
P520	E	120	4'-11"		X	1	4'-11"						ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	24 SERIES OF 5	4'-5" TO 5'-5"
P521	E	24	11'-6"	X		15	7'-9"	3'-0"	72				ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	100	10'-11"	X		4	3'-3"	4'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	100	11'-9"	X		4	3'-2"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	40	12'-5"	X		4	3'-7"	5'-7"					PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	20	12'-11"	X		4	3'-3"	6'-9"					PEDESTAL REINFORCEMENT - SW04 - TOP FACE					
P626	E	24	11'-9"	X		4	3'-2"	5'-9"					PEDESTAL REINFORCEMENT - SW04 - TOP FACE					
P627	E	8	14'-5"	X		4	4'-7"	5'-7"					PEDESTAL REINFORCEMENT - SW04 - SIDE					
P628	E	20	11'-7"	X		4	3'-7"	4'-9"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE					
P629	E	10	12'-0"	X		4	3'-6"	5'-4"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE					
P630	E	6	11'-10"	X		4	3'-6"	5'-2"					PEDESTAL REINFORCEMENT - SW06 - SIDE					
P531	E	230	30'-7"	X		3	10'-7"	4'-5"					COLUMN TRANSVERSE (MAIN)					
P532	E	460	24'-7"	X		3	6'-5"	5'-7"					COLUMN TRANSVERSE (MAIN)					
P533	E	748	5'-6"	X		4	1'-8"	2'-5"					COLUMN TRANSVERSE (SECONDARY)					
P1136	E	74	25'-7"			1	25'-7"						SW01 VERTICAL BAR (MAIN)					
P537	E	16	21'-11"			1	21'-11"						SW01 VERTICAL BAR (SECONDARY)					
P1138	E	74	31'-0"			1	31'-0"						SW02 VERTICAL BAR (MAIN)					
P539	E	16	27'-5"			1	27'-5"						SW02 VERTICAL BAR (SECONDARY)					
P1140	E	74	47'-8"			1	47'-8"						SW03 VERTICAL BAR (MAIN)					
P541	E	16	44'-1"			1	44'-1"						SW03 VERTICAL BAR (SECONDARY)					
P1142	E	74	43'-1"			1	43'-1"						SW04 VERTICAL BAR (MAIN)					
P543	E	16	39'-5"			1	39'-5"						SW04 VERTICAL BAR (SECONDARY)					
P1144	E	74	31'-3"			1	31'-3"						SW05 VERTICAL BAR (MAIN)					
P545	E	16	27'-7"			1	27'-7"						SW05 VERTICAL BAR (SECONDARY)					
P547	E	16	14'-5"			1	14'-5"						SW06 VERTICAL BAR (SECONDARY)					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION B
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET B25 OF B26

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option B\B855_080325B_pi.dgn PLOT DATE : 02-MAY-2014 12:16 PLOT BY : MSCGLM PLOT NAME : B855_080325B_pi PLOT SCALE : 8:1

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1148	E	74	36'-6"			1	36'-6"						SW07 VERTICAL BAR (MAIN)					
P549	E	16	32'-11"			1	32'-11"						SW07 VERTICAL BAR (SECONDARY)					
P1150	E	4	16'-8"	X		4	2'-0"	13'-4"					SW06 PIER CAP - TOP TIE BAR					
P851	E	6	12'-3"		X	1	12'-3"						SW06 PIER CAP - TOP FACE BAR (SERIES)	A	11'-4"	13'-2"	2 SERIES OF 3	11'-4" TO 13'-2"
P852	E	18	14'-3"	X		24	2'-3"	9'-9"	36				SW06 PIER CAP - HORIZ SKIN STEEL					
P853	E	2	13'-1"	X		24	1'-8"	9'-9"	36				SW06 PIER CAP - HORIZ SKIN STEEL - BOT					
P554	E	32	10'-6"	X		41	3'-3"	2'-10"	3'-5"	1'-3"	126	144	SW06 PIER CAP - FACE SKIN STEEL					
P555	E	4	10'-3"	X		41	3'-7"	2'-3"	3'-5"	1'-3"	126	144	SW06 PIER CAP - FACE SKIN STEEL - BOT					
P656	E	32	10'-4"	X	X	4	3'-7"	3'-6"					SW06 PIER CAP - SHEAR STEEL - EDGE (SERIES)	B	3'-0"	4'-0"	4 SERIES OF 4	9'-10" TO 10'-10"
P657	E	38	11'-2"	X		4	3'-7"	4'-4"					SW06 PIER CAP - SHEAR STEEL - CENTER					
P558	E	10	7'-0"	X		9	3'-2"	3'-10"	70				SW06 PIER CAP - OUTSIDE FACE					
P659	E	10	10'-7"	X		8	7'-9"	3'-0"					PEDESTAL REINFORCEMENT - SW06 - TOP FACE - RIGHT SIDE					
P660	E	2	11'-1"	X		8	7'-9"	3'-6"					PEDESTAL REINFORCEMENT - SW06 - SIDE - RIGHT SIDE					
P1161	E	74	24'-9"	X		8	23'-1"	2'-0"					SW06 VERTICAL BAR (MAIN)					
P1162	U	55	25'-0"	X		8	23'-4"	2'-0"					FOOTING BOTTOM - HORIZ					
P1163	U	47	29'-2"	X		8	27'-6"	2'-0"					FOOTING BOTTOM - HORIZ					

BAR MARK BREAKDOWN

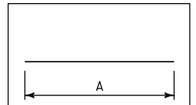
MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL NO	WEIGHT
P1101	11	11	11	11	11	0	11	66	11455
P1102	11	11	11	11	11	0	11	66	11163
P803	12	12	12	12	12	0	12	72	5639
P804	24	24	24	24	24	0	24	144	7465
P606	80	80	80	80	80	0	80	480	15801
P507	14	14	14	14	14	0	14	84	1570
P508	24	24	24	24	24	0	24	144	2816
P509	24	24	24	24	24	0	24	144	1690
P510	48	48	48	48	48	0	48	288	3980
P511	48	48	48	48	48	0	48	288	3079
P512	8	8	8	8	8	0	8	48	563
P513	14	14	14	14	14	0	14	84	1263
P514	20	20	20	20	20	0	20	120	2055
P515	4	4	4	4	4	0	4	24	453
P516	4	4	4	4	4	0	4	24	471
P517	4	4	4	4	4	0	4	24	494
P518	20	20	20	20	20	0	20	120	1418
P519	24	24	24	24	24	0	24	144	751
P520	20	20	20	20	20	0	20	120	615
P521	4	4	4	4	4	0	4	24	288
P622	20	20	20	0	20	0	20	100	1640
P623	20	20	20	0	20	0	20	100	1765
P624	8	8	8	0	8	0	8	40	746
P625	0	0	0	20	0	0	0	20	388
P626	0	0	0	24	0	0	0	24	424
P627	0	0	0	8	0	0	0	8	173
P628	0	0	0	0	0	20	0	20	348
P629	0	0	0	0	0	10	0	10	180
P630	0	0	0	0	0	6	0	6	107
P531	24	29	46	41	30	25	35	230	7337
P532	48	58	92	82	60	50	70	460	11795
P533	72	92	160	140	96	72	116	748	4291
P1136	74	0	0	0	0	0	0	74	10058

BAR MARK BREAKDOWN

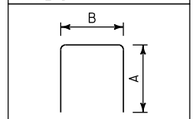
MARK	PIER SW01	PIER SW02	PIER SW03	PIER SW04	PIER SW05	PIER SW06	PIER SW07	TOTAL NO	WEIGHT
P537	16	0	0	0	0	0	0	16	366
P1138	0	74	0	0	0	0	0	74	12188
P539	0	16	0	0	0	0	0	16	458
P1140	0	0	74	0	0	0	0	74	18741
P541	0	0	16	0	0	0	0	16	736
P1142	0	0	0	74	0	0	0	74	16939
P543	0	0	0	16	0	0	0	16	658
P1144	0	0	0	0	74	0	0	74	12286
P545	0	0	0	0	16	0	0	16	460
P547	0	0	0	0	0	16	0	16	241
P1148	0	0	0	0	0	0	74	74	14350
P549	0	0	0	0	0	0	16	16	549
P1150	0	0	0	0	0	4	0	4	354
P851	0	0	0	0	0	6	0	6	196
P852	0	0	0	0	0	18	0	18	685
P853	0	0	0	0	0	2	0	2	70
P554	0	0	0	0	0	32	0	32	350
P555	0	0	0	0	0	4	0	4	43
P656	0	0	0	0	0	32	0	32	497
P657	0	0	0	0	0	38	0	38	637
P558	0	0	0	0	0	10	0	10	73
P659	0	0	0	0	0	10	0	10	159
P660	0	0	0	0	0	2	0	2	33
P1161	0	0	0	0	0	74	0	74	9731
P1162	0	0	0	0	0	55	0	55	7305
P1163	0	0	0	0	0	47	0	47	7283
TOT WEIGHT	25835	28587	37222	34966	28794	30785	31478		217668

STATE PROJECT NUMBER

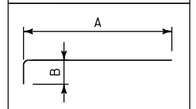
1060-33-80



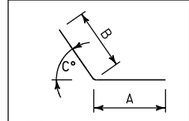
TYPE 1



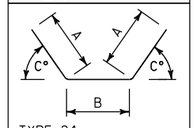
TYPE 4



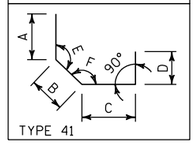
TYPE 8



TYPE 9



TYPE 24



TYPE 41

NOTES

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E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-855

DRAWN BY PAK | PLANS CK'D. WRT

OPTION B
PIER REINFORCEMENT
SCHEDULE (2 OF 2)

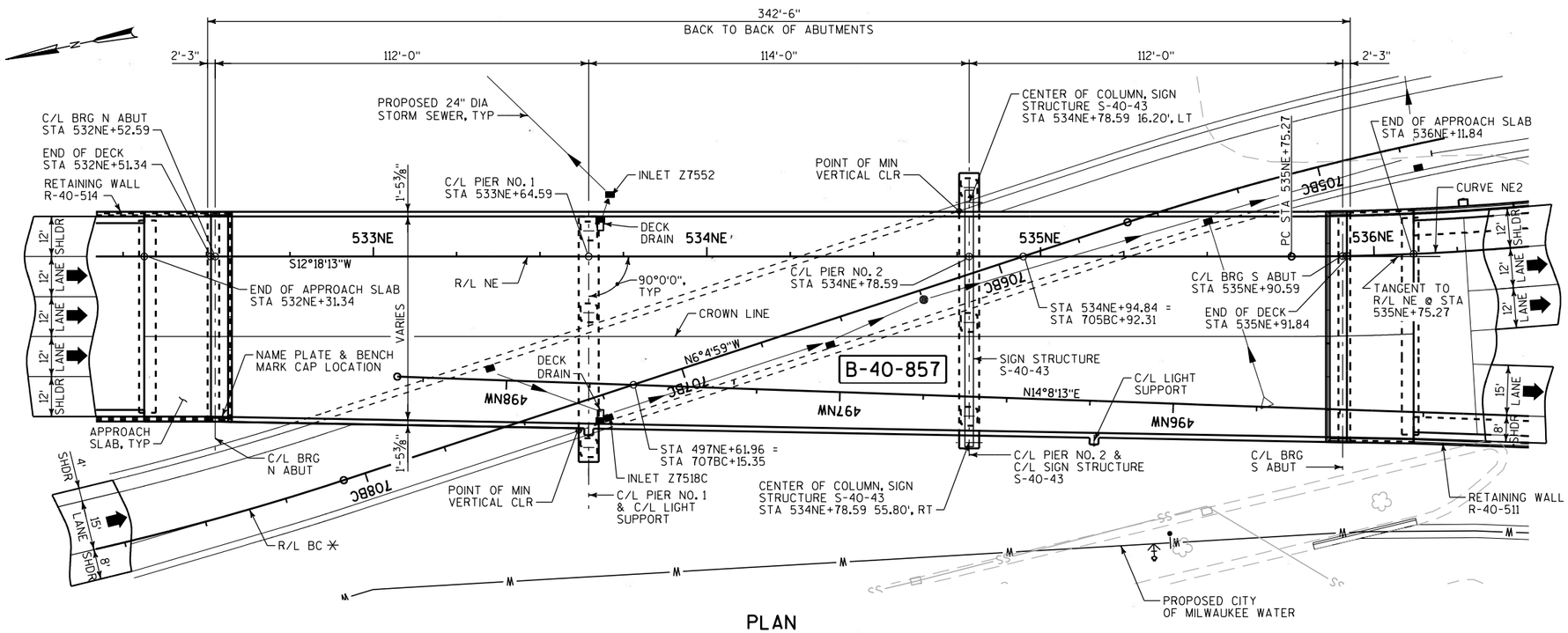
SHEET B26 OF B26

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-855\cds\cds Option B\B855_080326B_pi.dgn PLOT DATE : 02-MAY-2014 12:16 PLOT BY : MSCGLM PLOT NAME : B855_080326B_pi PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



PLAN

(3 SPAN - 45W" PRESTRESSED GIRDERS W/ STRADDLE BENT PIERS AND INTEGRAL PIER CAPS)

✳ RAMP BC WILL BE CONSTRUCTUED IN A FUTURE CONTRACT (PROJ ID 1060-33-80) AND NOT INCLUDED IN THIS CONTRACT (PROJ ID 1060-33-81)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.19
OPERATING RATING FACTOR: RF = 1.55
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- 45W-INCH PRESTRESSED GIRDERS ..... f'c = 8,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi

TRAFFIC DATA

RAMP BC
EXISTING ADT = N/A
FUTURE ADT = 10,290 (2035)
RDS = 50 MPH

RAMP NE
EXISTING ADT = 28,800 (2011)
FUTURE ADT = 29,010 (2035)
RDS = 50 MPH

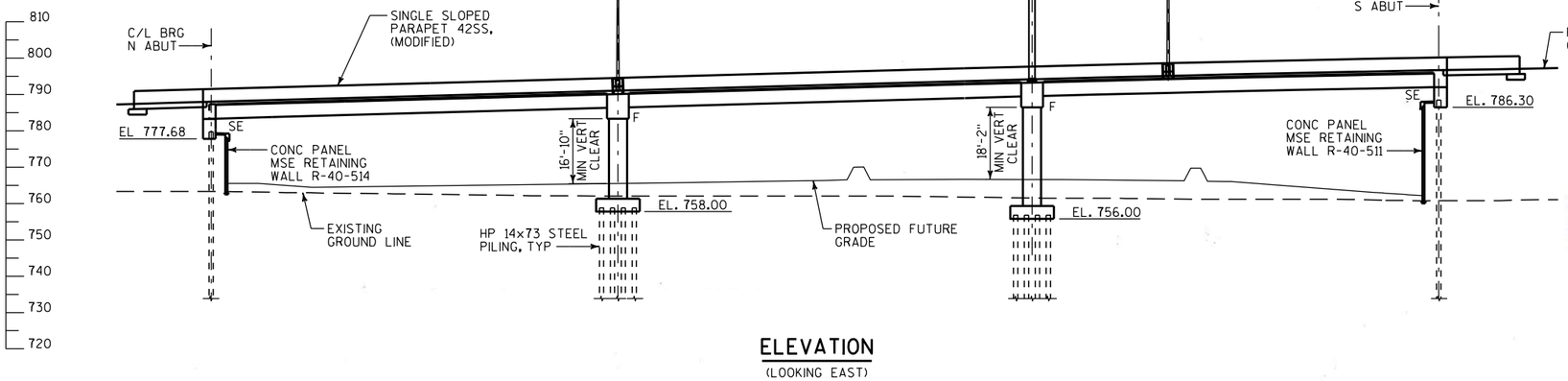
FOUNDATION DATA

ABUTMENTS AND PIER SHALL BE SUPPORTED ON HP 14x73 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:

NORTH ABUTMENT:	75 FEET
PIER 1:	65 FEET
PIER 2:	65 FEET
SOUTH ABUTMENT:	60 FEET



ELEVATION

(LOOKING EAST)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS
3. GENERAL NOTES & QUANTITIES
4. PROFILE GRADE LINES
5. SUBSURFACE EXPLORATION (1 OF 2)
6. SUBSURFACE EXPLORATION (2 OF 2)
7. CONSTRUCTION STAGING
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS
10. SOUTH ABUTMENT
11. SOUTH ABUTMENT DETAILS
12. ABUTMENT JOINT & REINFORCEMENT
13. COLUMN AND FOOTING DETAILS
14. PIER 1 (PHASE 1)
15. PIER 1 (PHASE 2)
16. PIER 2 (PHASE 1)
17. PIER 2 (PHASE 2)
18. 45W" PRESTRESSED GIRDER
19. 45W" PRESTRESSED GIRDER DETAILS
20. SUPERSTRUCTURE FRAMING PLAN
21. SUPERSTRUCTURE REINFORCEMENT
22. SUPERSTRUCTURE CROSS SECTIONS
23. SUPERSTRUCTURE DETAILS (1 OF 2)
24. SUPERSTRUCTURE DETAILS (2 OF 2)
25. STEEL DIAPHRAGM
26. STRUCTURAL APPROACH SLAB
27. STRUCTURAL APPROACH SLAB DETAILS
28. SINGLE SLOPPED PARAPET
29. LIGHT SUPPORT DETAILS (1 OF 2)
30. LIGHT SUPPORT DETAILS (2 OF 2)
31. DOWNSPOUT DETAILS
32. FLOOR DRAIN SPECIAL DETAILS
33. FLOOR DRAIN TYPE 'WF'
34. AESTHETIC DETAILS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (262) 548-8703

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/02/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
MARK A. MADAY
E-25925
MILWAUKEE
WI
PROFESSIONAL ENGINEER
May 1, 2014

STRUCTURE B-40-857

RAMP NE BRIDGE OVER RAMP BC

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ASW	MAM	TEK	MAM

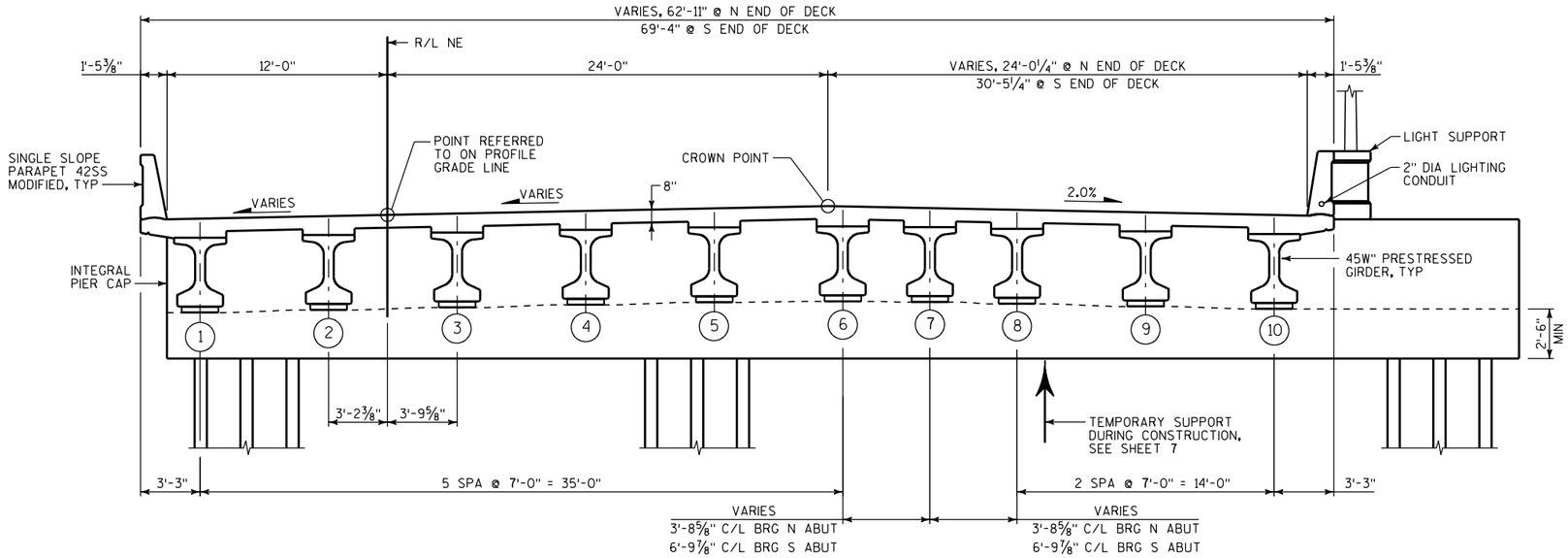
GENERAL PLAN & ELEVATION

SHEET 1 OF 34

8

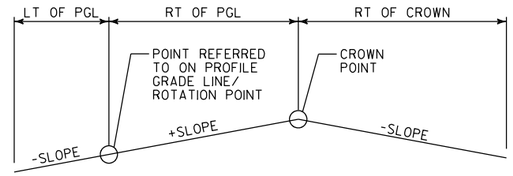
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STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION THRU RAMP NE

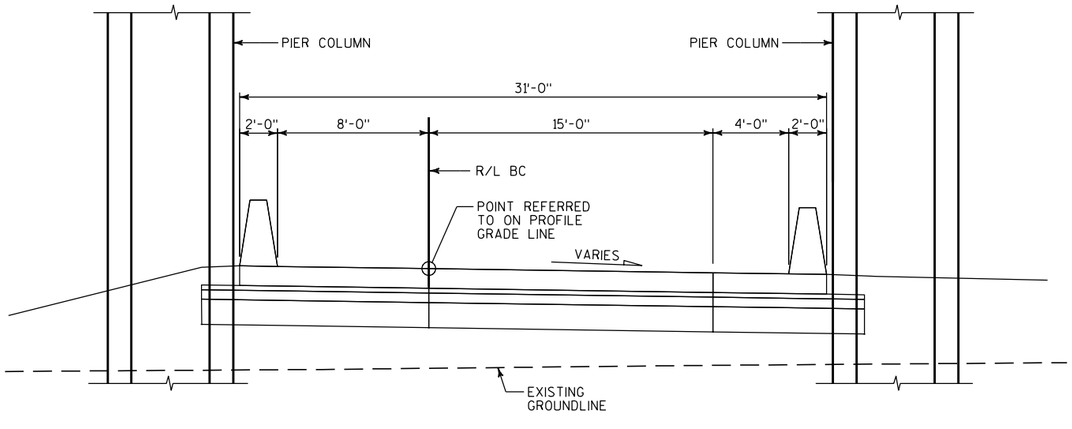
VALUES FOR VARYING DISTANCES GIVEN AT NORTH AND SOUTH ENDS OF DECK
(LOOKING SOUTH AT PIER 1)



SUPERELEVATION DETAIL

SUPERELEVATION TABLE

STATION	LT OF PGL	RT OF PGL	RT OF CROWN
532NE+00.00	-2.00%	+2.00%	-2.00%
534NE+79.00	-2.00%	+2.00%	-2.00%
535NE+75.00	-4.00%	+4.00%	-2.00%
536NE+71.00	-6.00%	+6.00%	-2.00%



TYPICAL SECTION THRU RAMP BC

ROADWAY CONSTRUCTED IN FUTURE CONTRACT
(LOOKING UPSTATION)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY TEK | PLANS CK'D. MAM

TYPICAL SECTIONS

SHEET 2 OF 34

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	NORTH APPROACH SLAB	NORTH ABUTMENT	PIER 1	PIER 2	SOUTH ABUTMENT	SOUTH APPROACH SLAB	SUPERSTRUCTURE	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-857	LS	---	---	---	---	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	---	93	84	84	129	---	---	390
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	209	---	---	---	---	232	---	441
502.0100	CONCRETE MASONRY BRIDGES	CY	16	44	166	187	53	18	---	484
502.3200	PROTECTIVE SURFACE TREATMENT	SY	150	---	---	---	---	170	2710	3030
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	---	---	---	---	---	---	3330	3330
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	---	---	5290	6980	---	---	---	12270
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	11960	3780	55700	62320	4160	13200	211640	362760
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	---	10	---	---	10	---	---	20
506.4000.0007	STEEL DIAPHRAGMS B-40-857	EACH	---	---	---	---	---	---	54	54
514.0450	FLOOR DRAINS TYPE WF	EACH	---	---	---	---	---	---	2	2
514.2608	DOWNSPOUT 8-INCH	LF	---	---	---	---	---	---	96	96
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	11	---	---	13	---	---	24
550.0500	PILE POINTS	EACH	---	14	36	48	12	---	---	110
550.1140	PILING STEEL HP 14-INCH X 73 LB	LF	---	1050	2340	3120	720	---	---	7230
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	---	---	---	---	6	6	18
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	---	---	---	6	---	---	3	9
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	14	---	---	---	---	14	348	376
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	---	---	---	---	---	---	2	2
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	---	---	---	---	---	---	3	3
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES STRUCTURES	EACH	---	---	---	---	---	---	2	2
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	68	---	79.5	62.5	---	75	732.5	1017.5
SPV.0060.4100	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH	---	---	---	2	---	---	---	2
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	---	2	3	3	2	---	---	10
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	---	2	3	3	2	---	---	10
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	---	---	---	---	---	---	2240	2240
SPV.0090.4430	PILING SLEEVES	LF	---	244	---	---	307	---	---	551
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1200	---	---	---	---	1460	21500	24160
	NON-BID ITEMS									
	EXPANDED POLYSTYRENE	SIZE								3/4"
	PREFORMED JOINT FILLER	SIZE								3/4", 1"
	NON-BITUMINOUS JOINT FILLER	SIZE								3/4"
	NAME PLATE	EACH								1

ALL ITEMS ARE CATEGORY 2080

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE $\frac{3}{4}$" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD). COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE OR MSE BACKFILL SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

THE CONCRETE QUANTITY FOR APPROACH SLAB FOOTINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR THE APPROACH SLABS SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER PER AWS D1.1.

INSTALL PILE POINTS ON ALL DRIVEN PILES.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF BRIDGE B-40-857 ABUTMENTS WITH RETAINING WALLS R-40-511 AND R-40-514.

THE DESIGN SPECIFICATION USED WAS AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012.

TEMPORARY SHORE TOWERS ARE INCIDENTAL TO CONCRETE MASONRY BRIDGES. ESTIMATED DEMANDS ARE SHOWN ON SHEET 7. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE SHORE TOWERS.

THE QUANTITY "BACKFILL STRUCTURE" IS CALCULATED FOR THE PIER FOOTINGS TO RETURN THE SOIL LEVEL TO THE EXISTING GRADE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

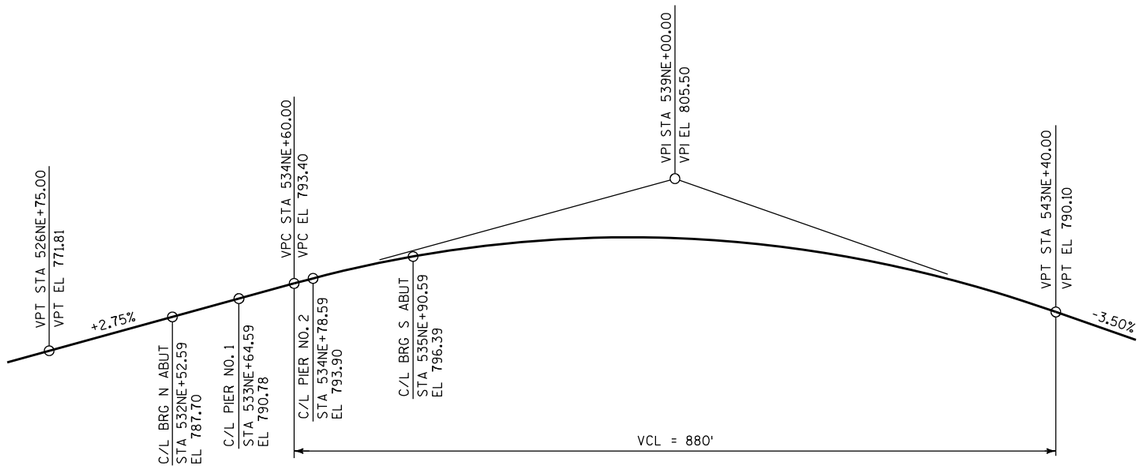
DRAWN BY ASW | PLANS CK'D. MAM

GENERAL NOTES & QUANTITIES

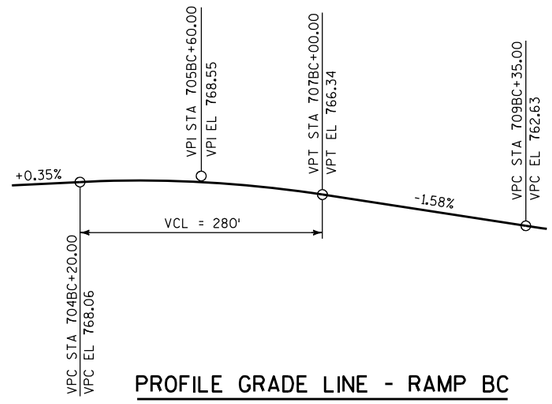
SHEET 3 OF 34

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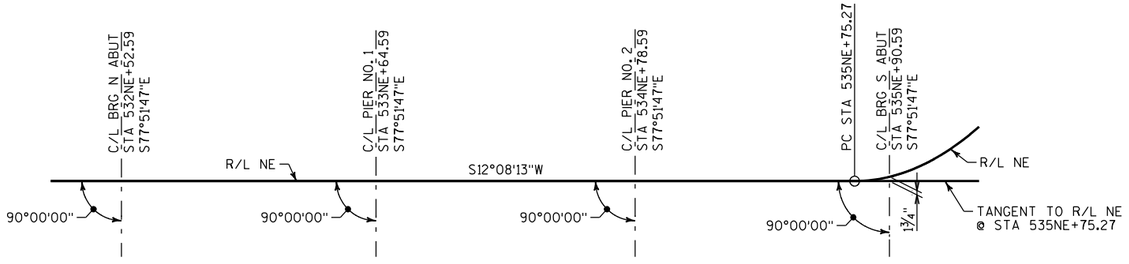
STATE PROJECT NUMBER
1060-33-80



PROFILE GRADE LINE - RAMP NE



PROFILE GRADE LINE - RAMP BC



LAYOUT DIAGRAM

HORIZONTAL CURVE DATA

R/L NE CURVE NE2

P.I. = 546NE+38.67
X = 572282.83
Y = 295594.76
Δ = 103°43'15"
D = 6°51'42"
T = 1063.40'
L = 1511.58'
R = 835.00'
P.C. = 535NE+75.27
P.T. = 550NE+86.84

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

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PROFILE GRADE LINES

SHEET 4 OF 34

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-857\cds\B857_080104_pg.dgn PLOT DATE : 30-APR-2014 12:38 PLOT BY : MSCASW PLOT NAME : B857_080104_pg PLOT SCALE : 100:1

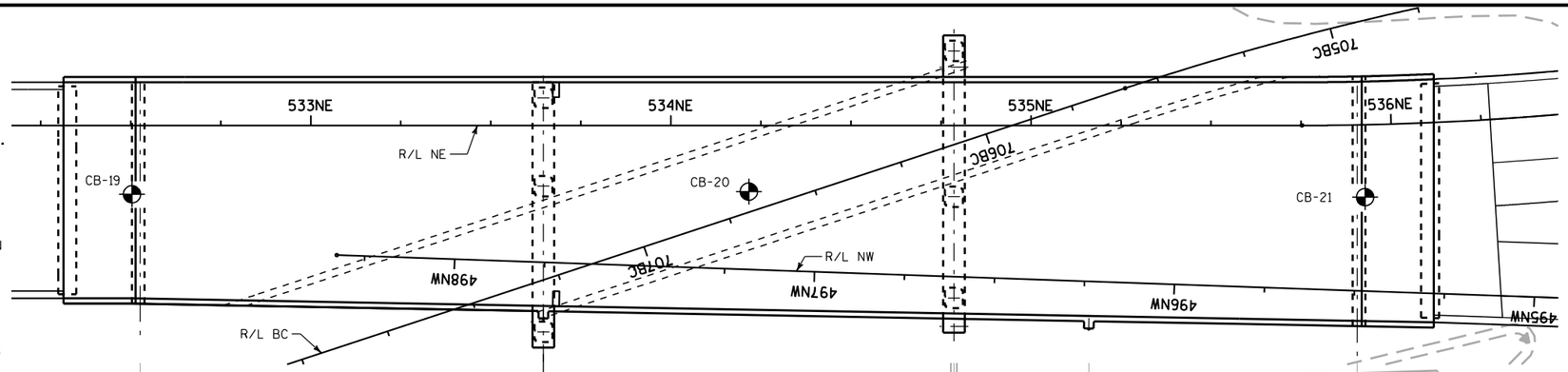
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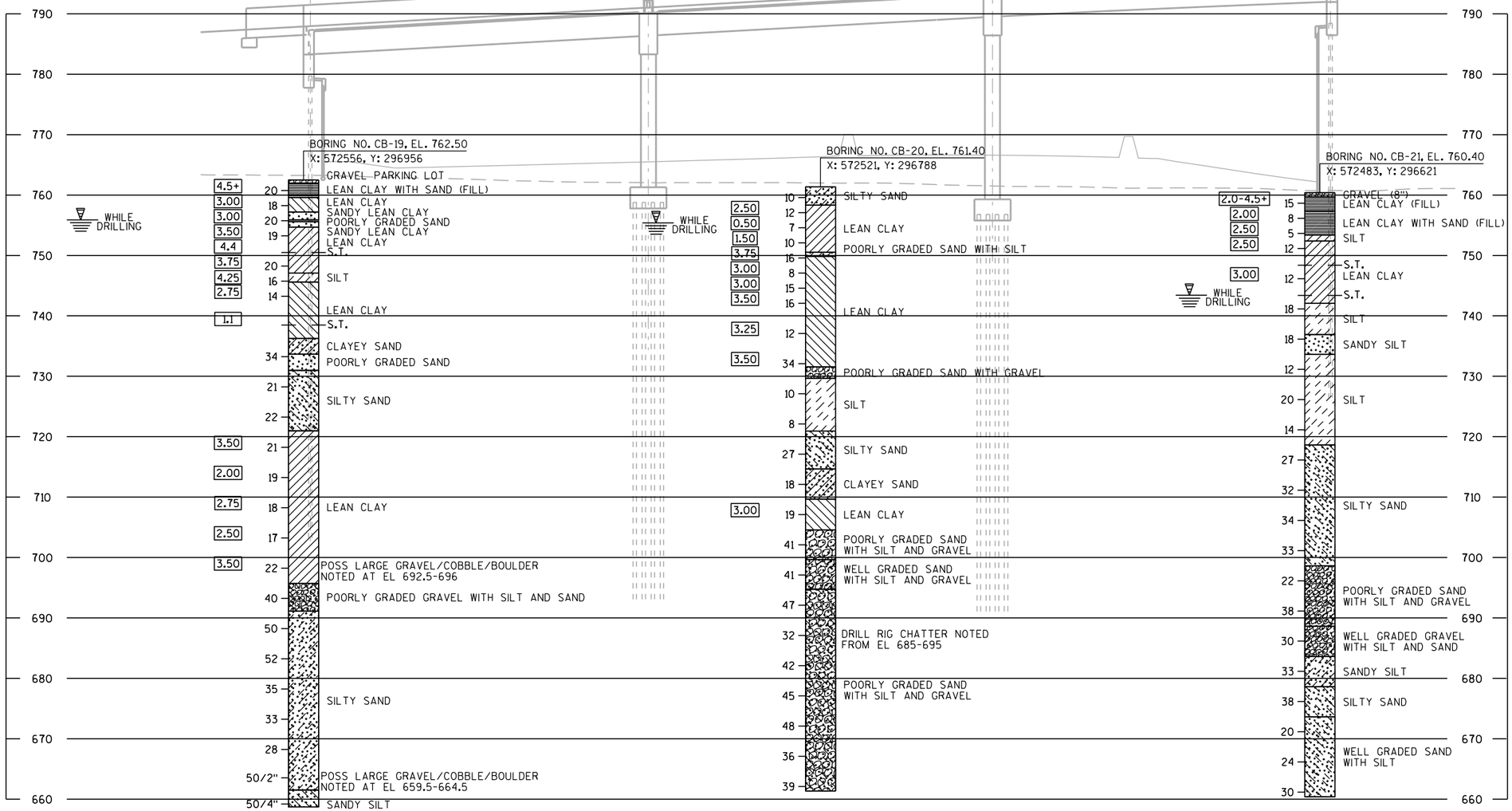
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
MAY 22, 2012 - BORING CB-19
APRIL 23, 2012 - BORING CB-20
MARCH 28, 2012 - BORING CB-21





STATE PROJECT NUMBER

1060-33-80

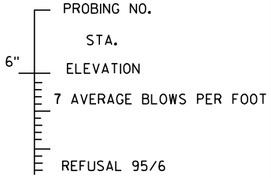
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

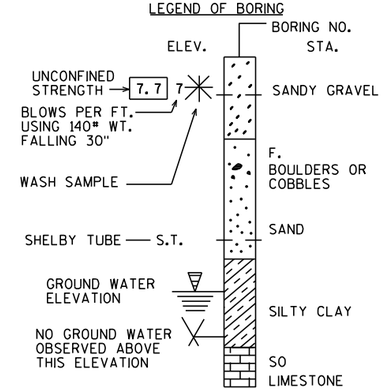
TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-857

DRAWN BY TEK | PLANS CK'D. MAM

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 5 OF 34

8

8

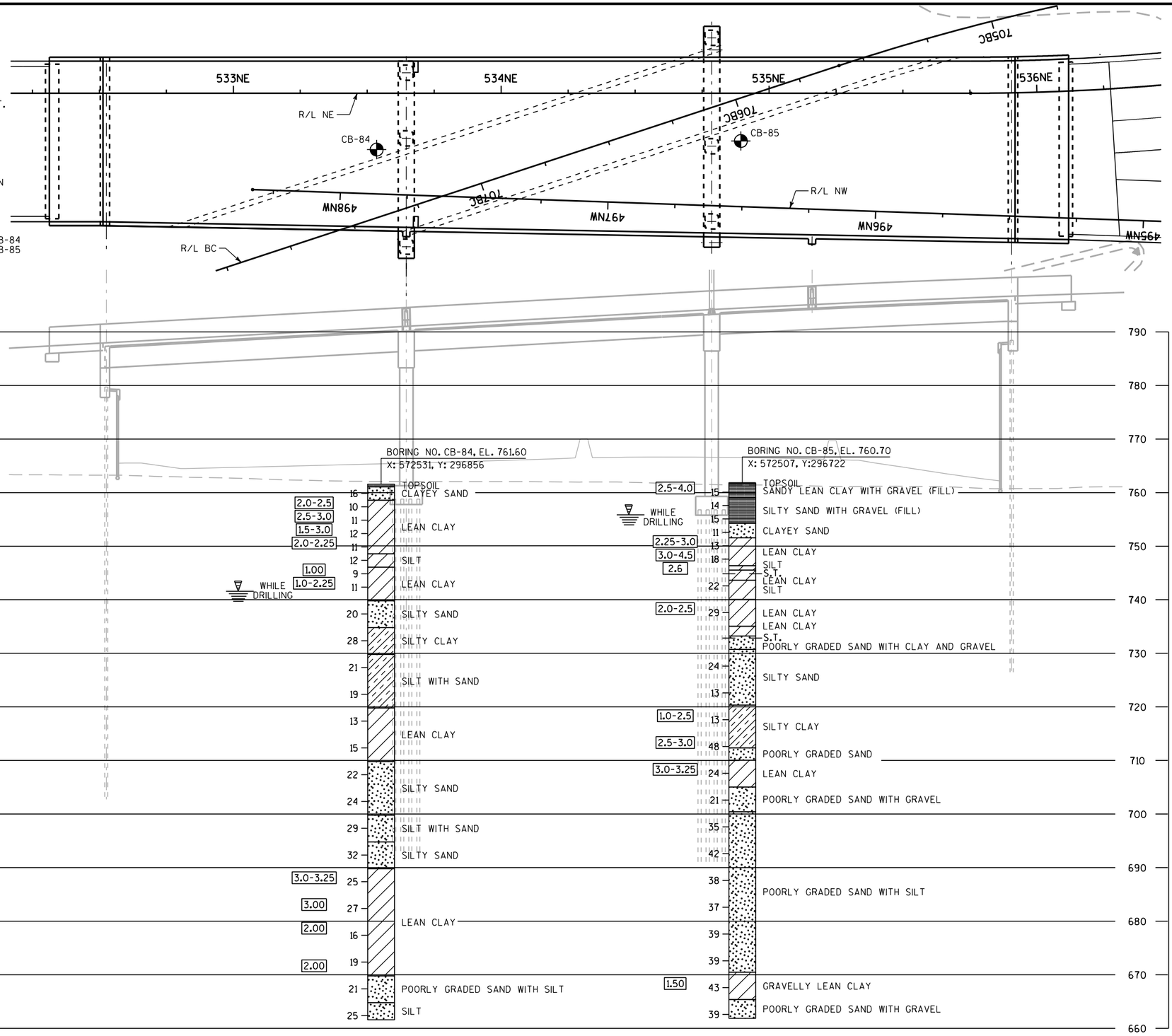
NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
NOVEMBER 16, 2012 - BORING CB-84
NOVEMBER 21, 2012 - BORING CB-85



STATE PROJECT NUMBER

1060-33-80

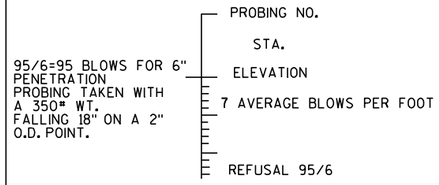
ABBREVIATIONS

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WS — WEATHERED SO — SOUND

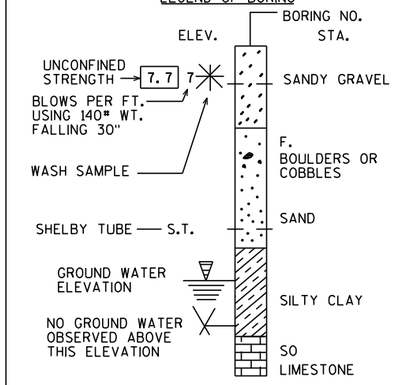
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

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SUBSURFACE EXPLORATION (2 OF 2)

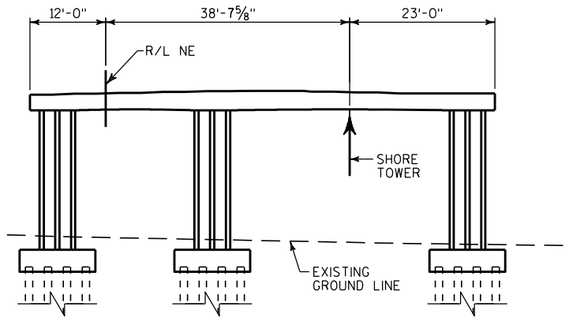
SHEET 6 OF 34

8

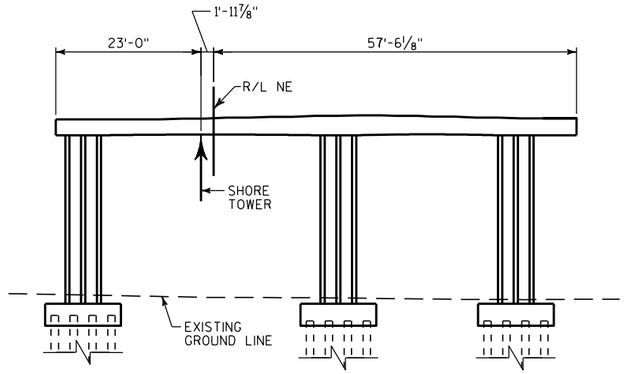
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STATE PROJECT NUMBER
1060-33-80



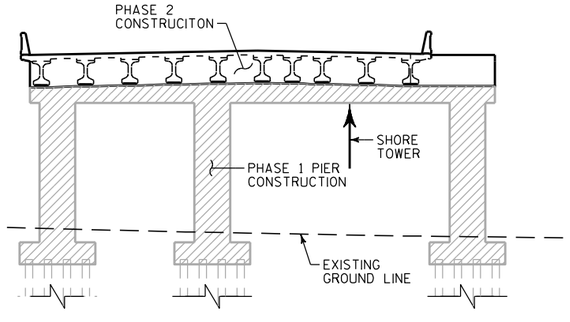
PIER 1



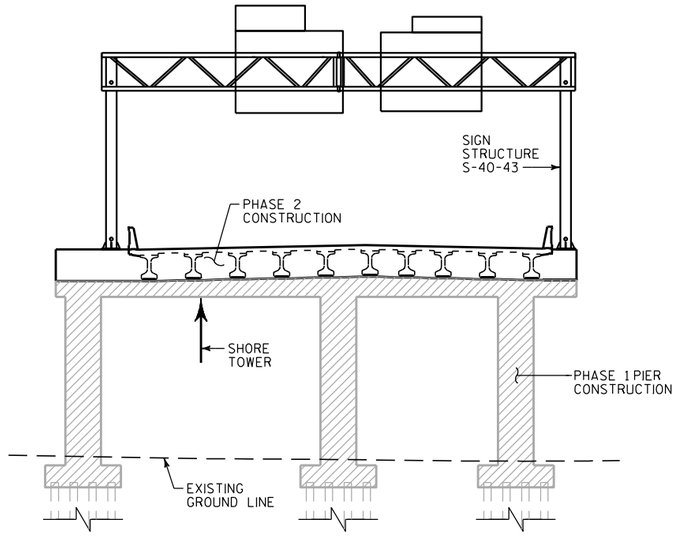
PIER 2

PIER ELEVATIONS - PHASE 1 PIER CAP CONSTRUCTION

(LOOKING SOUTH)



PIER 1



PIER 2

PIER ELEVATIONS - PHASE 2 PIER CAP CONSTRUCTION

(LOOKING SOUTH)

PIER CONSTRUCTION STAGING SEQUENCE

1. CONSTRUCT PIER FOOTINGS AND COLUMNS.
2. ERECT TEMPORARY SUPPORT TOWERS AT SUPPORT LOCATIONS SHOWN.
3. CONSTRUCT PHASE 1 OF PIER CAPS.
4. ONCE PHASE 1 PIER CAP CONCRETE HAS ACHIEVED STERNGTH: ERECT PRESTRESSED GIRDERS.
5. PLACE PHASE 2 PIER CAPS AND BRIDGE DECK.
6. ONCE THE PIER CAPS' PHASE 2 CONCRETE'S STRENGTH IS ACHIEVED: REMOVE TEMPORARY SUPPORT TOWERS.
7. COMPLETE ALL OTHER REMAINING BRIDGE WORK.

TEMPORARY SUPPORT TOWER NOTES

DESIGN THE TEMPORARY SUPPORT TOWERS PER 502.3.2 OF THE STANDARD SPECIFICATIONS AND THE CURRENT AASHTO GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS.

AT MINIMUM, DESIGN TEMPORARY SUPPORTS FOR THE FOLLOWING LOADS: TEMPORARY SUPPORT TOWER SELF WEIGHT.

COMBINED DEAD LOAD OF PHASE 1 AND PHASE 2 PIER CAPS, GIRDERS, AND CONCRETE DECK. MINIMUM 10 PSF LIVE LOAD ALLOWANCE SPECIFIED IN 502.3.2.2. ANY ADDITIONAL TEMPORARY LOADS APPLIED DURING CONSTRUCTION.

ESTIMATED COMBINED DEAD LOAD AND 10 PSF LIVE LOAD ALLOWANCE FOR DESIGN OF TEMPORARY SUPPORT TOWERS:

PIER 1: COMBINED DEAD LOAD AND LIVE LOAD ALLOWANCE = 845 KIPS*
PIER 2: COMBINED DEAD LOAD AND LIVE LOAD ALLOWANCE = 645 KIPS*

* - ESTIMATED, COMBINED DEAD LOADS DUE TO PHASE 1 AND 2 PIER CAP, GIRDERS AND CONCRETE DECK PLUS 10 PSF LIVE LOAD ALLOWANCE AS PER 502.3.2.2 OF THE STANDARD SPECIFICATIONS.

THE ABOVE TEMPORARY SUPPORT TOWER DESIGN LOADS DO NOT INCLUDE ANY ALLOWANCE FOR ADDITIONAL CONSTRUCTION OR LATERAL LOADS.

SUBMIT DETAILED PLANS AND DESIGN COMPUTATIONS TO THE ENGINEER PER 502.3.2.1.

DESIGN AND PROVISION OF TEMPORARY SUPPORT TOWERS IS INCLUDED IN THE ITEM: CONCRETE MASONRY BRIDGES.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

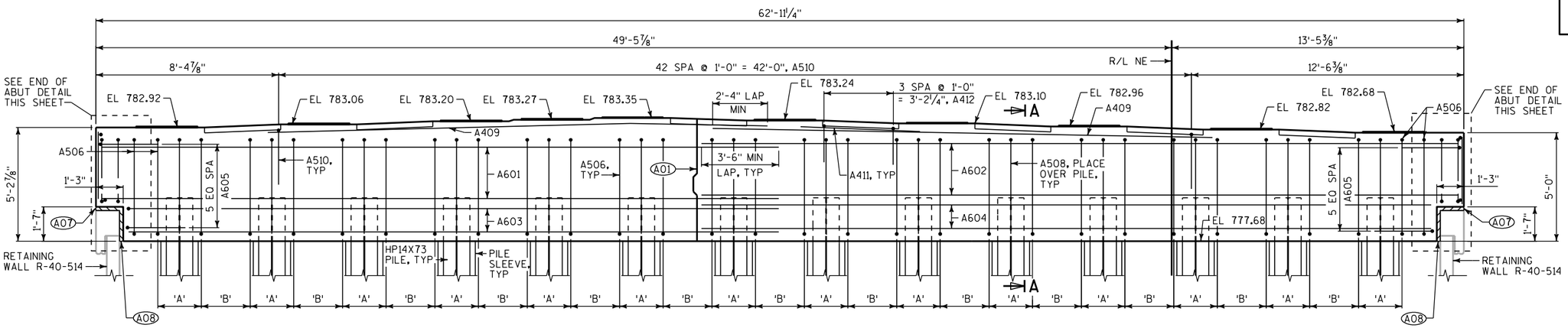
STRUCTURE B-40-857

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CONSTRUCTION STAGING

SHEET 7 OF 34

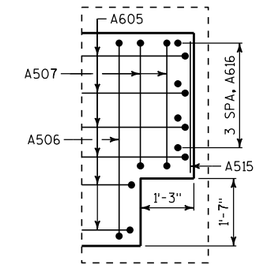
STATE PROJECT NUMBER
1060-33-80



'A' - 1 A508 PLACED OVER PILE, 1'-0" SPA BETWEEN A506
'B' - 3 SPA @ 9" = 2'-3", A506 TYPICAL BETWEEN PILES

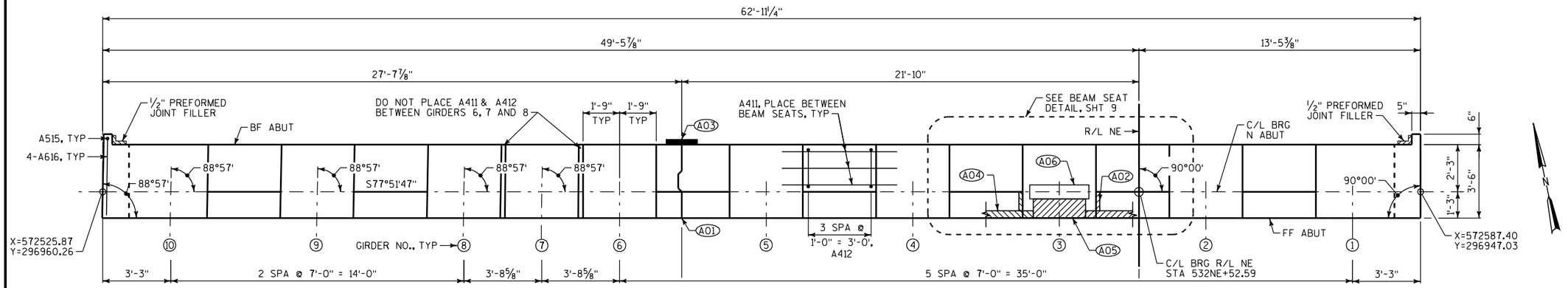
ELEVATION

(LOOKING NORTH)
(DIMENSIONS & ELEVATIONS GIVEN ALONG C/L BRG)



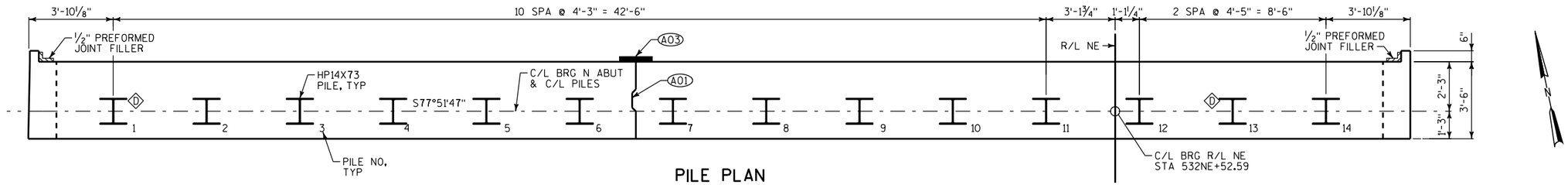
END OF ABUTMENT

EAST END SHOWN, WEST END SIMILAR
(LOOKING NORTH)
(LONGITUDINAL REINFORCEMENT NOT SHOWN FOR CLARITY)



PLAN

C/L GIRDERS ARE AT 90° TO C/L BRG EXCEPT WHERE NOTED
(DIMENSIONS GIVEN ALONG C/L BRG)



PILE PLAN

(DIMENSIONS GIVEN ALONG C/L BRG)

LEGEND

- HP14X73 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
  ESTIMATED PILE LENGTH = 75 FEET.
  PILING SLEEVES NOT SHOWN FOR CLARITY BUT ARE REQUIRED.
- ◇D DYNAMIC PILE LOAD TESTING.
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x8". SEE SHT 12 FOR ALTERNATE CONSTRUCTION JOINT.
- (A02) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.
- (A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A04) 4" x ¾" FILLER, TYP. RUN BETWEEN GIRDERS AND BETWEEN EXTERIOR GIRDERS AND END OF ABUTMENT.
- (A05) ¾" FILLER UNDER GIRDERS, TYP.
- (A06) ½" THICK x 8" x 2'-10" ELASTOMERIC BEARING PAD, TYP.
- (A07) PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITMUMINUS JOINT SEALER. SEE WALL PLANS.
- (A08) PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITMUMINUS JOINT SEALER. SEE WALL PLANS.

NOTES

DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG C/L BEARING AND PILES.

SEE SHEET 9 FOR SECTION A-A.

SEE SHEET 9 FOR TYPICAL BEAM SEAT DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

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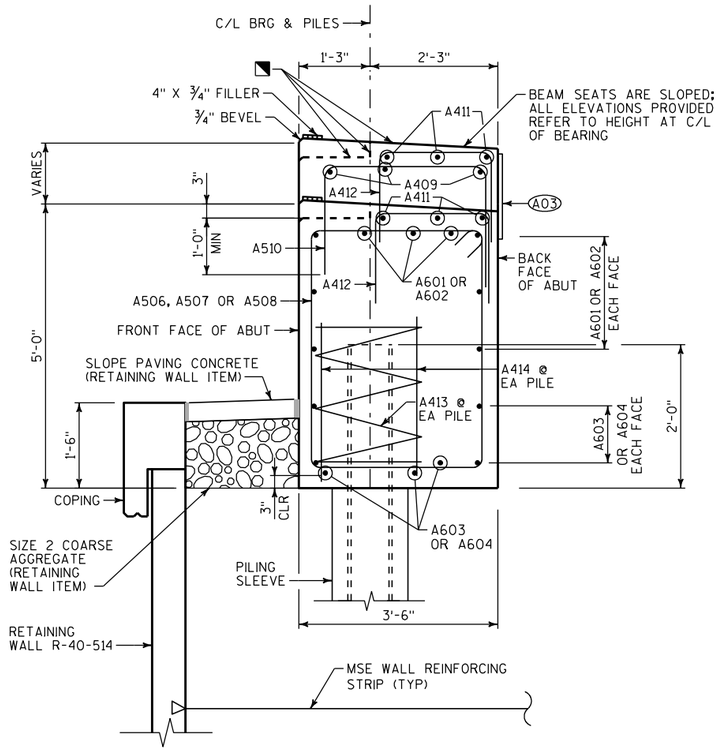
NORTH ABUTMENT

SHEET 8 OF 34

8

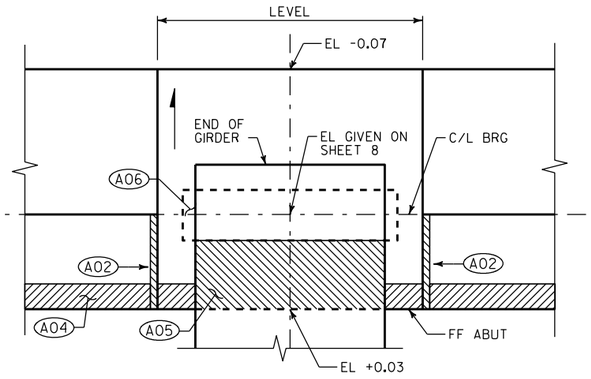
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STATE PROJECT NUMBER
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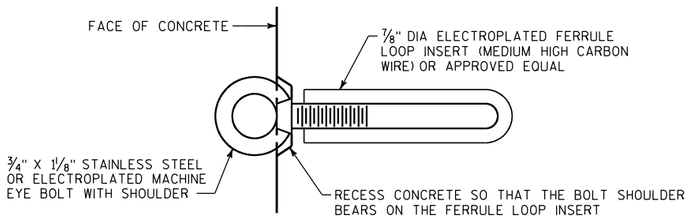
SECTION THRU ABUTMENT BODY

(LOOKING SOUTH)



TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)

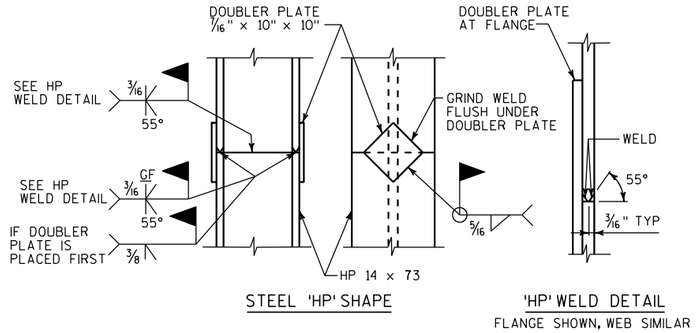


EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

NOTE

FOR LEGEND, SEE SHT 8



STEEL 'HP' SHAPE

'HP' WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

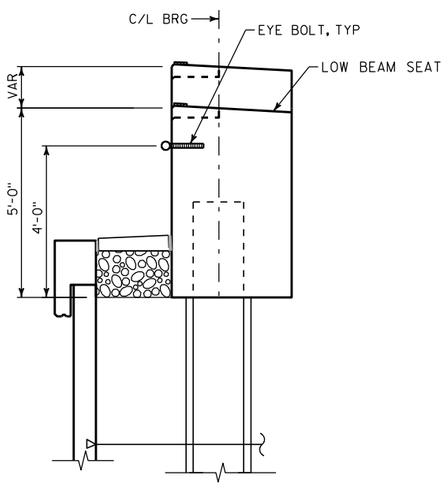
PILE SPLICE DETAIL

PILING SLEEVE NOTES

1. PILING SLEEVES MUST BE USED AT ALL PILES IN THE ABUTMENT. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES" AND ARE INCLUDED UNDER BID ITEM "PILING SLEEVES."
2. PILING SLEEVES SHALL CONFORM TO AND BE INSTALLED IN ACCORDANCE WITH THE SPV ARTICLE "PILING SLEEVES". IF THE PILE SLEEVE MATERIAL IS CORRUGATED STEEL PIPE, THEN 24" DIA. PIPE SHALL BE USED.
3. PILE SLEEVES MUST BE INSTALLED PRIOR TO THE CONSTRUCTION OF RETAINING WALL R-40-514.
4. PILING SLEEVES SHALL BE PLACED FROM EXISTING GROUND AT APPROXIMATE ELEVATION 760.00 TO THE BOTTOM OF THE ABUTMENT.

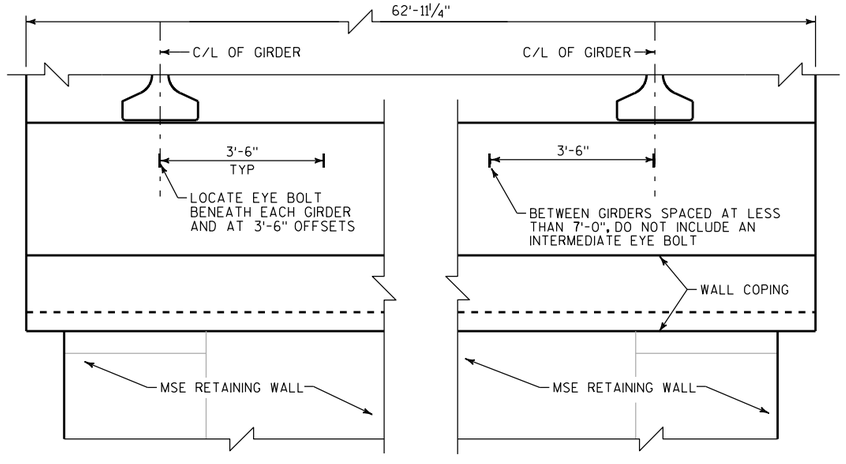
LEGEND

◥ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"



FALL PROTECTION ANCHOR

(LOOKING SOUTH)



FALL PROTECTION ELEVATION

(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

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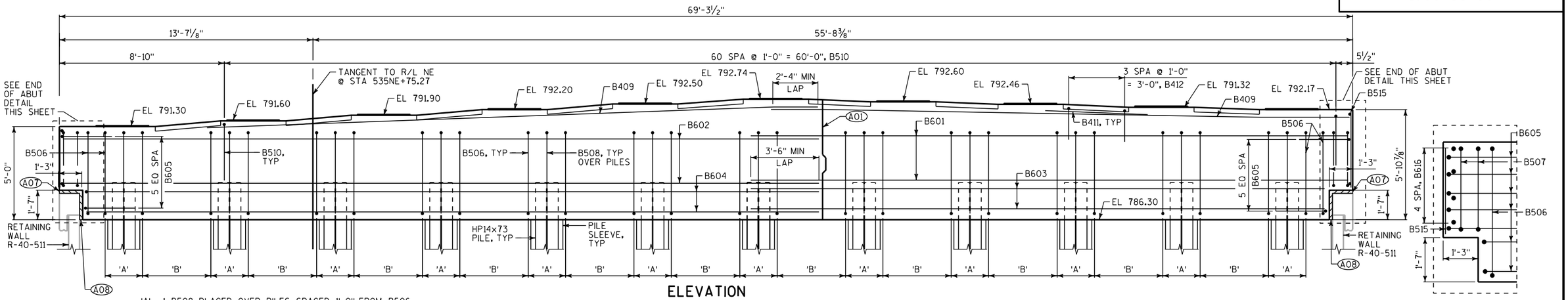
NORTH ABUTMENT DETAILS

SHEET 9 OF 34

8

8

STATE PROJECT NUMBER
1060-33-80



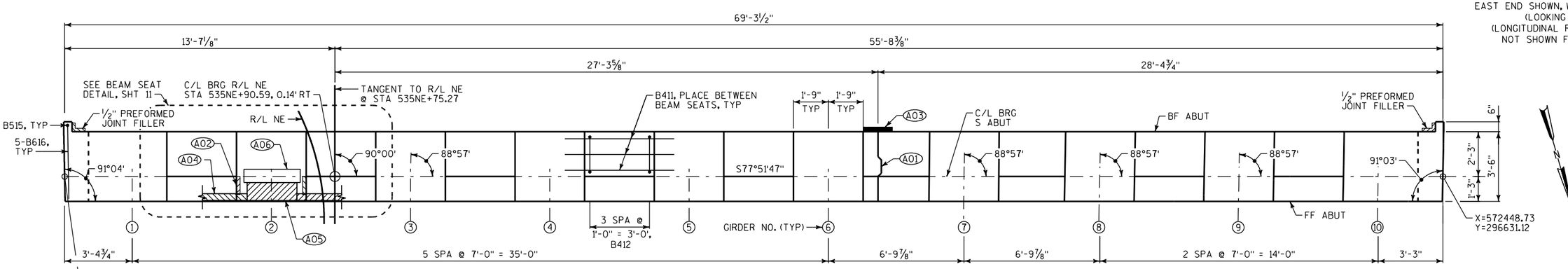
'A' - 1 B508 PLACED OVER PILES, SPACED 1'-0" FROM B506
'B' - 4 SPA @ 11" = 3'-8" B506, TYP BETWEEN PILES

ELEVATION

(LOOKING SOUTH)
(DIMENSIONS & ELEVATIONS GIVEN ALONG C/L BRG)

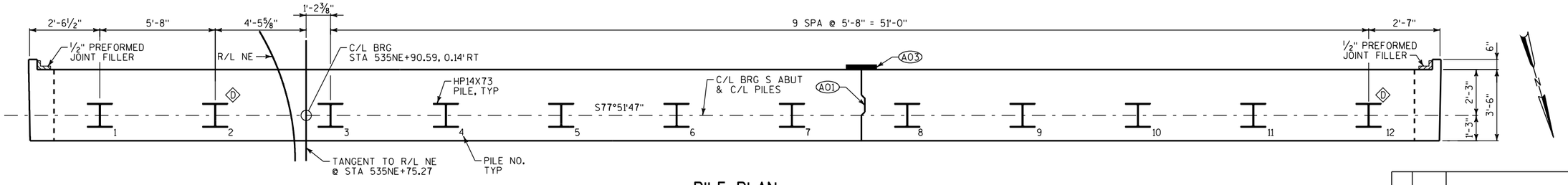
END OF ABUTMENT

EAST END SHOWN, WEST END SIMILAR
(LOOKING SOUTH)
(LONGITUDINAL REINFORCEMENT NOT SHOWN FOR CLARITY)



PLAN

C/L GIRDERS ARE AT 90° TO C/L BRG EXCEPT WHERE NOTED
(DIMENSIONS GIVEN ALONG C/L BRG)



PILE PLAN

(DIMENSIONS GIVEN ALONG C/L BRG)

LEGEND

HP14X73 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

ESTIMATED PILE LENGTH = 75 FEET.

PILING SLEEVES NOT SHOWN FOR CLARITY BUT ARE REQUIRED.

◇D DYNAMIC PILE LOAD TESTING.

(A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x8". SEE SHT 12 FOR ALTERNATE CONSTRUCTION JOINT.

(A02) ¾" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

(A04) 4" × ¾" FILLER, TYP. RUN BETWEEN GIRDERS AND BETWEEN EXTERIOR GIRDERS AND END OF ABUTMENT.

(A05) ¾" FILLER UNDER GIRDERS, TYP.

(A06) ½" THICK × 8" × 2'-10" ELASTOMERIC BEARING PAD, TYP.

(A07) PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITMUMINUS JOINT SEALER. SEE WALL PLANS.

(A08) PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITMUMINUS JOINT SEALER. SEE WALL PLANS.

NOTES

DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG C/L BEARING AND PILES.

SEE SHEET 11 FOR SECTION A-A.

SEE SHEET 11 FOR TYPICAL BEAM SEAT DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

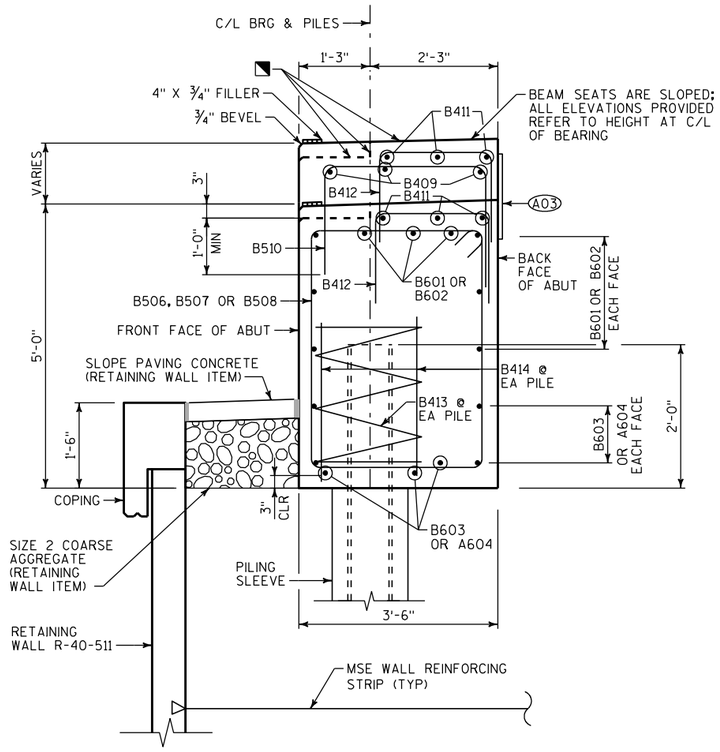
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SOUTH ABUTMENT

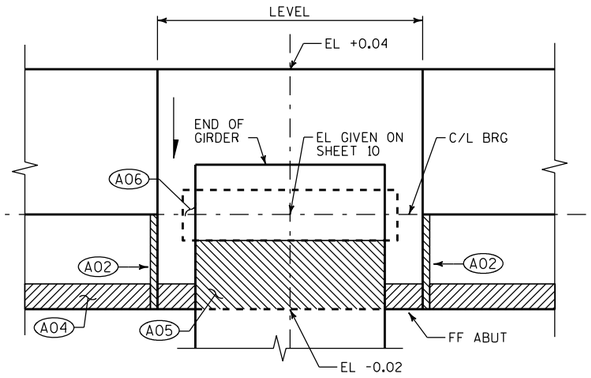
SHEET 10 OF 34

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PLOT BY : MSCASW
PLOT NAME : B857_080303_ab
PLOT SCALE : 5.333333:1



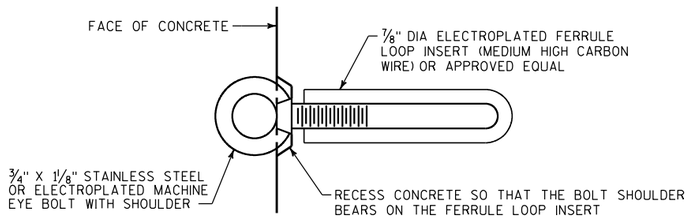
SECTION THRU ABUTMENT BODY

(LOOKING SOUTH)



TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)

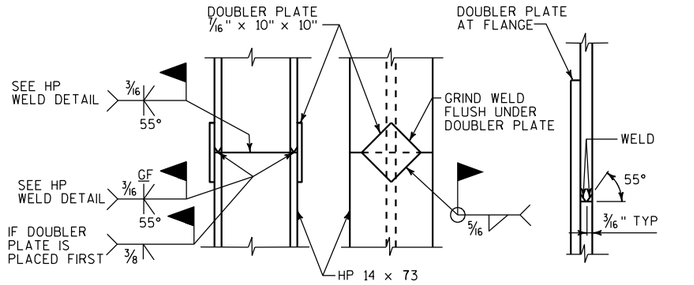


EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

NOTE

FOR LEGEND, SEE SHT 10



STEEL 'HP' SHAPE

'HP' WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

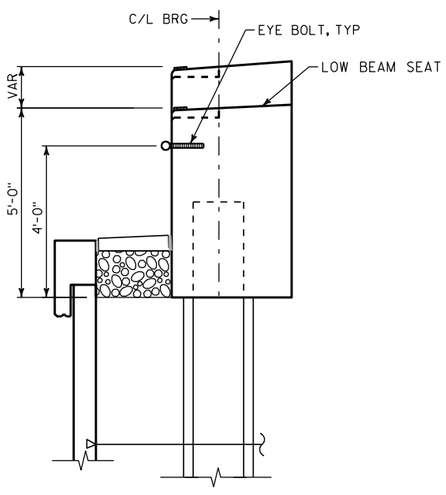
PILE SPLICE DETAIL

PILING SLEEVE NOTES

1. PILING SLEEVES MUST BE USED AT ALL PILES IN THE ABUTMENT. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES" AND ARE INCLUDED UNDER BID ITEM "PILING SLEEVES."
2. PILING SLEEVES SHALL CONFORM TO AND BE INSTALLED IN ACCORDANCE WITH THE SPV ARTICLE "PILING SLEEVES". IF THE PILE SLEEVE MATERIAL IS CORRUGATED STEEL PIPE, THEN 24" DIA. PIPE SHALL BE USED.
3. PILE SLEEVES MUST BE INSTALLED PRIOR TO THE CONSTRUCTION OF RETAINING WALL R-40-511.
4. PILING SLEEVES SHALL BE PLACED FROM EXISTING GROUND AT APPROXIMATE ELEVATION 760.00 TO THE BOTTOM OF THE ABUTMENT.

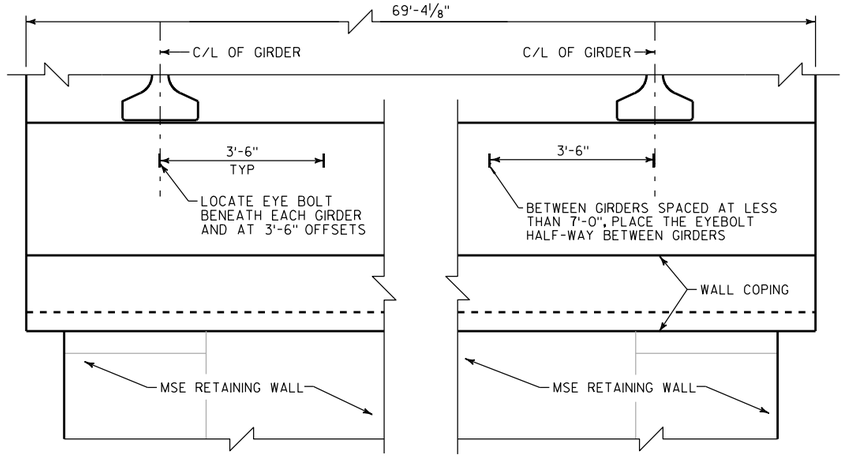
LEGEND

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"



FALL PROTECTION ANCHOR

(LOOKING SOUTH)



FALL PROTECTION ELEVATION

(LOOKING WEST)

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SOUTH ABUTMENT DETAILS

SHEET 11 OF 34

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-857\cds\B857_080304_ab.dgn
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STATE PROJECT NUMBER
1060-33-80

NORTH ABUTMENT

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

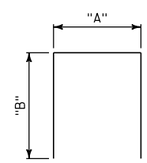
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A601	X	9	31'-2"	-	LONGITUDINAL - WEST
A602	X	9	35'-0"	-	LONGITUDINAL - EAST
A603	X	7	29'-11"	-	LONGITUDINAL - WEST - BOT
A604	X	7	33'-9"	-	LONGITUDINAL - EAST - BOT
A605	X	12	7'-11"	X	ABUTMENT ENDS
A506	X	56	15'-3"	X	STIRRUPS - MAIN
A507	X	4	12'-7"	X	STIRRUPS - END
A508	X	14	11'-4"	X	TIES OVER PILES
A409	X	6	23'-0"	-	LONGITUDINAL - TOP OF ABUTMENT
A510	X	43	7'-10"	X	TIES - TOP OF ABUTMENT
A411	X	21	5'-6"	-	LONGITUDINAL - BETWEEN BEAM SEATS
A412	X	28	5'-0"	X	TIES - BETWEEN BEAM SEATS
A413	X	14	28'-0"	X	PILES - 1 PER PILE - 5 WRAP SPECIAL
A414	X	28	2'-3"	-	PILES - 2 PER PILE
A515	X	2	3'-0"	-	COPING DOGEAR
A616	X	8	3'-6"	-	COPING DOGEAR

SOUTH ABUTMENT

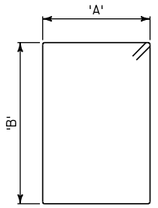
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

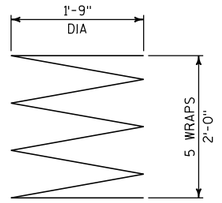
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B601	X	9	31'-11"	-	LONGITUDINAL - WEST
B602	X	9	40'-8"	-	LONGITUDINAL - EAST
B603	X	7	30'-8"	-	LONGITUDINAL - WEST - BOT
B604	X	7	39'-5"	-	LONGITUDINAL - EAST - BOT
B605	X	12	7'-11"	X	ABUTMENT ENDS
B506	X	59	15'-3"	X	STIRRUPS - MAIN
B507	X	4	12'-7"	X	STIRRUPS - END
B508	X	12	11'-4"	X	TIES OVER PILES
B409	X	6	31'-5"	-	LONGITUDINAL - TOP OF ABUTMENT
B510	X	61	7'-10"	X	TIES - TOP OF ABUTMENT
B411	X	27	5'-6"	-	LONGITUDINAL - BETWEEN BEAM SEATS
B412	X	36	5'-0"	X	TIES - BETWEEN BEAM SEATS
B413	X	12	28'-0"	X	PILES - 1 PER PILE - 5 WRAP SPECIAL
B414	X	24	2'-3"	-	PILES - 2 PER PILE
B515	X	2	3'-0"	-	COPING DOGEAR
B616	X	10	3'-6"	-	COPING DOGEAR



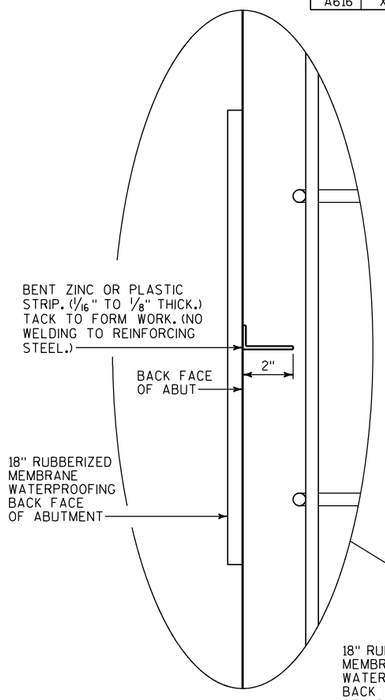
BAR MARK	DIM "A"	DIM "B"
A605	2"-11"	2'-8"
A508	3'-1"	4'-3"
A510	3'-1"	2'-6"
A412	1'-10"	1'-8"
B605	2"-11"	2'-8"
B508	3'-1"	4'-3"
B510	3'-1"	2'-6"
B412	1'-10"	1'-8"

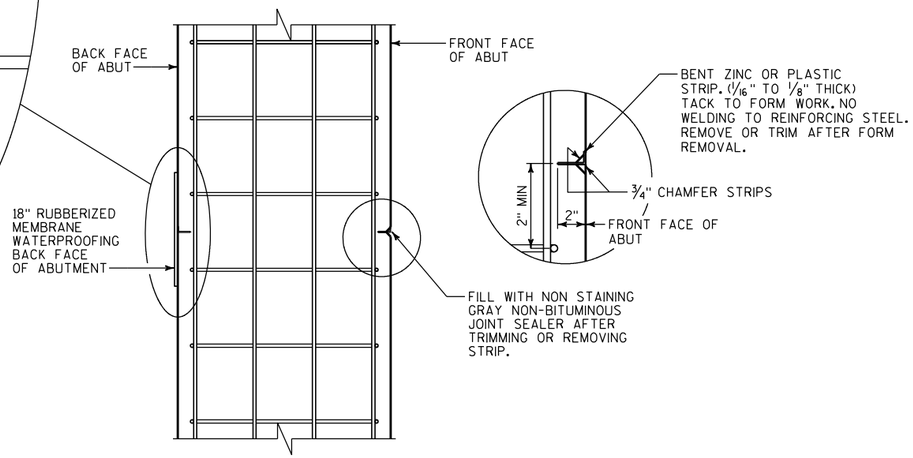


BAR MARK	DIM "A"	DIM "B"
A506	3'-1"	4'-3"
A507	3'-1"	2'-11"
B506	3'-1"	4'-3"
B507	3'-1"	2'-11"



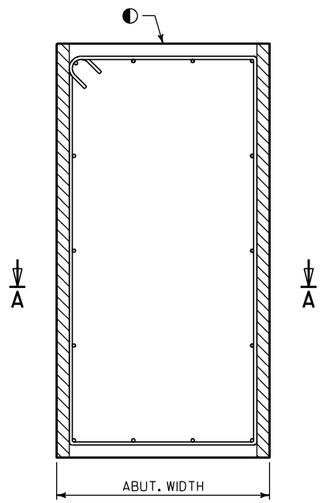
A413 B413





SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT



SECTION THRU ABUTMENT BODY

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENCE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF BULKHEAD.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY BHI | PLANS CK'D. MAM

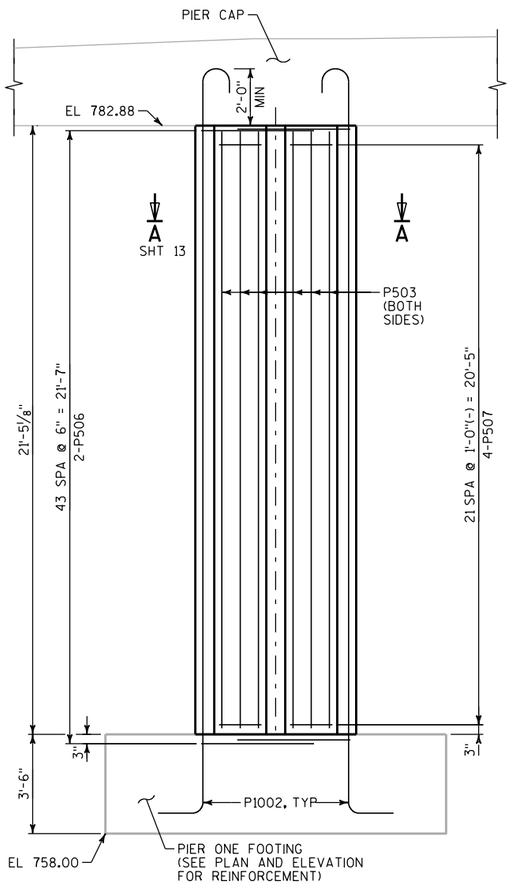
ABUTMENT JOINT & REINFORCEMENT

SHEET 12 OF 34

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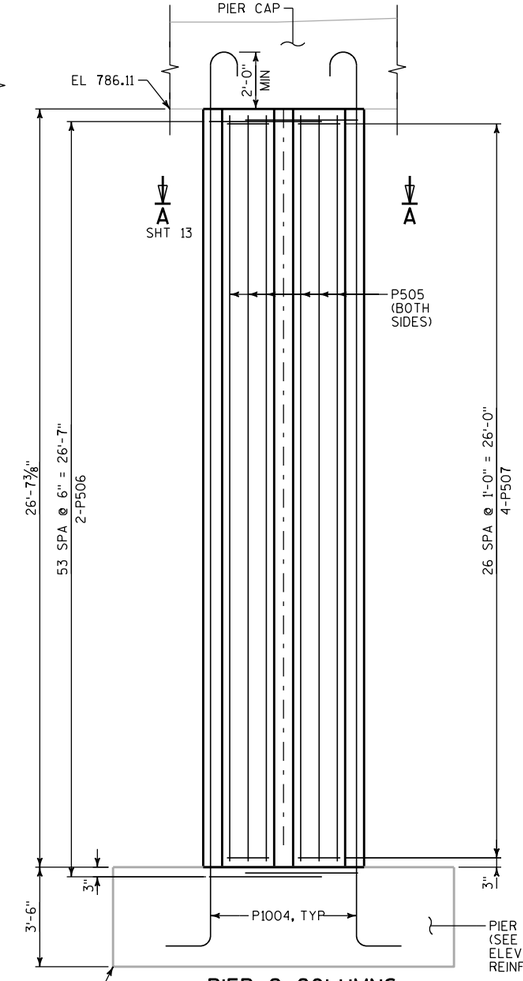
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STATE PROJECT NUMBER
1060-33-80



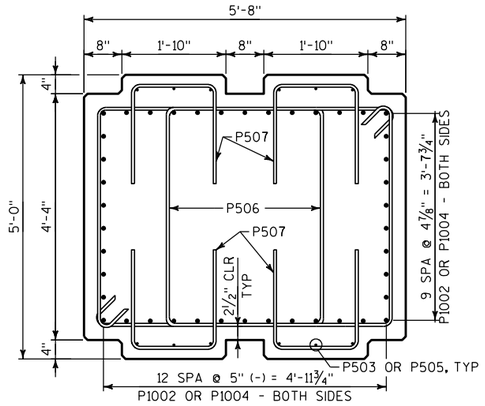
PIER 1 COLUMNS

PIER CAP AND FOOTING REINFORCEMENT
NOT SHOWN FOR CLARITY
(LOOKING SOUTH)

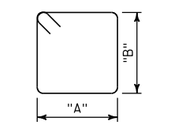


PIER 2 COLUMNS

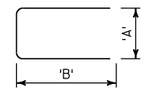
PIER CAP AND FOOTING REINFORCEMENT
NOT SHOWN FOR CLARITY
(LOOKING SOUTH)



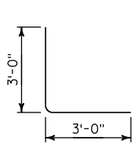
SECTION A-A



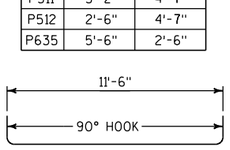
BAR MARK	DIM "A"	DIM "B"
P506	4'-0"	3'-11"
P608	2'-8"	2'-1"



BAR MARK	DIM "A"	DIM "B"
P507	1'-5"	1'-9"
P509	3'-2"	5'-10"
P510	2'-6"	5'-10"
P511	3'-2"	4'-7"
P512	2'-6"	4'-7"
P635	5'-6"	2'-6"



P636

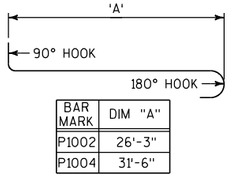


P801, P439

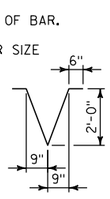
BILL OF BARS

BAR MARK	COAT	PIER ONE	PIER TWO	LENGTH	BENT	LOCATION
P801	-	144	144	13'-9"	X	FOOTING
P1002	X	126	0	29'-2"	X	PIER ONE - COLUMN LONGITUDINAL (MAIN)
P503	X	36	0	21'-3"	-	PIER ONE - COLUMN LONGITUDINAL (REVEAL)
P1004	X	0	126	34'-5"	X	PIER TWO - COLUMN LONGITUDINAL (MAIN)
P505	X	0	36	26'-5"	-	PIER TWO - COLUMN LONGITUDINAL (REVEAL)
P506	X	264	324	16'-5"	X	COLUMN STIRRUPS
P507	X	264	324	4'-8"	X	COLUMN TIES (REVEAL)
P608	X	348	399	10'-4"	X	PIER ONE - PHASE ONE CAP STIRRUPS
P509	X	100	120	14'-7"	X	CAP TIES - OUTSIDE OF GIRDERS - PHASE 1
P510	X	74	66	13'-11"	X	CAP TIES - BETWEEN GIRDERS - PHASE 1
P511	X	100	120	12'-1"	X	CAP TIES - OUTSIDE OF GIRDERS - PHASE 2
P512	X	74	66	11'-5"	X	CAP TIES - BETWEEN GIRDERS - PHASE 2
P1013	X	24	0	33'-6"	-	PIER ONE - PHASE ONE CAP - LONGITUDINAL - BOT - EAST
P1014	X	24	0	50'-0"	-	PIER ONE - PHASE ONE CAP - LONGITUDINAL - BOT - WEST
P1115	X	26	0	48'-8"	X	PIER ONE - CAP - LONGITUDINAL - TOP - EAST
P1116	X	26	0	42'-6"	X	PIER ONE - CAP - LONGITUDINAL - TOP - WEST
P517	X	4	0	60'-0"	-	PIER ONE - LONGITUDINAL - CAP BODY - EAST
P518	X	4	0	16'-6"	-	PIER ONE - LONGITUDINAL - CAP BODY - WEST
P519	X	7	0	45'-0"	-	PIER ONE - TOP OF PHASE ONE CAP
P520	X	140	140	4'-0"	-	SKIN STEEL BETWEEN GIRDERS
P521	X	28	0	7'-3"	-	PIER ONE - SKIN STEEL WEST OF GIRDERS
P522	X	16	0	1'-9"	-	PIER ONE - SKIN STEEL BETWEEN LOW-SPACE GIRDERS
P523	X	12	0	3'-6"	-	PIER ONE - SKIN STEEL BETWEEN LOW-SPACE GIRDERS
P1024	X	0	24	49'-0"	-	PIER TWO - PHASE ONE CAP - LONGITUDINAL - BOT - EAST
P1025	X	0	24	43'-6"	-	PIER TWO - PHASE ONE CAP - LONGITUDINAL - BOT - WEST
P1126	X	0	24	39'-10"	X	PIER TWO - CAP - LONGITUDINAL - TOP - EAST
P1127	X	0	24	60'-0"	X	PIER TWO - CAP - LONGITUDINAL - TOP - WEST
P528	X	0	4	60'-0"	-	PIER TWO - LONGITUDINAL - CAP BODY - EAST
P529	X	0	4	25'-3"	-	PIER TWO - LONGITUDINAL - CAP BODY - WEST
P530	X	0	7	22'-6"	-	PIER TWO - TOP OF PHASE ONE CAP
P531	X	0	28	9'-0"	-	PIER TWO - SKIN STEEL EAST OF GIRDERS
P532	X	0	12	5'-3"	-	PIER TWO - SKIN STEEL WEST OF GIRDERS
P533	X	0	16	2'-10"	-	PIER TWO - SKIN STEEL BETWEEN LOW-SPACE GIRDERS
P534	X	0	12	4'-6"	-	PIER TWO - SKIN STEEL BETWEEN LOW-SPACE GIRDERS
P635	X	12	18	10'-2"	X	ENDS OF PIER CAPS
P636	X	6	0	5'-10"	X	EAST END OF PIER ONE CAP - PHASE 2
P737	-	0	96	5'-3"	X	PIER 2 - FOOTING - PILE DOWEL BARS
P638	X	20	20	6'-0"	-	PLACED THROUGH GIRDERS
P439	-	0	78	12'-8"	X	PIER TWO - FOOTING TOP

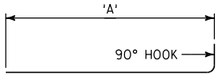
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE



BAR MARK	DIM "A"
P1002	26'-3"
P1004	31'-6"



P737

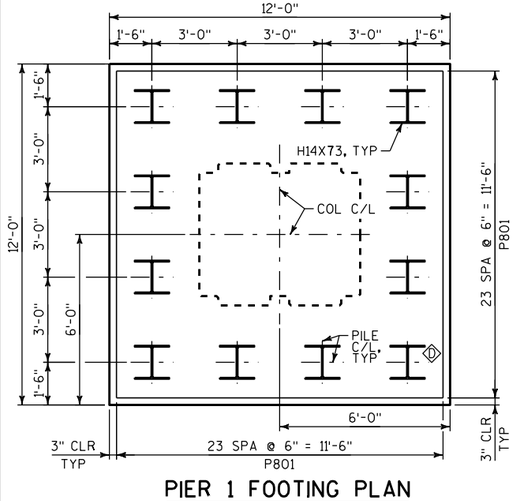


BAR MARK	DIM "A"
P1015	45'-3"
P1016	39'-9"
P1126	38'-2"
P1127	58'-4"

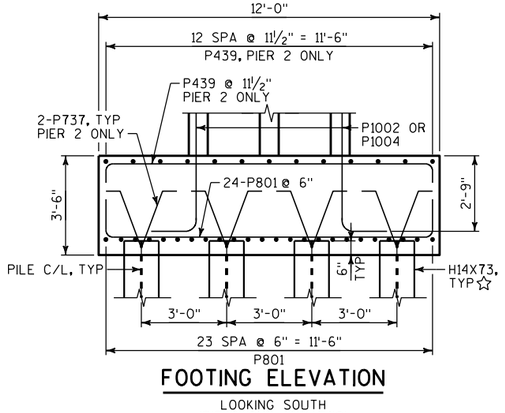
LEGEND

◊ DYNAMIC PILE LOAD TESTING

☆ AT PIER 2 ONLY, MUST REACH TIP ELEVATION OF 711.00 TO ACHIEVE REQUIRED UPLIFT CAPACITY

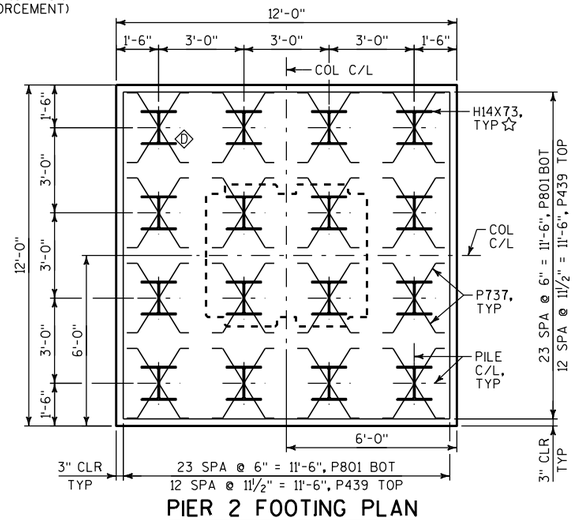


PIER 1 FOOTING PLAN



FOOTING ELEVATION

LOOKING SOUTH
(PIERS ONE AND TWO)



PIER 2 FOOTING PLAN

NOTES

HP14X73 STEEL PILING WITH HAS A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

PIER 1:
ESTIMATED PILE LENGTH = 65 FEET.

PIER 2:
ESTIMATED PILE LENGTH = 65 FEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

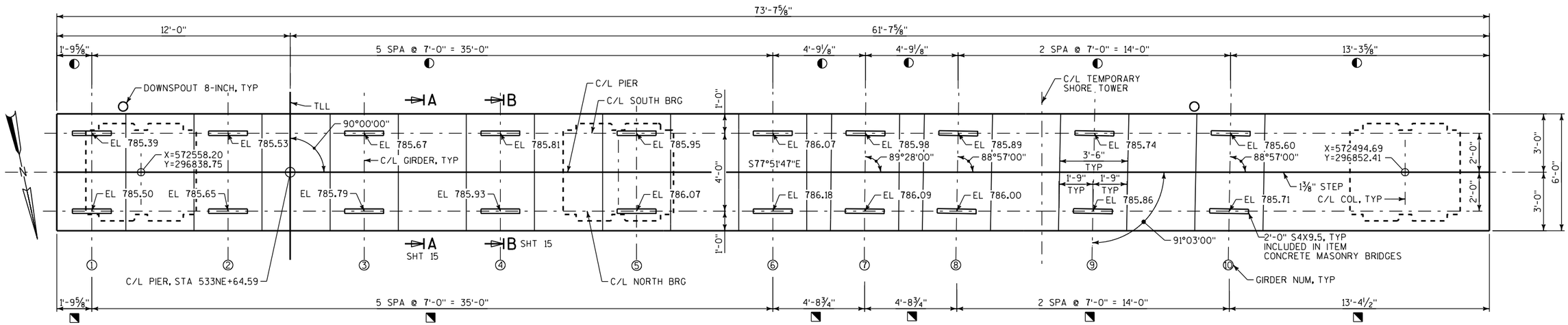
COLUMN AND FOOTING DETAILS

SHEET 13 OF 34

8

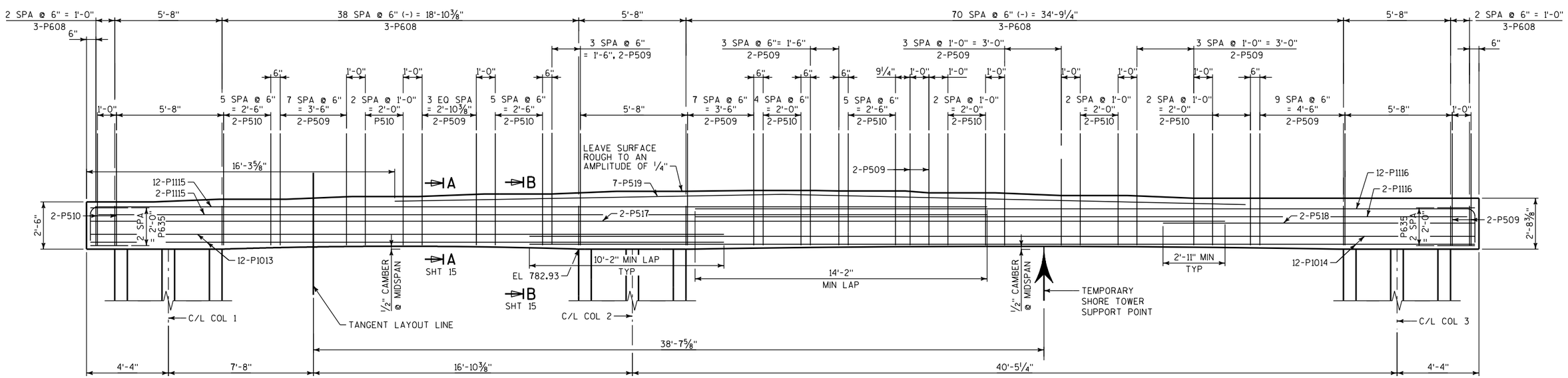
8

STATE PROJECT NUMBER
1060-33-80



PIER 1 CAP PLAN

DIMENSIONS GIVEN ALONG C/L OF PIER UNLESS OTHERWISE NOTED
C/L GIRDERS BRG AT 90° TO C/L OF PIER EXCEPT WHERE NOTED



LEGEND

◐ DIMENSIONS BETWEEN GIRDERS GIVEN ALONG NORTH BEARING LINE

◥ DIMENSIONS BETWEEN GIRDERS GIVEN ALONG SOUTH BEARING LINE

PIER CAP 1 ELEVATION - PHASE 1

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY
(LOOKING SOUTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

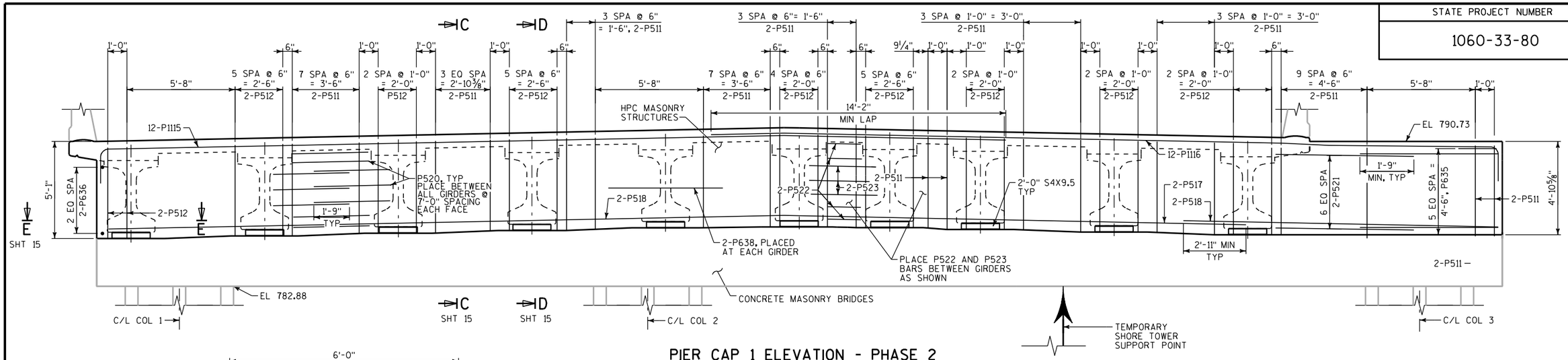
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

PIER 1 PHASE 1

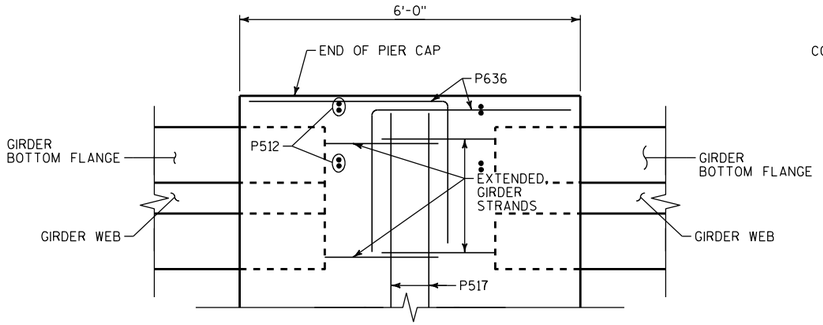
SHEET 14 OF 34

STATE PROJECT NUMBER
1060-33-80



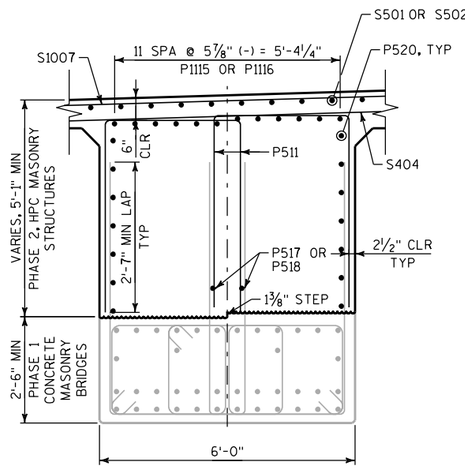
PIER CAP 1 ELEVATION - PHASE 2

ELEVATIONS GIVEN AT C/L OF PIER
COLUMN, DECK AND PIER CAP PHASE 1 REINFORCEMENT NOT SHOWN FOR CLARITY
(LOOKING SOUTH)



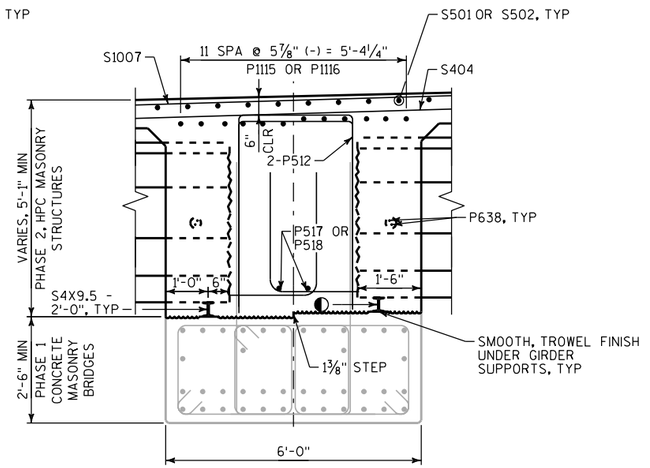
SECTION E-E

PLAN VIEW



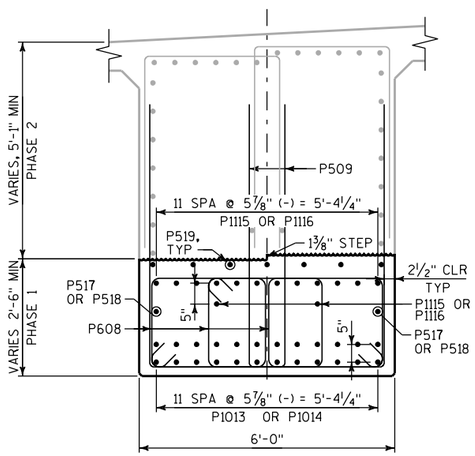
SECTION C-C

BETWEEN GIRDERS, PLACE P511 AT THE FACE OF THE PIER CAP



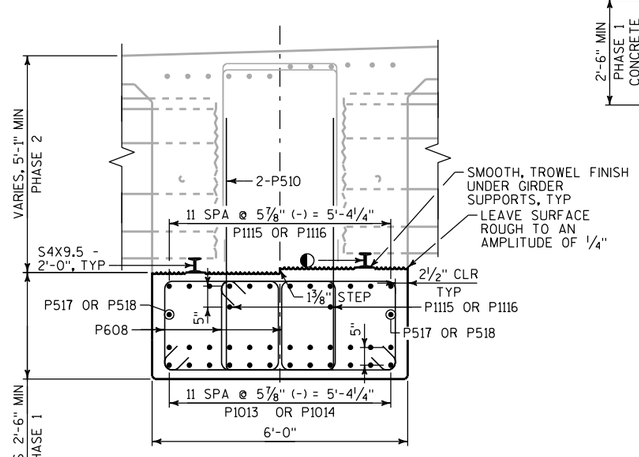
SECTION D-D

AT GIRDERS, PLACE P512 SUCH THAT THEY WILL FIT BETWEEN THE GIRDERS



SECTION A-A

BETWEEN GIRDERS, PLACE P509 AT THE FACE OF THE PIER CAP
(COLUMN AND DECK REINFORCEMENT NOT SHOWN)



SECTION B-B

AT GIRDERS, PLACE P510 SUCH THAT THEY WILL FIT BETWEEN THE GIRDERS
(COLUMN AND DECK REINFORCEMENT NOT SHOWN)

LEGEND

◐ INCLUDED IN ITEM CONCRETE MASONRY BRIDGES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

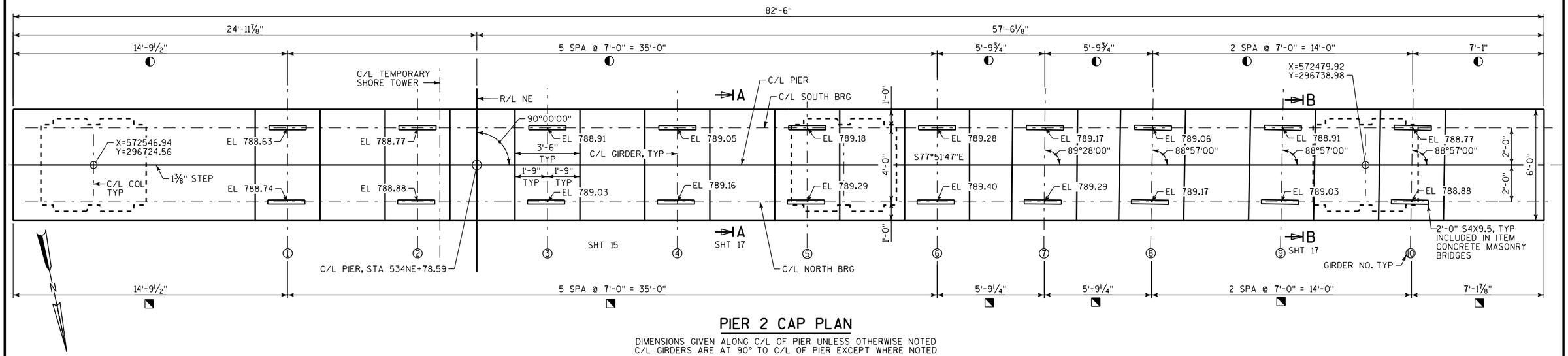
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

PIER 1 PHASE 2

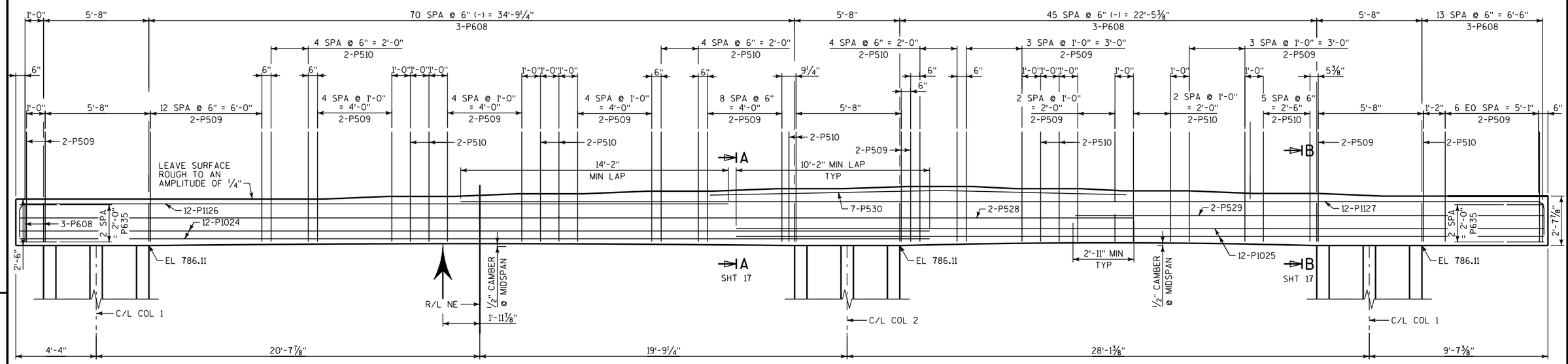
SHEET 15 OF 34

STATE PROJECT NUMBER
1060-33-80



PIER 2 CAP PLAN

DIMENSIONS GIVEN ALONG C/L OF PIER UNLESS OTHERWISE NOTED
C/L GIRDERS ARE AT 90° TO C/L OF PIER EXCEPT WHERE NOTED



PIER CAP 2 ELEVATION - PHASE 1

ELEVATIONS GIVEN AT C/L OF PIER
COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY
(LOOKING SOUTH)

LEGEND

◐ DIMENSIONS BETWEEN GIRDERS GIVEN ALONG NORTH BEARING LINE

◥ DIMENSIONS BETWEEN GIRDERS GIVEN ALONG SOUTH BEARING LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

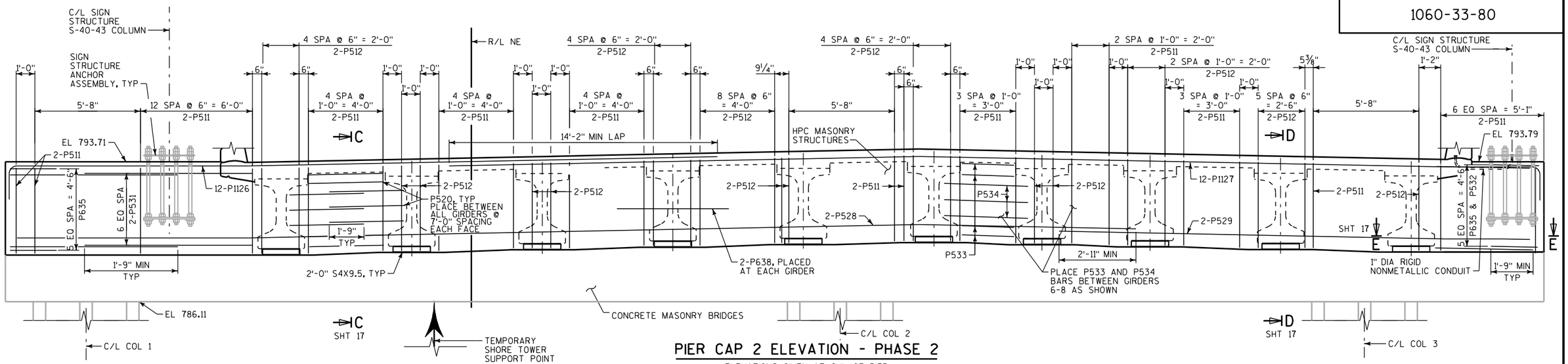
DRAWN BY ASW | PLANS CK'D. MAM

PIER 2 PHASE 1

SHEET 16 OF 34

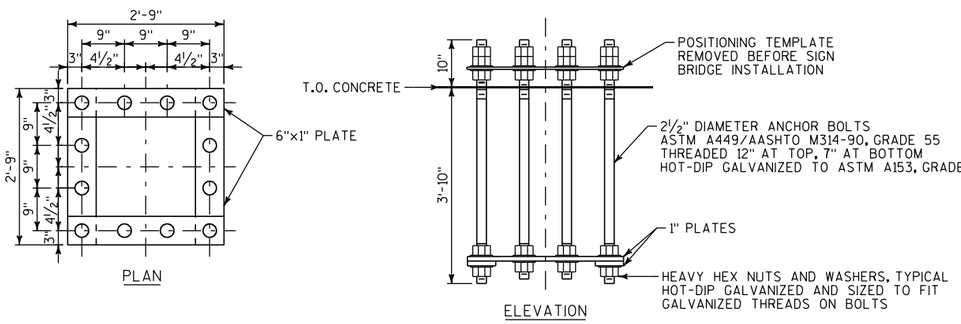
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STATE PROJECT NUMBER
1060-33-80

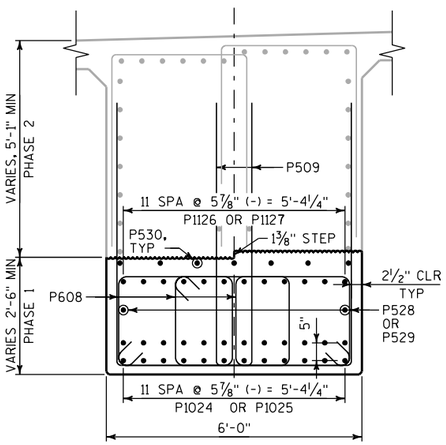


PIER CAP 2 ELEVATION - PHASE 2

ELEVATIONS GIVEN AT C/L OF PIER
DECK AND PHASE ONE REINFORCEMENT NOT SHOWN FOR CLARITY
(LOOKING SOUTH)

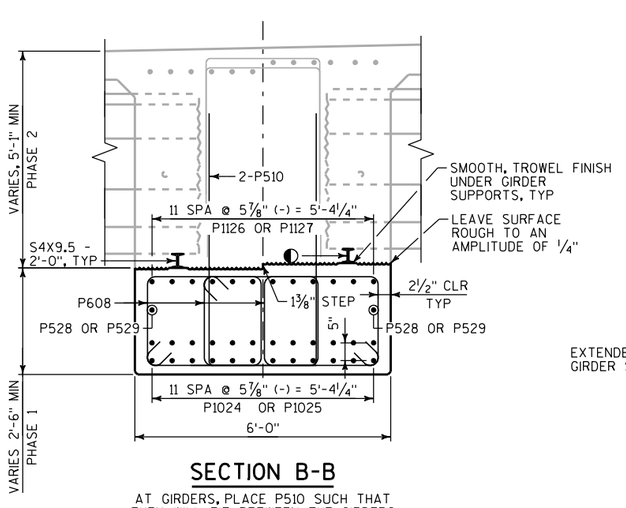


ANCHOR ASSEMBLY SIGN STRUCTURE



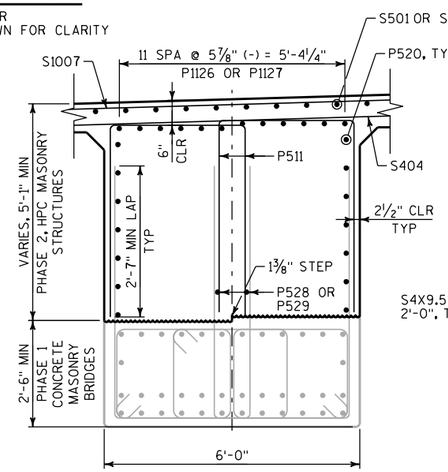
SECTION A-A

BETWEEN GIRDERS, PLACE P509 AT
THE FACE OF THE PIER CAP
(COLUMN AND DECK REINFORCEMENT NOT SHOWN)



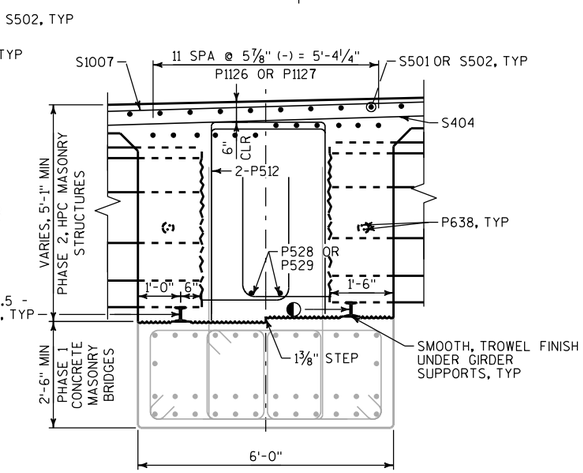
SECTION B-B

AT GIRDERS, PLACE P510 SUCH THAT
THEY WILL FIT BETWEEN THE GIRDERS
(COLUMN AND DECK REINFORCEMENT NOT SHOWN)



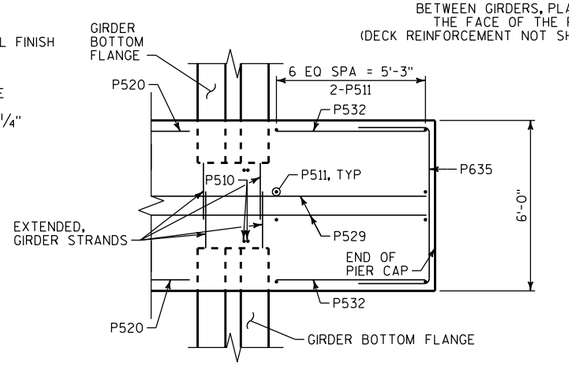
SECTION C-C

BETWEEN GIRDERS, PLACE P511 AT
THE FACE OF THE PIER CAP
(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION D-D

AT GIRDERS, PLACE P512 SUCH THAT
THEY WILL FIT BETWEEN THE GIRDERS
(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION E-E

PLAN VIEW

LEGEND

◐ INCLUDED IN ITEM CONCRETE MASONRY BRIDGES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

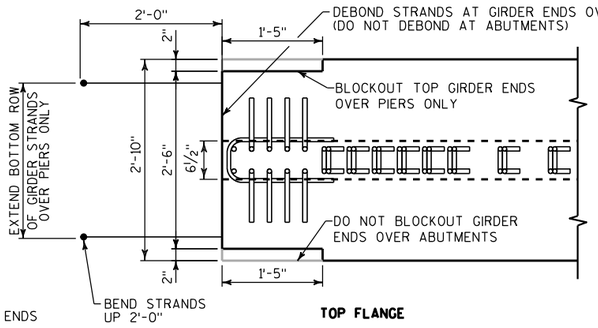
DRAWN BY	ASW	PLANS CK'D.	MAM

PIER 2 PHASE 2

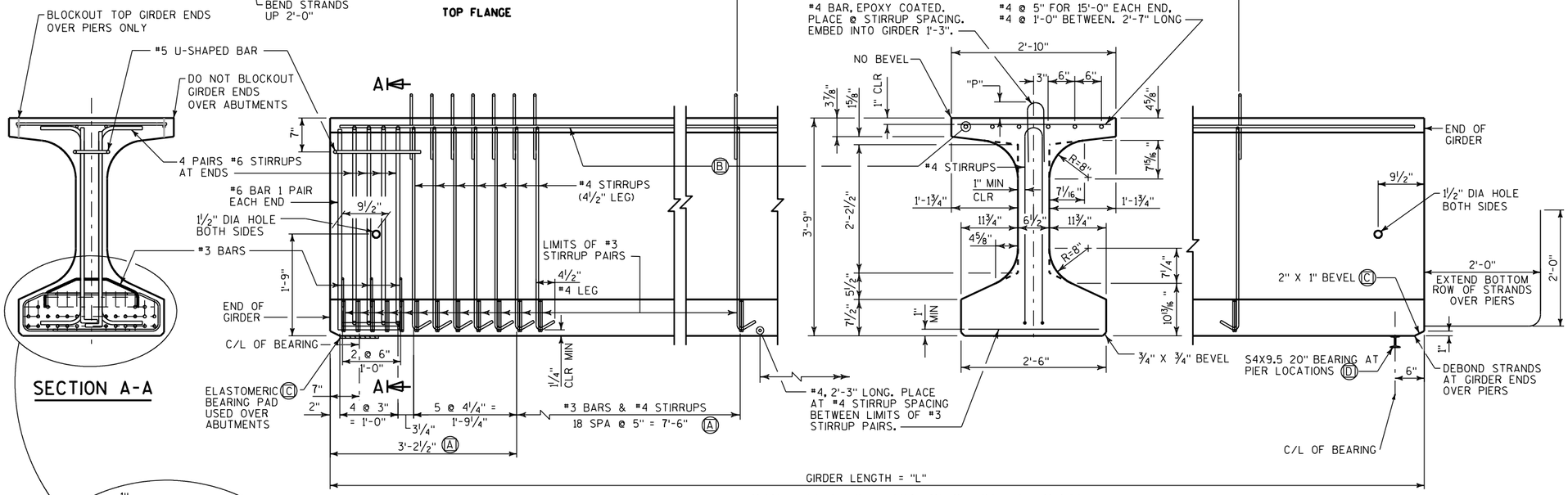
SHEET 17 OF 34

STATE PROJECT NUMBER

1060-33-80



TOP FLANGE



SECTION A-A

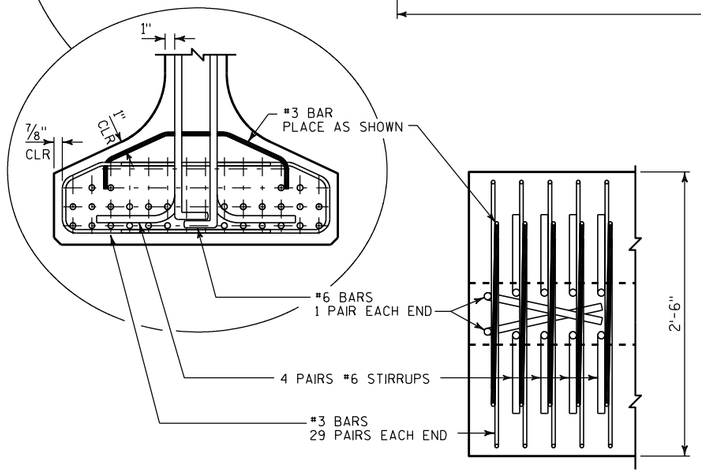
SIDE VIEW & TYP SECTION IN SPAN

(A) DETAIL TYP AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN LAP = 1'-8"

(C) DETAIL TYP AT ENDS OVER ABUTMENT FOR SPANS 1 & 3

(D) DETAIL TYP AT ENDS OVER PIERS



BOTTOM FLANGE

GIRDER DATA**

SPAN	GIRDER NUMBERS	GIRDER LENGTH "L"	CONC STRGTH f'c (psi)	f'ci (psi) *	"P"	DIA OF STRAND (IN.)	DRAPED PATTERN					NUM OF DEBONDED STRANDS	DIST TO DEBOND (FT) ***
							TOTAL NO OF STRANDS	(IN.)					
								"A"	"B" (MIN)	"B" (MAX)	"C"		
1	1-10	111'-0"	8000	6800	7"	0.6	36	40	13¾"	16¾"	5	4	6
2	1-10	111'-0"	8000	6800	7"	0.6	36	40	13¾"	16¾"	5	4	6
3	1-10	111'-0"	8000	6800	7"	0.6	36	40	13¾"	16¾"	5	4	6

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.
** DEAD LOAD DEFLECTIONS GIVEN ON SHEET 20
*** DEBOND STRANDS AT THE PIER ENDS OF THE GIRDER ONLY. THE DEBONDED ENDS OF GIRDER SHALL BE MARKED TO BE EASILY IDENTIFIABLE DURING ERECTION.

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6"ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER AT ABUTMENTS. END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE "STEEL DIAPHRAGM" SHEET.

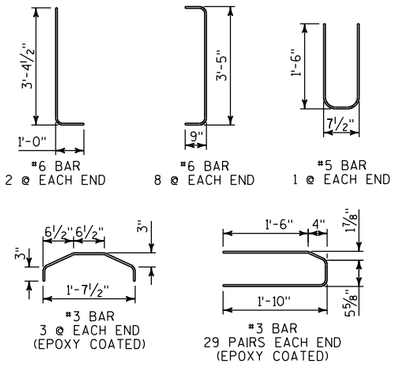
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, THE FOLLOWING OPTION IS AVAILABLE:

1. USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT CHIEF, (608) 266-5161

FOR GIRDER ENDS OVER PIERS, EXTEND BOTTOM ROW OF STRANDS 2'-0" BEYOND THE GIRDER FACE AND BEND 2'-0" UP. AT SAME ENDS, BLOCK-OUT THE TOP FLANGE OF THE GIRDERS, 2" ON EACH SIDE FOR A 1'-5" LENGTH.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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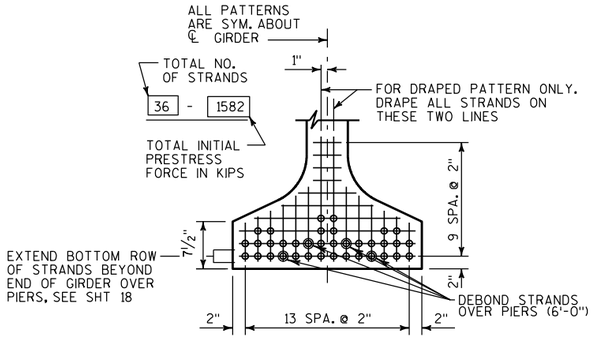
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

45W" PRESTRESSED GIRDER

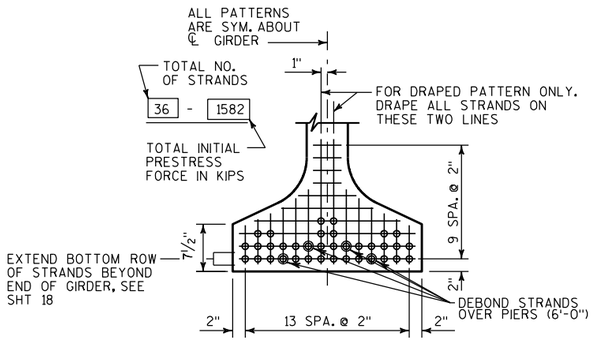
SHEET 18 OF 34

STATE PROJECT NUMBER
1060-33-80



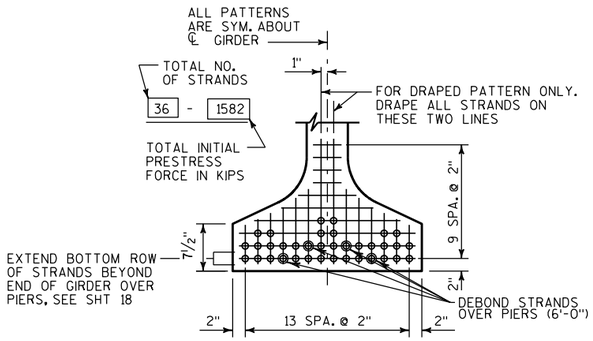
STRAND PATTERN - SPAN 1

0.6" DIA. STRANDS



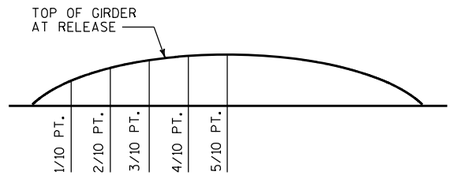
STRAND PATTERN - SPAN 2

0.6" DIA. STRANDS



STRAND PATTERN - SPAN 3

0.6" DIA. STRANDS

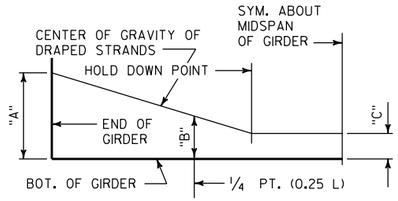


THEORETICAL CAMBER AT STRAND RELEASE

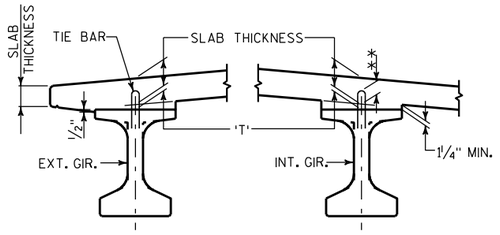
CAMBER IS SYMMETRIC ABOUT MID POINT OF BEAM

THEORETICAL CAMBER *					
SPAN	1/10	2/10	3/10	4/10	5/10
1	1⅛"	2"	2⅝"	3"	3¼"
2	1⅛"	2"	2⅝"	3"	3¼"
3	1⅛"	2"	2⅝"	3"	3¼"

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF RELEASE. THESE VALUES ARE PRESENTED FOR INFORMATION ONLY. THE CAMBER VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'.



DRAPED STRAND PROFILE



SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE QUANTITY ('T') OF 3" WAS USED IN THE QUANTITY "HPC MASONRY STRUCTURES"

8

8

NO.	DATE	REVISION	BY

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STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

45W" PRESTRESSED GIRDER DETAILS

SHEET 19 OF 34

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STATE PROJECT NUMBER
1060-33-80

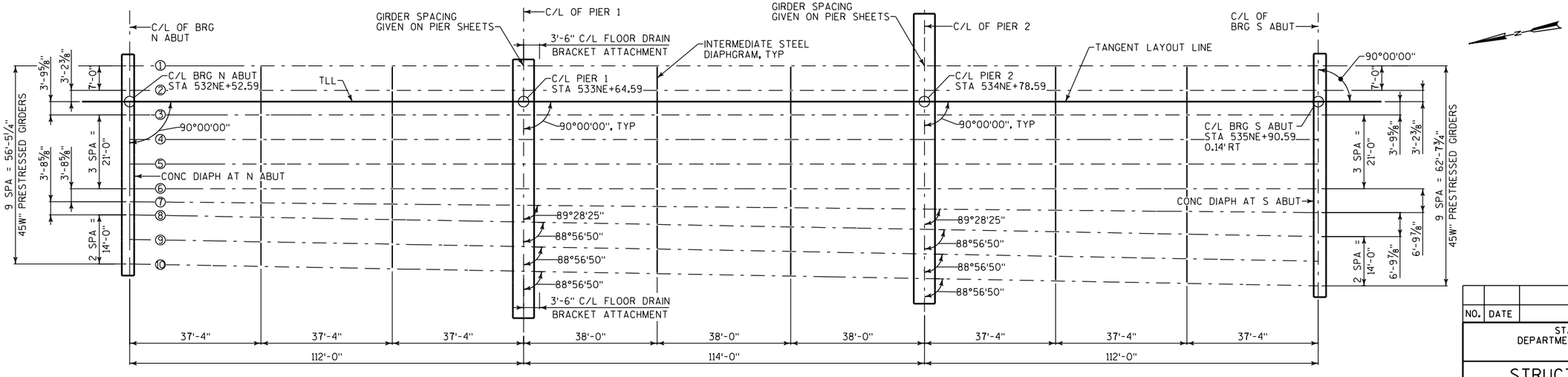
TOP OF DECK ELEVATIONS

LOCATION	N EDGE OF DECK	N ABUT BRG	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L OF N BRG	C/L OF S BRG	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L OF N BRG	C/L OF S BRG	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	S ABUT BRG	S EDGE OF DECK
DECK EDGE E	787.42	787.45	787.76	788.07	788.38	788.69	788.99	789.30	789.61	789.92	790.23	790.48	790.59	790.85	791.16	791.47	791.79	792.10	792.41	792.73	793.04	793.36	793.61	793.71	793.92	794.17	794.42	794.65	794.87	795.09	795.30	795.50	795.69	795.87	795.89
GIRDER 1	787.46	787.49	787.80	788.11	788.41	788.72	789.03	789.34	789.65	789.95	790.26	790.52	790.63	790.88	791.20	791.51	791.83	792.14	792.45	792.77	793.08	793.39	793.64	793.75	793.96	794.22	794.47	794.71	794.94	795.16	795.37	795.57	795.77	795.95	795.97
GIRDER 2	787.60	787.63	787.94	788.25	788.55	788.86	789.17	789.48	789.79	790.09	790.40	790.66	790.77	791.02	791.34	791.65	791.97	792.28	792.59	792.91	793.22	793.53	793.78	793.89	794.12	794.39	794.66	794.91	795.16	795.39	795.62	795.84	796.05	796.25	796.28
R/L NE	787.66	787.69	788.00	788.31	788.62	788.93	789.23	789.54	789.85	790.16	790.47	790.72	790.83	791.09	791.40	791.71	792.03	792.34	792.65	792.97	793.28	793.60	793.85	793.95	794.19	794.47	794.74	795.00	795.25	795.50	795.73	795.96	796.18	796.39	796.41
GIRDER 3	787.74	787.77	788.08	788.39	788.69	789.00	789.31	789.62	789.93	790.23	790.54	790.80	790.91	791.16	791.48	791.79	792.11	792.42	792.73	793.05	793.36	793.67	793.92	794.03	794.27	794.56	794.84	795.12	795.38	795.63	795.88	796.11	796.34	796.55	796.58
GIRDER 4	787.88	787.91	788.22	788.53	788.83	789.14	789.45	789.76	790.07	790.37	790.68	790.94	791.05	791.30	791.62	791.93	792.25	792.56	792.87	793.19	793.50	793.81	794.06	794.17	794.43	794.74	795.03	795.32	795.60	795.87	796.13	796.38	796.62	796.85	796.88
GIRDER 5	788.02	788.05	788.36	788.67	788.97	789.28	789.59	789.90	790.21	790.51	790.82	791.08	791.19	791.44	791.76	792.07	792.39	792.70	793.01	793.33	793.64	793.95	794.20	794.31	794.59	794.91	795.22	795.52	795.82	796.11	796.38	796.65	796.91	797.15	797.18
CROWN	788.14	788.17	788.48	788.79	789.10	789.41	789.71	790.02	790.33	790.64	790.95	791.20	791.31	791.57	791.88	792.19	792.51	792.82	793.13	793.45	793.76	794.08	794.33	794.44	794.72	795.06	795.38	795.70	796.01	796.31	796.60	796.89	797.16	797.41	797.44
GIRDER 6	788.12	788.16	788.47	788.77	789.08	789.39	789.70	790.01	790.31	790.62	790.93	791.18	791.29	791.55	791.86	792.18	792.49	792.80	793.12	793.43	793.74	794.06	794.31	794.42	794.70	795.04	795.37	795.68	795.99	796.29	796.58	796.87	797.14	797.39	797.42
GIRDER 7	788.05	788.08	788.39	788.70	789.00	789.31	789.61	789.92	790.22	790.53	790.84	791.09	791.20	791.45	791.76	792.08	792.39	792.70	793.01	793.32	793.63	793.94	794.19	794.31	794.59	794.92	795.24	795.56	795.87	796.17	796.45	796.73	797.01	797.25	797.28
GIRDER 8	787.98	788.01	788.31	788.62	788.92	789.22	789.53	789.83	790.14	790.44	790.74	790.99	791.10	791.36	791.67	791.97	792.28	792.59	792.90	793.21	793.52	793.83	794.08	794.19	794.47	794.80	795.12	795.44	795.74	796.04	796.32	796.60	796.87	797.12	797.14
GIRDER 9	787.84	787.87	788.17	788.48	788.78	789.08	789.39	789.69	790.00	790.30	790.60	790.85	790.96	791.22	791.53	791.83	792.14	792.45	792.76	793.07	793.38	793.69	793.94	794.05	794.33	794.66	794.98	795.30	795.60	795.90	796.18	796.46	796.73	796.97	797.00
GIRDER 10	787.70	787.73	788.03	788.34	788.64	788.94	789.25	789.55	789.86	790.16	790.46	790.71	790.82	791.08	791.39	791.69	792.00	792.31	792.62	792.93	793.24	793.55	793.80	793.91	794.19	794.52	794.84	795.16	795.46	795.76	796.04	796.32	796.59	796.83	796.86
DECK EDGE N	787.66	787.69	788.00	788.30	788.60	788.91	789.21	789.52	789.82	790.12	790.43	790.68	790.79	791.04	791.35	791.66	791.97	792.28	792.59	792.90	793.20	793.51	793.76	793.87	794.15	794.48	794.81	795.12	795.42	795.72	796.01	796.29	796.56	796.79	796.82

GIRDER DEFLECTIONS

GIRDER, DEAD LOAD DEFLECTIONS BASED ON BEAM DEFLECTIONS AND THE DEFLECTION AT THE PIERS. DEFLECTIONS ARE GIVEN AT TENTH POINTS OF SPANS.
DEFLECTIONS AT ABUTMENTS ARE 0".
DEFLECTIONS GIVEN IN INCHES.

LOCATION	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG NORTH	C/L BRG SOUTH	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG NORTH	C/L BRG SOUTH	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
GIRDER 1	0.85	1.58	2.14	2.50	2.61	2.48	2.11	1.55	0.84	0.02	0.02	0.89	1.66	2.27	2.66	2.80	2.68	2.32	1.74	0.84	0.16	0.16	0.96	1.67	2.23	2.58	2.69	2.55	2.18	1.60	0.88
GIRDER 2	0.79	1.46	1.97	2.27	2.35	2.19	1.81	1.25	0.56	0.04	0.05	0.77	1.42	1.91	2.21	2.28	2.11	1.74	1.19	0.56	0.20	0.20	0.92	1.57	2.06	2.36	2.43	2.26	1.88	1.30	0.59
GIRDER 3	0.80	1.46	1.98	2.28	2.36	2.20	1.83	1.27	0.58	0.07	0.07	0.80	1.44	1.93	2.22	2.29	2.13	1.75	1.19	0.58	0.20	0.20	0.92	1.57	2.06	2.36	2.43	2.27	1.88	1.30	0.59
GIRDER 4	0.79	1.46	1.97	2.28	2.36	2.20	1.82	1.26	0.58	0.06	0.07	0.79	1.42	1.91	2.20	2.26	2.09	1.71	1.15	0.58	0.15	0.15	0.87	1.52	2.02	2.33	2.40	2.24	1.86	1.29	0.58
GIRDER 5	0.80	1.47	1.98	2.29	2.37	2.22	1.84	1.28	0.60	0.09	0.09	0.80	1.43	1.91	2.19	2.24	2.06	1.67	1.10	0.60	0.08	0.08	0.81	1.47	1.98	2.28	2.37	2.22	1.84	1.28	0.57
GIRDER 6	0.68	1.26	1.71	1.98	2.05	1.93	1.62	1.17	0.60	0.18	0.18	0.80	1.34	1.75	1.98	2.01	1.85	1.49	0.98	0.60	0.07	0.07	0.76	1.39	1.87	2.17	2.25	2.11	1.75	1.21	0.55
GIRDER 7	0.56	1.04	1.40	1.63	1.70	1.61	1.37	1.01	0.57	0.24	0.24	0.83	1.35	1.74	1.96	1.99	1.83	1.48	0.99	0.57	0.10	0.10	0.77	1.37	1.84	2.12	2.20	2.05	1.71	1.18	0.53
GIRDER 8	0.69	1.28	1.73	2.01	2.09	1.98	1.68	1.23	0.67	0.26	0.26	0.87	1.40	1.81	2.04	2.07	1.90	1.54	1.03	0.67	0.10	0.10	0.80	1.42	1.90	2.19	2.27	2.12	1.76	1.22	0.55
GIRDER 9	0.81	1.50	2.03	2.35	2.44	2.30	1.94	1.40	0.73	0.24	0.24	0.93	1.54	2.01	2.27	2.30	2.10	1.69	1.11	0.73	0.06	0.05	0.79	1.45	1.96	2.27	2.36	2.21	1.83	1.27	0.57
GIRDER 10	0.87	1.61	2.19	2.56	2.69	2.58	2.23	1.67	0.98	0.18	0.18	1.02	1.76	2.34	2.70	2.81	2.66	2.26	1.65	0.98	0.02	0.02	0.83	1.56	2.13	2.49	2.62	2.50	2.14	1.57	0.86



FRAMING PLAN

GIRDERS 90° TO C/L OF BRG AND PIERS EXCEPT WHERE SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

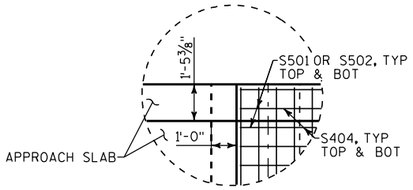
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SUPERSTRUCTURE FRAMING PLAN

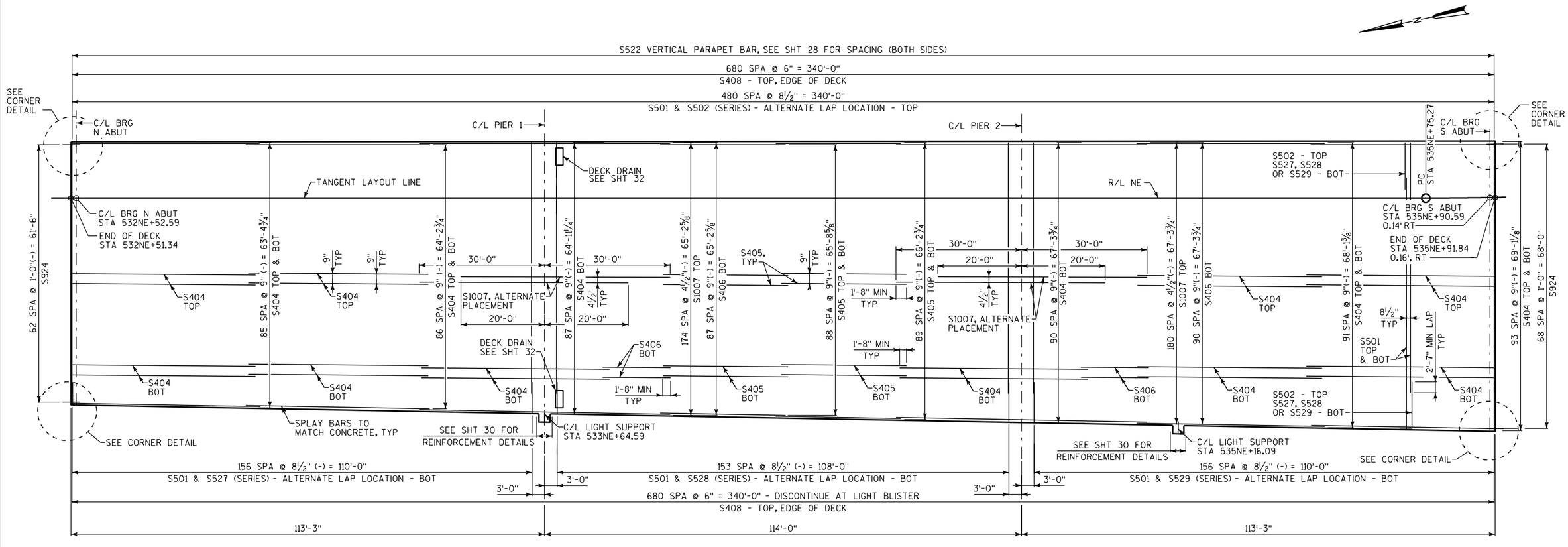
SHEET 20 OF 34

STATE PROJECT NUMBER
1060-33-80



CORNER DETAIL

TYPICAL FOR ALL FOUR, DECK CORNERS (NORTHEAST CORNER SHOWN)
(APPROACH SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)



DECK PLAN

STRUCURAL APPROACH SLABS NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

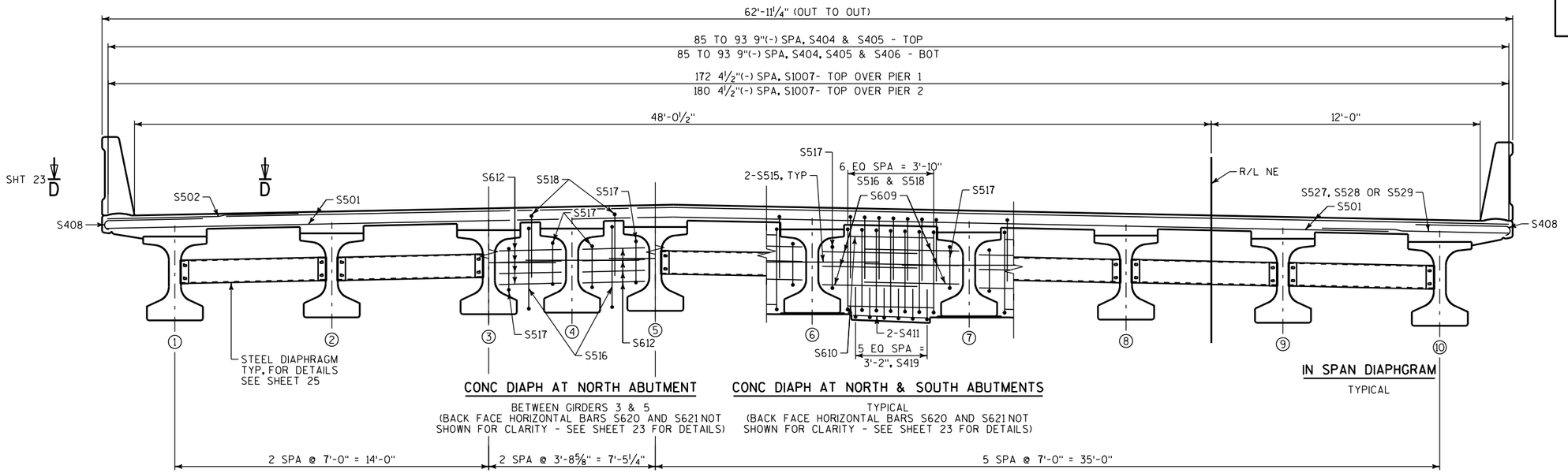
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SUPERSTRUCTURE REINFORCEMENT

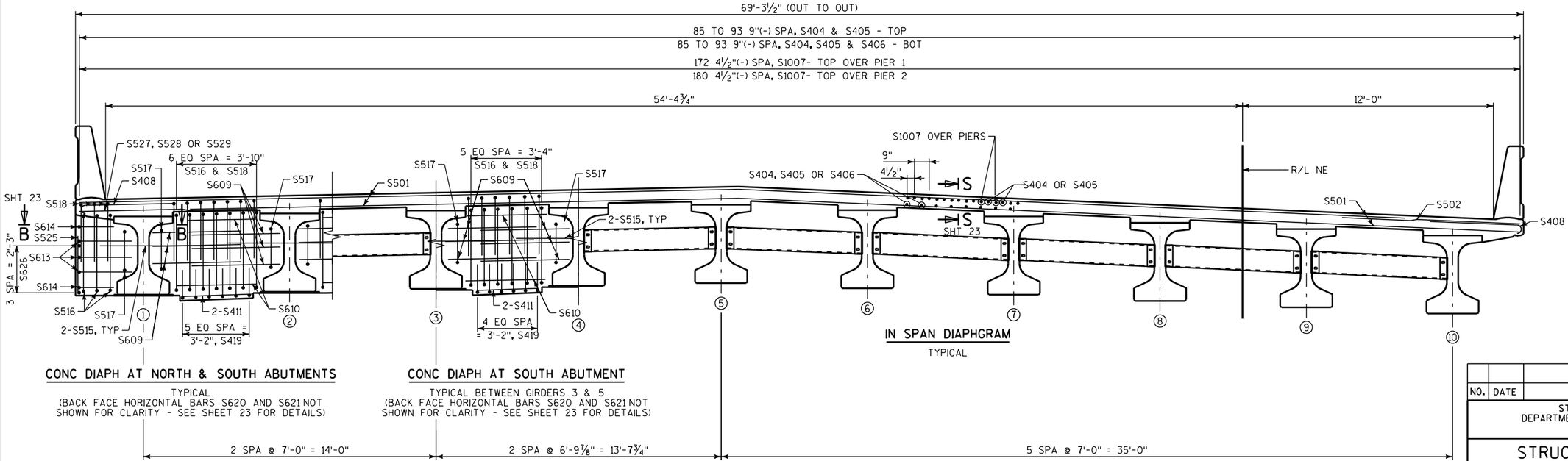
SHEET 21 OF 34

STATE PROJECT NUMBER
1060-33-80



CROSS SECTION THRU SUPERSTRUCTURE

DIMENSIONS GIVEN AT C/L BRG NORTH ABUTMENT
(LOOKING NORTH)



CROSS SECTION THRU SUPERSTRUCTURE

DIMENSIONS GIVEN AT C/L BRG SOUTH ABUTMENT
(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

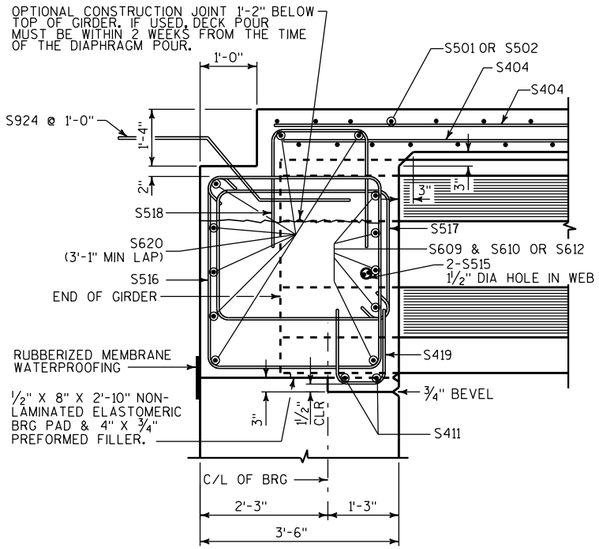
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

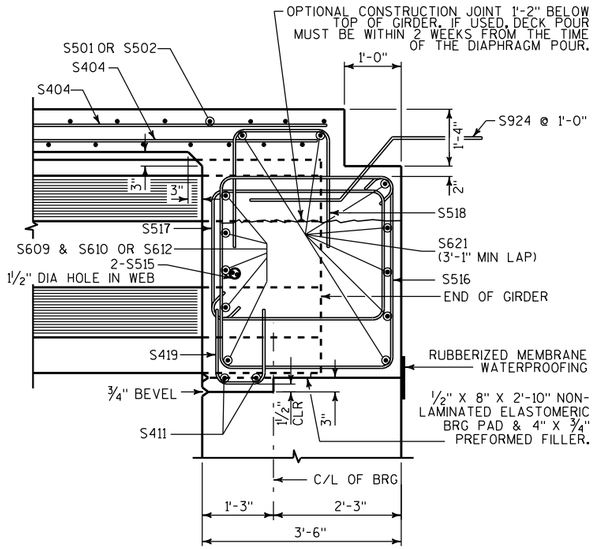
SUPERSTRUCTURE CROSS SECTIONS

SHEET 22 OF 34

STATE PROJECT NUMBER
1060-33-80

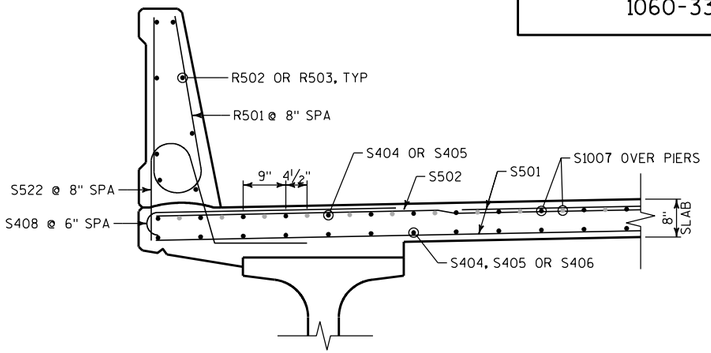


AT NORTH ABUTMENT



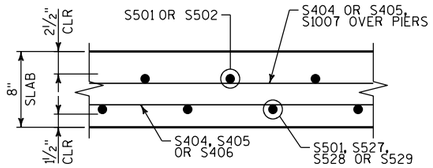
AT SOUTH ABUTMENT

PARTIAL LONGITUDINAL SECTION AT ABUTMENTS



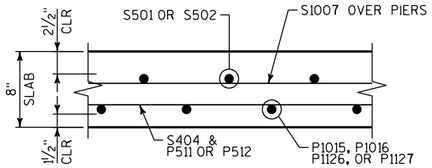
SECTION D-D

(LOOKING SOUTH, EAST PARAPET SHOWN, WEST PARAPET SIMILAR BUT OPPOSITE HAND)



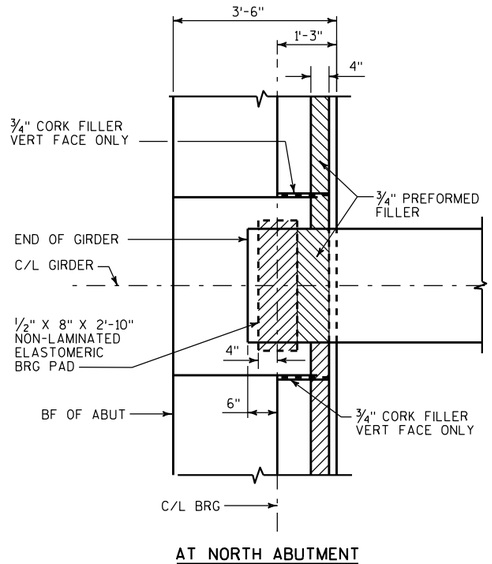
SECTION S-S

SECTION NOT DIRECTLY OVER PIERS

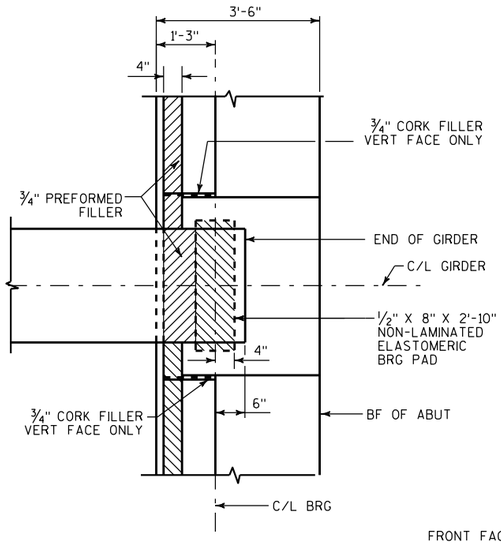


SECTION S-S

SECTION OVER PIERS (OVER PIER CAPS)

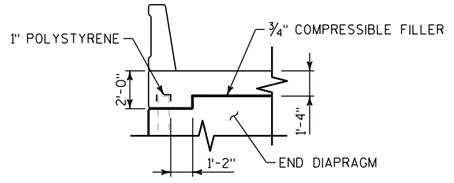


AT NORTH ABUTMENT

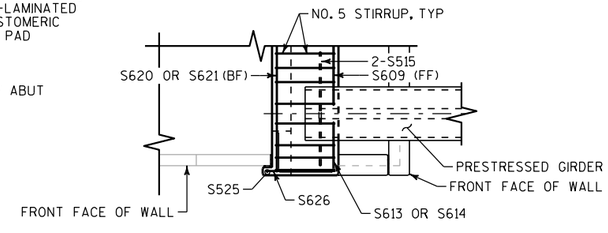


AT SOUTH ABUTMENT

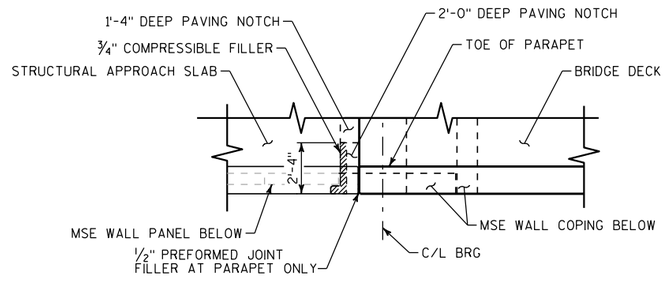
BEARING PAD DETAIL



SECTION A-A



SECTION B-B (DIAPHRAGM)



SECTION C-C

(DECK REINFORCEMENT NOT SHOWN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SUPEPSTRUCTURE DETAILS (1 OF 2)

SHEET 23 OF 34

STATE PROJECT NUMBER
1060-33-80

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

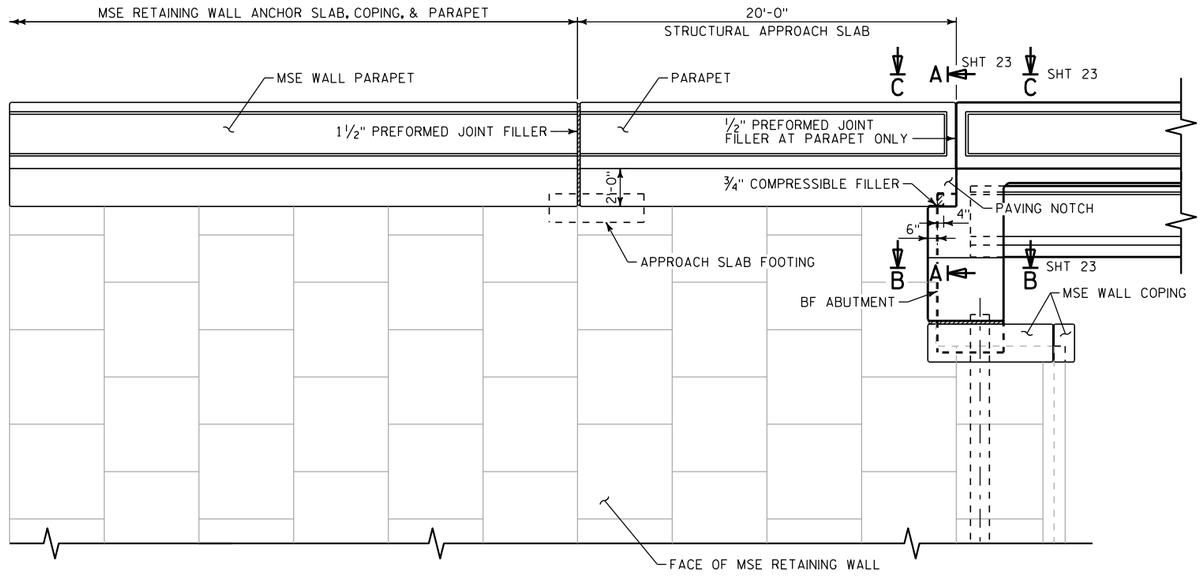
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	SERIES	LOCATION
S501	X	949	60'-0"	-		TRANSVERSE DECK - TOP & BOT
S502	X	481	8'-6"	-	⚠	TRANSVERSE DECK - TOP & BOT (SERIES)
S503	X	0	0'-0"	-		NOT USED
S404	X	897	45'-0"	-		LONGITUDINAL DECK - TOP & BOT
S405	X	358	30'-0"	-		LONGITUDINAL DECK - CENTER SPAN - TOP & BOT
S406	X	179	16'-3"	-		LONGITUDINAL DECK - OVER PIERS - BOT
S1007	X	356	50'-0"	-		LONGITUDINAL DECK - OVER PIERS - TOP
S408	X	1350	5'-0"	X		TRANSVERSE - EDGE OF DECK
S609	X	96	4'-3"	-		DIAPHRAGM - LONGITUDINAL - MAIN
S610	X	32	3'-10"	-		DIAPHRAGM - LONGITUDINAL - TOP & BOT
S411	X	32	2'-11"	-		DIAPHRAGM - LONGITUDINAL - SHEAR KEY
S612	X	8	2'-9"	-		DIAPHRAGM - LONGITUDINAL - FLARED GIRDERS
S613	X	12	7'-9"	X		DIAPHRAGM - LONGITUDINAL - ENDS - MAIN
S614	X	8	6'-1"	X		DIAPHRAGM - LONGITUDINAL - ENDS - TOP & BOT
S515	X	38	6'-0"	-		THROUGH GIRDERS
S516	X	124	13'-11"	X		DIAPHRAGM - TRANSVERSE - MAIN
S517	X	40	10'-5"	X		DIAPHRAGM - TRANSVERSE - BY GIRDERS
S518	X	124	7'-4"	X		DIAPHRAGM - TRANSVERSE - TOP
S419	X	94	3'-4"	X		DIAPHRAGM - TRANSVERSE - SHEAR KEY
S620	X	14	33'-3"	-		DIAPHRAGM - LONGITUDINAL - BACK FACE (NORTH)
S621	X	14	36'-6"	-		DIAPHRAGM - LONGITUDINAL - BACK FACE (SOUTH)
S522	X	1025	4'-8"	X		PARAPET TIE
S623	X	8	9'-10"	X		DRAIN CONTAINMENT
STAINLES STEEL → S924	-	132	5'-0"	X		APPROACH SLAB TIE IN (STAINLESS STEEL)
S525	X	4	2'-9"	-		DIAPHRAGM COPING DOGEAR
S626	X	16	3'-6"	-		DIAPHRAGM COPING DOGEAR
S527	X	157	6'-5"	-	⚠	DECK - TRANSVERSE - NORTH (SERIES)
S528	X	154	8'-6"	-	⚠	DECK - TRANSVERSE - MIDDLE (SERIES)
S529	X	157	10'-7"	-	⚠	DECK - TRANSVERSE - SOUTH (SERIES)

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH

BAR SERIES TABLE

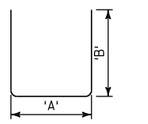
BAR MARK	NO. REQ'D	LENGTH
S502	1 SERIES OF 481	5'-4" TO 11'-8"
S527	1 SERIES OF 157	5'-4" TO 7'-5"
S528	1 SERIES OF 154	7'-6" TO 9'-5"
S529	1 SERIES OF 157	9'-6" TO 11'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY

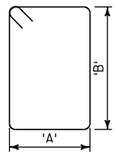


ELEVATION AT ABUTMENT

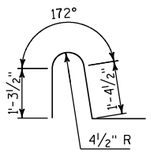
SEE SHEET 23 FOR SECTIONS



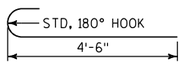
BAR MARK	DIM. 'A'	DIM. 'B'
S613	3'-1"	2'-6"
S614	3'-1"	1-8"
S518	2'-1"	2'-9"
S419	10"	1'-4"



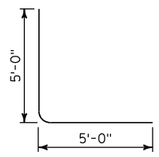
BAR MARK	DIM 'A'	DIM 'B'
S516	3'-1"	3'-7"
S517	3'-1"	1'-10"



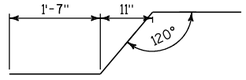
S522



S408



S623



S924
STAINLESS STEEL

NO.	DATE	REVISION	BY

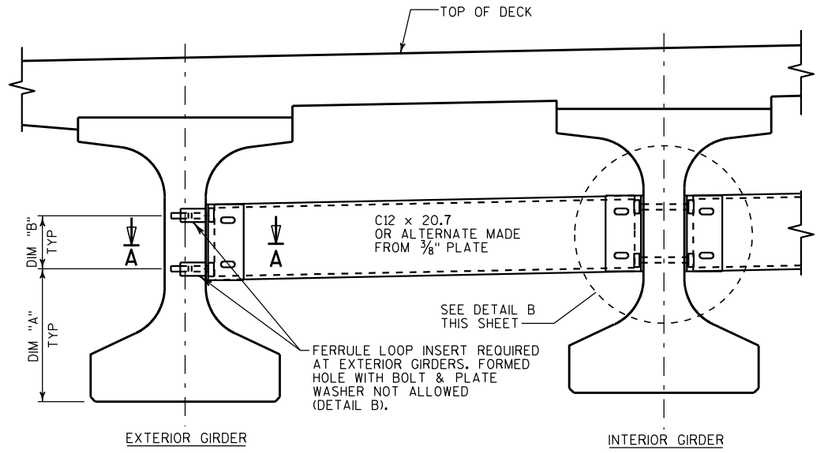
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

SUPERSTRUCTURE DETAILS (2 OF 2)

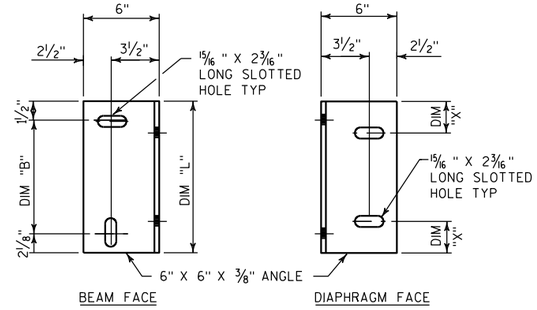
SHEET 24 OF 34



PART TRANSVERSE SECTION AT DIAPHRAGM

DIMENSION TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM "X"
45W"	1'-9 1/8"	8 7/8"	1'-0 1/2"	2 3/4"



DIAPHRAGM SUPPORT

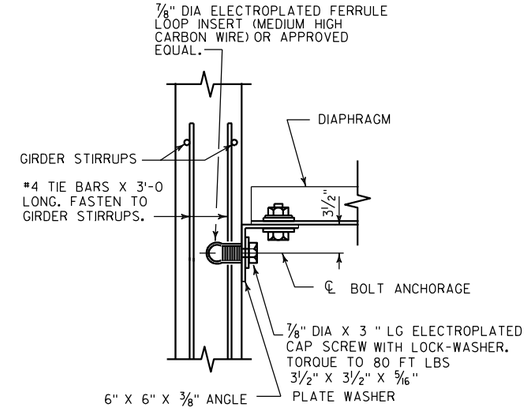
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-857", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

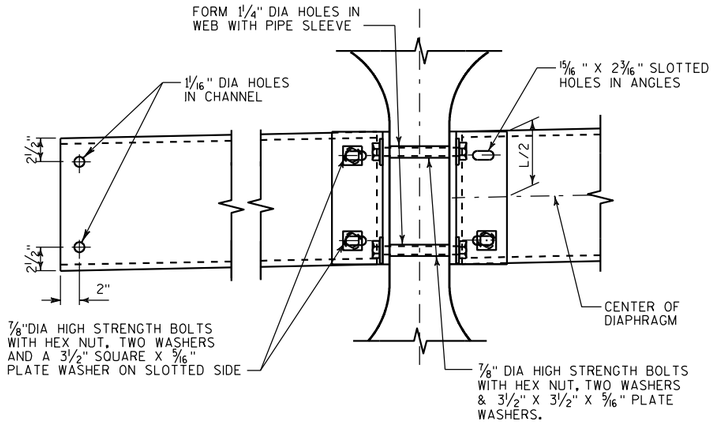
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



SECT A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

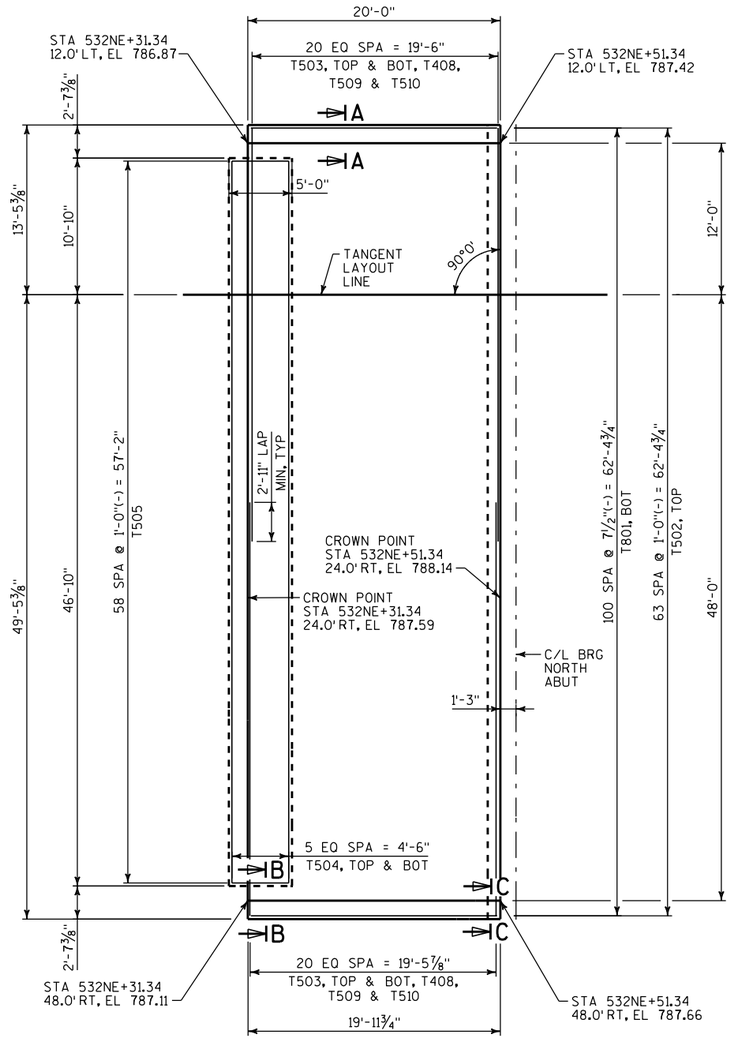
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

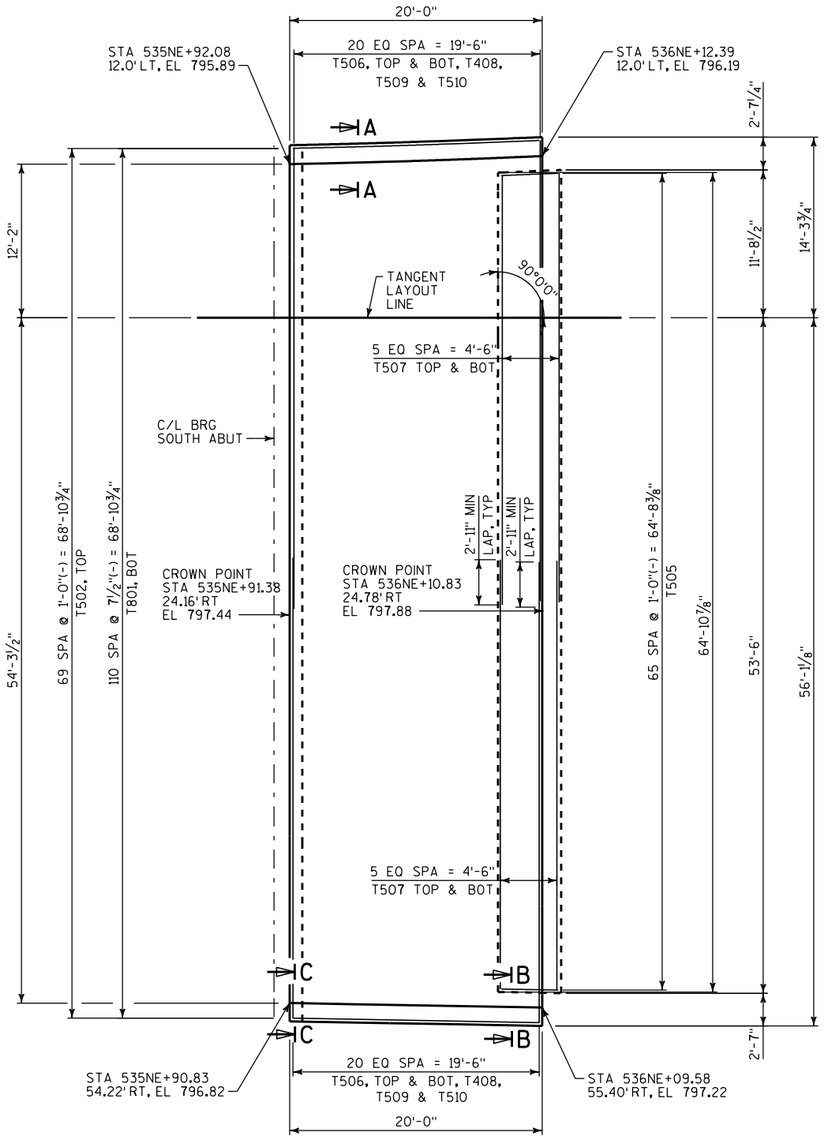
STEEL DIAPHRAGM

SHEET 25 OF 34

STATE PROJECT NUMBER
1060-33-80



NORTH APPROACH SLAB



SOUTH APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

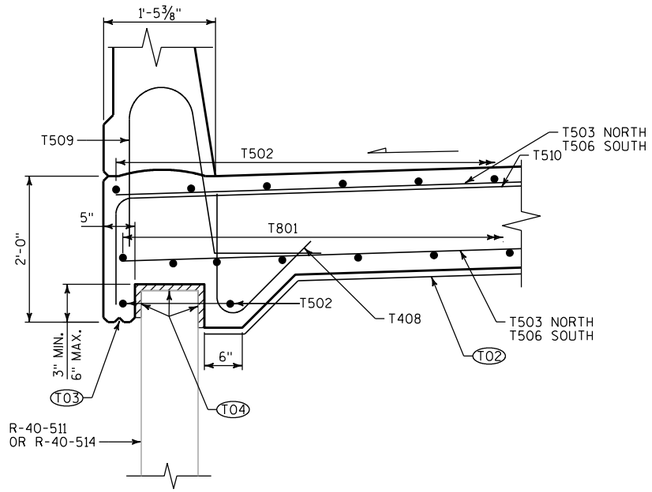
STRUCTURAL
APPROACH SLAB

SHEET 26 OF 34

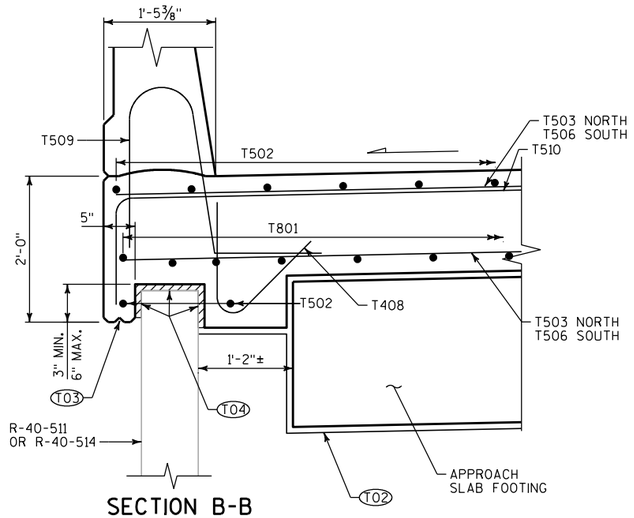
8

8

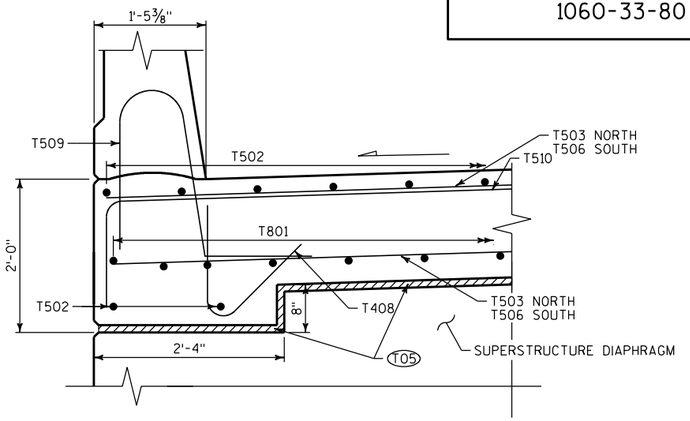
STATE PROJECT NUMBER
1060-33-80



SECTION A-A
(AT R-40-511 OR R-40-514)



SECTION B-B
(AT R-40-511 OR R-40-514)



SECTION C-C
AT ABUTMENTS

LEGEND

(T01) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T02) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

(T03) ¾" CONT. DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENT BACKWALL.

(T04) 1" EXPANDED POLYSTYRENE

(T05) ¾" COMPRESSIBLE FILLER

APPROACH SLAB NOTES

THE DECK SHALL HAVE A TINE FINISH AS DEFINED IN THE STANDARD SPECIFICATIONS.

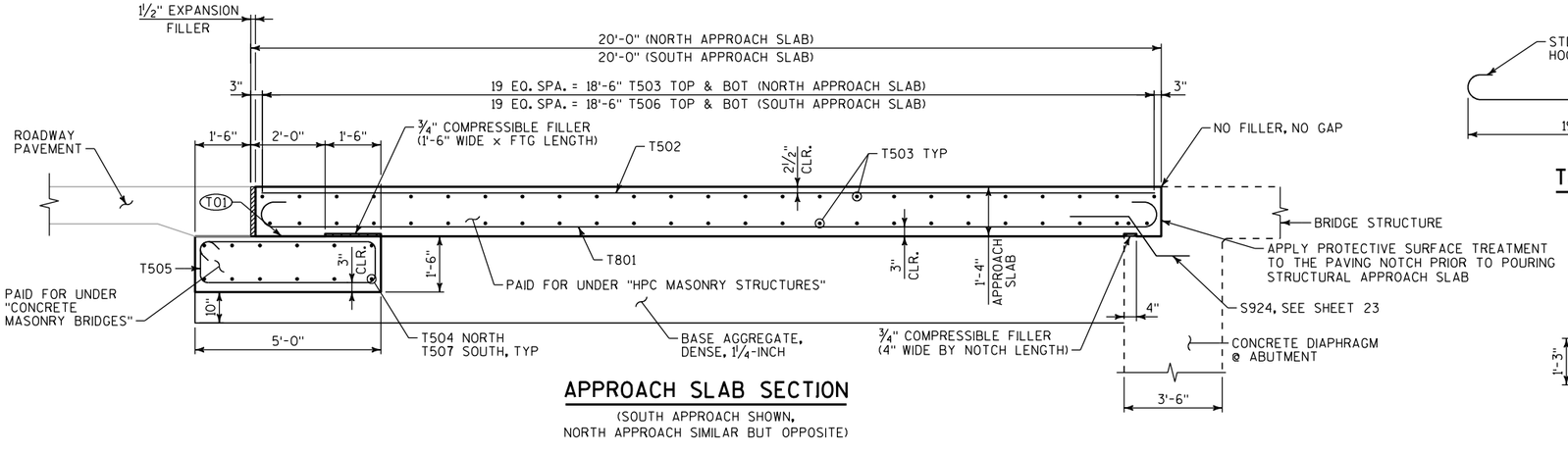
SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.

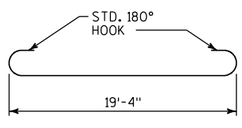
BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
T801	X	212	21'-2"	X		BOTTOM, MAIN, LONGITUDINAL (N & S)
T502	X	142	19'-4"	-		TOP, MAIN, LONGITUDINAL (N & S)
T503	X	84	32'-9"	-		TOP & BOT, MAIN, TRANSVERSE (N)
T504	X	12	57'-2"	-		SLAB FTG, LONGITUDINAL (N)
T505	X	125	11'-9"	X		SLAB FTG, TRANSVERSE (N & S)
T506	X	84	36'-6"	-		TOP & BOT, MAIN, TRANSVERSE (S)
T507	X	24	34'-0"	-		SLAB FTG, LONGITUDINAL (S)
T408	X	84	3'-0"	X		WALL NOTCH (N & S)
T509	X	84	5'-5"	X		PARAPET DOWEL (N & S)
T510	X	84	5'-9"	X		EXTERIOR TRANSVERSE (N & S)

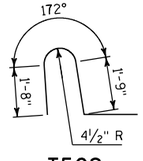
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



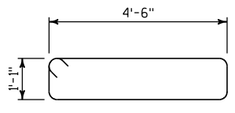
APPROACH SLAB SECTION
(SOUTH APPROACH SHOWN, NORTH APPROACH SIMILAR BUT OPPOSITE)



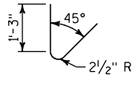
T801



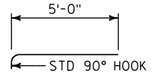
T509



T505



T408



T510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

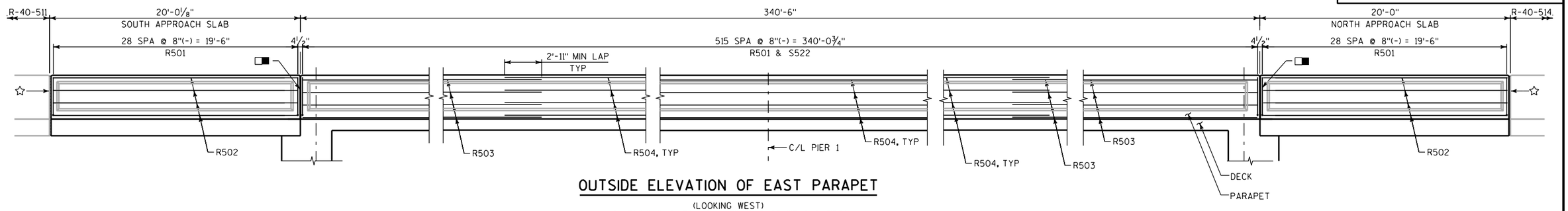
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

STRUCTURAL APPROACH SLAB DETAILS

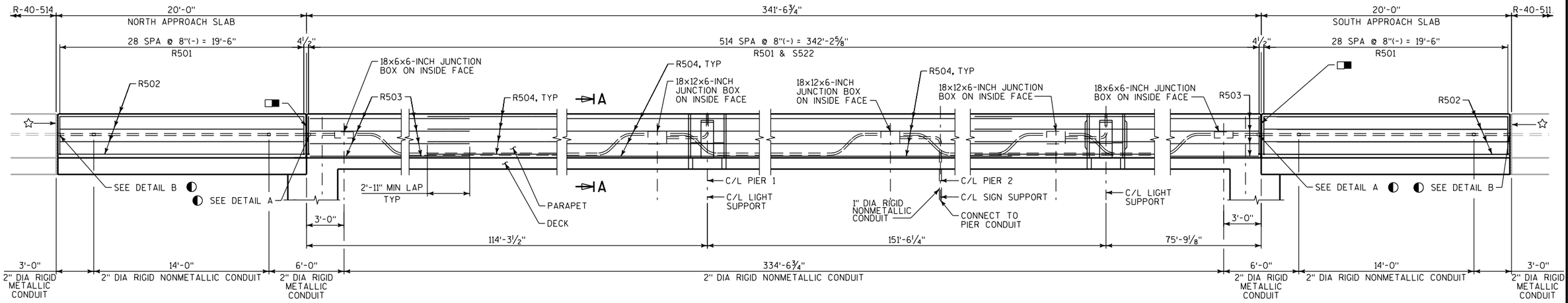
SHEET 27 OF 34

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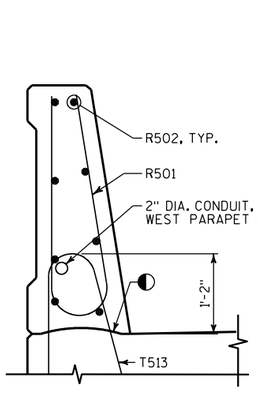
OUTSIDE ELEVATION OF EAST PARAPET

(LOOKING WEST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)

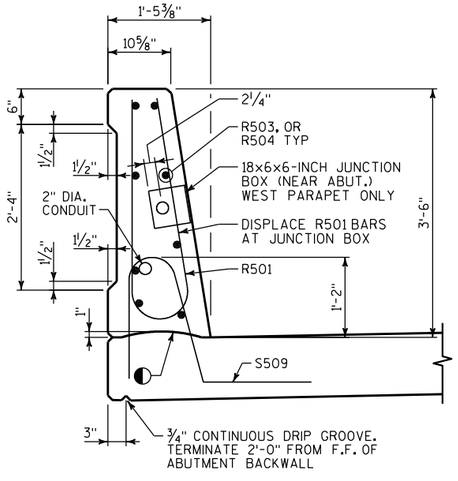


OUTSIDE ELEVATION OF WEST PARAPET

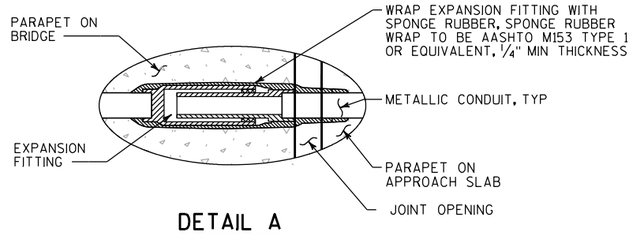
(LOOKING EAST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



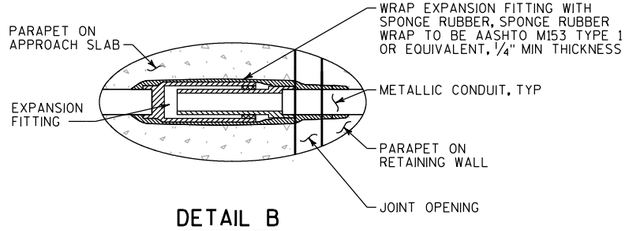
SECTION A



SECTION B



DETAIL A

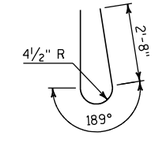


DETAIL B

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
R501	X	1147	6'-7"	X	PARAPET VERTICAL
R502	X	32	19'-6"	-	PARAPET LONGITUDINAL - APPROACH SLAB
R503	X	32	29'-6"	-	PARAPET LONGITUDINAL - MAIN
R504	X	80	60'-0"	X	PARAPET LONGITUDINAL - MAIN



LEGEND

◐ METALLIC CONDUIT EXPANSION FITTING (O-Z/GEDNEY TYPE AX-200 & BONDING JUMPER) WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".

☆ 1/2" PREFORMED JOINT FILLER

◨ 1/2" PREFORMED JOINT FILLER AT PARAPET ONLY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

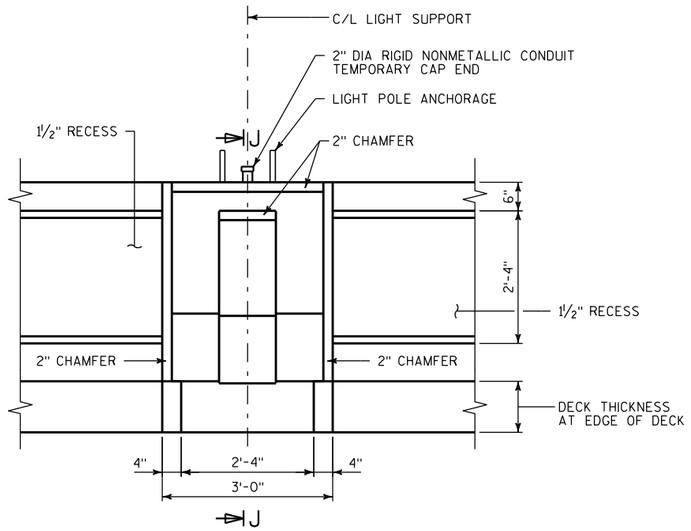
STRUCTURE B-40-857

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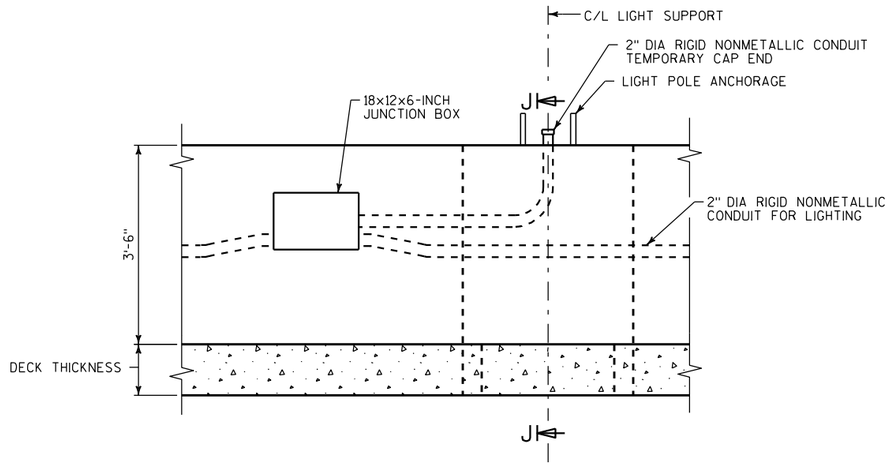
SINGLE SLOPED PARAPET

SHEET 28 OF 34

STATE PROJECT NUMBER
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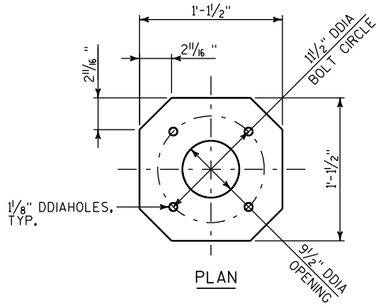


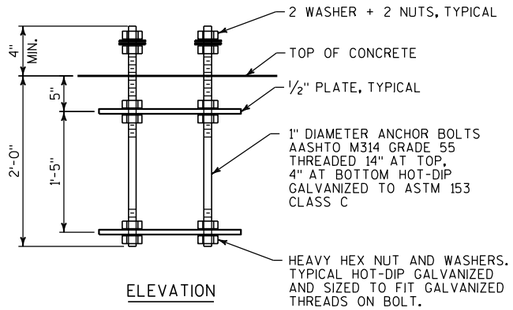
OUTSIDE ELEVATION AT LIGHT SUPPORT



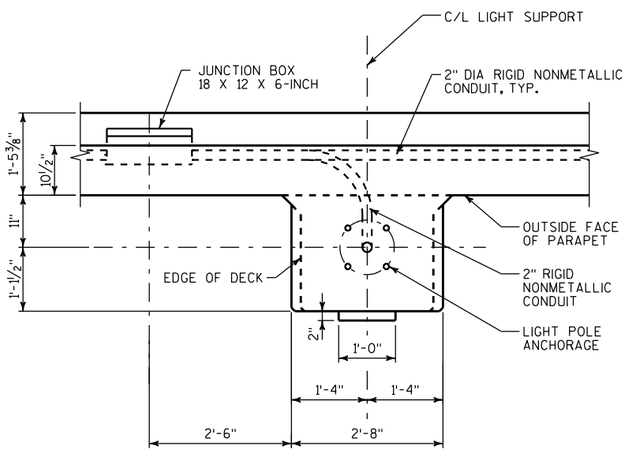
INSIDE ELEVATION AT LIGHT SUPPORT

(NORTH PARAPET SHOWN - SOUTH PARAPET SIMILAR)

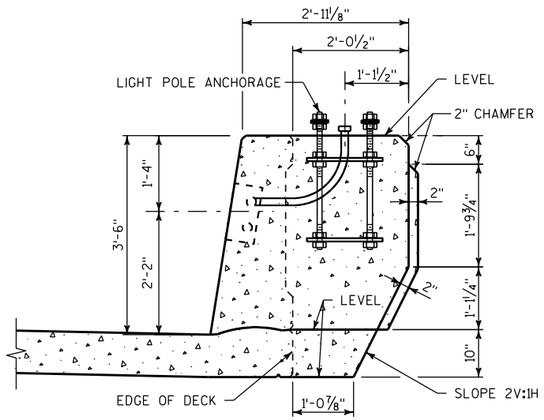




ANCHOR ASSEMBLY LIGHT POLE ON STRUCTURES



PLAN AT LIGHT SUPPORT



SECTION J-J

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY TEK | PLANS CK'D. MAM

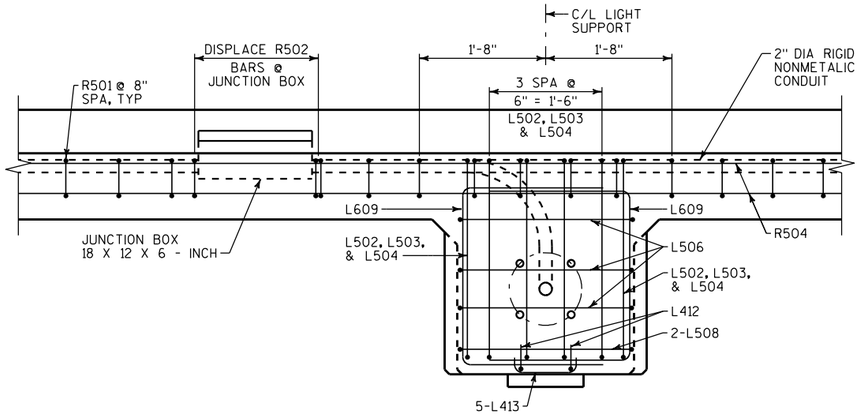
LIGHT SUPPORT DETAILS (1 OF 2)

SHEET 29 OF 34

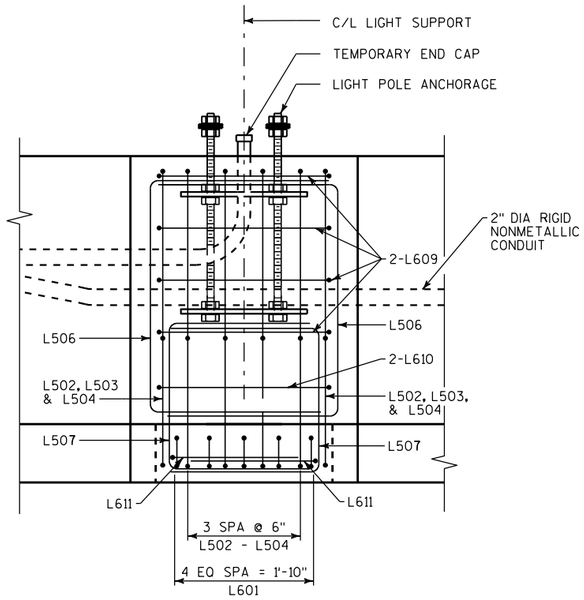
8

8

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PLAN SHOWING REINFORCEMENT IN LIGHT SUPPORT



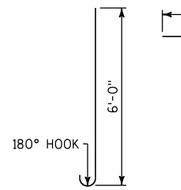
REINFORCEMENT IN LIGHT SUPPORT

INSIDE ELEVATION

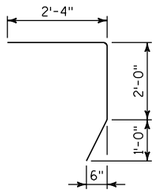
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

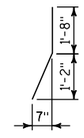
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L601	X	14	6'-8"	X	DECK OVERHANG
L502	X	12	5'-3"	X	VERTICAL - OUTSIDE
L503	X	12	5'-4"	X	VERTICAL - OUTSIDE WITH SLAB
L504	X	12	4'-10"	X	VERTICAL - WITH SLAB
L505		0			NOT USED
L506	X	12	7'-5"	X	VERTICAL - BODY
L507	X	8	5'-8"	X	VERTICAL - LOWER BODY
L508	X	4	6'-6"	X	VERTICAL - OUTSIDE
L609	X	16	6'-5"	X	HORIZONTAL - TOP
L610	X	4	6'-1"	X	HORIZONTAL - BODY
L611	X	4	4'-9"	X	HORIZONTAL - BOTTOM
L412	X	4	3'-0"	X	OUTSIDE FACE
L413	X	10	1'-1"	X	OUTSIDE FACE



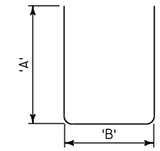
L601



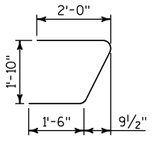
L503



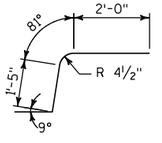
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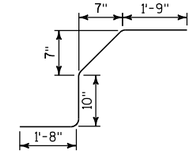
BAR MARK	DIM 'A'	DIM 'B'
L506	2'-3"	3'-2"
L507	2'-0"	1'-11"
L508	2'-3"	2'-3"
L609	2'-3"	2'-3"
L610	2'-3"	1'-11"
L413	0'-4"	0'-7"



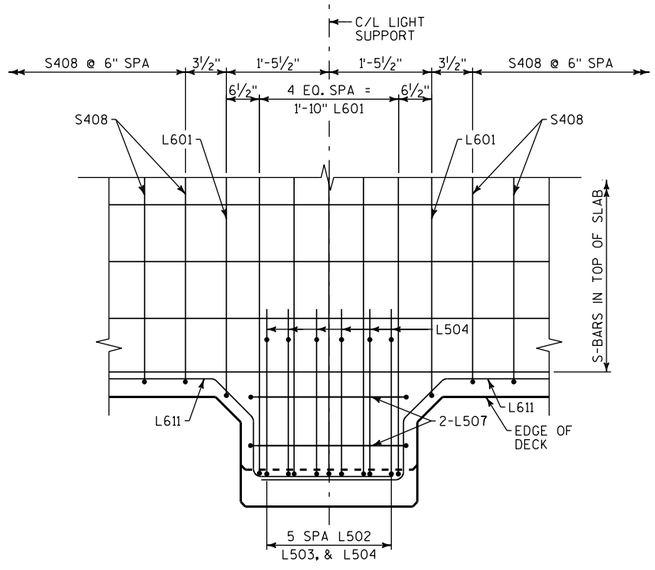
L502



L504

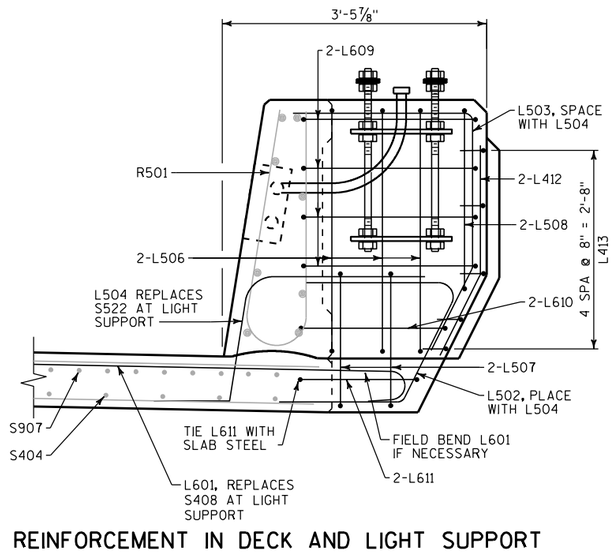


L611



REINFORCEMENT IN DECK AT LIGHT SUPPORT

(S501 & S502 NOT SHOWN FOR CLARITY)



REINFORCEMENT IN DECK AND LIGHT SUPPORT

CROSS SECTION AT LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

DRAWN BY TEK | PLANS CK'D. MAM

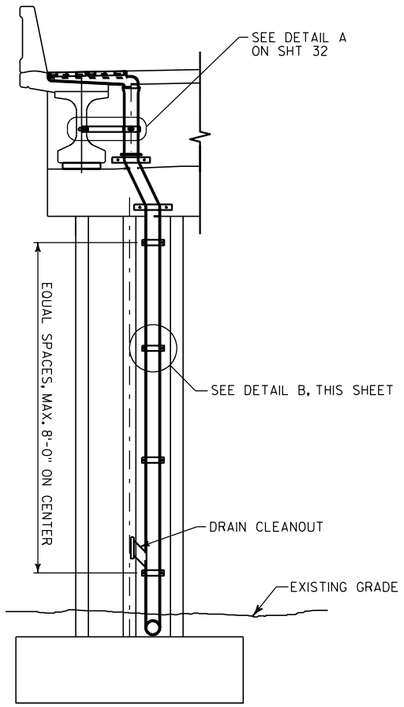
LIGHT SUPPORT DETAILS (2 OF 2)

SHEET 30 OF 34

8

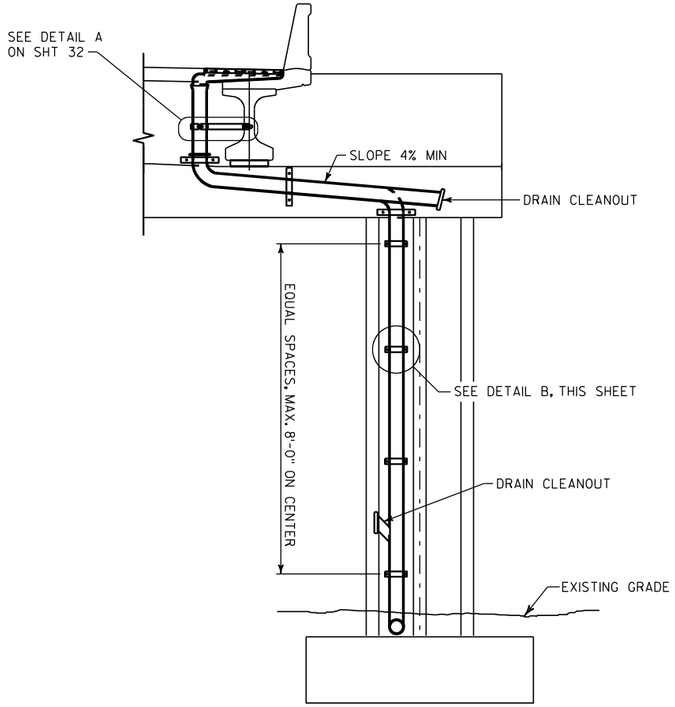
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STATE PROJECT NUMBER
1060-33-80



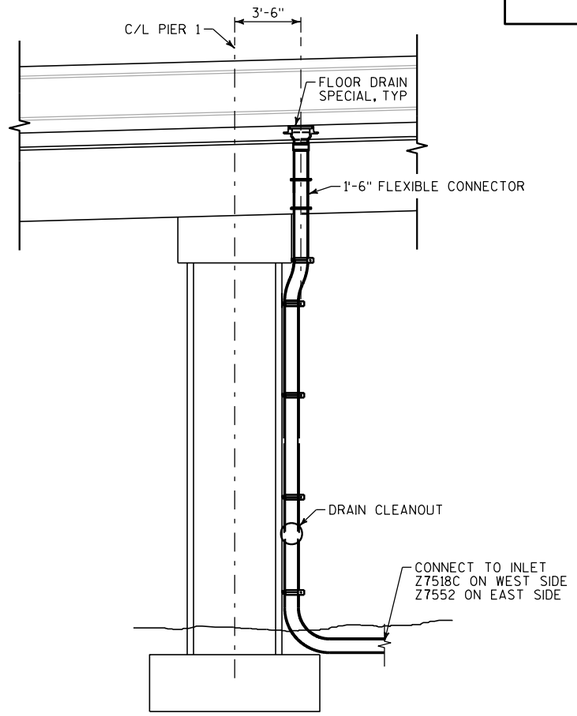
PARTIAL ELEVATION

WEST SIDE LOOKING NORTH



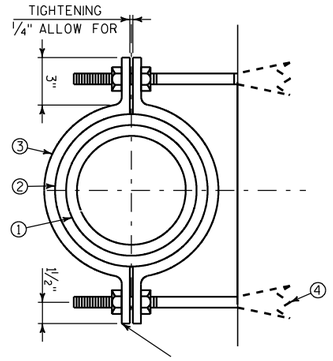
PARTIAL ELEVATION

EAST SIDE LOOKING NORTH



ELEVATION

LOOKING EAST



DETAIL B

NOTES

1. INSTALL PIPING AT THE STEEPEST GRADE POSSIBLE.
2. ALL FITTINGS, ELBOWS, CLEANOUTS, HANGERS, MASONRY ANCHORS, BOLTS AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT AND/OR FLOOR DRAINS IS CONSIDERED INCIDENTAL TO PAY ITEM "DOWNSPOUT 8-INCH".
3. BOLTS SHALL BE STAINLESS STEEL. ALL OTHER CONNECTION ELEMENTS SHALL CONFORM TO ASTM A36 AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. 8" DIA DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.

NOTES

① 8" DIA DOWNSPOUT

② 6" LG SPLIT RTRP STRIP BOND TO #1, PLACE AT ALL CLAMP LOC'S

③ 2½" X ⅜" BAR, TYP

④ ⅝" DIA TYPE S ANCHORS (ST STL BOLT & WASHER, TYP)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

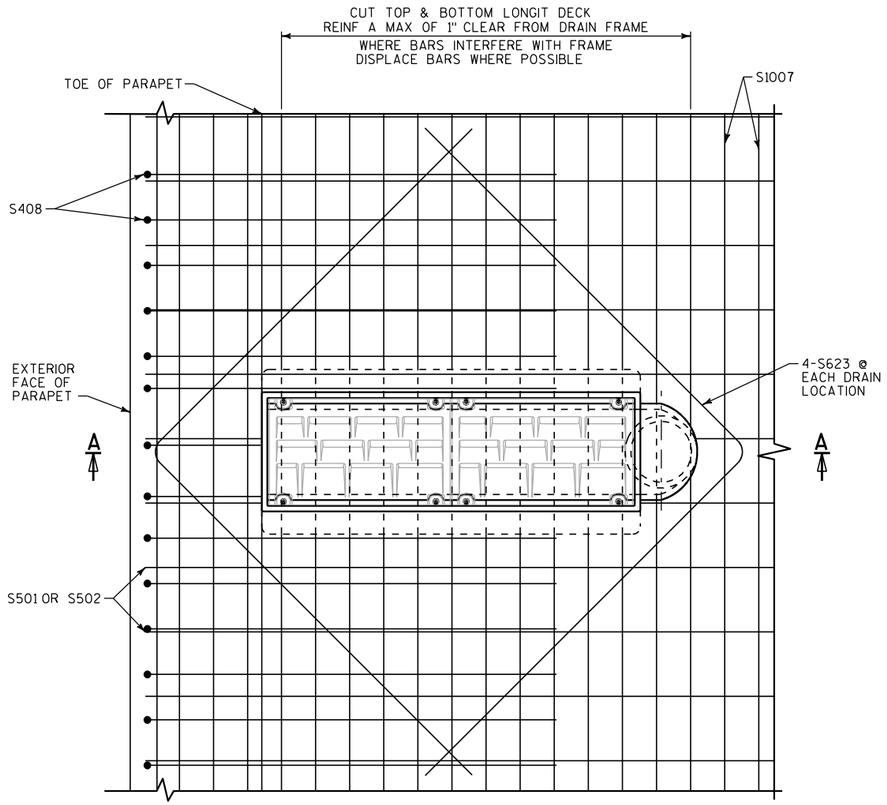
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

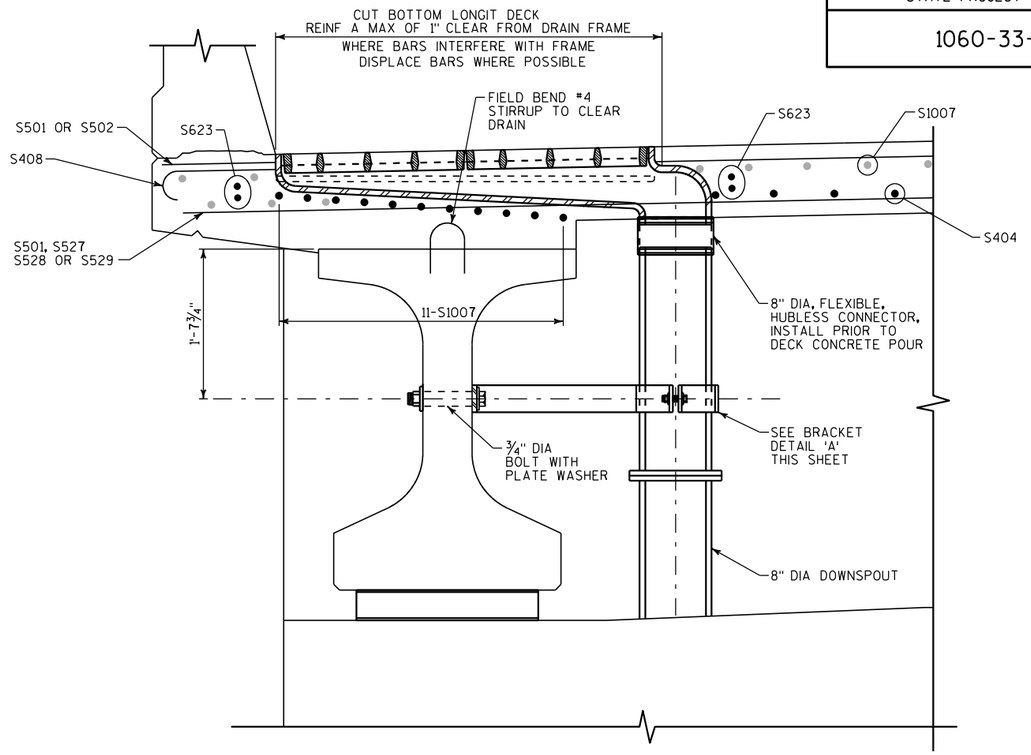
DOWNSPOUT DETAILS

SHEET 31 OF 34

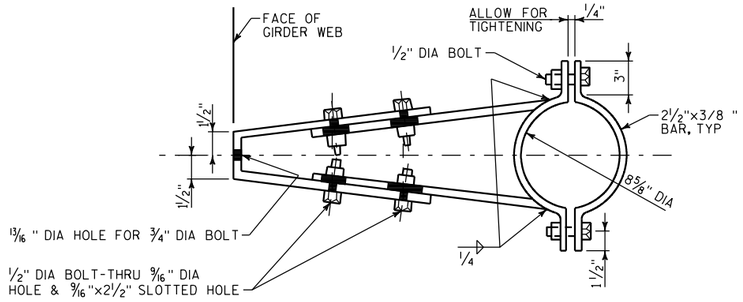
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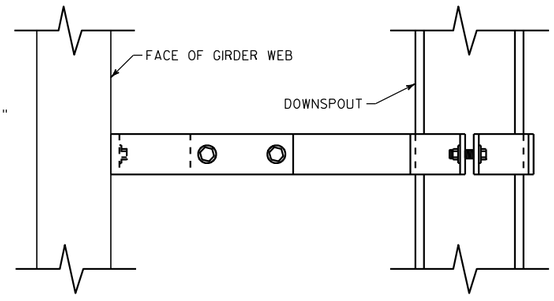
PLAN



SECTION A-A



PLAN



SIDE ELEVATION

DETAIL A

NOTES

1. FOR DRAIN CASTING DETAILS, SEE SHEET 33.
2. MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36 AND HOT-DIP GALVANIZED AFTER FABRICATION. ALL BOLTS SHALL BE STAINLESS STEEL. PROVIDE OVERSIZE NYLON WASHERS TO ISOLATE STAINLESS STEEL BOLTS FROM GALVANIZED STEEL.
3. THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

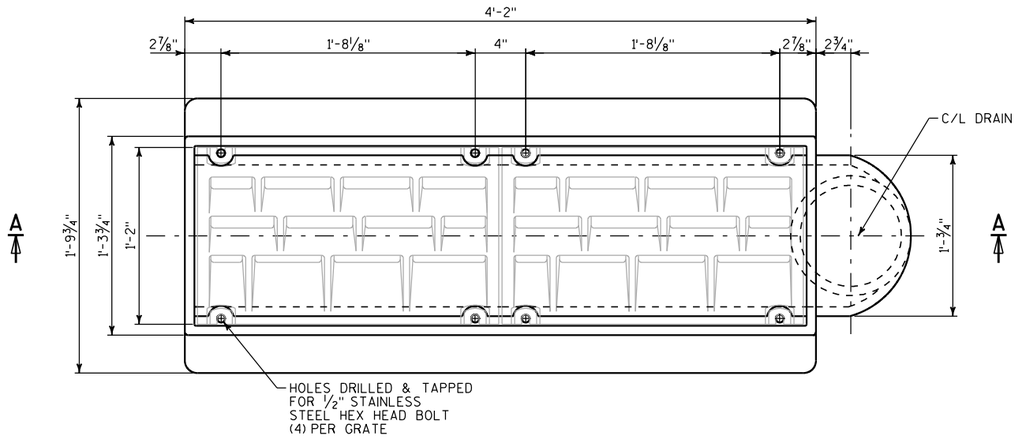
DRAWN BY ASW | PLANS CK'D. MAM

FLOOR DRAIN DETAILS

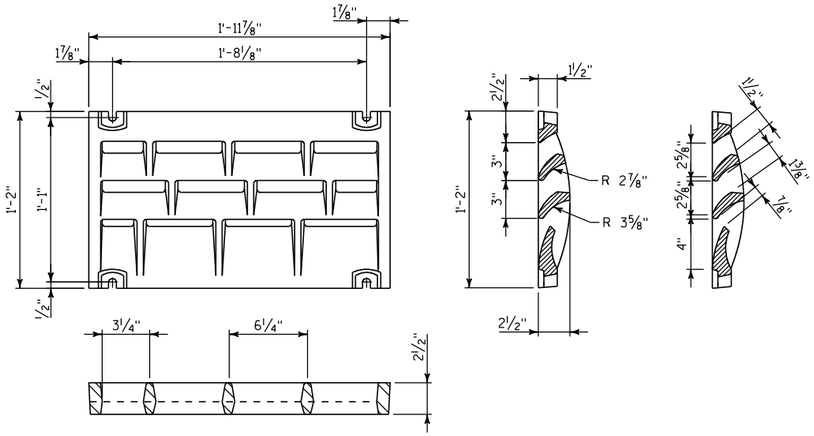
SHEET 32 OF 34

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STATE PROJECT NUMBER
1060-33-80

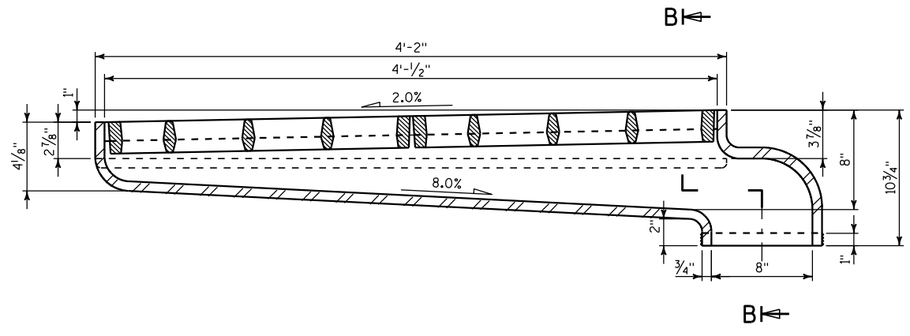


PLAN

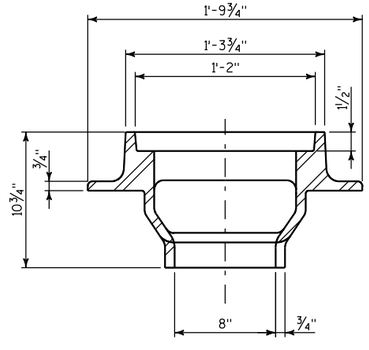


GRATE DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT



SECTION A-A



SECTION B-B

NOTES

ALL MATERIAL FOR TYPE 'WF' CASTING AND 8" DIA CONNECTION PIPE, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-857

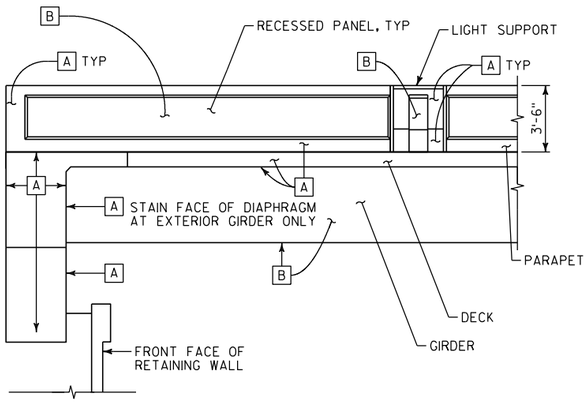
DRAWN BY ASW | PLANS CK'D. MAM

FLOOR DRAIN
TYPE 'WF'

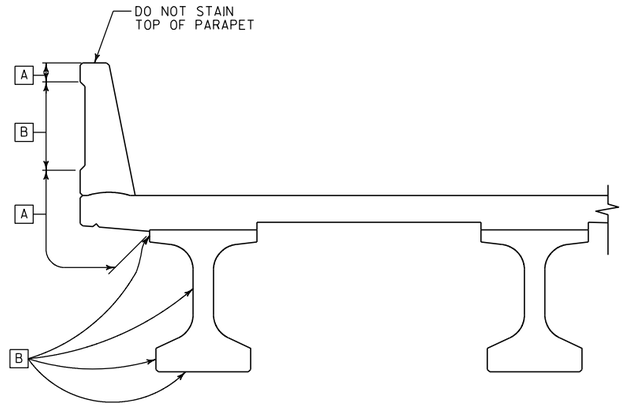
SHEET 33 OF 34

8

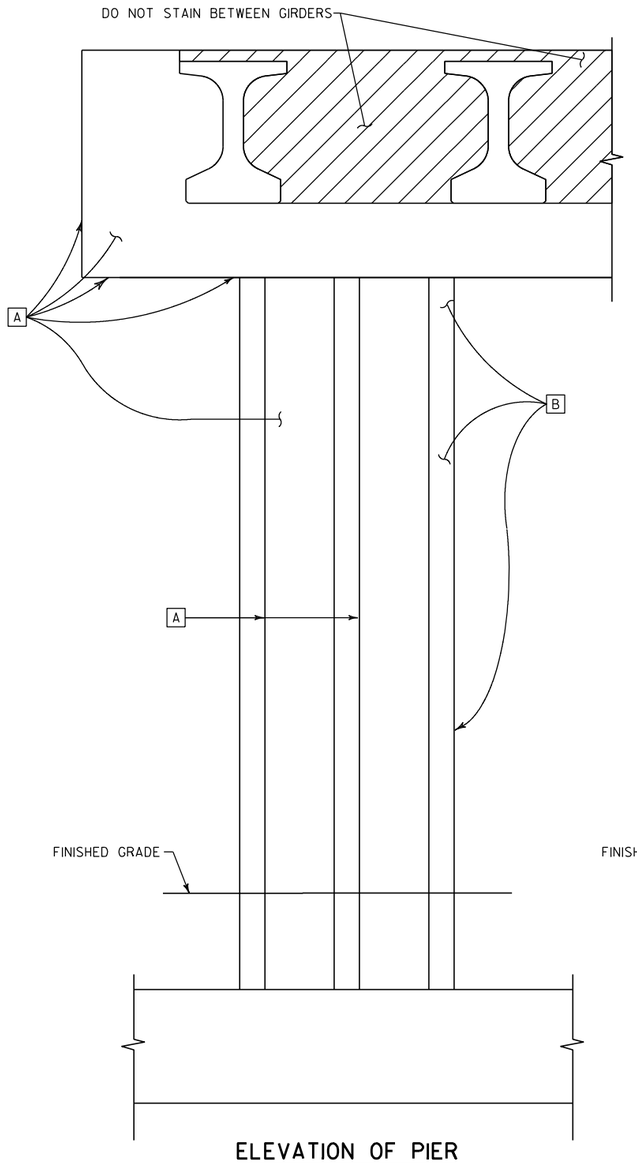
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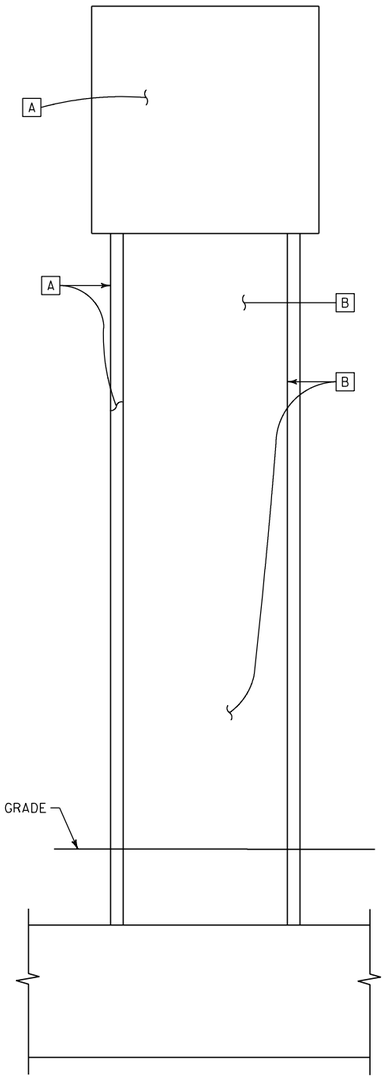
OUTSIDE ELEVATION OF PARAPET



ELEVATION OF DECK



ELEVATION OF PIER



ELEVATION OF PIER

LOOKING EAST (FROM WEST END)

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		SIDEWALKS	FASCIA & EXPOSED UNDERSIDE
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO 6" BELOW TOP OF RETAINING WALL COPING
		PIERS	SIDES AND BOTTOM OF CAP BEAM, AND COLUMNS TO FINISHED GRADE
B	ACCENT COLOR #1	PIERS, GIRDERS, PARAPETS	REVEALS ON COLUMNS, EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS, REVEALS ON PARAPETS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE SHERWIN-WILLIAMS STANDARD COLOR SYSTEM LISTED.

BASE COLOR : FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERALCOLOR - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

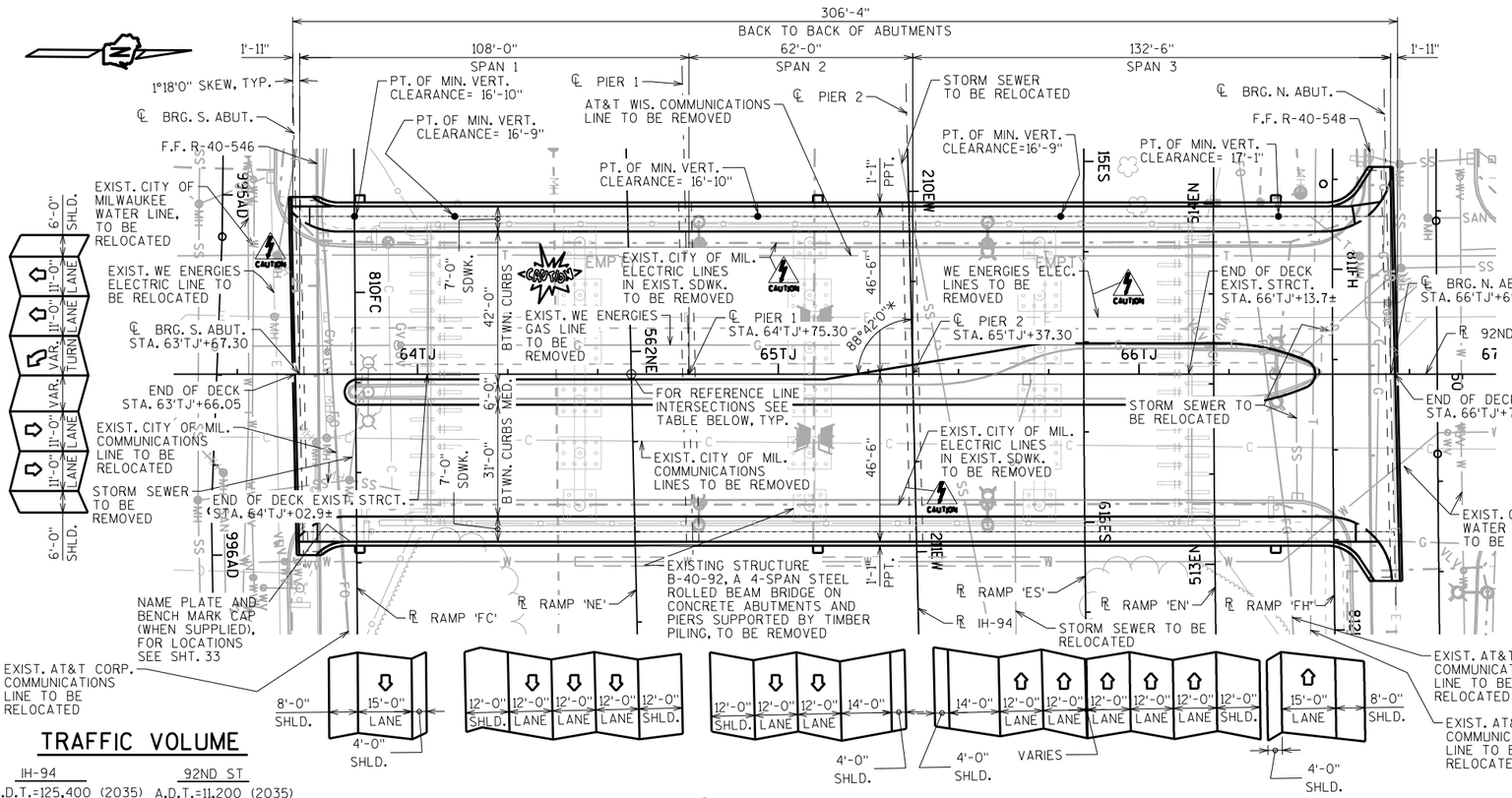
STRUCTURE B-40-857

DRAWN BY ASW | PLANS CK'D. MAM

AESTHETIC DETAILS

SHEET 34 OF 34

STATE PROJECT NUMBER
1060-33-80



DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.01
OPERATING RATING FACTOR: RF=1.31
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 190 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

STRUCTURE IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY: PILES — f'c = 3,500 P.S.I. ALL OTHER — f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
54W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.
PRECAST BEAMS, CONCRETE MASONRY — f'c = 5,000 P.S.I.
STRUCTURAL CARBON STEEL ASTM A709 GRADE 36 — Fy = 36,000 P.S.I.

FOUNDATION DATA

SOUTH ABUTMENT TO BE SUPPORTED ON 14" DIA. X 0.375" WALL C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 230 TONS ** PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED 55'-0" LONG. PILE POINTS REQUIRED.

NORTH ABUTMENT TO BE SUPPORTED ON 14" DIA. X 0.375" WALL C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS ** PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED 60'-0" LONG. PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 14" DIA. X 0.375" WALL C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 185 TONS **PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED 40'-0" LONG. PILE POINTS REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH-94	92ND ST
A.D.T.=125,400 (2035)	A.D.T.=11,200 (2035)
R.D.S.=60 M.P.H.	R.D.S.=30 M.P.H.

CURVE DATA

RAMP 'EN'	RAMP 'FH'
P.I. = 517+08.71	P.I. = 810+76.33
Δ = 7°11' 33.77" R	Δ = 2°53' 32.44" L
D = 0°42' 39.12"	D = 0°42' 49.64"
T = 506.58	T = 202.65
L = 1011.82	L = 405.21
R = 8060.00	R = 8027.00
S.E. = 2.00%	S.E. = N/A
P.C. = 512+02.13	P.C.C. = 808+73.68
P.C.C = 522+13.95	P.T. = 812+78.89

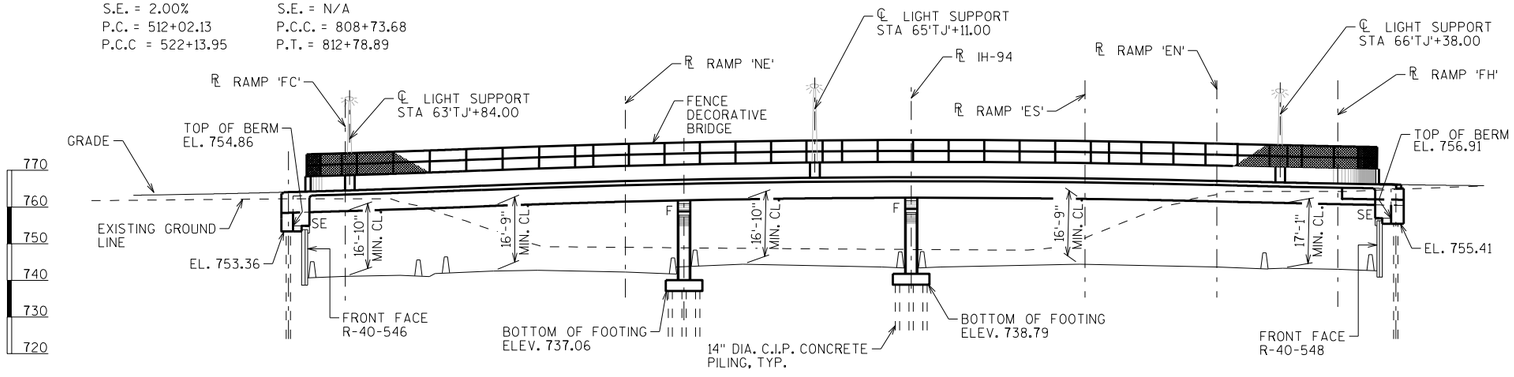
* TO ℄ PIER

PLAN

(3 SPAN, 54W" PRESTRESSED CONCRETE GIRDERS)

R/L INTERSECTION TABLE

R/L 'TJ' STA	INTERSECTING R/L	STATION
63'TJ'+82.80	'FC'	810'FC'+22.64
64'TJ'+59.28	'NE'	562'NE'+06.22
65'TJ'+37.30	IH-94 'EW'	210'EW'+50.68
65'TJ'+84.73	'ES'	615'ES'+58.95
66'TJ'+20.73	'EN'	514'EN'+47.26
66'TJ'+53.73	'FH'	811'FH'+29.03



ELEVATION

NORMAL TO IH-94

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS
3. QUANTITIES & GENERAL NOTES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS 1
7. SOUTH ABUTMENT DETAILS 2
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS 1
10. NORTH ABUTMENT DETAILS 2
11. PIER 1
12. PIER 1 DETAILS 1
13. PIER 1 DETAILS 2
14. PIER 2
15. PIER 2 DETAILS 1
16. PIER 2 DETAILS 2
17. SUPERSTRUCTURE FRAMING PLAN
18. 54W" PRESTRESSED GIRDER DETAILS 1
19. 54W" PRESTRESSED GIRDER SPECAIL DETAILS
20. 54W" PRESTRESSED GIRDER DETAILS 2
21. PRECAST BEAM 1 DETAILS
22. PRECAST BEAM 2 DETAILS
23. STEEL DIAPHRAGM
24. SUPERSTRUCTURE LAYOUT
25. SIDEWALK RAMP DETAILS
26. SUPERSTRUCTURE REINFORCEMENT
27. SUPERSTRUCTURE DETAILS 1
28. SUPERSTRUCTURE DETAILS 2
29. SUPERSTRUCTURE DETAILS 3
30. SUPERSTRUCTURE DETAILS 4
31. SUPERSTRUCTURE DETAILS 5
32. DECK ELEVATION TABLE
33. VERTICAL FACE PARAPET 1
34. VERTICAL FACE PARAPET 2
35. LIGHT SUPPORT DETAILS
36. LIGHT SUPPORT REINFORCEMENT
37. FENCE 1
38. FENCE 2
39. FENCE 3
40. FENCE 4
41. AESTHETIC DETAILS
42. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

CHRIS DOLL (608) 266-3229
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — CHIEF STRUCTURES DESIGN ENGINEER — 5/22/14 DATE

STRUCTURE B-40-862

92ND ST OVER IH-94

COUNTY MILWAUKEE | ~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	CAD	DESIGN CK'D.	DFD	DRAWN BY	CAD	PLANS CK'D.	DFD

GENERAL PLAN

SHEET 1 OF 42

2684

I.D. 1060-33-07 E

DATE: MAY 2014

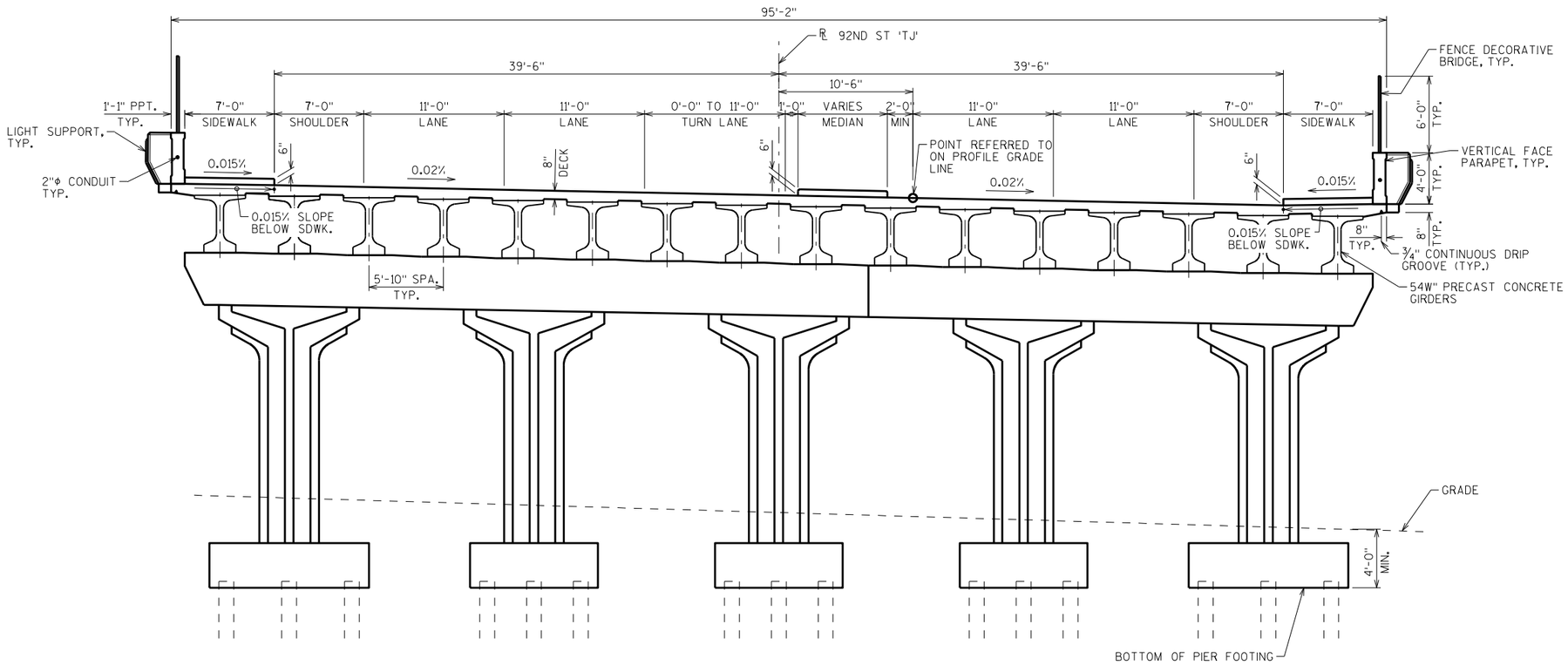
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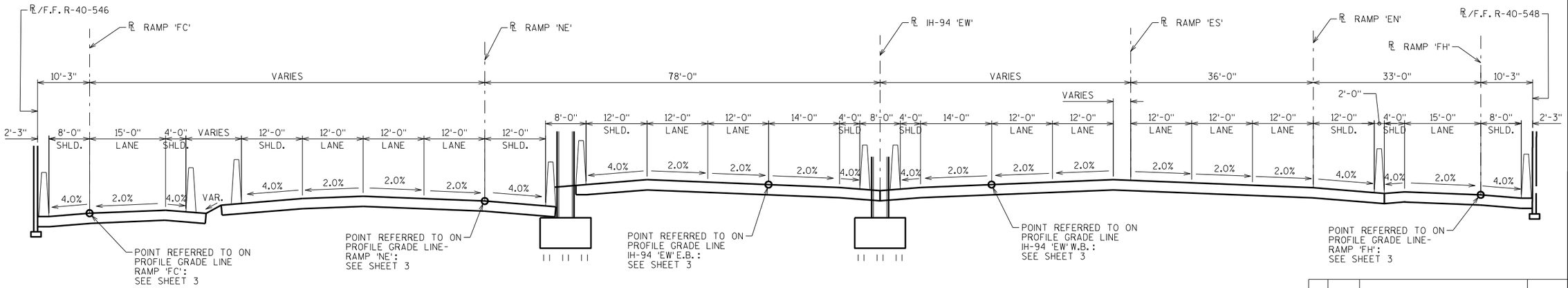
STATE PROJECT NUMBER

1060-33-80



CROSS SECTION THRU BRIDGE- STA. 63+81.05 TO 66+51.68

(LOOKING NORTH)



TYPICAL SECTION THRU ROADWAY

(LOOKING WEST NEAR BRIDGE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY	CAD	PLANS CK'D.	DFD

TYPICAL SECTIONS

SHEET 2

2685

SCALE = 5.0

8

8

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER 1	PIER 2	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 64+02.9	LS	—	—	—	—	—	1
203.0210.S.0004	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-92	LS	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-862	LS	—	—	—	—	—	1
210.0100	BACKFILL STRUCTURE	CY	—	500	600	—	—	1,100
502.0100	CONCRETE MASONRY BRIDGES	CY	—	70	85	175	173	503
502.3200	PROTECTIVE SURFACE TREATMENT	SY	3,250	—	—	—	—	3,250
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	4,585	—	—	—	—	4,585
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	6,040	7,155	4,700	4,700	22,595
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	255,910	—	—	27,490	27,975	311,375
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	2	16	18	32	32	100
506.4000	STEEL DIAPHRAGMS B-40-862	EACH	75	—	—	—	—	75
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	20	23	—	—	43
550.0500	PILE POINTS	EACH	—	16	18	39	44	117
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	—	880	1080	1,560	1,760	5,280
602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	32	—	—	—	—	32
604.0400	SLOPE PAVING CONCRETE	SY	—	33	41	—	—	74
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	12	—	—	—	—	12
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	—	—	—	45	45	90
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	680	—	—	—	—	680
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	8	—	—	—	—	8
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	6	—	—	—	—	6
SPV.0035.4000	HPC MASONRY SUPERSTRUCTURES	CY	1,362	—	—	—	—	1,362
SPV.0060.4110	PDA TESTING	EACH	—	2	2	2	2	8
SPV.0060.4115	PDA RESTRIKES	EACH	—	2	2	2	2	8
SPV.0060.4180	PRECAST BEAMS	EACH	2	—	—	—	—	2
SPV.0090.4400	FENCE DECORATIVE BRIDGE	LF	593	—	—	—	—	593
SPV.0090.4480	PRESTRESSED GIRDER TYPE I 54W-INCH SPECIAL	LF	266	—	—	—	—	266
	NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	—	1/2", 3/4" & 1"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY SUPERSTRUCTURES." ADDITIONALLY, SIDEWALKS, CURBS, AND MEDIAN WILL BE PAID FOR UNDER "HPC MASONRY SUPERSTRUCTURES".

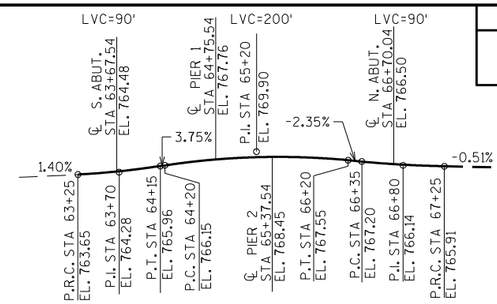
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP OF DECK SURFACE BETWEEN MEDIAN & SIDEWALKS, AND THE CURBS & TOPS OF THE MEDIAN AND SIDEWALKS. ANY DECK SURFACE COVERED BY THE MEDIAN OR SIDEWALKS SHALL NOT RECEIVE PROTECTIVE SURFACE TREATMENT.

THE PROPOSED FINISHED GRADE LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

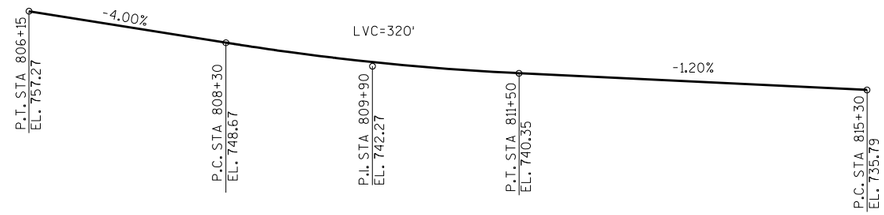
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN IN THE ABUTMENT DETAILS.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COURSE AGGREGATE BELOW THE SLOPE PAVING SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE".

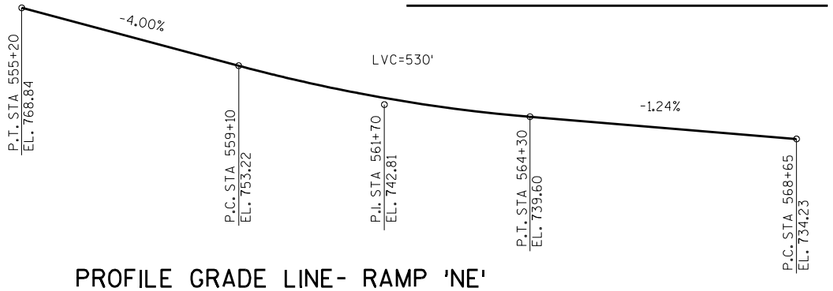
THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE BRIDGE ABUTMENTS WITH RETAINING WALLS R-40-546 & R-40-548.



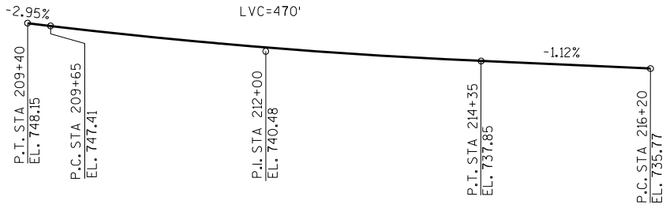
PROFILE GRADE LINE- 92ND ST 'TJ'



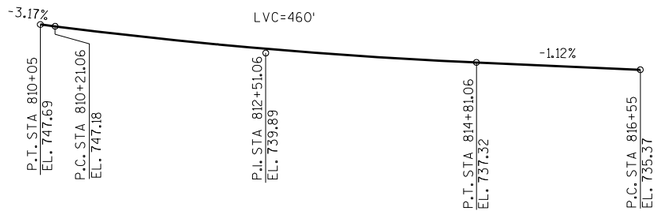
PROFILE GRADE LINE- RAMP 'FC'



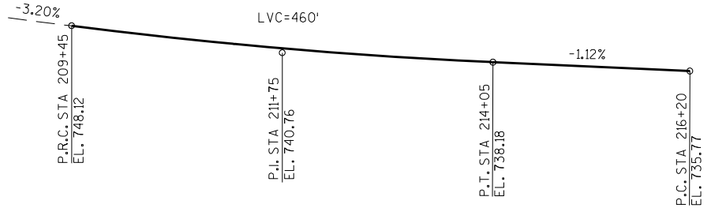
PROFILE GRADE LINE- RAMP 'NE'



PROFILE GRADE LINE- IH-94 'EW' E.B.



PROFILE GRADE LINE- RAMP 'FH'



PROFILE GRADE LINE- IH-94 'EW' W.B.

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

QUANTITIES & GENERAL NOTES

SHEET 3

2686

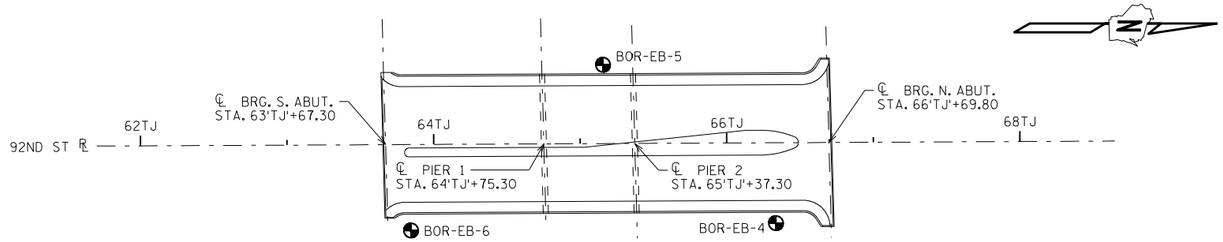
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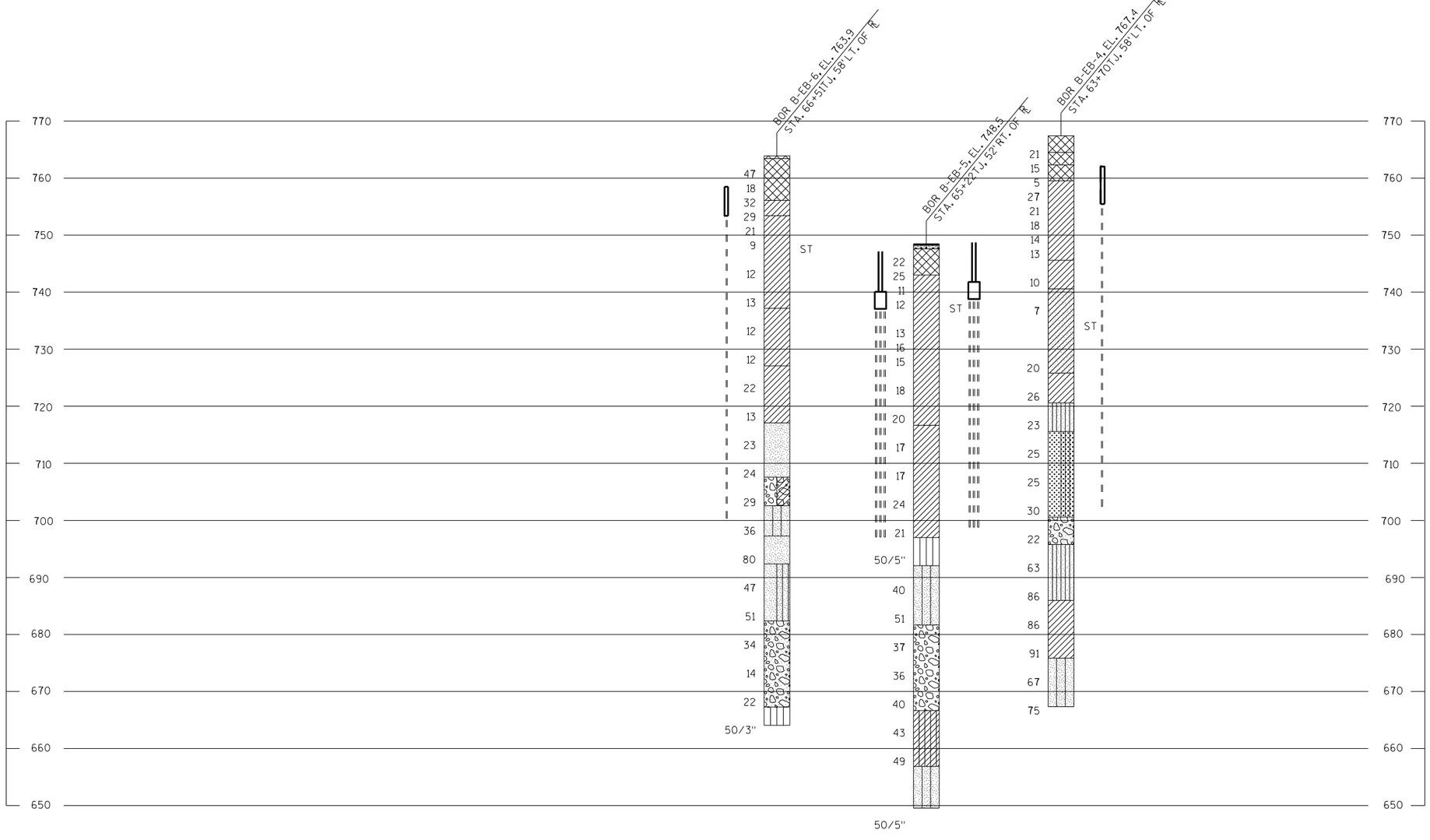
8

8

ZOO INTERCHANGE
92ND ST OVER IH 94

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
EB-4	8/17/2011	295830	574520
EB-5	11/13/2011	295712	574412
EB-6	8/19/2011	295581	574525
BORINGS COMPLETED BY: GESTRA/RIVER VALLEY TESTING			
REPORT COMPLETED BY: CH2MHILL			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY			





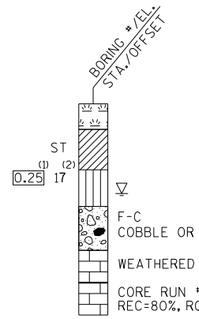
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY PR/CAD | PLANS CK'D. DFD

SUBSURFACE EXPLORATION

SHEET 4

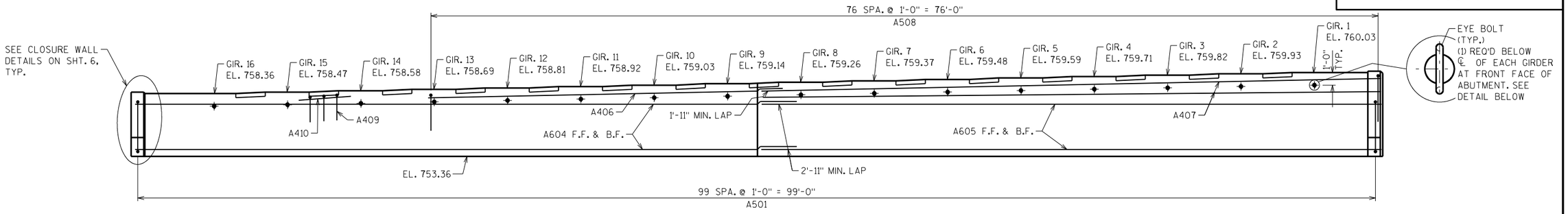
2687

8

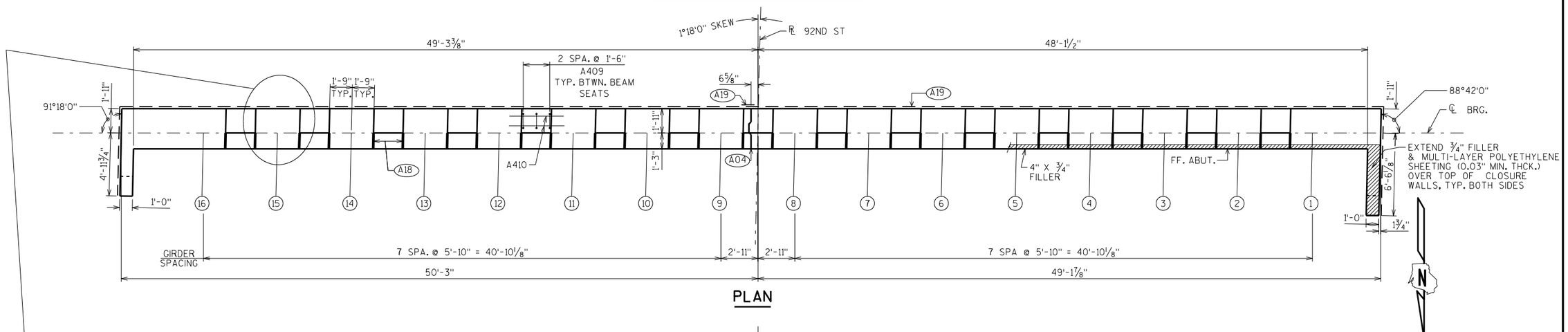
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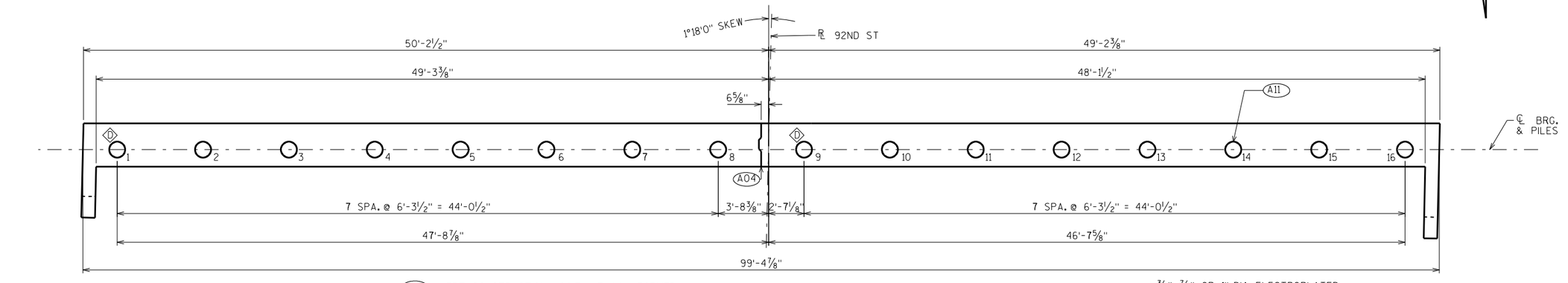
STATE PROJECT NUMBER
1060-33-80



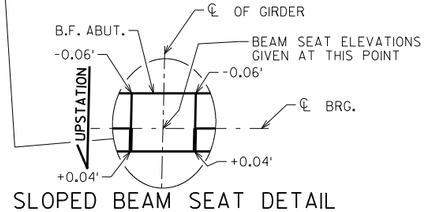
ELEVATION LOOKING SOUTH



PLAN



PILE PLAN



SLOPED BEAM SEAT DETAIL

(TYPICAL AT ALL BEAM SEATS)

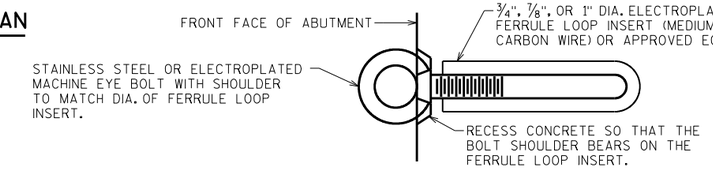
(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A11) SUPPORT ABUTMENT ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 230 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS REQ'D. SEE SHT. 7 FOR PILE SPLICE DETAILS.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◇D DYNAMIC PILE LOAD TEST



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SOUTH ABUTMENT

SHEET 5

2688

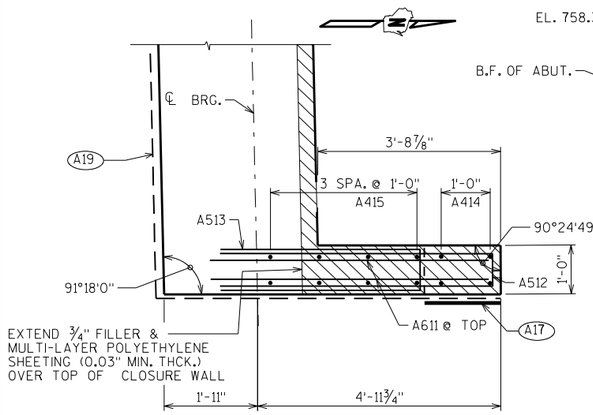
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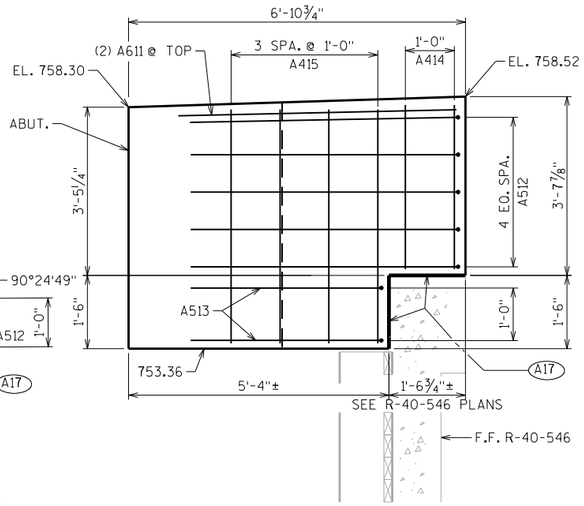
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STATE PROJECT NUMBER

1060-33-80

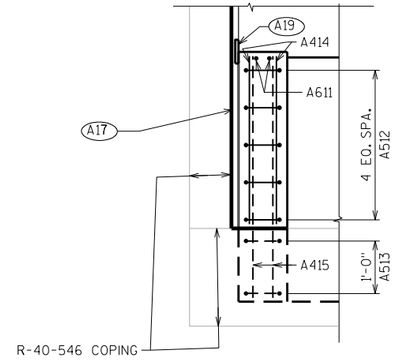


SOUTHEAST CLOSURE WALL PLAN



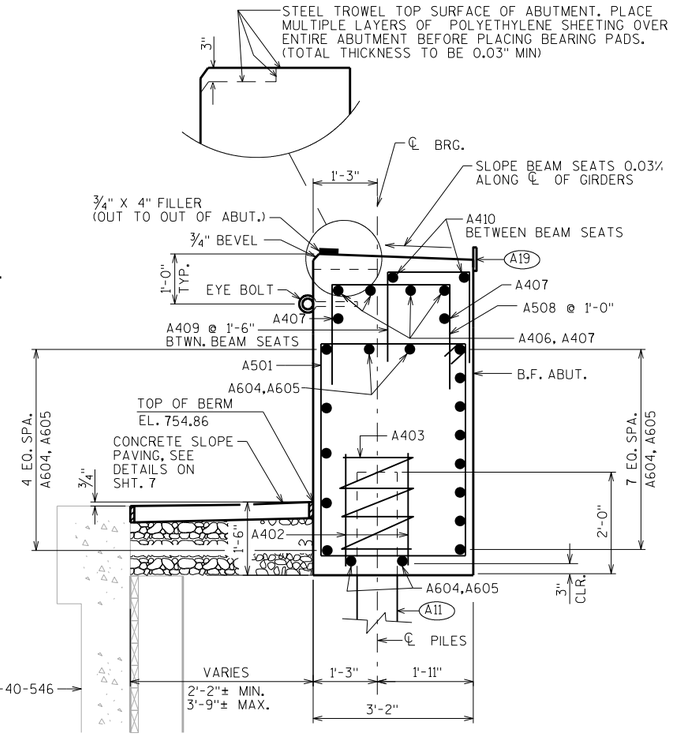
SOUTHEAST CLOSURE WALL ELEVATION

(LOOKING WEST)

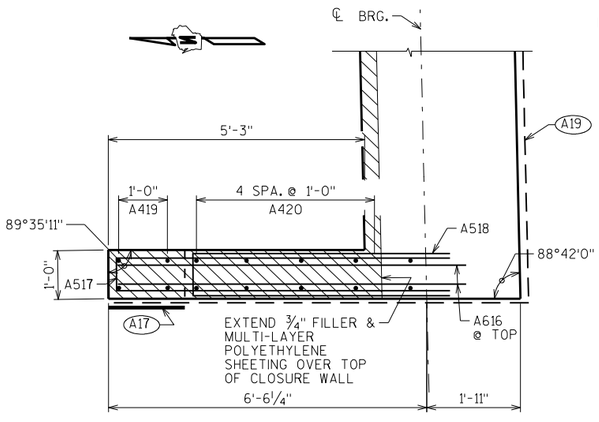


SOUTHEAST CLOSURE WALL ELEVATION

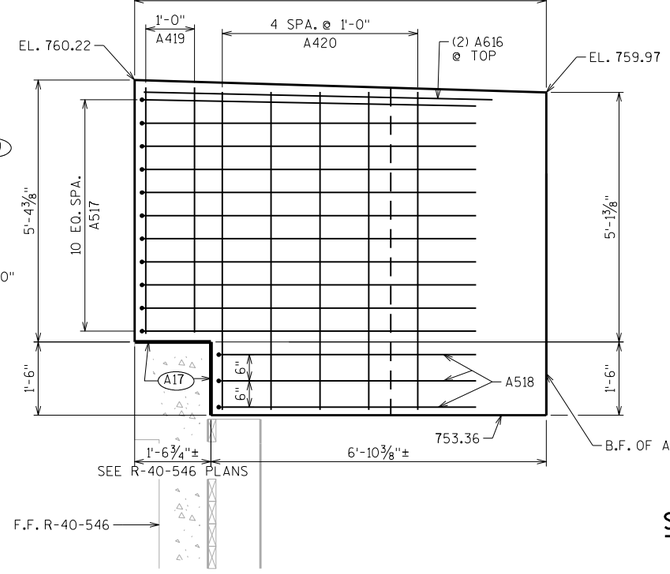
(LOOKING SOUTH)



SECTION THRU BODY

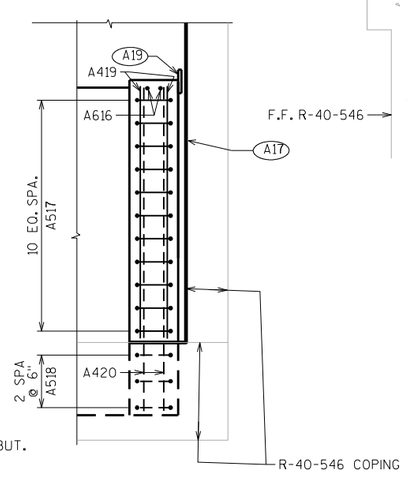


SOUTHWEST CLOSURE WALL PLAN



SOUTHWEST CLOSURE WALL ELEVATION

(LOOKING EAST)



SOUTHWEST CLOSURE WALL ELEVATION

(LOOKING SOUTH)

(A11) SUPPORT ABUTMENT ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 230 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. SEE SHT. 7 FOR PILE SPLICE DETAILS.

(A17) ¾" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ¾" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SOUTH ABUTMENT DETAILS 1

SHEET 6

2689

SCALE = 1.5

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8

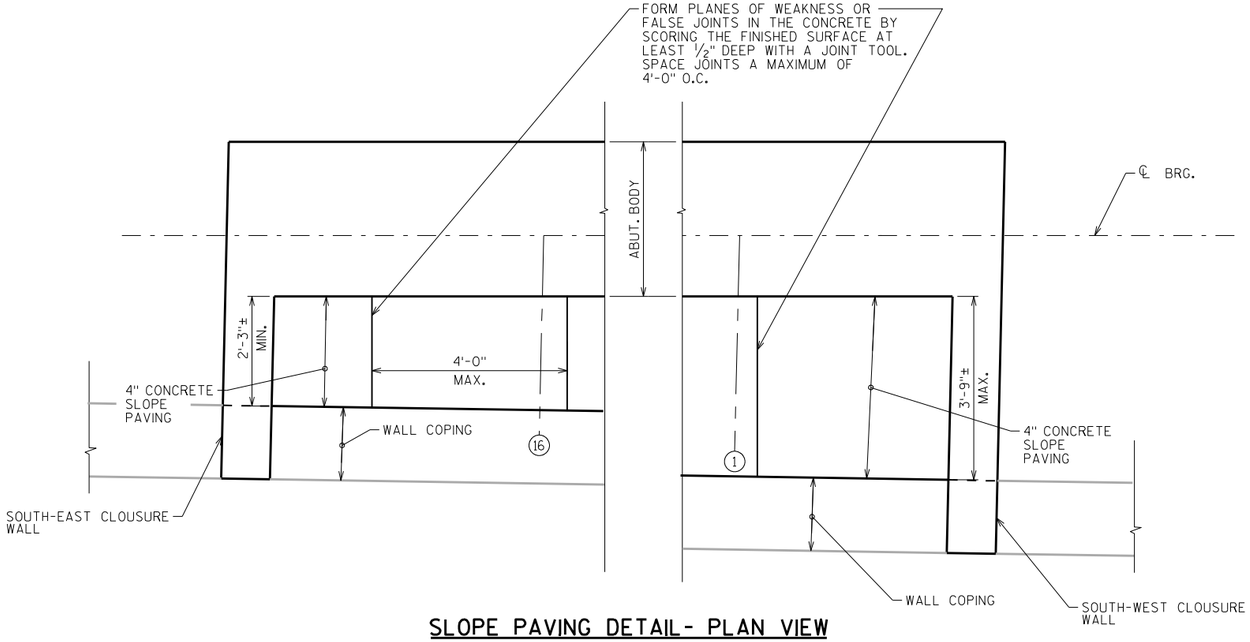
STATE PROJECT NUMBER

1060-33-80

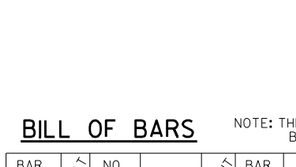
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		100	15'-0"	X		BODY - STIRRUPS
A402		32	2'-3"			PILES- 2 PER PILE
A403		16	28'-0"	X		PILES- 1 PER PILE
A604		17	52'-8"			BODY-HORIZONTAL EAST
A605		17	49'-4"			BODY-HORIZONTAL WEST
A406		4	28'-4"			BODY-HORIZONTAL-TOP EAST
A407		6	49'-4"			BODY-HORIZONTAL-TOP WEST
A508		77	7'-11"	X		BODY-STIRRUP-TOP
A409		45	3'-11"	X		BODY-STIRRUP-TOP-BTWN. BEAM SEATS
A410		30	4'-5"			BODY-TOP-BTWN. BEAM SEATS
A611		2	6'-0"			S.E. CLOSURE WALL-TOP
A512		5	11'-7"	X		S.E. CLOSURE WALL- HORIZONTAL
A513		2	8'-7"	X		S.E. CLOSURE WALL- HORIZONTAL- BOTTOM
A414		4	3'-2"			S.E. CLOSURE WALL- VERTICAL
A415		8	4'-8"			S.E. CLOSURE WALL- VERTICAL
A616		2	7'-6"			S.W. CLOSURE WALL-TOP
A517		11	14'-5"	X		S.W. CLOSURE WALL- HORIZONTAL
A518		3	11'-5"	X		S.W. CLOSURE WALL- HORIZONTAL- BOTTOM
A419		4	4'-10"			S.W. CLOSURE WALL- VERTICAL
A420		10	6'-4"			S.W. CLOSURE WALL- VERTICAL

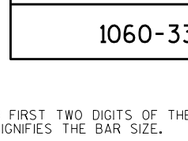


SLOPE PAVING DETAIL- PLAN VIEW



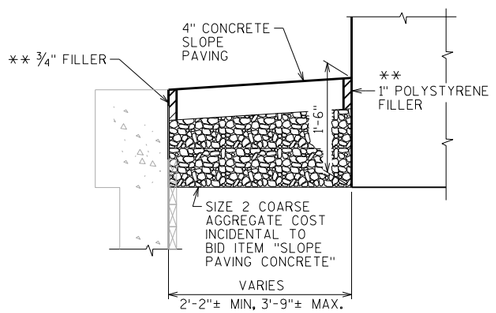
A501

A403



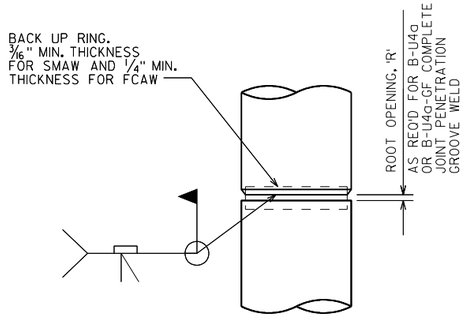
A508, A409, A512, A513, A517, A518

MARK	'A'	'B'
A508	2'-8"	2'-10"
A409	1'-3"	1'-7"
A512	5'-7"	8"
A513	4'-1"	8"
A517	7'-0"	8"
A518	5'-6"	8"

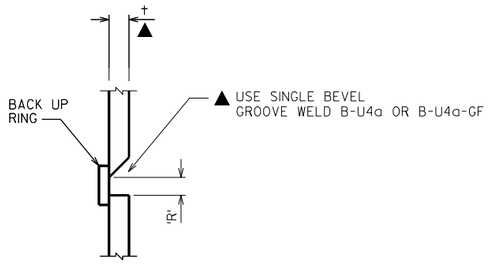


SLOPE PAVING DETAIL

** SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW THE SURFACE OF THE CONCRETE).



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SOUTH ABUTMENT DETAILS 2

SHEET 7

2690

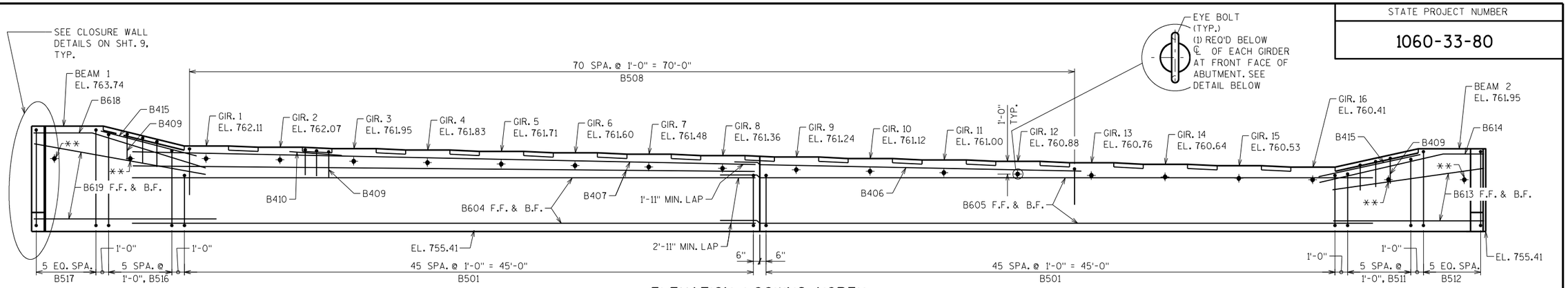
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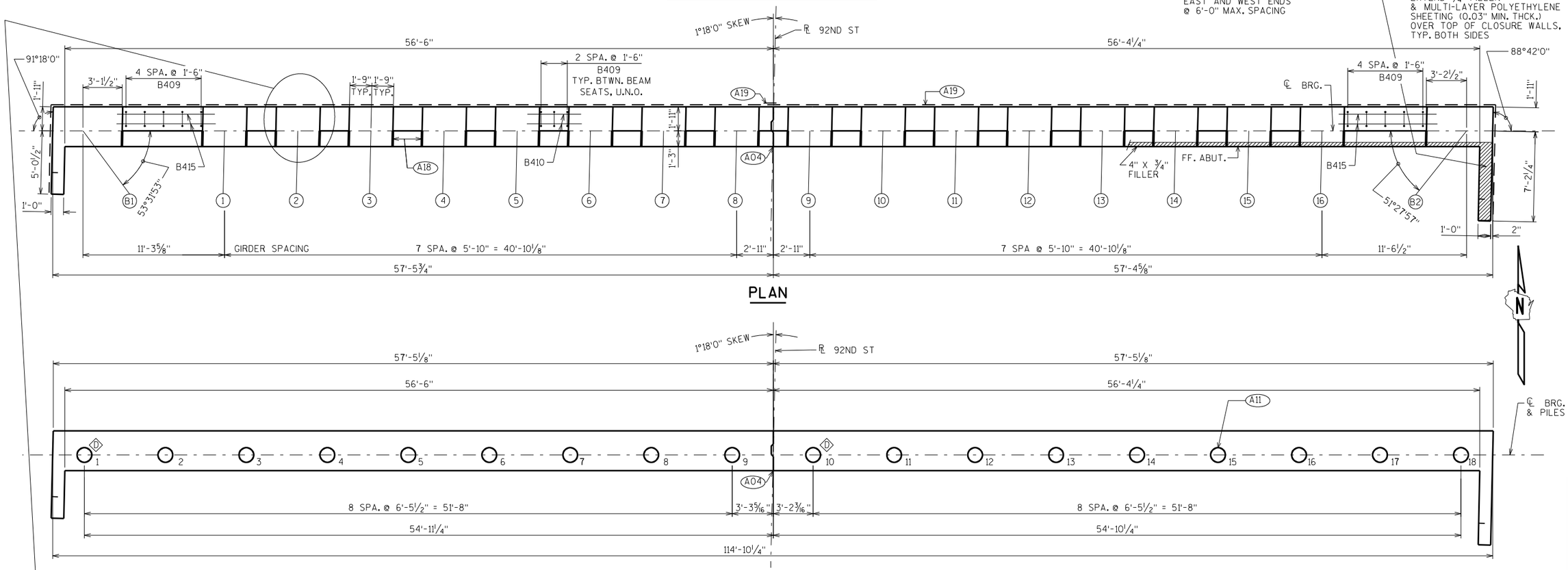
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STATE PROJECT NUMBER

1060-33-80

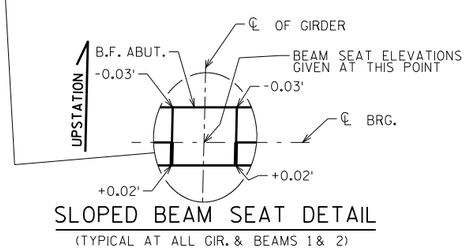


ELEVATION LOOKING NORTH



PLAN

PILE PLAN



SLOPED BEAM SEAT DETAIL

(TYPICAL AT ALL GIR. & BEAMS 1 & 2)

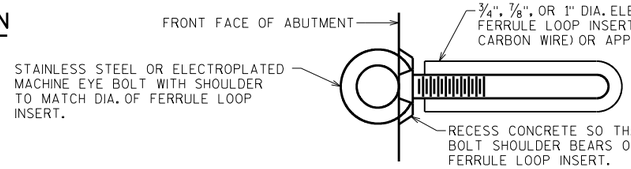
(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A11) SUPPORT ABUTMENT ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS REQ'D. SEE SHT. 7 FOR PILE SPLICE DETAILS.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◇D DYNAMIC PILE LOAD TEST



EYE BOLT DETAIL

EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

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STRUCTURE B-40-862

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NORTH ABUTMENT

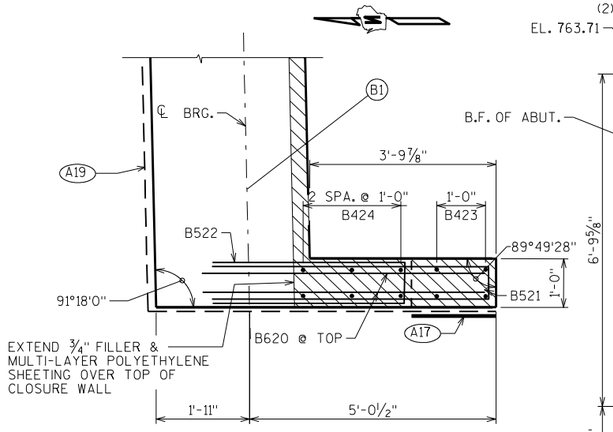
SHEET 8

2691

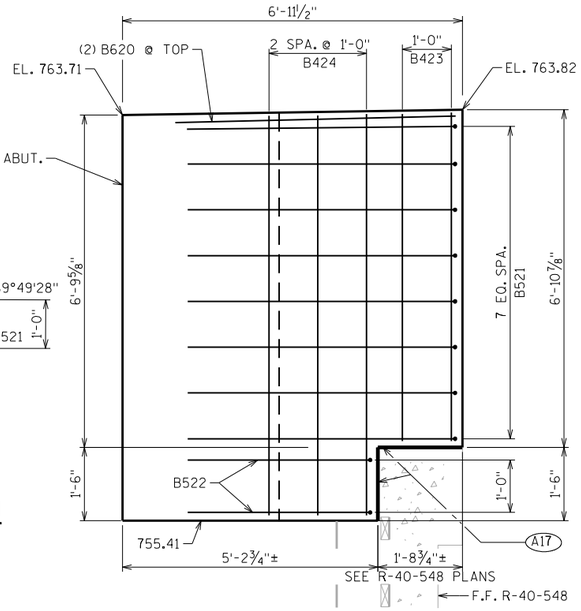
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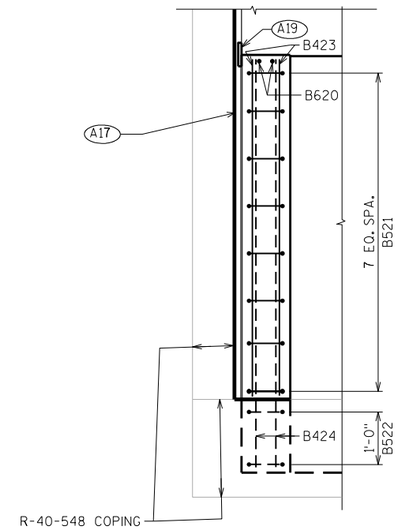


NORTHWEST CLOSURE WALL PLAN



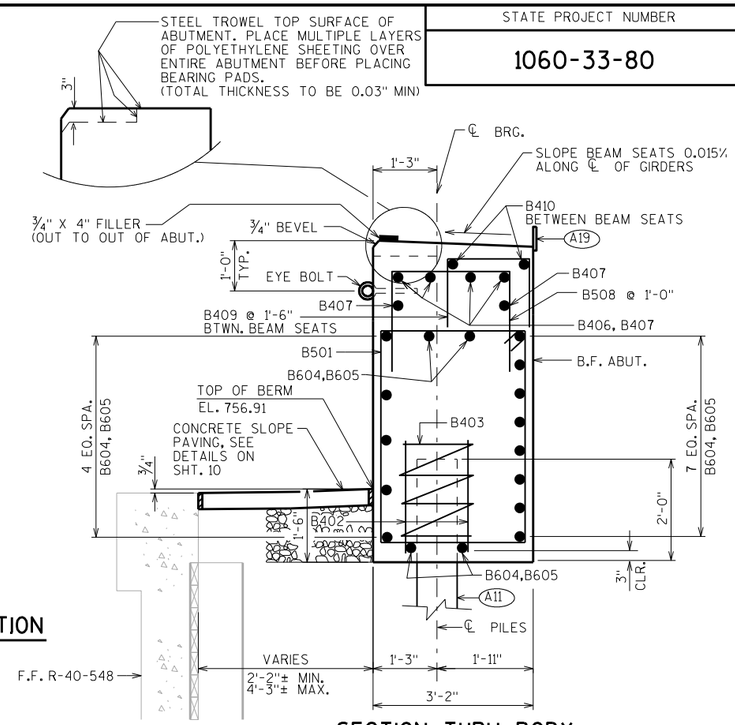
NORTHWEST CLOSURE WALL ELEVATION

(LOOKING EAST)



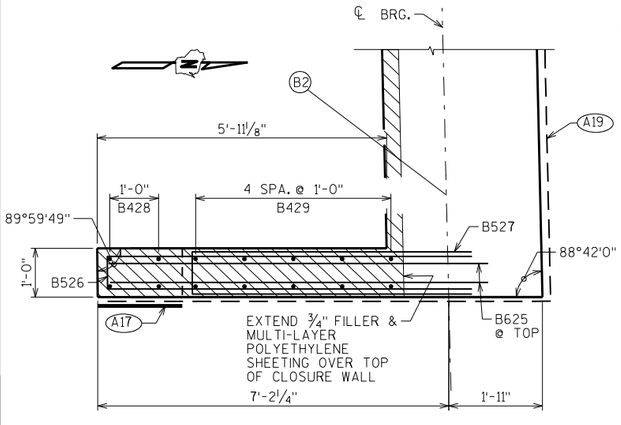
NORTHWEST CLOSURE WALL ELEVATION

(LOOKING NORTH)

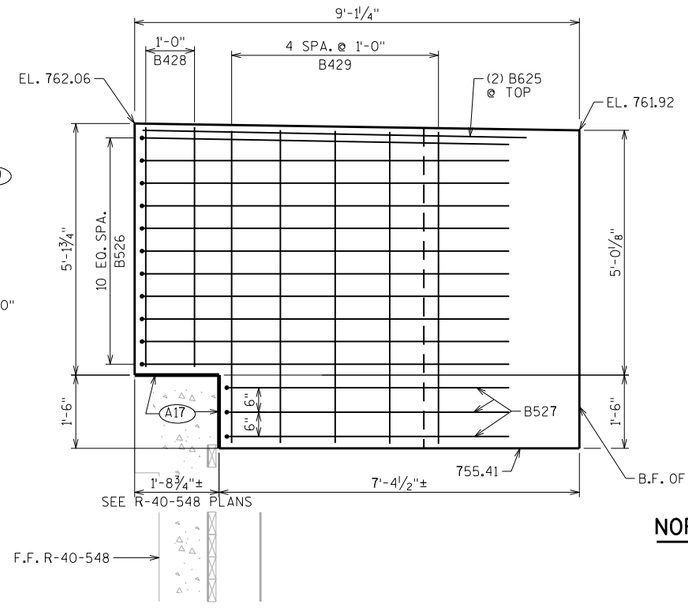


SECTION THRU BODY

(BETWEEN GIRDERS 1 THRU 16)

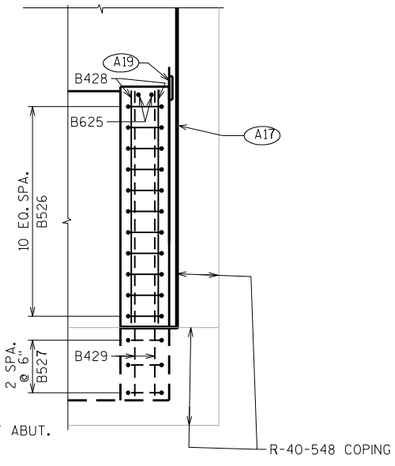


NORTHEAST CLOSURE WALL PLAN



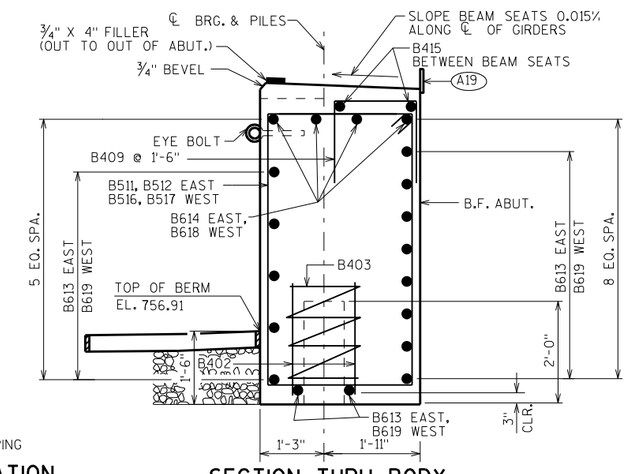
NORTHEAST CLOSURE WALL ELEVATION

(LOOKING WEST)



NORTHEAST CLOSURE WALL ELEVATION

(LOOKING NORTH)



SECTION THRU BODY

(NEAR EAST AND WEST ENDS OF NORTH ABUTMENT)

(A11) SUPPORT ABUTMENT ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS REQ'D. SEE SHT. 7 FOR PILE SPLICE DETAILS.

(A17) ¾" JOINT FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ¾" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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NORTH ABUTMENT DETAILS 1

SHEET 9

2692

SCALE = 1.5

STATE PROJECT NUMBER

1060-33-80

8

8

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BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
B511	1 SERIES OF 6	15'-3" TO 17'-7"
B516	1 SERIES OF 6	18'-9" TO 21'-1"

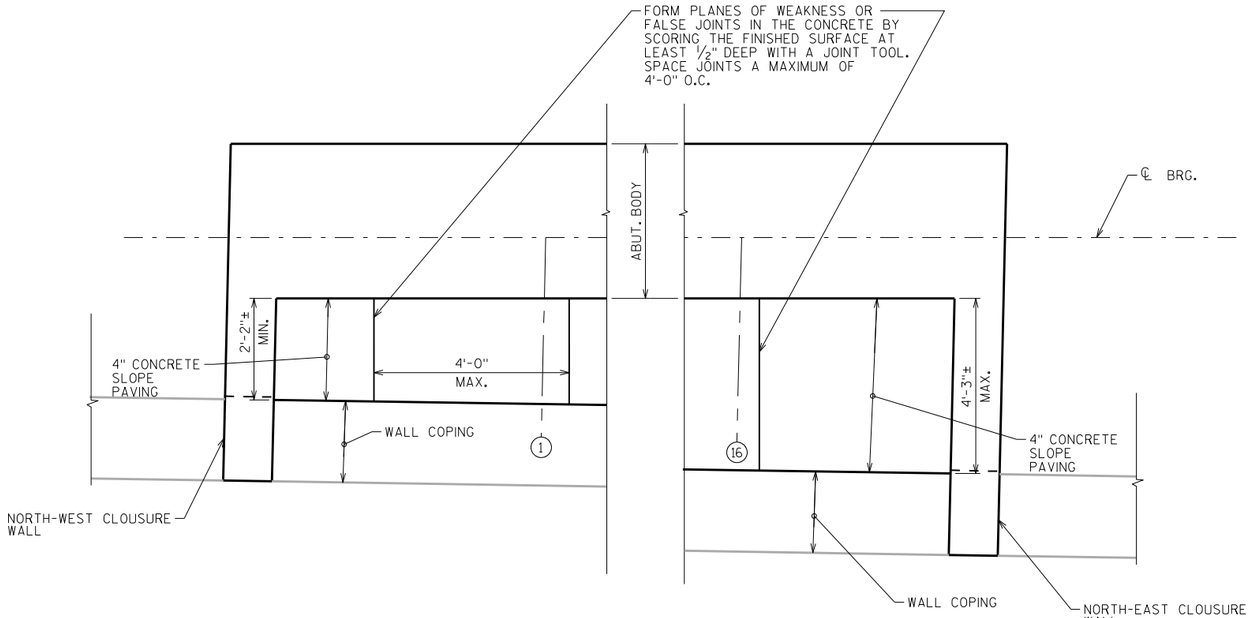
BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

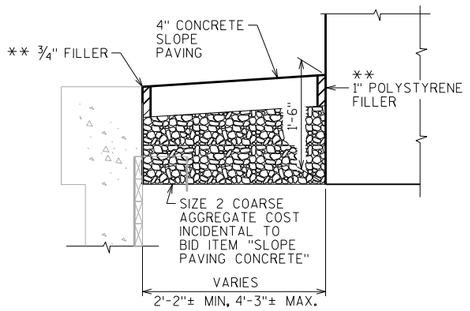
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		92	15'-0"	X		BODY - STIRRUPS
B402		36	2'-3"			PILES- 2 PER PILE
B403		18	28'-0"	X		PILES- 1 PER PILE
B604		17	48'-6"			BODY-HORIZONTAL WEST
B605		17	51'-7"			BODY-HORIZONTAL EAST
B406		4	27'-0"			BODY-HORIZONTAL-TOP EAST
B407		6	47'-6"			BODY-HORIZONTAL-TOP WEST
B508		71	7'-11"	X		BODY-STIRRUP-TOP
B409		55	3'-11"	X		BODY-STIRRUP-TOP-BTWN. BEAM SEATS
B410		30	4'-5"			BODY-TOP-BTWN. BEAM SEATS
B511		6	16'-5"	X	◭	BODY - STIRRUPS-N.E.
B512		6	18'-5"	X		BODY - STIRRUPS-N.E.
B613		15	12'-0"			BODY-HORIZONTAL-N.E.
B614		4	13'-2"	X		BODY-HORIZONTAL-N.E.-TOP
B415		4	8'-0"			BODY-TOP-BTWN. BEAM SEATS
B516		6	19'-11"	X	◭	BODY - STIRRUPS-N.W.
B517		6	21'-11"	X		BODY - STIRRUPS-N.W.
B618		4	13'-5"	X		BODY-HORIZONTAL-N.W.-TOP
B619		15	12'-3"			BODY-HORIZONTAL-N.W.
B620		2	6'-0"			N.W. CLOSURE WALL-TOP
B521		8	11'-7"	X		N.W. CLOSURE WALL- HORIZONTAL
B522		2	8'-3"	X		N.W. CLOSURE WALL- HORIZONTAL- BOTTOM
B423		4	6'-6"			N.W. CLOSURE WALL- VERTICAL
B424		6	8'-0"			N.W. CLOSURE WALL- VERTICAL
B625		2	8'-2"			N.E. CLOSURE WALL-TOP
B526		11	15'-9"	X		N.E. CLOSURE WALL- HORIZONTAL
B527		3	12'-5"	X		N.E. CLOSURE WALL- HORIZONTAL- BOTTOM
B428		4	4'-9"			N.E. CLOSURE WALL- VERTICAL
B429		10	6'-2"			N.E. CLOSURE WALL- VERTICAL

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

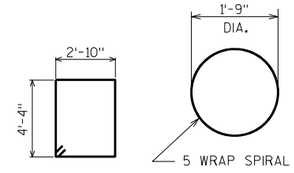


SLOPE PAVING DETAIL- PLAN VIEW

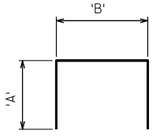


SLOPE PAVING DETAIL

** SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW THE SURFACE OF THE CONCRETE).

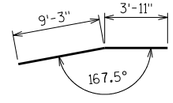


B501 B403

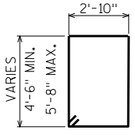


B508, B409, B521, B522, B526, B527

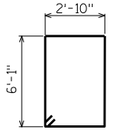
MARK	'A'	'B'
B508	2'-8"	2'-10"
B409	1'-3"	1'-7"
B521	5'-7"	8"
B522	3'-11"	8"
B526	7'-8"	8"
B527	6'-0"	8"



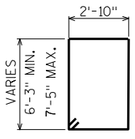
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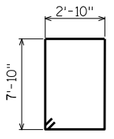
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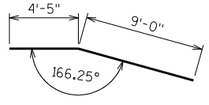
B512



B516



B517



B618

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NORTH ABUTMENT DETAILS 2

SHEET 10

2693

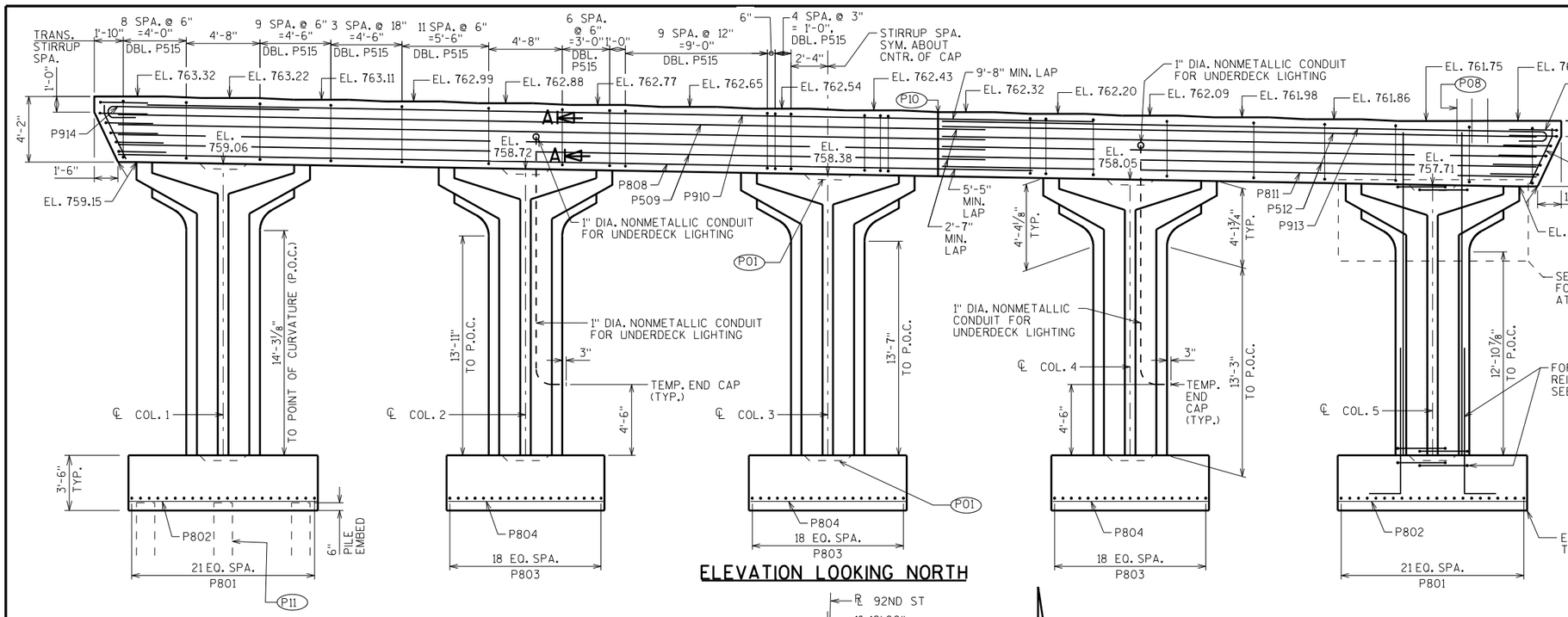
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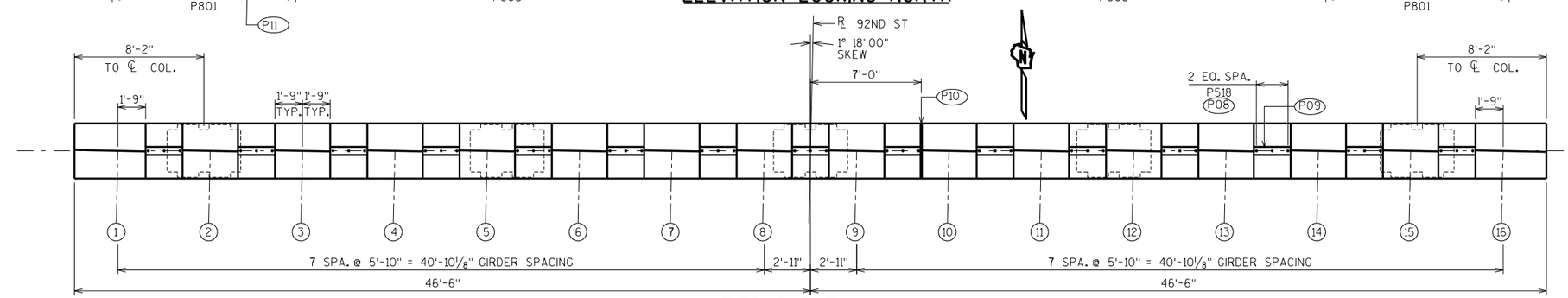
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STATE PROJECT NUMBER

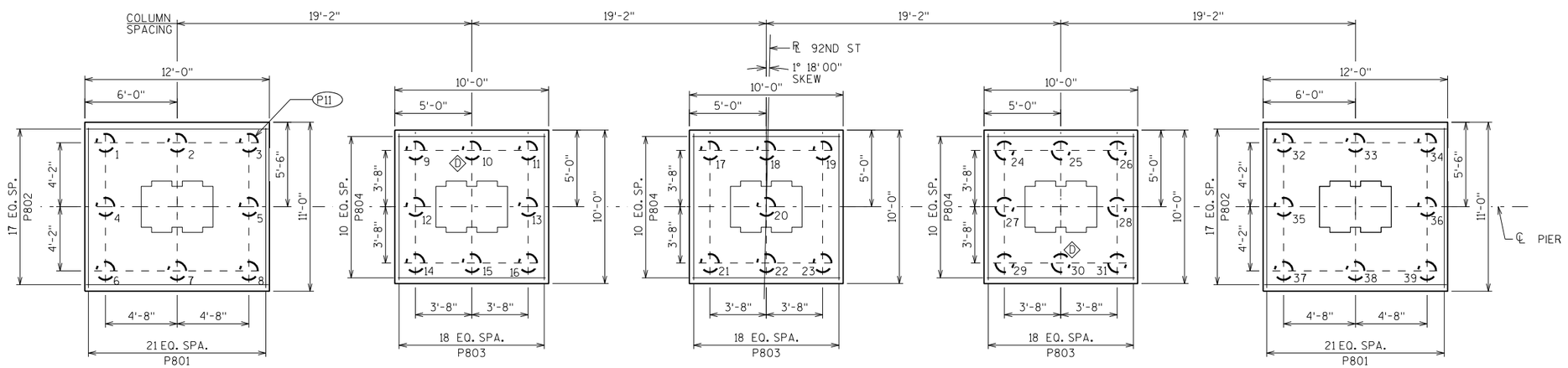
1060-33-80



ELEVATION LOOKING NORTH



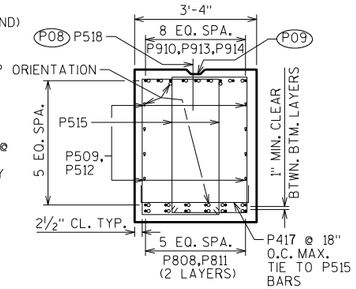
PIER CAP PLAN



FOOTING/PILE PLAN

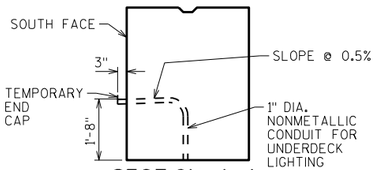
◇D DYNAMIC PILE LOAD TEST

(P11) SUPPORT PIER ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 185 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS REQ'D. SEE SHT. 7 FOR PILE SPLICE DETAILS.



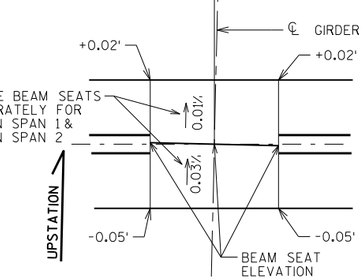
SECTION THRU CAP

NOTE:
PLACE ALL LONGITUDINAL BARS PARALLEL TO THE BOTTOM OF THE CAP.



SECTION A-A

(TYP. ABOVE COLS. 2 & 4)



SLOPED BEAM SEAT DETAIL

BEAM SEATS SHALL BE LEVEL IN THE DIRECTION PERPENDICULAR TO GIRDERS

(P01) 1'-3" X 2'-0" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P08) P518 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

(P10) MANDATORY VERT. CONST. JOINT FORMED BY SURFACED BEVELED 2 X 6 X 2'-0 KEYWAY

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PIER 1

SHEET 11

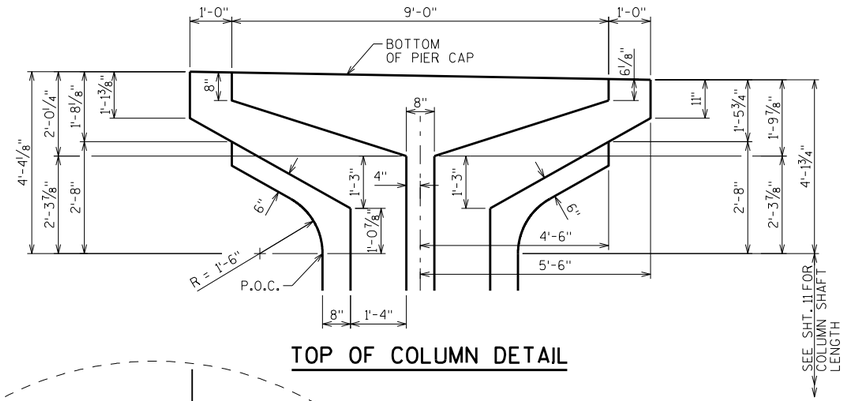
2694

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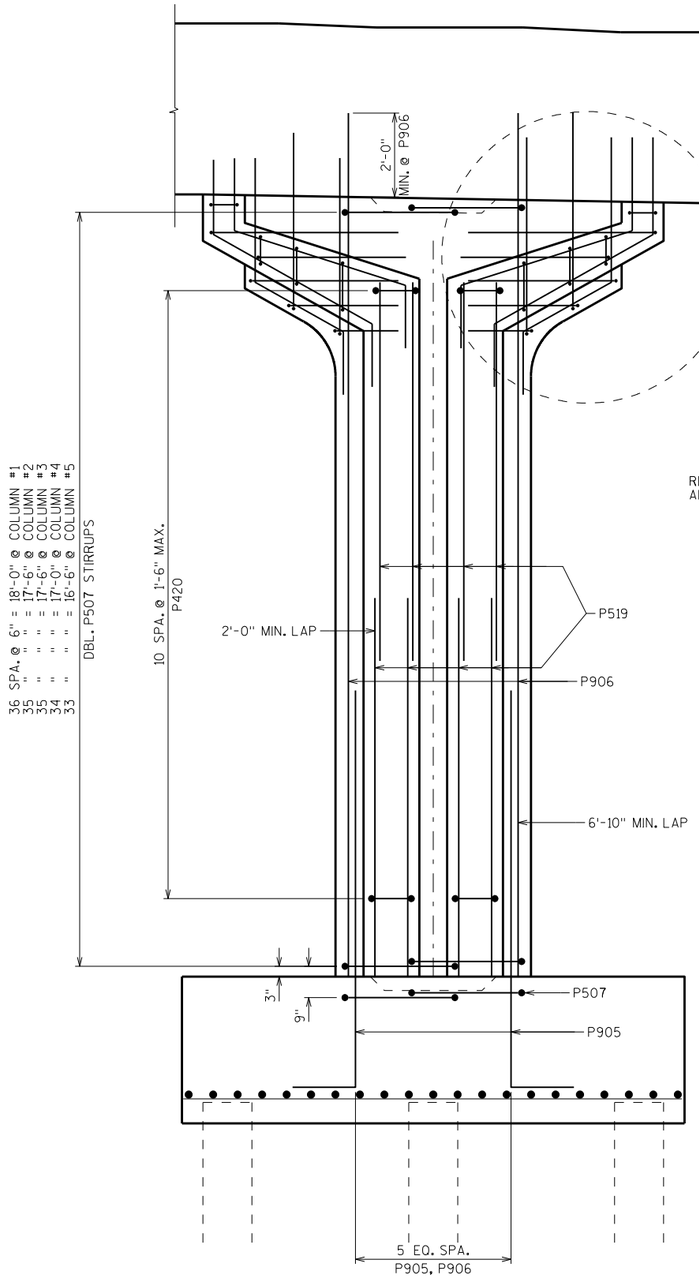
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SCALE =

STATE PROJECT NUMBER
1060-33-80

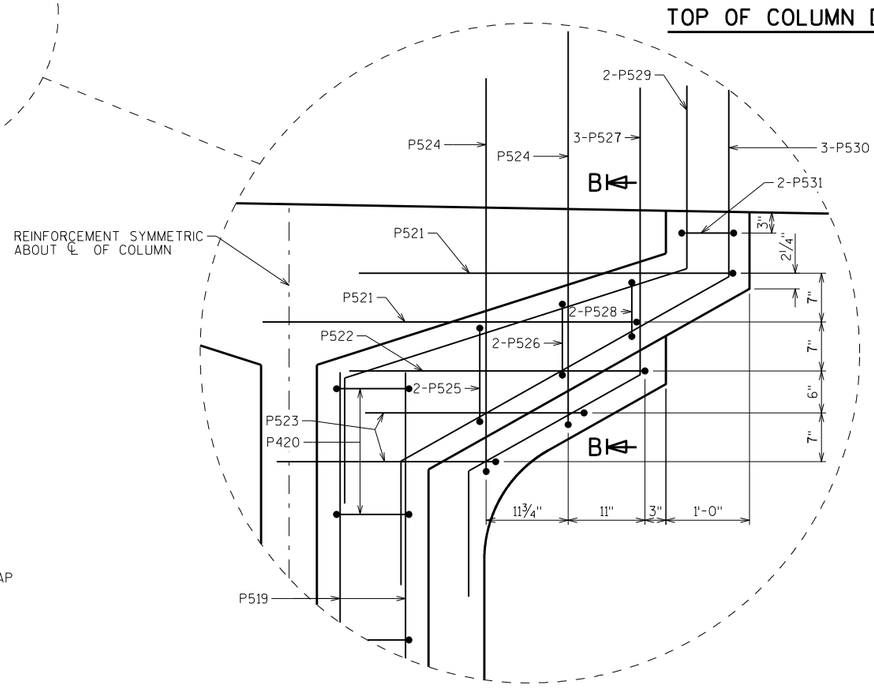


TOP OF COLUMN DETAIL



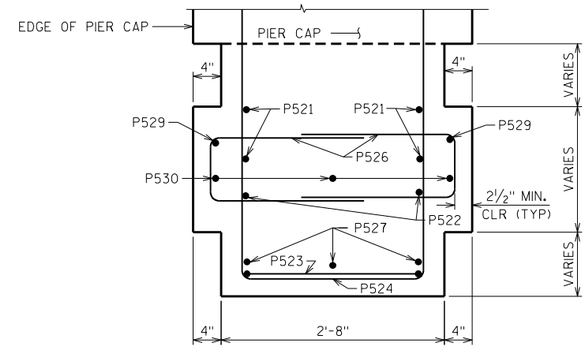
TYPICAL COLUMN ELEVATION

(SHOWING REINFORCEMENT)

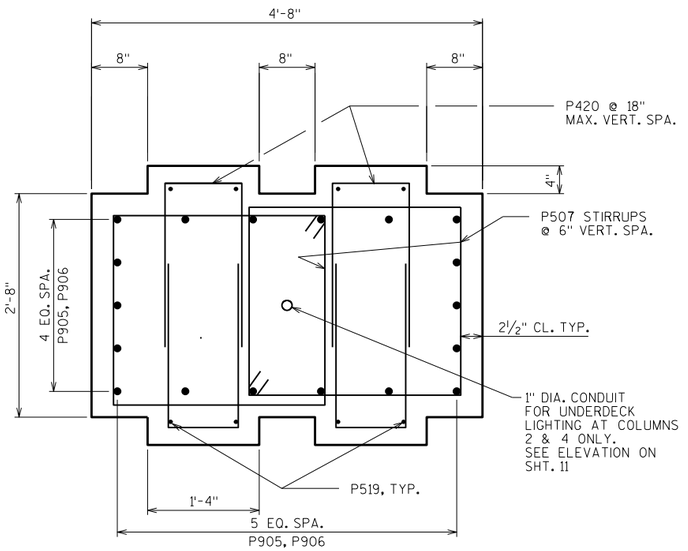


TOP OF COLUMN REINFORCEMENT DETAIL

(SHOWING SECONDARY REINFORCING ONLY)



SECTION B-B



SECTION THRU COLUMN

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PIER 1
DETAILS 1

SHEET 12

2695

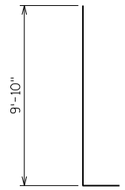
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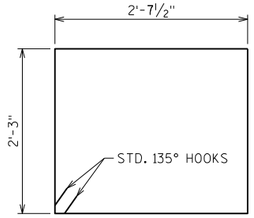
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STATE PROJECT NUMBER

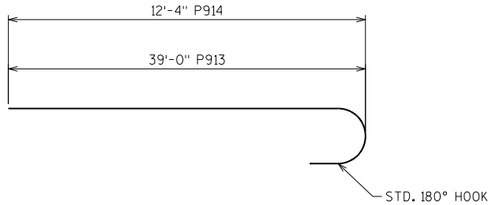
1060-33-80



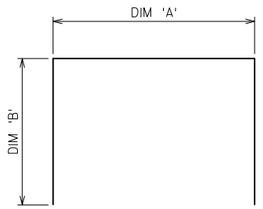
P905



P507

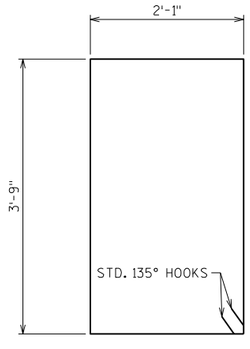


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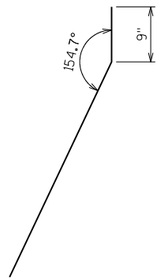


P417,P420,P521-26,P528,P531-32

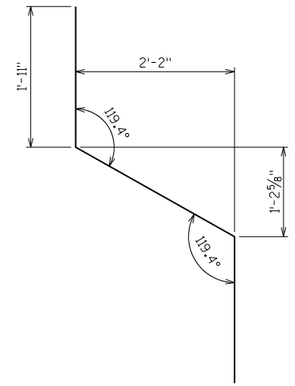
BAR MARK	DIM 'A'	DIM 'B'
P417	2'-11"	1'-0"
P420	11"	1'-10"
P521	2'-1½"	5'-6"
P522	2'-1½"	4'-6"
P523	2'-1½"	3'-0"
P524	2'-3"	4'-6"
P525	1'-2½"	2'-1"
P526	11½"	2'-1"
P528	9"	2'-1"
P531	7"	2'-1"
P532	2'-9"	2'-0"



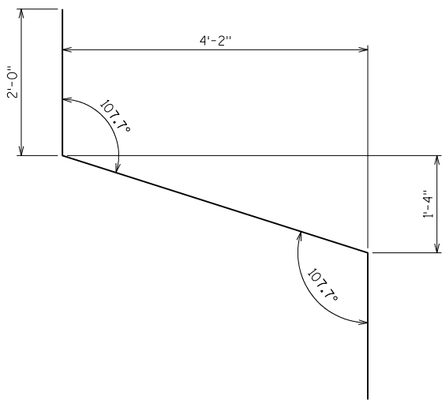
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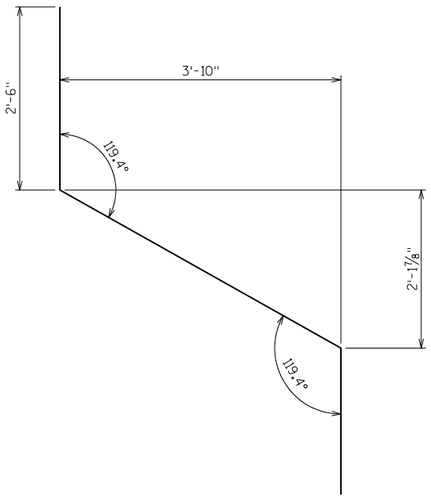
P516



P527



P529



P530

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		44	10'-8"			FOOTING 1 & 5
P802		36	11'-8"			FOOTING 1 & 5
P803		57	9'-8"			FOOTING 2, 3, & 4
P804		33	9'-8"			FOOTING 2, 3, & 4
P905	X	90	11'-7"	X		FOOTING DOWEL/COLUMN VERT.
P906	X	90	20'-7"			COLUMN VERT.
P507	X	366	10'-4"	X		COLUMN HORIZ. STIRRUPS
P808	X	12	57'-7"			CAP BOTTOM- WEST
P509	X	8	55'-0"			CAP MIDDLE- WEST
P910	X	9	60'-0"			CAP TOP- WEST
P811	X	12	37'-9"			CAP BOTTOM- EAST
P512	X	8	37'-9"			CAP MIDDLE- EAST
P913	X	9	40'-3"	X		CAP TOP- EAST
P914	X	9	13'-7"	X		CAP TOP- WEST
P515	X	220	12'-3"	X		CAP STIRRUPS
P516	X	6	4'-0"	X		CAP- END VERT.
P417	X	46	4'-9"	X		HOLDS LAYERED STEEL (USE AS NEEDED IN CAP)
P518	X	45	2'-0"			DOWEL BARS BTWN. SEATS
P519	X	80	9'-0"			COLUMN-VERT.-SECONDARY
P420	X	220	4'-5"	X		COLUMN-HORIZ.-SECONDARY
P521	X	20	12'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
P522	X	10	10'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
P523	X	20	7'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
P524	X	20	11'-0"	X		COLUMN- TOP- VERT.- SECONDARY
P525	X	20	5'-2"	X		COLUMN- TOP- VERT.- SECONDARY
P526	X	20	4'-11"	X		COLUMN- TOP- VERT.- SECONDARY
P527	X	30	6'-5"	X		COLUMN- TOP- VERT.- SECONDARY
P528	X	20	4'-8"	X		COLUMN- TOP- HORIZ.- SECONDARY
P529	X	20	8'-5"	X		COLUMN- TOP- VERT.- SECONDARY
P530	X	30	8'-11"	X		COLUMN- TOP- VERT.- SECONDARY
P531	X	20	4'-6"	X		COLUMN- TOP- HORIZ.- SECONDARY
P532	X	12	6'-6"	X		CAP- END U-BAR

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PIER 1
DETAILS 2

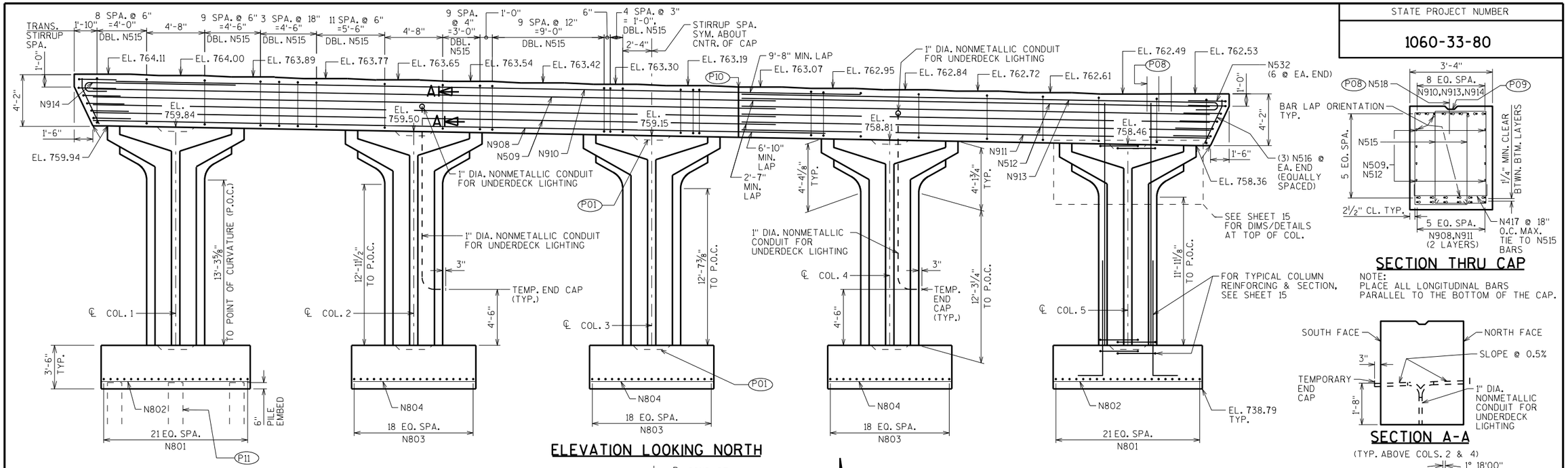
SHEET 13

2696

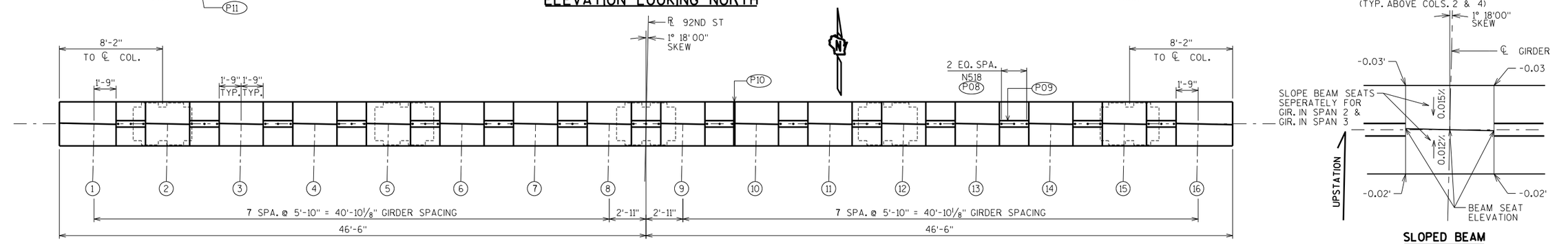
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STATE PROJECT NUMBER

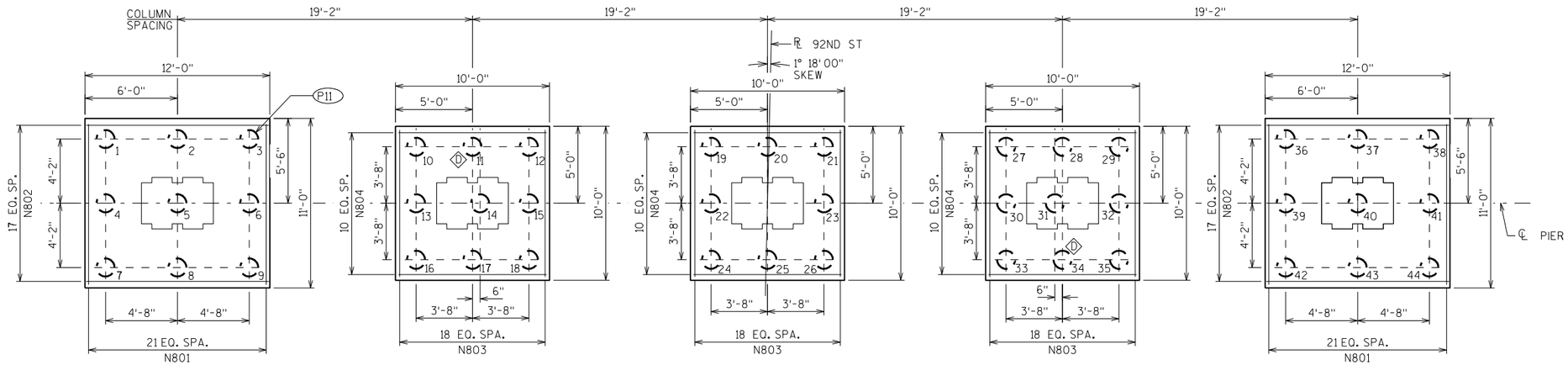
1060-33-80



ELEVATION LOOKING NORTH



PIER CAP PLAN



FOOTING/PILE PLAN

◇D DYNAMIC PILE LOAD TEST

P11 SUPPORT PIER ON 14" DIA. X 0.375" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 185 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. PILE POINTS REQ'D. SEE SHT. 7 FOR PILE SPLICE DETAILS.

SECTION THRU CAP

NOTE:
PLACE ALL LONGITUDINAL BARS PARALLEL TO THE BOTTOM OF THE CAP.

SECTION A-A

(TYP. ABOVE COLS. 2 & 4)

SLOPED BEAM SEAT DETAIL

BEAM SEATS SHALL BE LEVEL IN THE DIRECTION PERPENDICULAR TO GIRDERS

P01 1'-3" X 2'-0" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

P08 N518 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

P09 KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

P10 MANDATORY VERT. CONST. JOINT FORMED BY SURFACED BEVELED 2 X 6 X 2'-0 KEYWAY

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PIER 2

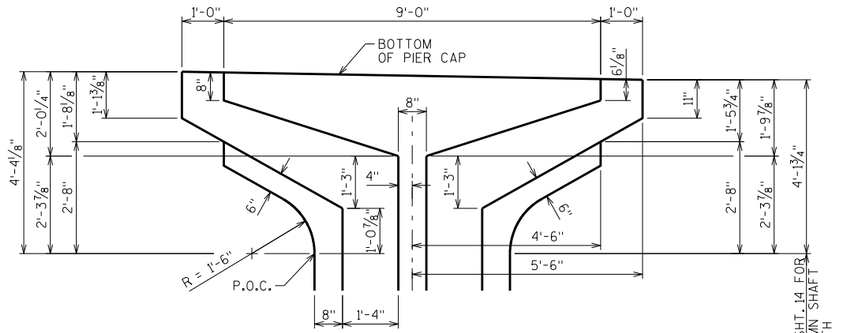
SHEET 14

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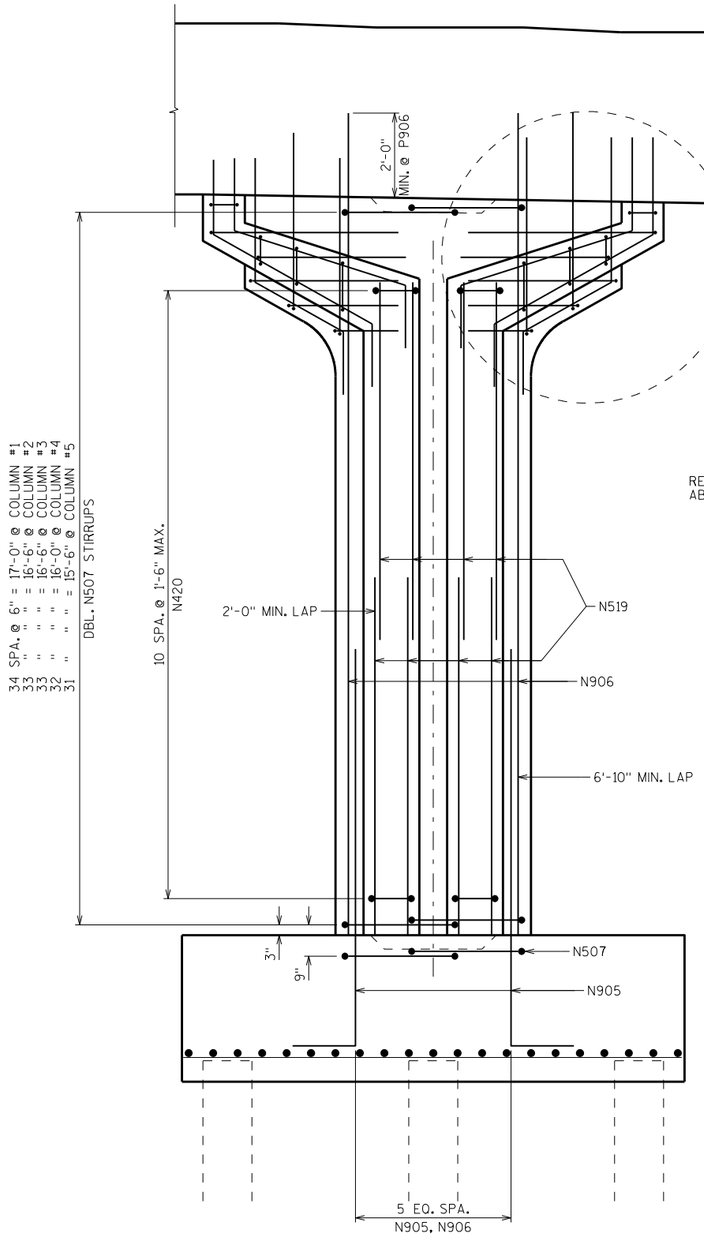
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STATE PROJECT NUMBER

1060-33-80

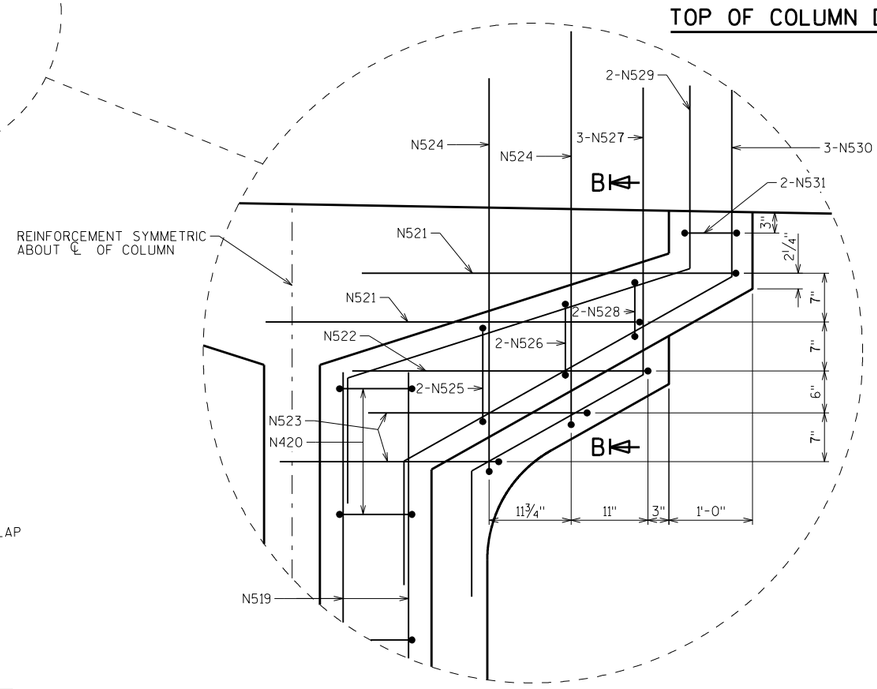


TOP OF COLUMN DETAIL



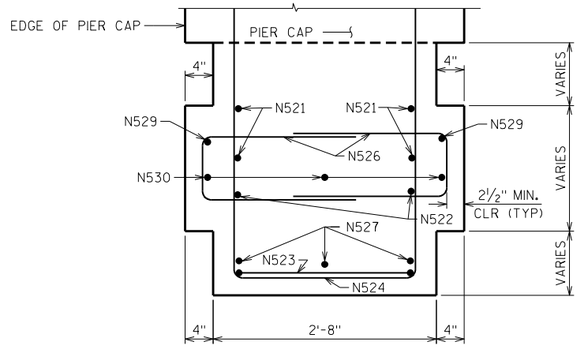
TYPICAL COLUMN ELEVATION

(SHOWING REINFORCEMENT)

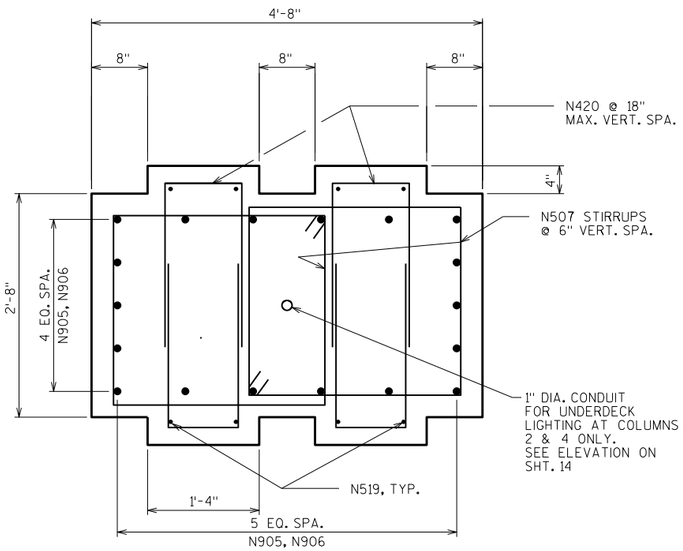


TOP OF COLUMN REINFORCEMENT DETAIL

(SHOWING SECONDARY REINFORCING ONLY)



SECTION B-B



SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PIER 2
DETAILS 1

SHEET 15

2698

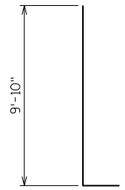
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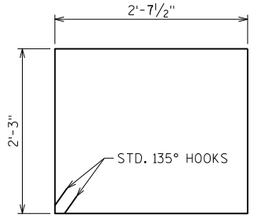
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STATE PROJECT NUMBER

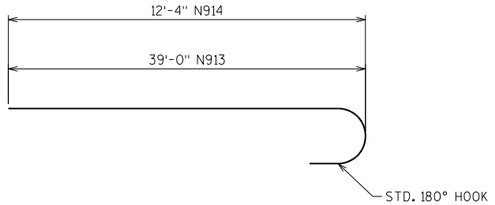
1060-33-80



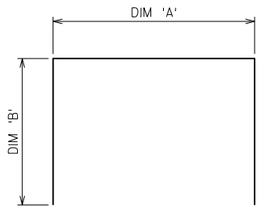
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N507

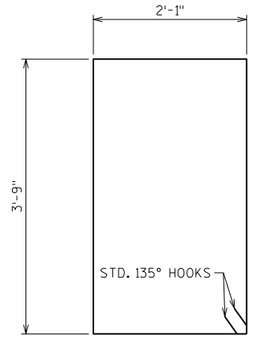


N913, N914

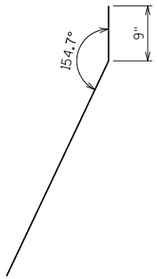


N417,N420,N521-26,N528,N531-32

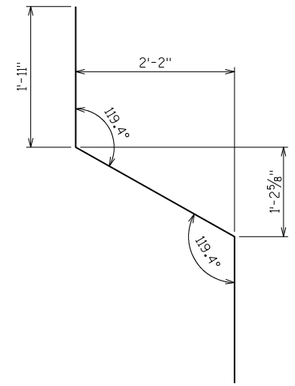
BAR MARK	DIM 'A'	DIM 'B'
N417	2'-11"	1'-0"
N420	11"	1'-10"
N521	2'-1½"	5'-6"
N522	2'-1½"	4'-6"
N523	2'-1½"	3'-0"
N524	2'-3"	4'-6"
N525	1'-2½"	2'-1"
N526	11½"	2'-1"
N528	9"	2'-1"
N531	7"	2'-1"
N532	2'-9"	2'-0"



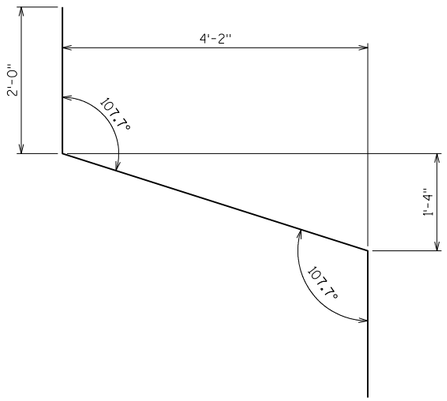
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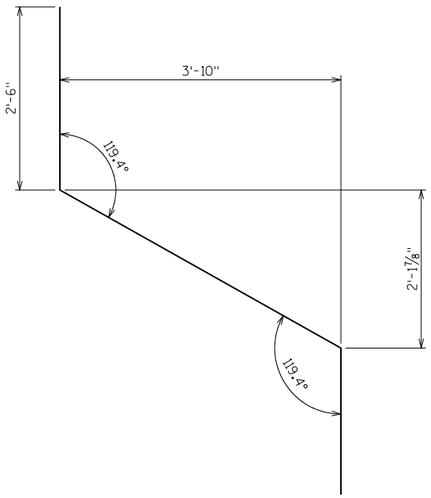
N516



N527



N529



N530

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
N801		44	10'-8"			FOOTING 1 & 5
N802		36	11'-8"			FOOTING 1 & 5
N803		57	9'-8"			FOOTING 2, 3, & 4
N804		33	9'-8"			FOOTING 2, 3, & 4
N905	X	90	11'-7"	X		FOOTING DOWEL/COLUMN VERT.
N906	X	90	19'-7"			COLUMN VERT.
N507	X	346	10'-4"	X		COLUMN HORIZ. STIRRUPS
N908	X	12	59'-0"			CAP BOTTOM- WEST
N509	X	8	55'-0"			CAP MIDDLE- WEST
N910	X	9	60'-0"			CAP TOP- WEST
N911	X	12	37'-9"			CAP BOTTOM- EAST
N512	X	8	37'-9"			CAP MIDDLE- EAST
N913	X	9	40'-3"	X		CAP TOP- EAST
N914	X	9	13'-7"	X		CAP TOP- WEST
N515	X	232	12'-3"	X		CAP STIRRUPS
N516	X	6	4'-0"	X		CAP- END VERT.
N417	X	46	4'-9"	X		HOLDS LAYERED STEEL (USE AS NEEDED IN CAP)
N518	X	45	2'-0"			DOWEL BARS BTWN. SEATS
N519	X	80	8'-6"			COLUMN-VERT.-SECONDARY
N420	X	220	4'-5"	X		COLUMN-HORIZ.-SECONDARY
N521	X	20	12'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
N522	X	10	10'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
N523	X	20	7'-11"	X		COLUMN- TOP- HORIZ.- SECONDARY
N524	X	20	11'-0"	X		COLUMN- TOP- VERT.- SECONDARY
N525	X	20	5'-2"	X		COLUMN- TOP- VERT.- SECONDARY
N526	X	20	4'-11"	X		COLUMN- TOP- VERT.- SECONDARY
N527	X	30	6'-5"	X		COLUMN- TOP- VERT.- SECONDARY
N528	X	20	4'-8"	X		COLUMN- TOP- HORIZ.- SECONDARY
N529	X	20	8'-5"	X		COLUMN- TOP- VERT.- SECONDARY
N530	X	30	8'-11"	X		COLUMN- TOP- VERT.- SECONDARY
N531	X	20	4'-6"	X		COLUMN- TOP- HORIZ.- SECONDARY
N532	X	12	6'-6"	X		CAP- END U-BAR

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PIER 2
DETAILS 2

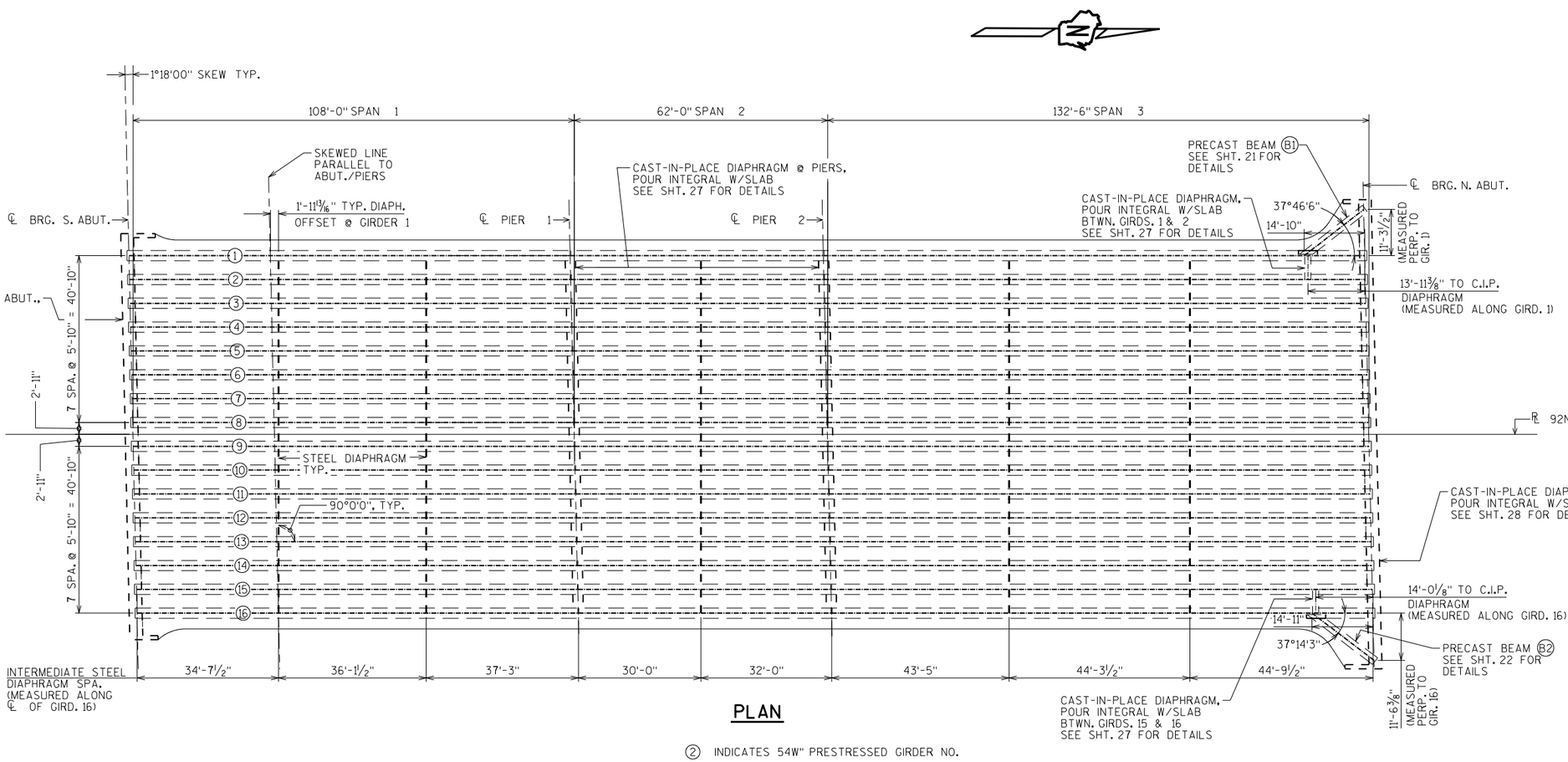
SHEET 16

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SCALE =

STATE PROJECT NUMBER

1060-33-80



PLAN

(2) INDICATES 54W" PRESTRESSED GIRDER NO.

NOTES

AT THE EXTERIOR GIRDERS, DUE TO THE LARGE SLAB OVERHANGS RELATIVE TO THE GIRDER SPACING, PARTICULAR ATTENTION SHALL BE GIVEN TO TEMPORARY BRACING REQUIRED BETWEEN THE EXTERIOR GIRDERS AND INTERIOR GIRDERS DURING THE DECK POUR IN ORDER TO PREVENT ROTATION OF THE EXTERIOR GIRDERS. THE CONTRACTOR SHALL DETERMINE THE EXACT BRACING REQUIREMENTS/SPACING (IF ANY) GIVEN THEIR SPECIFIC DECK FORMING/PLACEMENT PROCEDURE AND CONFIGURATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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SUPERSTRUCTURE FRAMING PLAN

SHEET 17

2700

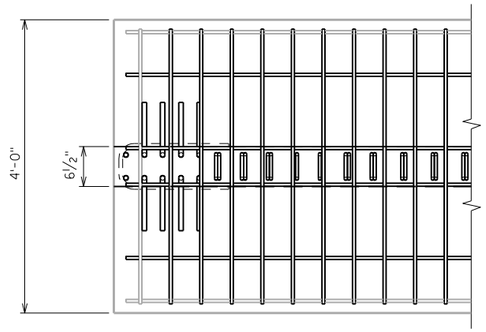
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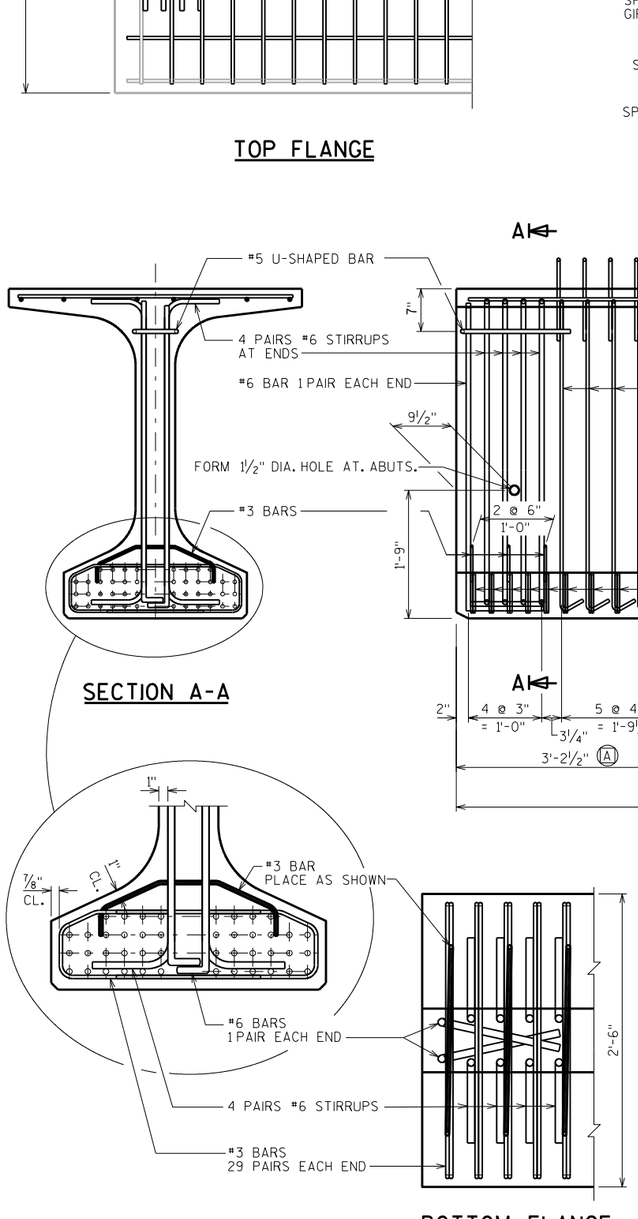
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1060-33-80

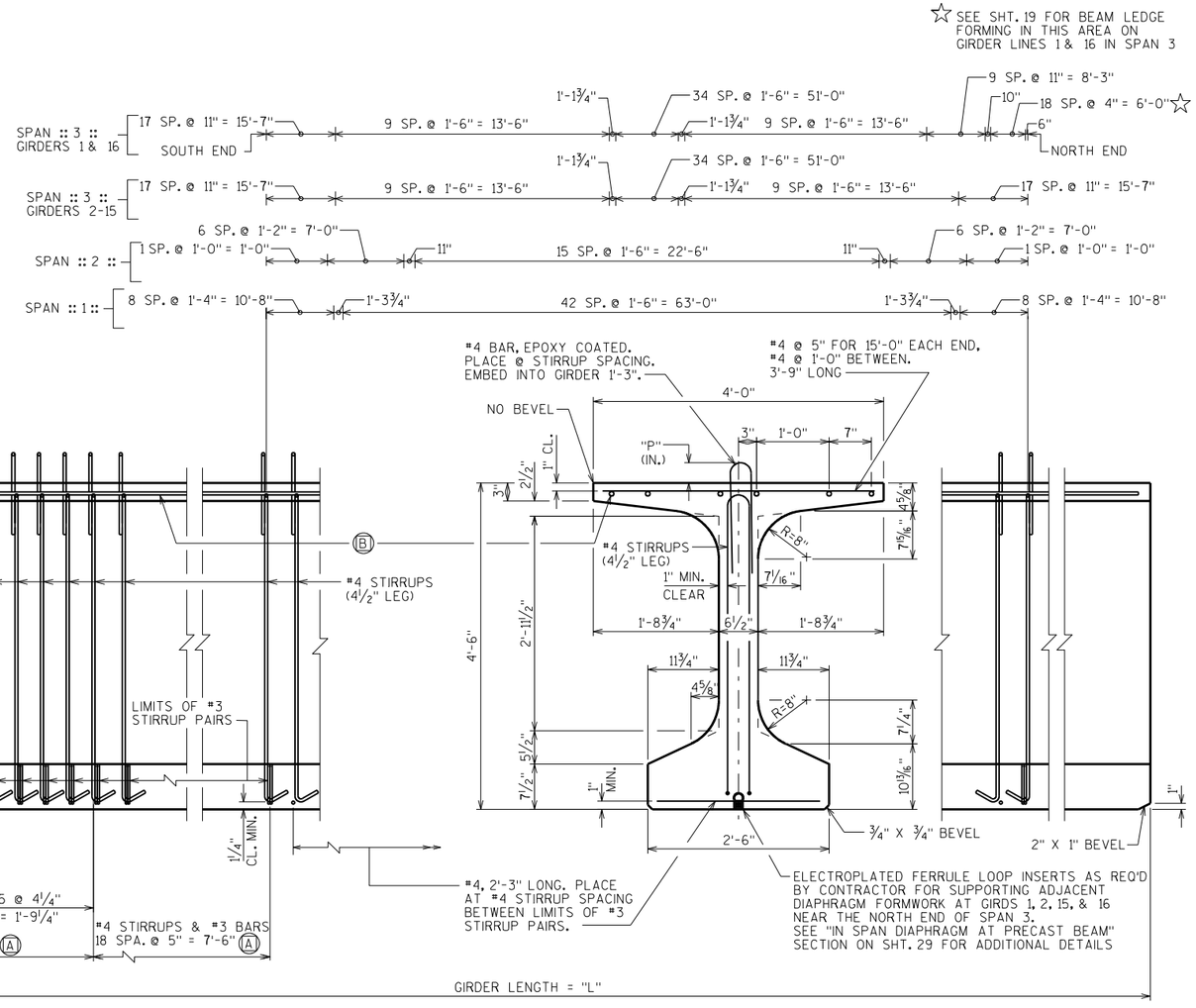


TOP FLANGE

SECTION A-A



BOTTOM FLANGE



SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6-#4 BARS, FULL LENGTH, MIN. LAP = 1'-11", SPANS 1 & 3
6-#6 BARS, FULL LENGTH, MIN. LAP = 2'-11", SPAN 2

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	2-15	108.38	0.4	0.8	1.1	1.2	1.3	1.2	1.1	0.8	0.4	8000	7	8	8	0.60	26	6800	50.0	15.5	18.5	4.0	N/A	N/A
1	1 & 16	108.38	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5	8000	7	9	9	0.60	26	6800	50.0	15.5	18.5	4.0	N/A	N/A
2	1-16	61.75	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8000	8	8	7	0.60	N/A	N/A	—	—	—	—	16	6800
													"P" 9/10TH TO 1/10TH	"P" 1/10TH TO 7/10TH	"P" 7/10TH TO 10/10TH									
3	2-15	132.88	0.9	1.8	2.4	2.8	3.0	2.9	2.5	1.8	0.9	8000	8	10	8	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A
3	1 & 16	132.88	1.1	2.1	2.9	3.4	3.5	3.4	2.9	2.1	1.1	8000	8	10	8	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING (SEE 'AESTHETIC DETAILS' SHT.)

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

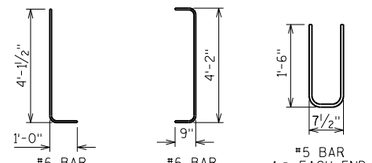
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ALL GIRDERS, EXCEPT FOR GIRDERS 1 & 16 IN SPAN 3, SHALL BE PAID FOR UNDER THE BID ITEM "PRESTRESSED GIRDER TYPE I 54W-INCH". GIRDERS 1 & 16 IN SPAN 3 SHALL BE PAID FOR UNDER THE BID ITEM "PRESTRESSED GIRDER TYPE I 54W-INCH SPECIAL"

CLEARLY LABEL NORTH AND SOUTH ENDS OF ALL GIRDERS SO THEY ARE PLACED PROPERLY IN THE FIELD.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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54W" PRESTRESSED GIRDER DETAILS 1

SHEET 18

2701

1-13
G54W

SCALE =

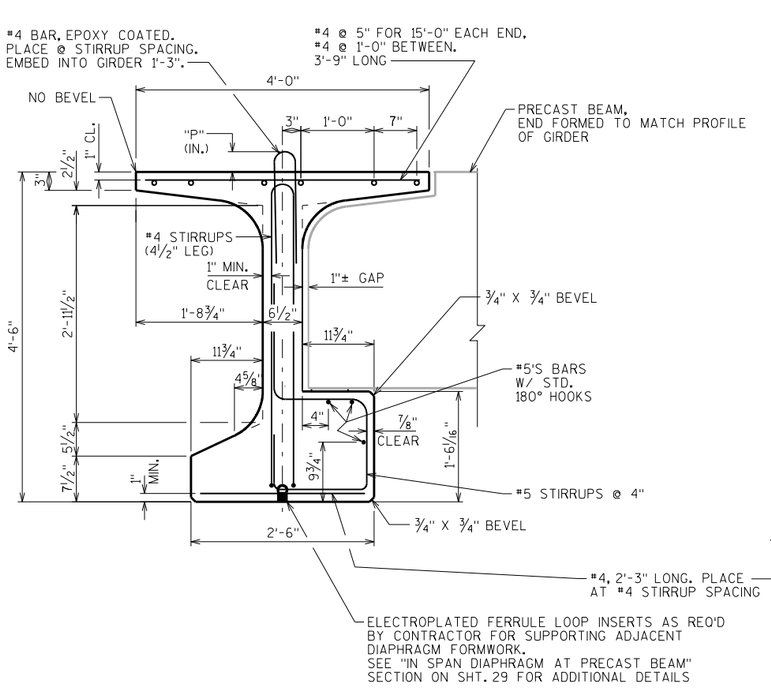
STATE PROJECT NUMBER
1060-33-80

NOTES

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

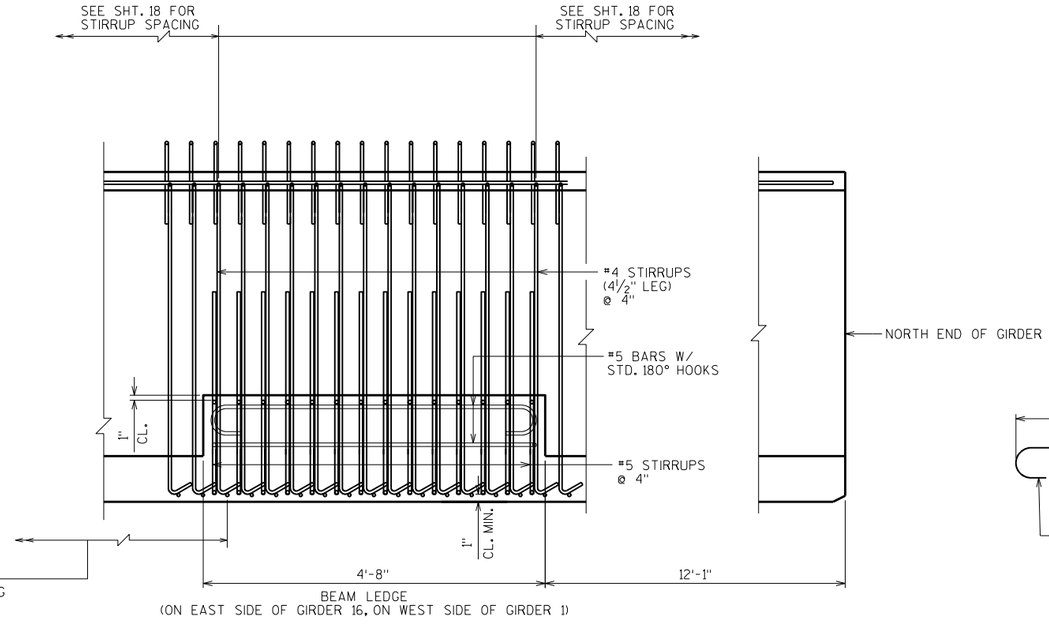
USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

GIRDERS 1 & 16 IN SPAN 3 SHALL BE PAID FOR UNDER THE BID ITEM "PRESTRESSED GIRDER TYPE I 54W-INCH SPECIAL"



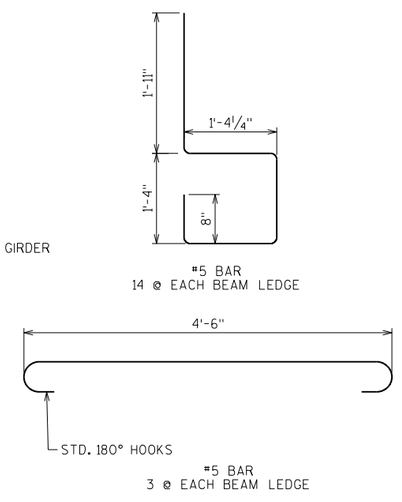
TYPICAL SECTION THRU BEAM LEDGE

(GIRDER 16 LOOKING NORTH, GIRDER 1 LOOKING SOUTH)



SIDE ELEVATION VIEW OF BEAM LEDGE - GIRDERS 1 & 16

(GIRDER 16 LOOKING WEST SHOWN)



8

8

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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54W" PRESTRESSED GIRDER SPECIAL DETAILS

SHEET 19

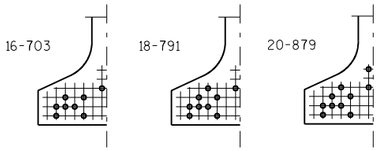
2702

1-13
G54W

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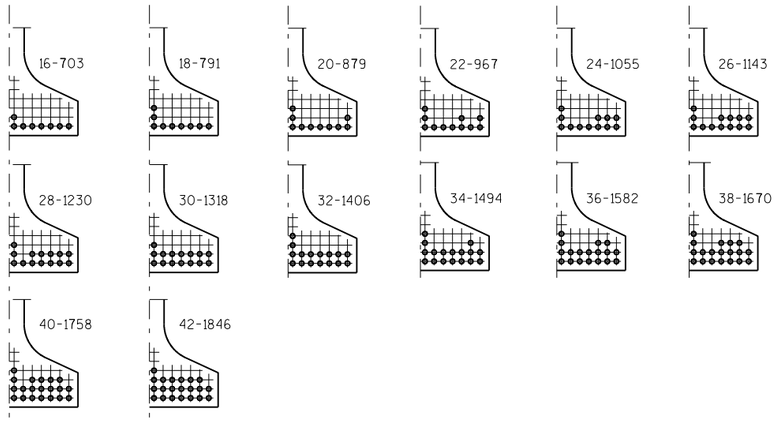
STATE PROJECT NUMBER

1060-33-80



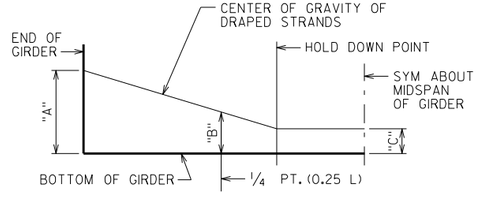
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"ϕ STRANDS

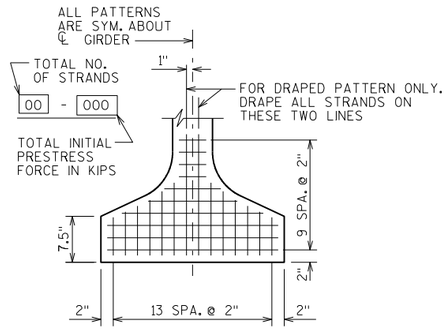


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

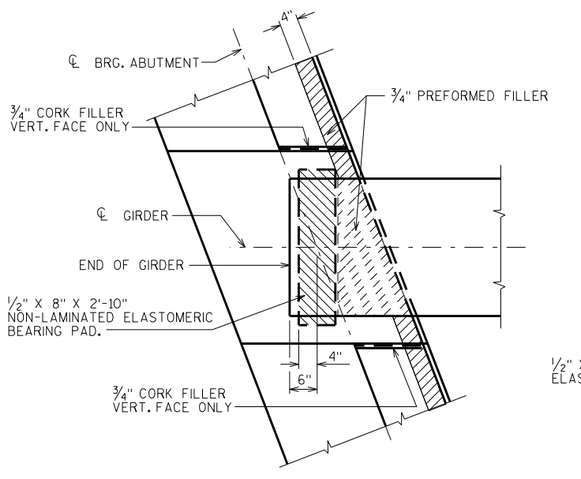
0.6"ϕ STRANDS

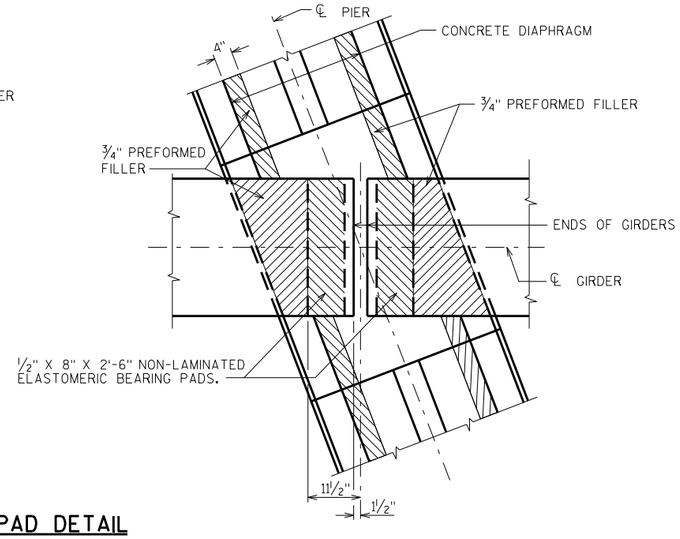


DRAPED STRAND PROFILE

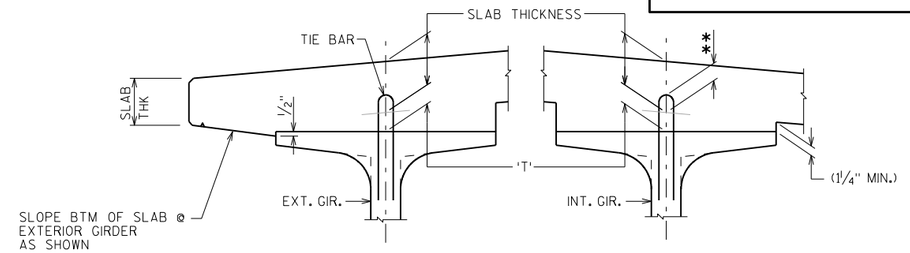


TYP. STRAND PATTERN





BEARING PAD DETAIL



SLAB HAUNCH DETAIL

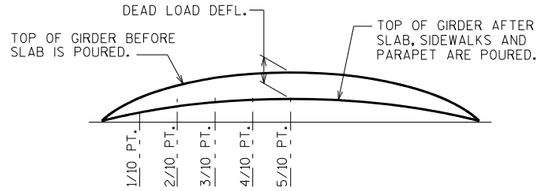
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	2.07
2	0.64
3	4.72

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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54W" PRESTRESSED GIRDER DETAILS 2

SHEET 20

2703

8

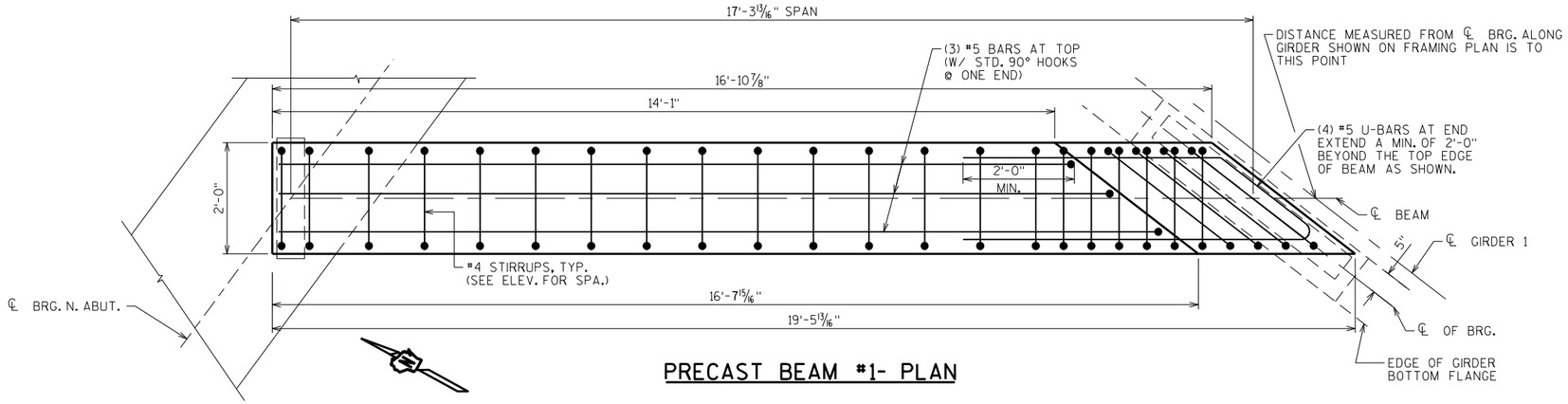
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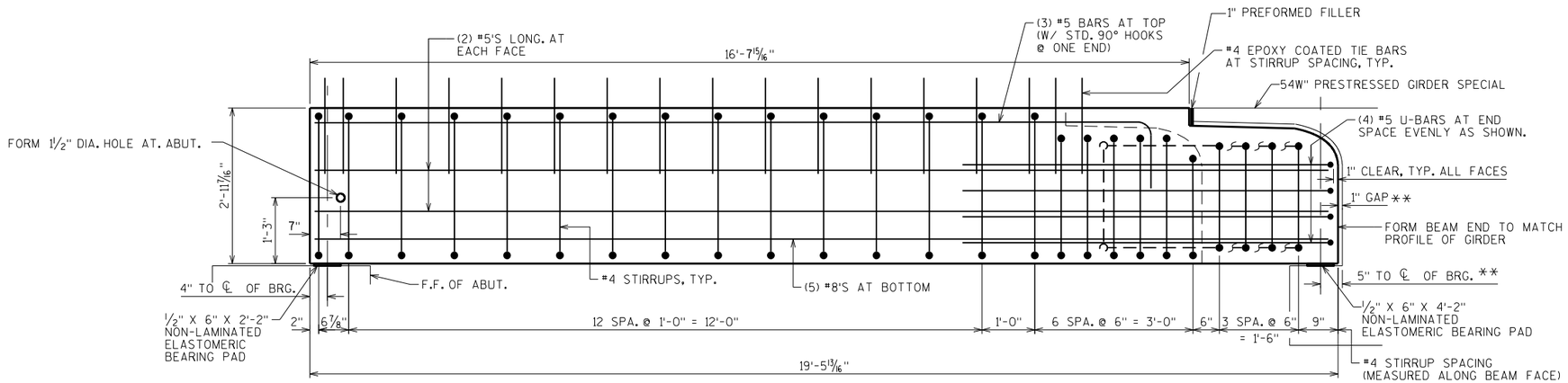
G54W
5-11

STATE PROJECT NUMBER

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PRECAST BEAM #1- PLAN



PRECAST BEAM #1- ELEVATION LOOKING NORTHEAST

**DISTANCE MEASURED PERP. TO GIRDER FACE

NOTES

TOP OF BEAM TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 7" OF BEAM, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 7" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING (SEE 'AESTHETIC DETAILS' SHT.).

THE BEAMS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE BEAMS.

ALL BEAMS SHALL BE CAST FULL LENGTH AS SHOWN.

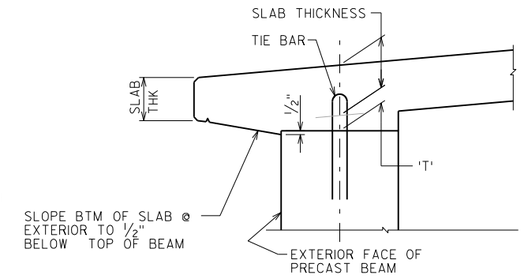
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

REQUIRED COMPRESSIVE STRENGTH OF PRECAST CONCRETE BEAMS, f'c = 5,000 PSI

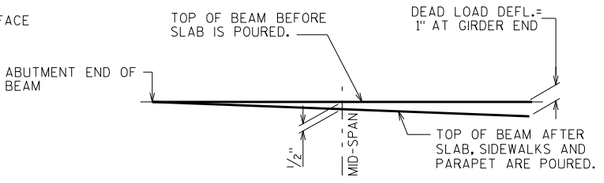
PROVIDE 3/4" CHAMFERS AT ALL BEAM EDGES TO AVOID SPALLING, EXCEPT AT THE TOP OF THE BEAM. BEAM DIMENSIONS SHOWN DO NOT ACCOUNT FOR CHAMFERS.

DURING THE DECK POUR, THE END OF THE BEAM SUPPORTED BY THE GIRDER WILL DEFLECT WITH THE GIRDER, WHICH SHALL BE ACCOUNTED FOR DURING DECK FORMING.

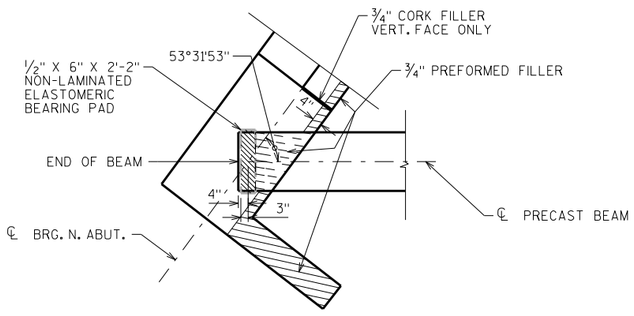


SLAB HAUNCH DETAIL

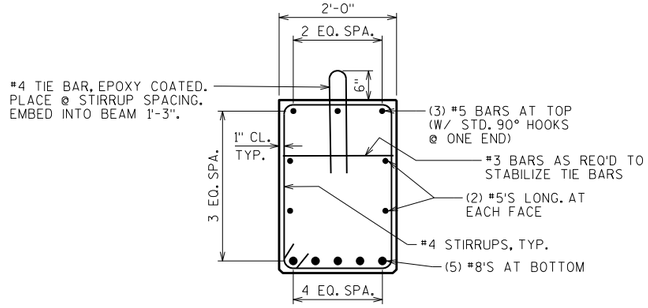
TO DETERMINE 'T', SEE PROCESS OUTLINED ON SHT. 20
SEE TABLE BELOW FOR TOP OF DECK ELEV. AT FINAL GRADE.
SEE DIAGRAM BELOW FOR DEAD LOAD DEFLECTION.



DEAD LOAD DEFLECTION DIAGRAM



BEARING DETAIL AT NORTH ABUT



TYPICAL SECTION THRU PRECAST BEAM

	℄ BRG. @ GIRD	1/4-SPAN	1/2-SPAN	3/4-SPAN	℄ BRG. @ ABUT.
℄ BEAM 1	767.85	767.83	767.81	767.81	767.81

TOP OF DECK ELEV. @ ℄ OF BEAM
(FEET)

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PRECAST BEAM 1 DETAILS

SHEET 21

2704

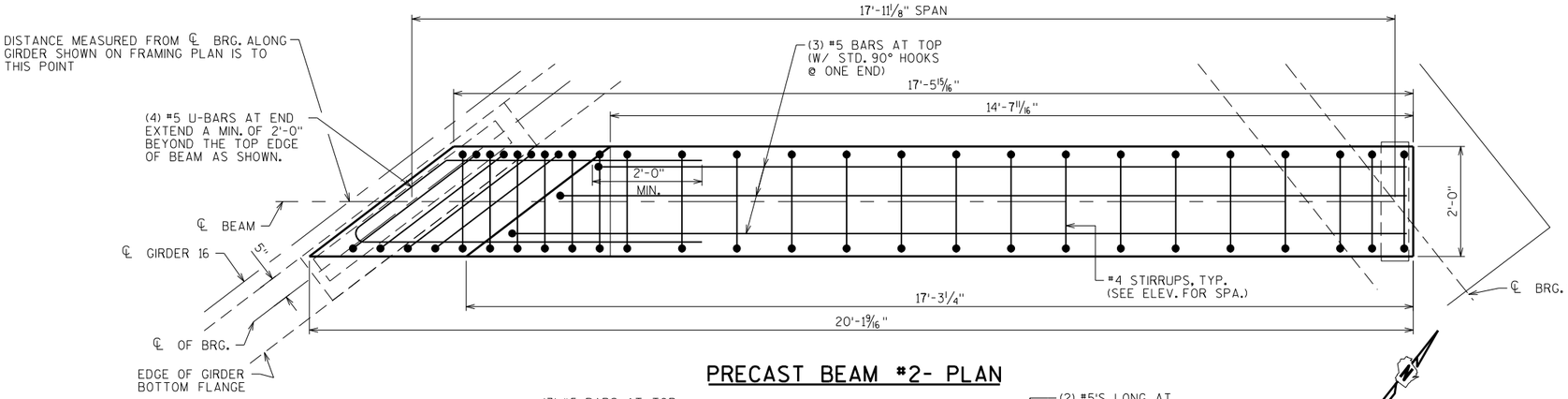
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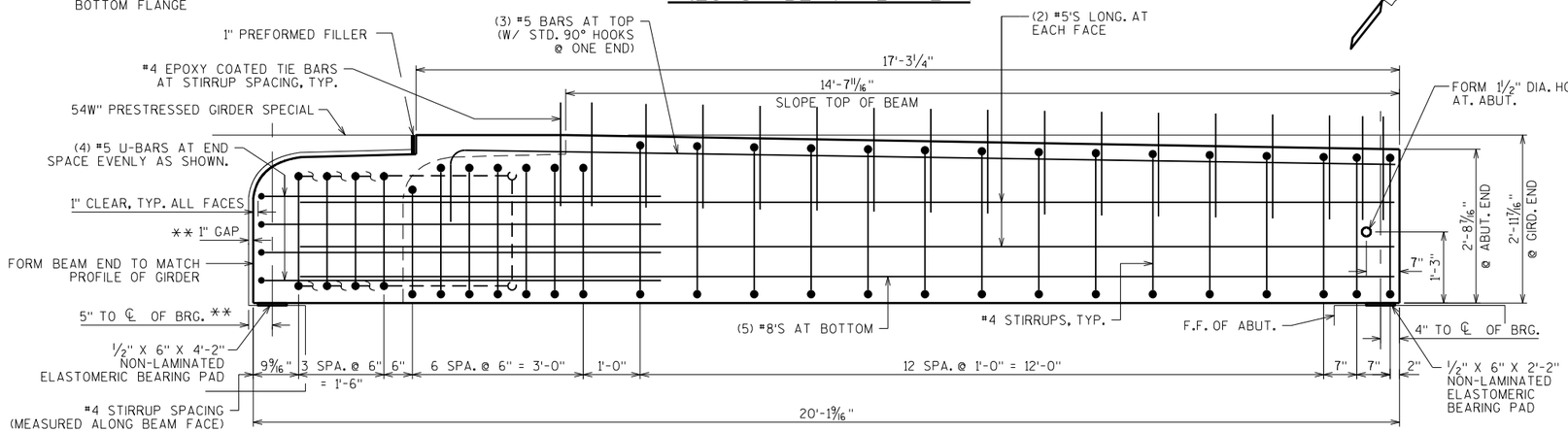
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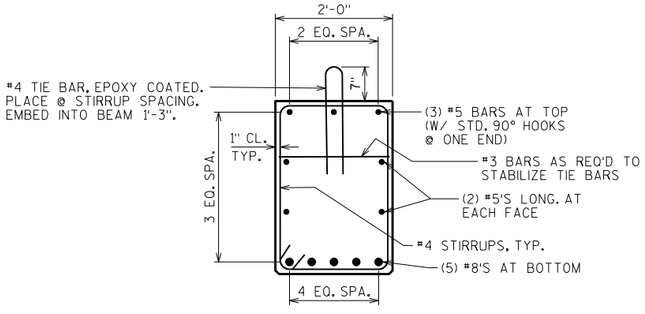


PRECAST BEAM #2- PLAN

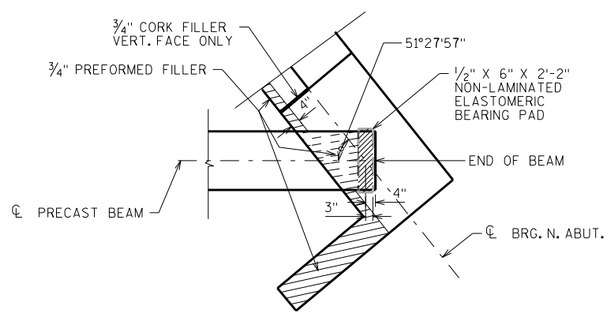


PRECAST BEAM #2- ELEVATION LOOKING NORTHWEST

** DISTANCE MEASURED PERP. TO GIRDER FACE



TYPICAL SECTION THRU PRECAST BEAM



BEARING DETAIL AT NORTH ABUT

	℄ BRG. @ GIRD	1/4-SPAN	1/2-SPAN	3/4-SPAN	℄ BRG. @ ABUT.
℄ BEAM 2	766.21	766.14	766.03	765.86	765.59

TOP OF DECK ELEV. @ ℄ OF BEAM

(FEET)

NOTES

TOP OF BEAM TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 7" OF BEAM, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 7" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING. (SEE 'AESTHETIC DETAILS' SHT.).

THE BEAMS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE BEAMS.

ALL BEAMS SHALL BE CAST FULL LENGTH AS SHOWN.

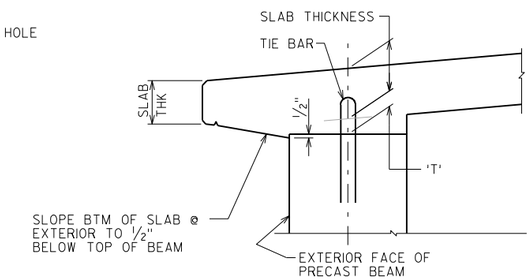
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

REQUIRED COMPRESSIVE STRENGTH OF PRECAST CONCRETE BEAMS, f'c = 5,000 PSI

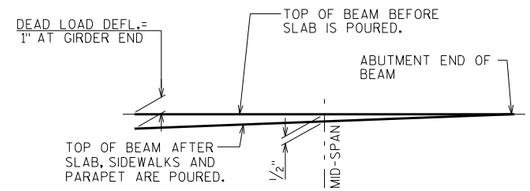
PROVIDE ¾" CHAMFERS AT ALL BEAM EDGES TO AVOID SPALLING, EXCEPT AT THE TOP OF THE BEAM. BEAM DIMENSIONS SHOWN DO NOT ACCOUNT FOR CHAMFERS.

DURING THE DECK POUR, THE END OF THE BEAM SUPPORTED BY THE GIRDER WILL DEFLECT WITH THE GIRDER, AND SHALL BE ACCOUNTED FOR DURING DECK FORMING.



SLAB HAUNCH DETAIL

TO DETERMINE 'T', SEE PROCESS OUTLINED ON SHT. 20
SEE TABLE BELOW FOR TOP OF DECK ELEV. AT FINAL GRADE.
SEE DIAGRAM BELOW FOR DEAD LOAD DEFLECTION.



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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PRECAST BEAM 2 DETAILS

SHEET 22

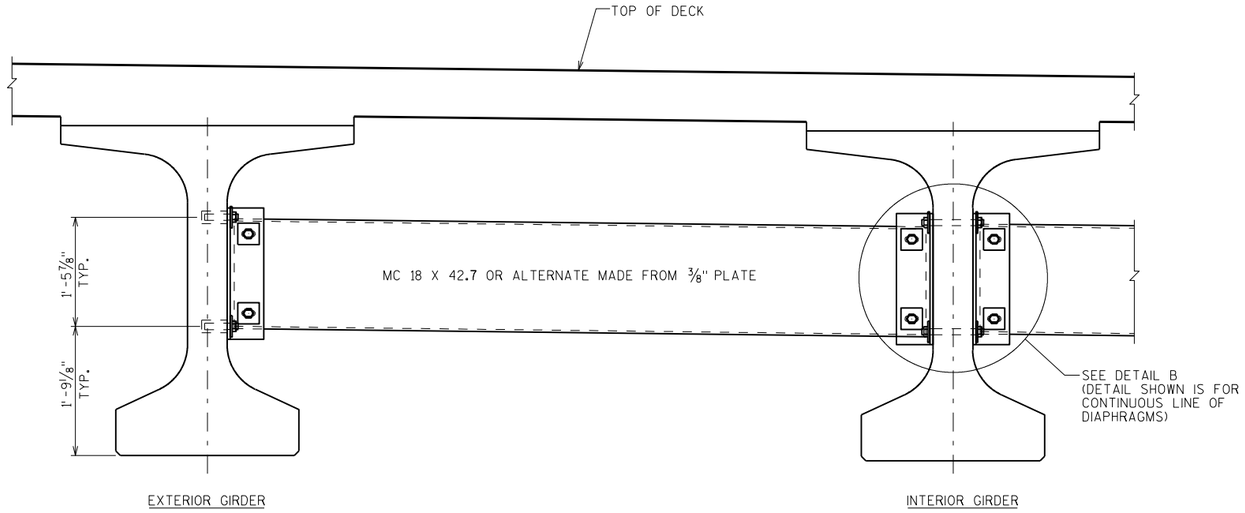
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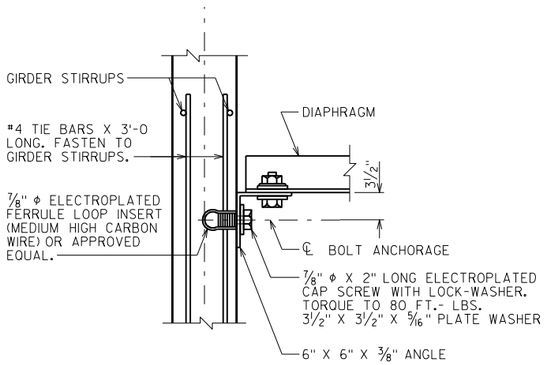
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8

STATE PROJECT NUMBER
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PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

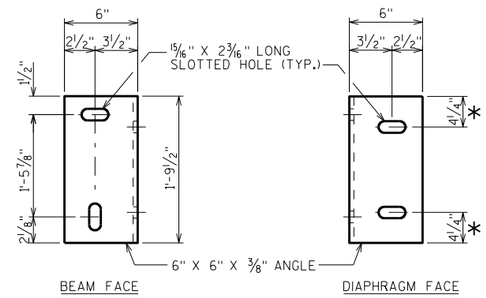
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-862", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

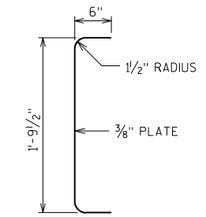
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

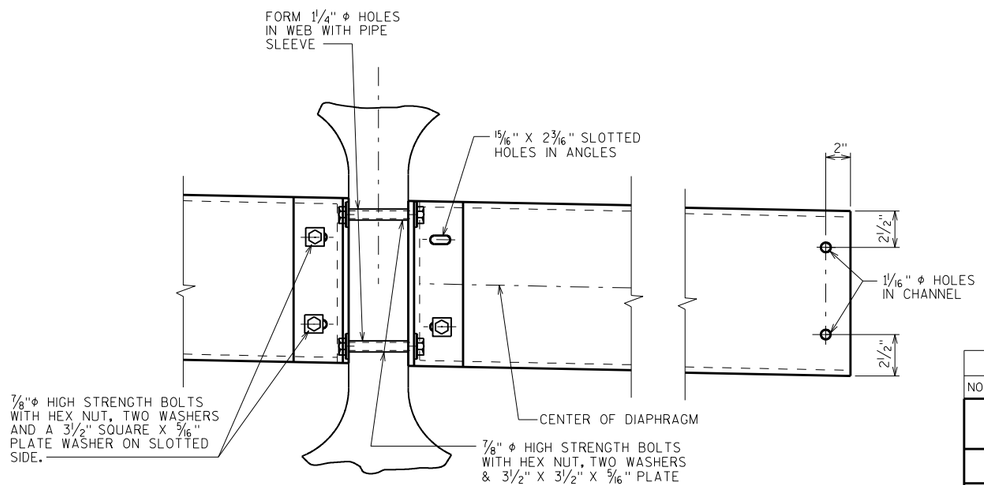


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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STEEL DIAPHRAGM

SHEET 23

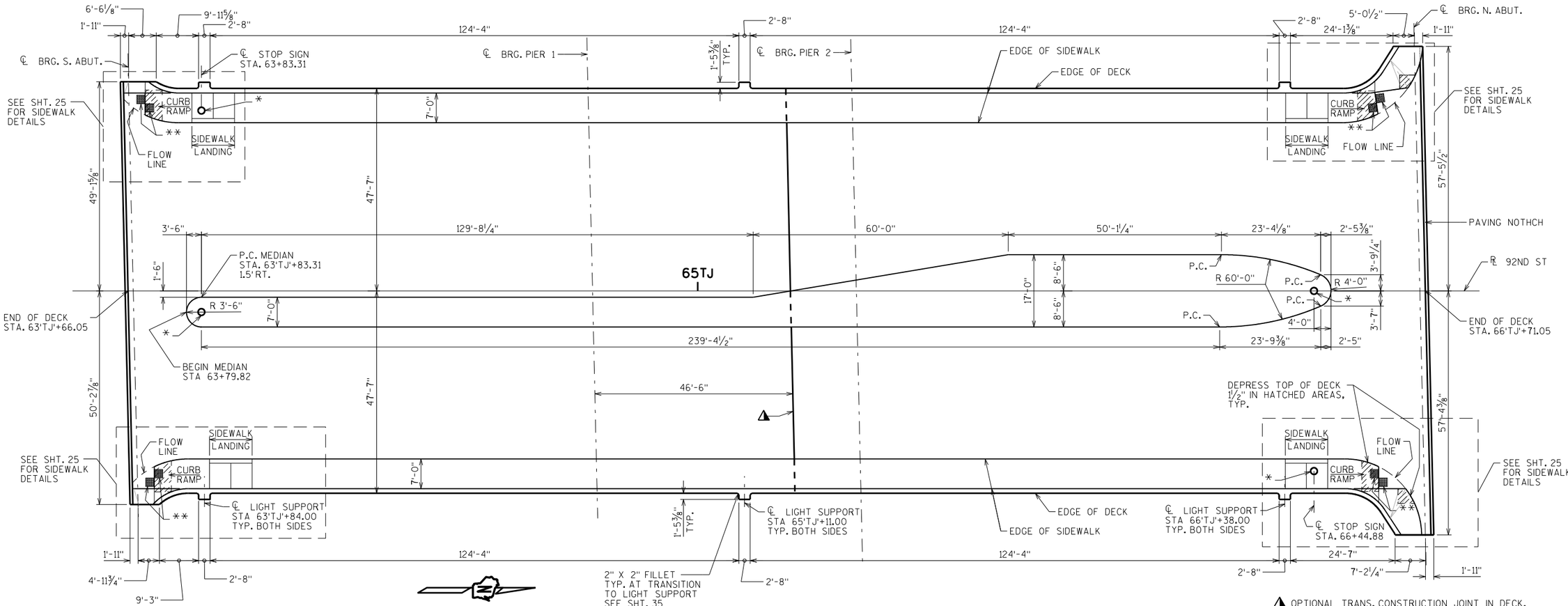
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STATE PROJECT NUMBER

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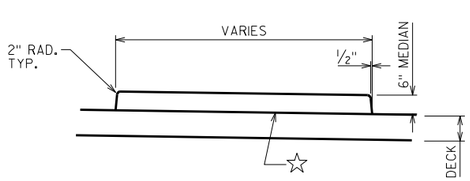


SLAB, SIDEWALKS, & MEDIAN LAYOUT PLAN

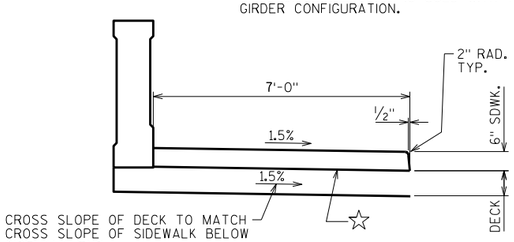
NOTE: THE BUREAU OF STRUCTURES HAS APPROVED THE FULL WIDTH POUR OF THE SUPERSTRUCTURE DECK DUE TO POTENTIAL FOR DIFFICULT SLAB FORMING IF A LONGITUDINAL JOINT IS USED WITH THE SPECIFIC GIRDER CONFIGURATION.

△ OPTIONAL TRANS. CONSTRUCTION JOINT IN DECK. PLACE PARALLEL TO ℄ OF ABUT/PIERS. SEE SHT. 27 FOR CONSTRUCTION JOINT DETAIL. SEE SHT. 29 FOR POUR SEQUENCE AND NOTES.

* STOP SIGN SOCKET EMBEDED INTO MEDIAN/SIDEWALK. SOCKET TO BE PROVIDED BY THE CITY OF MILWAUKEE. CONTACT DALE DIETZ (414-286-8678) TO COORDINATE INSTALLATION OF THE SOCKETS. INSTALLATION SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES"



TYPICAL SECTION THRU MEDIAN



TYPICAL SECTION THRU SIDEWALK BTWN. CURB RAMPS

☆ ROUGH FLOAT SURFACE, OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT BELOW SIDEWALKS AND MEDIAN.

NOTE
CLEAN ALL LOOSE MATERIAL ON DECK AT MEDIAN AND SIDEWALK LOCATIONS PRIOR TO PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.8.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN AND SIDEWALK ARE POURED WITHIN 45 DAYS OF DECK POUR COMPLETION.

** 2'-0" X 2'-0" CURB RAMP DETECTABLE WARNING FIELD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE LAYOUT

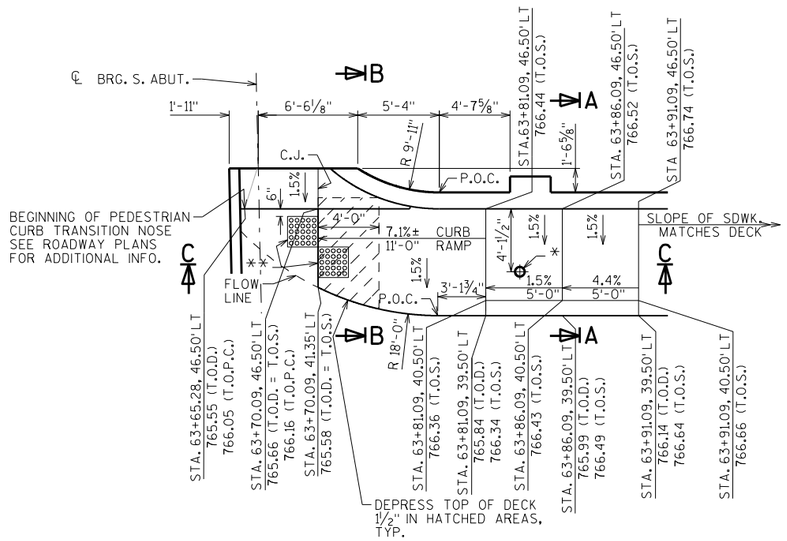
SHEET 24

2707

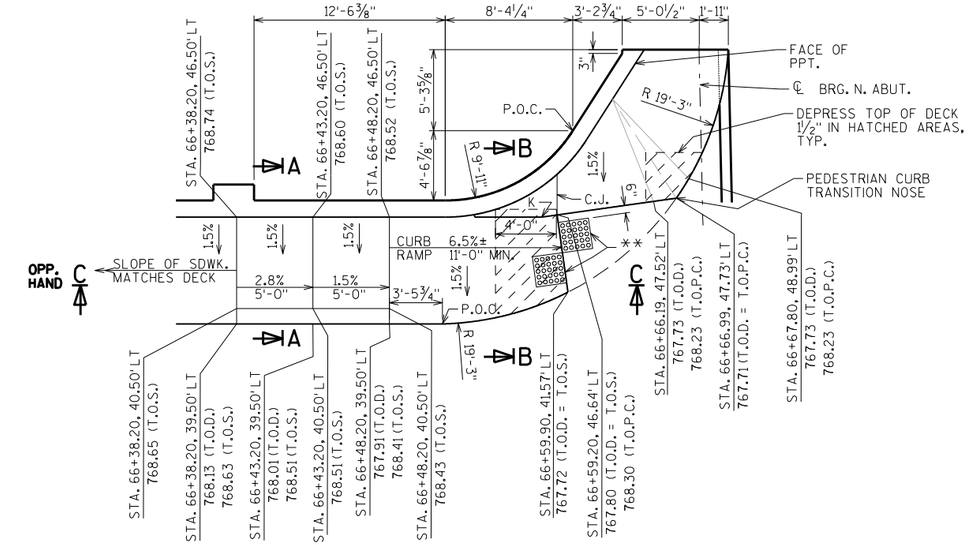
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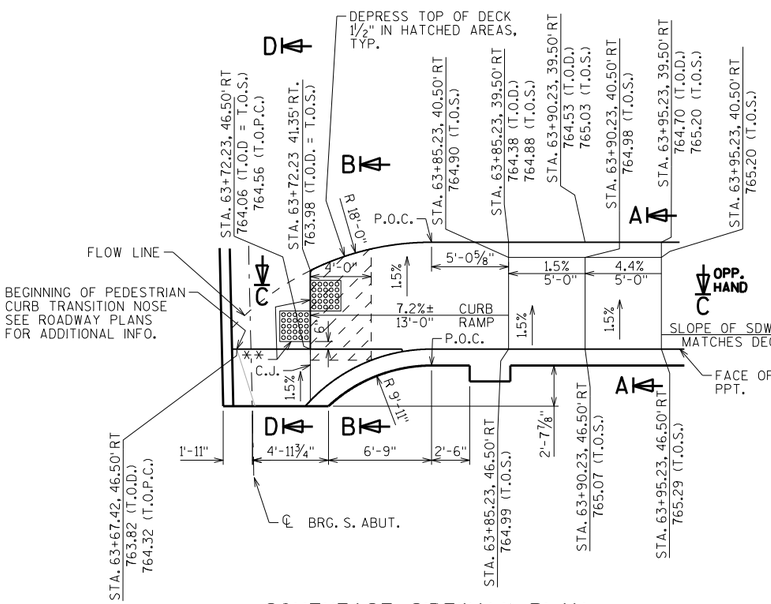
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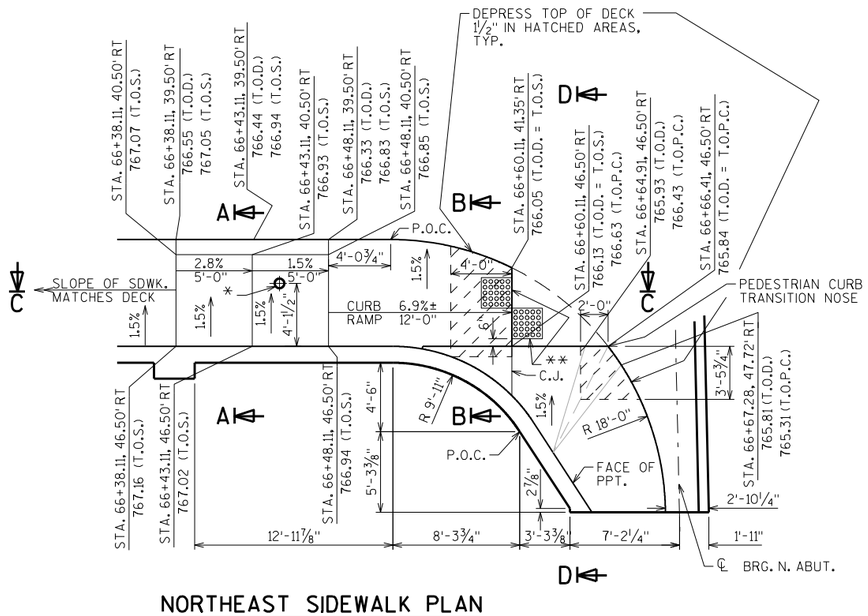
SOUTHWEST SIDEWALK PLAN



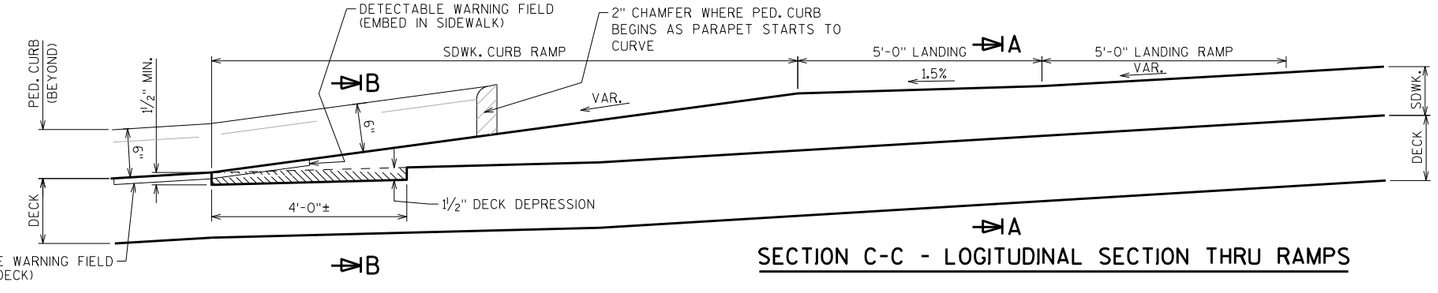
NORTHWEST SIDEWALK PLAN



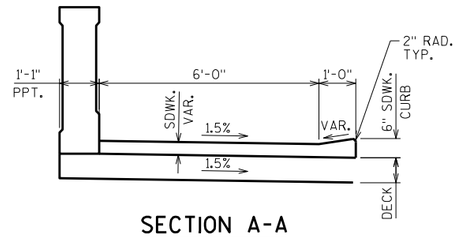
SOUTHEAST SIDEWALK PLAN



NORTHEAST SIDEWALK PLAN

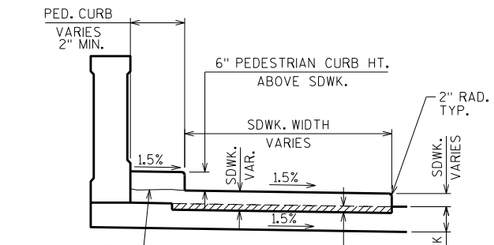


SECTION C-C - LOGITUDINAL SECTION THRU RAMPS



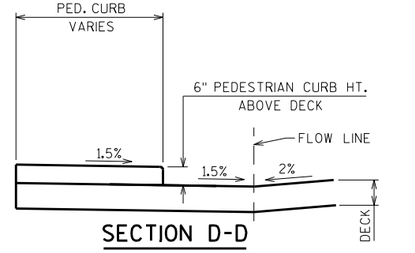
SECTION A-A

(THRU SDWK. RAMP LANDING)



SECTION B-B

(THRU SDWK. CURB RAMP @ DEPRESSED DECK)



SECTION D-D

(THRU DECK AT FLOW LINE)

T.O.D. = TOP OF DECK

T.O.S. = TOP OF SIDEWALK

T.O.P.C. = TOP OF PEDESTRIAN CURB

P.O.C. = POINT OF CURVATURE

C.J. = TOOLED CONTROL JOINT

K = KINK POINT IN PEDESTRIAN CURB @ STA. 66+58.18

* STOP SIGN SOCKET EMBEDED INTO SIDEWALK. SOCKET TO BE PROVIDED BY THE CITY OF MILWAUKEE. CONTACT DALE DIETZE (414-286-8678) TO COORDINATE INSTALLATION OF THE SOCKETS. INSTALLATION SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES"

** 2'-0" X 2'-0" CURB RAMP DETECTABLE WARNING FIELDS (8 REQ'D TOTAL), PAID FOR AS "CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA"

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY: CAD | PLANS CK'D.: DFD

SIDEWALK RAMP DETAILS

SHEET 25

2708

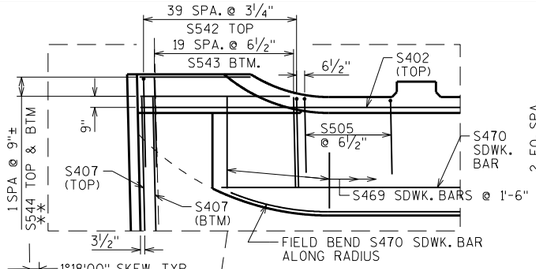
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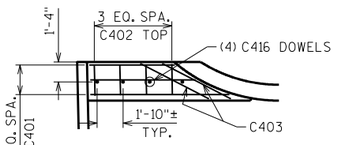
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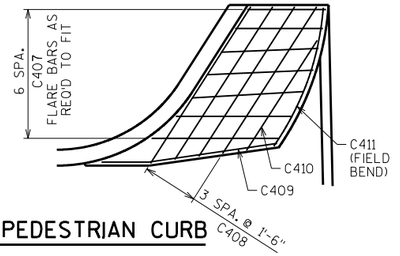
STATE PROJECT NUMBER

1060-33-80

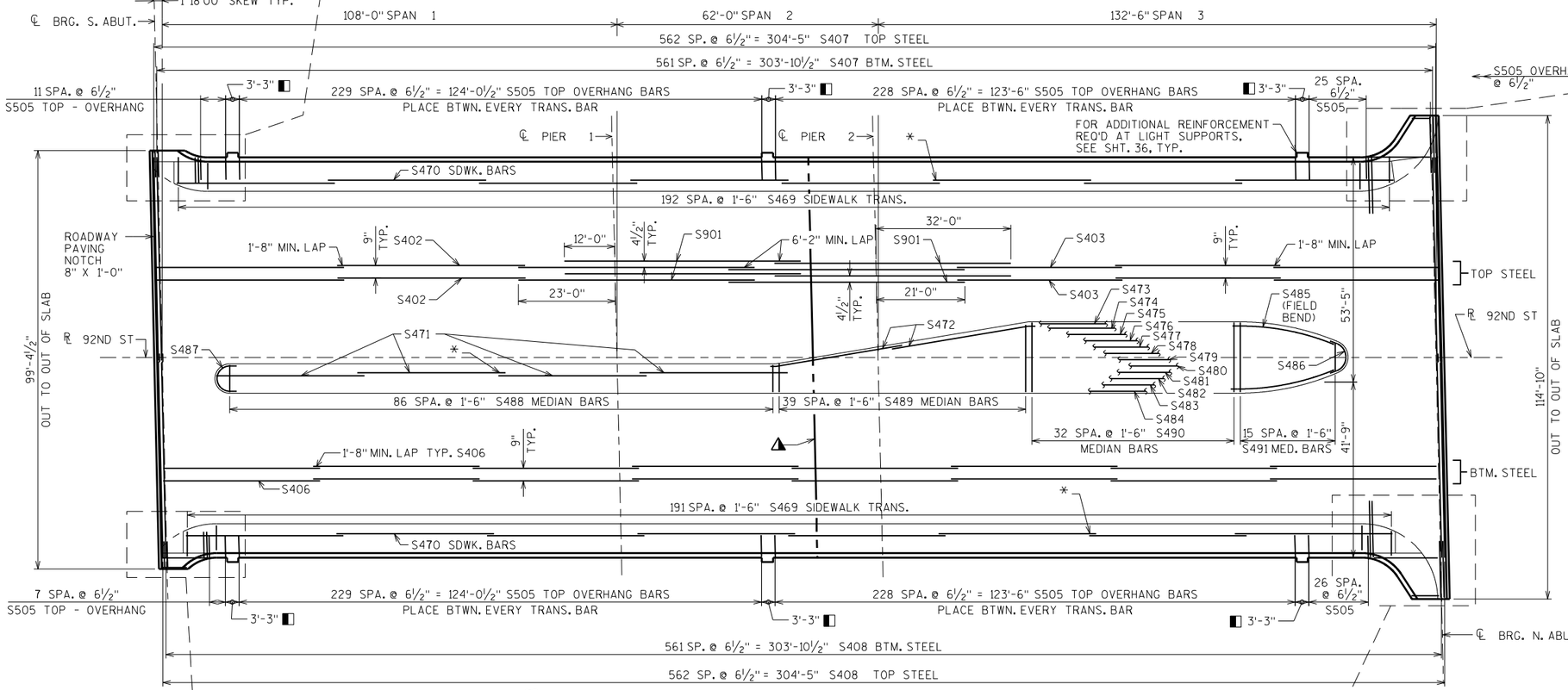


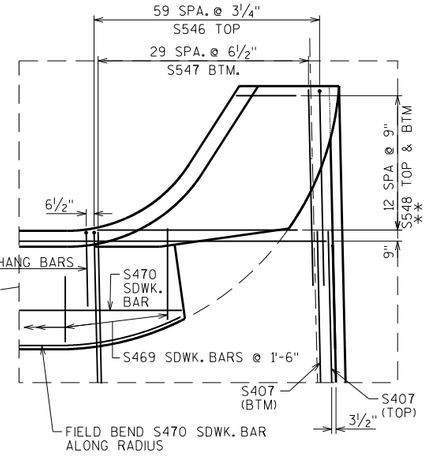


S.W. PEDESTRIAN CURB

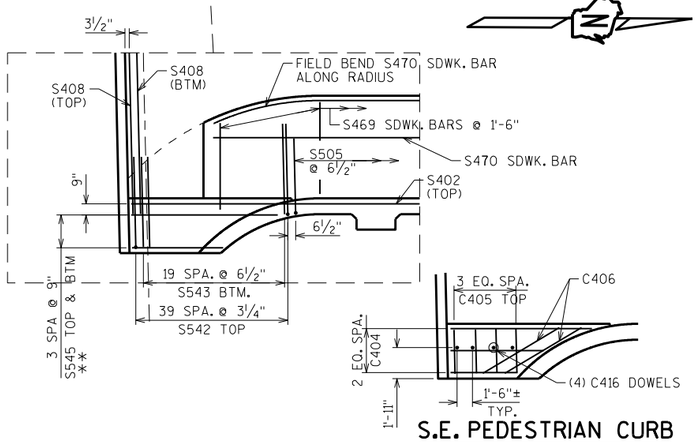


N.W. PEDESTRIAN CURB

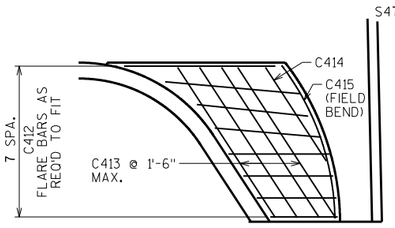




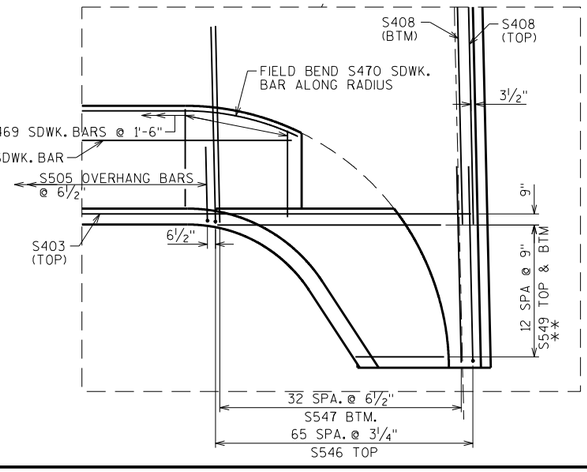
PLAN SHOWING BAR REINFORCEMENT



S.E. PEDESTRIAN CURB



N.E. PEDESTRIAN CURB



▮ SEE SHT. 36 FOR OVERHANG REINFORCEMENT AT LIGHT SUPPORTS

* 1'-8" MIN. LAP @ #4 SIDEWALK AND MEDIAN BARS. INCREASE LAPS AS REQ'D TO ACCOMODATE VARYING MEDIAN/SDWK LENGTHS. DO NOT CUT BARS.

⚠ OPTIONAL TRANS. CONSTRUCTION JOINT IN DECK. PLACE PARALLEL TO ℄ OF ABUT/PIERS. SEE SHT. 27 FOR CONSTRUCTION JOINT DETAIL. SEE SHT. 29 FOR POUR SEQUENCE AND NOTES.

** S544, S545, S548, & S549 BARS SHALL BE PLACED SUCH THAT THE END OF THE BARS ARE 2" CLEAR FROM THE EDGE OF DECK BELOW THE PARAPET

PLACE TRANS. BARS ALONG SKEW

SEE SHTS. 24 & 25 FOR ADDITIONAL DETAILS/DIMS

SEE SHT. 27 TYPICAL SECTIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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SUPERSTRUCTURE REINFORCEMENT

SHEET 26

2709

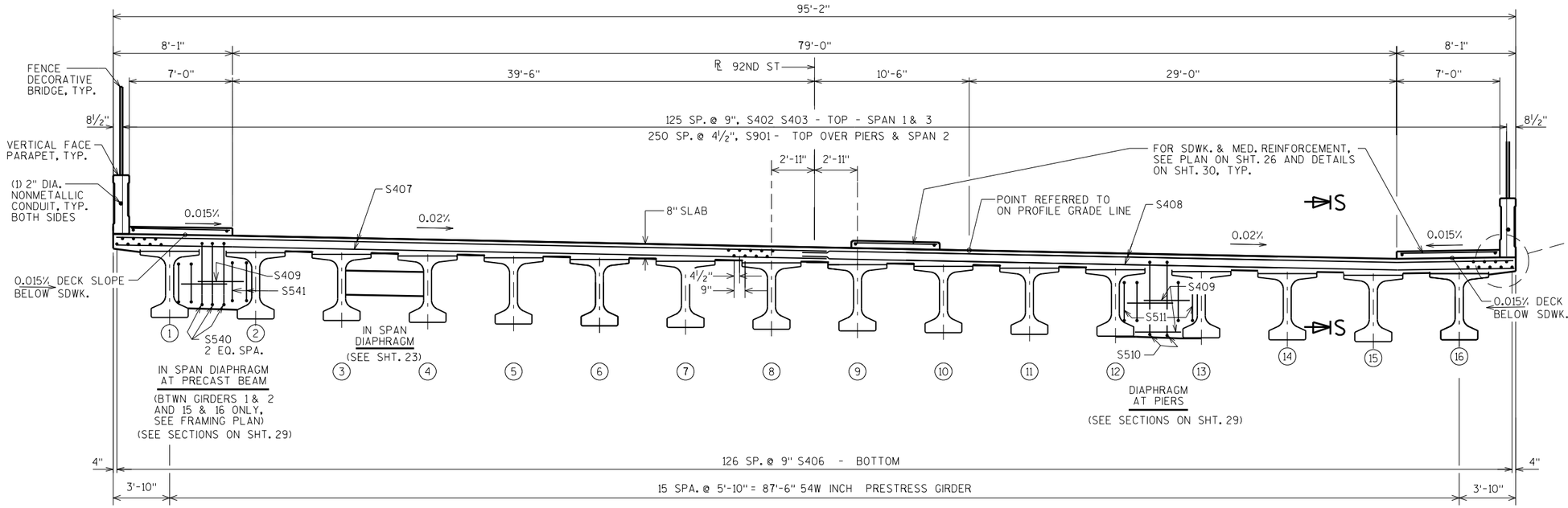
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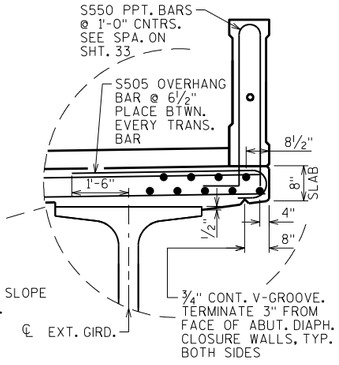
STATE PROJECT NUMBER

1060-33-80

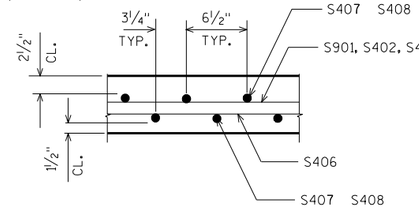


CROSS SECTION THRU ROADWAY

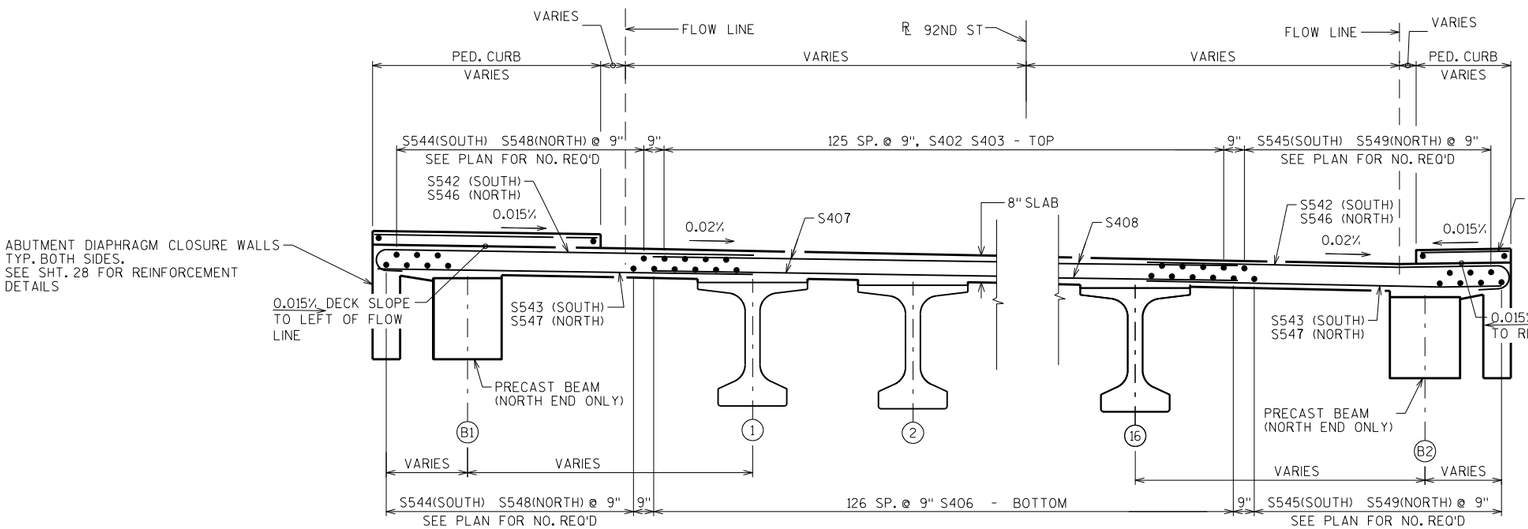
(LOOKING NORTH - STA. 63+95.23 TO 66+38.11)
(SEE SHT. 28 FOR ABUT. DIAPHRAGM ELEVATIONS)



DETAIL A

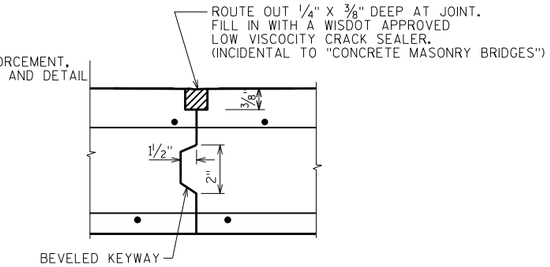


SECTION S-S



PARTIAL CROSS SECTION THRU ROADWAY AT DECK FLARES

(LOOKING NORTH NEAR ENDS OF BRIDGE)



TRANSVERSE CONSTRUCTION JOINT DETAIL

(IF NEEDED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS 1

SHEET 27

2710

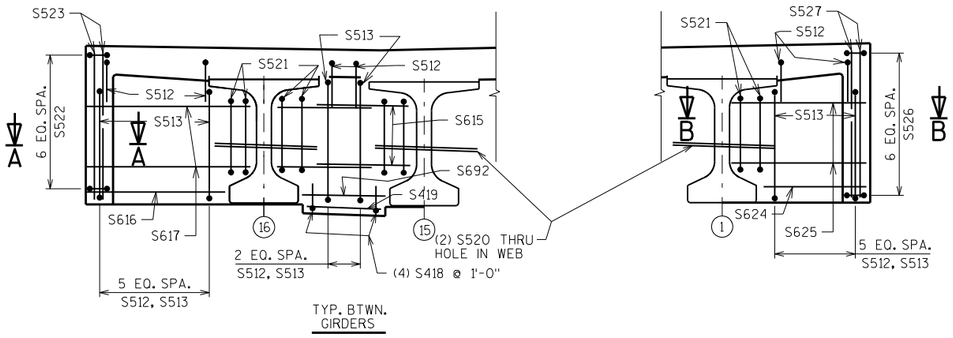
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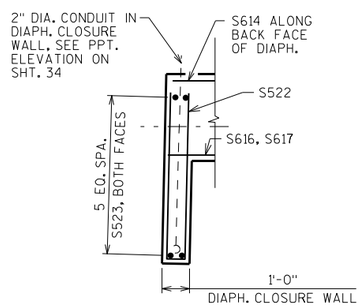
STATE PROJECT NUMBER

1060-33-80



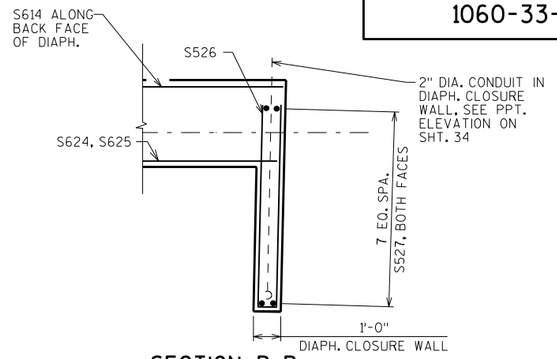
PARTIAL CROSS SECTION THRU ROADWAY AT SOUTH ABUTMENT DIAPHRAGM

(LOOKING SOUTH)
(SEE SECTIONS ON SHT. 29)



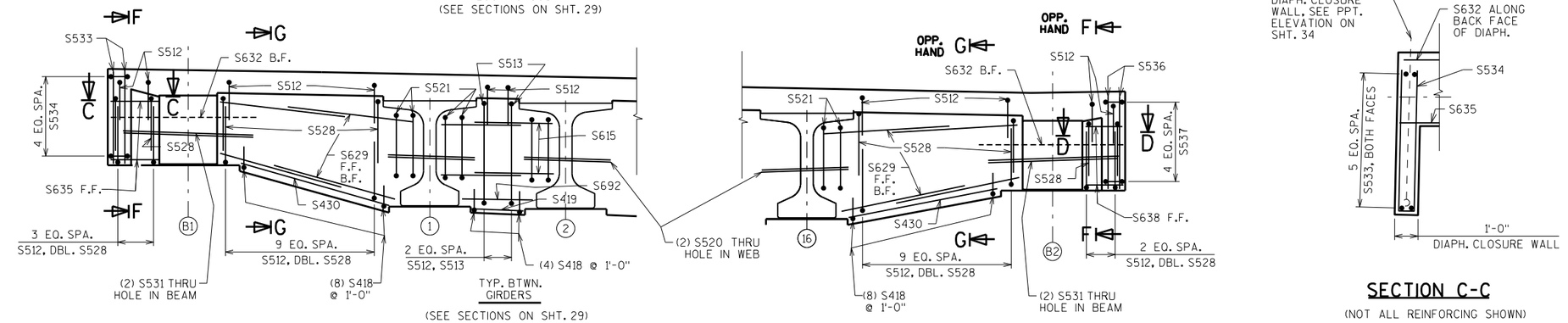
SECTION A-A

(NOT ALL REINFORCING SHOWN)



SECTION B-B

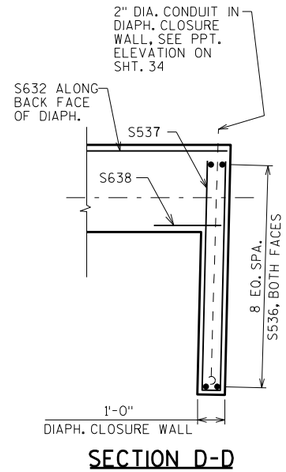
(NOT ALL REINFORCING SHOWN)



(SEE SECTIONS ON SHT. 29)

SECTION C-C

(NOT ALL REINFORCING SHOWN)

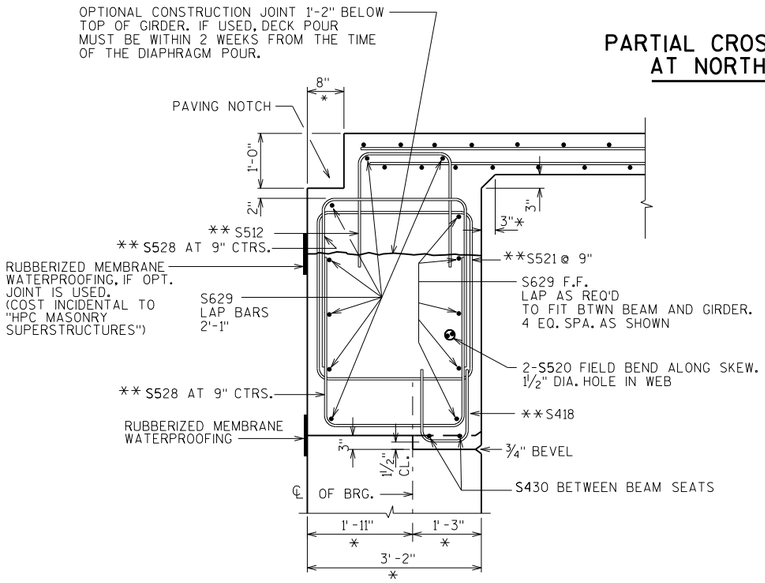


SECTION D-D

(NOT ALL REINFORCING SHOWN)

PARTIAL CROSS SECTION THRU ROADWAY AT NORTH ABUTMENT DIAPHRAGM

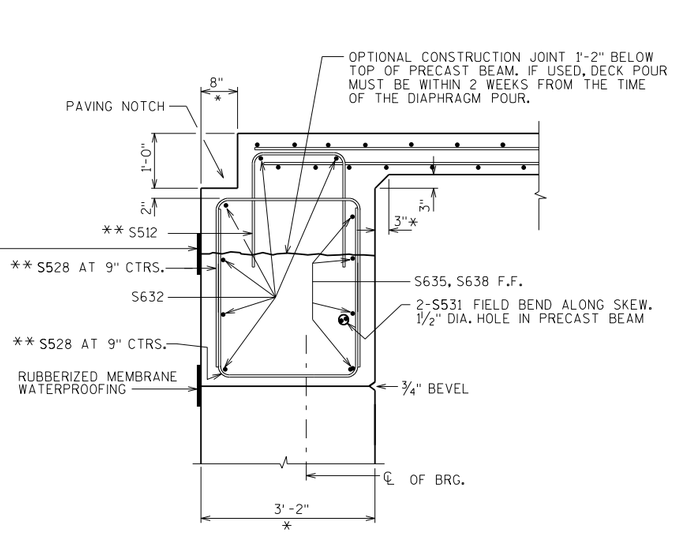
(LOOKING NORTH)



SECTION G-G

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



SECTION F-F

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS 2

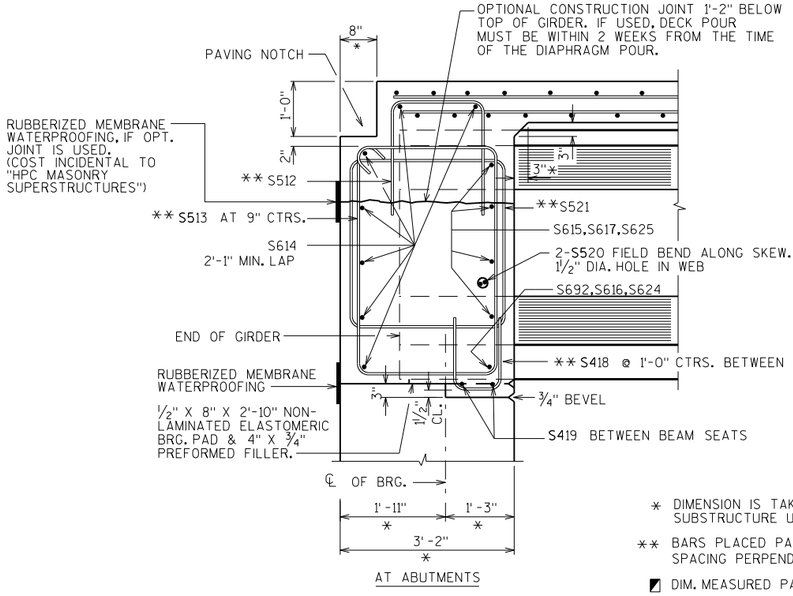
SHEET 28

2711

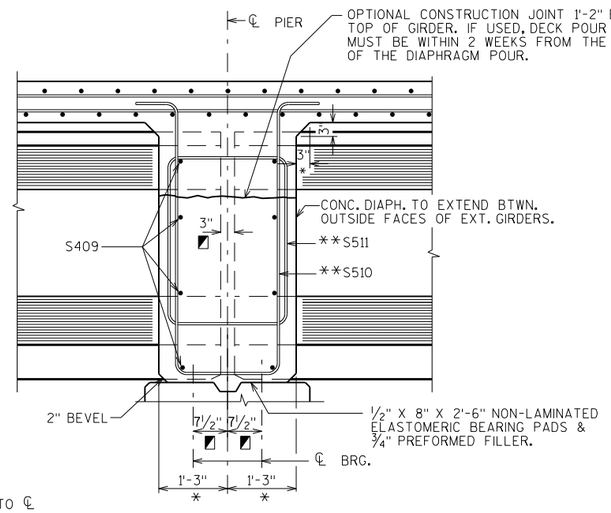
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STATE PROJECT NUMBER

1060-33-80



PART LONGIT. SECTION



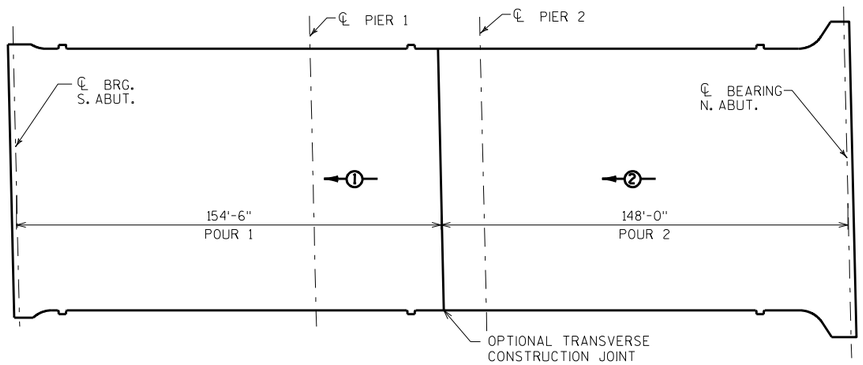
AT PIER DIAPHRAGM

BTWN. GIRDS. 1-5, & 6-16

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

◩ DIM. MEASURED PARALLEL TO GIRDERS

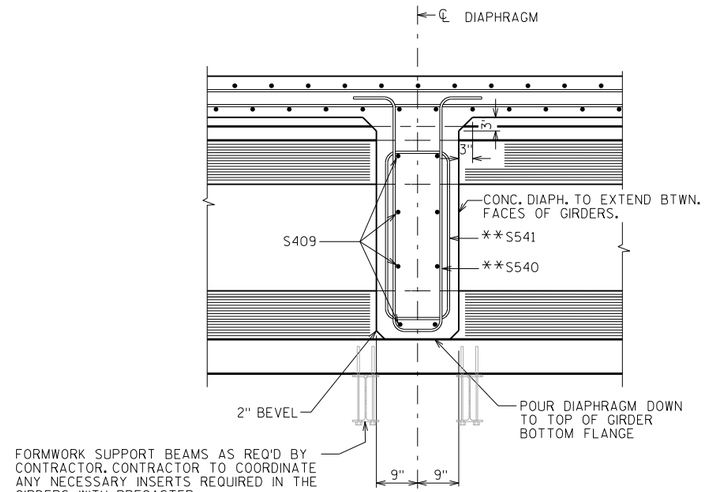


POURING SEQUENCE

DECK POURING NOTES

1. THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.
2. TWO OR MORE POURS MAY BE PLACED ON THE SAME DAY.
3. SEE SHEET 27 FOR CONSTRUCTION JOINT DETAIL.

②— INDICATES POUR NUMBER AND DIRECTION OF POUR



FORMWORK SUPPORT BEAMS AS REQ'D BY CONTRACTOR. CONTRACTOR TO COORDINATE ANY NECESSARY INSERTS REQUIRED IN THE GIRDERS WITH PRECASTER.
IF REQ'D, INSERTS SHALL BE LOCATED ON THE BOTTOM SIDE OF THE GIRDER AND BE PLACED ALONG THE ℄ OF THE GIRDER. INSERTS SHALL BE FILLED WITH SILICONE CAULK AFTER FORMWORK IS REMOVED.

IN SPAN DIAPHRAGM AT PRECAST BEAM

(BETWEEN GIRDERS 1 & 2 AND 15 & 16 ONLY)
(SEE FRAMING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS 3

SHEET 29

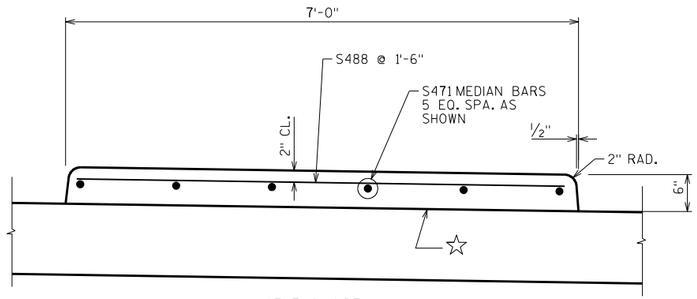
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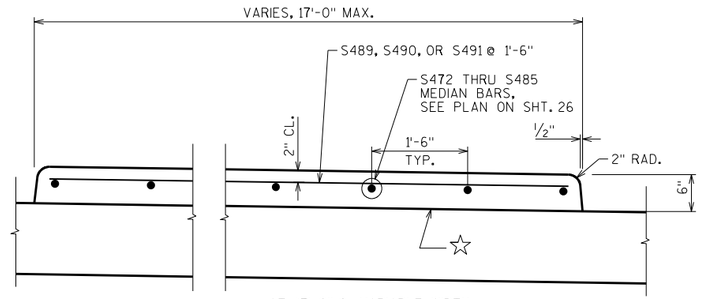
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SCALE =

STATE PROJECT NUMBER
1060-33-80

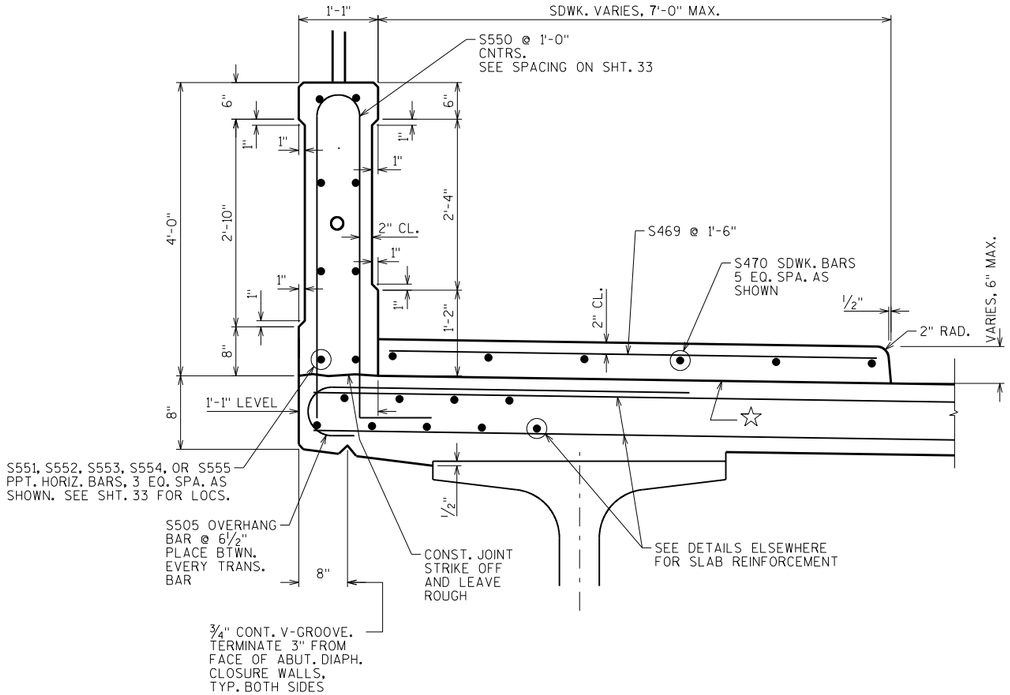


AT 7'-0" WIDTH

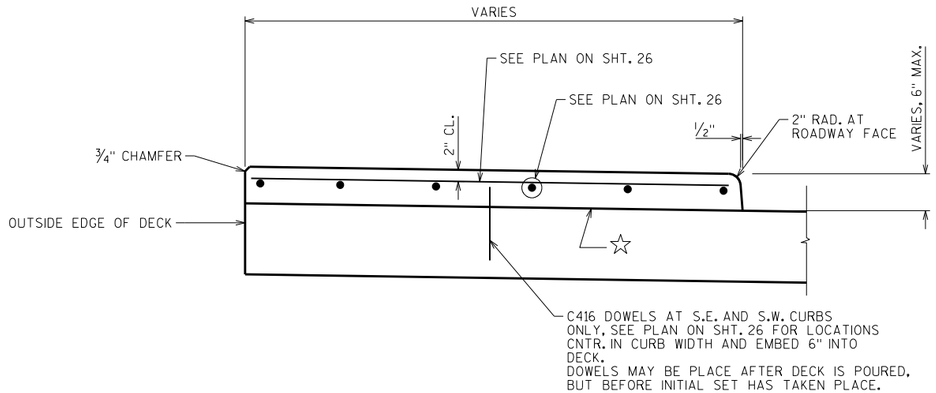


AT 17'-0" & VARIABLE WIDTH

TYPICAL SECTIONS THRU MEDIAN



TYPICAL PARAPET AND SIDEWALK DETAILS



TYPICAL SECTION THRU PEDESTRIAN CURB

(LOOKING NORTH AT WEST SIDE OF BRIDGE)

☆ ROUGH FLOAT SURFACE, OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT BELOW SIDEWALKS, MEDIAN, OR PED. CURBS.
CLEAN ALL LOOSE MATERIAL ON DECK AT MEDIAN, SIDEWALK, & CURB LOCATIONS PRIOR TO PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.8.2 OF THE STANDARD SPECIFICATION UNLESS THE MEDIAN, SIDEWALK, AND CURBS ARE POURED WITHIN 45 DAYS OF DECK POUR COMPLETION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS 4

SHEET 30

2713

8

8

SCALE = 4.0

BILL OF BARS

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S901	X	502	56'-1"			LONGITUDINAL TOP - CONTINUITY
S402	X	252	44'-8"			LONGITUDINAL TOP- SPAN 1
S403	X	378	39'-3"			LONGITUDINAL TOP- SPAN 3
S404						NOT USED
S505	X	991	5'-9"	X		TRANSVERSE - OVERHANG - HOOKED
S406	X	1016	39'-6"			LONGITUDINAL BOTTOM
S407	X	1125	48'-3"			TRANSVERSE-WEST
S408	X	1125	48'-3"			TRANSVERSE-EAST
S409	X	448	3'-1"			PIER & PRECAST BEAM DIAPHRAGM-HORIZ.
S510	X	60	13'-0"	X		PIER DIAPHRAGM - VERT.
S511	X	120	10'-3"	X		PIER DIAPHRAGM - VERT.
S512	X	129	5'-9"	X		ABUT. DIAPHRAGM - VERT.
S513	X	102	14'-6"	X		ABUT. DIAPHRAGM - VERT.
S614	X	42	34'-5"			ABUT. DIAPHRAGM - HORIZ. - BACK FACE
S615	X	240	3'-6"			ABUT. DIAPHRAGM - HORIZ. - FRONT FACE
S616	X	1	4'-10"			S. ABUT. DIAPH.-HORIZ. BTM.- F.F. @ E. END
S617	X	4	5'-8"			S. ABUT. DIAPH.-HORIZ. - F.F. @ E. END
S418	X	136	3'-9"	X		ABUT. DIAPHRAGM-VERT. U-BARS
S419	X	56	2'-0"			ABUT. DIAPHRAGM-HORIZ. BTM.
S520	X	64	6'-0"			ABUT. DIAPHRAGM- THRU GIRDER WEB
S521	X	128	11'-7"	X		ABUT. DIAPHRAGM-VERT.
S522	X	7	12'-1"	X		S. ABUT. DIAPH. - E. CLOSURE WALL- HORIZ.
S523	X	12	4'-8"			S. ABUT. DIAPH. - E. CLOSURE WALL- VERT.
S624	X	1	3'-9"			S. ABUT. DIAPH.-HORIZ. BTM.- F.F. @ W. END
S625	X	4	4'-7"			S. ABUT. DIAPH.-HORIZ. - F.F. @ W. END
S526	X	7	15'-3"	X		S. ABUT. DIAPH. - W. CLOSURE WALL- HORIZ.
S527	X	16	4'-10"			S. ABUT. DIAPH. - W. CLOSURE WALL- VERT.
S528	X	54	7'-7"	X		N. ABUT. DIAPH. - E. & W. ENDS- VERT.
S629	X	48	5'-4"			N. ABUT. DIAPH. - E. & W. ENDS- HORIZ.
S430	X	4	6'-2"			N. ABUT. DIAPH. - E. & W. ENDS- HORIZ.
S531	X	4	6'-6"			N. ABUT. DIAPH. - THRU PRECAST BEAM
S632	X	12	6'-8"			N. ABUT. DIAPH. - E. & W. ENDS- HORIZ. B.F.
S533	X	12	3'-4"			N. ABUT. DIAPH. - W. CLOSURE WALL- VERT.
S534	X	5	12'-3"	X		N. ABUT. DIAPH. - W. CLOSURE WALL- HORIZ.
S635	X	4	1'-10"			N. ABUT. DIAPH. - W. END- HORIZ. F.F.
S536	X	18	3'-2"			N. ABUT. DIAPH. - E. CLOSURE WALL- VERT.
S537	X	5	16'-7"	X		N. ABUT. DIAPH. - E. CLOSURE WALL- HORIZ.
S638	X	4	1'-6"			N. ABUT. DIAPH. - E. END- HORIZ. F.F.
S539						NOT USED
S540	X	6	10'-8"	X		IN SPAN DIAPH. @ PRECAST BEAM - VERT.
S541	X	8	8'-3"	X		IN SPAN DIAPH. @ PRECAST BEAM - VERT.
S542	X	80	8'-5"	X		TRANSVERSE- TOP- SOUTH FLARES
S543	X	40	5'-5"			TRANSVERSE- BTM.- SOUTH FLARES
S544	X	4	9'-1"		⚠	LONGIT.- TOP & BTM.- S.W. FLARE
S545	X	8	7'-7"		⚠	LONGIT.- TOP & BTM.- S.E. FLARE
S546	X	126	14'-0"	X		TRANSVERSE- TOP- NORTH FLARES
S547	X	63	12'-8"			TRANSVERSE- BTM. - NORTH FLARES
S548	X	26	8'-9"		⚠	LONGIT.- TOP & BTM.- N.W. FLARE
S549	X	26	10'-8"		⚠	LONGIT.- TOP & BTM.- N.E. FLARE
S550	X	576	9'-6"	X		PARAPET VERTICAL
S551	X	80	56'-2"			PARAPET HORIZONTAL
S552	X	8	8'-6"	X		WEST PARAPET HORIZONTAL - SOUTH END
S553	X	8	18'-6"	X		WEST PARAPET HORIZONTAL - NORTH END
S554	X	8	9'-9"	X		EAST PARAPET HORIZONTAL - SOUTH END
S555	X	8	18'-6"	X		EAST PARAPET HORIZONTAL - NORTH END
S469	X	385	6'-7"			SIDEWALK- TRANSVERSE
S470	X	96	37'-5"			SIDEWALK- LONGIT.
S471	X	24	35'-2"			MEDIAN- LONGIT.
S472	X	2	33'-1"	X		MEDIAN- W. EDGE ALONG DIAGONAL
S473	X	2	25'-11"			MEDIAN- LONGIT.
S474	X	2	37'-1"			MEDIAN- LONGIT.
S475	X	2	44'-3"			MEDIAN- LONGIT.
S476	X	3	34'-5"			MEDIAN- LONGIT.
S477	X	3	38'-2"			MEDIAN- LONGIT.
S478	X	3	41'-4"			MEDIAN- LONGIT.
S479	X	3	44'-4"			MEDIAN- LONGIT.
S480	X	3	46'-1"			MEDIAN- LONGIT.
S481	X	3	45'-4"			MEDIAN- LONGIT.
S482	X	3	43'-11"			MEDIAN- LONGIT.
S483	X	3	42'-2"			MEDIAN- LONGIT.
S484	X	3	37'-11"			MEDIAN- LONGIT.
S485	X	2	26'-0"			MEDIAN- EDGE- FIELD BEND AS REQ'D
S486	X	1	12'-6"	X		N. MEDIAN NOSE
S487	X	1	13'-7"	X		S. MEDIAN NOSE
S488	X	87	6'-6"			MEDIAN TRANSVERSE
S489	X	40	11'-7"		⚠	MEDIAN TRANSVERSE
S490	X	33	16"-6"			MEDIAN TRANSVERSE
S491	X	16	12'-1"		⚠	MEDIAN TRANSVERSE
S692	X	30	3'-0"			ABUT. DIAPH. HORIZ. F.F. BOTTOM

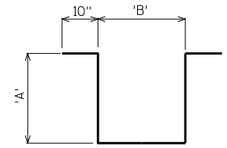
PEDESTRIAN CURB BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
C401	X	3	7'-5"		⚠	S.W. CURB
C402	X	4	2'-1"			S.W. CURB
C403	X	2	4'-7"			S.W. CURB
C404	X	3	6'-5"		⚠	S.E. CURB
C405	X	4	3'-3"			S.E. CURB
C406	X	2	6'-0"			S.E. CURB
C407	X	7	7'-2"		⚠	N.W. CURB
C408	X	4	11'-9"		⚠	N.W. CURB
C409	X	1	12'-2"	X		N.W. CURB
C410	X	1	6'-3"			N.W. CURB
C411	X	1	10'-1"			N.W. CURB
C412	X	8	7'-0"		⚠	N.E. CURB
C413	X	4	12'-6"			N.E. CURB
C414	X	1	9'-0"			N.E. CURB
C415	X	1	11'-3"			N.E. CURB
C416	X	8	10"			SOUTH CURB SLAB DOWELS

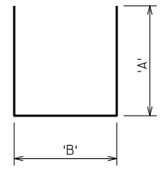
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
S544	1 SERIES OF 4	7'-7" TO 10'-6"
S545	1 SERIES OF 8	5'-4" TO 9'-9"
S548	1 SERIES OF 26	3'-11" TO 13'-7"
S549	1 SERIES OF 26	6'-1" TO 15'-3"
S489	1 SERIES OF 40	6'-8" TO 16'-5"
S491	1 SERIES OF 16	7'-7" TO 16'-6"
C401	1 SERIES OF 3	5'-9" TO 9'-0"
C404	1 SERIES OF 3	4'-6" TO 8'-4"
C407	1 SERIES OF 7	5'-4" TO 9'-0"
C408	1 SERIES OF 4	11'-0" TO 12'-6"
C412	1 SERIES OF 8	4'-6" TO 9'-6"

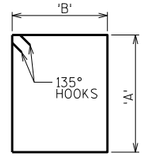
BUNDLE AND TAG EACH SERIES SEPARATELY.



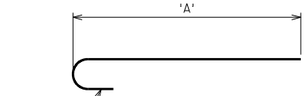
MARK	'A'	'B'
S510	4'-10"	2'-2"
S540	4'-2"	1'-2"



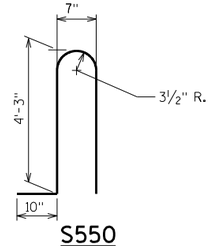
MARK	'A'	'B'
S512	1'-11"	2'-2"
S418	1'-6"	11"
S522	5'-10"	8"
S526	7'-5"	8"
S528	2'-6"	2'-10"
S534	5'-11"	8"
S537	8'-1"	8"



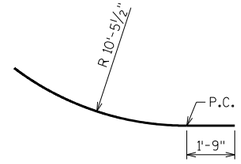
MARK	'A'	'B'
S511	2'-8"	2'-2"
S513	4'-1"	2'-10"
S521	2'-8"	2'-10"
S541	2'-8"	1'-2"



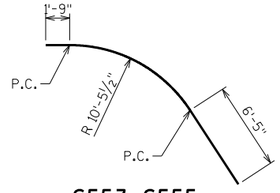
MARK	'A'
S505	5'-2"
S542	7'-10"
S546	13'-5"



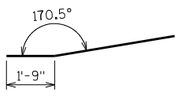
S550



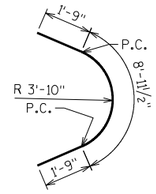
S552, S554



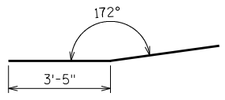
S553, S555



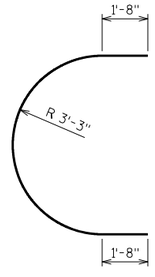
S472



S486



C409



S487

NOTES

SEE SHT. 36 FOR ADDITIONAL SUPERSTRUCTURE BARS AT LIGHT SUPPORTS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS 5

SHEET 31

2714

STATE PROJECT NUMBER

1060-33-80

8

8

SCALE =

STATE PROJECT NUMBER
1060-33-80

	S. ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1
W. EOD	765.61	765.84	766.15	766.49	766.87	767.27	767.65	768.00	768.32	768.60	768.84
GIRD. 1	765.54	765.80	766.11	766.45	766.83	767.23	767.61	767.96	768.28	768.56	768.80
W. GUTTER	765.54	765.74	766.05	766.39	766.77	767.17	767.55	767.90	768.22	768.50	768.74
GIRD. 2	765.42	765.71	766.02	766.36	766.74	767.14	767.52	767.87	768.19	768.47	768.71
GIRD. 3	765.31	765.59	765.91	766.25	766.63	767.03	767.41	767.76	768.07	768.35	768.60
GIRD. 4	765.20	765.48	765.79	766.14	766.51	766.91	767.30	767.65	767.96	768.24	768.48
GIRD. 5	765.08	765.37	765.68	766.03	766.40	766.80	767.19	767.54	767.85	768.13	768.37
GIRD. 6	764.97	765.25	765.57	765.91	766.29	766.69	767.07	767.42	767.74	768.01	768.25
GIRD. 7	764.86	765.14	765.46	765.80	766.18	766.58	766.96	767.31	767.62	767.90	768.14
GIRD. 8	764.74	765.03	765.34	765.69	766.07	766.47	766.85	767.20	767.51	767.79	768.03
GIRD. 9	764.63	764.91	765.23	765.58	765.95	766.36	766.74	767.09	767.40	767.67	767.91
GIRD. 10	764.52	764.80	765.12	765.46	765.84	766.24	766.63	766.97	767.28	767.56	767.80
GIRD. 11	764.40	764.69	765.01	765.35	765.73	766.13	766.51	766.86	767.17	767.45	767.68
GIRD. 12	764.29	764.58	764.89	765.24	765.62	766.02	766.40	766.75	767.06	767.33	767.57
GIRD. 13	764.18	764.46	764.78	765.13	765.51	765.91	766.29	766.63	766.94	767.22	767.46
GIRD. 14	764.06	764.35	764.67	765.02	765.39	765.80	766.18	766.52	766.83	767.10	767.34
GIRD. 15	763.95	764.24	764.56	764.90	765.28	765.69	766.07	766.41	766.72	766.99	767.23
E. GUTTER	763.83	764.21	764.52	764.87	765.25	765.65	766.03	766.38	766.69	766.96	767.20
GIRD. 16	763.84	764.27	764.59	764.94	765.32	765.72	766.10	766.45	766.75	767.03	767.26
E. EOD	764.93	764.32	764.64	764.98	765.36	765.77	766.15	766.49	766.80	767.07	767.31

SPAN 1

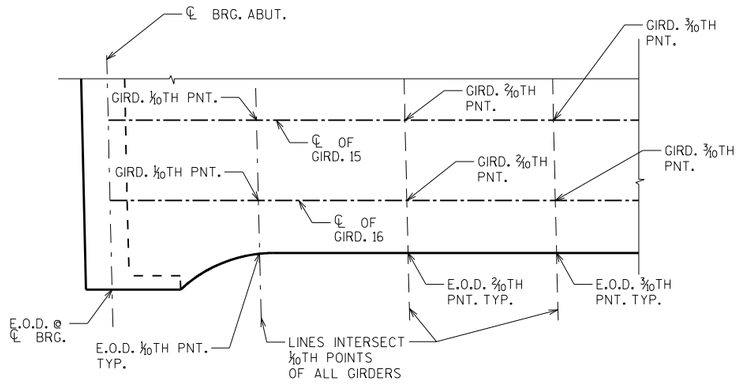
	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
W. EOD	768.84	768.97	769.08	769.18	769.27	769.34	769.41	769.46	769.51	769.54	769.55
GIRD. 1	768.80	768.93	769.04	769.14	769.23	769.30	769.37	769.42	769.46	769.49	769.51
W. GUTTER	768.74	768.86	768.98	769.08	769.16	769.24	769.31	769.36	769.40	769.43	769.45
GIRD. 2	768.71	768.83	768.95	769.05	769.13	769.21	769.28	769.33	769.37	769.40	769.42
GIRD. 3	768.60	768.72	768.83	768.93	769.02	769.10	769.16	769.21	769.25	769.28	769.30
GIRD. 4	768.48	768.60	768.72	768.82	768.90	768.98	769.04	769.10	769.14	769.17	769.19
GIRD. 5	768.37	768.49	768.60	768.70	768.79	768.86	768.93	768.98	769.02	769.05	769.07
GIRD. 6	768.25	768.38	768.49	768.59	768.67	768.75	768.81	768.87	768.91	768.94	768.95
GIRD. 7	768.14	768.26	768.37	768.47	768.56	768.63	768.70	768.75	768.79	768.82	768.84
GIRD. 8	768.03	768.15	768.26	768.36	768.44	768.52	768.58	768.63	768.67	768.70	768.72
GIRD. 9	767.91	768.03	768.14	768.24	768.33	768.40	768.47	768.52	768.56	768.59	768.60
GIRD. 10	767.80	767.92	768.03	768.13	768.21	768.29	768.35	768.40	768.44	768.47	768.49
GIRD. 11	767.68	767.81	767.92	768.01	768.10	768.17	768.24	768.29	768.33	768.35	768.37
GIRD. 12	767.57	767.69	767.80	767.90	767.98	768.06	768.12	768.17	768.21	768.24	768.25
GIRD. 13	767.46	767.58	767.69	767.78	767.87	767.94	768.01	768.06	768.09	768.12	768.14
GIRD. 14	767.34	767.46	767.57	767.67	767.75	767.83	767.89	767.94	767.98	768.01	768.02
GIRD. 15	767.23	767.35	767.46	767.55	767.64	767.71	767.77	767.82	767.86	767.89	767.90
E. GUTTER	767.20	767.32	767.43	767.52	767.61	767.68	767.74	767.79	767.83	767.86	767.87
GIRD. 16	767.26	767.38	767.49	767.59	767.67	767.75	767.81	767.86	767.90	767.92	767.94
E. EOD	767.31	767.43	767.53	767.63	767.72	767.79	767.85	767.90	767.94	767.96	767.98

SPAN 2

	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT
W. EOD	769.55	769.55	769.50	769.39	769.23	769.02	768.75	768.44	768.14	767.88	767.84
GIRD. 1	769.51	769.51	769.46	769.35	769.19	768.98	768.71	768.40	768.10	767.83	767.61
W. GUTTER	769.45	769.45	769.39	769.29	769.13	768.91	768.64	768.33	768.03	767.77	767.75
GIRD. 2	769.42	769.42	769.36	769.26	769.09	768.88	768.61	768.30	768.00	767.72	767.49
GIRD. 3	769.30	769.30	769.25	769.14	768.98	768.76	768.49	768.18	767.88	767.60	767.37
GIRD. 4	769.19	769.18	769.13	769.02	768.86	768.64	768.37	768.06	767.76	767.48	767.25
GIRD. 5	769.07	769.07	769.01	768.90	768.74	768.52	768.25	767.94	767.64	767.37	767.13
GIRD. 6	768.95	768.95	768.89	768.78	768.62	768.40	768.13	767.82	767.52	767.25	767.01
GIRD. 7	768.84	768.83	768.78	768.67	768.50	768.28	768.01	767.70	767.40	767.13	766.89
GIRD. 8	768.72	768.72	768.66	768.55	768.38	768.16	767.89	767.58	767.28	767.01	766.77
GIRD. 9	768.60	768.60	768.54	768.43	768.26	768.05	767.77	767.46	767.16	766.89	766.65
GIRD. 10	768.49	768.48	768.42	768.31	768.15	767.93	767.65	767.34	767.04	766.77	766.54
GIRD. 11	768.37	768.36	768.31	768.19	768.03	767.81	767.53	767.22	766.92	766.65	766.42
GIRD. 12	768.25	768.25	768.19	768.08	767.91	767.69	767.41	767.10	766.80	766.53	766.30
GIRD. 13	768.14	768.13	768.07	767.96	767.79	767.57	767.30	766.98	766.68	766.41	766.18
GIRD. 14	768.02	768.01	767.95	767.84	767.67	767.45	767.18	766.87	766.56	766.29	766.06
GIRD. 15	767.90	767.90	767.84	767.72	767.55	767.33	767.06	766.75	766.44	766.17	765.94
E. GUTTER	767.87	767.86	767.80	767.69	767.52	767.30	767.02	766.71	766.41	766.13	NA
GIRD. 16	767.94	767.93	767.87	767.75	767.58	767.36	767.08	766.77	766.47	766.18	765.82
E. EOD	767.98	767.97	767.91	767.79	767.62	767.40	767.12	766.81	766.51	766.24	765.55

SPAN 3

TOP OF DECK ELEVATIONS



PART PLAN SHOWING LOCATION OF E.O.D. 1/10TH POINTS

(LOCATION OF GUTTER LINE 1/10TH POINTS SIMILAR)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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DECK ELEVATION TABLE

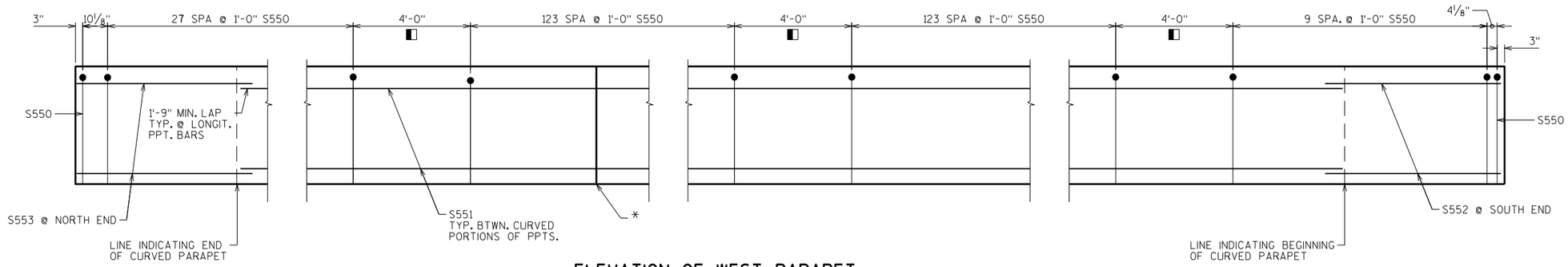
SHEET 32

2715

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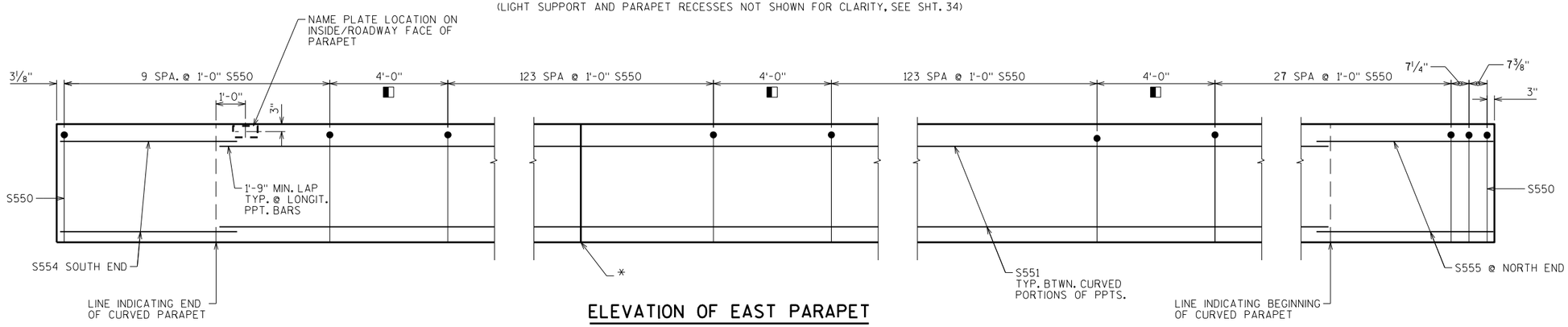
STATE PROJECT NUMBER

1060-33-80



ELEVATION OF WEST PARAPET

(LOOKING EAST)
(DIMENSIONS GIVEN ALONG OUTSIDE FACE OF PARAPET)
(LIGHT SUPPORT AND PARAPET RECESSES NOT SHOWN FOR CLARITY, SEE SHT. 34)



ELEVATION OF EAST PARAPET

(LOOKING WEST)
(DIMENSIONS GIVEN ALONG OUTSIDE FACE OF PARAPET)
(LIGHT SUPPORT AND PARAPET RECESSES NOT SHOWN FOR CLARITY, SEE SHT. 34)

◧ BREAK IN TYPICAL REINFORCEMENT. SEE SHTS. 35 & 36 FOR DIMENSIONS AND REINFORCEMENT AT LIGHT SUPPORTS

* OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". DEFINE CONST. JOINT WITH A 3/4" 'V' GROOVE.
IF USED, PARAPET CONSTRUCTION JOINTS SHALL BE LOCATED DIRECTLY OVER THE ℄ OF ONE OR BOTH OF THE PIERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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VERTICAL FACE PARAPET 1

SHEET 33

2716

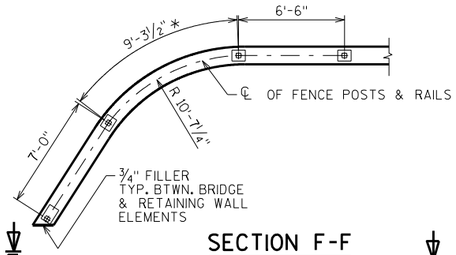
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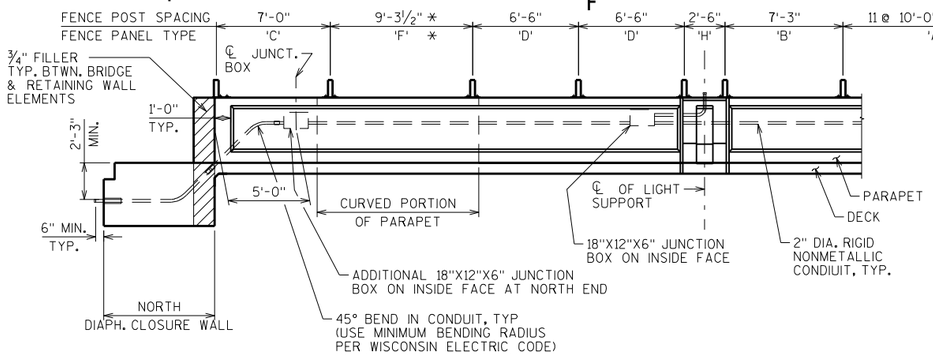
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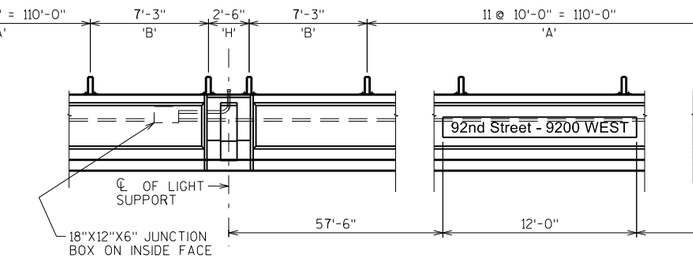
STATE PROJECT NUMBER

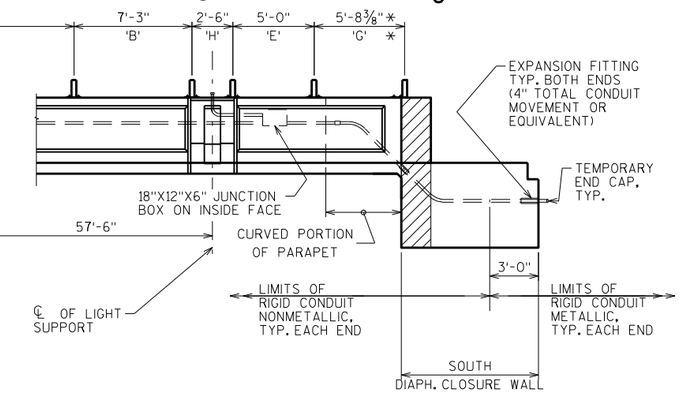
1060-33-80



SECTION F-F



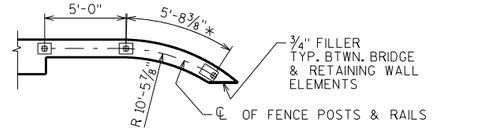




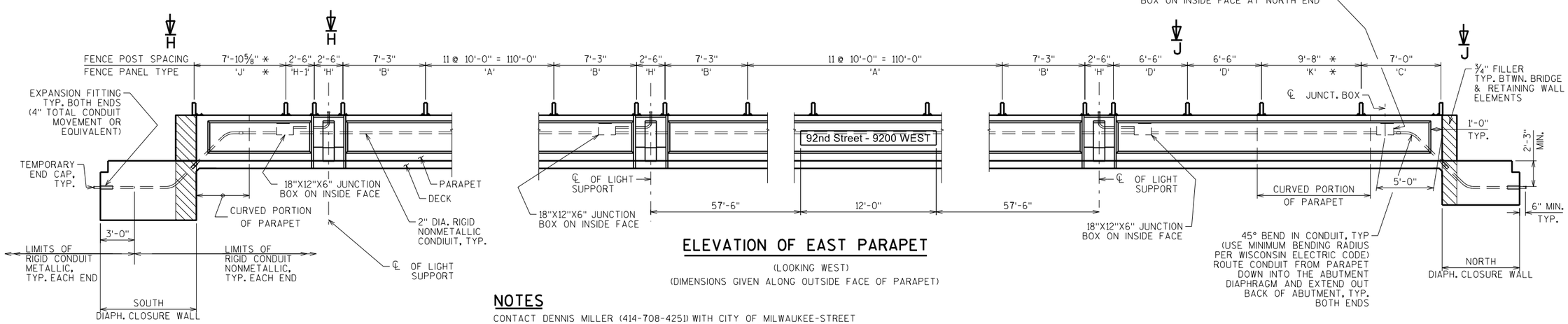
ELEVATION OF WEST PARAPET

(LOOKING EAST)

(DIMENSIONS GIVEN ALONG OUTSIDE FACE OF PARAPET)



SECTION G-G



ELEVATION OF EAST PARAPET

(LOOKING WEST)

(DIMENSIONS GIVEN ALONG OUTSIDE FACE OF PARAPET)

NOTES

CONTACT DENNIS MILLER (414-708-4251) WITH CITY OF MILWAUKEE-STREET LIGHTING A MINIMUM OF 10 DAYS PRIOR TO THE INSTALLATION OF THE ABUTMENT DIAPHRAGMS, BRIDGE DECK, AND PARAPETS TO COORDINATE & ALLOW REVIEW OF THE INSTALLATION OF THE CONDUITS ON THE STRUCTURE. COORDINATION SHALL BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

BID ITEMS SHALL BE:

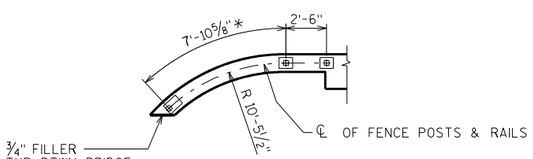
"JUNCTION BOXES 18X12X6-INCH", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

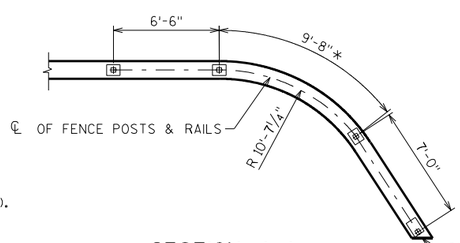
APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.



SECTION H-H



SECTION J-J

* CURVED PANEL, DISTANCE SHOWN MEASURED ALONG CURVE AT ℄ OF FENCE POSTS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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VERTICAL FACE PARAPET 2

SHEET 34

2717

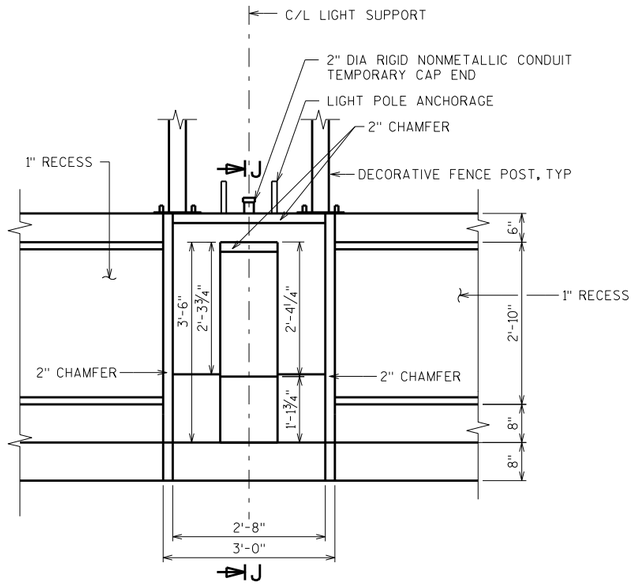
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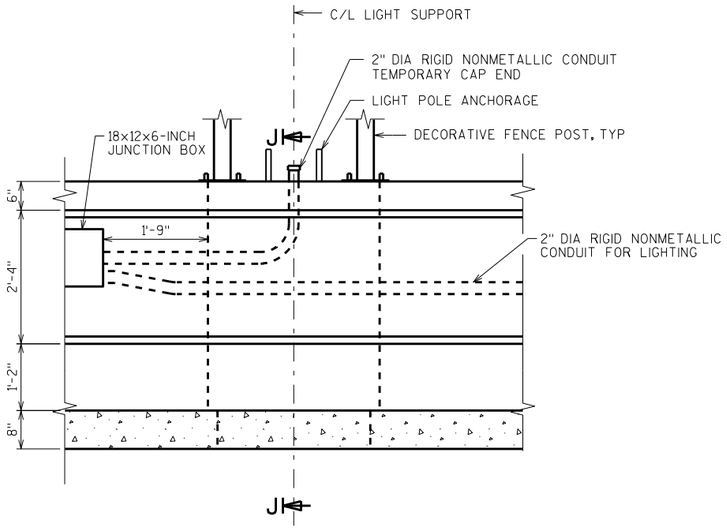
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STATE PROJECT NUMBER

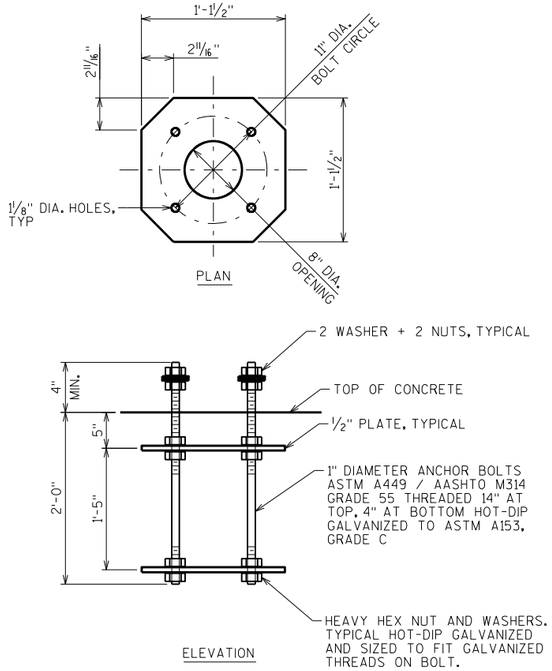
1060-33-80



OUTSIDE ELEVATION AT LIGHT SUPPORT

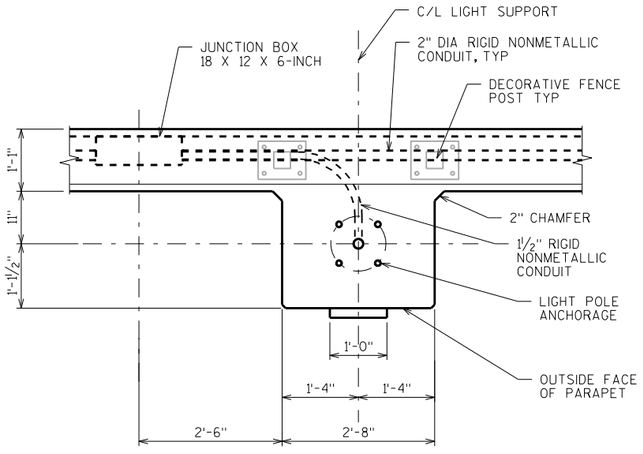


INSIDE ELEVATION AT LIGHT SUPPORT

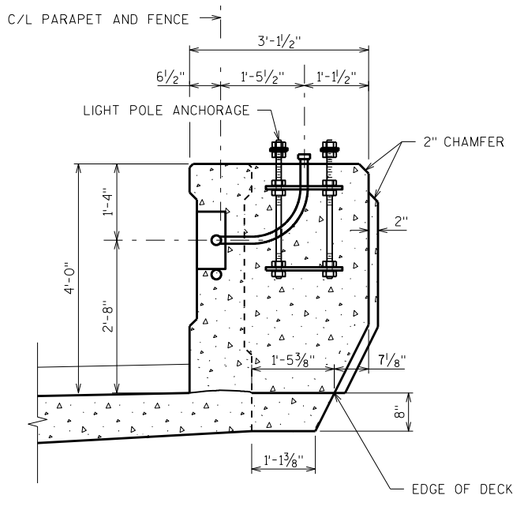


ANCHOR ASSEMBLY LIGHT POLE STRUCTURES

(6 REQ'D)



PLAN AT LIGHT SUPPORT



SECTION J-J

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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LIGHT SUPPORT DETAILS

SHEET 35

2718

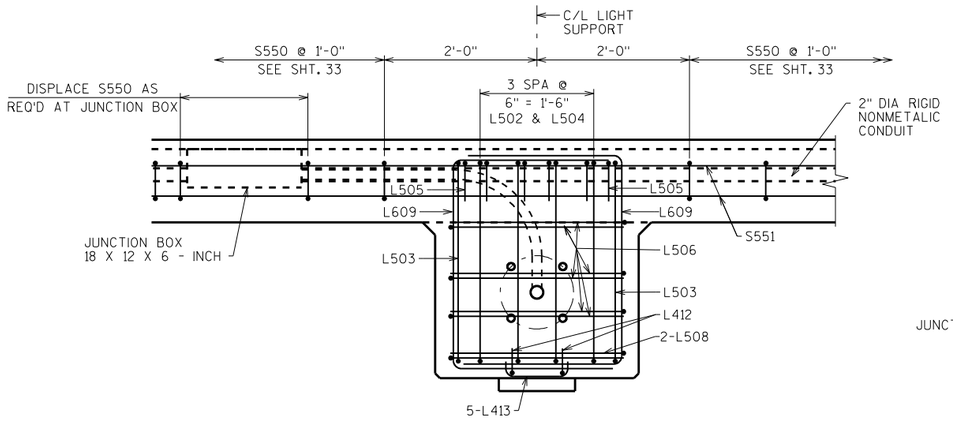
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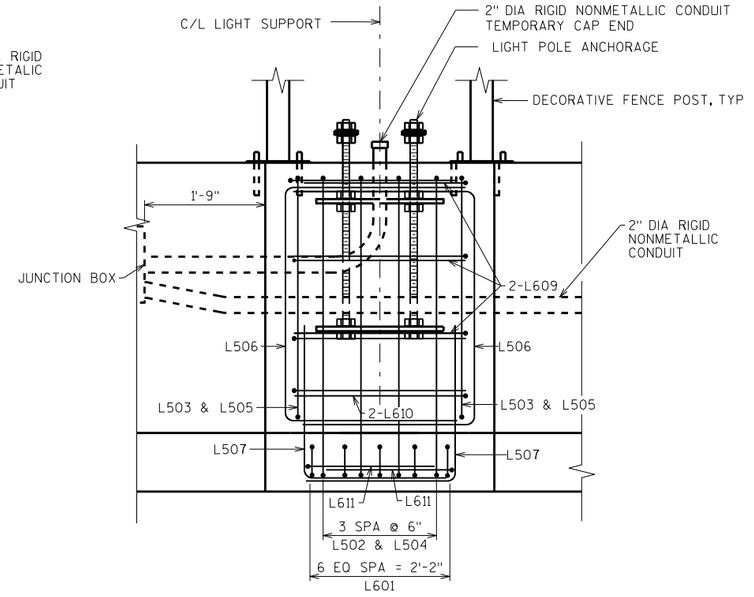
STATE PROJECT NUMBER

1060-33-80



REINFORCEMENT IN LIGHT SUPPORT

SECTIONAL PLAN



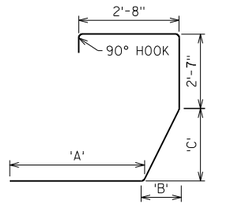
REINFORCEMENT IN LIGHT SUPPORT

INSIDE ELEVATION

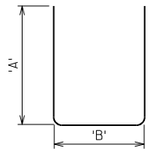
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

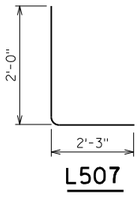
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
L601	X	42	8'-4"	X		DECK OVERHANG TOP HOOK
L502	X	24	11'-4"	X		VERTICAL - INSIDE
L503	X	12	8'-11"	X		VERTICAL - OUTSIDE
L504	X	24	5'-9"	X		VERTICAL - OUTSIDE
L505	X	12	5'-0"	X		VERTICAL - FRONT
L506	X	36	7'-11"	X		VERTICAL - BODY
L507	X	24	4'-2"	X		VERTICAL - LOWER BODY
L508	X	12	7'-0"	X		VERTICAL - OUTSIDE
L609	X	36	6'-10"	X		HORIZONTAL - TOP
L610	X	12	6'-6"	X		HORIZONTAL - BODY
L611	X	12	4'-9"	X		HORIZONTAL - BOTTOM
L412	X	12	3'-6"	X		OUTSIDE FACE
L413	X	30	1'-1"	X		OUTSIDE FACE



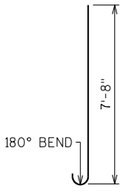
BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
L502	3'-6"	10"	1'-9"
L503	2'-0"	0'-6"	1'-0"



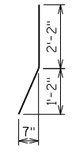
BAR MARK	DIM 'A'	DIM 'B'
L504	0'-10"	4'-4"
L505	0'-10"	3'-7"
L506	2'-3"	3'-8"
L508	2'-3"	2'-9"
L609	2'-3"	2'-7"
L610	2'-3"	2'-3"
L413	0'-4"	0'-7"



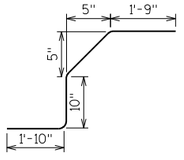
L507



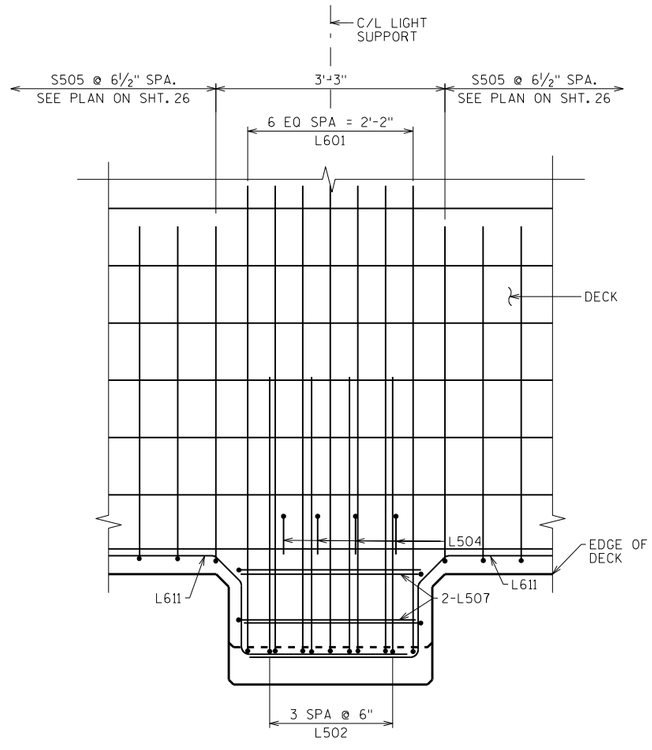
L601



L412

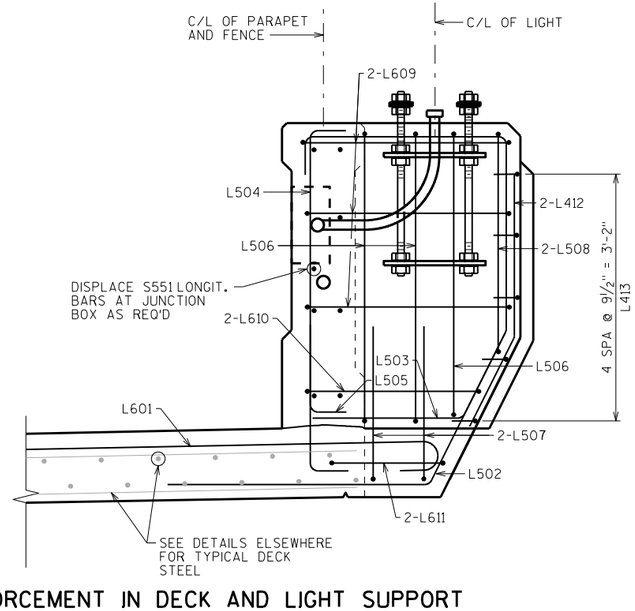


L611



REINFORCEMENT IN DECK AT LIGHT SUPPORT

(ADDITIONAL OVERHANG REINFORCEMENT IN DECK SHOWN ONLY FOR CLARITY)



REINFORCEMENT IN DECK AND LIGHT SUPPORT

CROSS SECTION AT LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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LIGHT SUPPORT REINFORCEMENT

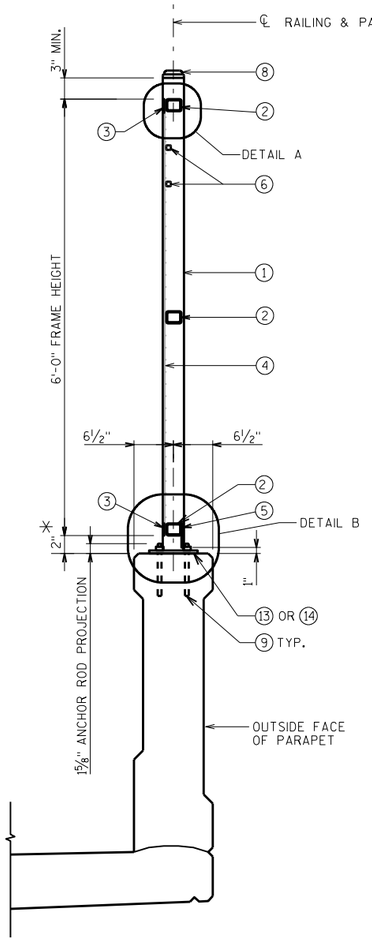
SHEET 36

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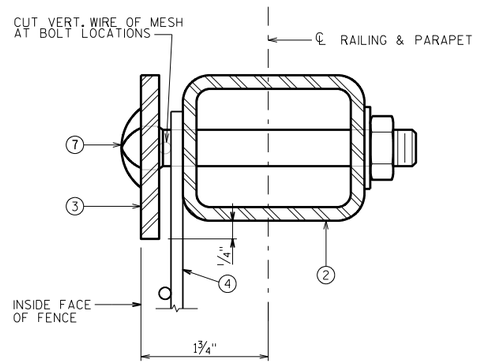
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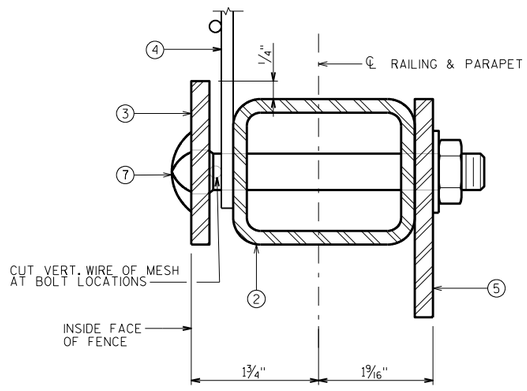
8



SECTION THRU PARAPET



DETAIL A



DETAIL B

LEGEND

① HSS 3½ X 3½ X 3/16 POST WITH ⅛" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.

② HSS 2½ X 2½ X 3/16. WELD TO NO. 6.

③ PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.

④ STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.

⑤ PL ¼" X WIDTH VARIES. PROVIDE SHORT SLOTTED VERT. HOLES FOR NO. 7.

⑥ ¾" x ¾" BAR. WELD TO NO. 2 & 6.

⑦ ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 & NO. 2 WHERE CONNECTED TO DECORATIVE INSET PLATE FOR SQUARE PORTION OF THE BOLT HEAD.

⑧ 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.

⑨ ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT.

⑩ PL 5/16" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 11 TO COVER 2" DIA. ADJUSTMENT HOLES.

⑪ PL ⅜" X 2" X 4½".

⑫ PL WASHER ¼" X 3½" X 3½".

⑬ PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.

⑭ PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.

⑮ ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

✳ THE DIMENSION BETWEEN THE BOTTOM OF THE WELDED FRAME AND THE TOP OF THE PARAPET VARIES DUE TO THE VERTICAL PROFILE OF THE STRUCTURE. SET THIS DIMENSION TO 2" ADJACENT TO THE POST WHERE NO. 5 HAS THE SMALLEST VERTICAL DIMENSION.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE BRIDGE" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE SHEET 38 & 39.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.4.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COVER THE 2" x 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

STATE PROJECT NUMBER

1060-33-80

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

FENCE 1

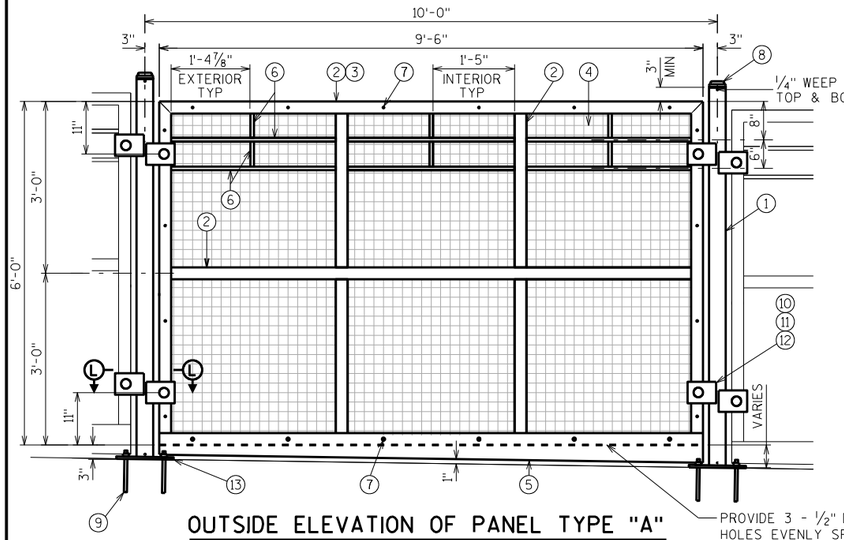
SHEET 37

2720

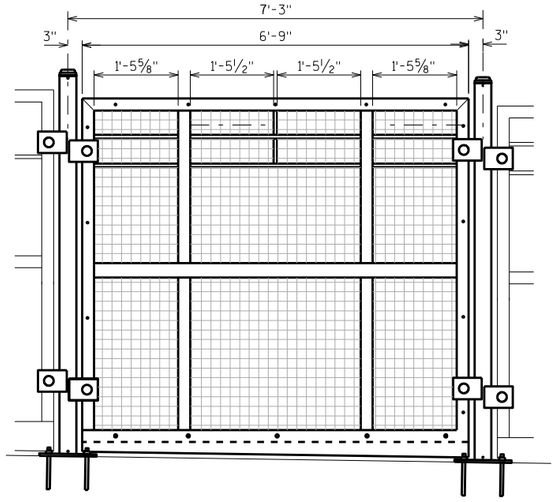
SCALE =

STATE PROJECT NUMBER

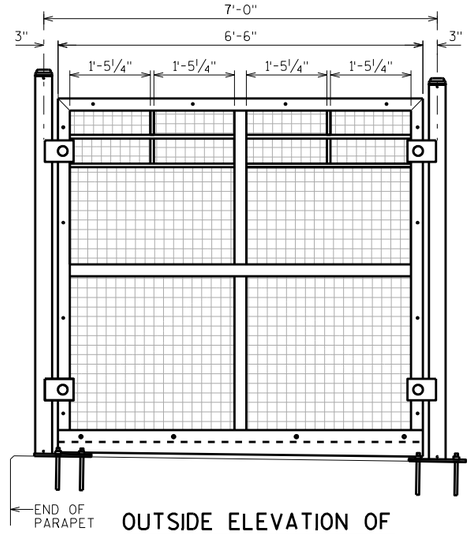
1060-33-80



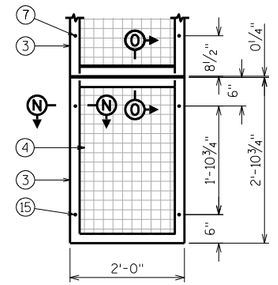
OUTSIDE ELEVATION OF PANEL TYPE "A"



OUTSIDE ELEVATION OF PANEL TYPE "B"

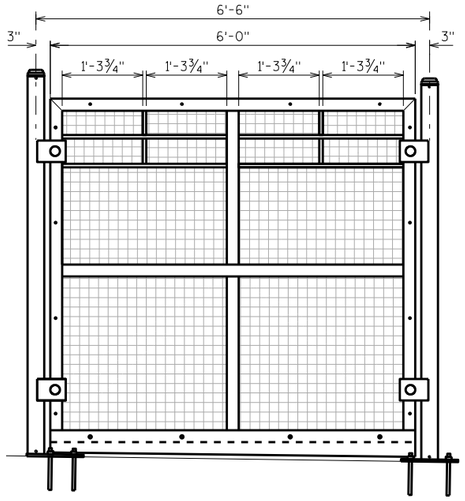


OUTSIDE ELEVATION OF PANEL TYPE "C"

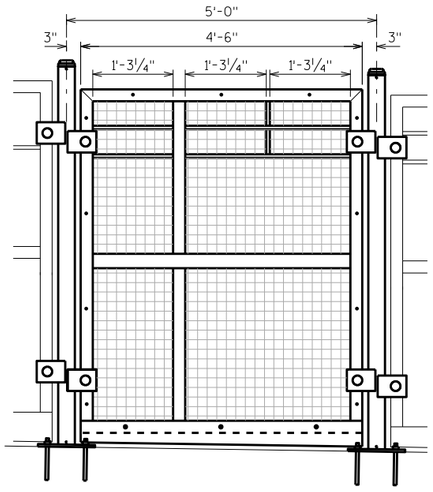


MAINTENANCE DOOR DETAIL

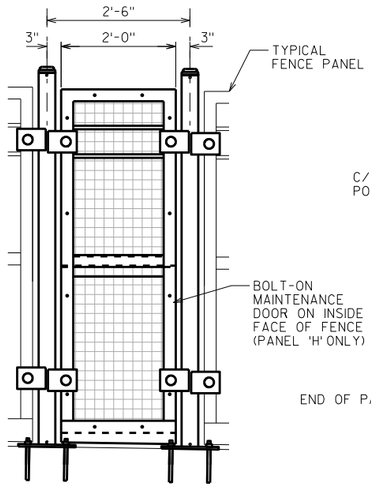
INSIDE ELEVATION
(AT PANELS 'H' ONLY)



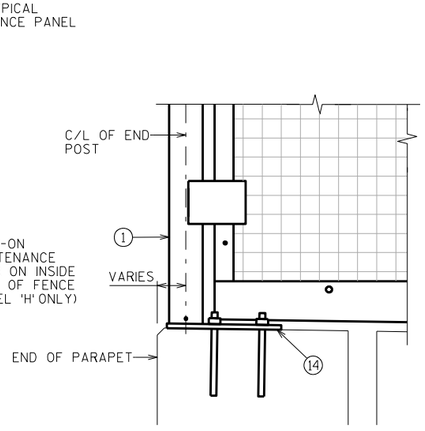
OUTSIDE ELEVATION OF PANEL TYPE "D"



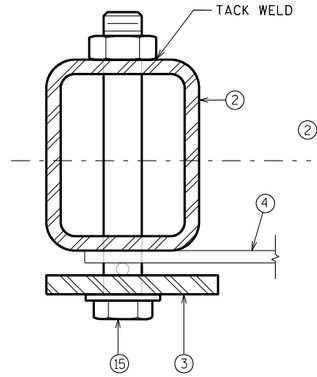
OUTSIDE ELEVATION OF PANEL TYPE "E"



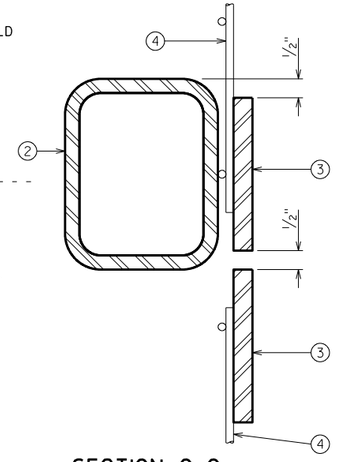
OUTSIDE ELEVATION OF PANEL TYPE "H" & "H-1"



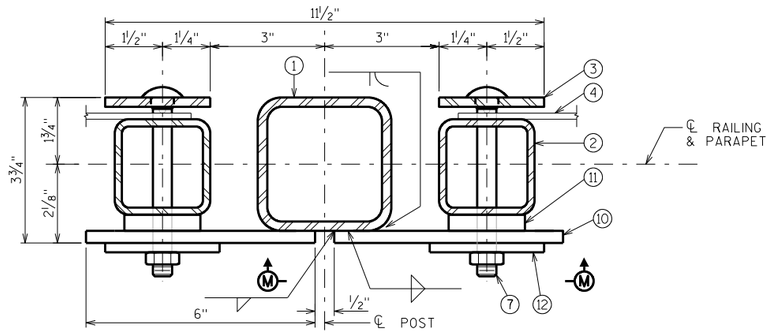
END POST DETAIL



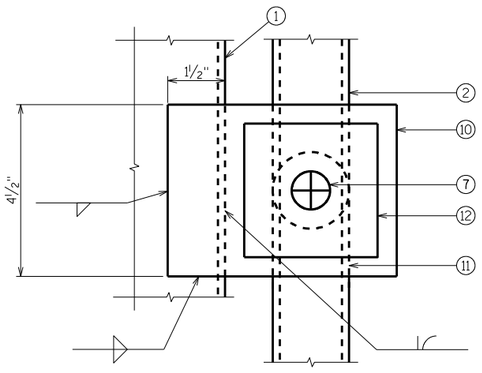
SECTION N-N



SECTION O-O



SECTION L-L



ELEVATION M-M

NOTES

FOR NOTES AND LEGEND, SEE SHEET 37.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON SHEET 40.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

FENCE 2

SHEET 38

2721

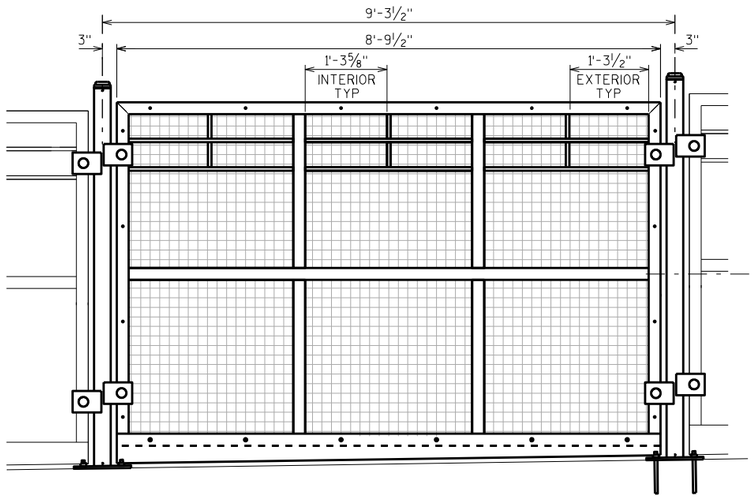
SCALE =

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8

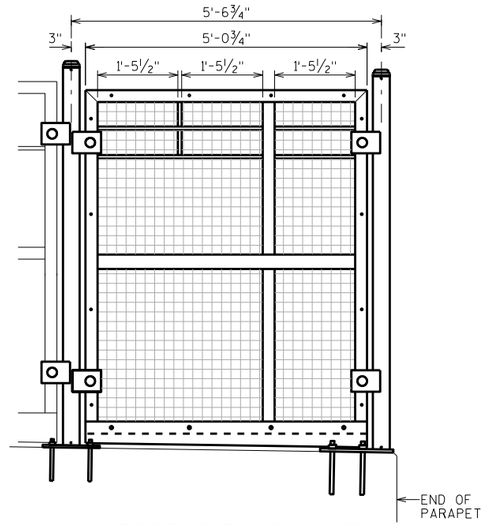
STATE PROJECT NUMBER

1060-33-80



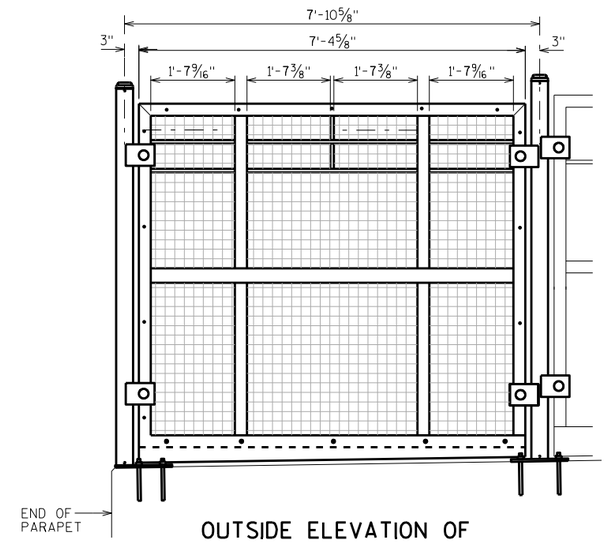
OUTSIDE ELEVATION OF
CURVED PANEL TYPE "F"

(ALL DIMENSIONS MESURED ALONG CURVE @ ℄ OF RAILS)



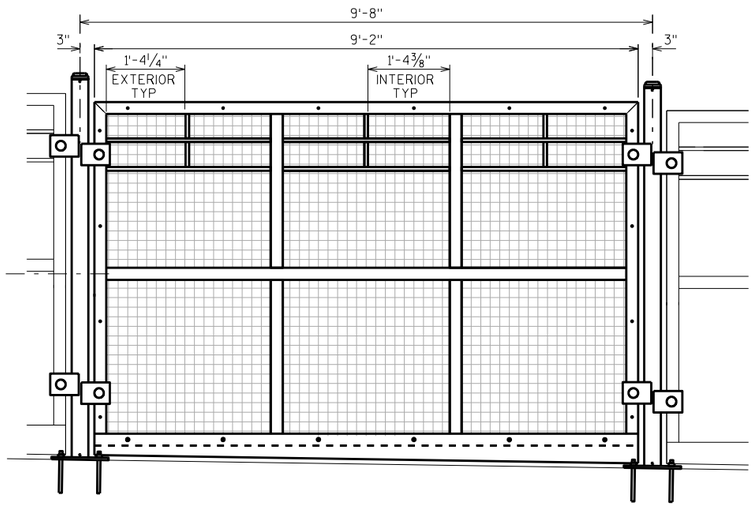
OUTSIDE ELEVATION OF
CURVED PANEL TYPE "G"

(ALL DIMENSIONS MESURED ALONG CURVE @ ℄ OF RAILS)



OUTSIDE ELEVATION OF
CURVED PANEL TYPE "J"

(ALL DIMENSIONS MESURED ALONG CURVE @ ℄ OF RAILS)



OUTSIDE ELEVATION OF
CURVED PANEL TYPE "K"

(ALL DIMENSIONS MESURED ALONG CURVE @ ℄ OF RAILS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

DRAWN BY CAD | PLANS CK'D. DFD

FENCE 3

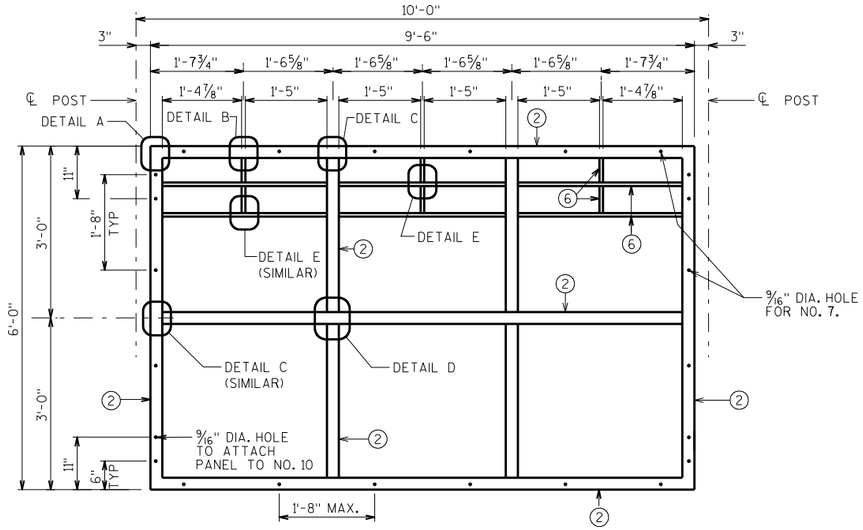
SHEET 39

2722

SCALE =

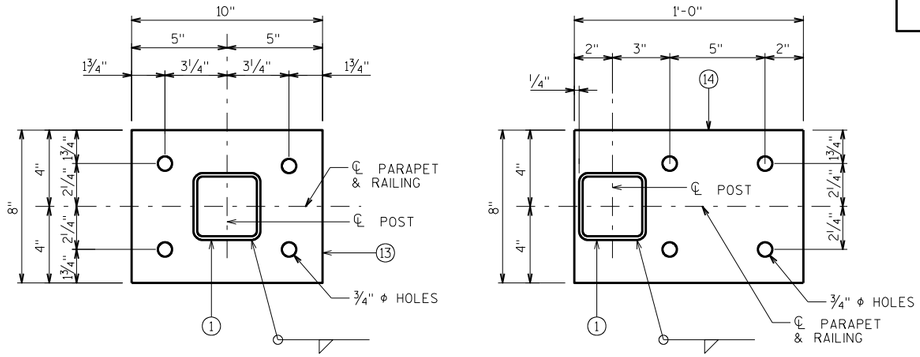
STATE PROJECT NUMBER

1060-33-80



DECORATIVE FENCE BRIDGE PANEL

TYPICAL 10' PANEL SHOWN

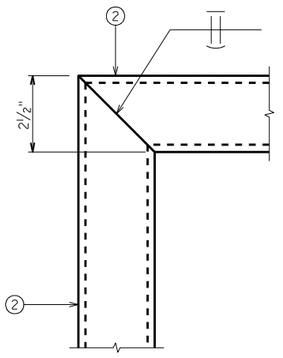


BASE PLATE

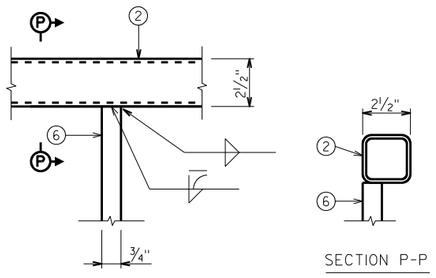
END BASE PLATE

(INSTALL AT END SECTIONS)

BASE PLATE DETAILS

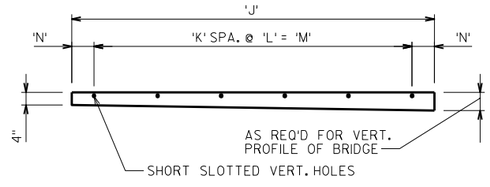


DETAIL A



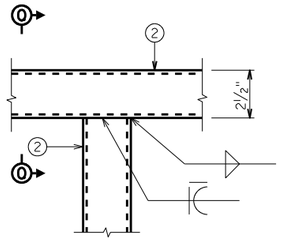
DETAIL B

SECTION P-P

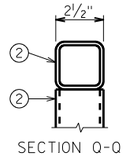


¼" PLATE (NO. 5)

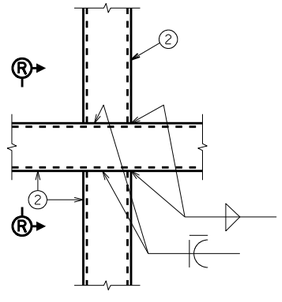
PANEL TYPE	DIM 'J'	NO. 'K'	SPA 'L'	DIM 'M'	DIM 'N'
A	9'-6"	5	1'-8"	8'-4"	7"
B	6'-9"	4	1'-4¾"	5'-7"	7"
C	6'-6"	3	1'-8"	5'-4"	9"
D	6'-0"	3	1'-8"	5'-0"	6"
E	4'-6"	2	1'-8"	3'-4"	7"
* F	8'-9½"	5	1'-6¼"	7'-7¼"	7⅛"
* G	5'-0¾"	3	1'-3½"	3'-10½"	7⅛"
H	2'-0"	1	10"	10"	7"
* J	7'-4⅝"	4	1'-6½"	6'-2"	7⅝16"
* K	9'-2"	5	1'-7"	7'-11"	7½"



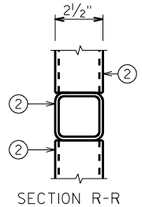
DETAIL C



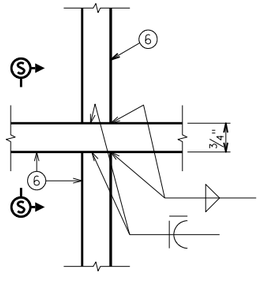
SECTION Q-Q



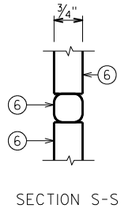
DETAIL D



SECTION R-R



DETAIL E



SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE SHEET 37.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

* CURVE PLATE TO MATCH RAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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FENCE 4

SHEET 40

2723

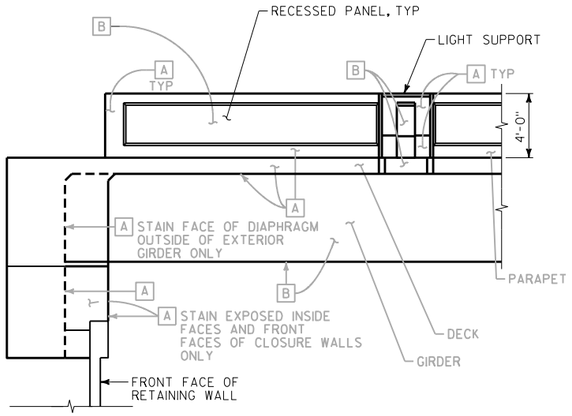
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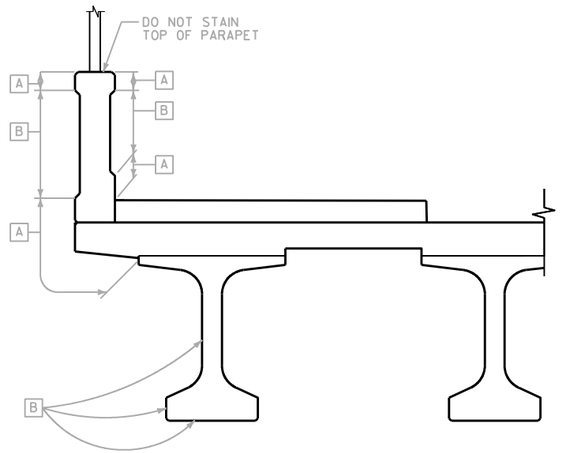
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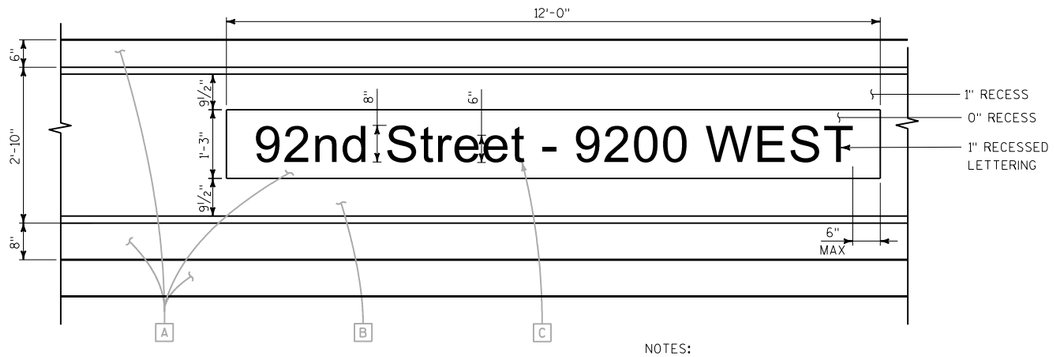
STATE PROJECT NUMBER

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OUTSIDE ELEVATION OF PARAPET



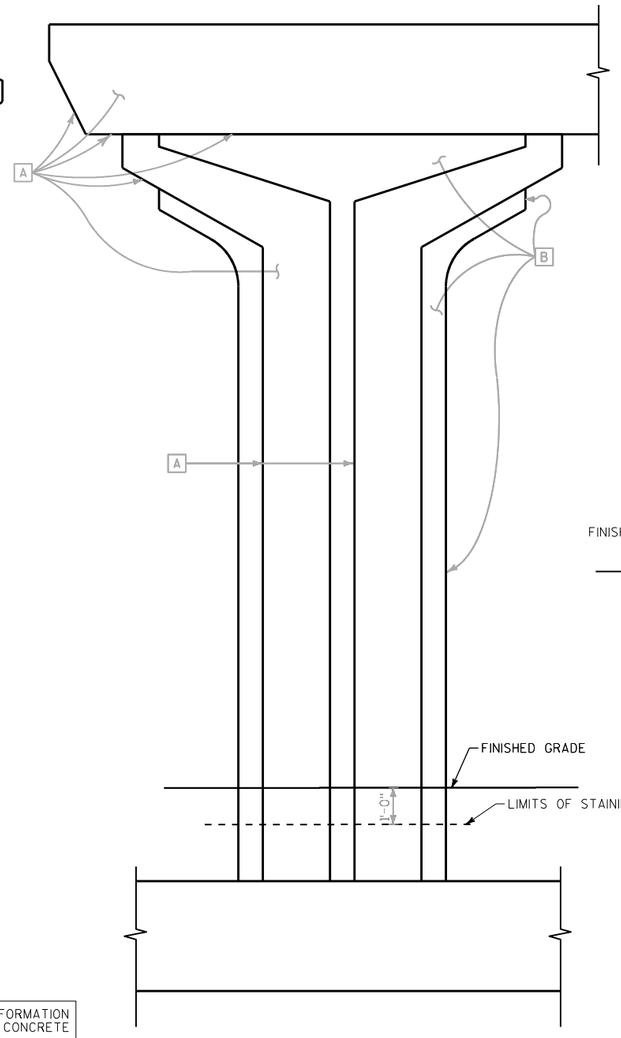


INDENTED TEXT

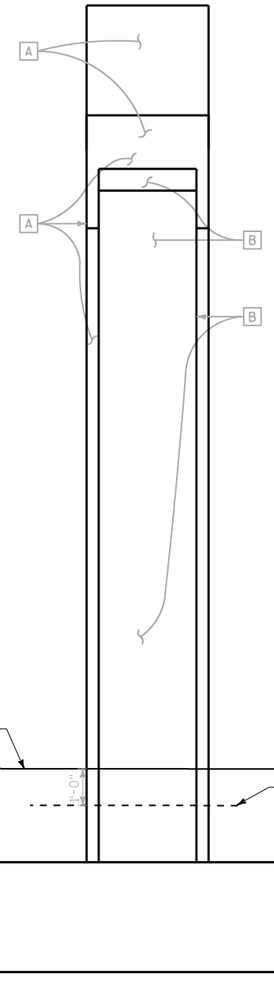
EXTERIOR FACE OF PARAPET ONLY

NOTES:
LETTERING SHALL BE HELVETICA, 8" UPPER CASE AND 6" LOWER CASE.
LETTERING IS ONLY ON OUTSIDE FACE OF PARAPET.
SEE SHT 34 FOR LOCATIONS.

ELEVATION OF DECK



ELEVATION OF PIER



ELEVATION OF PIER

LOOKING EAST

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO 6" BELOW TOP OF RETAINING WALL COPING
		ABUT. CLOSURE WALLS	INSIDE AND FRONT EXPOSED FACES TO 6" BELOW TOP OF RETAINING WALL COPING
		PIERS	SIDES AND BOTTOM OF CAP BEAM, AND COLUMNS TO 1'-0" BELOW FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	PIERS, GIRDERS, BEAMS PARAPETS	REVEALS ON COLUMNS, EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS & BEAMS, REVEALS ON PARAPETS
C	ACCENT COLOR #2	PARAPETS	LETTERING AT ROADWAY NAME

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE SHERWIN-WILLIAMS STANDARD COLOR SYSTEM LISTED.

BASE COLOR : WHOLE WHEAT - SW 6121, FN 122
ACCENT COLOR #1: BAGUETTE - SW 6123, FN 124
ACCENT COLOR #2: BLACK - FEDERAL COLOR 37038

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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AESTHETIC DETAILS

SHEET 41

2724

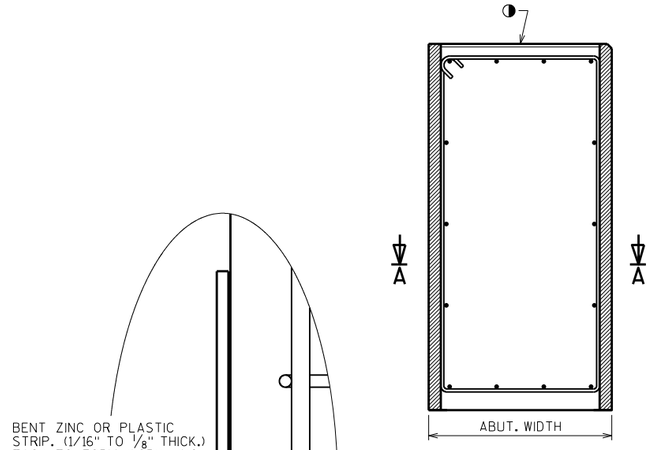
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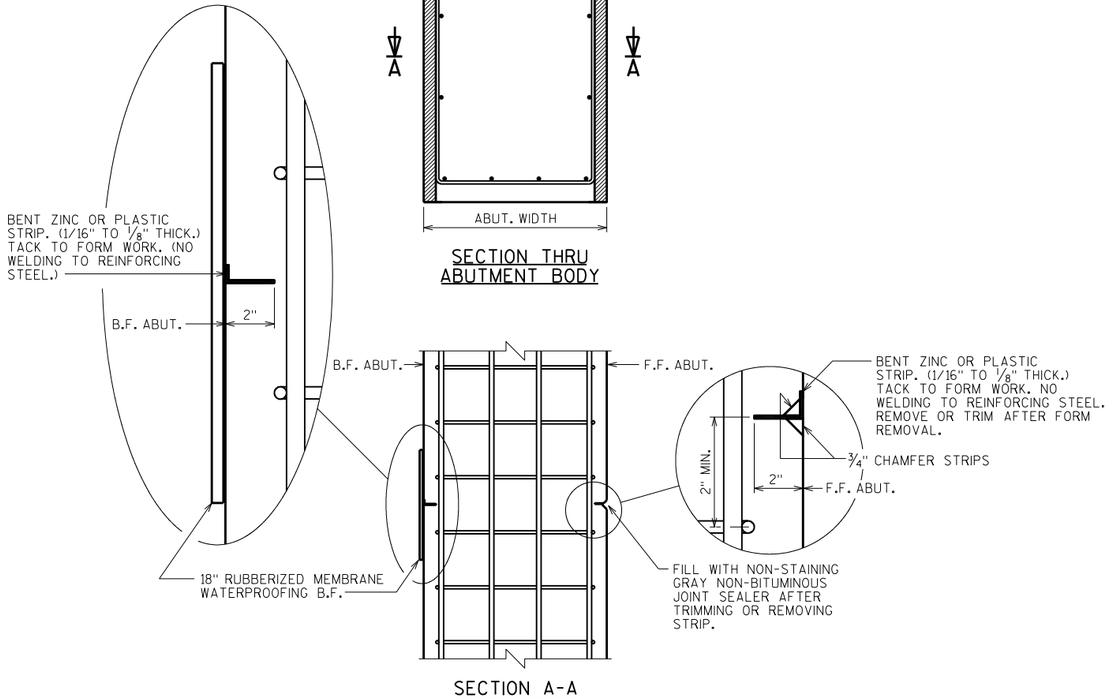
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STATE PROJECT NUMBER

1060-33-80



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-862

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ALTERNATE CONSTRUCTION JOINT

SHEET 42

2725

8

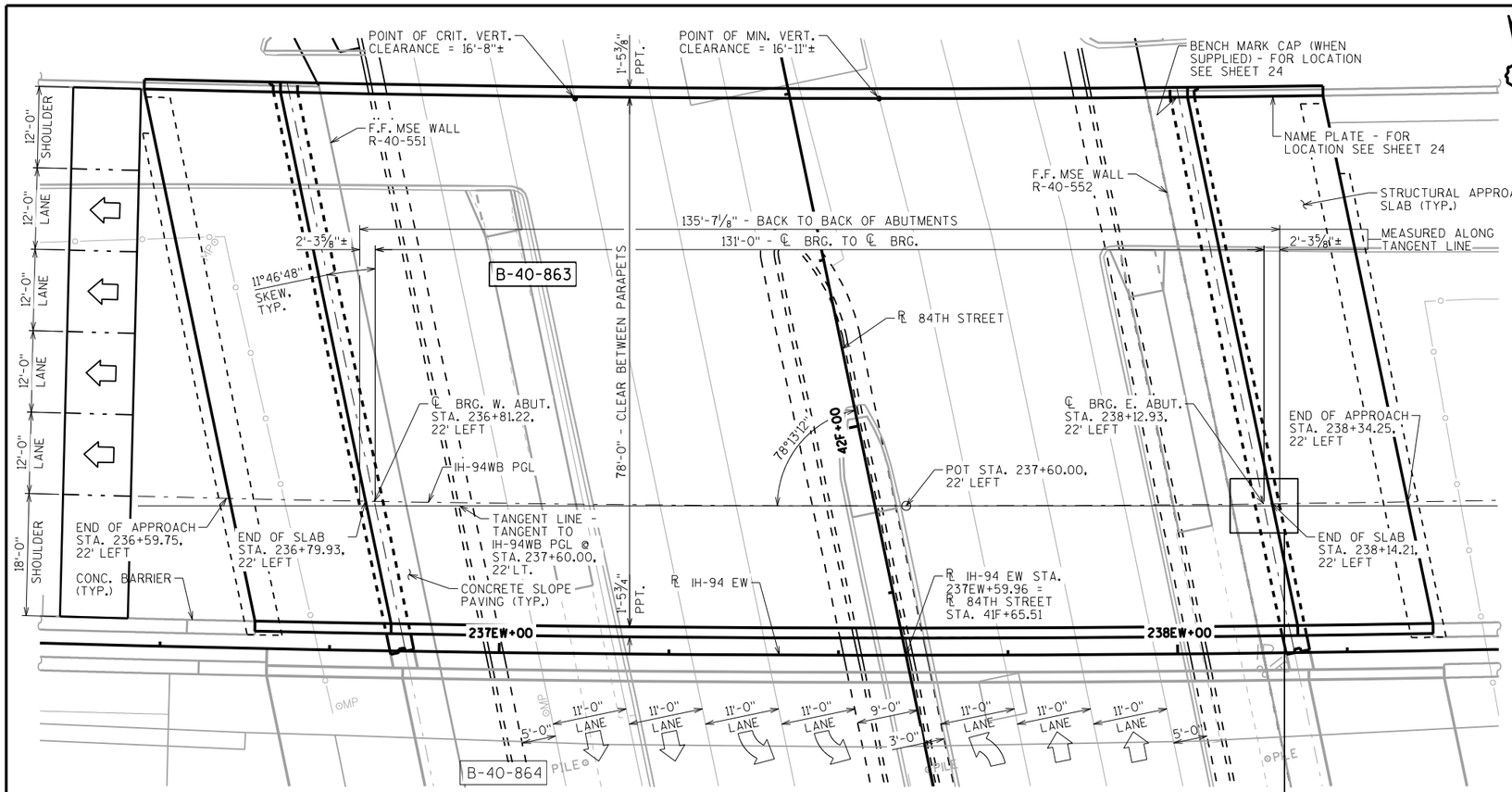
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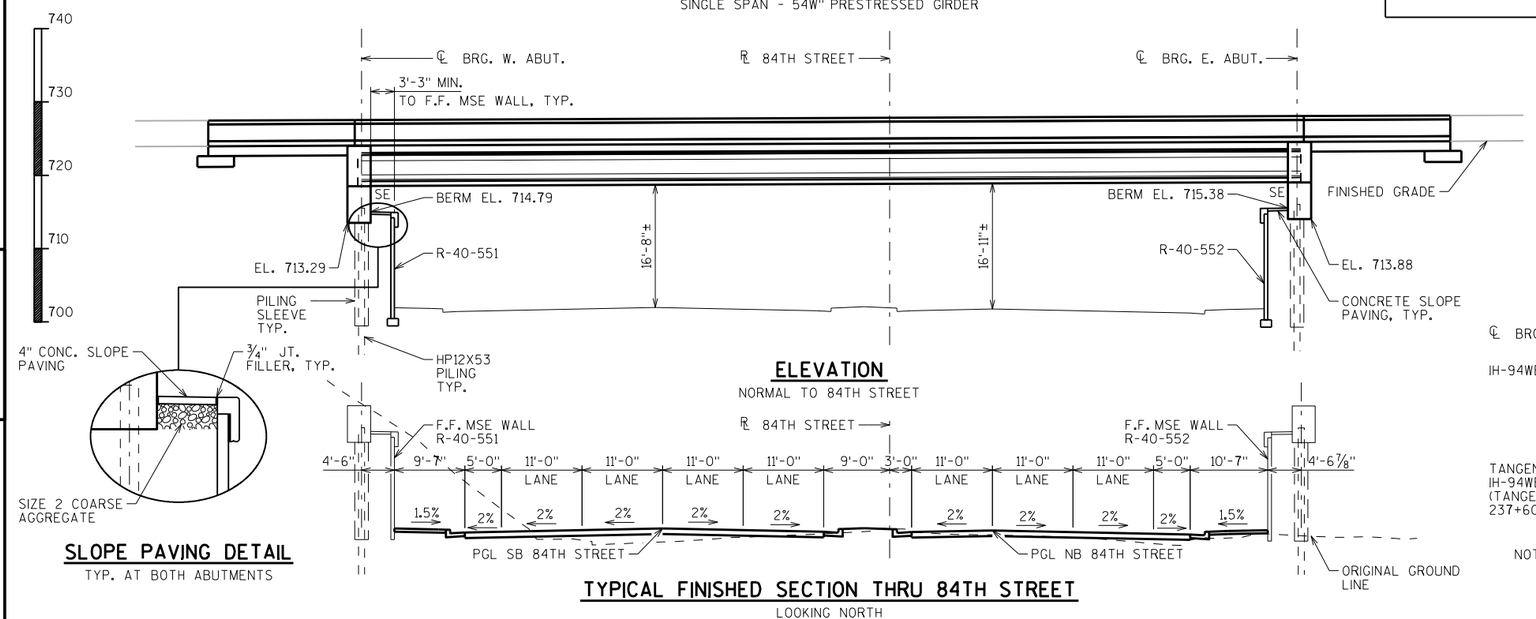
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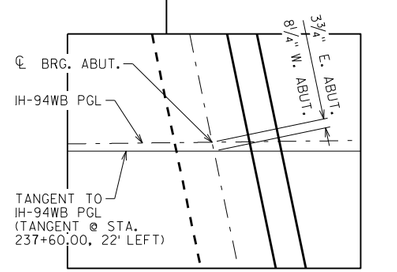
SCALE =

STATE PROJECT NUMBER

1060-33-80







DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.11
OPERATING RATING FACTOR: RF=1.87
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
B-40-863 IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I.
CONCRETE MASONRY ALL OTHER — f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
54W" PRESTRESSED GIRDERS, CONCRETE MASONRY STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I. — f'c = 8,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP12X53 PILING DRIVEN TO A REQUIRED RESISTANCE OF 215 TONS ** PER PILE AS DETERMINED BY THE PDA METHOD.
ESTIMATED 95'-0" LONG.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MUTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA METHOD TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH-94

A.D.T. = 125,400 (2035)
R.D.S. = 60 M.P.H.

84TH STREET

A.D.T. = 22,500 (2035)
R.D.S. = 35 M.P.H.

CURVE DATA

℞ IH-94 EW

P.I. = 248+40.53
Δ = 31° 30' 38.10"
D = 1° 14' 44.02"
T = 1297.79
L = 2529.83
R = 4600.00
P.C. = 235+42.74
P.T. = 260+72.57

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. UTILITY DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. WEST ABUTMENT REBAR DETAILS
8. EAST ABUTMENT
9. EAST ABUTMENT DETAILS
10. EAST ABUTMENT REBAR DETAILS
11. SUPERSTRUCTURE FRAMING PLAN
12. 54W" PRESTRESSED GIRDER
13. 54W" PRESTRESSED GIRDER DETAILS
14. STEEL DIAPHRAGM
15. SUPERSTRUCTURE
16. SUPERSTRUCTURE DETAILS
17. WEST DIAPHRAGM DETAILS
18. EAST DIAPHRAGM DETAILS
19. SUPERSTRUCTURE REBAR DETAILS
20. SUPERSTRUCTURE TANGENT OFFSET
21. WEST STRUCTURAL APPROACH SLAB
22. EAST STRUCTURAL APPROACH SLAB
23. STRUCTURAL APPROACH SLAB DETAILS
24. SINGLE SLOPE PARAPET "42SS" (MODIFIED)
25. SINGLE SLOPE PARAPET "56SS"
26. AESTHETIC DETAILS
27. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

ADAM SWIERCZEK (608)267-4593
AARON BONK (608)261-0261

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher DNR — 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-863

IH-94 WB OVER 84TH STREET

COUNTY	~~TOWN~~ CITY ~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ABS	NAR	ABS	NAR

GENERAL PLAN

SHEET 1 OF 27

2726

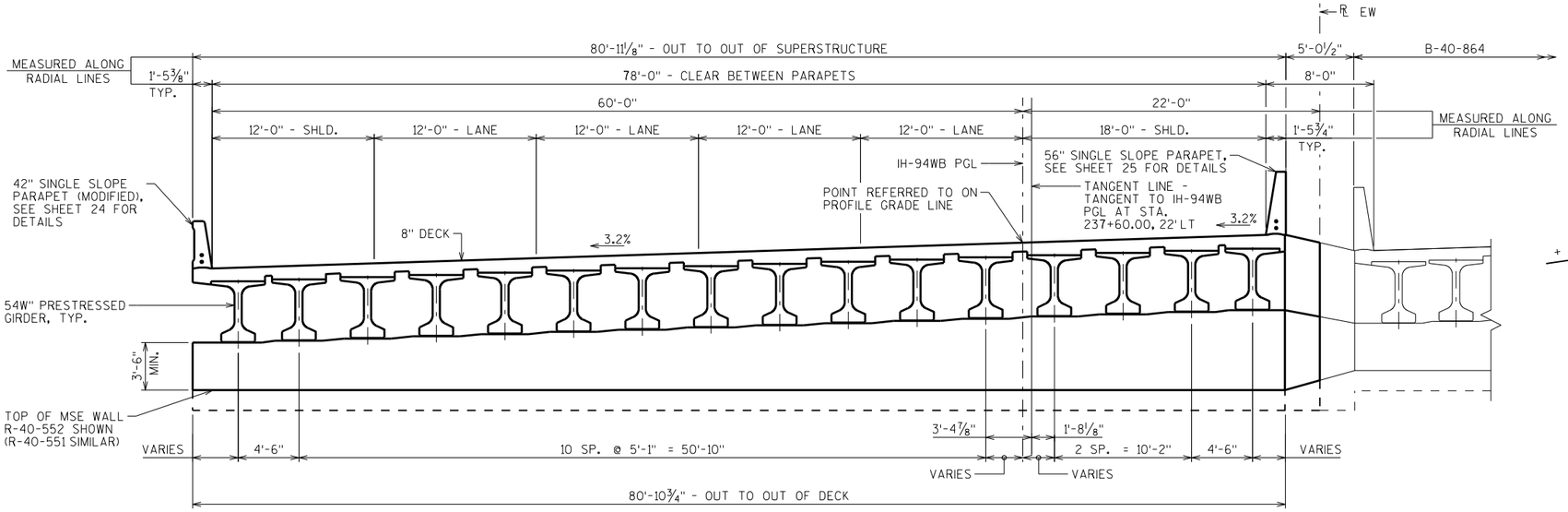
I.D. 1060-33-07AC

DATE: APR. 2014

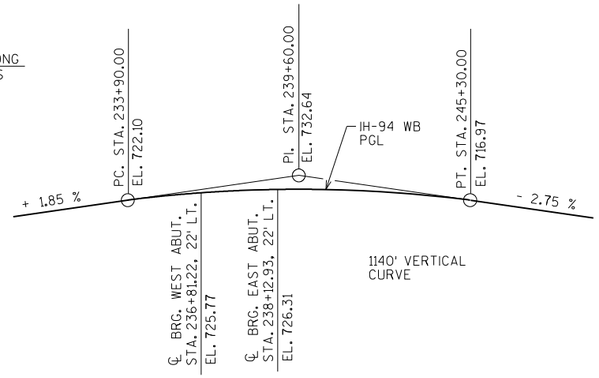
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STATE PROJECT NUMBER

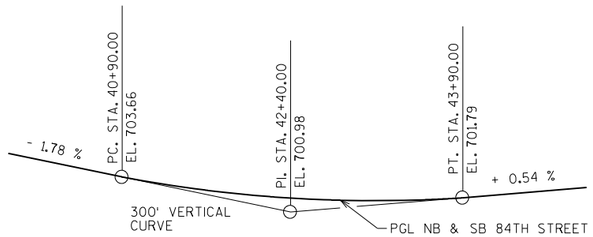
1060-33-80



SECTION THRU ROADWAY - LOOKING EAST (B-40-863)



PROFILE GRADE LINE IH-94 WB



PROFILE GRADE LINE NB & SB 84TH STREET

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	WEST APPR. SLAB	SUPER.	WEST ABUT.	EAST ABUT.	EAST APPR. SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-863	LS	———	———	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	———	285	285	———	570
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	255	———	———	———	255	510
502.0100	CONCRETE MASONRY BRIDGES	CY	22	———	69	68	22	181
502.3200	PROTECTIVE SURFACE TREATMENT	SY	205	1,375	———	———	205	1,785
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	———	2,112	———	———	———	2,112
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	———	5,380	5,340	———	10,720
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	18,130	63,380	200	170	17,940	99,820
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	———	———	16	16	———	32
506.4000	STEEL DIAPHRAGMS B-40-863	EACH	———	30	———	———	———	30
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	5	15	15	———	35
550.0500	PILE POINTS	EACH	———	———	14	14	———	28
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	1,330	1,330	———	2,660
604.0400	SLOPE PAVING CONCRETE	SY	———	———	30	30	———	60
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	80	24	———	———	80	184
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	———	520	———	———	———	520
SPV. 0035.4000	HPC MASONRY STRUCTURES	CY	88	494	———	———	88	670
SPV. 0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	———	———	2	2	———	4
SPV. 0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	———	———	2	2	———	4
SPV. 0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS STEEL BRIDGES	LB	1,360	———	———	———	1,380	2,740
SPV. 0090.4430	PILING SLEEVES	LF	———	———	196	196	———	392
SPV. 0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,570	10,430	———	———	1,560	13,560
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½" & ¾"
	FILLER	SIZE	———	———	———	———	———	1½"
	EXPANDED POLYSTYRENE	SIZE	———	———	———	———	———	1" & 1½"

ALL ITEMS ARE CATEGORY 2100

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, THE FRONT FACE AND THE TOP OF THE 42SS PARAPET, AND TO ALL FACES OF THE 56SS PARAPET.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

EMBEDDED CONDUIT AND JUNCTION BOXES IN THE SOUTH PARAPET FOR FUTURE LIGHTING OF IH-94 ARE INCLUDED IN THE BRIDGE PLANS.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COURSE AGGREGATE SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE".

THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLABS (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTURES."

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE BRIDGE B-40-863 ABUTMENTS WITH RETAINING WALLS R-40-551 AND R-40-552.

THE EXISTING STRUCTURES SOUTH OF B-40-863, B-40-90 AND B-40-91, ARE TO BE REMOVED AFTER COMPLETION OF B-40-863 (PRIOR TO CONSTRUCTION OF B-40-864), ARE FOUR SPAN STEEL BEAM BRIDGES WITH AN OVERALL WIDTH OF 63'-5" AND AN OVERALL LENGTH OF 174'-8". REMOVAL OF EXISTING STRUCTURES INCLUDED IN PLANS FOR B-40-864.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

CROSS SECTION & QUANTITIES

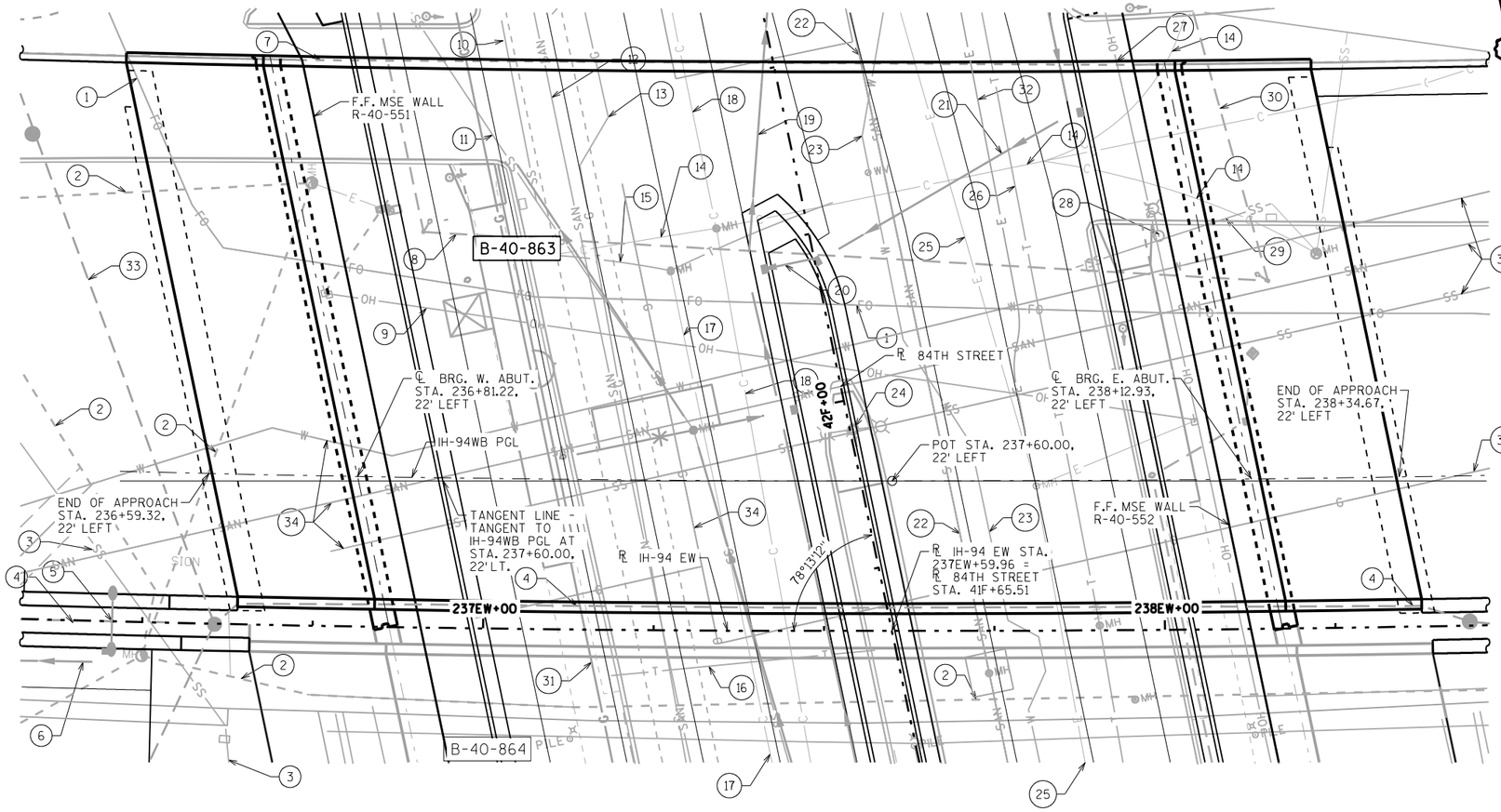
SHEET 2

2727

SCALE = 5.0

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PLAN

SINGLE SPAN - 54W" PRESTRESSED GIRDER

STATE PROJECT NUMBER

1060-33-80

UTILITY NOTES

1. EXISTING AT&T CORP. FIBER OPTIC TO BE ABANDONED
2. EXISTING WISDOT FTMS TO BE RELOCATED
3. EXISTING CITY OF MILWAUKEE 15" STORM SEWER TO BE ABANDONED
4. PROPOSED WISDOT LIGHTING CONDUIT
5. PROPOSED WISDOT LIGHTING STRUCTURE
6. PROPOSED CITY OF MILWAUKEE 24" STORM SEWER
7. PROPOSED WISDOT FTMS
8. EXISTING CITY OF MILWAUKEE TRAFFIC SIGNALS TO BE RELOCATED
9. EXISTING WE ENERGIES OVERHEAD ELECTRIC TO BE RELOCATED
10. EXISTING CITY OF MILWAUKEE 9" STORM SEWER TO BE REMOVED
11. EXISTING CITY OF MILWAUKEE 60" STORM SEWER TO BE REMOVED
12. EXISTING MMSD 96" SANITARY SEWER TO REMAIN
13. EXISTING WE ENERGIES GAS TO BE RELOCATED
14. EXISTING CITY OF MILWAUKEE COMMUNICATION CABLE TO BE RELOCATED
15. EXISTING CITY OF MILWAUKEE COMMUNICATION CABLE TO BE RELOCATED
16. EXISTING AT&T-WIS CABLE TO REMAIN
17. EXISTING CITY OF MILWAUKEE COMMUNICATION CABLE TO BE RELOCATED
18. EXISTING CITY OF MILWAUKEE COMMUNICATION CABLE TO BE RELOCATED
19. PROPOSED CITY OF MILWAUKEE 30" STORM SEWER
20. PROPOSED CITY OF MILWAUKEE 24" STORM SEWER
21. PROPOSED CITY OF MILWAUKEE 24" STORM SEWER
22. EXISTING MMSD 24" SANITARY SEWER TO BE ABANDONED
23. EXISTING CITY OF MILWAUKEE 12" WATERMAIN TO REMAIN IN PLACE
24. EXISTING CITY OF MILWAUKEE LIGHTING STRUCTURE TO BE RELOCATED
25. EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
26. EXISTING AT&T-WIS COMMUNICATION CABLE TO REMAIN
27. EXISTING WE ENERGIES OVERHEAD UTILITIES TO BE RELOCATED
28. EXISTING CITY OF MILWAUKEE LIGHTING STRUCTURE TO BE RELOCATED
29. EXISTING CITY OF MILWAUKEE 8" STORM SEWER TO BE REMOVED
30. EXISTING CITY OF MILWAUKEE TRAFFIC SIGNAL CONDUIT TO BE RELOCATED
31. PROPOSED WE ENERGIES GAS MAIN
32. PROPOSED WE ENERGIES ELECTRIC LINE
33. PROPOSED WISDOT LIGHTING
34. PREVIOUSLY ABANDONED UTILITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

UTILITY PLAN & NOTES

SHEET 3

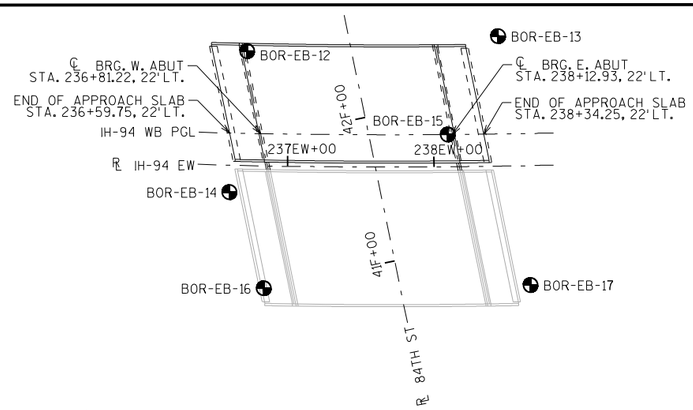
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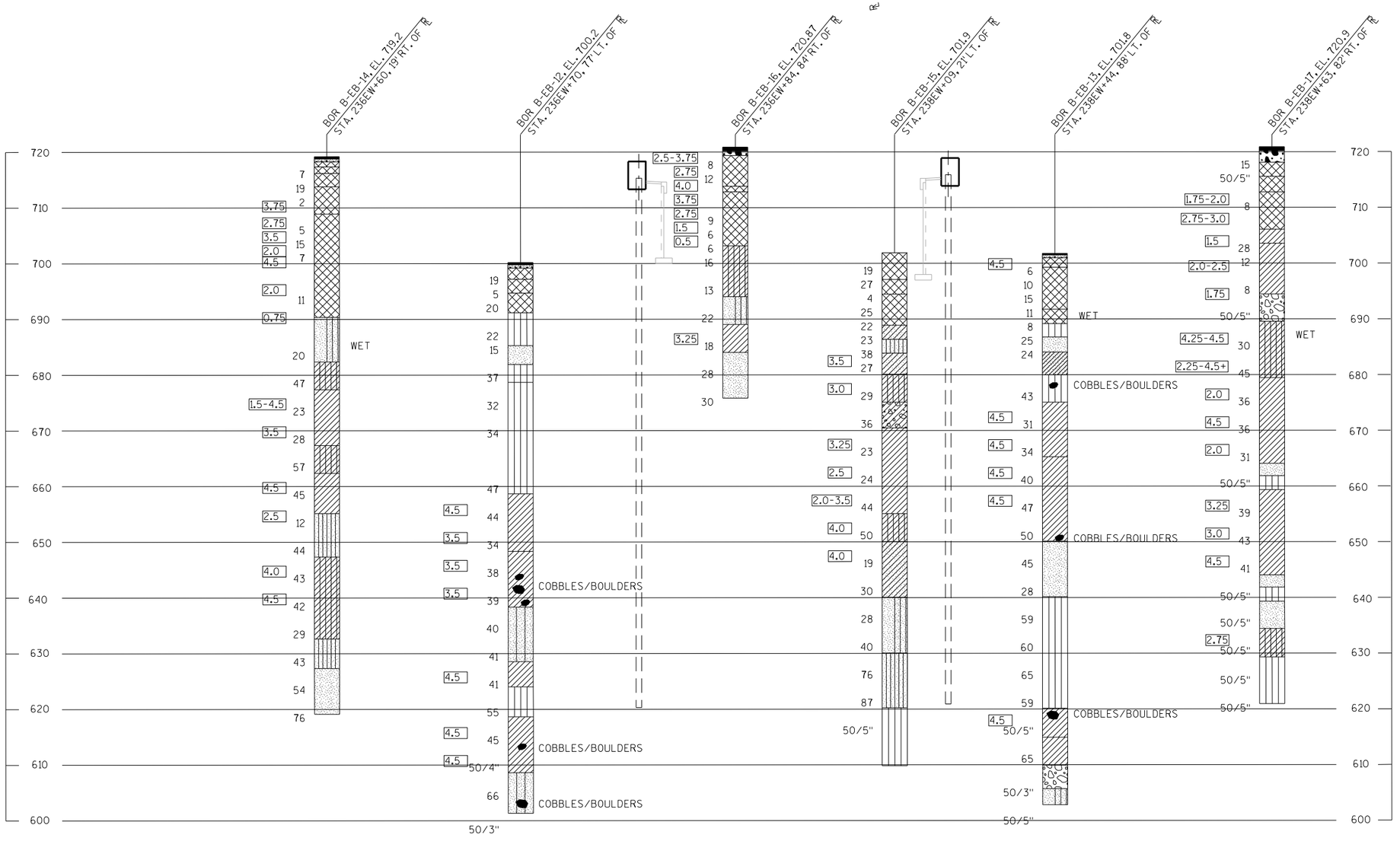
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
EB-12	11/15/2011	295656	577079
EB-13	11/16/2011	295632	577249
EB-14	10/25/2011	295564	577048
EB-15	10/25/2011	295573	577202
EB-16	11/8/2011	295495	577058
EB-17	11/7/2011	295461	577237
BORINGS COMPLETED BY: GESTRA/RIVER VALLEY TESTING			
REPORT COMPLETED BY: CH2M HILL			
ALL COORDINATES REFERENCED TO WISCRS NAVD 88 MILWAUKEE COUNTY			





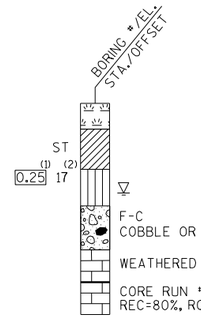
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT · TOPSOIL · PEAT
CONCRETE · FILL · GRAVEL
SAND · CLAY · SILT
BOULDERS OR COBBLES · LIMESTONE · BEDROCK (UNKNOWN)
SHALE · SANDSTONE · IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE · M-MEDIUM · C-COARSE · ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY PR/ABS · PLANS CK'D. NAR

SUBSURFACE EXPLORATION

SHEET 4

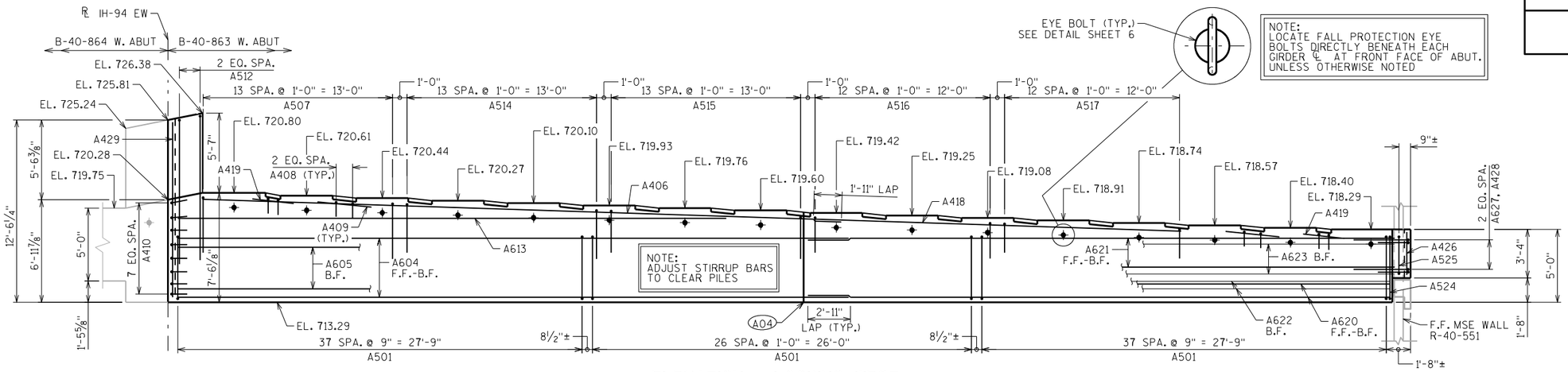
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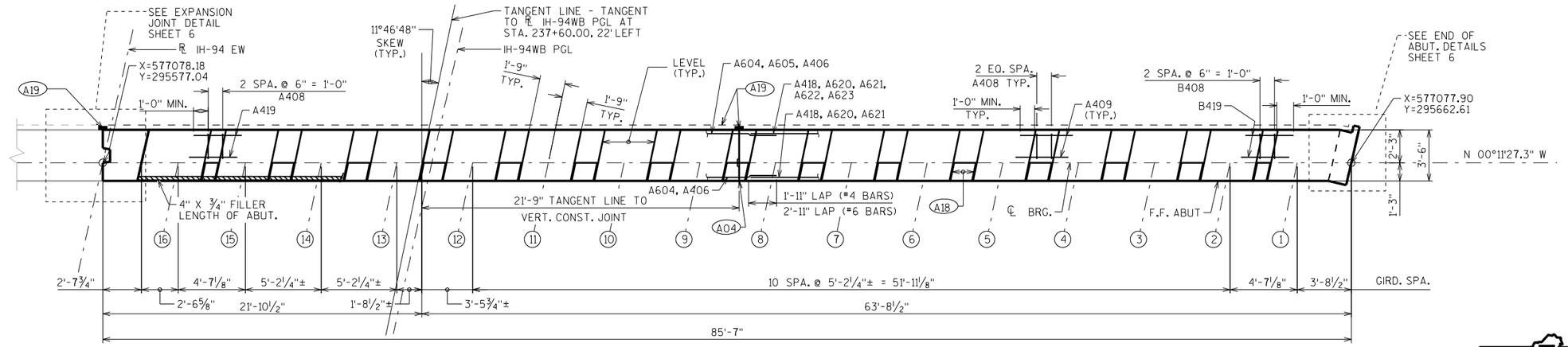
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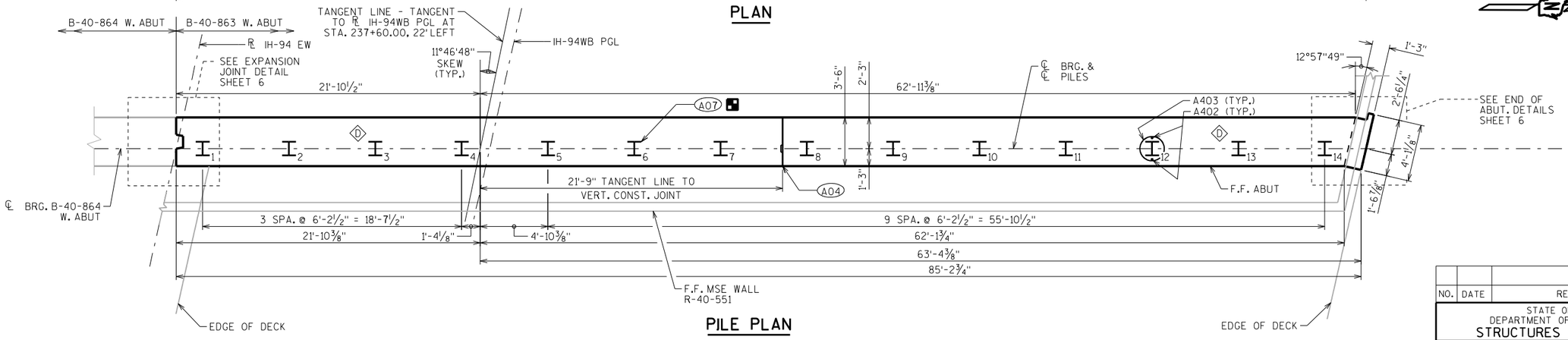
1060-33-80



ELEVATION - LOOKING WEST



PLAN



PILE PLAN

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 × 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(D) DYNAMIC PILE LOAD TESTING.

PILE SLEEVES REQUIRED. COORDINATE PILE SLEEVE LOCATIONS WITH RETAINING WALL R-40-551. PILE SLEEVES SHALL BE PLACED FROM THE BOTTOM OF MSE WALL TO THE BOTTOM OF ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

WEST ABUTMENT

SHEET 5

2730

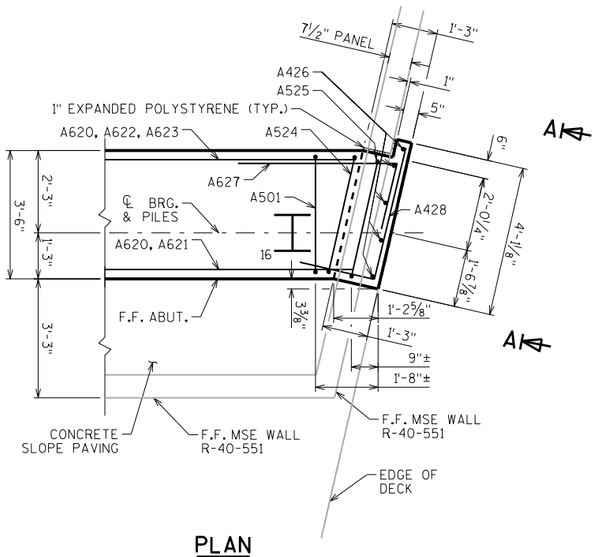
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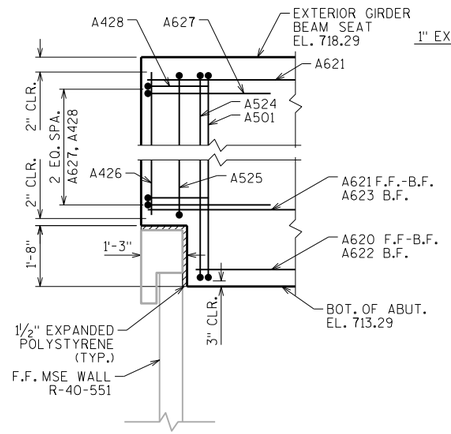
STATE PROJECT NUMBER

1060-33-80

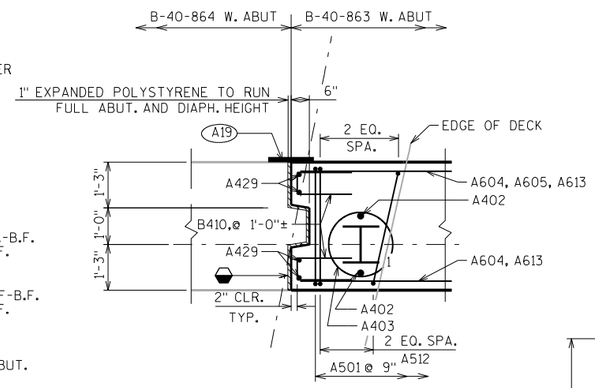


PLAN

(SHOWING NORTH END OF WEST ABUTMENT)



SECTION B-B

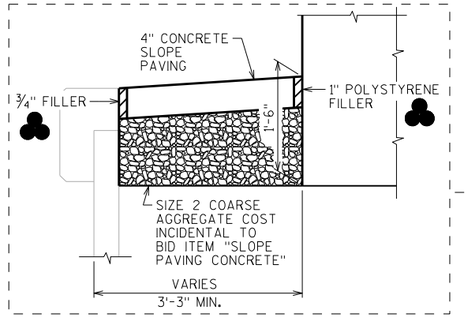


EXPANSION JOINT DETAILS

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE.

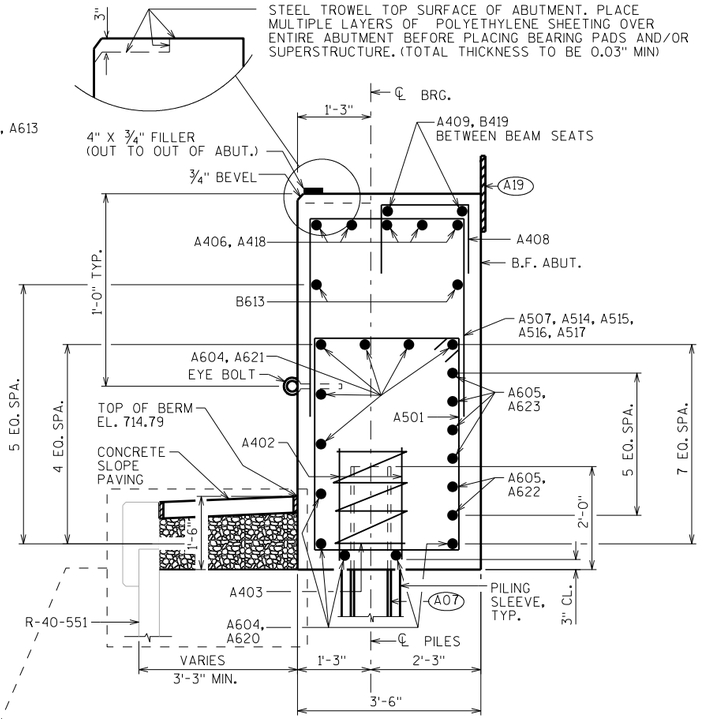
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



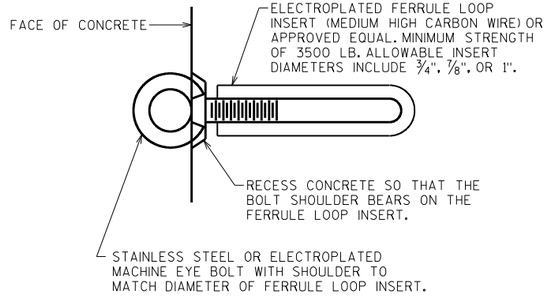
SLOPE PAVING DETAIL

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW THE SURFACE OF THE CONCRETE).

NOTE: TOOL JOINTS AT 5'-0"± SPACING AT LEAST ½" DEEP.



SECTION THRU BODY



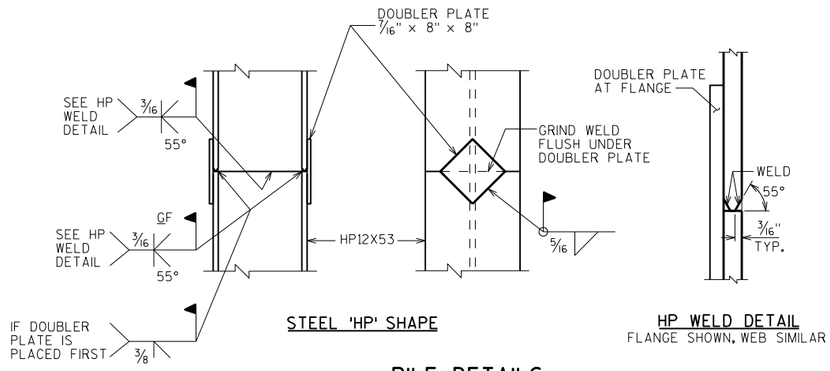
EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

VIEW A-A

END OF ABUT. DETAILS

(SHOWING NORTH END OF WEST ABUTMENT)



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

WEST ABUTMENT DETAILS

SHEET 6

2731

SCALE = 4

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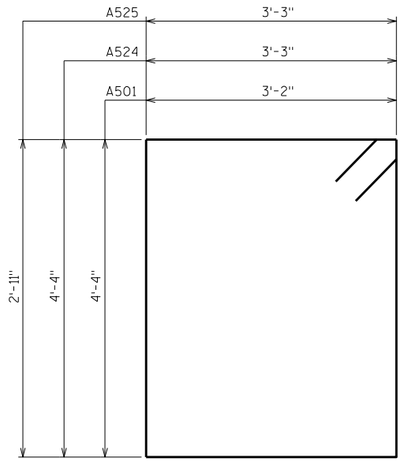
STATE PROJECT NUMBER

1060-33-80

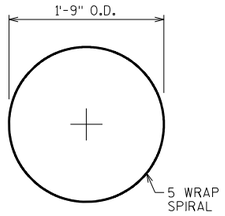
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

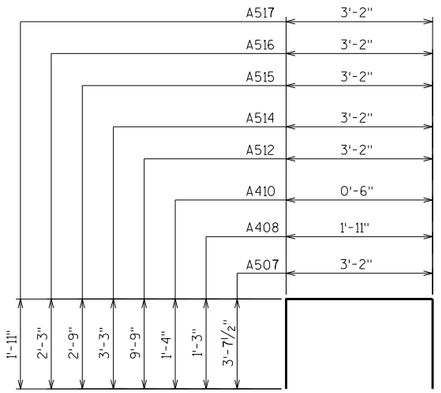
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		103	15'-8"	X		BODY - STIRRUPS
A402		28	2'-3"			BODY - VERT. - AT BODY PILES
A403		14	28'-0"	X		BODY - VERT. - AT BODY PILES
A604		11	46'-6"			BODY - HORIZ.
A605		6	46'-6"			BODY - HORIZ - B.F.
A406		5	43'-10"			BODY - HORIZ.
A507		14	10'-5"	X		BODY - VERT.
A408		45	4'-3"	X		BODY - VERT. - BETWEEN GIRDERS
A409		26	3'-8"			BODY - HORIZ. - BETWEEN GIRDERS
A410	X	16	3'-0"	X		BODY - HORIZ. - KEYED END
A411		--	--			NOT USED
A512	X	3	22'-5"	X		BODY - VERT. - KEYED END
A613		2	37'-8"			BODY - HORIZ.
A514		14	9'-7"	X		BODY - VERT.
A515		14	8'-7"	X		BODY - VERT.
A516		13	7'-9"	X		BODY - VERT.
A517		13	6'-11"	X		BODY - VERT.
A418		5	27'-2"			BODY - HORIZ.
A419		4	3'-4"			BODY - HORIZ. - BETWEEN GIRDERS
A620		5	40'-1"			BODY - HORIZ.
A621		6	41'-3"			BODY - HORIZ.
A622		2	40'-7"			BODY - HORIZ. - B.F.
A623		4	41'-3"			BODY - HORIZ. - B.F.
A524		1	15'-10"	X		BODY - STIRRUP
A525	X	1	13'-0"	X		BODY - STIRRUP - END
A426	X	5	2'-11"			BODY - VERT.
A627	X	3	6'-0"	X		BODY - HORIZ. - END
A428	X	3	5'-9"	X		BODY - HORIZ. - END
A429	X	4	12'-2"			BODY - VERT. - KEYED END



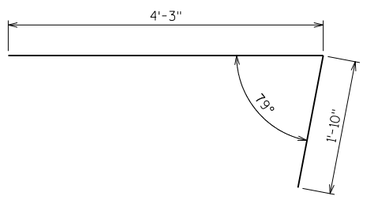
A501, A524, A525



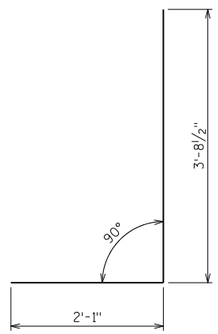
A403



A507, A408, A410, A512, A514, A515, A516, A517



A627



A428

8

8

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

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WEST ABUTMENT REBAR DETAILS

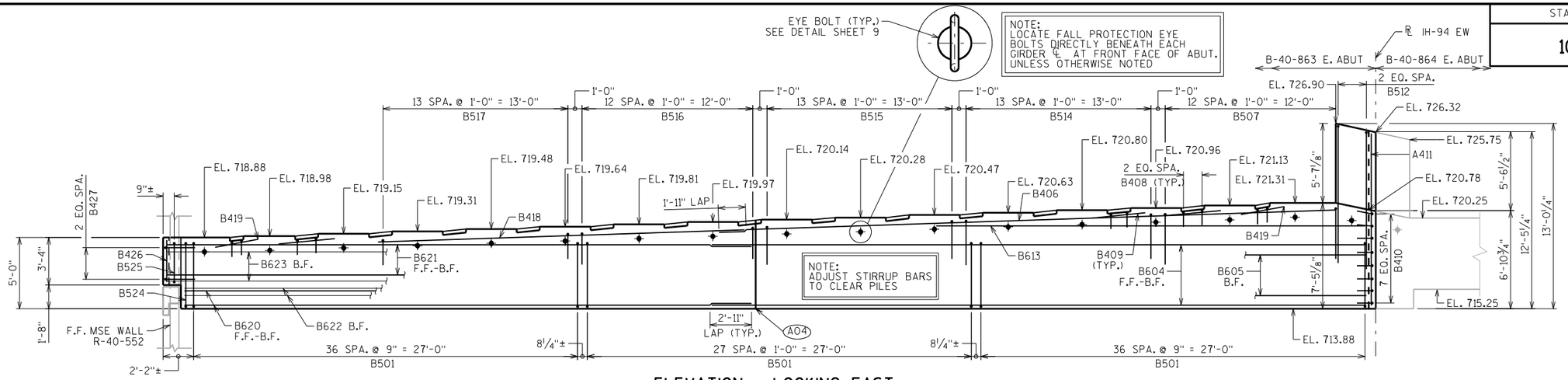
SHEET 7

2732

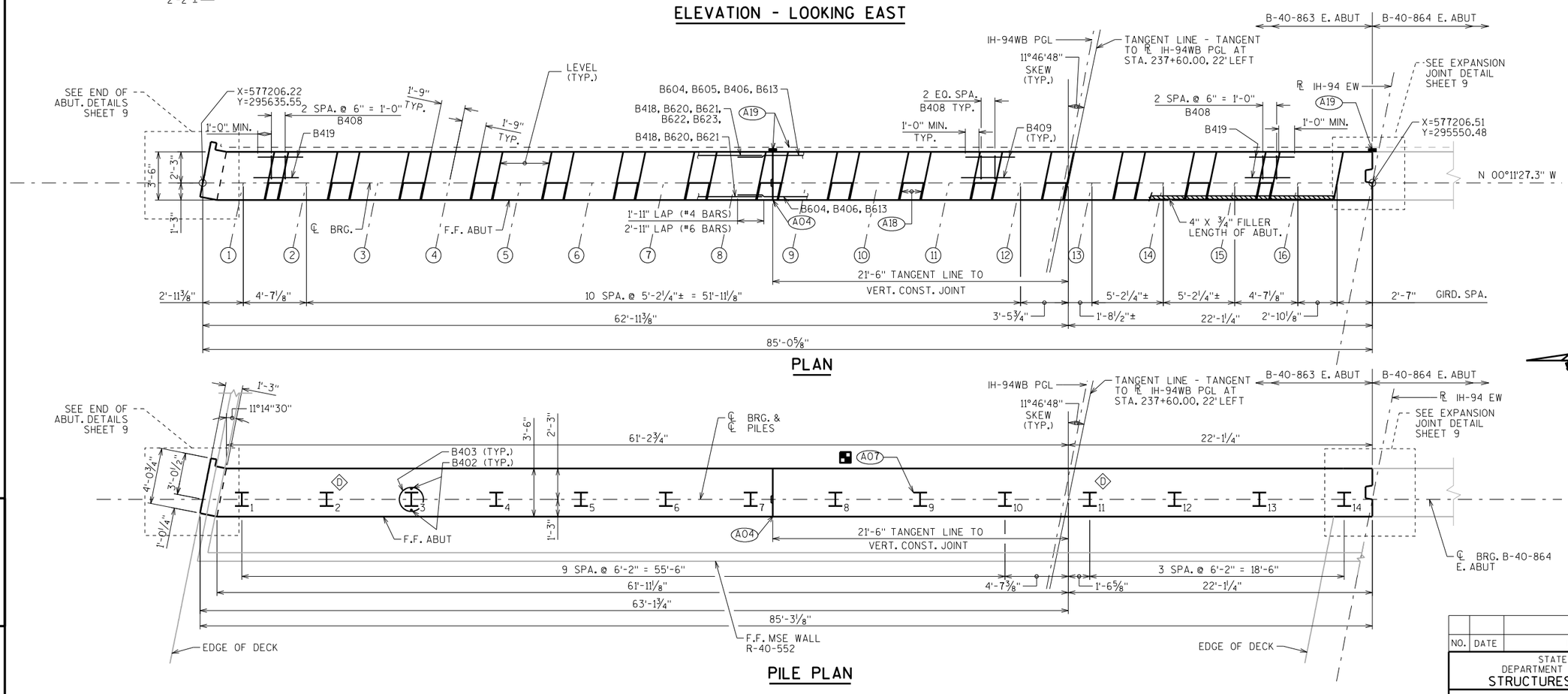
SCALE = 4

STATE PROJECT NUMBER

1060-33-80



ELEVATION - LOOKING EAST



PLAN

PILE PLAN

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 95-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◇D DYNAMIC PILE LOAD TESTING.

■ PILE SLEEVES REQUIRED. COORDINATE PILE SLEEVE LOCATIONS WITH RETAINING WALL R-40-551. PILE SLEEVES SHALL BE PLACED FROM THE BOTTOM OF MSE WALL TO THE BOTTOM OF ABUTMENT.

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EAST ABUTMENT

SHEET 8

2733

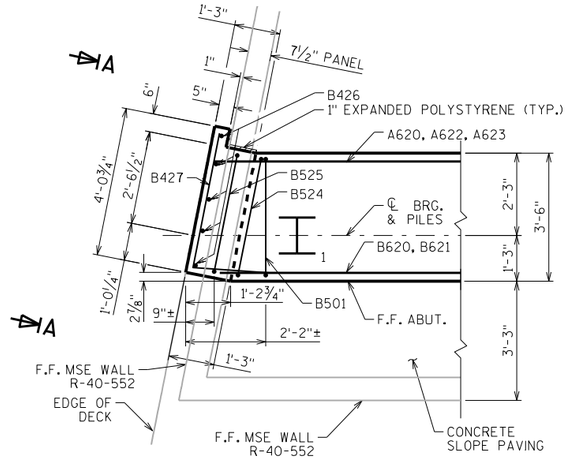
SCALE = 4

8

8

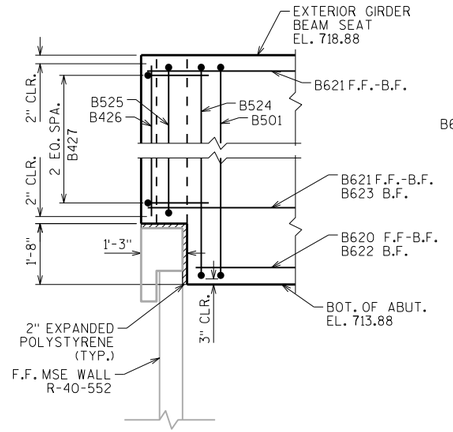
STATE PROJECT NUMBER

1060-33-80

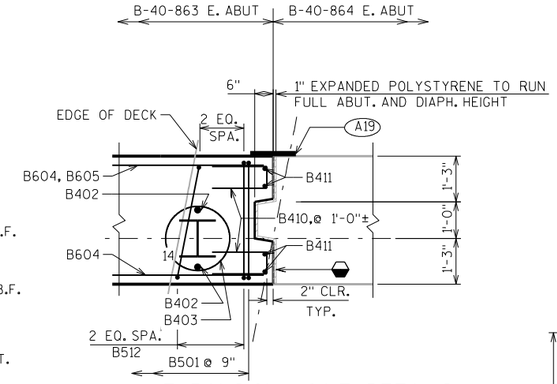


PLAN

(SHOWING NORTH END OF EAST ABUTMENT)



SECTION B-B

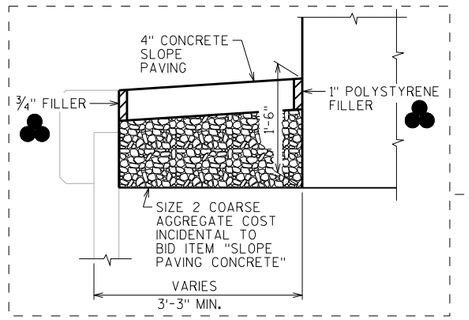


EXPANSION JOINT DETAILS

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE.

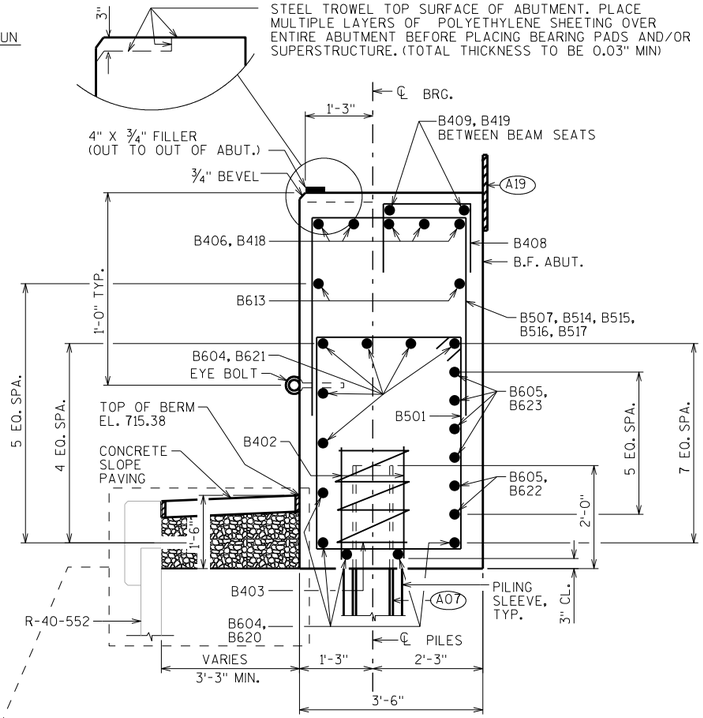
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



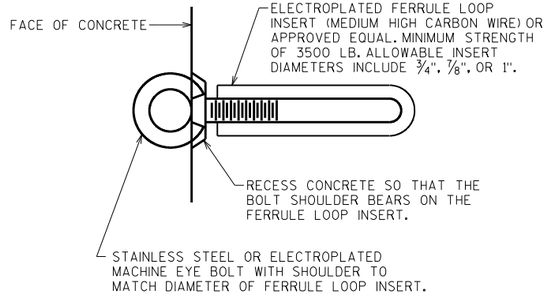
SLOPE PAVING DETAIL

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW THE SURFACE OF THE CONCRETE).

NOTE: TOOL JOINTS AT 5'-0"± SPACING AT LEAST ½" DEEP.



SECTION THRU BODY



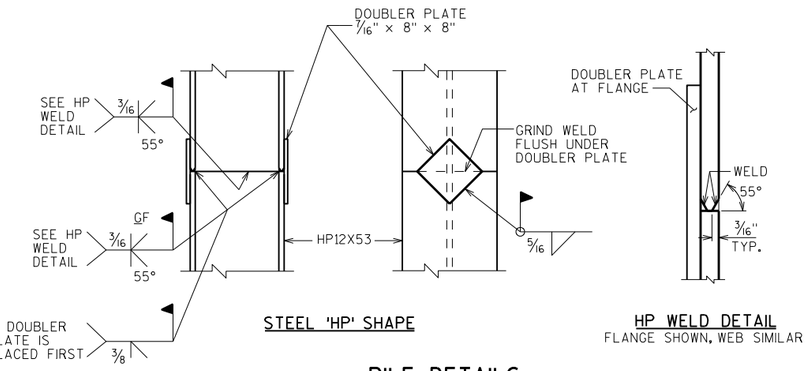
EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

VIEW A-A

END OF ABUT. DETAILS

(SHOWING NORTH END OF EAST ABUTMENT)



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

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STRUCTURE B-40-863

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EAST ABUTMENT DETAILS

SHEET 9

2734

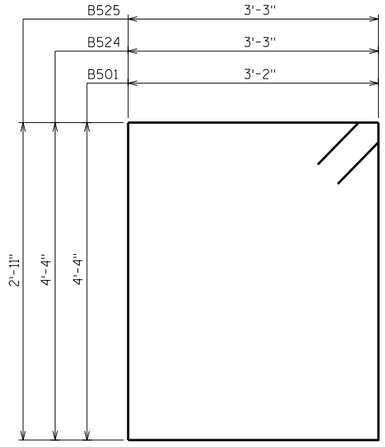
SCALE = 4

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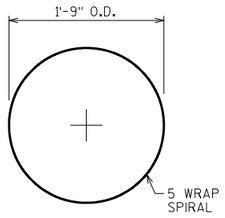
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STATE PROJECT NUMBER

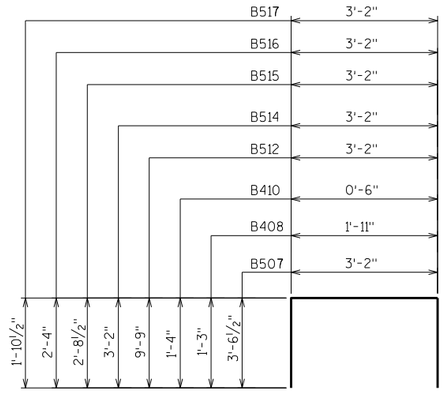
1060-33-80



B501, B524, B525



B403

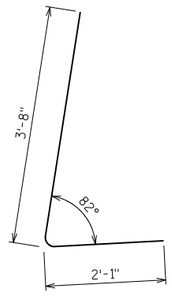


B507, B408, B410, B512, B514, B515, B516, B517

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		102	15'-8"	X		BODY - STIRRUPS
B402		28	2'-3"			BODY - VERT. - AT BODY PILES
B403		14	28'-0"	X		BODY - VERT. - AT BODY PILES
B604		11	47'-2"			BODY - HORIZ.
B605		6	47'-2"			BODY - HORIZ - B.F.
B406		5	43'-6"			BODY - HORIZ.
B507		13	10'-0"	X		BODY - VERT.
B408		45	4'-3"	X		BODY - VERT. - BETWEEN GIRDERS
B409		26	3'-8"			BODY - HORIZ. - BETWEEN GIRDERS
B410	X	16	3'-0"	X		BODY - HORIZ. - KEYED END
B411	X	4	12'-0"			BODY - VERT. - KEYED END
B512	X	3	22'-5"	X		BODY - VERT. - KEYED END
B613		2	30'-2"			BODY - HORIZ.
B514		14	9'-3"	X		BODY - VERT.
B515		14	8'-4"	X		BODY - VERT.
B516		13	7'-7"	X		BODY - VERT.
B517		14	6'-8"	X		BODY - VERT.
B418		5	27'-6"			BODY - HORIZ.
B419		4	3'-4"			BODY - HORIZ. - BETWEEN GIRDERS
B620		5	39'-5"			BODY - HORIZ.
B621		6	40'-7"			BODY - HORIZ.
B622		2	39'-3"			BODY - HORIZ. - B.F.
B623		4	40'-7"			BODY - HORIZ. - B.F.
B524		1	15'-10"	X		BODY - STIRRUP - END
B525	X	1	13'-0"	X		BODY - STIRRUP - END
B426	X	5	2'-11"			BODY - VERT. - END
B427	X	3	5'-8"	X		BODY - HORIZ. - END



B427

8

8

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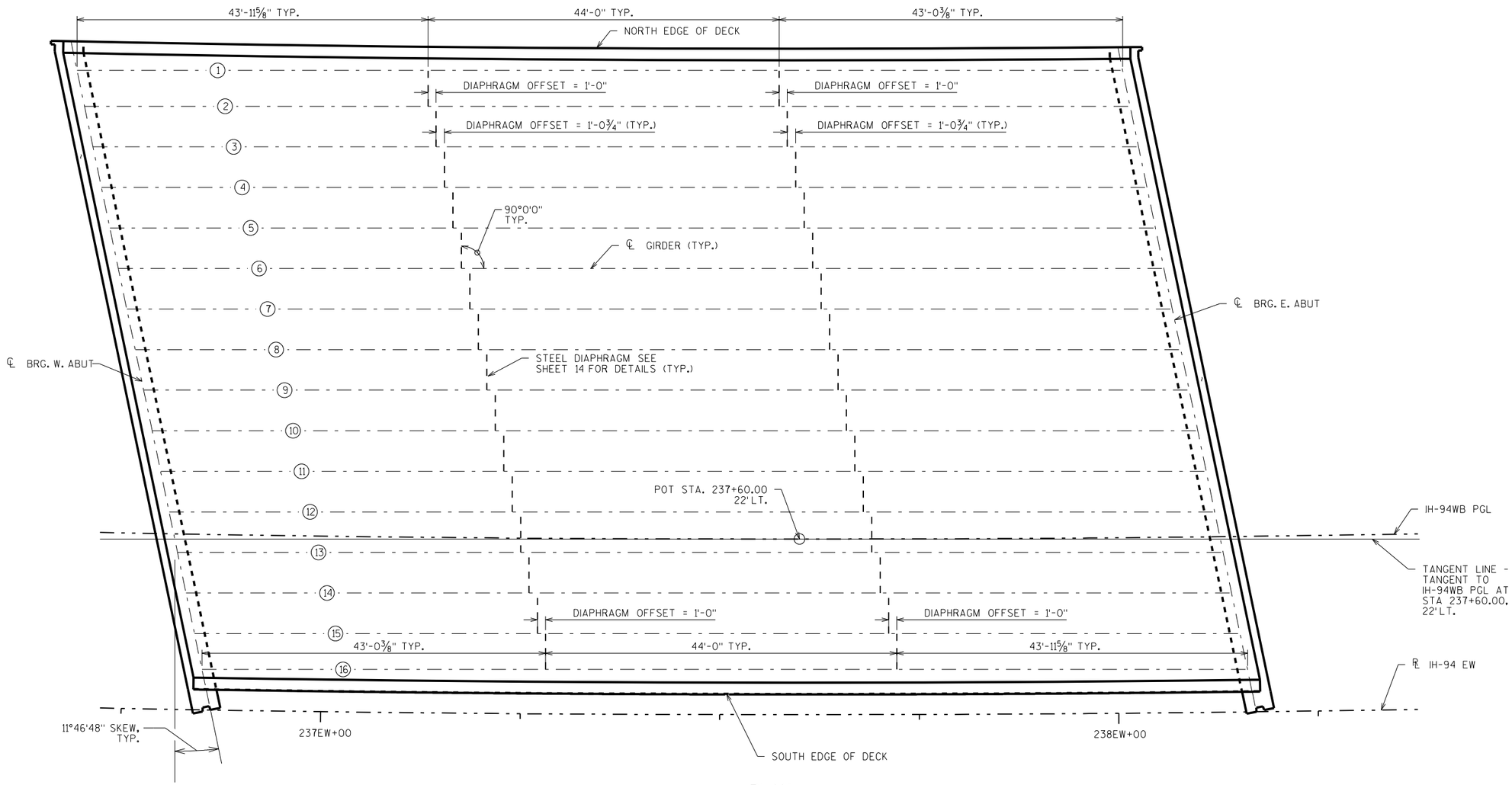
EAST ABUTMENT REBAR DETAILS

SHEET 10

2735

SCALE = 4

STATE PROJECT NUMBER
1060-33-80



PLAN

8

8

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

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SUPERSTRUCTURE FRAMING PLAN

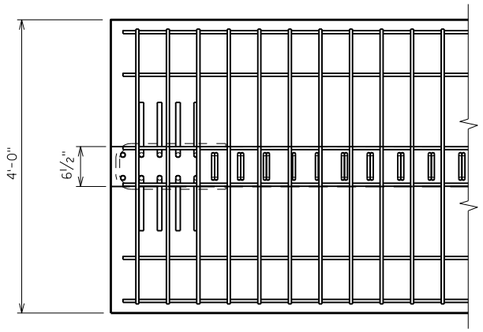
SHEET 11

2736

SCALE = 7

STATE PROJECT NUMBER

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TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

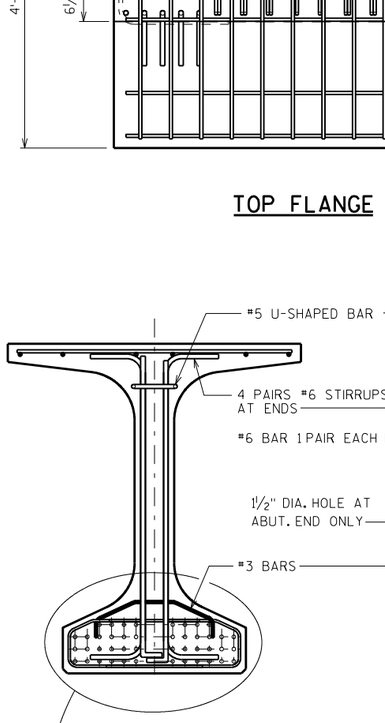
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

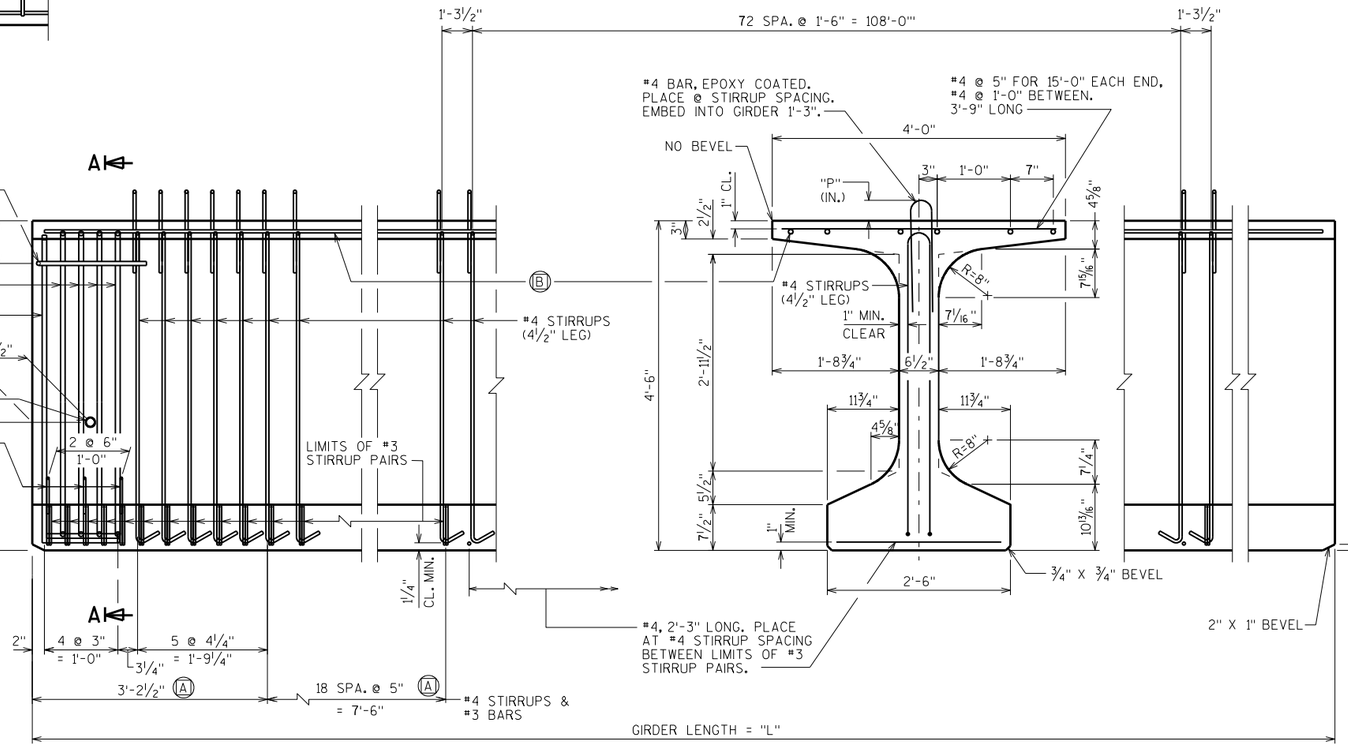
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



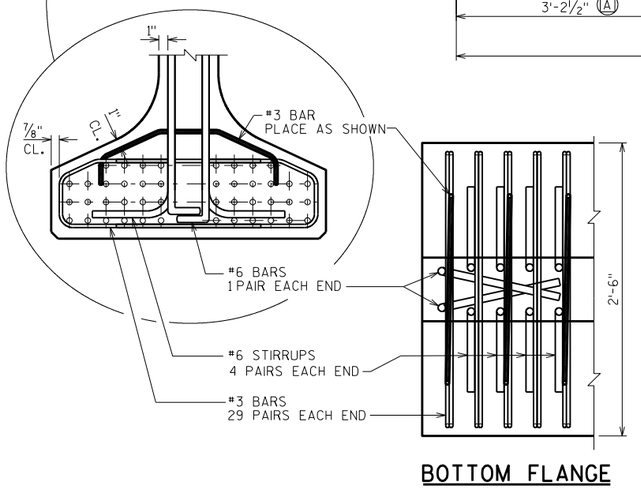
SECTION A-A



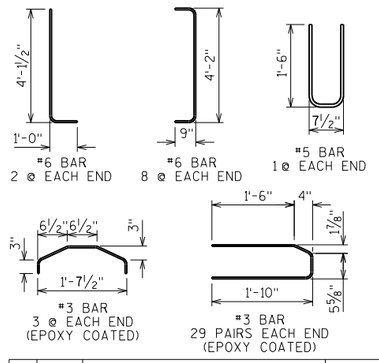
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1	132.0'	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8000	8"	7"	8"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A
1	2-15	132.0'	0.8	1.4	2.0	2.3	2.4	2.3	2.0	1.4	0.8	8000	8.5"	7.5"	8.5"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A
1	16	132.0'	0.8	1.6	2.1	2.5	2.6	2.5	2.1	1.6	0.8	8000	8"	7"	8"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A

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STRUCTURE B-40-863

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54W" PRESTRESSED GIRDER

SHEET 12

2737

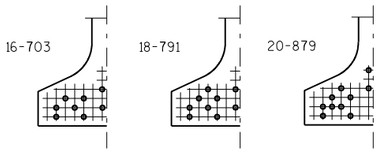
SCALE = 1

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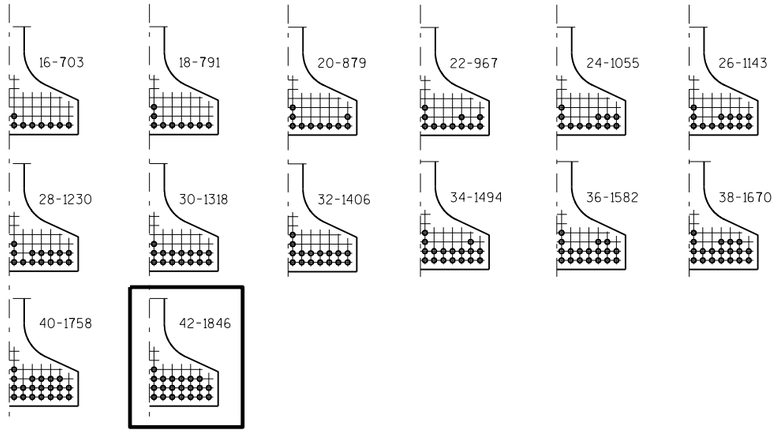
STATE PROJECT NUMBER

1060-33-80



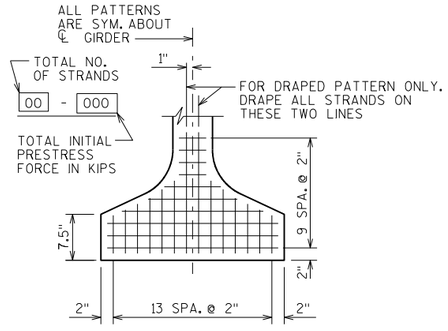
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

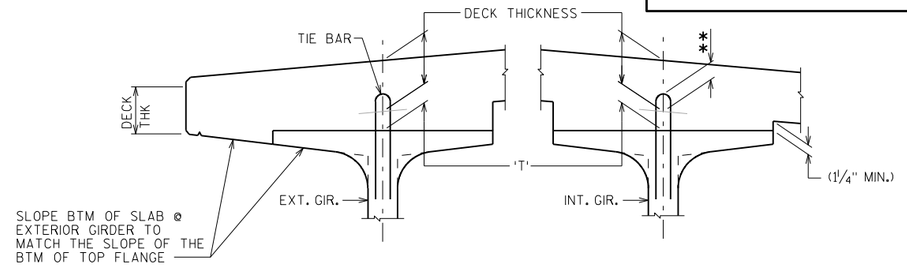


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

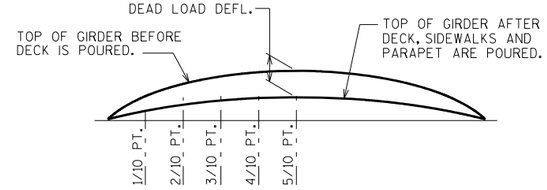
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

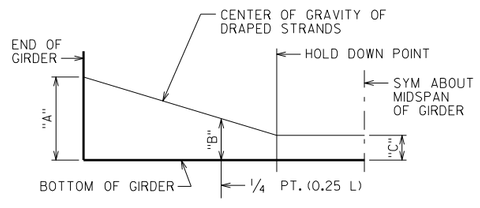
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-40-863

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54W" PRESTRESSED GIRDER DETAILS

SHEET 13

2738

G54W
7-13

SCALE = 1

8

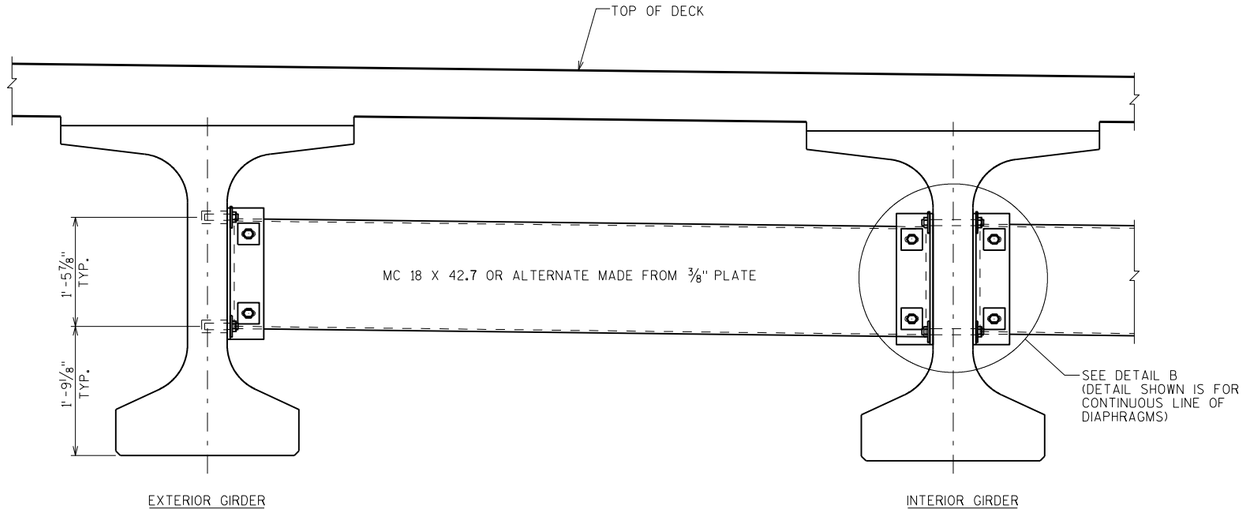
9

123

8

STATE PROJECT NUMBER

1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM

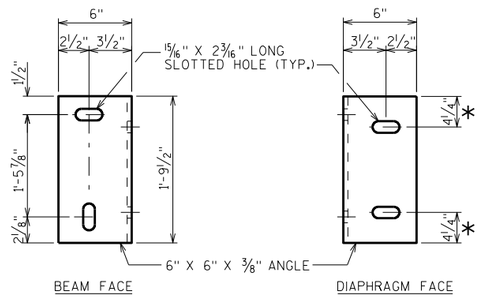
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-863", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

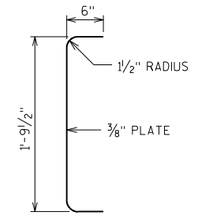
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

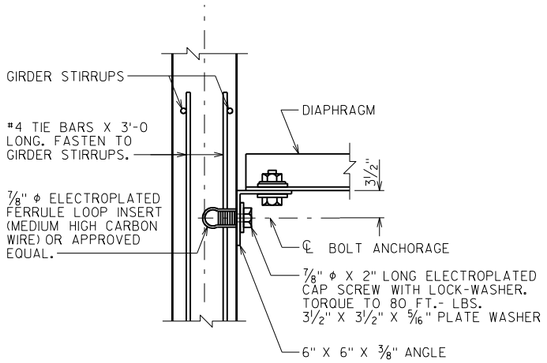


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

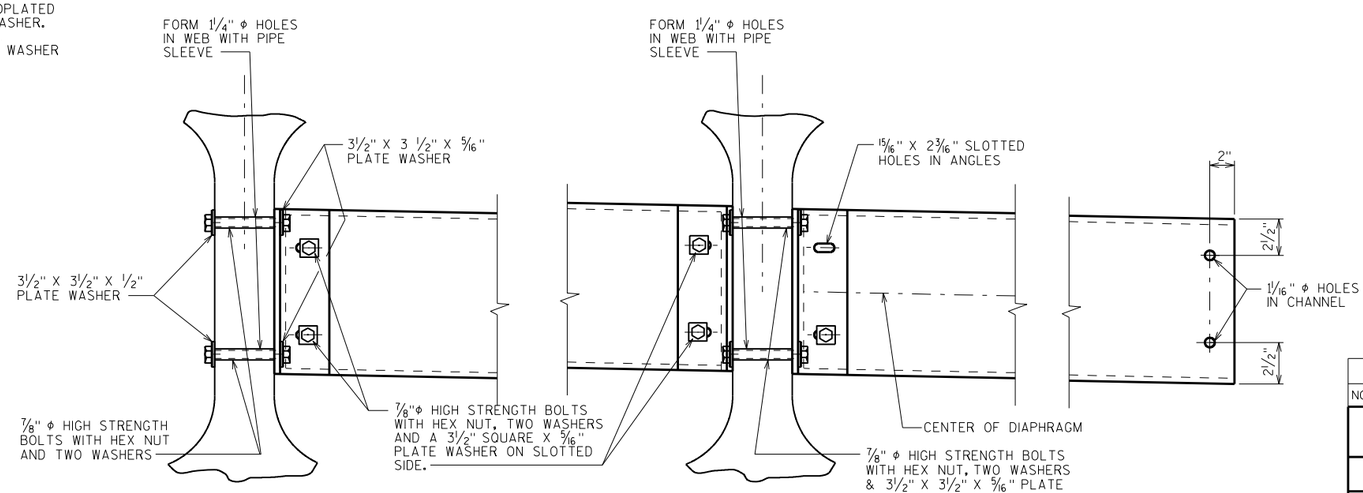


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

STEEL DIAPHRAGM

SHEET 14

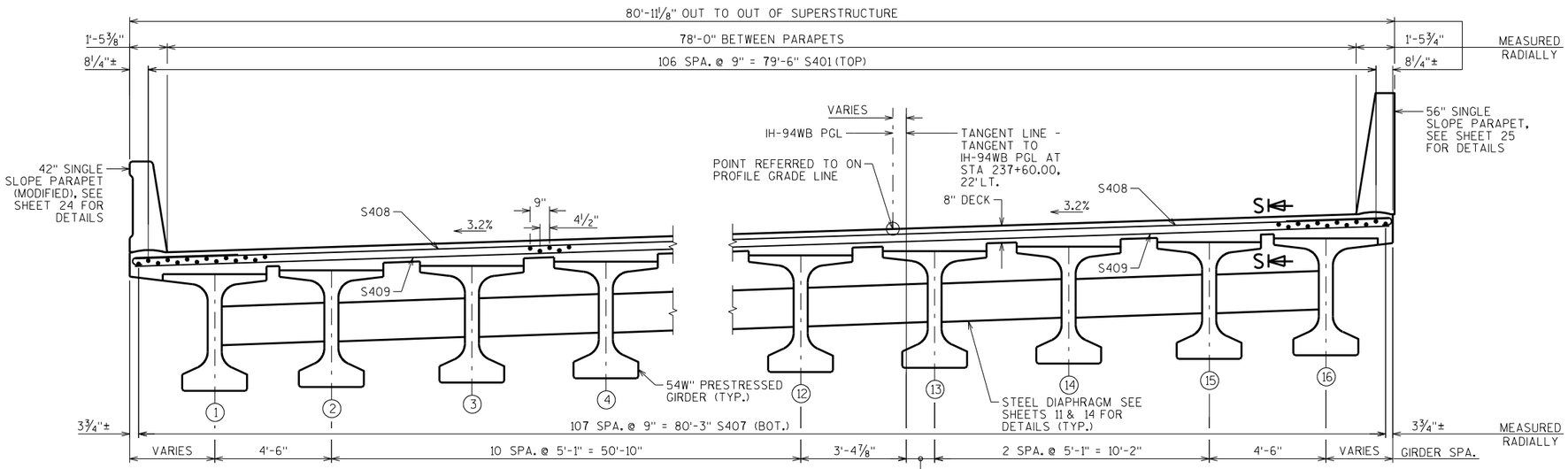
2739

GSTDIA
7-13

SCALE = 1

STATE PROJECT NUMBER

1060-33-80

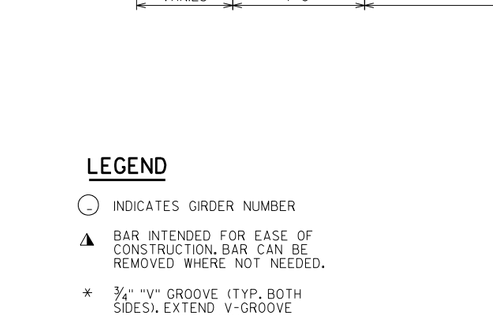


SECTION THRU BRIDGE

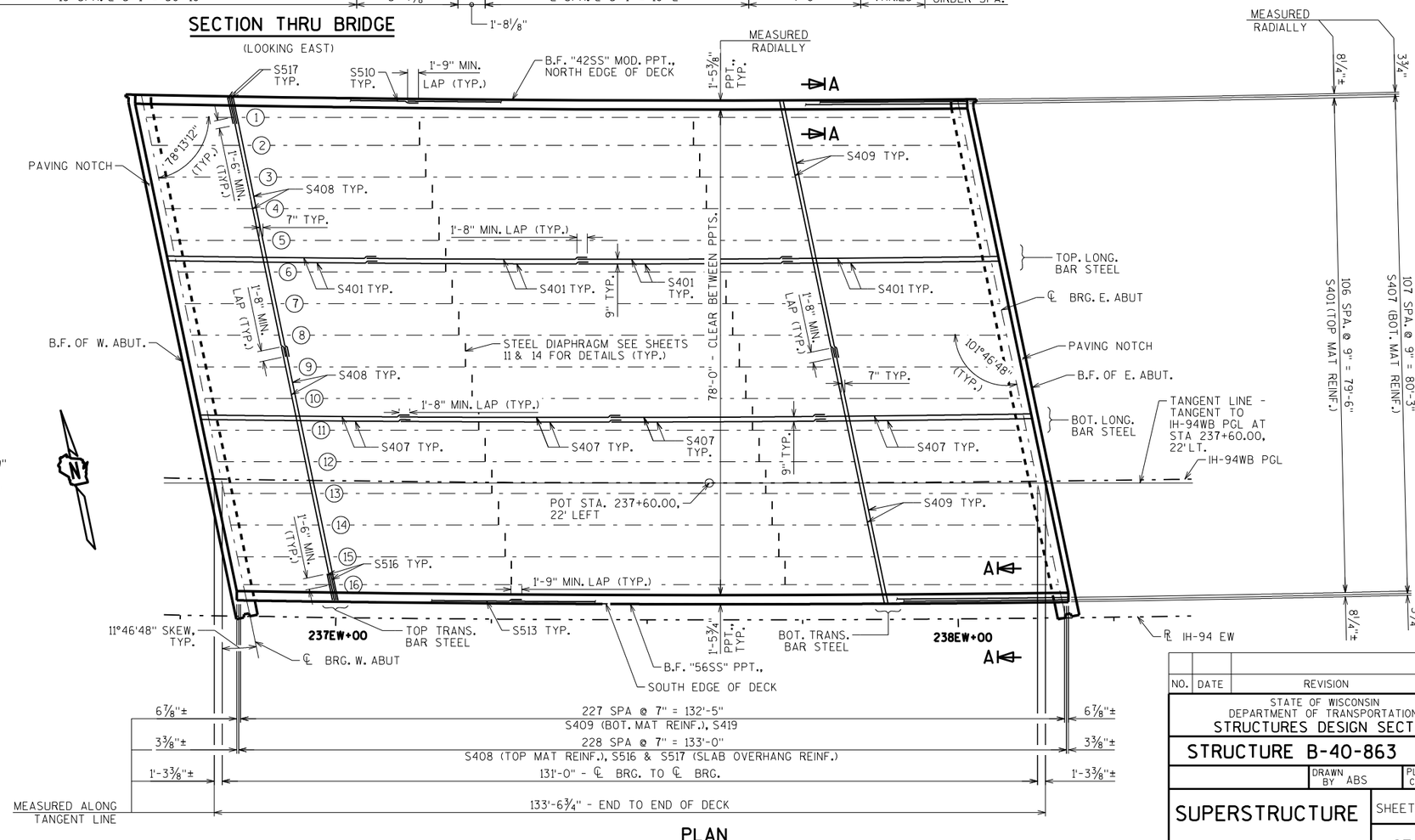
(LOOKING EAST)

LEGEND

- (_) INDICATES GIRDER NUMBER
- ▲ BAR INTENDED FOR EASE OF CONSTRUCTION. BAR CAN BE REMOVED WHERE NOT NEEDED.
- * ¾" "V" GROOVE (TYP. BOTH SIDES). EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT DIAPHRAGM



SECTION A-A



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

SUPERSTRUCTURE | SHEET 15 | 2740

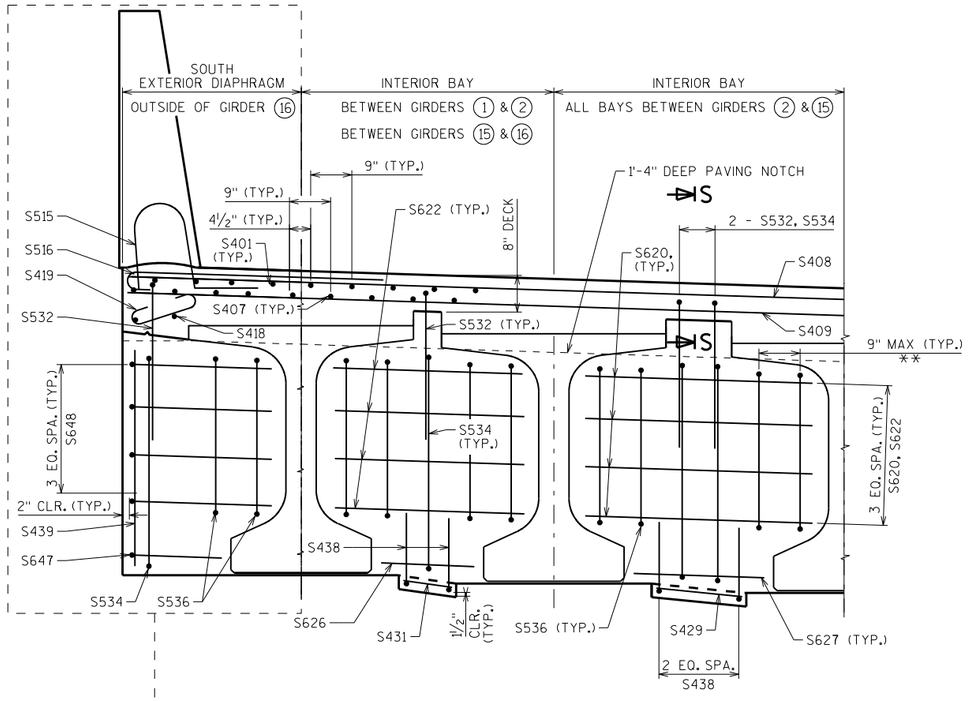
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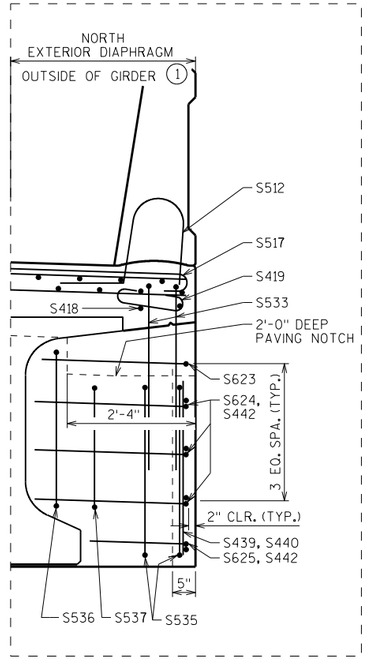
STATE PROJECT NUMBER

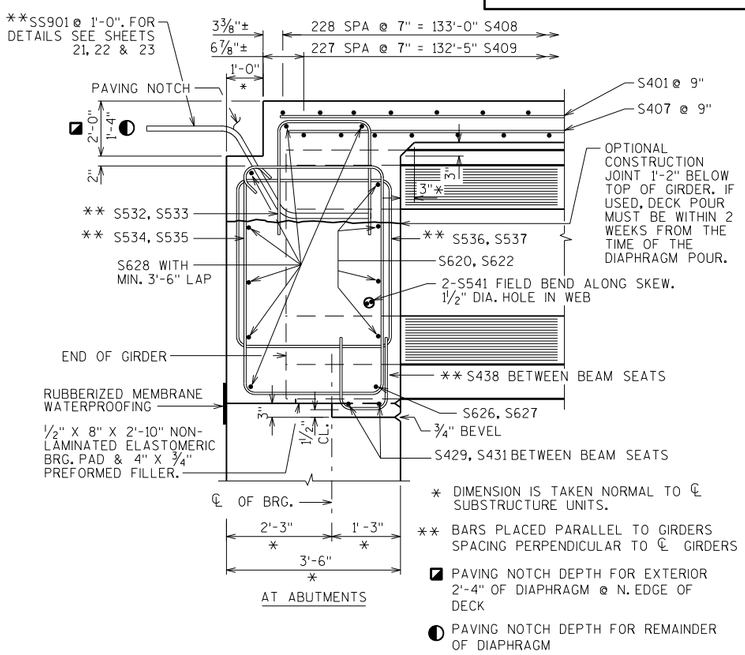
1060-33-80



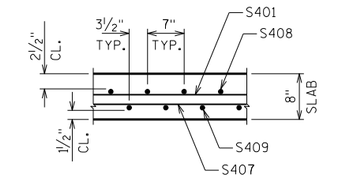
CROSS SECTION THRU WEST DIAPHRAGM

(LOOKING WEST)

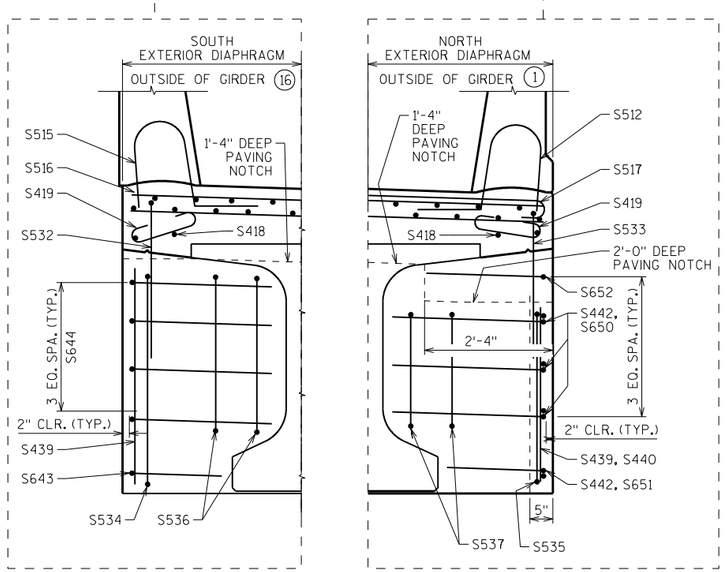




PART LONGIT. SECTION



SECTION S-S

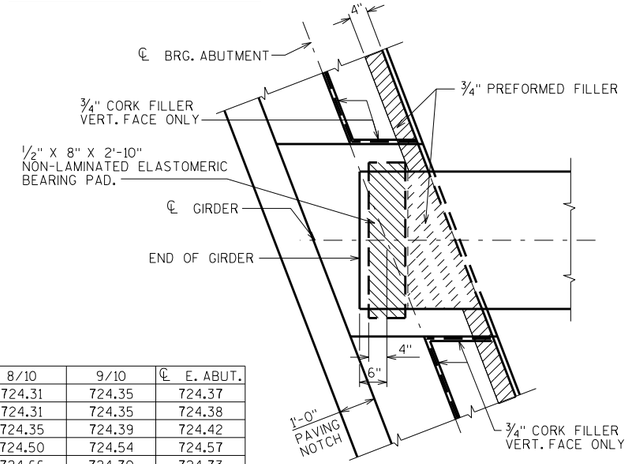


CROSS SECTION THRU EAST DIAPHRAGM

(LOOKING WEST)
ALL INTERIOR BAYS SIMILAR TO WEST DIAPHRAGM

TOP OF DECK ELEVATIONS

GIRDER	℄ W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ E. ABUT.
N EOD	723.76	723.85	723.94	724.02	724.09	724.16	724.21	724.26	724.31	724.35	724.37
N F.L.	723.76	723.85	723.94	724.02	724.09	724.16	724.22	724.27	724.31	724.35	724.38
GIRDER 1	723.83	723.92	724.00	724.07	724.14	724.20	724.26	724.31	724.35	724.39	724.42
GIRDER 2	723.98	724.07	724.15	724.22	724.29	724.35	724.41	724.46	724.50	724.54	724.57
GIRDER 3	724.15	724.24	724.32	724.39	724.46	724.52	724.57	724.62	724.66	724.70	724.73
GIRDER 4	724.32	724.41	724.49	724.56	724.62	724.68	724.74	724.79	724.83	724.87	724.90
GIRDER 5	724.49	724.58	724.66	724.73	724.79	724.85	724.91	724.95	725.00	725.03	725.06
GIRDER 6	724.66	724.75	724.82	724.90	724.96	725.02	725.07	725.12	725.16	725.20	725.23
GIRDER 7	724.84	724.92	724.99	725.06	725.13	725.19	725.24	725.29	725.33	725.36	725.39
GIRDER 8	725.01	725.09	725.16	725.23	725.30	725.35	725.41	725.45	725.49	725.53	725.56
GIRDER 9	725.19	725.27	725.34	725.41	725.47	725.53	725.58	725.62	725.66	725.69	725.72
GIRDER 10	725.35	725.42	725.50	725.56	725.62	725.68	725.73	725.77	725.81	725.84	725.87
GIRDER 11	725.52	725.59	725.67	725.74	725.80	725.86	725.91	725.95	725.99	726.02	726.05
GIRDER 12	725.69	725.76	725.84	725.91	725.97	726.02	726.07	726.12	726.16	726.19	726.22
PGL	725.78	725.86	725.94	726.01	726.08	726.13	726.18	726.23	726.26	726.29	726.32
GIRDER 13	725.85	725.93	726.01	726.07	726.13	726.19	726.24	726.28	726.32	726.35	726.38
GIRDER 14	726.02	726.10	726.17	726.24	726.30	726.36	726.41	726.45	726.49	726.52	726.54
GIRDER 15	726.19	726.27	726.34	726.41	726.47	726.52	726.57	726.61	726.65	726.68	726.71
GIRDER 16	726.34	726.42	726.49	726.56	726.62	726.67	726.72	726.76	726.80	726.83	726.85
S F.L.	726.38	726.46	726.54	726.61	726.67	726.72	726.77	726.81	726.85	726.88	726.90
S EOD	726.38	726.46	726.54	726.61	726.67	726.73	726.77	726.82	726.85	726.88	726.90



BEARING PAD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

SUPERSTRUCTURE DETAILS

SHEET 16

2741

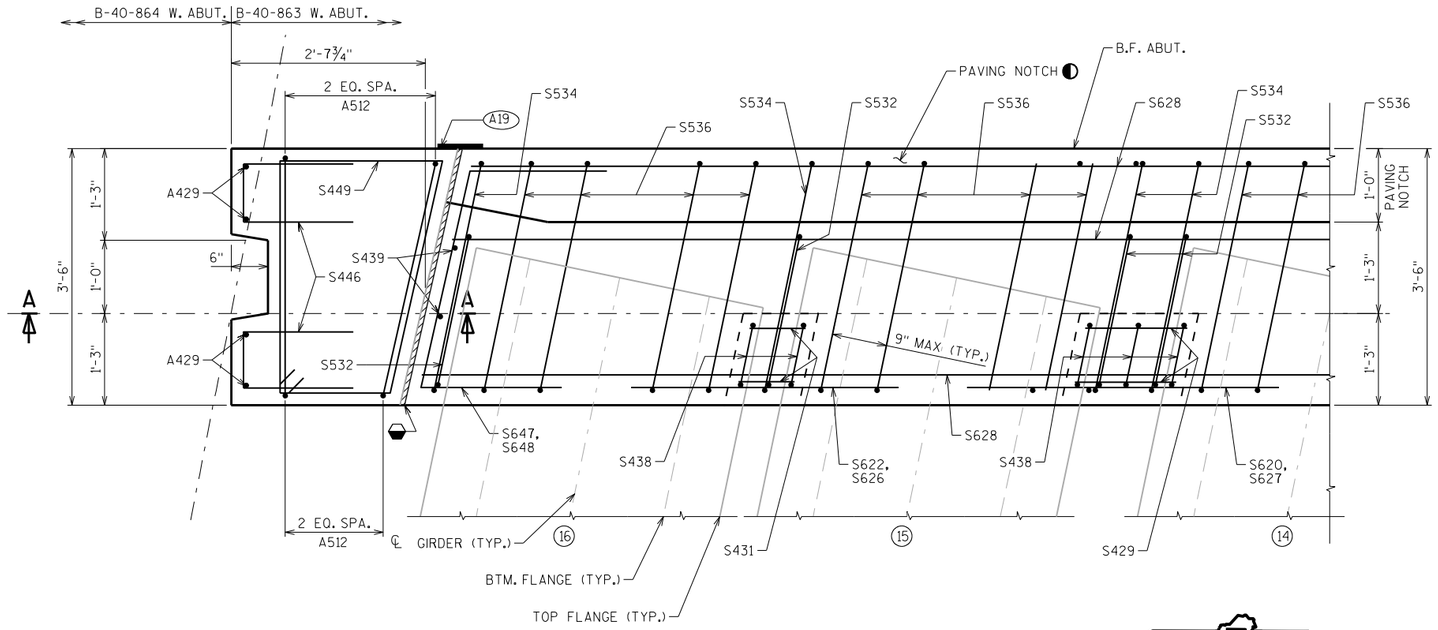
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8

STATE PROJECT NUMBER

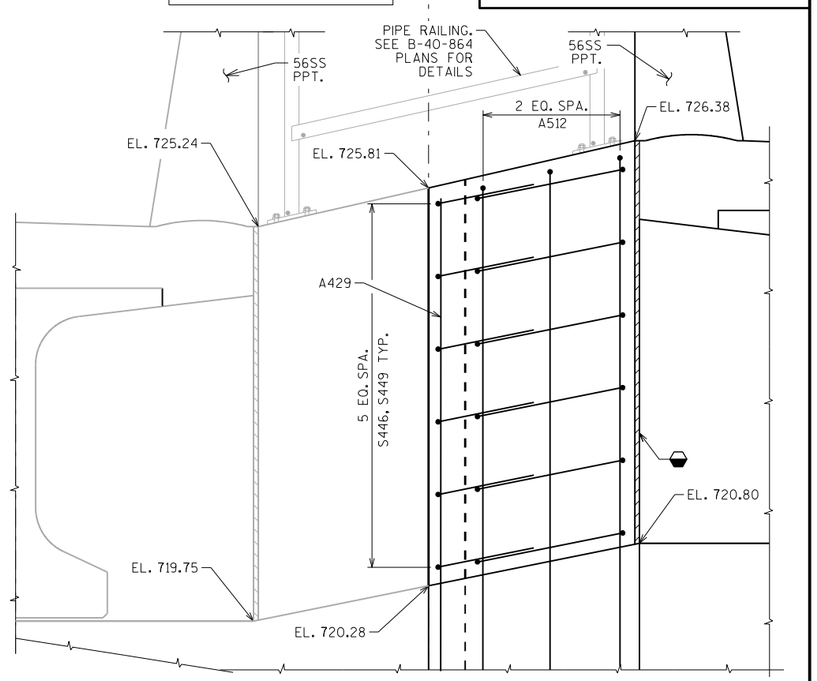
1060-33-80



PLAN VIEW OF DIAPHRAGM

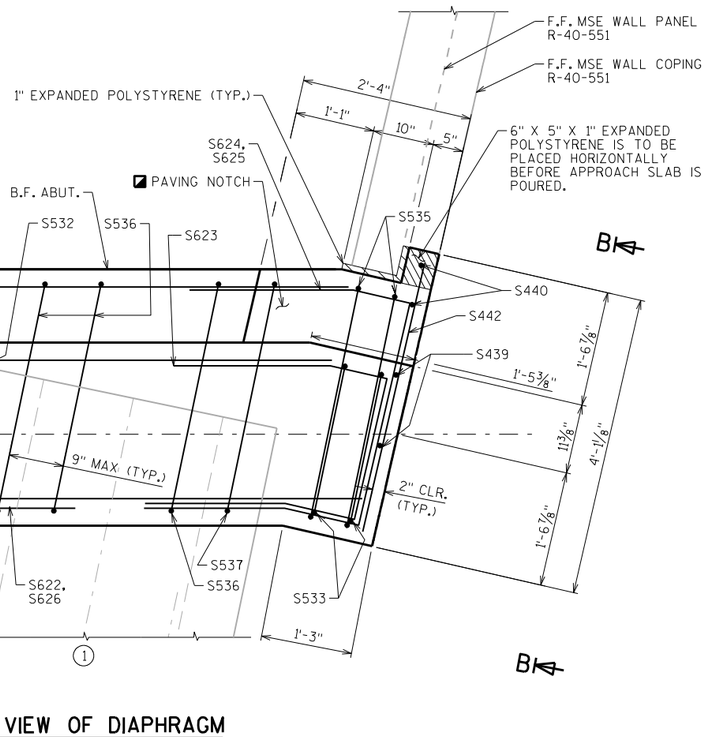
(SHOWING SOUTH END OF DIAPHRAGM)

ALL ELEVATIONS MEASURED ALONG ℄ BRG. OF ABUTMENT



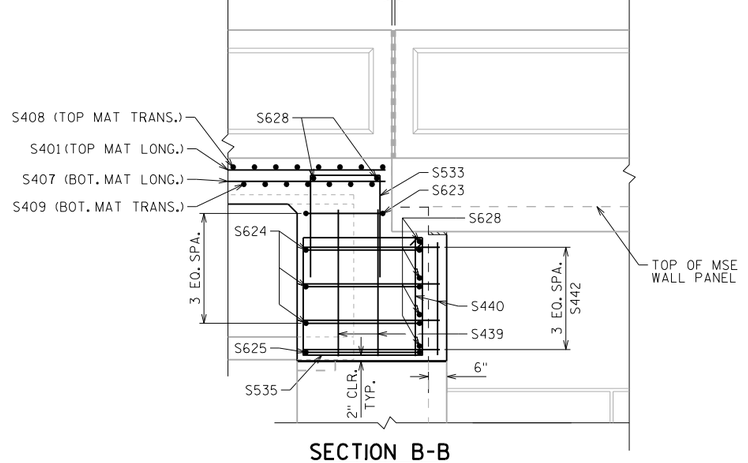
SECTION A-A

- ¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)
- PAVING NOTCH DEPTH = 2'-0"
- PAVING NOTCH DEPTH = 1'-4"



PLAN VIEW OF DIAPHRAGM

(SHOWING NORTH END OF DIAPHRAGM)



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

WEST DIAPHRAGM DETAILS

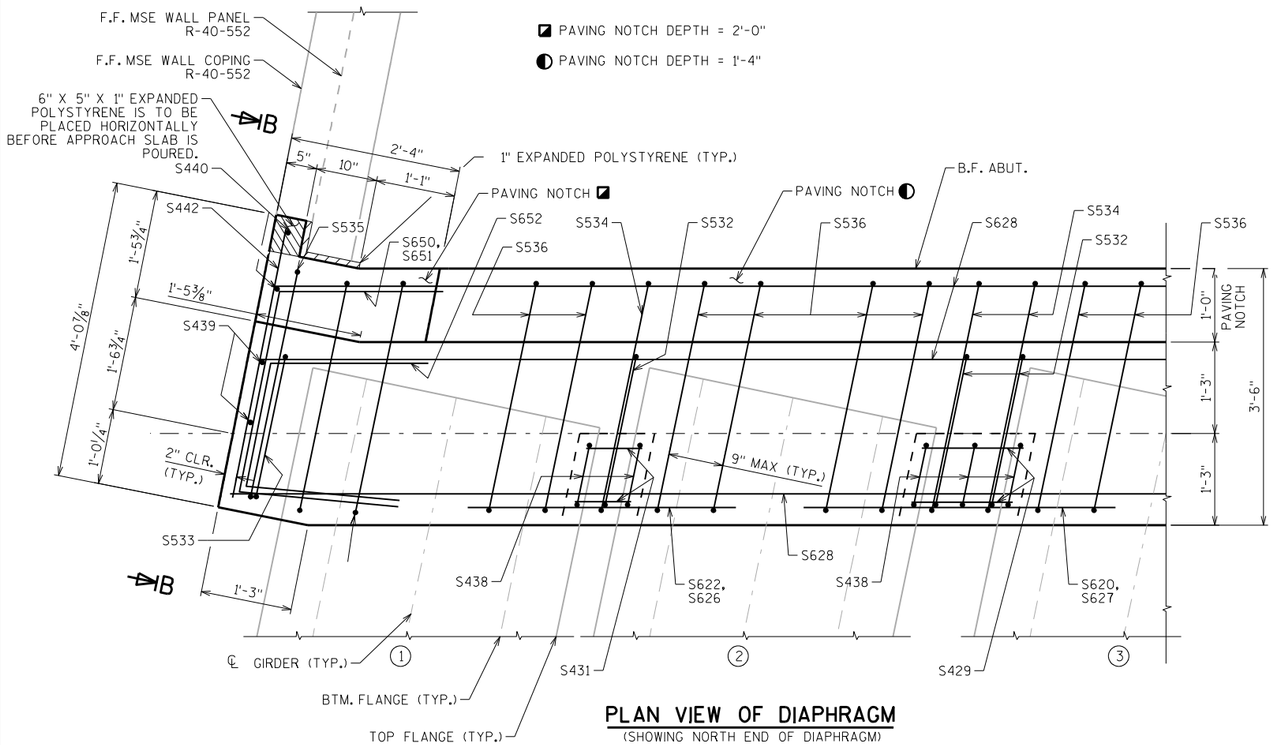
SHEET 17

2742

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STATE PROJECT NUMBER

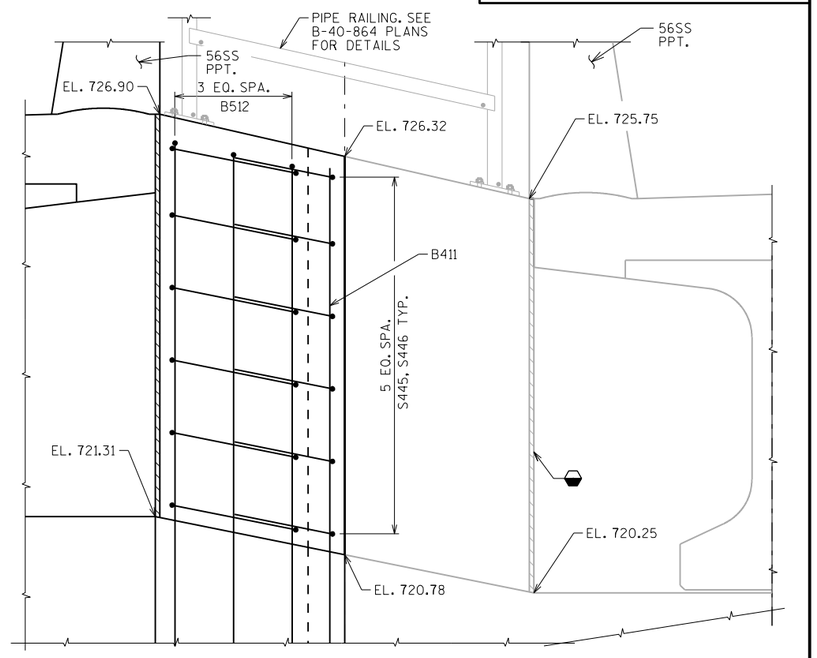
1060-33-80



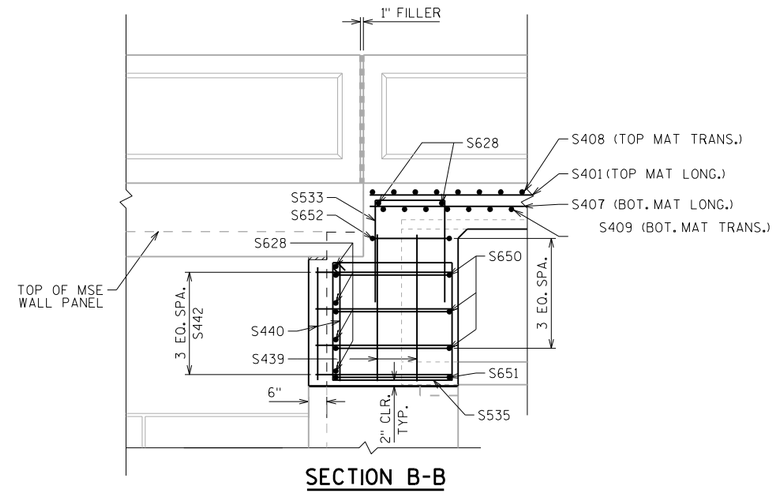
PLAN VIEW OF DIAPHRAGM
(SHOWING NORTH END OF DIAPHRAGM)

PLAN VIEW OF DIAPHRAGM
(SHOWING SOUTH END OF DIAPHRAGM)

ALL ELEVATIONS MEASURED ALONG ℄ BRG. OF ABUTMENT



SECTION A-A



SECTION B-B

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

EAST DIAPHRAGM DETAILS

SHEET 18

2743

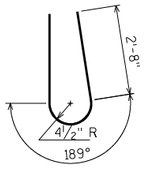
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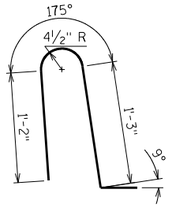
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STATE PROJECT NUMBER

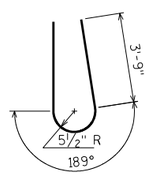
1060-33-80



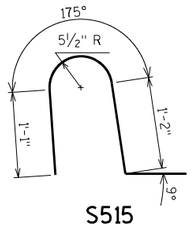
S511



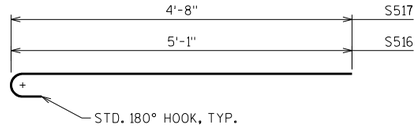
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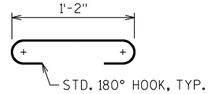
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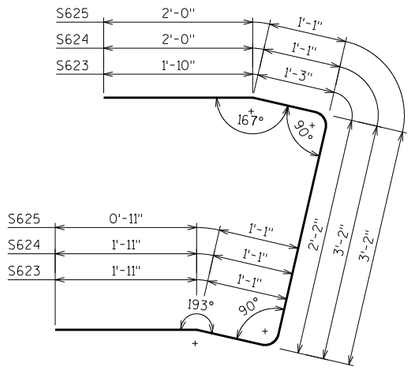
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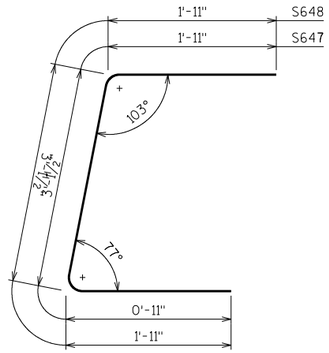
S516, S517



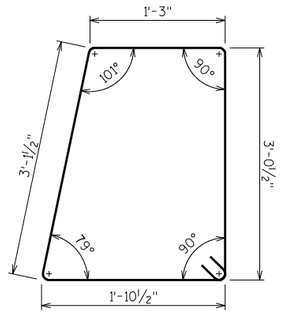
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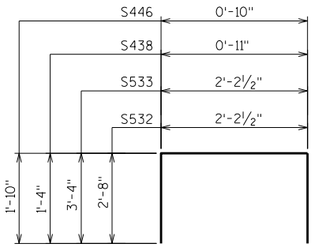
S623, S624, S625



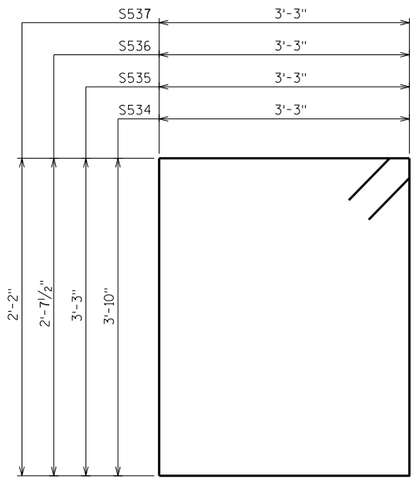
S647, S648



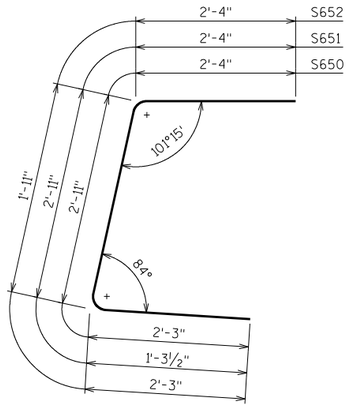
S445



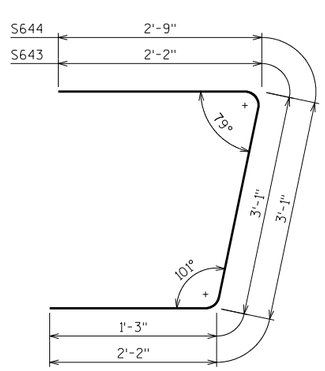
S532, S533, S438, S446



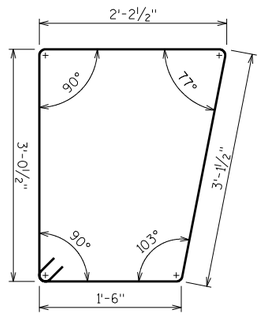
S534, S535, S536, S537



S650, S651, S652



S643, S644



S449

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	428	34'-7"			LONGITUDINAL - TOP
S402		--	--			NOT USED
S403		--	--			NOT USED
S404		--	--			NOT USED
S405		--	--			NOT USED
S406		--	--			NOT USED
S407	X	440	34'-7"			LONGITUDINAL - BOTTOM
S408	X	458	42'-2"			TRANSVERSE - TOP
S409	X	456	42'-2"			TRANSVERSE - BOTTOM
S510	X	24	45'-8"			42SS PARAPET - HORIZ.
S511	X	200	6'-8"	X		42SS PARAPET - VERT.
S512	X	200	4'-5"	X		42SS PARAPET - VERT.
S513	X	24	45'-8"			56SS PARAPET - HORIZ.
S514	X	200	9'-1"	X		56SS PARAPET - VERT.
S515	X	200	4'-6"	X		56SS PARAPET - VERT
S516	X	229	5'-8"	X		TRANSVERSE - TOP - AT S. EDGE OF DECK
S517	X	229	5'-3"	X		TRANSVERSE - TOP - AT N. EDGE OF DECK
S418	X	8	34'-7"			LONGITUDINAL - BOT. - AT EDGES OF DECK
S419	X	456	2'-2"	X		TRANS. - BOT. - AT EDGES OF DECK
S620	X	104	4'-3"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S621		--	--			NOT USED
S622	X	16	3'-8"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S623	X	1	7'-11"	X		W. ABUT. DIAPH. - HORIZ. - N. END
S624	X	3	9'-0"	X		W. ABUT. DIAPH. - HORIZ. - N. END
S625	X	1	8'-0"	X		W. ABUT. DIAPH. - HORIZ. - N. END
S626	X	4	1'-8"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S627	X	26	2'-3"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S628	X	28	43'-1"			ABUT. DIAPH. - HORIZ. - B.F.
S429	X	52	1'-3"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S430		--	--			NOT USED
S431	X	8	0'-9"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S532	X	58	7'-4"	X		ABUT. DIAPH. - STIRRUP
S533	X	3	8'-8"	X		ABUT. DIAPH. - STIRRUP - N. END
S534	X	58	14'-10"	X		ABUT. DIAPH. - STIRRUP
S535	X	3	13'-8"	X		ABUT. DIAPH. - STIRRUP - N. END
S536	X	125	12'-5"	X		ABUT. DIAPH. - STIRRUP
S537	X	3	11'-6"	X		ABUT. DIAPH. - STIRRUP - N. END
S438	X	86	3'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIRDERS
S439	X	8	4'-0"			ABUT. DIAPH. - VERT. - N. & S. ENDS
S440	X	4	3'-3"			ABUT. DIAPH. - VERT. - S. END
S541	X	64	6'-0"			ABUT. DIAPH. - THRU GIRDERS
S442	X	8	3'-9"			ABUT. DIAPH. - HORIZ. - END
S643	X	1	6'-4"	X		E. ABUT. DIAPH. - HORIZ. - S. END
S644	X	3	7'-4"	X		E. ABUT. DIAPH. - HORIZ. - S. END
S445	X	6	10'-0"	X		E. ABUT. DIAPH. - TIES - KEYED END
S446	X	12	3'-8"	X		ABUT. DIAPH. - HORIZ. - KEYED END
S647	X	1	5'-9"	X		W. ABUT. DIAPH. - HORIZ. - S. END
S648	X	3	6'-9"	X		W. ABUT. DIAPH. - HORIZ. - S. END
S449	X	6	10'-7"	X		W. ABUT. DIAPH. - TIES - KEYED END
S650	X	3	7'-4"	X		E. ABUT. DIAPH. - HORIZ. - N. END
S651	X	1	6'-4"	X		E. ABUT. DIAPH. - HORIZ. - N. END
S652	X	1	6'-4"	X		E. ABUT. DIAPH. - HORIZ. - N. END

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

SUPERSTRUCTURE REBAR DETAILS

SHEET 19

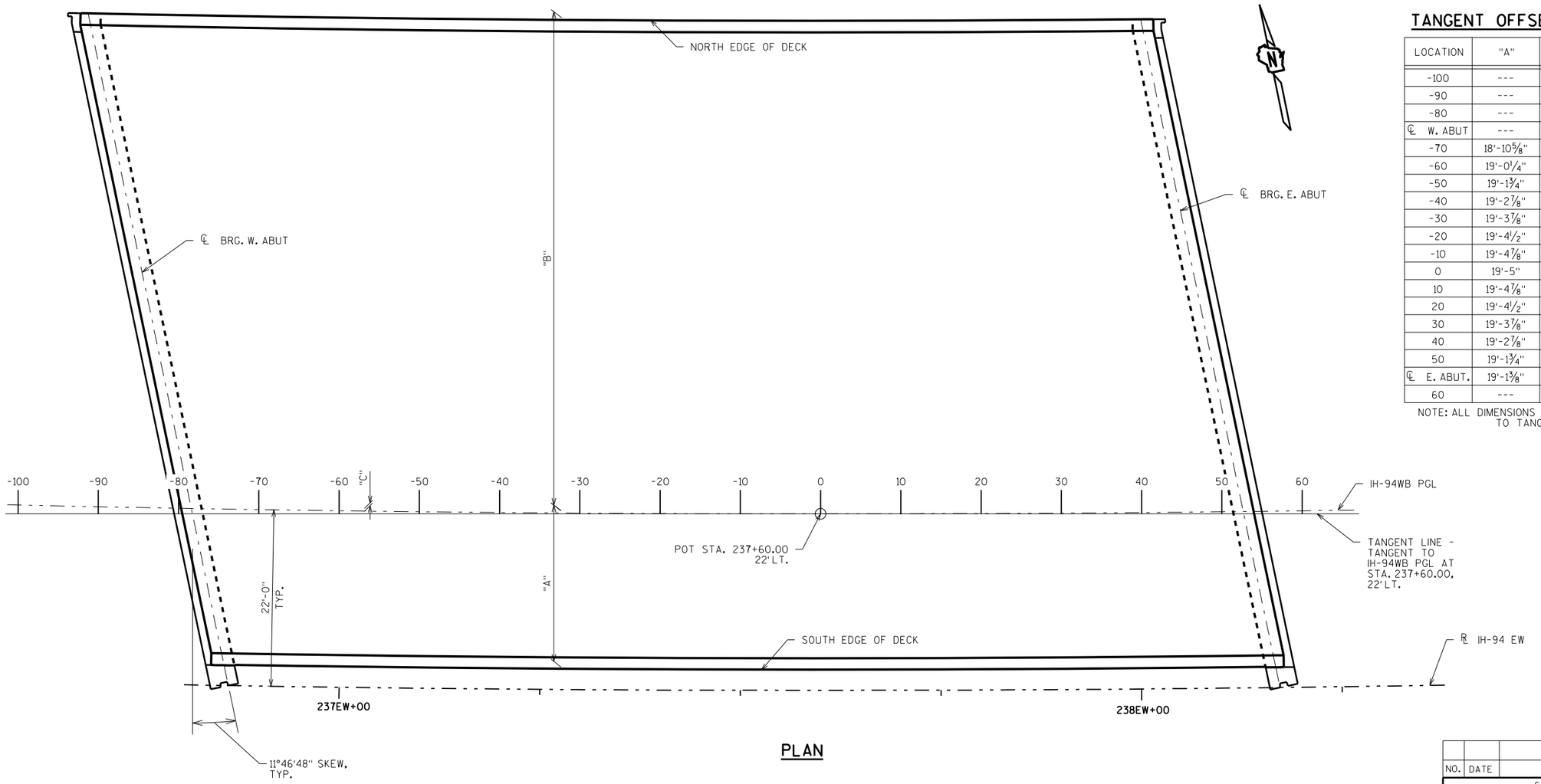
2744

SCALE = 4

8

8

STATE PROJECT NUMBER
1060-33-80



PLAN

TANGENT OFFSET DIMENSIONS

LOCATION	"A"	"B"	"C"
-100	---	---	1'-1 1/8"
-90	---	62'-4 1/8"	10 5/8"
-80	---	62'-1 7/8"	8 3/8"
℄ W. ABUT	---	62'-1 1/2"	8"
-70	18'-10 5/8"	61'-11 7/8"	6 3/8"
-60	19'-0 1/4"	61'-10 1/8"	4 3/4"
-50	19'-1 3/4"	61'-8 3/4"	3 1/4"
-40	19'-2 7/8"	61'-7 1/2"	2 1/8"
-30	19'-3 7/8"	61'-6 5/8"	1 1/8"
-20	19'-4 1/2"	61'-5 7/8"	0 1/2"
-10	19'-4 7/8"	61'-5 1/2"	0 1/8"
0	19'-5"	61'-5 3/8"	0"
10	19'-4 7/8"	61'-5 1/2"	0 1/8"
20	19'-4 1/2"	61'-5 7/8"	0 1/2"
30	19'-3 7/8"	61'-6 5/8"	1 1/8"
40	19'-2 7/8"	61'-7 1/2"	2 1/8"
50	19'-1 3/4"	---	3 1/4"
℄ E. ABUT.	19'-1 3/8"	---	3 5/8"
60	---	---	4 3/4"

NOTE: ALL DIMENSIONS ARE MEASURED NORMAL TO TANGENT LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

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SUPERSTRUCTURE TANGENT OFFSET

SHEET 20

2745

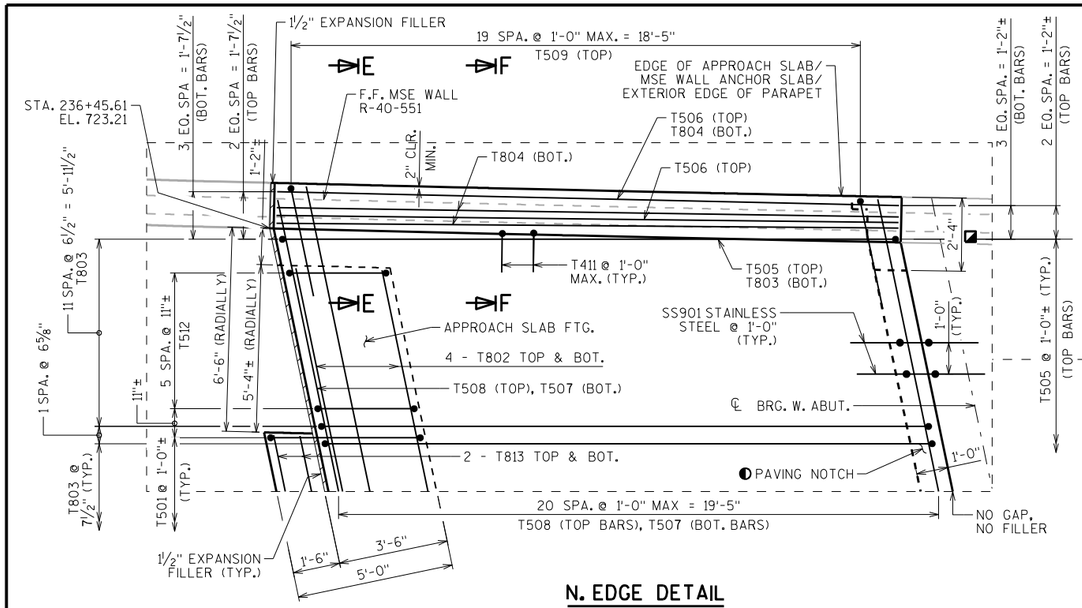
SCALE = 7

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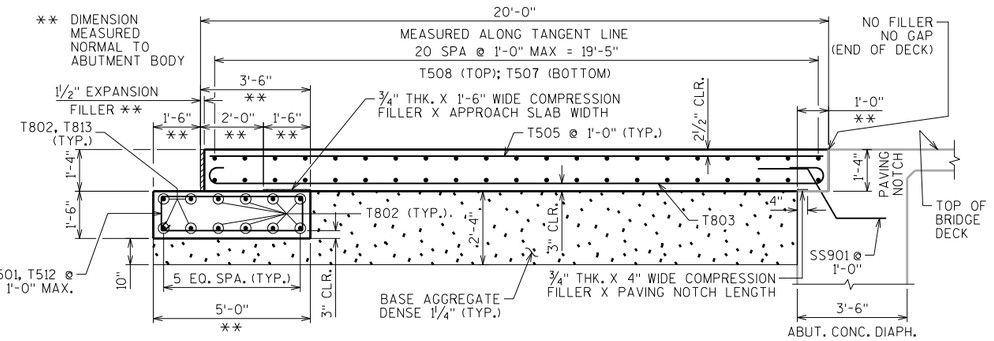
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STATE PROJECT NUMBER

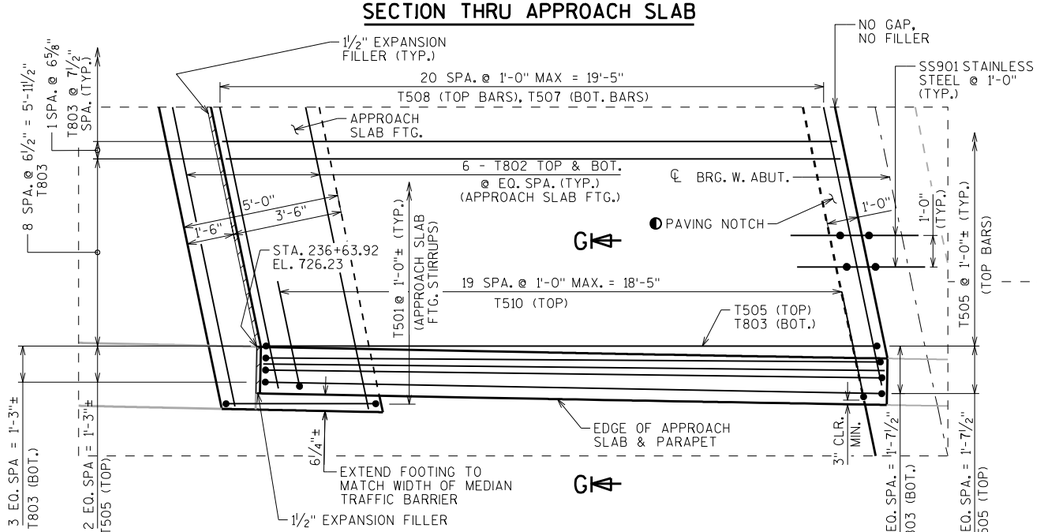
1060-33-80



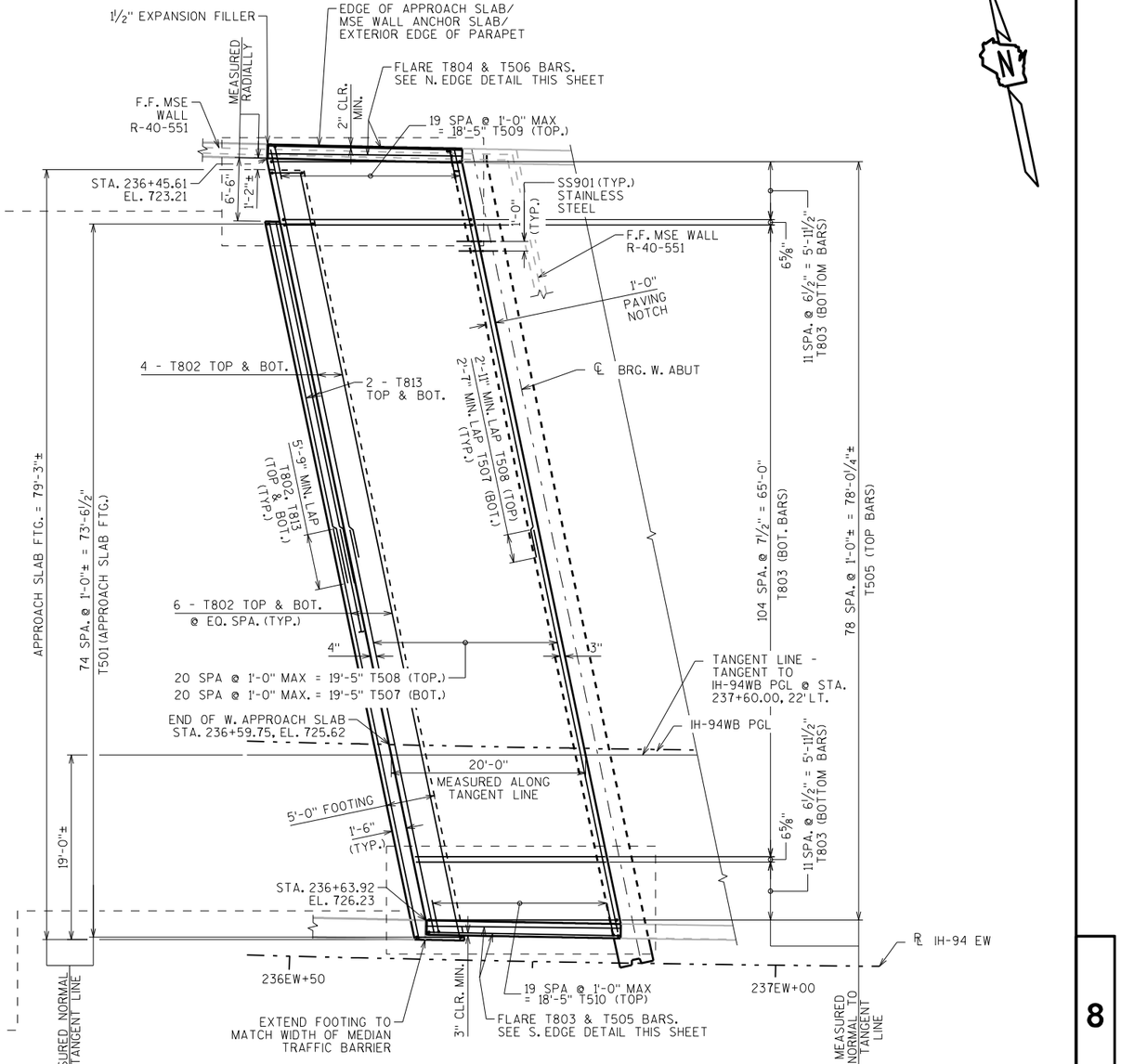
N. EDGE DETAIL



SECTION THRU APPROACH SLAB



S. EDGE DETAIL



PLAN

NOTE: FOR SECTIONS E-E, F-F, AND G-G SEE SHEET 23

◐ PAVING NOTCH DEPTH = 1'-4"

◪ PAVING NOTCH DEPTH = 2'-0"
(SS901 TO BE SPACED @ 6" IN THIS REGION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

WEST STRUCTURAL APPROACH SLAB

SHEET 21

2746

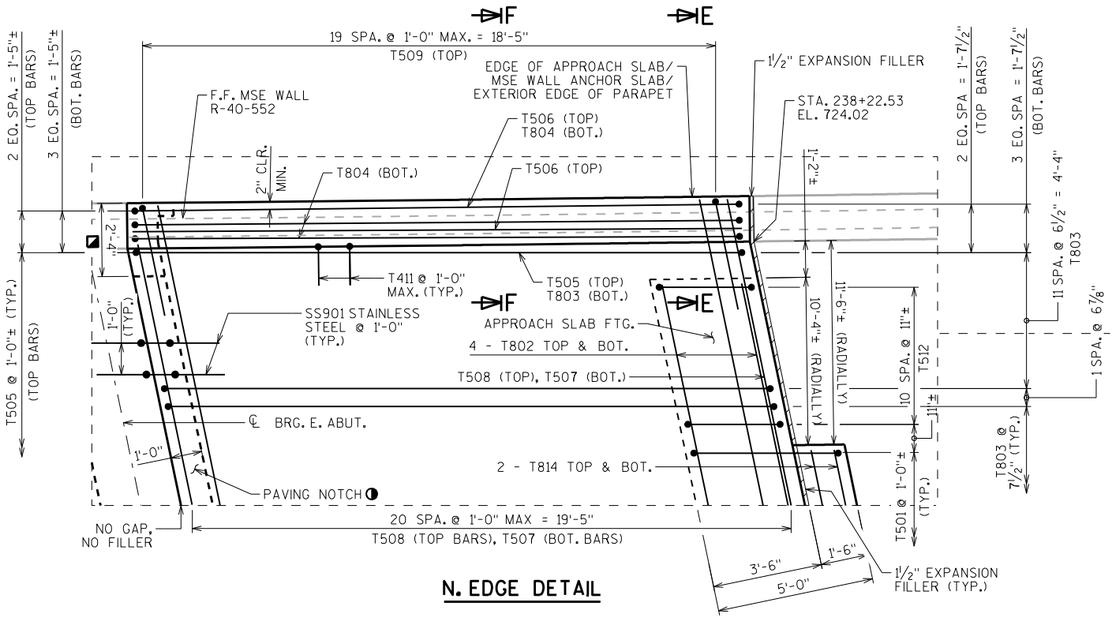
SCALE = 7

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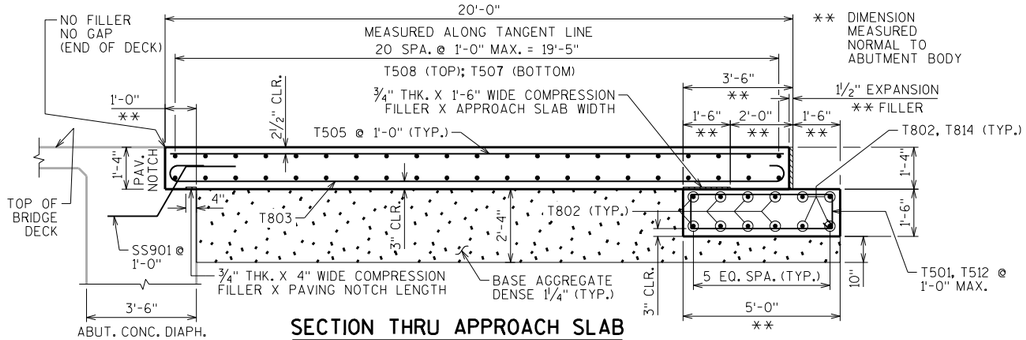
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STATE PROJECT NUMBER

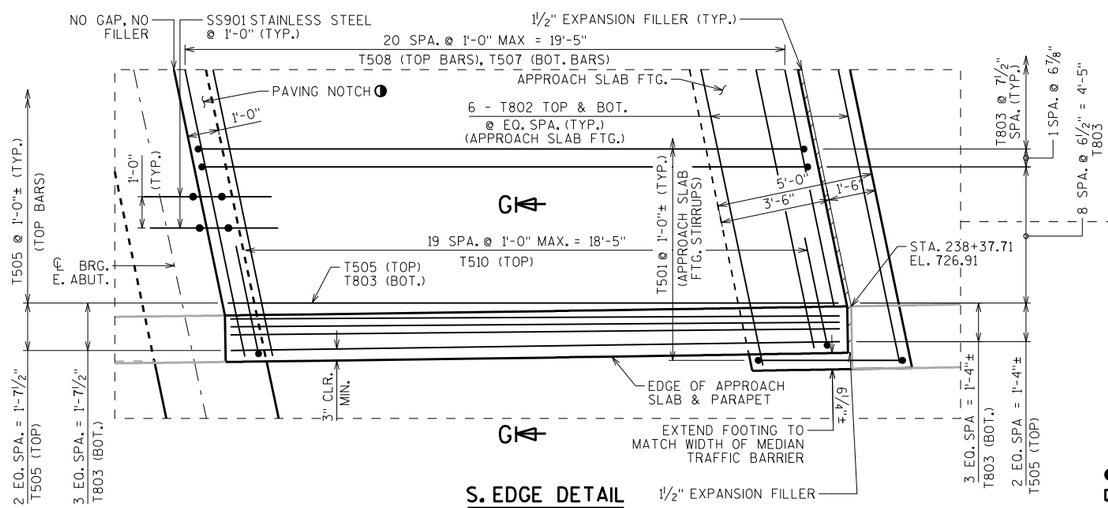
1060-33-80



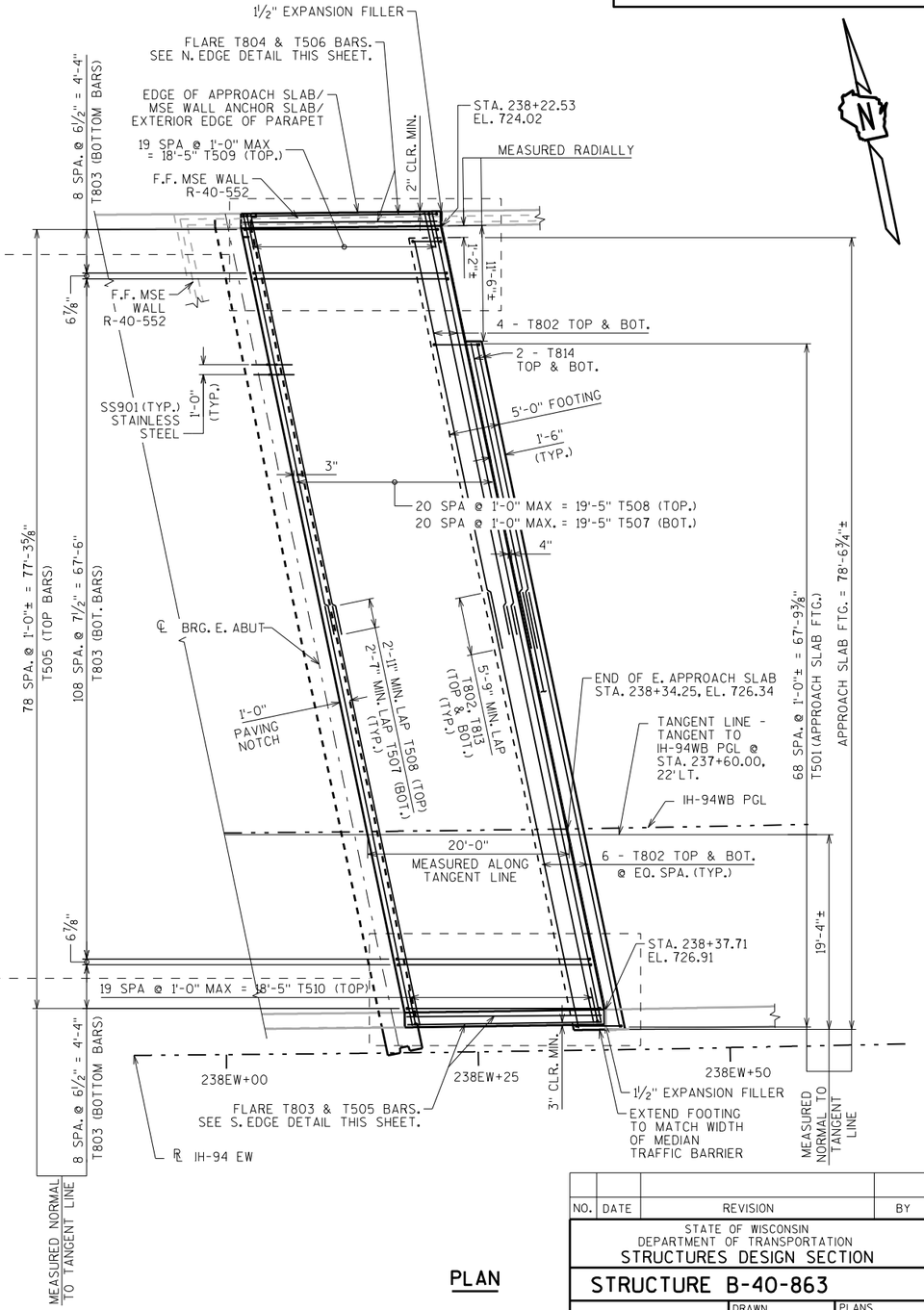
N. EDGE DETAIL



SECTION THRU APPROACH SLAB



S. EDGE DETAIL



PLAN

NOTE: FOR SECTIONS E-E, F-F, AND G-G SEE SHEET 23

◐ PAVING NOTCH DEPTH = 1'-4"

◪ PAVING NOTCH DEPTH = 2'-0"
(SS901 TO BE SPACED @ 6" IN THIS REGION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

EAST STRUCTURAL APPROACH SLAB

SHEET 22

2747

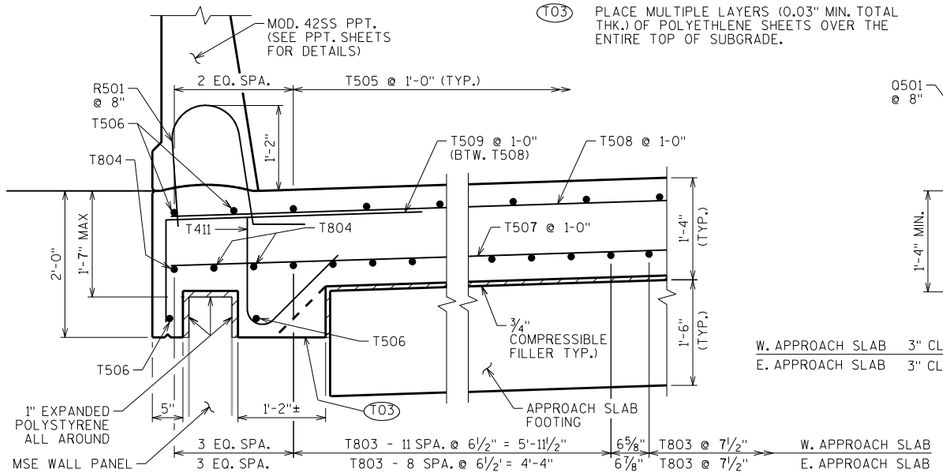
SCALE = 7

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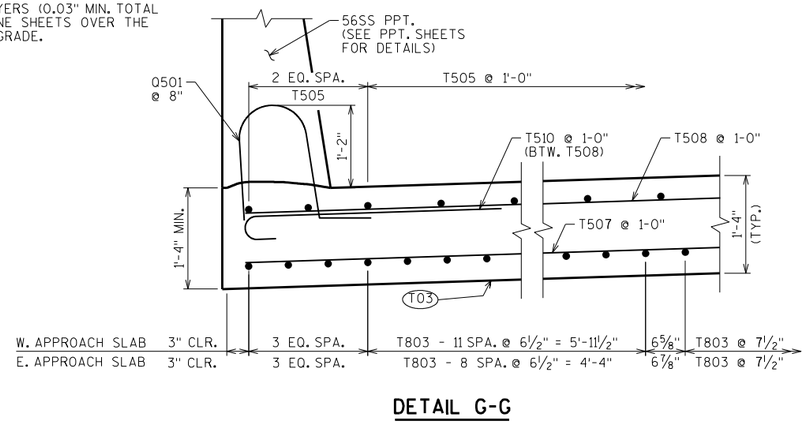
8

STATE PROJECT NUMBER
1060-33-80

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.



DETAIL E-E



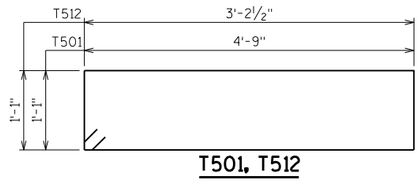
DETAIL G-G

BILL OF BARS

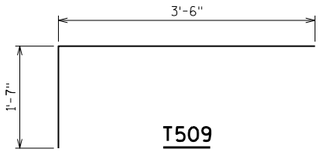
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D. WEST SLAB	NO. REQ'D. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	75	69	12'-4"	X		APPROACH SLAB FTG. - STIRRUP
T802	X	20	20	43'-2"			APPROACH SLAB FTG. - TRANS.
T803	X	132	130	21'-3"	X		APPROACH SLAB - LONG. - BOT.
T804	X	3	3	19'-5"			APPROACH SLAB - LONG. - BOT. - N. EDGE
T505	X	81	81	19'-5"			APPROACH SLAB - LONG. - TOP
T506	X	2	2	19'-5"			APPROACH SLAB - LONG. - TOP - N. EDGE
T507	X	42	42	42'-7"			APPROACH SLAB - TRANS. - BOT.
T508	X	42	42	42'-9"			APPROACH SLAB - TRANS. - TOP
T509	X	20	20	5'-0"	X		APPROACH SLAB - TRANS. - TOP - S. EDGE
T510	X	20	20	4'-1"	X		APPROACH SLAB - TRANS. - TOP - N. EDGE
T411	X	20	20	3'-0"	X		APPROACH SLAB - TRANS. - S. EDGE
T512	X	6	11	9'-3"	X		APPROACH SLAB FTG. - STIRRUP - NOTCH
T813	X	4	--	38'-0"			APPROACH SLAB FTG. - TRANS. - W. NOTCH
T814	X	--	4	30'-10"			APPROACH SLAB FTG. - TRANS. - E. NOTCH

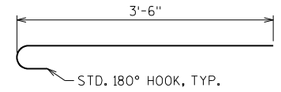
BAR MARK	COAT	NO. REQ'D. WEST SLAB	NO. REQ'D. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
STAINLESS STEEL → SS901		80	81	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB



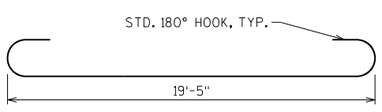
T501, T512



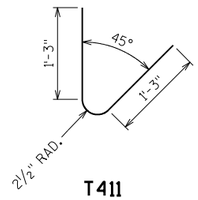
T509



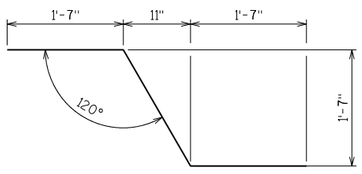
T510



T803

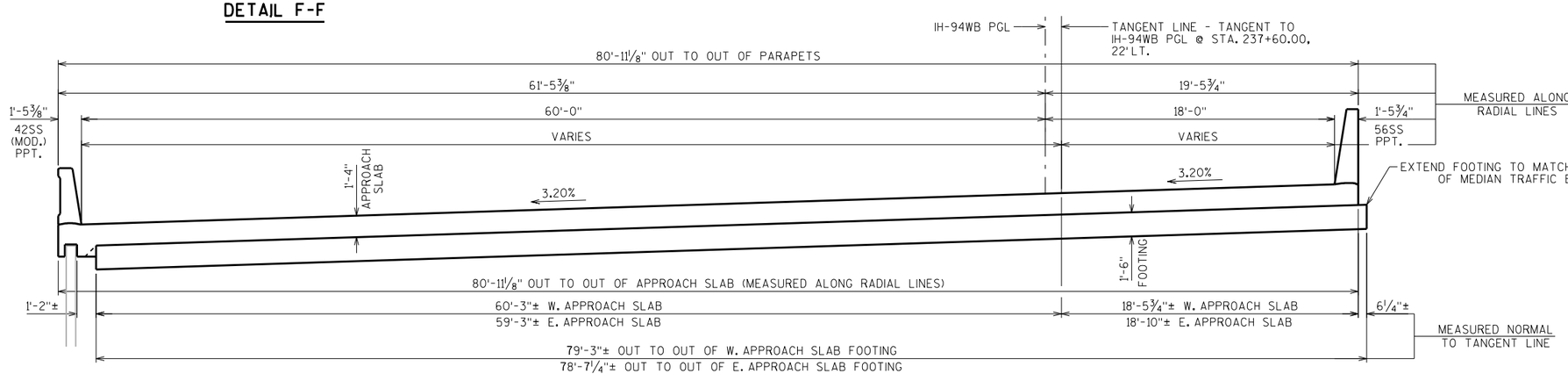


T411



SS901

DETAIL F-F



CROSS SECTION THRU ROADWAY - LOOKING EAST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

STRUCTURAL APPROACH SLAB DETAILS

SHEET 23

2748

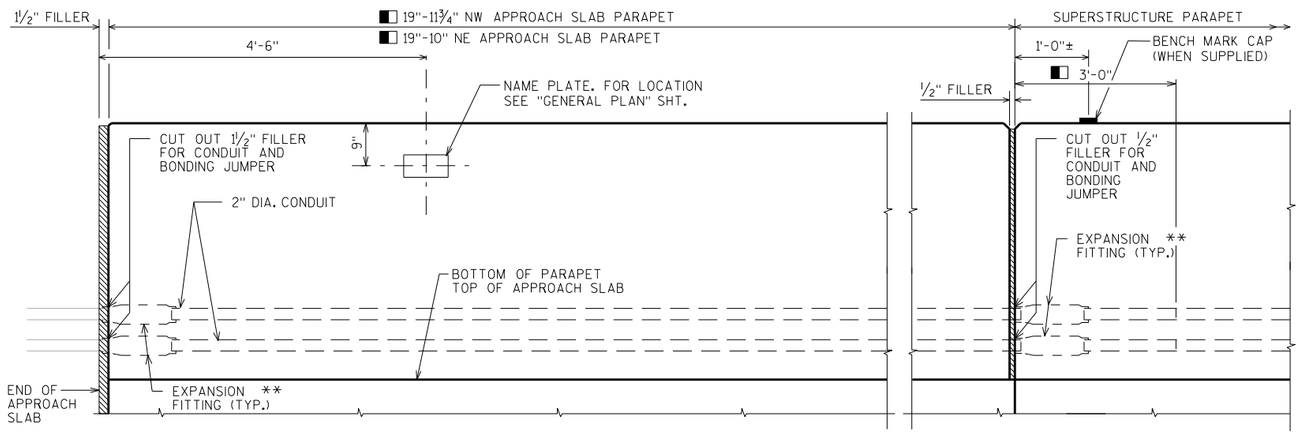
8

8

SCALE = 4

STATE PROJECT NUMBER

1060-33-80



INSIDE ELEVATION

(LOOKING NORTH)
(SHOWING NW CORNER)

SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING AND BE APPROVED BY THE ENGINEER.

NOTES

BID ITEMS SHALL BE:

"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

** APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING: O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

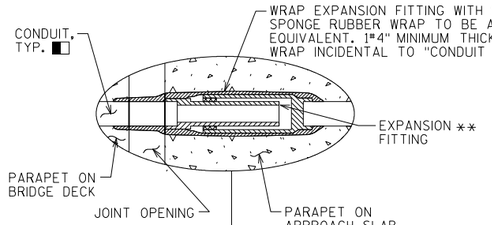
EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

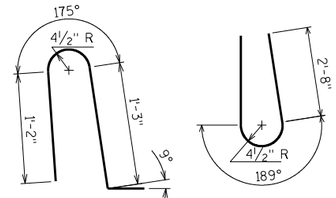
WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

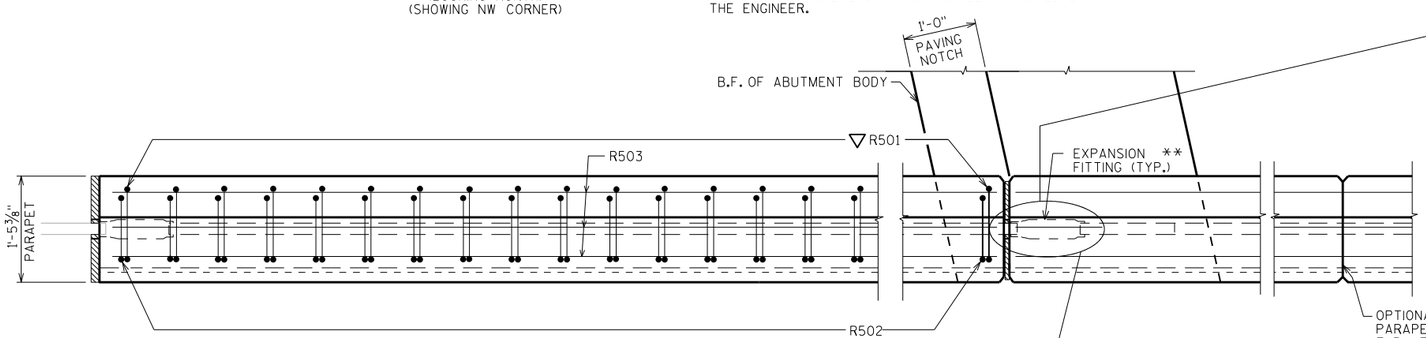
BILL OF BARS

FOR APPROACH SLAB PARAPETS

BAR MARK	COAT	W. APPR.	E. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	30	30	4-5	X		PARAPET VERT.
R502	X	30	30	6-7	X		PARAPET VERT.
R503	X	8	8	19-6			PARAPET HORIZ.

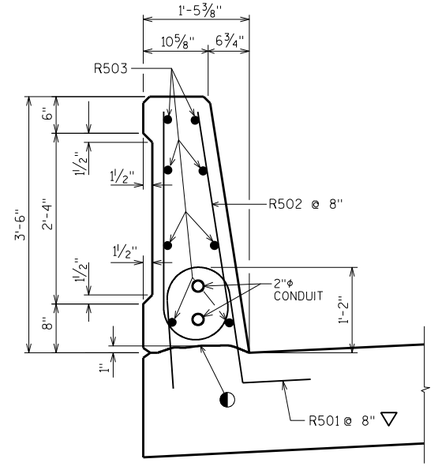


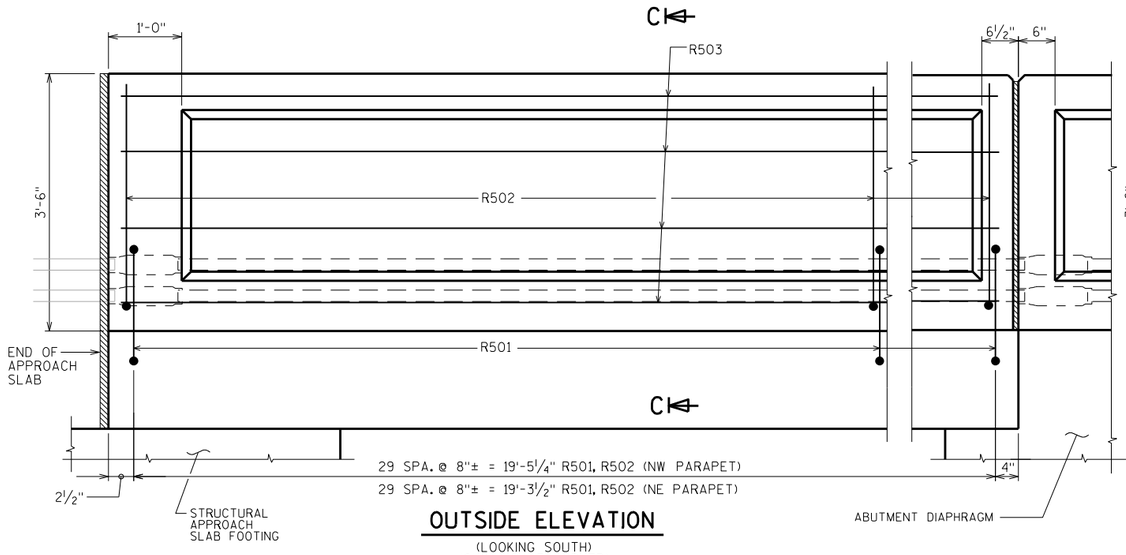




PLAN

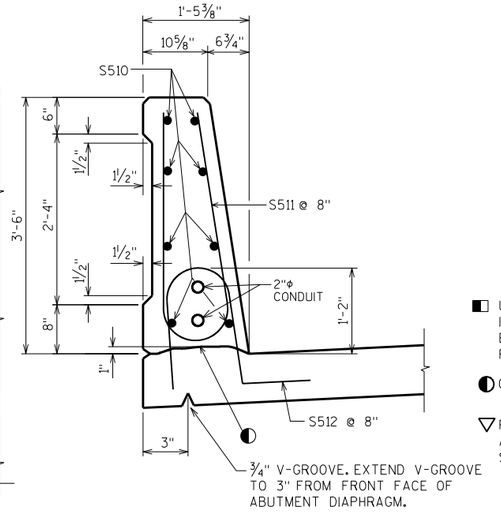
(SHOWING NE CORNER)





OUTSIDE ELEVATION

(LOOKING SOUTH)
(SHOWING NE CORNER)



SECTION THRU PARAPET ON BRIDGE

- USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND FOR ENTIRE LENGTH OF APPROACH SLAB PARAPETS.
- ◐ CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH STEEL BEFORE APPROACH SLAB IS POURED.

SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

SINGLE SLOPE PARAPET "42SS" (MODIFIED)

SHEET 24

2749

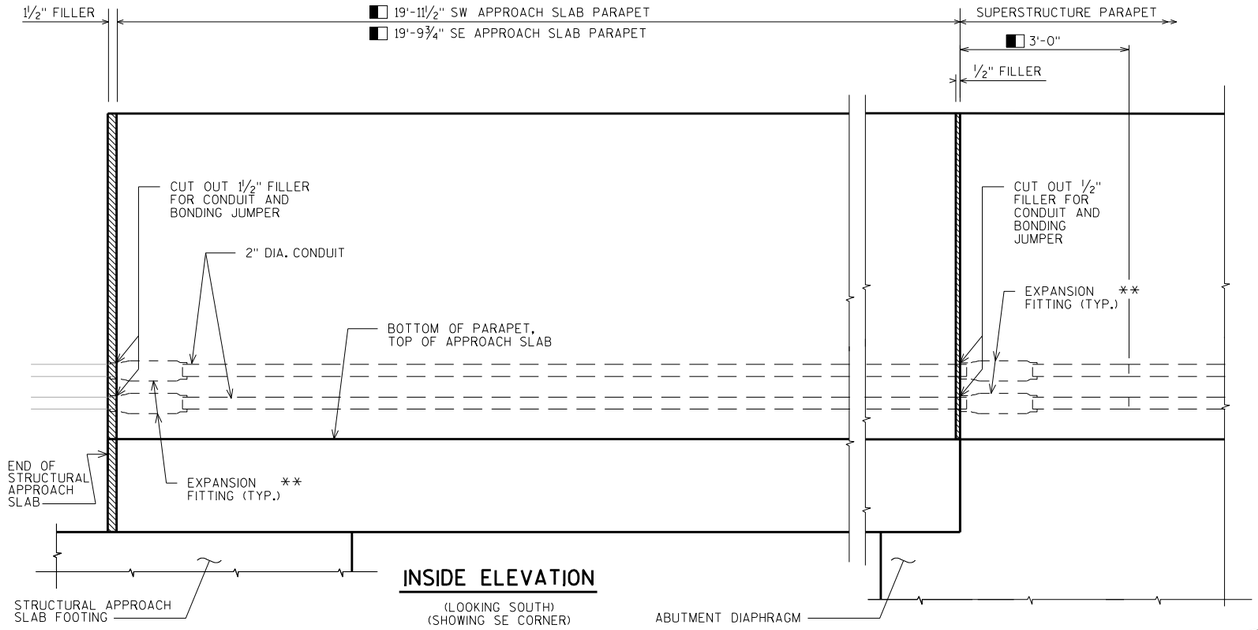
SCALE = 1

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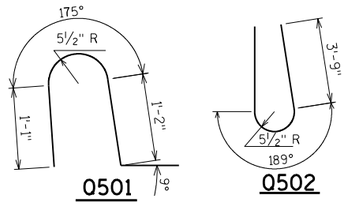
STATE PROJECT NUMBER

1060-33-80



INSIDE ELEVATION

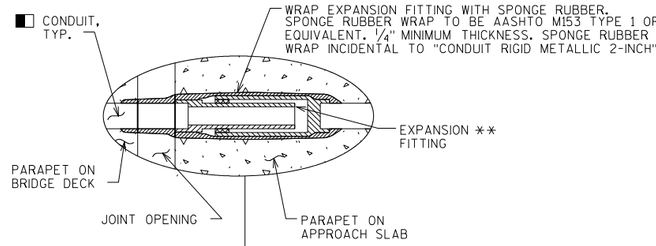
(LOOKING SOUTH)
(SHOWING SE CORNER)



BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

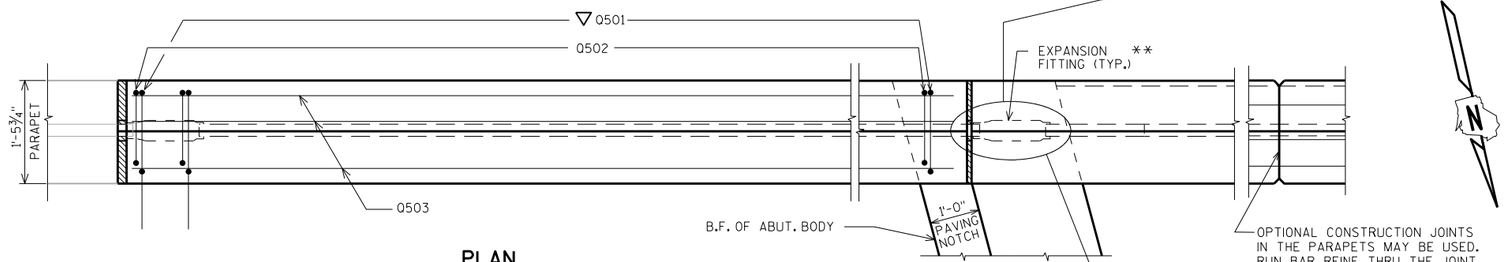
BAR MARK	COAT	W. APPR.	E. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
0501	X	30	30	4-5	X		PARAPET VERT.
0502	X	30	30	9-1	X		PARAPET VERT.
0503	X	10	10	19-6			PARAPET HORIZ.



■ USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND FOR ENTIRE LENGTH OF APPROACH SLAB PARAPETS.

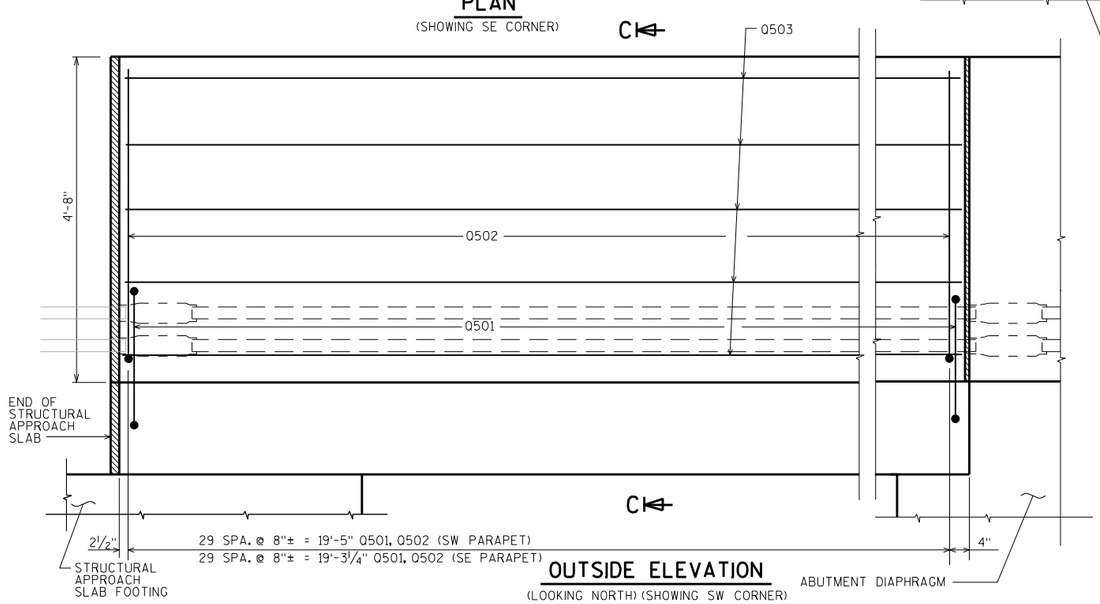
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ 0501 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



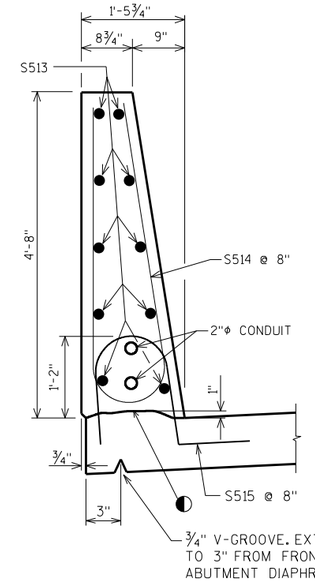
PLAN

(SHOWING SE CORNER)

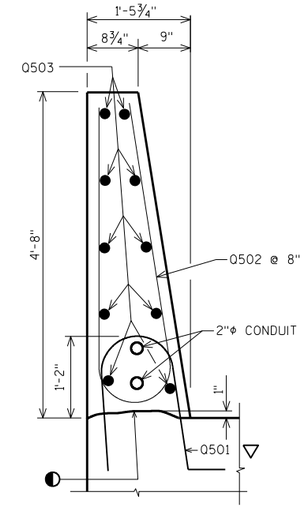


OUTSIDE ELEVATION

(LOOKING NORTH) (SHOWING SW CORNER)



SECTION THRU PARAPET ON BRIDGE



SECTION C-C

NOTES

BID ITEMS SHALL BE:

"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

** APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING: O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

SINGLE SLOPE PARAPET "56SS"

SHEET 25

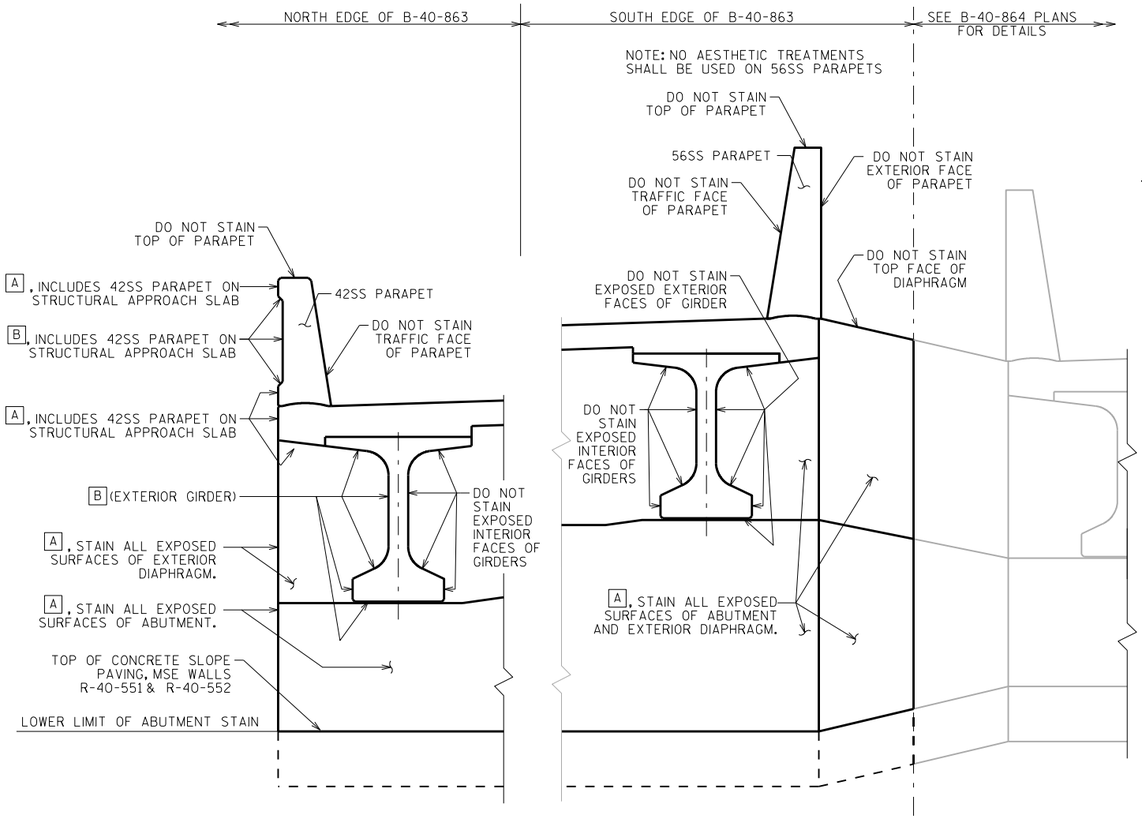
2750

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8

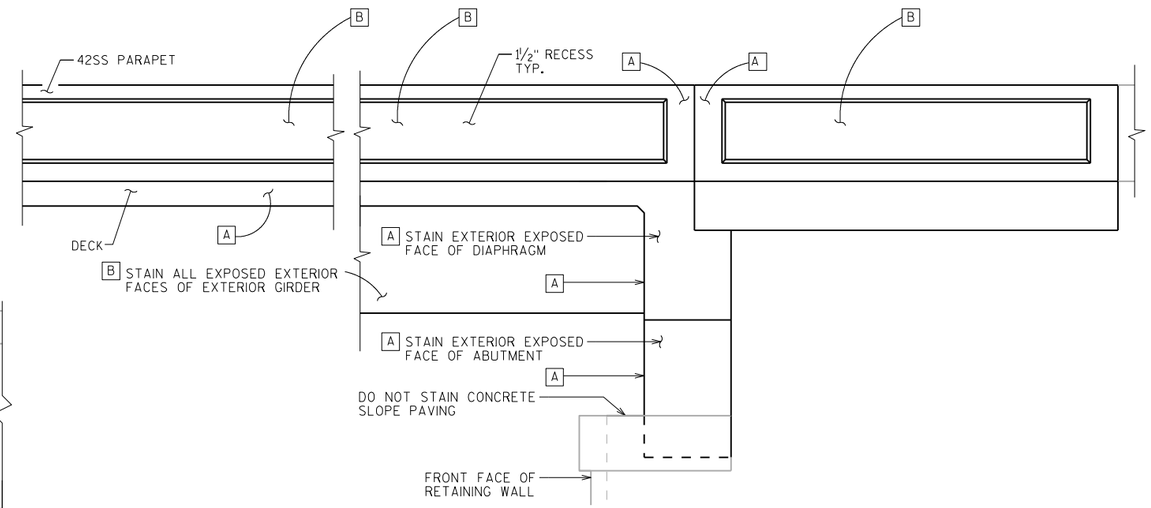
8

STATE PROJECT NUMBER
1060-33-80



PARTIAL ABUTMENT ELEVATIONS

(EAST ABUTMENT SHOWN - WEST ABUTMENT SIMILAR)



OUTSIDE ELEVATION OF PARAPET TYP.

(WEST ABUTMENT SHOWN - EAST ABUTMENT SIMILAR)

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	42SS PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO TOP OF SLOPE PAVING, EXTERIOR EXPOSED FACE OF DIAPHRAGM
B	ACCENT COLOR #1	42SS PARAPETS	RECESSED PANELS ON EXTERIOR FACE.
		GIRDER	EXTERIOR FACES AND UNDERSIDE OF EXTERIOR GIRDER BOTTOM FLANGE

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:
BASE COLOR: FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 333448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

AESTHETIC DETAILS

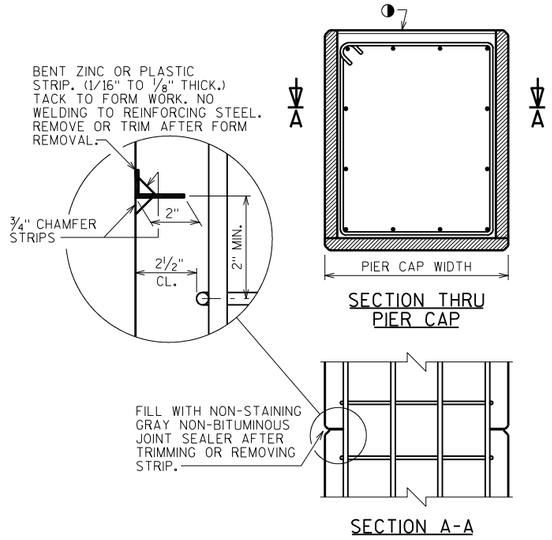
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2751

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STATE PROJECT NUMBER

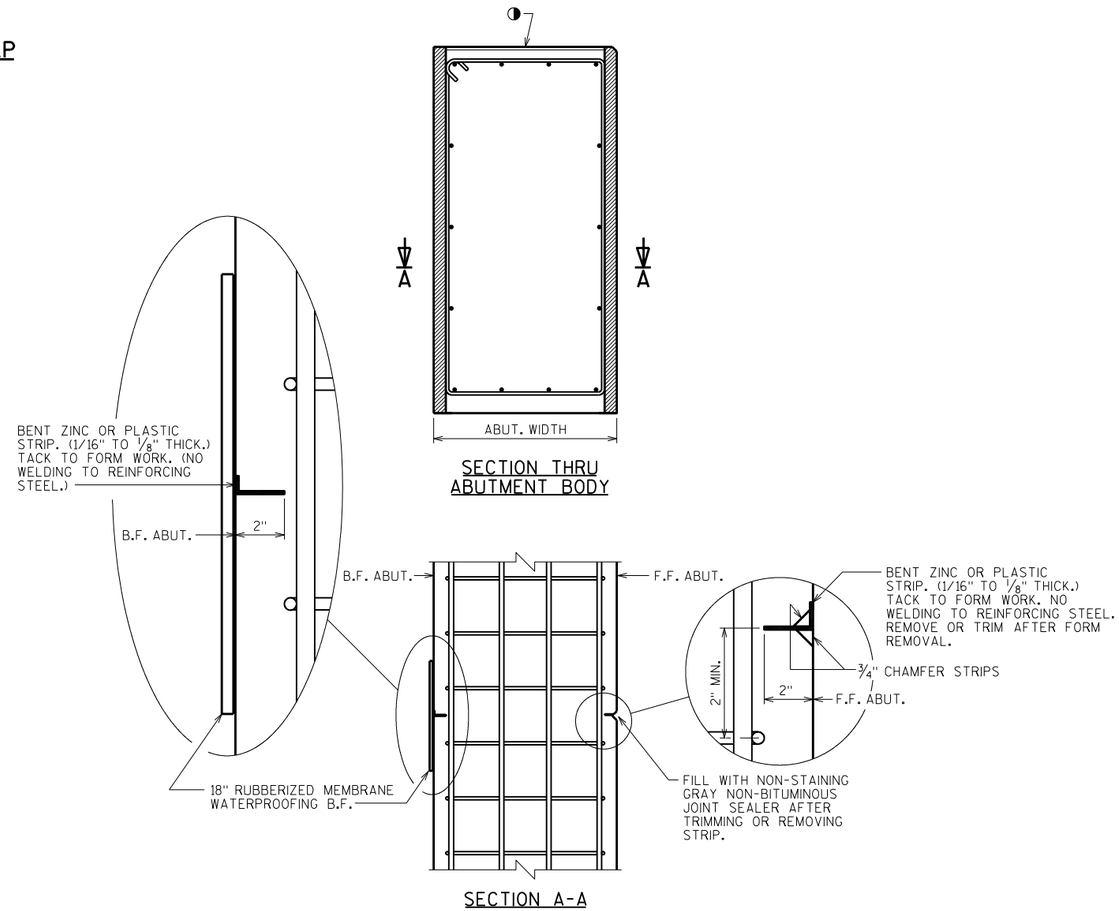
1060-33-80



SECTION THRU PIER CAP

SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT PIER CAP



SECTION THRU ABUTMENT BODY

SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-863

DRAWN BY ABS | PLANS CK'D. NAR

ALTERNATE CONSTRUCTION JOINT

SHEET 27

2752

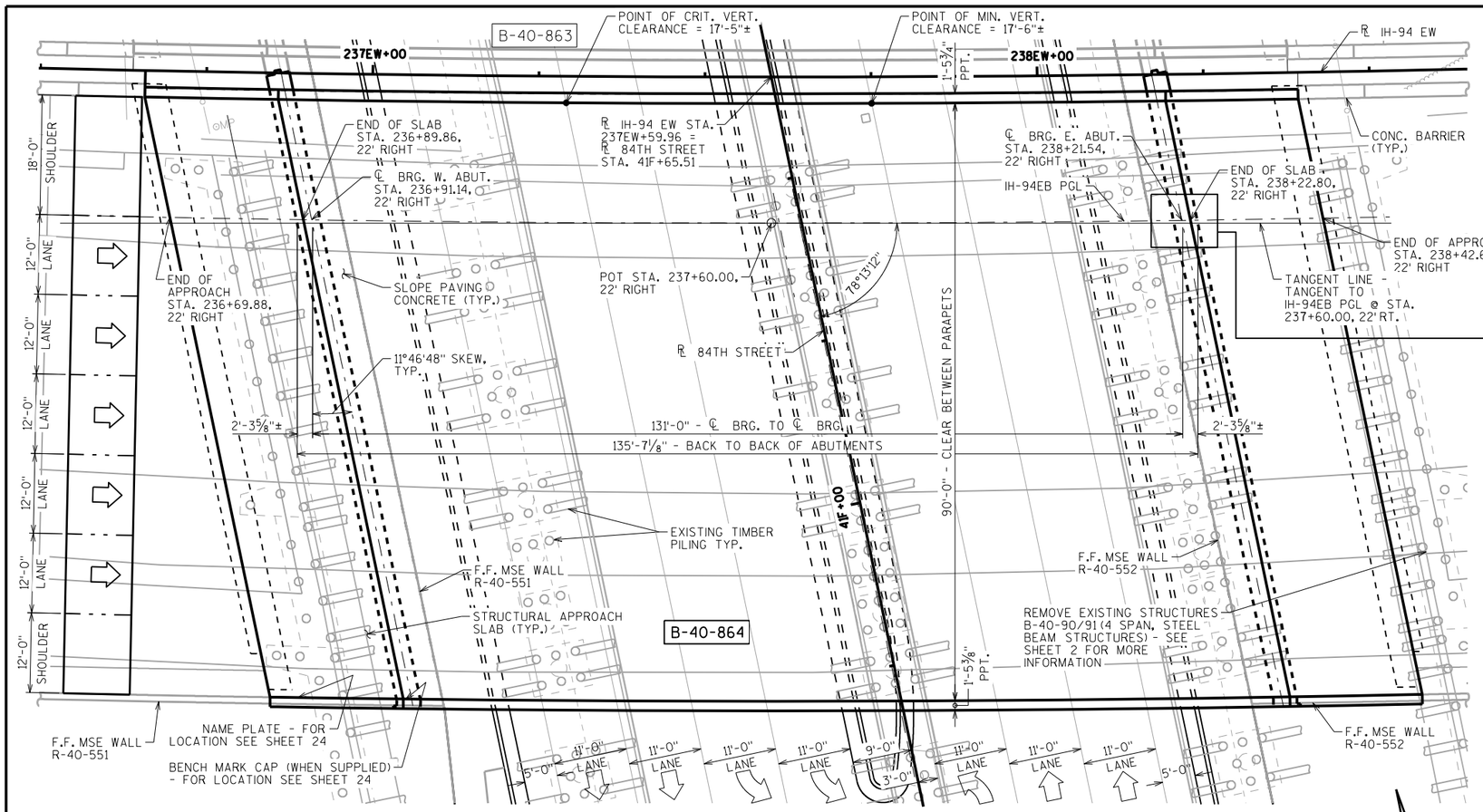
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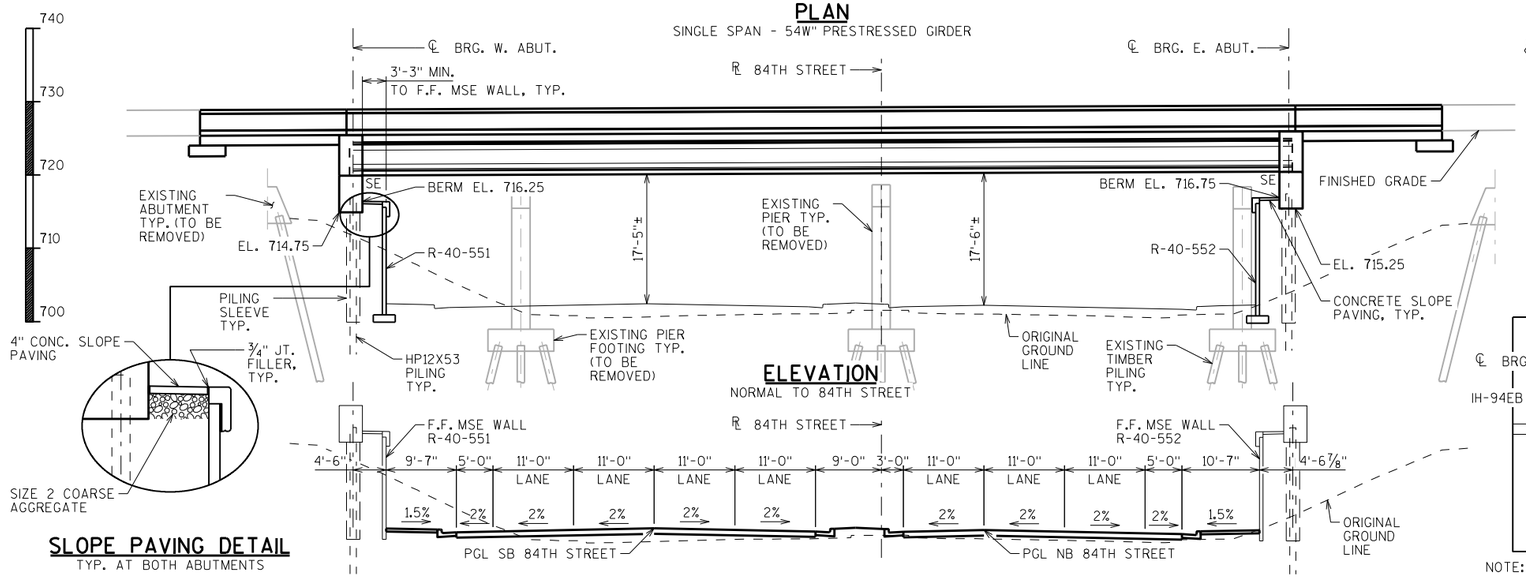
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SCALE = 1.0

STATE PROJECT NUMBER
1060-33-80



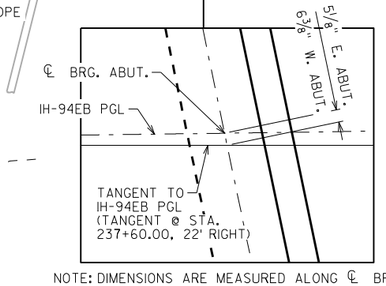
PLAN
SINGLE SPAN - 54W" PRESTRESSED GIRDER



SLOPE PAVING DETAIL
TYP. AT BOTH ABUTMENTS

ELEVATION
NORMAL TO 84TH STREET

TYPICAL FINISHED SECTION THRU 84TH STREET
LOOKING NORTH



NOTE: DIMENSIONS ARE MEASURED ALONG ℄ BRG.

TANGENT OFFSET DETAIL
EAST ABUT. SHOWN, WEST ABUT. SIMILAR

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.09
OPERATING RATING FACTOR: RF=1.87
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
B-40-864 IS RATED FOR A POLYMER OVERLAY THAT WILL BE APPLIED TO THE BRIDGE DECK IN A LATER CONTRACT

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB	f'c = 4,000 P.S.I.
CONCRETE MASONRY ALL OTHER	f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.
54W" PRESTRESSED GIRDERS, CONCRETE MASONRY STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.	f'c = 8,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP12X53 PILING DRIVEN TO A REQUIRED RESISTANCE OF 210 TONS ** PER PILE AS DETERMINED BY THE PDA METHOD.
ESTIMATED 95'-0" LONG @ WEST ABUTMENT.
ESTIMATED 90'-0" LONG @ EAST ABUTMENT.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MUTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA METHOD TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH-94
A.D.T. = 125,400 (2035)
R.D.S. = 60 M.P.H.

84TH STREET
A.D.T. = 22,500 (2035)
R.D.S. = 35 M.P.H.

CURVE DATA

℄ IH-94 EW

P.I.	= 248+40.53
Δ	= 31° 30' 38.10"
D	= 1° 14' 44.02"
T	= 1297.79
L	= 2529.83
R	= 4600.00
P.C.	= 235+42.74
P.T.	= 260+72.57

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. UTILITY DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. WEST ABUTMENT REBAR DETAILS
8. EAST ABUTMENT
9. EAST ABUTMENT DETAILS
10. EAST ABUTMENT REBAR DETAILS
11. SUPERSTRUCTURE FRAMING PLAN
12. 54W" PRESTRESSED GIRDER
13. 54W" PRESTRESSED GIRDER DETAILS
14. STEEL DIAPHRAGM
15. SUPERSTRUCTURE
16. SUPERSTRUCTURE DETAILS
17. WEST DIAPHRAGM DETAILS
18. EAST DIAPHRAGM DETAILS
19. SUPERSTRUCTURE REBAR DETAILS
20. SUPERSTRUCTURE TANGET OFFSET
21. WEST STRUCTURAL APPROACH SLAB
22. EAST STRUCTURAL APPROACH SLAB
23. STRUCTURAL APPROACH SLAB DETAILS
24. SINGLE SLOPE PARAPET "42SS" (MODIFIED)
25. SINGLE SLOPE PARAPET "56SS"
26. PIPE RAILING DETAILS
27. AESTHETIC DETAILS
28. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:
ADAM SWIERCZEK (608) 267-4593
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES
ACCEPTED William C. Dreher 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-864

IH-94 EB OVER 84TH STREET

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ABS	NAR	ABS	NAR

GENERAL PLAN

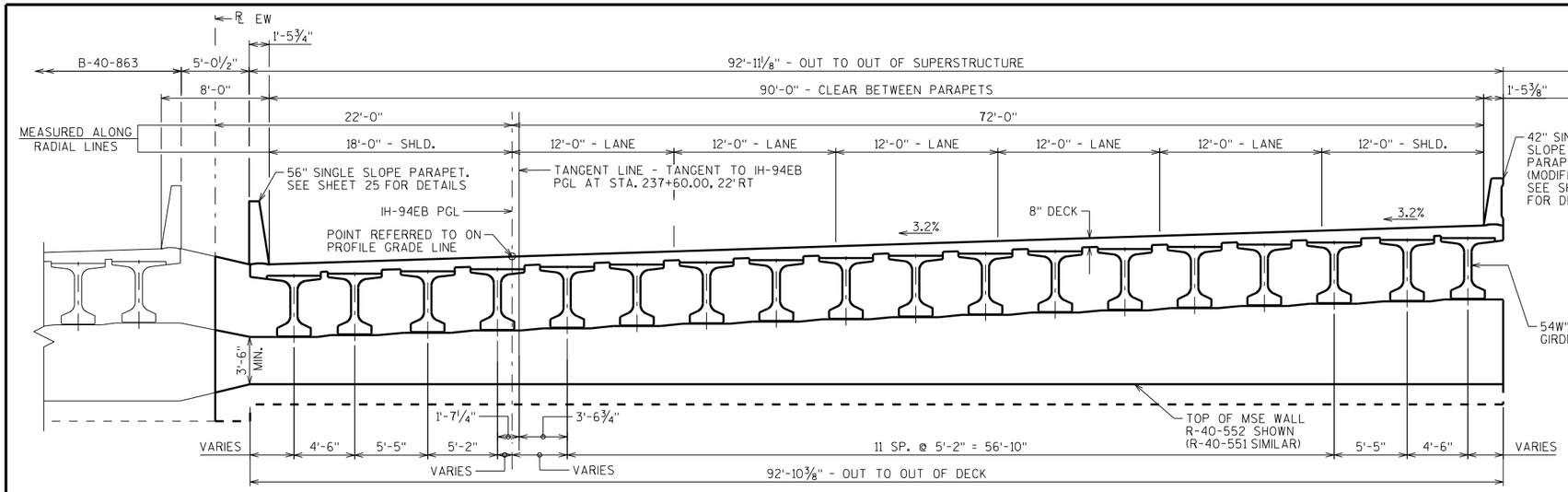
SHEET 1 OF 28

2753

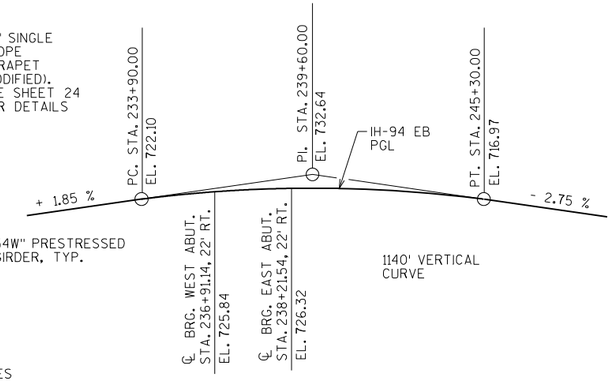
I.D. 1060-33-07AD

DATE: APR. 2014

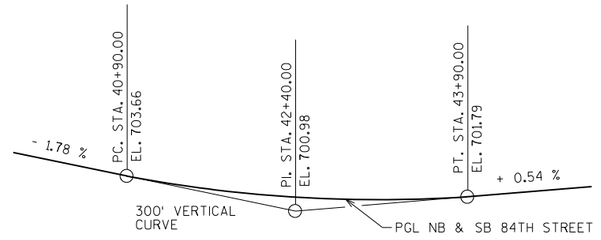
SCALE = 10.0



SECTION THRU ROADWAY - LOOKING EAST (B-40-864)



PROFILE GRADE LINE IH-94 EB



PROFILE GRADE LINE NB & SB 84TH STREET

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	WEST APPR. SLAB	SUPER.	WEST ABUT.	EAST ABUT.	EAST APPR. SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 237+50	LS	———	———	———	———	———	1
203.0200	REMOVING OLD STRUCTURE STA. 237+60	LS	———	———	———	———	———	1
203.0210.S.0002	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-90	LS	———	———	———	———	———	1
203.0210.S.0003	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-91	LS	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-864	LS	———	———	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	———	335	330	———	665
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	290	———	———	———	290	580
502.0100	CONCRETE MASONRY BRIDGES	CY	26	———	82	81	26	215
502.3200	PROTECTIVE SURFACE TREATMENT	SY	235	1,550	———	———	230	2,015
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	———	2,376	———	———	———	2,376
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	———	6,240	6,270	———	12,510
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	20,650	71,500	290	350	21,810	113,600
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	———	———	18	18	———	36
506.4000	STEEL DIAPHRAGMS B-40-864	EACH	———	34	———	———	———	34
513.2000	RAILING PIPE B-40-864	LS	———	———	———	———	———	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	5	20	20	———	45
550.0500	PILE POINTS	EACH	———	———	16	16	———	32
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	1,520	1,440	———	2,960
604.0400	SLOPE PAVING CONCRETE	SY	———	———	30	30	———	60
SPV. 0035.4000	HPC MASONRY STRUCTURES	CY	99	559	———	———	99	757
SPV. 0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	———	———	2	2	———	4
SPV. 0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	———	———	2	2	———	4
SPV. 0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS STEEL BRIDGES	LB	1,580	———	———	———	1,580	3,160
SPV.0090.4430	PILING SLEEVES	LF	———	———	224	224	———	448
SPV. 0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,810	12,020	———	———	1,795	15,625
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½" & ¾"
	FILLER	SIZE	———	———	———	———	———	1½"
	EXPANDED POLYSTYRENE	SIZE	———	———	———	———	———	1" & 1½"

ALL ITEMS ARE CATEGORY 2110

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, THE FRONT FACE AND THE TOP OF THE 42SS PARAPET, AND TO ALL FACES OF THE 56SS PARAPET.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COURSE AGGREGATE SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE".

THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLABS (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTURES."

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE BRIDGE B-40-864 ABUTMENTS WITH RETAINING WALLS R-40-551 AND R-40-552.

THE EXISTING STRUCTURES SOUTH OF B-40-863, B-40-90 AND B-40-91, ARE TO BE REMOVED AFTER COMPLETION OF B-40-863 (PRIOR TO CONSTRUCTION OF B-40-864), ARE FOUR SPAN STEEL BEAM BRIDGES WITH AN OVERALL WIDTH OF 63'-5" AND AN OVERALL LENGTH OF 174'-8".

IT IS ANTICIPATED THAT THE EXISTING PIER FOOTINGS WILL BE REMOVED PRIOR TO THE STAGE 4A TRAFFIC CONFIGURATION. REFER TO ROADWAY PLANS FOR DETAILS.

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

CROSS SECTION & QUANTITIES

SHEET 2

2754

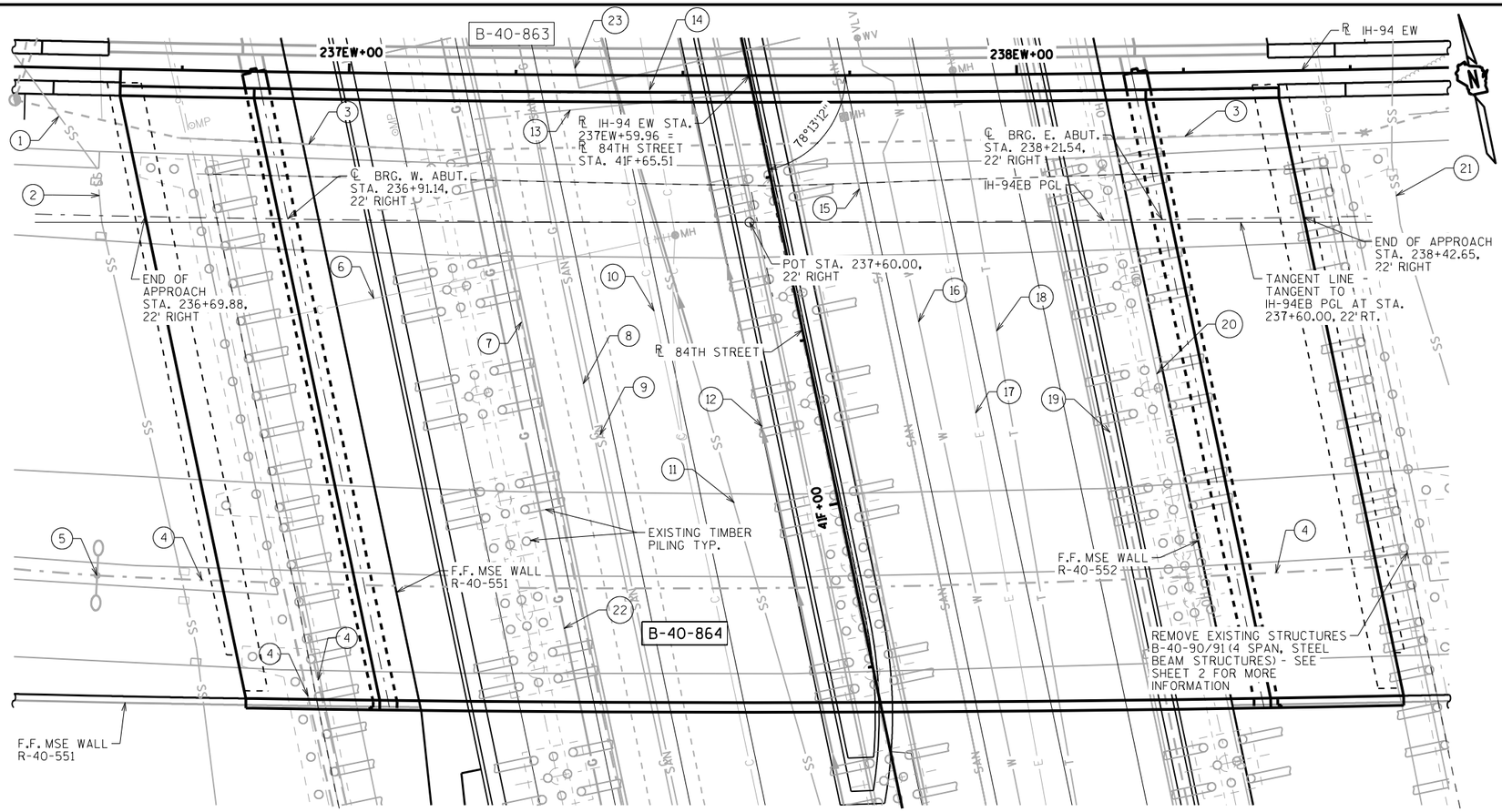
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SCALE = 5.0

STATE PROJECT NUMBER

1060-33-80



PLAN

SINGLE SPAN - 54W" PRESTRESSED GIRDER

UTILITY NOTES

1. EXISTING WISDOT 15" STORM SEWER TO BE ABANDONED
2. EXISTING WISDOT 15" STORM SEWER TO BE ABANDONED
3. EXISTING WISDOT FTMS TO BE RELOCATED
4. EXISTING WISDOT LIGHTING CONDUIT TO BE RELOCATED
5. EXISTING WISDOT LIGHTING POLE TO BE RELOCATED
6. EXISTING CITY OF MILWAUKEE CITY COMMUNICATION CABLE TO BE ABANDONED
7. EXISTING CITY OF MILWAUKEE LIGHTING (CID) TO BE REMOVED
8. EXISTING WE ENERGIES GAS TO BE RELOCATED
9. EXISTING MMSD 96" SANITARY SEWER TO REMAIN
10. EXISTING CITY OF MILWAUKEE COMMUNICATION CABLE TO BE RELOCATED
11. EXISTING CITY OF MILWAUKEE 60" STORM SEWER TO BE REMOVED
12. PROPOSED CITY OF MILWAUKEE30" STORM SEWER
13. EXISTING AT&T-WIS UNDERGROUND TELEPHONE TO BE ABANDONED
14. EXISTING CITY OF MILWAUKEE UNDERGROUND CITY CABLE TO BE RELOCATED
15. EXISTING MMSD 24" SANITARY SEWER TO BE ABANDONED
16. EXISTING CITY OF MILWAUKEE 12" WATERMAIN TO REMAIN IN PLACE
17. EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
18. EXISTING AT&T-WIS COMMUNICATION CABLE TO REMAIN
19. EXISTING CITY OF MILWAUKEE LIGHTING (CID) TO BE REMOVED
20. EXISTING WE ENERGIES OVERHEAD ELECTRIC TO BE RELOCATED
21. EXISTING WISDOT 12" STORM SEWER TO BE REMOVED
22. PROPOSED WE ENERGIES GAS LINE
23. PREVIOUSLY ABANDONED UTILITY

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

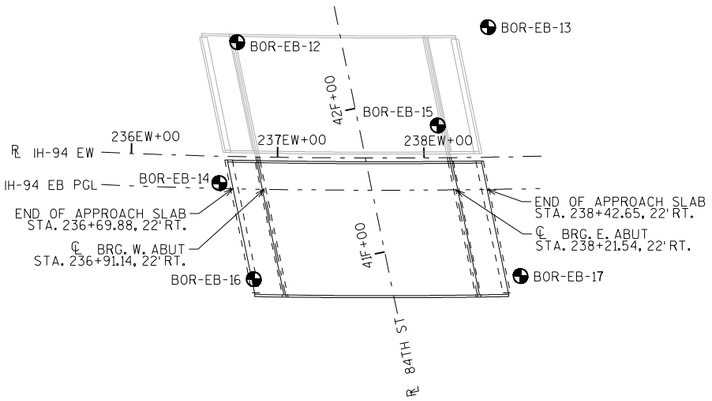
UTILITY PLAN & NOTES

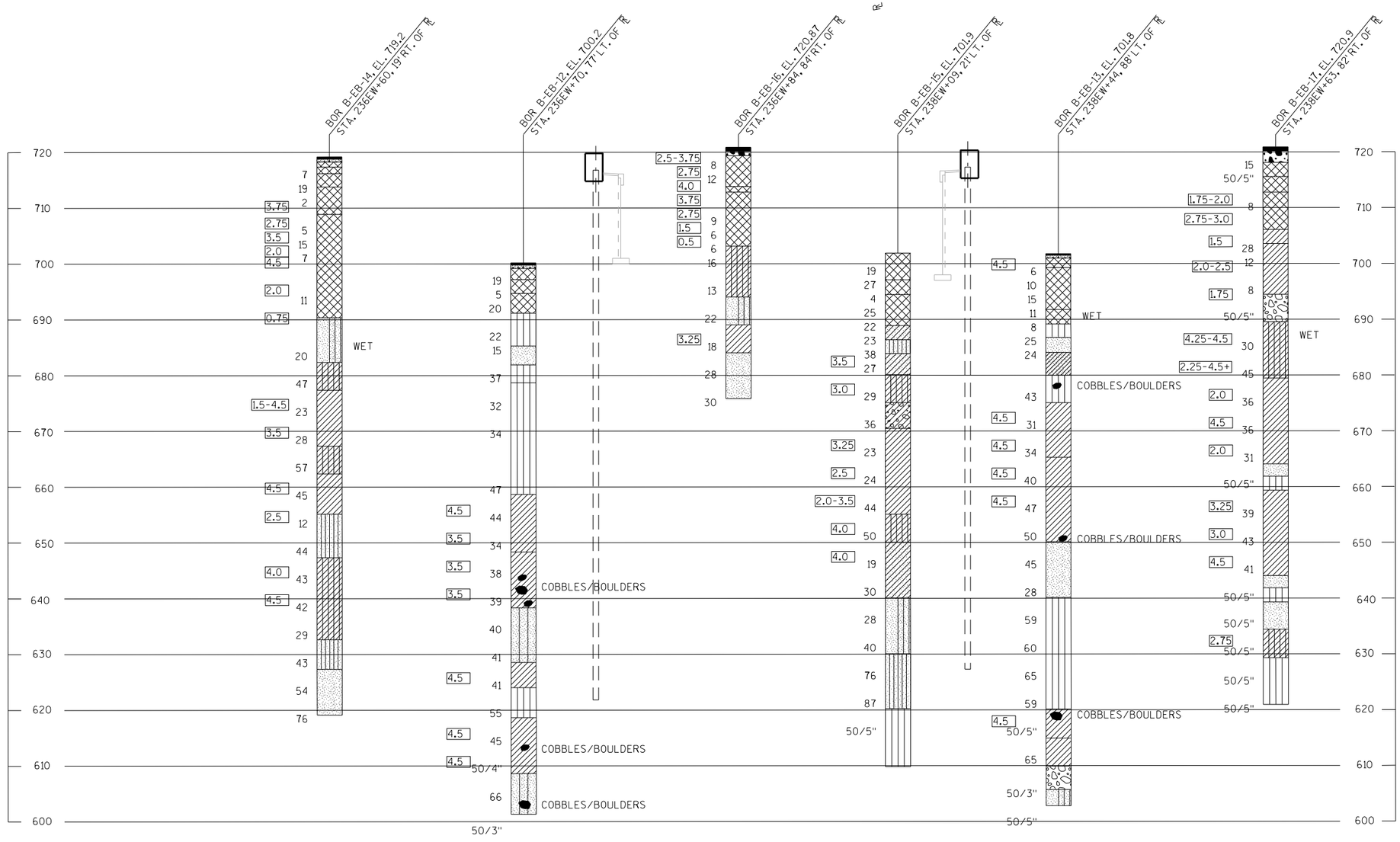
SHEET 3

2755

SCALE = 10.0

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
EB-12	11/15/2011	295656	577079
EB-13	11/16/2011	295632	577249
EB-14	10/25/2011	295564	577048
EB-15	10/25/2011	295573	577202
EB-16	11/8/2011	295495	577058
EB-17	11/7/2011	295461	577237
BORINGS COMPLETED BY: GESTRA/RIVER VALLEY TESTING			
REPORT COMPLETED BY: CH2M HILL			
ALL COORDINATES REFERENCED TO WISCRS NAVD 88 MILWAUKEE COUNTY			





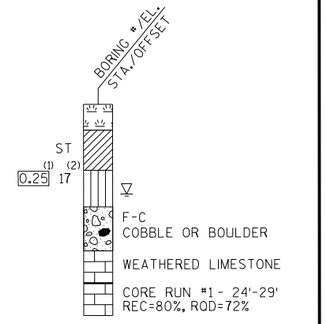
STATE PROJECT NUMBER

1060-33-80

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY PR/ABS | PLANS CK'D. NAR

SUBSURFACE EXPLORATION

SHEET 4

2756

SCALE = 5.0

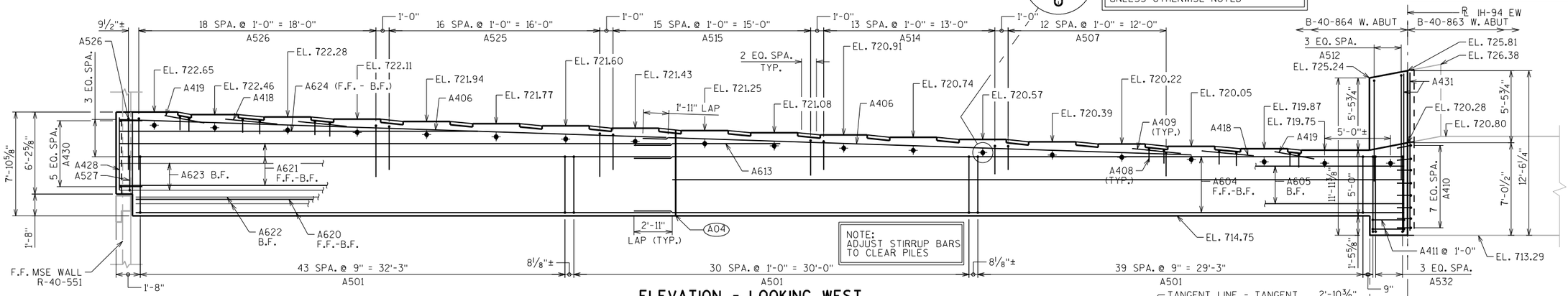
STATE PROJECT NUMBER

1060-33-80

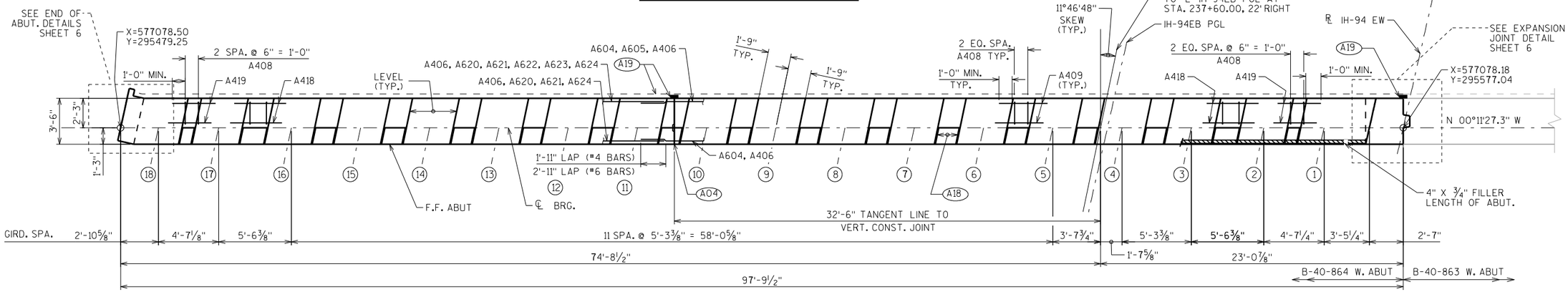
ALL ELEVATIONS MEASURED ALONG ℄ BRG. OF ABUTMENT

EYE BOLT (TYP.) SEE DETAIL SHEET 6

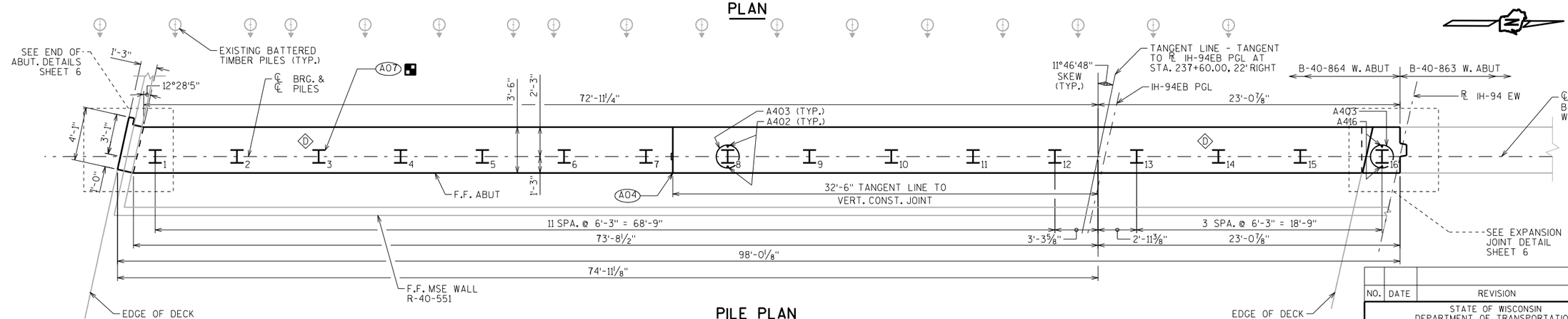
NOTE:
LOCATE FALL PROTECTION EYE BOLTS DIRECTLY BENEATH EACH GIRDER ℄ AT FRONT FACE OF ABUT. UNLESS OTHERWISE NOTED



ELEVATION - LOOKING WEST



PLAN



PILE PLAN

NOTE:
PROPOSED PILES MAY ENCOUNTER EXISTING BATTERED TIMBER PILES. CONTRACTOR SHALL MOVE CONFLICTING H-PILES, WITH APPROVAL OF THE FIELD ENGINEER, TO AVOID CONFLICT, WHILE MAINTAINING SPACING WITH RESPECT TO ADJACENT H-PILES OF NOT LESS THAN 2'-6" NOR EXCEEDING 8'-0".

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

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PILE SLEEVES REQUIRED. COORDINATE PILE SLEEVE LOCATIONS WITH RETAINING WALL R-40-551. PILE SLEEVES SHALL BE PLACED FROM THE BOTTOM OF MSE WALL TO THE BOTTOM OF ABUTMENT.

(D) DYNAMIC PILE LOAD TESTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

WEST ABUTMENT

SHEET 5

2757

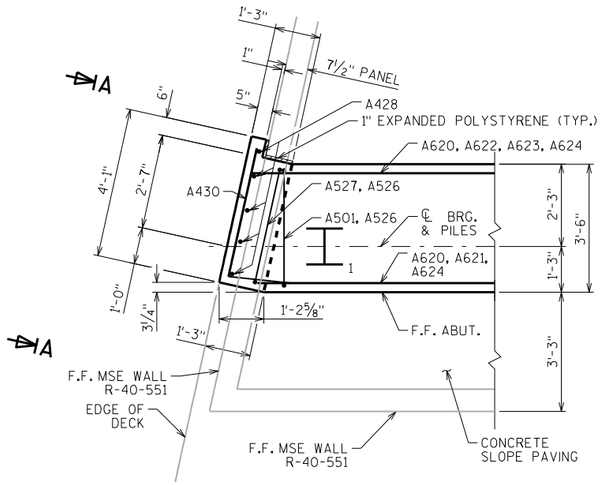
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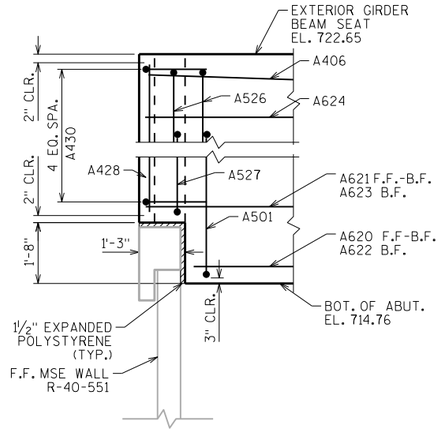
STATE PROJECT NUMBER

1060-33-80

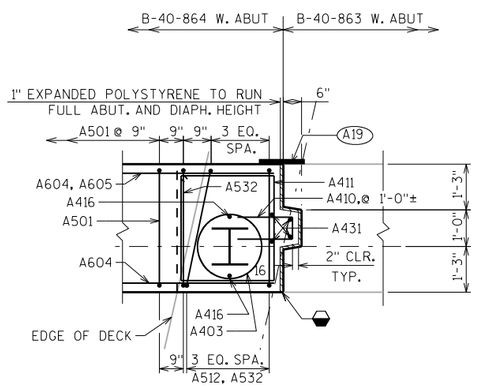


PLAN

(SHOWING SOUTH END OF WEST ABUTMENT)



SECTION B-B

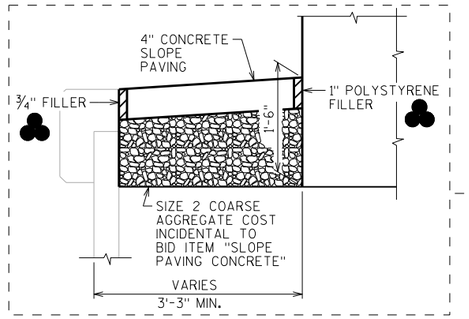


EXPANSION JOINT DETAILS

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

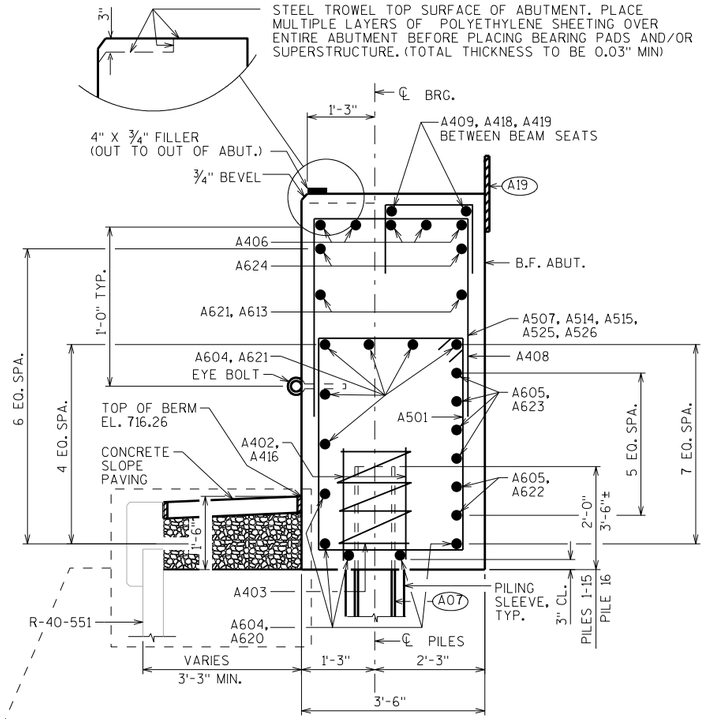
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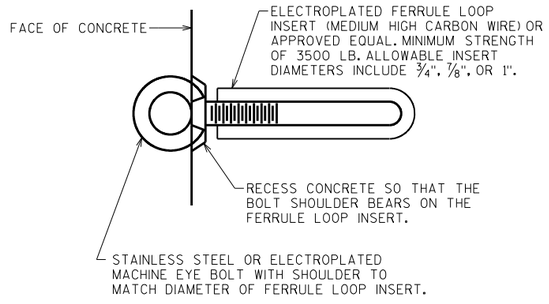
SLOPE PAVING DETAIL

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW THE SURFACE OF THE CONCRETE).

NOTE: TOOL JOINTS AT 5'-0"± SPACING AT LEAST ½" DEEP.



SECTION THRU BODY



EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

VIEW A-A

END OF ABUT. DETAILS

(SHOWING SOUTH END OF WEST ABUTMENT)

STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

WEST ABUTMENT DETAILS

SHEET 6

2758

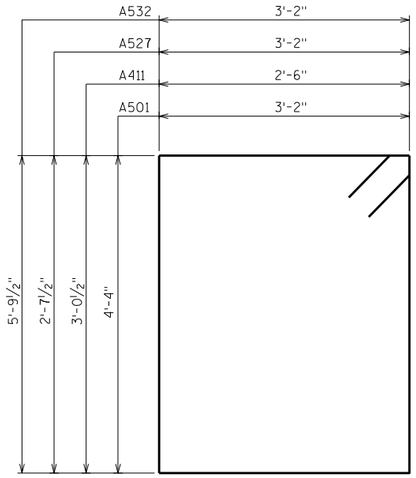
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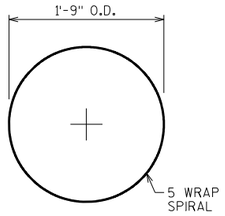
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STATE PROJECT NUMBER

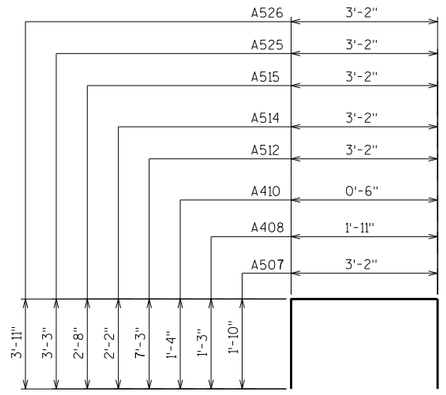
1060-33-80



A501, A411, A527, A532



A403

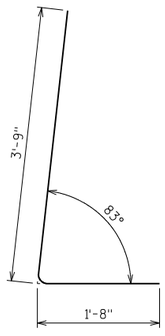


A507, A408, A410, A512, A514, A515, A525, A526

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		115	15'-8"	X		BODY - STIRRUPS
A402		30	2'-3"			BODY - VERT. - AT BODY PILES 1-15
A403		16	28'-0"	X		BODY - VERT. - AT BODY PILES
A604		11	58'-7"			BODY - HORIZ.
A605		6	58'-7"			BODY - HORIZ - B.F.
A406		10	41'-8"			BODY - HORIZ.
A507		13	6'-7"	X		BODY - VERT.
A408		51	4'-3"	X		BODY - VERT. - BETWEEN GIRDERS
A409		26	3'-9"			BODY - HORIZ. - BETWEEN GIRDERS
A410	X	8	3'-0"	X		BODY - HORIZ. - KEYED END
A411	X	2	11'-7"	X		BODY - HORIZ. - KEYED END
A512	X	4	17'-5"	X		BODY - VERT. - KEYED END
A613		2	11'-2"			BODY - HORIZ.
A514		14	7'-3"	X		BODY - VERT.
A515		16	8'-3"	X		BODY - VERT.
A416		2	3'-9"			BODY - VERT. - AT BODY PILE 16
A417		--	--			NOT USED
A418		4	4'-0"			BODY - HORIZ. - BETWEEN GIRDERS
A419		4	3'-4"			BODY - HORIZ. - BETWEEN GIRDERS
A620		5	40'-2"			BODY - HORIZ.
A621		8	41'-10"			BODY - HORIZ.
A622		2	39'-11"			BODY - HORIZ. - B.F.
A623		4	41'-2"			BODY - HORIZ. - B.F.
A624		2	27'-2"			BODY - HORIZ. - F.F.-B.F.
A525		17	9'-5"	X		BODY - VERT.
A526		20	10'-9"	X		BODY - VERT.
A527	X	1	12'-3"	X		BODY - STIRRUP - END
A428	X	5	5'-11"			BODY - VERT. - END
A429		--	--			NOT USED
A430	X	6	5'-4"	X		BODY - HORIZ. - END
A431	X	4	12'-0"			BODY - VERT. - KEYED END
A532	X	5	18'-7"	X		BODY - VERT. - KEYED END



A430

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

WEST ABUTMENT REBAR DETAILS

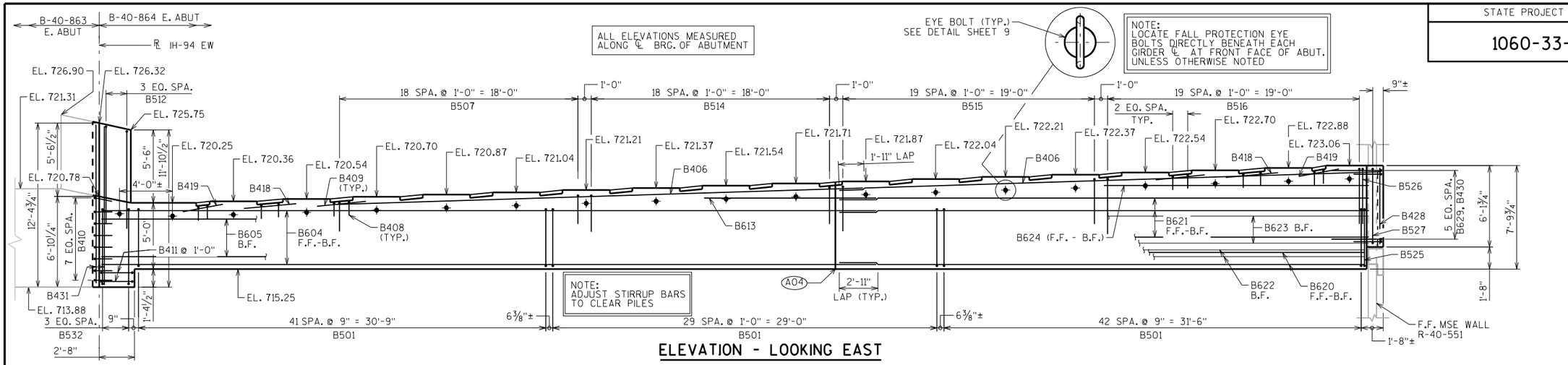
SHEET 7

2759

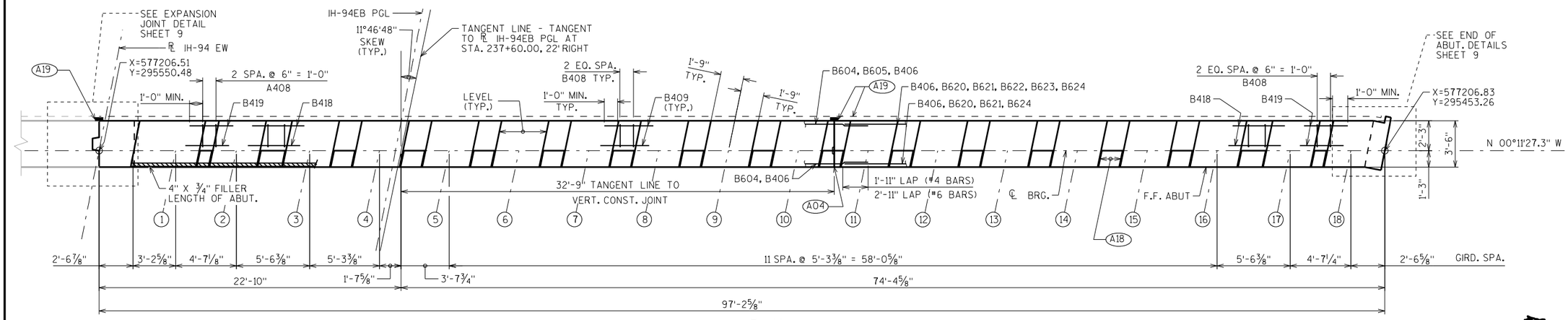
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STATE PROJECT NUMBER

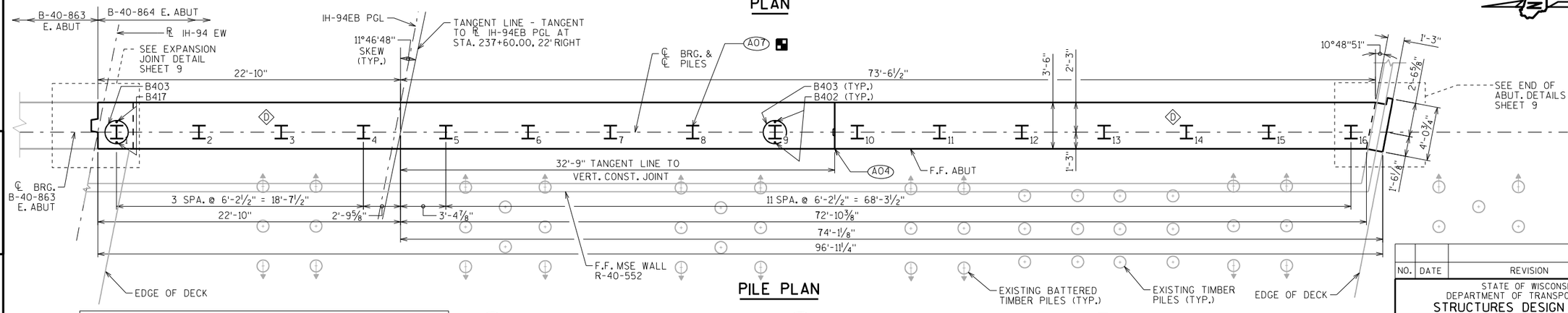
1060-33-80



ELEVATION - LOOKING EAST



PLAN



PILE PLAN

NOTE:
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◇D DYNAMIC PILE LOAD TESTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

EAST ABUTMENT

SHEET 8

2760

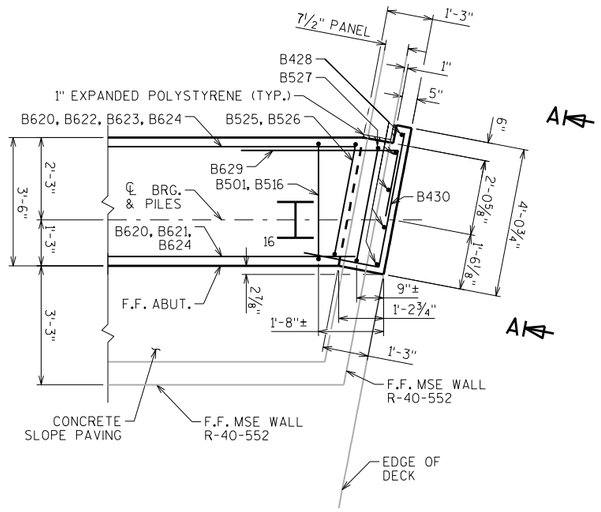
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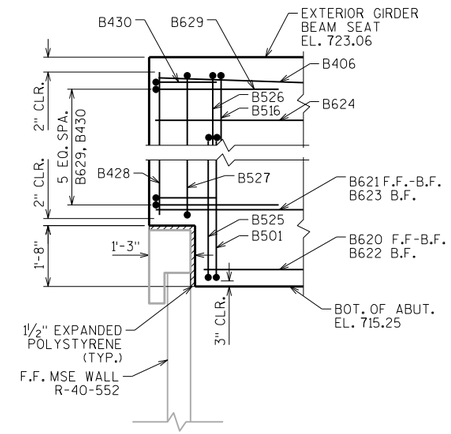
STATE PROJECT NUMBER

1060-33-80

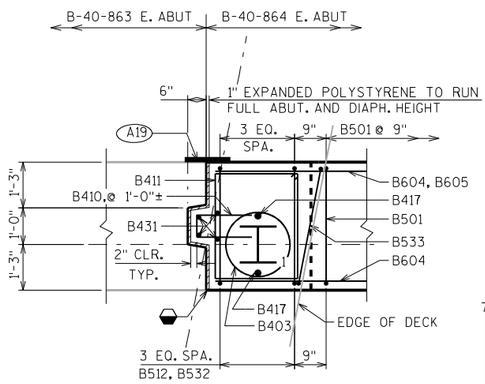


PLAN

(SHOWING SOUTH END OF EAST ABUTMENT)



SECTION B-B

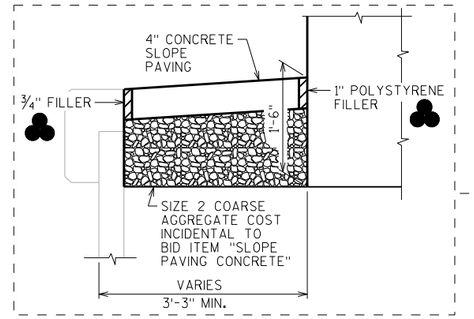


EXPANSION JOINT DETAILS

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

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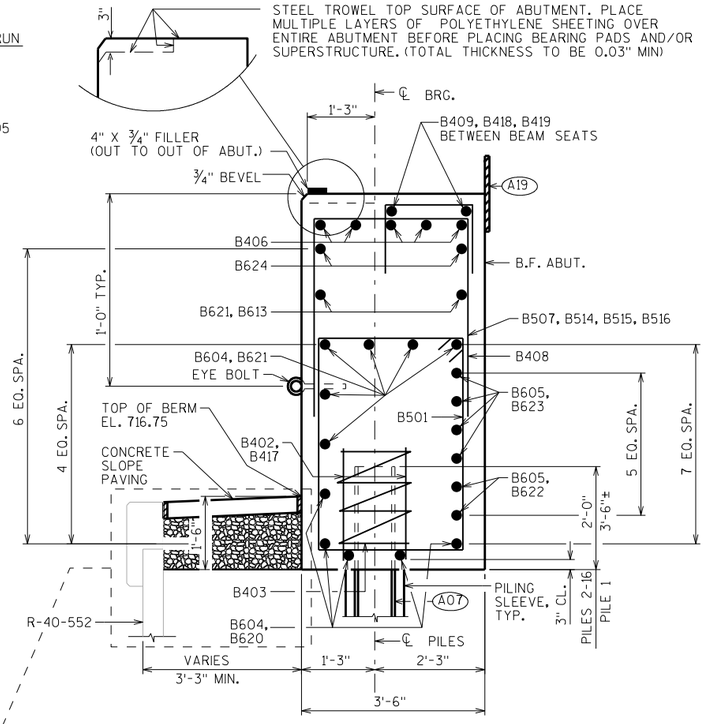
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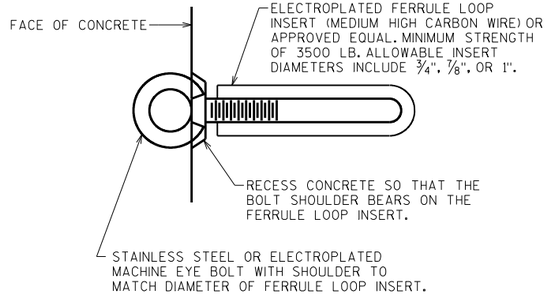
SLOPE PAVING DETAIL

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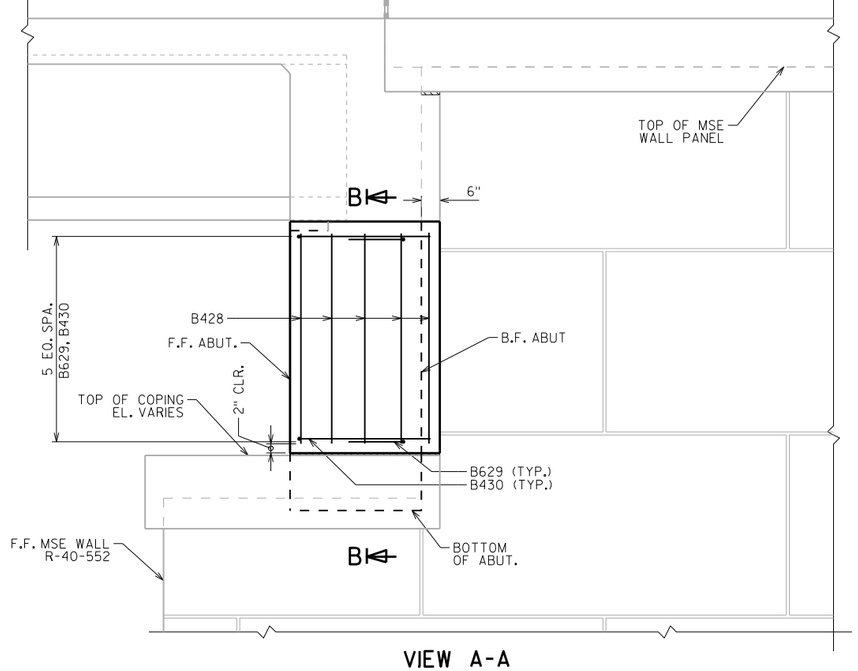


SECTION THRU BODY



EYE BOLT DETAIL

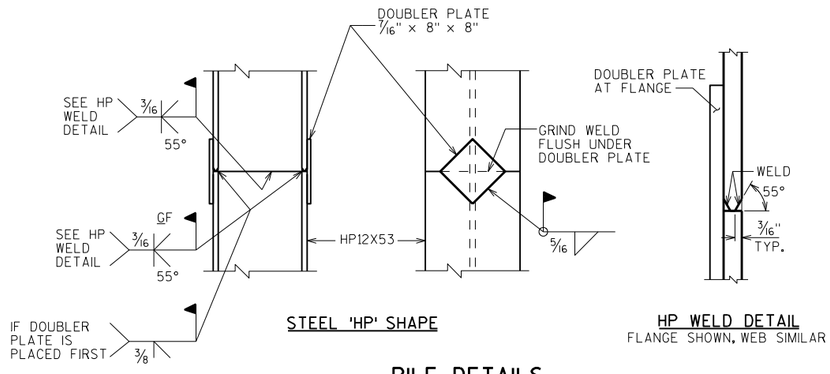
COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".



VIEW A-A

END OF ABUT. DETAILS

(SHOWING SOUTH END OF WEST ABUTMENT)



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

EAST ABUTMENT DETAILS

SHEET 9

2761

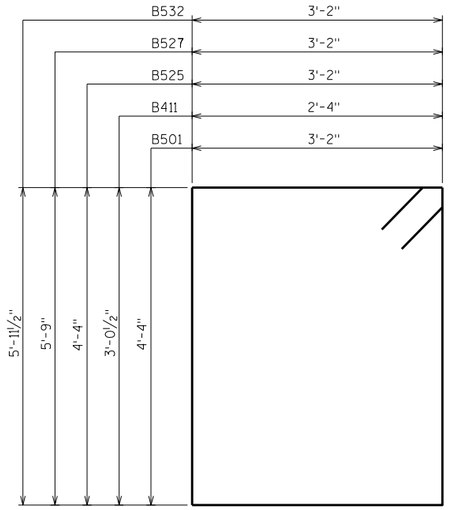
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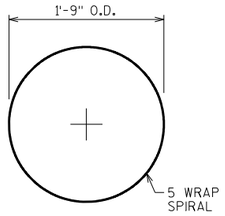
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STATE PROJECT NUMBER

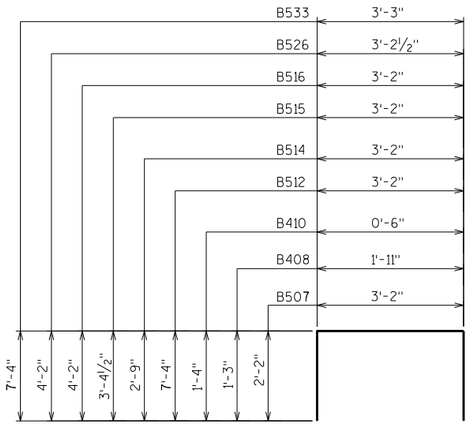
1060-33-80



B501, B411, B525, B527, B532



B403

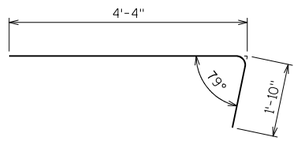


B507, B408, B410, B512, B514, B515, B516, B526, B533

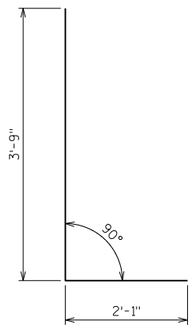
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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B403		16	28'-0"	X		BODY - VERT. - AT BODY PILES
B604		11	59'-0"			BODY - HORIZ.
B605		6	59'-0"			BODY - HORIZ - B.F.
B406		10	40'-5"			BODY - HORIZ.
B507		19	7'-3"	X		BODY - VERT.
B408		51	4'-3"	X		BODY - VERT. - BETWEEN GIRDERS
B409		26	3'-9"			BODY - HORIZ. - BETWEEN GIRDERS
B410	X	8	3'-0"	X		BODY - HORIZ. - KEYED END
B411	X	2	11'-3"	X		BODY - HORIZ. - KEYED END
B512	X	4	17'-7"	X		BODY - VERT. - KEYED END
B613		2	13'-0"			BODY - HORIZ.
B514		19	8'-5"	X		BODY - VERT.
B515		20	9'-8"	X		BODY - VERT.
B516		20	11'-3"	X		BODY - VERT.
B417		2	3'-9"			BODY - VERT. - AT BODY PILE 16
B418		4	4'-0"			BODY - HORIZ. - BETWEEN GIRDERS
B419		4	3'-4"			BODY - HORIZ. - BETWEEN GIRDERS
B620		5	39'-8"			BODY - HORIZ.
B621		8	41'-0"			BODY - HORIZ.
B622		2	40'-6"			BODY - HORIZ. - B.F.
B623		4	41'-0"			BODY - HORIZ. - B.F.
B624		2	20'-0"			BODY - HORIZ. - F.F.-B.F.
B525		1	15'-8"	X		BODY - STIRRUP - END
B526		1	11'-4"	X		BODY - VERT.
B527	X	1	18'-6"	X		BODY - STIRRUP - END
B428	X	5	5'-9"			BODY - VERT. - END
B629	X	6	6'-0"	X		BODY - HORIZ. - END
B430	X	6	5'-9"	X		BODY - HORIZ. - END
B431	X	4	12'-0"			BODY - VERT. - KEYED END
B532	X	4	18'-11"	X		BODY - VERT. - KEYED END
B533	X	1	17'-8"	X		BODY - VERT. - KEYED END



B629



B430

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

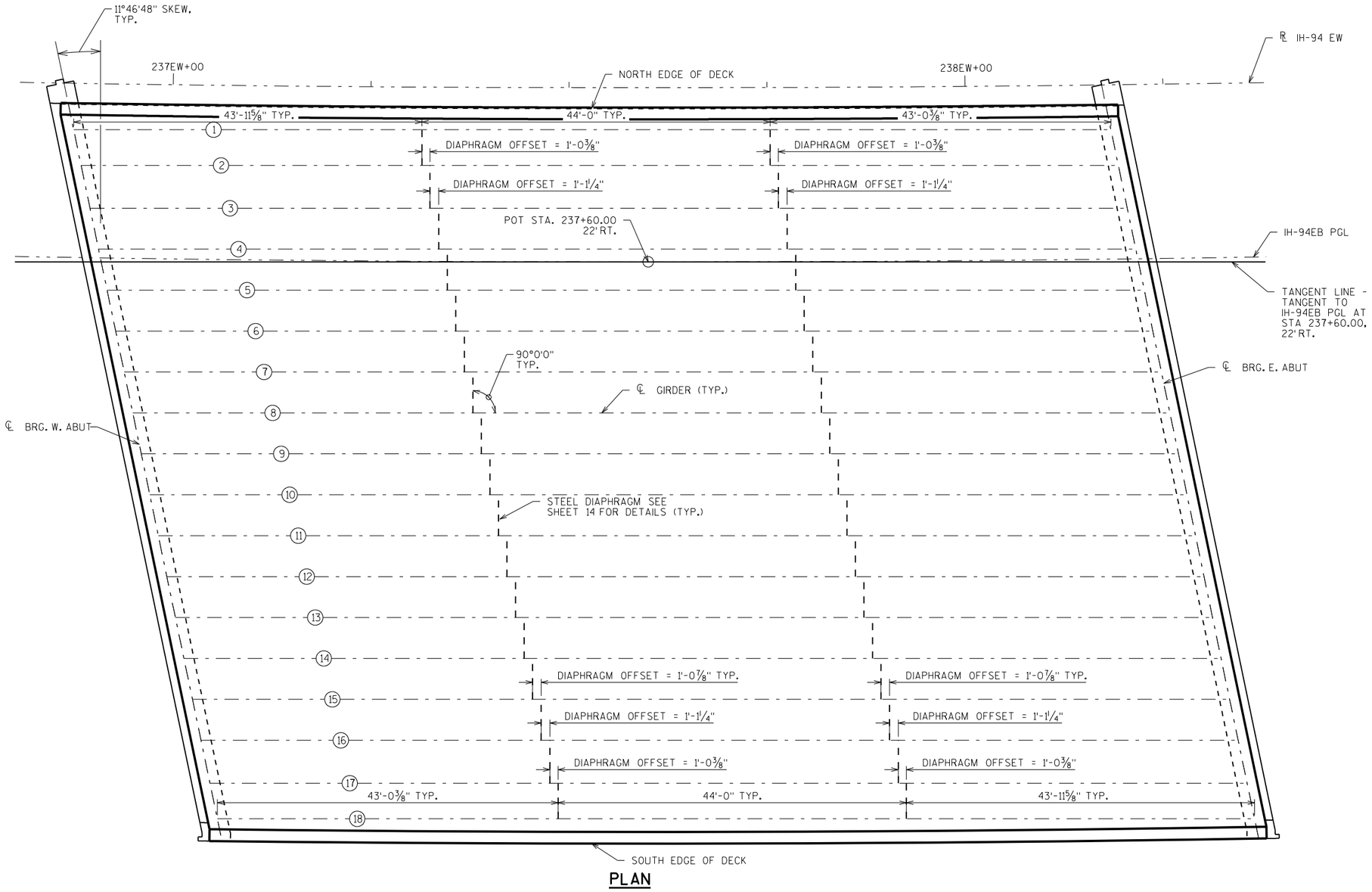
EAST ABUTMENT REBAR DETAILS

SHEET 10

2762

SCALE = 4

STATE PROJECT NUMBER
1060-33-80



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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SUPERSTRUCTURE FRAMING PLAN

SHEET 11

2763

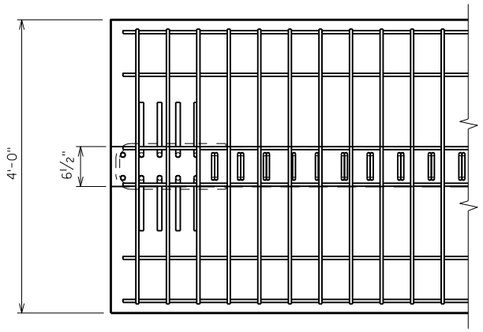
SCALE = 7

8

8

STATE PROJECT NUMBER

1060-33-80



TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

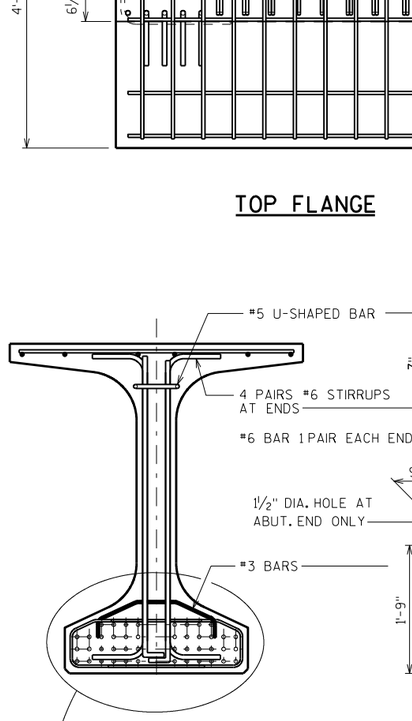
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

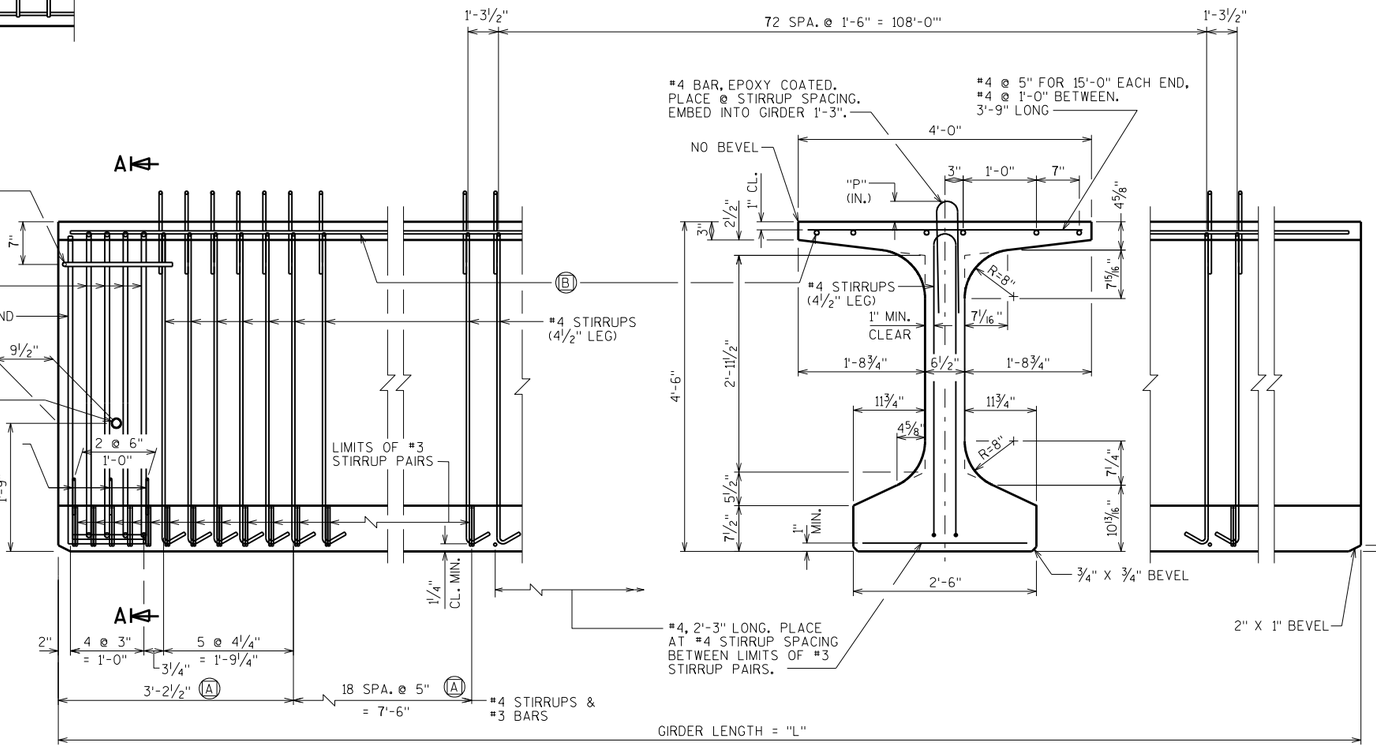
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



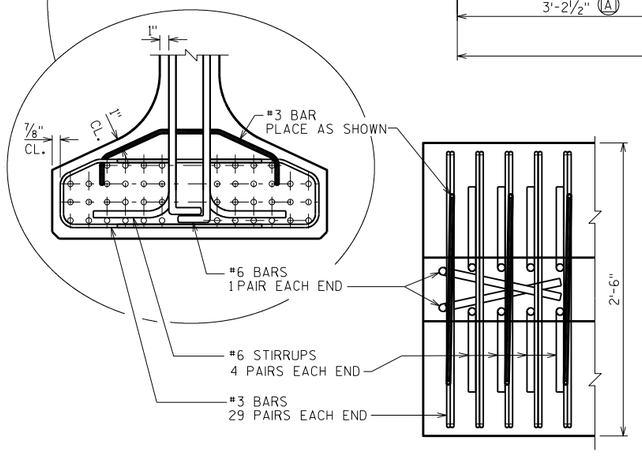
SECTION A-A



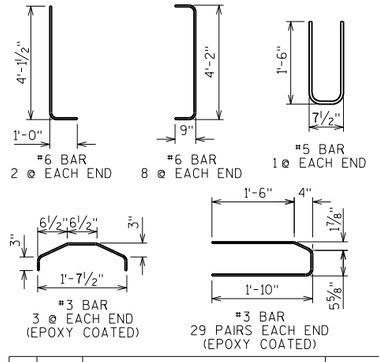
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	("A"	"B" MIN.	"B" MAX.	"C")	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1	132.0'	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8000	8"	7"	8"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A
1	2-17	132.0'	0.8	1.4	2.0	2.3	2.4	2.3	2.0	1.4	0.8	8000	8.5"	7.5"	8.5"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A
1	18	132.0'	0.8	1.6	2.2	2.5	2.7	2.5	2.2	1.6	0.8	8000	8"	7"	8"	0.60	42	6800	49.0	16.0	19.0	5.0	N/A	N/A

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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54W" PRESTRESSED GIRDER

SHEET 12

2764

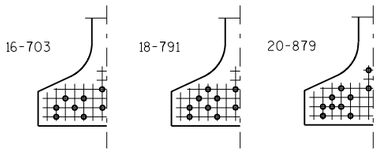
7-13
G54W

SCALE = 1

8 19 | 1 2 3 5 9 | 8

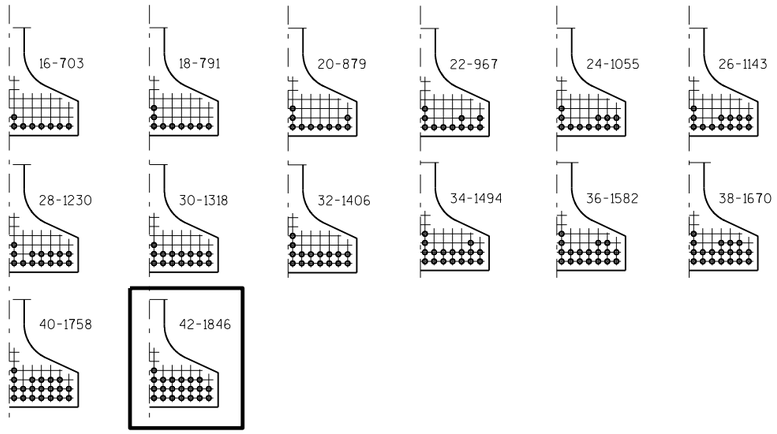
STATE PROJECT NUMBER

1060-33-80



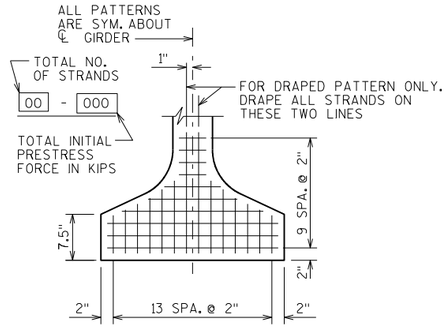
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

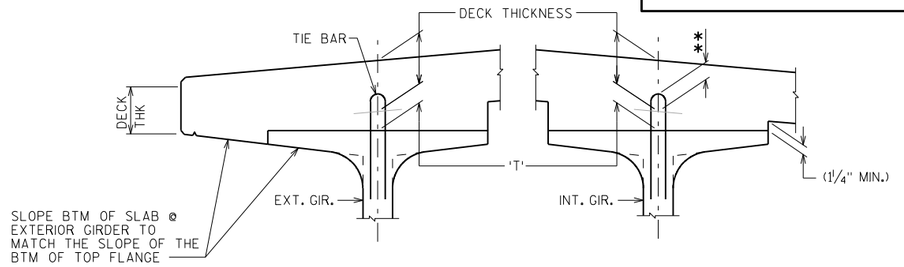


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

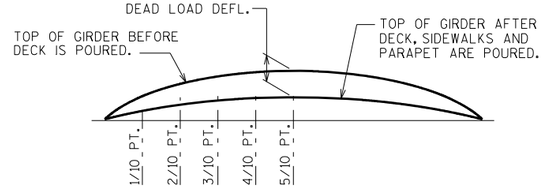
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

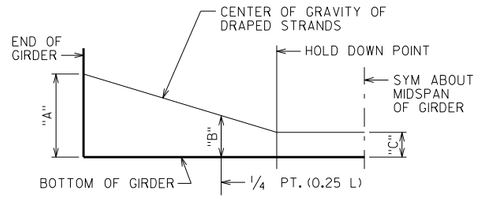
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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54W" PRESTRESSED GIRDER DETAILS

SHEET 13

2765

G54W
7-13

SCALE = 1

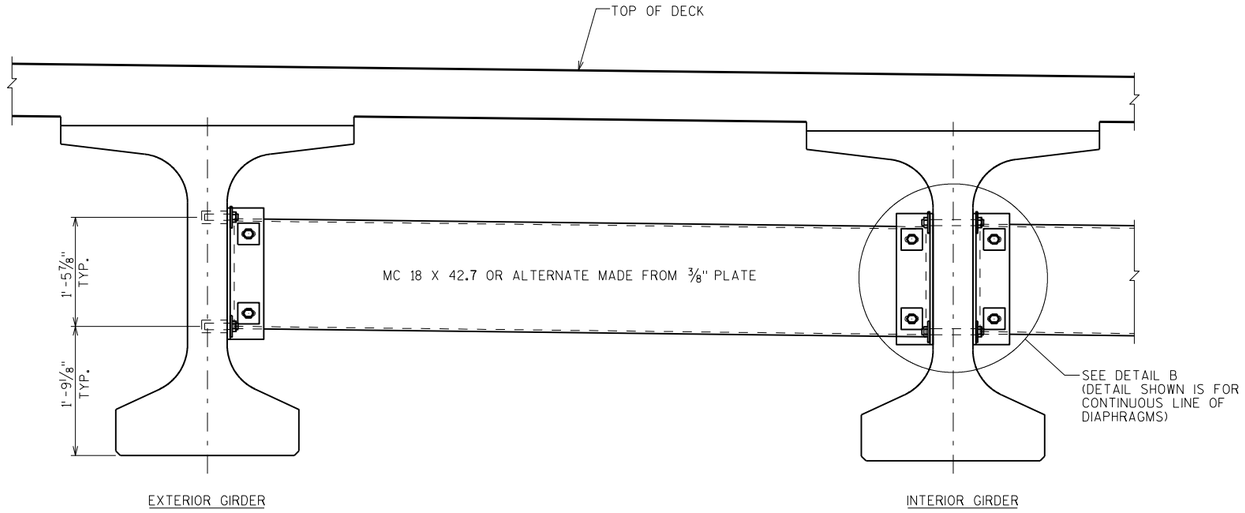
8

9

123

8

STATE PROJECT NUMBER
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PART TRANSVERSE SECTION AT DIAPHRAGM

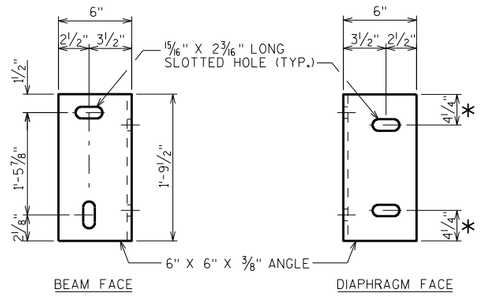
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-864", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

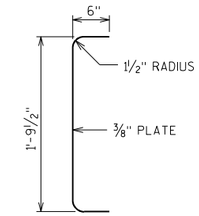
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

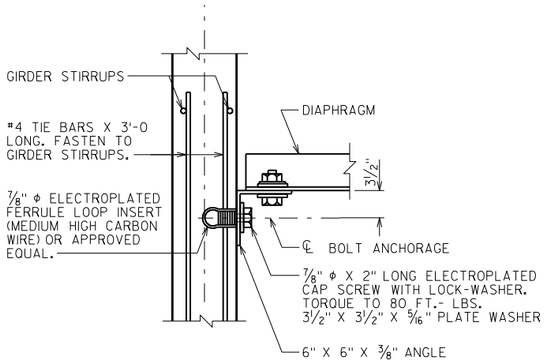


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

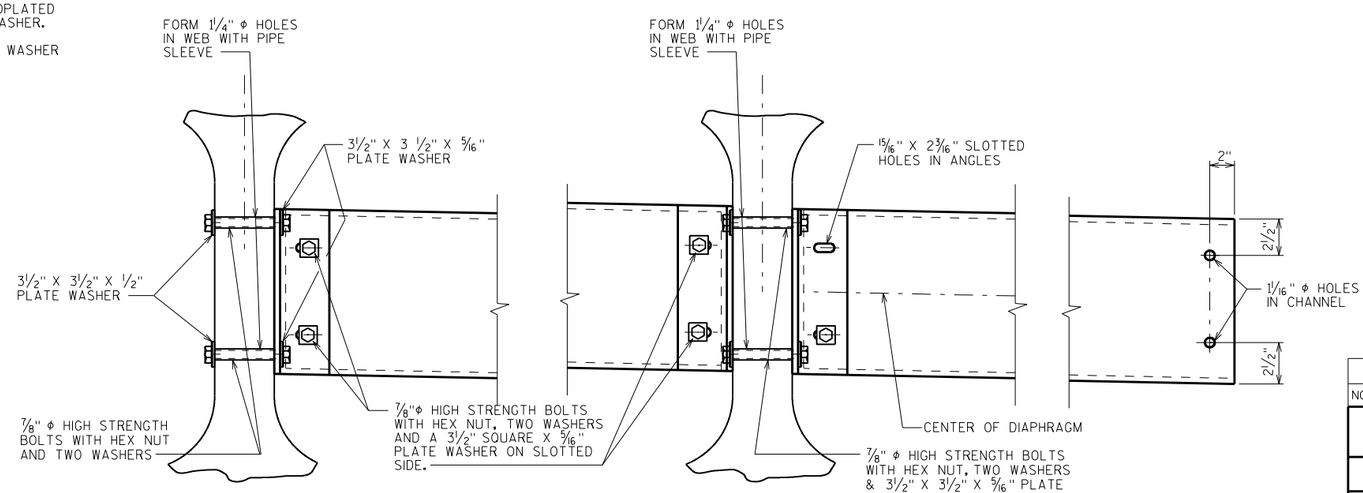


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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STEEL DIAPHRAGM

SHEET 14

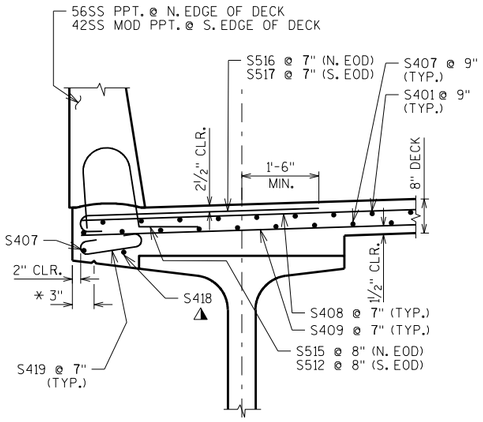
2766

GSTDIA
7-13

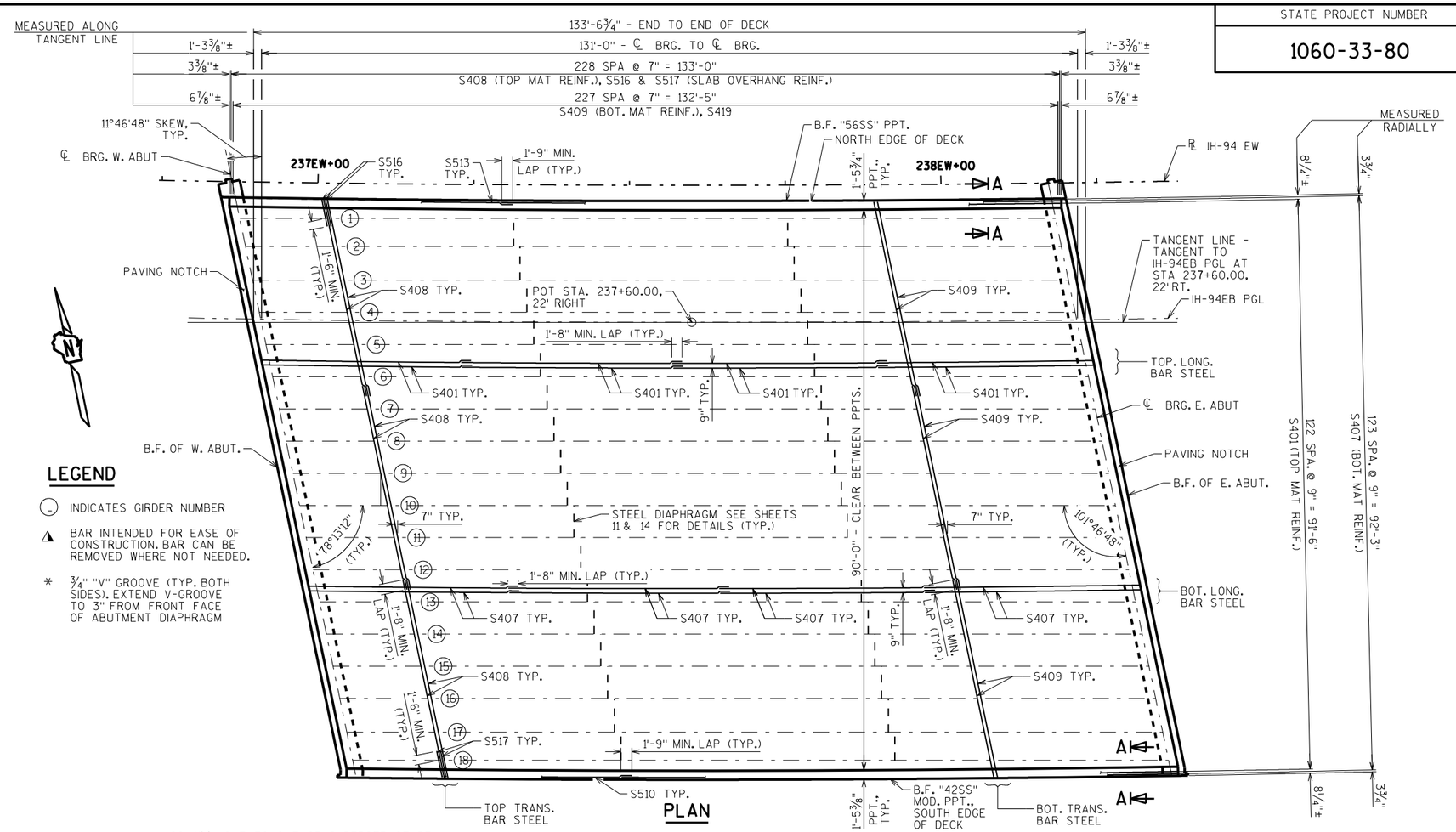
SCALE = 1

STATE PROJECT NUMBER

1060-33-80



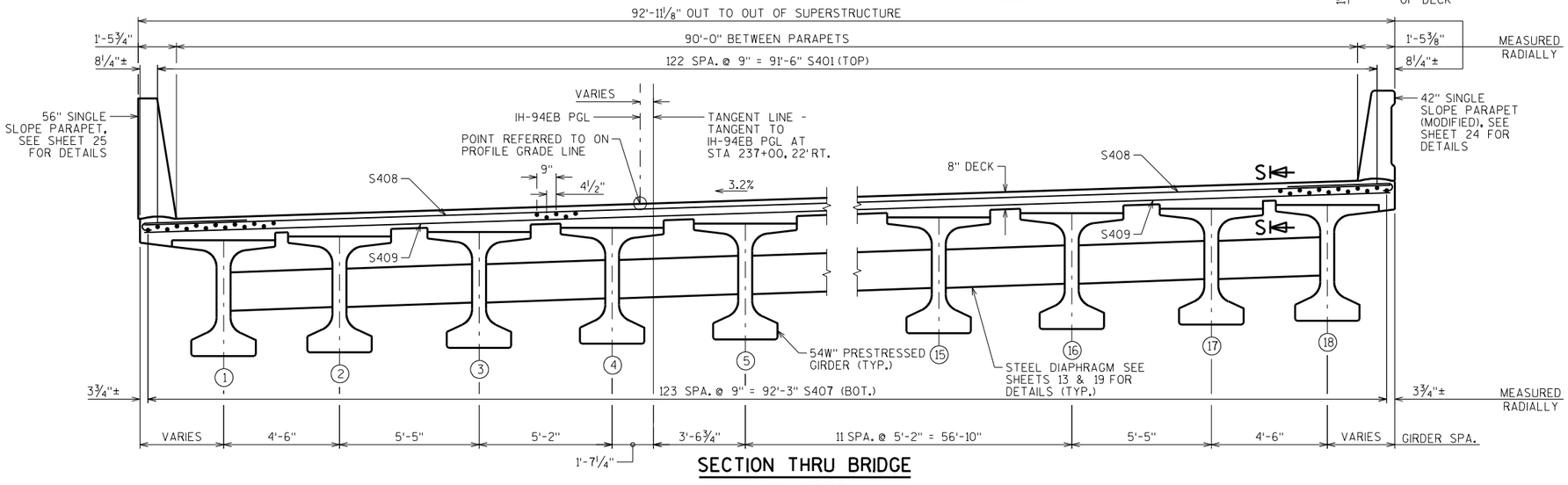
SECTION A-A



PLAN

LEGEND

- (1) INDICATES GIRDER NUMBER
- ▲ BAR INTENDED FOR EASE OF CONSTRUCTION. BAR CAN BE REMOVED WHERE NOT NEEDED.
- * ¾" "V" GROOVE (TYP. BOTH SIDES). EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT DIAPHRAGM



SECTION THRU BRIDGE

(LOOKING EAST)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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SUPERSTRUCTURE

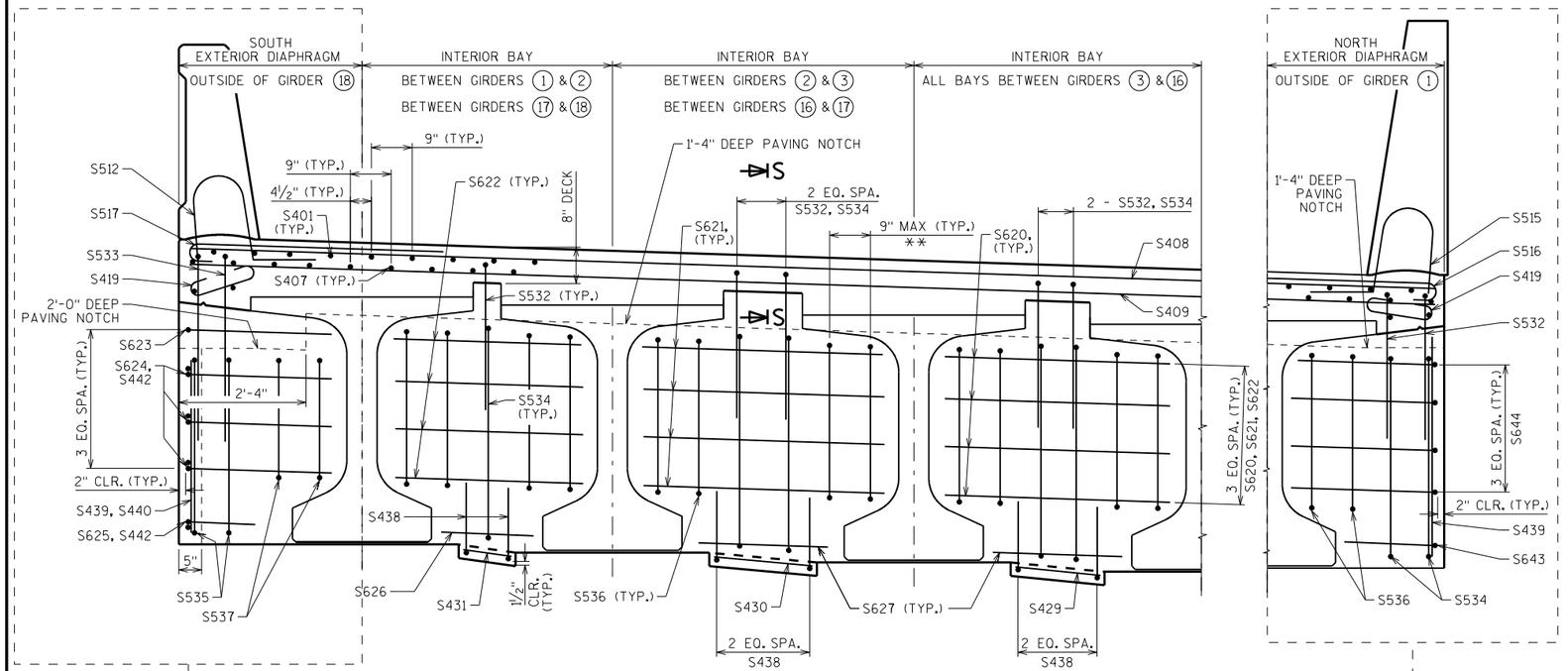
SHEET 15

2767

SCALE = 10

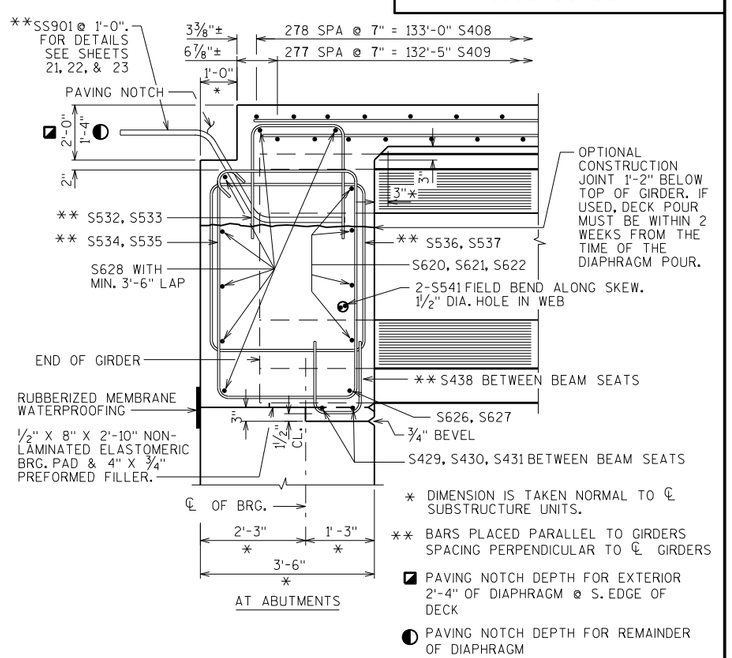
STATE PROJECT NUMBER

1060-33-80

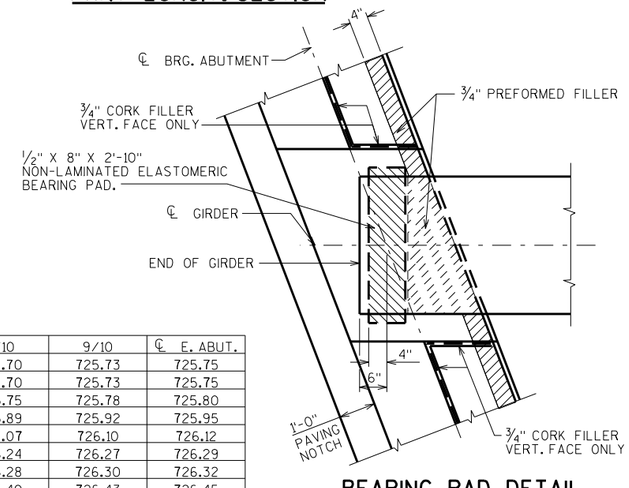


CROSS SECTION THRU WEST DIAPHRAGM

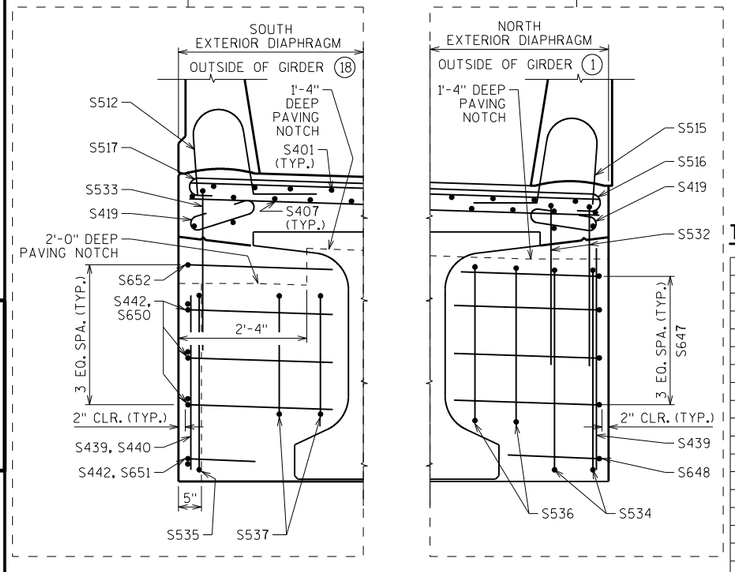
(LOOKING WEST)



PART LONGIT. SECTION

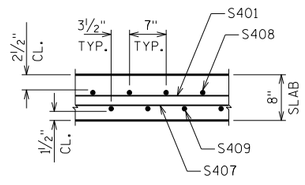


BEARING PAD DETAIL



CROSS SECTION THRU EAST DIAPHRAGM

(LOOKING WEST)
ALL INTERIOR BAYS SIMILAR TO WEST DIAPHRAGM



SECTION S-S

TOP OF DECK ELEVATIONS

	℄ W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ E. ABUT.
N EOD	725.24	725.32	725.39	725.46	725.52	725.58	725.63	725.67	725.70	725.73	725.75
N F.L.	725.24	725.32	725.40	725.46	725.53	725.58	725.63	725.67	725.70	725.73	725.75
GIRDER 1	725.30	725.38	725.45	725.51	725.57	725.62	725.67	725.71	725.75	725.78	725.80
GIRDER 2	725.45	725.53	725.60	725.66	725.72	725.77	725.82	725.86	725.89	725.92	725.95
GIRDER 3	725.63	725.71	725.78	725.84	725.90	725.95	725.99	726.03	726.07	726.10	726.12
GIRDER 4	725.81	725.88	725.95	726.01	726.07	726.12	726.16	726.20	726.24	726.27	726.29
PGL	725.84	725.92	725.99	726.05	726.11	726.16	726.21	726.25	726.28	726.30	726.32
GIRDER 5	725.98	726.05	726.12	726.18	726.24	726.29	726.33	726.37	726.40	726.43	726.45
GIRDER 6	726.15	726.22	726.29	726.35	726.41	726.46	726.50	726.54	726.57	726.60	726.62
GIRDER 7	726.32	726.39	726.46	726.52	726.58	726.63	726.67	726.71	726.74	726.77	726.79
GIRDER 8	726.49	726.56	726.63	726.69	726.75	726.79	726.84	726.88	726.91	726.93	726.96
GIRDER 9	726.67	726.74	726.80	726.86	726.92	726.96	727.01	727.04	727.08	727.10	727.12
GIRDER 10	726.84	726.91	726.97	727.03	727.08	727.13	727.17	727.21	727.24	727.27	727.29
GIRDER 11	727.01	727.08	727.14	727.20	727.25	727.30	727.34	727.38	727.41	727.44	727.46
GIRDER 12	727.18	727.25	727.31	727.37	727.42	727.47	727.51	727.55	727.58	727.60	727.62
GIRDER 13	727.35	727.42	727.48	727.54	727.59	727.64	727.68	727.72	727.75	727.77	727.79
GIRDER 14	727.52	727.59	727.65	727.71	727.76	727.81	727.85	727.88	727.91	727.94	727.95
GIRDER 15	727.69	727.76	727.82	727.88	727.93	727.98	728.02	728.05	728.08	728.10	728.12
GIRDER 16	727.87	727.93	727.99	728.05	728.10	728.14	728.18	728.22	728.25	728.27	728.29
GIRDER 17	728.05	728.11	728.17	728.23	728.28	728.32	728.36	728.40	728.42	728.45	728.46
GIRDER 18	728.20	728.26	728.32	728.38	728.43	728.47	728.51	728.54	728.57	728.59	728.61
S F.L.	728.24	728.31	728.37	728.43	728.48	728.52	728.56	728.59	728.61	728.63	728.64
S EOD	728.24	728.31	728.38	728.43	728.48	728.53	728.56	728.59	728.61	728.63	728.64

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

SUPERSTRUCTURE DETAILS

SHEET 16

2768

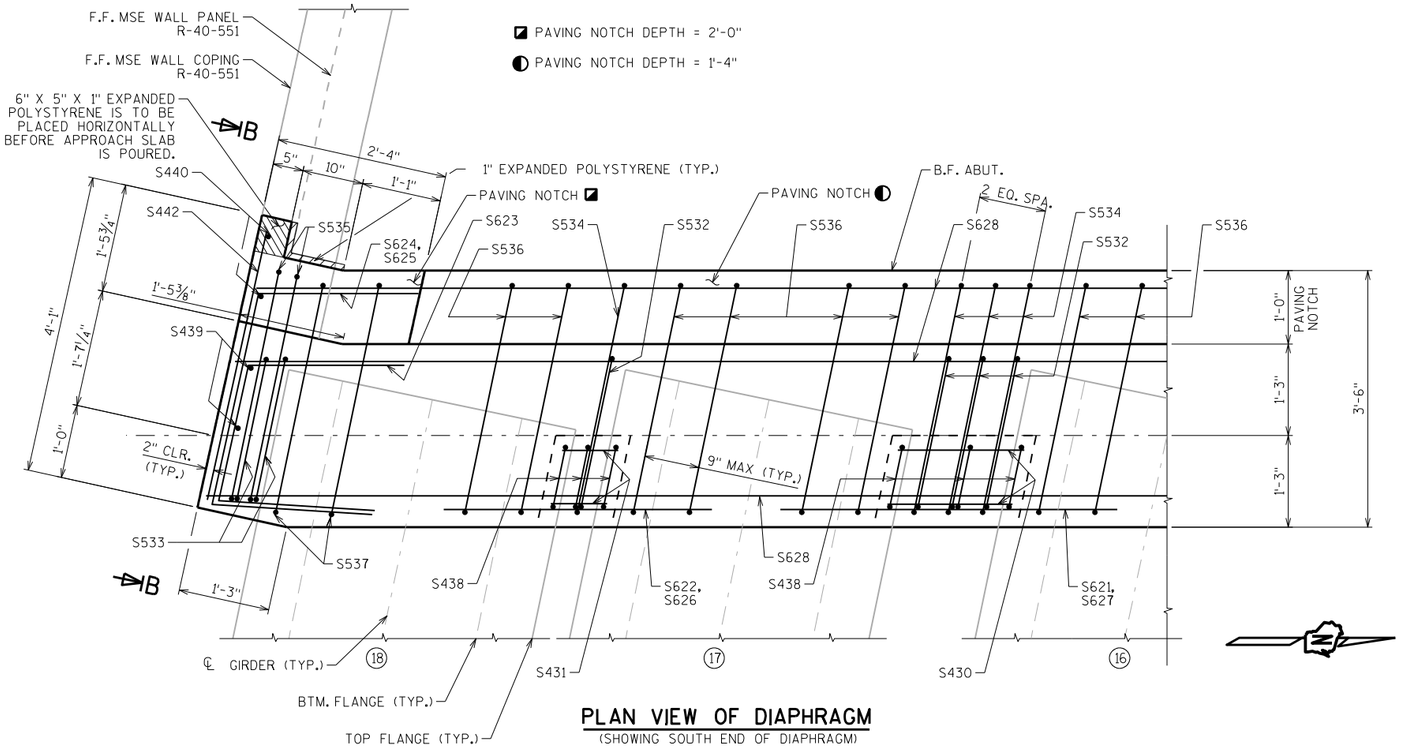
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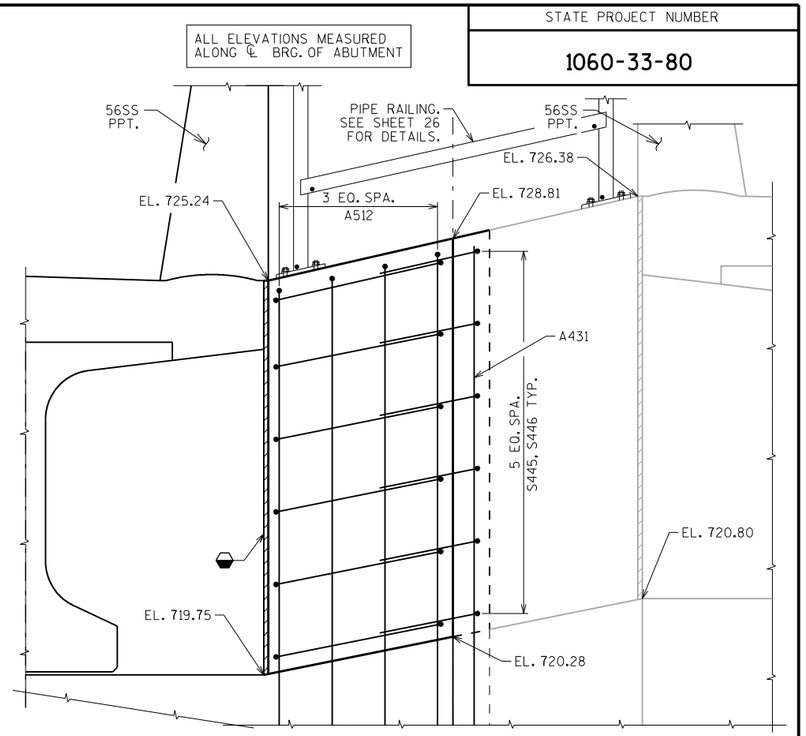
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STATE PROJECT NUMBER

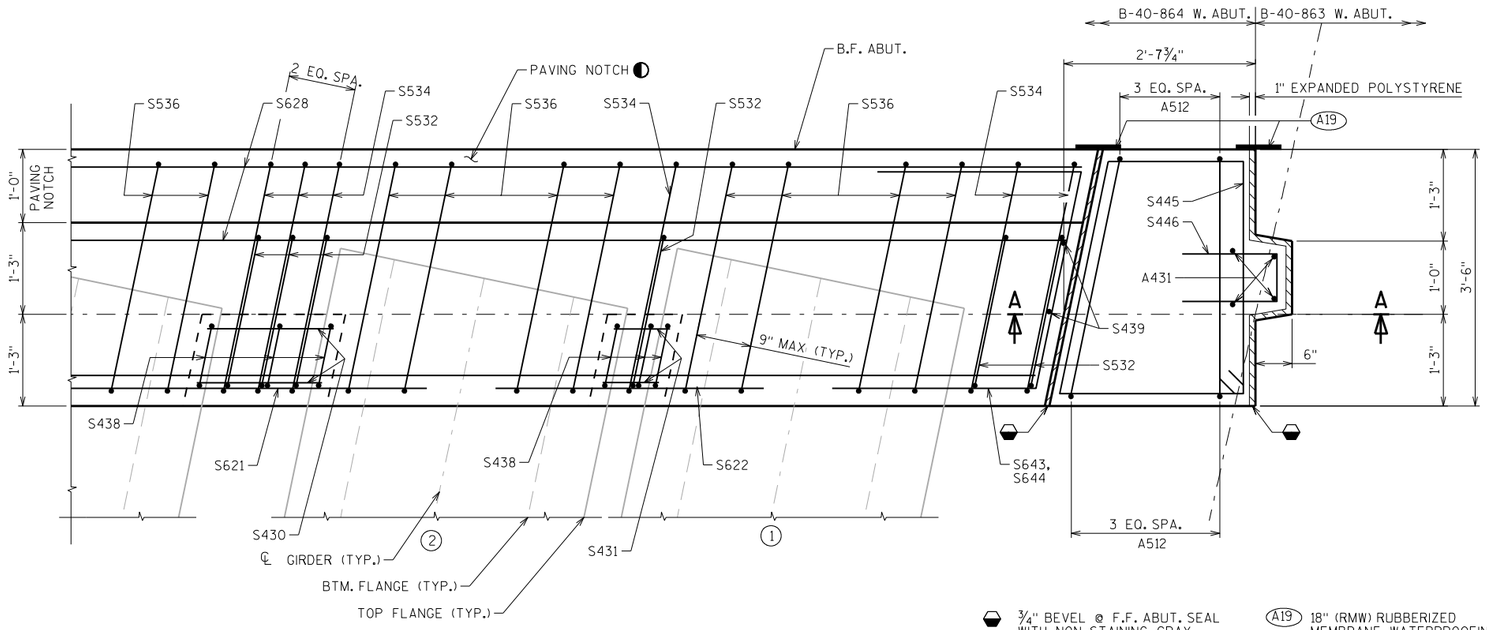
1060-33-80



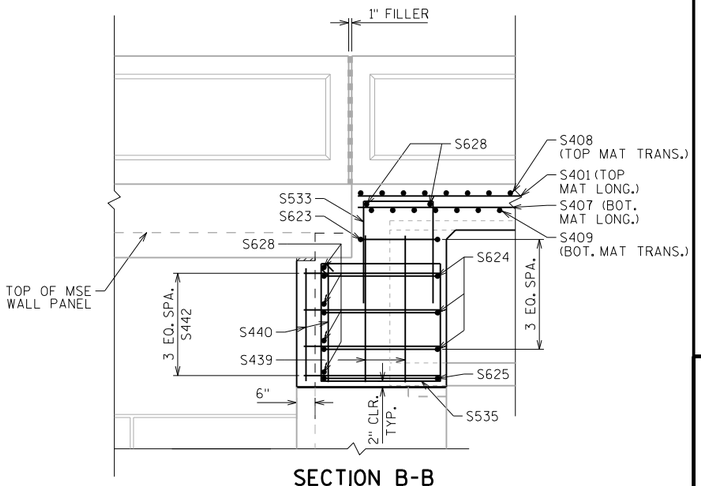
PLAN VIEW OF DIAPHRAGM
(SHOWING SOUTH END OF DIAPHRAGM)



SECTION A-A



PLAN VIEW OF DIAPHRAGM
(SHOWING NORTH END OF DIAPHRAGM)



SECTION B-B

¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

WEST DIAPHRAGM DETAILS

SHEET 17

2769

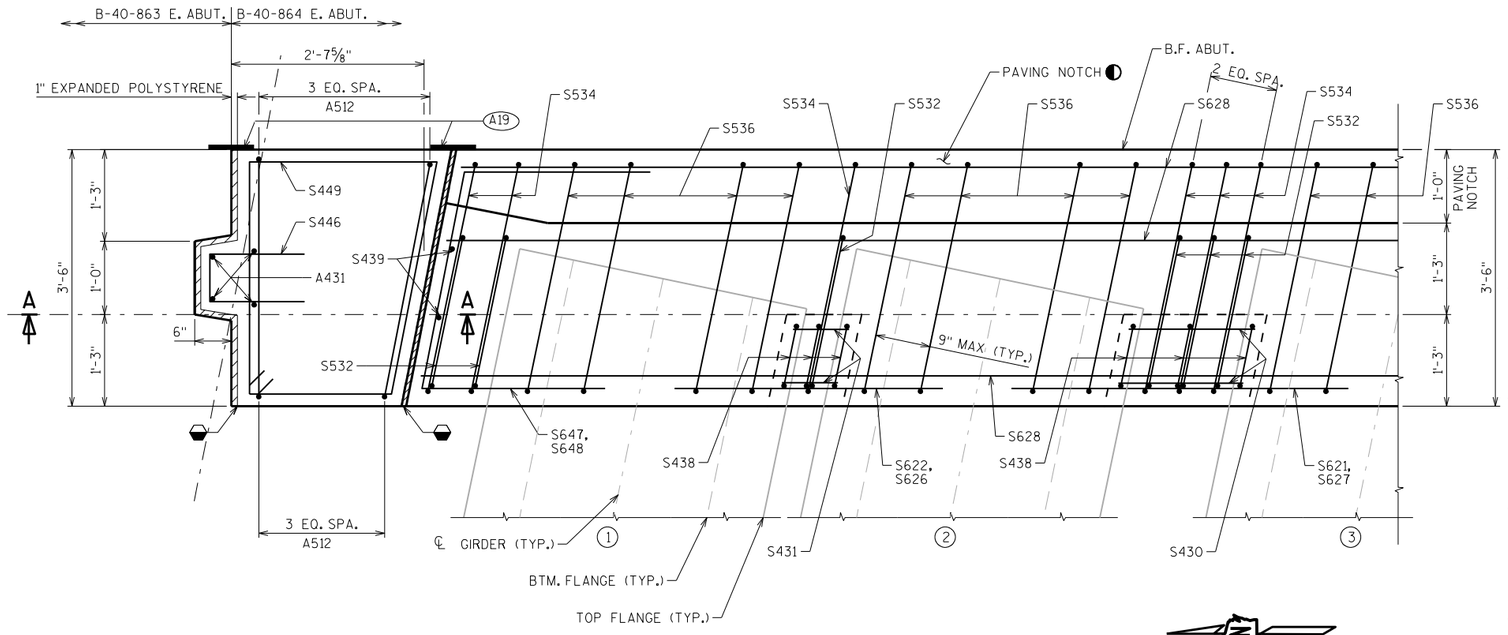
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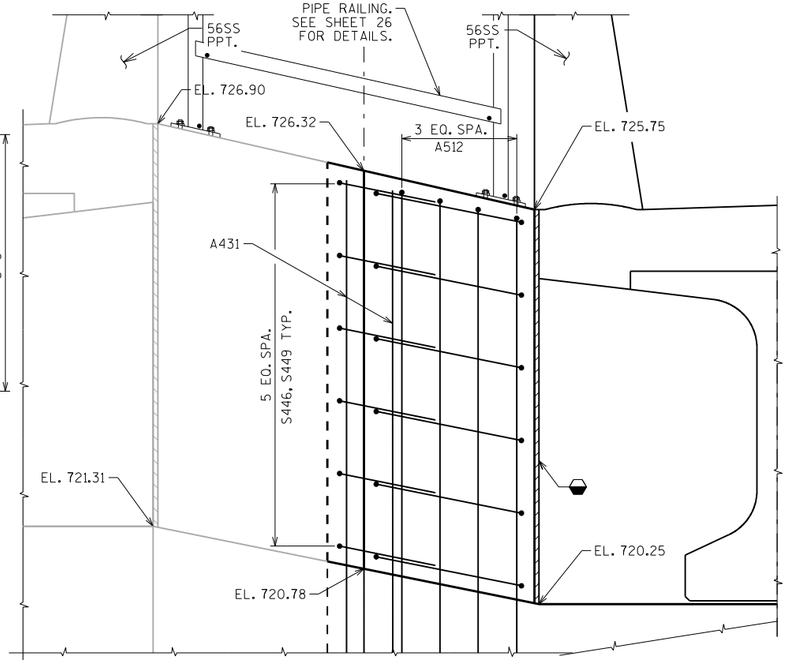
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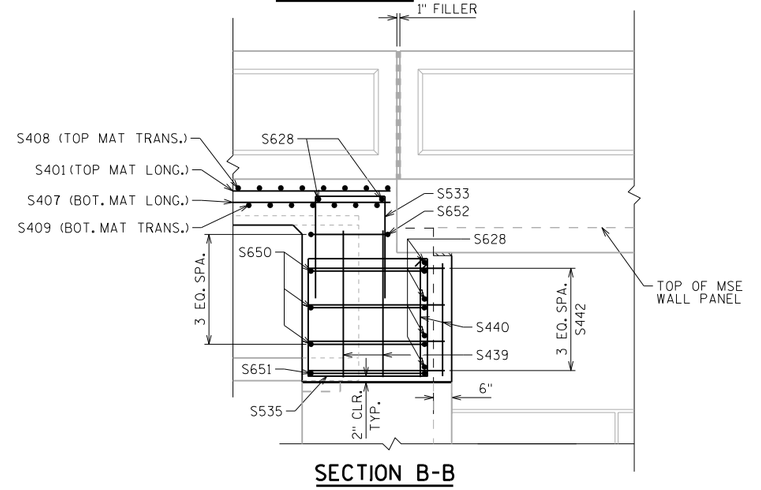
STATE PROJECT NUMBER

1060-33-80





SECTION A-A

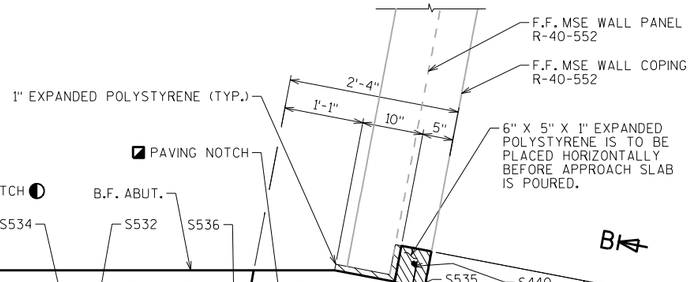


SECTION B-B

- ◒ ¾" BEVEL @ F.F. ABUT. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONCRETE.)
- ◪ PAVING NOTCH DEPTH = 2'-0"
- ◐ PAVING NOTCH DEPTH = 1'-4"

PLAN VIEW OF DIAPHRAGM

(SHOWING NORTH END OF DIAPHRAGM)



PLAN VIEW OF DIAPHRAGM

(SHOWING SOUTH END OF DIAPHRAGM)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

EAST DIAPHRAGM DETAILS

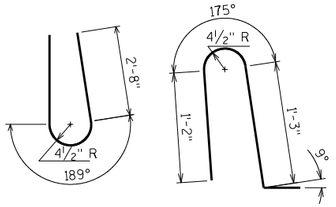
SHEET 18

2770

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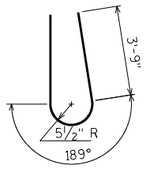
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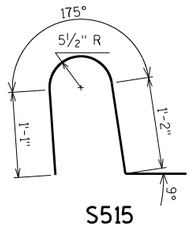


S511

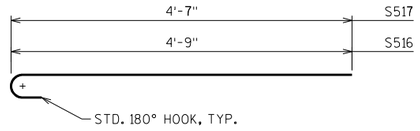
S512



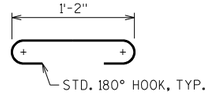
S514



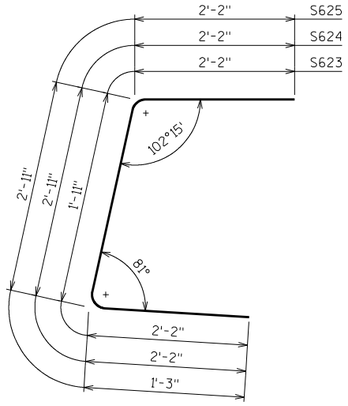
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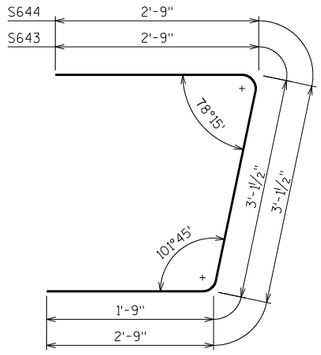
S516, S517



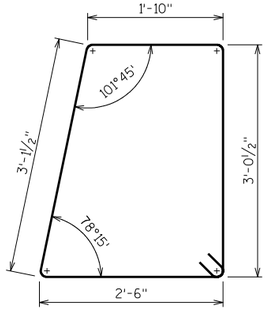
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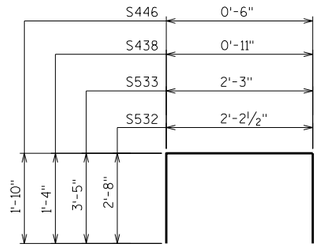
S623, S624, S625



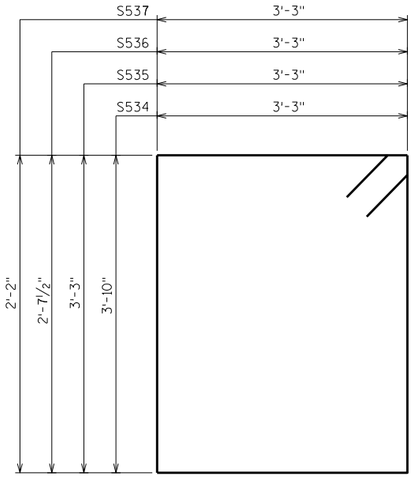
S643, S644



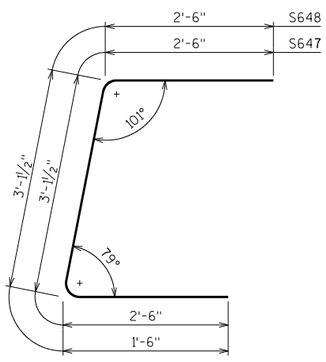
S445



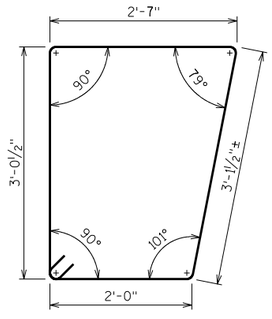
S532, S533, S438, S446



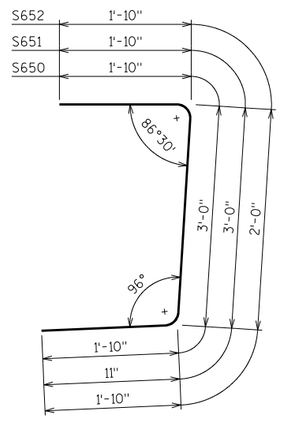
S534, S535, S536, S537



S647, S648



S449



S650, S651, S652

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	492	34'-7"			LONGITUDINAL - TOP
S402		--	--			NOT USED
S403		--	--			NOT USED
S404		--	--			NOT USED
S405		--	--			NOT USED
S406		--	--			NOT USED
S407	X	504	34'-7"			LONGITUDINAL - BOTTOM
S408	X	687	32'-8"			TRANSVERSE - TOP
S409	X	684	32'-8"			TRANSVERSE - BOTTOM
S510	X	24	45'-7"			42SS PARAPET - HORIZ.
S511	X	200	6'-8"	X		42SS PARAPET - VERT.
S512	X	200	4'-5"	X		42SS PARAPET - VERT.
S513	X	24	45'-7"			56SS PARAPET - HORIZ.
S514	X	200	9'-1"	X		56SS PARAPET - VERT.
S515	X	200	4'-6"	X		56SS PARAPET - VERT
S516	X	229	5'-4"	X		TRANSVERSE - TOP - AT N. EDGE OF DECK
S517	X	229	5'-2"	X		TRANSVERSE - TOP - AT S. EDGE OF DECK
S418	X	8	34'-7"			LONGITUDINAL - BOT. - AT EDGES OF DECK
S419	X	456	2'-2"	X		TRANS. - BOT. - AT EDGES OF DECK
S620	X	104	4'-4"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S621	X	16	4'-7"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S622	X	16	3'-8"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S623	X	1	6'-1"	X		W. ABUT. DIAPH. - HORIZ. - S. END
S624	X	3	7'-1"	X		W. ABUT. DIAPH. - HORIZ. - S. END
S625	X	1	6'-2"	X		W. ABUT. DIAPH. - HORIZ. - S. END
S626	X	4	1'-8"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S627	X	30	2'-7"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S628	X	28	49'-2"			ABUT. DIAPH. - HORIZ. - B.F.
S429	X	52	1'-5"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S430	X	8	1'-8"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S431	X	8	0'-9"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S532	X	72	7'-4"	X		ABUT. DIAPH. - STIRRUP
S533	X	3	8'-10"	X		ABUT. DIAPH. - STIRRUP - S. END
S534	X	72	14'-10"	X		ABUT. DIAPH. - STIRRUP
S535	X	3	13'-8"	X		ABUT. DIAPH. - STIRRUP - S. END
S536	X	140	12'-5"	X		ABUT. DIAPH. - STIRRUP
S537	X	4	11'-6"	X		ABUT. DIAPH. - STIRRUP - S. END
S438	X	98	3'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIRDERS
S439	X	8	4'-0"			ABUT. DIAPH. - VERT. - N. END
S440	X	4	3'-3"			ABUT. DIAPH. - VERT. - S. END
S541	X	72	6'-0"			ABUT. DIAPH. - THRU GIRDERS
S442	X	8	3'-9"			ABUT. DIAPH. - HORIZ. - END
S643	X	1	7'-4"	X		W. ABUT. DIAPH. - HORIZ. - N. END
S644	X	4	8'-5"	X		W. ABUT. DIAPH. - HORIZ. - N. END
S445	X	6	11'-2"	X		ABUT. DIAPH. - TIES - KEYED END
S446	X	12	4'-0"	X		ABUT. DIAPH. - HORIZ. - KEYED END
S647	X	4	7'-10"	X		E. ABUT. DIAPH. - HORIZ. - N. END
S648	X	1	6'-10"	X		E. ABUT. DIAPH. - HORIZ. - N. END
S449	X	6	11'-3"	X		E. ABUT. DIAPH. - TIES - KEYED END
S650	X	3	6'-6"	X		E. ABUT. DIAPH. - HORIZ. - S. END
S651	X	1	5'-6"	X		E. ABUT. DIAPH. - HORIZ. - S. END
S652	X	1	5'-5"	X		E. ABUT. DIAPH. - HORIZ. - S. END

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

SUPERSTRUCTURE REBAR DETAILS

SHEET 19

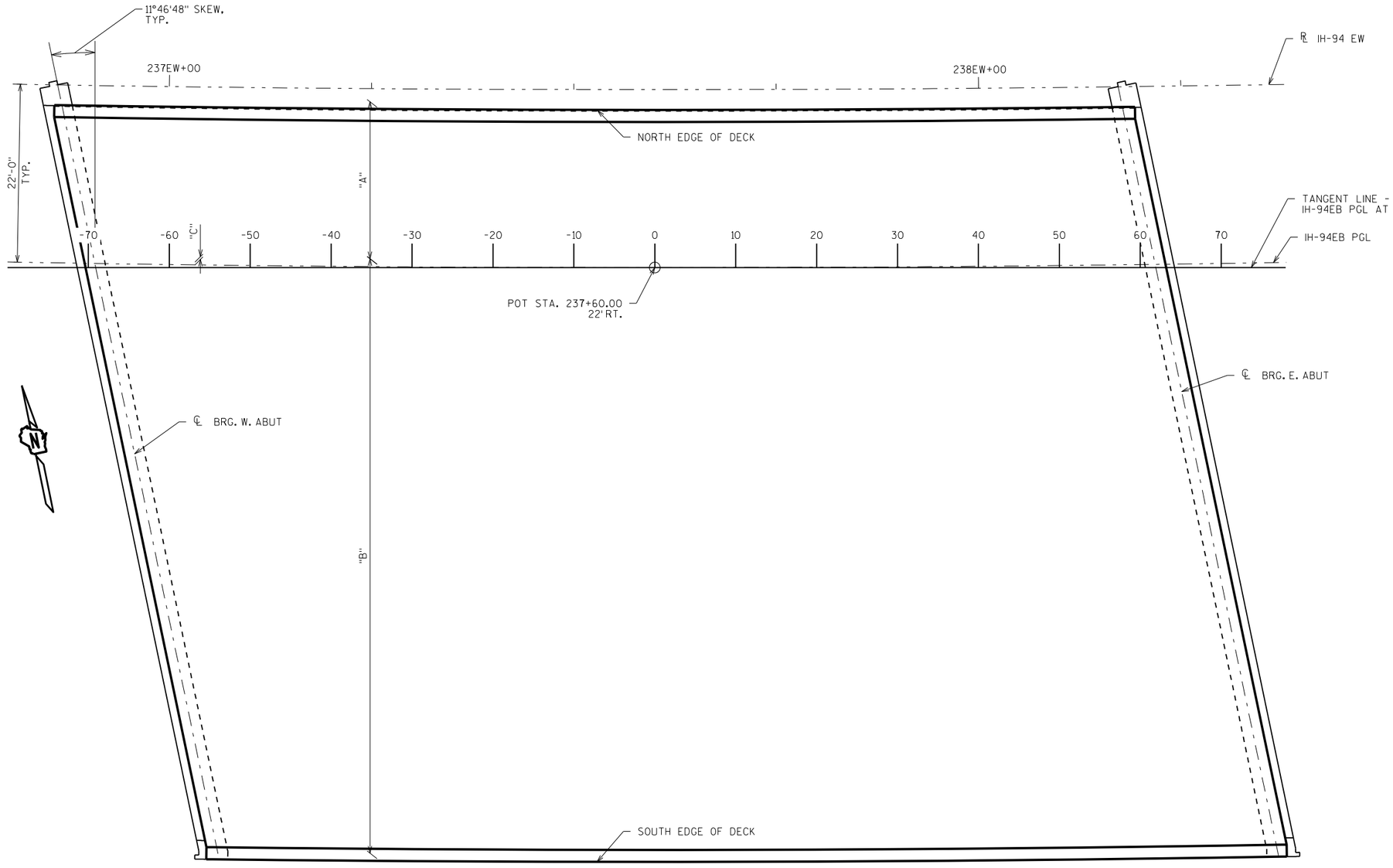
2771

SCALE = 4

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8

STATE PROJECT NUMBER
1060-33-80



PLAN

TANGENT OFFSET DIMENSIONS

LOCATION	"A"	"B"	"C"
-70	19'-11 3/8"	---	6 3/8"
℄ W. ABUT	19'-11 1/4"	---	6 1/4"
-60	19'-9 3/4"	---	4 5/8"
-50	19'-8 1/4"	73'-2 1/8"	3 1/4"
-40	19'-7 1/8"	73'-3 3/8"	2 1/8"
-30	19'-6 1/8"	73'-4 1/4"	1 1/8"
-20	19'-5 1/2"	73'-4 7/8"	0 1/2"
-10	19'-5 1/8"	73'-5 1/4"	0 1/8"
0	19'-5"	73'-5 3/8"	0"
10	19'-5 1/8"	73'-5 1/4"	0 1/8"
20	19'-5 1/2"	73'-4 7/8"	0 1/2"
30	19'-6 1/8"	73'-4 1/4"	1 1/8"
40	19'-7 1/8"	73'-3 3/8"	2 1/8"
50	19'-8 1/4"	73'-2 1/8"	3 1/4"
60	---	73'-0 3/4"	4 5/8"
℄ E. ABUT.	---	73'-0 1/2"	5"
70	---	72'-11 1/8"	6 3/8"

NOTE: ALL DIMENSIONS ARE MEASURED NORMAL TO TANGENT LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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SUPERSTRUCTURE TANGENT OFFSET

SHEET 20

2772

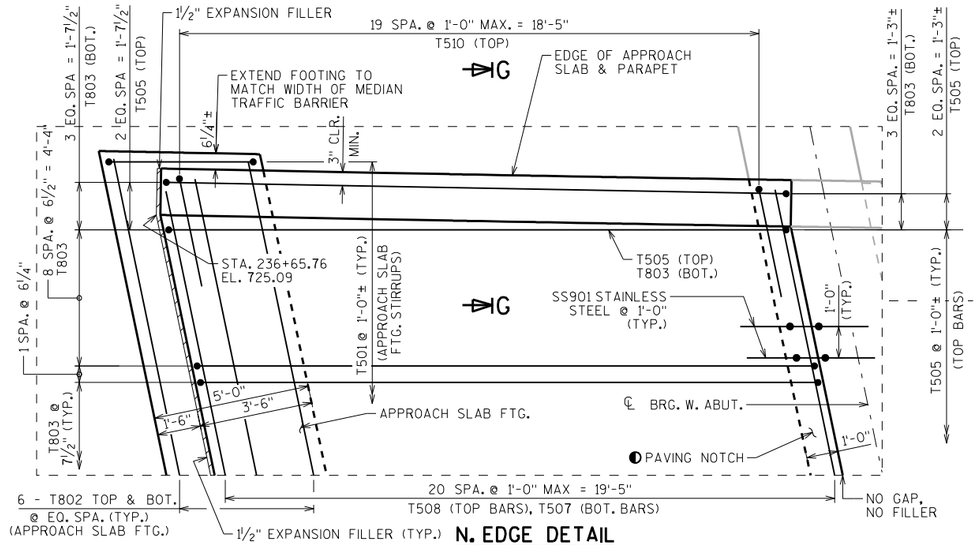
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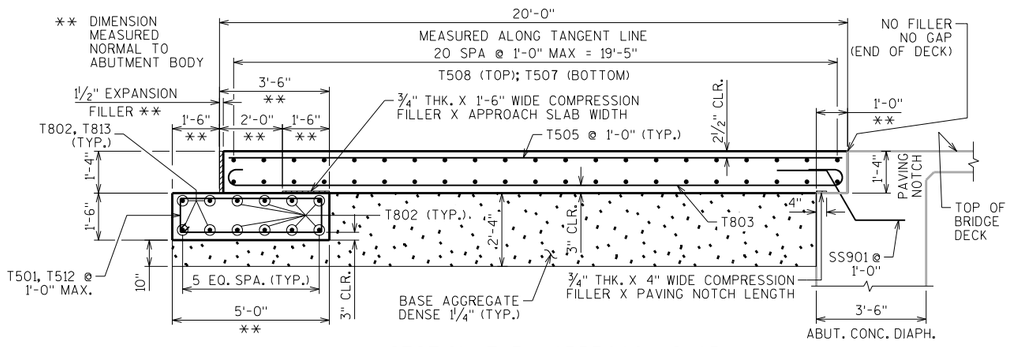
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STATE PROJECT NUMBER

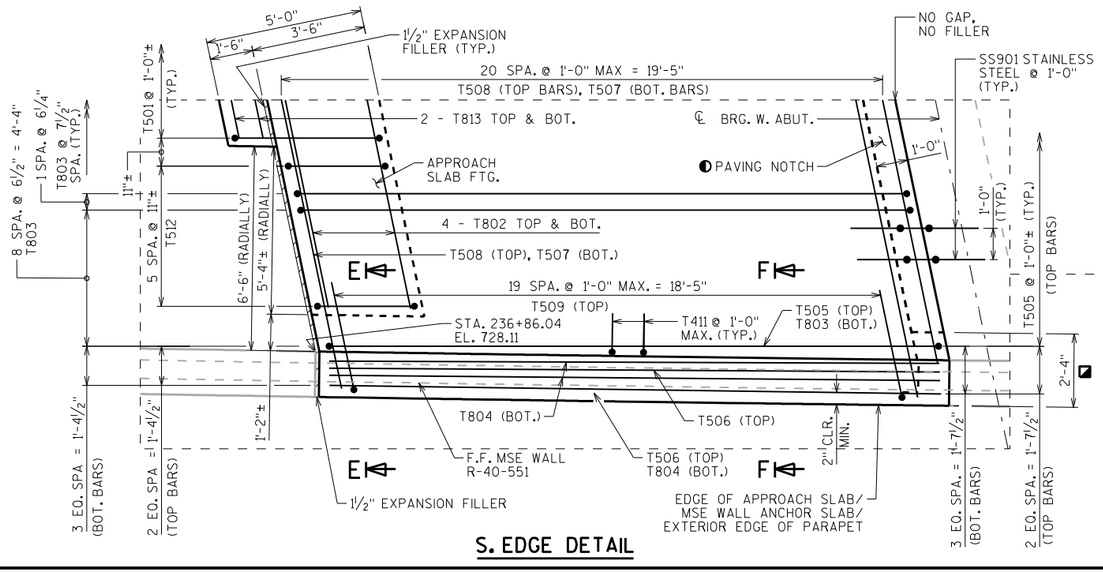
1060-33-80



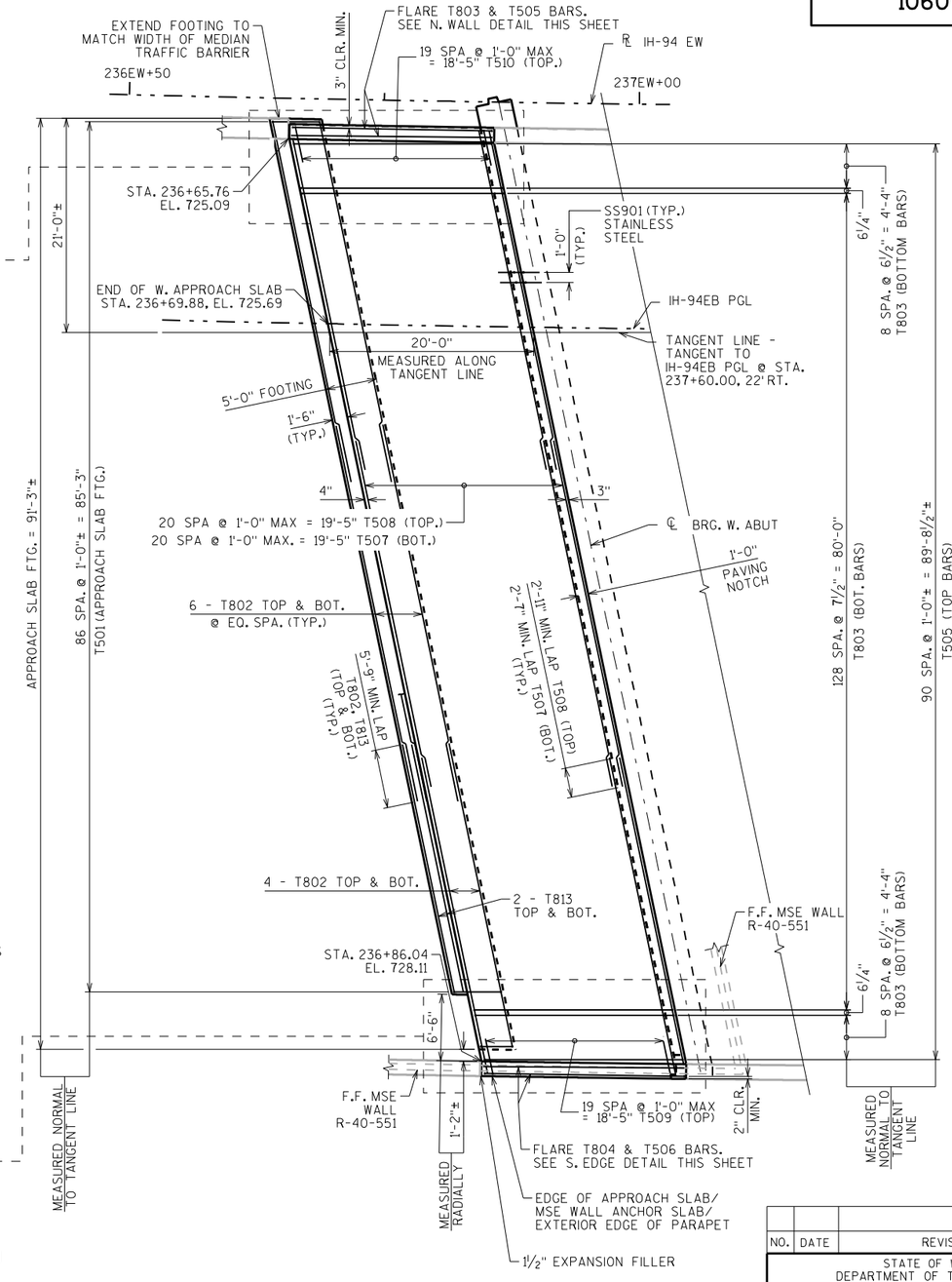
N. EDGE DETAIL



SECTION THRU APPROACH SLAB



S. EDGE DETAIL



NOTE: FOR SECTIONS E-E, F-F, AND G-G SEE SHEET 23

PLAN

◐ PAVING NOTCH DEPTH = 1'-4"

◪ PAVING NOTCH DEPTH = 2'-0" (SS901 TO BE SPACED @ 6" IN THIS REGION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

WEST STRUCTURAL APPROACH SLAB

SHEET 21

2773

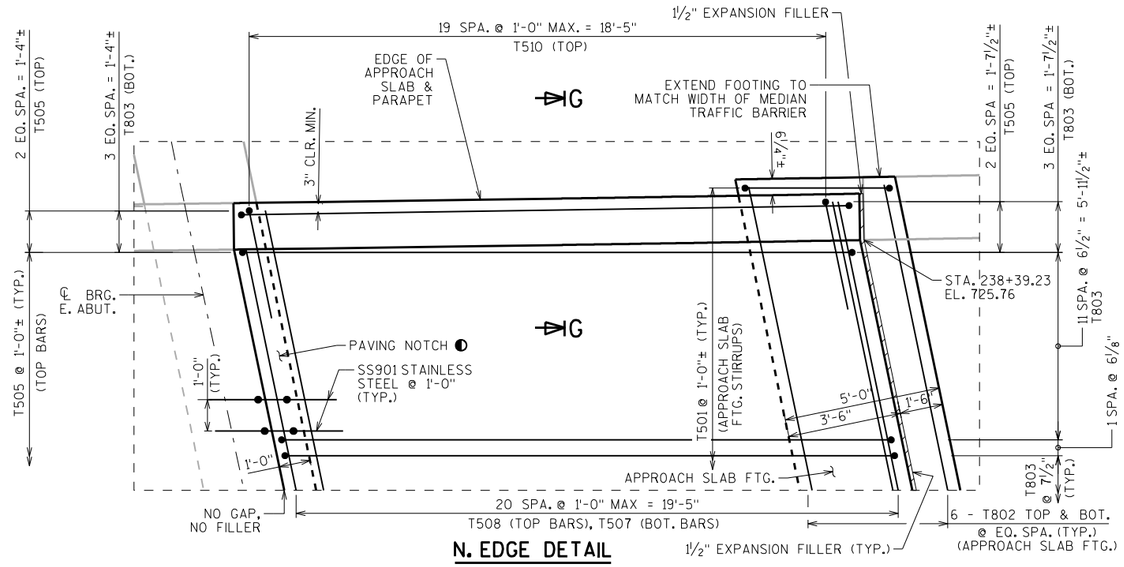
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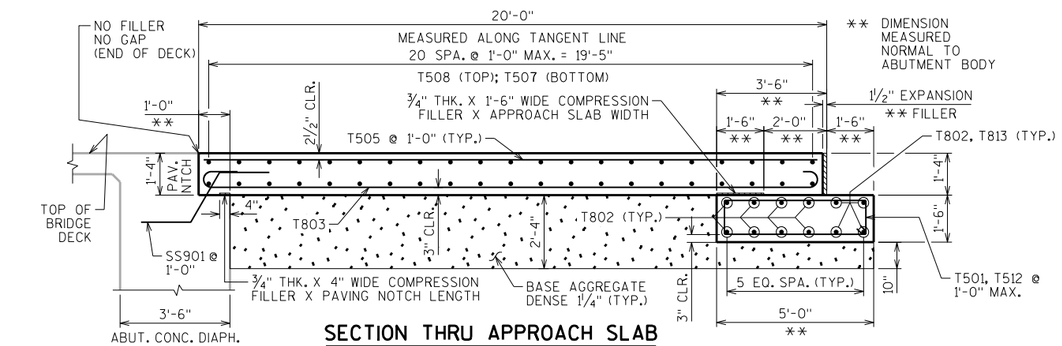
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STATE PROJECT NUMBER

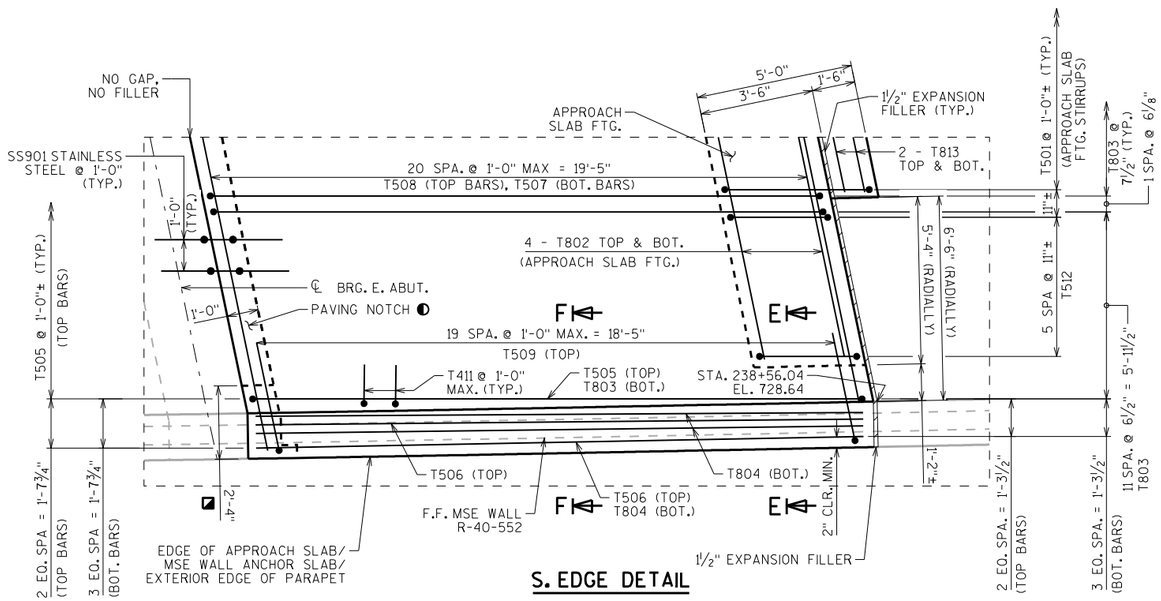
1060-33-80



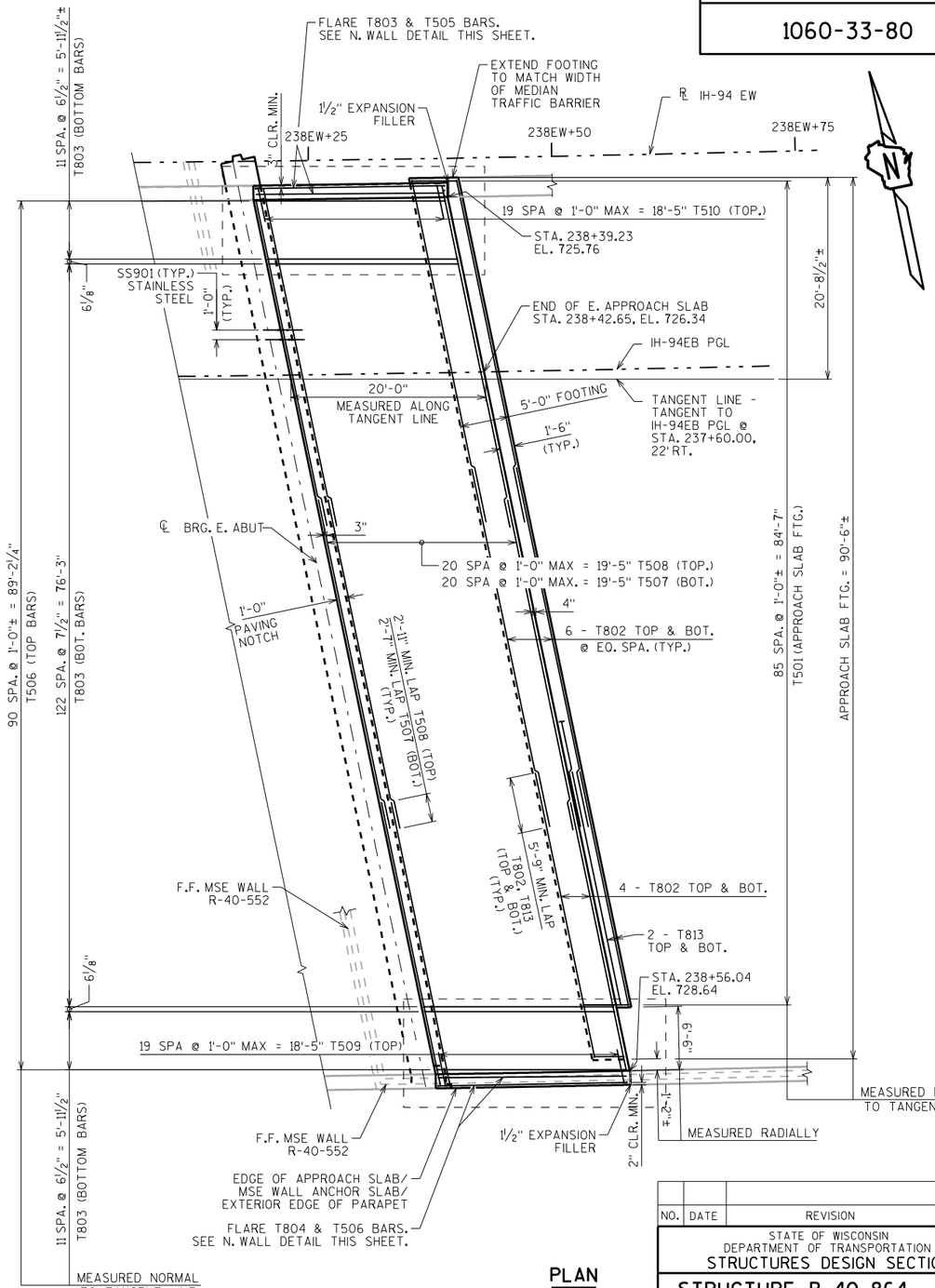
N. EDGE DETAIL



SECTION THRU APPROACH SLAB



S. EDGE DETAIL



PLAN

NOTE: FOR SECTIONS E-E, F-F, AND G-G SEE SHEET 23

◐ PAVING NOTCH DEPTH = 1'-4"

◪ PAVING NOTCH DEPTH = 2'-0" (SS901 TO BE SPACED @ 6" IN THIS REGION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

DRAWN BY ABS | PLANS CK'D. NAR

EAST STRUCTURAL APPROACH SLAB

SHEET 22

2774

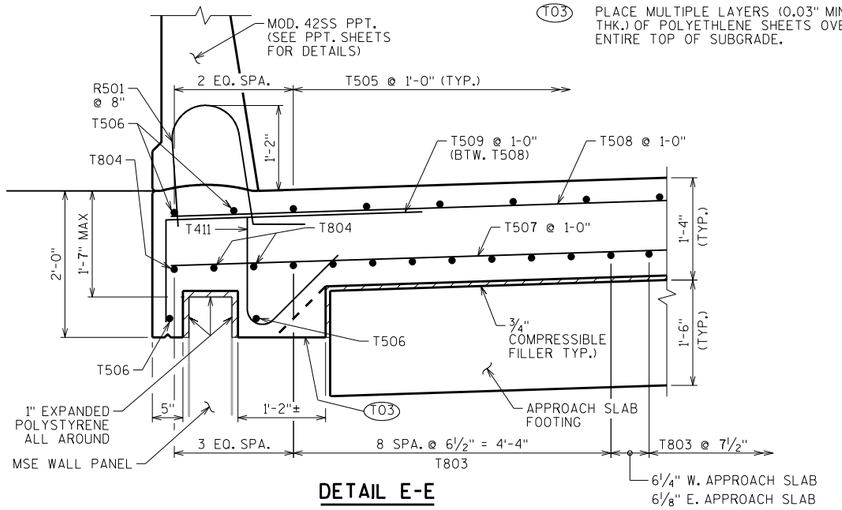
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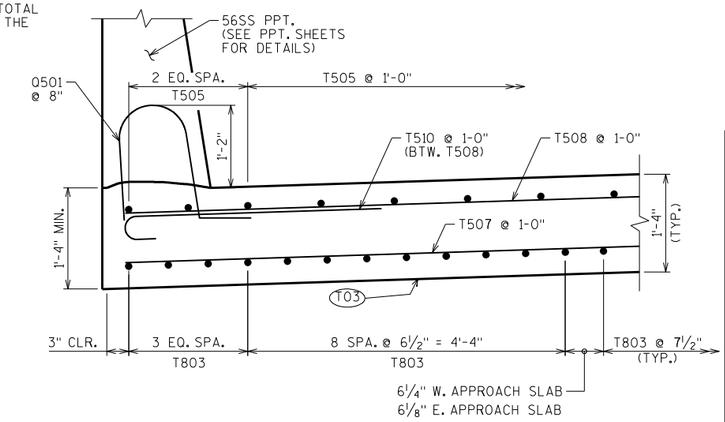
8

STATE PROJECT NUMBER
1060-33-80

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.



DETAIL E-E



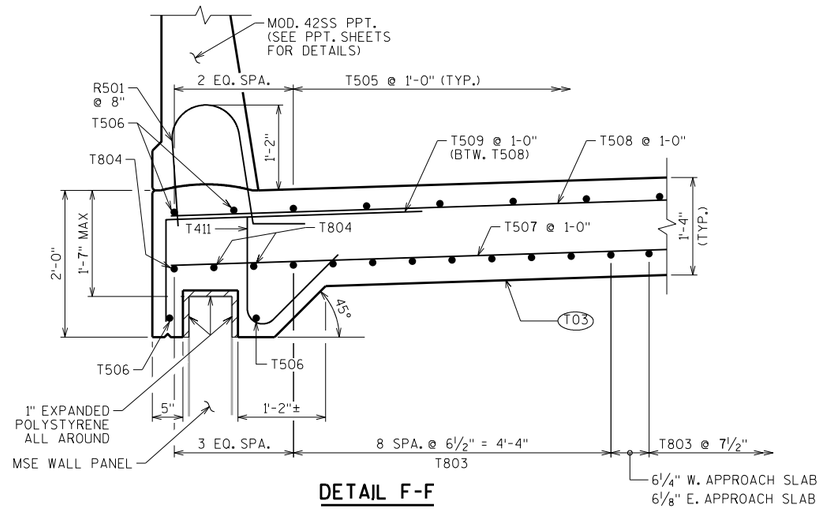
DETAIL G-G

BILL OF BARS

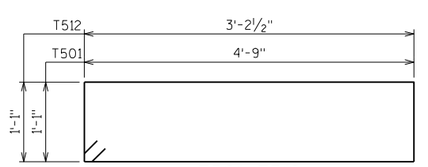
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D. WEST SLAB	NO. REQ'D. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	87	86	12'-4"	X		APPROACH SLAB FTG. - STIRRUP
T802	X	32	32	34'-11"			APPROACH SLAB FTG. - TRANS.
T803	X	147	150	21'-3"	X		APPROACH SLAB - LONG. - BOT.
T804	X	3	3	19'-5"			APPROACH SLAB - LONG. - BOT. - N. EDGE
T505	X	93	93	19'-5"			APPROACH SLAB - LONG. - TOP
T506	X	2	2	19'-5"			APPROACH SLAB - LONG. - TOP - N. EDGE
T507	X	63	63	33'-4"			APPROACH SLAB - TRANS. - BOT.
T508	X	63	63	33'-7"			APPROACH SLAB - TRANS. - TOP
T509	X	20	20	5'-0"	X		APPROACH SLAB - TRANS. - TOP - S. EDGE
T510	X	20	20	4'-1"	X		APPROACH SLAB - TRANS. - TOP - N. EDGE
T411	X	20	20	3'-0"	X		APPROACH SLAB - TRANS. - S. EDGE
T512	X	6	6	9'-3"	X		APPROACH SLAB FTG. - STIRRUP - NOTCH
T813	X	4	4	29'-4"			APPROACH SLAB FTG. - TRANS. - NOTCH

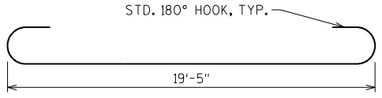
BAR MARK	COAT	NO. REQ'D. WEST SLAB	NO. REQ'D. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
SS901		93	93	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB



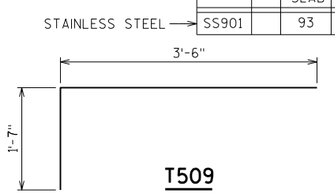
DETAIL F-F



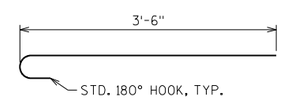
T501, T512



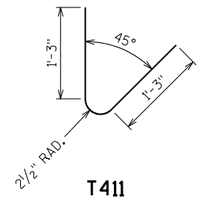
T803



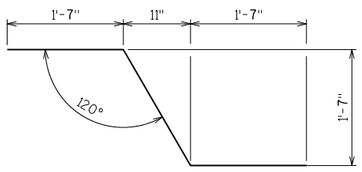
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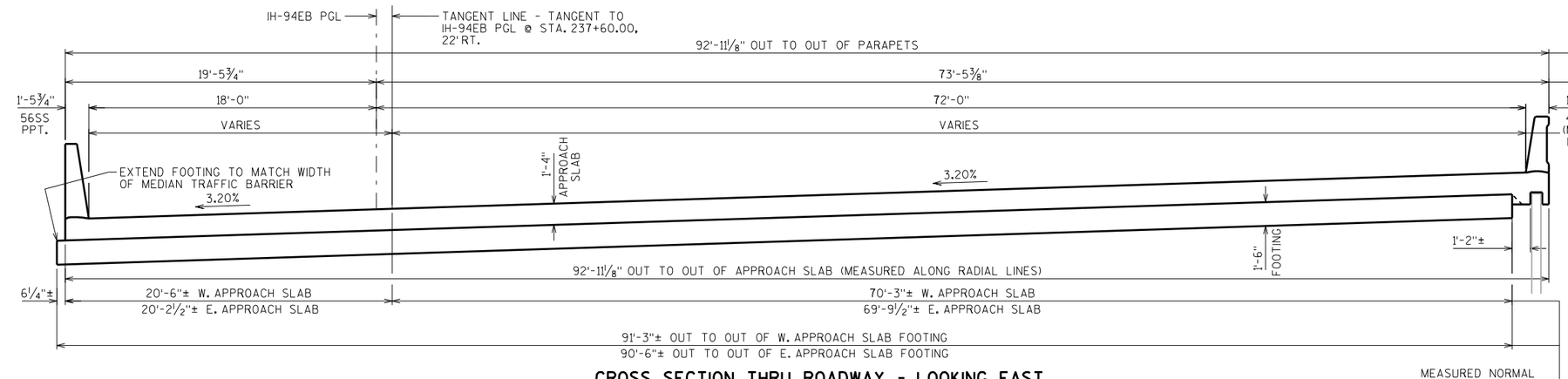
T510



T411



SS901



CROSS SECTION THRU ROADWAY - LOOKING EAST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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STRUCTURAL APPROACH SLAB DETAILS

SHEET 23

2775

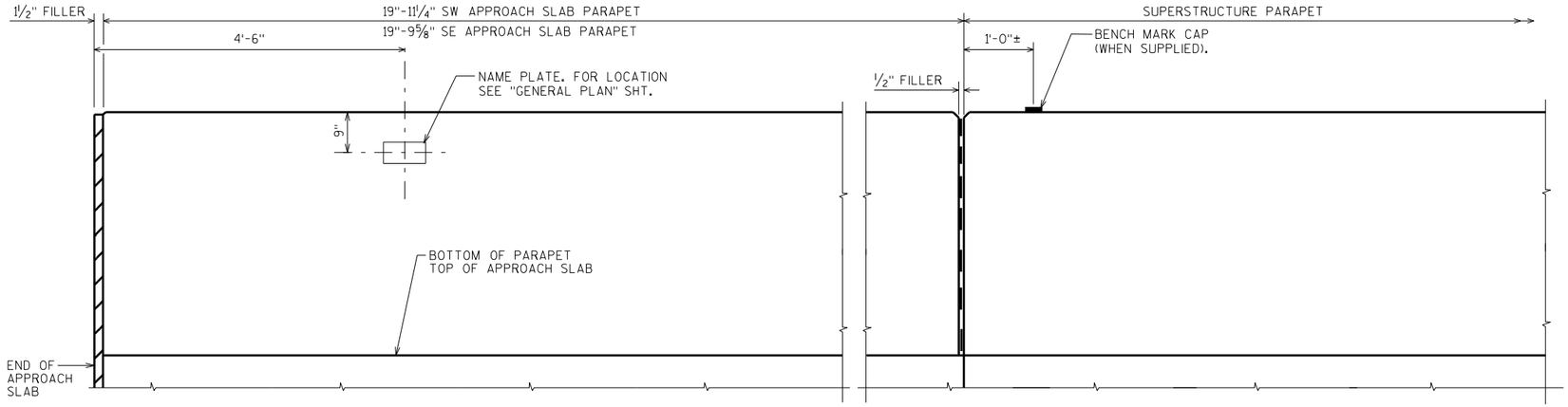
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SCALE = 4

STATE PROJECT NUMBER

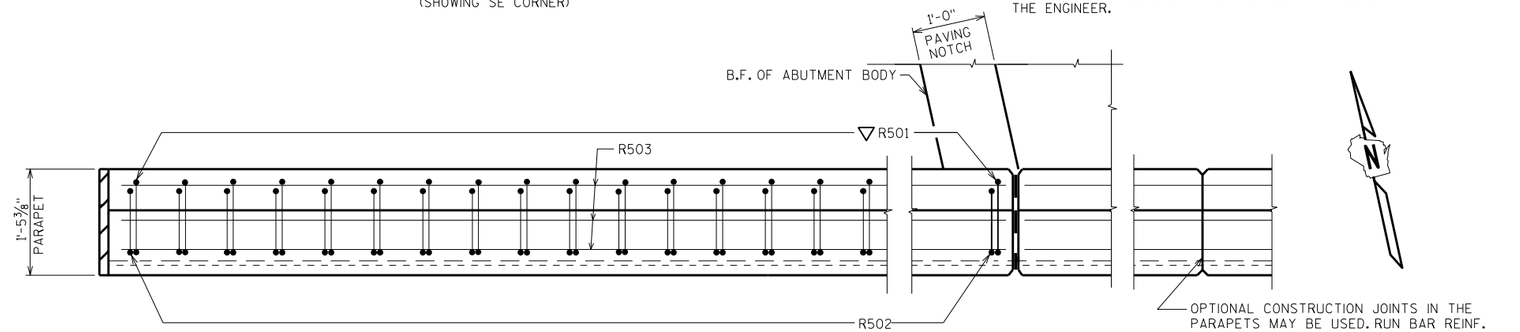
1060-33-80



INSIDE ELEVATION

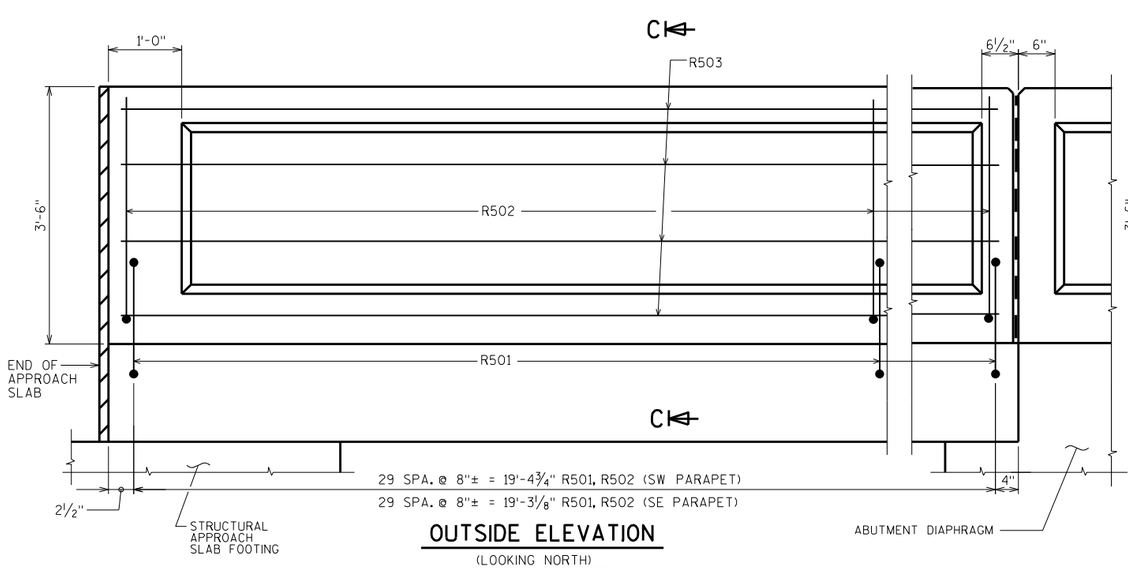
(LOOKING SOUTH)
(SHOWING SE CORNER)

SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING AND BE APPROVED BY THE ENGINEER.



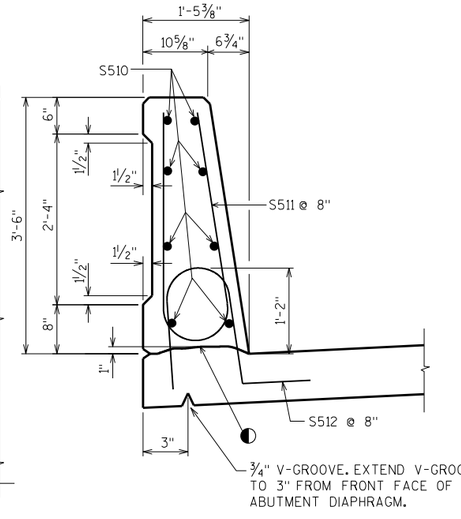
PLAN

(SHOWING SW CORNER)



OUTSIDE ELEVATION

(LOOKING NORTH)
(SHOWING SW CORNER)



SECTION THRU PARAPET ON BRIDGE

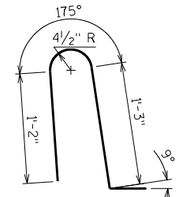
CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH STEEL BEFORE APPROACH SLAB IS POURED.

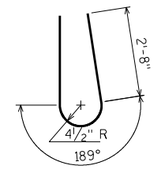
BILL OF BARS

FOR APPROACH SLAB PARAPETS

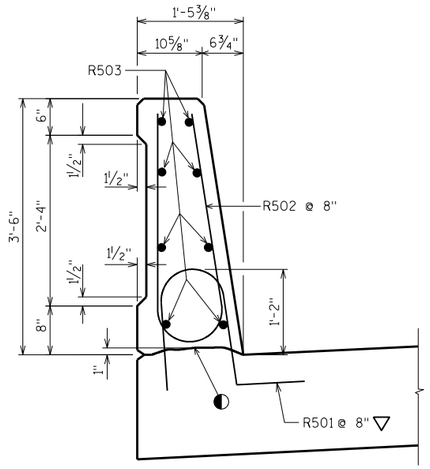
BAR MARK	COAT	W. APPR.	E. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	30	30	4-5	X		PARAPET VERT.
R502	X	30	30	6-7	X		PARAPET VERT.
R503	X	8	8	19-6			PARAPET HORIZ.



R501



R502



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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SINGLE SLOPE PARAPET "42SS" (MODIFIED)

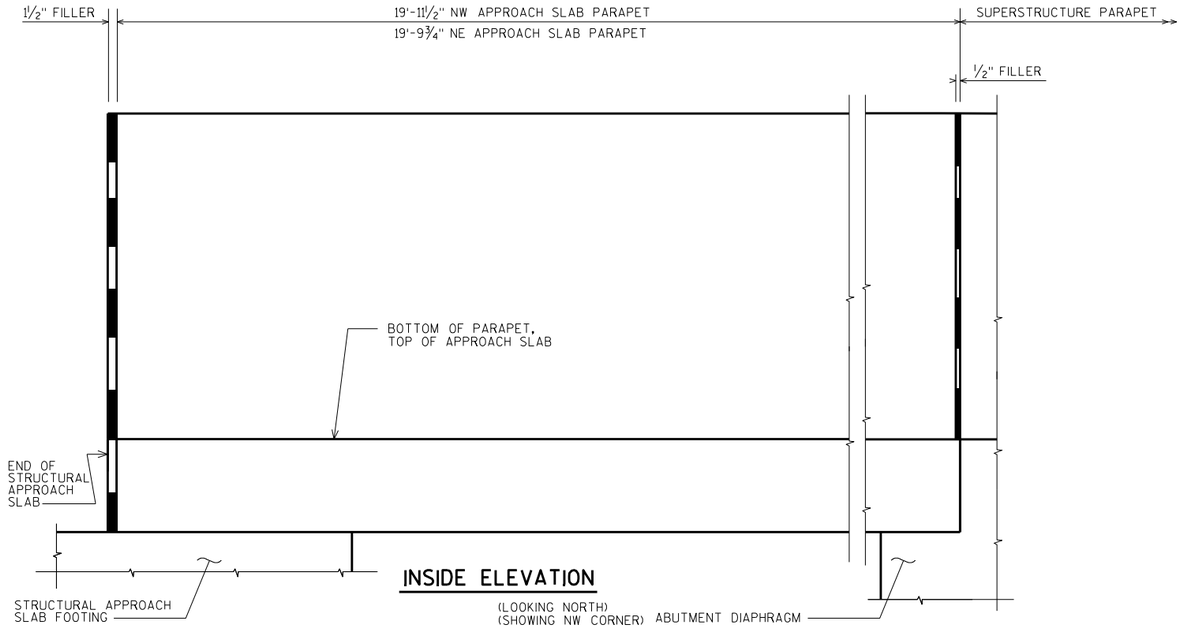
SHEET 24

2776

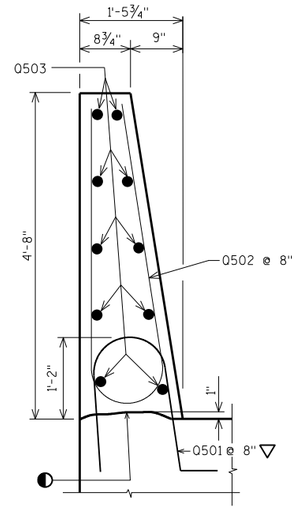
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INSIDE ELEVATION



SECTION C-C

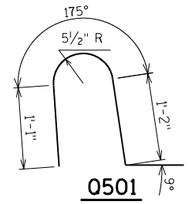
STATE PROJECT NUMBER

1060-33-80

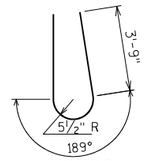
BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

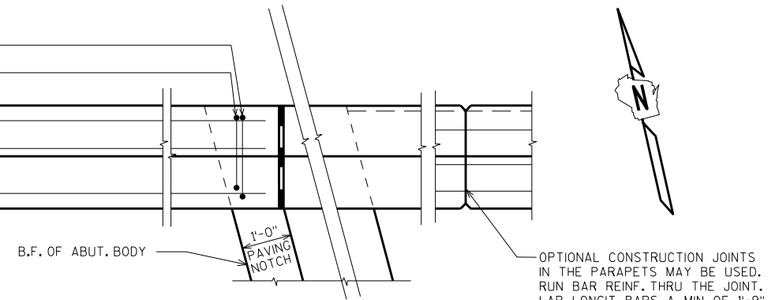
BAR MARK	COAT	W. APPR.	E. APPR.	LENGTH	BENT	BAR SERIES	LOCATION
0501	X	30	30	4-5	X		PARAPET VERT.
0502	X	30	30	9-1	X		PARAPET VERT.
0503	X	10	10	19-6			PARAPET HORIZ.



0501



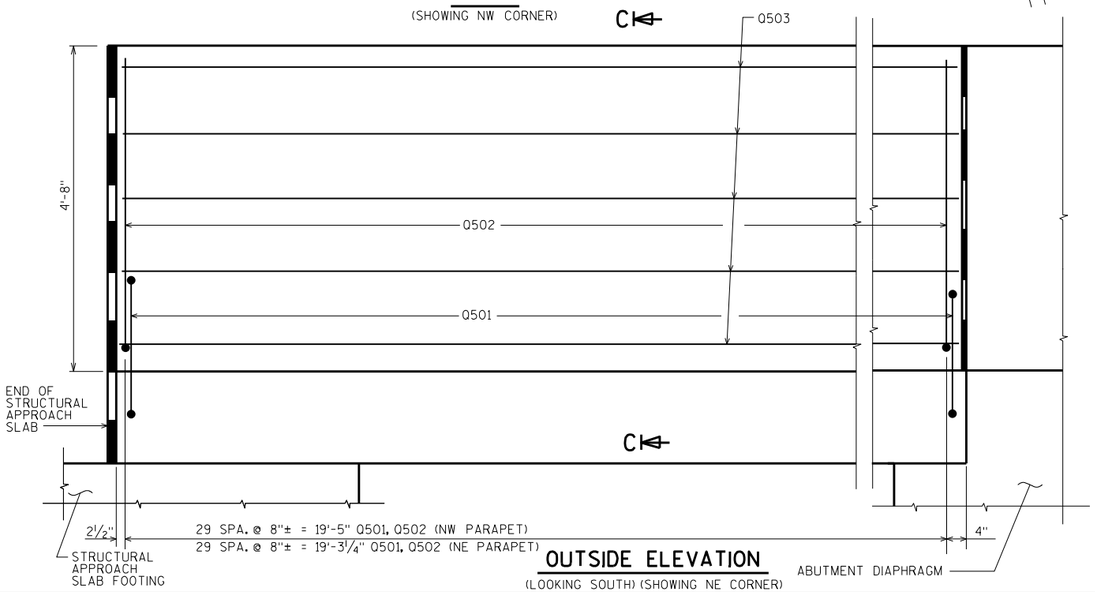
0502



PLAN

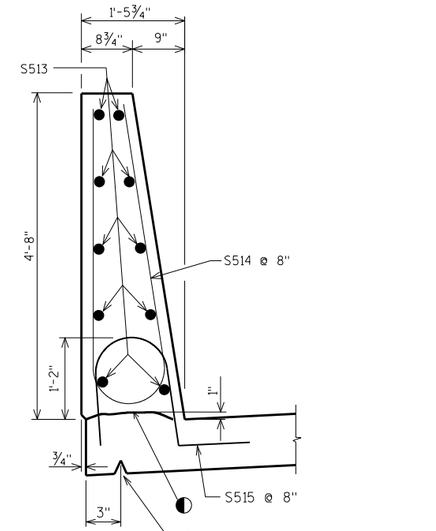
(SHOWING NW CORNER)

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



OUTSIDE ELEVATION

(LOOKING SOUTH) (SHOWING NE CORNER)



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ Q501 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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SINGLE SLOPE PARAPET "56SS"

SHEET 25

2777

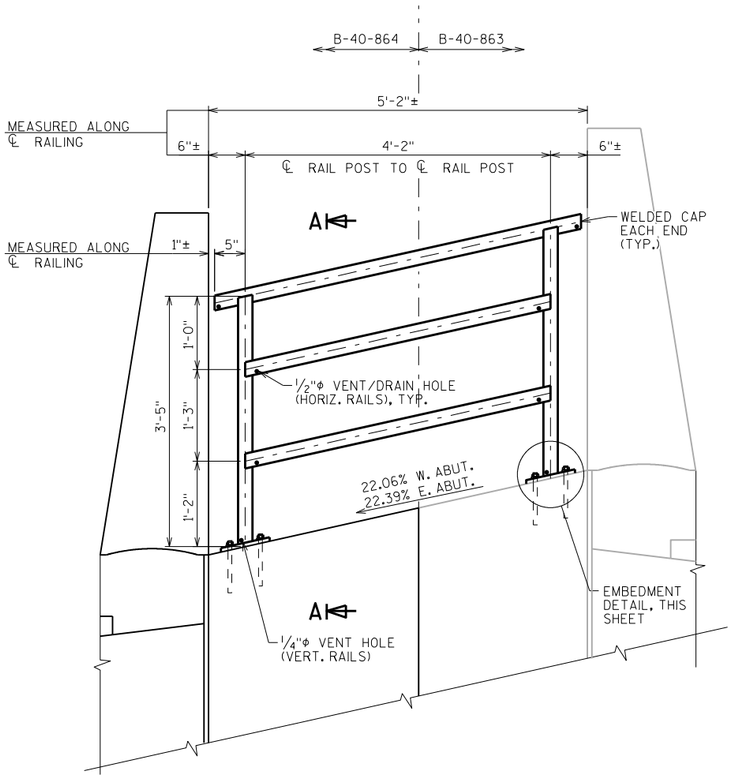
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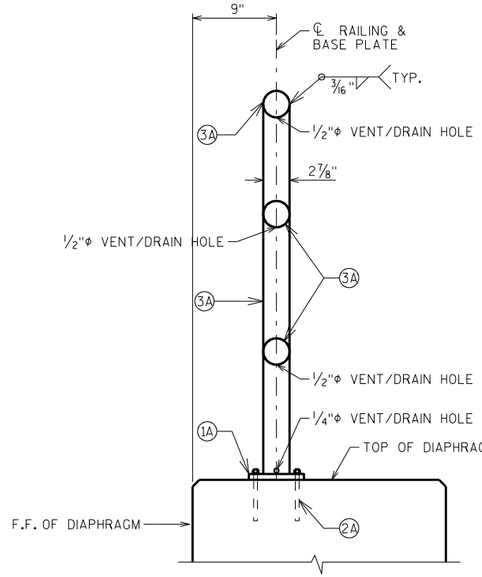
STATE PROJECT NUMBER

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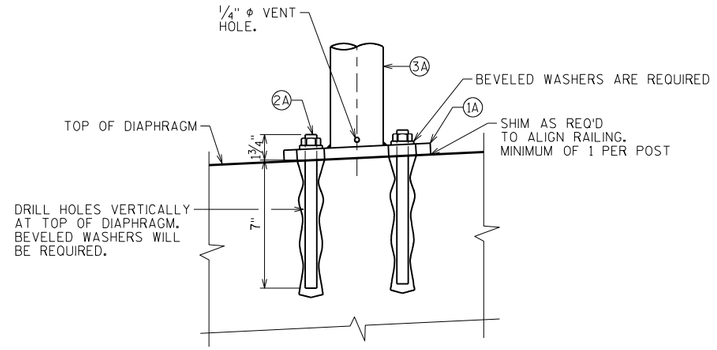
MEDIAN DIAPHRAGM RAILING ELEVATION

(LOOKING AT FRONT FACE OF MEDIAN DIAPHRAGM)
(WEST ABUTMENT SHOWN)

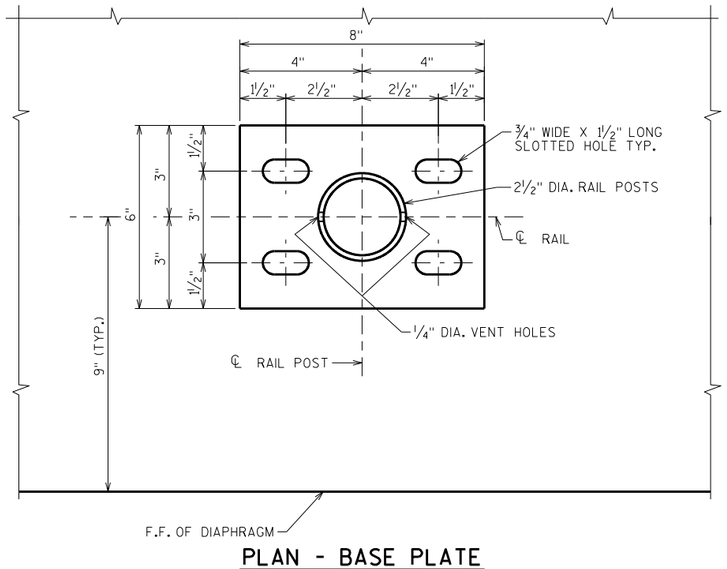


SECTION A-A

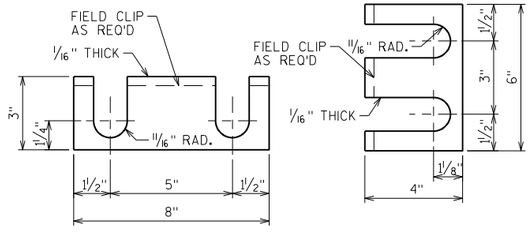
(SHOWING WEST ABUT. EAST SIMILAR)



EMBEDMENT DETAIL



PLAN - BASE PLATE



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NOTES

BID ITEM SHALL BE "RAILING PIPE B-40-864", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 3A).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE ADN LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM A123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE 5/8" X 8" X 6" WITH (4) 3/4" WIDE 1 1/2" SLOTTED HOLES

(2A) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S 5/8-INCH (8 3/4" LONG) WITH NUT AND BEVELED WASHER. EMBED 7" IN CONCRETE.

(3A) 2 1/2" DIA. STANDARD PIPE RAIL (2.875" O.D.) PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF DIAPHRAGM. WELD TO 3A.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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PIPE RAILING DETAILS

SHEET 26

2778

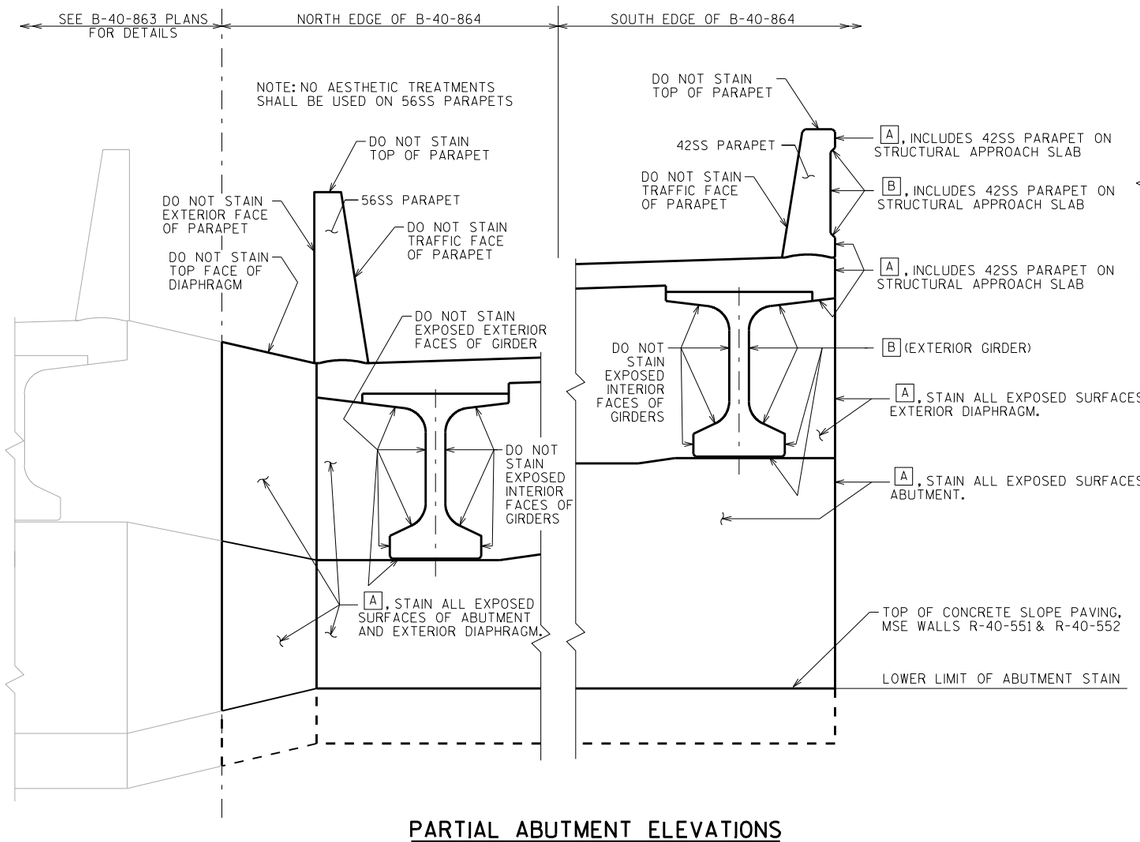
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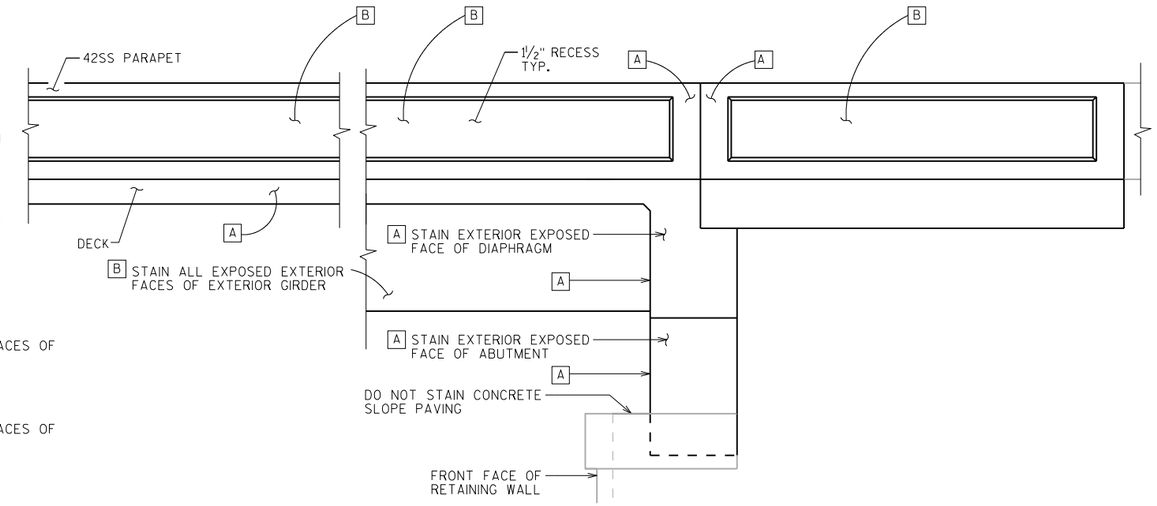
STATE PROJECT NUMBER

1160-33-80



PARTIAL ABUTMENT ELEVATIONS

(EAST ABUTMENT SHOWN - WEST ABUTMENT SIMILAR)



OUTSIDE ELEVATION OF PARAPET TYP.

(EAST ABUTMENT SHOWN - WEST ABUTMENT SIMILAR)

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	42SS PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO TOP OF SLOPE PAVING, EXTERIOR EXPOSED FACE OF DIAPHRAGM
B	ACCENT COLOR #1	42SS PARAPETS	RECESSED PANELS ON EXTERIOR FACE.
		GIRDER	EXTERIOR FACES AND UNDERSIDE OF EXTERIOR GIRDER BOTTOM FLANGE

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:
BASE COLOR: FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 333448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-40-864

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AESTHETIC DETAILS

SHEET 27

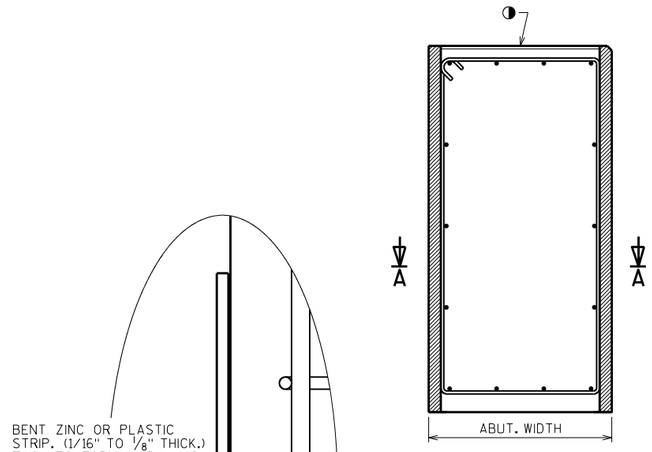
2779

8

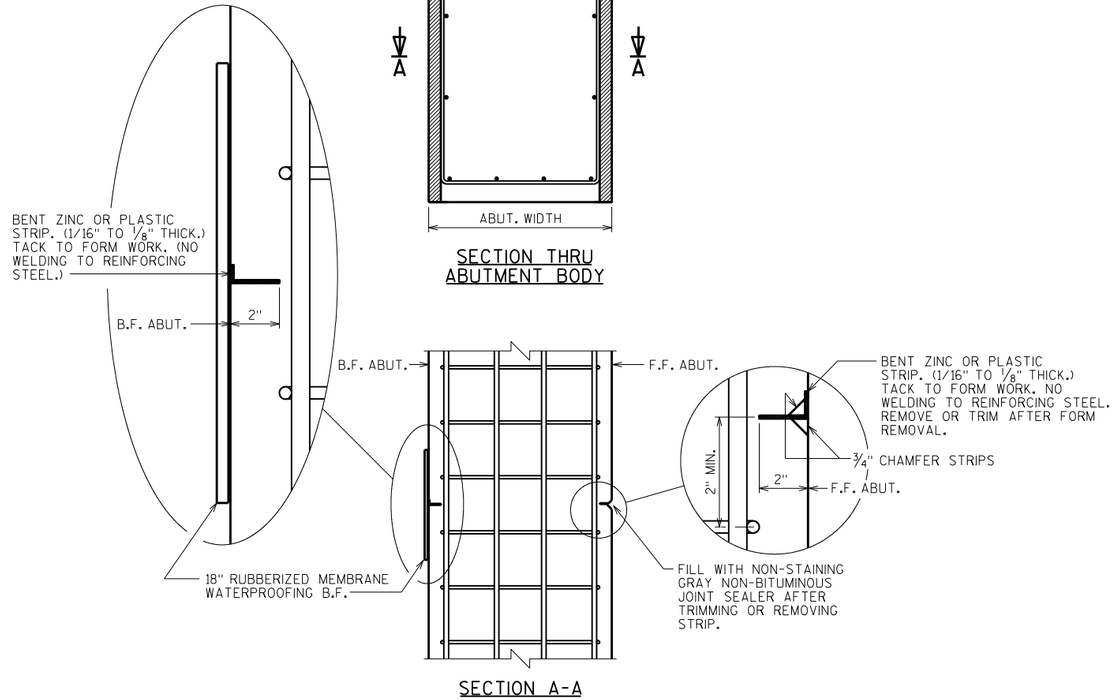
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SCALE = 2

STATE PROJECT NUMBER
1060-33-80



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

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STRUCTURE B-40-864

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ALTERNATE CONSTRUCTION JOINT

SHEET 28

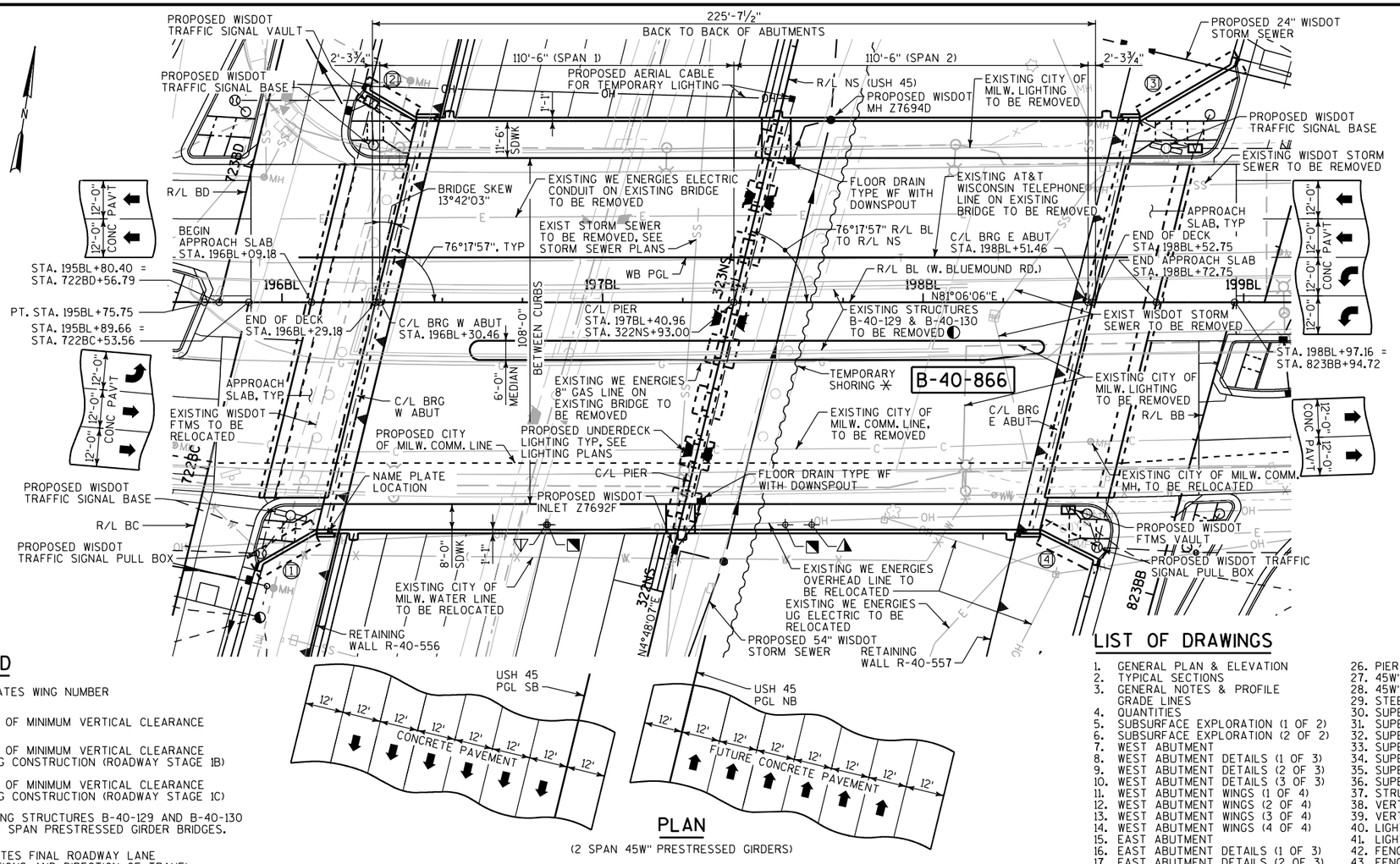
2780

8

8

SCALE = 1.0

STATE PROJECT NUMBER
1060-33-80



PLAN

(2 SPAN 45W" PRESTRESSED GIRDERS)

LEGEND

- (X) INDICATES WING NUMBER
- ◭ POINT OF MINIMUM VERTICAL CLEARANCE
- ◹ POINT OF MINIMUM VERTICAL CLEARANCE DURING CONSTRUCTION (ROADWAY STAGE 1B)
- ▽ POINT OF MINIMUM VERTICAL CLEARANCE DURING CONSTRUCTION (ROADWAY STAGE 1C)
- ◐ EXISTING STRUCTURES B-40-129 AND B-40-130 ARE 4 SPAN PRESTRESSED GIRDER BRIDGES.
- ⬅ INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- ✳ TEMPORARY SHORING FOR STORM SEWER INSTALLATION AND FOOTING EXCAVATION. PAYMENT FOR TEMPORARY SHORING IS INCLUDED WITH THE STORM SEWER CONSTRUCTION. SEE STORM SEWER PLANS.

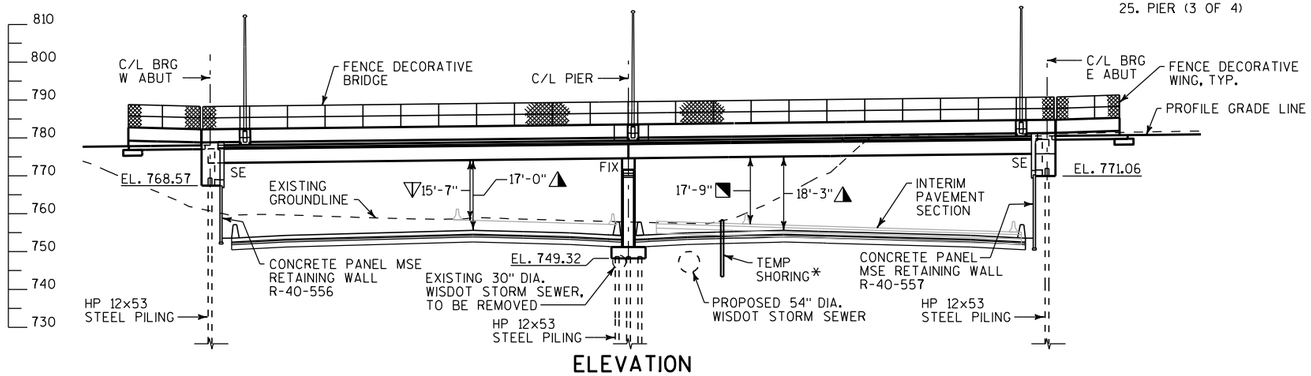
TRAFFIC DATA

W. BLUEMOUND ROAD

ADT = 15,300 (2009)
ADT = 23,400 (2035)
RDS = 40 MPH

USH 45

ADT = 153,000 (2009)
ADT = 197,500 (2035)
RDS = 60 MPH



ELEVATION

(LOOKING NORTH)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS
3. GENERAL NOTES & PROFILE GRADE LINES
4. QUANTITIES
5. SUBSURFACE EXPLORATION (1 OF 2)
6. SUBSURFACE EXPLORATION (2 OF 2)
7. WEST ABUTMENT
8. WEST ABUTMENT DETAILS (1 OF 3)
9. WEST ABUTMENT DETAILS (2 OF 3)
10. WEST ABUTMENT DETAILS (3 OF 3)
11. WEST ABUTMENT WINGS (1 OF 4)
12. WEST ABUTMENT WINGS (2 OF 4)
13. WEST ABUTMENT WINGS (3 OF 4)
14. WEST ABUTMENT WINGS (4 OF 4)
15. EAST ABUTMENT
16. EAST ABUTMENT DETAILS (1 OF 3)
17. EAST ABUTMENT DETAILS (2 OF 3)
18. EAST ABUTMENT DETAILS (3 OF 3)
19. EAST ABUTMENT WINGS (1 OF 4)
20. EAST ABUTMENT WINGS (2 OF 4)
21. EAST ABUTMENT WINGS (3 OF 4)
22. EAST ABUTMENT WINGS (4 OF 4)
23. PIER (1 OF 4)
24. PIER (2 OF 4)
25. PIER (3 OF 4)
26. PIER (4 OF 4)
27. 45W" PRESTRESSED GIRDER
28. 45W" PRESTRESSED GIRDER DETAILS
29. STEEL DIAPHRAGM
30. SUPERSTRUCTURE FRAMING PLAN
31. SUPERSTRUCTURE REINFORCEMENT
32. SUPERSTRUCTURE CROSS SECTION
33. SUPERSTRUCTURE DETAILS (1 OF 4)
34. SUPERSTRUCTURE DETAILS (2 OF 4)
35. SUPERSTRUCTURE DETAILS (3 OF 4)
36. SUPERSTRUCTURE DETAILS (4 OF 4)
37. STRUCTURAL APPROACH SLAB
38. VERTICAL FACE PARAPET (1 OF 2)
39. VERTICAL FACE PARAPET (2 OF 2)
40. LIGHT SUPPORT DETAILS
41. LIGHT SUPPORT REINFORCEMENT
42. FENCE DECORATIVE BRIDGE (1 OF 3)
43. FENCE DECORATIVE BRIDGE (2 OF 3)
44. FENCE DECORATIVE BRIDGE (3 OF 3)
45. FENCE DECORATIVE WING (1 OF 3)
46. FENCE DECORATIVE WING (2 OF 3)
47. FENCE DECORATIVE WING (3 OF 3)
48. UNDERDECK UTILITY DETAILS
49. FLOOR DRAIN PIPING
50. FLOOR DRAIN TYPE WF
51. AESTHETIC DETAILS

DESIGN DATA

DESIGN SPECIFICATION:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.09
OPERATING RATING FACTOR: RF = 1.68
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:
- SUPERSTRUCTURE (HPC) ..... f'c = 4,000 psi
- SUBSTRUCTURE ..... f'c = 4,000 psi
- 45W-INCH PRESTRESSED GIRDERS ..... f'c = 9,000 psi

BAR STEEL REINFORCEMENT ..... fy = 60,000 psi
STEEL PILING ..... fy = 50,000 psi
PRESTRESSING STRANDS ..... ULTIMATE TENSILE STRENGTH = 270,000 psi

FOUNDATION DATA

ABUTMENTS AND PIER SHALL BE SUPPORTED ON HP 12x53 STEEL PILING

REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

WEST ABUTMENT:	235 TONS PER PILE
PIER:	165 TONS PER PILE
EAST ABUTMENT:	210 TONS PER PILE

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:

WEST ABUTMENT:	80 FEET
PIER:	55 FEET
EAST ABUTMENT:	85 FEET

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/16/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN
BRIAN K. SIDES
40269-006
WAUKESHA, WI
PROFESSIONAL ENGINEER
5/12/2014

STRUCTURE B-40-866

USH 18 (W. BLUEMOUND RD.) BRIDGE OVER USH 45

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE/WAUWATOSA

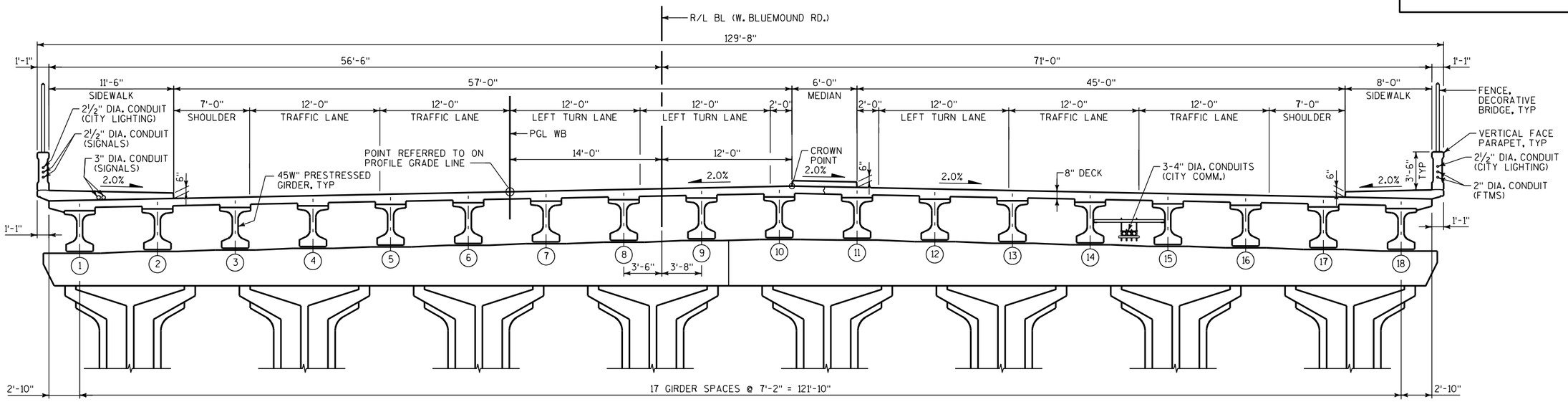
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	BKS	MS	BKS

GENERAL PLAN & ELEVATION

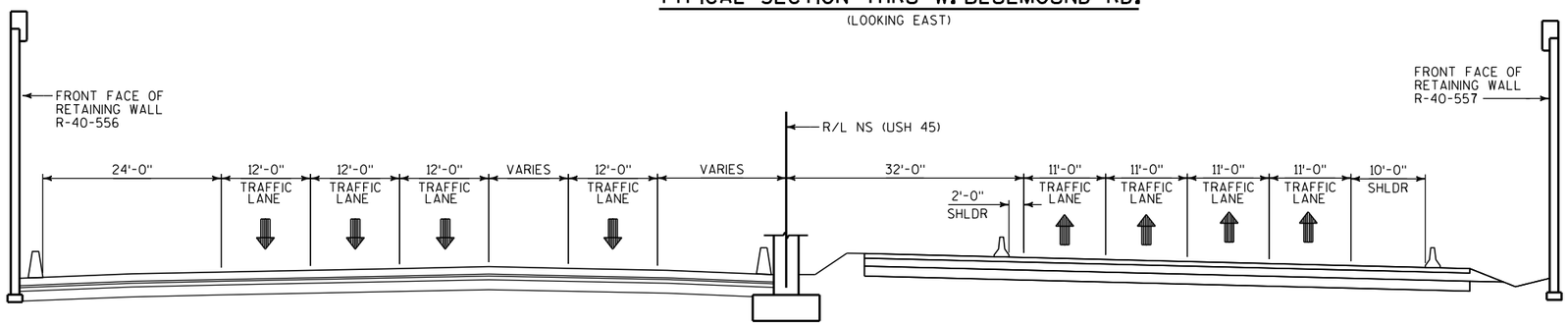
SHEET 1 OF 51

STATE PROJECT NUMBER
1060-33-80



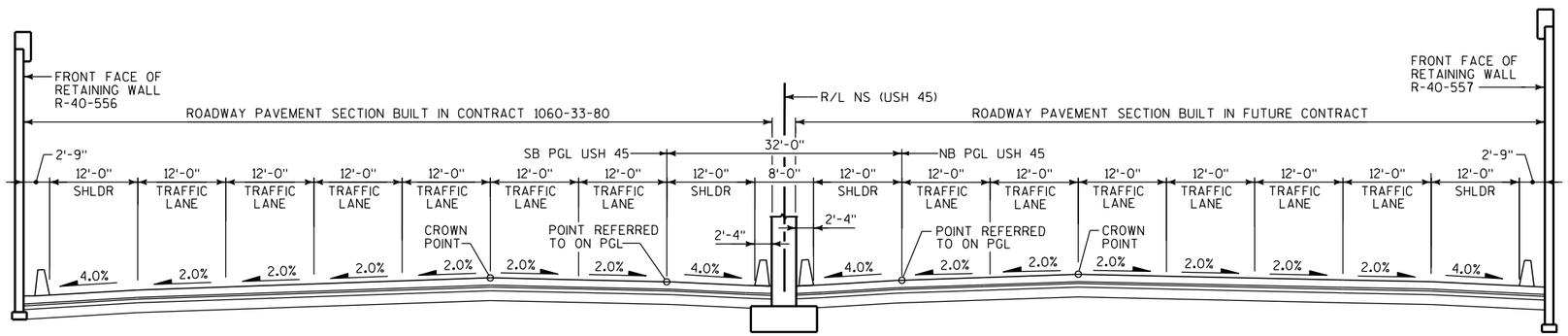
TYPICAL SECTION THRU W. BLUEMOUND RD.

(LOOKING EAST)



USH 45 INTERIM TYPICAL SECTION UNDER W. BLUEMOUND RD. BRIDGE

ROADWAY TRAFFIC STAGE 5A SHOWN
(LOOKING NORTH)



USH 45 ULTIMATE TYPICAL SECTION UNDER W. BLUEMOUND RD. BRIDGE

(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY: MS | PLANS CK'D.: BKS

TYPICAL SECTIONS

SHEET 2 OF 51

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-866\cds\B866_080102_ts.dgn PLOT DATE : 25-APR-2014 07:51 PLOT BY : MSCBKS PLOT NAME : B866_080102_ts PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007).

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD) (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 45W" PRESTRESSED GIRDERS DETAILS SHEET.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

AT THE BACK FACE OF ABUTMENT, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE, MSE BACKFILL OR BASE AGGREAGE DENSE 1 1/4-INCH SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. EXTEND STRUCTURE BACKFILL TO THE FACE OF WINGS.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE PIER SHALL BE BACKFILLED WITH GRANULAR BACKFILL TO THE LOWER OF THE EXISTING GROUNDLINE OR THE BOTTOM OF ADJACENT PROPOSED PAVEMENT SECTION.

THE CONCRETE QUANTITY FOR THE ABUTMENT, PIER, AND WINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

THE CONCRETE QUANTITY FOR THE DECK SLAB, SIDEWALK, MEDIAN AND CONCRETE DIAPHRAGMS SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE VERTICAL FACE PARAPET CONCRETE QUANTITY FOR PARAPET LOCATED ON THE DECK SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE VERTICAL FACE PARAPET CONCRETE QUANTITY FOR PARAPET LOCATED ON THE WINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

THE CONCRETE QUANTITY FOR APPROACH SLAB FOOTING SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES", THE REMAINING CONCRETE QUANTITY FOR THE APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

ABUTMENT CONSTRUCTION AND PILE DRIVING MUST BE COORDINATED WITH THE CONSTRUCTION OF RETAINING WALLS R-40-556 AND R-40-557.

GENERAL NOTES, CONT.

THE EXISTING EB BLUEMOUND RD. STRUCTURE B-40-129 IS 4 SPAN, PRESTRESSED GIRDER BRIDGE. PAYMENT FOR REMOVAL OF STRUCTURE B-40-129 IS INCLUDED UNDER BID ITEM "REMOVING OLD STRUCTURE STATION 196+88". THE STRUCTURE CARRIES EXISTING UNDERDECK UTILITIES THAT WILL BE REMOVED BY OTHERS, SEE SPECIAL PROVISIONS. ASBESTOS CONTAINING MATERIAL HAS BEEN IDENTIFIED ON THIS STRUCTURE, SEE SPECIAL PROVISIONS. PAYMENT FOR ABATEMENT OF ASBESTOS CONTAINING MATERIAL IS INCLUDED UNDER THE BID ITEM "ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-129".

THE EXISTING WB BLUEMOUND RD. STRUCTURE B-40-130 IS 4 SPAN, PRESTRESSED GIRDER BRIDGE. PAYMENT FOR REMOVAL OF STRUCTURE B-40-130 IS INCLUDED UNDER BID ITEM "REMOVING OLD STRUCTURE STATION 197+06". THE STRUCTURE CARRIES EXISTING UNDERDECK UTILITIES THAT WILL BE REMOVED BY OTHERS, SEE SPECIAL PROVISIONS. ASBESTOS CONTAINING MATERIAL HAS BEEN IDENTIFIED ON THIS STRUCTURE, SEE SPECIAL PROVISIONS. PAYMENT FOR ABATEMENT OF ASBESTOS CONTAINING MATERIAL IS INCLUDED UNDER THE BID ITEM "ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-130".

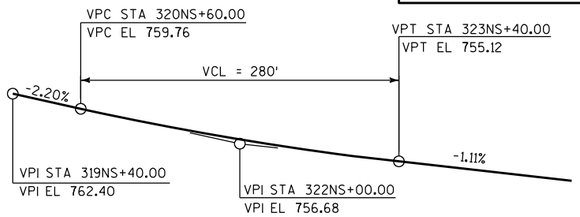
THE EXISTING WISCONSIN AVE. STRUCTURE B-40-131 IS 4 SPAN, PRESTRESSED GIRDER BRIDGE. PAYMENT FOR REMOVAL OF STRUCTURE B-40-131 IS INCLUDED UNDER BID ITEM "REMOVING OLD STRUCTURE STATION 201+60". THE STRUCTURE CARRIES EXISTING UNDERDECK UTILITIES THAT WILL BE REMOVED BY OTHERS, SEE SPECIAL PROVISIONS. ASBESTOS CONTAINING MATERIAL HAS BEEN IDENTIFIED ON THIS STRUCTURE, SEE SPECIAL PROVISIONS. PAYMENT FOR ABATEMENT OF ASBESTOS CONTAINING MATERIAL IS INCLUDED UNDER THE BID ITEM "ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-131".

EXISTING STRUCTURE PLANS OF EXISTING STRUCTURES B-40-129, B-40-130, AND B-40-131 ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW STREET, WAUKESHA, WI, OR THROUGH THE WISDOT STRUCTURES WEBSITE.

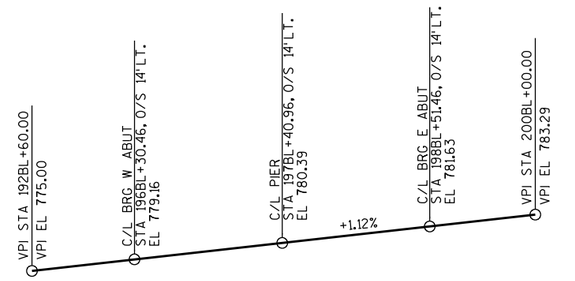
EASTBOUND AND WESTBOUND TRAFFIC OF W. BLUEMOUND ROAD WILL BE DETOURED DURING CONSTRUCTION OF STRUCTURE B-40-866. TRAFFIC ON USH 45 WILL BE MAINTAINED AS OUTLINED IN THE ROADWAY TRAFFIC CONTROL STAGING PLANS.

THE EXISTING W. BLUEMOUND RD. STRUCTURES B-40-129 & B-40-130 REMOVAL SHALL START IN TRAFFIC CONTROL STAGE 1A. STAGE 1A REMOVAL SHALL INCLUDE OF THE REMOVAL OF THE ENTIRE SUPERSTRUCTURE, THE ENTIRE WEST ABUTMENT INCLUDING THE FOOTING, THE ENTIRE EAST ABUTMENT INCLUDING THE FOOTING, THE ENTIRE PIER 3 INCLUDING THE FOOTINGS, AND THE REMOVAL OF PIER 1& PIER 2 CAP AND COLUMNS DOWN TO THE TOP OF ROADWAY BARRIER. IN STAGE 1B, THE REMAINING PORTION OF PIER 1 INCLUDING THE FOOTING SHALL BE REMOVED AND THE REMAINING COLUMN PORTION OF PIER 2 SHALL BE REMOVED TO THE TOP OF FOOTING. THE CONTRACTOR COULD ALSO REMOVE THE PIER 2 FOOTING, BUT A TEMPORARY LANE CLOSURE WOULD BE REQUIRED FOR THE REMOVAL. IN STAGE 4A, THE PIER 2 FOOTING SHALL BE REMOVED IF NOT REMOVED IN PREVIOUS STAGES.

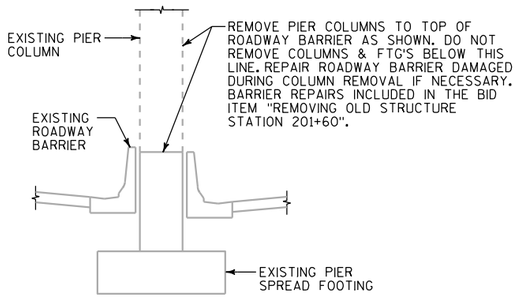
THE EXISTING WISCONSIN AVE. STRUCTURE B-40-131 REMOVAL SHALL START IN TRAFFIC CONTROL STAGE 3 AND THE REMOVAL SHALL INCLUDE OF THE REMOVAL OF THE ENTIRE SUPERSTRUCTURE, THE ENTIRE WEST ABUTMENT INCLUDING THE FOOTING, THE ENTIRE EAST ABUTMENT INCLUDING THE FOOTING, AND THE REMOVAL OF PIER 1, PIER 2 & PIER 3 CAP AND COLUMNS DOWN TO THE TOP OF ROADWAY BARRIER. SEE REMOVAL DETAILS, THIS SHEET.



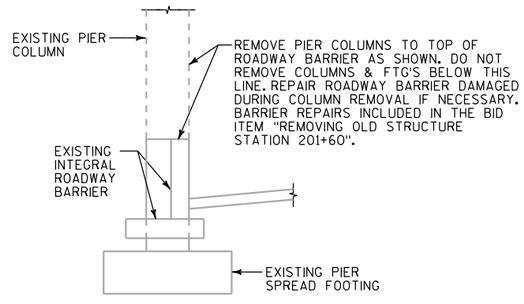
PROFILE GRADE LINE - USH 45 NB & SB



WB PROFILE GRADE LINE - W. BLUEMOUND RD.



PIER 2 (MEDIAN PIER)



PIER 1 AND PIER 3

EXISTING STRUCTURE B-40-131 (WISCONSIN AVE.) PIER REMOVAL DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY	MS	PLANS CK'D.	BKS

GENERAL NOTES & PROFILE GRADE LINES

SHEET 3 OF 51

STATE PROJECT NUMBER

1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM CATEGORY	ITEM NO.	BID ITEMS	UNIT	WEST APPR. SLAB	WEST ABUTMENT	PIER	EAST ABUTMENT	EAST APPR. SLAB	SUPER	TOTAL
2120	203.0200.0008	REMOVING OLD STRUCTURE STATION 196+88	LS	--	--	--	--	--	--	1
2120	203.0200.0009	REMOVING OLD STRUCTURE STATION 197+06	LS	--	--	--	--	--	--	1
2120	203.0200.0010	REMOVING OLD STRUCTURE STATION 201+60	LS	--	--	--	--	--	--	1
2120	203.0210.S.0010	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-129	LS	--	--	--	--	--	--	1
2120	203.0210.S.0011	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-130	LS	--	--	--	--	--	--	1
2120	203.0210.S.0012	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-131	LS	--	--	--	--	--	--	1
2120	206.1000.0013	EXCAVATION FOR STRUCTURES BRIDGES B-40-866	LS	--	--	--	--	--	--	1
2120	209.0100	BACKFILL GRANULAR	CY	--	--	300	--	--	--	300
2120	210.0100	BACKFILL STRUCTURE	CY	--	580	--	580	--	--	1,160
2120	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	411	--	--	--	411	--	822
2120	502.0100	CONCRETE MASONRY BRIDGES	CY	29	135	255	140	29	--	588
2120	502.3200	PROTECTIVE SURFACE TREATMENT	SY	230	--	--	--	230	3,290	3,750
2120	503.0146	PRESTRESSED GIRDER TYPE I45W-INCH	LF	--	--	--	--	--	3,992	3,992
2120	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	--	1,390	3,800	1,880	--	--	7,070
2120	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	21,540	10,950	54,600	11,760	21,540	264,630	385,020
2120	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	--	18	36	18	--	--	72
2120	506.4000.0011	STEEL DIAPHRAGMS B-40-866	EACH	--	--	--	--	--	68	68
2120	514.0450	FLOOR DRAINS TYPE WF	EACH	--	--	--	--	--	2	2
2120	514.2608	DOWNSPOUT 8-INCH	LF	--	--	100	--	--	--	100
2120	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	24	--	24	--	--	48
2120	550.0500	PILE POINTS	EACH	--	18	66	18	--	--	102
2120	550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	--	1,440	3,630	1,530	--	--	6,600
2120	604.0400	SLOPE PAVING CONCRETE	SY	--	42	--	42	--	--	84
2120	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	--	--	--	--	--	6	6
2120	652.0130	CONDUIT RIGID METALLIC 2 1/2-INCH	LF	--	--	--	--	--	12	12
2120	652.0135	CONDUIT RIGID METALLIC 3-INCH	LF	--	--	--	--	--	6	6
2120	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	--	--	80	--	--	--	80
2120	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	--	--	--	--	--	460	460
2120	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	--	--	--	--	--	660	660
2120	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	--	--	--	--	--	440	440
2120	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	--	--	--	--	--	7	7
2120	657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	--	--	--	--	--	6	6
2120	SPV.0035.4000	HPC MASONRY STRUCTURES	CY	103	--	--	--	103	1,230	1,436
2120	SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	--	3	8	3	--	--	14
2120	SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	--	3	8	3	--	--	14
2120	SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	1,770	--	--	--	1,770	--	3,540
2120	SPV.0090.4400	FENCE DECORATIVE BRIDGE	LF	--	--	--	--	--	450	450
2120	SPV.0090.4410	FENCE DECORATIVE WING	LF	--	35	--	50	--	--	85
7070	SPV.0105.4540	UNDERDECK UTILITY B-40-866	LS	--	--	--	--	--	--	1
2120	SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	2,080	--	--	--	2,080	21,880	26,040
		NON-BID ITEMS								
		CORK FILLER	SIZE							¾"
		PREFORMED JOINT FILLER	SIZE							½", ¾", 1", 1½", 2"
		EXPANDED POLYSTYRENE	SIZE							1"
		NAME PLATE	EACH							1
		SIZE 2 COARSE AGGREGATE	SY							

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

QUANTITIES

SHEET 4 OF 51

2784

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-866\cds\B866_080104_qu.dgn PLOT DATE : 25-APR-2014 07:51 PLOT BY : MSCBKS PLOT NAME : B866_080104_qu PLOT SCALE : 8:1

NOTES

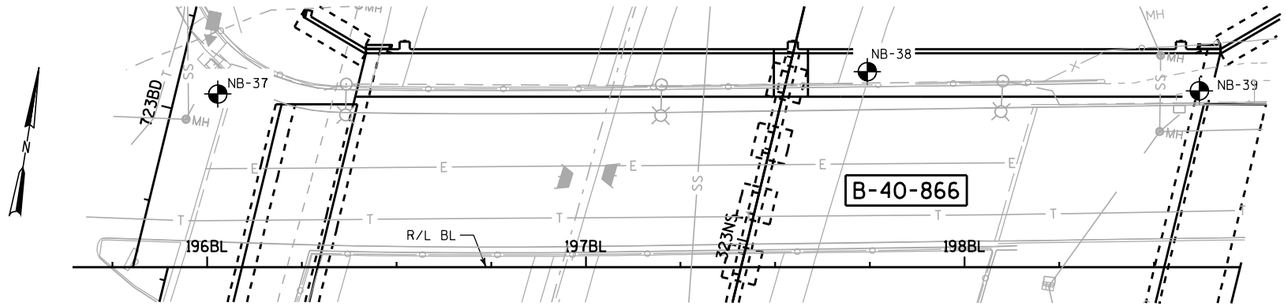
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

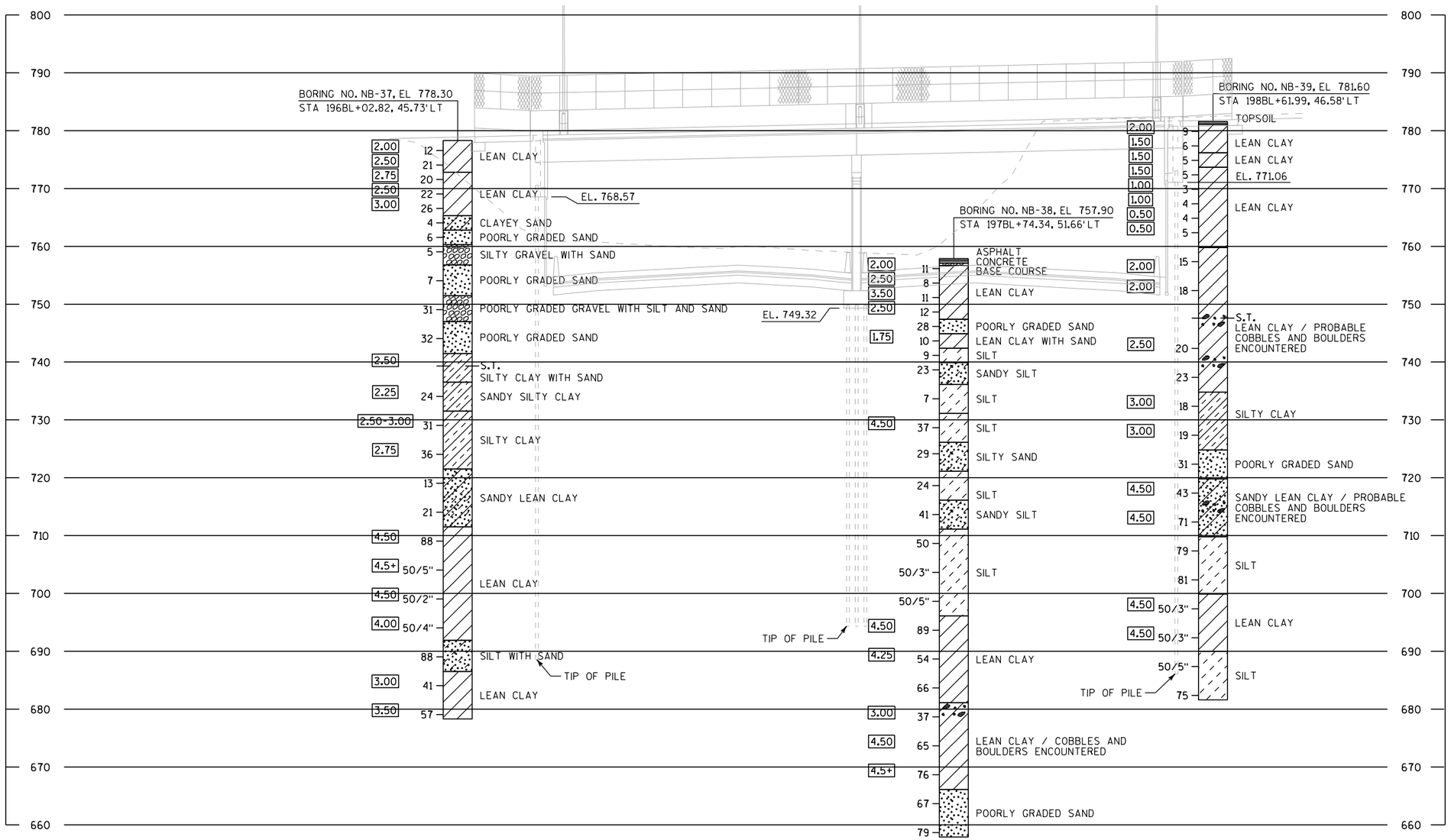
BORING STATIONS AND OFFSETS ARE BASED ON R/L BL.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPTEMBER 29, 2011 - BORING NB-37
OCTOBER 26, 2011 - BORING NB-38
SEPTEMBER 28, 2011 - BORING NB-39





8

STATE PROJECT NUMBER

1060-33-80

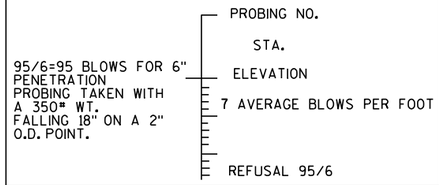
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

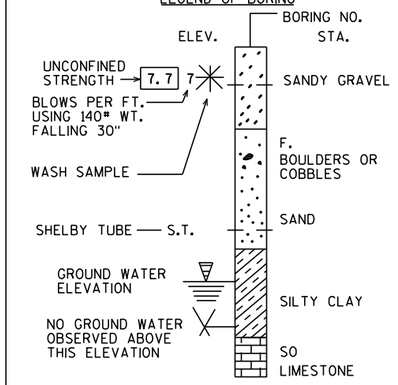
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 5 OF 51

NOTES

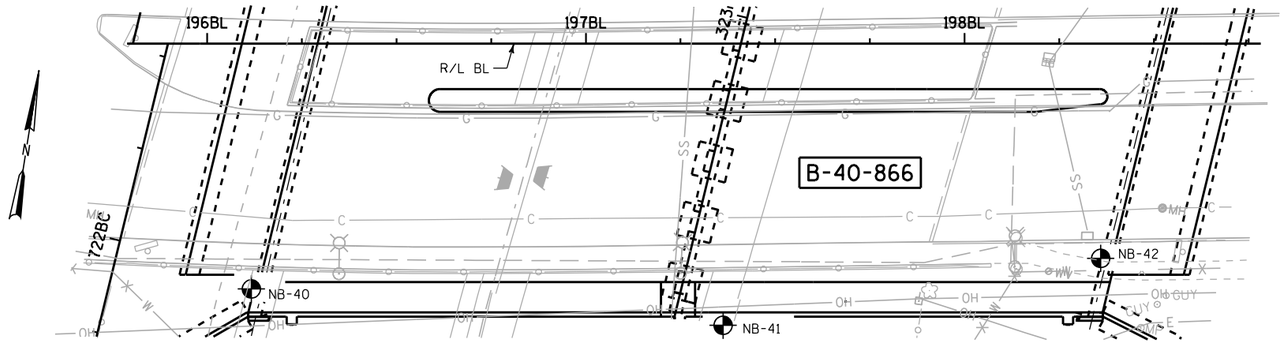
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

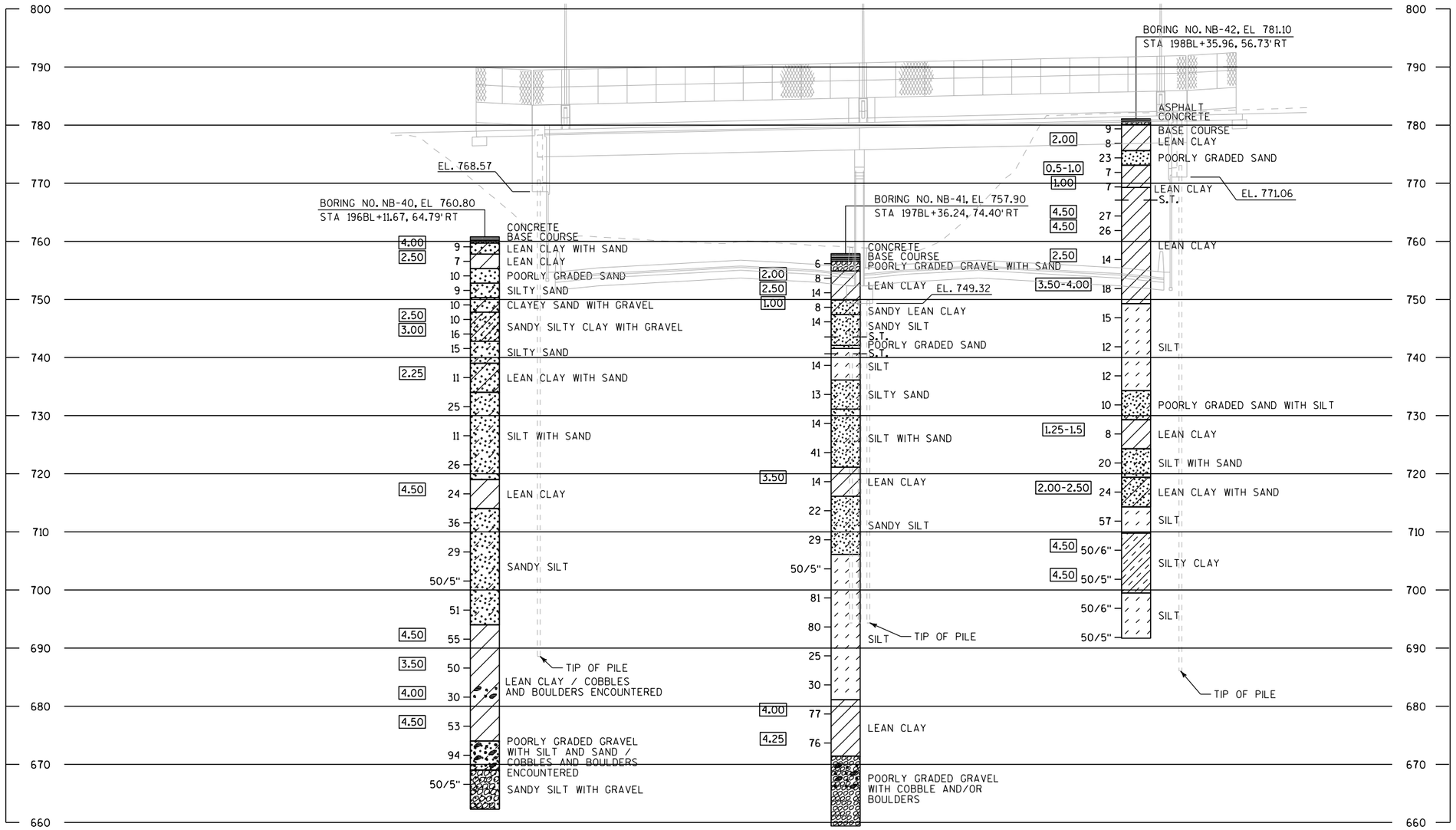
BORING STATIONS AND OFFSETS ARE BASED ON R/L BL.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
NOVEMBER 6, 2011 - BORING NB-40
NOVEMBER 9, 2011 - BORING NB-41
SEPTEMBER 28, 2011 - BORING NB-42





STATE PROJECT NUMBER

1060-33-80

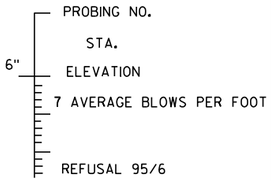
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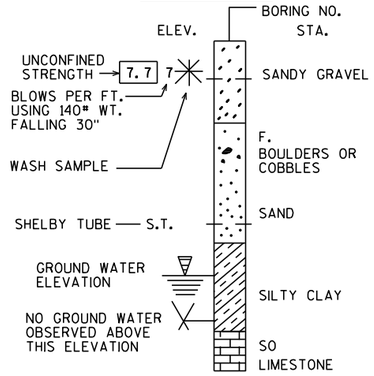
MATERIAL SYMBOLS

TOPSOIL / FILL
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GRAVEL
SILT
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LEGEND OF BORING



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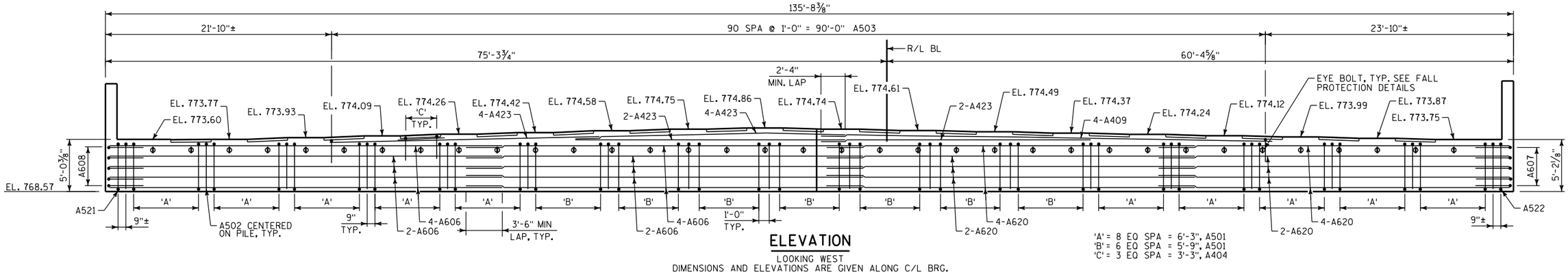
SUBSURFACE EXPLORATION (2 OF 2)

SHEET 6 OF 51

8

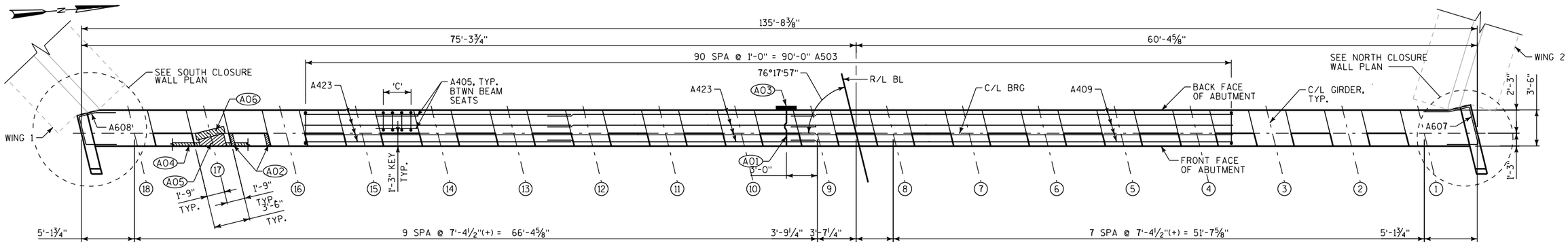
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STATE PROJECT NUMBER
1060-33-80

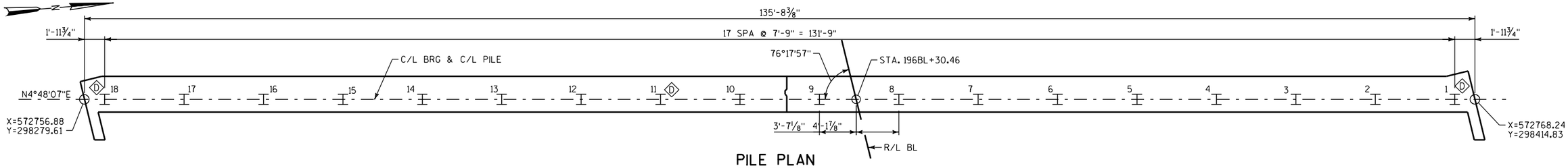


ELEVATION

LOOKING WEST
DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG C/L BRG.



PLAN



PILE PLAN

LEGEND

- HP12X53 STEEL. PILING WITH A REQUIRED DRIVING RESISTANCE OF 235 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
  ESTIMATED PILE LENGTH = 80 FEET.
- (D) DYNAMIC PILE LOAD TESTING.
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8" WITH 3/4" V-GROOVE ON FRONT FACE OF ABUTMENT.
- (A02) 3/4" CORK FILLER ON VERTICAL FACES OF BEAM SEATS, TYP.
- (A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A04) 4" x 3/4" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- (A05) 3/4" FILLER UNDER GIRDERS, TYP.
- (A06) 1/2" THICK ELASTOMERIC BEARING PAD, TYP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-866

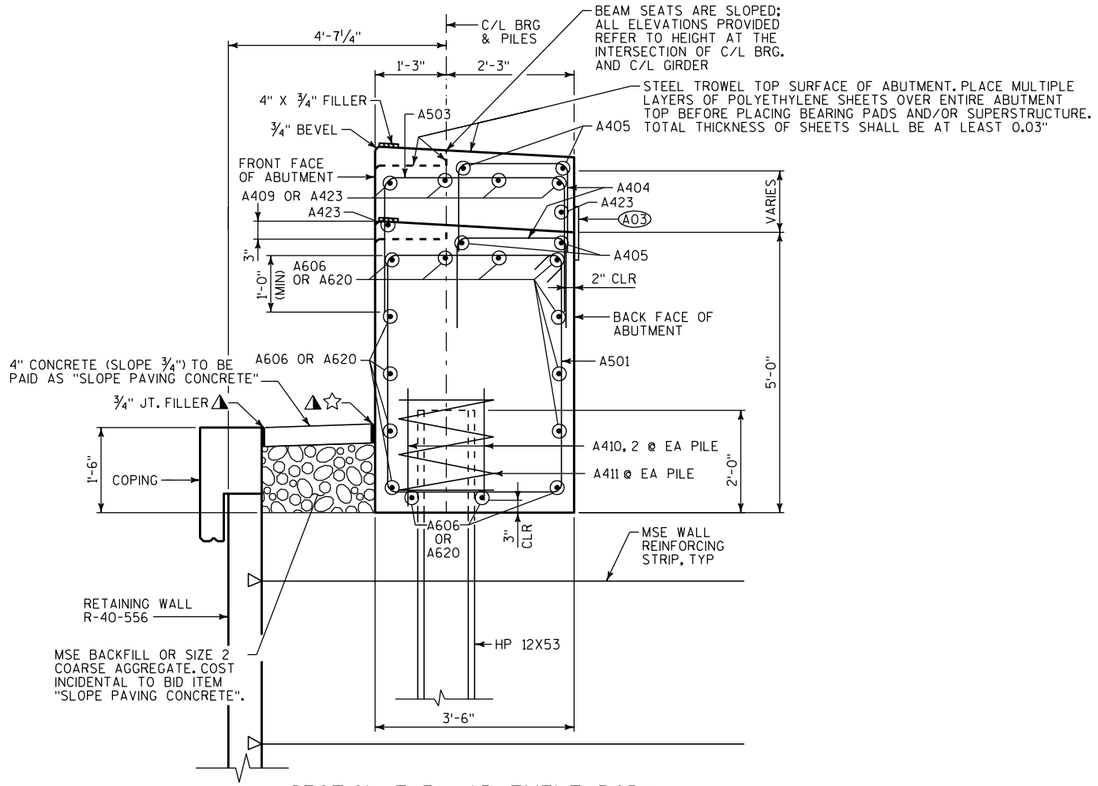
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WEST ABUTMENT

SHEET 7 OF 51

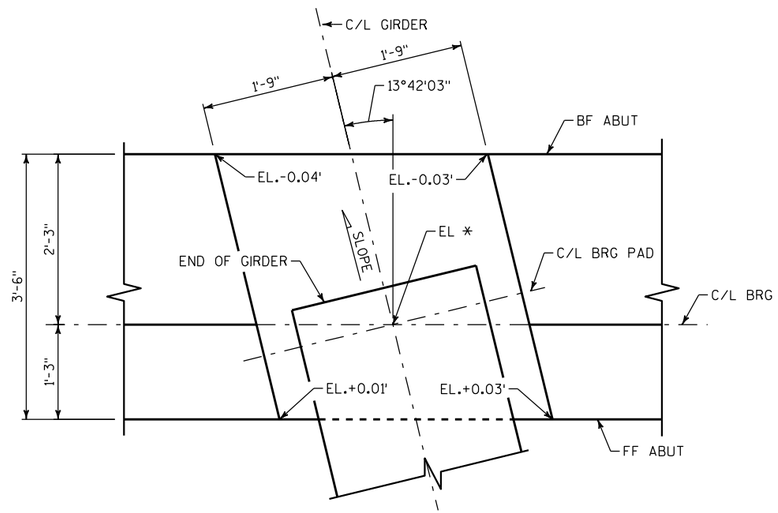
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1060-33-80



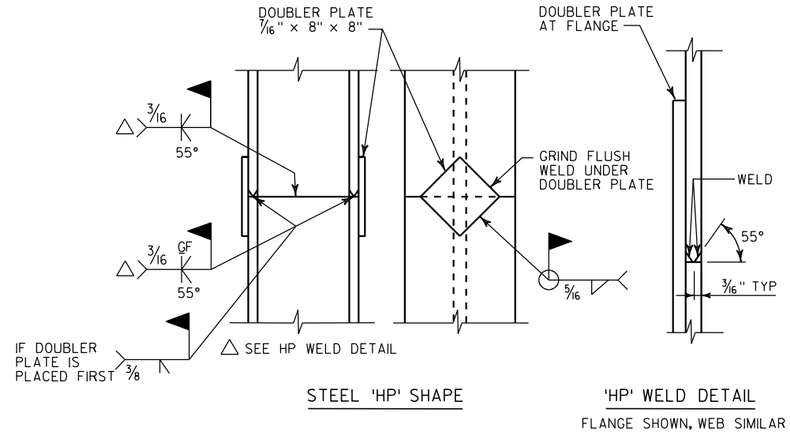
SECTION THRU ABUTMENT BODY

(LOOKING SOUTH)



SLOPING BEAM SEAT DETAIL

ELEVATION CORRECTIONS GIVEN IN FEET
*ELEVATION GIVEN IN WEST ABUTMENT ELEVATION



STEEL 'HP' SHAPE

'HP' WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

LEGEND

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLE 1/8" BELOW SURFACE OF CONCRETE).

☆ 1" EXPANDED POLYSTYRENE

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STRUCTURE B-40-866

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WEST ABUTMENT DETAILS (1 OF 3)

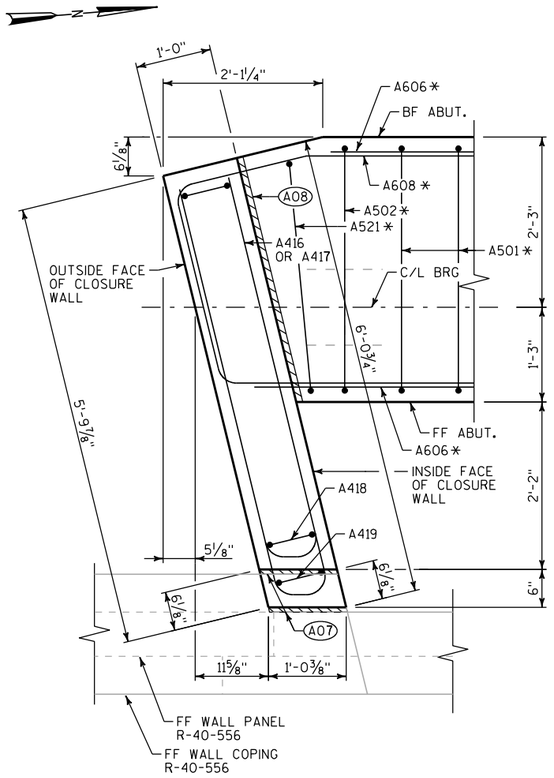
SHEET 8 OF 51

8

8

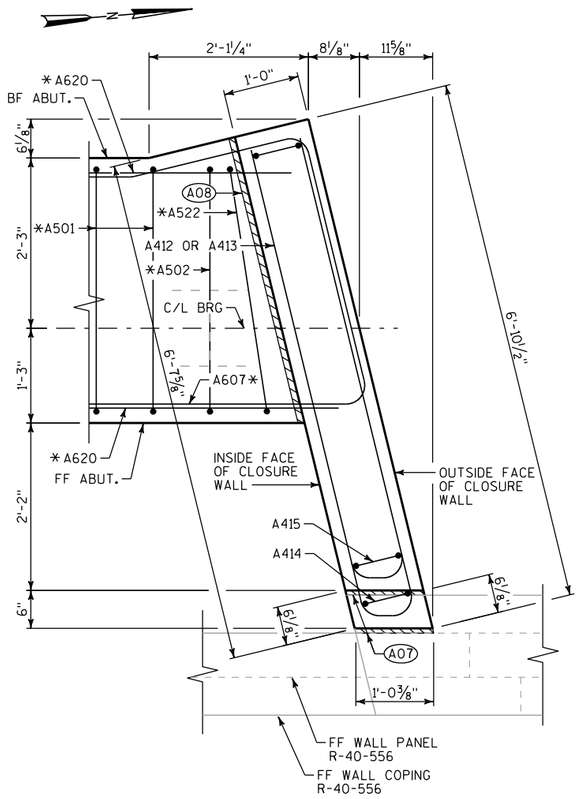
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PLOT BY : MSCBKS
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PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



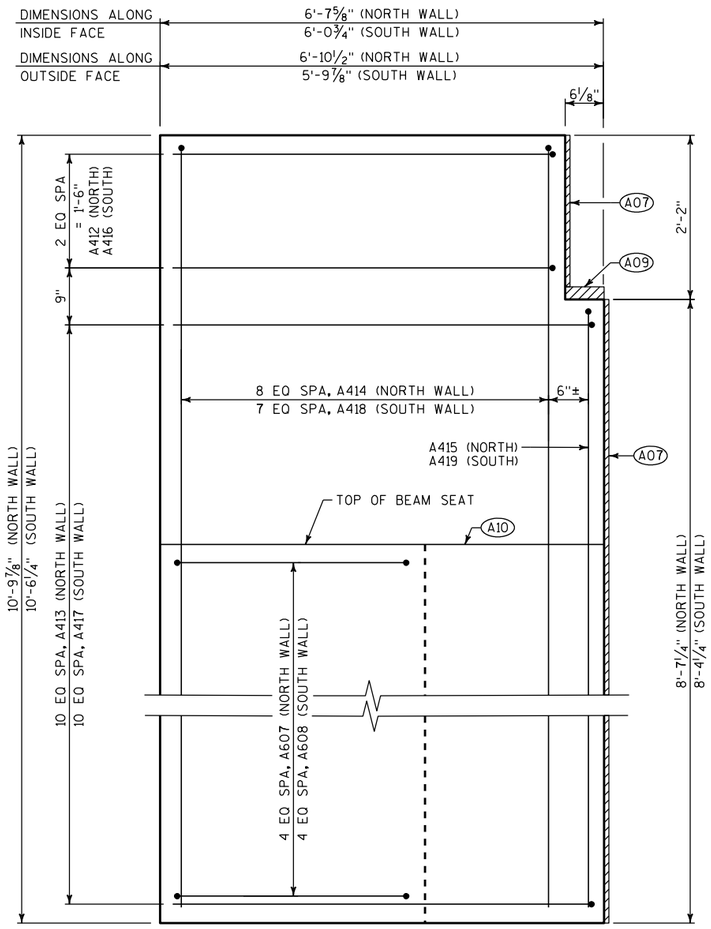
SOUTH CLOSURE WALL PLAN

* BAR IN ABUTMENT BODY



NORTH CLOSURE WALL PLAN

* BAR IN ABUTMENT BODY



CLOSURE WALL ELEVATION

LOOKING AT OUTSIDE FACE OF CLOSURE WALL
SOUTH WALL SHOWN, NORTH WALL OPPOSITE HAND

LEGEND

(A07) ¾" FILLER THICKNESS IS BASED ON A PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES OTHER THAN 7½" INCHES, ADJUST FILLER THICKNESS ACCORDINGLY.

(A08) 1" FILLER ABOVE BEAM SEAT BETWEEN CLOSURE WALL AND ABUTMENT DIAPHRAGM AND EDGE OF SIDEWALK

(A09) 2" FILLER

(A10) OPTIONAL KEYED CONSTRUCTION JOINT. SEAL JOINT WITH 18" RUBBERIZED MEMBRANE WATERPROOFING.

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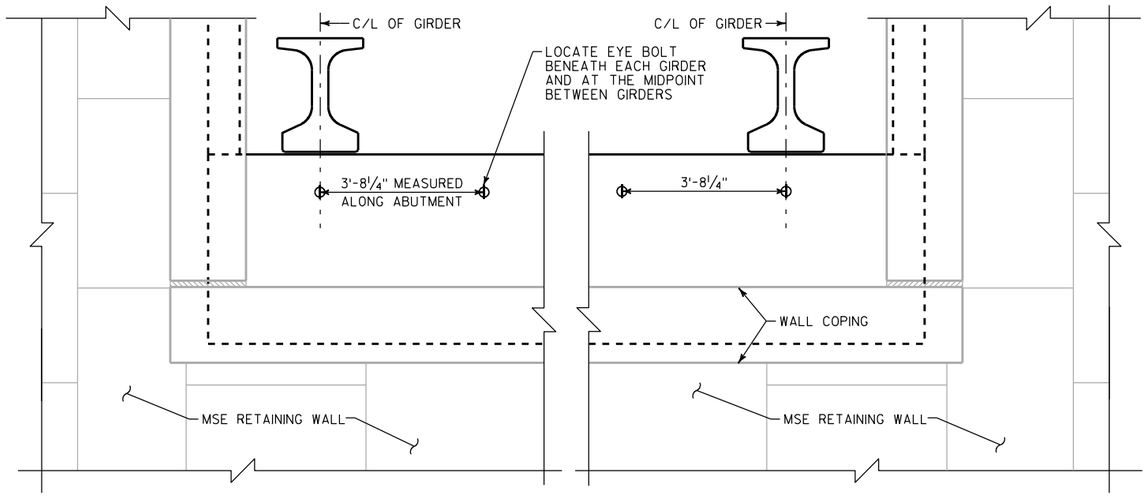
STRUCTURE B-40-866

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WEST ABUTMENT DETAILS (2 OF 3)

SHEET 9 OF 51

STATE PROJECT NUMBER
1060-33-80

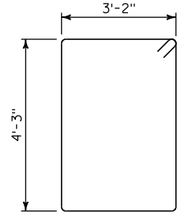


FALL PROTECTION ELEVATION

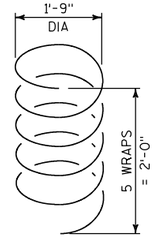
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

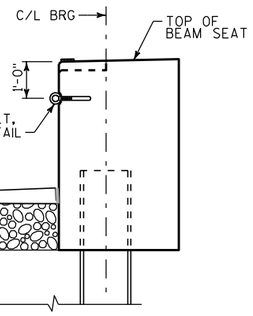
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	139	15'-5"	X	BODY - STIRRUP
A502	X	18	11'-5"	X	BODY - VERT.
A503	X	91	7'-5"	X	BODY - VERT.
A404	X	68	5'-1"	X	BODY - VERT.
A405	X	34	6'-0"		BODY - HORIZ.
A606	X	28	38'-0"		BODY - HORIZ
A607	X	5	10'-9"	X	BODY - HORIZ. AT END
A608	X	5	9'-4"	X	BODY - HORIZ. AT END
A409	X	4	43'-6"		BODY - HORIZ.
A410	X	36	2'-3"		PILES - VERTICAL
A411	X	18	28'-0"	X	PILES SPIRAL
A412	X	3	12'-1"	X	BODY HORIZ. - N. CLOSURE WALL
A413	X	11	13'-1"	X	BODY HORIZ. - N. CLOSURE WALL
A414	X	9	21'-1"	X	BODY - VERT. - N. CLOSURE WALL
A415	X	1	16'-9"	X	BODY - VERT. - N. CLOSURE WALL
A416	X	3	10'-5"	X	BODY - HORIZ. - S. CLOSURE WALL
A417	X	11	11'-5"	X	BODY - HORIZ. - S. CLOSURE WALL
A418	X	8	20'-7"	X	BODY - VERT. - S. CLOSURE WALL
A419	X	1	16'-3"	X	BODY - VERT. - S. CLOSURE WALL
A620	X	28	35'-3"		BODY - HORIZ
A521	X	1	14'-9"	X	BODY - STIRRUP AT END
A522	X	1	15'-7"	X	BODY - STIRRUP AT END
A423	X	12	26'-0"		BODY - HORIZ.



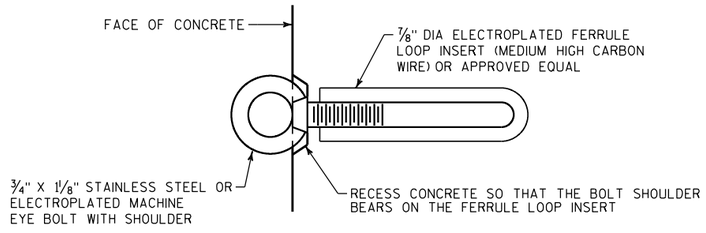
A501



A411

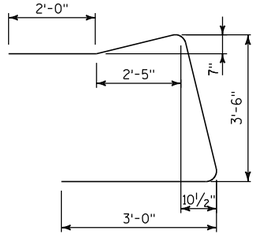


FALL PROTECTION ANCHOR

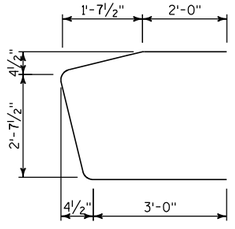


EYE BOLT DETAIL

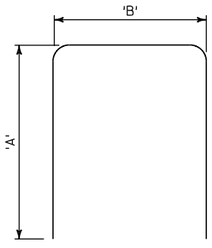
EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.



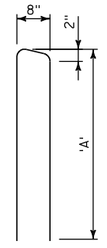
A607



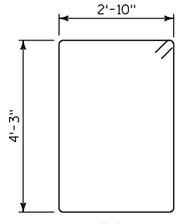
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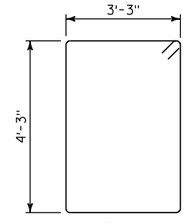
BAR MARK	DIM 'A'	DIM 'B'
A502	4'-3"	3'-2"
A503	2'-3"	3'-2"
A404	1'-8"	1'-11"
A414	10'-4"	7"
A415	8'-2"	7"
A418	10'-1"	7"
A419	7'-11"	7"



BAR MARK	DIM 'A'
A412	5'-10"
A413	6'-4"
A416	5'-0"
A417	5'-6"



A521



A522

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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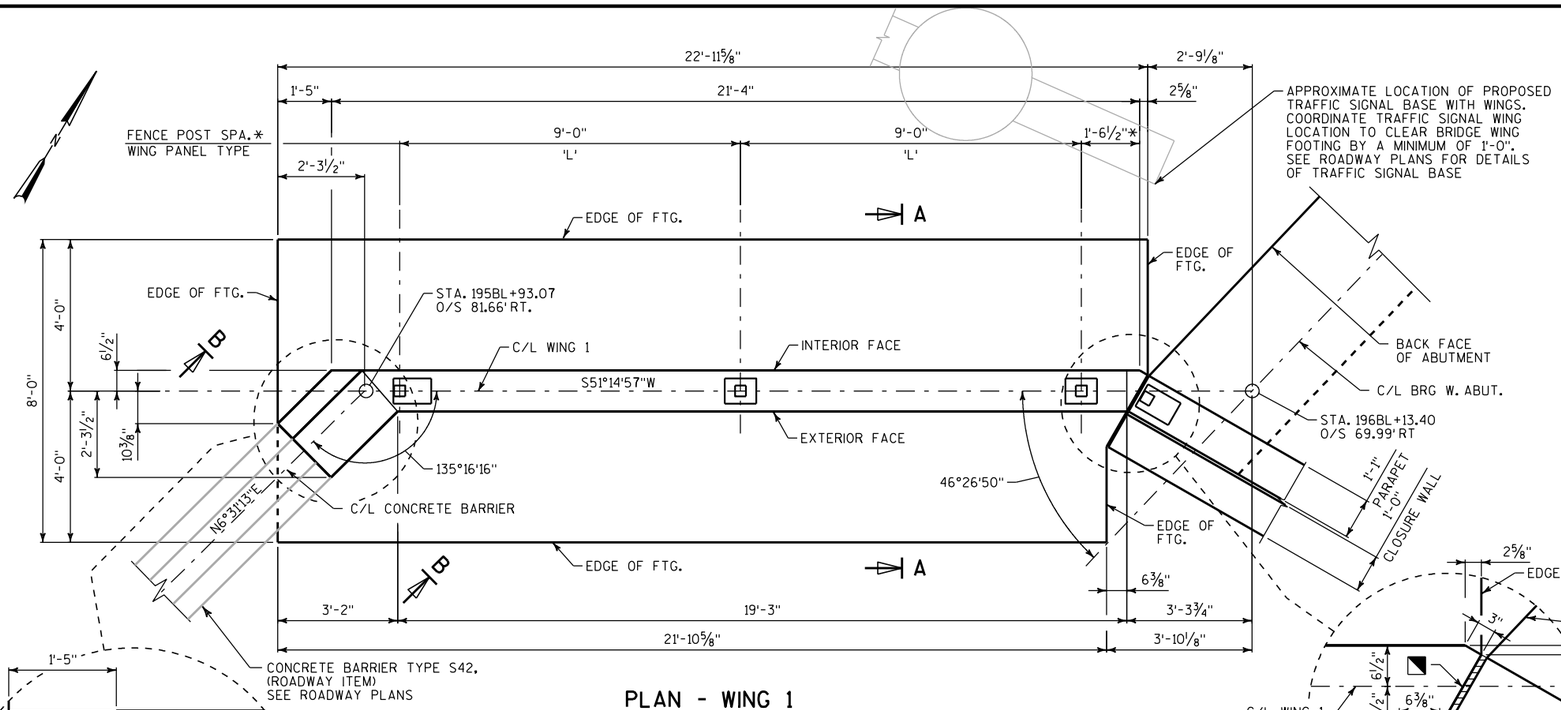
WEST ABUTMENT DETAILS (3 OF 3)

SHEET 10 OF 51

8

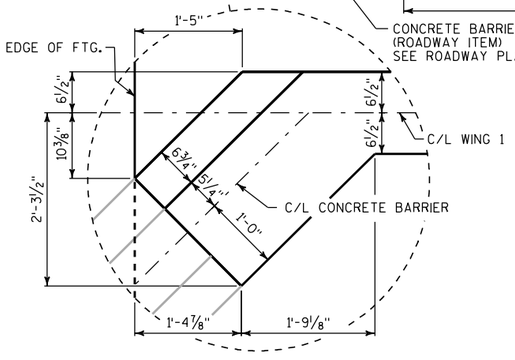
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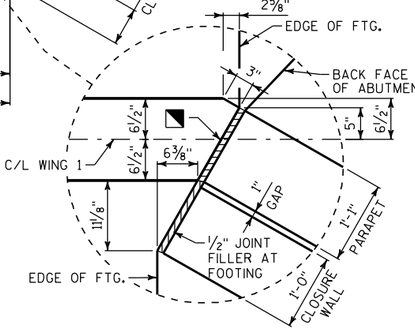
STATE PROJECT NUMBER
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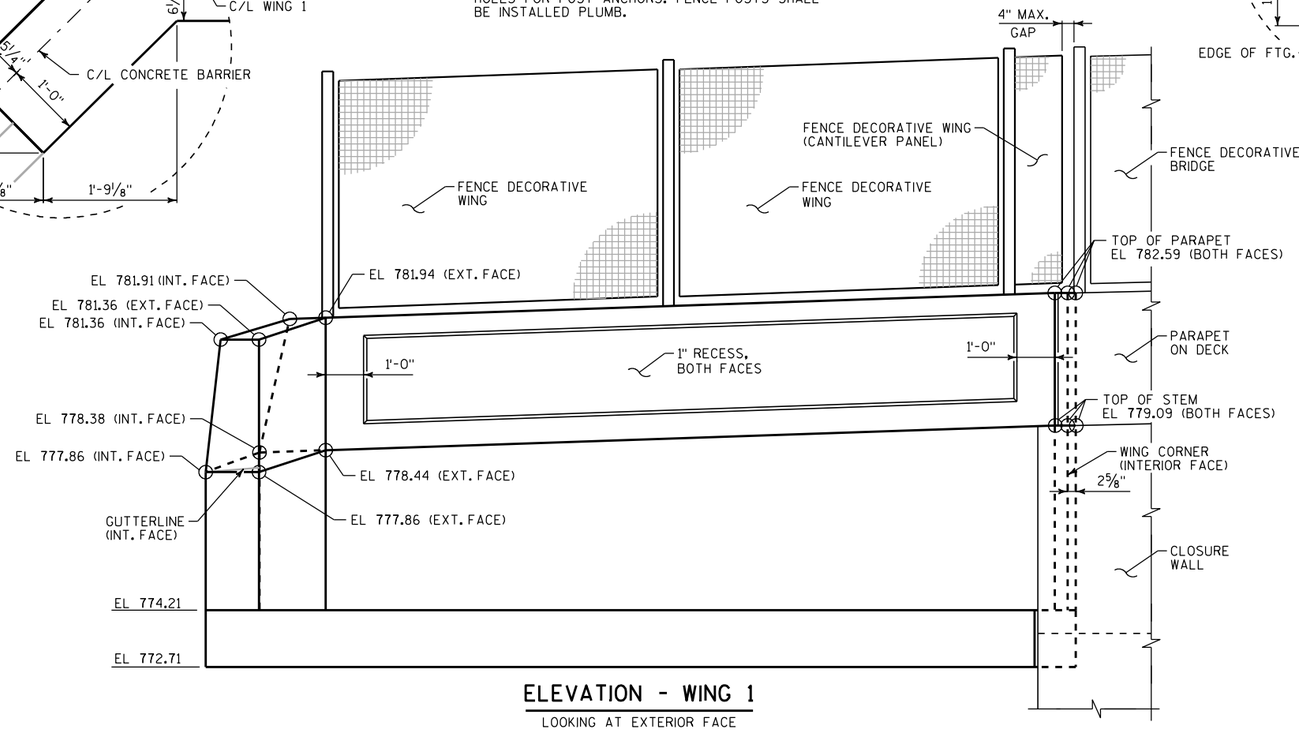


PLAN - WING 1

* DECORATIVE FENCE POST SPACING DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS ALONG THE PARAPET. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO DRILLING HOLES FOR POST ANCHORS. FENCE POSTS SHALL BE INSTALLED PLUMB.

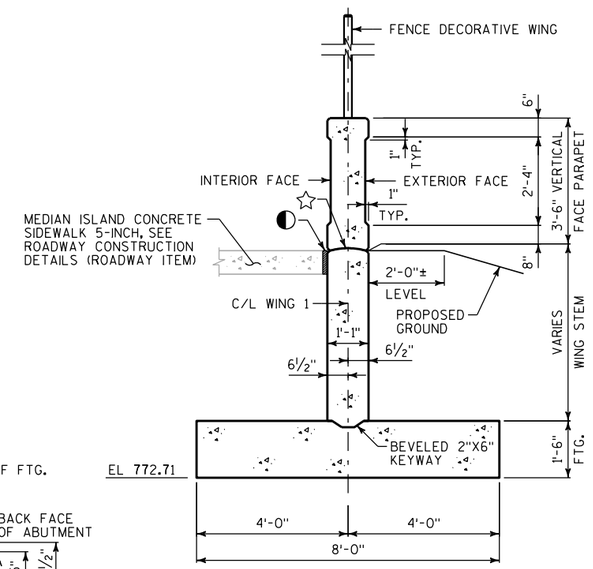




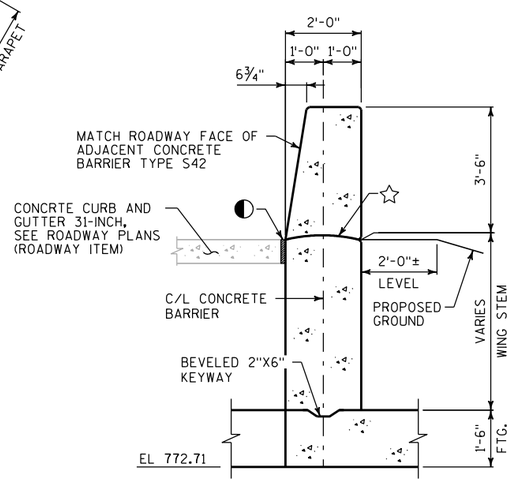


ELEVATION - WING 1

LOOKING AT EXTERIOR FACE



SECTION A-A



SECTION B-B

LEGEND

- ◐ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE)
- ◥ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE). SEALER COLOR TO MATCH FUTURE STAIN COLOR. PROVIDE SEALER FROM TOP OF STEM TO TOP OF PARAPET.
- ☆ CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

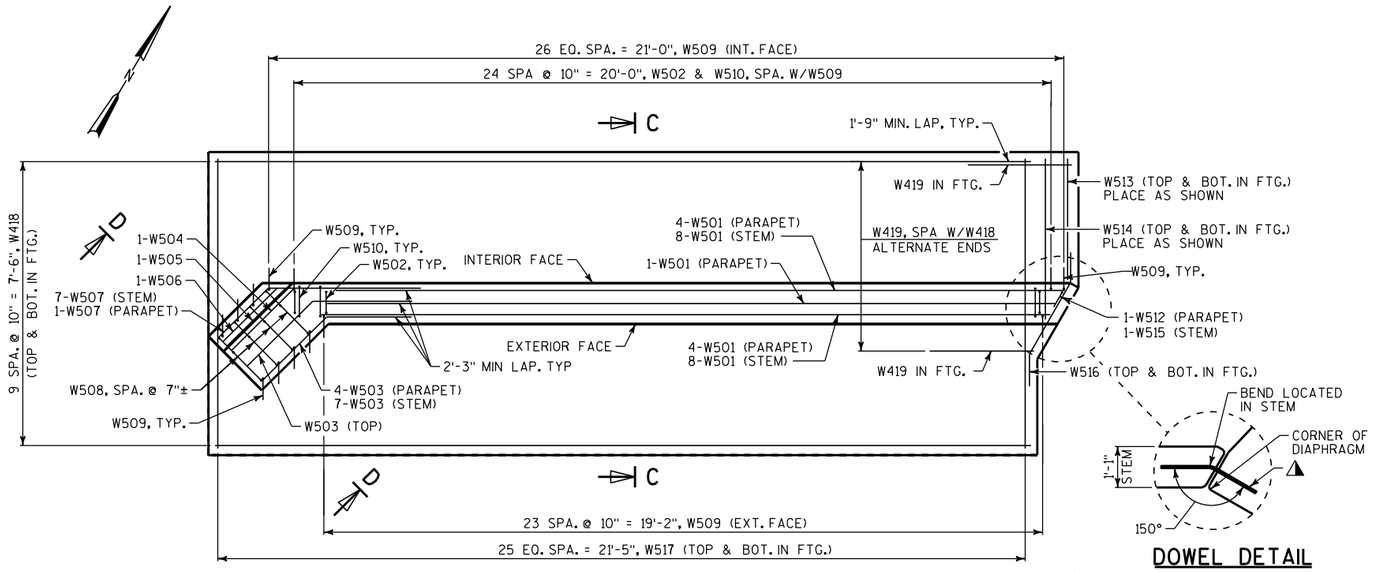
WEST ABUTMENT WINGS (1 OF 4)

SHEET 11 OF 51

8

8

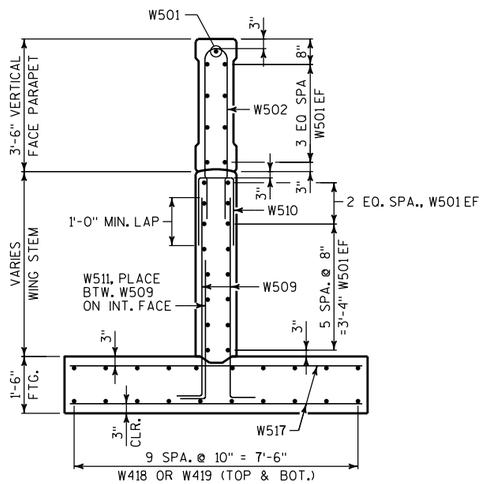
STATE PROJECT NUMBER
1060-33-80



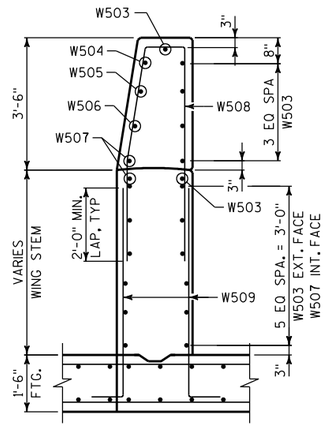
REINFORCEMENT PLAN - WING 1

DOWEL DETAIL

⚠ 1" DIA. PLAIN (SMOOTH) ROUND BENT DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO WING STEM. USE DEBONDER ON EXTENSION INTO ABUTMENT DIAPHRAGM. BENDING WILL BE REQUIRED. PAYMENT INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES"



SECTION C-C



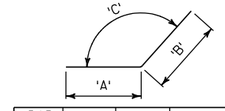
SECTION D-D

FOOTING REINFORCEMENT NOT CALLED OUT FOR CLARITY, SEE OTHER VIEWS

BILL OF BARS - WING 1

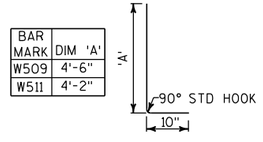
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
W501	X	25	20'-0"		PARAPET & STEM LONGITUDINAL
W502	X	25	9'-10"	X	PARAPET VERTICAL
W503	X	12	4'-7"	X	CONC. BARRIER LONGITUDINAL
W504	X	1	5'-3"	X	CONC. BARRIER LONGITUDINAL
W505	X	1	5'-4"	X	CONC. BARRIER LONGITUDINAL
W506	X	1	5'-5"	X	CONC. BARRIER LONGITUDINAL
W507	X	8	5'-6"	X	CONC. BARRIER LONGITUDINAL
W508	X	4	13'-5"	X	PARAPET & STEM
W509	X	58	5'-3"	X	STEM VERTICAL
W510	X	25	6'-1"	X	STEM VERTICAL
W511	X	26	4'-11"	X	STEM VERTICAL INT. FACE
W512	X	1	5'-3"	X	PARAPET VERTICAL
W513		2	3'-3"		FOOTING TRANSVERSE
W514		2	4'-2"		FOOTING TRANSVERSE
W515	X	1	3'-5"	X	STEM VERTICAL
W516		2	4'-2"	X	FOOTING TRANSVERSE
W517		52	7'-6"		FOOTING TRANSVERSE
W418		20	21'-5"		FOOTING LONGITUDINAL
W419		14	2'-10"		FOOTING LONGITUDINAL
W520					NOT USED

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

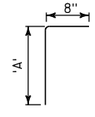


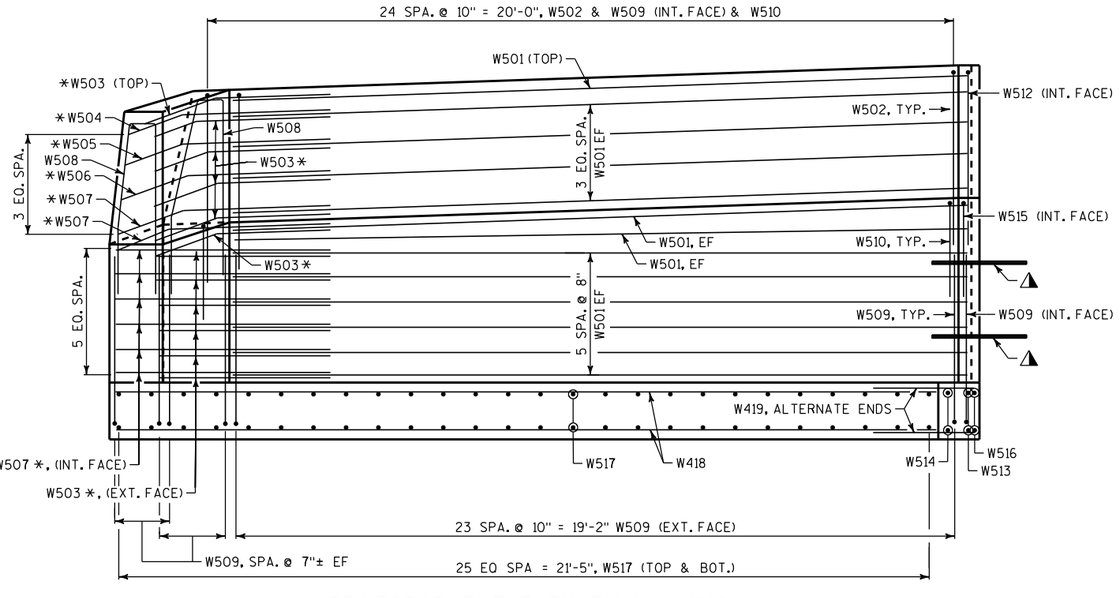
BAR MARK	DIM 'A'	DIM 'B'	ANGLE 'C'
W503	2'-4"	2'-3"	135°
W504	2'-1"	3'-2"	135°
W505	1'-11"	3'-5"	135°
W506	1'-10"	3'-7"	135°
W507	1'-8"	3'-10"	135°

BAR MARK	DIM 'A'
W509	4'-6"
W511	4'-2"



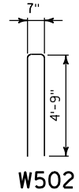
BAR MARK	DIM 'A'
W512	4'-9"
W515	2'-10"



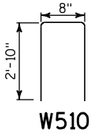


REINFORCEMENT ELEVATION - WING 1

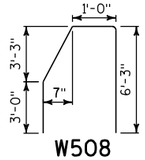
LOOKING AT EXTERIOR FACE
* FIELD BENDING MAY BE REQUIRED FOR THIS BAR



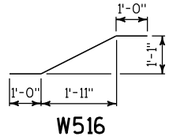
W502



W510



W508



W516

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

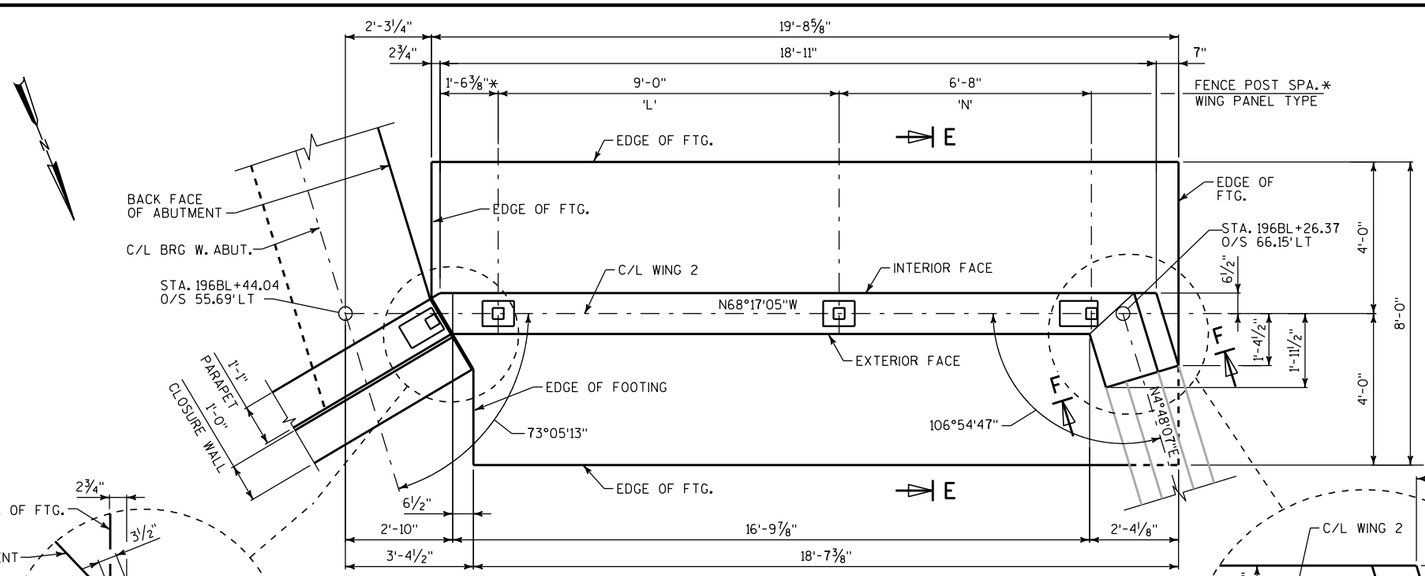
WEST ABUTMENT WINGS (2 OF 4)

SHEET 12 OF 51

8

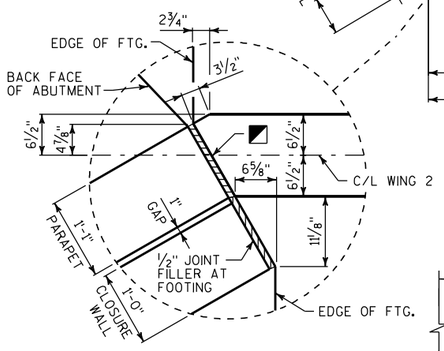
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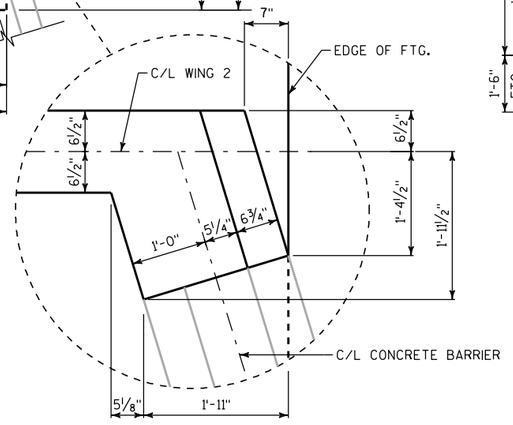
STATE PROJECT NUMBER
1060-33-80

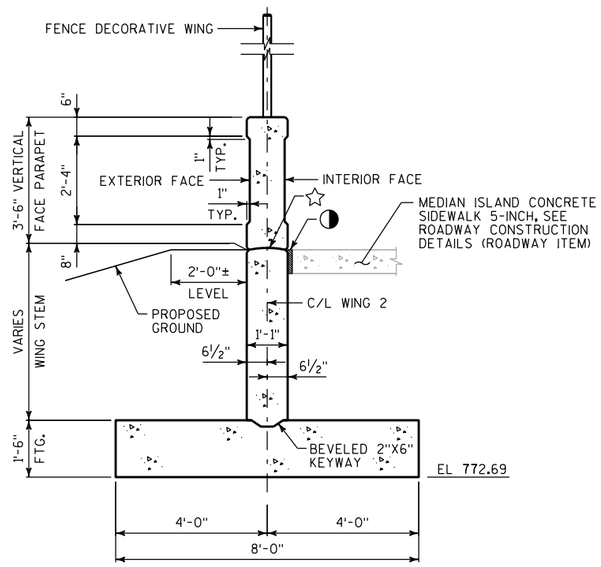


PLAN - WING 2

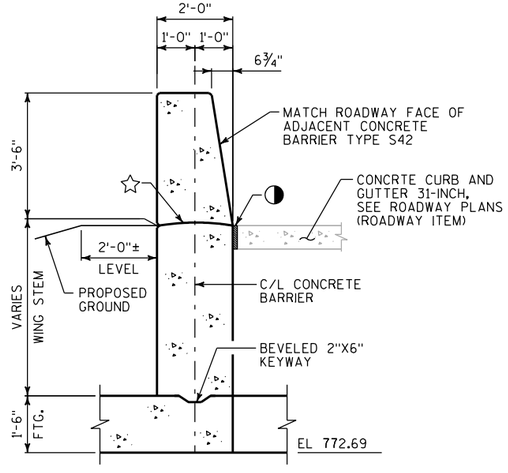
* DECORATIVE FENCE POST SPACING DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS ALONG THE PARAPET. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO DRILLING HOLES FOR POST ANCHORS. FENCE POSTS SHALL BE INSTALLED PLUMB.



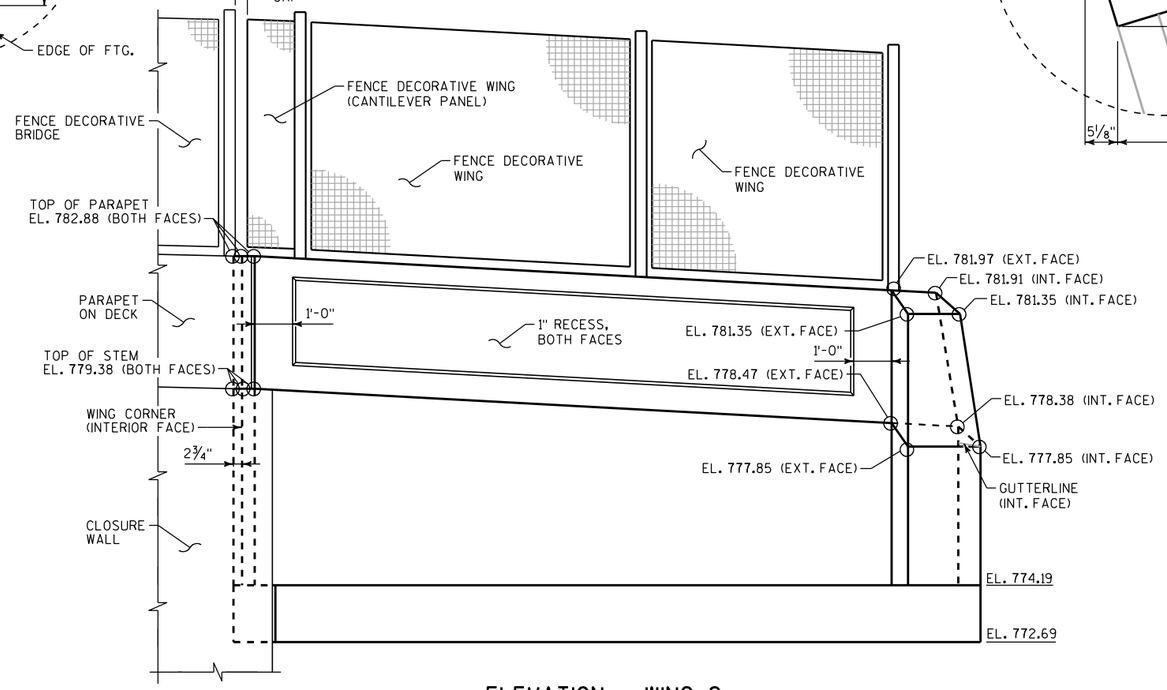




SECTION E-E



SECTION F-F



ELEVATION - WING 2

LOOKING AT EXTERIOR FACE

LEGEND

- ◐ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE)
- ◪ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE). SEALER COLOR TO MATCH FUTURE STAIN COLOR. PROVIDE SEALER FROM TOP OF STEM TO TOP OF PARAPET.
- ☆ CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

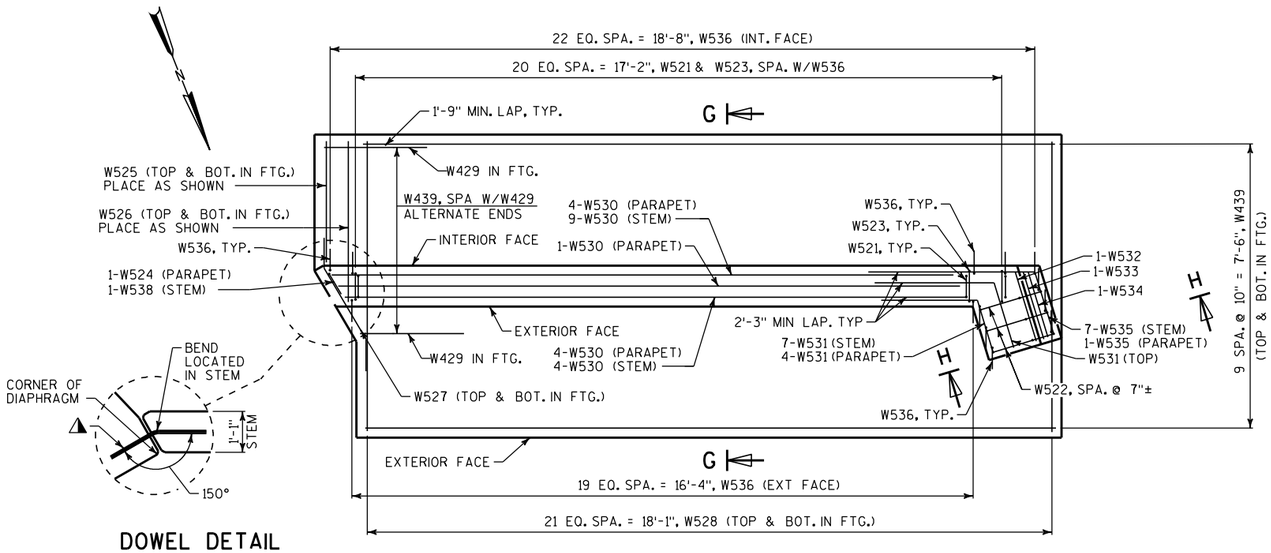
WEST ABUTMENT
WINGS
(3 OF 4)

SHEET 13 OF 51

8

8

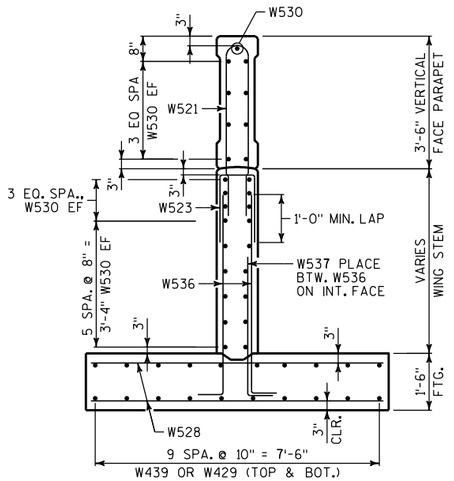
STATE PROJECT NUMBER
1060-33-80



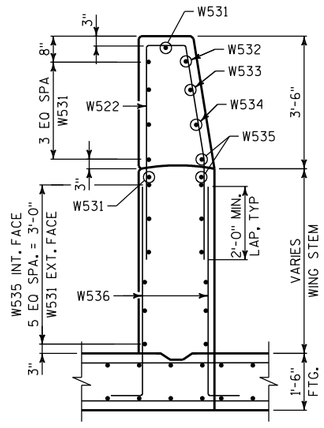
REINFORCEMENT PLAN - WING 2

DOWEL DETAIL

⚠ 1" DIA. PLAIN (SMOOTH) ROUND BENT DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO WING STEM. USE DEBONDER ON EXTENSION INTO ABUTMENT DIAPHRAGM. BENDING WILL BE REQUIRED. PAYMENT INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES"



SECTION G-G



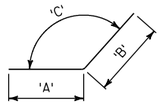
SECTION H-H

FOOTING REINFORCEMENT NOT CALLED OUT FOR CLARITY, SEE OTHER VIEWS

BILL OF BARS - WING 2

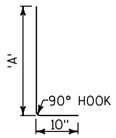
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
W521	X	21	9'-10"	X	PARAPET VERTICAL
W522	X	3	13'-9"	X	PARAPET & STEM
W523	X	21	6'-5"	X	STEM VERTICAL
W524	X	1	5'-3"	X	PARAPET VERTICAL
W525		2	3'-3"		FOOTING TRANSVERSE
W526		2	4'-2"		FOOTING TRANSVERSE
W527		2	4'-2"	X	FOOTING TRANSVERSE
W528		44	7'-6"		FOOTING TRANSVERSE
W429		14	2'-10"		FOOTING LONGITUDINAL
W530	X	27	17'-8"		PARAPET & STEM LONGITUDINAL
W531	X	12	3'-7"	X	CONC. BARRIER LONGITUDINAL
W532	X	1	5'-2"	X	CONC. BARRIER LONGITUDINAL
W533	X	1	5'-0"	X	CONC. BARRIER LONGITUDINAL
W534	X	1	4'-10"	X	CONC. BARRIER LONGITUDINAL
W535	X	8	4'-8"	X	CONC. BARRIER LONGITUDINAL
W536	X	49	5'-3"	X	STEM VERTICAL
W537	X	22	4'-11"	X	STEM VERTICAL INT. FACE
W538	X	1	3'-5"	X	STEM VERTICAL
W439		20	18'-2"		FOOTING LONGITUDINAL
W540					NOT USED

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

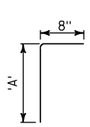


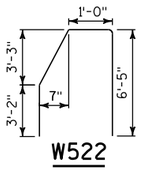
BAR MARK	DIM 'A'	DIM 'B'	ANGLE 'C'
W531	1'-4"	2'-3"	107°
W532	1'-7"	3'-7"	107°
W533	1'-7"	3'-5"	107°
W534	1'-6"	3'-4"	107°
W535	1'-6"	3'-2"	107°

BAR MARK	DIM 'A'
W536	4'-6"
W537	4'-2"

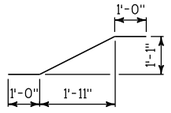


BAR MARK	DIM 'A'
W524	4'-9"
W538	2'-10"

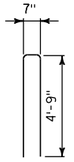




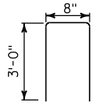
W522



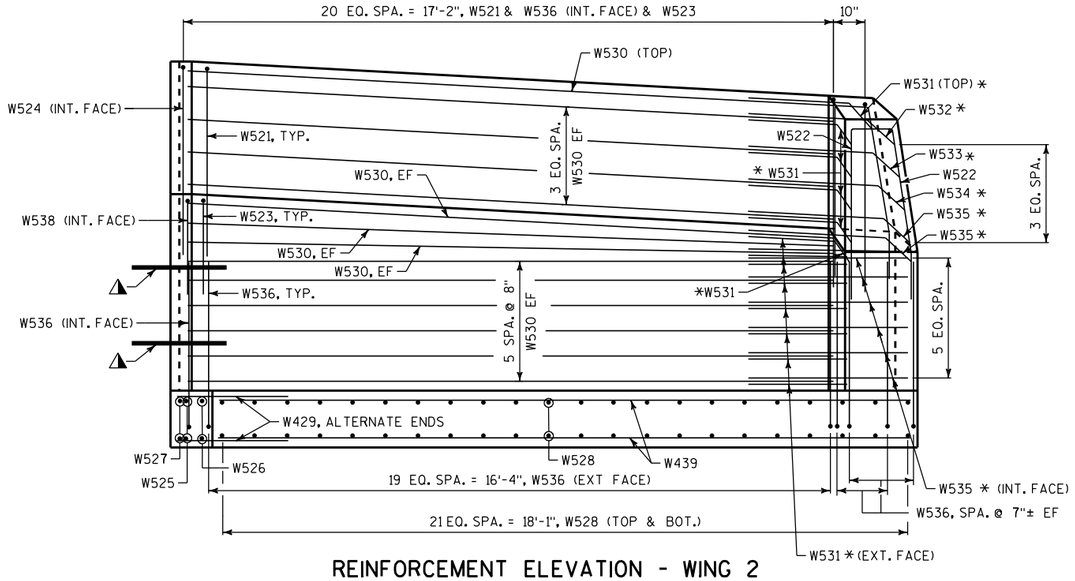
W527



W521



W523



REINFORCEMENT ELEVATION - WING 2

LOOKING AT EXTERIOR FACE
* FIELD BENDING MAY BE REQUIRED FOR THIS BAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

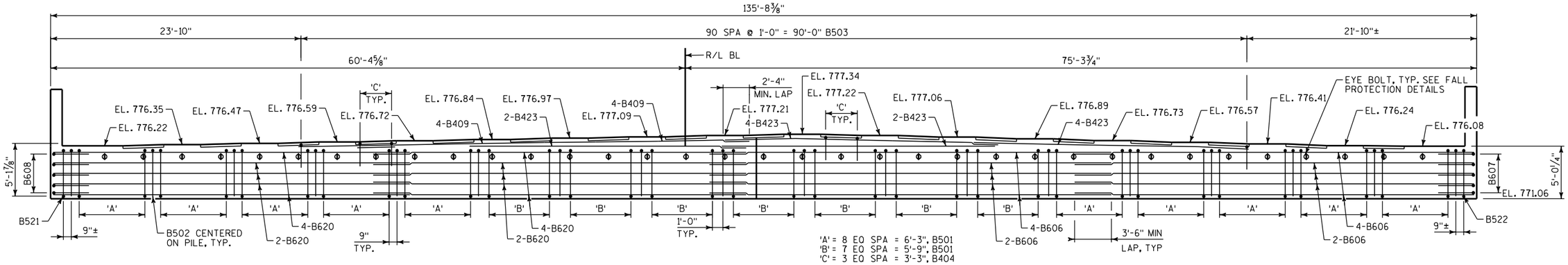
STRUCTURE B-40-866

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WEST ABUTMENT WINGS (4 OF 4)

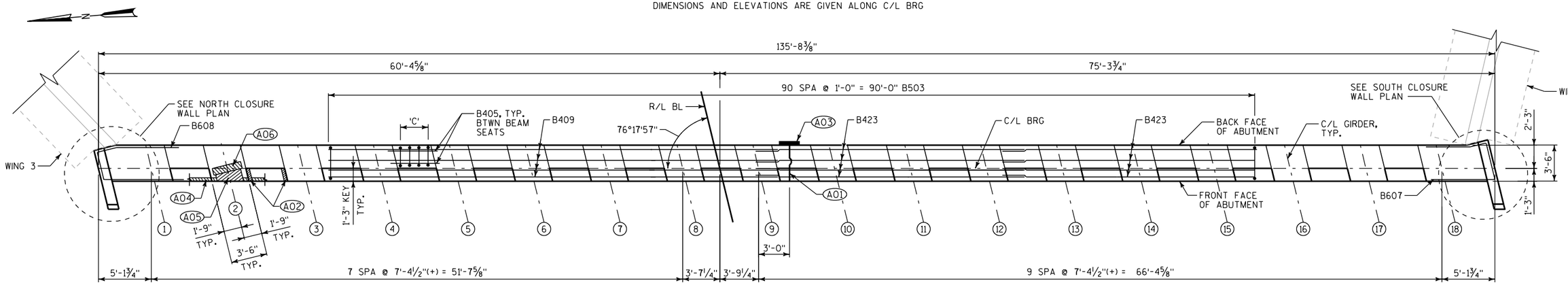
SHEET 14 OF 51

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1060-33-80

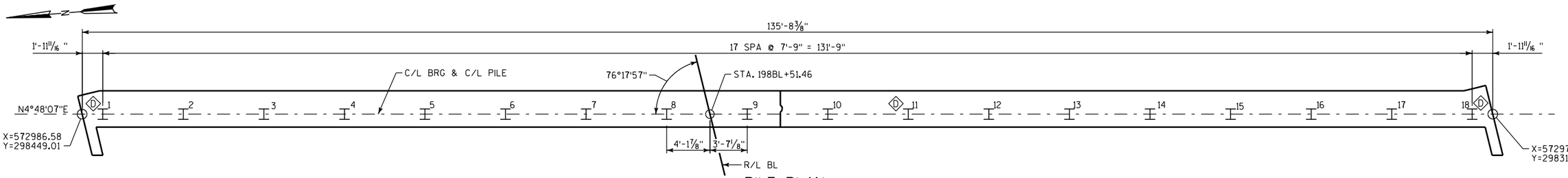


ELEVATION

LOOKING EAST
DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG C/L BRG



PLAN



PILE PLAN

LEGEND

- HP12X53 STEEL. PILING WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
  ESTIMATED PILE LENGTH = 85 FEET.
- (D) DYNAMIC PILE LOAD TESTING.
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVEL.ED 2"X8" WITH 3/4" V-GROOVE ON FRONT FACE OF ABUTMENT
- (A02) 3/4" CORK FILLER ON VERTICAL FACES OF BEAM SEATS, TYP.
- (A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A04) 4" x 3/4" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.
- (A05) 3/4" FILLER UNDER GIRDERS, TYP.
- (A06) 1/2" THICK ELASTOMERIC BEARING PAD, TYP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

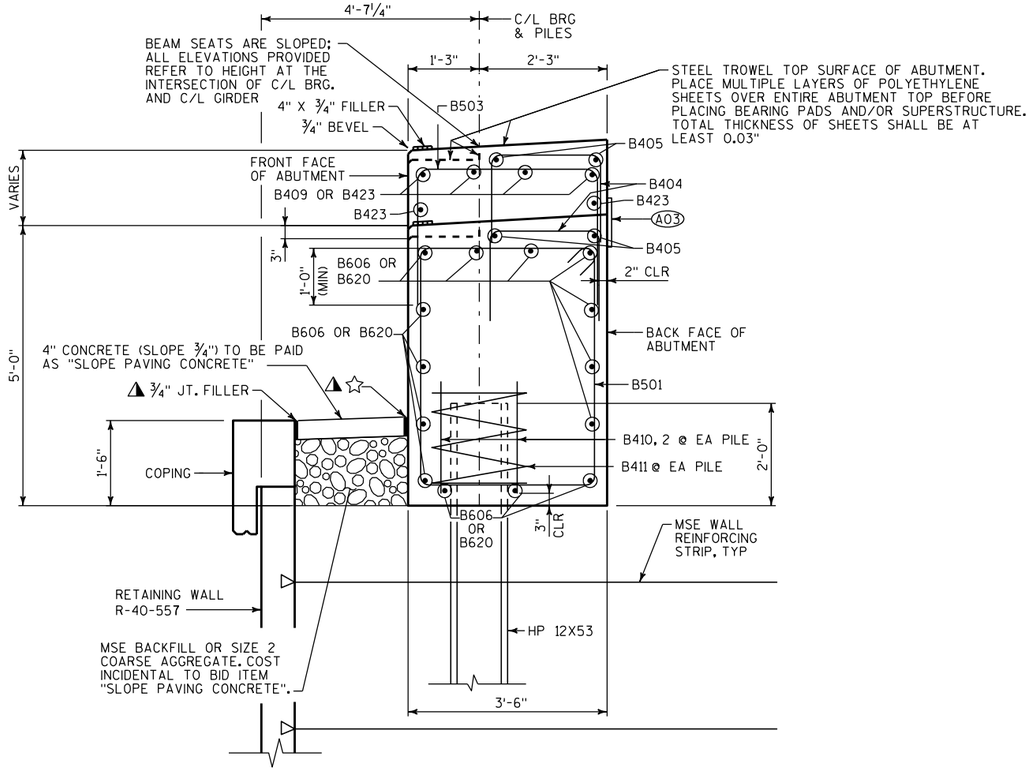
DRAWN BY MS | PLANS CK'D. BKS

EAST ABUTMENT

SHEET 15 OF 51

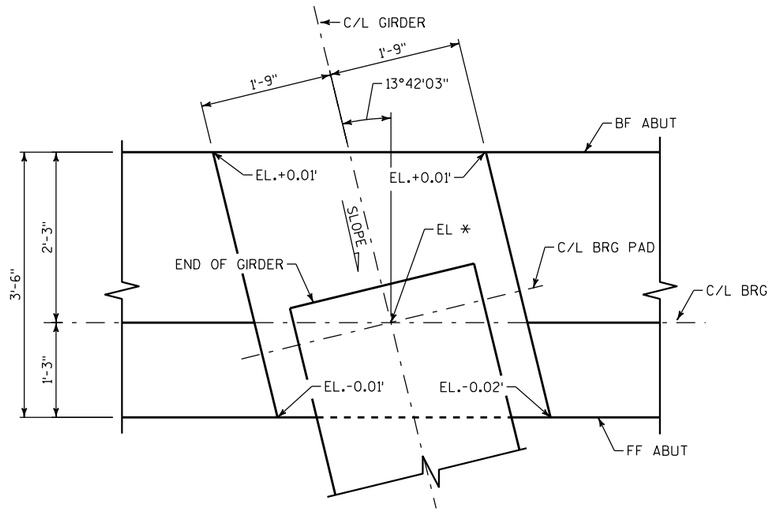
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STATE PROJECT NUMBER
1060-33-80



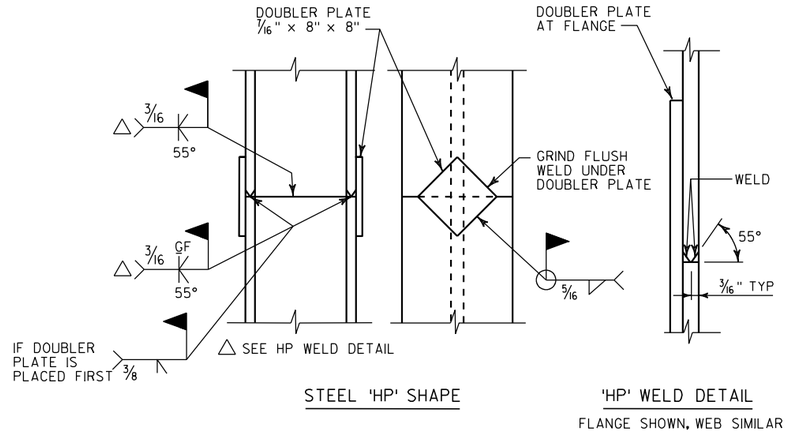
SECTION THRU ABUTMENT BODY

(LOOKING NORTH)



SLOPING BEAM SEAT DETAIL

ELEVATION CORRECTIONS GIVEN IN FEET
* ELEVATION GIVEN IN EAST ABUTMENT ELEVATION



STEEL 'HP' SHAPE

'HP' WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

LEGEND

(A03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

☆ 1" EXPANDED POLYSTYRENE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

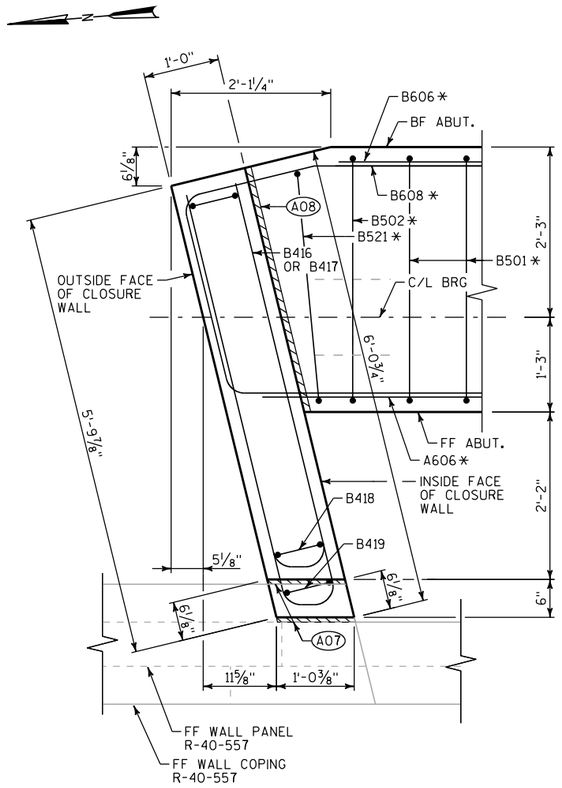
DRAWN BY MS | PLANS CK'D. BKS

EAST ABUTMENT DETAILS (1 OF 3)

SHEET 16 OF 51

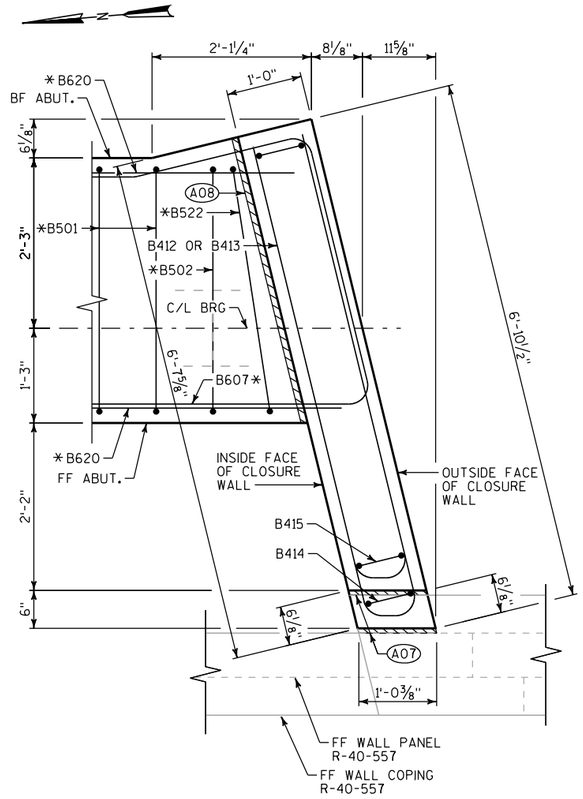
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STATE PROJECT NUMBER
1060-33-80



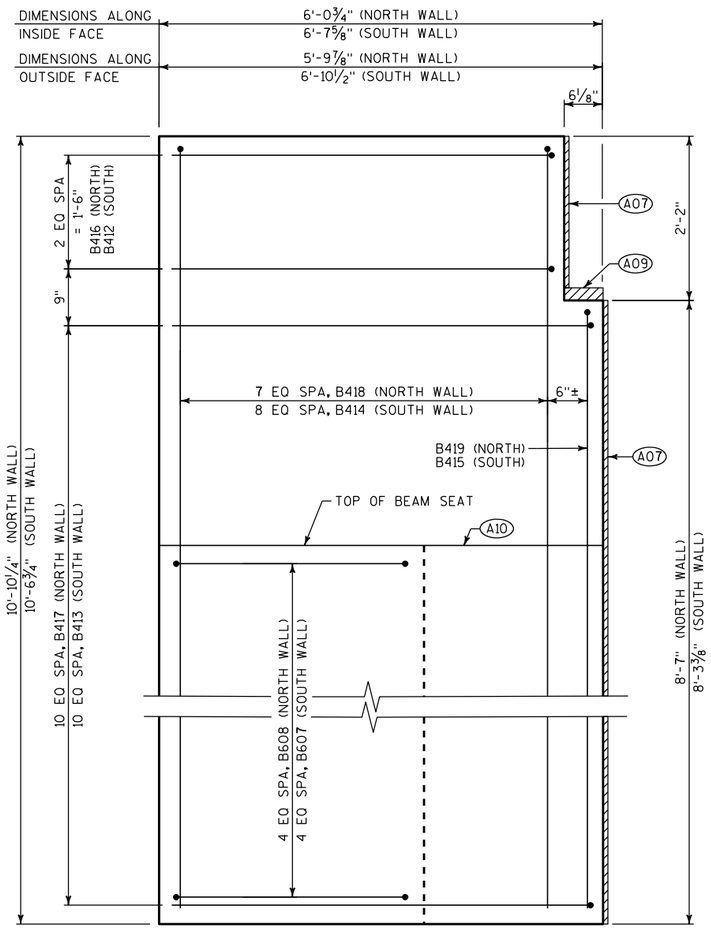
NORTH CLOSURE WALL PLAN

* BAR IN ABUTMENT BODY



SOUTH CLOSURE WALL PLAN

* BAR IN ABUTMENT BODY



CLOSURE WALL ELEVATION

LOOKING AT OUTSIDE FACE OF CLOSURE WALL
NORTH WALL SHOWN, SOUTH WALL OPPOSITE HAND

LEGEND

(A07) ¾" FILLER THICKNESS IS BASED ON A PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES OTHER THAN 7½" INCHES, ADJUST FILLER THICKNESS ACCORDINGLY.

(A08) 1" FILLER ABOVE BEAM SEAT BETWEEN CLOSURE WALL AND ABUTMENT DIAPHRAGM AND EDGE OF SIDEWALK.

(A09) 2" FILLER

(A10) OPTIONAL KEYED CONSTRUCTION JOINT. SEAL JOINT WITH 18" RUBBERIZED MEMBRANE WATERPROOFING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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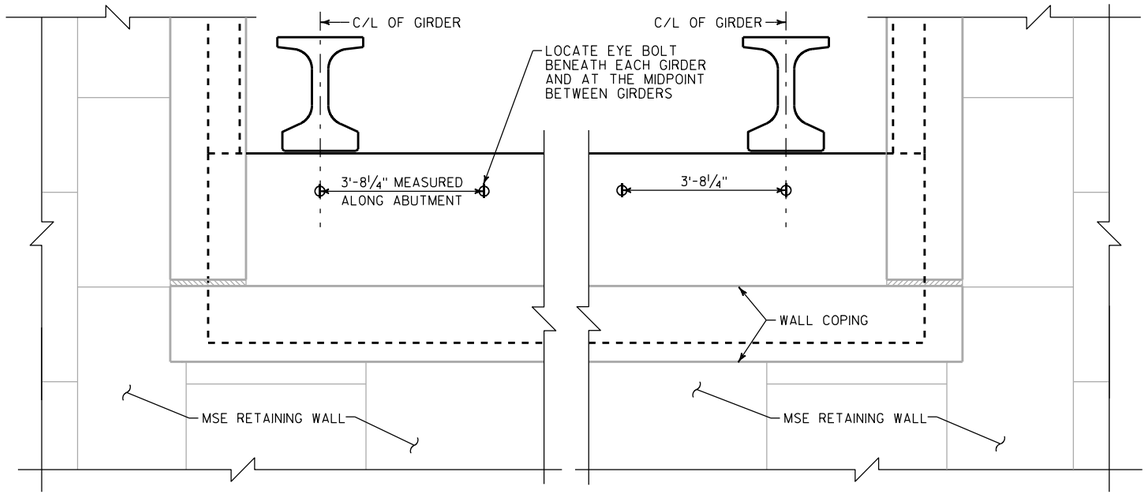
EAST ABUTMENT DETAILS (2 OF 3)

SHEET 17 OF 51

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PLOT DATE : 25-APR-2014 07:52
PLOT BY : MSCBKS
PLOT NAME : B866_080311_ab
PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

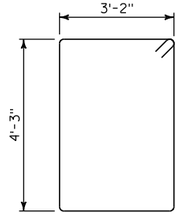


FALL PROTECTION ELEVATION

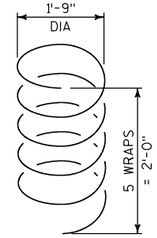
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

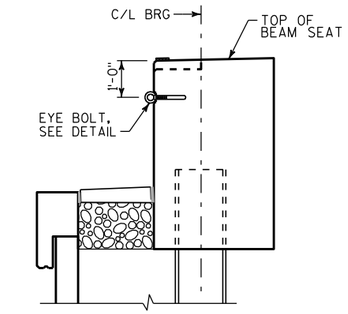
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	139	15'-5"	X	BODY - STIRRUP
B502	X	18	11'-5"	X	BODY - VERT.
B503	X	91	7'-5"	X	BODY - VERT.
B404	X	68	5'-1"	X	BODY - VERT.
B405	X	34	6'-0"		BODY - HORIZ.
B606	X	28	38'-0"		BODY - HORIZ
B607	X	5	10'-9"	X	BODY - HORIZ. AT END
B608	X	5	9'-4"	X	BODY - HORIZ. AT END
B409	X	4	43'-6"		BODY - HORIZ.
B410	X	36	2'-3"		PILES - VERTICAL
B411	X	18	28'-0"	X	PILES SPIRAL
B412	X	3	12'-1"	X	BODY - HORIZ. S. CLOSURE WALL
B413	X	11	13'-1"	X	BODY - HORIZ. S. CLOSURE WALL
B414	X	9	21'-1"	X	BODY - VERT. - S. CLOSURE WALL
B415	X	1	16'-9"	X	BODY - VERT. - S. CLOSURE WALL
B416	X	3	10'-5"	X	BODY - HORIZ. N. CLOSURE WALL
B417	X	11	11'-5"	X	BODY - HORIZ. N. CLOSURE WALL
B418	X	8	20'-7"	X	BODY - VERT. - N. CLOSURE WALL
B419	X	1	16'-3"	X	BODY - VERT. - N. CLOSURE WALL
B620	X	28	35'-3"		BODY - HORIZ
B521	X	1	14'-9"	X	BODY - STIRRUP AT END
B522	X	1	15'-7"	X	BODY - STIRRUP AT END
B423	X	12	26'-0"		BODY - HORIZ.



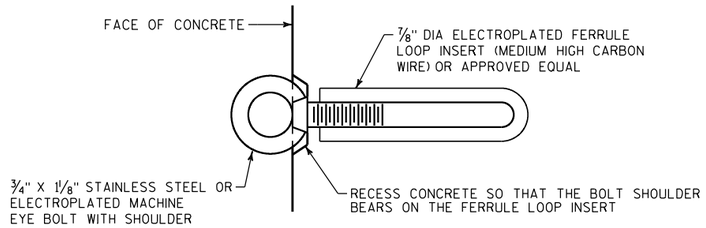
B501



B411

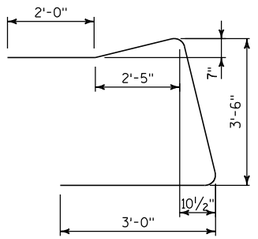


FALL PROTECTION ANCHOR

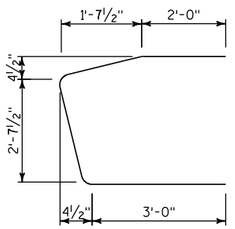


EYE BOLT DETAIL

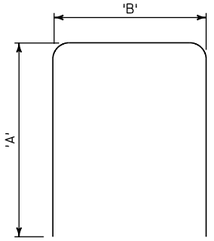
EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.



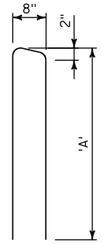
B607



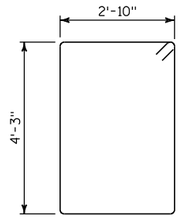
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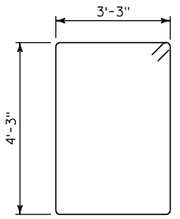
BAR MARK	DIM 'A'	DIM 'B'
B502	4'-3"	3'-2"
B503	2'-3"	3'-2"
B404	1'-8"	1'-11"
B414	10'-4"	7"
B415	8'-2"	7"
B418	10'-1"	7"
B419	7'-11"	7"



BAR MARK	DIM 'A'
B412	5'-10"
B413	6'-4"
B416	5'-0"
B417	5'-6"



B521



B522

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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EAST ABUTMENT DETAILS (3 OF 3)

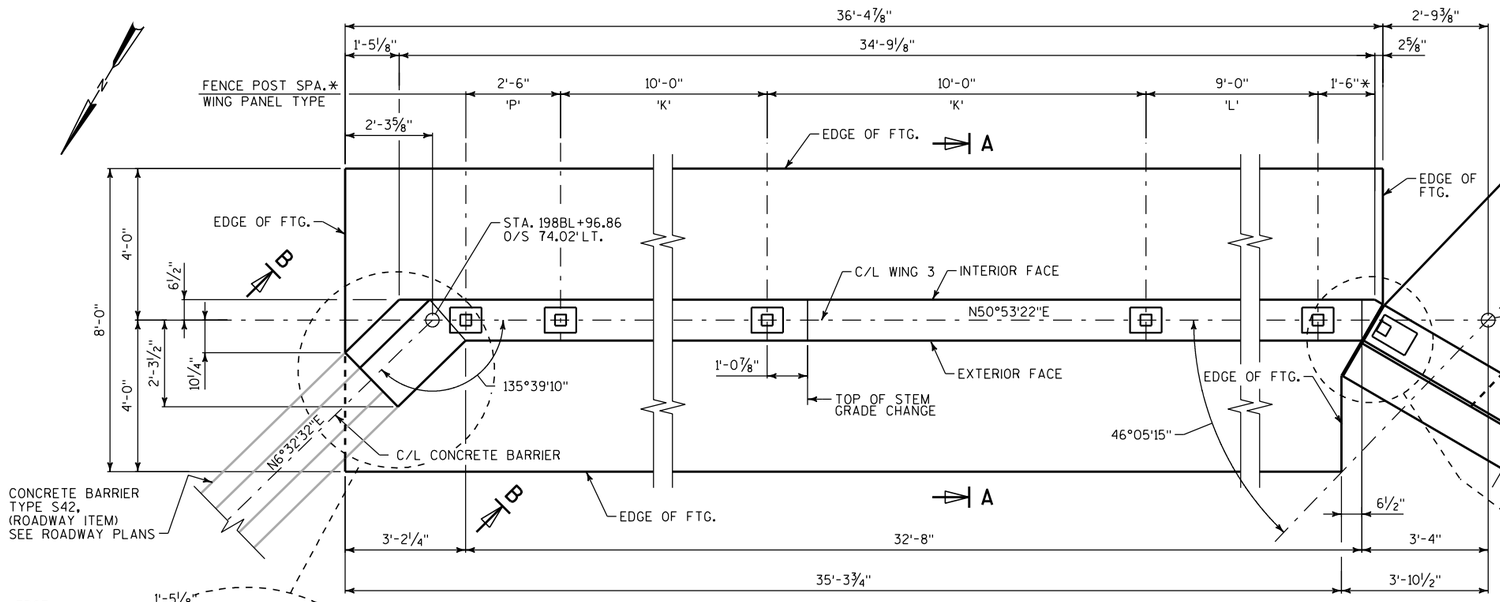
SHEET 18 OF 51

2798

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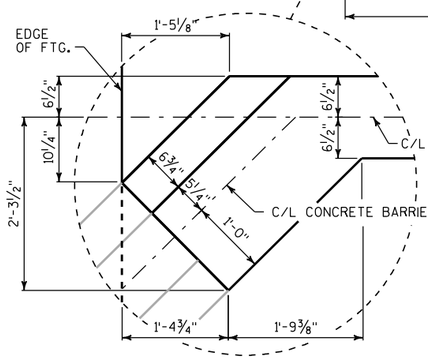
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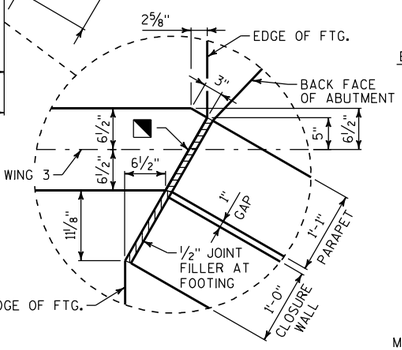
STATE PROJECT NUMBER
1060-33-80

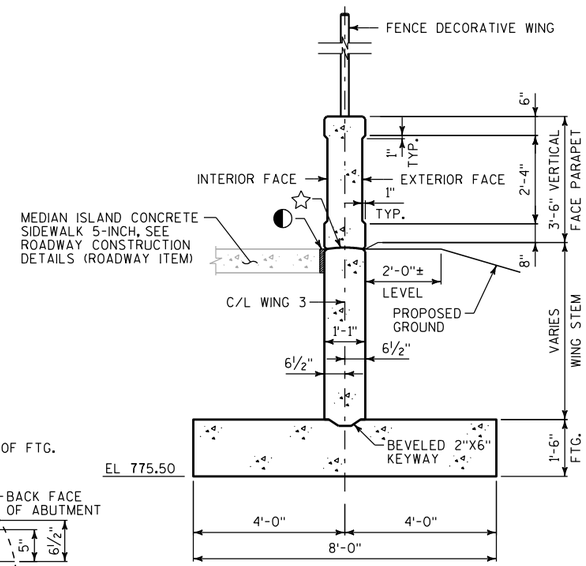


PLAN - WING 3

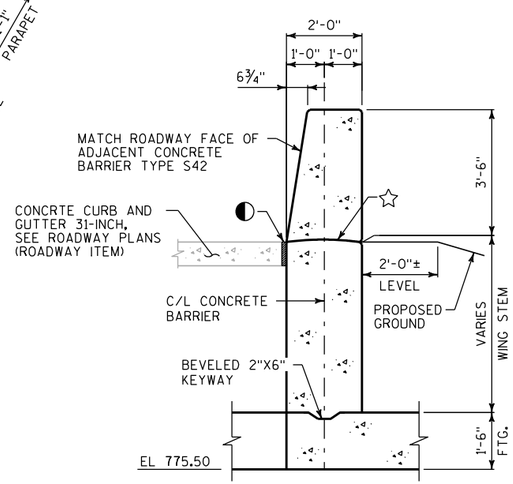
* DECORATIVE FENCE POST SPACING DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS ALONG THE PARAPET. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO DRILLING HOLES FOR POST ANCHORS. FENCE POSTS SHALL BE INSTALLED PLUMB.



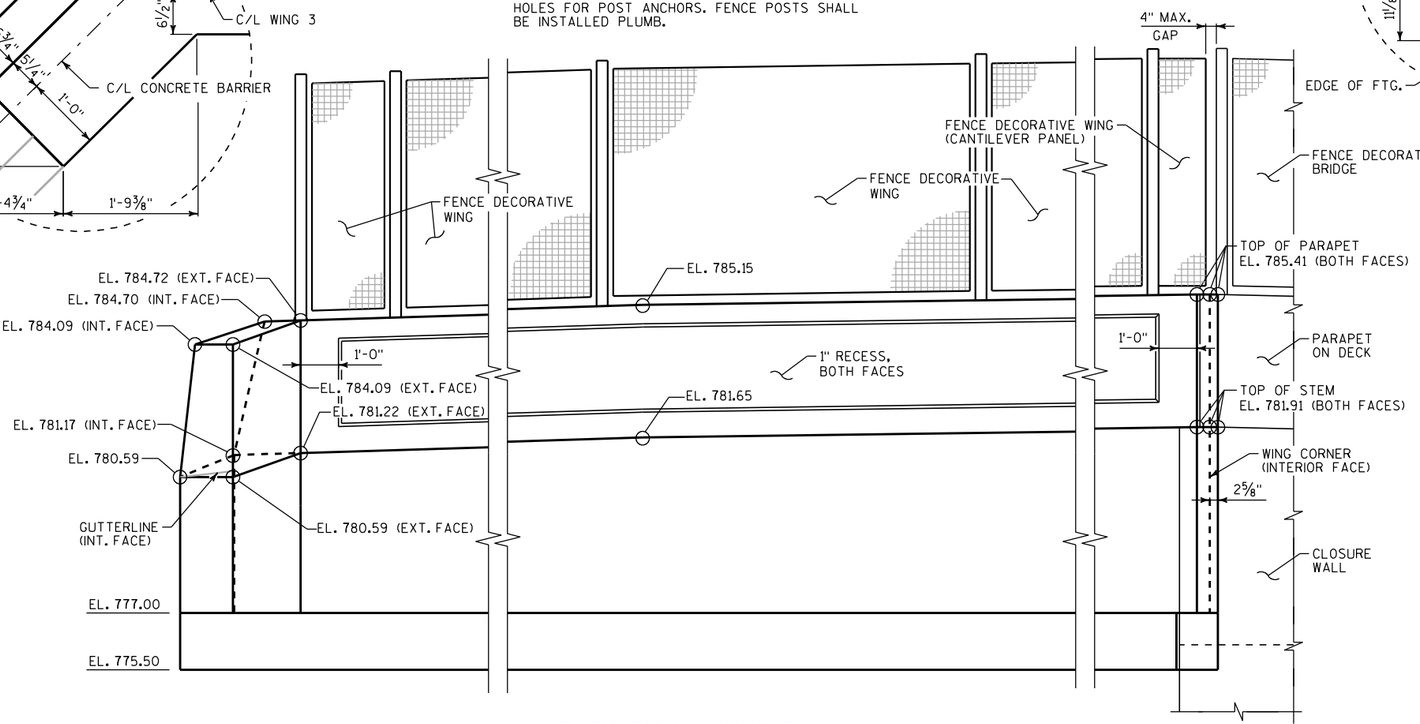




SECTION A-A



SECTION B-B



ELEVATION - WING 3

LOOKING AT EXTERIOR FACE

LEGEND

- ◐ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE)
- ◥ ½" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER ⅛" BELOW SURFACE). SEALER COLOR TO MATCH FUTURE STAIN COLOR. PROVIDE SEALER FROM TOP OF STEM TO TOP OF PARAPET.
- ☆ CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.

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STRUCTURE B-40-866

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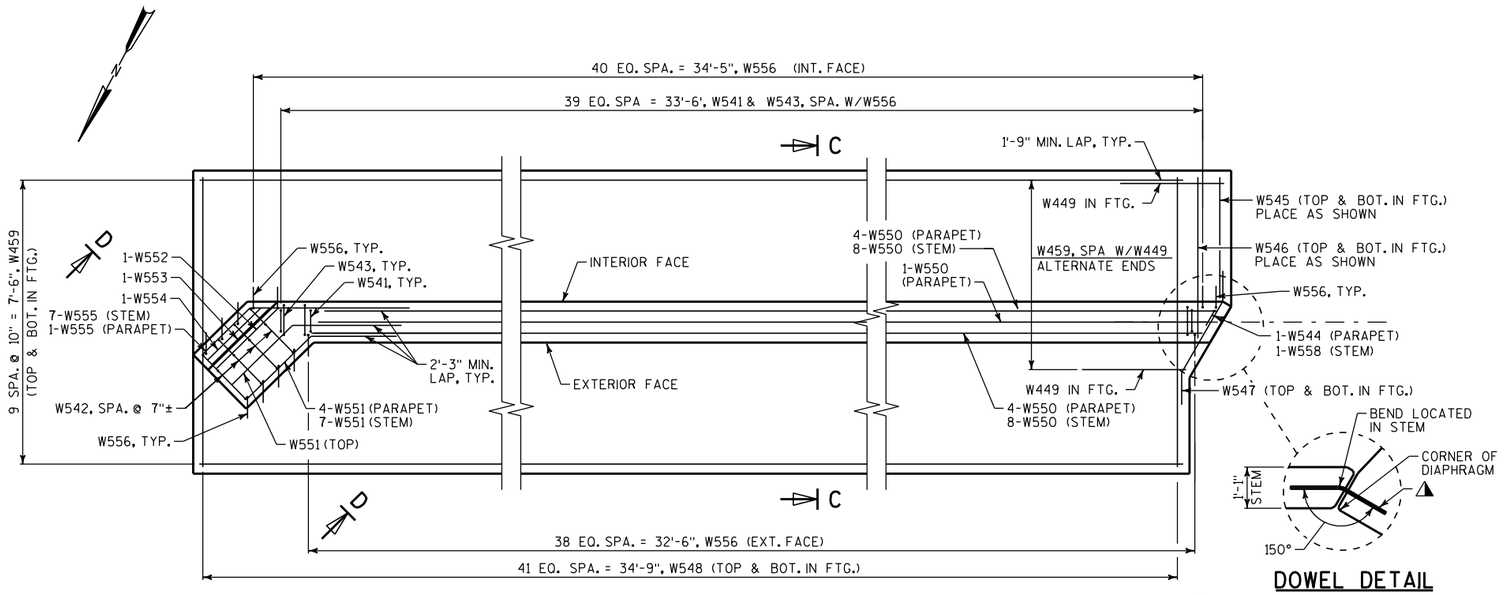
EAST ABUTMENT WINGS (1 OF 4)

SHEET 19 OF 51

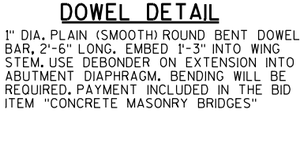
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STATE PROJECT NUMBER
1060-33-80

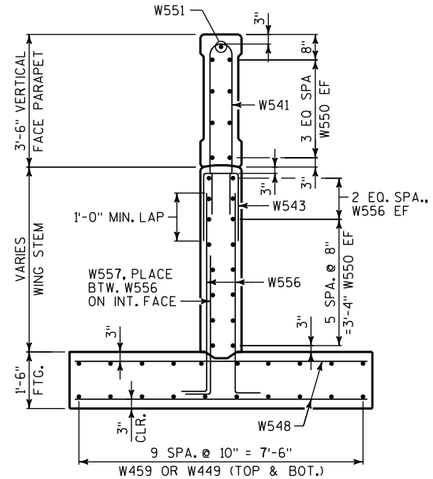


REINFORCEMENT PLAN - WING 3

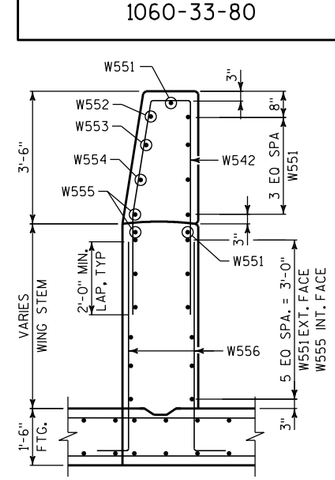


DOWEL DETAIL

⚠ 1" DIA. PLAIN (SMOOTH) ROUND BENT DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO WING STEM. USE DEBONDER ON EXTENSION INTO ABUTMENT DIAPHRAGM. BENDING WILL BE REQUIRED. PAYMENT INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

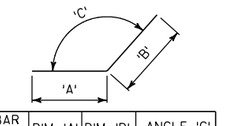


SECTION C-C



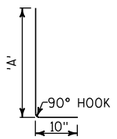
SECTION D-D

FOOTING REINFORCEMENT NOT CALLED OUT FOR CLARITY, SEE OTHER VIEWS

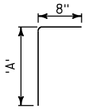


BAR MARK	DIM 'A'	DIM 'B'	ANGLE 'C'
W551	2'-3"	2'-3"	136°
W552	2'-0"	3'-1"	136°
W553	1'-10"	3'-4"	136°
W554	1'-9"	3'-6"	136°
W555	1'-7"	3'-9"	136°

BAR MARK	DIM 'A'
W556	4'-6"
W557	4'-2"



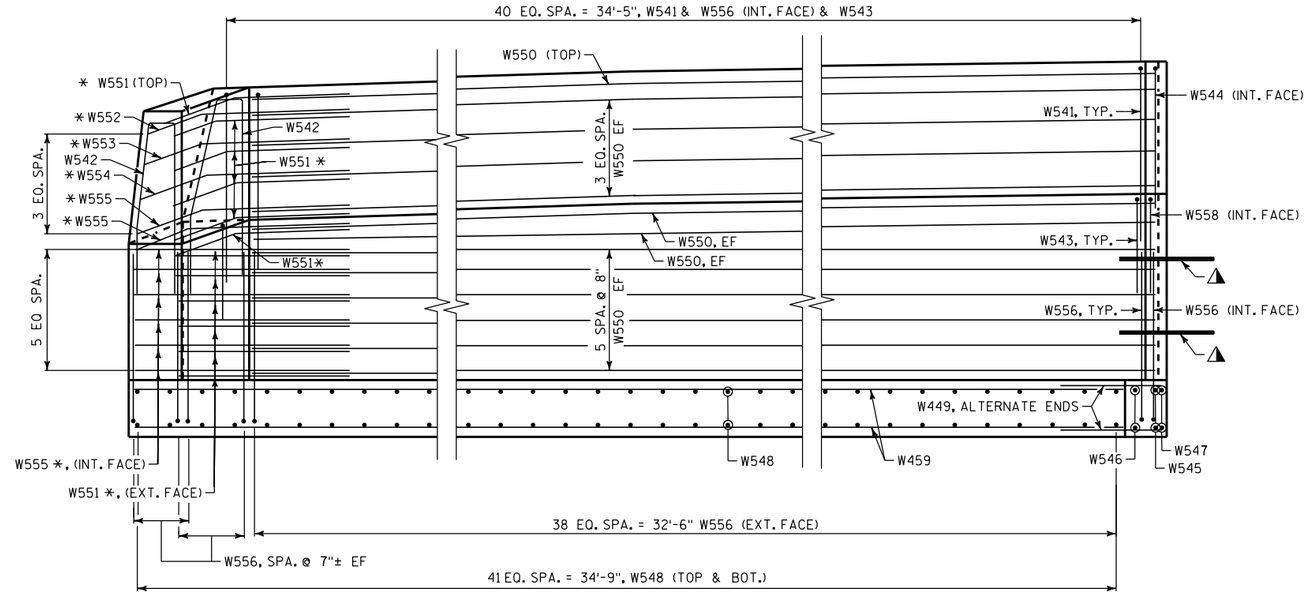
BAR MARK	DIM 'A'
W544	4'-9"
W558	2'-6"



BILL OF BARS - WING 3

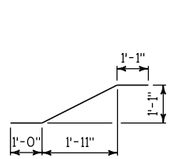
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
W541	X	40	9'-10"	X	PARAPET VERTICAL
W542	X	4	13'-5"	X	PARAPET & STEM VERTICAL
W543	X	40	5'-5"	X	STEM VERTICAL
W544	X	1	5'-3"	X	PARAPET VERTICAL
W545		2	3'-3"		FOOTING TRANSVERSE
W546		2	4'-2"		FOOTING TRANSVERSE
W547		2	4'-2"	X	FOOTING TRANSVERSE
W548		84	7'-6"		FOOTING TRANSVERSE
W449		14	2'-10"		FOOTING LONGITUDINAL
W550	X	25	33'-6"		PARAPET & STEM LONGITUDINAL
W551	X	12	4'-6"	X	CONC. BARRIER LONGITUDINAL
W552	X	1	5'-1"	X	CONC. BARRIER LONGITUDINAL
W553	X	1	5'-2"	X	CONC. BARRIER LONGITUDINAL
W554	X	1	5'-3"	X	CONC. BARRIER LONGITUDINAL
W555	X	8	5'-4"	X	CONC. BARRIER LONGITUDINAL
W556	X	87	5'-3"	X	STEM VERTICAL
W557	X	41	4'-11"	X	STEM VERTICAL INT. FACE
W558	X	1	3'-1"	X	STEM VERTICAL
W459		20	34'-10"		FOOTING LONGITUDINAL
W560					NOT USED

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

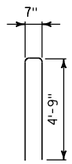


REINFORCEMENT ELEVATION - WING 3

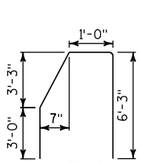
LOOKING AT EXTERIOR FACE
* FIELD BENDING MAY BE REQUIRED FOR THIS BAR



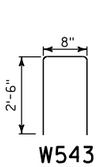
W547



W541



W542



W543

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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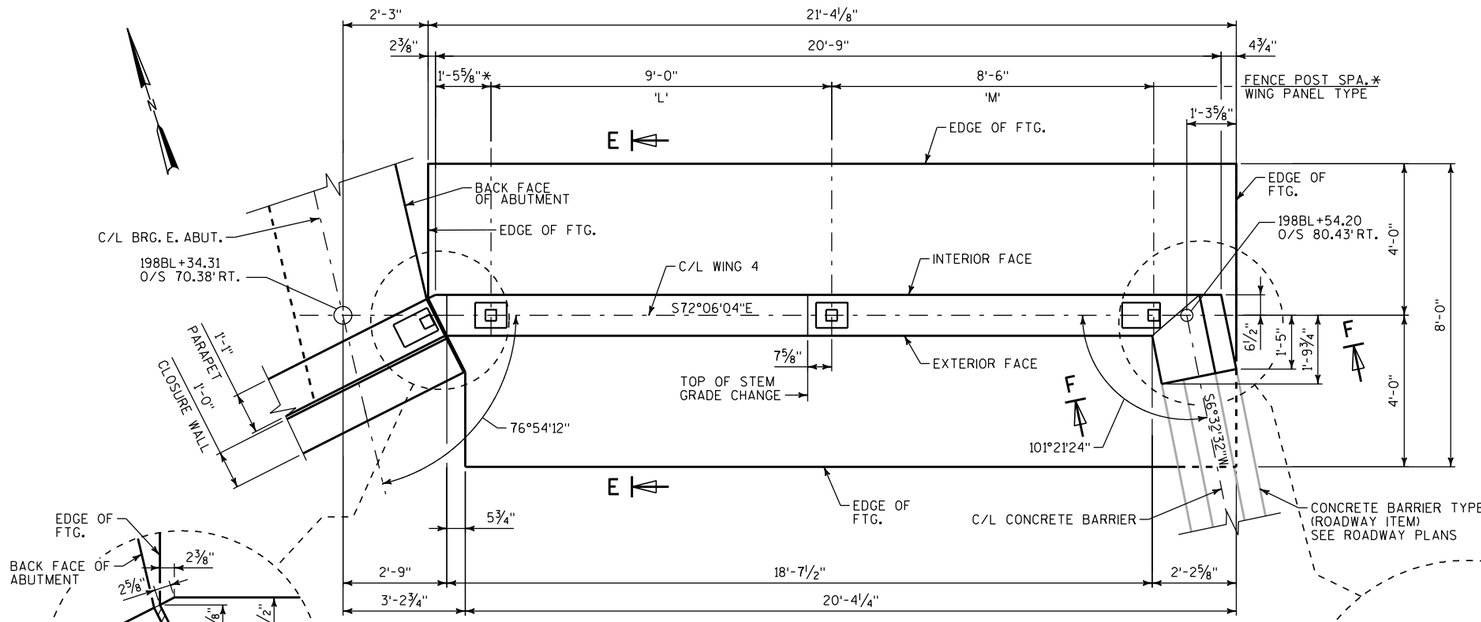
EAST ABUTMENT WINGS (2 OF 4)

SHEET 20 OF 51

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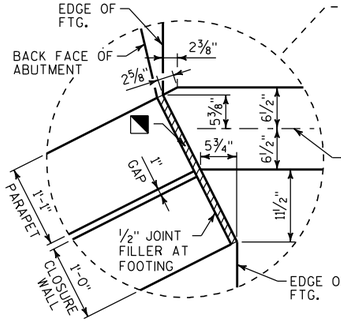
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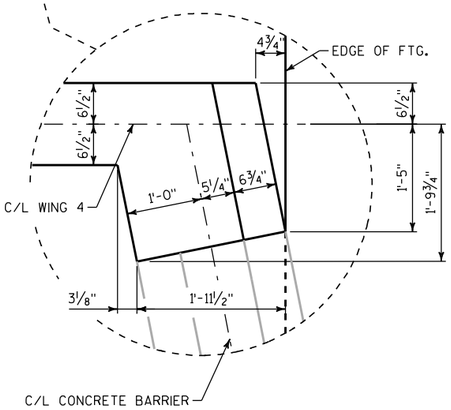
STATE PROJECT NUMBER
1060-33-80

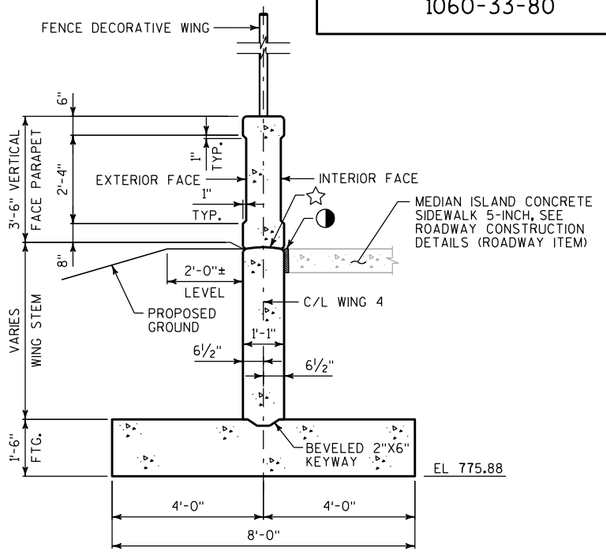


PLAN - WING 4

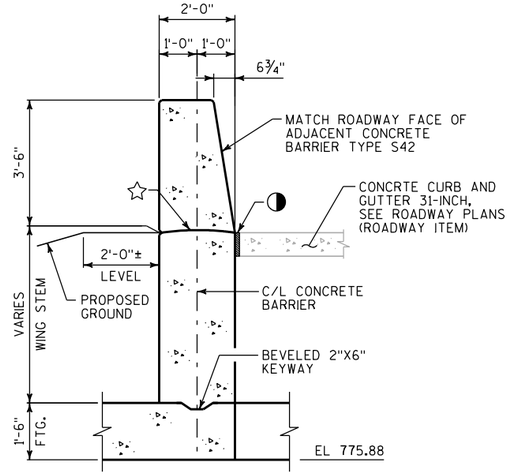
* DECORATIVE FENCE POST SPACING DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS ALONG THE PARAPET. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO DRILLING HOLES FOR POST ANCHORS. FENCE POSTS SHALL BE INSTALLED PLUMB.



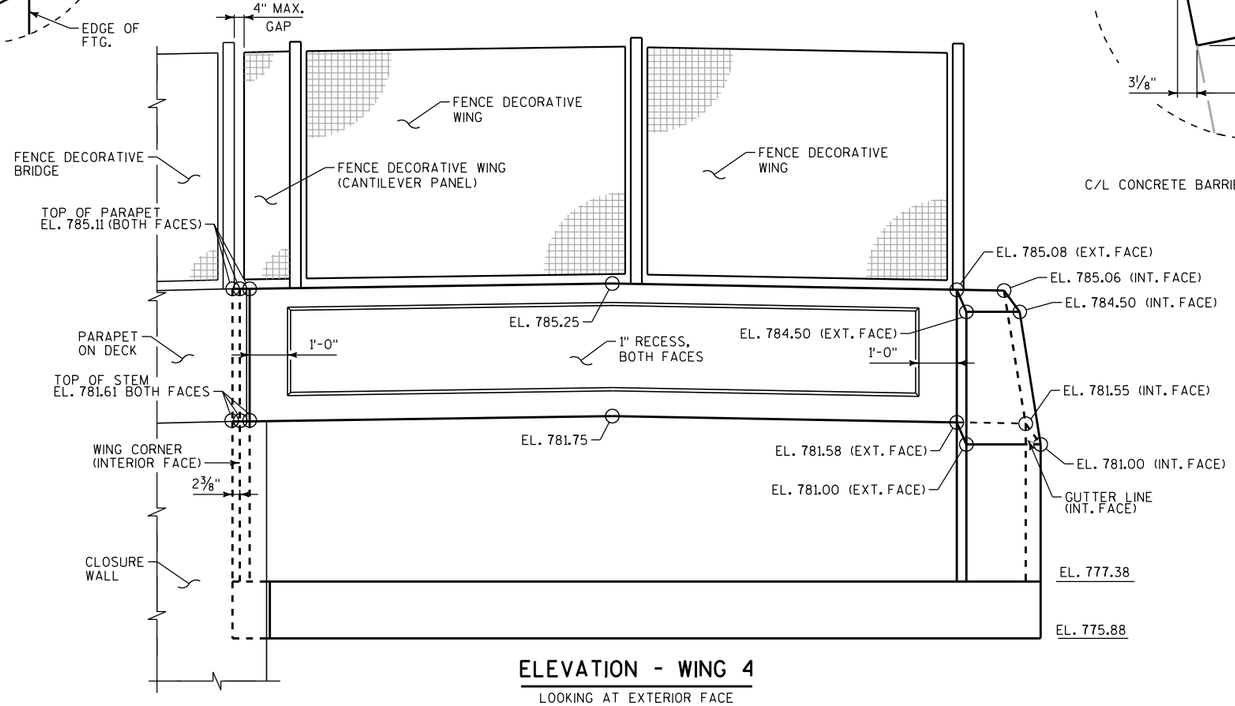




SECTION E-E



SECTION F-F



ELEVATION - WING 4

LOOKING AT EXTERIOR FACE

LEGEND

- ◐ 1/2" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER 1/8" BELOW SURFACE)
- ◪ 1/2" PREFORMED JT. FILLER WITH NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD SEALER 1/8" BELOW SURFACE). SEALER COLOR TO MATCH FUTURE STAIN COLOR. PROVIDE SEALER FROM TOP OF STEM TO TOP OF PARAPET.
- ☆ CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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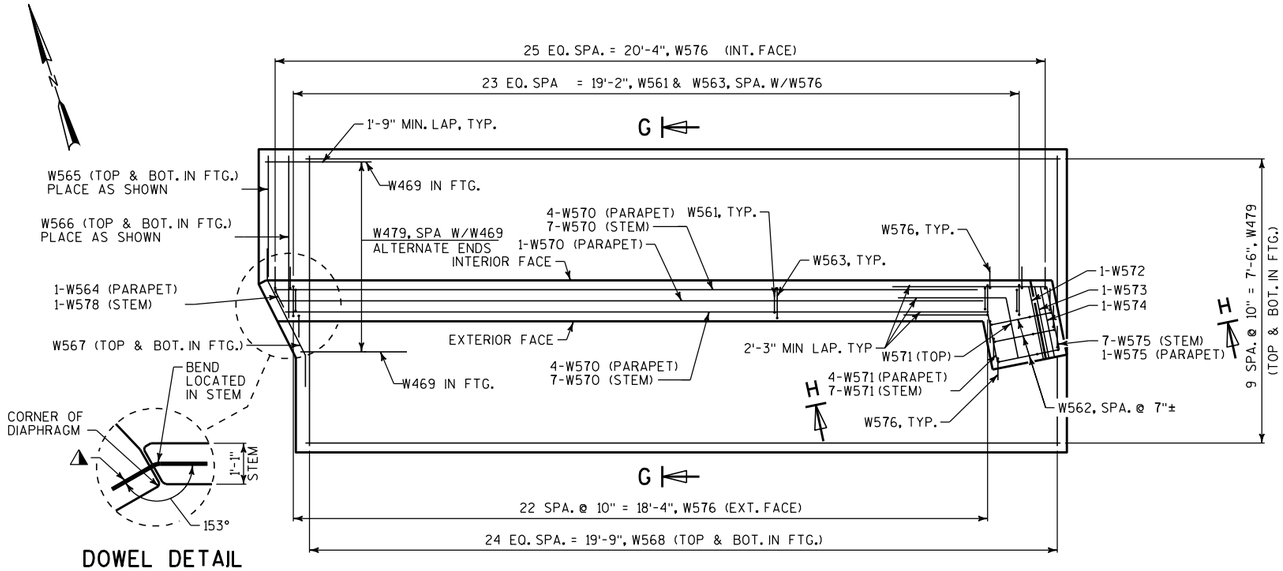
EAST ABUTMENT WINGS (3 OF 4)

SHEET 21 OF 51

8

8

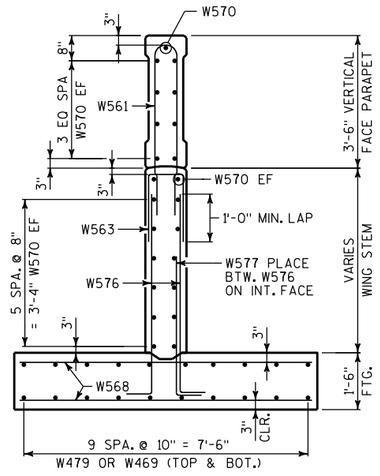
STATE PROJECT NUMBER
1060-33-80



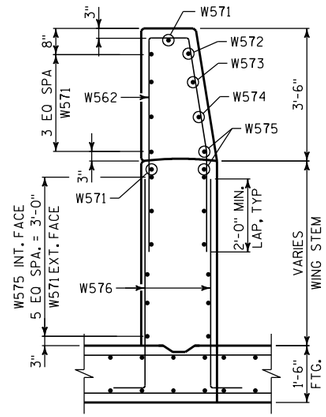
DOWEL DETAIL

⚠ 1" DIA. PLAIN (SMOOTH) ROUND BENT DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO WING STEM. USE DEBONDER ON EXTENSION INTO ABUTMENT DIAPHRAGM. BENDING WILL BE REQUIRED. PAYMENT INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

REINFORCEMENT PLAN - WING 4

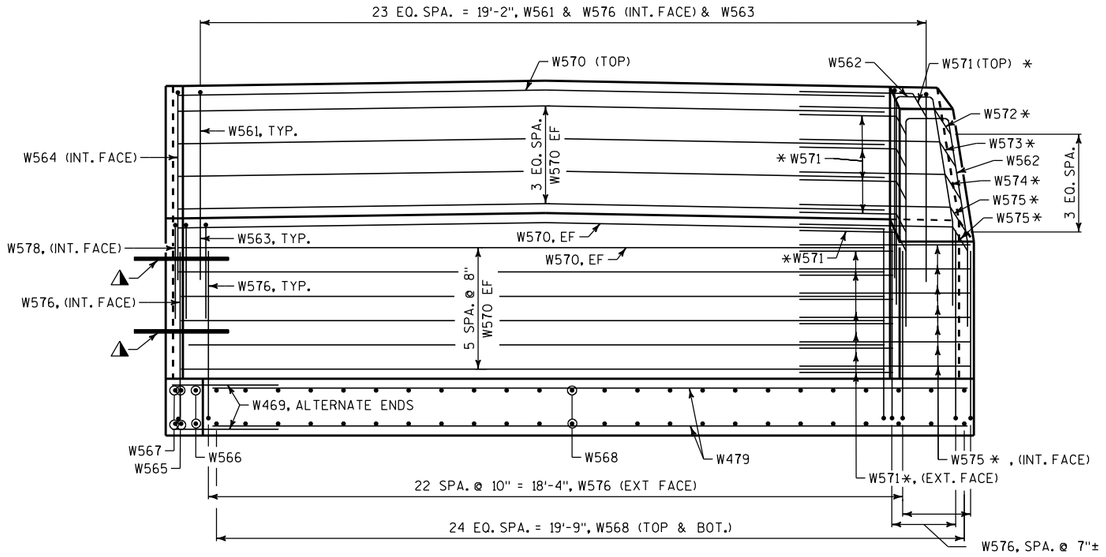


SECTION G-G



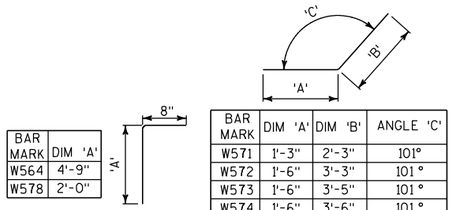
SECTION H-H

FOOTING REINFORCEMENT NOT CALLED OUT FOR CLARITY, SEE OTHER VIEWS



REINFORCEMENT ELEVATION - WING 4

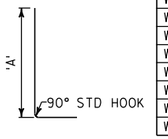
LOOKING AT EXTERIOR FACE
* FIELD BENDING MAY BE REQUIRED FOR THIS BAR

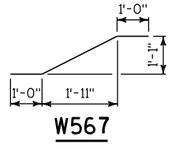


BAR MARK	DIM 'A'	DIM 'B'	ANGLE 'C'
W571	1'-3"	2'-3"	101°
W572	1'-6"	3'-3"	101 °
W573	1'-6"	3'-5"	101 °
W574	1'-6"	3'-6"	101 °
W575	1'-6"	3'-8"	101 °

BAR MARK	DIM 'A'
W564	4'-9"
W578	2'-0"

BAR MARK	DIM 'A'
W576	4'-6"
W577	4'-2"

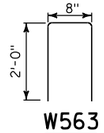




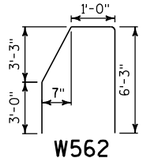
W567



W561



W563



W562

BILL OF BARS - WING 4

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
W561	X	24	9'-10"	X	PARAPET VERTICAL
W562	X	3	13'-5"	X	PARAPET & STEM VERTICAL
W563	X	24	4'-5"	X	STEM VERTICAL
W564	X	1	5'-3"	X	PARAPET VERTICAL
W565		2	3'-3"		FOOTING TRANSVERSE
W566		2	4'-2"		FOOTING TRANSVERSE
W567		2	4'-2"	X	FOOTING TRANSVERSE
W568		50	7'-6"		FOOTING TRANSVERSE
W469		14	2'-10"		FOOTING LONGITUDINAL
W570	X	23	19'-0"		PARAPET & STEM LONGITUDINAL
W571	X	12	3'-6"	X	CONC. BARRIER LONGITUDINAL
W572	X	1	4'-9"	X	CONC. BARRIER LONGITUDINAL
W573	X	1	4'-11"	X	CONC. BARRIER LONGITUDINAL
W574	X	1	5'-0"	X	CONC. BARRIER LONGITUDINAL
W575	X	8	5'-2"	X	CONC. BARRIER LONGITUDINAL
W576	X	55	5'-3"	X	STEM VERTICAL
W577	X	25	4'-11"	X	STEM VERTICAL INT. FACE
W578	X	1	2'-7"	X	STEM VERTICAL
W479		20	19'-10"		FOOTING LONGITUDINAL
W580					NOT USED

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

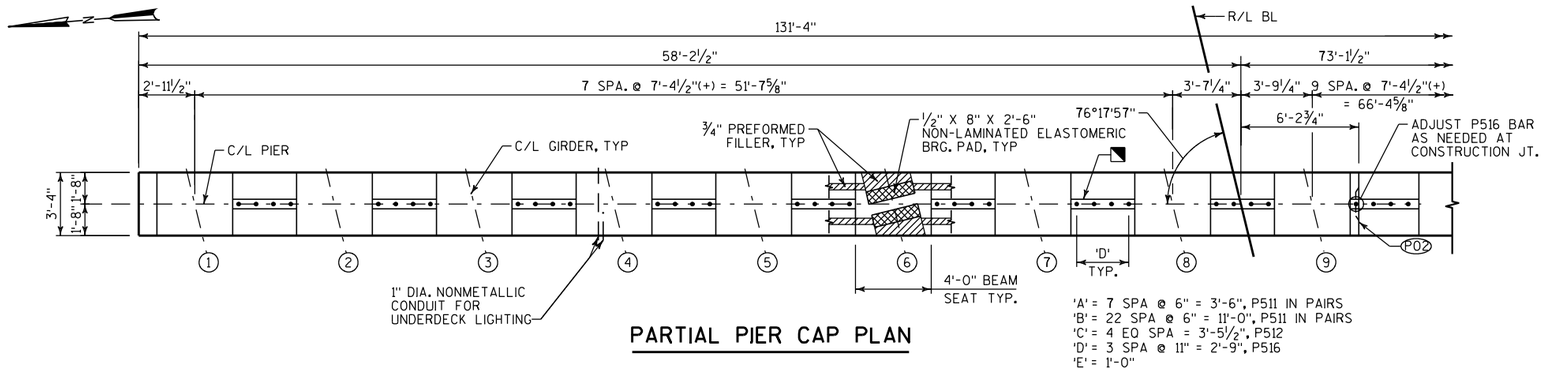
EAST ABUTMENT WINGS (4 OF 4)

SHEET 22 OF 51

8

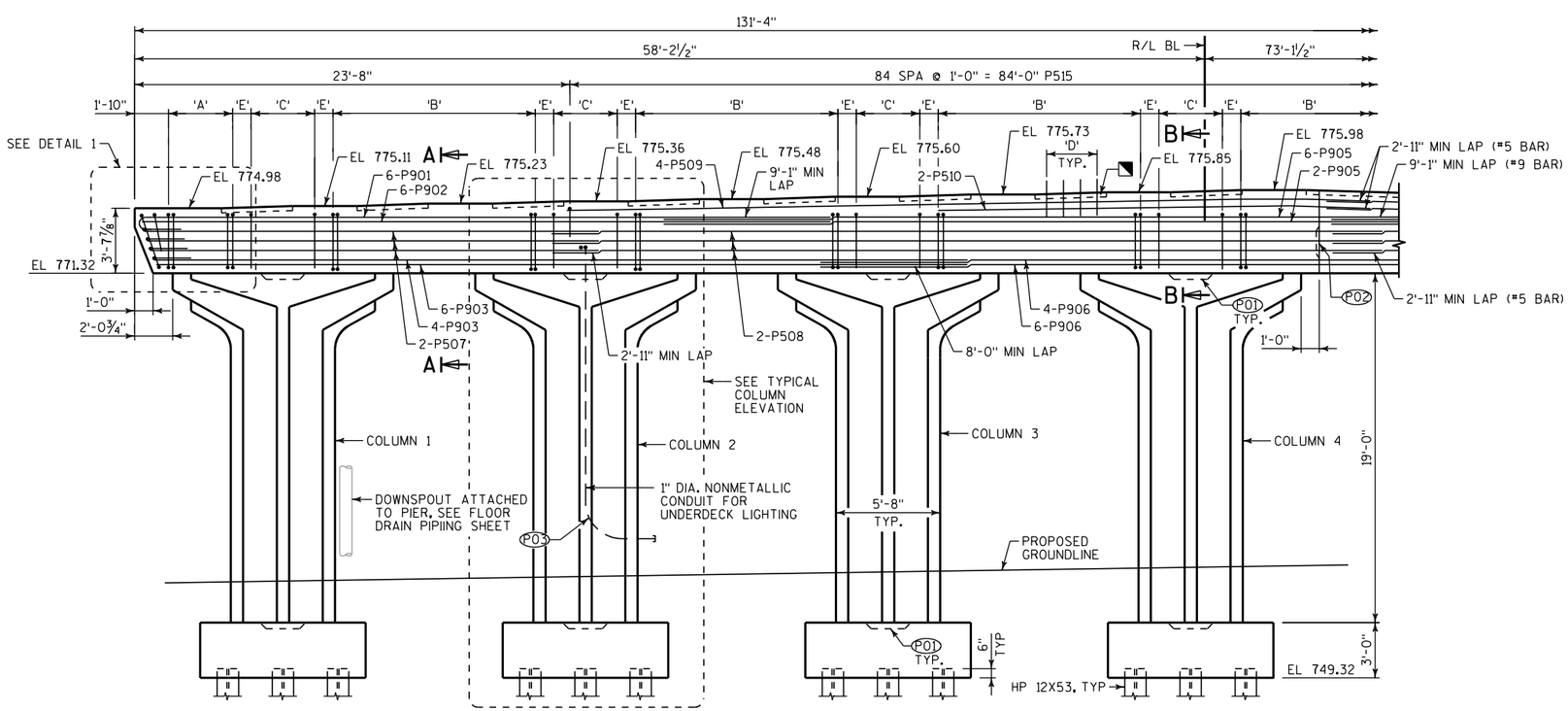
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STATE PROJECT NUMBER
1060-33-80



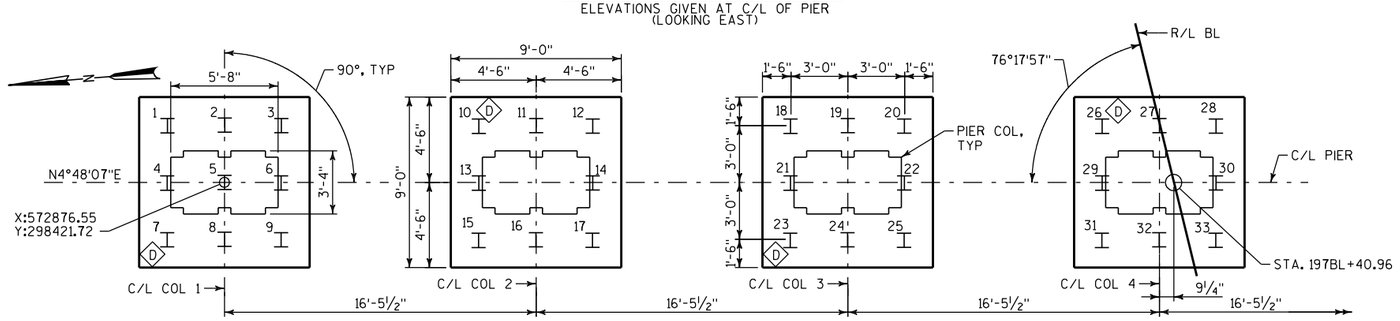
PARTIAL PIER CAP PLAN

'A' = 7 SPA @ 6" = 3'-6", P511 IN PAIRS
'B' = 22 SPA @ 6" = 11'-0", P511 IN PAIRS
'C' = 4 EQ SPA = 3'-5½", P512
'D' = 3 SPA @ 11" = 2'-9", P516
'E' = 1'-0"

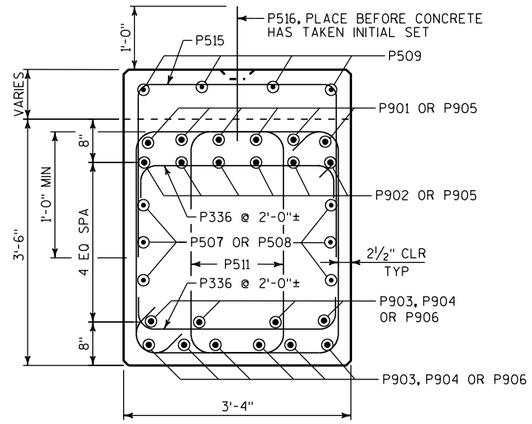


PARTIAL PIER ELEVATION

ELEVATIONS GIVEN AT C/L OF PIER (LOOKING EAST)

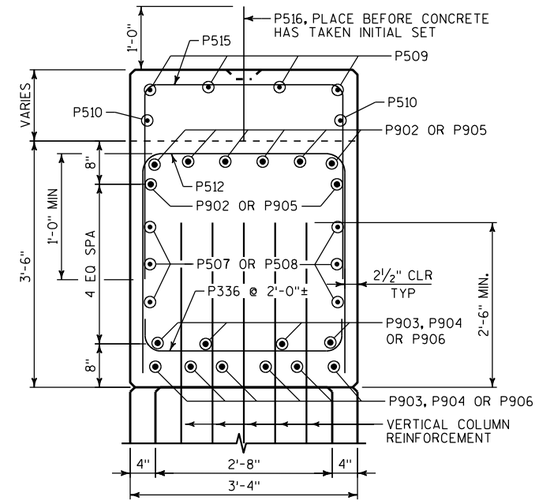


PARTIAL PIER FOOTING PLAN



SECTION A-A

TYPICAL PIER CAP SECTION NEAR END OF PIER CAP



SECTION B-B

TYPICAL PIER CAP SECTION AT COLUMN SHOWN

LEGEND

- HP 12 X 53 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED PILE LENGTH = 55 FEET.
- 2" X 6" BEVELED KEYWAY BETWEEN BEAM SEATS
- (D) DYNAMIC PILE LOAD TESTING
- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 4" X 1'-3" X 2'-6" TYPICAL AT TOP AND BOTTOM OF PIER COLUMNS
- (P02) VERTICAL CONSTRUCTION JOINT FORMED BY 2'-0" X 1'-3" X 2" BEVELED KEYWAY
- (P03) FOR 45° BENDS IN CONDUIT, USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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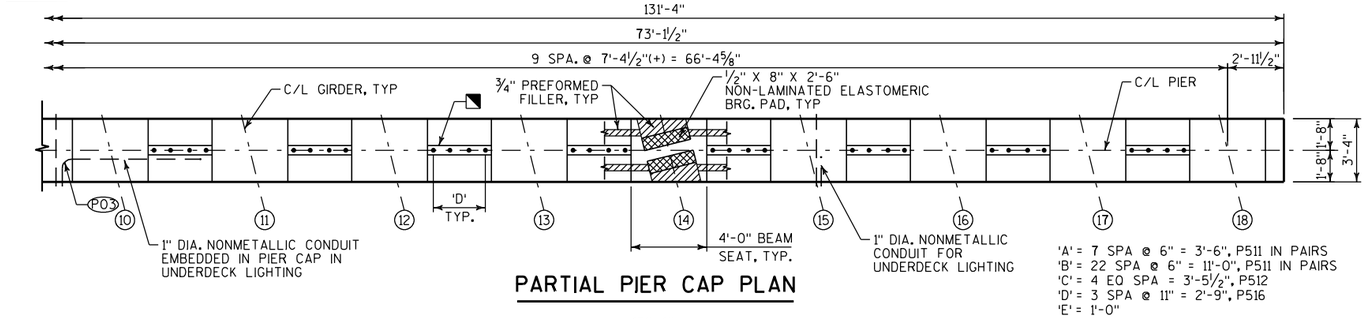
PIER (1 OF 4)

SHEET 23 OF 51

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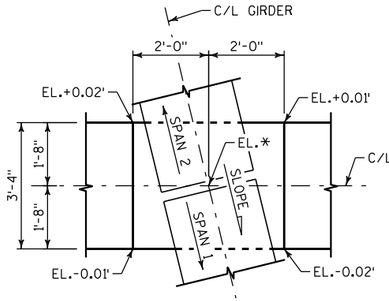
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STATE PROJECT NUMBER
1060-33-80



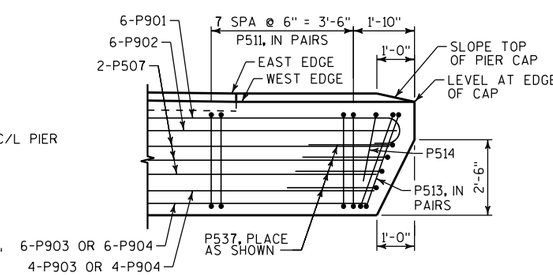
'A' = 7 SPA @ 6" = 3'-6", P511 IN PAIRS
'B' = 22 SPA @ 6" = 11'-0", P511 IN PAIRS
'C' = 4 EQ SPA = 3'-5½", P512
'D' = 3 SPA @ 11" = 2'-9", P516
'E' = 1'-0"

PARTIAL PIER CAP PLAN

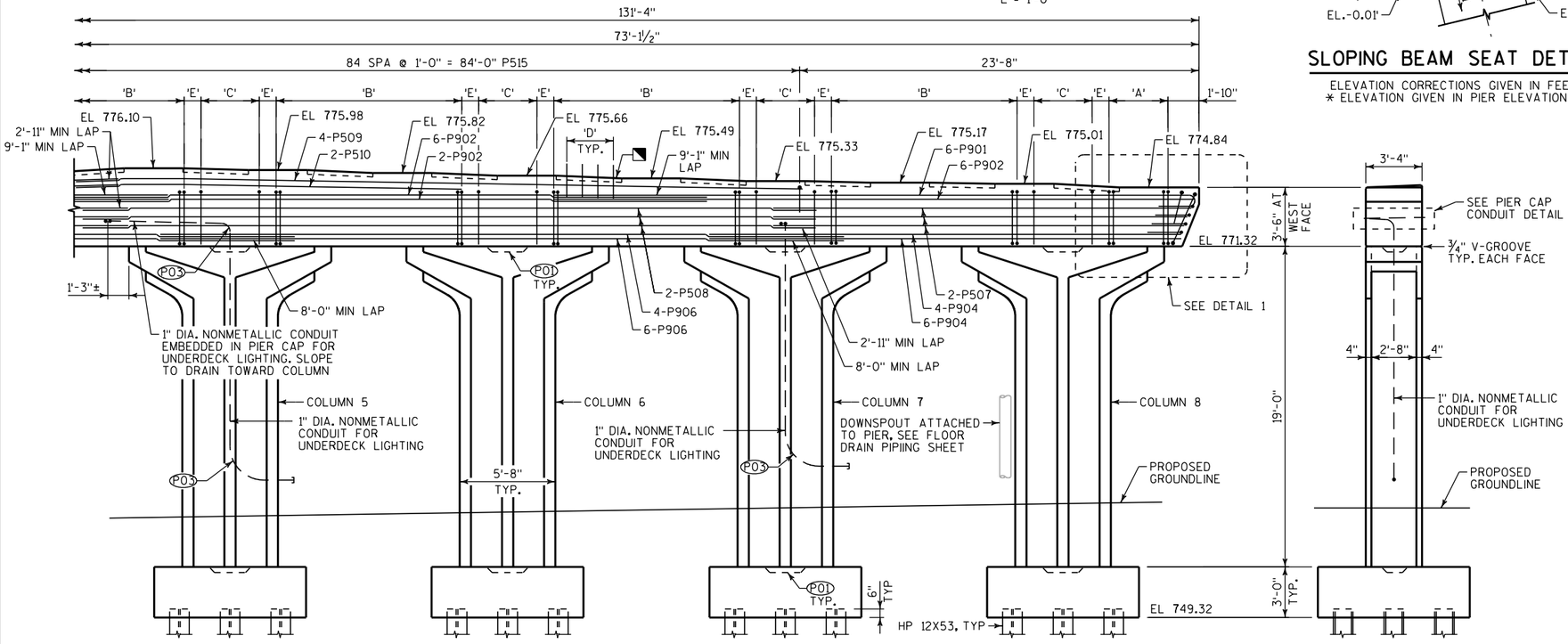


SLOPING BEAM SEAT DETAIL

ELEVATION CORRECTIONS GIVEN IN FEET
* ELEVATION GIVEN IN PIER ELEVATION



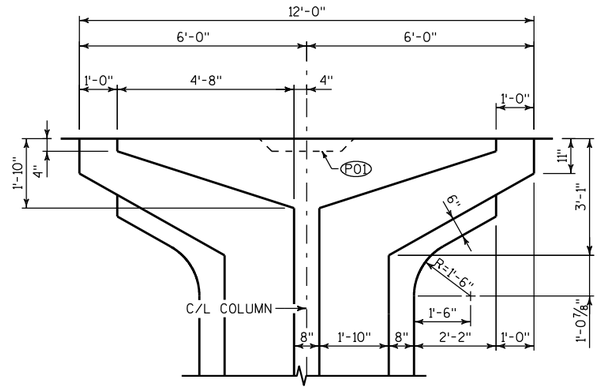
DETAIL 1



PARTIAL PIER ELEVATION

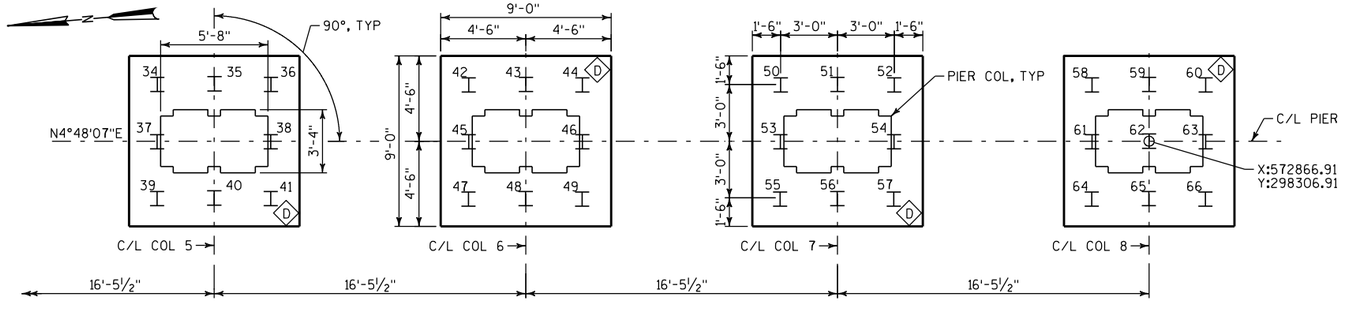
ELEVATIONS GIVEN AT C/L OF PIER
(LOOKING EAST)

END VIEW



TOP OF COLUMN DETAIL

DIMENSIONS SYMMETRICAL ABOUT C/L COLUMN



PARTIAL PIER FOOTING PLAN

LEGEND

- HP 12 X 53 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD. ESTIMATED PILE LENGTH = 55 FEET.
- 2" X 6" BEVELED KEYWAY BETWEEN BEAM SEATS
- (D) DYNAMIC PILE LOAD TESTING
- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACE BEVELED 4" X 1'-3" X 2'-6" TYPICAL AT TOP AND BOTTOM OF PIER COLUMNS
- (P02) VERTICAL CONSTRUCTION JOINT FORMED BY 2'-0" X 1'-3" X 2" BEVELED KEYWAY
- (P03) FOR 45° BENDS IN CONDUIT, USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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PIER
(2 OF 4)

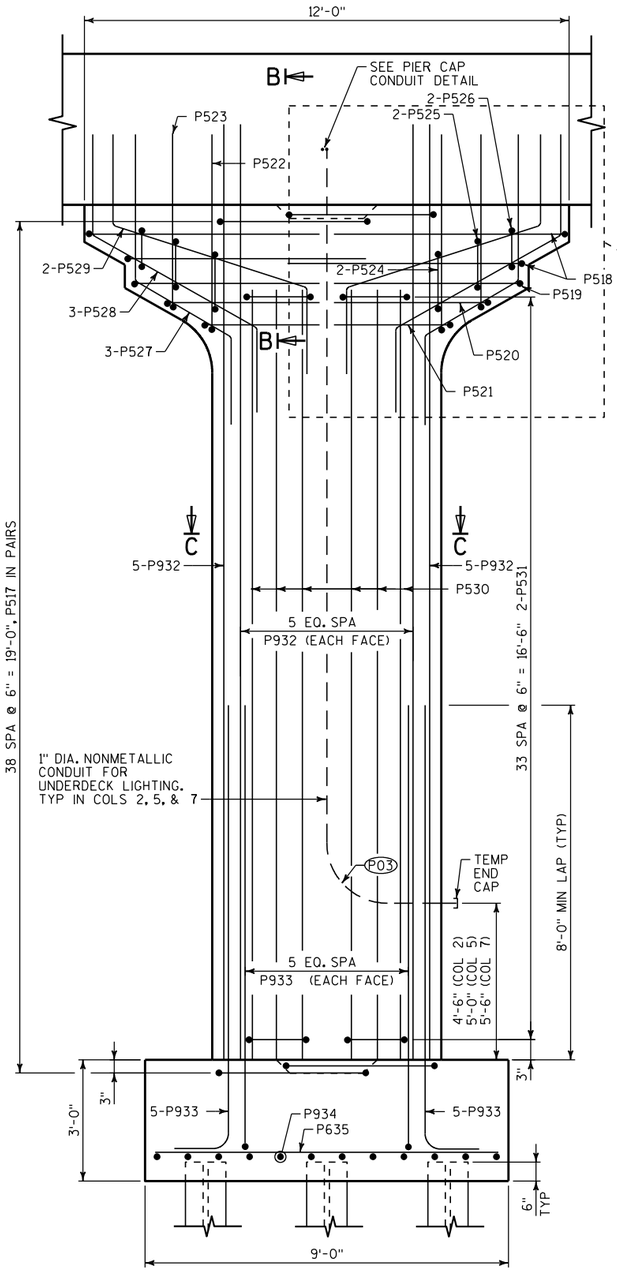
SHEET 24 OF 51

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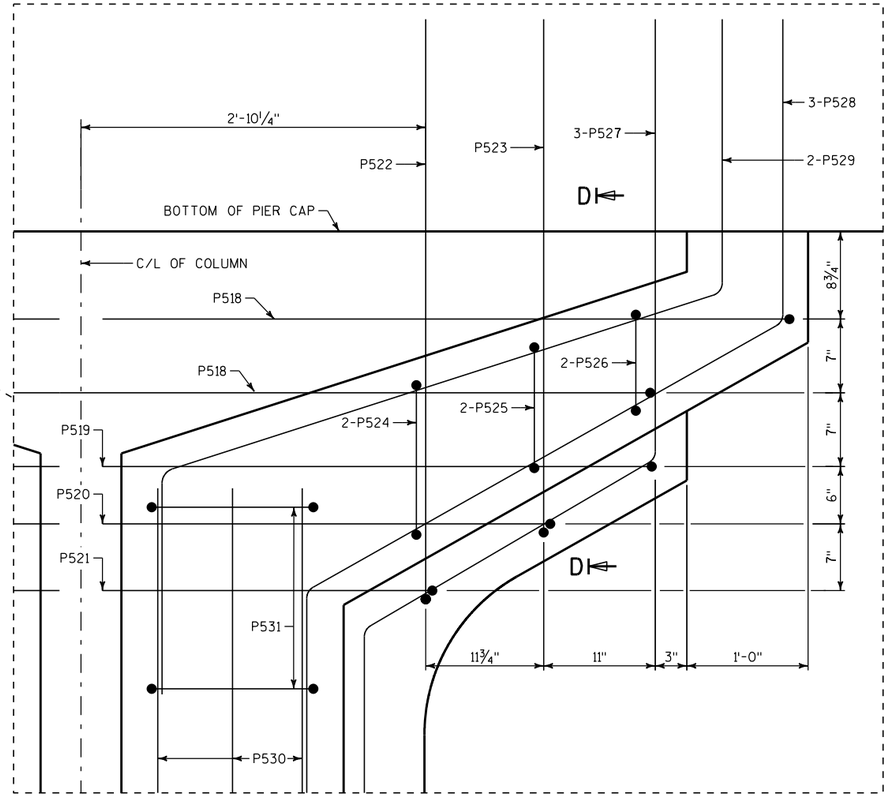
STATE PROJECT NUMBER

1060-33-80



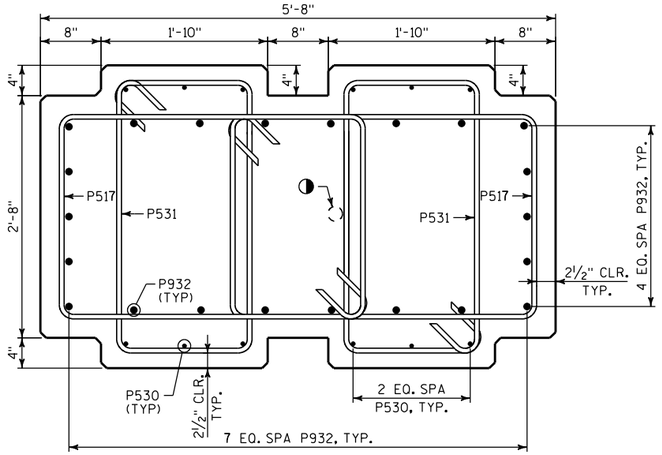
TYPICAL COLUMN ELEVATION

(LOOKING EAST)

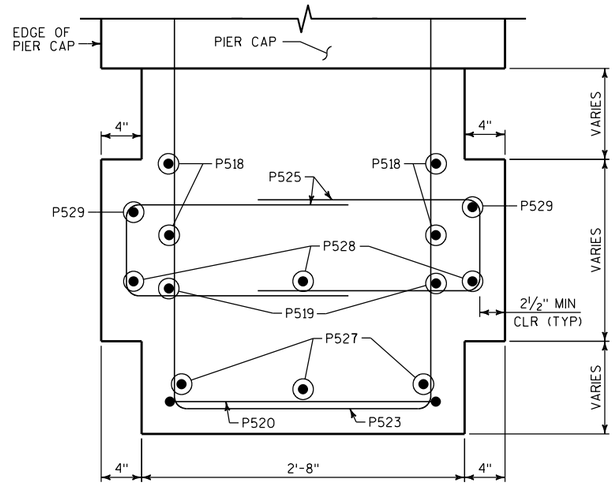


DETAIL 2

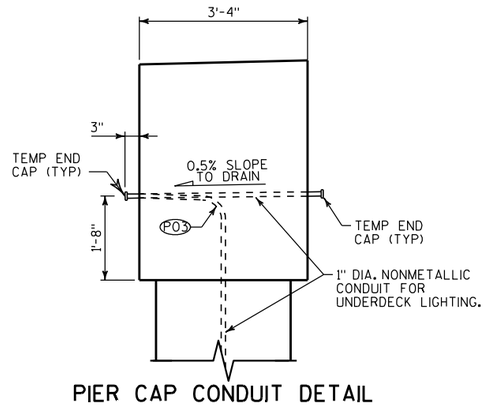
PRIMARY REINFORCEMENT NOT SHOWN FOR CLARITY
REINFORCEMENT IS SYMMETRIC ABOUT C/L OF COLUMN



SECTION C-C



SECTION D-D



PIER CAP CONDUIT DETAIL

LOOKING NORTH
FOR LOCATIONS, SEE PIER CAP PLAN AND ELEVATION
PIER REINFORCEMENT NOT SHOWN FOR CLARITY

LEGEND

◑ 1" DIA. NONMETALLIC CONDUIT

(P03) FOR 45° BENDS IN CONDUIT, USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

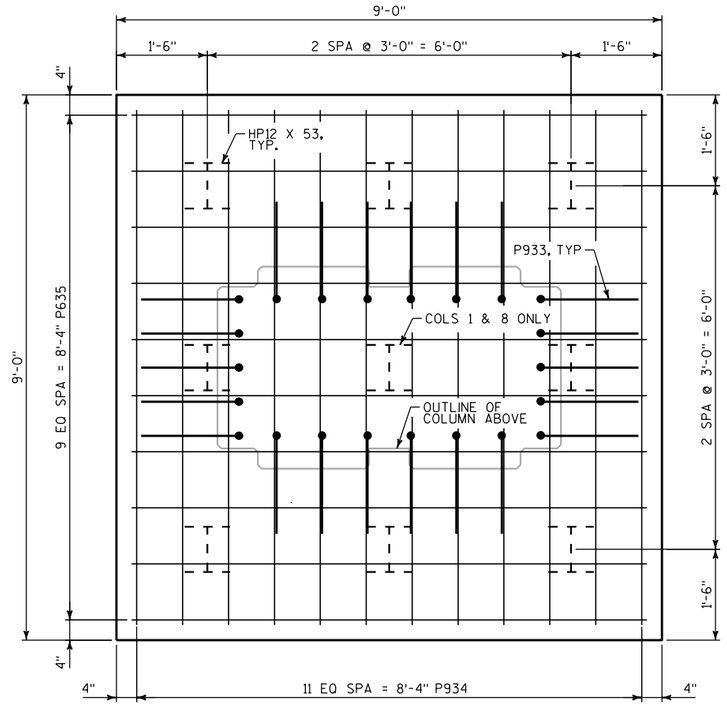
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PIER
(3 OF 4)

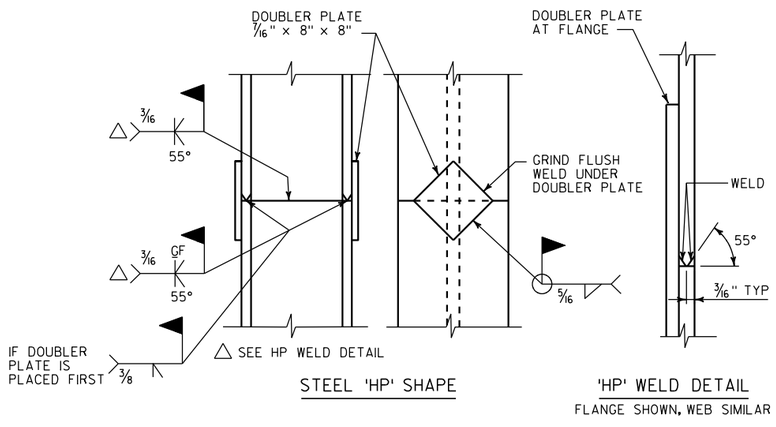
SHEET 25 OF 51

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TYPICAL FOOTING PLAN

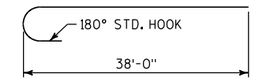


PILE SPLICE DETAIL

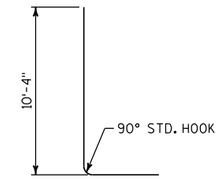
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

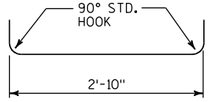
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
P901	X	12	39'-3"	X	PIER CAP HORIZONTAL TOP
P902	X	20	38'-0"		PIER CAP HORIZONTAL TOP
P903	X	10	45'-0"		PIER CAP HORIZONTAL BOTTOM
P904	X	10	29'-0"		PIER CAP HORIZONTAL BOTTOM
P905	X	8	45'-0"		PIER CAP HORIZONTAL TOP
P906	X	20	40'-0"		PIER CAP HORIZONTAL BOTTOM
P507	X	12	25'-0"		PIER CAP HORIZONTAL SIDES
P508	X	12	45'-0"		PIER CAP HORIZONTAL SIDES
P509	X	8	45'-0"		PIER CAP HORIZONTAL TOP
P510	X	4	22'-0"		PIER CAP HORIZONTAL TOP
P511	X	354	10'-7"	X	PIER CAP STIRRUPS
P512	X	40	8'-10"	X	PIER CAP VERTICAL AT COLUMN
P513	X	4	10'-11"	X	PIER CAP STIRRUPS AT ENDS
P514	X	2	7'-2"	X	PIER CAP VERTICAL AT ENDS
P515	X	85	7'-4"	X	PIER CAP VERTICAL
P516	X	68	2'-0"		PIER CAP VERTICAL BETWEEN BEAMS SEATS
P517	X	624	11'-9"	X	COLUMN TIE (PRIMARY)
P518	X	32	13'-4"	X	TOP OF COLUMN - (SECONDARY)
P519	X	16	11'-6"	X	TOP OF COLUMN - (SECONDARY)
P520	X	16	9'-4"	X	TOP OF COLUMN - (SECONDARY)
P521	X	16	7'-6"	X	TOP OF COLUMN - (SECONDARY)
P522	X	16	11'-11"	X	TOP OF COLUMN - (SECONDARY)
P523	X	16	10'-11"	X	TOP OF COLUMN - (SECONDARY)
P524	X	32	5'-0"	X	TOP OF COLUMN - (SECONDARY)
P525	X	32	4'-9"	X	TOP OF COLUMN - (SECONDARY)
P526	X	32	4'-6"	X	TOP OF COLUMN - (SECONDARY)
P527	X	48	8'-3"	X	TOP OF COLUMN - BENT (SECONDARY)
P528	X	48	9'-3"	X	TOP OF COLUMN - BENT (SECONDARY)
P529	X	32	9'-3"	X	TOP OF COLUMN - BENT (SECONDARY)
P530	X	96	16'-10"		VERTICAL COLUMN (SECONDARY)
P531	X	544	9'-1"	X	COLUMN TIE (SECONDARY)
P932	X	176	21'-6"		VERTICAL COLUMN (PRIMARY)
P933	X	176	11'-8"	X	VERTICAL COLUMN - FOOTING (PRIMARY)
P934		96	8'-6"		FOOTING HORIZONTAL BOTTOM
P635		80	8'-6"		FOOTING HORIZONTAL BOTTOM
P336	X	110	3'-4"	X	PIER CAP SUPPORT BAR
P537	X	8	6'-0"	X	PIER CAP HORIZONTAL AT ENDS



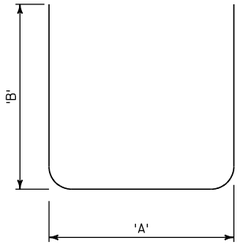
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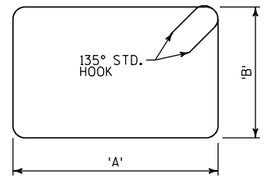
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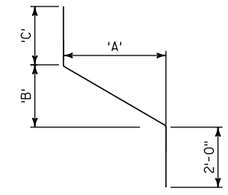
P336



BAR MARK	DIM. 'A'	DIM. 'B'
P512	2'-11"	3'-1"
P514	2'-11"	2'-3"
P515	2'-11"	2'-4"
P518	2'-3"	5'-8"
P519	2'-3"	4'-9"
P520	2'-3"	3'-8"
P521	2'-3"	2'-9"
P522	2'-2"	5'-0"
P523	2'-2"	4'-6"
P524	1'-3"	2'-0"
P525	1'-0"	2'-0"
P526	9"	2'-0"
P537	2'-9"	1'-9"



BAR MARK	DIM. 'A'	DIM. 'B'
P511	1'-11"	3'-1"
P513	1'-11"	3'-3"
P517	3'-4"	2'-3"
P531	2'-10"	1'-5"



BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C
P527	2'-3"	1'-3"	3'-9"
P528	3'-11"	2'-3"	2'-9"
P529	4'-8"	1'-6"	2'-6"

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STRUCTURE B-40-866

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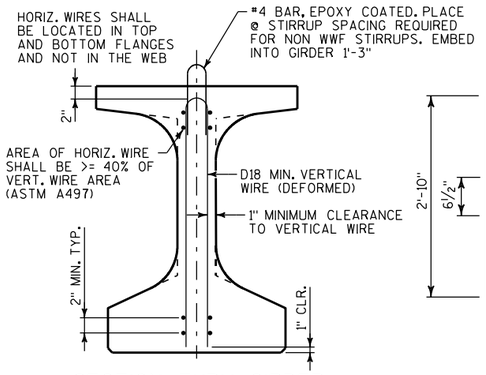
PIER
(4 OF 4)

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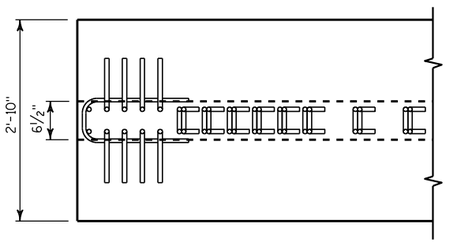
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STATE PROJECT NUMBER
1060-33-80

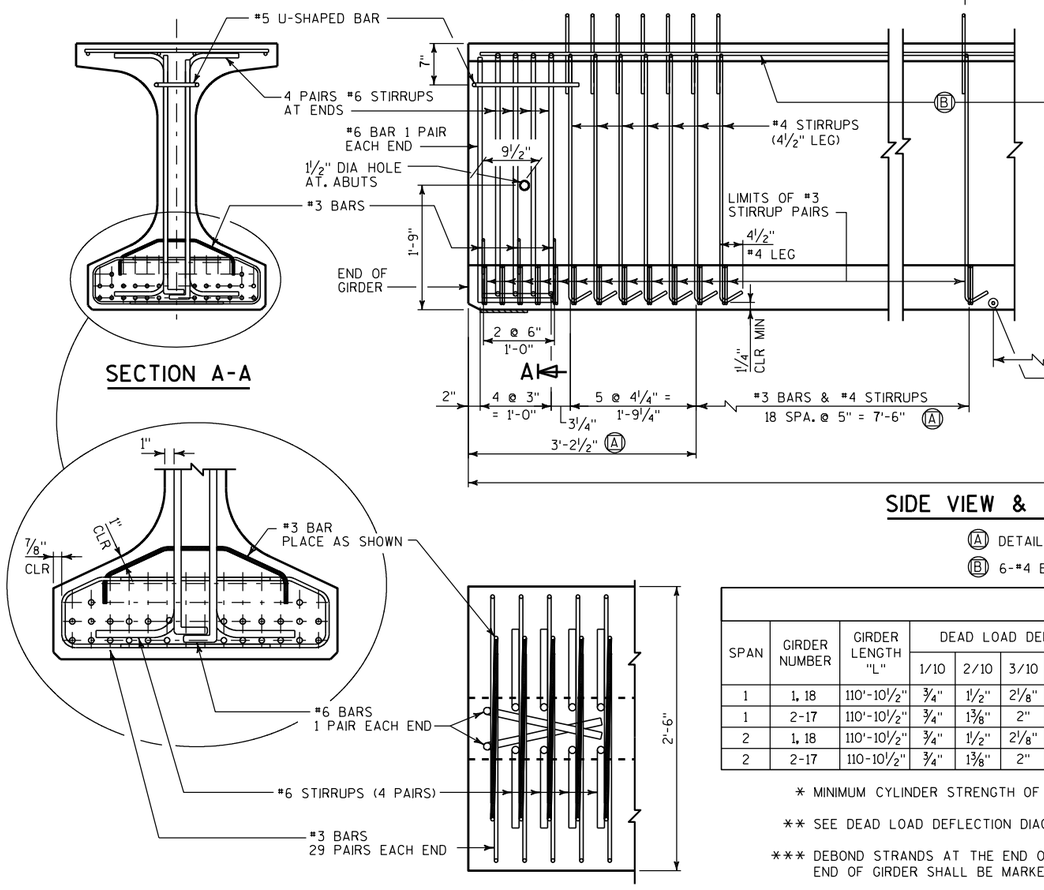


SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A497 (FY = 70 KSI)



TOP FLANGE



SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6-#4 BARS, FULL LENGTH, MIN LAP = 1'-8"

BOTTOM FLANGE

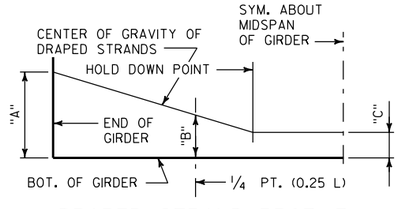
GIRDER DATA

SPAN	GIRDER NUMBER	GIRDER LENGTH "L"	DEAD LOAD DEFL (IN.) ** 1/10	2/10	3/10	4/10	5/10	CONC STRGTH f'c (psi)	f'ci (psi) *	"P" (IN.) 0.0L-0.15L 0.85L-1.0L	0.15L-0.85L	DIA. OF STRAND (IN.)	TOTAL NO. OF STRANDS	DRAPED PATTERN (IN.) "A"	"B" (MIN)	"B" (MAX)	"C"	NO. OF DEBONDED STRANDS ***
1	1, 18	110'-10½"	¾"	1½"	2⅛"	2½"	2⅝"	9000	6800	7½"	7"	0.6	34	39	13½	16½	5	6
1	2-17	110'-10½"	¾"	1⅜"	2"	2¼"	2⅜"	9000	6800	7½"	7"	0.6	34	39	13½	16½	5	0
2	1, 18	110'-10½"	¾"	1½"	2⅛"	2½"	2⅝"	9000	6800	7½"	7"	0.6	34	39	13½	16½	5	6
2	2-17	110-10½"	¾"	1⅜"	2"	2¼"	2⅜"	9000	6800	7½"	7"	0.6	34	39	13½	16½	5	0

* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.

** SEE DEAD LOAD DEFLECTION DIAGRAM ON 45W" PRESTRESSED GIRDER DETAILS SHEET.

*** DEBOND STRANDS AT THE END OF THE GIRDER WHICH SITS AT THE PIER. THE DEBONDED END OF GIRDER SHALL BE MARKED TO BE EASILY IDENTIFIABLE DURING ERECTION.



DRAPED STRAND PROFILE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF FUTURE CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6" DIA. - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER. END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

PIPE SLEEVES OR FERRULE LOOP INSERTS ARE TO BE CAST IN MULTIPLE LOCATIONS IN THE GIRDER AS SHOWN ON THE SUPERSTRUCTURE FRAMING PLAN.

FOR STEEL DIAPHRAGM CONNECTION DETAILS, SEE STEEL DIAPHRAGM SHEET.

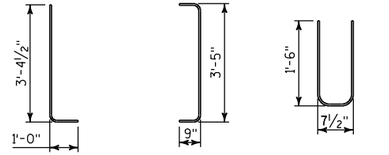
FOR UTILITY HANGER SUPPORT CONNECTION DETAILS, SEE UNDERDECK UTILITY DETAILS SHEET.

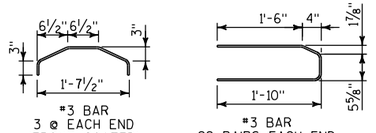
FOR FLOOR DRAIN BRACKET CONNECTION DETAILS, SEE FLOOR DRAIN PIPING SHEET.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.





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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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45W" PRESTRESSED GIRDER

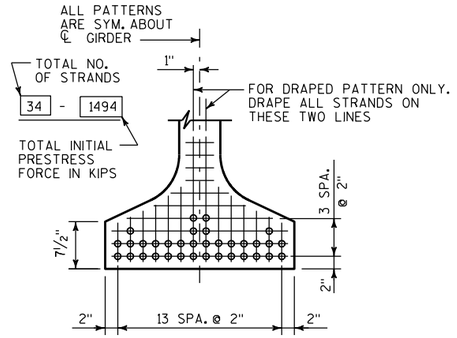
SHEET 27 OF 51

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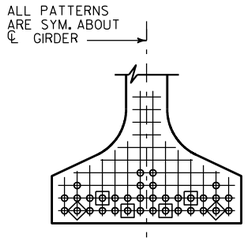
STATE PROJECT NUMBER

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STRAND PATTERN - ALL GIRDERS

0.6" DIA. STRANDS

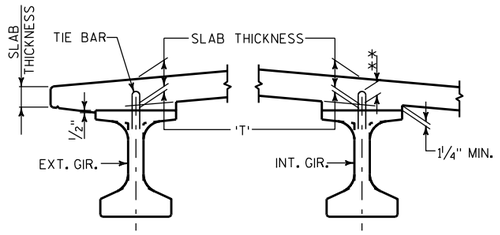


DEBONDED STRANDS - EXTERIOR GIRDERS ONLY

DEBOND STRANDS AT PIER END ONLY

□ DEBOND LENGTH = 5'-0" (4 STRANDS TOTAL)

◇ DEBOND LENGTH = 10'-0" (2 STRANDS TOTAL)



SLAB HAUNCH DETAIL

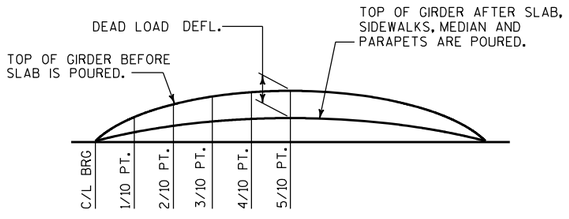
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

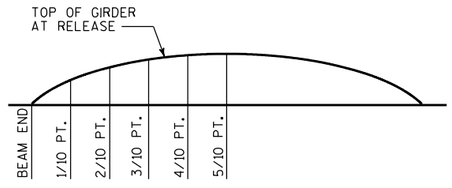
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE:
AN AVERAGE HAUNCH ('T') OF 3" WAS USED FOR COMPUTING THE SUPERSTRUCTURE CONCRETE QUANTITY "HPC MASONRY STRUCTURES"



DEAD LOAD DEFLECTION DIAGRAM

DEFLECTIONS ARE SYMMETRIC ABOUT MID POINT OF BEAM



THEORETICAL CAMBER AT STRAND RELEASE

CAMBER IS SYMMETRIC ABOUT MID POINT OF BEAM

THEORETICAL CAMBER (IN)*				
1/10	2/10	3/10	4/10	5/10
0.93	1.66	2.18	2.49	2.59

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF RELEASE. THESE VALUES ARE PRESENTED FOR INFORMATION ONLY. THE CAMBER VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'.

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STRUCTURE B-40-866

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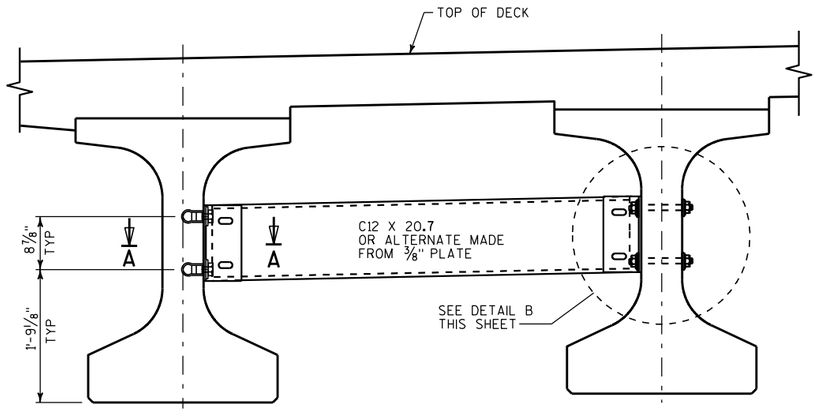
45W" PRESTRESSED GIRDER DETAILS

SHEET 28 OF 51

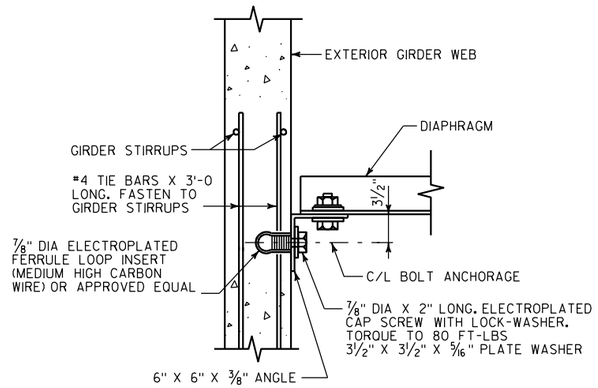
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STATE PROJECT NUMBER

1060-33-80



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

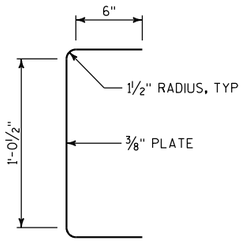
STEEL DIAPHRAGM NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-866", EACH.

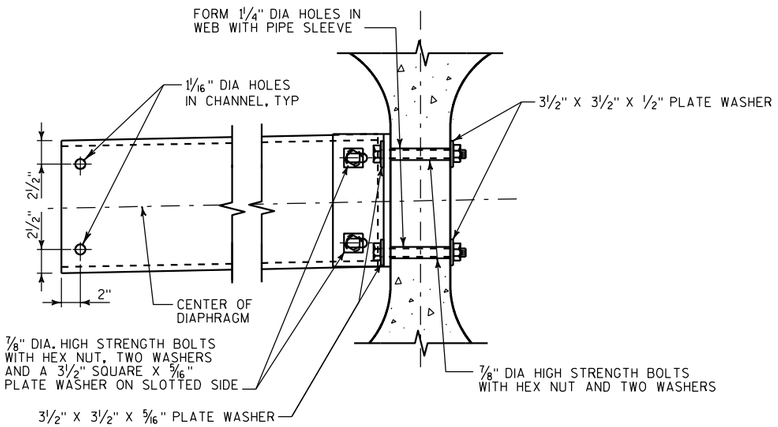
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

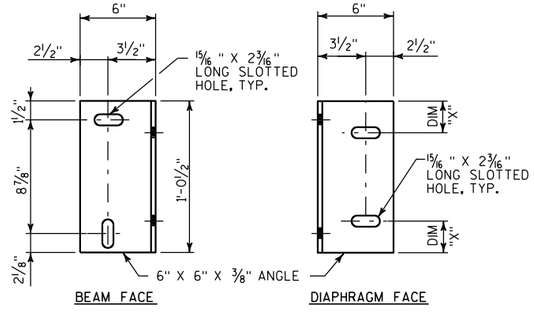
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



SECTION THRU ALTERNATE DIAPHRAGM



DETAIL B



DIAPHRAGM SUPPORT

DIM "X" = 2¾" FOR C12 x 20.7
DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM

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STRUCTURE B-40-866

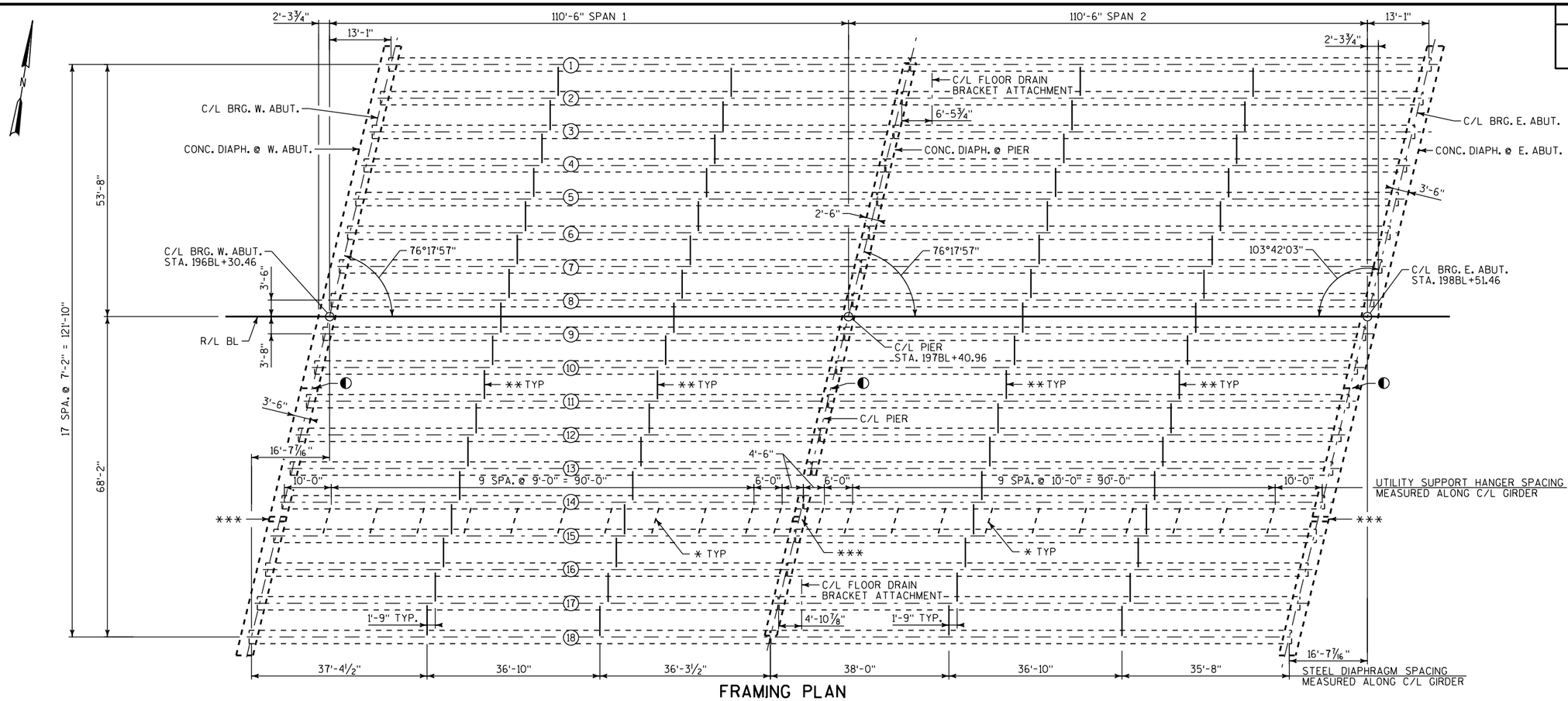
DRAWN BY TEK | PLANS CK'D. BKS

STEEL DIAPHRAGM

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2809

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-866\cds\B866_080503_gr.dgn PLOT DATE : 25-APR-2014 07:52 PLOT BY : MSCBKS PLOT NAME : B866_080503_gr PLOT SCALE : 2:1



FRAMING PLAN

TOP OF DECK ELEVATIONS

LOCATION	W. ABUT. BRG	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	E. ABUT. BRG
N. EDGE OF DECK	778.45	778.58	778.70	778.82	778.95	779.07	779.20	779.32	779.44	779.57	779.69	779.81	779.94	780.06	780.19	780.31	780.43	780.56	780.68	780.80	780.93
GIRDER 1	778.50	778.63	778.75	778.87	779.00	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.23	780.36	780.48	780.61	780.73	780.85	780.98
GIRDER 2	778.63	778.75	778.87	779.00	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10
TOE OF N. SIDEWALK	778.65	778.78	778.90	779.02	779.15	779.27	779.39	779.52	779.64	779.77	779.89	780.01	780.14	780.26	780.38	780.51	780.63	780.76	780.88	781.00	781.13
GIRDER 3	778.75	778.87	779.00	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23
GIRDER 4	778.87	779.00	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35
GIRDER 5	779.00	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47
GIRDER 6	779.12	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47	781.60
WB PGL	779.19	779.31	779.43	779.56	779.68	779.81	779.93	780.05	780.18	780.30	780.42	780.55	780.67	780.80	780.92	781.04	781.17	781.29	781.42	781.54	781.66
GIRDER 7	779.24	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47	781.60	781.72
GIRDER 8	779.37	779.49	779.62	779.74	779.86	779.99	780.11	780.24	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47	781.60	781.72	781.84
R/L BL	779.43	779.55	779.68	779.80	779.92	780.05	780.17	780.30	780.42	780.54	780.67	780.79	780.91	781.04	781.16	781.29	781.41	781.53	781.66	781.78	781.90
GIRDER 9	779.49	779.62	779.74	779.86	779.99	780.11	780.23	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47	781.60	781.72	781.84	781.97
GIRDER 10	779.62	779.74	779.86	779.99	780.11	780.23	780.36	780.48	780.61	780.73	780.85	780.98	781.10	781.23	781.35	781.47	781.60	781.72	781.84	781.97	782.09
CROWN/N. EDGE OF MEDIAN	779.64	779.76	779.88	780.01	780.13	780.26	780.38	780.50	780.63	780.75	780.87	781.00	781.12	781.25	781.37	781.49	781.62	781.74	781.86	781.99	782.11
CONSTRUCTION JOINT	779.57	779.69	779.82	779.94	780.06	780.19	780.31	780.43	780.56	780.68	780.81	780.93	781.05	781.18	781.30	781.42	781.55	781.67	781.80	781.92	782.04
GIRDER 11/S. EDGE OF MEDIAN	779.50	779.62	779.75	779.87	780.00	780.12	780.24	780.37	780.49	780.61	780.74	780.86	780.99	781.11	781.23	781.36	781.48	781.60	781.73	781.85	781.98
GIRDER 12	779.34	779.46	779.58	779.71	779.83	779.96	780.08	780.20	780.33	780.45	780.57	780.70	780.82	780.95	781.07	781.19	781.32	781.44	781.56	781.69	781.81
GIRDER 13	779.17	779.30	779.42	779.55	779.67	779.79	779.92	780.04	780.16	780.29	780.41	780.54	780.66	780.78	780.91	781.03	781.15	781.28	781.40	781.53	781.65
GIRDER 14	779.01	779.14	779.26	779.38	779.51	779.63	779.75	779.88	780.00	780.13	780.25	780.37	780.50	780.62	780.74	780.87	780.99	781.12	781.24	781.36	781.49
GIRDER 15	778.85	778.97	779.10	779.22	779.34	779.47	779.59	779.71	779.84	779.96	780.09	780.21	780.33	780.46	780.58	780.70	780.83	780.95	781.08	781.20	781.32
GIRDER 16	778.69	778.81	778.93	779.06	779.18	779.30	779.43	779.55	779.68	779.80	779.92	780.05	780.17	780.29	780.42	780.54	780.67	780.79	780.91	781.04	781.16
GIRDER 17	778.52	778.65	778.77	778.89	779.02	779.14	779.27	779.39	779.51	779.64	779.76	779.88	780.01	780.13	780.26	780.38	780.50	780.63	780.75	780.87	781.00
TOE OF S. SIDEWALK	778.48	778.60	778.72	778.85	778.97	779.10	779.22	779.34	779.47	779.59	779.71	779.84	779.96	780.09	780.21	780.33	780.46	780.58	780.70	780.83	780.95
GIRDER 18	778.36	778.48	778.61	778.73	778.85	778.98	779.10	779.23	779.35	779.47	779.60	779.72	779.84	779.97	780.09	780.22	780.34	780.46	780.59	780.71	780.83
S. EDGE OF DECK	778.30	778.42	778.54	778.67	778.79	778.91	779.04	779.16	779.29	779.41	779.53	779.66	779.78	779.90	780.03	780.15	780.28	780.40	780.52	780.65	780.77

NOTE

INTERMEDIATE STEEL DIAPHRAGMS, UTILITY HANGER SUPPORT TUBES, AND FLOOR DRAIN BRACKETS ARE DIMENSIONED ALONG C/L OF GIRDER FROM C/L OF BRG. AT THE ABUTMENT AND C/L PIER AT THE PIER.

LEGEND

* UTILITY HANGER SUPPORT

** INTERMEDIATE STEEL DIAPHRAGM

*** CONCRETE DIAPHRAGM BLOCKOUT, SEE SUPERSTRUCTURE DETAILS (2 OF 4) SHEET.

◐ CONSTRUCTION JOINT IN CONC. DIAPH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

SUPERSTRUCTURE FRAMING PLAN

SHEET 30 OF 51

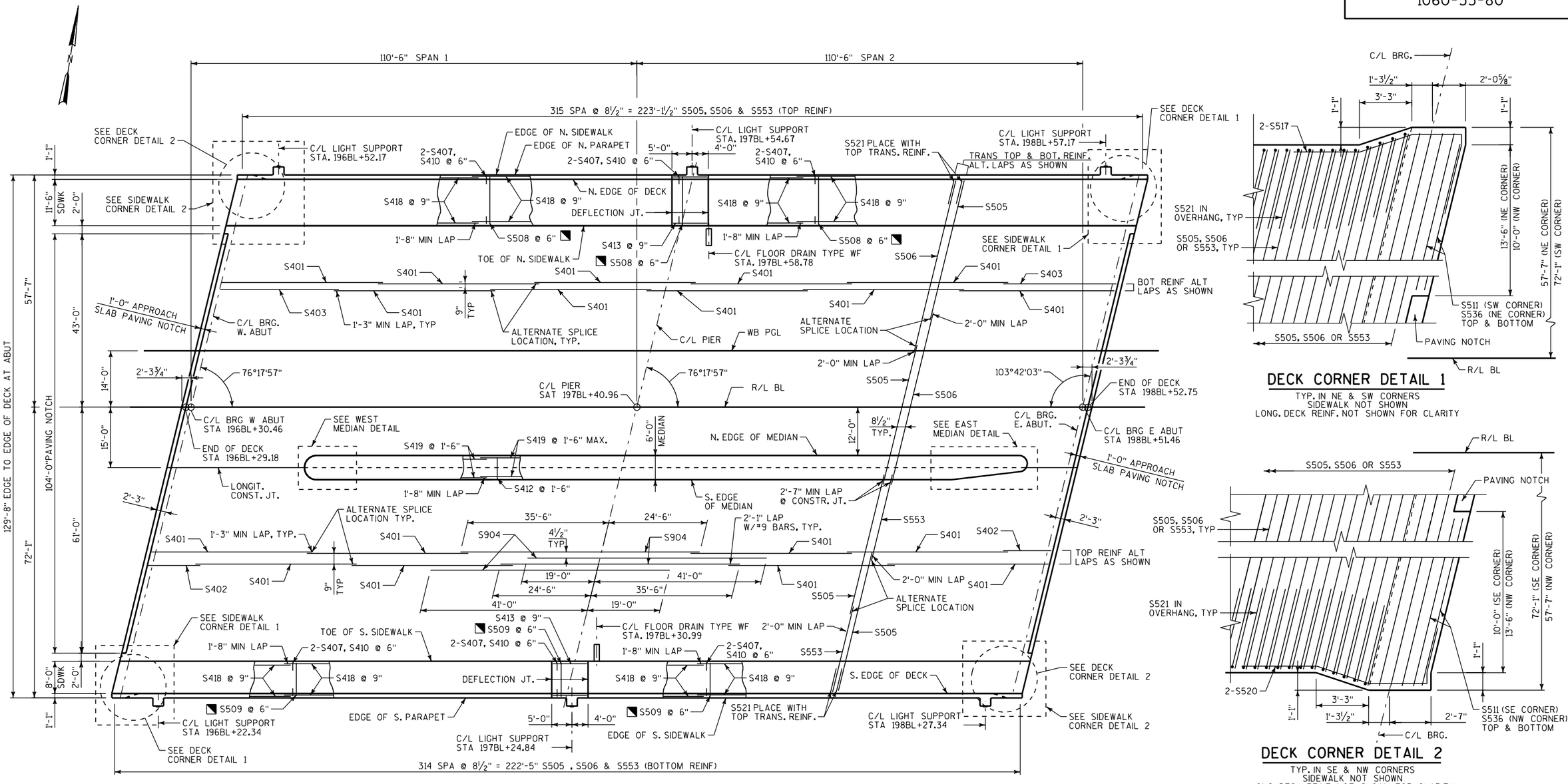
STATE PROJECT NUMBER

1060-33-80

8

8

STATE PROJECT NUMBER
1060-33-80



DECK CORNER DETAIL 1

TYP. IN NE & SW CORNERS
SIDEWALK NOT SHOWN
LONG. DECK REINF. NOT SHOWN FOR CLARITY

DECK CORNER DETAIL 2

TYP. IN SE & NW CORNERS
SIDEWALK NOT SHOWN
LONG. DECK REINF. NOT SHOWN FOR CLARITY

DECK REINFORCEMENT PLAN

◥ DISCONTINUE S508 & S509 BARS AT LIGHT SUPPORT LOCATIONS.
SEE LIGHT SUPPORT REINFORCEMENT SHEET FOR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY	MS	PLANS CK'D.	BKS

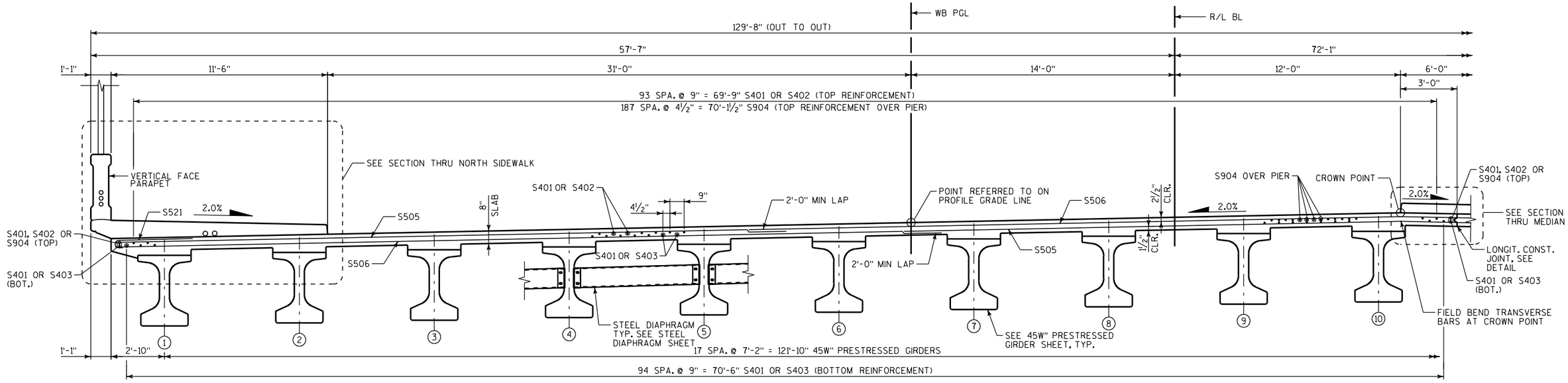
SUPERSTRUCTURE REINFORCEMENT

SHEET 31 OF 51

8

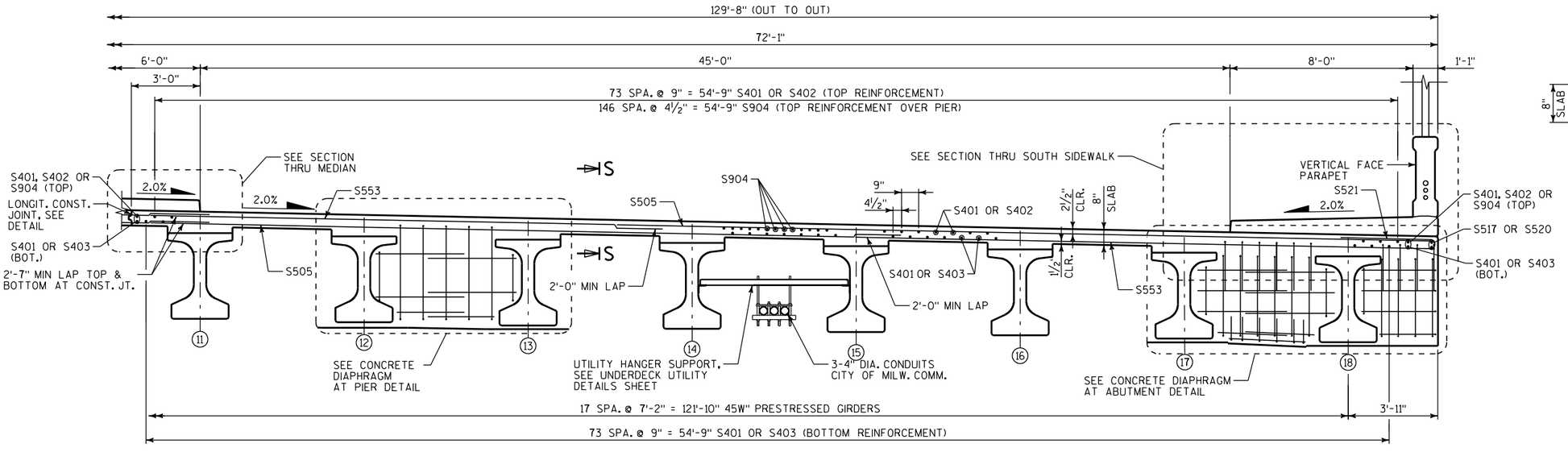
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STATE PROJECT NUMBER
1060-33-80



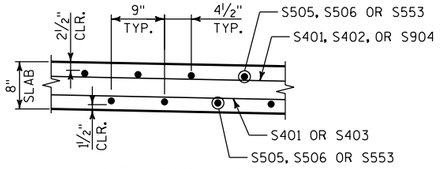
TYPICAL SECTION THRU W. BLUEMOUND RD.

(LOOKING EAST)



TYPICAL SECTION THRU W. BLUEMOUND RD.

(LOOKING EAST)



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

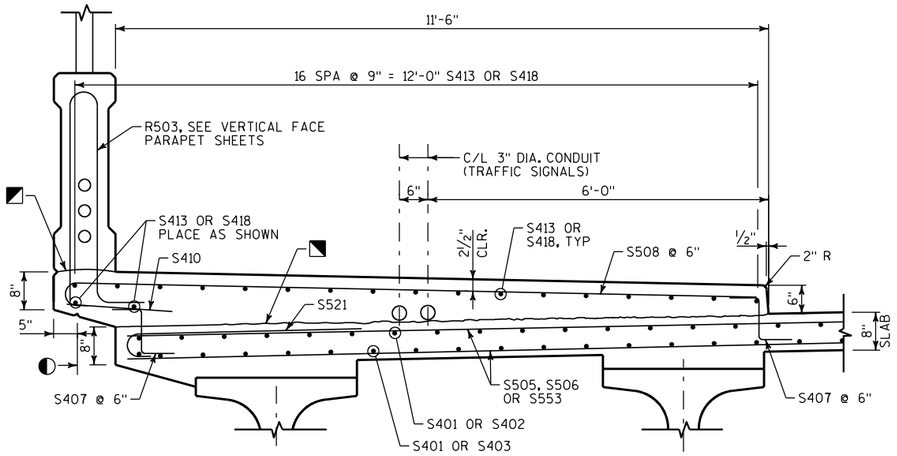
DRAWN BY MS | PLANS CK'D. BKS

SUPERSTRUCTURE CROSS SECTION

SHEET 32 OF 51

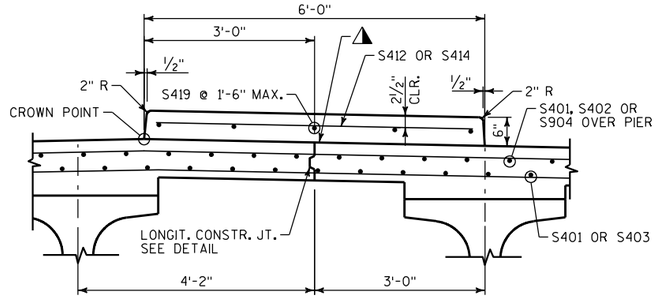
STATE PROJECT NUMBER

1060-33-80



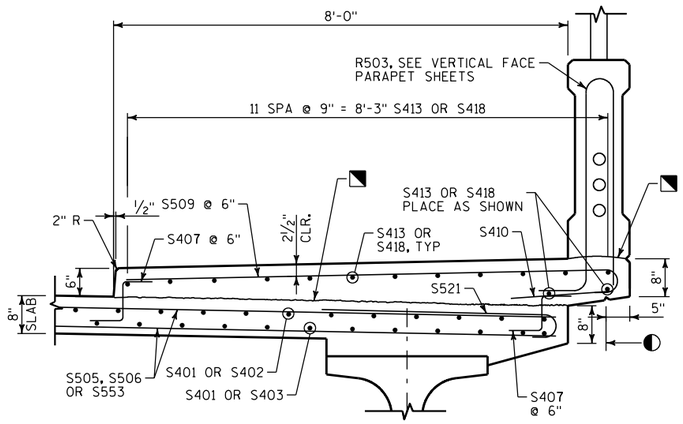
SECTION THRU NORTH SIDEWALK

LOOKING UPSTATION



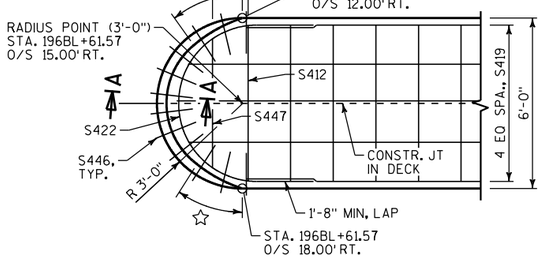
SECTION THRU MEDIAN

LOOKING UPSTATION



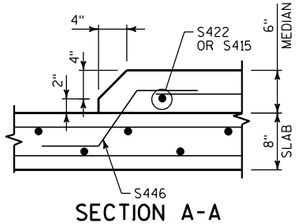
SECTION THRU SOUTH SIDEWALK

LOOKING UPSTATION

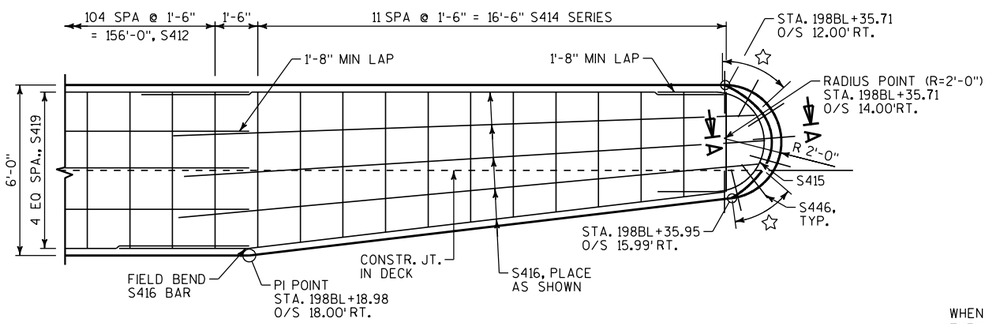


WEST MEDIAN DETAIL

☆ 2'-0" MEDIAN NOSE TRANSITION

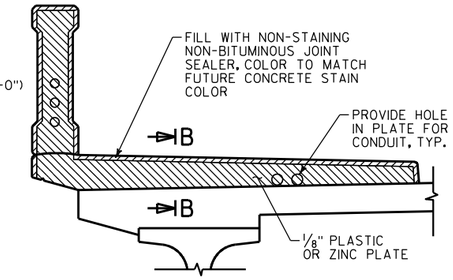


SECTION A-A MEDIAN NOSE DETAIL



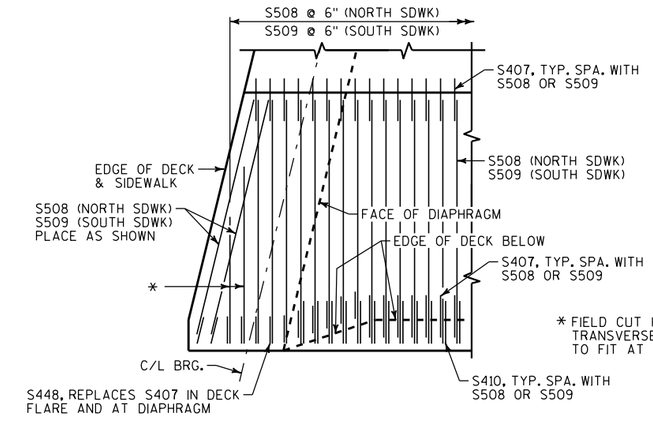
EAST MEDIAN DETAIL

☆ 2'-0" MEDIAN NOSE TRANSITION



SECTION THRU DEFLECTION JOINT

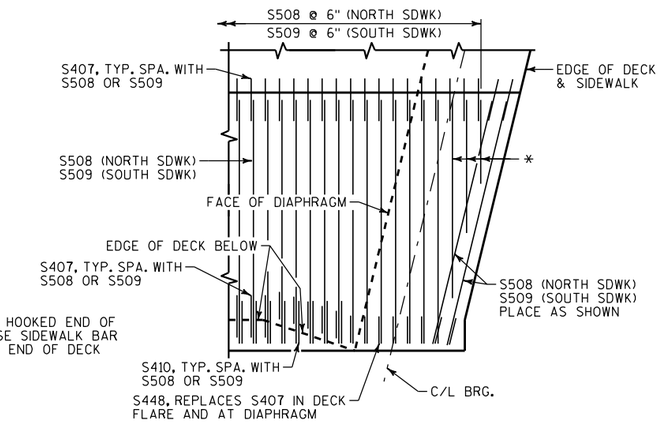
WHEN THE SIDEWALKS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT SHOWN ABOVE BY THE SHADED AREA. IF CONSTRUCTION JOINTS IN SIDEWALKS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF THE JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPERATORS MAY BE OMITTED.



SIDEWALK CORNER DETAIL 1

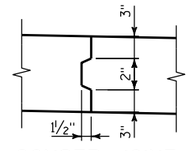
SW CORNER SHOWN, NE CORNER SIMILAR

* FIELD CUT HOOKED END OF TRANSVERSE SIDEWALK BAR TO FIT AT END OF DECK



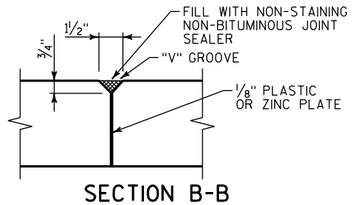
SIDEWALK CORNER DETAIL 2

SE CORNER SHOWN, NW CORNER SIMILAR



LONGIT. CONSTR. JOINT DETAIL

LOOKING UPSTATION



SECTION B-B

LEGEND

- ◥ CONSTR. JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- ◐ ¾" V-GROOVE. EXTEND V-GROOVE TO 3" FROM DECK FLARE NEAR ABUTMENT DIAPHRAGM.
- ◭ ROUGH FLOAT SURFACE OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT TO THIS AREA. CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN IS POURED WITHIN 45 DAYS OF COMPLETING THE DECK POUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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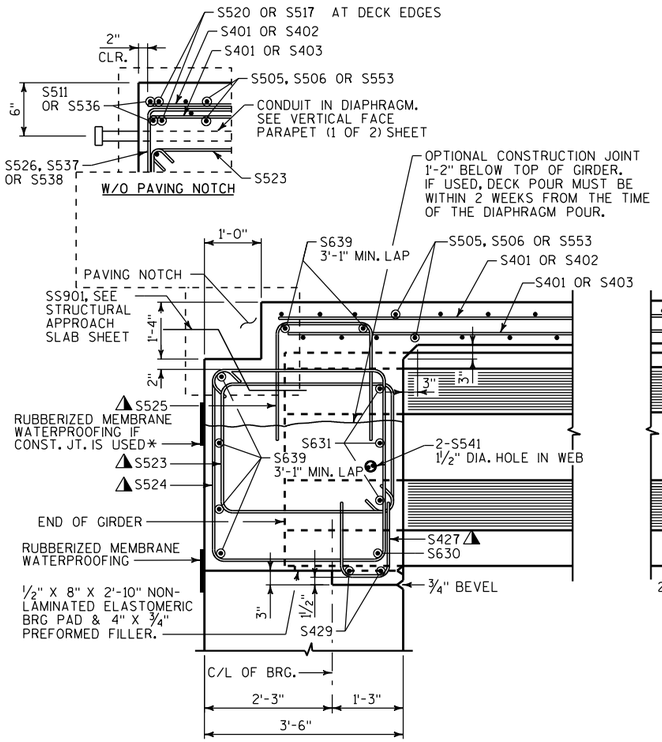
SUPERSTRUCTURE DETAILS (1 OF 4)

SHEET 33 OF 51

8

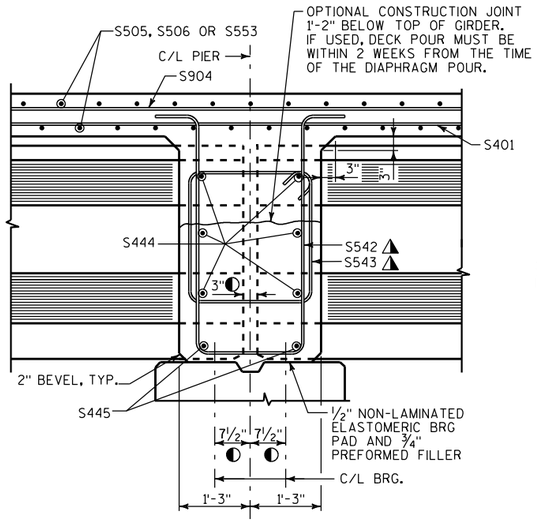
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STATE PROJECT NUMBER
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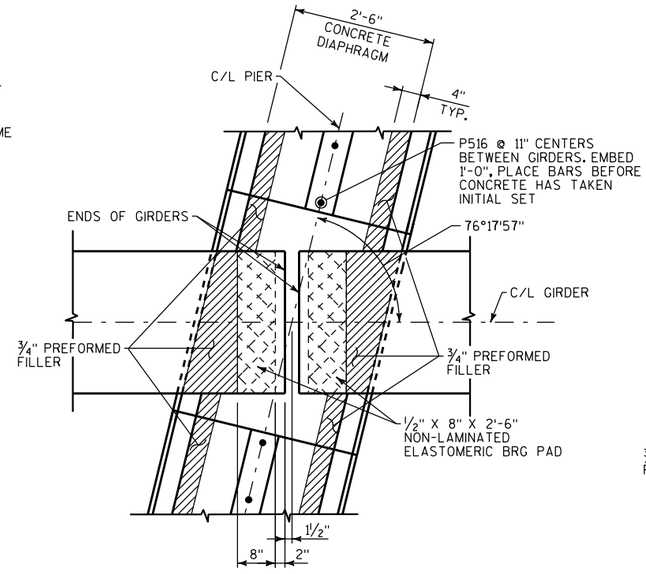
SECTION THRU ABUTMENT DIAPHRAGM

* COST INCIDENTAL TO BID ITEM "HPC MASONRY STRUCTURES"

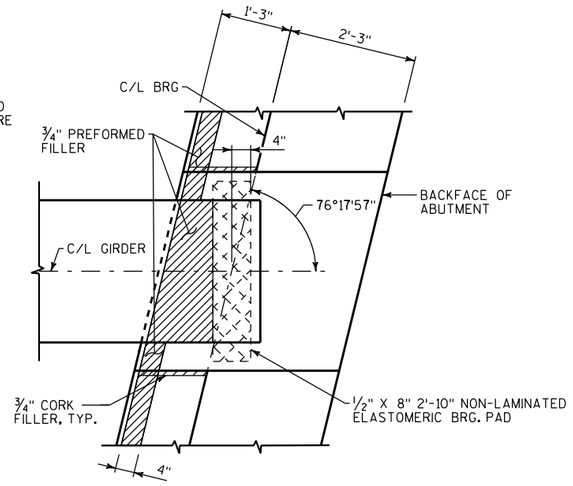


SECTION THRU PIER DIAPHRAGM

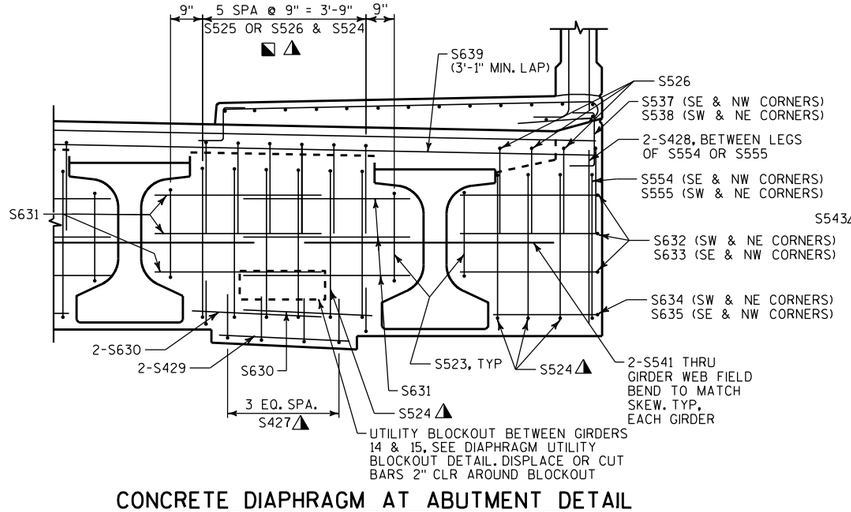
PIER CONC DIAPH TO EXTEND BETWEEN OUTSIDE FACES OF EXTERIOR GIRDERS



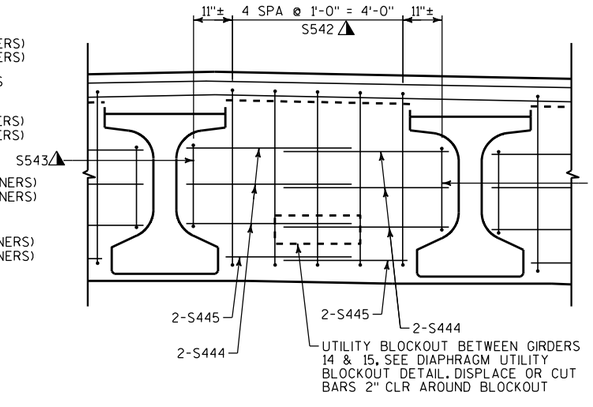
BEARING PAD DETAIL AT PIER



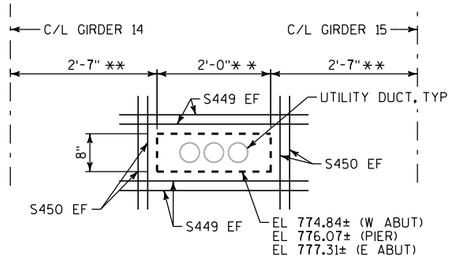
BEARING PAD DETAIL AT ABUTMENT



CONCRETE DIAPHRAGM AT ABUTMENT DETAIL



CONCRETE DIAPHRAGM AT PIER DETAIL



DIAPHRAGM UTILITY BLOCKOUT DETAIL

(LOOKING AT FACE OF DIAPHRAGM)

CONTRACTOR TO VERIFY VERTICAL LOCATION OF UTILITY BLOCKOUT. FIELD CUT DIAPHRAGM BARS AS REQUIRED. BLOCKOUTS TO BE PARALLEL TO UTILITY CENTERLINE. DUCT PACKAGE SHALL BE CENTERED IN BLOCKOUT. SEE UNDERDECK UTILITY DETAILS SHEET FOR GROUTING AROUND UTILITY DUCTS.

* * DIMENSIONS GIVEN PERPENDICULAR TO C/L GIRDER

LEGEND

- S525 SHALL BE PLACED AT DIAPHRAGM LOCATIONS WITH A PAVING NOTCH WHEREAS S526 SHALL BE PLACED AT LOCATIONS WITHOUT A PAVING NOTCH.
- ◐ DIMENSION IS TAKEN PARALLEL TO C/L GIRDER
- ◭ BARS PLACED PARALLEL TO GIRDERS. SPACING IS PERPENDICULAR TO C/L GIRDERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

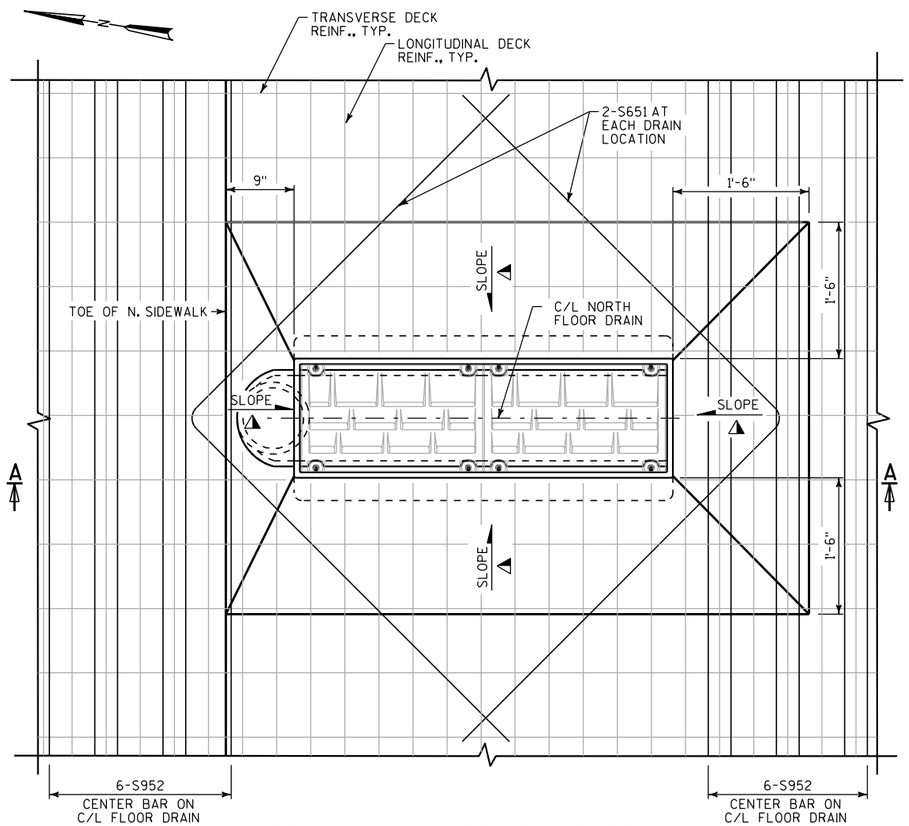
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SUPERSTRUCTURE DETAILS (2 OF 4)

SHEET 34 OF 51

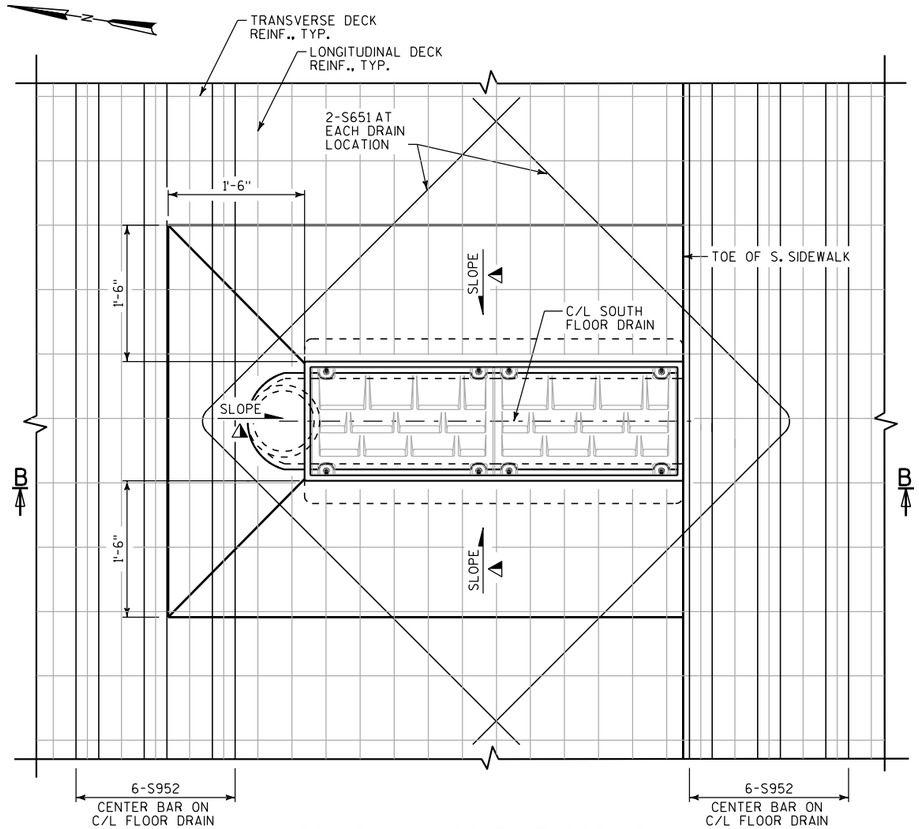
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STATE PROJECT NUMBER
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DECK PLAN - NORTH FLOOR DRAIN

C/L FLOOR DRAIN AT STA. 197BL+58.78



DECK PLAN - SOUTH FLOOR DRAIN

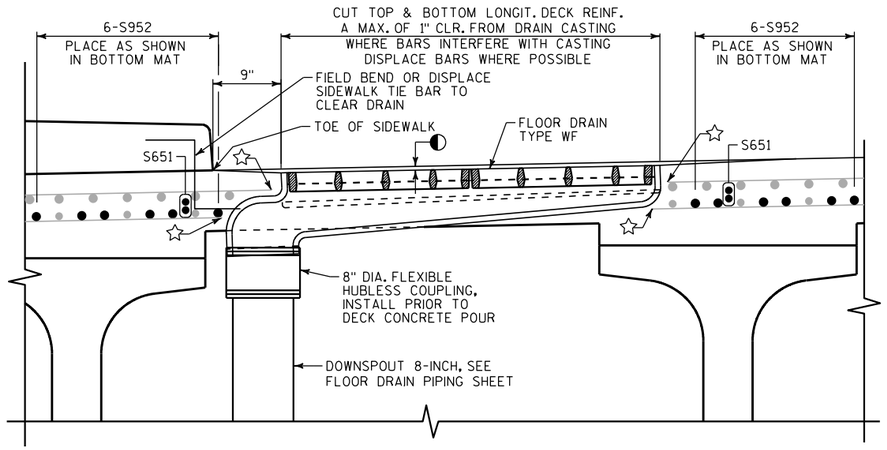
C/L FLOOR DRAIN AT STA. 197BL+30.99

NOTE

DETAILS FOR THE FLOOR DRAIN, DOWNSPOUTS, CONNECTORS, BRACKETS, AND FLEXIBLE HUBLESS COUPLING, CAN BE FOUND ON THE FLOOR DRAIN PIPING SHEET OR FLOOR DRAIN TYPE WF SHEET.

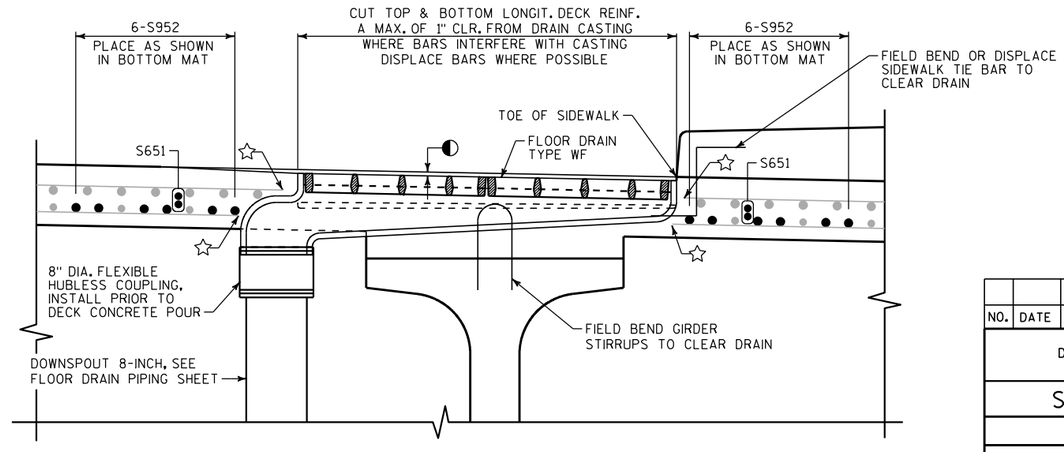
LEGEND

- ☆ TRANSVERSE & LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAXIMUM OF 1" CLEAR FROM DRAIN CASTING. DISPLACE BARS WHERE POSSIBLE.
- ◐ SET TOP OF FLOOR DRAIN CASTING AT ½" BELOW TOP OF DECK
- ◭ HAND-FINISH SLAB WITHIN THE SLOPED AREA



SECTION A-A

LOOKING EAST



SECTION B-B

LOOKING EAST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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SUPERSTRUCTURE DETAILS (3 OF 4)

SHEET 35 OF 51

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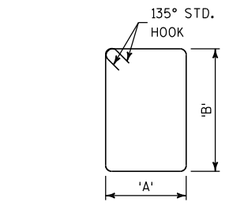
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STATE PROJECT NUMBER
1060-33-80

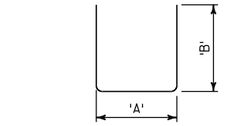
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

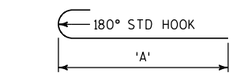
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	SERIES	LOCATION
S401	X	1553	40'-0"			SLAB LONGITUDINAL TOP & BOTTOM
S402	X	172	13'-6"			SLAB LONGITUDINAL TOP
S403	X	173	32'-0"			SLAB LONGITUDINAL BOTTOM
S904	X	339	60'-0"			SLAB LONGITUDINAL TOP AT PIER
S505	X	1262	35'-8"			SLAB TRANSVERSE TOP & BOTTOM
S506	X	631	43'-11"			SLAB TRANSVERSE TOP & BOTTOM
S407	X	1760	2'-7"	X		NORTH & SOUTH SIDEWALK TRANSVERSE
S508	X	440	12'-8"	X		NORTH SIDEWALK TRANSVERSE
S509	X	440	9'-2"	X		SOUTH SIDEWALK TRANSVERSE
S410	X	904	2'-0"			NORTH & SOUTH SIDEWALK OVERHANG TRANSVERSE
S511	X	8	10'-8"			SLAB TRANSVERSE TOP & BOTTOM AT ABUTMENT
S412	X	105	5'-6"			MEDIAN TRANSVERSE
S413	X	33	8'-6"			NORTH & SOUTH SIDEWALK LONGITUDINAL AT PIER
S414	X	12	4'-6"		⚠	MEDIAN TRANSVERSE
S415	X	1	9'-6"	X		MEDIAN EAST TRANSVERSE
S416	X	5	20'-6"			MEDIAN LONGITUDINAL
S517	X	4	11'-2"	X		NE & SW SLAB TOP & BOTTOM AT DECK FLARE
S418	X	198	38'-0"			SIDEWALKS LONGITUDINAL
S419	X	20	41'-6"			MEDIAN LONGITUDINAL
S520	X	4	11'-10"	X		SE & NW SLAB TOP & BOTTOM AT DECK FLARE
S521	X	614	4'-10"	X		SLAB TRANSVERSE AT DECK OVERHANG
S422	X	1	12'-8"	X		MEDIAN WEST TRANSVERSE
S523	X	72	11'-5"	X		ABUTMENT DIAPHRAGM VERTICAL
S524	X	216	13'-9"	X		ABUTMENT DIAPHRAGM VERTICAL GIRDER
S525	X	174	6'-5"	X		ABUTMENT DIAPHRAGM VERTICAL AT PAVING NOTCH
S526	X	42	7'-5"	X		ABUTMENT DIAPHRAGM VERTICAL
S427	X	136	3'-5"	X		ABUTMENT DIAPHRAGM VERTICAL BETWEEN BEAM SEATS
S428	X	8	4'-3"			ABUTMENT DIAPHRAGM VERTICAL EXTERIOR FACES
S429	X	68	3'-4"			ABUTMENT DIAPHRAGM HORIZ. FRONT FACE
S630	X	68	3'-4"			ABUTMENT DIAPHRAGM HORIZ. FRONT FACE
S631	X	204	4'-4"			ABUTMENT DIAPHRAGM HORIZ. FRONT FACE
S632	X	6	9'-2"	X		ABUTMENT DIAPHR. HORIZ. EXTERIOR SW & NE CORNERS
S633	X	6	9'-8"	X		ABUTMENT DIAPHR. HORIZ. EXTERIOR SE & NW CORNERS
S634	X	2	8'-3"	X		ABUTMENT DIAPHR. HORIZ. EXTERIOR SW & NE CORNERS
S635	X	2	8'-8"	X		ABUTMENT DIAPHR. HORIZ. EXTERIOR SE & NW CORNERS
S536	X	8	14'-2"			SLAB TRANSVERSE TOP & BOTTOM AT ABUTMENT
S537	X	2	7'-7"	X		ABUTMENT DIAPHRAGM VERTICAL
S538	X	2	7'-2"	X		ABUTMENT DIAPHRAGM VERTICAL
S639	X	36	46'-8"	X		ABUTMENT DIAPHRAGM HORIZ. BACK FACE
S640						NOT USED
S541	X	72	6'-0"			ABUTMENT DIAPHRAGM THRU GIRDER WEBS
S542	X	85	11'-10"	X		PIER DIAPHRAGM VERTICAL
S543	X	34	9'-3"	X		PIER DIAPHRAGM VERTICAL
S444	X	204	4'-0"			PIER DIAPHRAGM HORIZONTAL
S445	X	68	3'-0"			PIER DIAPHRAGM HORIZONTAL
S446	X	20	2'-10"	X		MEDIAN TRANSVERSE AT NOSE
S447	X	1	4'-7"			MEDIAN TRANSVERSE
S448	X	50	2'-7"	X		SLAB TRANSVERSE AT ABUTMENT
S449	X	24	3'-4"			UTILITY BLOCKOUT - HORIZONTAL
S450	X	24	2'-0"			UTILITY BLOCKOUT - VERTICAL
S651	X	8	9'-10"	X		CROSS BARS AT DECK DRAINS
S952	X	24	16'-0"			SLAB LONGITUDINAL BOTTOM AT DECK DRAINS
S553	X	631	25'-3"			SLAB TRANSVERSE TOP & BOTTOM
S554	X	2	14'-1"	X		ABUTMENT DIAPHR. VERTICAL EXT. SE & NW CORNERS
S555	X	2	13'-3"	X		ABUTMENT DIAPHR. VERTICAL EXT. SW & NE CORNERS



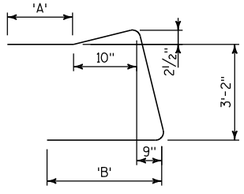
BAR MARK	DIM. 'A'	DIM. 'B'
S523	3'-3"	2'-2"
S524	3'-3"	3'-4"
S543	2'-2"	2'-2"
S554	3'-5"	3'-4"
S555	3'-0"	3'-4"



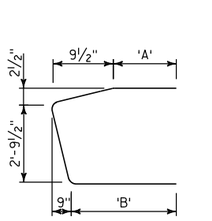
BAR MARK	DIM. 'A'	DIM. 'B'
S525	2'-2"	2'-3"
S526	3'-3"	2'-3"
S427	11"	1'-4"
S537	3'-5"	2'-3"
S538	3'-0"	2'-3"



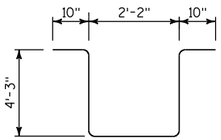
BAR MARK	DIM. 'A'
S508	12'-1"
S509	8'-7"
S521	4'-3"



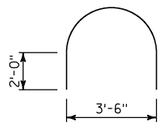
BAR MARK	DIM. 'A'	DIM. 'B'
S633	2'-6"	3'-2"
S635	2'-6"	2'-3"



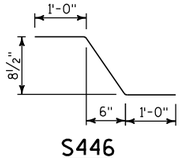
BAR MARK	DIM. 'A'	DIM. 'B'
S632	2'-6"	3'-2"
S634	2'-6"	2'-3"



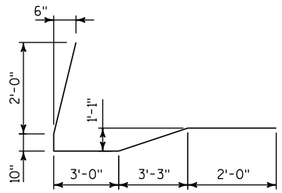
S542



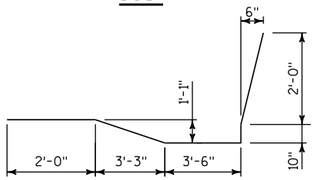
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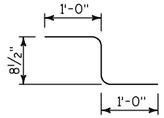
S446



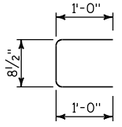
S517



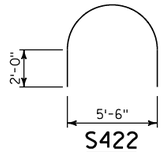
S520



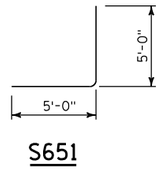
S407



S448



S422



S651

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH.

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
S414	1 SERIES OF 12	3'-6" TO 5'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

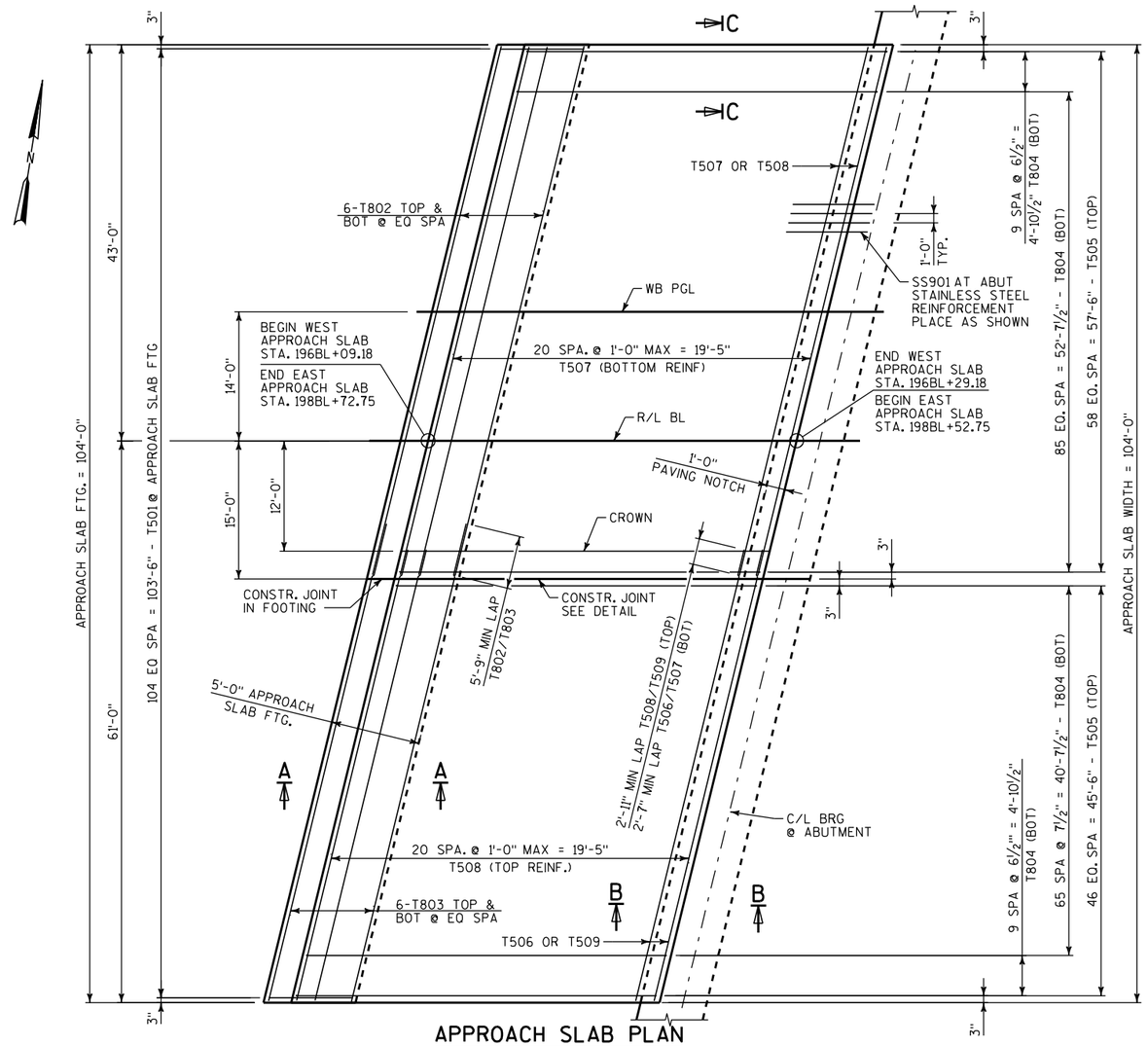
STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

SUPERSTRUCTURE DETAILS (4 OF 4)

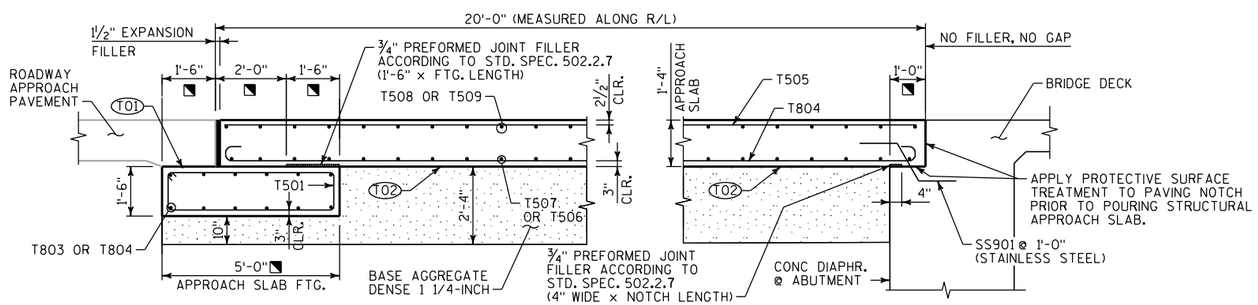
SHEET 36 OF 51

STATE PROJECT NUMBER
1060-33-80



APPROACH SLAB PLAN

WEST APPROACH SLAB SHOWN
EAST APPROACH SIMILAR BUT OPPOSITE



SECTION A-A

SECTION B-B

SECTION THRU APPROACH SLAB

▨ MEASURED NORMAL TO ABUTMENT

TOP OF APPROACH SLAB ELEVATIONS

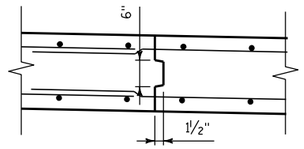
FEATURE	WEST APPR.		EAST APPR.	
	BEGIN	END	BEGIN	END
LT. EDGE OF SLAB	778.45	778.68	781.18	781.40
WB PGL	778.96	779.18	781.68	781.90
R/L BL	779.20	779.42	781.92	782.15
CROWN	779.40	779.63	782.13	782.35
CONSTRUCTION JOINT	779.34	779.56	782.06	782.29
RT. EDGE OF SLAB	778.29	778.51	781.02	781.24
LT. AND RT. ARE TAKEN AS LOOKING UPSTATION				

APPROACH SLAB NOTES

THE APPROACH SLAB SHALL HAVE LONGITUDINAL GROOVING. SEE SPECIAL PROVISIONS.

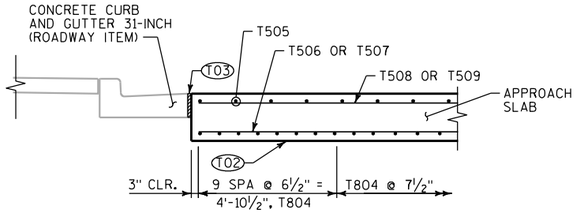
APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE APPROACH SLAB AND AREAS OUTLINED IN THE SECTION THRU APPROACH SLAB.

POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".



CONSTRUCTION JT. DETAIL

LOOOKING UPSTATION



SECTION C-C

NORTH EDGE SHOWN, SOUTH EDGE SIMILAR

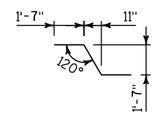
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

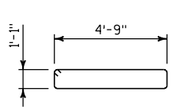
BAR MARK	COAT	W. APPR. NO. REQ'D	E. APPR. NO. REQ'D	TOTAL NO. REQ'D	LENGTH	BENT	LOCATION
SS901		104	104	208	5'-0"	X	CONC. ABUT. DIAPH. TO APPROACH SLAB

STAINLESS STEEL →

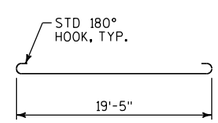
BAR MARK	COAT	W. APPR. NO. REQ'D	E. APPR. NO. REQ'D	TOTAL NO. REQ'D	LENGTH	BENT	LOCATION
T501	X	105	105	210	12'-3"	X	APPROACH SLAB FTG. - STIRRUP
T802	X	12	12	24	59'-3"		APPROACH SLAB FTG. - TRANS
T803	X	12	12	24	53'-6"		APPROACH SLAB FTG. - TRANS
T804	X	170	170	340	21'-3"	X	APPROACH SLAB - LONG. - BOT
T505	X	106	106	212	19'-5"		APPROACH SLAB - LONG. - TOP
T506	X	21	21	42	50'-0"		APPROACH SLAB - TRANS. - BOT
T507	X	21	21	42	59'-3"		APPROACH SLAB - TRANS. - BOT
T508	X	21	21	42	59'-3"		APPROACH SLAB - TRANS. - TOP
T509	X	21	21	42	50'-4"		APPROACH SLAB - TRANS. - TOP



SS901



T501



T804

LEGEND

(T01) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T02) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SURGRADE.

(T03) ½" PREFORMED JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

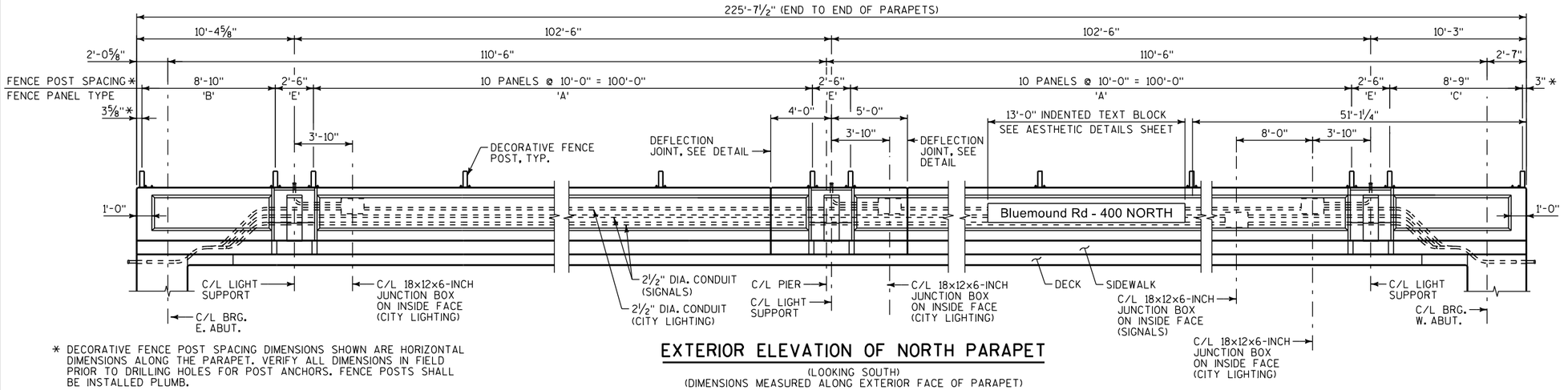
STRUCTURE B-40-866

DRAWN BY: MS | PLANS CK'D.: BKS

STRUCTURAL APPROACH SLAB

SHEET 37 OF 51

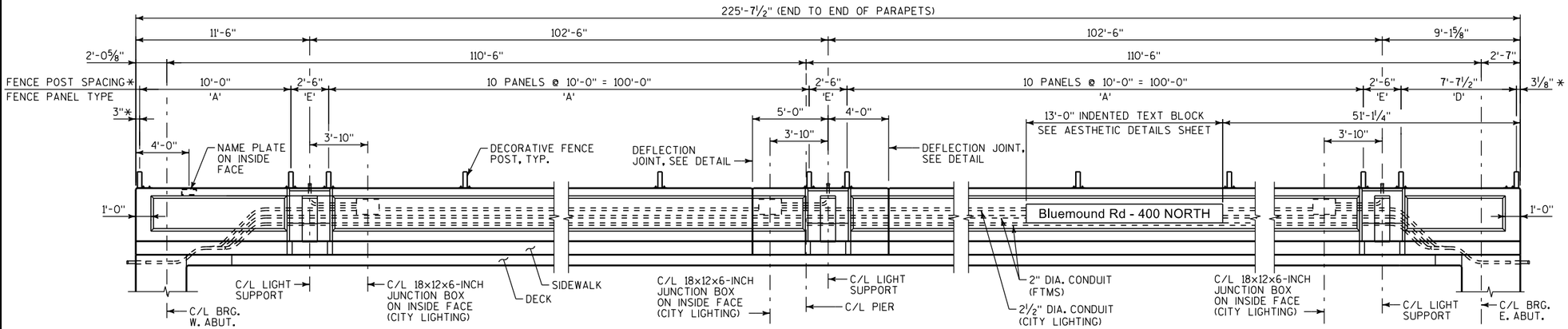
STATE PROJECT NUMBER
1060-33-80



* DECORATIVE FENCE POST SPACING DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS ALONG THE PARAPET. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO DRILLING HOLES FOR POST ANCHORS. FENCE POSTS SHALL BE INSTALLED PLUMB.

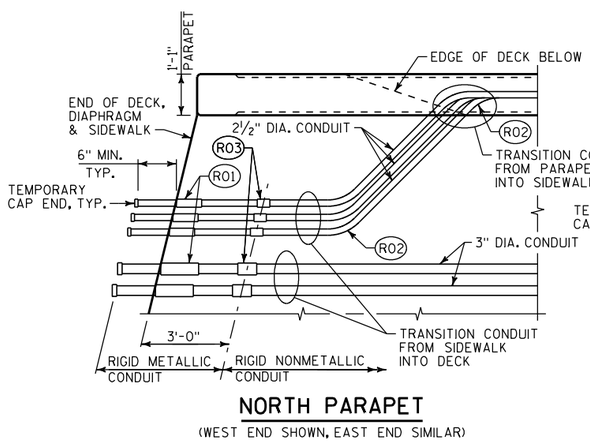
EXTERIOR ELEVATION OF NORTH PARAPET

(LOOKING SOUTH)
(DIMENSIONS MEASURED ALONG EXTERIOR FACE OF PARAPET)



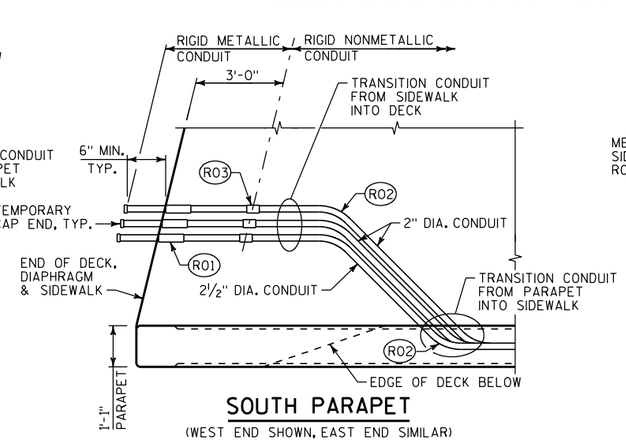
EXTERIOR ELEVATION OF SOUTH PARAPET

(LOOKING NORTH)
(DIMENSIONS MEASURED ALONG EXTERIOR FACE OF PARAPET)



NORTH PARAPET

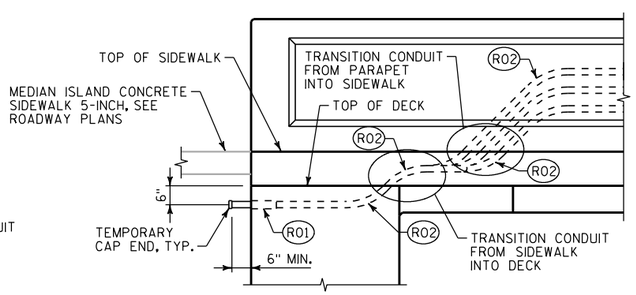
(WEST END SHOWN, EAST END SIMILAR)



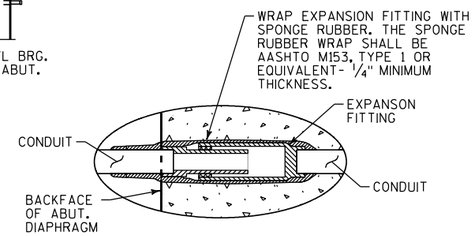
SOUTH PARAPET

(WEST END SHOWN, EAST END SIMILAR)

PARTIAL PLANS OF PARAPET AT ABUTMENT SHOWING CONDUITS



TYPICAL EXTERIOR ELEVATION OF PARAPET AT ABUTMENT SHOWING CONDUITS



EXPANSION FITTING DETAIL

POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL ALLOW FOR 2" OF MOVEMENT (EXPANSION/CONTRACTION). TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

NOTES

EXPANSION FITTINGS, BENDS, SPONGE RUBBER WRAP, TEMPORARY END CAPS, AND ADAPTER FITTINGS ARE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH", "CONDUIT RIGID METALLIC 2.5-INCH", OR "CONDUIT RIGID METALLIC 3-INCH",

FOR APPROVED MANUFACTURERS OF JUNCTION BOXES, SEE APPROVED MATERIAL LIST.

LEGEND

(R01) APPROVED MANUFACTURER OR EQUIVALENT FOR EXPANSION FITTINGS WITH 4" TOTAL CONDUIT MOVEMENT.

2" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER

2½" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-250 AND BONDING JUMPER

3" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-300 AND BONDING JUMPER

EQUIVALENTS ARE SUBJECT TO DEPARTMENT APPROVAL

(R02) 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

(R03) WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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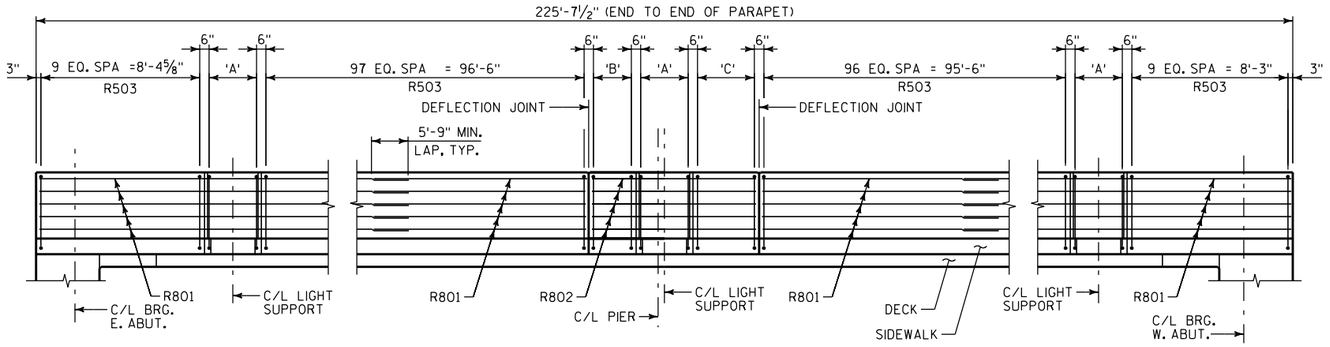
VERTICAL FACE PARAPET (1 OF 2)

SHEET 38 OF 51

8

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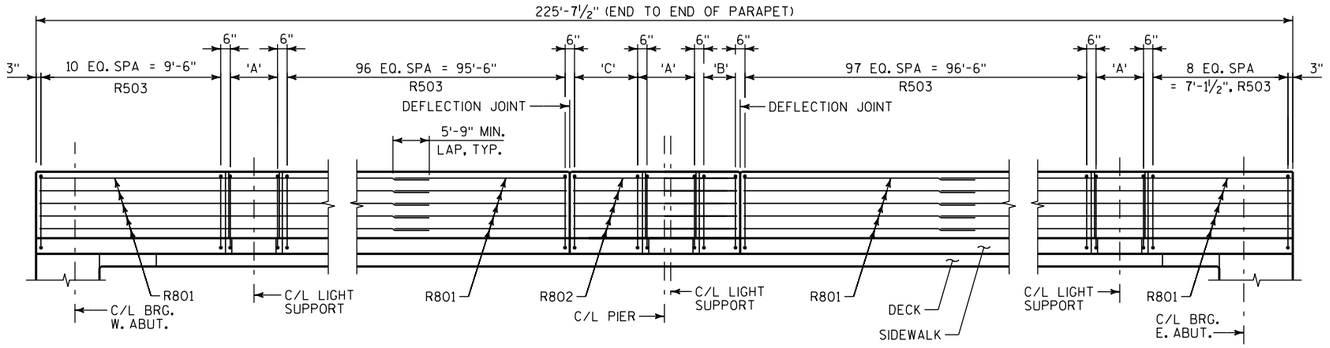
STATE PROJECT NUMBER
1060-33-80



EXTERIOR ELEVATION OF NORTH PARAPET

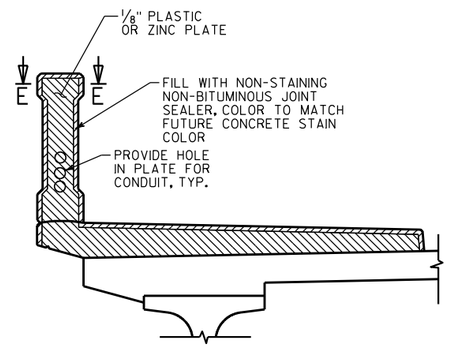
(LOOKING SOUTH)
(DIMENSIONS MEASURED ALONG EXTERIOR FACE OF PARAPET)

'A' = 5 EQ. SPA = 2'-6", R503
'B' = 2 SPA @ 1'-0" = 2'-0", R503
'C' = 3 SPA @ 1'-0" = 3'-0", R503



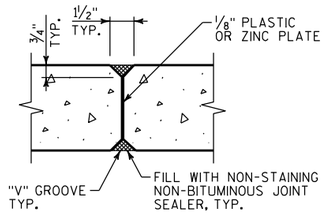
EXTERIOR ELEVATION OF SOUTH PARAPET

(LOOKING NORTH)
(DIMENSIONS MEASURED ALONG EXTERIOR FACE OF PARAPET)

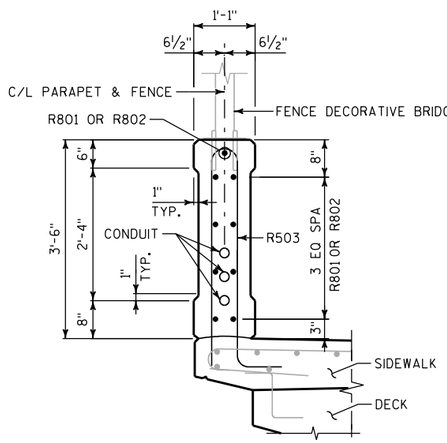


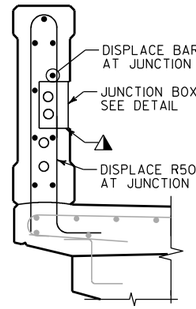
SECTION THRU DEFLECTION JOINT

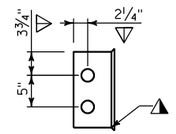
WHEN THE PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT SHOWN ABOVE BY THE SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF THE JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPERATORS MAY BE OMITTED.



SECTION E-E







JUNCTION BOX DETAIL

SECTIONS THRU PARAPET

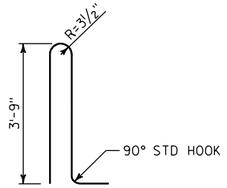
▲ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
R801	X	72	57'-3"		PARAPET - LONGITUDINAL
R802	X	18	8'-6"		PARAPET - LONGITUDINAL AT DEFL. JT.
R503	X	480	8'-7"	X	PARAPET - VERTICAL

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



R503

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

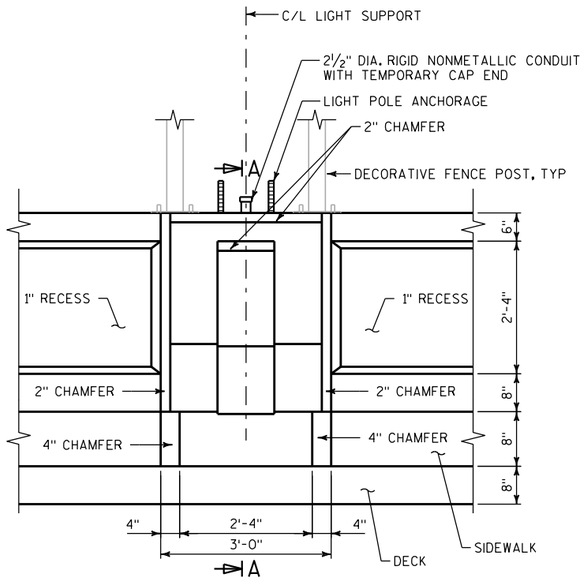
VERTICAL FACE PARAPET (2 OF 2)

SHEET 39 OF 51

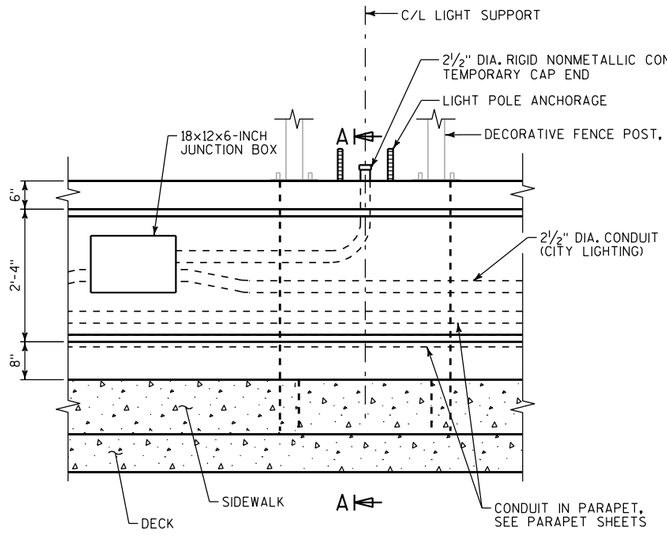
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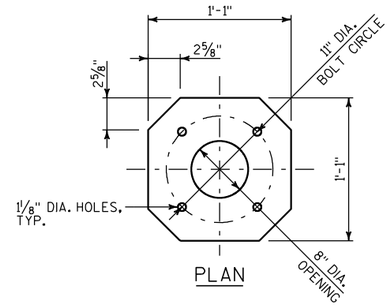
STATE PROJECT NUMBER
1060-33-80



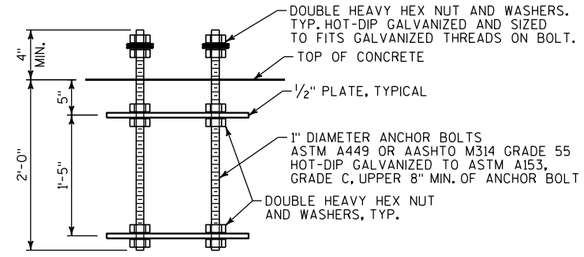
OUTSIDE ELEVATION AT LIGHT SUPPORT



INSIDE ELEVATION AT LIGHT SUPPORT



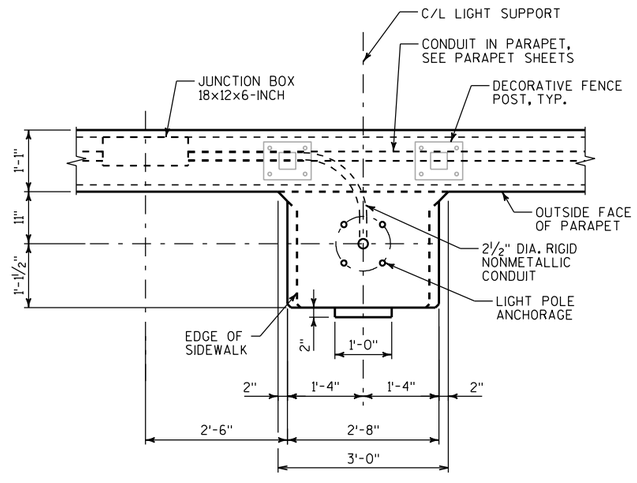
PLAN



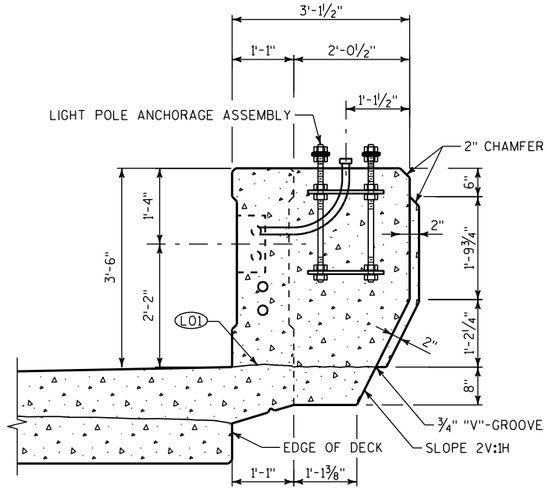
ELEVATION

ANCHOR ASSEMBLY LIGHT POLES ON STRUCTURES

ANCHOR ASSEMBLY ANCHOR BOLTS SHALL BE INSTALLED PLUMB



PLAN AT LIGHT SUPPORT



SECTION A-A

(L01) HORIZONTAL CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH

NO.	DATE	REVISION	BY

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STRUCTURE B-40-866

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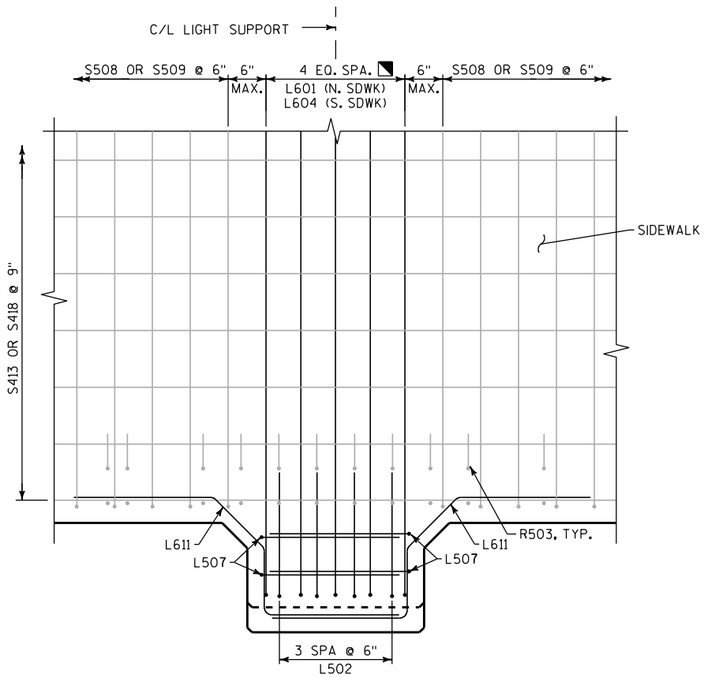
LIGHT SUPPORT DETAILS

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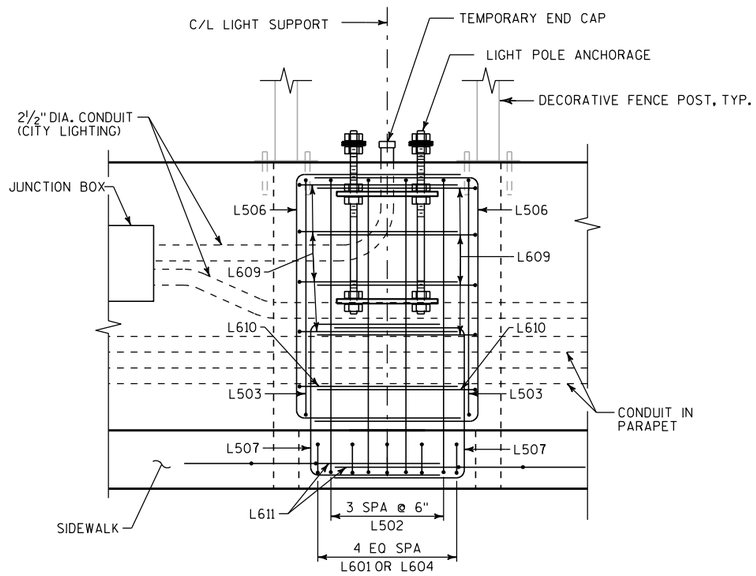
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STATE PROJECT NUMBER
1060-33-80



PLAN SHOWING REINFORCEMENT IN SIDEWALK AT LIGHT SUPPORT

◥ DISCONTINUE S508 OR S509 BARS AT LIGHT SUPPORT

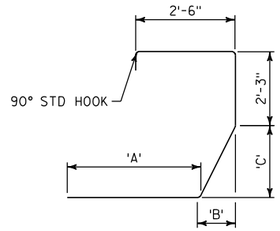


INSIDE ELEVATION OF LIGHT SUPPORT SHOWING REINFORCEMENT

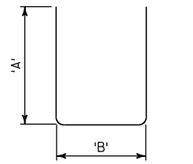
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L601	X	15	14'-1"	X	NORTH SIDEWALK HOOK
L502	X	24	8'-5"	X	VERTICAL - INSIDE
L503	X	12	7'-9"	X	VERTICAL - OUTSIDE
L604	X	15	10'-7"	X	SOUTH SIDEWALK HOOK
L505				X	NOT USED
L506	X	36	7'-7"	X	VERTICAL - BODY
L507	X	24	5'-2"	X	VERTICAL - LOWER BODY
L508	X	12	6'-9"	X	VERTICAL - OUTSIDE
L609	X	48	5'-11"	X	HORIZONTAL - TOP
L610	X	12	5'-7"	X	HORIZONTAL - BODY
L611	X	12	5'-0"	X	HORIZONTAL - BOTTOM
L412	X	12	2'-9"	X	OUTSIDE FACE
L413	X	30	1'-6"	X	OUTSIDE FACE

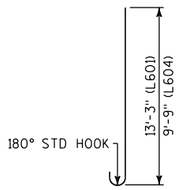
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



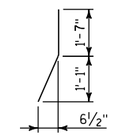
BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C'
L502	1'-6"	10"	1'-8"
L503	1'-9"	5½"	11"



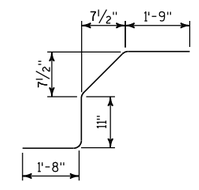
BAR MARK	DIM. 'A'	DIM. 'B'
L506	2'-4"	3'-2"
L507	1'-10"	1'-9"
L508	2'-4"	2'-4"
L609	2'-0"	2'-3"
L610	2'-0"	1'-11"
L413	6"	8"



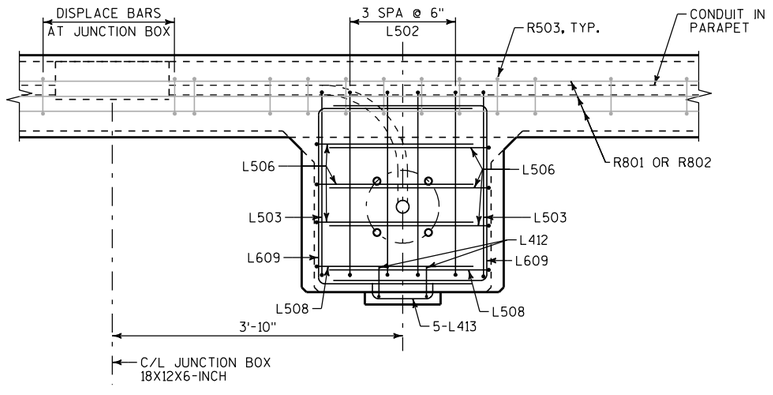
L601, L604



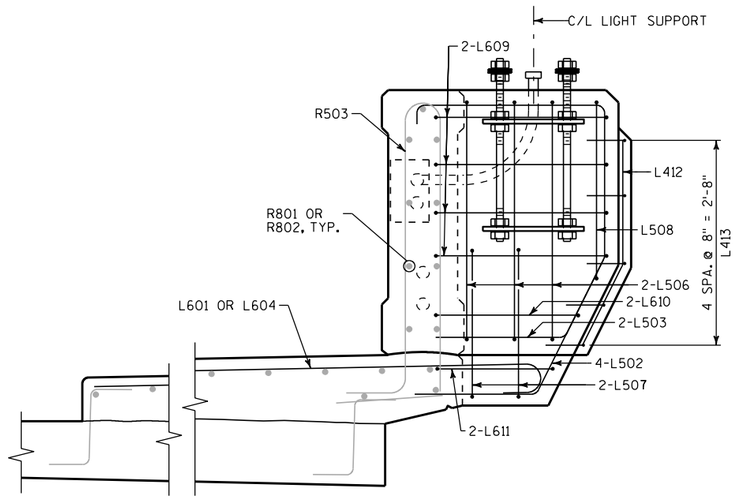
L412



L611



PLAN SHOWING REINFORCEMENT IN LIGHT SUPPORT



SECTION THRU LIGHT SUPPORT SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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LIGHT SUPPORT REINFORCEMENT

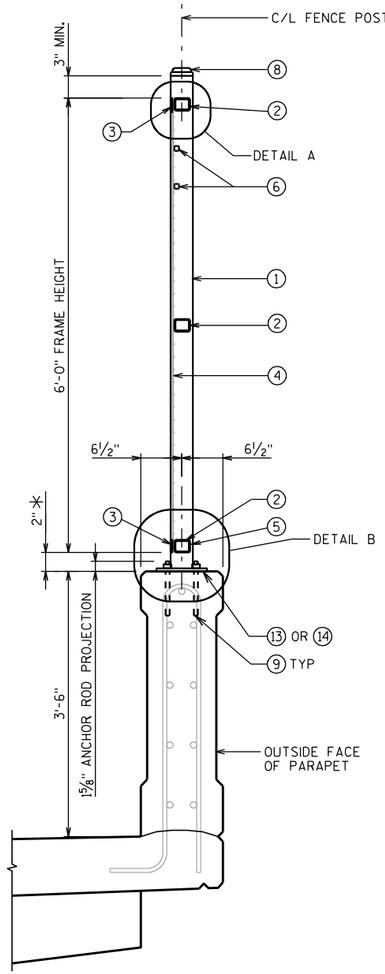
SHEET 41 OF 51

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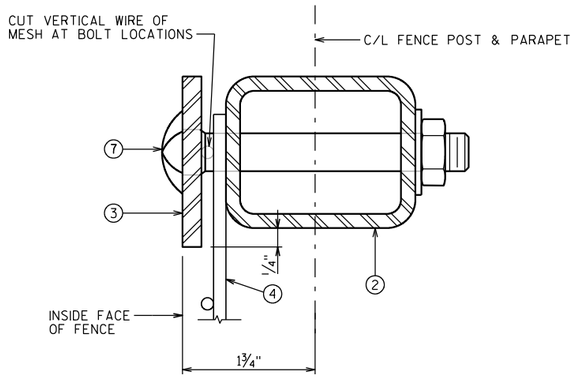
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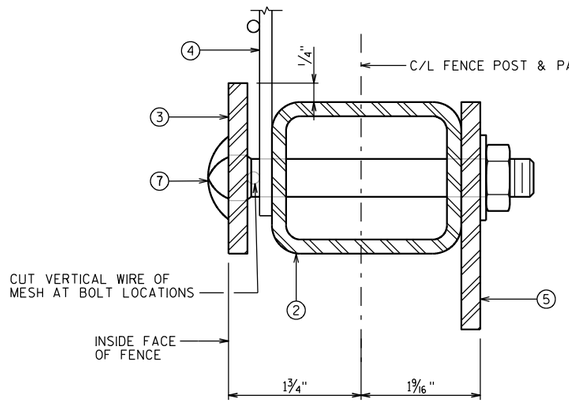


SECTION THRU PARAPET

* THE DIMENSION BETWEEN THE BOTTOM OF THE WELDED FRAME AND THE TOP OF THE PARAPET VARIES DUE TO THE VERTICAL PROFILE OF THE STRUCTURE. SET THIS DIMENSION TO 2" ADJACENT TO THE POST WHERE NO. 5 HAS THE SMALLEST VERTICAL DIMENSION.



DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X 3⁄16 POST WITH 1⁄8" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X 3⁄16. WELD TO NO. 6.
3. PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.
5. PL ¼" X WIDTH VARIES. PROVIDE SHORT SLOTTED VERT. HOLES FOR NO. 7.
6. ¾" x ¾" BAR. WELD TO NO. 2 & 6.
7. ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT.
10. PL ⅝" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 12 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. PL ½" X 8" X 1'-0" END BASE PLATE. WELD TO NO. 1.
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE BRIDGE" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE "FENCE DECORATIVE BRIDGE (2 OF 3)" SHEET.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL BE ASTM A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE ASTM A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

THE POSTS (NO. 1) SHALL BE ERECTED PLUMB. CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE ASTM A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.5.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3⁄16".

COVER THE 2" x 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

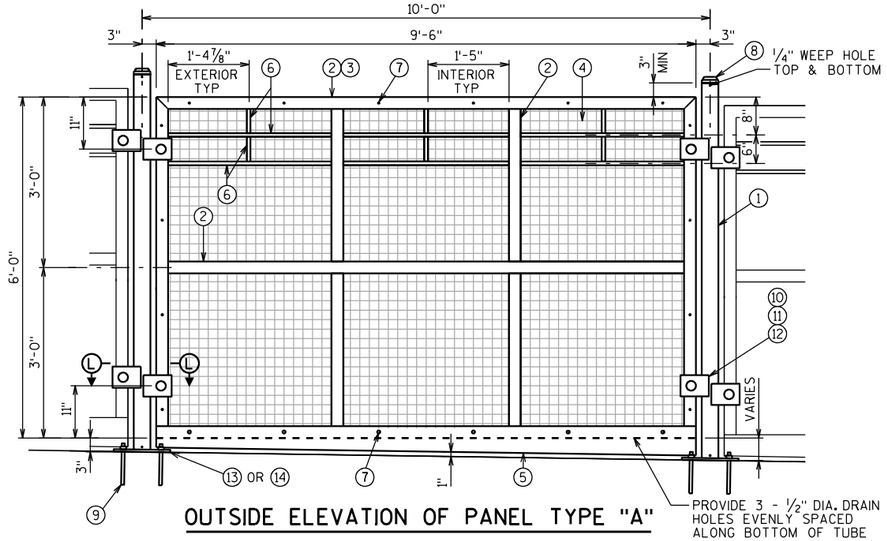
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FENCE DECORATIVE BRIDGE (1 OF 3)

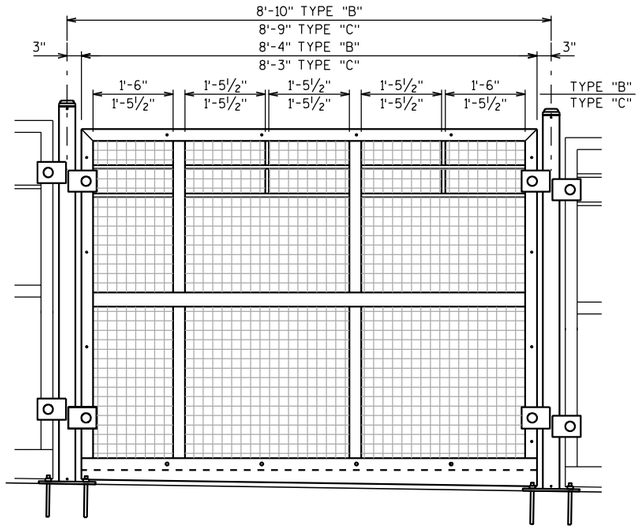
SHEET 42 OF 51

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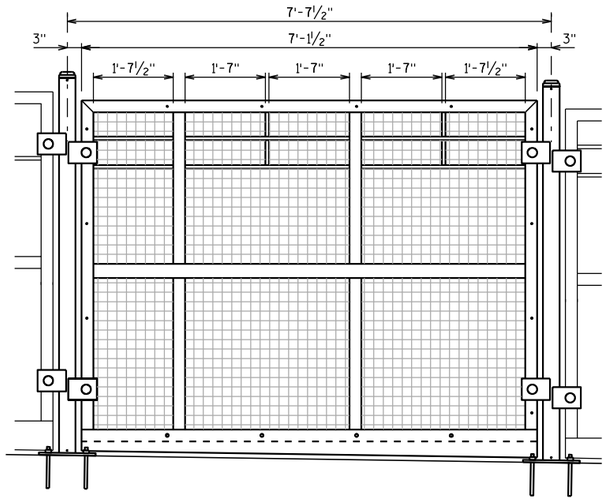
STATE PROJECT NUMBER
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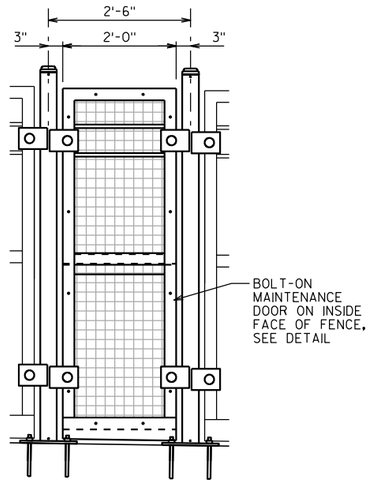
OUTSIDE ELEVATION OF PANEL TYPE "A"



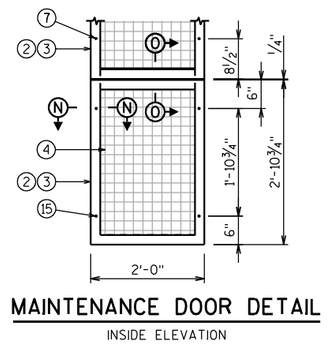
OUTSIDE ELEVATION OF PANEL TYPE "B" AND TYPE "C"



OUTSIDE ELEVATION OF PANEL TYPE "D"

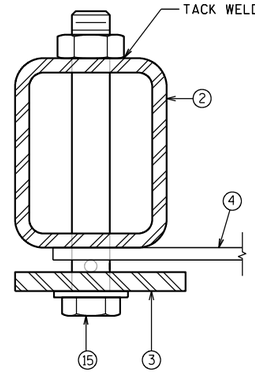


OUTSIDE ELEVATION OF PANEL TYPE "E"

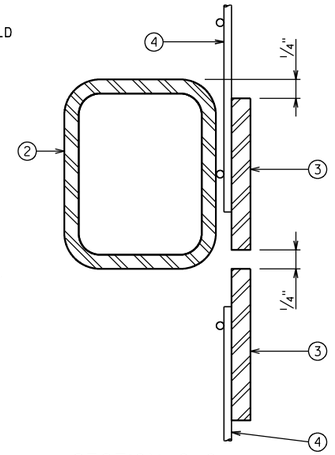


MAINTENANCE DOOR DETAIL

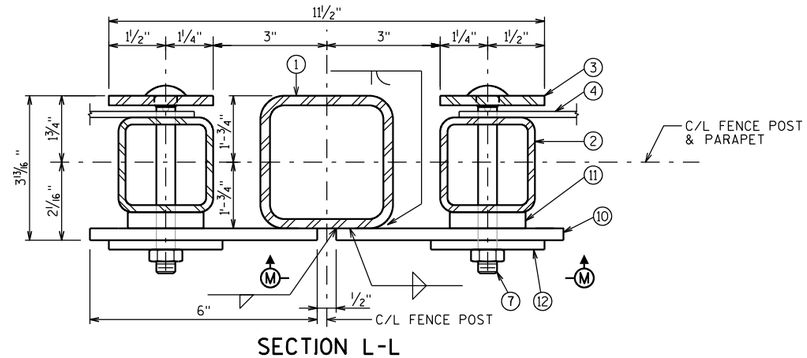
INSIDE ELEVATION



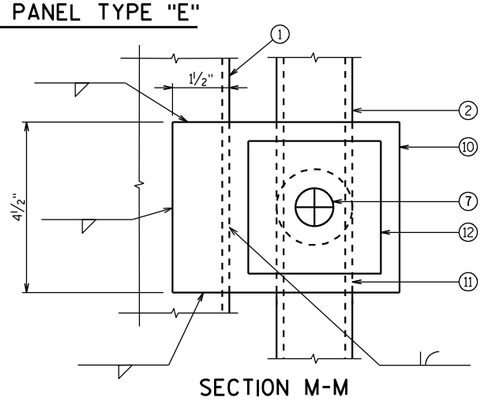
SECTION N-N



SECTION O-O



SECTION L-L



SECTION M-M

NOTES

FOR NOTES AND LEGEND, SEE FENCE DECORATIVE BRIDGE (1 OF 3) SHEET.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON FENCE DECORATIVE BRIDGE (3 OF 3) SHEET.

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STATE OF WISCONSIN
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STRUCTURE B-40-866

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FENCE DECORATIVE BRIDGE (2 OF 3)

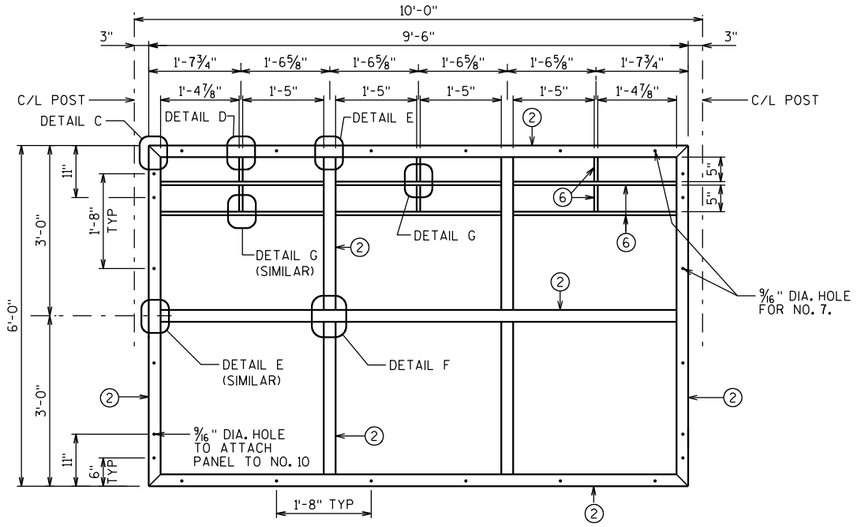
SHEET 43 OF 51

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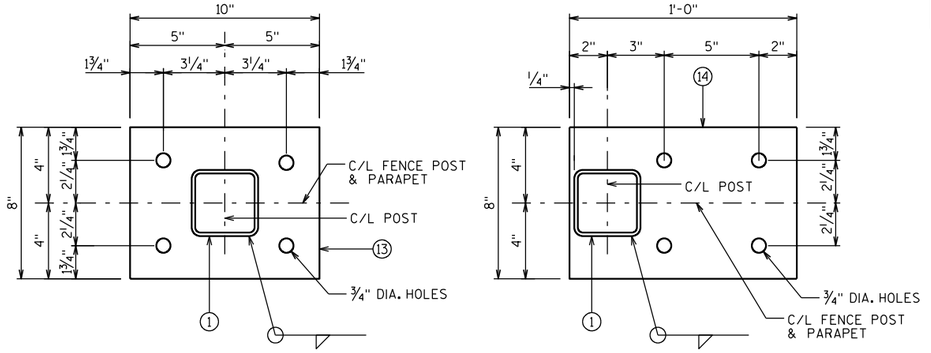
STATE PROJECT NUMBER

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DECORATIVE FENCE BRIDGE PANEL

TYPICAL 10'-0" PANEL SHOWN, OTHER PANELS SIMILAR

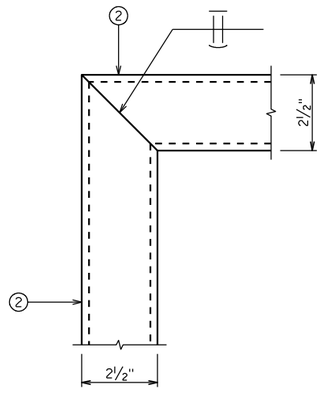


BASE PLATE

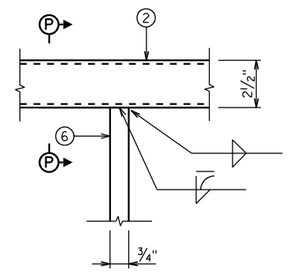
END BASE PLATE

(INSTALL AT END POSTS)

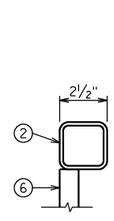
BRIDGE BASE PLATE DETAILS



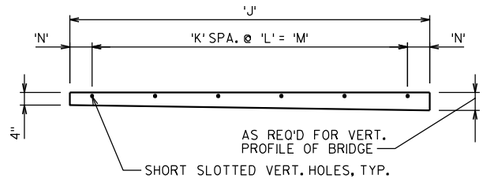
DETAIL C



DETAIL D

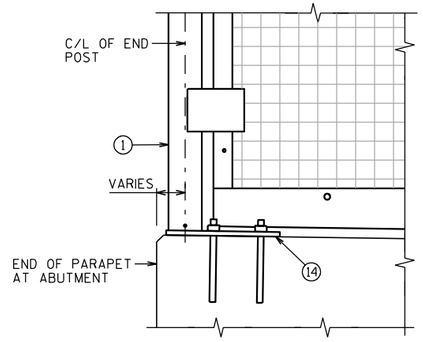


SECTION P-P

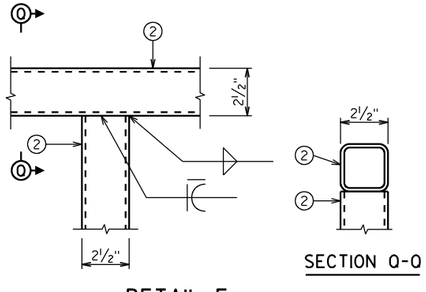


¼" PLATE (NO. 5)

PANEL TYPE	DIM 'J'	NO. 'K'	SPA 'L'	DIM 'M'	DIM 'N'
A	9'-6"	5	1'-8"	8'-4"	7"
B	8'-9"	4	1'-9"	7'-0"	7½"
C	8'-10"	4	1'-9"	7'-0"	8"
D	7'-1½"	4	1'-6"	6'-0"	6¾"
E	2'-0"	1	1'-0"	1'-0"	6"

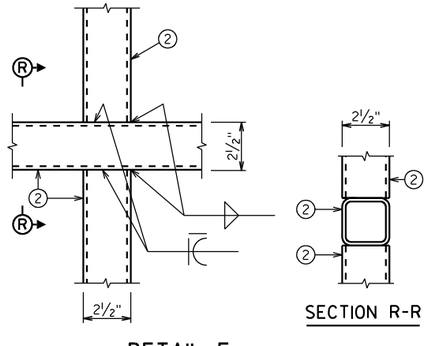


END POST DETAIL



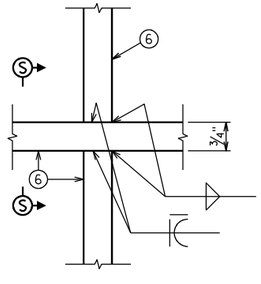
DETAIL E

SECTION Q-Q

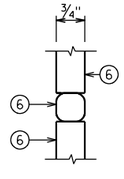


DETAIL F

SECTION R-R



DETAIL G



SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE FENCE DECORATIVE BRIDGE (1 OF 3) SHEET.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

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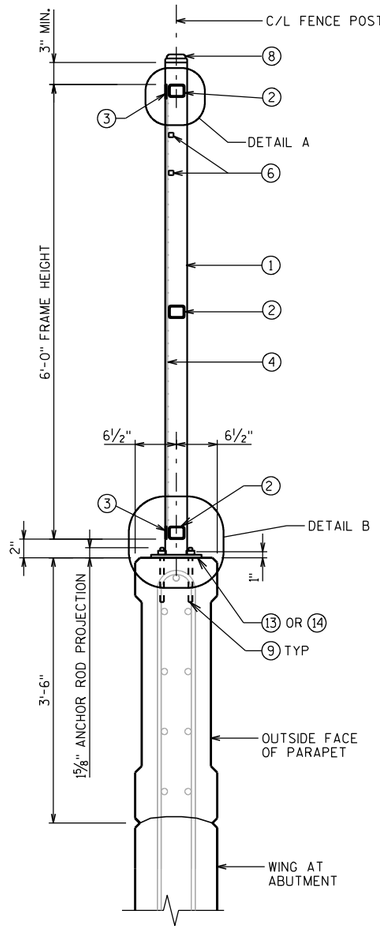
FENCE DECORATIVE BRIDGE (3 OF 3)

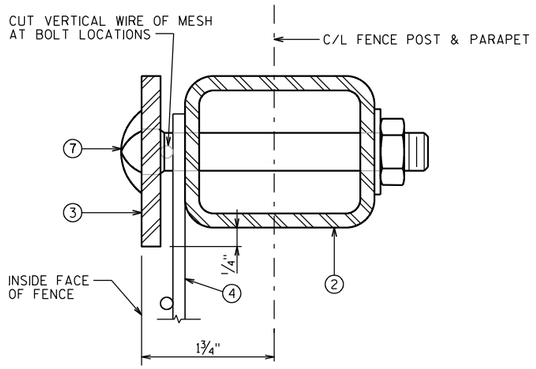
SHEET 44 OF 51

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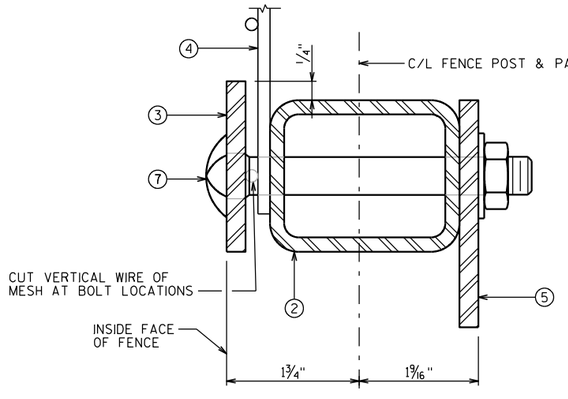
8

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DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X 3⁄16 POST WITH ¼" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X 3⁄16. WELD TO NO. 6.
3. PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.
5. NOT USED
6. ¾" × ¾" BAR. WELD TO NO. 2 & 6.
7. ½" DIA. CARRIAGE BOLT, WASHER AND NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT.
10. PL ⅝" X 4½" X 6" CONNECTION WITH 2" DIA. HOLES FOR NO. 7. USE NO. 12 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. PL ½" X 8" X 1'-0" END BASE PLATE. WELD TO NO. 1.
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE WING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL BE ASTM A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE ASTM A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

THE POSTS (NO. 1) SHALL BE ERECTED PLUMB. CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE ASTM A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.5.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3⁄16".

COVER THE 2" × 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

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STRUCTURE B-40-866

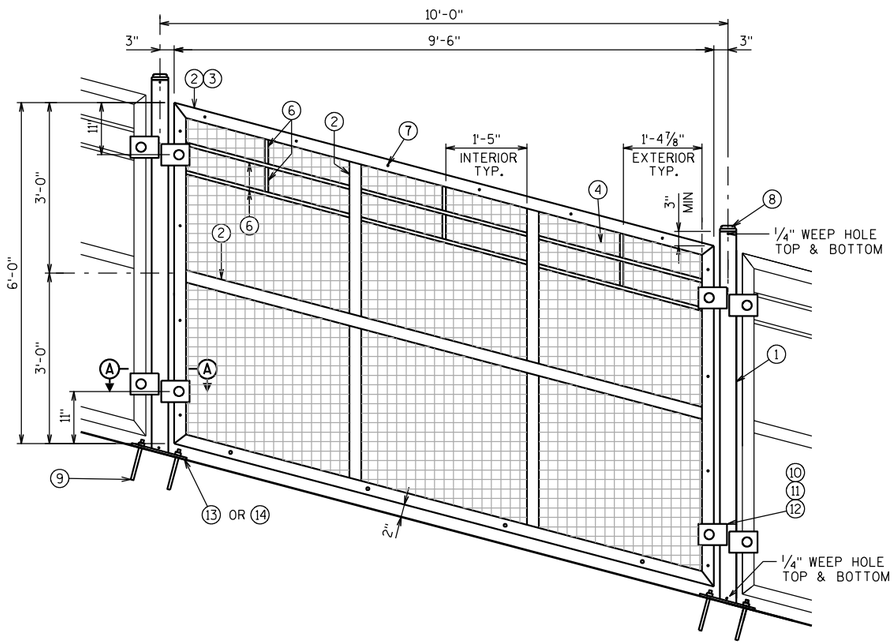
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FENCE DECORATIVE WING (1 OF 3)

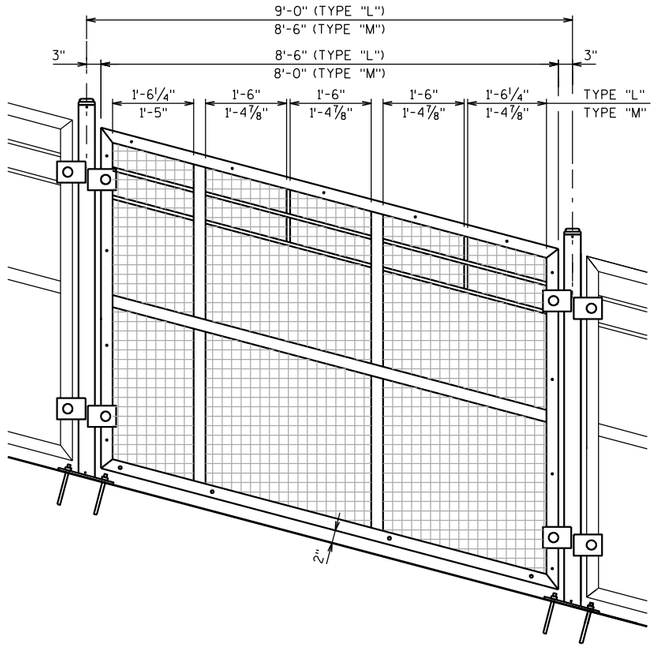
SHEET 45 OF 51

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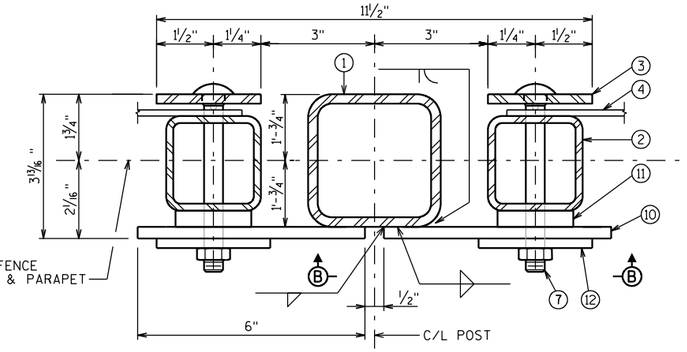
STATE PROJECT NUMBER
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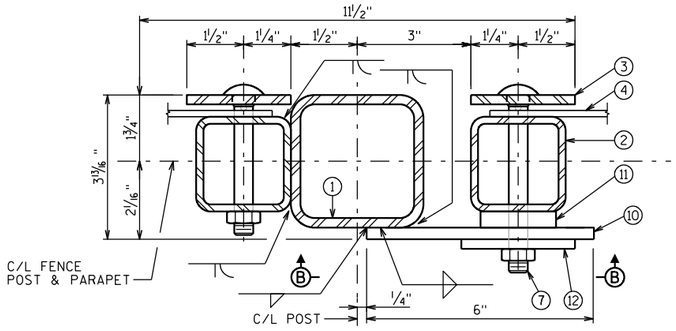
OUTSIDE ELEVATION OF PANEL TYPE "K"



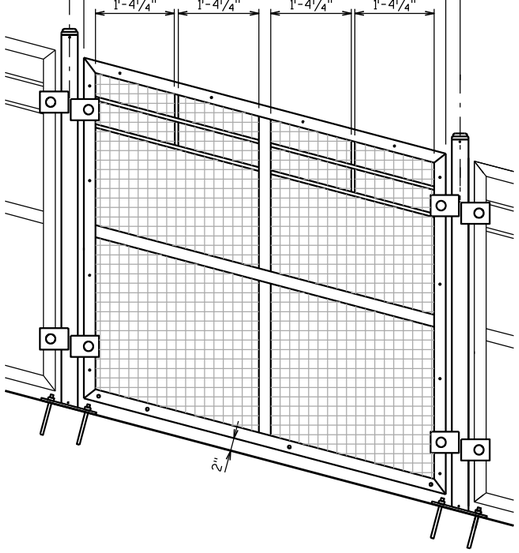
OUTSIDE ELEVATION OF PANEL TYPE "L" AND TYPE "M"



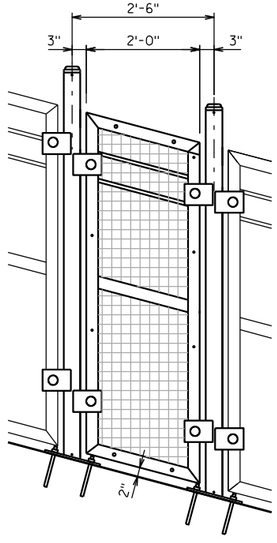
SECTION A-A



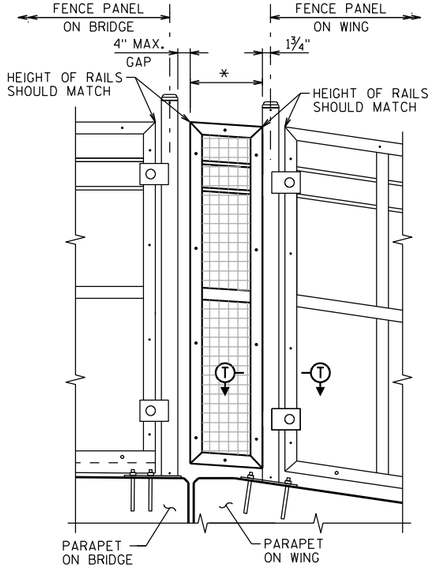
SECTION T-T



OUTSIDE ELEVATION OF PANEL TYPE "N"

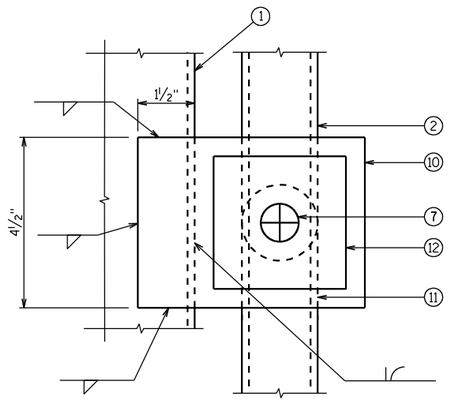


OUTSIDE ELEVATION OF PANEL TYPE "P"



OUTSIDE ELEVATION OF CANTILEVER PANEL

* 1'-3" WING 1, WING 2, & WING 3
1'-2½" WING 4



SECTION B-B

NOTES

FOR NOTES AND LEGEND, SEE FENCE DECORATIVE WING (1 OF 3) SHEET.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE WING PANEL' ON FENCE DECORATIVE WING (3 OF 3) SHEET.

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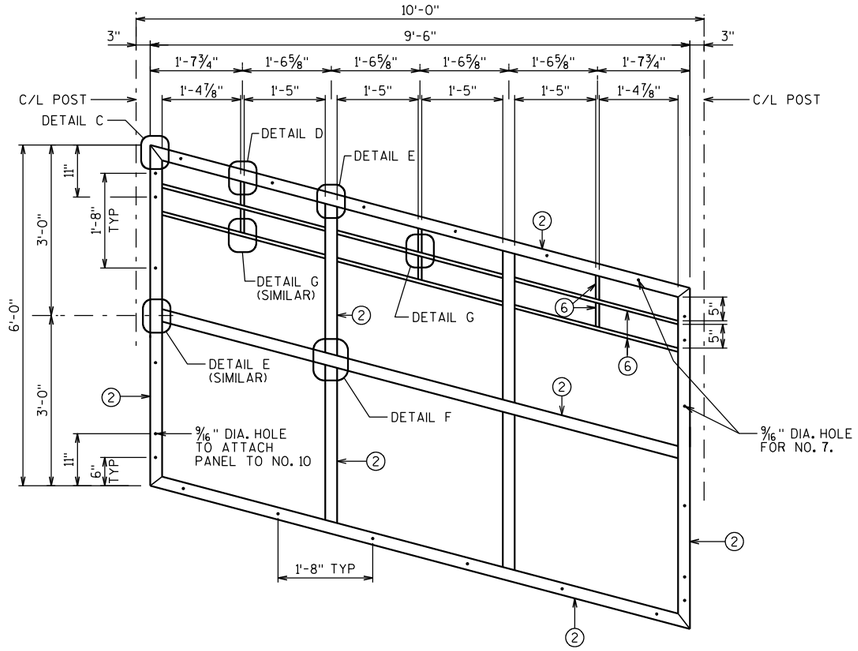
FENCE DECORATIVE WING (2 OF 3)

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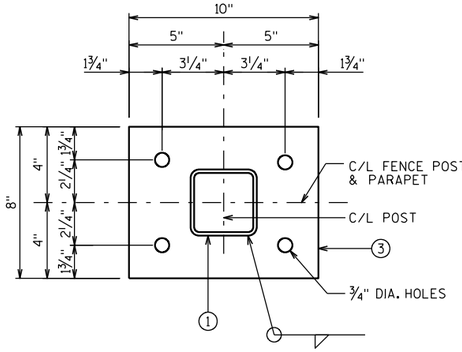
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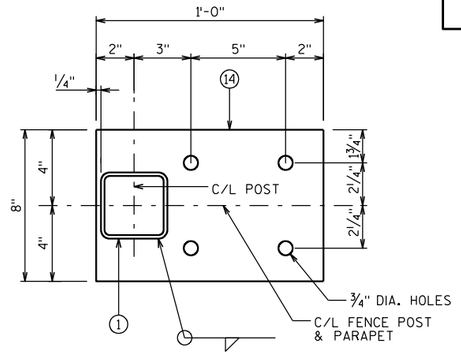


DECORATIVE FENCE WING PANEL

TYPICAL 10'-0" PANEL SHOWN, OTHER PANELS SIMILAR

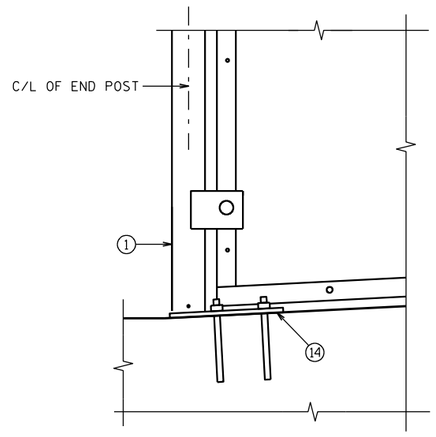


BASE PLATE

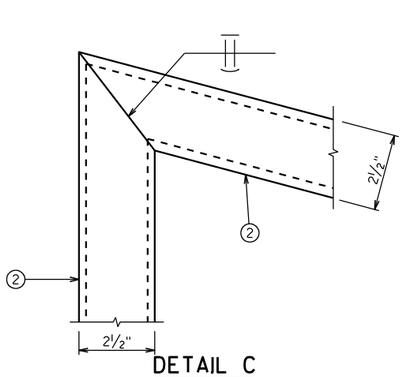


END BASE PLATE
(INSTALL AT END POST)

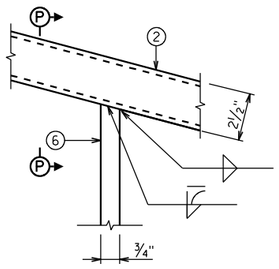
WING BASE PLATE DETAILS



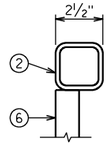
END POST DETAIL



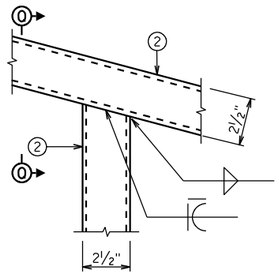
DETAIL C



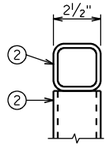
DETAIL D



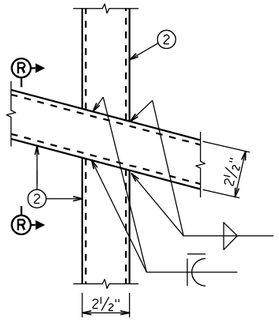
SECTION P-P



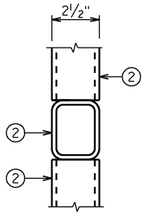
DETAIL E



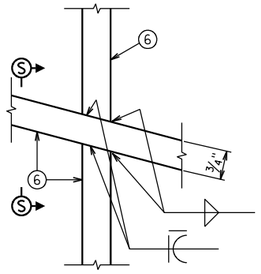
SECTION O-O



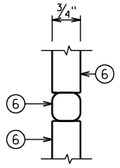
DETAIL F



SECTION R-R



DETAIL G



SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE FENCE DECORATIVE WING (1 OF 3) SHEET.

DETAILS SHOWN ARE TYPICAL FOR ALL WALL PANELS.

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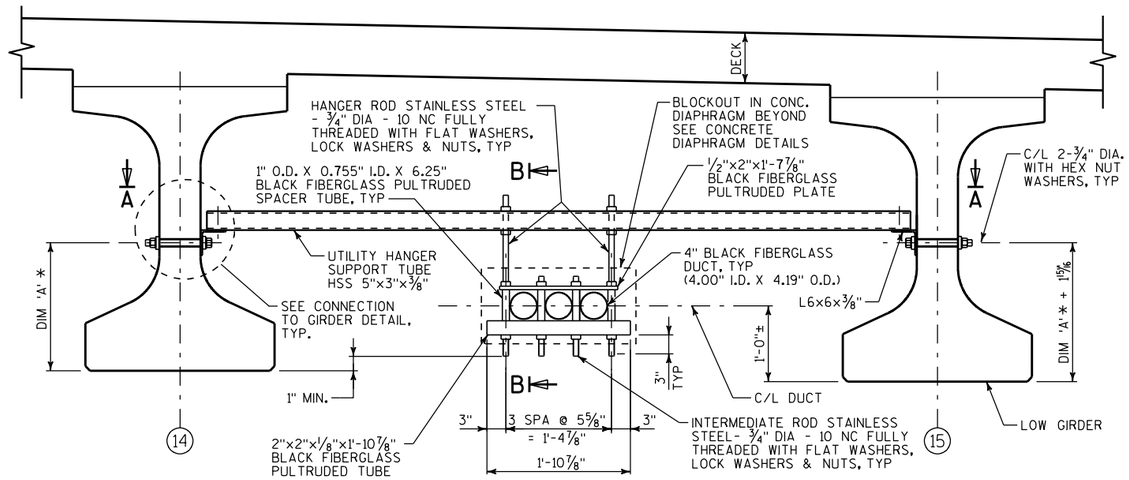
STATE OF WISCONSIN
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STRUCTURE B-40-866

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FENCE DECORATIVE WING (3 OF 3)

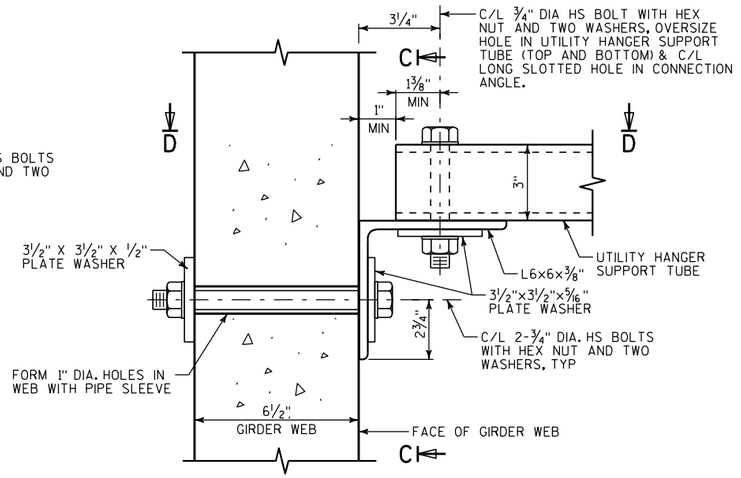
SHEET 47 OF 51



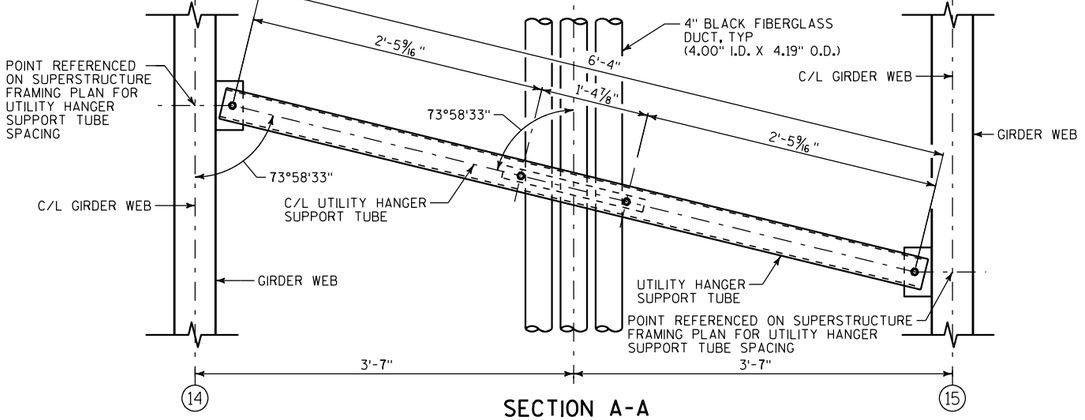
SECTION THRU 3 DUCT CITY COMMUNICATION PACKAGE

LOOKING UPSTATION

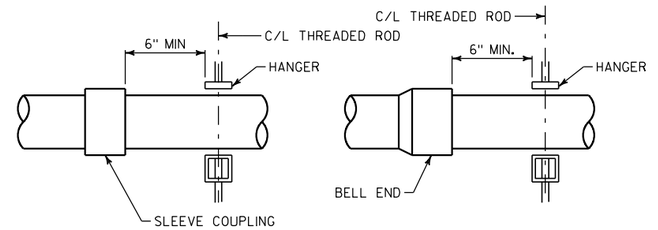
* DIM 'A' SHALL BE 1'-9", EXCEPT DIM 'A' IS PERMITTED TO RANGE UP TO A MAXIMUM OF 2'-5" TO AVOID DRAPED STRANDS IN GIRDER



CONNECTION TO GIRDER DETAIL

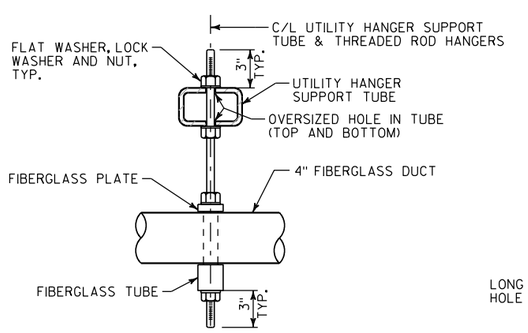


SECTION A-A

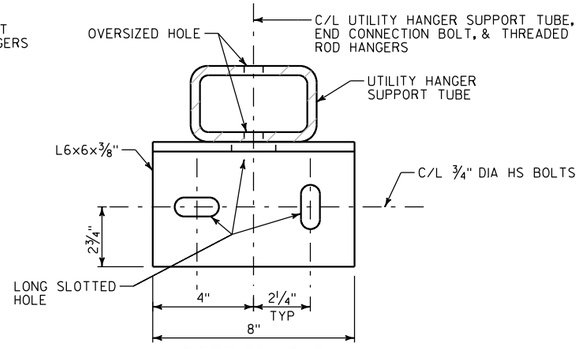


CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

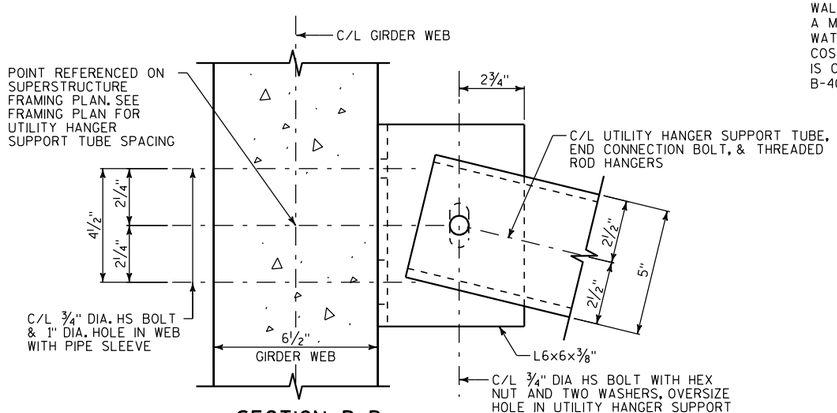
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS.



SECTION B-B



SECTION C-C



SECTION D-D

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NOTES

ALL UNDERDECK UTILITY MATERIALS SHOWN ON THIS SHEET AND OUTLINED IN THE SPECIAL PROVISIONS, SHALL BE PAID FOR UNDER BID ITEM "UNDERDECK UTILITY B-40-866".

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

DEAD LOAD OF EACH 4" CONDUIT AND WIRE IS 9 PLF.

THE CONDUIT SUPPORT HANGER MEMBERS SHALL BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL. FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D635. A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN-RICH SURFACE AND ULTRAVIOLET RESISTANCE.

PRIOVIDE AN EXPANSION COUPLING IN THE CONDUIT AT 3'-0" FROM THE FACE OF EACH ABUTMENT DIAPHRAGM.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

ALL CUTS AND HOLES IN EACH FIBERGLASS PIECE SHALL BE PROPERLY SEALED PER MANUFACTURER'S RECOMMENDATIONS TO PREVENT DETERIORATION.

THE CONDUIT SUPPORT HANGER RODS AND HARDWARE SHALL BE STAINLESS STEEL.

THE STRUCTURAL TUBING FOR THE UTILITY HANGER SUPPORT TUBE SHALL BE ASTM A500 GRADE B.

THE STRUCTURAL STEEL FOR THE CONNECTION ANGLES AND PLATE WASHERS SHALL BE ASTM A709 GRADE 36.

ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A325 TYPE 1.

THE STRUCTURAL UTILITY HANGER SUPPORT TUBE, CONNECTION ANGLES, AND PLATE WASHERS SHALL BE HOT-DIPPED GALVANIZED. THE BOLTS, NUTS AND WASHERS USED TO CONNECT THE UTILITY HANGER SUPPORT TUBE TO THE GIRDERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE FIBERGLASS TO PVC ADAPTER ON THE END OF EACH DUCT AND CAP TEMPORARILY.

CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF THE CONCRETE DIAPHRAGM BLOCKOUTS. ALL PENETRATIONS AT ABUTMENT DIAPHRAGMS FOR CITY OF MILWAUKEE COMMUNICATIONS SHALL BE SEALED AND WATERPROOFED. FILL ANNULAR SPACE BETWEEN UTILITY PACKAGE AND WALL BLOCKOUT WITH A NON-SHIRNK CEMENT GROUT WITH A MINIMUM STRENGTH OF 4000 PSI. APPLY RUBBERIZED WATERPROOFING TO THE FILL FACE OF ABUTMENT WALL. COST OF CEMENT GROUT AND RUBBERIZED WATERPROOFING IS CONSIDERED INCIDENTAL TO "UNDERDECK UTILITY B-40-866".

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STRUCTURE B-40-866

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UNDERDECK UTILITY DETAILS

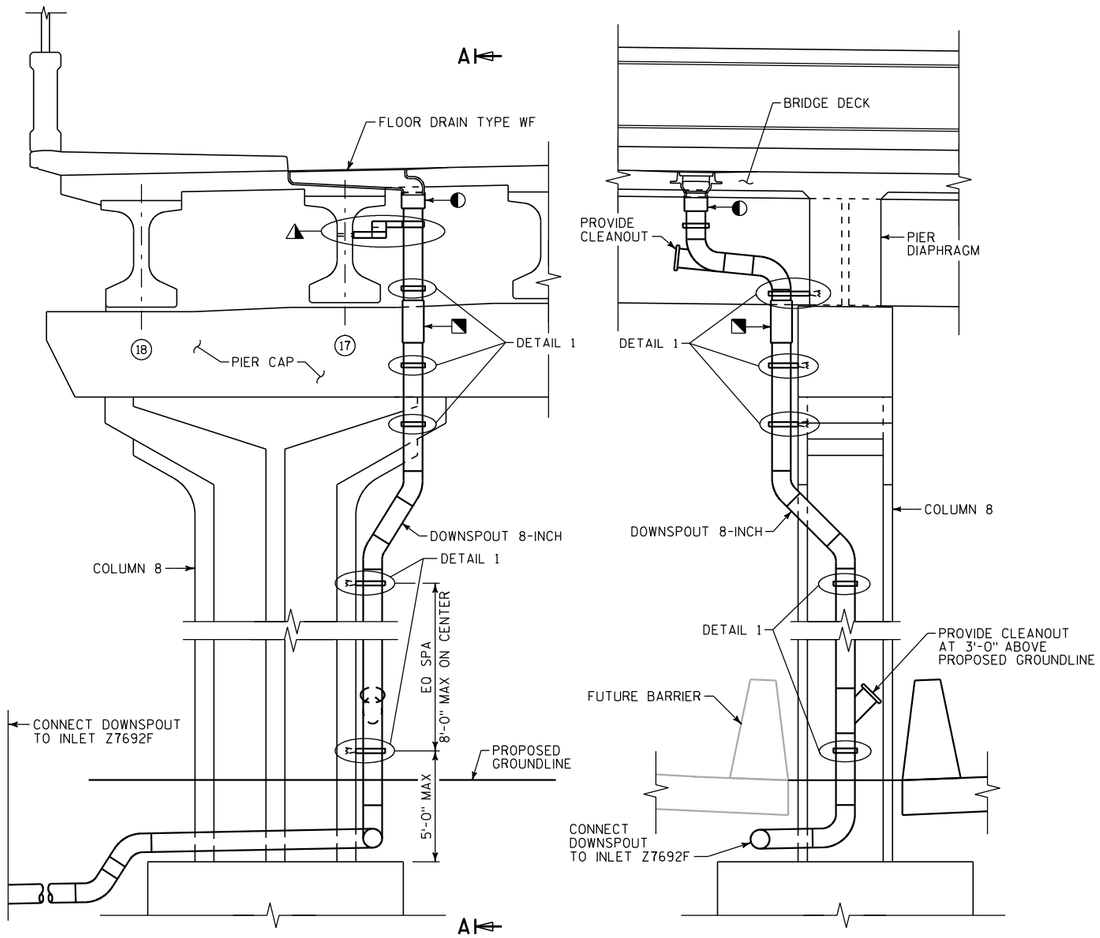
SHEET 48 OF 51

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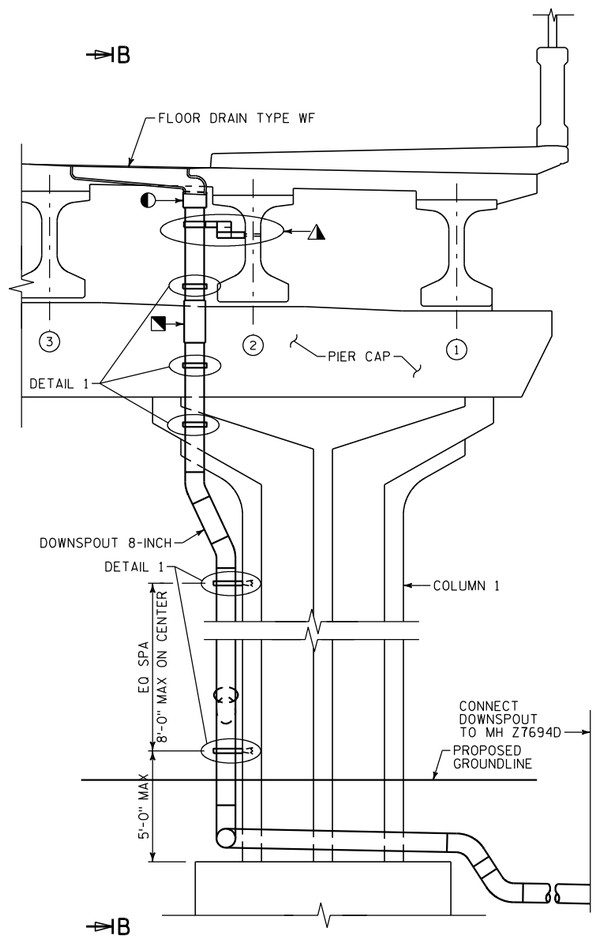


PARTIAL ELEVATION - SOUTH FLOOR DRAIN

LOOKING WEST AT PIER

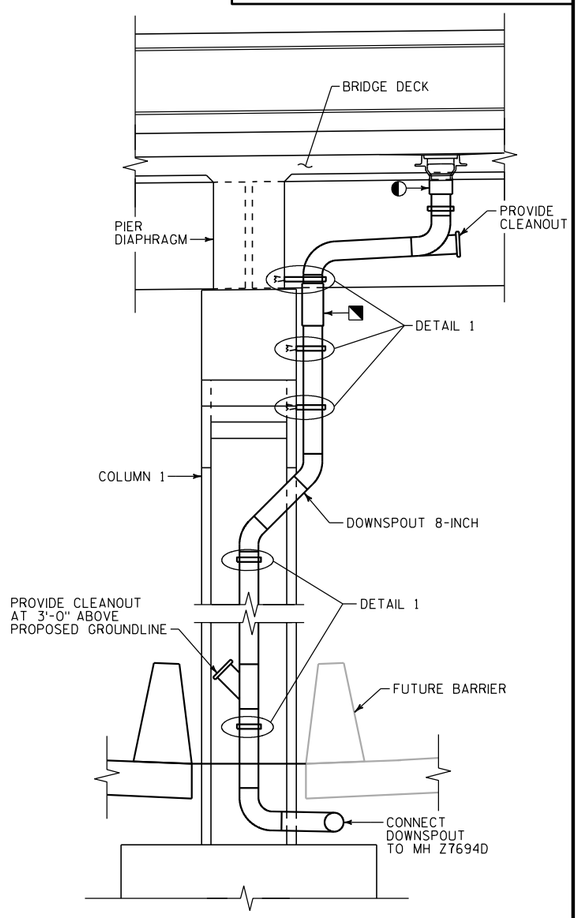
SECTION A-A

LOOKING SOUTH



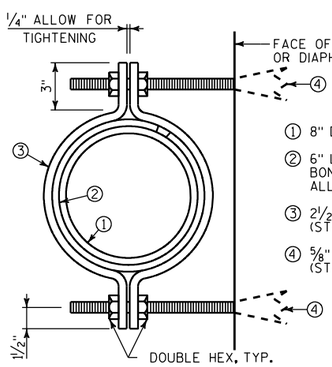
PARTIAL ELEVATION - NORTH FLOOR DRAIN

LOOKING WEST AT PIER

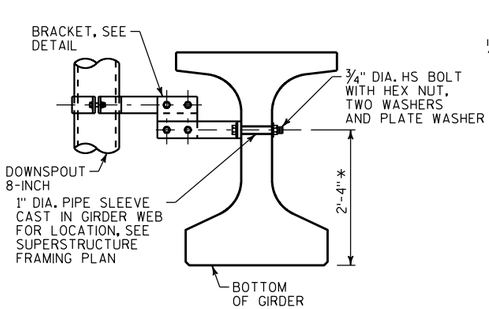


SECTION B-B

LOOKING NORTH

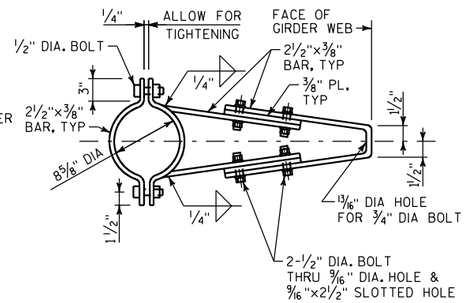


DETAIL 1



BRACKET ELEVATION

* PIPE SLEEVE LOCATION IS DIMENSIONED TO CLEAR THE DRAPED STRANDS. VERIFY AND ADJUST PRIOR TO FABRICATING DOWNSPOUTS.



BRACKET DETAIL

NOTES

ALL DOWNSPOUTS, FITTINGS, ELBOWS, CLEANOUTS, CONNECTORS, BRACKETS, FLEXIBLE HUBLESS COUPLING, BOLTS, MASONRY ANCHORS, AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT SHALL BE INCLUDED IN THE BID ITEM "DOWNSPOUT 8-INCH".

VERIFY ALL DIMENSIONS PRIOR TO FABRICATING DOWNSPOUTS.

INSTALL DOWNSPOUT PIPING AT THE STEEPEST GRADE POSSIBLE, MINIMUM 2 PERCENT.

ALL DOWNSPOUTS AND HARDWARE SHALL BE COLOR MATCHED TO THE ADJACENT FUTURE CONCRETE PIER STAIN COLOR. COLOR MATCH AS OUTLINED IN THE STANDARD SPECIFICATIONS.

ALL FASTENERS, INCLUDING BOLTS, NUTS, WASHERS, AND MASONRY ANCHORS SHALL BE STAINLESS STEEL MEETING THE MATERIAL REQUIREMENTS IN THE STANDARD SPECIFICATIONS.

ALL BARS SHALL BE STAINLESS STEEL MEETING THE REQUIREMENTS OF ASTM A276, TYPE 304

THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

LEGEND

- 8" DIA. FLEXIBLE HUBLESS COUPLING
- 1'-6" FLEXIBLE CONNECTOR
- GIRDER BRACKET, SEE BRACKET DETAIL & BRACKET ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

FLOOR DRAIN PIPING

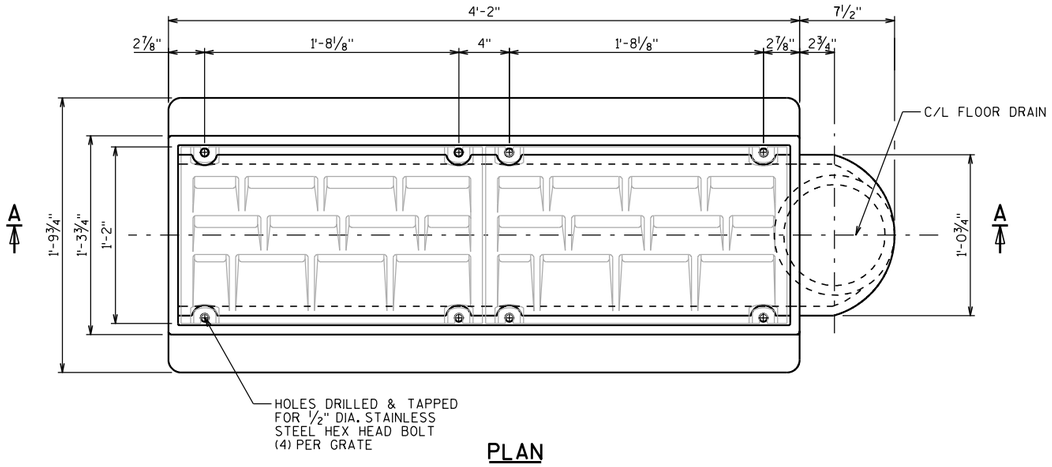
SHEET 49 OF 51

8

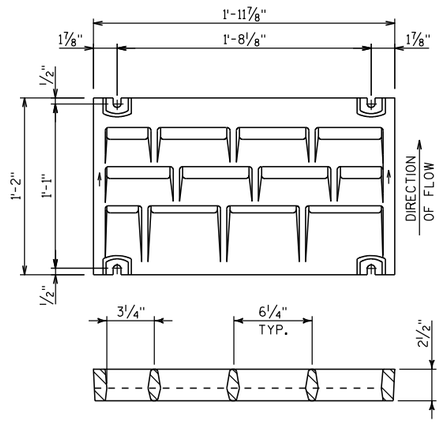
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STATE PROJECT NUMBER
1060-33-80

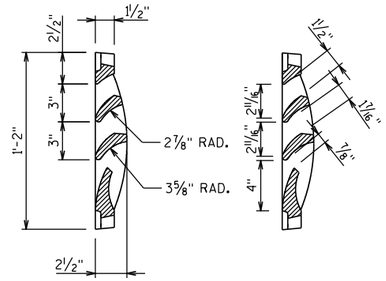


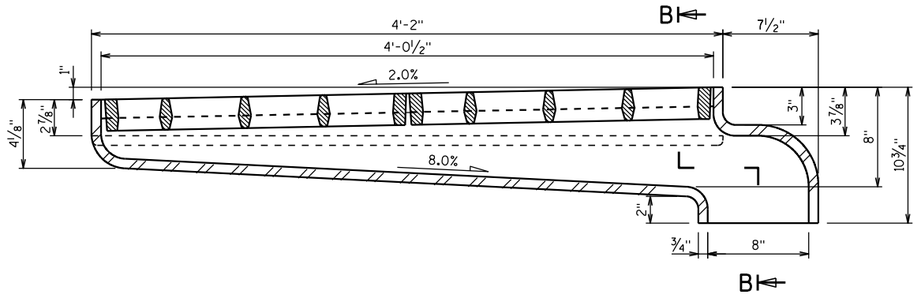
PLAN



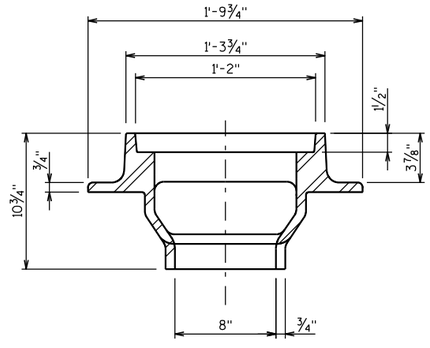
GRATE CASTING DETAIL

ATTACH GRATES TO FRAME FOR SHIPMENT





SECTION A-A



SECTION B-B

NOTES

ALL MATERIAL FOR FLOOR DRAINS AS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE BID ITEM "FLOOR DRAINS TYPE WF".

ALL MATERIAL FOR TYPE "WF" CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

DRAWN BY MS | PLANS CK'D. BKS

FLOOR DRAIN TYPE WF

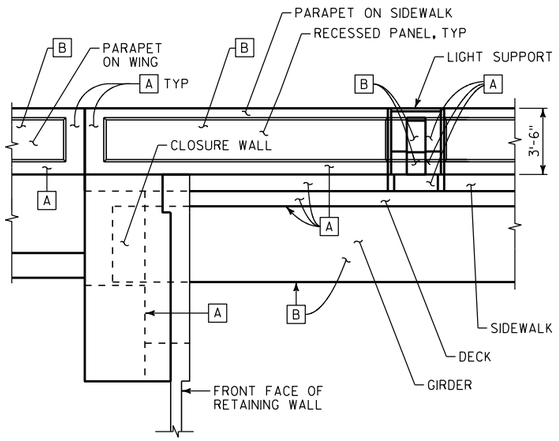
SHEET 50 OF 51

8

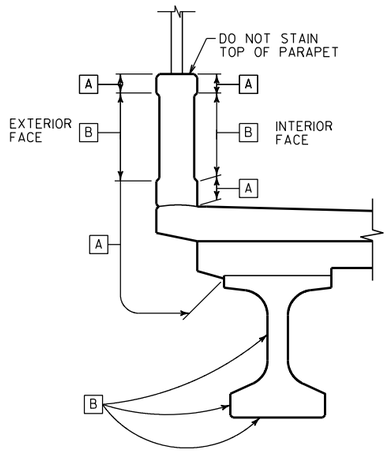
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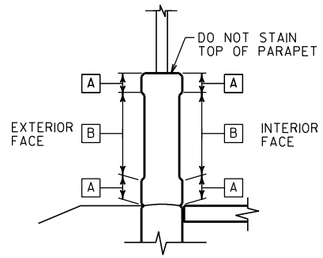
STATE PROJECT NUMBER
1060-33-80



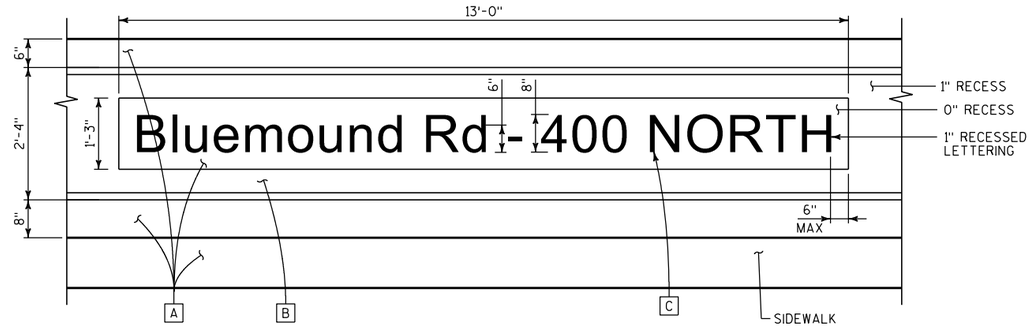
OUTSIDE ELEVATION OF PARAPET



PARTIAL SECTION THRU DECK



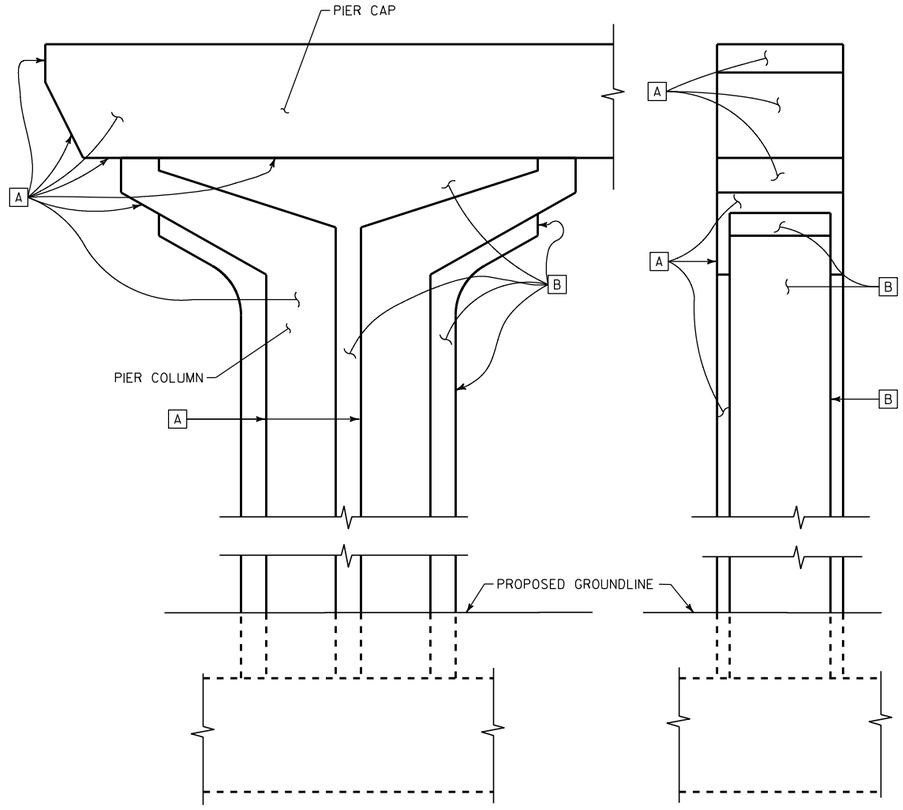
SECTION THRU WING PARAPET



INDENTED TEXT

EXTERIOR FACE OF PARAPET ONLY

INDENTED TEXT NOTES:
LETTERING SHALL BE HELVETICA. 8" UPPER CASE AND 6" LOWER CASE.
LETTERING IS ONLY ON EXTERIOR FACE OF PARAPET.
SEE VERTICAL FACE PARAPET SHEETS FOR LOCATIONS.



ELEVATION OF PIER

END SECTION OF PIER

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	INTERIOR & EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS
		SIDEWALKS	FASCIA & EXPOSED UNDERSIDE
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO TOP OF CONCRETE SLOPE PAVING
		PIERS	SIDES AND BOTTOM OF CAP BEAM. COLUMNS TO PROPOSED GROUNDLINE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	PIERS	REVEALS ON COLUMNS
		GIRDERS	EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS
		PARAPETS	RECESSED PANELS ON INTERIOR & EXTERIOR FACE
C	ACCENT COLOR #2	PARAPETS	LETTERING AT ROADWAY NAME

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED.

BASE COLOR : 33564
ACCENT COLOR #1: 33448
ACCENT COLOR #2: 37038

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE PREFORMED BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-866

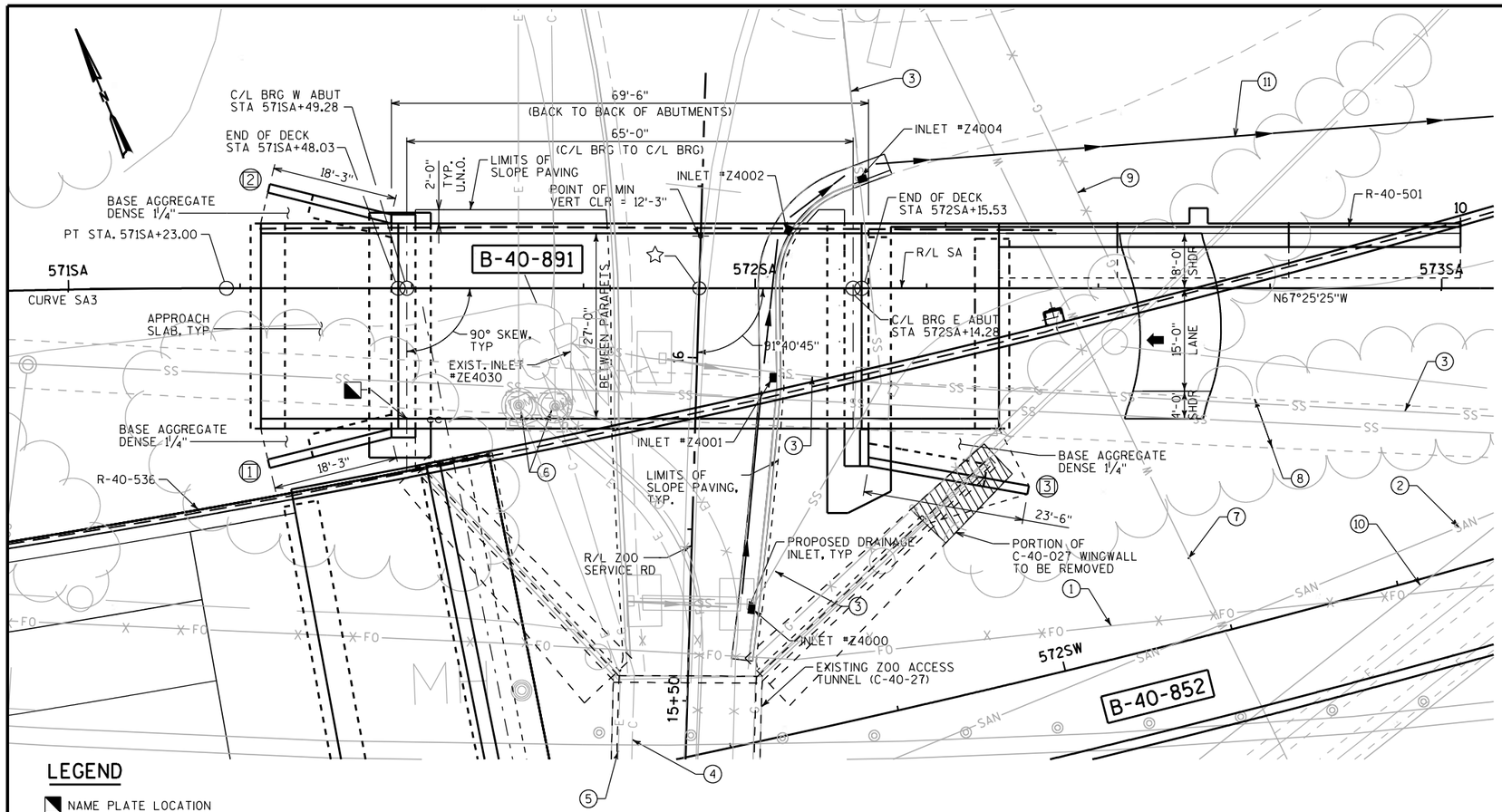
DRAWN BY MS | PLANS CK'D. BKS

AESTHETIC DETAILS

SHEET 51 OF 51

8

8

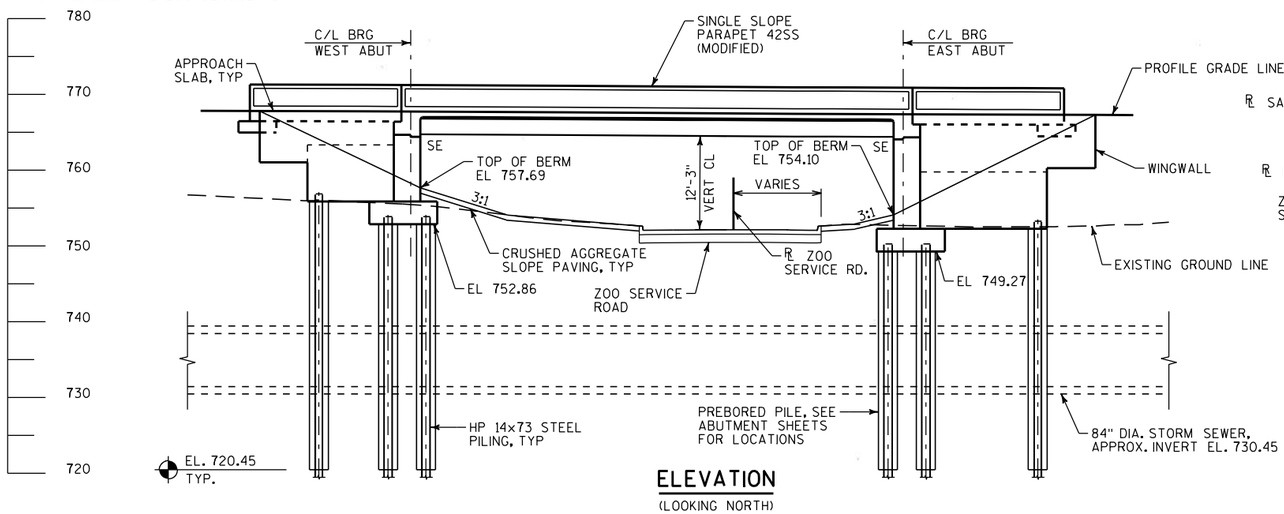


PLAN

(SIMPLE SPAN ROLLED WIDE FLANGE GIRDER)

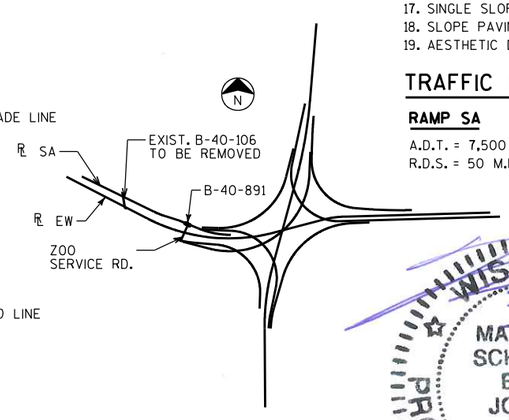
LEGEND

- NAME PLATE LOCATION
- TRAFFIC DIRECTION
- (X) WING NUMBER
- ☆ STA 571SA+91.87 R/L SA = STA 16+10.13 R/L ZOO SERVICE RD



ELEVATION

(LOOKING NORTH)



LOCATION MAP

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.24
OPERATING RATING FACTOR: RF = 1.62
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY:	
SUPERSTRUCTURE (HPC)	f'c = 4,000 PSI
SUBSTRUCTURE	f'c = 4,000 PSI
STEEL PILING	Fy = 50,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI
BAR STEEL REINFORCEMENT, STAINLESS	Fy = 60,000 PSI
STRUCTURAL STEEL	
ASTM A709 GRADE 50	Fy = 50,000 PSI

FOUNDATION DATA

ABUTMENTS SHALL BE SUPPORTED ON HP 14X73 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING THE MODIFIED GATES ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

PILE POINTS SHALL BE USED. SEE WISDOT LIST FOR APPROVED SUPPLIERS.

ESTIMATED PILE LENGTHS:

WEST ABUTMENT:	65 FEET
EAST ABUTMENT:	65 FEET
WEST ABUTMENT W/PREBORE:	70 FEET
EAST ABUTMENT W/PREBORE:	70 FEET

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTIONS, FILL LIMITS & REMOVAL DETAILS
3. QUANTITIES, NOTES & PROFILE GRADE LINES
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT FOUNDATION PLAN
6. WEST ABUTMENT PLAN & ELEVATION
7. EAST ABUTMENT FOUNDATION PLAN
8. EAST ABUTMENT PLAN & ELEVATION
9. WING WALL DETAILS
10. FRAMING PLAN & GIRDER ELEVATION
11. STEEL DETAILS
12. CAMBER, BLOCKING & DEFLECTION DIAGRAMS
13. SUPERSTRUCTURE REINFORCEMENT
14. ABUTMENT DIAPHRAGM
15. STRUCTURAL APPROACH SLAB
16. STRUCTURAL APPROACH SLAB DETAILS
17. SINGLE SLOPED PARAPET
18. SLOPE PAVING DETAILS
19. AESTHETIC DETAILS

TRAFFIC DATA

RAMP SA

A.D.T. = 7,500 (2035)
R.D.S. = 50 M.P.H.

UTILITIES LEGEND

1. EXISTING AT&T CORP. ABANDONED FIBER OPTIC
2. EXISTING MMSD SANITARY SEWER TO REMAIN
3. EXISTING WISDOT STORM SEWER 12" DIA. TO BE REMOVED
4. EXISTING MILWAUKEE COUNTY COMMUNICATIONS LINE TO REMAIN
5. EXISTING MILWAUKEE COUNTY ELECTRIC LINE TO REMAIN
6. EXISTING MILWAUKEE COUNTY MANHOLES TO REMAIN
7. EXISTING MILWAUKEE COUNTY WATER LINE TO REMAIN
8. EXISTING WISDOT STORM SEWER 84" DIA. TO REMAIN
9. EXISTING WE ENERGIES ABANDONED GAS LINE
10. EXISTING WE ENERGIES UTILITIES TUNNEL
11. PROPOSED WISDOT STORM SEWER 18" DIA.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 359-2300

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/15/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-891

RAMP SA OVER ZOO SERVICE ROAD

COUNTY: MILWAUKEE	~~TOWN/~~CITY/~~VILLAGE~~: MILWAUKEE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY MSS/ENS	DESIGN CK'D. JWC
DRAWN BY MSS/ENS	PLANS CK'D. JWC

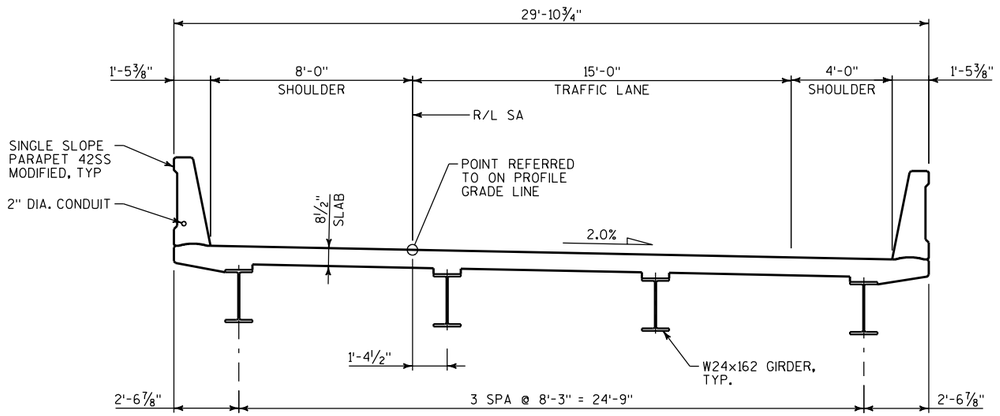
GENERAL PLAN & ELEVATION

SHEET 1 OF 19

WISCONSIN
MATTHEW S SCHROEDER
E-42428
JOHNSON CREEK
WI
5-13-14
PROFESSIONAL ENGINEER

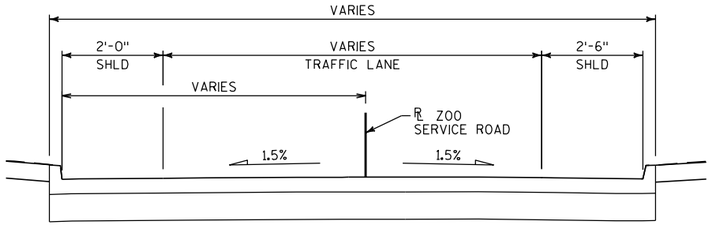
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PLOT BY : MSCMSS
PLOT NAME : 080101_gp
PLOT SCALE : 20:1

STATE PROJECT NUMBER
1060-33-80



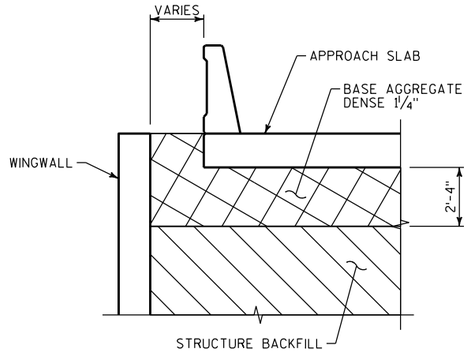
TYPICAL SECTION THRU RAMP SA

(LOOKING EAST)

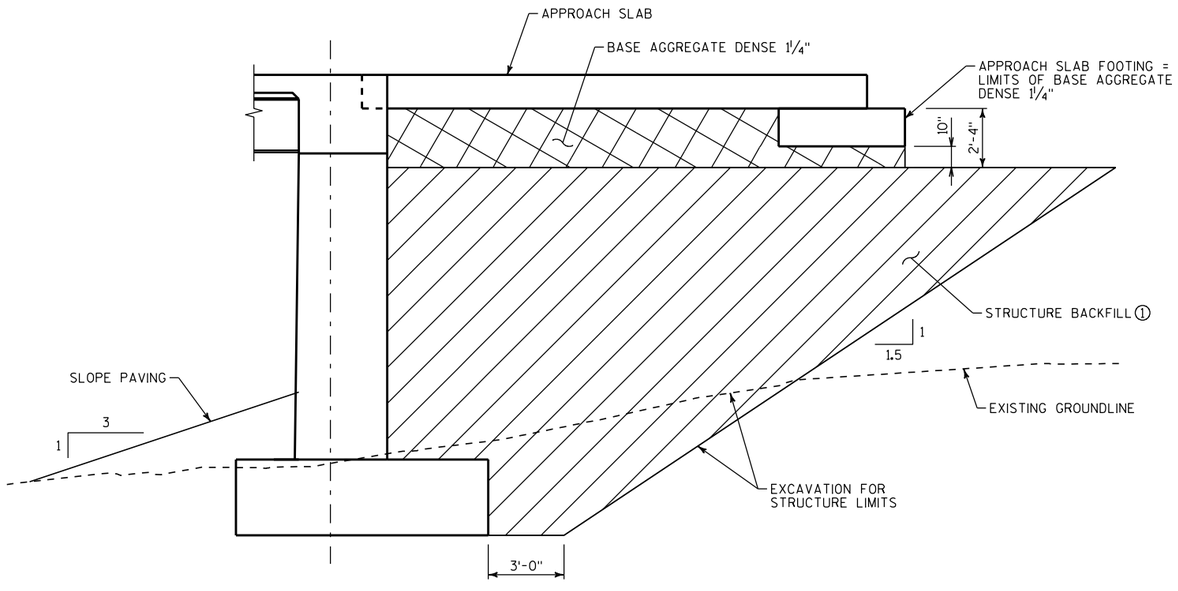


TYPICAL SECTION THRU ZOO SERVICE ROAD

(LOOKING NORTH)

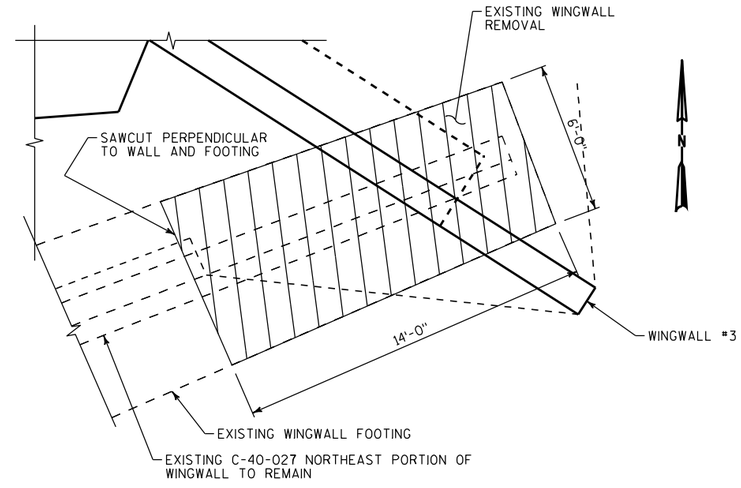


WINGWALL BACKFILL LIMITS



ABUTMENT EXCAVATION & BACKFILL LIMITS

(TYPICAL EACH ABUTMENT)



EXISTING C-40-027 WINGWALL REMOVAL PLAN

NOTES

① WHERE STRUCTURE BACKFILL LIMITS BEHIND THE EAST ABUTMENT AND THE MSE REINFORCEMENT ZONE LIMITS FOR R-40-501 OVERLAP, THE LIMITS FOR THE MSE REINFORCEMENT ZONE CONTROL. REFER TO R-40-501 PLANS FOR THESE LIMITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

DRAWN BY MSS | PLANS CK'D. JWC

TYPICAL SECTIONS, FILL LIMITS & REMOVAL DETAILS

SHEET 2 OF 19

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-891\cds\080102_ts.dgn PLOT DATE : 13-MAY-2014 14:49 PLOT BY : MSCMSS PLOT NAME : 080102_ts PLOT SCALE : 6:1

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	WEST APPROACH SLAB	WEST ABUTMENT	EAST ABUTMENT	EAST APPROACH SLAB	SUPER	TOTAL
203.0200.0011	REMOVING OLD STRUCTURE STA. 572SA+25	LS	-	-	-	-	-	1
203.0200.0012	REMOVING OLD STRUCTURE STA. 559SA+50	LS	-	-	-	-	-	1
203.0210.S.0009	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-106	LS	-	-	-	-	-	1
206.1000.0014	EXCAVATION FOR STRUCTURES BRIDGES B-40-891	LS	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	30	27	-	-	57
210.0100	BACKFILL STRUCTURE	CY	-	246	213	-	-	459
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	-	114	130	-	-	244
502.0100	CONCRETE MASONRY BRIDGES	CY	8	104	124	8	-	244
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80	-	-	80	269	429
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-	2,240	3,280	-	-	5,520
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	6,585	7,300	7,960	6,585	19,500	47,930
506.0605	STRUCTURAL STEEL HS	LB	-	-	-	-	44,668	44,668
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	-	-	8	8
506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH	-	-	-	-	1,188	1,188
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	18	22	-	-	40
517.0600.0002	PAINTING EPOXY SYSTEM B-40-891	LS	-	-	-	-	-	1
550.0500	PILE POINTS	EACH	-	10	11	-	-	21
550.1140	PILING STEEL HP 14-INCH X 73 LB	LF	-	675	740	-	-	1,415
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	45	15	-	-	60
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	50	45	-	-	95
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	7	-	-	6	6	19
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	14	-	-	14	62	90
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	35	-	-	35	93	163
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	-	-	-	-	1,020	1,020
SPV.0090.4445	PRE-BORING SPECIAL	LF	-	165	147	-	-	312
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	540	-	-	540	1,823	2,903
SPV.0180.4800	SLOPE PAVING CRUSHED AGGREGATE SPECIAL	SY	-	161	93	-	-	254
	NON-BID ITEMS							
	NON-BITUMINOUS JOINT SEALER	SIZE	-	-	-	-	-	1/2" - 2"
	JOINT FILLER	SIZE	-	-	-	-	-	1/2" - 2"
	NAME PLATE	EACH	-	-	-	-	-	1
	CORK FILLER	SIZE	-	-	-	-	-	2"

ALL ITEMS ARE CATEGORY 2130

GENERAL NOTES

GENERAL

1. DRAWINGS SHALL NOT BE SCALED.
2. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
3. COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).
4. THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.
5. THE EXISTING BRIDGE B-40-106 IS A 4-SPAN THROUGH PLATE GIRDER RAILROAD BRIDGE. THE ENTIRETY OF THE STRUCTURE WILL BE REMOVED AND PAID FOR UNDER "REMOVING OLD STRUCTURE STA. 559SA+50".
6. THE PARTIAL REMOVAL OF THE WINGWALL ON EXISTING STRUCTURE C-40-027 WILL BE PAID FOR UNDER "REMOVING OLD STRUCTURE STA. 572SA+25".
7. THE PARTIAL REMOVAL OF THE WINGWALL ON EXISTING STRUCTURE C-40-027 IS NOT ANTICIPATED TO CONTAIN ASBESTOS ACCORDING TO THE BRIDGE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE.

DESIGN

1. DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION, 2012 WITH INTERIM REVISIONS, UNLESS OTHERWISE NOTED.

CONCRETE

1. BAR STEEL REINFORCEMENT SHALL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED. THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CLEAR CONCRETE COVER.
2. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
3. THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.
4. FOR BARS NOTED IN THE BILL OF BAR TABLES AS STAINLESS STEEL, PROVIDE STAINLESS STEEL REINFORCEMENT PER THE SPECIAL PROVISION "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES".
5. THE CONCRETE QUANTITIES FOR THE SUPERSTRUCTURE DECK, ABUTMENT DIAPHRAGMS AND PARAPETS SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".
6. THE CONCRETE QUANTITY FOR STRUCTURAL APPROACH SLAB FOOTINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR THE APPROACH SLAB, INCLUDING PARAPETS, SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".
7. APPLY PROTECTIVE SURFACE TREATMENT ON B-40-891 TO THE TOP OF THE DECK SLAB AND TOP OF STRUCTURAL APPROACH SLABS, TO THE TOP AND INSIDE FACES OF PARAPETS ALONG THESE SLABS, AND TO THE PAVING NOTCH SURFACES BEFORE POURING THE STRUCTURAL APPROACH SLABS.
8. COORDINATE THE CONSTRUCTION OF B-40-891 EAST ABUTMENT WITH THE CONSTRUCTION OF RETAINING WALL R-40-501.
9. NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "HPC MASONRY STRUCTURES". FABRICATE ACCORDING TO S.D.D. 12 A 3-10.

STRUCTURAL STEEL

1. ALL FIELD CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER ASTM A325-SC, TYPE 3 BOLTS, UNLESS SHOWN OR NOTED OTHERWISE.
2. PAINT STRUCTURAL STEEL WITH AN EPOXY SYSTEM, UNLESS NOTED OTHERWISE. FINISH COAT SHALL HAVE A COLOR TO MATCH SHERWIN WILLIAMS COLOR "SW6523 - DENIM BLUE" USING A HIGH GLOSS FINISH. OBTAIN APPROVAL OF THE COLOR MATCH FROM THE ENGINEER BEFORE ORDERING.
3. ROLLED STRUCTURAL SHAPES SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.
4. THE CAMBER DIAGRAM HAS BEEN DEVELOPED ASSUMING A CONSTANT 2½" HAUNCH HEIGHT, MEASURED FROM THE UNDERSIDE OF THE DECK TO THE TOP OF THE TOP FLANGE. ANY ADDITIONAL QUANTITIES REQUIRED AS A RESULT OF VARIATION IN THE HAUNCH HEIGHT ARE ASSUMED TO BE INCIDENTAL TO HPC MASONRY STRUCTURES AND WILL NOT BE PAID FOR SEPARATELY. THIS INCLUDES ADDITIONAL CONCRETE IN THE HAUNCH, ADDITIONAL OR MORE COMPLICATED FORM WORK, EXTRA SHEAR STUD LENGTH AND ANY REQUIRED REINFORCEMENT IN THE HAUNCH.

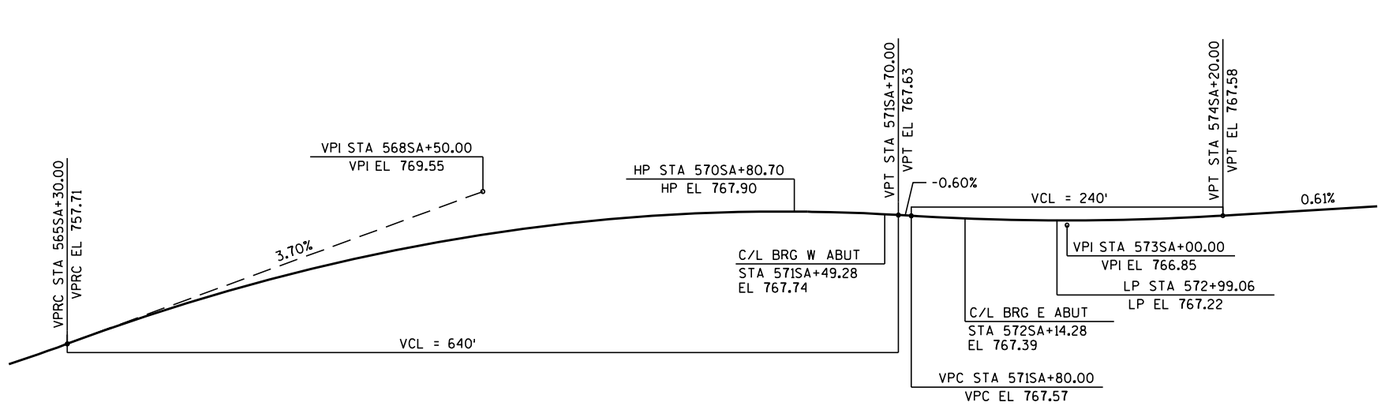
EXCAVATION AND BACKFILL

1. AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
2. THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.
3. FOR PREBORE LOCATIONS, THE CONTRACTOR IS REQUIRED TO BOTH INSTALL TEMPORARY CASING AND USE WATER OR SLURRY DURING PRE-BORING TO ENSURE A STABLE OPEN HOLE FOR INSERTION OF PILE AND PLACEMENT OF "BACKFILL CONTROLLED LOW STRENGTH". THESE REQUIREMENTS SHALL BE INCIDENTAL TO THE ITEM "PRE-BORING SPECIAL".

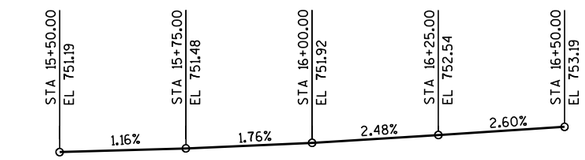
HORIZONTAL CURVE DATA

℄ SA, CURVE SA3

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Y: 295617.11
Δ = 4°36'35" RIGHT
D = 4°07'19"
T = 55.94'
L = 111.83'
R = 1390.00'
P.C. = 570SA+11.17
X: 570508.81
Y: 295634.37
P.T. = 570SA+23.00
X: 570613.68
Y: 295595.63



PROFILE GRADE LINE - RAMP SA



PROFILE GRADE LINE - EXISTING ZOO SERVICE ROAD

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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QUANTITIES, NOTES & PROFILE GRADE LINES

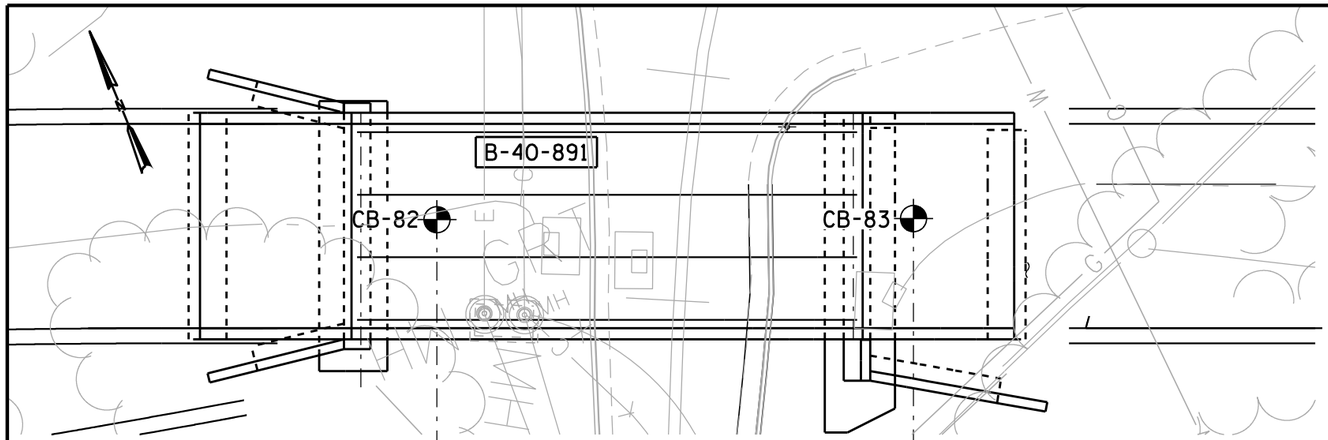
SHEET 3 OF 19

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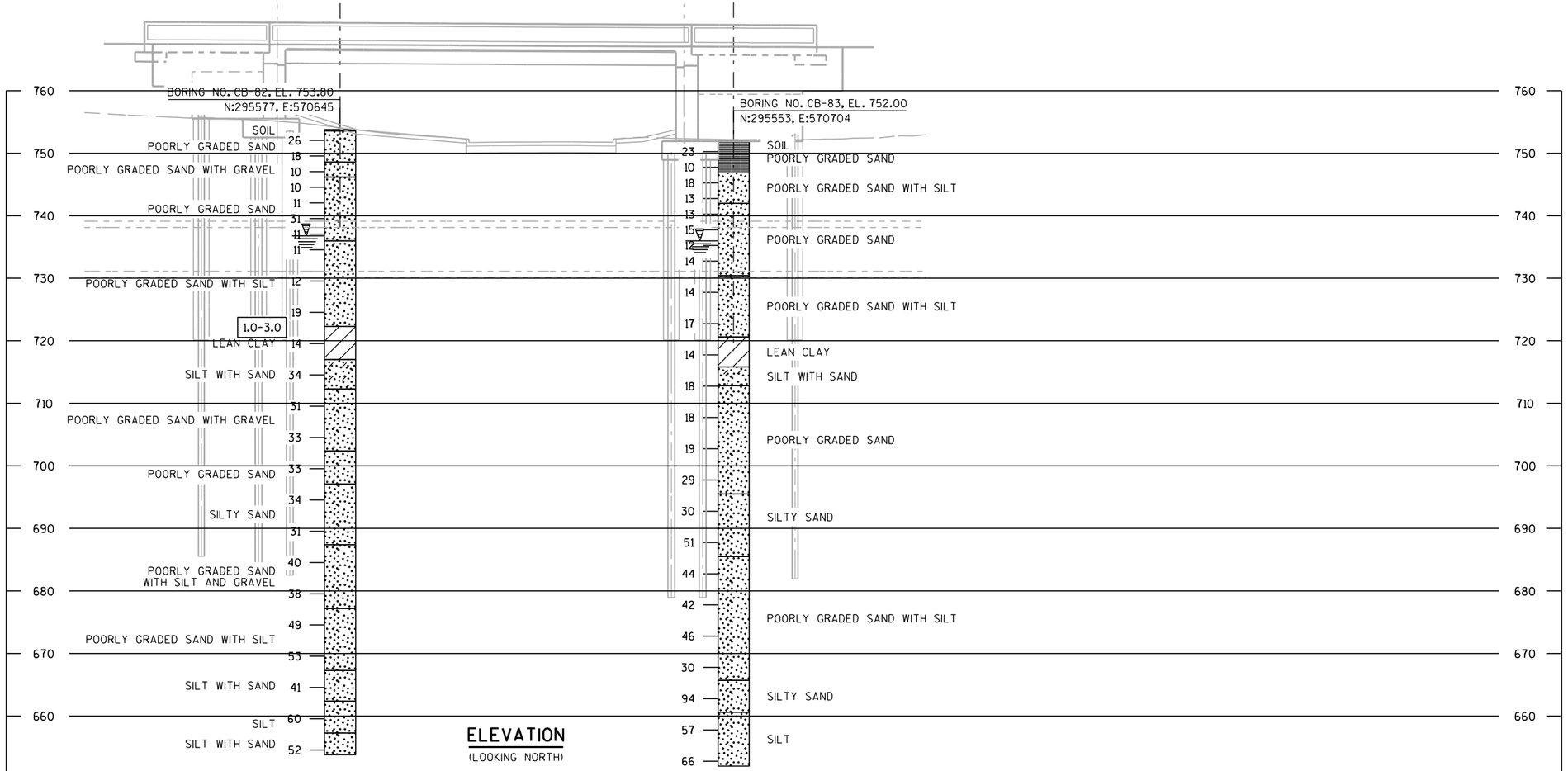
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PLAN

(SIMPLE SPAN ROLLED WIDE FLANGE GIRDER)



ELEVATION

(LOOKING NORTH)

NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IA AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING INC.

SOIL BORINGS TAKEN:
NOVEMBER 20, 2012 - BORING CB-82
NOVEMBER 19, 2012 - BORING CB-83

STATE PROJECT NUMBER

1060-33-80

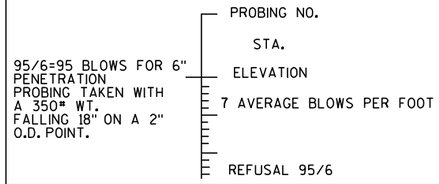
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

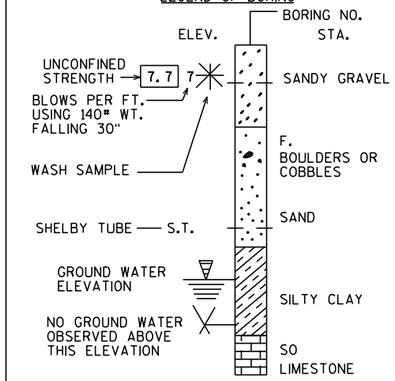
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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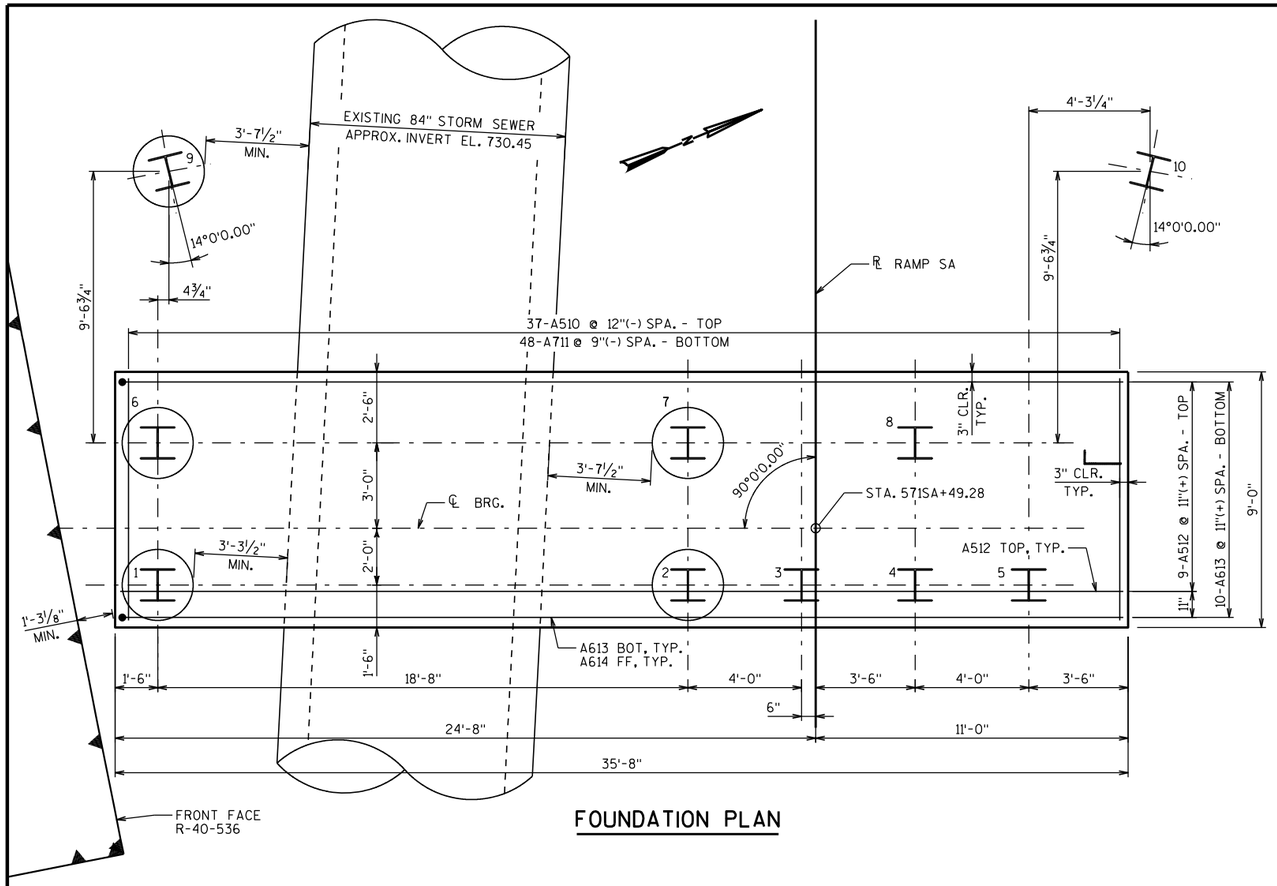
SUBSURFACE EXPLORATION

SHEET 4 OF 19

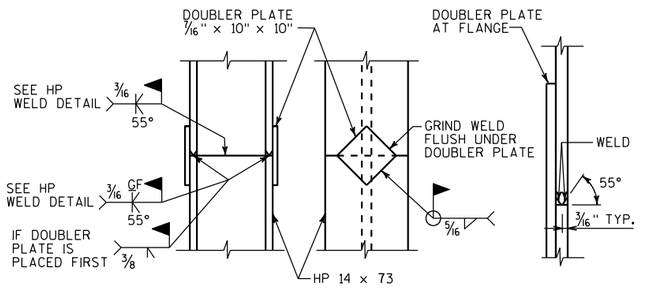
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STATE PROJECT NUMBER
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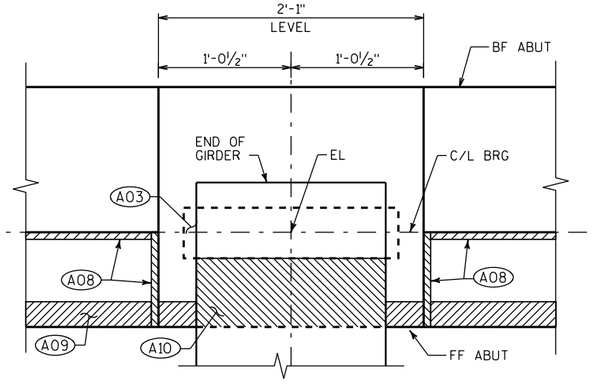
FOUNDATION PLAN



STEEL 'HP' SHAPE

'HP' WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL



TYPICAL BEAM SEAT DETAIL

LEGEND

HP14x73 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD. DRIVE PILES USING PILE POINTS.

PREBORED PILE TO EL. 720.45. DRILL 2'-6" DIA. HOLE WITH TEMPORARY CASING PER "PRE-BORING SPECIAL". BACKFILL HOLE WITH "BACKFILL CONTROLLED LOW STRENGTH" TO BOTTOM OF FOOTING/WING WALL. PILES TO CONSIST OF HP14x73 WITH REQUIRED DRIVING RESISTANCE 250 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD. DRIVE PILES USING PILE POINTS.

(A03) ¾" THICK x 8" x 1'-5" ELASTOMERIC BEARING PAD, TYP.

(A08) 2" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP.

(A09) 4" X¾" FILLER, TYP. RUN FULL LENGTH OF ABUTMENT.

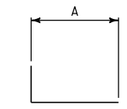
(A10) 1" FILLER UNDER GIRDERS, TYP.

NOTES

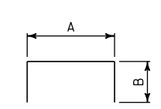
1. SEE "WEST ABUTMENT PLAN & ELEVATION" SHEET FOR WEST ABUTMENT STEM DETAILS.

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	15	3'-11"	X		STEM - STIRRUP BTWN SEATS
A402	X	6	8'-2"			STEM - HORZ BTWN SEATS
A403	X	4	8'-10"			STEM - EXTRA TOP HORZ
A704	X	3	32'-0"			STEM - TOP HORZ
A705	X	11	34'-0"	X		STEM - HORZ FRONT FACE
A1006	X	10	35'-1"	X		STEM - HORZ BACK FACE
A507	X	33	5'-10"	X		STEM - TOP STIRRUP
A608	X	33	10'-6"			STEM - VERT. FRONT FACE
A709	X	40	11'-6"	X		STEM - VERT. BACK FACE
A510		37	8'-6"			FTG - SHORT TOP
A711		48	8'-6"			FTG - SHORT BOT
A512		9	35'-2"			FTG - LONG TOP
A613		10	36'-0"	X		FTG - LONG BOT
A614		4	35'-2"			FTG - FRONT FACE



BAR MARK	DIM "A"
A709	10'-6"
A613	35'-2"



BAR MARK	DIM "A"	DIM "B"
A401	1'-11"	1'-1"
A705	32'-0"	1'-2"
A1006	32'-0"	1'-10"
A507	3'-1"	1'-6"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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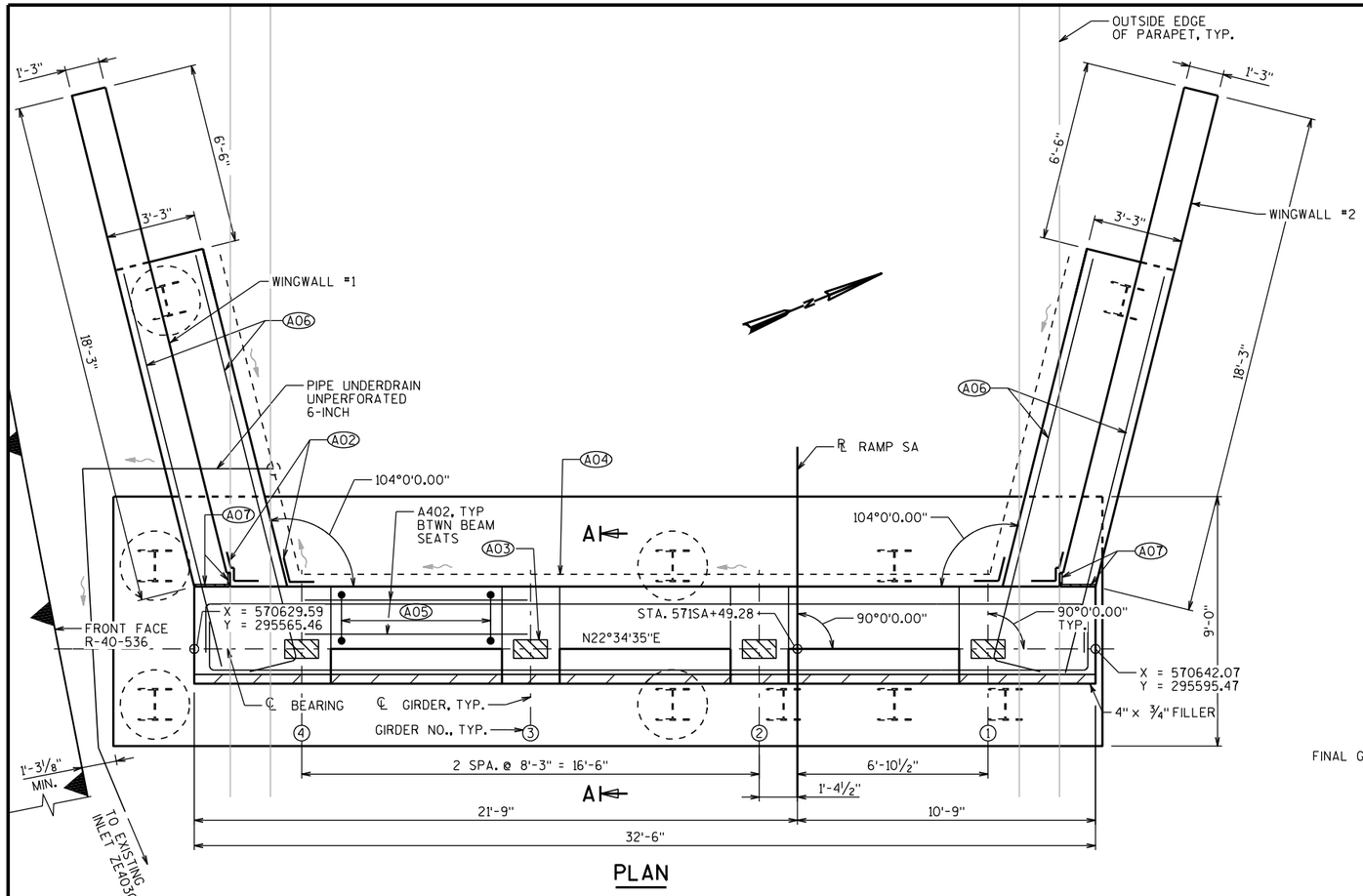
WEST ABUTMENT
FOUNDATION PLAN

SHEET 5 OF 19

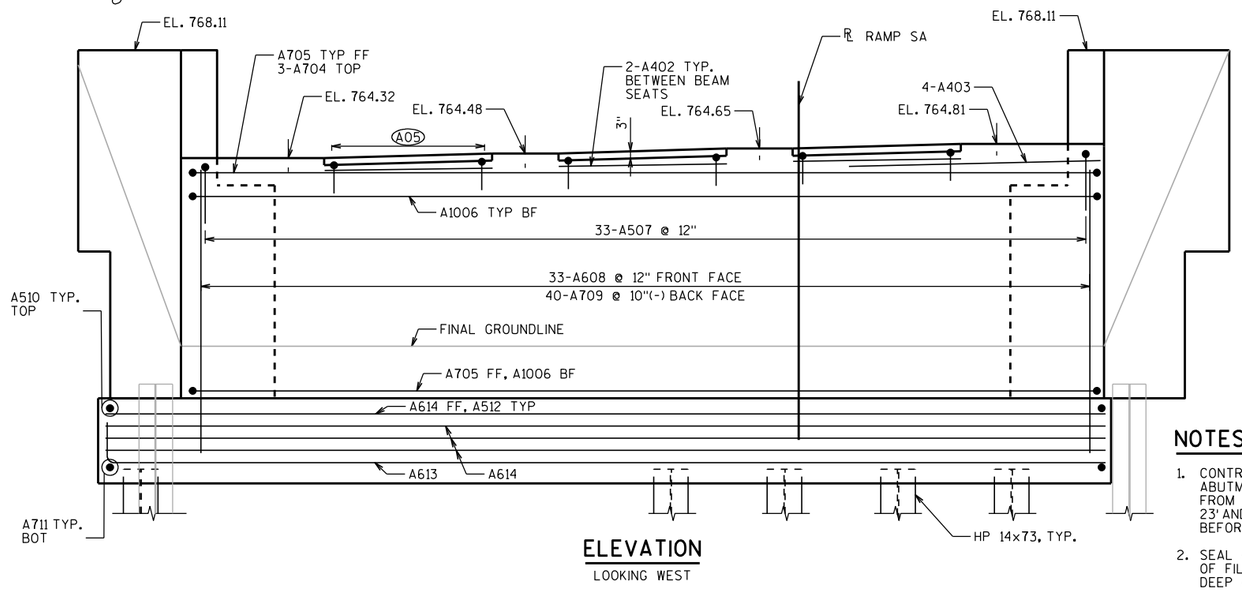
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STATE PROJECT NUMBER
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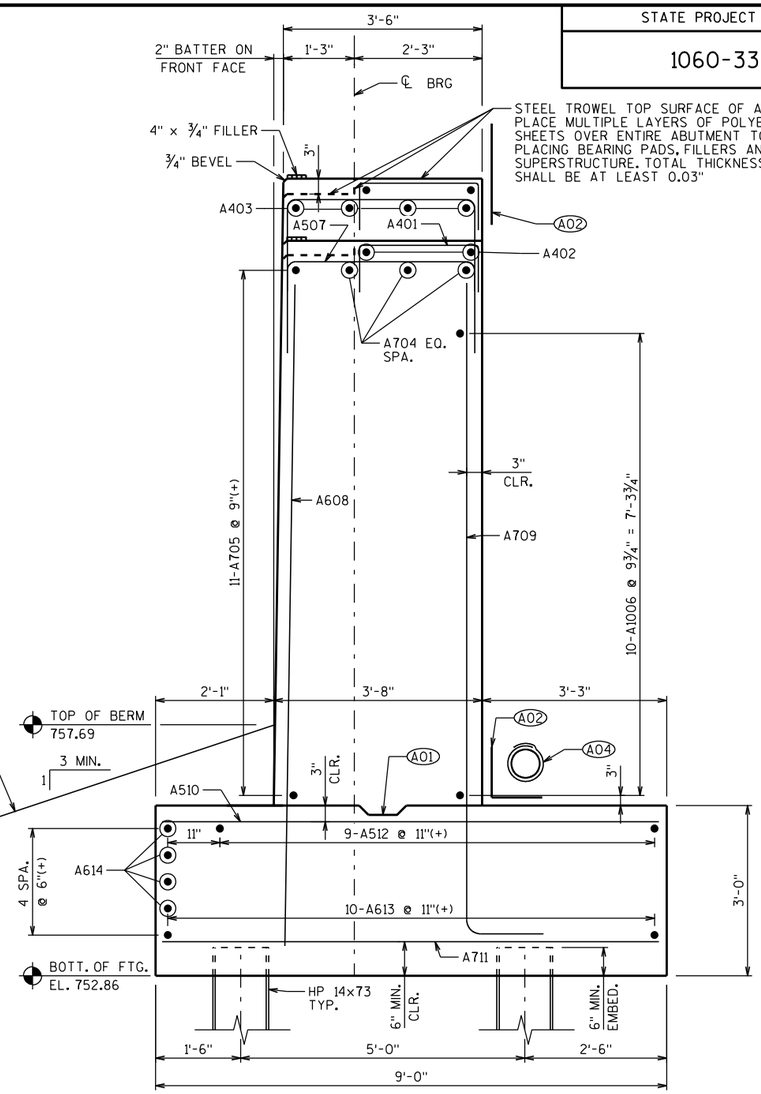


PLAN



ELEVATION

LOOKING WEST



SECTION A-A

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6".
- (A02) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A03) ¾" THICK × 8" × 1'-5" ELASTOMERIC BEARING PAD, TYP.
- (A04) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN.
- (A05) 5-A401 @ 1'-6" MAX, BETWEEN GIRDER SEATS
- (A06) SEE WING WALL DETAIL SHEET FOR WING REINFORCEMENT.
- (A07) ½" FILLER, SEE "WING WALL DETAILS" FOR VERTICAL LIMITS.
- PIPE UNDERDRAIN FLOW DIRECTION

NOTES

1. CONTRACTOR SHALL COMPLETE BACKFILLING BEHIND ABUTMENT AND WINGS FOR A DISTANCE MEASURED NORMAL FROM THE BACK FACE OF THE ABUTMENT NO LESS THAN 23' AND UP TO AN ELEVATION NO LOWER THAN EL. 764.00 BEFORE CASTING SEMI-EXPANSION DIAPHRAGM.
2. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
3. SEE "WEST ABUTMENT FOUNDATION PLAN" SHEET FOR ABUTMENT BILL OF BARS AND ADDITIONAL DETAILS.
4. SEE "WING WALL DETAILS" SHEET FOR WINGWALL BILL OF BARS AND ADDITIONAL DETAILS.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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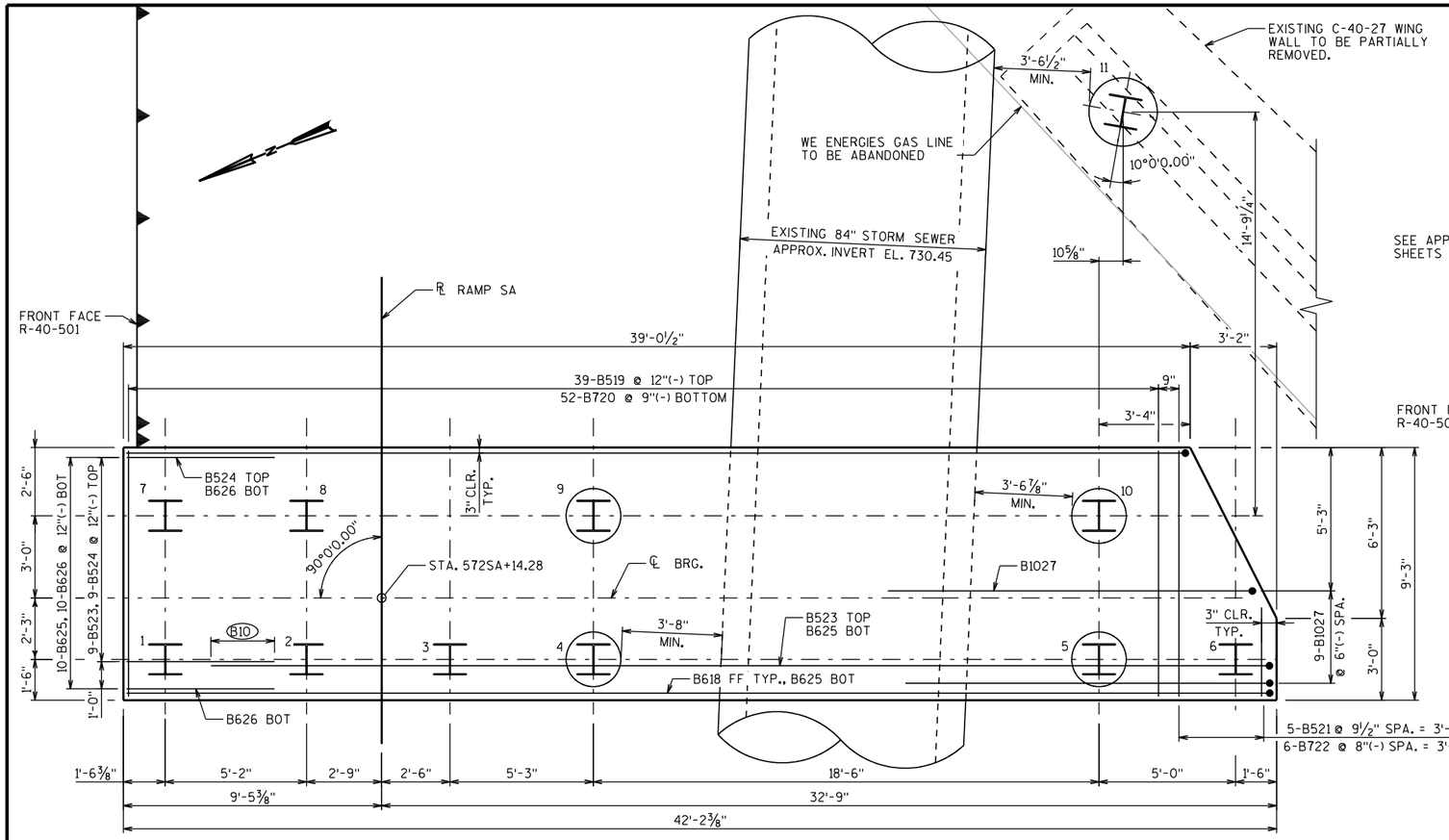
WEST ABUTMENT PLAN & ELEVATION

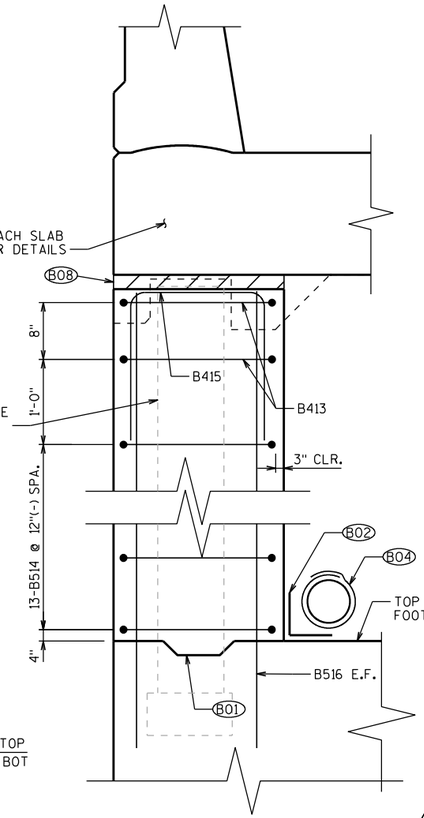
SHEET 6 OF 19

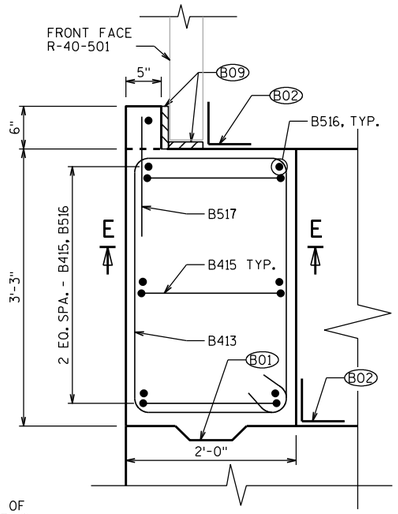
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SIDEWALL DETAIL D

SIDEWALL SECTION E-E

LEGEND

HP14x73 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD. DRIVE PILES USING PILE POINTS.

PREBORED PILE TO EL. 720.45. DRILL 2'-6" DIA. HOLE WITH TEMPORARY CASING PER "PRE-BORING SPECIAL". BACKFILL HOLE WITH "BACKFILL CONTROLLED LOW STRENGTH" TO BOTTOM OF FOOTING/WING WALL. PILES TO CONSIST OF HP14x73 WITH REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES ACCEPTANCE METHOD. DRIVE PILES USING PILE POINTS.

B01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6".

B02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

B04 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN.

B08 2" JOINT FILLER WITH NON-BITUMINUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN.

B09 1" FILLER

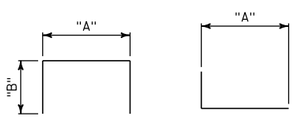
B10 1'-10" MIN. LAP TOP, 1'-7" MIN. LAP BOT

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401	X	15	3'-11"	X		STEM - STIRRUP BTWN SEATS
B402	X	6	8'-2"			STEM - HORZ BTWN SEATS
B403	X	4	8'-10"			STEM - EXTRA TOP HORZ
B704	X	3	34'-10"			STEM - TOP HORZ
B705	X	15	36'-10"	X		STEM - HORZ FRONT FACE
B1006	X	10	37'-11"	X		STEM - HORZ BACK FACE
B507	X	36	5'-10"	X		STEM - TOP STIRRUP
B608	X	36	13'-9"			STEM - VERT FRONT FACE
B709	X	43	14'-9"	X		STEM - VERT BACK FACE
B610	X	3	34'-10"			STEM - HORZ BACK FACE TOP
B511	X	6	9'-10"	X		BACKWALL - VERT
B412	X	8	5'-0"			BACKWALL - HORZ
B413	X	2	9'-4"	X		STUB WALL - HORZ STIRRUP TOP
B514	X	13	10'-10"	X		STUB WALL - HORZ STIRRUPS
B415	X	3	4'-7"	X		STUB WALL - VERT STIRRUP
B516	X	7	15'-0"			STUB WALL - VERT
B517	X	15	2'-1"			STUB WALL - HORZ
B618		4	41'-8"			FTG - LONG FRONT FACE
B519		39	8'-9"			FTG - SHORT TOP TYP
B720		52	8'-9"			FTG - SHORT BOT TYP
B521		5	5'-9"		⚠	FTG - SHORT TOP SERIES
B722		6	5'-9"		⚠	FTG - SHORT BOT SERIES
B523		9	38'-6"			FTG - LONG TOP
B524		9	5'-0"			FTG - LONG TOP
B625		10	39'-4"	X		FTG - LONG BOT
B626		10	4'-9"			FTG - LONG BOT
B1027		9	14'-10"	X		FTG - LONG BOT SW CORNER

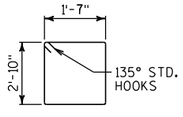
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

FOUNDATION PLAN



BAR MARK	DIM "A"	DIM "B"
B401	1'-11"	1'-1"
B705	34'-10"	1'-2"
B1006	34'-10"	1'-10"
B507	3'-1"	1'-6"
B511	9"	4'-8"
B514	1'-7"	4'-9"
B415	1'-5"	1'-8"

BAR MARK	DIM "A"
B709	13'-9"
B625	38'-6"
B1027	13'-4"

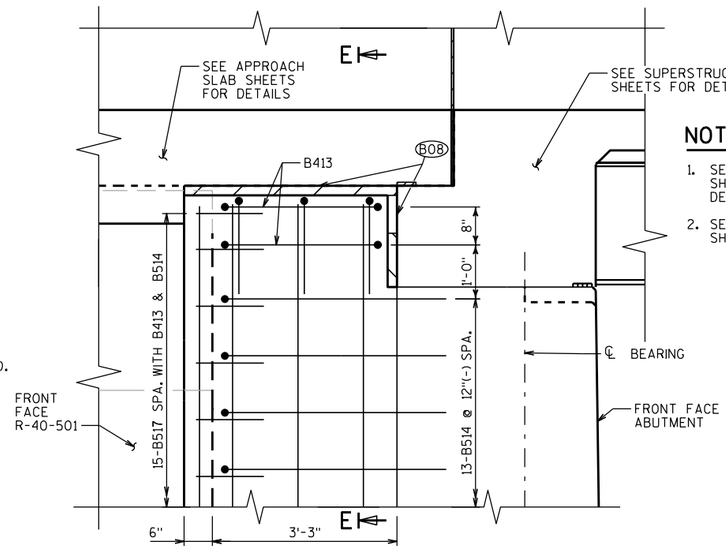


B413

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B521	1 SERIES OF 5	2'-9" TO 8'-9"
B722	1 SERIES OF 6	2'-9" TO 8'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY



SIDEWALL ELEVATION C-C

LOOKING SOUTH

NOTES

1. SEE "WEST ABUTMENT FOUNDATION PLAN" SHEET FOR PILE SPLICE & BEAM SEAT DETAILS
2. SEE "EAST ABUTMENT PLAN & ELEVATION" SHEET FOR EAST ABUTMENT STEM DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

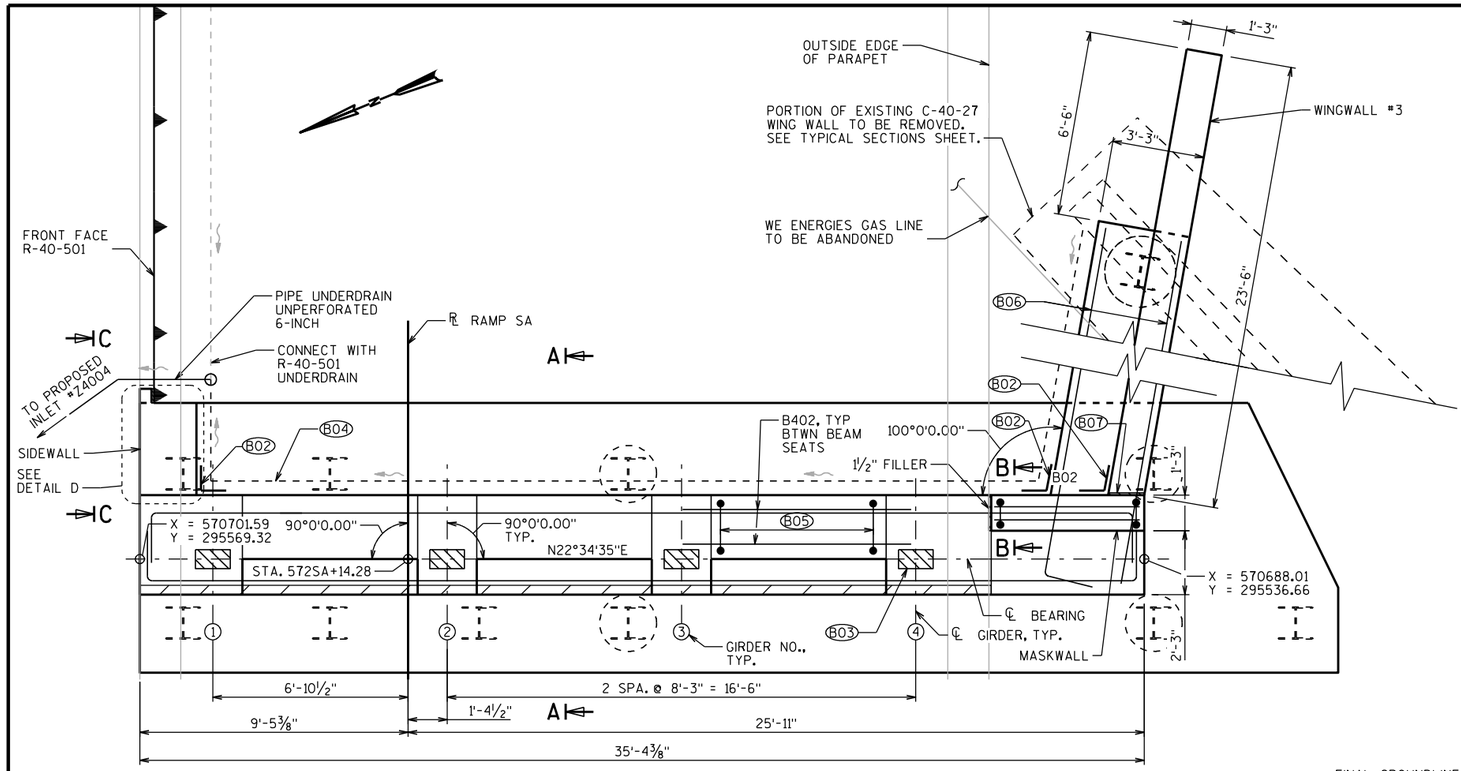
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EAST ABUTMENT FOUNDATION PLAN

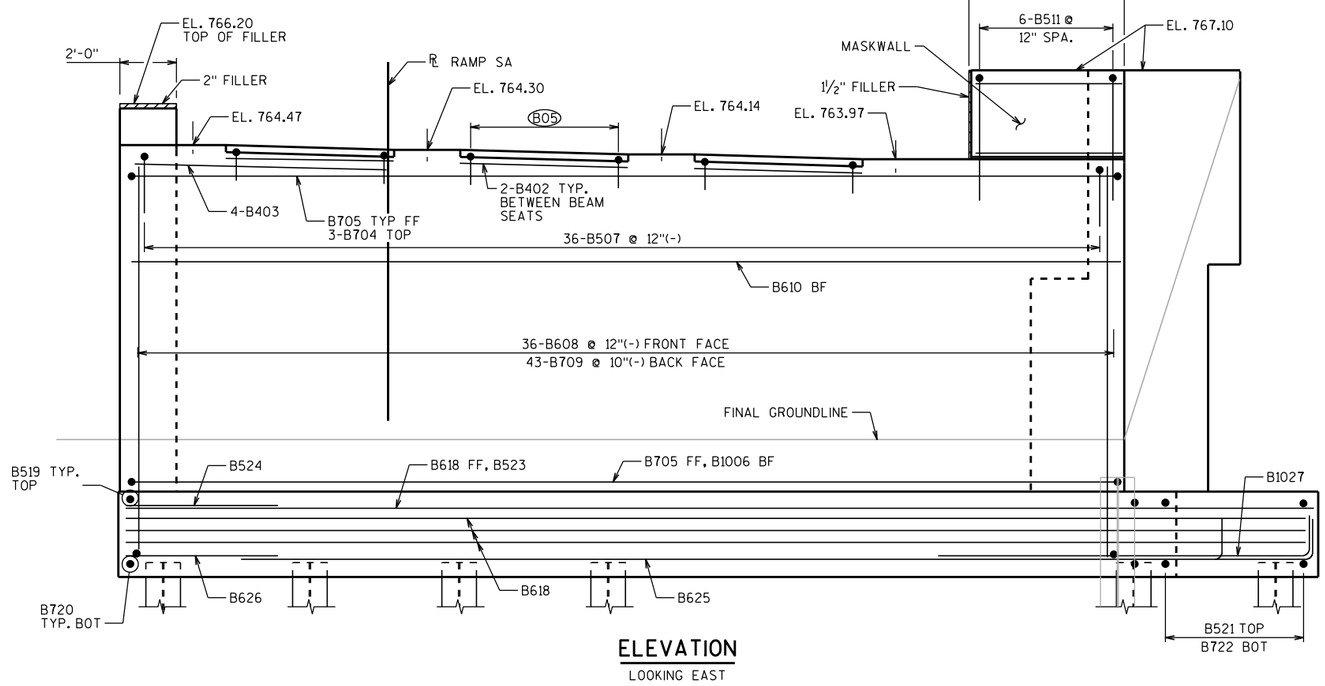
SHEET 7 OF 19

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PLOT DATE : 13-MAY-2014 14:51 PLOT BY : MSCMSS PLOT NAME : 080303_ab PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80

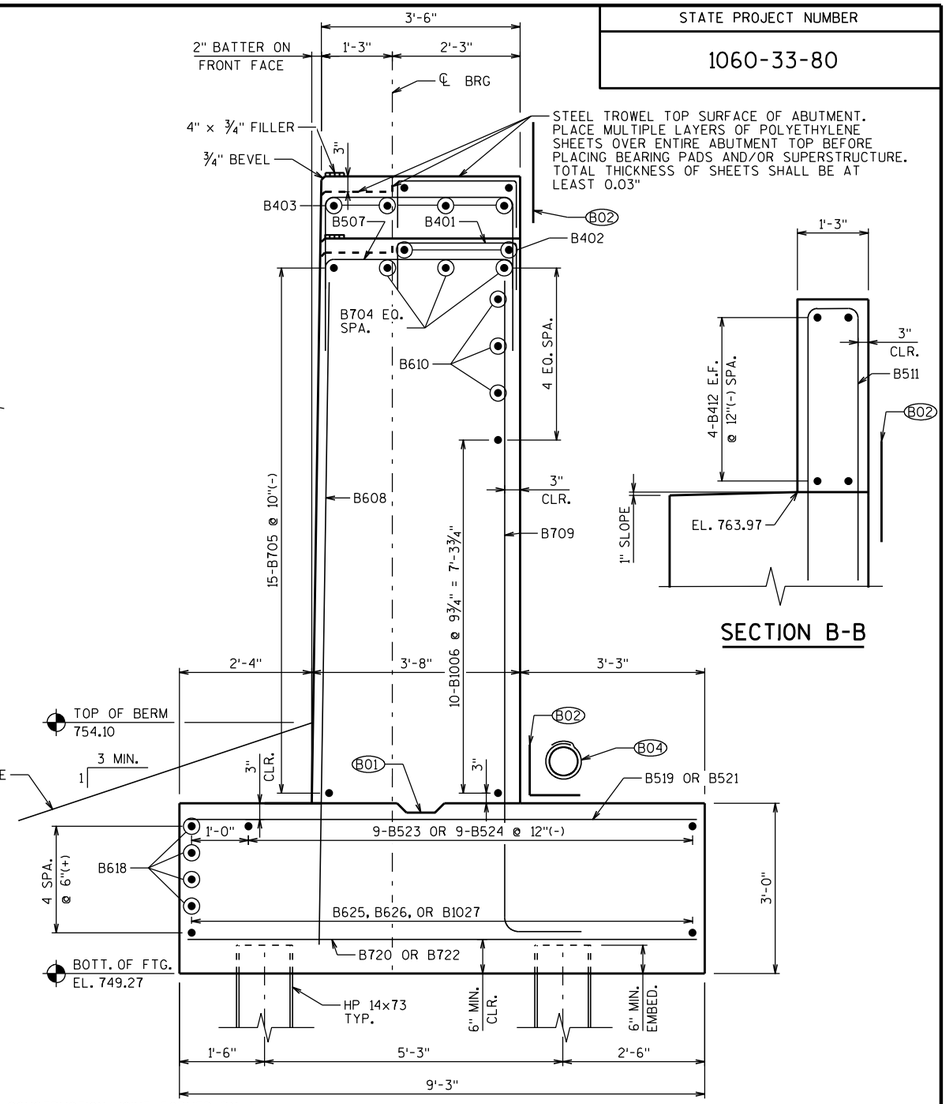


PLAN



ELEVATION

LOOKING EAST



SECTION A-A

LEGEND

- (B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6".
- (B02) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (B03) ¾" THICK × 8" × 1'-5" ELASTOMERIC BEARING PAD, TYP.
- (B04) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN.
- (B05) 5-B401 @ 1'-6" MAX, BETWEEN GIRDER SEATS
- (B06) SEE WING WALL DETAIL SHEET FOR WING REINFORCEMENT.
- (B07) ½" FILLER, SEE "WING WALL DETAILS" FOR VERTICAL LIMITS.
- PIPE UNDERDRAIN FLOW DIRECTION

NOTES

1. CONTRACTOR SHALL COMPLETE BACKFILLING BEHIND ABUTMENT AND WINGS FOR A DISTANCE MEASURED NORMAL FROM THE BACK FACE OF THE ABUTMENT NO LESS THAN 27' AND UP TO AN ELEVATION NO LOWER THAN EL. 763.00 BEFORE CASTING SEMI-EXPANSION DIAPHRAGM.
2. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
3. SEE "EAST ABUTMENT FOUNDATION PLAN" SHEET FOR BILL OF BARS AND ADDITIONAL DETAILS.
4. SEE "WING WALL DETAILS" SHEET FOR WING WALL BILL OF BARS AND ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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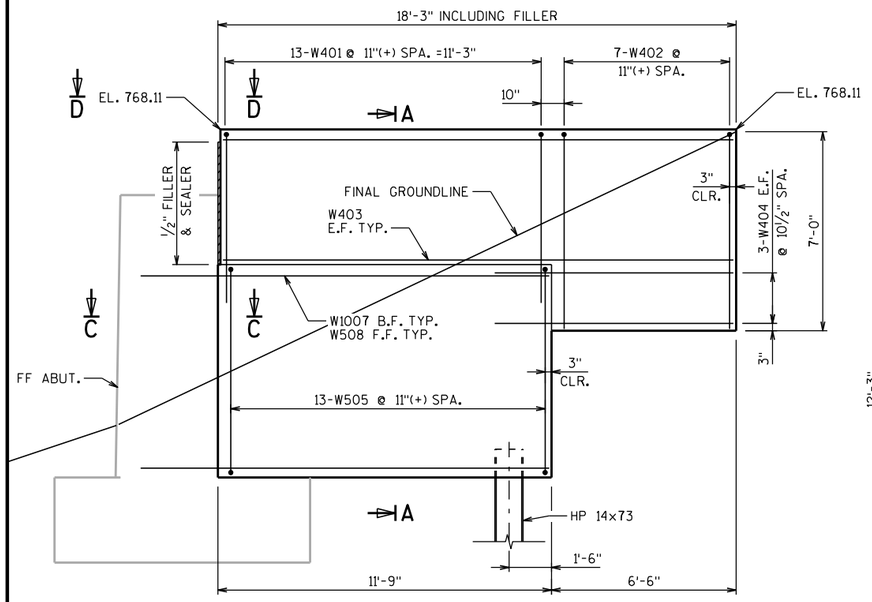
EAST ABUTMENT PLAN & ELEVATION

SHEET 8 OF 19

8

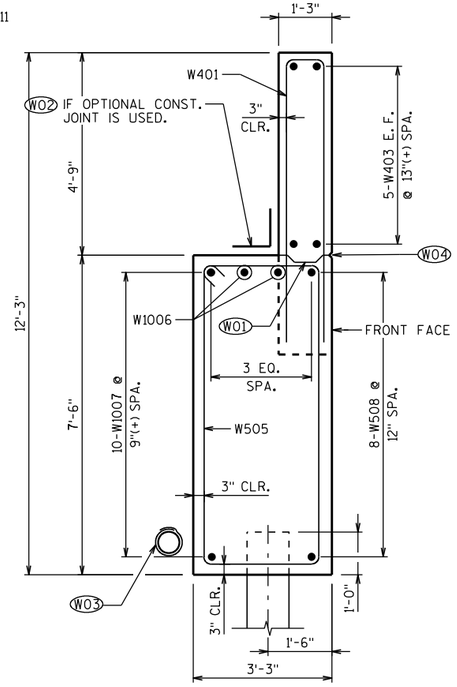
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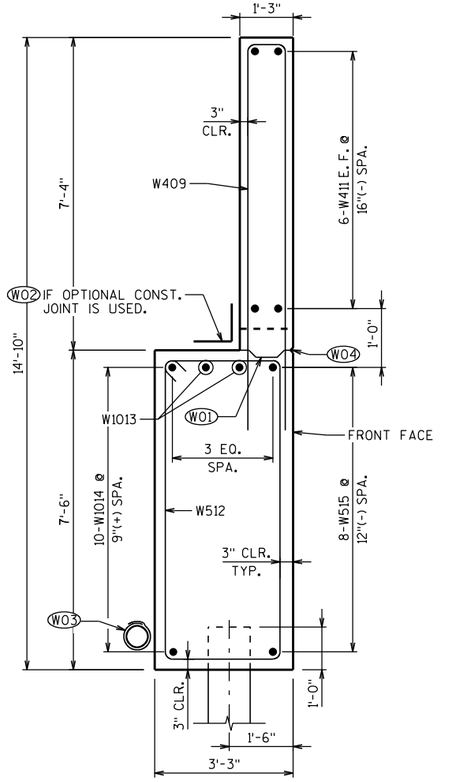
ELEVATION WING WALLS 1 & 2

OUTSIDE FACE
WING WALL 2 SHOWN, WING WALL 1 SIMILAR



SECTION A-A

WING WALLS 1 & 2



SECTION B-B

WING WALL 3

NOTES

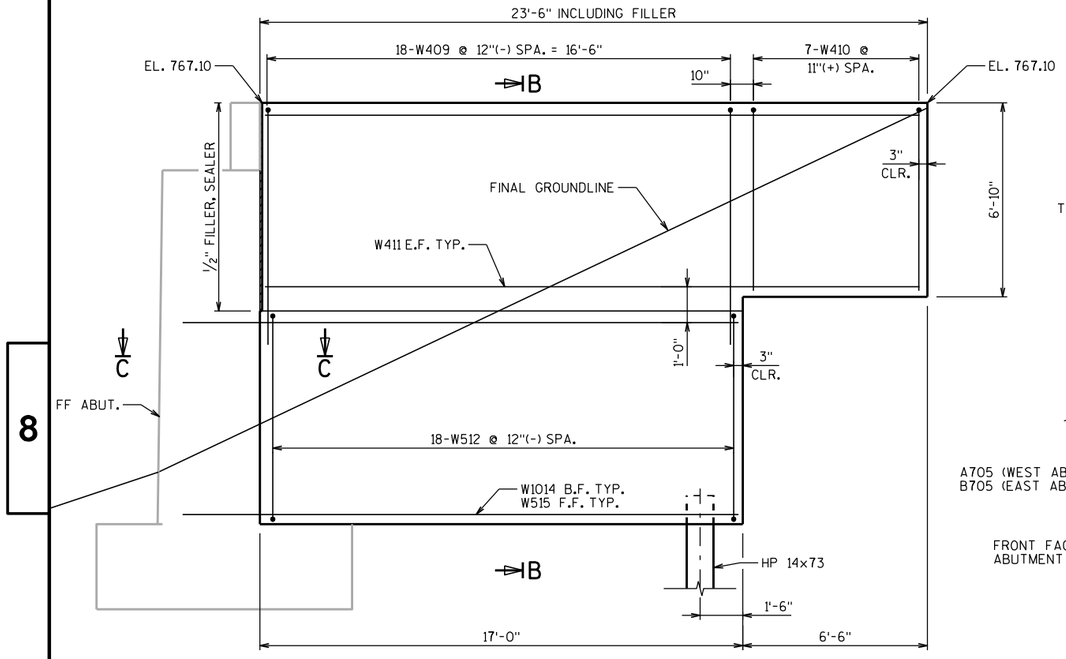
1. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).
2. SEE ABUTMENT DETAILS SHEETS FOR PILE LOCATIONS AND DETAILS.

LEGEND

- W01 OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH RUBBERIZED MEMBRANE WATERPROOFING ON BACKFACE.
- W02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- W03 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. SEE ABUTMENT PLAN & ELEVATION SHEETS.
- W04 3/4" V GROOVE. TERMINATE AT BACK FACE OF ABUTMENT.
- W07 1/2" FILLER

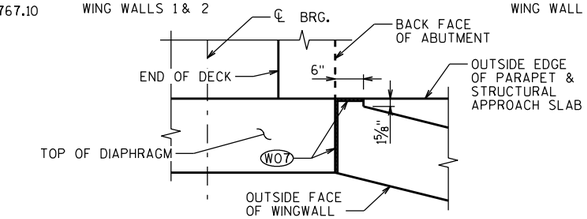
BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
W401	X	26	11'-10"	X		WINGS 1&2 - UPPER STIRRUP
W402	X	14	13'-8"	X		WINGS 1&2 - UPPER STIRRUP
W403	X	20	17'-9"			WINGS 1&2 - UPPER HORZ
W404	X	12	7'-8"			WINGS 1&2 - HORZ
W505	X	26	20'-2"	X		WINGS 1&2 - LOWER STIRRUP
W1006	X	4	14'-6"			WINGS 1&2 - LOWER HORZ
W1007	X	20	16'-6"	X		WINGS 1&2 - LOWER BACK FACE
W508	X	16	13'-6"			WINGS 1&2 - LOWER FRONT FACE
W409	X	18	17'-0"	X		WING 3 - UPPER STIRRUP
W410	X	7	13'-4"	X		WING 3 - UPPER STIRRUP
W411	X	12	23'-0"			WING 3 - UPPER HORZ
W512	X	18	20'-2"	X		WING 3 - LOWER STIRRUP
W1013	X	2	19'-9"			WING 3 - LOWER HORZ
W1014	X	10	21'-6"	X		WING 3 - LOWER BACK FACE
W515	X	8	18'-6"			WING 3 - LOWER FRONT FACE



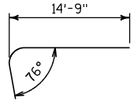
ELEVATION WING WALL 3

OUTSIDE FACE

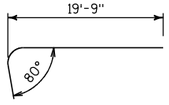


SECTION D-D

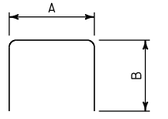
WING WALL 2 SHOWN
WING WALL 1 SIMILAR



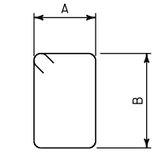
W1007



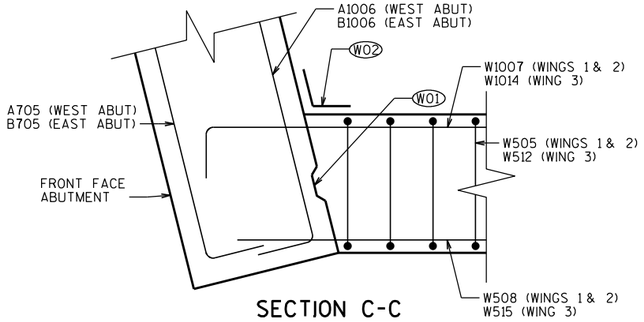
W1014



BAR MARK	DIM 'A'	DIM 'B'
W401	10"	5'-7"
W402	10"	6'-6"
W409	10"	8'-2"
W410	10"	6'-4"



BAR MARK	DIM 'A'	DIM 'B'
W505	2'-10"	7'-0"
W512	2'-10"	7'-0"



SECTION C-C

WING WALLS 2 & 3 SHOWN
WING WALL 1 SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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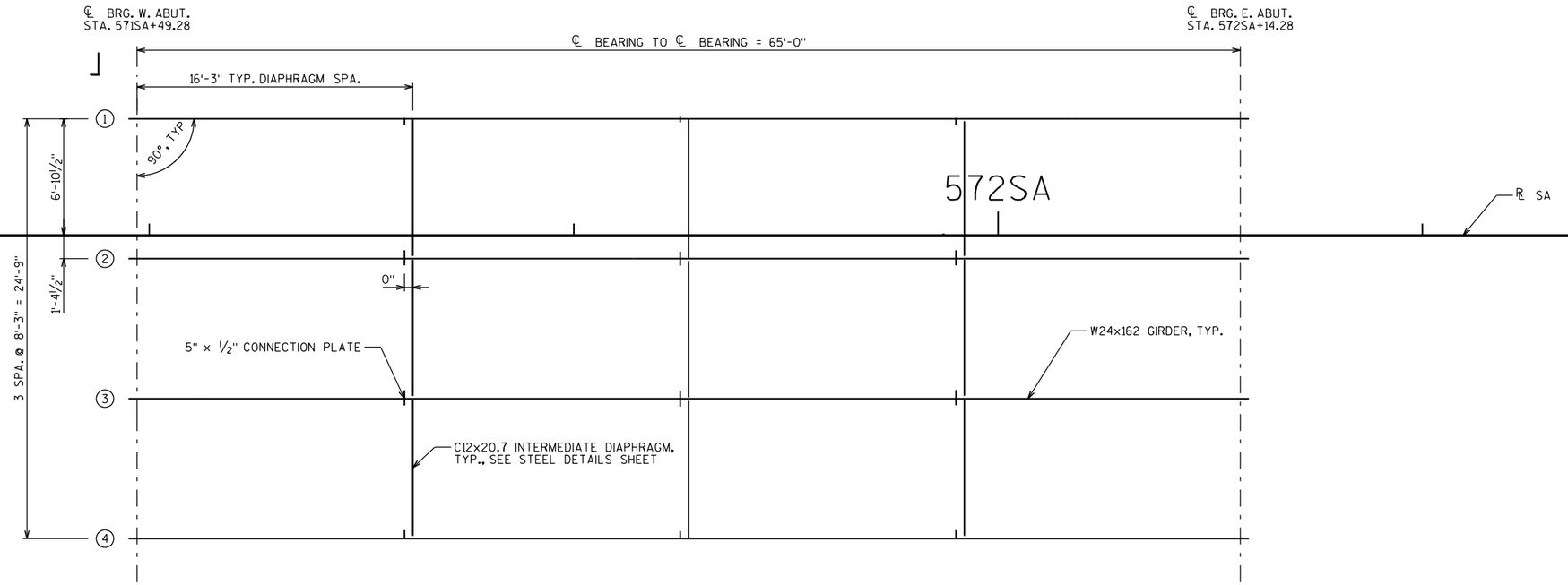
WING WALL DETAILS

SHEET 9 OF 19

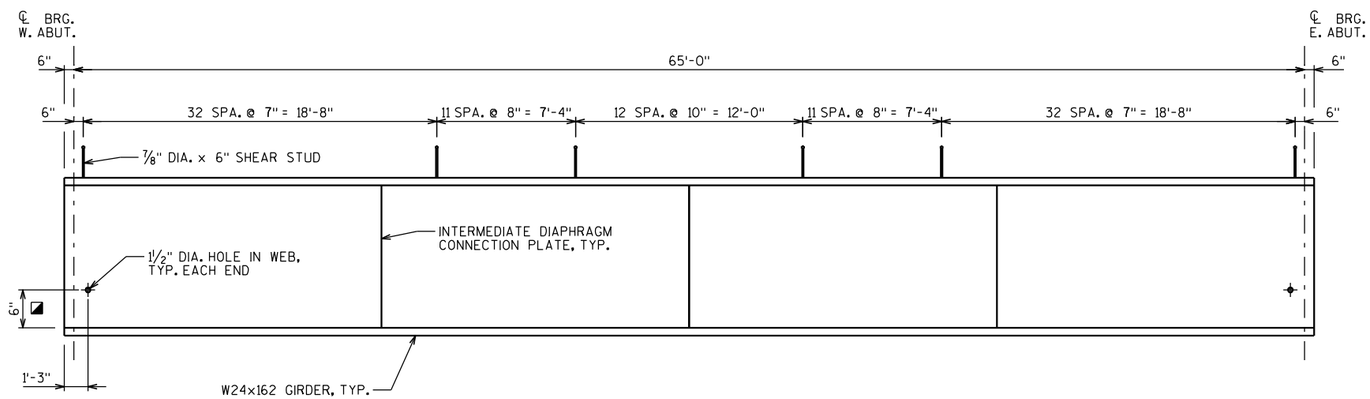
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STATE PROJECT NUMBER
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GIRDER FRAMING PLAN



TYPICAL GIRDER ELEVATION

VERTICAL SCALE EXAGGERATED

NOTES

◪ DIMENSION MEASURED FROM TOP OF BOTTOM FLANGE

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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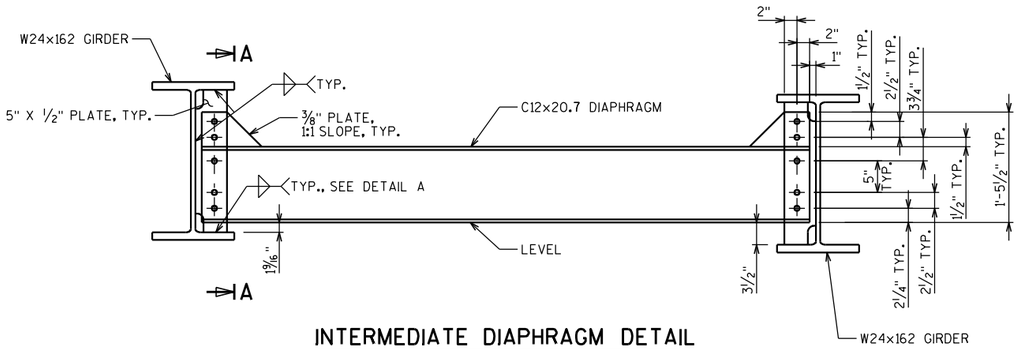
FRAMING PLAN & GIRDER ELEVATION

SHEET 10 OF 19

8

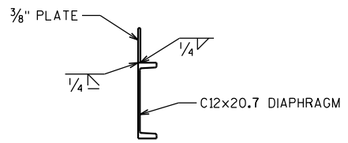
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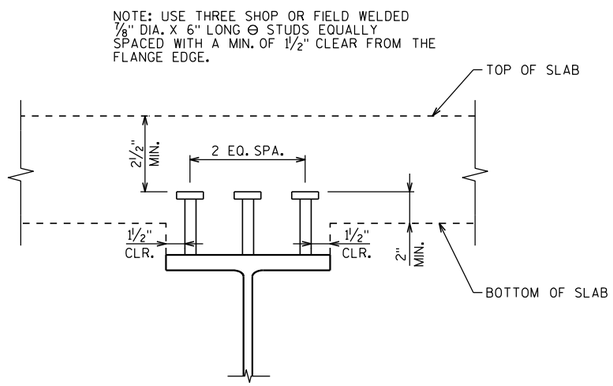


INTERMEDIATE DIAPHRAGM DETAIL

TYPICAL ALL GIRDERS

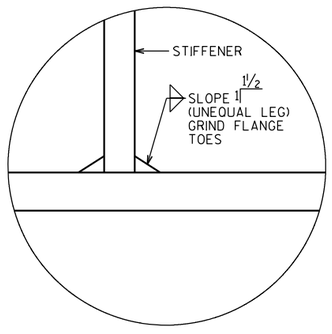


SECTION A-T



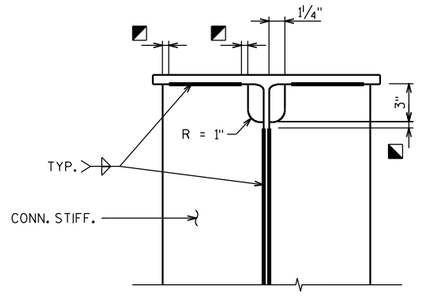
Θ USE DIFFERENT LENGTH STUDS IF 2 1/2" MIN. CLEARANCE OR 2" EXTENSION CRITERIA IS VIOLATED

SHEAR CONNECTOR DETAILS



DETAIL A

CONNECTION STIFFENER
DETAIL @ TENSION FLANGE



1/4" MIN., 1/2" MAX., TYP.

CONN. STIFF TO WEB/FLANGE CONN. WELDS

MINIMUM FILLET WELD SIZE:

THICKNESS OF THICKER PART JOINED	MINIMUM WELD SIZE
T <= 1/2"	3/16"
1/2" < T <= 3/4"	1/4"
3/4" < T <= 1 1/2"	5/16"
1 1/2" < T <= 2 1/4"	3/8"

1. MINIMUM WELD SIZES SHOWN SHALL BE USED WHEN A SIZE IS NOT OTHERWISE SPECIFIED OR SHOWN.
2. WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART BEING JOINED.
3. FOR ALL WELDS 5/16" OR LARGER, THE MINIMUM PASS SIZE SHALL BE 5/16".

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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STEEL DETAILS

SHEET 11 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-891\cds\080502_ss.dgn PLOT DATE : 13-MAY-2014 14:51 PLOT BY : MSCMSS PLOT NAME : 080502_ss PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80

DEAD LOAD DEFLECTIONS

GIRDERS 1 & 4	℄ BRG.	SPAN									℄ BRG.
	W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	E. ABUT.
CONCRETE ONLY	0.000	0.063	0.120	0.164	0.192	0.202	0.192	0.164	0.120	0.063	0.000
TOTAL	0.000	0.076	0.144	0.198	0.232	0.243	0.232	0.198	0.144	0.076	0.000

GIRDERS 2 & 3	℄ BRG.	SPAN									℄ BRG.
	W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	E. ABUT.
CONCRETE ONLY	0.000	0.072	0.135	0.185	0.217	0.228	0.217	0.185	0.135	0.072	0.000
TOTAL	0.000	0.085	0.162	0.221	0.259	0.272	0.259	0.221	0.162	0.085	0.000

NOTES
DEFLECTIONS ARE GIVEN IN DECIMALS OF A FOOT.

CONCRETE DEFLECTION INCLUDES CONCRETE SLAB, HAUNCH, AND BARRIERS.

TOTAL DEFLECTION INCLUDES ALL OF ABOVE PLUS DEFLECTIONS DUE TO SELF-WEIGHT OF STEEL.

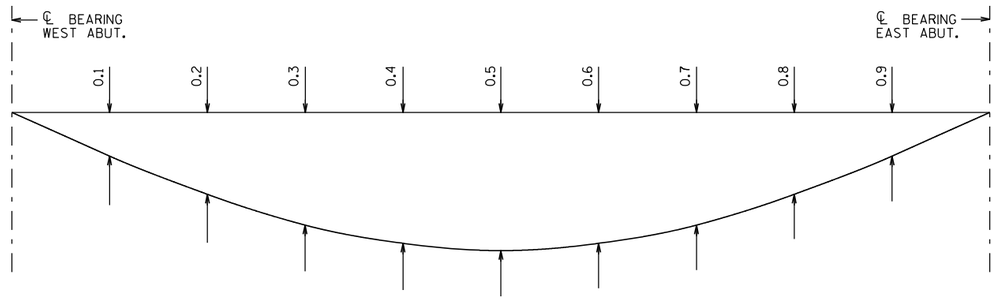
TOP OF DECK ELEVATIONS

	LOCATION	℄ BRG. W. ABUT.	SPAN 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BRG. E. ABUT.
(1)	NORTH PARAPET	767.90	767.87	767.83	767.80	767.76	767.72	767.68	767.65	767.61	767.58	767.55
	GIRDER 1	767.88	767.85	767.81	767.77	767.74	767.70	767.66	767.62	767.59	767.56	767.53
	PGL	767.74	767.71	767.67	767.64	767.60	767.56	767.52	767.49	767.45	767.42	767.39
	GIRDER 2	767.71	767.68	767.65	767.61	767.57	767.53	767.49	767.46	767.43	767.40	767.37
	GIRDER 3	767.55	767.52	767.48	767.44	767.41	767.37	767.33	767.29	767.26	767.23	767.20
	GIRDER 4	767.38	767.35	767.32	767.28	767.24	767.20	767.16	767.13	767.10	767.07	767.04
(1)	SOUTH PARAPET	767.36	767.33	767.29	767.26	767.22	767.18	767.14	767.11	767.07	767.04	767.01

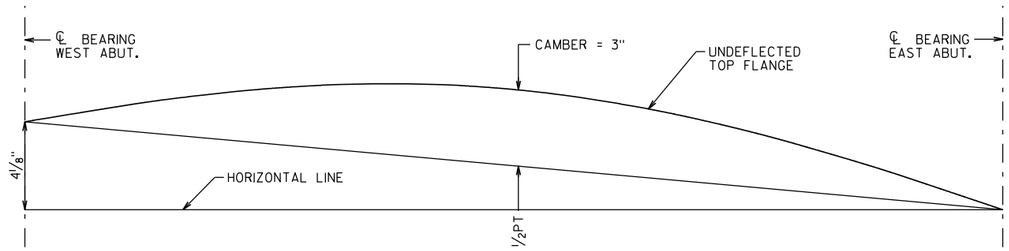
TOP OF ERECTED STEEL

	℄ BRG W ABUT	℄ BRG E ABUT
GIRDER 1	766.96	766.62
GIRDER 2	766.80	766.45
GIRDER 3	766.63	766.29
GIRDER 4	766.47	766.12

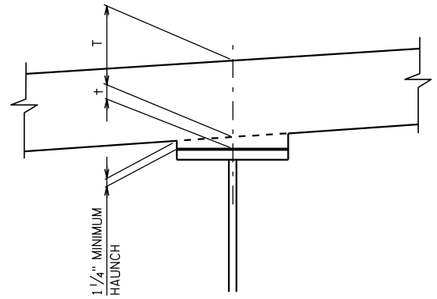
ELEVATIONS ARE TO TOP OF STEEL AND ARE FOR THE MATERIAL AS ERECTED.



DEFLECTION DIAGRAM



CAMBER AND BLOCKING DIAGRAM
(TYP. ALL GIRDERS)



HAUNCH DETAIL

NOTES

(1) TOP OF DECK IS LEVEL UNDER PARAPETS

(2) † = HAUNCH HEIGHT AT CENTERLINE OF GIRDER

TO DETERMINE "†": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINE OF BEARINGS AND AT 0.1 POINTS.

	TOP OF DECK ELEVATION AT FINAL GRADE
-	TOP OF STEEL ELEVATION AFTER STEEL ERECTION
+	CONC. ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED
-	SLAB THICKNESS ('T')
=	"†" VALUE FOR SETTING HAUNCH

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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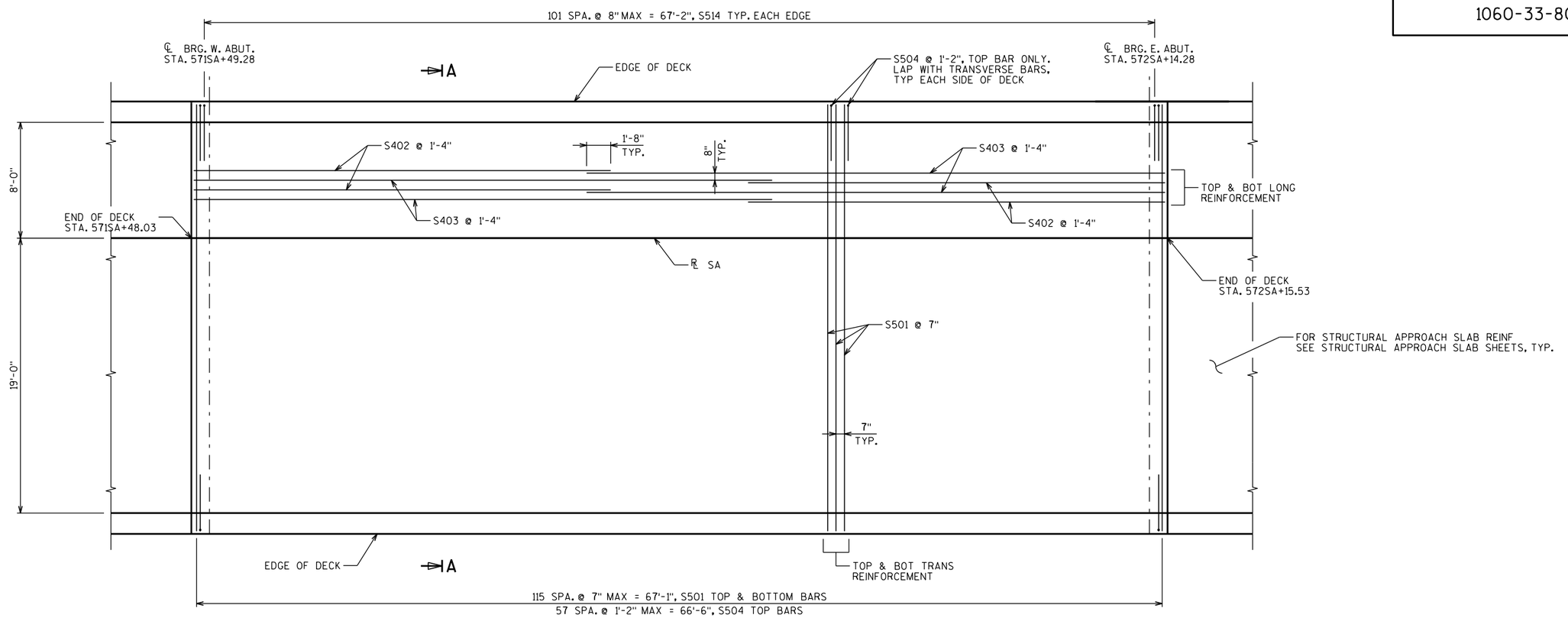
CAMBER, BLOCKING & DEFLECTION DIAGRAMS

SHEET 12 OF 19

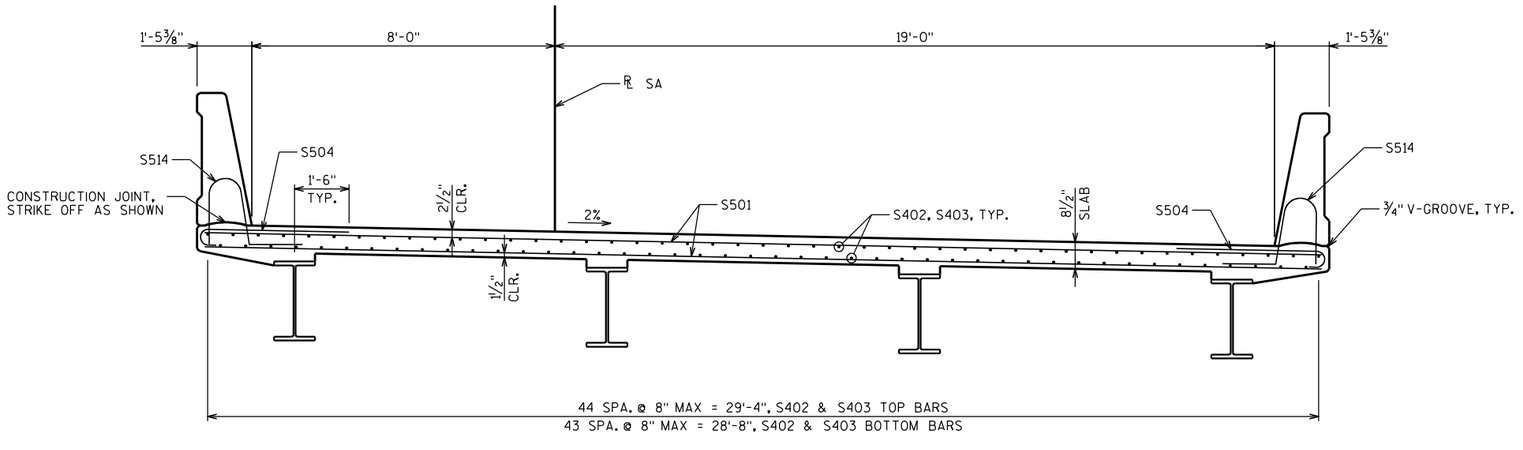
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8

STATE PROJECT NUMBER
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PLAN



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

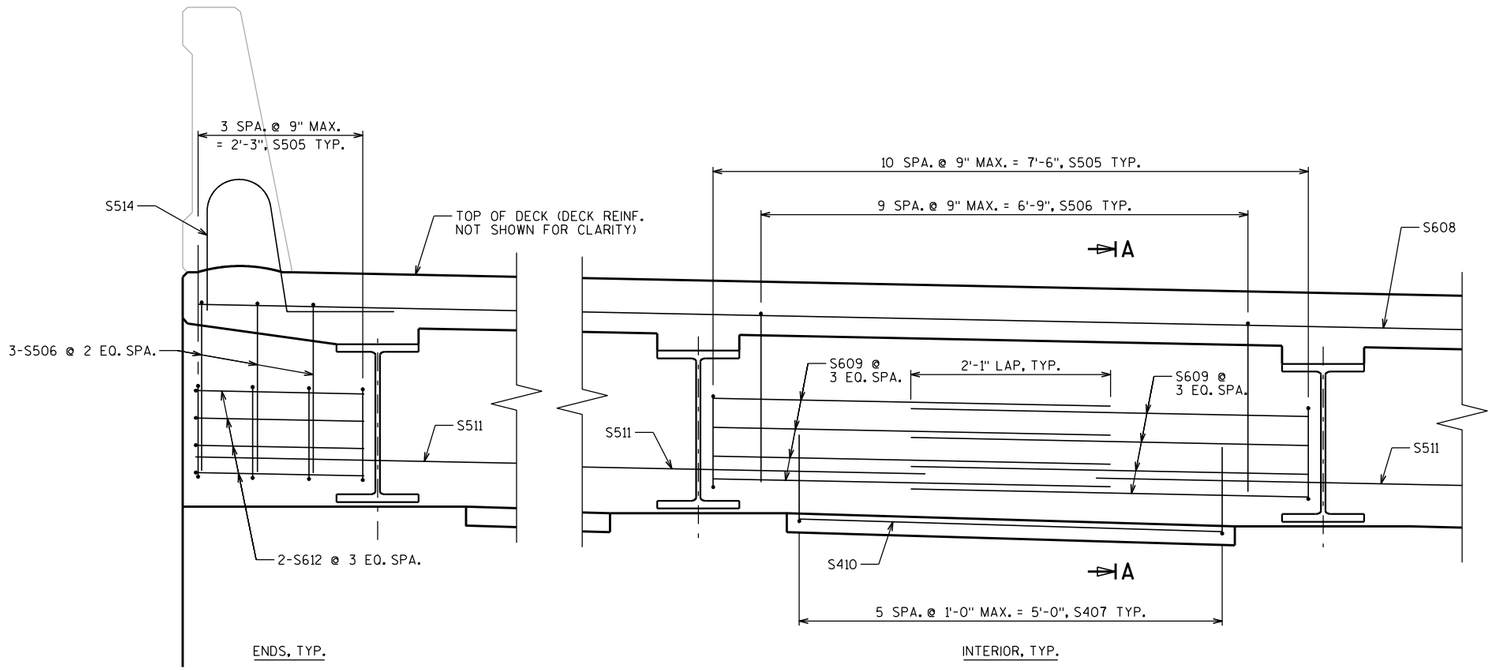
STRUCTURE B-40-891

DRAWN BY MSS | PLANS CK'D. JWC

SUPERSTRUCTURE REINFORCEMENT

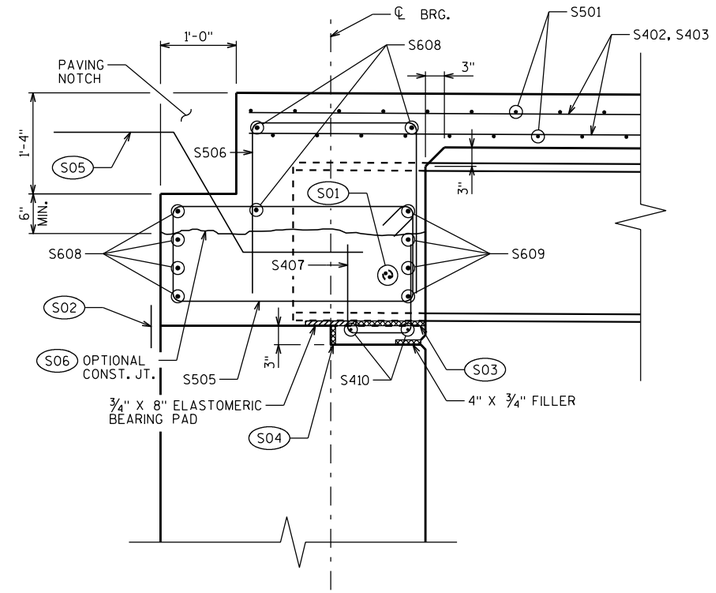
SHEET 13 OF 19

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ABUTMENT DIAPHRAGM ELEVATION

(LOOKING EAST, TYP. BOTH ABUTMENTS)

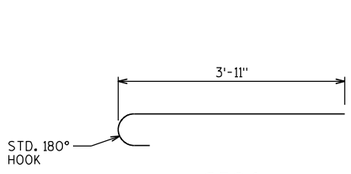


SECTION A-A

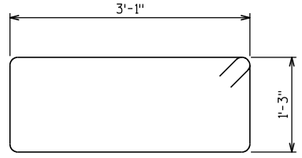
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
S501	X	232	29'-6"			SLAB - TRANS. TOP & BOT.
S402	X	89	28'-10"			SLAB - LONG. TOP & BOT.
S403	X	89	40'-0"			SLAB - LONG. TOP & BOT.
S504	X	116	4'-6"	X		SLAB - TRANS. TOP EDGE OF DECK
S505	X	82	9'-3"	X		ABUT. DIAPH. - TRANS.
S506	X	72	6'-5"	X		ABUT. DIAPH. - TRANS.
S407	X	36	3'-8"	X		ABUT. DIAPH. - TRANS. BTWN. GIRDERS
S608	X	14	29'-6"			ABUT. DIAPH. - LONG.
S609	X	48	5'-0"			ABUT. DIAPH. - LONG. BTWN. GIRDERS
S410	X	12	5'-9"			ABUT. DIAPH. - LONG. BTWN. GIRDERS
S511	X	16	6'-0"			ABUT. DIAPH. - LONG. THRU GIRDERS
S612	X	32	4'-6"	X		ABUT. DIAPH. - TRANS. ENDS
S913		60	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB
S514	X	204	4'-5"	X		PARAPET TO SLAB TRANS.

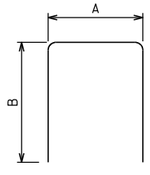
STAINLESS STEEL → S913



S504

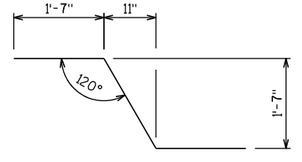


S505

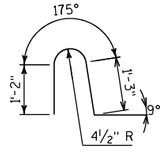


S506, S407

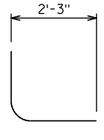
BAR MARK	A	B
S506	2'-2"	2'-3"
S407	10"	1'-6"



S913
STAINLESS STEEL



S514



S612

NOTES

(S01) 1½" DIA HOLE IN WEB SYMMETRICAL FOR (2) S511 HORIZ. BARS. BARS TO BE PLACED ABOUT ℄ INTERIOR GIRDERS. FOR EXTERIOR GIRDERS SHIFT BARS TO PROVIDE 2" CLEAR AT END OF DIAPHRAGM.

(S02) 18" RUBBERIZED MEMBRANE WATERPROOFING.

(S03) 1" FILLER UNDER GIRDER FLANGE IN FRONT OF BEARING PAD, SEE ABUTMENT SHEETS.

(S04) 2" CORK FILLER UP VERTICAL FACES OF BEAM SEATS, TYP. SEE ABUTMENT SHEETS.

(S05) STAINLESS STEEL S913 @ 1'-0" MAX. SEE "STRUCTURAL APPROACH SLAB" SHEET FOR LAYOUT. PAID FOR AS "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES".

(S06) IF USED, DECK POUR MUST BE WITH 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-891

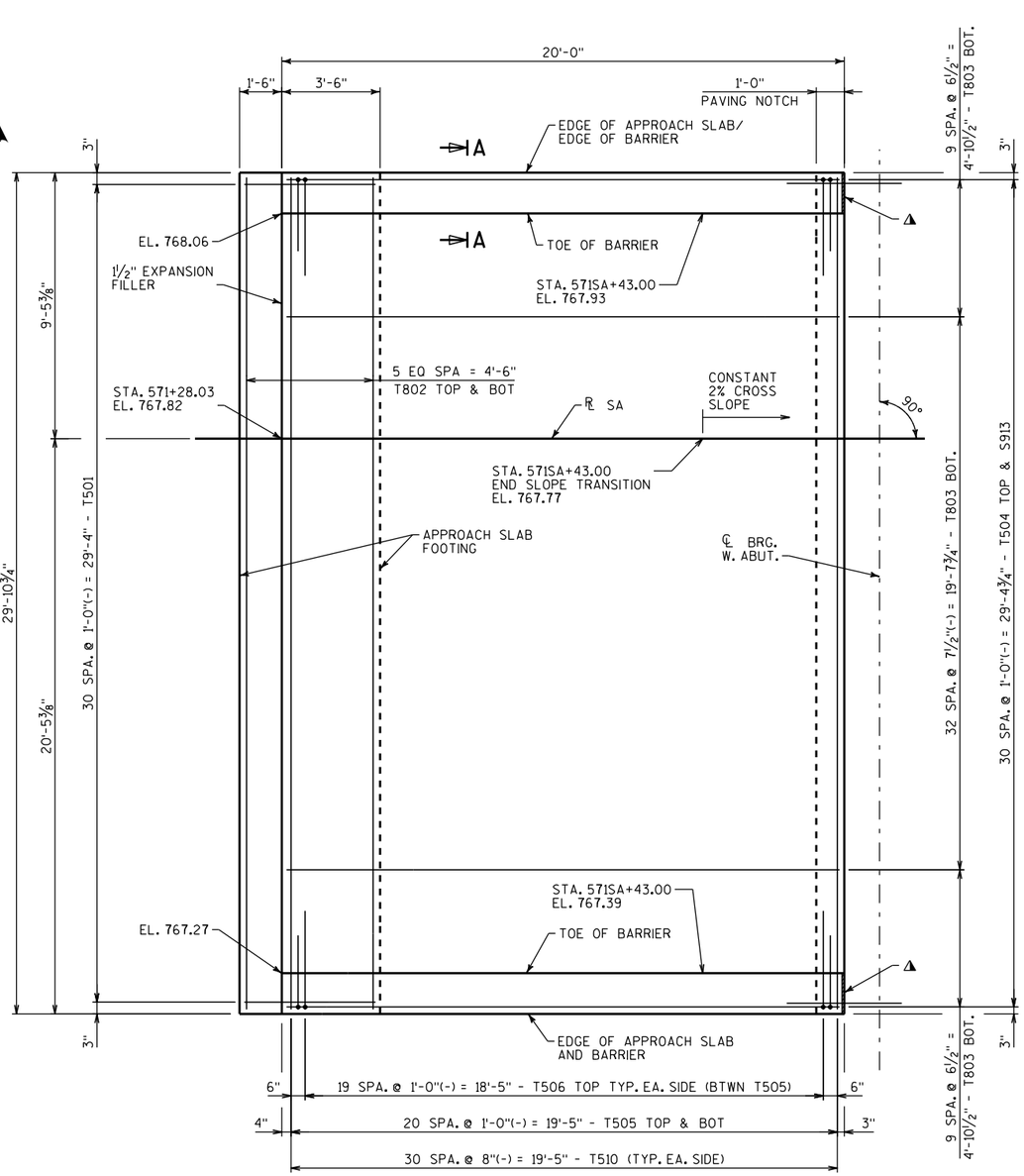
DRAWN BY MSS | PLANS CK'D. JWC

ABUTMENT DIAPHRAGM

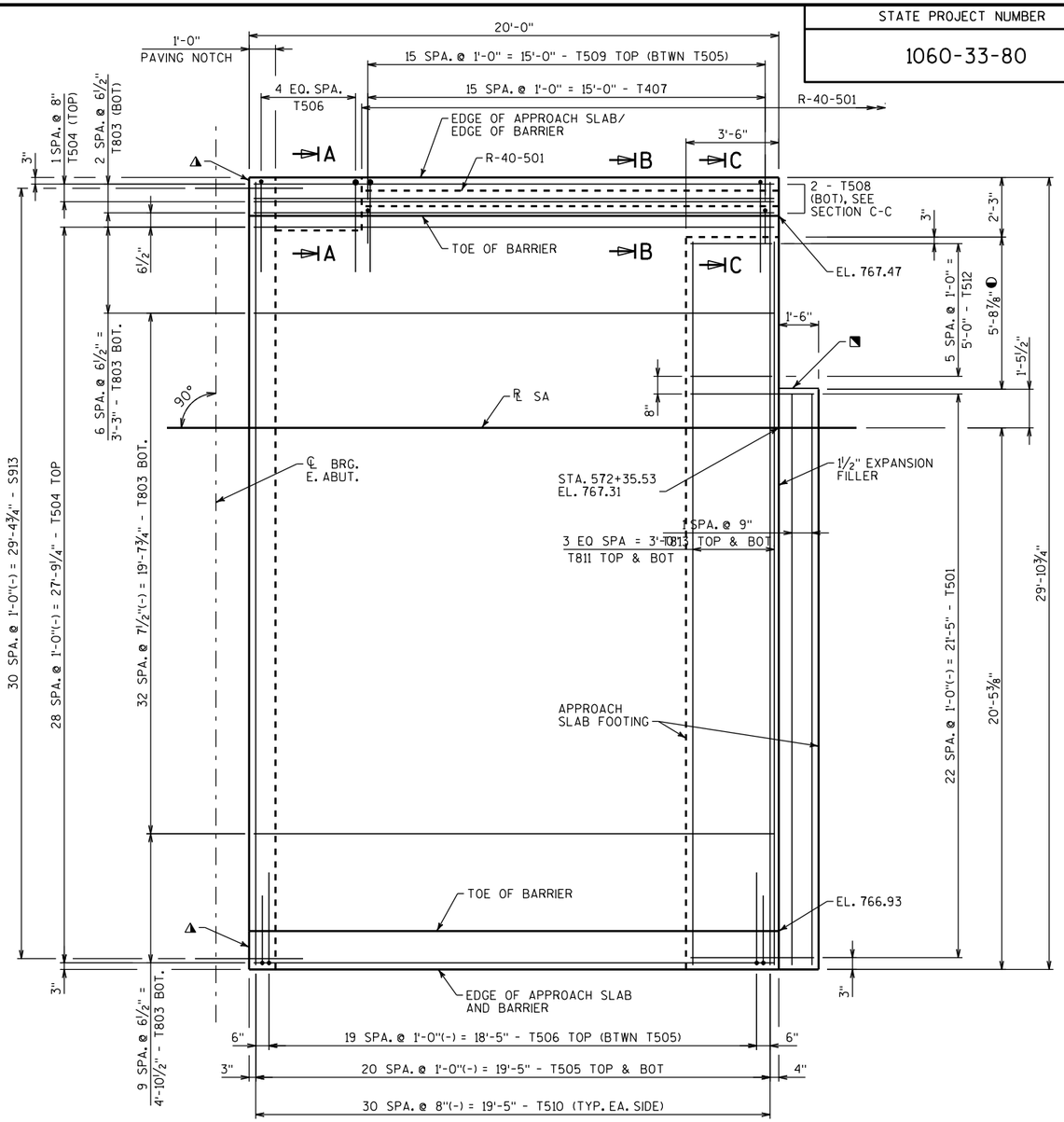
SHEET 14 OF 19

8

8



WEST APPROACH SLAB



EAST APPROACH SLAB

LEGEND

- ◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- ◥ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPOACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB.
- ◐ INCLUDING FILLER THICKNESS

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STRUCTURE B-40-891

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STRUCTURAL APPROACH SLAB

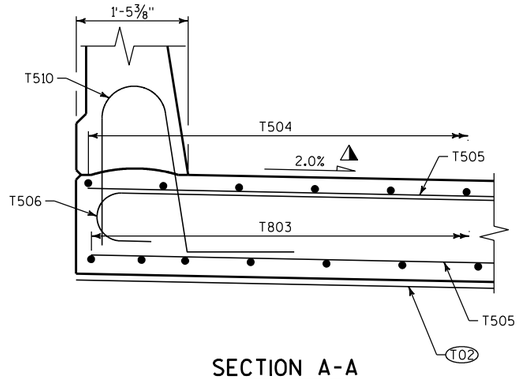
SHEET 15 OF 19

2846

8

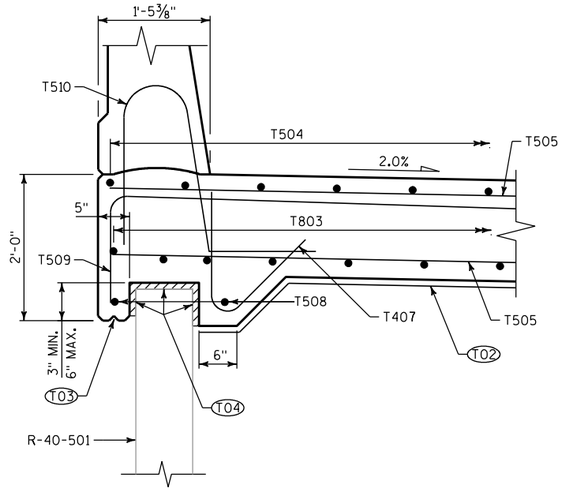
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STATE PROJECT NUMBER
1060-33-80

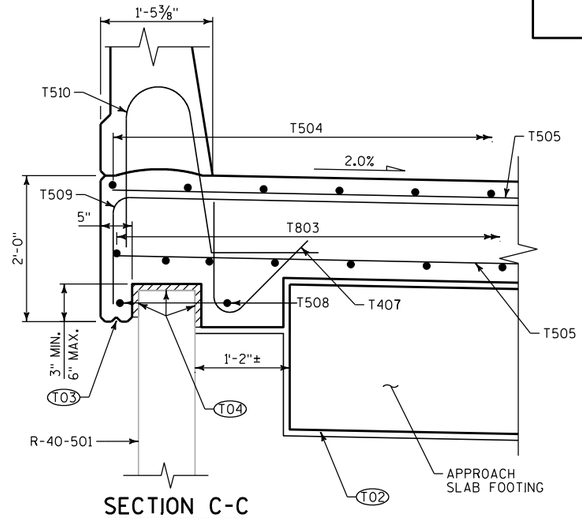


SECTION A-A

(TYP. BOTH SIDES OF W. APPROACH, SOUTH SIDE OF E. APPROACH AND NORTH SIDE OF E. APPROACH AT PAVING NOTCH AND STEMWALL)



SECTION B-B



SECTION C-C

LEGEND

(T01) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T02) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

(T03) ¾" CONT. DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENT BACKWALL.

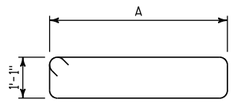
(T04) 1" EXPANDED POLYSTYRENE

⚠ VARIES FROM 2.91% AT WEST END OF WEST APPROACH SLAB TO 2% AT STA. 571SA+43.00.

APPROACH SLAB NOTES

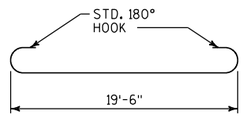
SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.

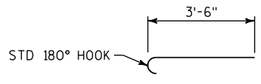


T501, T512

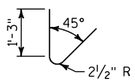
BAR MARK	A
T501	4'-6"
T512	3'-0"



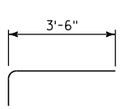
T803



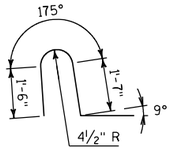
T506



T407



T509

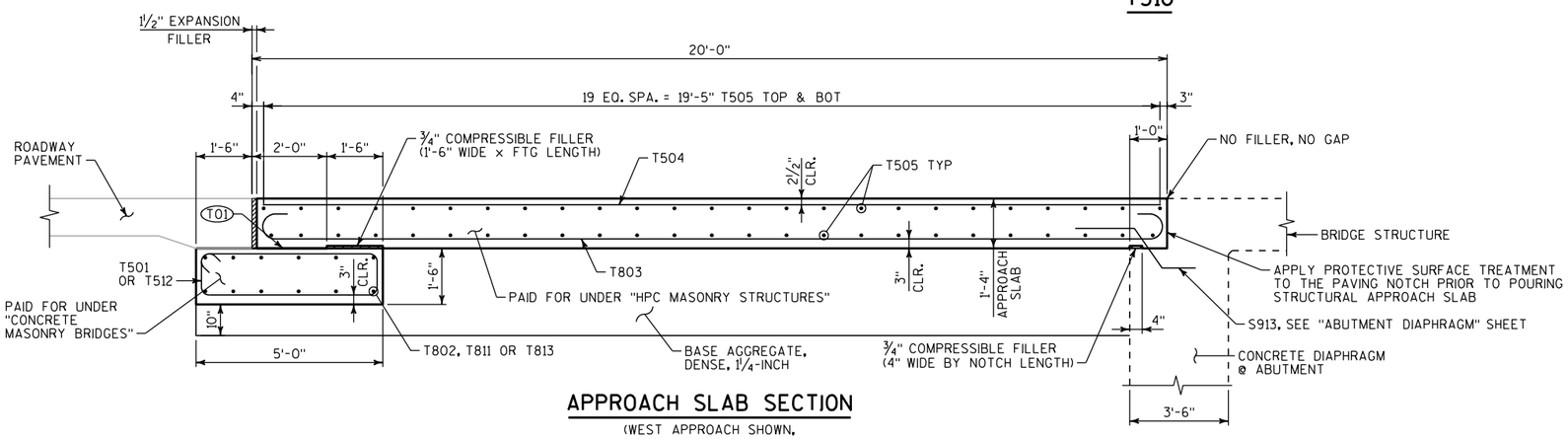


T510

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
T501	X	54	11'-9"	X		APPROACH SLAB FTG. - STIRRUP (W. & E.)
T802	X	12	29'-4"			APPROACH SLAB FTG. - LONG. (W.)
T803	X	102	21'-4"	X		APPROACH SLAB - LONG. BOT. (W. & E.)
T504	X	62	19'-6"			APPROACH SLAB - LONG. TOP (W. & E.)
T505	X	84	29'-4"			APPROACH SLAB - TRANS. TOP & BOT. (W. & E.)
T506	X	65	4'-1"	X		APPROACH SLAB - TRANS. (W. & E.)
T407	X	16	3'-0"	X		APPROACH SLAB - TRANS. (E.)
T508	X	2	15'-3"	X		APPROACH SLAB - LONG. (E.)
T509	X	16	4'-3"	X		APPROACH SLAB - TRANS. (E.)
T510	X	124	5'-1"	X		APPROACH SLAB - PARAPET (W. & E.)
T811	X	8	27'-1"			APPROACH SLAB FTG. - LONG. (E.)
T512	X	6	8'-9"	X		APPROACH SLAB FTG. - STIRRUP (E.)
T813	X	4	21'-5"			APPROACH SLAB FTG. - LONG. (E.)

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



APPROACH SLAB SECTION

(WEST APPROACH SHOWN, EAST APPROACH SIMILAR BUT OPPOSITE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

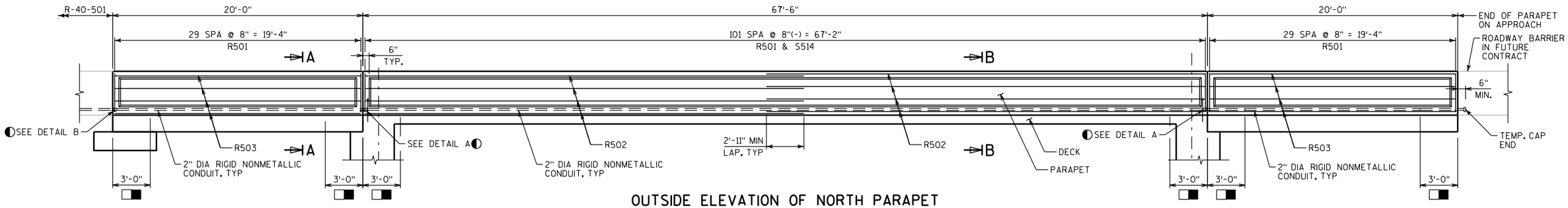
STRUCTURE B-40-891

DRAWN BY MSS | PLANS CK'D. ENS

STRUCTURAL APPROACH SLAB DETAILS

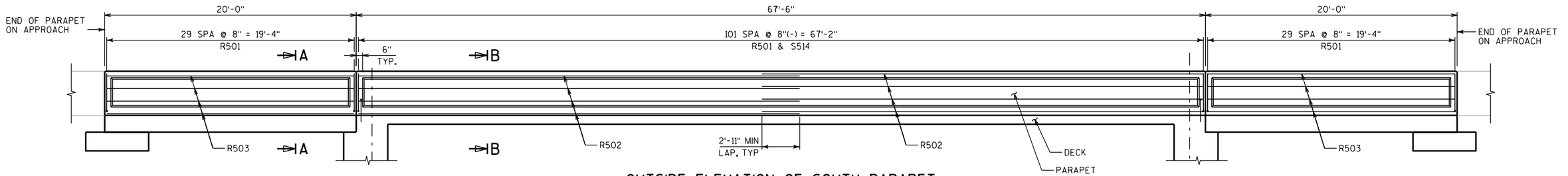
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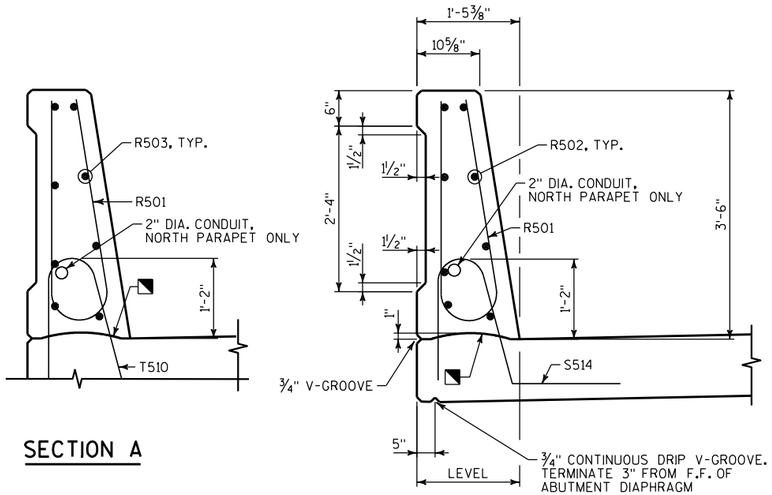
OUTSIDE ELEVATION OF NORTH PARAPET

(LOOKING SOUTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)
(WEST APPROACH SLAB FTG. NOT SHOWN FOR CLARITY)



OUTSIDE ELEVATION OF SOUTH PARAPET

(LOOKING NORTH)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



SECTION A

SECTION B

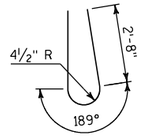
LEGEND

- ◐ METALLIC CONDUIT EXPANSION FITTING (O-Z/GEDNEY TYPE AX-200 & BONDING JUMPER) WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS, INCLUDING SPONGE RUBBER WRAP, TO BE INCLUDED IN THE BID ITEM "CONDUIT RIGID METALLIC 2-INCH".
- ■ 2" DIA. RIGID METALLIC CONDUIT
- ◥ STRIKE OFF AS SHOWN

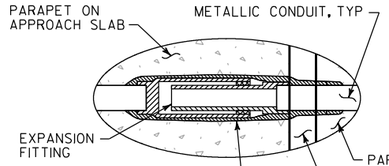
BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
R501	X	324	6'-8"	X	PARAPET - VERT.
R502	X	32	35'-1"		PARAPET - HORIZ.
R503	X	32	19'-8"		APPROACH PARAPET - HORIZ.

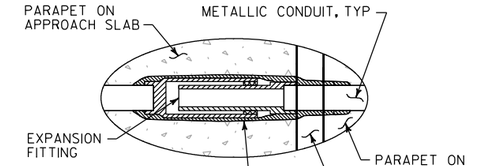
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.



R501



DETAIL A



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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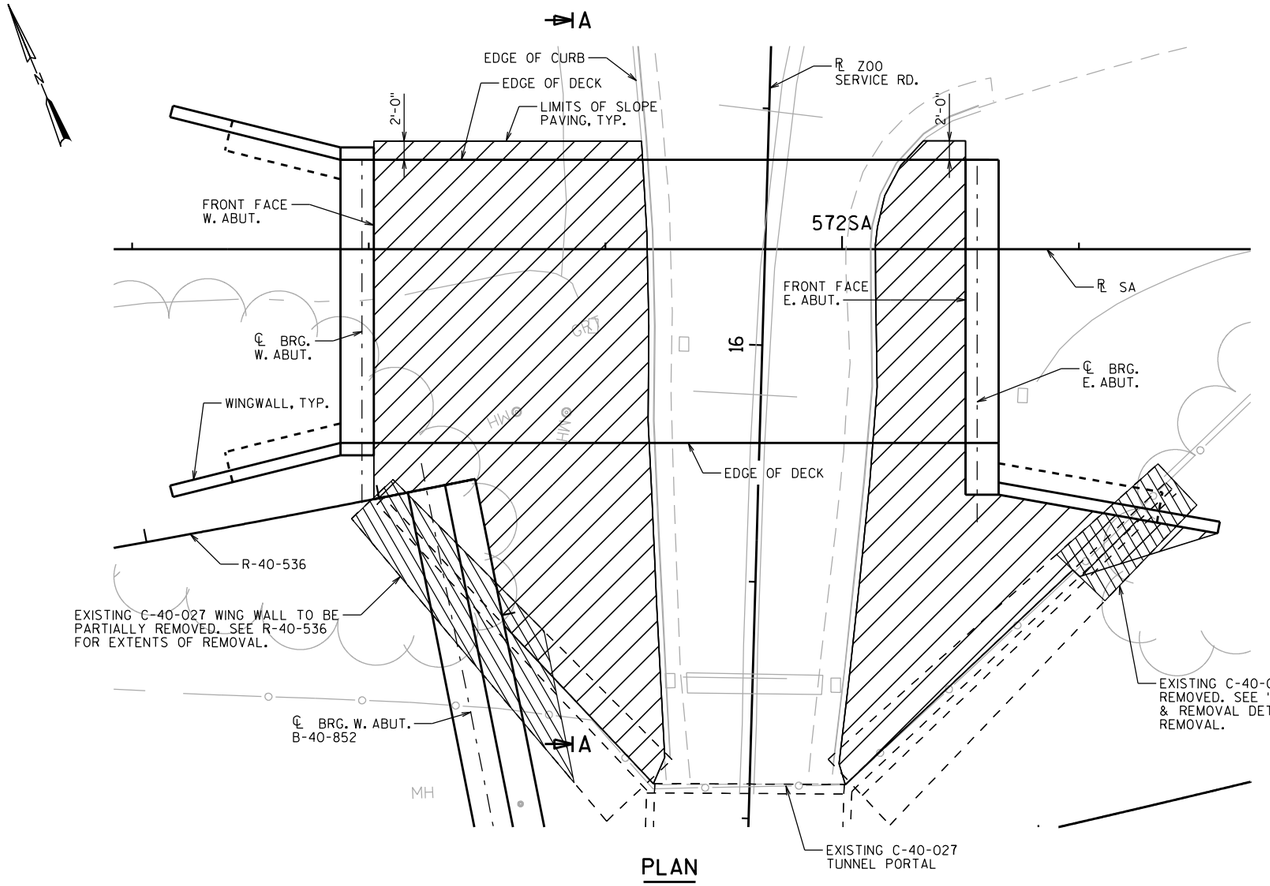
SINGLE SLOPED PARAPET

SHEET 17 OF 19

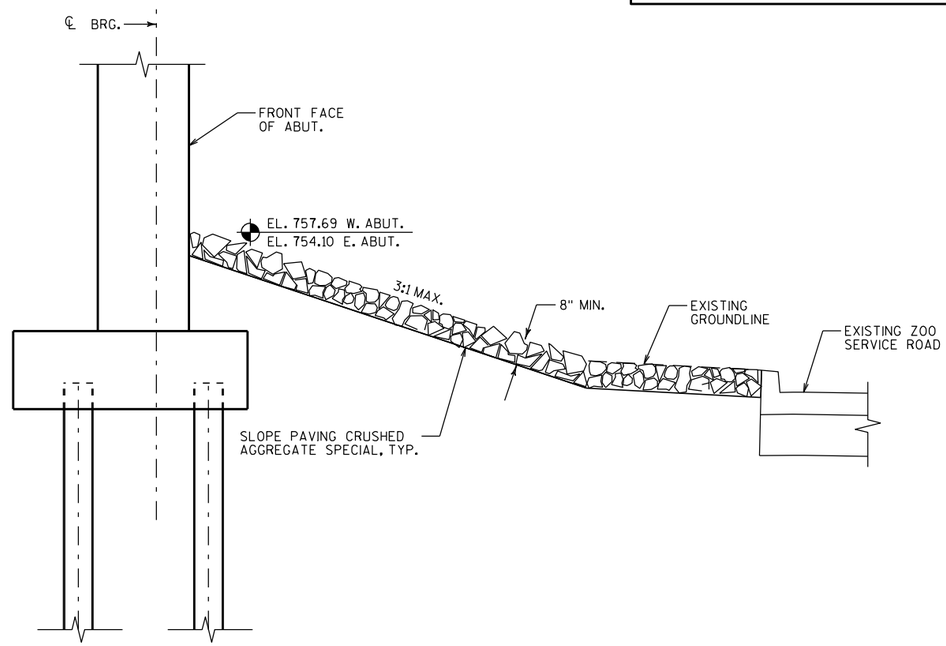
8

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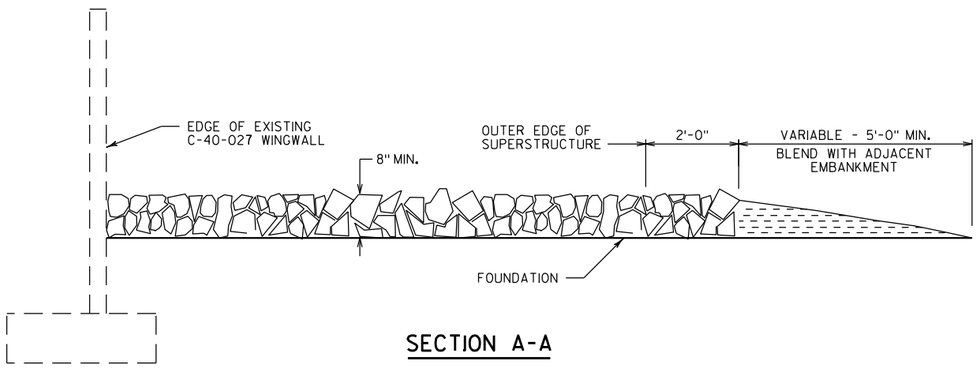
STATE PROJECT NUMBER
1060-33-80



PLAN



TYPICAL SECTION



SECTION A-A

NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE CONTRACT SPECIAL PROVISIONS.

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

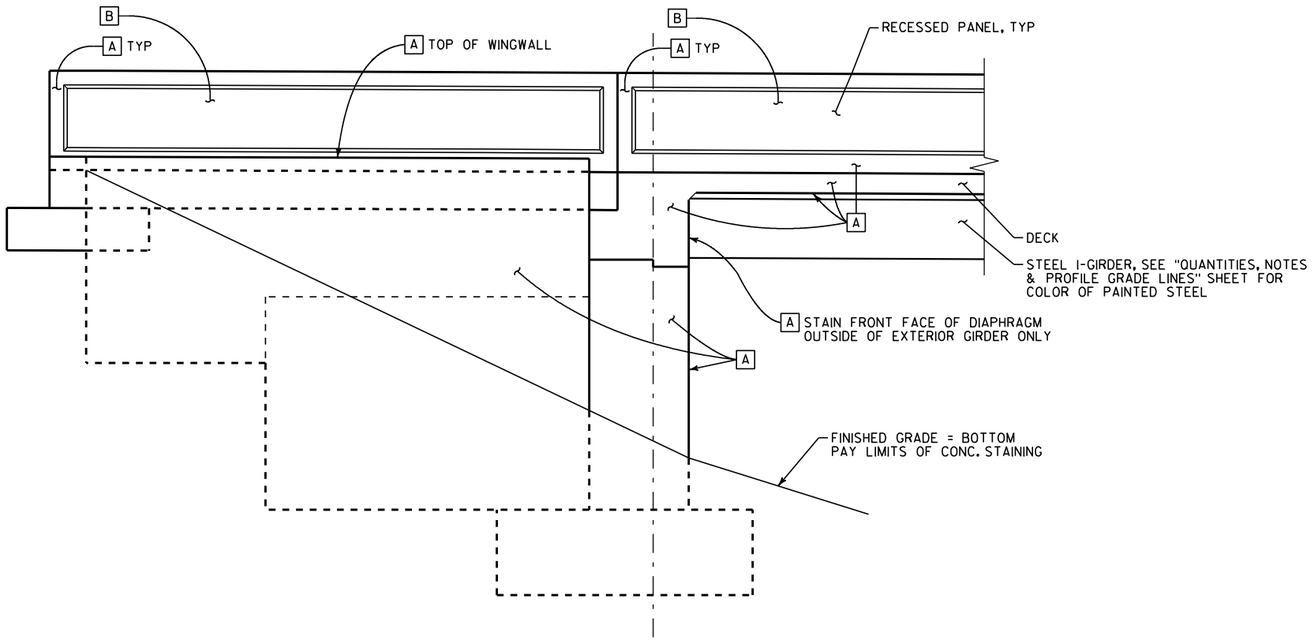
DRAWN BY MSS | PLANS CK'D. JWC

SLOPE PAVING DETAILS

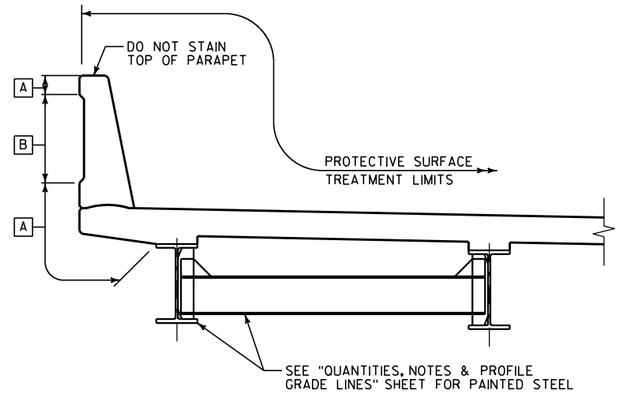
SHEET 18 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\B-40-891\cds\080509_sp.dgn PLOT DATE : 13-MAY-2014 14:51 PLOT BY : MSCMSS PLOT NAME : 080509_sp PLOT SCALE : 16:1

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1060-33-80



OUTSIDE ELEVATION OF ABUTMENT



TYPICAL SECTION OF DECK

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE AND SIDES FROM TOP OF ABUTMENT TO FINISHED GRADE, EXTERIOR EXPOSED FACES OF DIAPHRAGM. ALL EXPOSED FACES OF EAST ABUTMENT INCLUDING SIDEWALL, MASKWALL AND TOP OF ABUTMENT BEAM SEAT IN FRONT OF MASKWALL.
		WINGWALLS	ALL EXPOSED FACES AND TOP OF WALL
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON EXTERIOR FACE

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:

BASE COLOR : FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-891

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AESTHETIC DETAILS

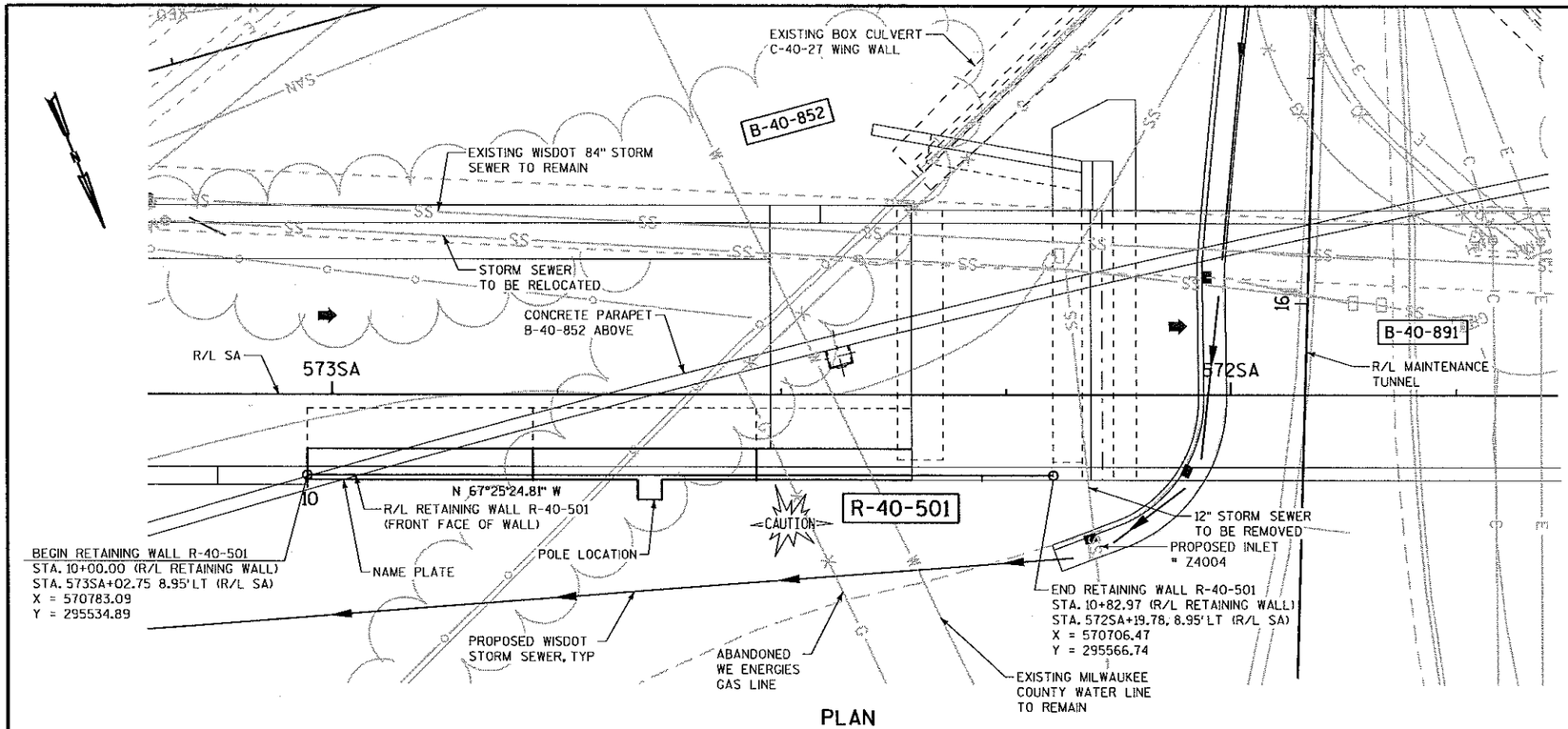
SHEET 19 OF 19

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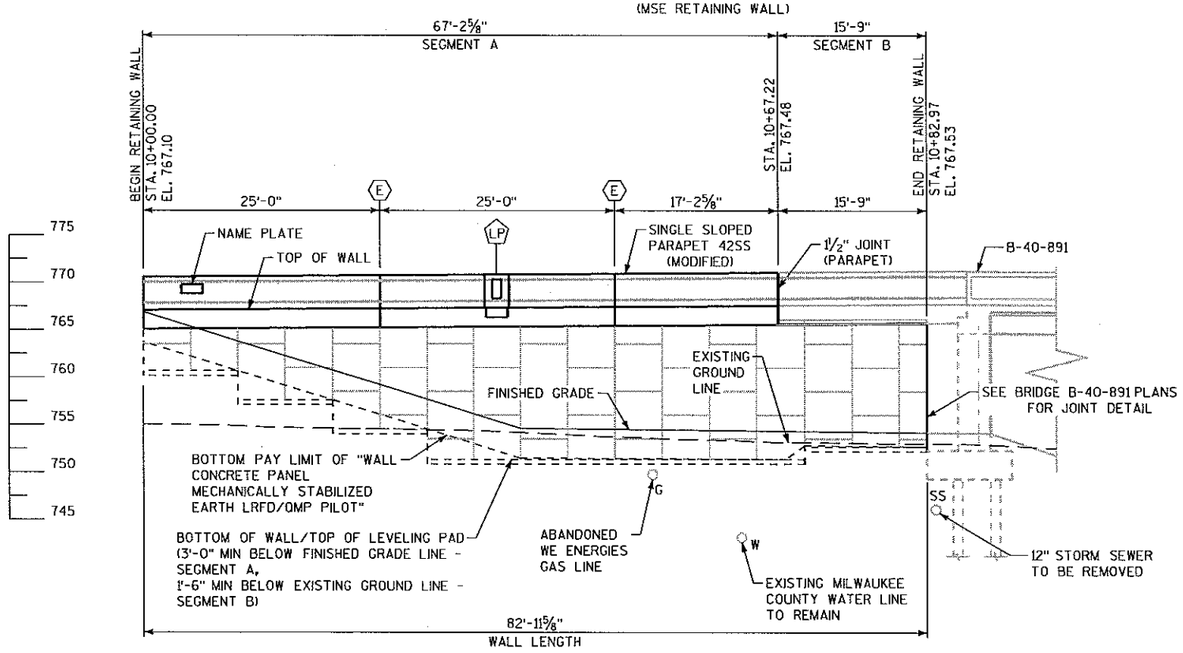
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STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

DESIGN THE MSE WALL FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- (LP) POLE LOCATION. FOR STATION AND DETAILS SEE SHEET 6

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, NOTES & PROFILE GRADE LINE
3. TYPICAL WALL SECTIONS
4. SEGMENT A PLAN & ELEVATION
5. PARAPET & ANCHOR SLAB DETAILS
6. CONDUIT & LIGHT POLE SUPPORT DETAIL
7. BILL OF BARS
8. AESTHETIC WALL TREATMENT DETAILS
9. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
5/1/2014

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-501

EAST ABUTMENT AT STRUCTURE B-40-891

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WEST ALLIS

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 9

8

8

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID THE PILE SLEEVES.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7 1/2 INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7 1/2 INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-501 WITH THE EAST ABUTMENT OF BRIDGE B-40-891.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE TO BE EPOXY COATED.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENT A CAST-IN-PLACE ANCHOR SLAB ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" & "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE AT LEAST 3'-0" BELOW FINISHED GRADE FOR SEGMENT A. THE TOP OF THE LEVELING PAD IS ASSUMED TO BE AT LEAST 1'-6" BELOW THE EXISTING GROUND LINE FOR SEGMENT B.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND INSIDE FACES OF PARAPETS AND THE 2'-0" HORIZONTAL SURFACE AT TOE OF PARAPETS.

TOTAL ESTIMATED QUANTITIES

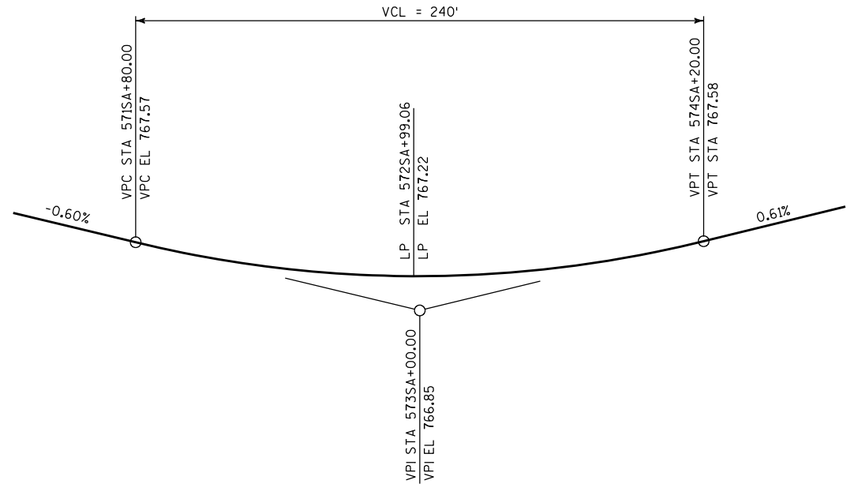
ITEM NO.	BID ITEM	UNIT	SEGMENT A	SEGMENT B	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	48	-	48
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	40	-	40
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LBS	6,567	-	6567
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3	-	3
517.1050.S.0001	ARCHITECTURAL SURFACE TREATMENT R-40-501	SF	688	201	889
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	71	17	88
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	4	-	4
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	77	-	77
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	1	-	1
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	1	-	1
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	821	232	1054
	NON-BID ITEMS				
	NAME PLATE	EACH	-	-	1
	PREFORMED JOINT FILLER	SIZE	-	-	1 1/2"
	NON-BITUMINOUS JOINT SEALER	SIZE	-	-	1"
	CORK FILLER	SIZE	-	-	1"
	EXPANDED POLYSTYRENE	SIZE	-	-	1"

ALL ITEMS ARE CATEGORY 3000

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS		
WALL HEIGHT (FEET)	10.5	16.5
EXPOSED WALL HEIGHT (FEET)	7.5	15
MINIMUM LENGTH OF REINFORCEMENT (FEET) *	8	11.5
WALL STATION (R/L RETAINING WALL R-40-501)	10+25	10+80
BORING USED	CB-15	CB-83
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING	1.1	1.1
ECCENTRICITY	1.2	1.3
BEARING	2.0	2.5
GLOBAL STABILITY	1.2	1.2

* MINIMUM LENGTH APPLIES ONLY AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.



PROFILE GRADE LINE - SA

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
MSE BACKFILL *	120	30	0	30	0
CLAY BACKFILL/ CLAY FILL	130	0	1750	30	50
MEDIUM DENSE SAND	130	32	0	32	0
MEDIUM DENSE TO DENSE SAND	130	34	0	34	0
FIRM TO STIFF LEAN CLAY	130	0	1750	30	50
STIFF TO VERY STIFF LEAN CLAY	135	0	2000	32	50

* DESIGN WALL FOR THESE VALUES

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

DRAWN BY MR | PLANS CK'D. MHZ

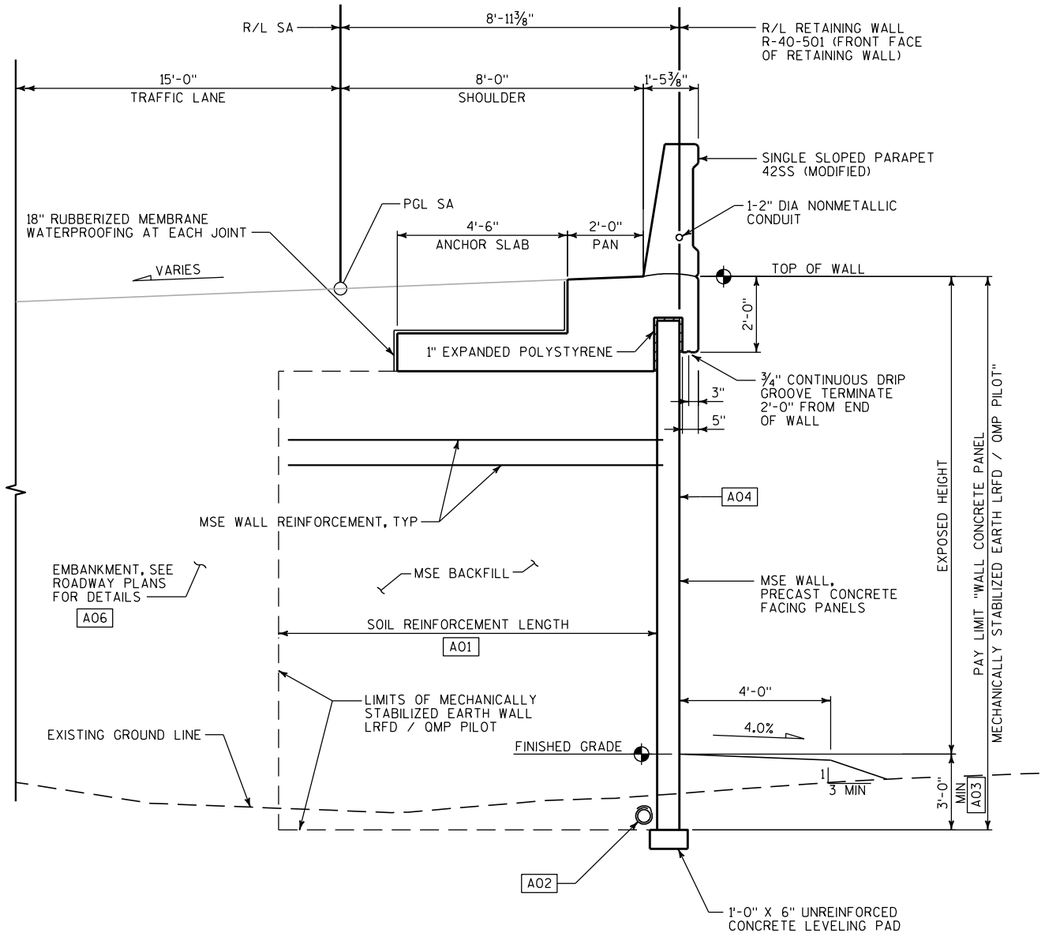
QUANTITIES, NOTES & PROFILE GRADE LINE

SHEET 2 OF 9

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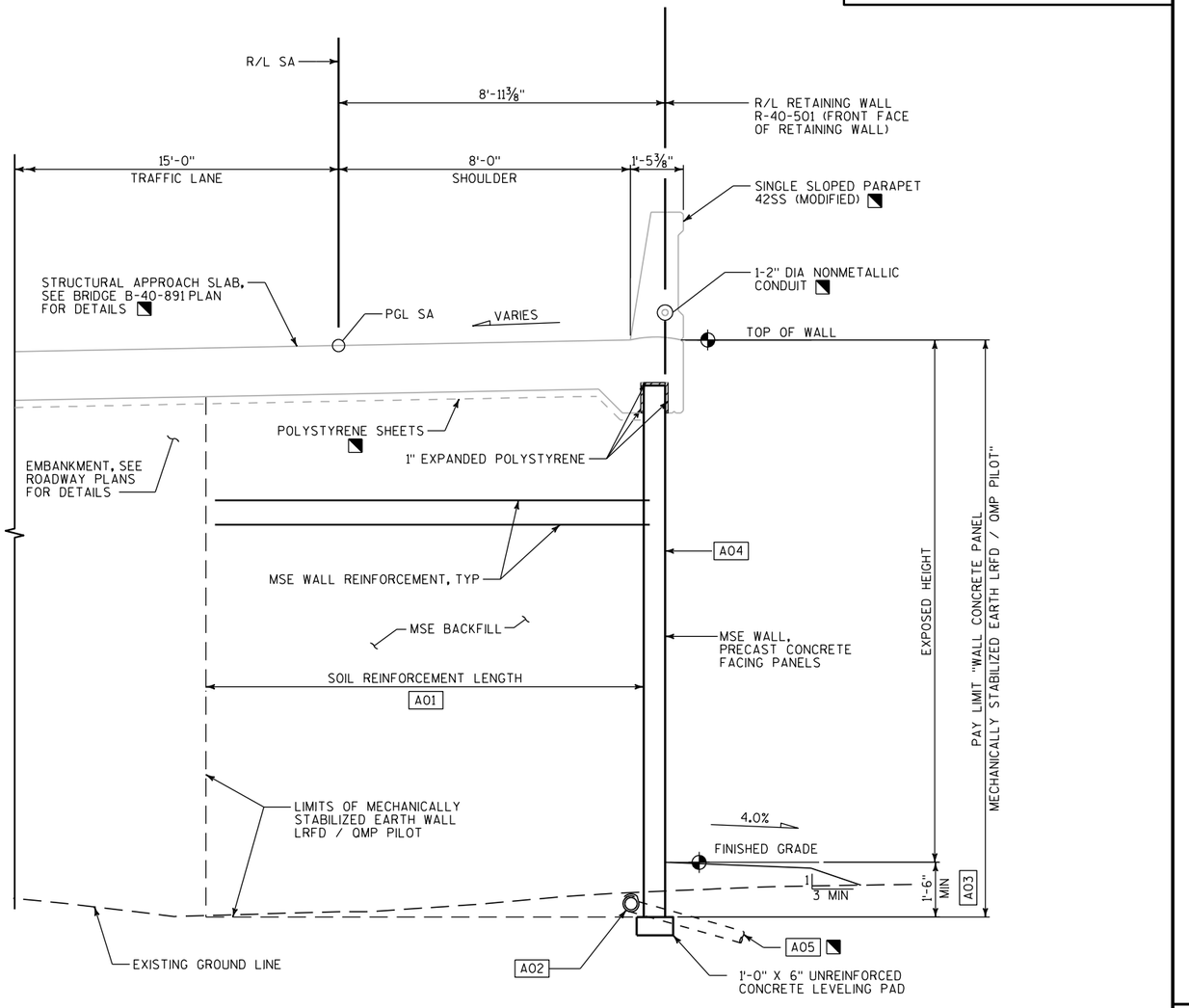
STATE PROJECT NUMBER

1060-33-80



SEGMENT A - TYPICAL SECTION

(LOOKING WEST - STA. 10+00.00 TO STA. 10+67.22)



SEGMENT B - TYPICAL SECTION

(LOOKING WEST - STA. 10+67.22 TO STA. 10+82.97)

NOTES

A01 SEE TABLE OF SAFETY FACTORS FOR MSE WALLS AND NOTE ON SHEET 2 FOR MINIMUM LENGTH OF MSE REINFORCING STRIPS. ACTUAL CALCULATED LENGTHS OF REINFORCING STRIPS WILL NEED TO EXCEED THESE MINIMUMS IN ORDER TO SATISFY MINIMUM FACTORS OF SAFETY FOR VARIOUS MSE PARAMETERS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

A02 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. CONNECT TO BRIDGE B-40-891 PIPE UNDERDRAIN AT THE END OF WALL.

A03 TOP OF LEVELING PAD TO BE A MINIMUM OF 3'-0" BELOW FINISHED GRADE FOR SEGMENT A AND 1'-6" BELOW EXISTING GRADE FOR SEGMENTS B. PAY LIMIT FOR "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" TO INCLUDE EXPOSED HEIGHT PLUS 3'-0" FOR SEGMENT A AND 1'-6" FOR SEGMENTS B.

A04 SEE SHEET 8 FOR AESTHETIC WALL TREATMENT DETAILS.

A05 CONNECT PIPE UNDERDRAIN TO INLET "Z4004 . PIPE UNDERDRAIN IS INCLUDED IN BRIDGE B-40-891 BID ITEMS.

A06 SEE ROADWAY PLANS FOR TEMPORARY GRADING. PAVEMENT, BASE COURSE, AND ROADWAY UNDERDRAINS WILL BE CONSTRUCTED IN FUTURE CONTRACT.

LEGEND

◥ NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

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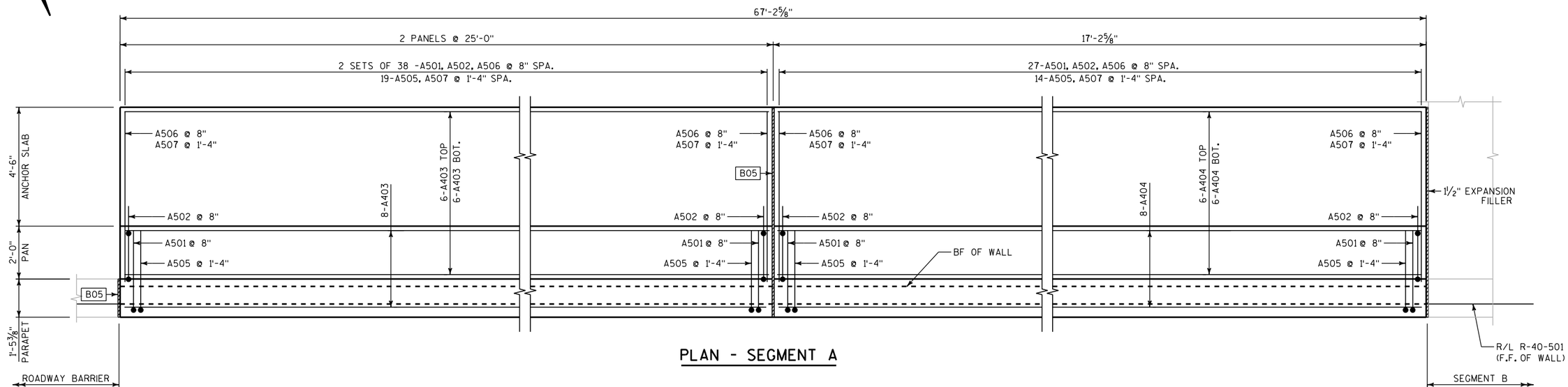
TYPICAL WALL SECTIONS

SHEET 3 OF 9

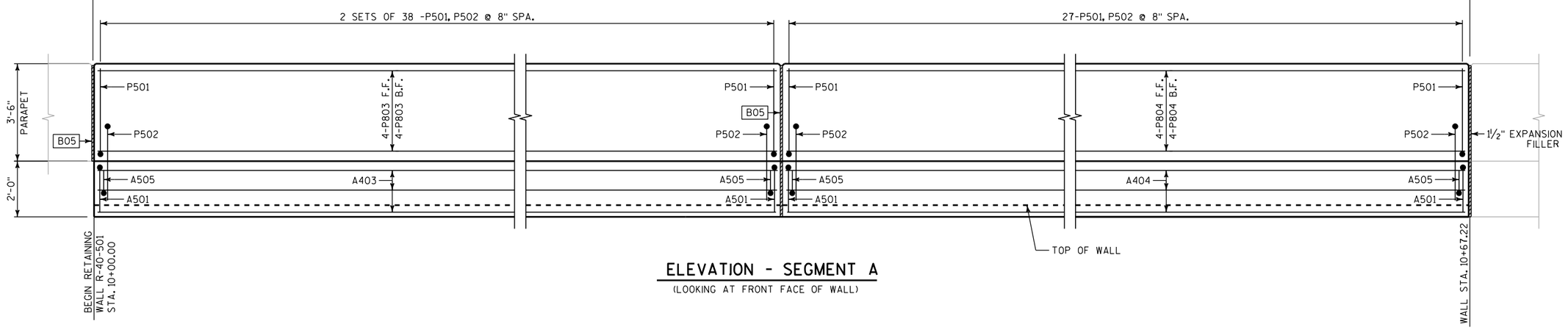
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8

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A



ELEVATION - SEGMENT A

(LOOKING AT FRONT FACE OF WALL)

NOTES

B05 1" CORK FILLER

LEGEND

FF FRONT FACE

BF BACK FACE

EF EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

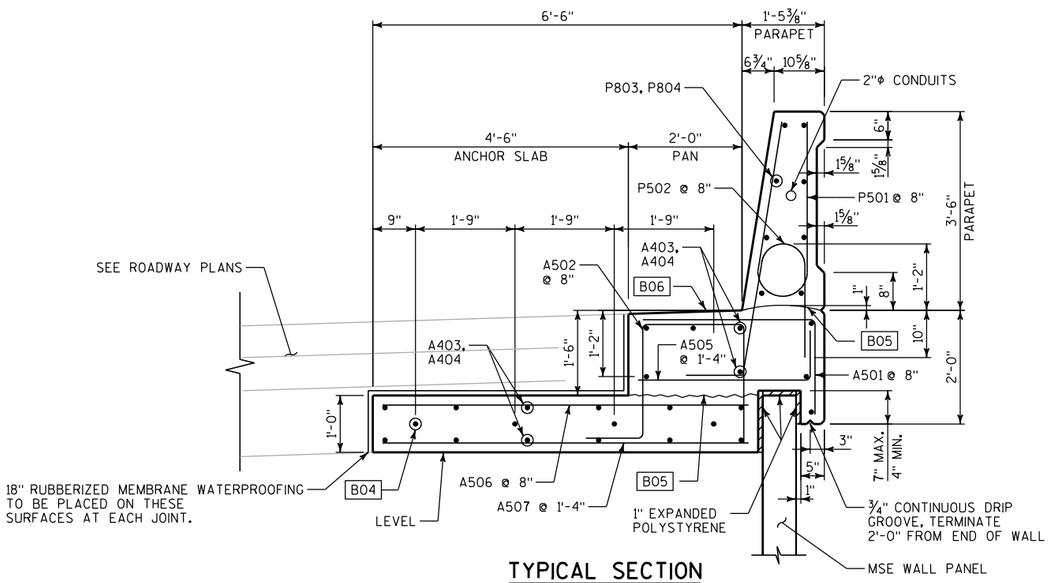
DRAWN BY MR | PLANS CK'D. MHZ

SEGMENT A PLAN & ELEVATION

SHEET 4 OF 9

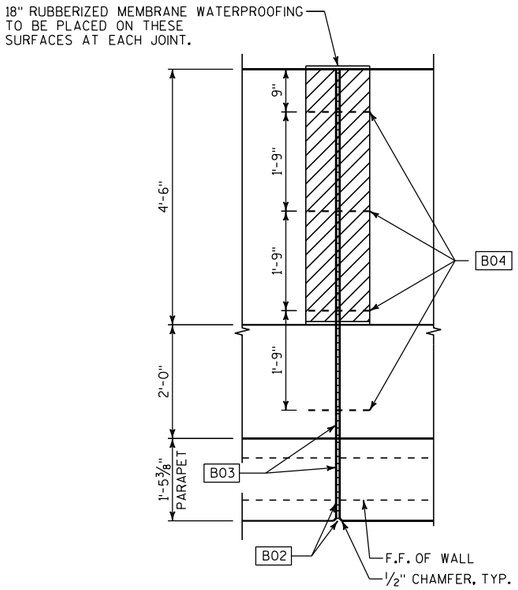
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1060-33-80

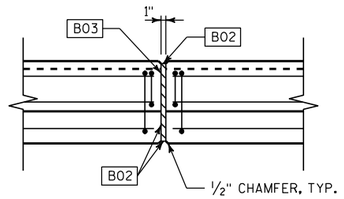


TYPICAL SECTION

SEGMENT A
STA. 10+00.00 TO STA. 10+67.22

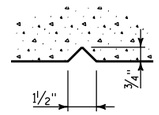


ANCHOR SLAB EXPANSION JOINT



PARAPET EXPANSION JOINT

(DO NOT RUN BARS THRU JOINT)



¾" DRIP GROOVE

GEOMETRY TABLE

WALL STATION	TOP OF WALL ELEV.	FINISHED GRADE ELEV.
10+00	767.1	766.87
10+10	767.15	763.8
10+20	767.20	760.73
10+30	767.26	757.67
10+40	767.33	754.6
10+50	767.4	754.5
10+60	767.46	754.4
10+67.22	767.48	754.33
10+70	767.49	754.3
10+80	767.52	754.2
10+82.97	767.53	754.17

NOTES

B02 NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)

B03 1" CORK FILLER

B04 DIAMETER x 1'-6" SMOOTH EPOXY COATED DOWELS PLACED AT MID-DEPTH IN THE SLAB. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT SLABS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

B05 CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH

B06 MATCH ROADWAY SLOPE

LEGEND

F.F. FRONT FACE

B.F. BACK FACE

E.F. EACH FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

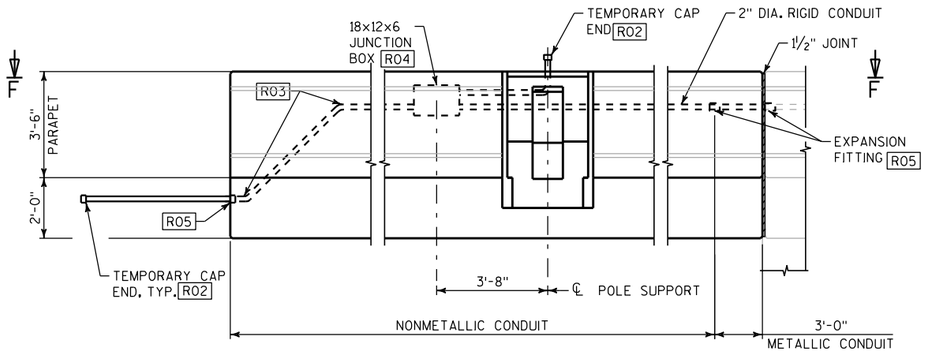
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PARAPET & ANCHOR SLAB DETAILS

SHEET 5 OF 9

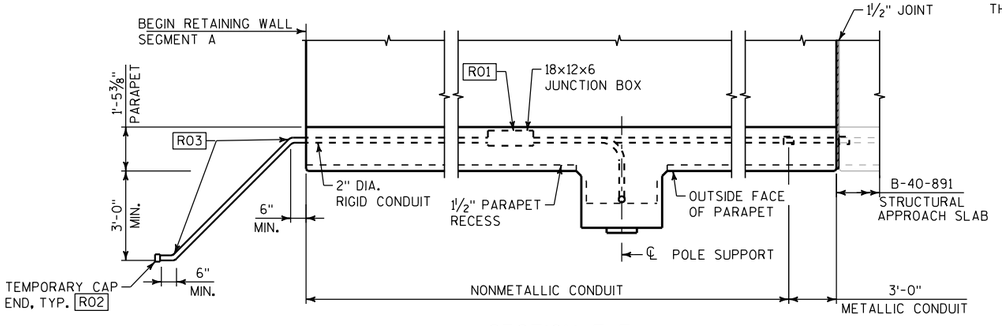
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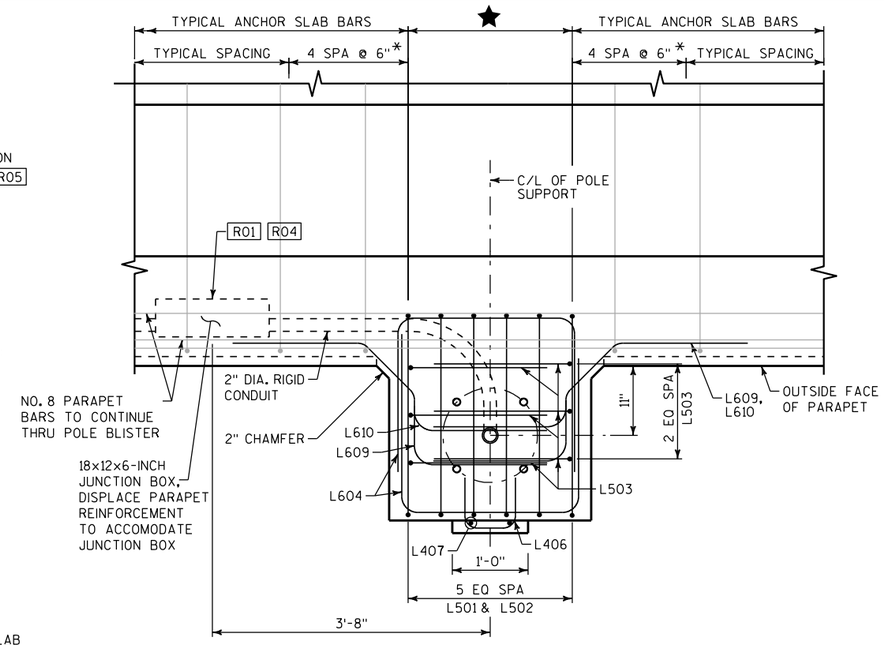


PARAPET ELEVATION

OUTSIDE FACE OF PARAPET



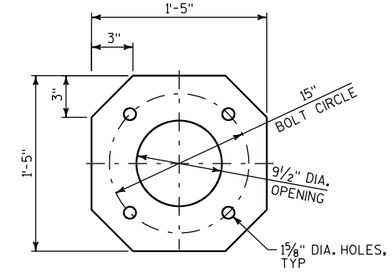
SECTION F-F



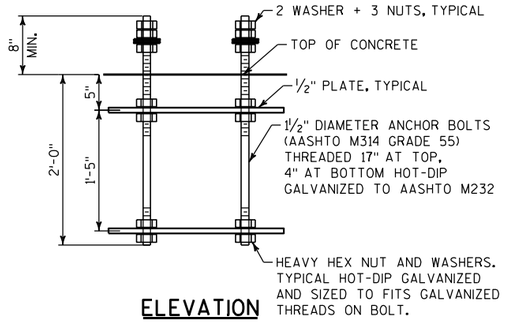
POLE SUPPORT PLAN

★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH POLE SUPPORT SPACING, 4 OF EACH - E501, E502, E506, P511, P512, E507, E505 (EXTRA TO TYPICAL BAR QUANTITIES PER PANEL)

* 4 SPA @ 6" = 2'-0", A501, A502, A506, P501, P502
2 SPA @ 1'-0" = 2'-0", A507, A505



PLAN



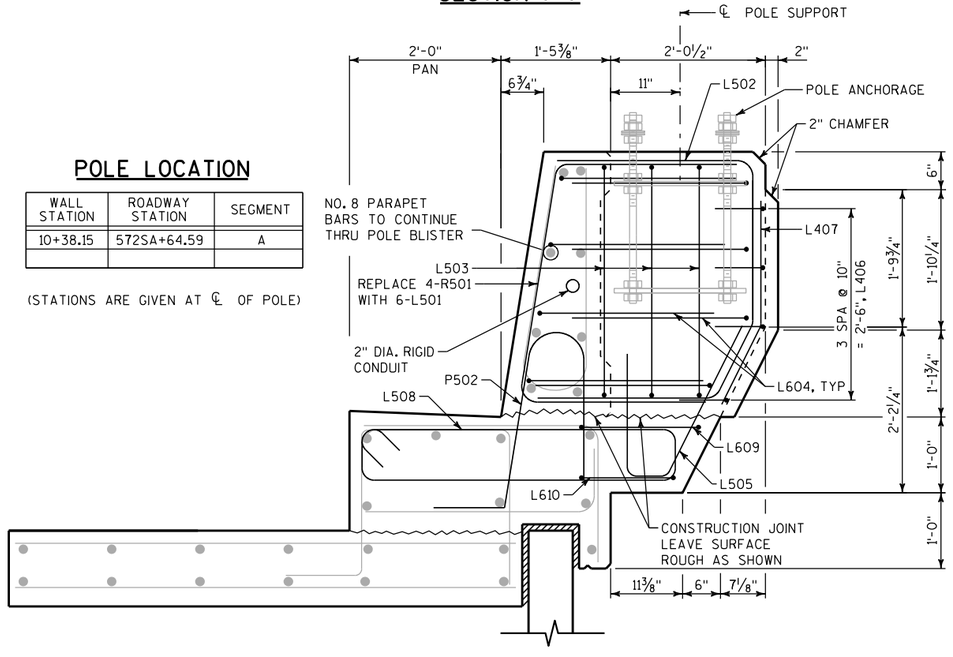
ELEVATION

ANCHOR ASSEMBLY POLE STRUCTURES SPECIAL

POLE LOCATION

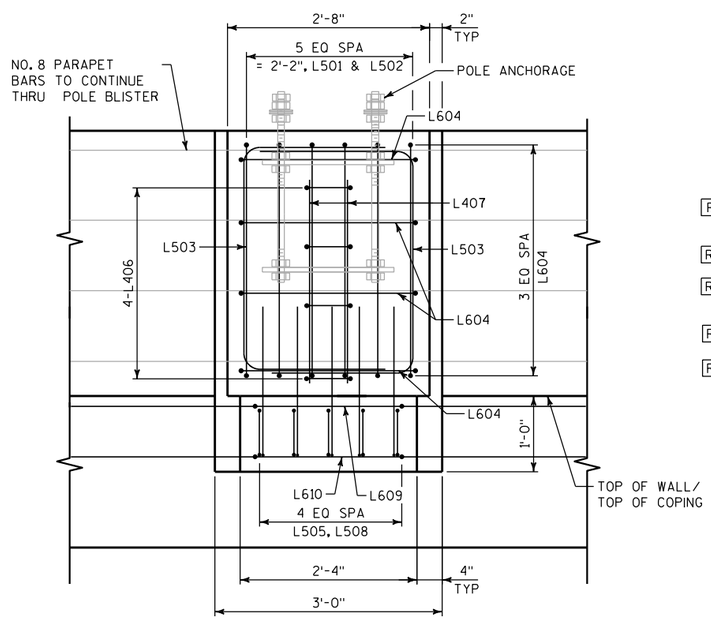
WALL STATION	ROADWAY STATION	SEGMENT
10+38.15	572SA+64.59	A

(STATIONS ARE GIVEN AT ℄ OF POLE)



REINFORCEMENT AT POLE SUPPORT

CROSS SECTION AT C/L POLE SUPPORT



REINFORCEMENT AT POLE SUPPORT

OUTSIDE ELEVATION

NOTES:

R01 CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

R02 TEMPORARY CAP ENDS TO BE INCIDENTAL TO CORRESPONDING CONDUIT BID ITEMS.

R03 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRICAL CODE.

R04 JUNCTION BOX IS REQUIRED AT POLE SUPPORT LOCATION.

R05 O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).
EXPANSION FITTINGS AT EACH EXPANSION JOINT LOCATION.
EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

DRAWN BY MR | PLANS CK'D. MHZ

CONDUIT & LIGHT POLE SUPPORT DETAILS

SHEET 6 OF 9

8

8

STATE PROJECT NUMBER
1060-33-80

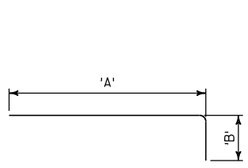
BILL OF BARS ✳

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	107	4'-8"	X	-	ANCHOR SLAB-TRANS. SEG. A
A502	X	107	6'-5"	X	-	ANCHOR SLAB-TRANS. SEG. A
A403	X	40	24'-7"	-	-	ANCHOR SLAB-LONG. SEG. A
A404	X	20	16'-9"	-	-	ANCHOR SLAB-LONG. SEG. A
A505	X	56	4'-0"	X	-	ANCHOR SLAB-TRANS. SEG. A
A506	X	107	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. A
A507	X	56	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. A
P501	X	107	6'-8"	X	-	PARAPET- VERT. SEG. A
P502	X	107	5'-10"	X	-	PARAPET- VERT. SEG. A
P803	X	16	24'-7"	-	-	PARAPET- LONG. SEG. A
P804	X	8	16'-9"	-	-	PARAPET- LONG. SEG. A

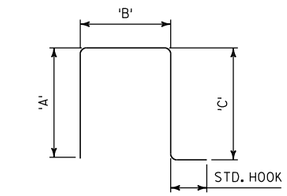
POLE SUPPORT BILL OF BARS ✳

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
L501	X	6	8'-1"	X	-	POLE SUPPORT - TIE SEG.A
L502	X	6	8'-2"	X	-	POLE SUPPORT -VERTICAL TIE SEG.A
L503	X	6	6'-6"	X	-	POLE SUPPORT - HORIZONTAL TIE SEG.A
L604	X	8	6'-8"	X	-	POLE SUPPORT - HORIZONTAL TIE SEG.A
L505	X	5	4'-4"	X	-	POLE SUPPORT - VERTICAL TIE SEG.A
L406	X	4	1'-10"	X	-	POLE SUPPORT - HORIZONTAL TIE SEG.A
L407	X	2	2'-10"	X	-	POLE SUPPORT - VERTICAL SEG.A
L508	X	5	10'-3"	X	-	POLE SUPPORT - STIRRUP SEG.A
L609	X	2	5'-1"	X	-	POLE SUPPORT - HORIZONTAL SEG.A
L610	X	2	4'-9"	X	-	POLE SUPPORT - HORIZONTAL SEG.A

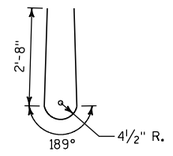
✳ NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



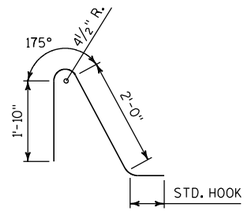
BAR MARK	DIM 'A'	DIM 'B'
A501	3'-1"	1'-8"
A505	3'-1"	1'-0"



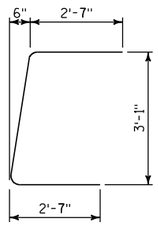
BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
A502	2'-0"	1'-10"	2'-1"



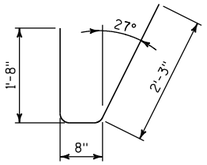
P501



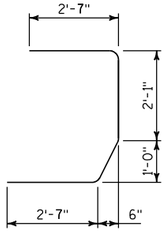
P502



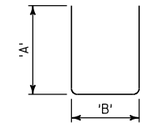
L501



L505

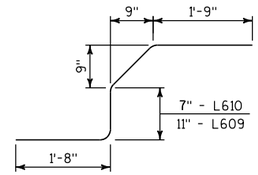


L502



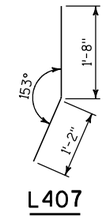
L503, L604, L406

BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



L609 & L610

L508



L407

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

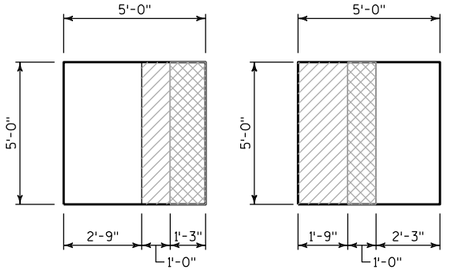
STRUCTURE R-40-501

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS

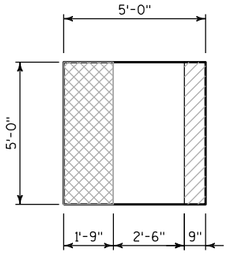
SHEET 7 OF 9

STATE PROJECT NUMBER
1060-33-80

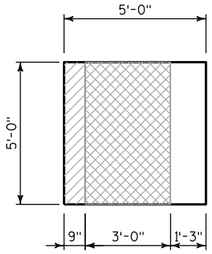


WALL PANEL "A"

WALL PANEL "B"

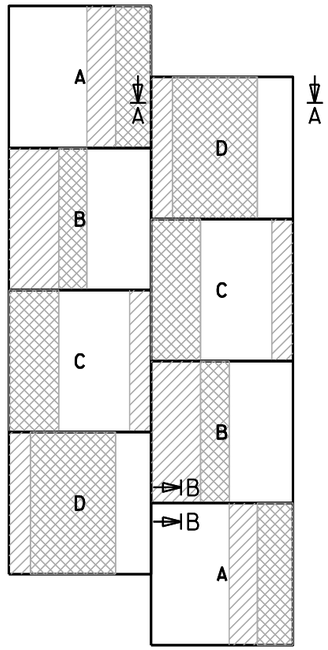


WALL PANEL "C"

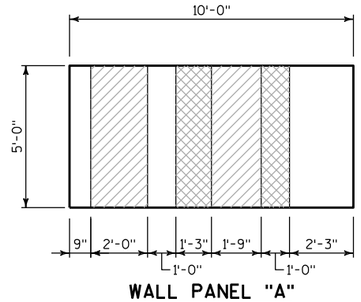


WALL PANEL "D"

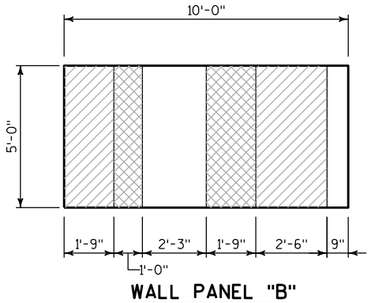
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



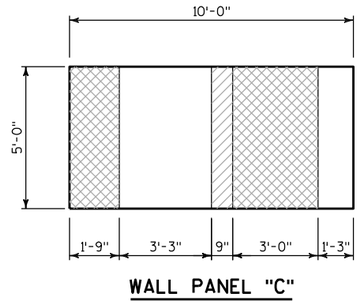
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



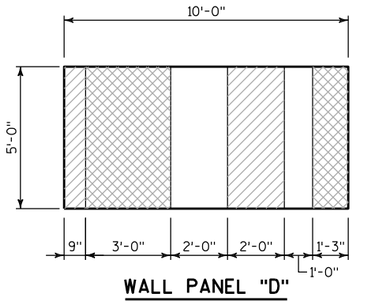
WALL PANEL "A"



WALL PANEL "B"

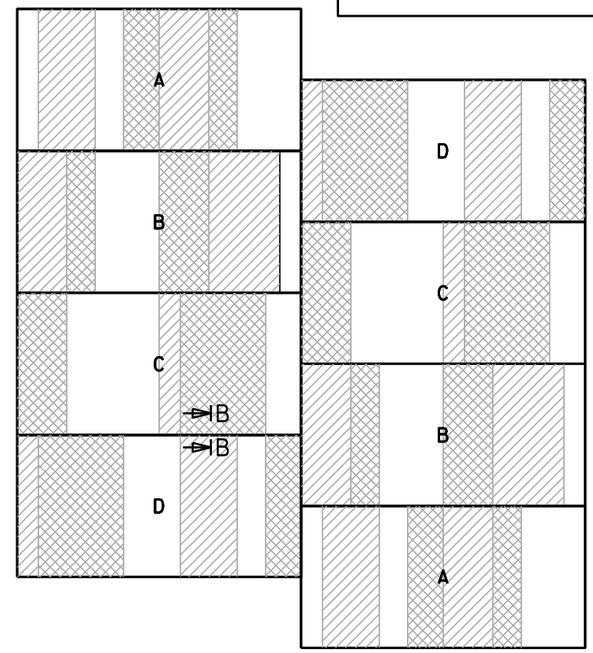


WALL PANEL "C"



WALL PANEL "D"

5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

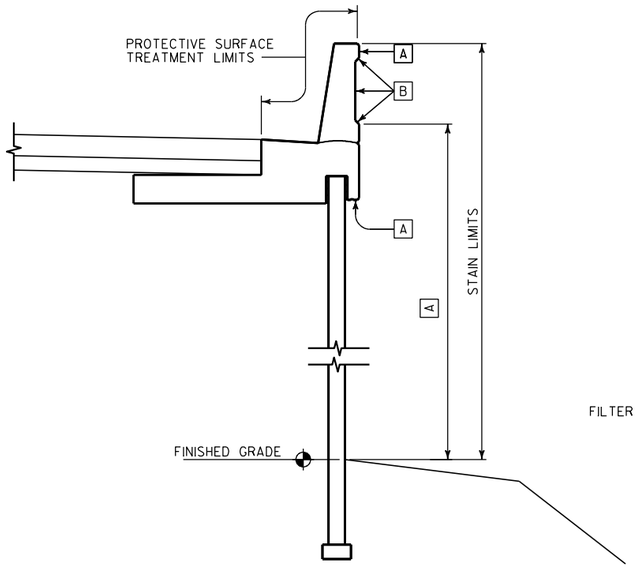
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO 1'-0" BELOW FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

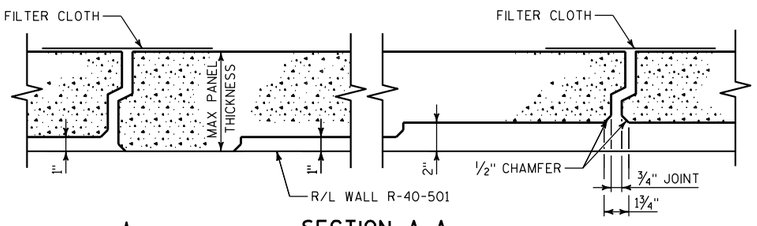
STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

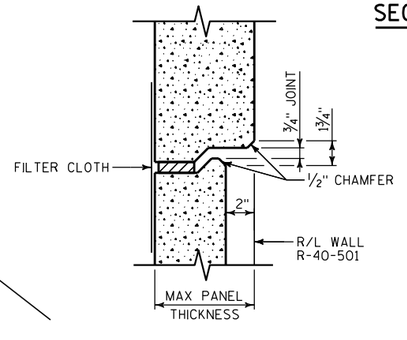
BASE COLOR - 33564
ACCENT COLOR #1 - 33448



MSE WALL STAINING DIAGRAM



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

DRAWN BY MR | PLANS CK'D. MHZ

AESTHETIC WALL TREATMENT DETAILS

SHEET 8 OF 9

8

8

NOTE

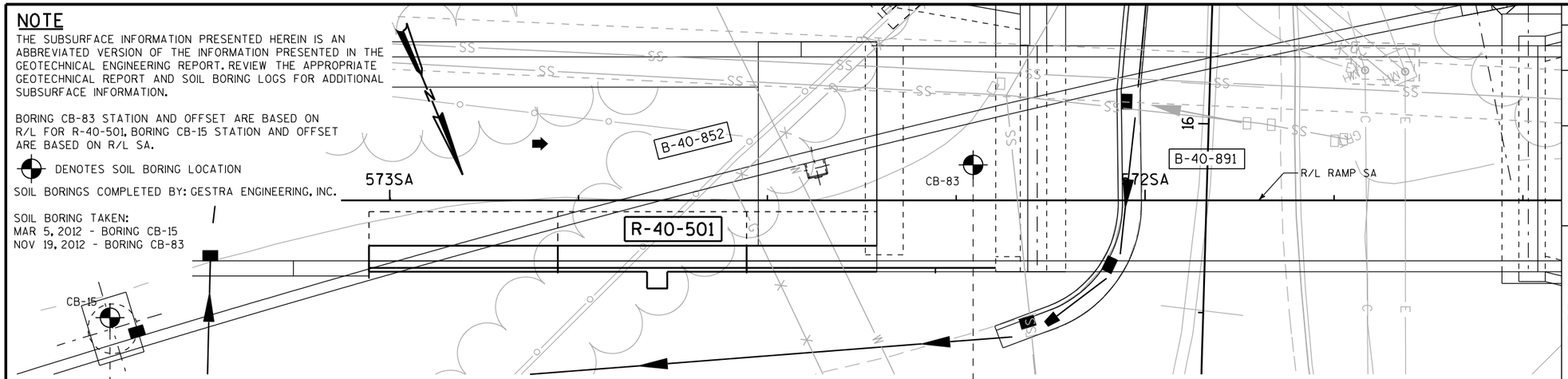
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

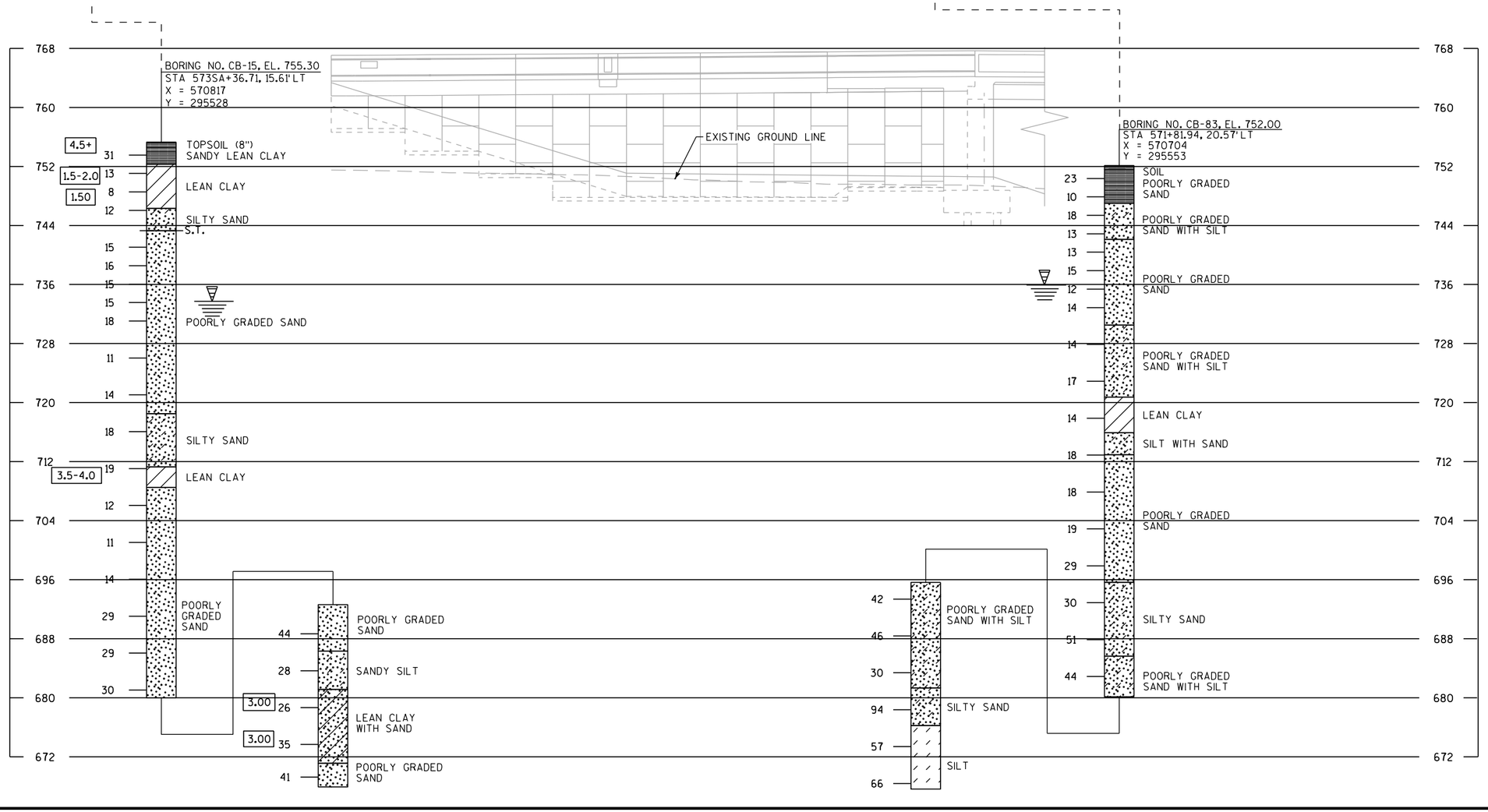
BORING CB-83 STATION AND OFFSET ARE BASED ON R/L FOR R-40-501, BORING CB-15 STATION AND OFFSET ARE BASED ON R/L SA.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAR 5, 2012 - BORING CB-15
NOV 19, 2012 - BORING CB-83





STATE PROJECT NUMBER

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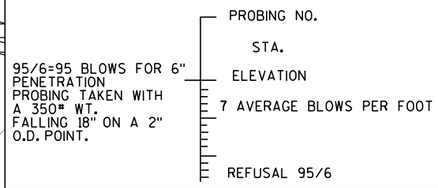
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

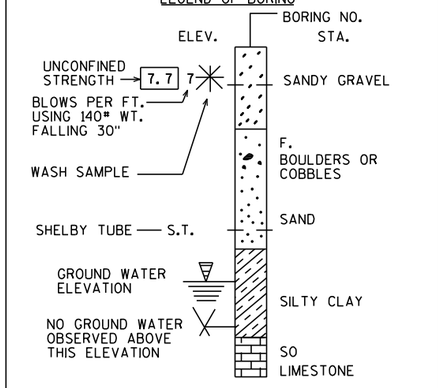
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-501

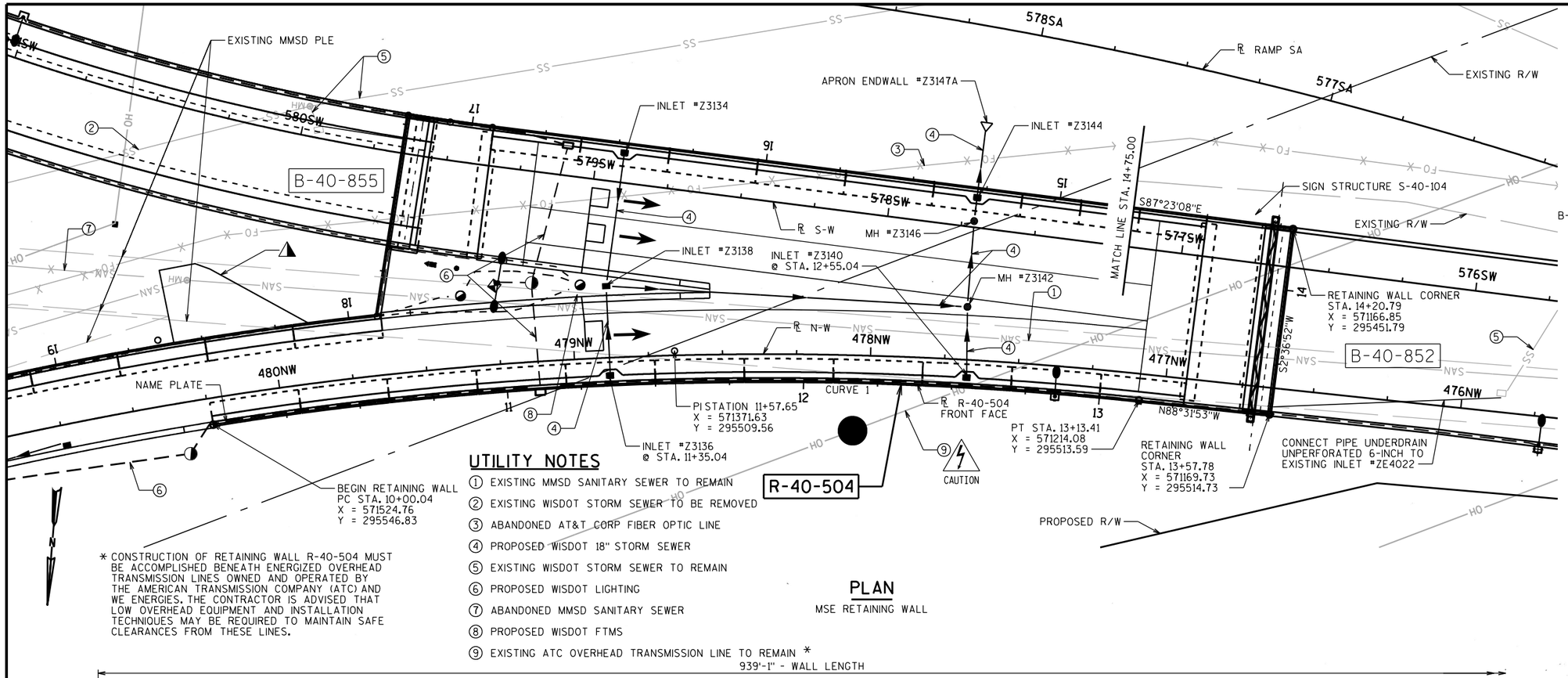
DRAWN BY MM | PLANS CK'D. MR

SUBSURFACE EXPLORATION

SHEET 9 OF 9

8

8



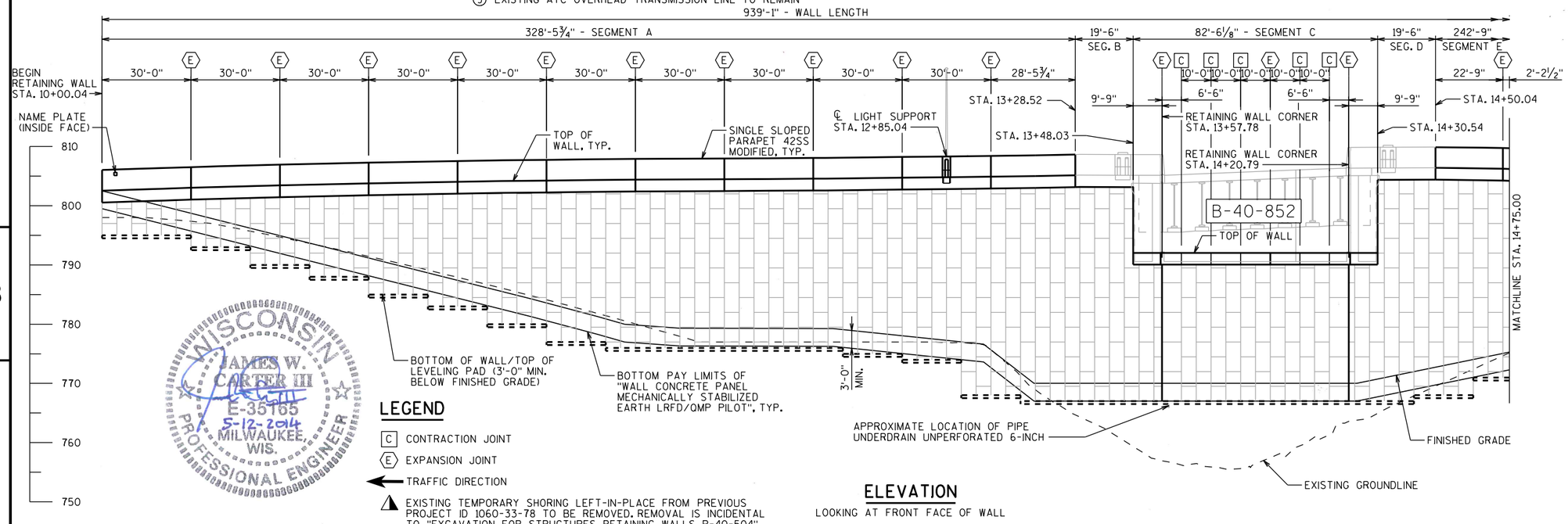
* CONSTRUCTION OF RETAINING WALL R-40-504 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

UTILITY NOTES

1. EXISTING MMSD SANITARY SEWER TO REMAIN
2. EXISTING WISDOT STORM SEWER TO BE REMOVED
3. ABANDONED AT&T CORP FIBER OPTIC LINE
4. PROPOSED WISDOT 18" STORM SEWER
5. EXISTING WISDOT STORM SEWER TO REMAIN
6. PROPOSED WISDOT LIGHTING
7. ABANDONED MMSD SANITARY SEWER
8. PROPOSED WISDOT FTMS
9. EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN *

PLAN

MSE RETAINING WALL



LEGEND

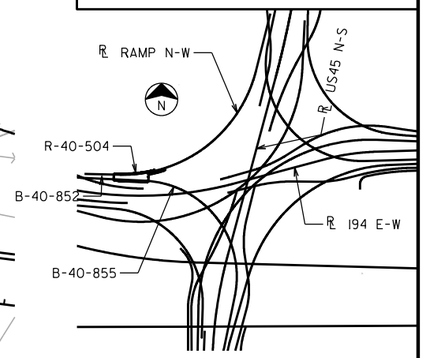
- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- TRAFFIC DIRECTION
- EXISTING TEMPORARY SHORING LEFT-IN-PLACE FROM PREVIOUS PROJECT ID 1060-33-78 TO BE REMOVED. REMOVAL IS INCIDENTAL TO "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-504".

ELEVATION

LOOKING AT FRONT FACE OF WALL

STATE PROJECT NUMBER

1060-33-80



LOCATION MAP

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION 1
2. GENERAL PLAN & ELEVATION 2
3. GENERAL NOTES & DESIGN DATA
4. QUANTITIES
5. TYPICAL SECTIONS (1 OF 3)
6. TYPICAL SECTIONS (2 OF 3)
7. TYPICAL SECTIONS (3 OF 3)
8. ELEVATION TABLES
9. REINFORCEMENT SCHEDULE
10. PARAPET, COPING AND ANCHOR SLAB DETAILS
11. COPING DETAILS
12. SEGMENT A REINFORCEMENT DETAILS (1 OF 2)
13. SEGMENT A REINFORCEMENT DETAILS (2 OF 2)
14. SEGMENT C REINFORCEMENT DETAILS
15. SEGMENT E REINFORCEMENT DETAILS
16. SEGMENTS G, H & J REINFORCEMENT DETAILS
17. LIGHT SUPPORT DETAILS (1 OF 2)
18. LIGHT SUPPORT DETAILS (2 OF 2)
19. INLET DETAILS
20. ANCHOR SLAB INLET COVER SPECIAL
21. RAILING PIPE DETAILS
22. AESTHETIC WALL TREATMENT DETAILS
23. SUBSURFACE EXPLORATION 1
24. SUBSURFACE EXPLORATION 2

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 359-2300

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/14/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-504

RETAINING WALL ALONG RAMP NW

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KTM	JJO	KTM	JWC

GENERAL PLAN & ELEVATION 1

SHEET 1 OF 24

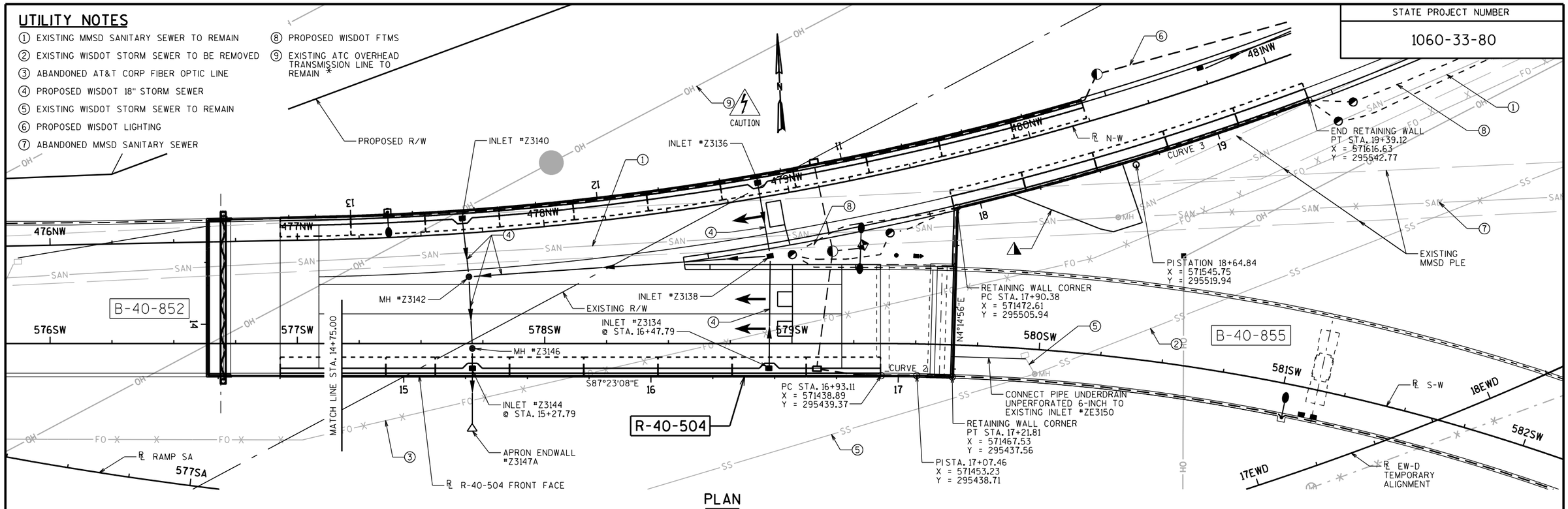
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UTILITY NOTES

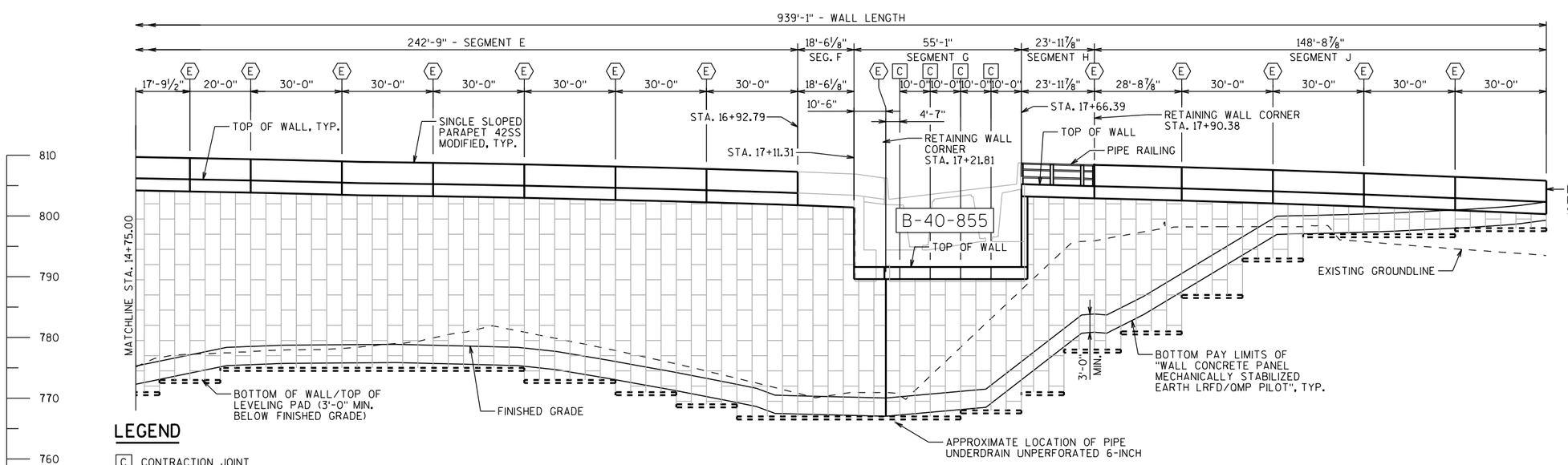
1. EXISTING MMSD SANITARY SEWER TO REMAIN
2. EXISTING WISDOT STORM SEWER TO BE REMOVED
3. ABANDONED AT&T CORP FIBER OPTIC LINE
4. PROPOSED WISDOT 18" STORM SEWER
5. EXISTING WISDOT STORM SEWER TO REMAIN
6. PROPOSED WISDOT LIGHTING
7. ABANDONED MMSD SANITARY SEWER
8. PROPOSED WISDOT FTMS
9. EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN *

STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL



* CONSTRUCTION OF RETAINING WALL R-40-504 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- TRAFFIC DIRECTION
- EXISTING TEMPORARY SHORING LEFT-IN-PLACE FROM PREVIOUS PROJECT ID 1060-33-78 TO BE REMOVED. REMOVAL IS INCIDENTAL TO "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-504".

ELEVATION

LOOKING AT FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 2

SHEET 2 OF 24

8 8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-504\cds\080102_gp.dgn
PLOT DATE : 01-MAY-2014 10:59
PLOT BY : MSCJJO
PLOT NAME : 080102_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION, 2012 WITH INTERIM REVISIONS, UNLESS NOTED OTHERWISE.

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

COORDINATE THE CONSTRUCTION OF WALL R-40-504 WITH THE EAST ABUTMENT OF BRIDGE B-40-852 AND THE WEST ABUTMENT OF BRIDGE B-40-855.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT A, SEGMENT E, AND SEGMENT J CAST-IN-PLACE ANCHOR SLAB AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" AND "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT C, SEGMENT G, AND SEGMENT H CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND INSIDE FACES OF PARAPET AND THE EXPOSED TOP SURFACE OF THE ANCHOR SLAB.

COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES WITH THE CONSTRUCTION OF THE WALL. COORDINATION INCLUDES THE LOCATIONS OF THE MSE PANEL JOINTS AND MSE REINFORCING STRIPS RELATIVE TO THE PROPOSED INLETS AND STRUCTURES.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES OTHER THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 3'-0" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO ITEM "CONCRETE MASONRY RETAINING WALLS". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

HORIZONTAL CURVE DATA

WALL CURVE 1	WALL CURVE 2	WALL CURVE 3
P.I. = 11+57.65	P.I. = 17+07.46	P.I. = 18+64.84
X: 571371.63	X: 571453.23	X: 571545.75
Y: 295509.56	Y: 295438.71	Y: 295519.94
Δ = 15°09'03" RIGHT	Δ = 2°00'01" RIGHT	Δ = 7°01'13" LEFT
D = 4°50'06"	D = 6°58'11"	D = 4°43'11"
T = 157.60'	T = 14.35'	T = 74.47'
L = 313.37'	L = 28.70'	L = 148.74'
R = 1185.05'	R = 822.05'	R = 1213.95'
P.C. = 10+00.04	P.C. = 16+93.11	P.C. = 17+90.38
X: 571524.76	X: 571438.89	X: 571472.61
Y: 295546.83	Y: 295439.37	Y: 295505.94
P.T. = 13+13.41	P.T. = 17+21.81	P.T. = 19+39.12
X: 571214.08	X: 571467.53	X: 571616.63
Y: 295513.59	Y: 295437.56	Y: 295542.77

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS							
WALL HEIGHT (FEET)	10.9	20	28.1	38	35.7	29.3	34.4	24
EXPOSED WALL HEIGHT (FEET)	7.9	17	25.1	35	32.7	26.3	31.4	21
◥ MINIMUM LENGTH OF REINFORCEMENT (FEET)	8	15	25.2	33	32.1	26.5	24.1	16.8
REINFORCEMENT LENGTH/RETAINED HEIGHT RATIO	0.73H	0.75H	0.9H	0.9H	0.9H	0.9H	0.7H	0.8H
WALL STATION	10+56.64	11+23.15	12+22.40	13+21.71	14+57.03	15+56.85	16+55.86	17+92.77
BORING USED	CR-18	CR-18	CR-18&19	CR-19	CR-19	CR-18&19	CR-18	CR-18
CAPACITY TO DEMAND RATIO (CDR)								
SLIDING	3.73	1.29	1.61	5.69	5.98	1.70	1.35	1.47
ECCENTRICITY	3.36	1.20	1.85	7.15	6.48	1.83	1.15	1.40
BEARING	3.06	1.19	1.54	1.39	1.49	1.36	1.19	1.51
GLOBAL STABILITY	1.27	1.07	1.18	1.59	2.16	1.03	1.03	1.00

◥ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

MSE WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)*	120	30	0	30	0
LEAN CLAY (RETAINED SOIL)	125	0	2000	30	0
COMPACTED LEAN CLAY FILL (FOUNDATION SOIL)	128	0	3000	30	0

* DESIGN WALL FOR THESE VALUES

DESIGN DATA

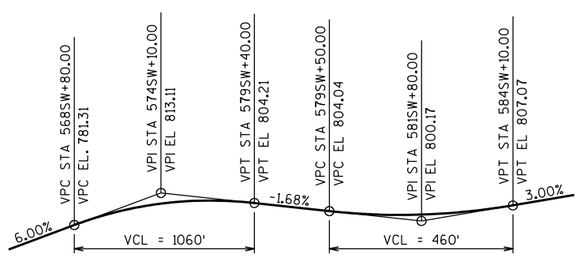
LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A VERTICAL EARTH SURCHARGE LOAD BEHIND THE ABUTMENT PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

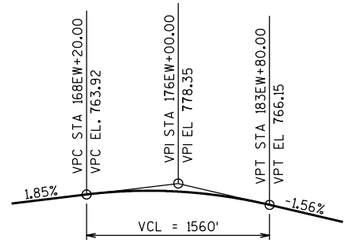
DESIGN THE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

MATERIAL PROPERTIES

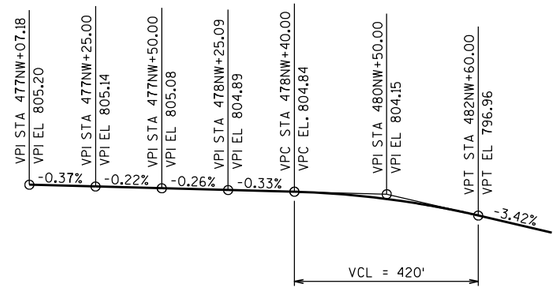
CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI



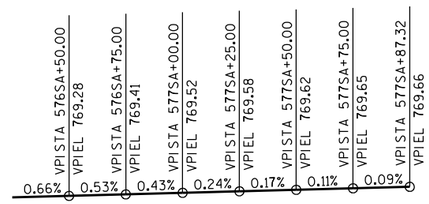
PROFILE GRADE LINE S-W
℄ 'SW'



PROFILE GRADE LINE E-W WB
℄ 'EW'



PROFILE GRADE LINE N-W
℄ 'NW'



PROFILE GRADE LINE RAMP SA
℄ 'SA'

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STRUCTURE R-40-504

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GENERAL NOTES & DESIGN DATA

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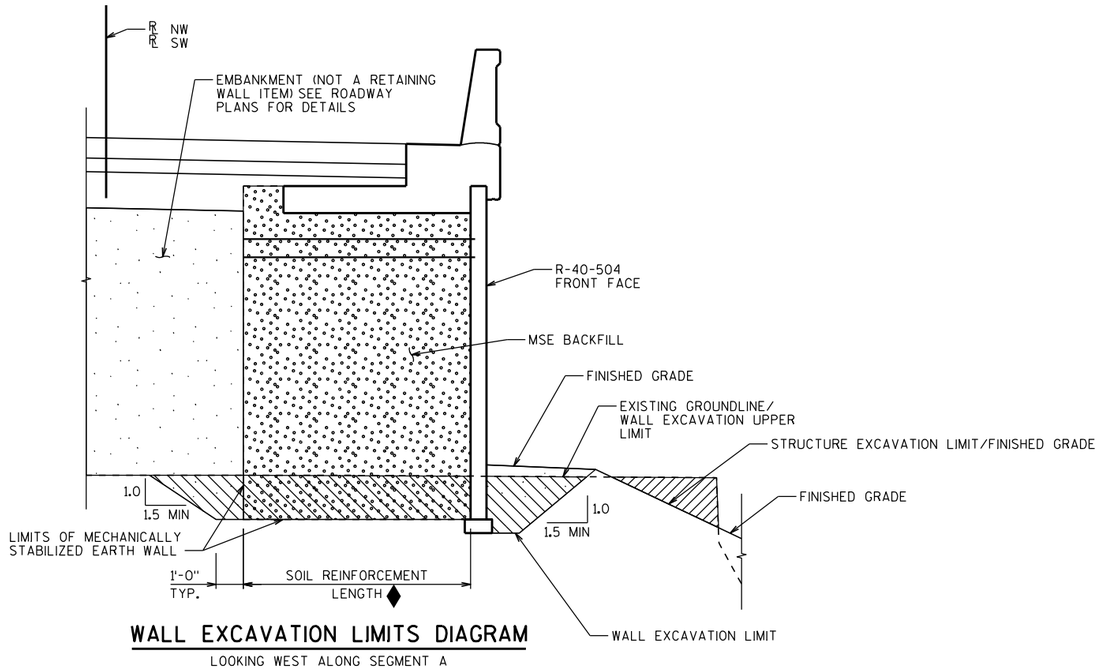
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TOTAL ESTIMATED QUANTITES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	SEGMENT E	SEGMENT F	SEGMENT G	SEGMENT H	SEGMENT J	TOTAL
206.3000.0001	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-504	LS	-	-	-	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	234	-	-	-	173	-	-	-	141	548
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	198	-	-	-	146	-	-	-	104	448
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	30,410	-	-	-	22,260	-	-	-	14,410	67,080
513.2000.0003	RAILING PIPE R-40-504	LS	-	-	-	-	-	-	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	69	-	1	-	54	-	1	1	29	155
517.1050.S.0002	ARCHITECTURAL SURFACE TREATMENT R-40-504	SF	6,645	705	1,899	696	7,234	653	1,165	613	1,173	20,783
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	-	82	-	-	-	32	-	-	114
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	332	20	83	20	244	20	56	26	152	953
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	4	-	-	-	3	-	-	-	-	7
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	331	-	-	-	23	-	-	-	302	656
653.0220	JUNCTION BOXES 18 X 6 X 6-INCH	EACH	1	-	-	-	-	-	-	-	-	1
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	2	-	-	-	1	-	-	-	2	5
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	1	-	-	-	-	-	-	-	-	1
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	2	-	-	-	2	-	-	-	-	4
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	7,302	744	2,064	735	7,720	691	1,274	661	1,470	22,661
	NON-BID ITEMS											
	PREFORMED JOINT FILLER	SIZE	-	-	-	-	-	-	-	-	-	3/4", 1", 1 1/2"
	NON-BITUMINOUS JOINT SEALER	SIZE	-	-	-	-	-	-	-	-	-	1"
	NAME PLATE	EACH	-	-	-	-	-	-	-	-	-	1
	CORK FILLER	SIZE	-	-	-	-	-	-	-	-	-	1"
	EXPANDED POLYSTYRENE	SIZE	-	-	-	-	-	-	-	-	-	3/4", 1", 1 1/2"

ALL ITEMS ARE CATEGORY 3010



WALL EXCAVATION LIMITS DIAGRAM

LOOKING WEST ALONG SEGMENT A
LOOKING EAST ALONG SEGMENT E

LEGEND

- STRUCTURE EXCAVATION - INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-504"
- EMBANKMENT - NOT A RETAINING WALL ITEM
- MSE BACKFILL - INCLUDED IN THE BID ITEMS "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" AND "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT"
- WALL EXCAVATION - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT"
- ♦ CONSTRUCTION NOTE: WHERE THE BACK OF REINFORCEMENT ZONES ABUT EACH OTHER, LIMIT THE MAXIMUM DIFFERENTIAL OF INTERIM FILL HEIGHTS TO LESS THAN 5 FEET.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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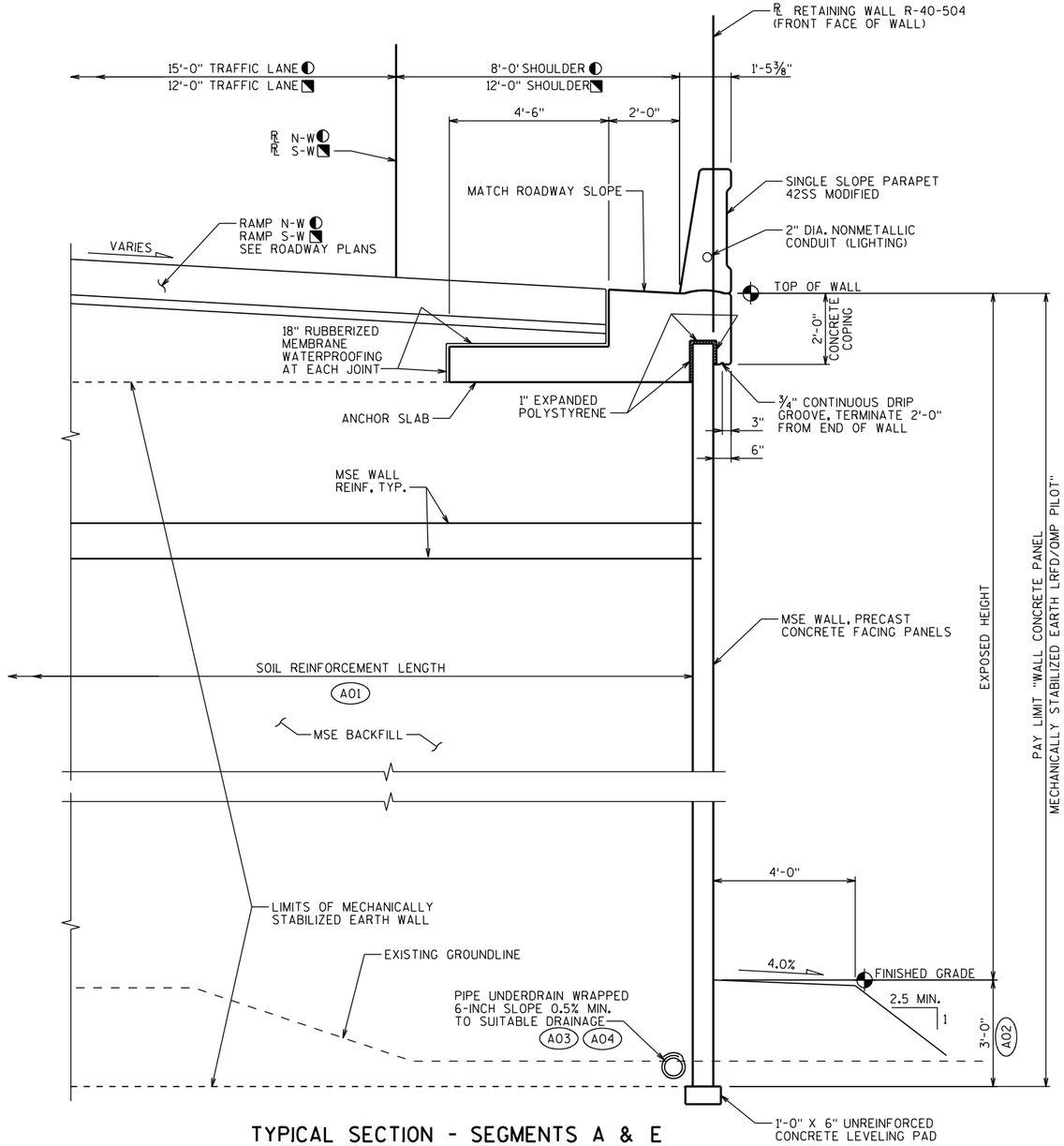
QUANTITIES

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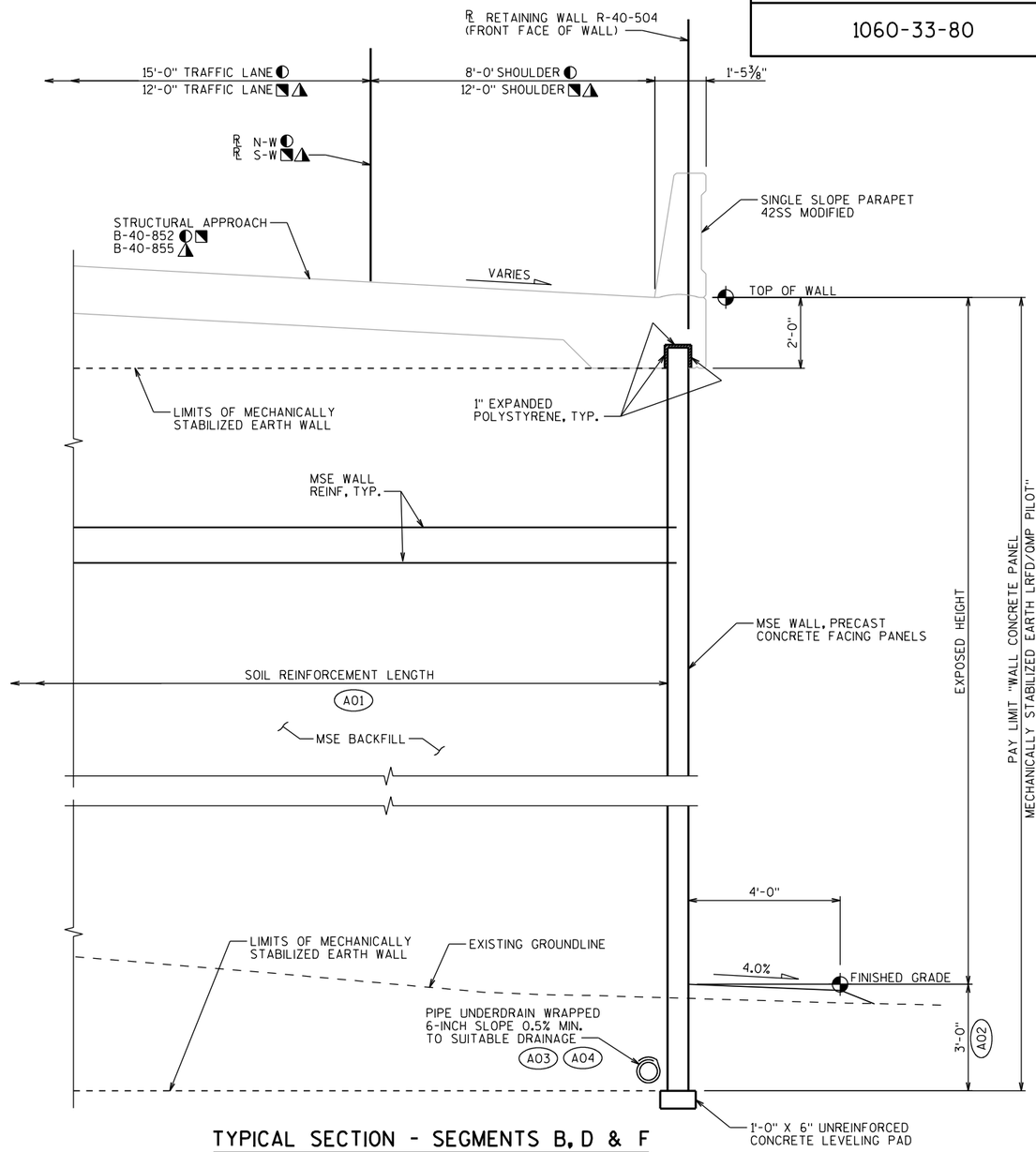
STATE PROJECT NUMBER

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TYPICAL SECTION - SEGMENTS A & E

SEGMENT A - LOOKING WEST - STA. 10+00.04 TO STA. 13+28.52
SEGMENT E - LOOKING EAST - STA. 14+50.04 TO STA. 16+92.79



TYPICAL SECTION - SEGMENTS B, D & F

SEGMENT B - LOOKING WEST - STA. 13+28.52 TO STA. 13+48.03
SEGMENT D - LOOKING EAST - STA. 14+30.54 TO STA. 14+50.04
SEGMENT F - LOOKING EAST - STA. 16+92.79 TO STA. 17+11.31

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "GENERAL NOTES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. SOIL REINFORCEMENT LENGTH MAY OVERLAP WITH REINFORCEMENT ZONE OF OPPOSITE WALL SEGMENT.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) FOR SEGMENTS A THROUGH E, CONNECT PIPE UNDERDRAIN WRAPPED TO INLET #ZE4022 USING PIPE UNDERDRAIN UNPERFORATED. (CONNECTIONS ARE INCIDENTAL TO "PIPE UNDERDRAIN UNPERFORATED 6-INCH"). SEE GENERAL PLAN AND ELEVATION SHEETS.

(A04) FOR SEGMENTS E THROUGH J, CONNECT PIPE UNDERDRAIN WRAPPED TO INLET #ZE3150 USING PIPE UNDERDRAIN UNPERFORATED. (CONNECTIONS ARE INCIDENTAL TO "PIPE UNDERDRAIN UNPERFORATED 6-INCH"). SEE GENERAL PLAN AND ELEVATION SHEETS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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TYPICAL SECTIONS (1 OF 3)

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LEGEND

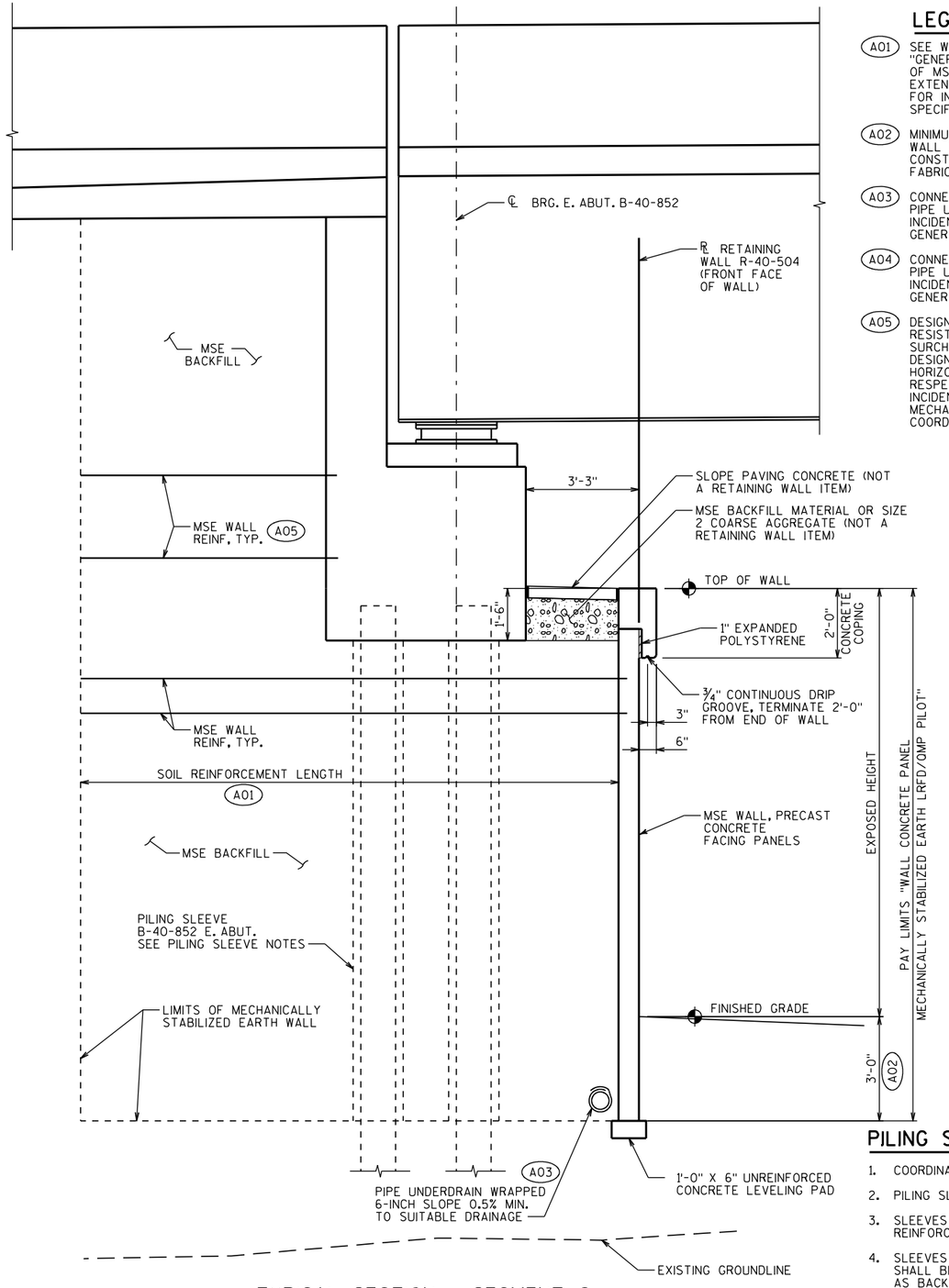
(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "GENERAL NOTES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN WRAPPED TO INLET "ZE4022 USING PIPE UNDERDRAIN UNPERFORATED. (CONNECTIONS ARE INCIDENTAL TO "PIPE UNDERDRAIN UNPERFORATED 6-INCH"). SEE GENERAL PLAN AND ELEVATION SHEETS.

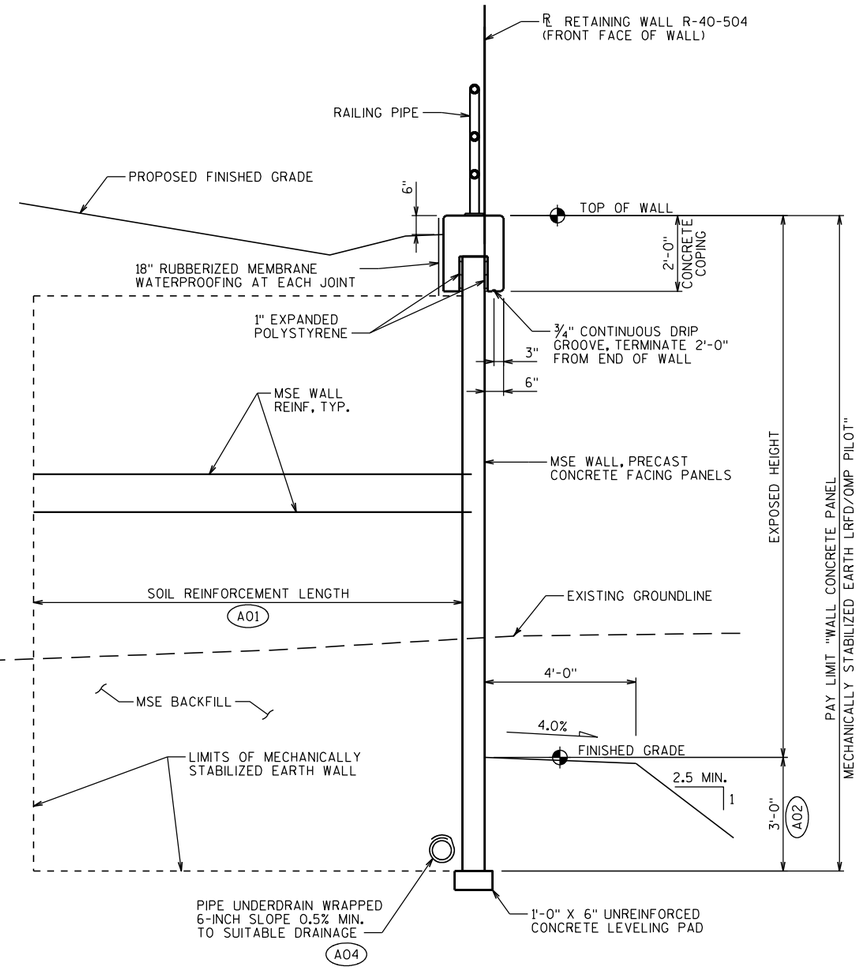
(A04) CONNECT PIPE UNDERDRAIN WRAPPED TO INLET "ZE3150 USING PIPE UNDERDRAIN UNPERFORATED. (CONNECTIONS ARE INCIDENTAL TO "PIPE UNDERDRAIN UNPERFORATED 6-INCH"). SEE GENERAL PLAN AND ELEVATION SHEETS.

(A05) DESIGN REINFORCING STRIPS CONNECTED TO ABUTMENTS TO RESIST ALL HORIZONTAL EARTH PRESSURE AND LIVE LOAD SURCHARGE LOADS INDICATED ON THE "GENERAL NOTES & DESIGN DATA" SHEET, AND AN UNFACTORED SUPERSTRUCTURE HORIZONTAL LOAD INDICATED FOR THE ABUTMENT ON THE RESPECTIVE BRIDGE PLANS. THESE REINFORCING STRIPS ARE INCIDENTAL TO THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT". COORDINATE INSTALLATION WITH BRIDGE CONTRACTOR.



TYPICAL SECTION - SEGMENT C

LOOKING SOUTH
STA. 13+48.03 TO STA. 14+30.54



TYPICAL SECTION - SEGMENT H

LOOKING NORTH
STA. 17+66.39 TO STA. 17+90.38

PILING SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-852.
2. PILING SLEEVES TO BE PAID FOR UNDER BRIDGE B-40-852.
3. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
4. SLEEVES SHALL BE PLACED BEFORE MSE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.
5. PILING SLEEVES SHALL BE INSTALLED PRIOR TO BEGINNING ABUTMENT CONSTRUCTION. INSTALLATION ELEVATION AT BOTTOM OF MSE REINFORCED ZONE VARIES. SEE "ELEVATION TABLES" SHEET FOR WALL ELEVATIONS.

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TYPICAL SECTIONS (2 OF 3)

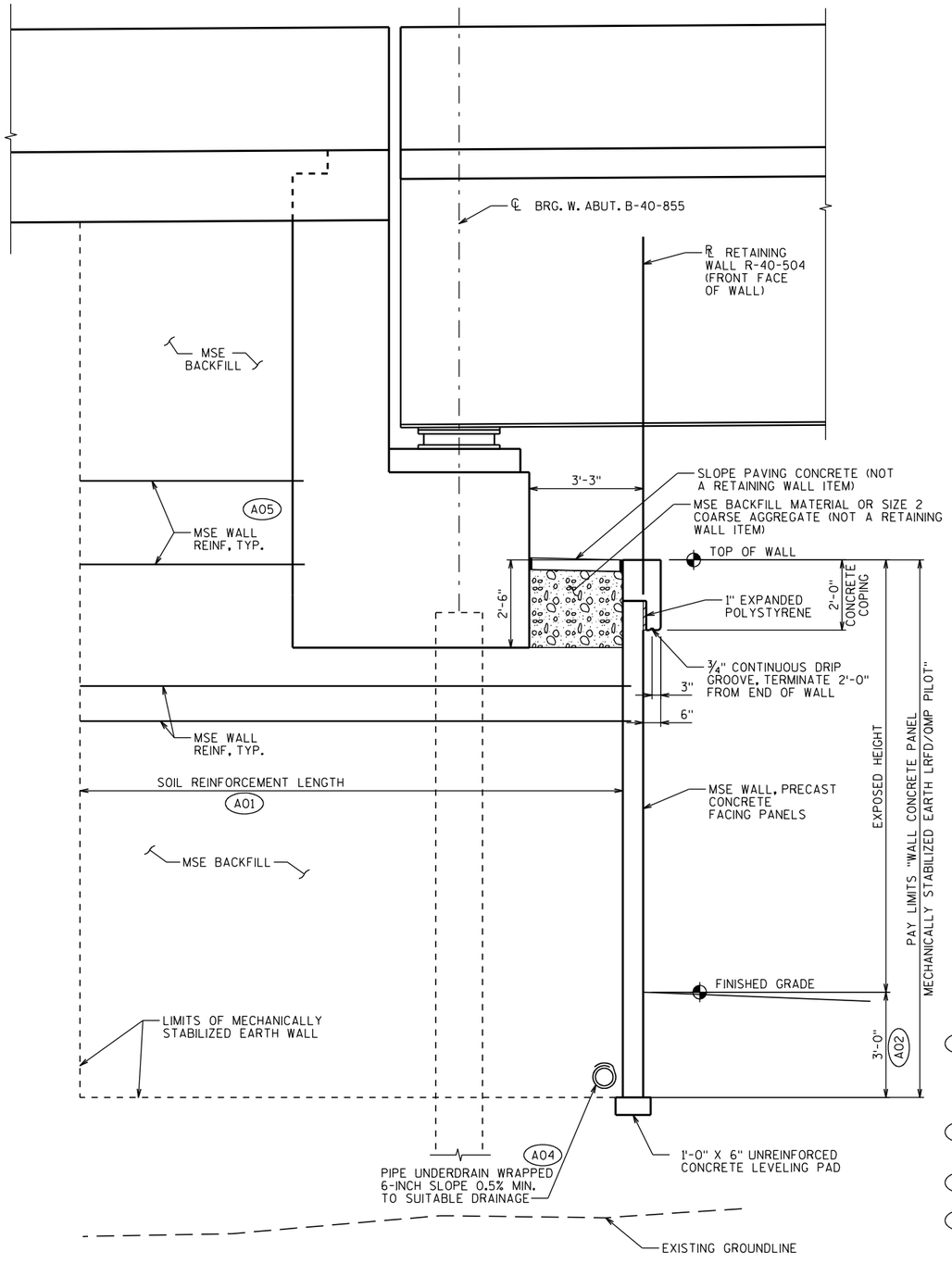
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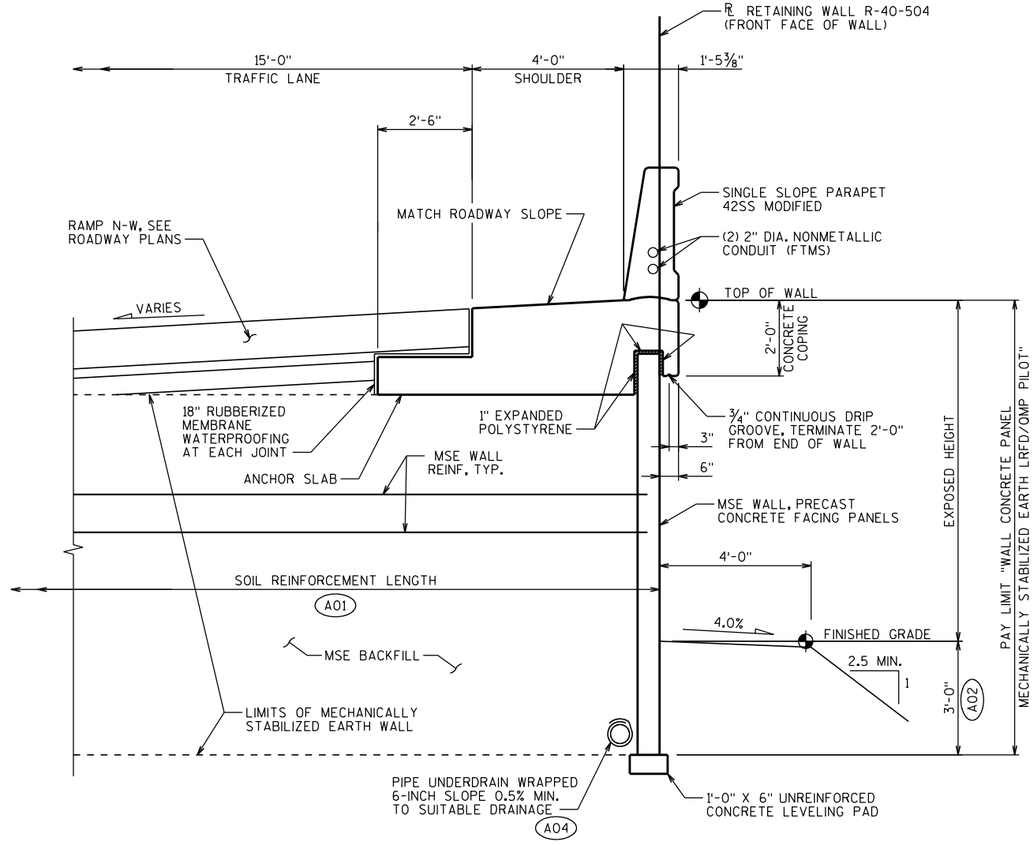
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TYPICAL SECTION - SEGMENT G

LOOKING NORTH
STA. 17+11.31 TO STA. 17+66.39



TYPICAL SECTION - SEGMENT J

LOOKING EAST
STA. 17+90.38 TO STA. 19+39.12

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "GENERAL NOTES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. SOIL REINFORCEMENT LENGTH MAY OVERLAP WITH REINFORCEMENT ZONE OF WALL SEGMENT A.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A04) CONNECT PIPE UNDERDRAIN WRAPPED TO INLET "ZE3150 USING PIPE UNDERDRAIN UNPERFORATED. SEE GENERAL PLAN AND ELEVATION SHEETS.

(A05) DESIGN REINFORCING STRIPS CONNECTED TO ABUTMENTS TO RESIST ALL HORIZONTAL EARTH PRESSURE AND LIVE LOAD SURCHARGE LOADS INDICATED ON THE "GENERAL NOTES & DESIGN DATA" SHEET, AND AN UNFACTORED SUPERSTRUCTURE HORIZONTAL LOAD INDICATED FOR THE ABUTMENT ON THE RESPECTIVE BRIDGE PLANS. THESE REINFORCING STRIPS ARE INCIDENTAL TO THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT". COORDINATE INSTALLATION WITH BRIDGE CONTRACTOR.

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DRAWN BY KTM | PLANS CK'D. JWC

TYPICAL SECTIONS (3 OF 3)

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STATE PROJECT NUMBER
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SEGMENT A WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+00.04	802.54	802.50	798.01
10+15.04	802.79	800.61	797.98
10+30.04	803.01	798.73	797.35
10+45.04	803.23	796.84	796.19
10+60.04	803.42	794.95	794.68
10+75.04	803.60	793.07	793.10
10+90.04	803.76	791.18	791.45
11+05.04	803.91	789.29	789.72
11+20.04	804.04	787.40	787.91
11+35.04	804.15	785.52	786.05
11+50.04	804.24	783.58	784.11
11+65.04	804.32	781.57	782.11
11+80.04	804.38	779.87	780.05
11+95.04	804.43	779.30	777.94
12+10.04	804.47	779.29	777.00
12+25.04	804.51	779.28	777.00
12+40.04	804.55	779.26	777.00
12+55.04	804.63	778.83	777.00
12+70.04	804.71	778.05	777.00
12+85.04	804.80	777.27	777.00
13+00.04	804.89	775.68	775.70
13+14.28	804.99	770.12	769.15
13+28.52	805.15	770.00	764.80

SEGMENT B WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
13+28.52	805.15	770.00	764.80
13+38.28	805.14	770.00	761.70
13+48.03	805.13	770.00	759.09

SEGMENT C WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
13+48.03	792.04	770.00	759.09
13+57.78	792.04	770.00	756.90
13+64.28	792.04	770.00	756.23
13+74.28	792.04	770.00	755.81
13+84.28	792.04	770.00	755.62
13+94.28	792.04	770.00	757.45
14+04.28	792.04	770.00	759.53
14+14.28	792.04	770.00	762.14
14+20.79	792.04	770.00	763.44
14+30.54	792.04	770.72	764.63

SEGMENT D WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
14+30.54	806.35	770.72	764.63
14+40.29	806.37	771.72	766.71
14+50.04	806.39	772.72	768.91

SEGMENT E WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
14+50.04	806.39	772.72	768.91
14+61.42	806.31	773.89	771.06
14+72.79	806.23	775.06	774.04
14+82.79	806.15	776.09	776.06
14+92.79	806.06	777.12	777.18
15+02.79	805.96	778.15	777.38
15+12.79	805.86	778.52	777.63
15+27.79	805.69	778.75	777.97
15+42.79	805.50	778.81	778.18
15+57.79	805.37	778.86	778.89
15+72.79	805.26	778.72	779.88
15+87.79	805.13	778.55	781.37
16+02.79	804.99	778.26	780.90
16+17.79	804.83	777.33	779.39
16+32.79	804.66	776.05	777.85
16+47.79	804.47	774.70	776.18
16+62.79	804.26	773.27	774.46
16+77.79	804.04	771.79	772.66
16+92.79	803.80	770.40	770.81

SEGMENT F WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
16+92.79	803.80	770.40	770.81
17+02.05	803.61	770.28	770.32
17+11.31	803.41	770.16	770.95

SEGMENT G WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
17+11.31	791.61	770.16	770.95
17+21.81	791.61	770.03	770.93
17+26.39	791.61	770.23	770.42
17+36.39	791.61	770.68	773.62
17+46.39	791.61	771.12	778.36
17+56.39	791.61	772.12	783.09
17+66.39	791.61	776.01	787.80

SEGMENT H WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
17+66.39	805.24	776.01	787.80
17+78.39	805.08	780.67	793.44
17+90.38	804.92	783.89	795.89

SEGMENT J WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
17+90.38	804.92	783.89	795.89
18+04.75	804.74	786.29	797.19
18+19.12	804.54	790.52	798.20
18+34.12	804.32	795.04	798.23
18+49.12	804.08	799.56	798.25
18+64.12	803.82	800.12	796.34
18+79.12	803.55	800.34	795.75
18+94.12	803.27	800.64	795.15
19+09.12	802.96	801.00	794.57
19+24.12	802.64	801.45	794.04
19+39.12	802.31	802.30	793.49

LEGEND

◣ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. JJO

ELEVATION TABLES

SHEET 8 OF 24

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-504\cds\080301_de.dgn PLOT DATE : 01-MAY-2014 10:59 PLOT BY : MSCJJO PLOT NAME : 080301_de PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80

BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	757	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	474	6'-7"	X		COPING - VERTICAL TIE
A503	X	494	4'-8"	X		COPING - HORIZONTAL TIE
A504	X	263	3'-10"	X		COPING - HORIZONTAL TIE
A505	X	494	5'-11"	X		PARAPET/COPING - VERTICAL TIE
A406	X	200	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
A407	X	20	28'-0"			ANCHOR SLAB & COPING - LONGITUDINAL
A508	X	5	10'-3"	X		ANCHOR SLAB -LIGHT SUPPORT STIRRUP
A609	X	2	5'-1"	X		ANCHOR SLAB -LIGHT SUPPORT HORIZONTAL
A610	X	2	4'-9"	X		ANCHOR SLAB -LIGHT SUPPORT HORIZONTAL
K501	X	16	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOT.
K502	X	8	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	8	5'-4"	X		COPING - VERTICAL TIE
K504	X	8	8'-7"	X		COPING - VERTICAL TIE
K505	X	12	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	8	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	8	2'-6"	X		COPING - VERTICAL TIE
K508	X	8	4'-8"	X		COPING - VERTICAL TIE
K509	X	8	5'-5"	X		COPING - VERTICAL TIE
K410	X	10	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	4	14'-0"	X		COPING - LONGITUDINAL
K412	X	4	5'-1"			COPING - LONGITUDINAL
K413	X	8	2'-0"			COPING - LONGITUDINAL
L501	X	6	8'-1"	X		LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X		LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X		LIGHT SUPPORT - VERTICAL
R501	X	498	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	80	29'-7"			PARAPET - LONGITUDINAL
R803	X	8	28'-0"			PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT E

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
E501	X	555	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
E502	X	345	6'-7"	X		COPING - VERTICAL TIE
E503	X	365	4'-8"	X		COPING - HORIZONTAL TIE
E504	X	190	3'-10"	X		COPING - HORIZONTAL TIE
E505	X	365	5'-11"	X		PARAPET/COPING - VERTICAL TIE
E406	X	120	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
E407	X	20	22'-4"			ANCHOR SLAB & COPING - LONGITUDINAL
E408	X	40	19'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
K501	X	16	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOT.
K502	X	8	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	8	5'-4"	X		COPING - VERTICAL TIE
K504	X	8	8'-7"	X		COPING - VERTICAL TIE
K505	X	12	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	8	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	8	2'-6"	X		COPING - VERTICAL TIE
K508	X	8	4'-8"	X		COPING - VERTICAL TIE
K509	X	8	5'-5"	X		COPING - VERTICAL TIE
K410	X	10	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	4	14'-0"	X		COPING - LONGITUDINAL
K412	X	4	5'-1"			COPING - LONGITUDINAL
K413	X	8	2'-0"			COPING - LONGITUDINAL
R501	X	367	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	48	29'-7"			PARAPET - LONGITUDINAL
R803						NOT USED
R804	X	16	19'-7"			PARAPET - LONGITUDINAL
R805	X	8	22'-4"			PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT J

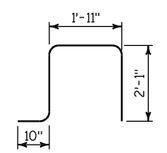
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
J501	X	340	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
J502	X	225	8'-4"	X		COPING - VERTICAL TIE
J503	X	225	4'-8"	X		COPING - HORIZONTAL TIE
J504	X	115	5'-10"	X		COPING - HORIZONTAL TIE
J505	X	225	5'-11"	X		PARAPET/COPING - VERTICAL TIE
J406	X	115	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
R501	X	225	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	40	29'-7"			PARAPET - LONGITUDINAL

NOTES

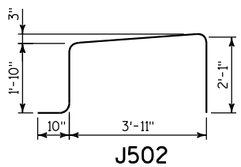
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

SEE 'INLET DETAILS' SHEET FOR INLET REINFORCEMENT BAR BEND DIAGRAMS.

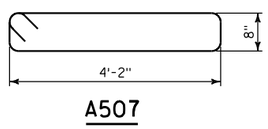
△ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



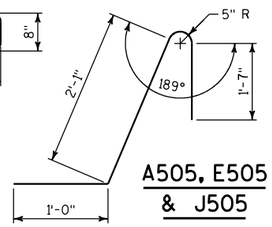
A502 & E502



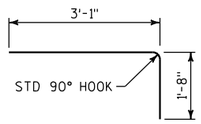
J502



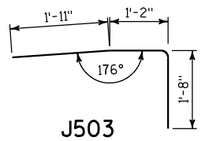
A507



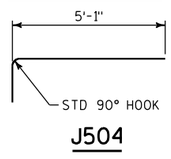
A505, E505 & J505



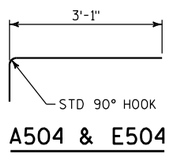
A503 & E503



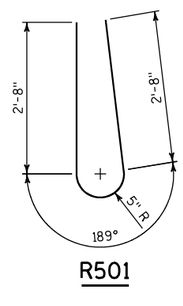
J503



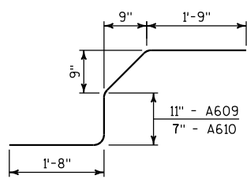
J504



A504 & E504



R501



A609 & A610

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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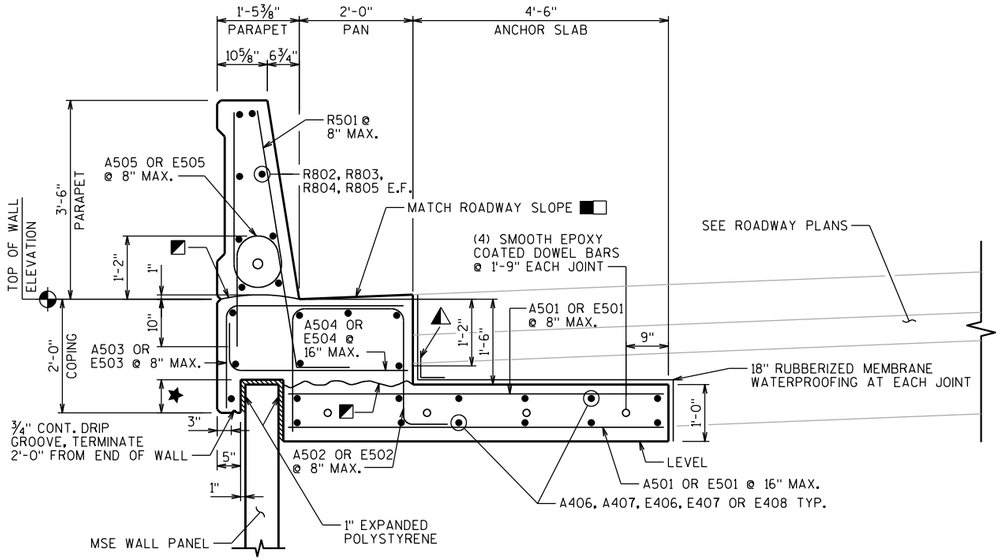
REINFORCEMENT SCHEDULE

SHEET 9 OF 24

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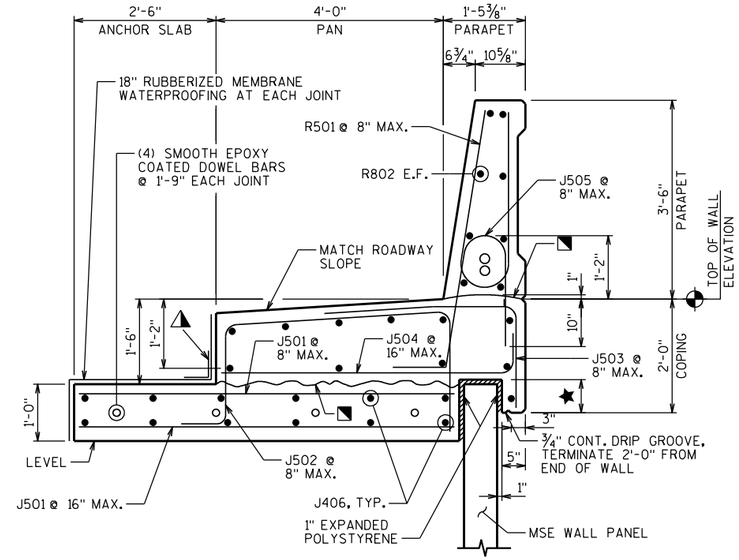
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STATE PROJECT NUMBER
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TYPICAL SECTION AT SEGMENTS A & E

(SEGMENT A LOOKING EAST, SEGMENT E LOOKING WEST)
■■ SEGMENT A SLOPES ABOVE TOE OF PARAPET AS SHOWN IN DETAIL ABOVE.
SEGMENT E TRANSITIONS FROM SLOPING BELOW TOE OF PARAPET,
(SIMILAR TO SEGMENT J DETAIL) TO SLOPING ABOVE TOE OF PARAPET.

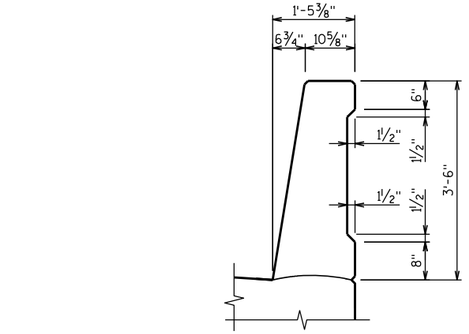


TYPICAL SECTION SEGMENT J

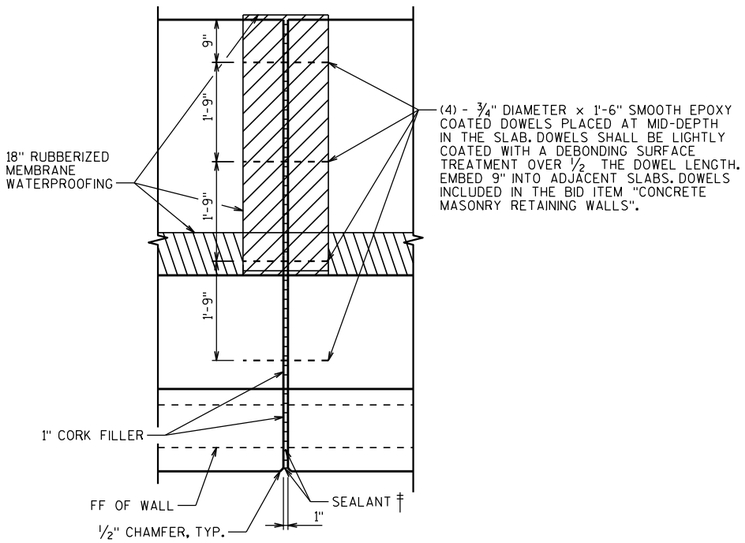
(LOOKING EAST)

LEGEND

- ★ 3" MIN., 6" MAX.
- ◥ CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- ‡ NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) COLOR TO MATCH CONCRETE STAIN.
- ■ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING
- ◓ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.

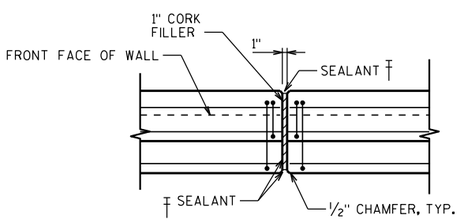


SINGLE SLOPE PARAPET 42SS MODIFIED DIMENSIONS



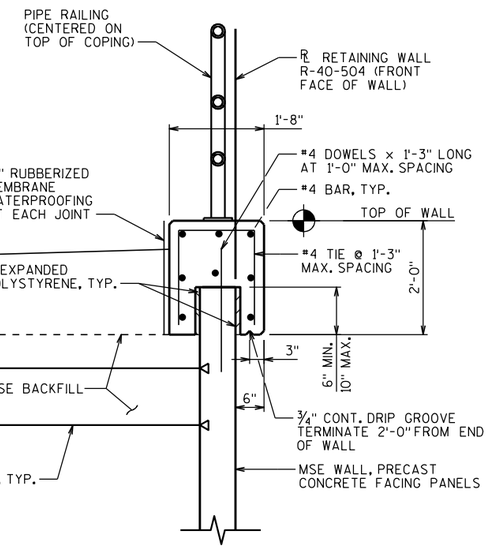
ANCHOR SLAB EXPANSION JOINT SEGMENTS A, & E (J SIMILAR)

LOCATE EXPANSION JOINTS OVER WALL JOINTS
DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWELS AS SHOWN
REFER TO GENERAL PLAN ELEVATION SHEETS FOR EXPANSION JOINT LOCATIONS.



PARAPET EXPANSION JOINT

DO NOT RUN BARS THROUGH JOINT.



COPING DETAIL AT SEGMENT H

(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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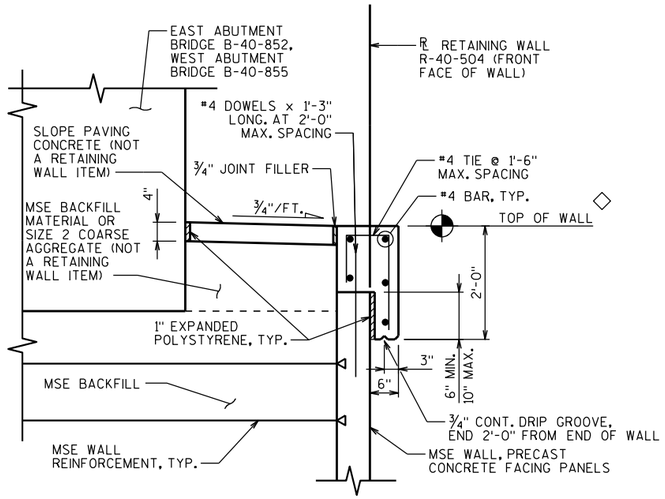
PARAPET, COPING & ANCHOR SLAB DETAILS

SHEET 10 OF 24

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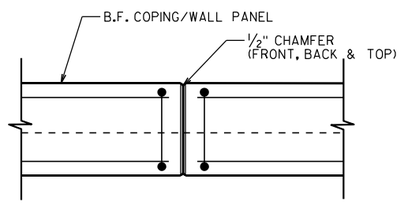
8

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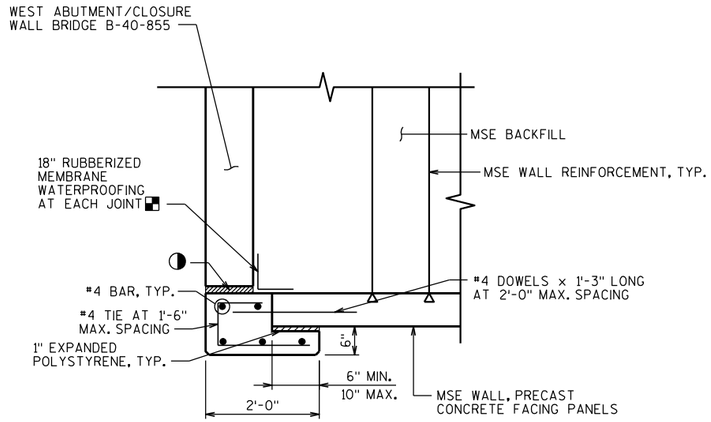
COPING DETAIL AT SEGMENTS C & G

(SEGMENT C, LOOKING SOUTH)
(SEGMENT G, LOOKING NORTH)



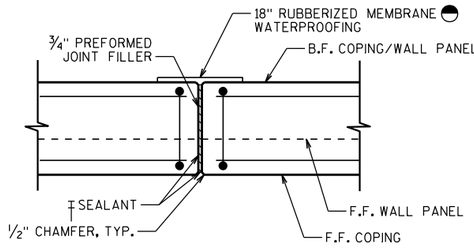
COPING CONTRACTION JOINT SEGMENTS C & G

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.



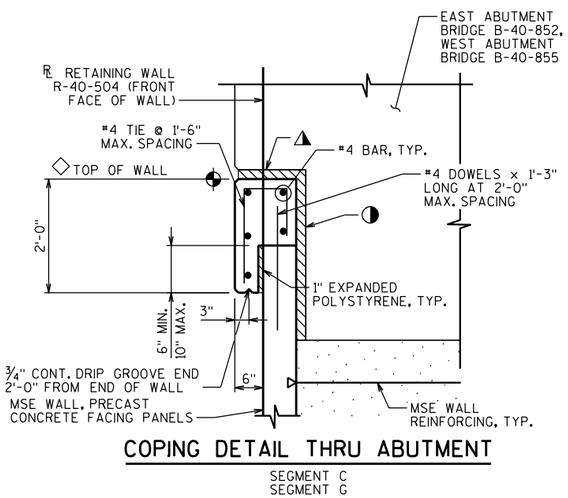
TYPICAL VERTICAL COPING CROSS SECTION

SEGMENT G



COPING EXPANSION JOINT SEGMENTS C & G

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.
SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER.



COPING DETAIL THRU ABUTMENT

SEGMENT C
SEGMENT G

LEGEND

- NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ◑ 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- ◭ 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- ◪ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING
- ◓ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL
- ◇ SEE "ELEVATION TABLES" SHEET FOR ELEVATION.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

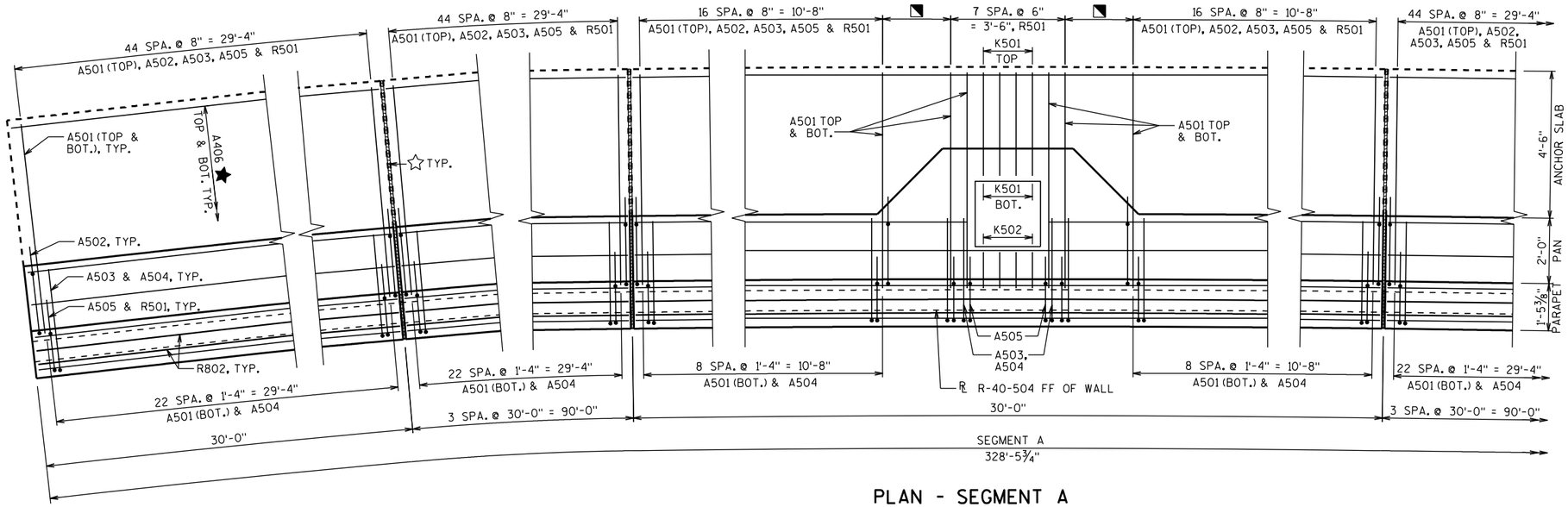
DRAWN BY KTM | PLANS CK'D. JWC

COPING DETAILS

SHEET 11 OF 24

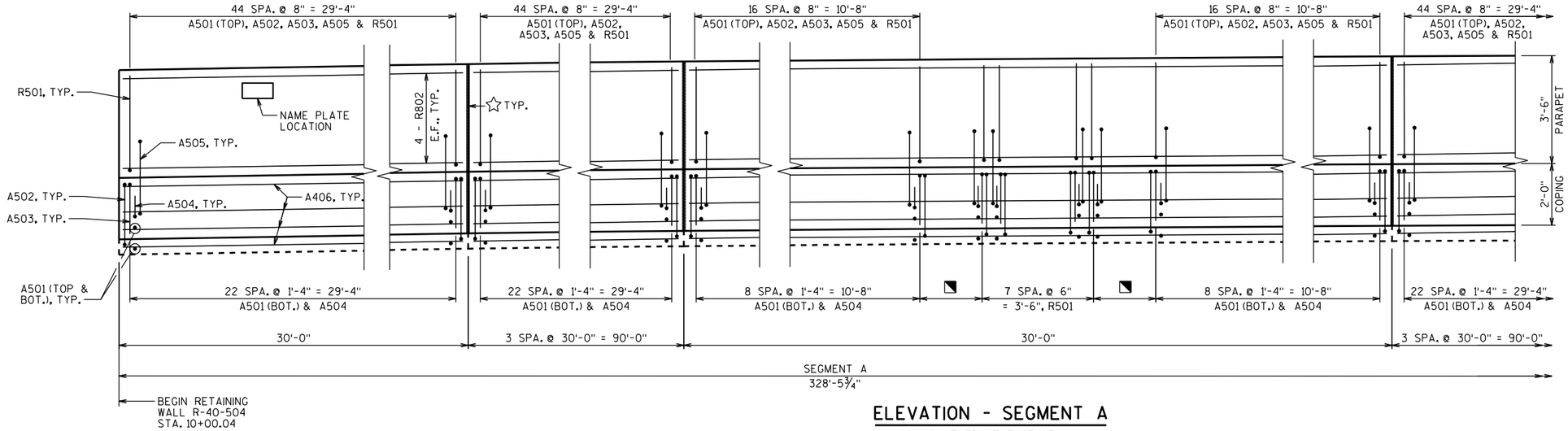
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PLOT DATE : 01-MAY-2014 10:59
PLOT BY : MSCJJO
PLOT NAME : 080304_de
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A

DIMENSIONS ALONG ℄ R-40-504



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-504

LEGEND

- ◥ 4 SPA. @ 6¾" = 2'-3", A501 (TOP), A503, A505 & R501
  2 SPA. @ 1'-1½" = 2'-3", A501 (BOT.) & A504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

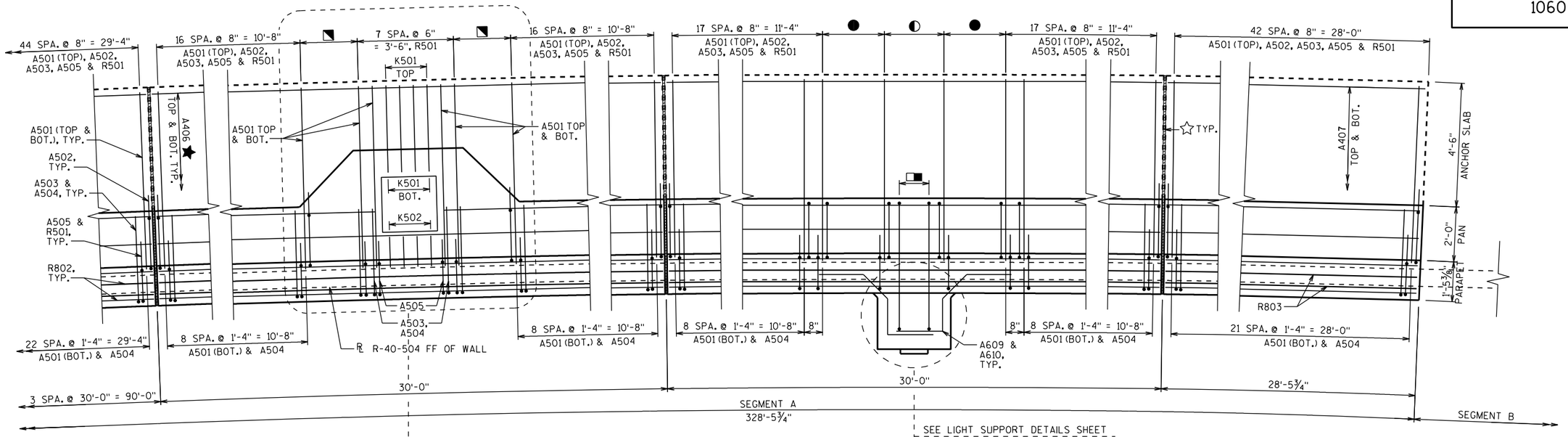
STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. ENS

SEGMENT A REINFORCEMENT DETAILS (1 OF 2)

SHEET 12 OF 24

STATE PROJECT NUMBER
1060-33-80



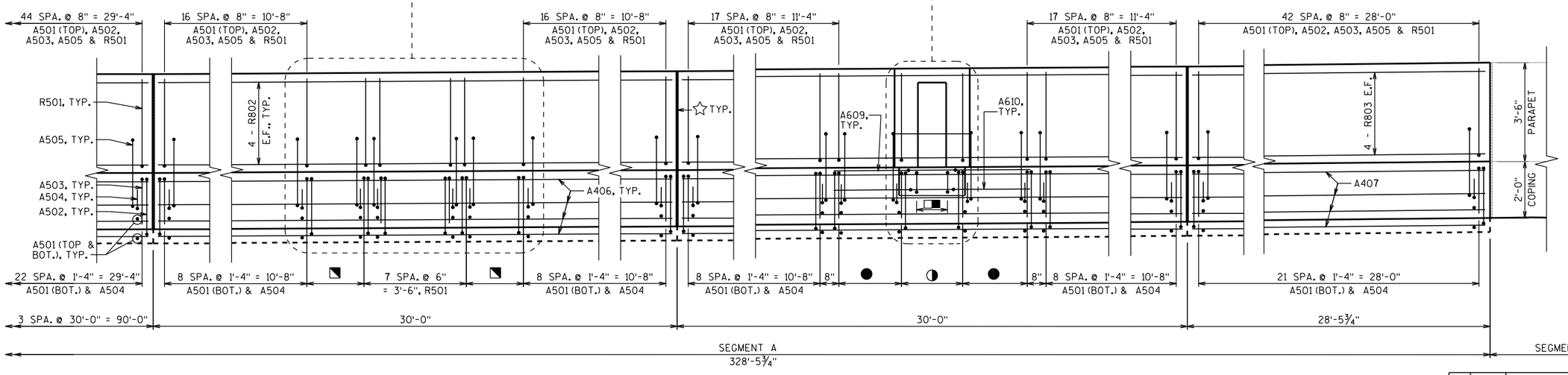
PLAN - SEGMENT A

DIMENSIONS ALONG ℄ R-40-504

SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

SEE LIGHT SUPPORT DETAILS SHEET FOR ADDITIONAL REINFORCEMENT

℄ LIGHT BLISTER SEE "GENERAL PLAN & ELEVATION 1" SHEET FOR LOCATION



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-504

LEGEND

- ● 4 SPA. @ 6 3/4" = 2'-3", A501 (TOP & BOT.), A502, A503, A504, A505 & R501
- ◐ 5 EQ. SPA. = 2'-2", A501 (TOP & BOT.), A502, A503, A504, & A505
- ▭■ A508, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ◥ 4 SPA. @ 6 3/4" = 2'-3", A501 (TOP), A503, A505 & R501
  2 SPA. @ 1'-1 1/2" = 2'-3", A501 (BOT.) & A504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

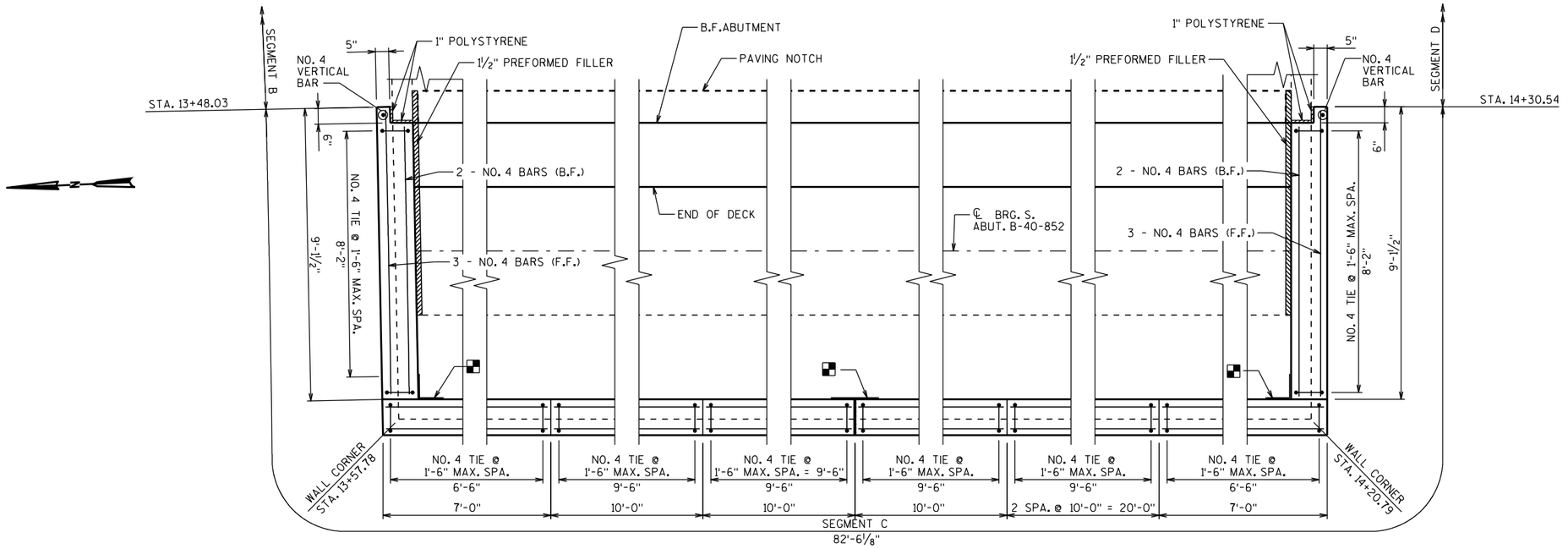
STRUCTURE R-40-504

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SEGMENT A REINFORCEMENT DETAILS (2 OF 2)

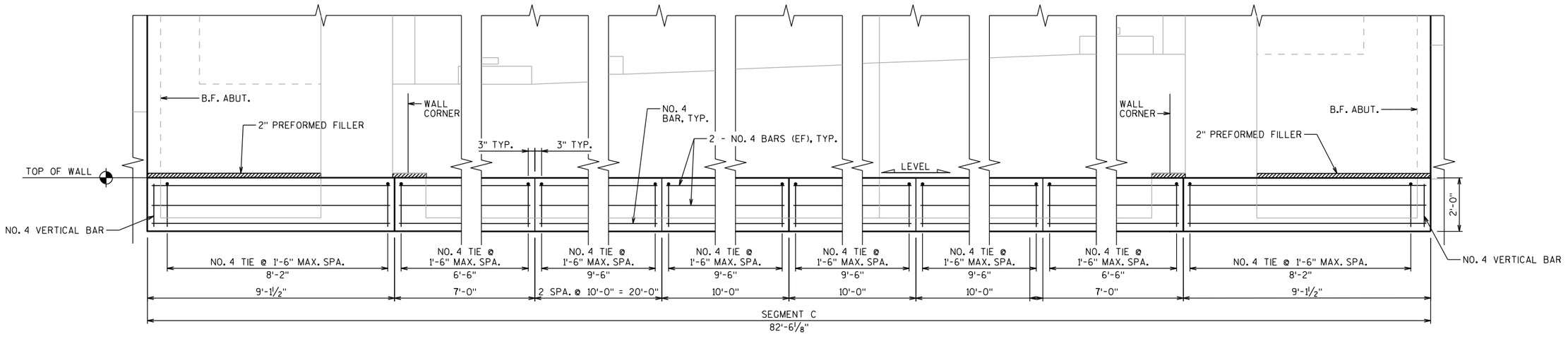
SHEET 13 OF 24

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT C

DIMENSIONS ALONG FRONT FACE OF COPING



ELEVATION - SEGMENT C

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG FRONT FACE OF COPING

LEGEND

■ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING

LEGEND

☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

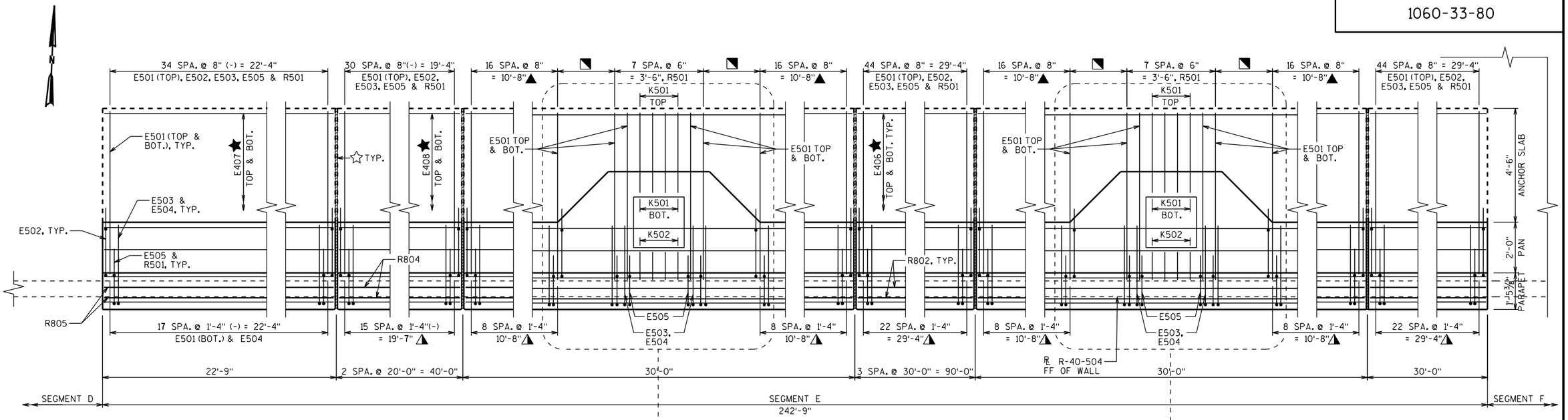
STRUCTURE R-40-504

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SEGMENT C REINFORCEMENT DETAILS

SHEET 14 OF 24

STATE PROJECT NUMBER
1060-33-80

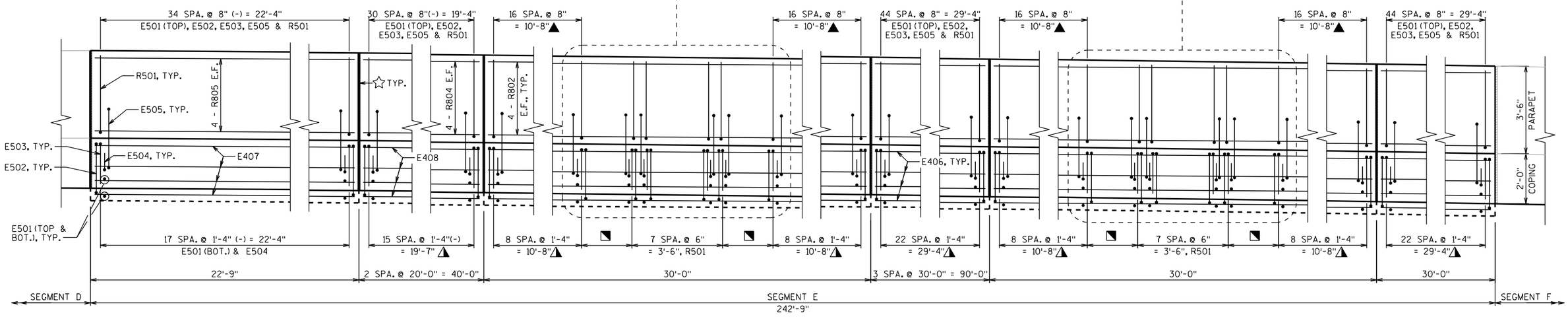


SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

PLAN - SEGMENT E

DIMENSIONS ALONG ℄ R-40-504

SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT



ELEVATION - SEGMENT E

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-504

LEGEND

- ▲ E501 (TOP), E502, E503, E505 & R501
- ◮ E501 (BOT.) & E504
- ◥ 4 SPA. @ 6 3/4" = 2'-3", E501 (TOP), E503, E505 & R501
  2 SPA. @ 1'-1 1/2" = 2'-3", E501 (BOT.) & E504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. ENS

SEGMENT E REINFORCEMENT DETAILS

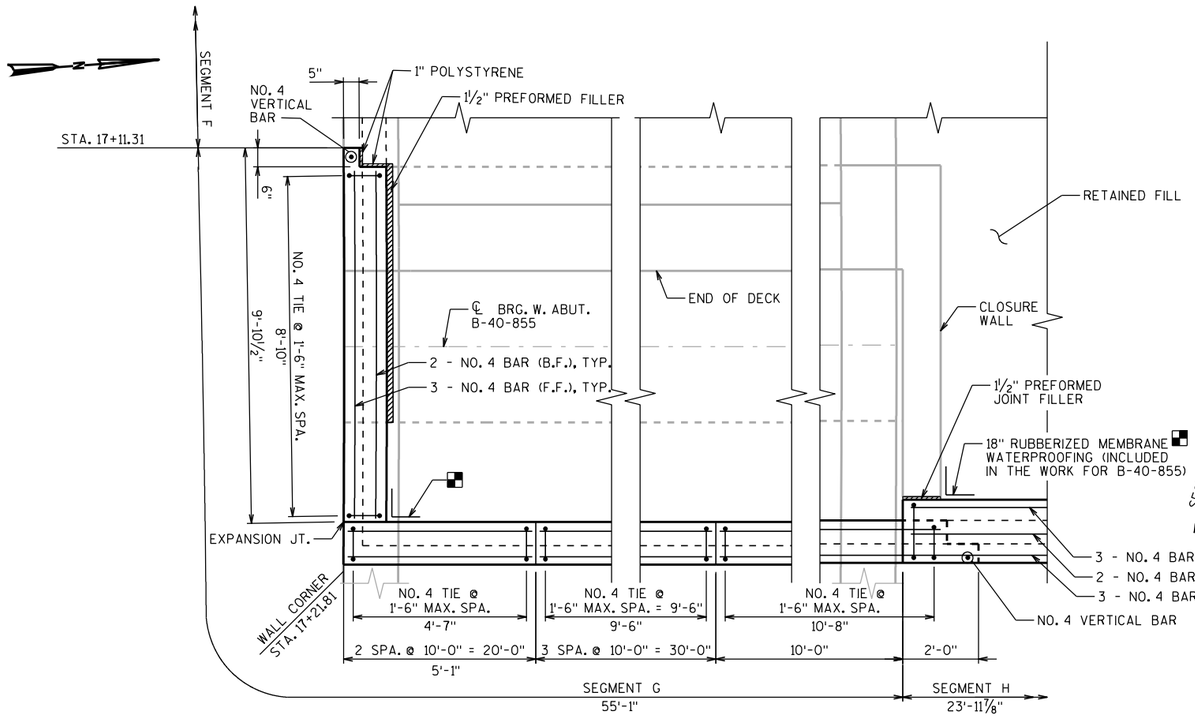
SHEET 15 OF 24

2874

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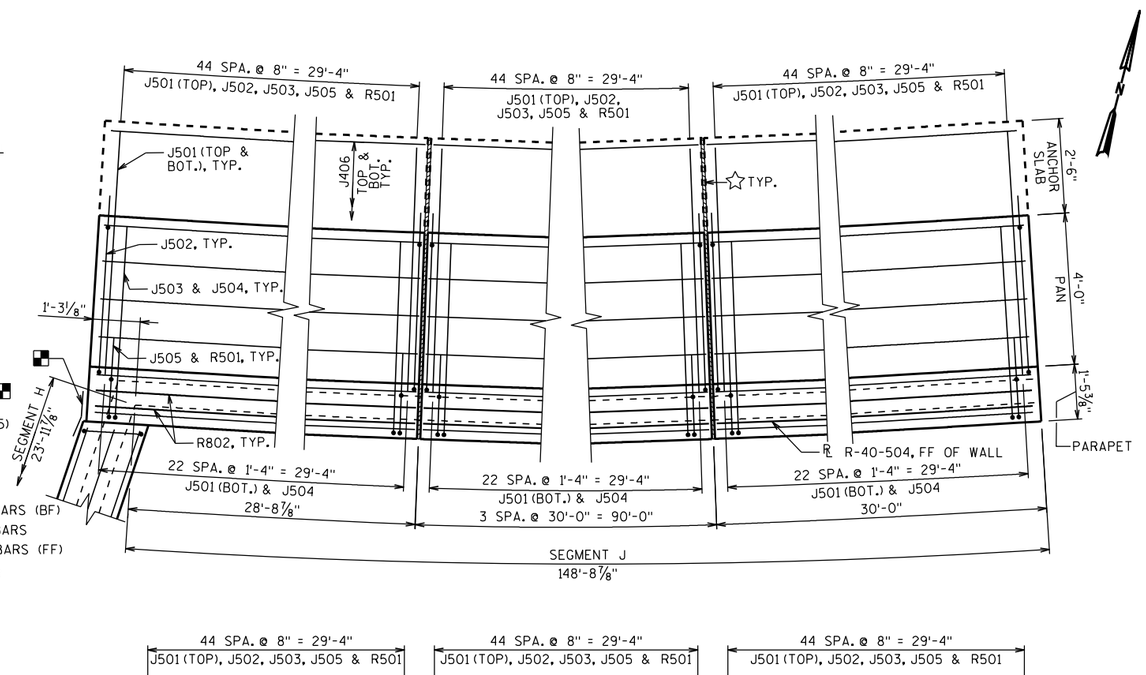
STATE PROJECT NUMBER

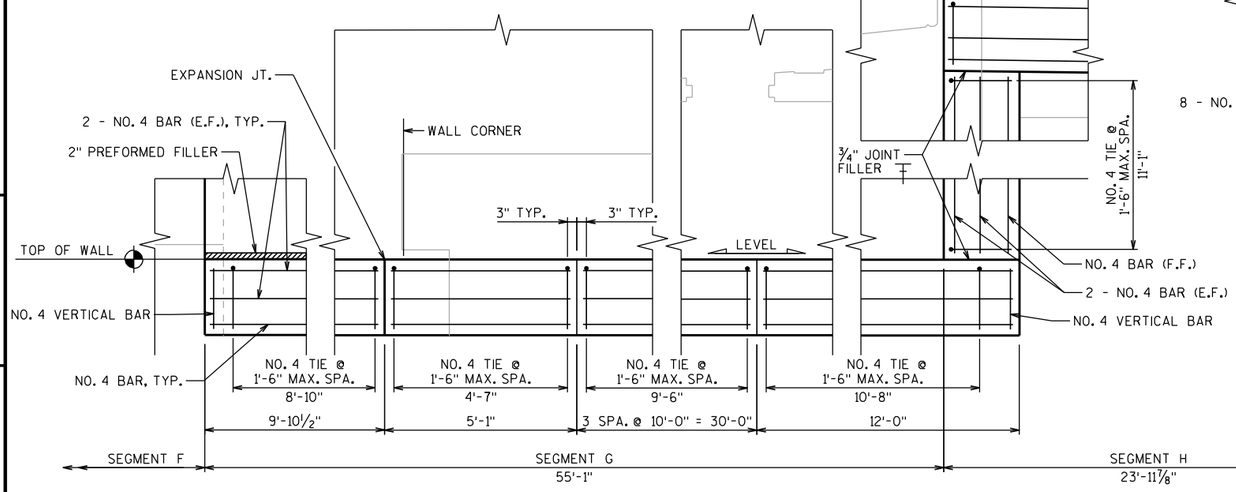
1060-33-80



PLAN - SEGMENT G

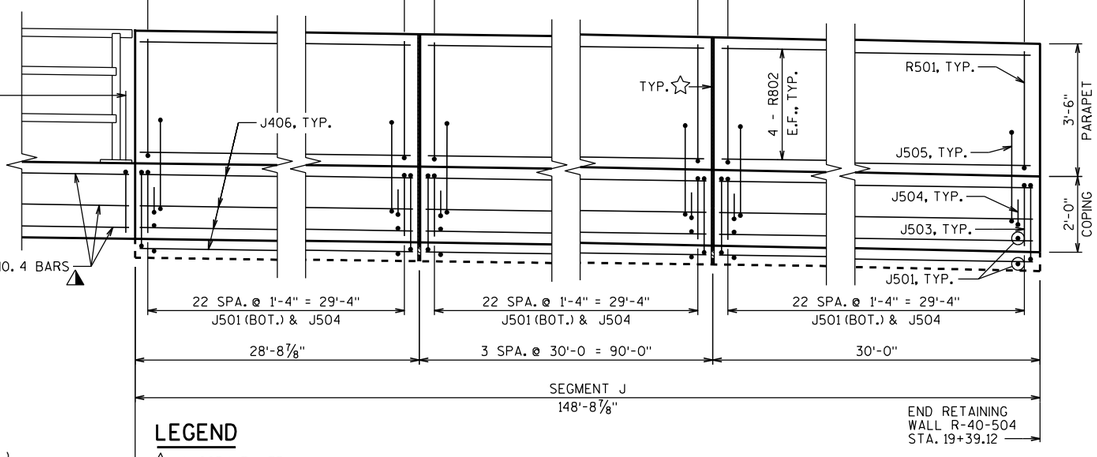
DIMENSIONS ALONG ℄ R-40-504





ELEVATION - SEGMENT G

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-504



LEGEND

- ☆ 1" CORK FILLER
- ■ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING
- ◭ FOR ADDITIONAL INFORMATION SEE 'COPING DETAIL AT SEGMENT H' ON "PARAPET, COPING & ANCHOR SLAB DETAILS" SHEET
- ⊤ NON-BITUMINOUS JOINT SEALER ON ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH CONCRETE STAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. ENS

SEGMENTS G, H & J REINFORCEMENT DETAILS

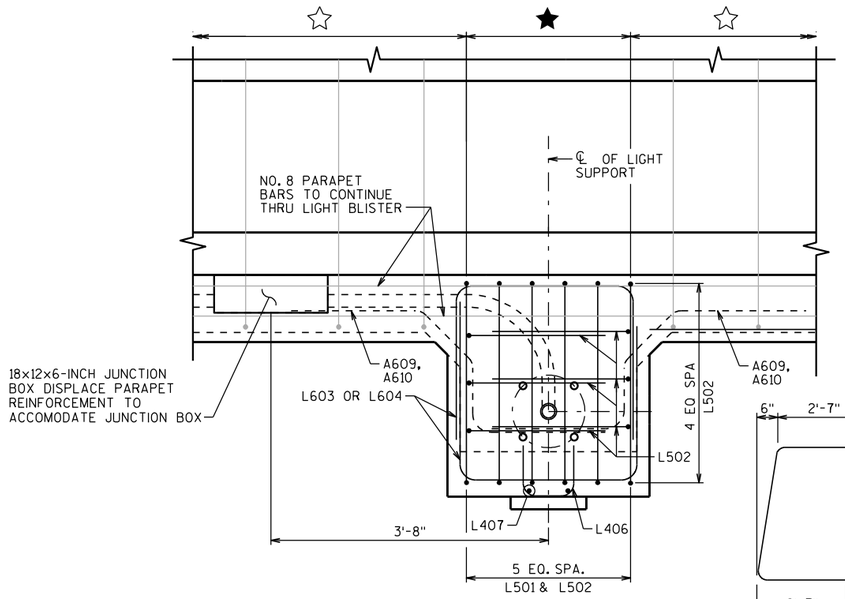
SHEET 16 OF 24

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PLOT BY : MSCJJO
PLOT NAME : 080309_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80

NOTES

SEE "PARAPET COPING & ANCHOR SLAB DETAILS" SHEET FOR STANDARD REINFORCEMENT DETAILS IN ANCHOR SLAB.



LIGHT SUPPORT PLAN

★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING

☆ SEE SEGMENT REINFORCEMENT DETAILS FOR SPACING

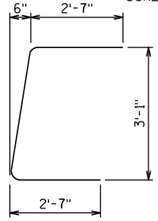
LIGHT SUPPORT BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L501	X	6	8'-1"	X	LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X	LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X	LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X	LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X	LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X	LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X	LIGHT SUPPORT - VERTICAL

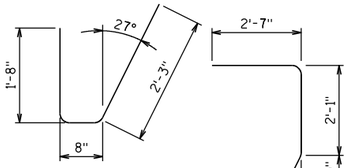
NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

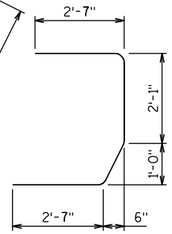
BAR SCHEDULE FOR ONE LIGHT SUPPORT ONLY. SEE "REINFORCEMENT SCHEDULE" SHEET FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.



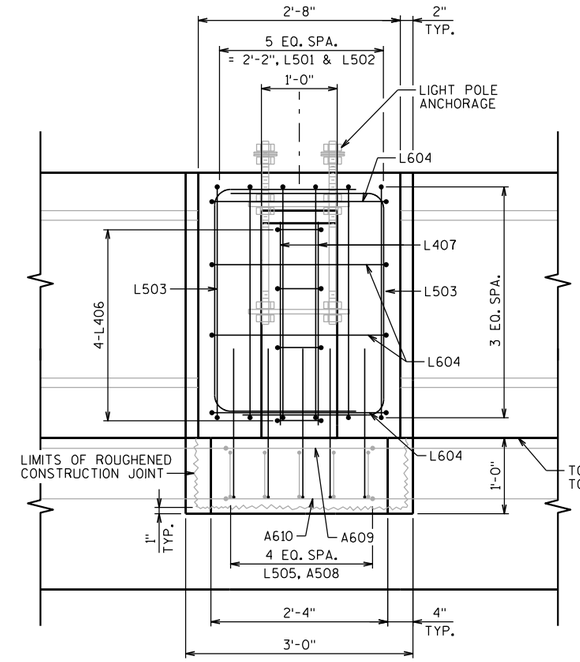
L501



L505

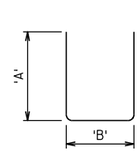


L502



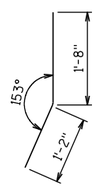
REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION

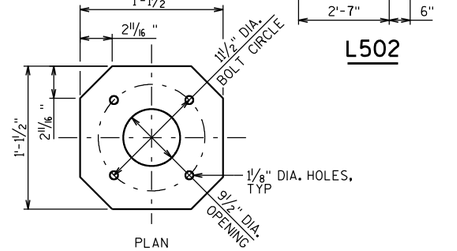


L503, L604, L406

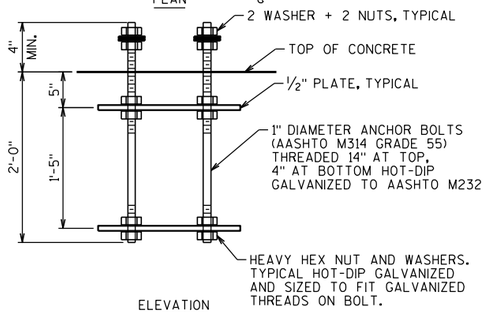
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



L407

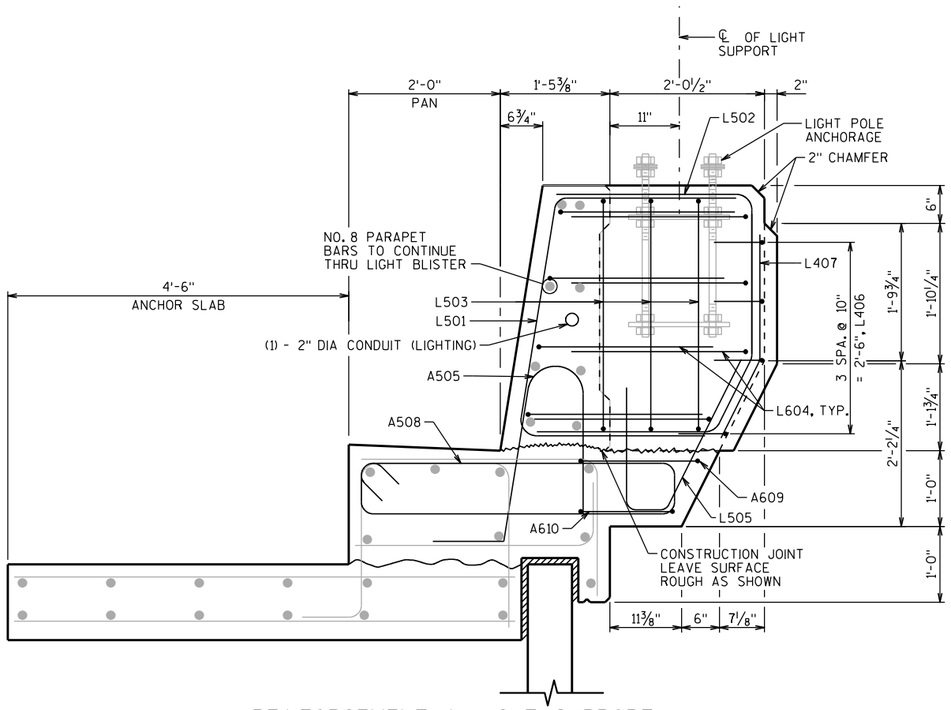


PLAN



ELEVATION

ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT ℄ LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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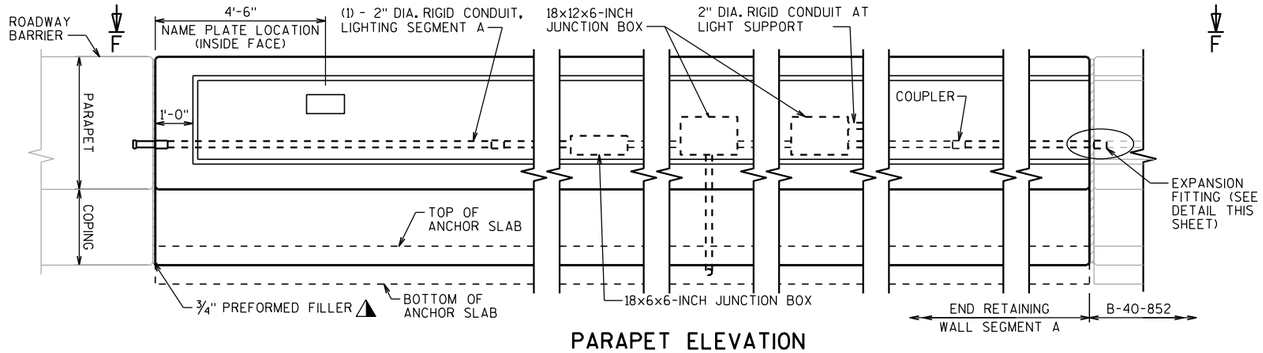
LIGHT SUPPORT DETAILS (1 OF 2)

SHEET 17 OF 24

8

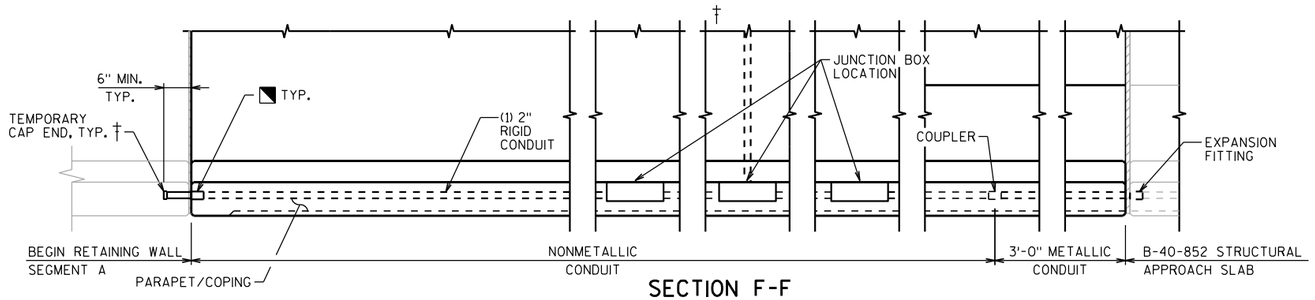
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STATE PROJECT NUMBER
1060-33-80



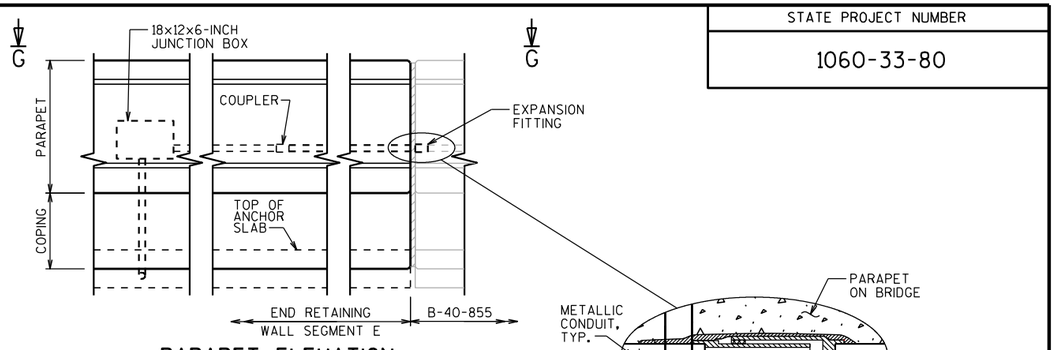
PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT A



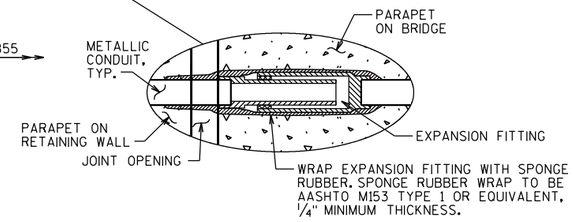
SECTION F-F

SEGMENT A - 1 CONDUIT REQUIRED

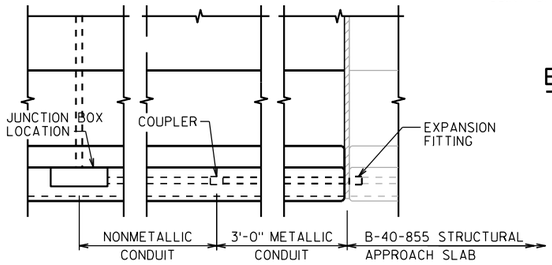


PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT E

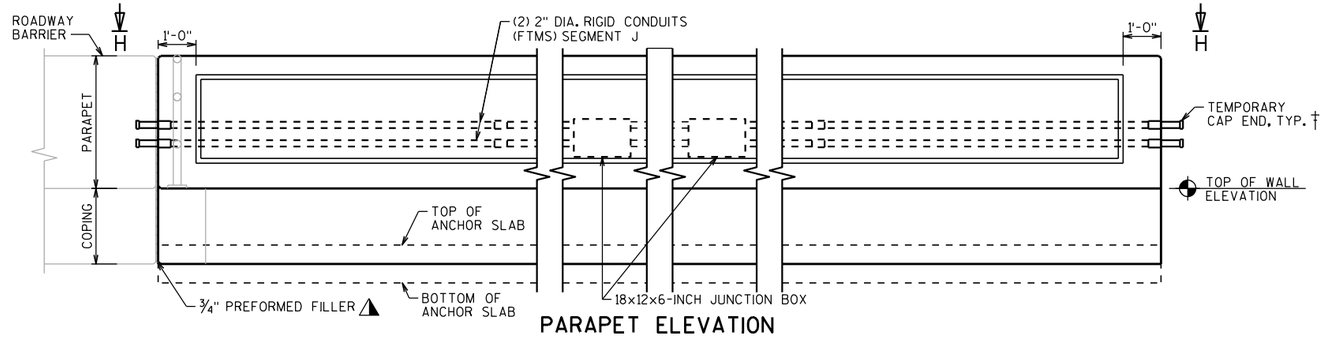


EXPANSION FITTING DETAIL



SECTION G-G

SEGMENT E - 1 CONDUIT REQUIRED



PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT J

NOTES:

18x6x6-INCH JUNCTION BOX REQUIRED 10'-0" FROM BEGINNING OF SEGMENT A

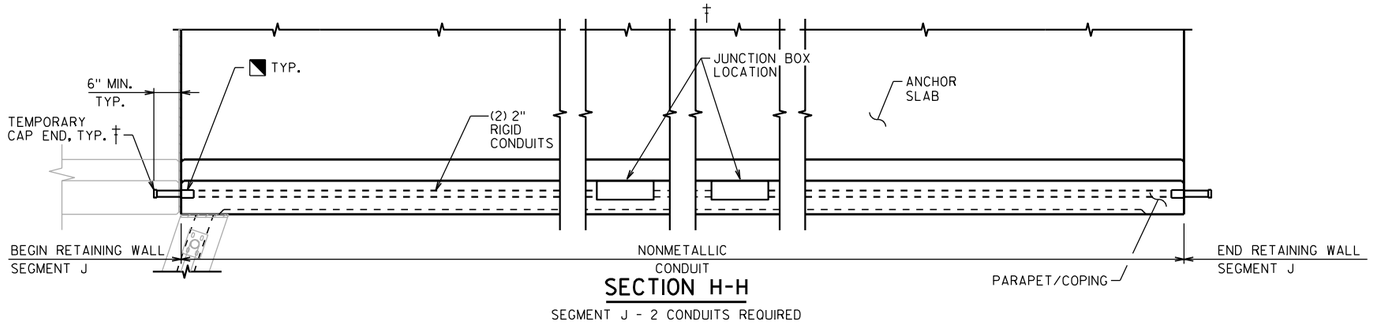
18x12x6-INCH JUNCTION BOX REQUIRED AT LIGHT SUPPORT LOCATION IN SEGMENT A, AT STA. 11+11 AND SEGMENT E AT STA. 16+67.

SEGMENT E LIGHTING CONDUIT TO BE INSTALLED FROM THE NORTH THROUGH THE ANCHOR SLAB UP TO THE 18"X12"X6" JUNCTION BOX AND THEN THROUGH THE PARAPET TO END OF SEGMENT E ONLY.

18x12x6-INCH JUNCTION BOX REQUIRED 10'-0" FROM BEGINNING AND END OF SEGMENT J FOR FTMS.

SEE GENERAL PLAN & ELEVATION SHEETS FOR LIGHT SUPPORT STATIONING.

SEE "LIGHT SUPPORT DETAILS (1 OF 2)" SHEET FOR REINFORCEMENT DETAILS AND LOCATION OF JUNCTION BOX AT LIGHT POLE BASE.



SECTION H-H

SEGMENT J - 2 CONDUITS REQUIRED

LEGEND

† EXPANSION FITTINGS, COUPLERS, ANGLES, AND TEMPORARY END CAPS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

◥ APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING: O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

◭ PREFORMED JOINT FILLER NOT A RETAINING WALL ITEM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

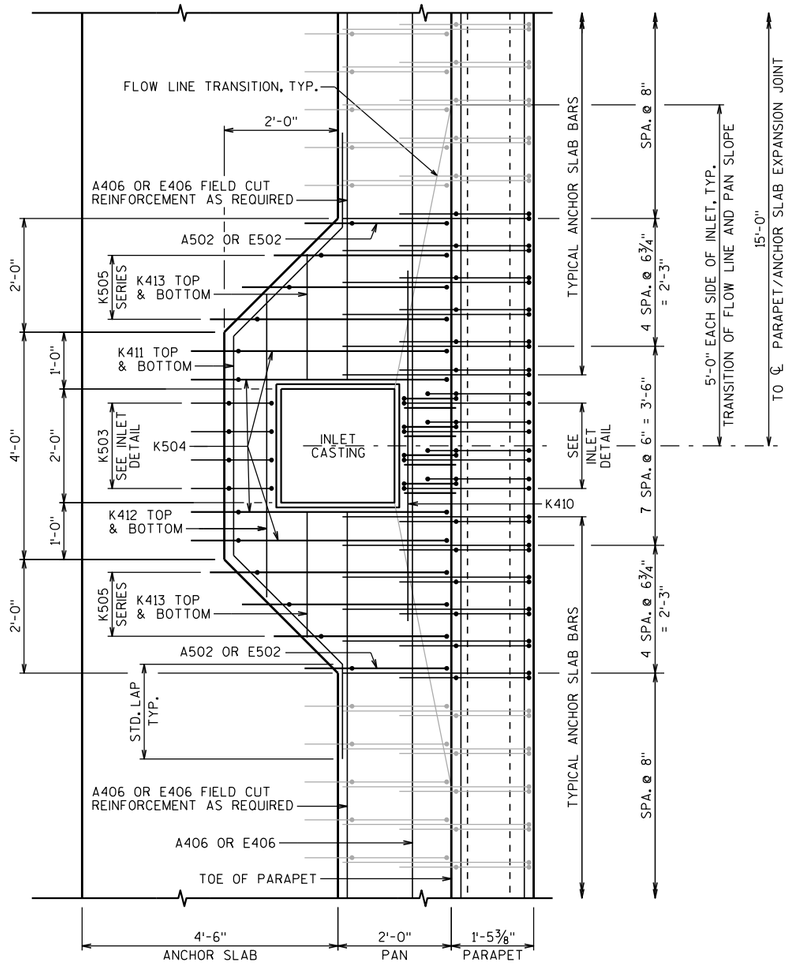
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LIGHT SUPPORT DETAILS (2 OF 2)

SHEET 18 OF 24

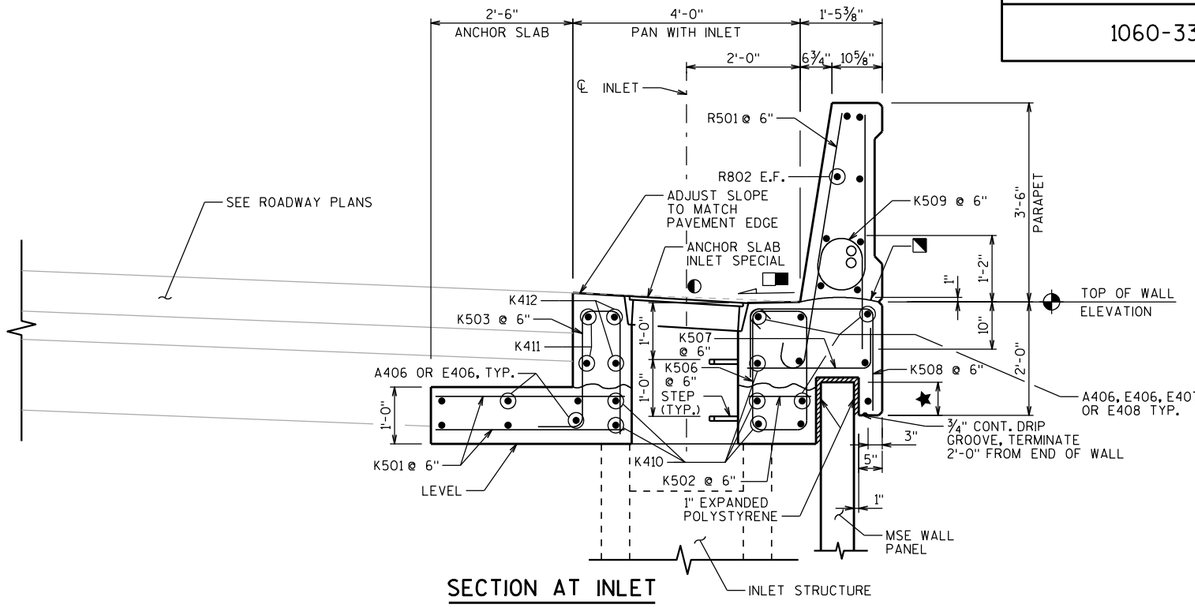
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8



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED.



SECTION AT INLET

INLET BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
K501	X	8	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	4	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	4	5'-4"	X		COPING - VERTICAL TIE
K504	X	4	8'-7"	X		COPING - VERTICAL TIE
K505	X	6	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	4	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	4	2'-6"	X		COPING - VERTICAL TIE
K508	X	4	4'-8"	X		COPING - VERTICAL TIE
K509	X	4	5'-5"	X		COPING - VERTICAL TIE
K410	X	5	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	2	14'-0"	X		COPING - LONGITUDINAL
K412	X	2	5'-1"			COPING - LONGITUDINAL
K413	X	4	2'-0"			COPING - LONGITUDINAL

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

BAR SCHEDULE FOR ONE INLET ONLY. SEE 'REINFORCEMENT SCHEDULE' SHEET FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.

△ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

LEGEND

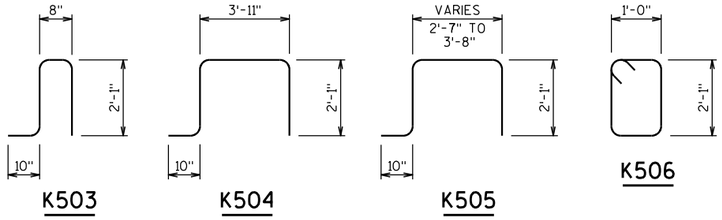
- VARIES
- ★ 3" MIN., 6" MAX.
- CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- TO CALCULATE TOP OF WALL ELEVATION, CONTINUE ROADWAY SLOPE TO TOE OF PARAPET

NOTES

LOCATE ℄ INLETS 15'-0" AWAY FROM EXPANSION JOINTS.

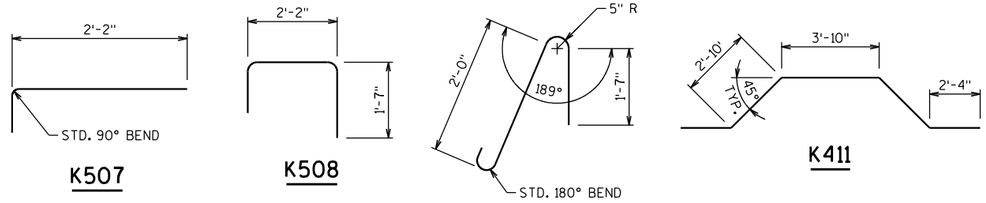
STEP SHALL COMPLY WITH ASTM C-478.

STEP IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY RETAINING WALLS".



BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
K505	2 SERIES OF 3	7'-3" TO 8'-4"



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. ENS

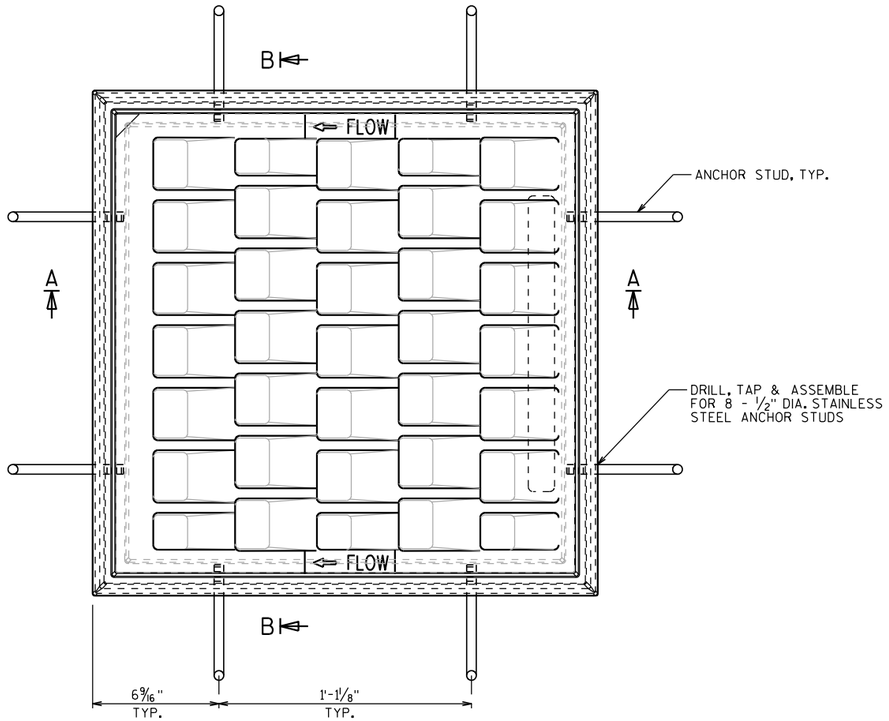
INLET DETAILS

SHEET 19 OF 24

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PLOT BY : MSCJJO
PLOT NAME : 080312_de
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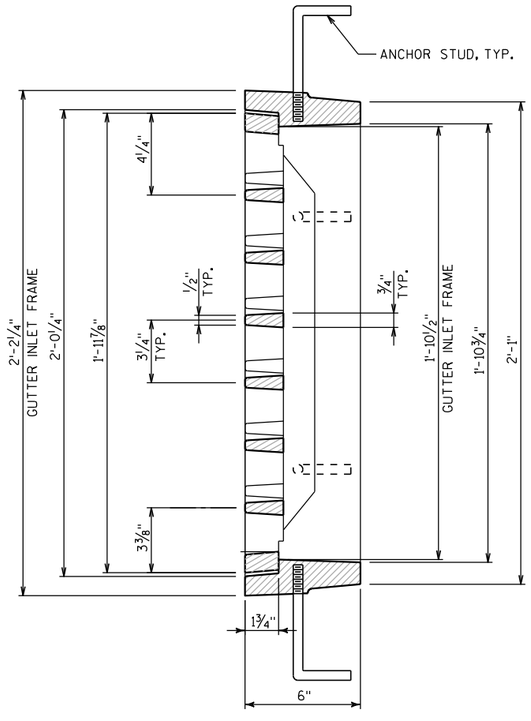
STATE PROJECT NUMBER

1060-33-80

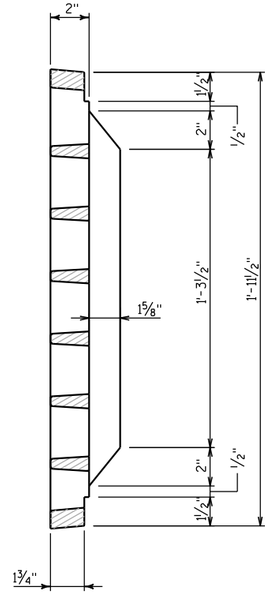


GUTTER INLET FRAME & GRATE TOP

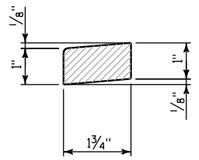
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



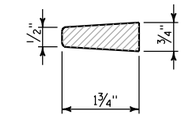
SECTION B-B



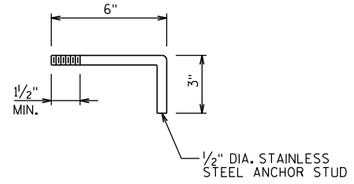
INLET GRATE



SIDE RIB DETAIL

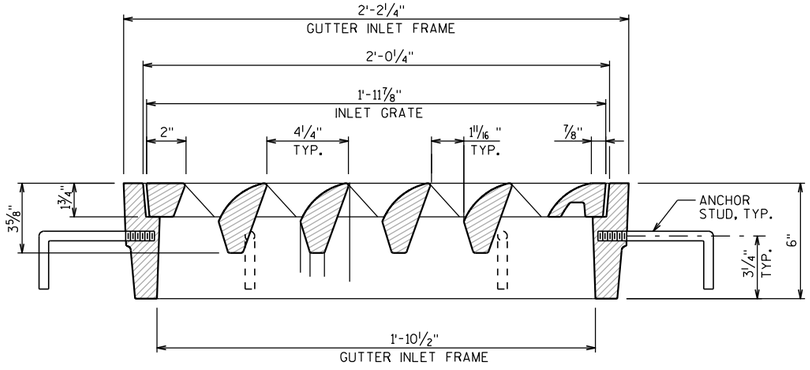


MIDDLE RIB DETAIL

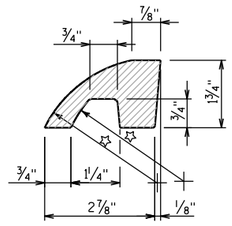


ANCHOR STUD DETAIL

(8 - 1/2" DIA. STAINLESS STEEL ANCHOR STUDS REQUIRED)

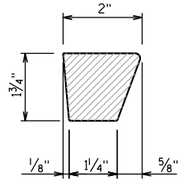


SECTION A-A

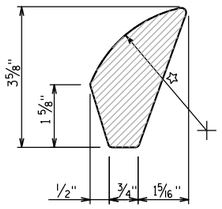


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. ENS

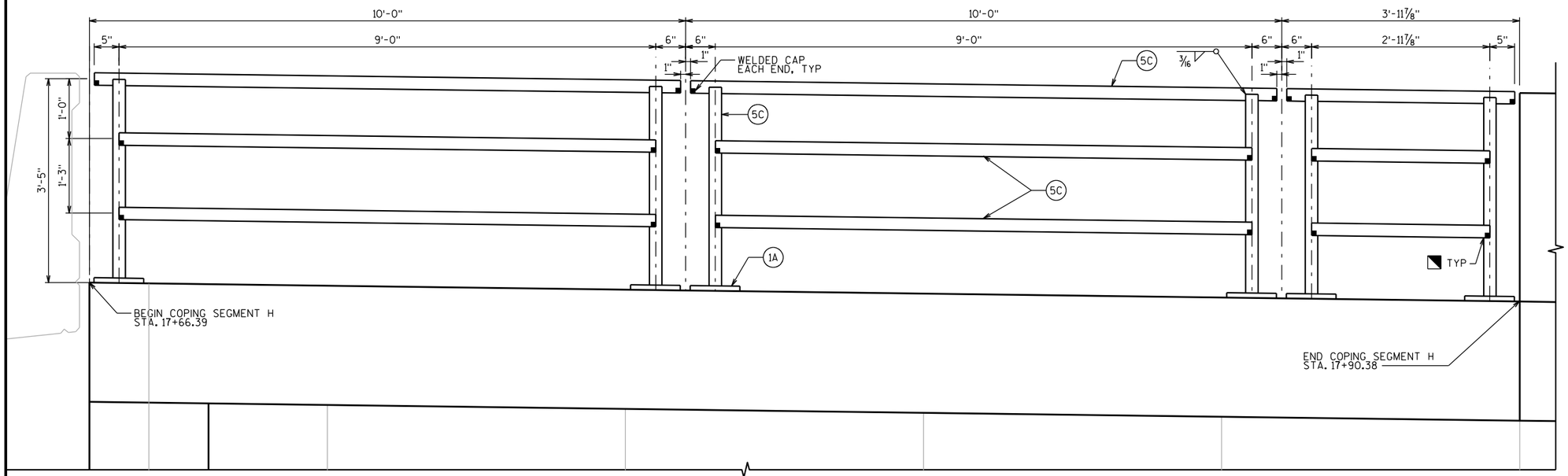
ANCHOR SLAB
INLET COVER
SPECIAL

SHEET 20 OF 24

8

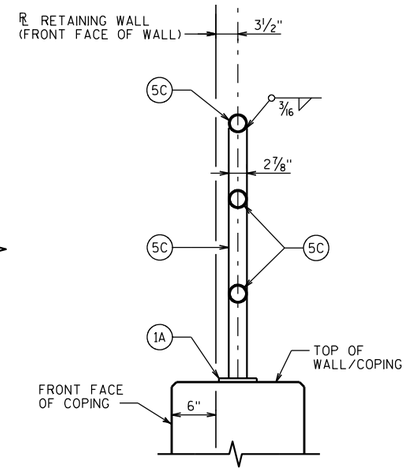
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STATE PROJECT NUMBER
1060-33-80

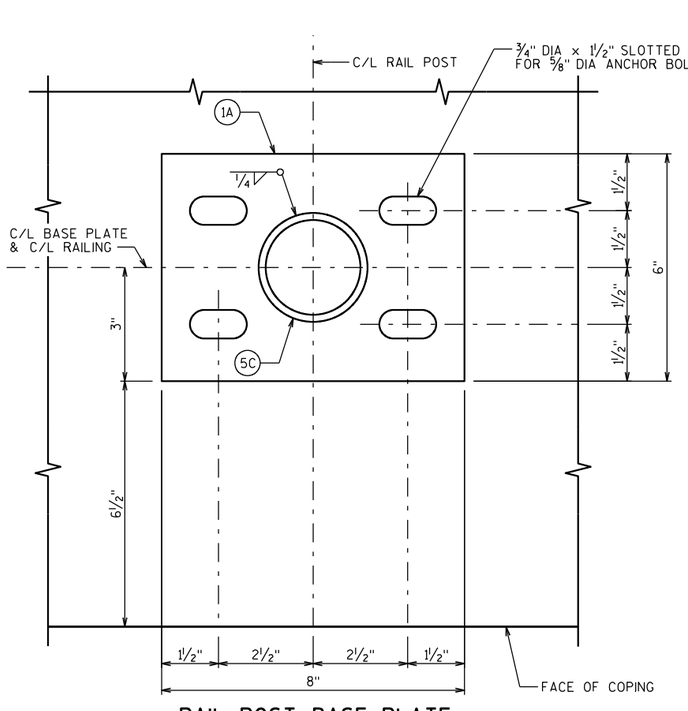


WALL RAILING ELEVATION

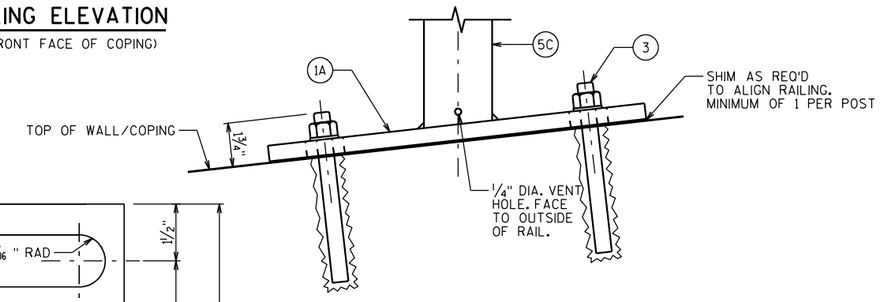
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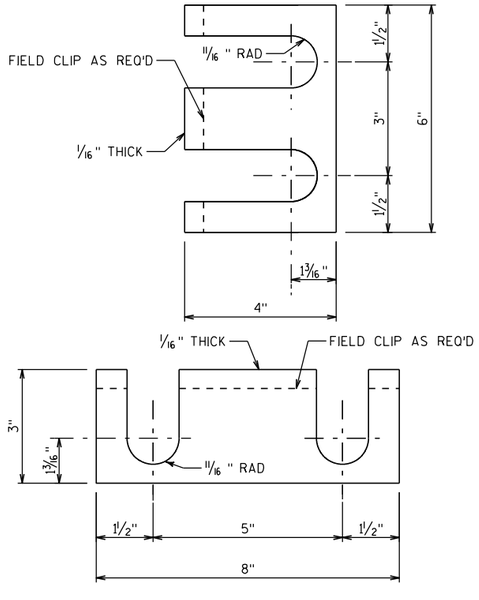
WALL RAILING SECTION



RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

LEGEND

- (1A) PLATE ⅝" x 6" x 8" WITH ¾" x 1½" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MINIMUM OF 6".
- (5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.
- ◥ ½" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NOTES

BID ITEM "RAILING PIPE R-40-504", INCLUDES ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN PANEL LENGTHS OF 2 POSTS.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY	KTM	PLANS CK'D.	ENS

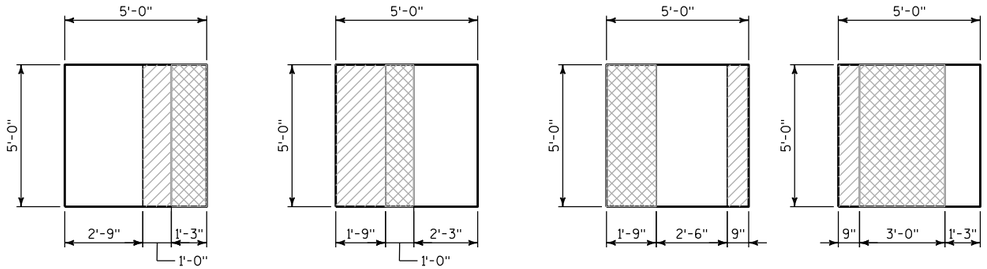
RAILING PIPE DETAILS

SHEET 21 OF 24

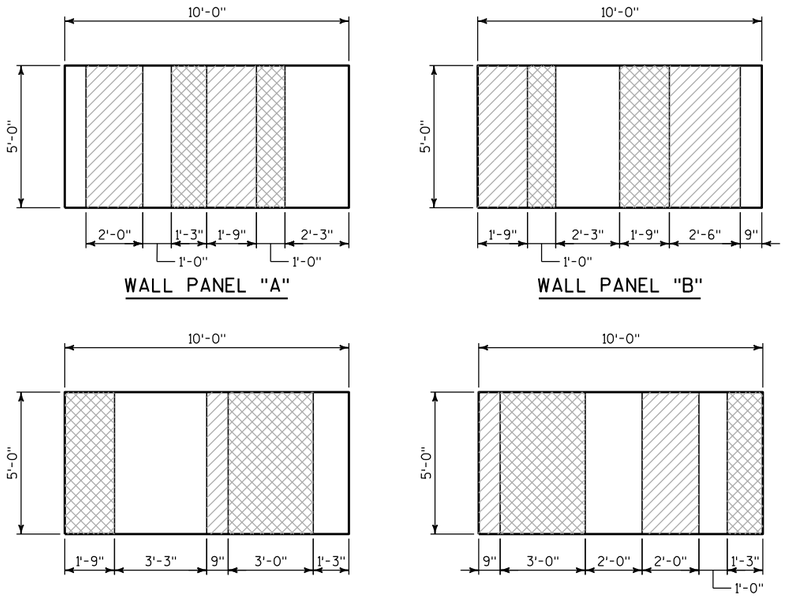
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STATE PROJECT NUMBER
1060-33-80



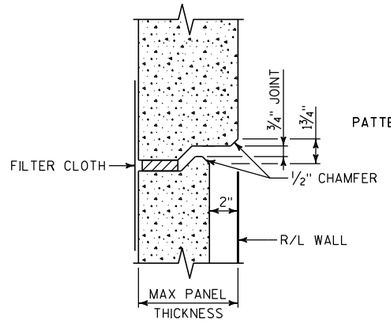
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



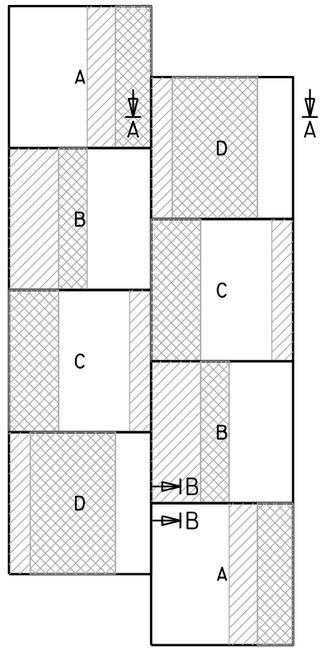
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

ARCHITECTURAL SURFACE TREATMENT NOTES:

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-504".

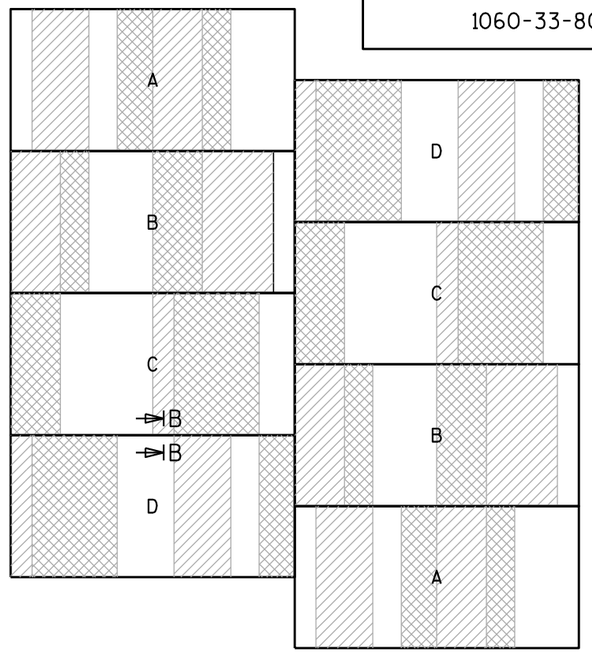


SECTION B-B



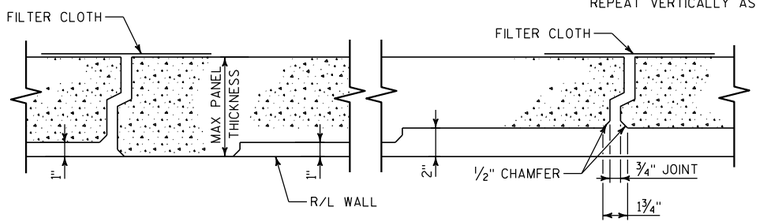
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN

PATTERN REPEATS 5' HORIZONTALLY, STAGGERED 30" VERTICALLY REPEAT VERTICALLY AS REQUIRED



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY REPEAT VERTICALLY AS REQUIRED



SECTION A-A

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

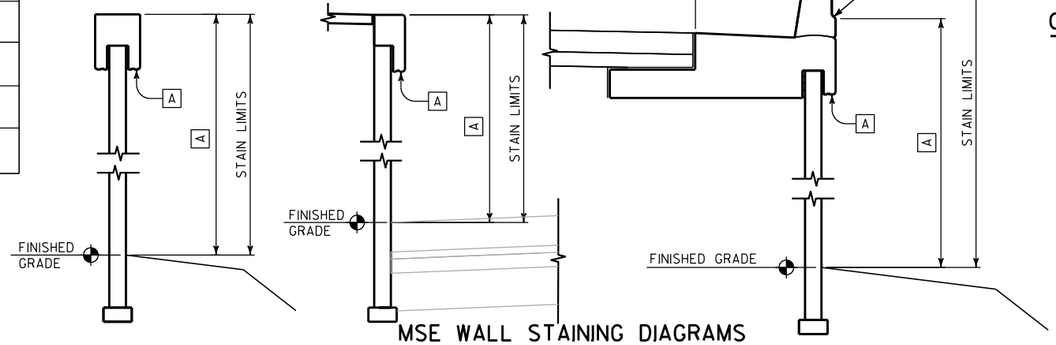
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

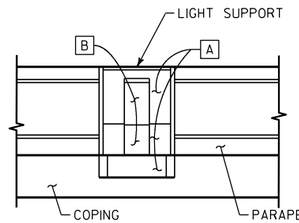
STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR : 33564
ACCENT COLOR #1: 33448



MSE WALL STAINING DIAGRAMS



OUTSIDE ELEVATION OF PARAPET STAINING DIAGRAM

(AT LIGHT SUPPORT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

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AESTHETIC WALL TREATMENT DETAILS

SHEET 22 OF 24

8

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NOTE:

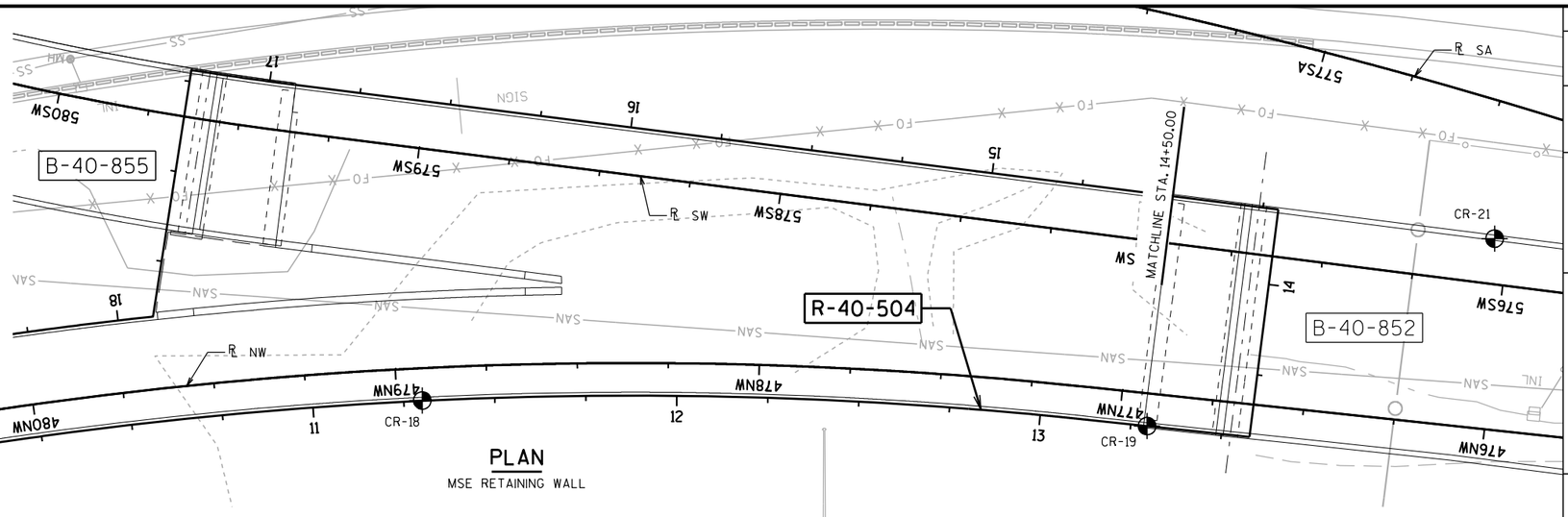
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ FOR RETAINING WALL R-40-504.

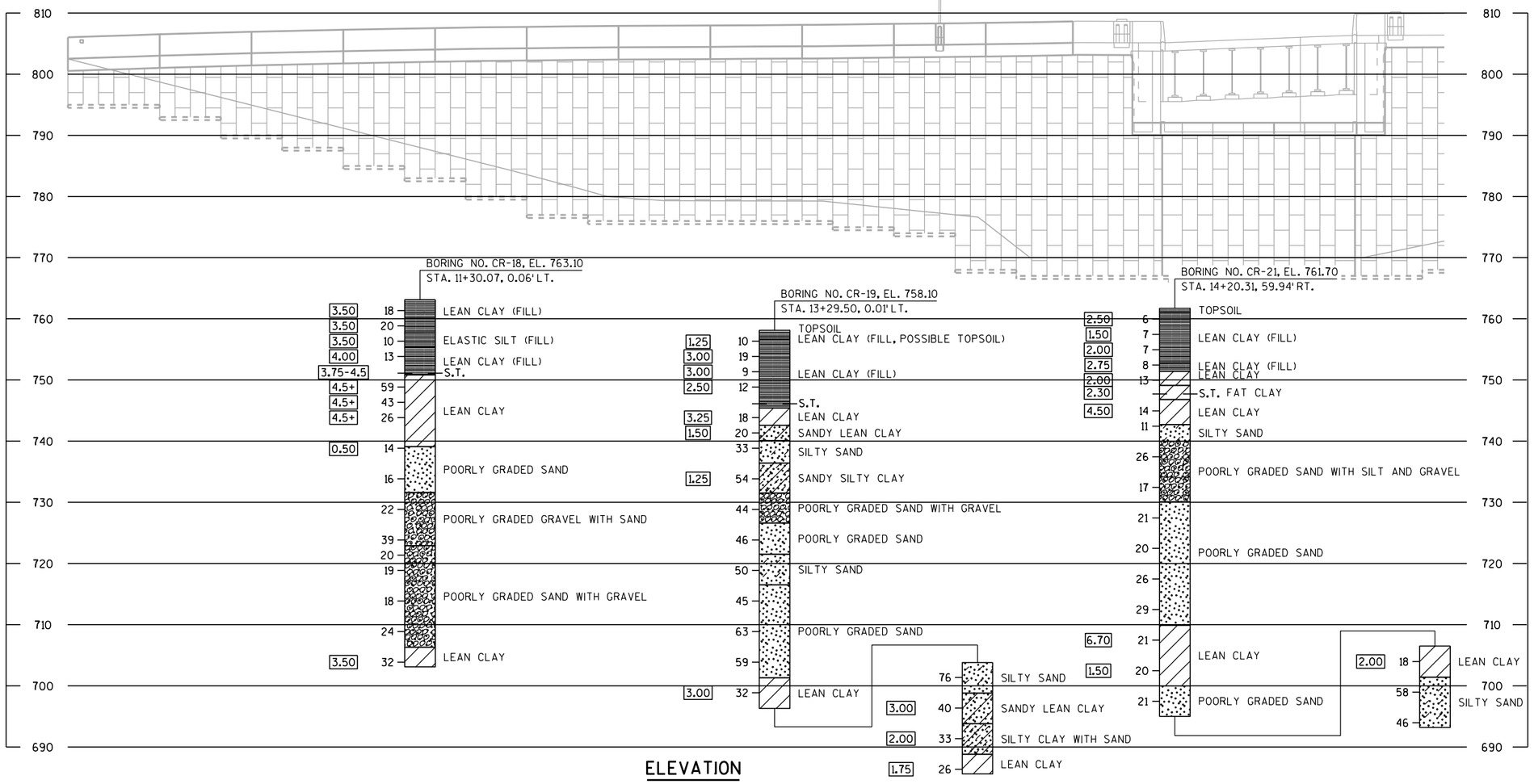
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 21, 2012 - BORING CR-18
MAY 10, 2012 - BORING CR-19
MAY 30, 2012 - BORING CR-21



PLAN
MSE RETAINING WALL



ELEVATION

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
ELEV. STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

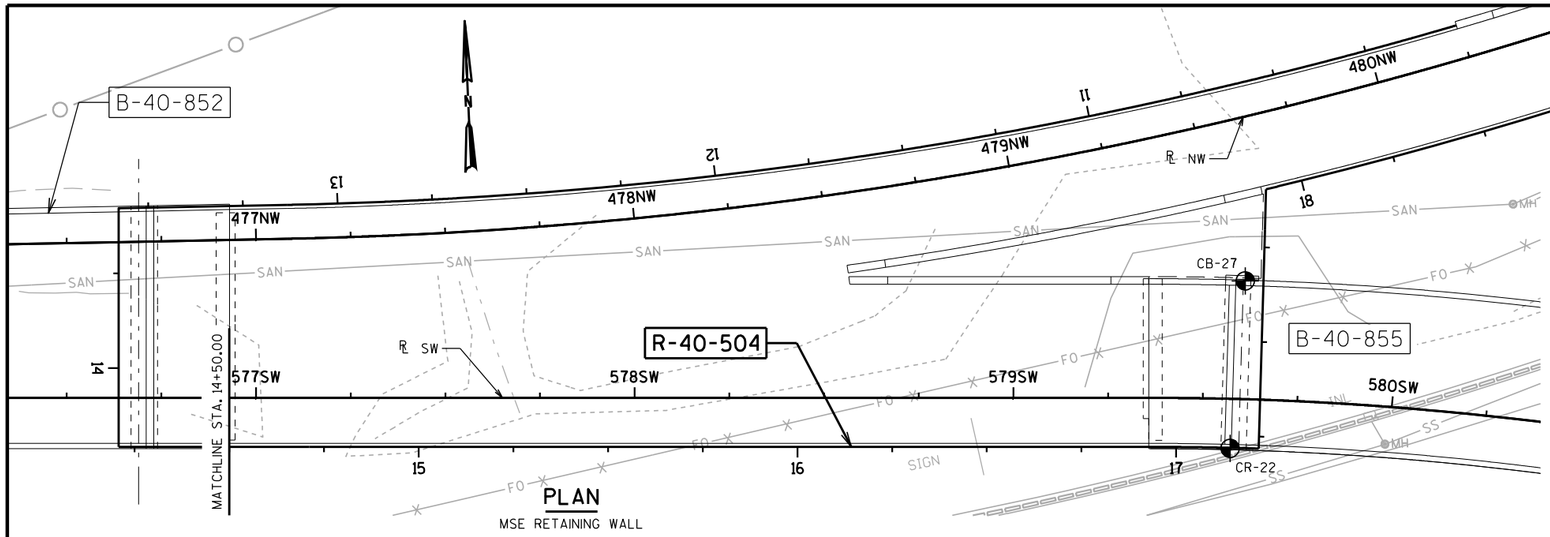
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SUBSURFACE EXPLORATION 1

SHEET 23 OF 24

8

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PLAN

MSE RETAINING WALL

NOTE:

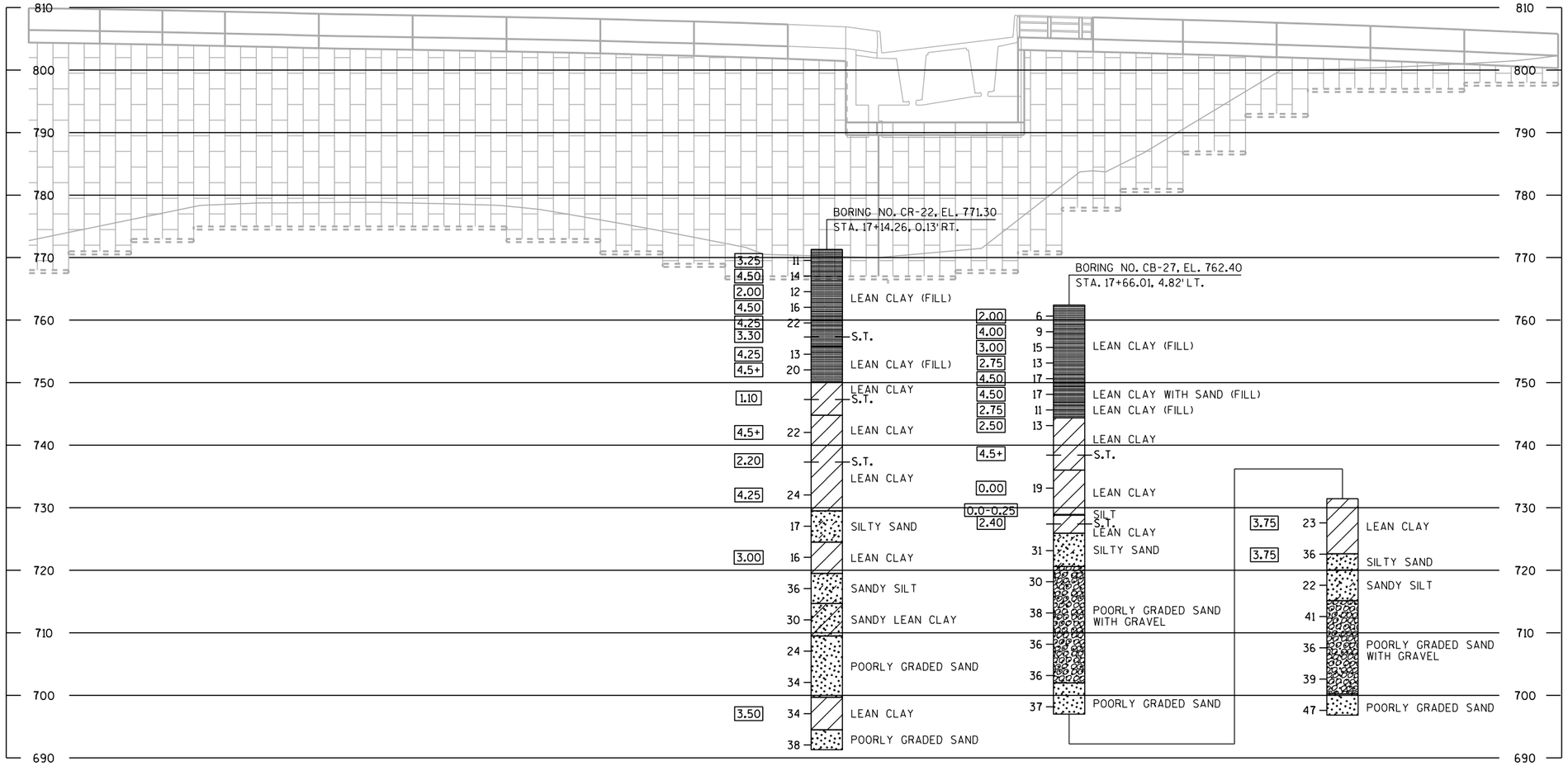
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BORING STATIONS AND OFFSETS ARE BASED ON ℄ FOR RETAINING WALL R-40-504.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS CR-22 COMPLETED BY: GESTRA ENGINEERING, INC.
SOIL BORINGS CB-27 COMPLETED BY: RVT

SOIL BORING TAKEN:
MAY 23, 2012 - BORING CR-22
APR. 27, 2012 - BORING CB-27



ELEVATION

STATE PROJECT NUMBER

1060-33-80

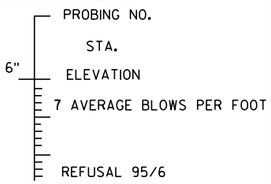
ABBREVIATIONS

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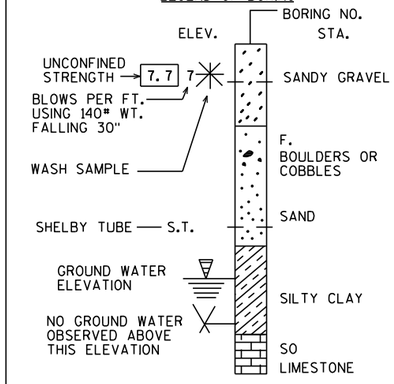
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-504

DRAWN BY KTM | PLANS CK'D. SB

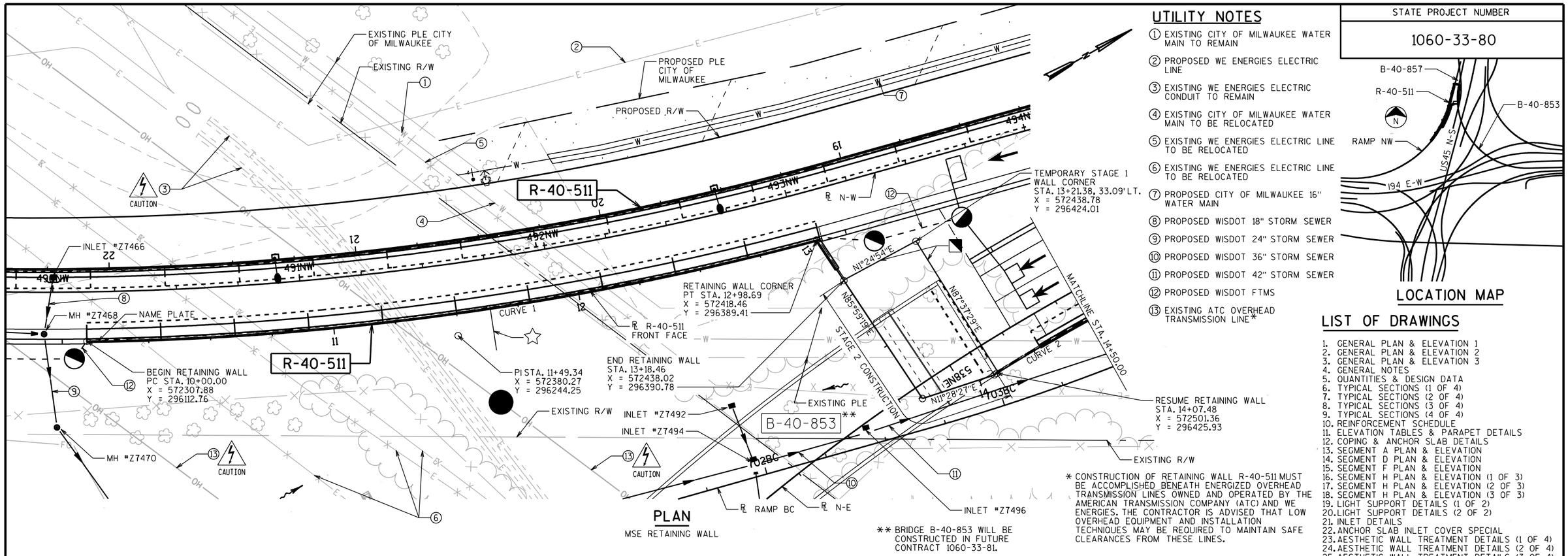
SUBSURFACE EXPLORATION 2

SHEET 24 OF 24

8

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PLOT BY : MSCJJO
PLOT NAME : 080602_se
PLOT SCALE : 40:1



** BRIDGE B-40-853 WILL BE CONSTRUCTED IN FUTURE CONTRACT 1060-33-81.

* CONSTRUCTION OF RETAINING WALL R-40-511 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

UTILITY NOTES

1. EXISTING CITY OF MILWAUKEE WATER MAIN TO REMAIN
2. PROPOSED WE ENERGIES ELECTRIC LINE
3. EXISTING WE ENERGIES ELECTRIC CONDUIT TO REMAIN
4. EXISTING CITY OF MILWAUKEE WATER MAIN TO BE RELOCATED
5. EXISTING WE ENERGIES ELECTRIC LINE TO BE RELOCATED
6. EXISTING WE ENERGIES ELECTRIC LINE TO BE RELOCATED
7. PROPOSED CITY OF MILWAUKEE 16" WATER MAIN
8. PROPOSED WISDOT 18" STORM SEWER
9. PROPOSED WISDOT 24" STORM SEWER
10. PROPOSED WISDOT 36" STORM SEWER
11. PROPOSED WISDOT 42" STORM SEWER
12. PROPOSED WISDOT FTMS
13. EXISTING ATC OVERHEAD TRANSMISSION LINE*

STATE PROJECT NUMBER

1060-33-80

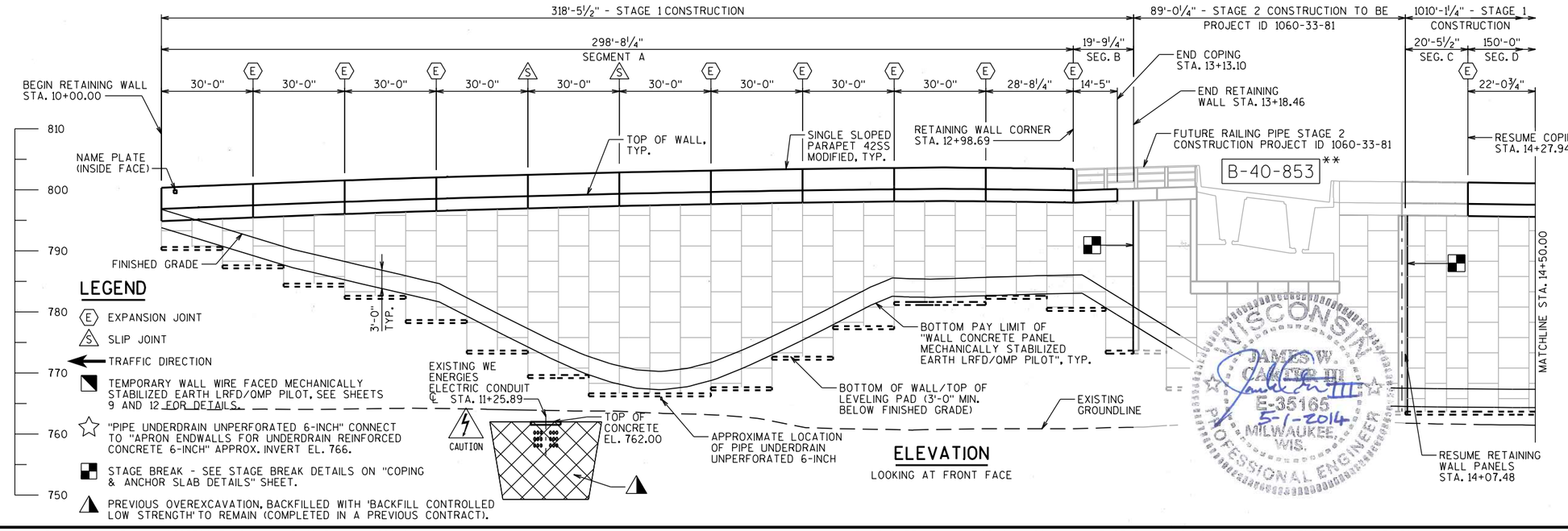
LOCATION MAP

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION 1
2. GENERAL PLAN & ELEVATION 2
3. GENERAL PLAN & ELEVATION 3
4. GENERAL NOTES
5. QUANTITIES & DESIGN DATA
6. TYPICAL SECTIONS (1 OF 4)
7. TYPICAL SECTIONS (2 OF 4)
8. TYPICAL SECTIONS (3 OF 4)
9. TYPICAL SECTIONS (4 OF 4)
10. REINFORCEMENT SCHEDULE
11. ELEVATION TABLES & PARAPET DETAILS
12. COPING & ANCHOR SLAB DETAILS
13. SEGMENT A PLAN & ELEVATION
14. SEGMENT D PLAN & ELEVATION
15. SEGMENT F PLAN & ELEVATION
16. SEGMENT H PLAN & ELEVATION (1 OF 3)
17. SEGMENT H PLAN & ELEVATION (2 OF 3)
18. SEGMENT H PLAN & ELEVATION (3 OF 3)
19. LIGHT SUPPORT DETAILS (1 OF 2)
20. LIGHT SUPPORT DETAILS (2 OF 2)
21. INLET DETAILS
22. ANCHOR SLAB INLET COVER SPECIAL
23. AESTHETIC WALL TREATMENT DETAILS (1 OF 4)
24. AESTHETIC WALL TREATMENT DETAILS (2 OF 4)
25. AESTHETIC WALL TREATMENT DETAILS (3 OF 4)
26. AESTHETIC WALL TREATMENT DETAILS (4 OF 4)
27. SUBSURFACE EXPLORATION 1
28. SUBSURFACE EXPLORATION 2
29. SUBSURFACE EXPLORATION 3

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 359-2300



LEGEND

- (E) EXPANSION JOINT
- (S) SLIP JOINT
- TRAFFIC DIRECTION
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT. SEE SHEETS 9 AND 12 FOR DETAILS.
- "PIPE UNDERDRAIN UNPERFORATED 6-INCH" CONNECT TO "APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH" APPROX. INVERT EL. 766.
- STAGE BREAK - SEE STAGE BREAK DETAILS ON "COPING & ANCHOR SLAB DETAILS" SHEET.
- PREVIOUS OVEREXCAVATION, BACKFILLED WITH 'BACKFILL CONTROLLED LOW STRENGTH' TO REMAIN (COMPLETED IN A PREVIOUS CONTRACT).

ELEVATION

LOOKING AT FRONT FACE

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-511

RETAINING WALL ALONG RAMP NW

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KTM	JJO	KTM	JWC

GENERAL PLAN & ELEVATION 1

SHEET 1 OF 29

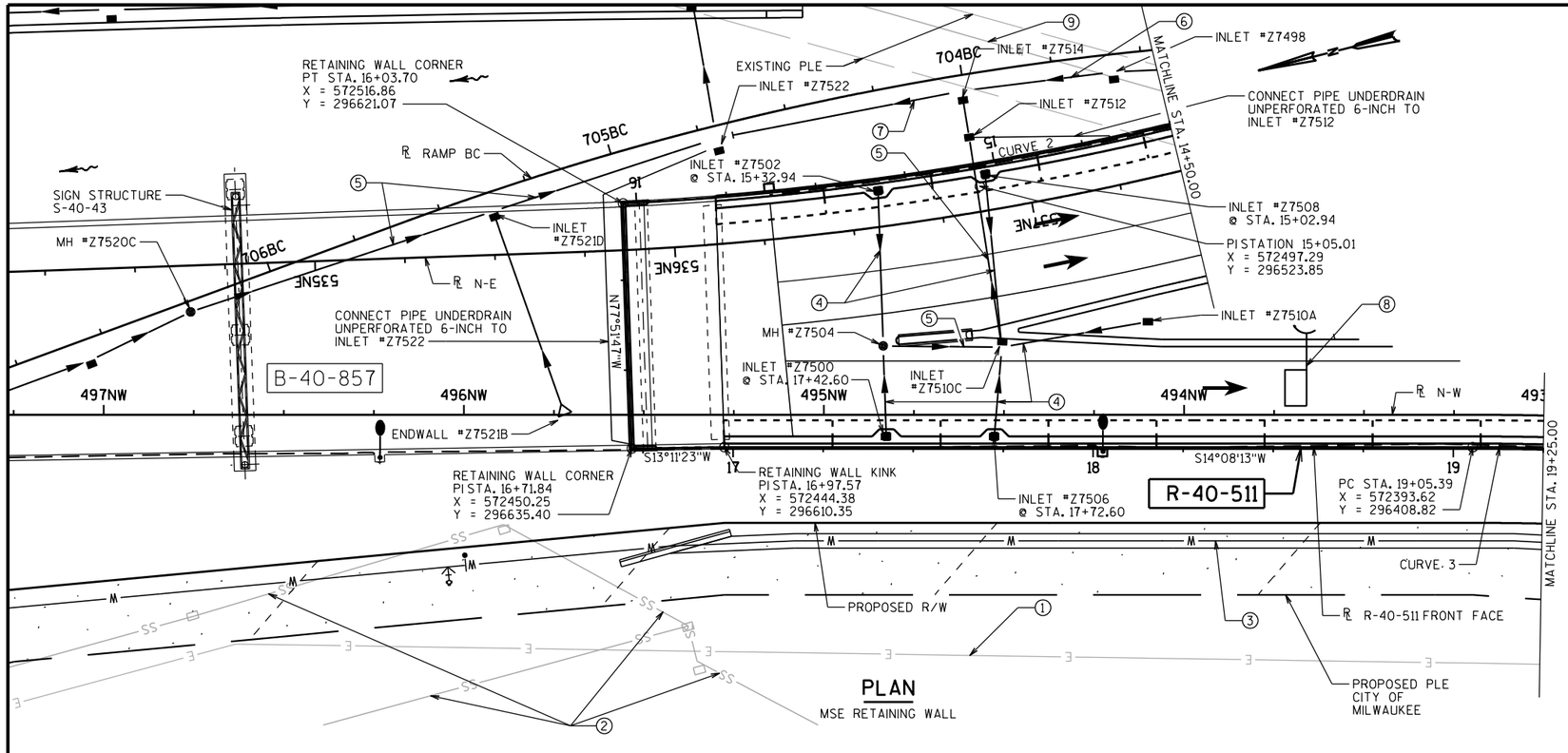
JAMES J. CALLOW III E-35165 5-1-2014 MILWAUKEE, WIS. PROFESSIONAL ENGINEER

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-511\cds\080101_gp.dgn
PLOT DATE : 01-MAY-2014 11:22
PLOT BY : MSCJJO
PLOT NAME : 080101_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80

UTILITY NOTES

1. EXISTING WE ENERGIES ELECTRIC LINE TO REMAIN
2. EXISTING WISDOT STORM SEWER TO REMAIN
3. PROPOSED WISDOT 16" WATER MAIN
4. PROPOSED WISDOT 18" STORM SEWER
5. PROPOSED WISDOT 24" STORM SEWER
6. PROPOSED WISDOT 42" STORM SEWER
7. PROPOSED WISDOT 48" STORM SEWER
8. PROPOSED WISDOT FTMS
9. EXISTING CITY OF MILWAUKEE WATER LINE TO BE RELOCATED

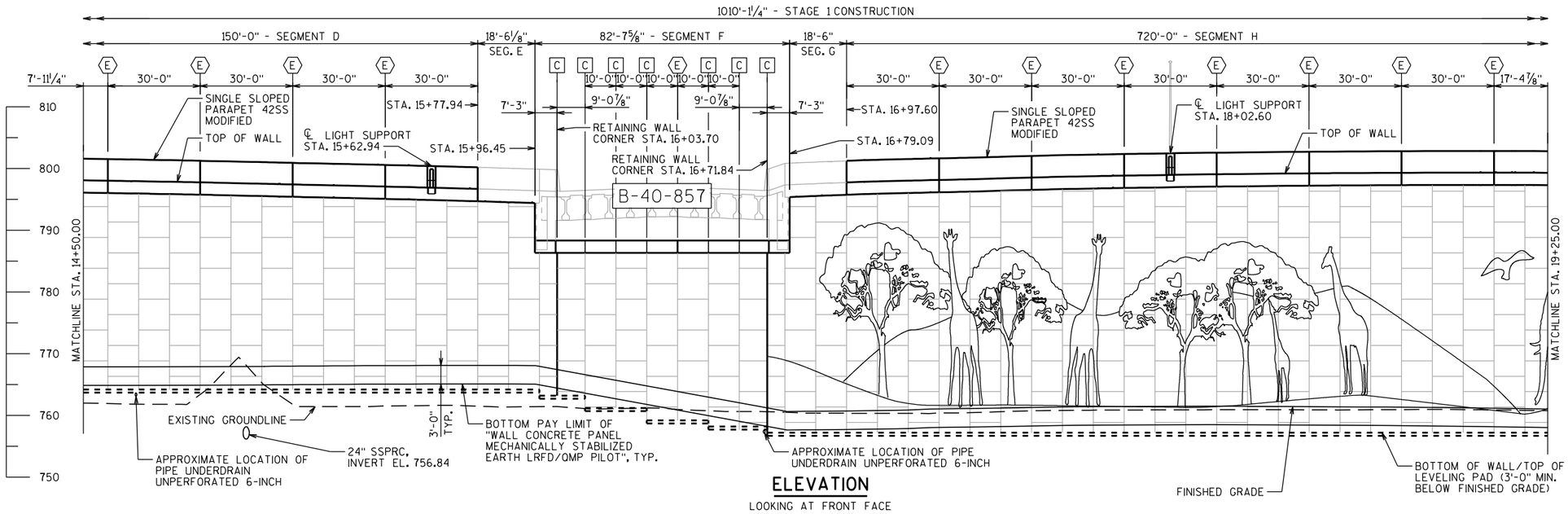


PLAN

MSE RETAINING WALL

LEGEND

- [C] CONTRACTION JOINT
- (E) EXPANSION JOINT
- TRAFFIC DIRECTION



ELEVATION

LOOKING AT FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC

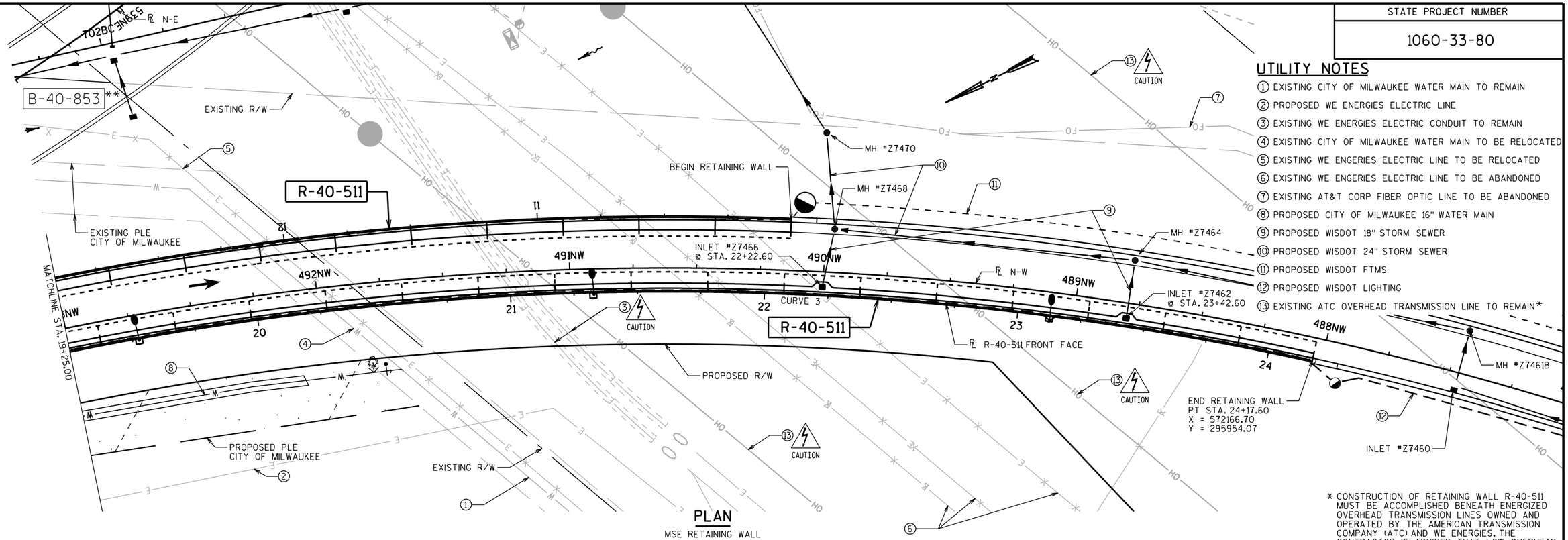
GENERAL PLAN & ELEVATION 2

SHEET 2 OF 29

8

8

STATE PROJECT NUMBER
1060-33-80



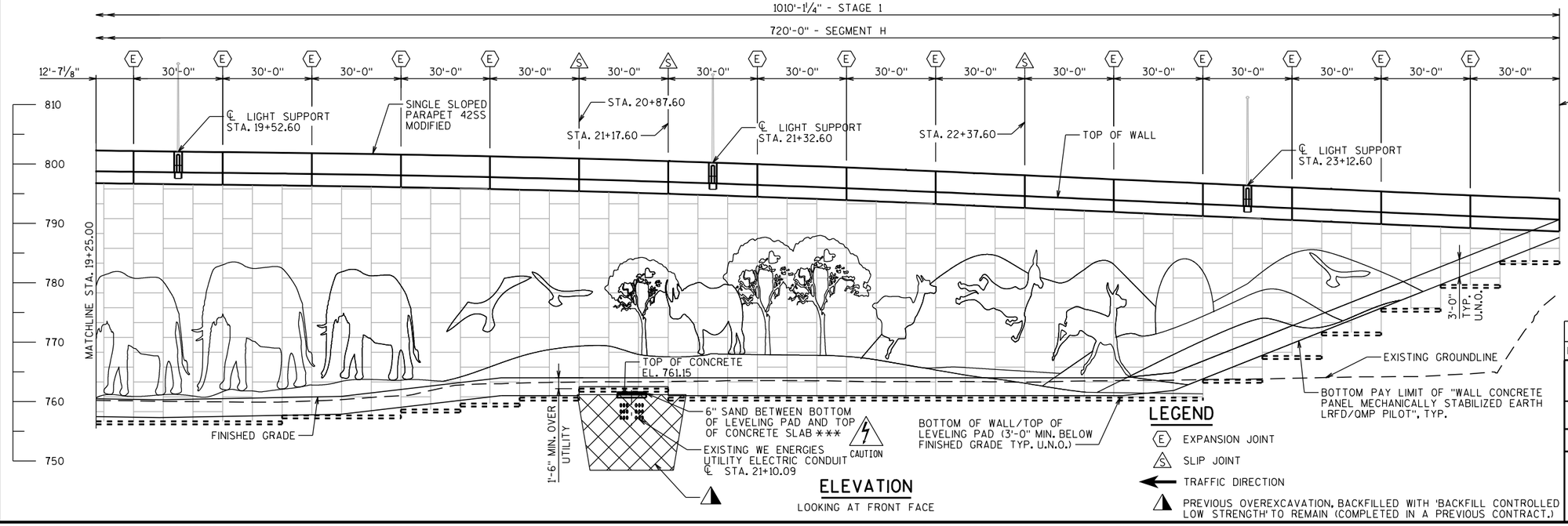
UTILITY NOTES

1. EXISTING CITY OF MILWAUKEE WATER MAIN TO REMAIN
2. PROPOSED WE ENERGIES ELECTRIC LINE
3. EXISTING WE ENERGIES ELECTRIC CONDUIT TO REMAIN
4. EXISTING CITY OF MILWAUKEE WATER MAIN TO BE RELOCATED
5. EXISTING WE ENGERIES ELECTRIC LINE TO BE RELOCATED
6. EXISTING WE ENGERIES ELECTRIC LINE TO BE ABANDONED
7. EXISTING AT&T CORP FIBER OPTIC LINE TO BE ABANDONED
8. PROPOSED CITY OF MILWAUKEE 16" WATER MAIN
9. PROPOSED WISDOT 18" STORM SEWER
10. PROPOSED WISDOT 24" STORM SEWER
11. PROPOSED WISDOT FTMS
12. PROPOSED WISDOT LIGHTING
13. EXISTING ATC OVERHEAD TRANSMISSION LINE TO REMAIN*

* CONSTRUCTION OF RETAINING WALL R-40-511 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

** BRIDGE B-40-853 WILL BE CONSTRUCTED IN FUTURE CONTRACT 1060-33-81.

*** SAND IS CONSIDERED INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".



ELEVATION
LOOKING AT FRONT FACE

LEGEND

- (E) EXPANSION JOINT
- (S) SLIP JOINT
- TRAFFIC DIRECTION
- PREVIOUS OVEREXCAVATION, BACKFILLED WITH 'BACKFILL CONTROLLED LOW STRENGTH' TO REMAIN (COMPLETED IN A PREVIOUS CONTRACT.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 3

SHEET 3 OF 29

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESGIN SPECIFICATIONS 6TH EDITION, 2012 WITH INTERIM REVISIONS, UNLESS OTHERWISE NOTED.

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL AND A TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

COORDINATE THE CONSTRUCTION OF WALL R-40-511 WITH THE SOUTH ABUTMENT OF BRIDGE B-40-857.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT A, SEGMENT D, AND SEGMENT H CAST-IN-PLACE ANCHOR SLAB AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" AND "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENTS B AND F CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND INSIDE FACES OF PARAPET AND THE EXPOSED TOP SURFACE OF THE ANCHOR SLAB.

COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES WITH THE CONSTRUCTION OF THE WALL. COORDINATION INCLUDES THE LOCATIONS OF THE MSE PANEL JOINTS AND MSE REINFORCING STRIPS RELATIVE TO THE PROPOSED INLETS AND STRUCTURES.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES OTHER THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 3'-0" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

THE PLAN QUANTITY FOR THE ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM TOP TO BOTTOM OF WALL AS SHOWN IN THE PLANS. THE BOTTOM OF THE WALL IS TAKEN AS A CONSTANT 3'-0" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES.

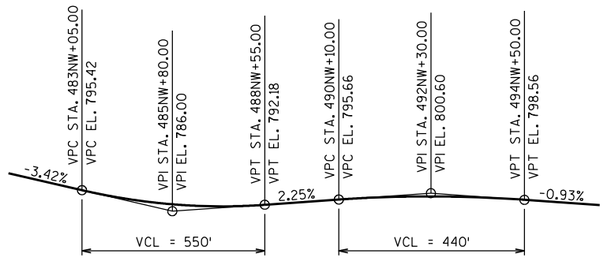
THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST RESULTS.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

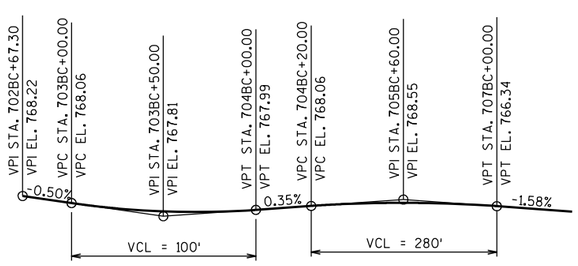
NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO ITEM "CONCRETE MASONRY RETAINING WALLS". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

THIS COVERS STAGE 1 CONSTRUCTION OF R-40-511. STAGE 2 CONSTRUCTION OF R-40-511 WILL BE CONSTRUCTED IN FUTURE PROJECT ID 1060-33-81.



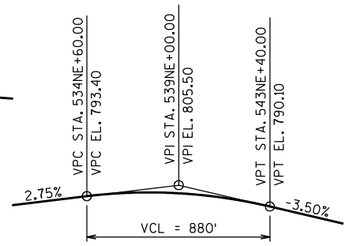
PROFILE GRADE LINE N-W

℄ 'NW'



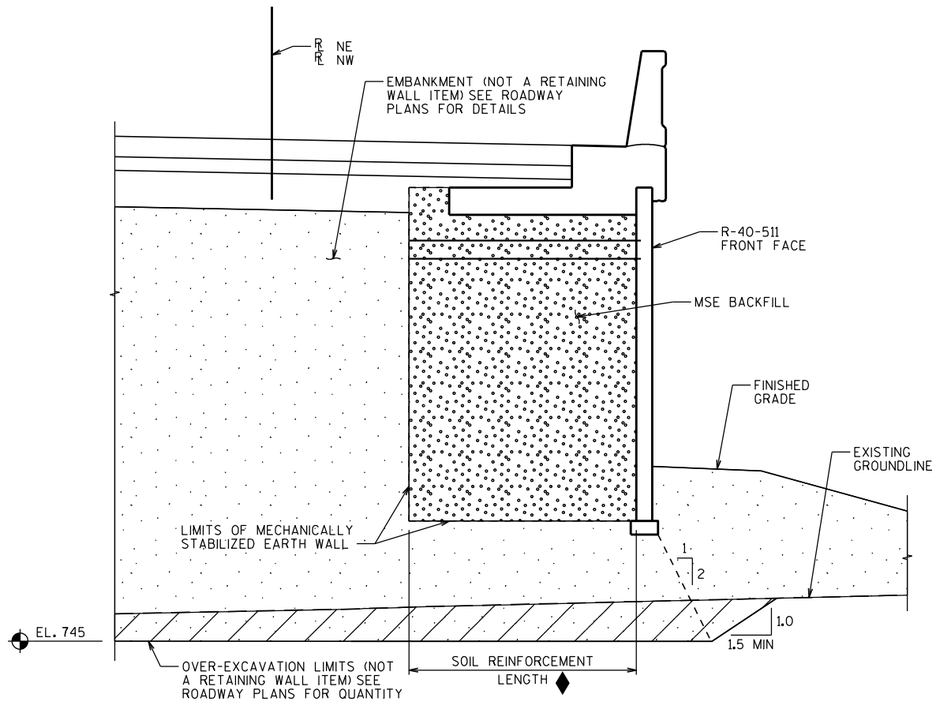
PROFILE GRADE LINE RAMP BC

℄ 'BC'



PROFILE GRADE LINE N-E

℄ 'NE'



WALL EXCAVATION LIMITS DIAGRAM

LOOKING NORTH - SEGMENTS A & D
LOOKING SOUTH - SEGMENT H

HORIZONTAL CURVE DATA

WALL CURVE 1	WALL CURVE 2	WALL CURVE 3
P.I. = 11+49.34	P.I. = 15+05.01	P.I. = 21+61.49
X: 572380.27	X: 572497.29	X: 572330.08
Y: 296244.25	Y: 296523.85	Y: 296156.54
Δ = 14°05'51" LT.	Δ = 13°45'28" RT.	Δ = 24°45'52" RT.
D = 4°43'11"	D = 6°58'11"	D = 4°50'06"
T = 150.10'	T = 99.17'	T = 260.16'
L = 298.69'	L = 197.39'	L = 512.20'
R = 1213.95'	R = 822.05'	R = 1185.05'
P.C. = 10+00.00	P.C. = 14+06.32	P.C. = 19+05.39
X: 572307.88	X: 572501.40	X: 572393.62
Y: 296112.76	Y: 296424.77	Y: 296408.82
P.T. = 12+98.69	P.T. = 16+03.70	P.T. = 24+17.60
X: 572418.46	X: 572516.86	X: 572166.70
Y: 296389.41	Y: 296621.07	Y: 295954.07

LEGEND

- OVER-EXCAVATION - NOT A RETAINING WALL ITEM
- EMBANKMENT - NOT A RETAINING WALL ITEM
- MSE BACKFILL - INCLUDED IN THE BID ITEMS "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" AND "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT"
- ♦ CONSTRUCTION NOTE: WHERE THE BACK OF REINFORCEMENT ZONES ABUT EACH OTHER, LIMIT THE MAXIMUM DIFFERENTIAL OF INTERIM FILL HEIGHTS TO LESS THAN 5 FEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC

GENERAL NOTES

SHEET 4 OF 29

8

8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEG. A	SEG. B	SEG. C	SEG. D	SEG. E	SEG. F	SEG. G	SEG. H	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	283	-	-	109	-	-	-	515	907
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	207	-	-	92	-	-	-	435	734
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	28,820	-	-	14,380	-	-	-	67,210	110,410
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	58	1	-	32	-	1	-	149	241
517.1050.S.0003	ARCHITECTURAL SURFACE TREATMENT R-40-511	SF	5220	337	641	4590	548	2069	707	23279	37,391
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	19	-	-	41	-	100	-	-	160
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	303	21	21	150	19	83	19	723	1,339
612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	1	-	-	-	-	-	-	-	1
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	-	-	-	-	-	-	-	4	4
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	602	-	-	140	-	-	-	737	1,479
653.0220	JUNCTION BOXES 18 X 6 X 6-INCH	EACH	-	-	-	1	-	-	-	1	2
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	3	-	-	-	-	-	-	4	7
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	-	-	-	1	-	-	-	4	5
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	-	-	-	2	-	-	-	4	6
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	5818	377	682	4890	585	2234	744	24719	40,049
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	-	641	1514	-	-	-	-	-	2,155
	NON-BID ITEMS										
	NAME PLATE	EACH									1
	PREFORMED JOINT FILLER	SIZE									3/4", 1", 1 1/2"
	CORK FILLER	SIZE									1"
	NON-BITUMINOUS JOINT SEALER	SIZE									3/4", 1", 1 1/2"
	EXPANDED POLYSTYRENE	SIZE									1"

ALL ITEMS ARE CATEGORY 3020

MSE WALL SOIL PARAMETERS

SOIL DESCRIPTION	TOTAL UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)*	120	30	0	30	0
LEAN CLAY (RETAINED SOIL)	125	0	2000	30	0
COMPACTED LEAN CLAY FILL (FOUNDATION SOIL)	130	0	3000	30	0

* DESIGN WALL FOR THESE VALUES

DESIGN DATA

LIVE LOAD
LIVE LOAD SURCHARGE (ROADWAY) _____ 240 PSF

MATERIAL PROPERTIES
CONCRETE MASONRY RETAINING WALL _____ f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS _____ f'c = 4,000 PSI
BAR STEEL REINFORCEMENT _____ Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A VERTICAL EARTH SURCHARGE LOAD BEHIND THE ABUTMENT PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

WALL EXTERNAL STABILITY EVALUATION

	DIMENSIONS										
	WALL HEIGHT (FEET)	16.5	29.1	17	31.9	40.7	40.9	38	35.8	32.7	24	13.1
	EXPOSED WALL HEIGHT (FEET)	13.5	26.1	14	28.9	37.7	37.9	35	32.8	29.7	21	10.1
◥	MINIMUM LENGTH OF REINFORCEMENT/WALL WIDTH (FEET)	11.6	20.4	11.9	22.4	30.5	30.75	26.6	25	22.9	24	13.1
	REINFORCEMENT LENGTH/RETAINED HEIGHT RATIO	0.70H	0.70H	0.70H	0.70H	0.75H	0.75H	0.70H	0.70H	0.70H	1.0H	1.0H
	WALL STATION	10+88	11+90	12+91	15+55	17+25	19+25	20+24	21+24	22+72	23+22	23+72
	BORING USED	CR-9&12	CR-10&CB-12	CR-10&11	CR-11&CB-21	CR-11&CB-21	CR-10&11	CR-10&CB-12	CR-9&12	CR-13&14	CR-13&14	CR-13&14
	CAPACITY TO DEMAND RATIO (CDR)											
	SLIDING	>10	>10	>10	1.51	1.64	1.41	1.32	1.31	1.30	1.72	1.55
	ECCENTRICITY	>10	>10	>10	1.32	1.57	1.37	1.18	1.17	1.16	2.22	1.90
	BEARING	1.44	1.07	1.87	1.26	1.07	1.02	1.02	1.07	1.16	1.15	1.84
◥	GLOBAL STABILITY	1.11	1.71	1.14	1.16	1.09	1.25	1.36	1.31	1.15	1.06	1.03

◥ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-511

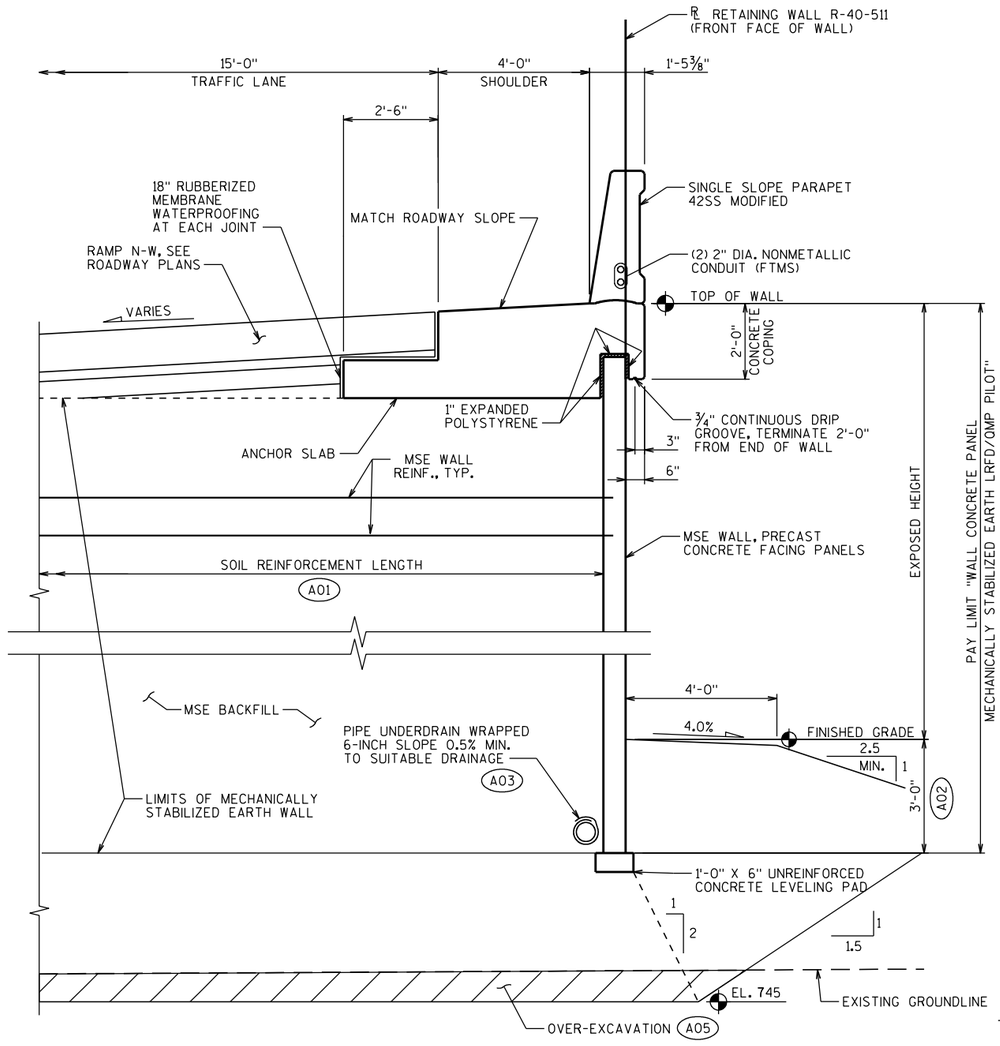
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QUANTITIES & DESIGN DATA

SHEET 5 OF 29

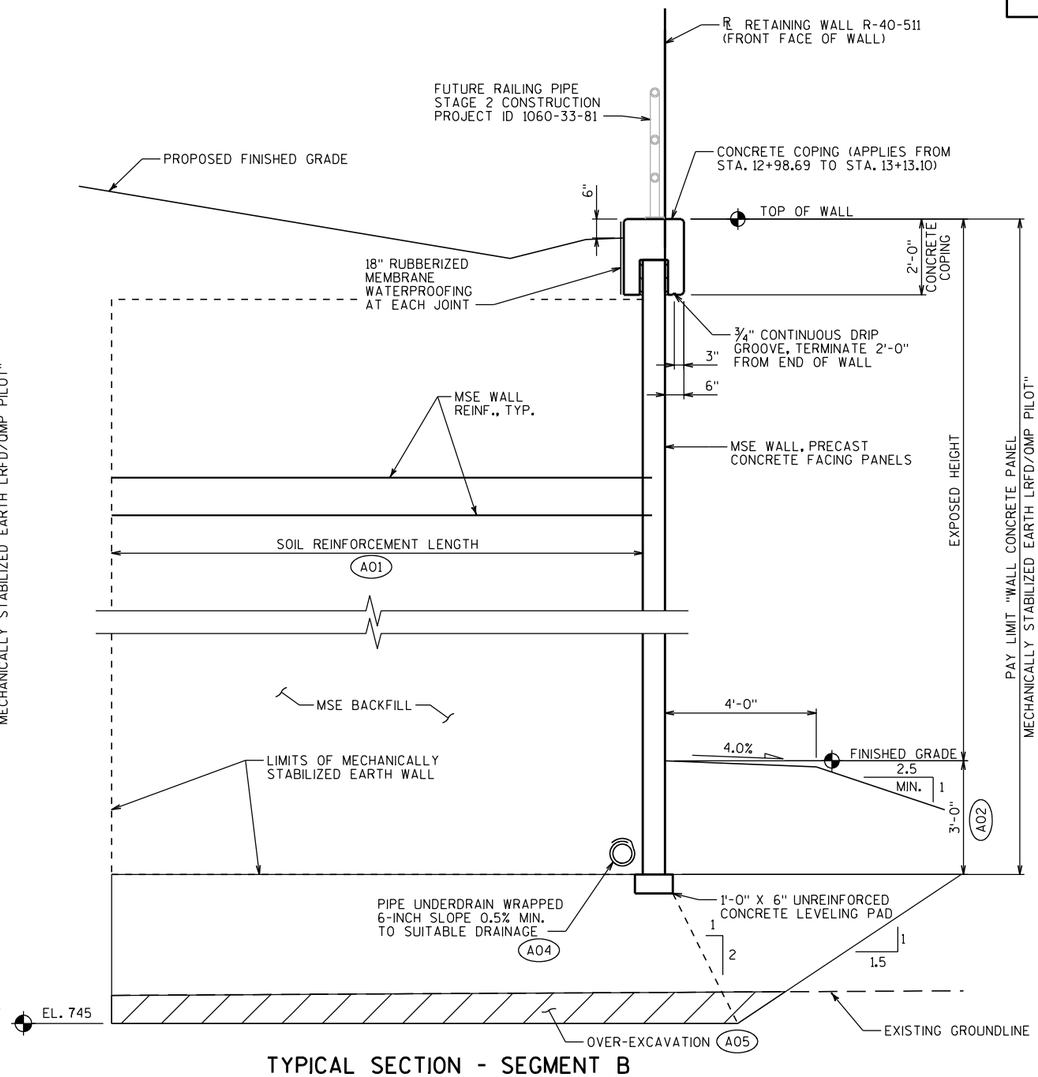
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STATE PROJECT NUMBER
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TYPICAL SECTION - SEGMENT A

LOOKING NORTH
STA. 10+00.00 TO STA. 12+98.69



TYPICAL SECTION - SEGMENT B

LOOKING EAST
STA. 12+98.69 TO STA. 13+18.46

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. AT SEGMENT A, SOIL REINFORCEMENT LENGTH MAY OVERLAP WITH REINFORCEMENT ZONE OF WALL SEGMENT H.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) DAYLIGHT PIPE UNDERDRAIN WRAPPED USING PIPE UNDERDRAIN UNPERFORATED CONNECTED TO APRON ENDWALL. SEE "GENERAL PLAN AND ELEVATION 1" SHEET.

(A04) CAP PIPE UNDERDRAIN WRAPPED TEMPORARILY FOR STAGE 1 CONSTRUCTION AT TEMPORARY WALL WIRE FACED MSE. CAP WILL BE REMOVED DURING STAGE 2 CONSTRUCTION, ALLOWING FOR CONNECTION OF PIPE UNDERDRAIN WRAPPED BETWEEN STAGES.

(A05) OVER-EXCAVATE TO EL. 745 (ELEVATION NOT SHOWN TO SCALE) FROM WALL STATION 10+00 TO WALL STATION 22+25. INCLUDED WITH EXCAVATION BELOW SUBGRADE. SEE ROADWAY PLANS FOR QUANTITY. (NOT A RETAINING WALL BID ITEM).

NO.	DATE	REVISION	BY

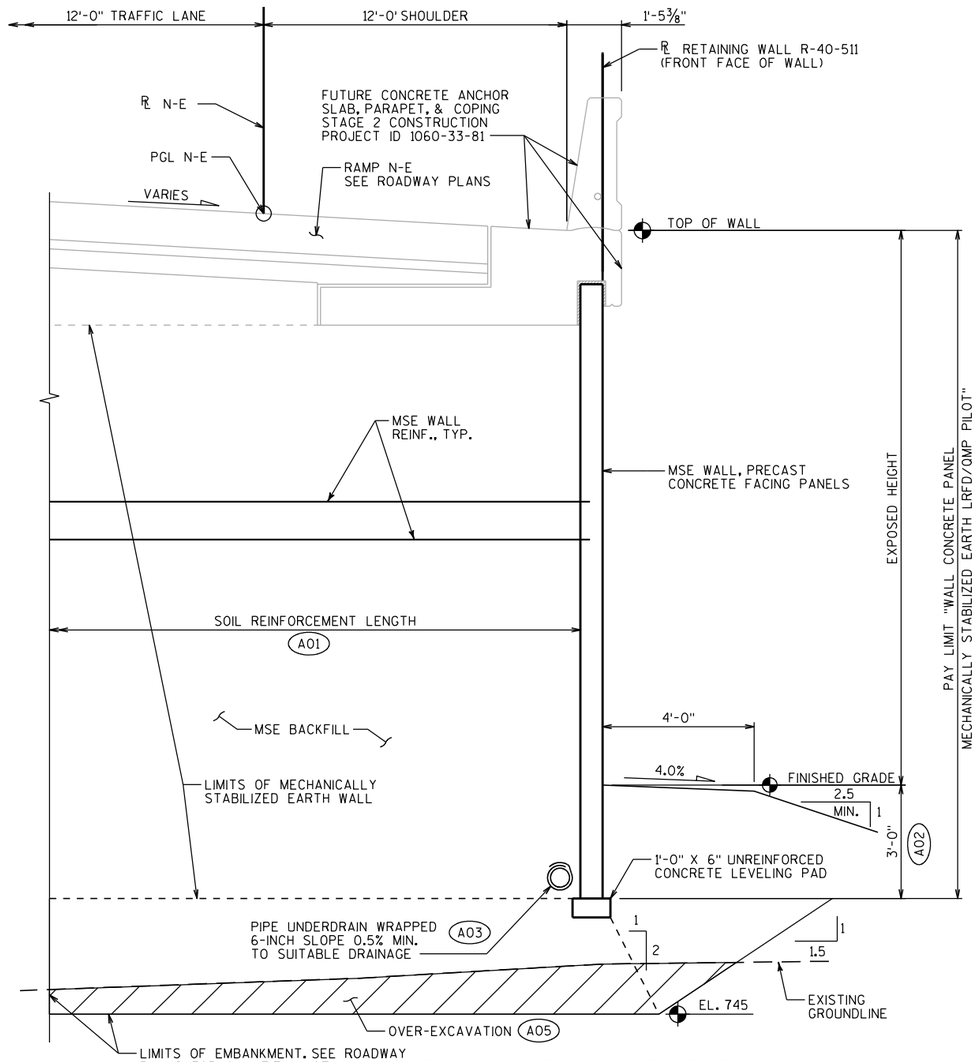
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

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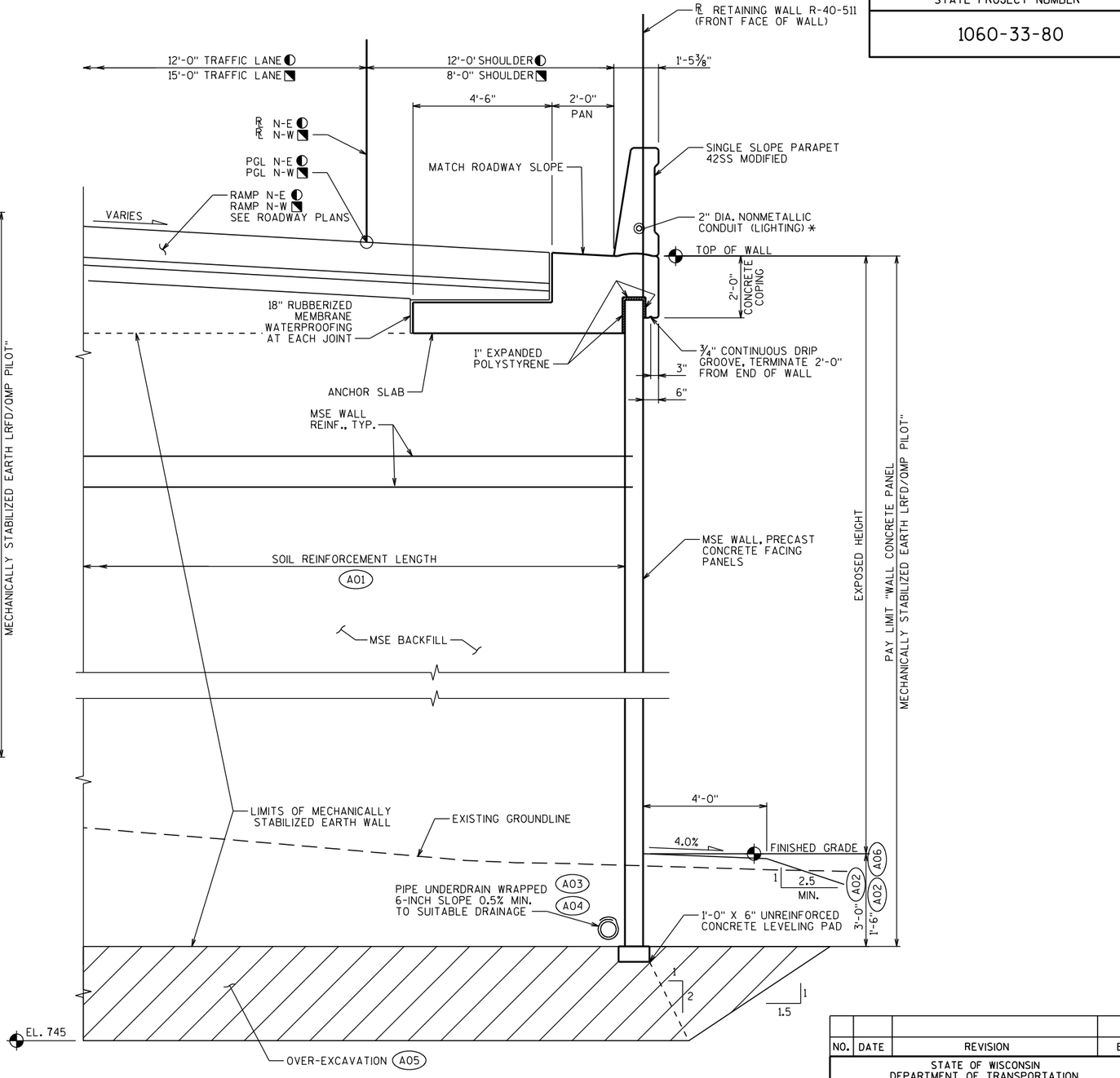
TYPICAL SECTIONS (1 OF 4)

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TYPICAL SECTION - SEGMENT C

LOOKING NORTH
STA. 14+07.48 TO STA. 14+27.94



TYPICAL SECTION - SEGMENTS D & H

SEGMENT D - LOOKING NORTH - STA. 14+27.94 TO STA. 15+77.94
SEGMENT H - LOOKING SOUTH - STA. 16+97.60 TO STA. 24+17.60

* NOTE: LIGHTING CONDUIT IN SEGMENT H RUNS FULL LENGTH OF SEGMENT. LIGHTING CONDUIT IN SEGMENT D ONLY RUNS FROM STA. 14+27.94 TO STA. 15+62.94.

LEGEND

A01 SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. AT SEGMENT A, SOIL REINFORCEMENT LENGTH MAY OVERLAP WITH REINFORCEMENT ZONE OF WALL SEGMENT H.

A02 MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN, UNLESS NOTED OTHERWISE. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

A03 CONNECT PIPE UNDERDRAIN WRAPPED FOR SEGMENTS C & D TO PROPOSED INLET #Z7512 USING PIPE UNDERDRAIN UNPERFORATED. SEE "GENERAL PLAN AND ELEVATION 2" SHEET. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO INLET IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH".

A04 CONNECT PIPE UNDERDRAIN WRAPPED FOR SEGMENT H TO PROPOSED INLET #Z7522 USING PIPE UNDERDRAIN UNPERFORATED. SEE "GENERAL PLAN AND ELEVATION 2" SHEET. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO INLET IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH".

A05 OVER-EXCAVATE TO EL. 745 (ELEVATION NOT SHOWN TO SCALE) FROM WALL STATION 10+00 TO WALL STATION 22+25. INCLUDED WITH EXCAVATION BELOW SUBGRADE. SEE ROADWAY PLANS FOR QUANTITY. (NOT A RETAINING WALL BID ITEM).

A06 MINIMUM DIMENSION ONLY WITHIN SEGMENT H BETWEEN STA. 20+87.60 AND STA. 21+17.60

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DEPARTMENT OF TRANSPORTATION

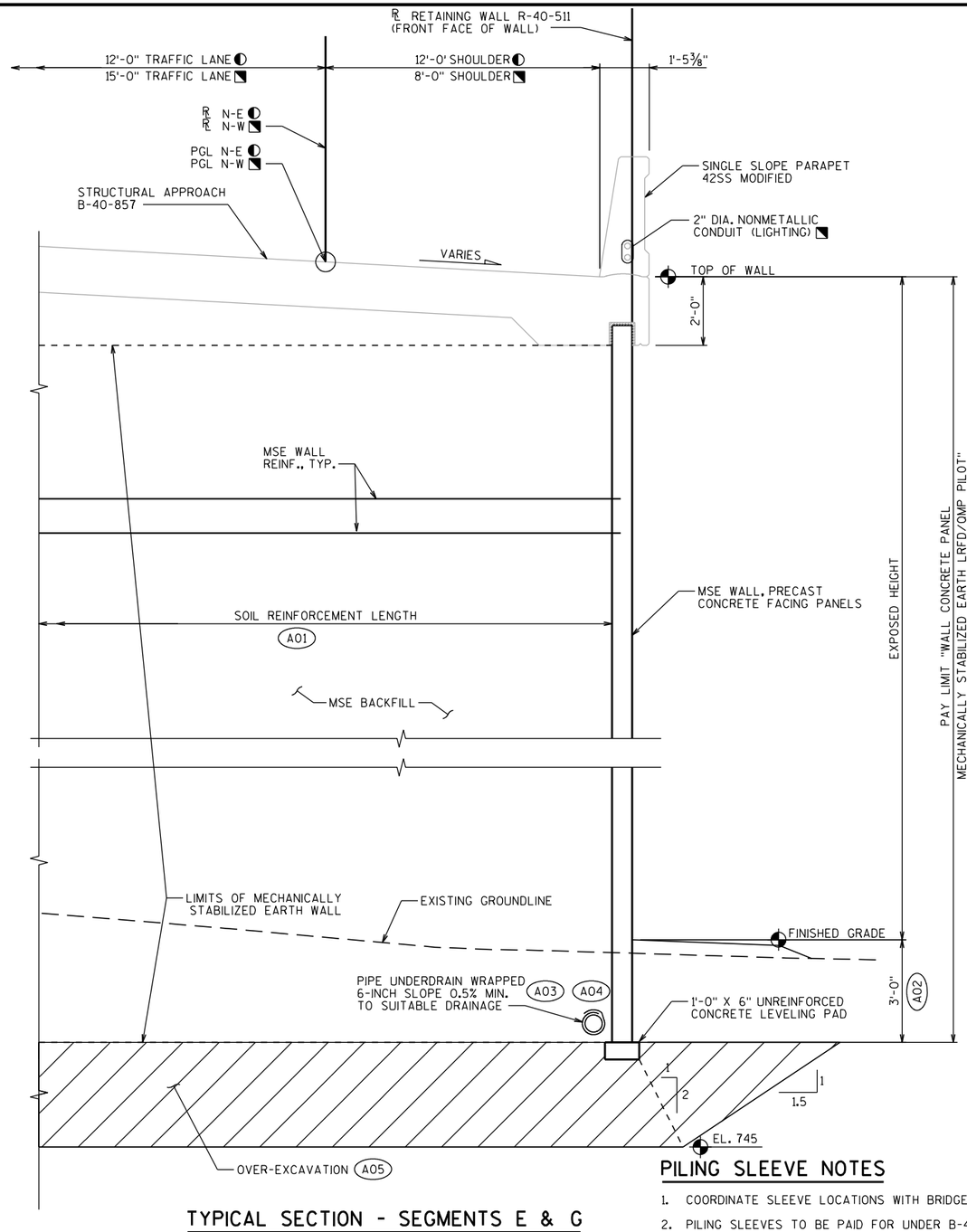
STRUCTURE R-40-511

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TYPICAL SECTIONS (2 OF 4)

SHEET 7 OF 29

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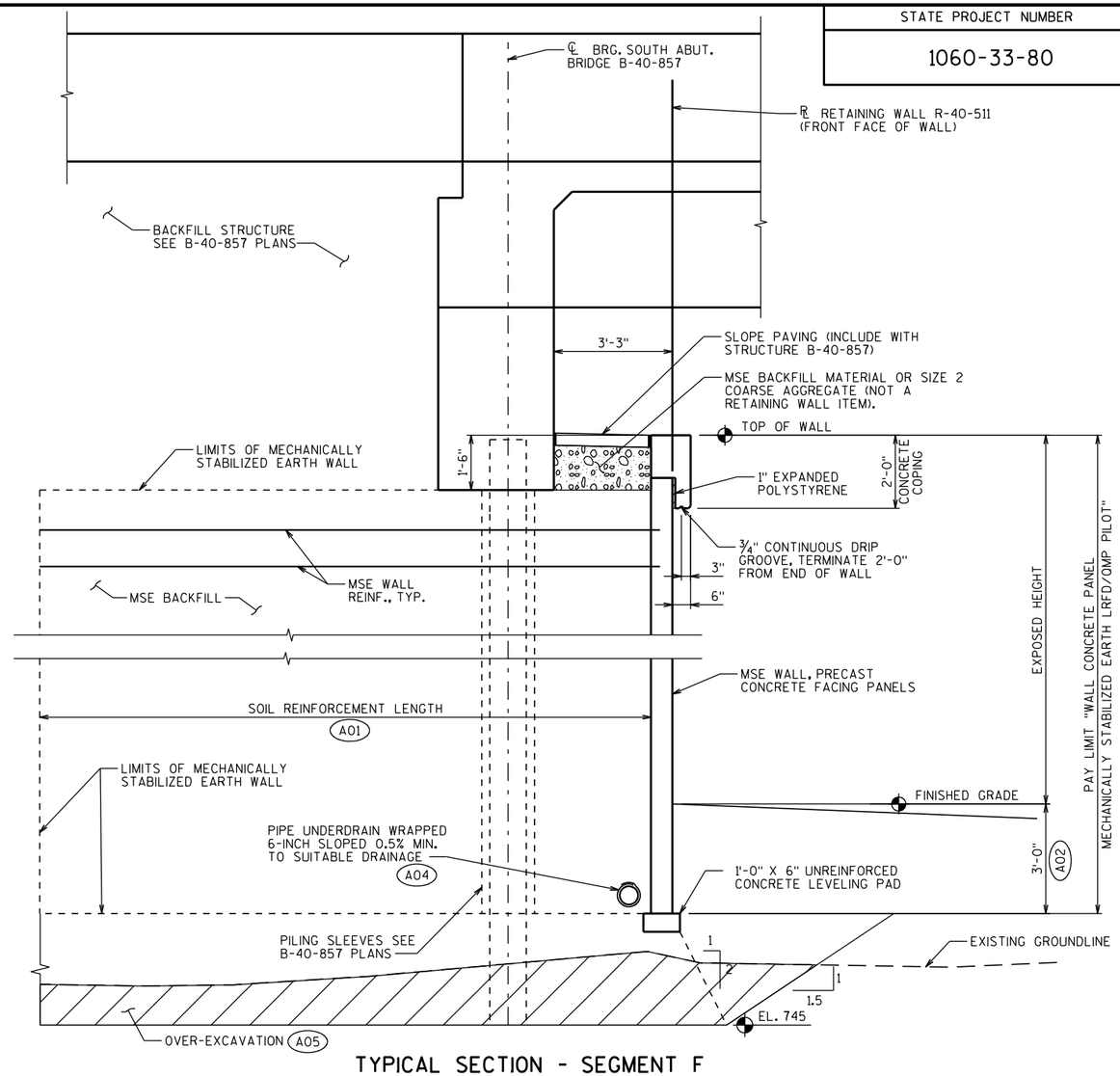


TYPICAL SECTION - SEGMENTS E & G

SEGMENT E - LOOKING NORTH - STA. 15+77.94 TO STA. 15+96.45
SEGMENT G - LOOKING SOUTH - STA. 16+79.09 TO STA. 16+97.60

PILING SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-857.
2. PILING SLEEVES TO BE PAID FOR UNDER B-40-857 BRIDGE.
3. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
4. SLEEVES SHALL BE PLACED BEFORE MSE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.
5. PILING SLEEVES SHALL BE INSTALLED PRIOR TO BEGINNING ABUTMENT CONSTRUCTION. INSTALLATION ELEVATION AT BOTTOM OF MSE REINFORCED ZONE VARIES. SEE "ELEVATION TABLES" SHEET FOR WALL ELEVATIONS.



TYPICAL SECTION - SEGMENT F

LOOKING WEST
STA. 15+96.45 TO STA. 16+79.09

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS. SOIL REINFORCEMENT LENGTH MAY OVERLAP WITH REINFORCEMENT ZONE OF OTHER WALL SEGMENTS.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN WRAPPED FOR SEGMENT E TO PROPOSED INLET #Z7512 USING PIPE UNDERDRAIN UNPERFORATED. SEE "GENERAL PLAN AND ELEVATION 2" SHEET. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO INLET IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH".

(A04) CONNECT PIPE UNDERDRAIN WRAPPED FOR SEGMENTS F AND G TO PROPOSED INLET #Z7522 USING PIPE UNDERDRAIN UNPERFORATED. SEE "GENERAL PLAN AND ELEVATION 2" SHEET. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO INLET IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH".

(A05) OVER-EXCAVATE TO EL. 745 (ELEVATION NOT SHOWN TO SCALE) FROM WALL STATION 10+00 TO WALL STATION 22+25. INCLUDED WITH EXCAVATION BELOW SUBGRADE. SEE ROADWAY PLANS FOR QUANTITY. (NOT A RETAINING WALL BID ITEM).

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

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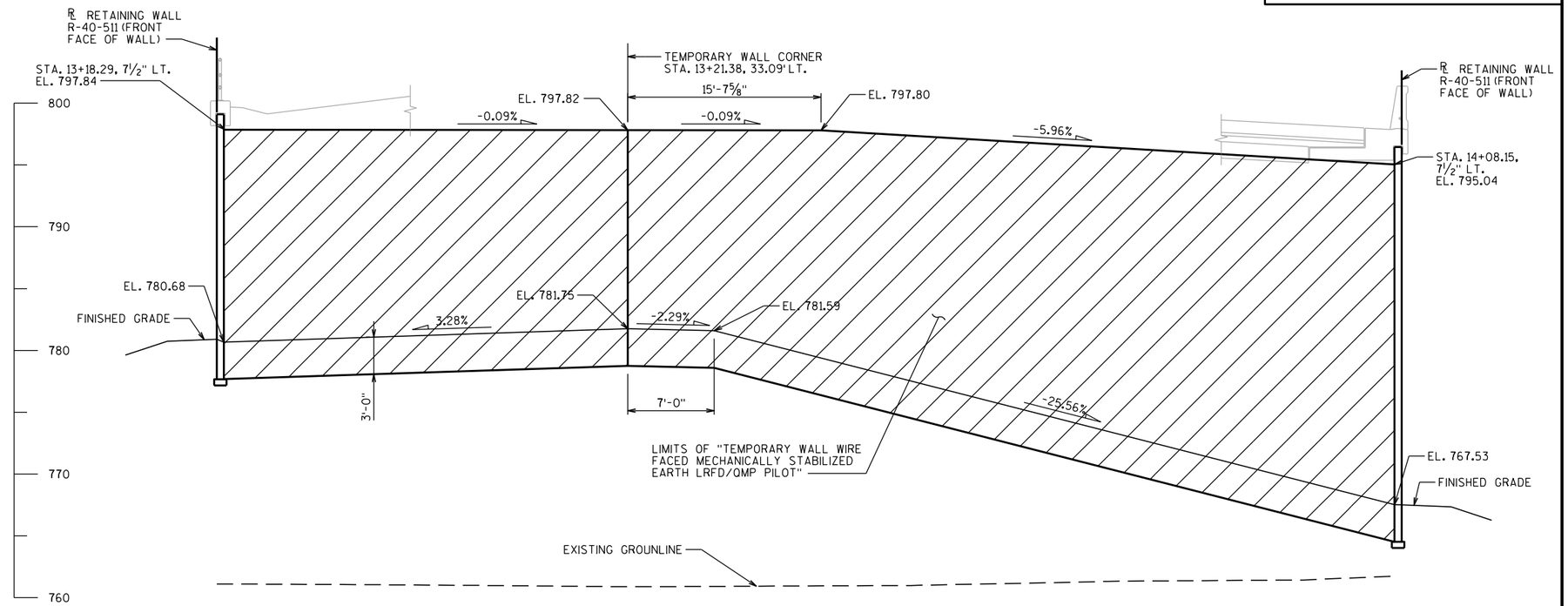
TYPICAL SECTIONS (3 OF 4)

SHEET 8 OF 29

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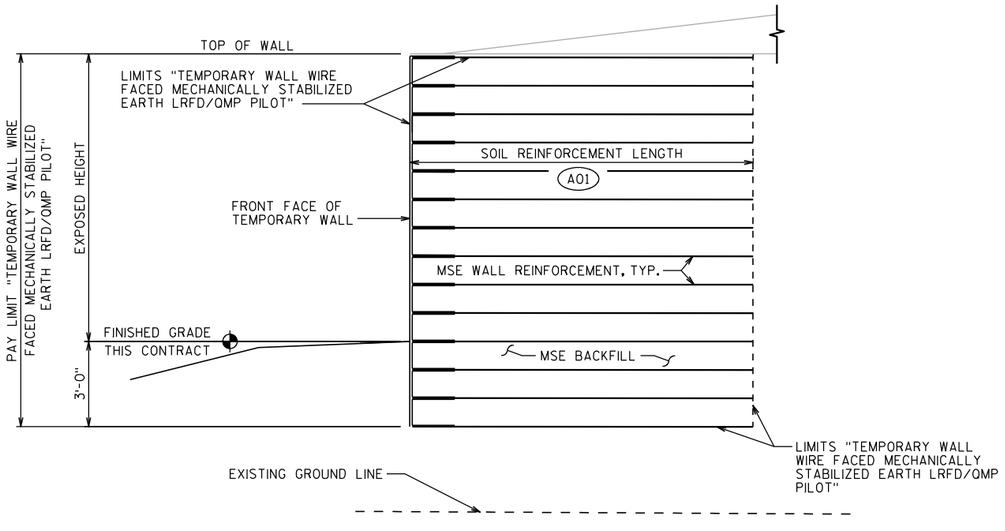


ELEVATION AT TEMPORARY WALL

LOOKING WEST

ELEVATION AT TEMPORARY WALL

LOOKING NORTH



SECTION AT TEMPORARY WALL

LOOKING SOUTH - STA. 13+18.29, 7" LT. TO STA. 13+21.38, 33'-1⅛", LT.
LOOKING WEST - STA. 14+08.15, 7" LT. TO STA. 14+08.02, 62'-7¼" LT.

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES & DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

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TYPICAL SECTIONS (4 OF 4)

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STATE PROJECT NUMBER
1060-33-80

BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	680	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	450	8'-4"	X		COPING - VERTICAL TIE
A503	X	450	4'-8"	X		COPING - HORIZONTAL TIE
A504	X	230	5'-10"	X		COPING - HORIZONTAL TIE
A505	X	450	5'-11"	X		PARAPET/COPING - VERTICAL TIE
A406	X	230	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
R501	X	450	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	80	29'-7"			PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT D

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
D501	X	352	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
D502	X	206	6'-7"	X		COPING - VERTICAL TIE
D503	X	226	4'-8"	X		COPING - HORIZONTAL TIE
D504	X	126	3'-10"	X		COPING - HORIZONTAL TIE
D505	X	226	5'-11"	X		PARAPET/COPING - VERTICAL TIE
D406	X	100	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
D507	X	5	10'-3"	X		ANCHOR SLAB - LIGHT BLISTER STIRRUP
D608	X	2	5'-1"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
D609	X	2	4'-9"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
K501	X	16	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOT.
K502	X	8	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	8	5'-4"	X		COPING - VERTICAL TIE
K504	X	8	8'-7"	X		COPING - VERTICAL TIE
K505	X	12	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	8	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	8	2'-6"	X		COPING - VERTICAL TIE
K508	X	8	4'-8"	X		COPING - VERTICAL TIE
K509	X	8	5'-5"	X		COPING - VERTICAL TIE
K410	X	10	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	4	14'-0"	X		COPING - LONGITUDINAL
K412	X	4	5'-1"			COPING - LONGITUDINAL
K413	X	8	2'-0"			COPING - LONGITUDINAL
L501	X	6	8'-1"	X		LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X		LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X		LIGHT SUPPORT - VERTICAL
R501	X	230	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	40	29'-7"			PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT H

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
H501	X	1680	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
H502	X	1048	6'-7"	X		COPING - VERTICAL TIE
H503	X	1088	4'-8"	X		COPING - HORIZONTAL TIE
H504	X	592	3'-10"	X		COPING - HORIZONTAL TIE
H505	X	1088	5'-11"	X		PARAPET/COPING - VERTICAL TIE
H406	X	480	29'-7"			ANCHOR SLAB & COPING - LONGITUDINAL
H507	X	5	10'-3"	X		ANCHOR SLAB - LIGHT BLISTER STIRRUP
H608	X	2	5'-1"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
H609	X	2	4'-9"	X		ANCHOR SLAB - LIGHT BLISTER HORIZONTAL
K501	X	32	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOT.
K502	X	16	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	16	5'-4"	X		COPING - VERTICAL TIE
K504	X	16	8'-7"	X		COPING - VERTICAL TIE
K505	X	24	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	16	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	16	2'-6"	X		COPING - VERTICAL TIE
K508	X	16	4'-8"	X		COPING - VERTICAL TIE
K509	X	16	5'-5"	X		COPING - VERTICAL TIE
K410	X	20	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	8	14'-0"	X		COPING - LONGITUDINAL
K412	X	8	5'-1"			COPING - LONGITUDINAL
K413	X	16	2'-0"			COPING - LONGITUDINAL
L501	X	24	8'-1"	X		LIGHT SUPPORT - STIRRUP
L502	X	24	8'-2"	X		LIGHT SUPPORT - VERTICAL TIE
L503	X	24	6'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	32	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	20	4'-6"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	16	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	8	2'-10"	X		LIGHT SUPPORT - VERTICAL
R501	X	1088	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	192	29'-7"			PARAPET - LONGITUDINAL

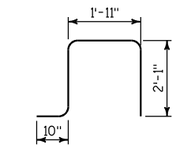
NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

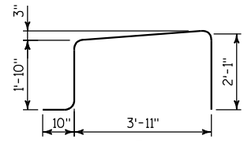
SEE "INLET DETAILS" SHEET FOR INLET REINFORCEMENT BAR BEND DIAGRAMS.

SEE "LIGHT SUPPORT DETAILS (1 OF 2)" SHEET FOR LIGHT SUPPORT REINFORCEMENT BAR BEND DIAGRAMS.

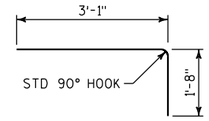
△ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



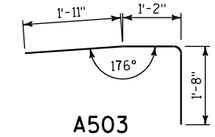
D502 & H502



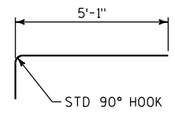
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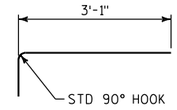
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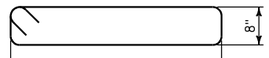
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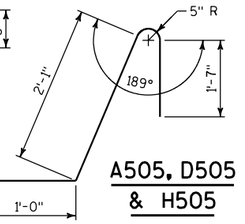
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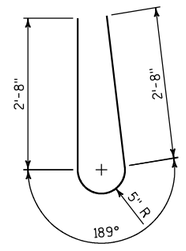
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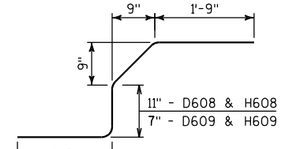
D507 & H507



A505, D505 & H505



R501



D608 & D609
H608 & H609

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

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REINFORCEMENT SCHEDULE

SHEET 10 OF 29

8

8

STATE PROJECT NUMBER
1060-33-80

SEGMENT A WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
10+00.00	796.80	796.80	764.13
10+15.00	797.12	794.52	763.99
10+30.00	797.43	792.23	764.06
10+45.00	797.71	790.01	764.00
10+60.00	797.99	788.26	764.07
10+75.00	798.24	786.50	764.18
10+90.00	798.49	784.76	764.16
11+05.00	798.71	781.06	764.05
11+20.00	798.92	777.27	763.92
11+35.00	799.11	773.72	763.77
11+50.00	799.29	771.15	763.70
11+65.00	799.46	770.30	763.37
11+80.00	799.60	771.75	763.12
11+95.00	799.73	774.82	762.57
12+10.00	799.85	778.39	761.15
12+25.00	799.95	782.20	760.84
12+40.00	800.03	785.55	760.70
12+55.00	800.10	785.42	760.75
12+70.00	800.05	785.66	760.85
12+84.35	799.98	785.89	760.86
12+98.69	799.89	786.05	760.87

SEGMENT B WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
12+98.69	799.89	786.05	760.87
13+05.89	800.02	784.74	760.99
13+13.10	800.12	782.52	761.06
13+18.46	800.20	780.86	761.10

SEGMENT C WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
14+07.48	797.87	767.51	761.77
14+17.71	797.82	767.41	761.61
14+27.94	797.76	767.38	761.57

SEGMENT D WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
14+27.94	797.76	767.38	761.57
14+42.94	797.67	767.33	761.48
14+57.94	797.55	767.32	761.37
14+72.94	797.42	767.32	761.21
14+87.94	797.27	767.34	762.83
15+02.94	797.11	767.38	767.50
15+17.94	796.93	767.43	761.21
15+32.94	796.77	767.49	760.84
15+47.94	796.59	767.52	760.95
15+62.94	796.40	767.54	761.05
15+77.94	796.19	767.54	760.93

SEGMENT E WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
15+77.94	796.19	767.54	760.93
15+87.20	796.06	767.54	760.78
15+96.45	795.91	767.53	760.83

SEGMENT F WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
15+96.45	787.80	767.53	760.83
16+03.70	787.80	766.89	760.88
16+12.77	787.80	766.06	760.54
16+22.77	787.80	765.15	760.52
16+32.77	787.80	764.23	760.64
16+42.77	787.80	763.32	760.40
16+52.77	787.80	762.41	760.20
16+62.77	787.80	761.49	760.09
16+71.84	787.80	760.67	760.02
16+79.09	787.80	760.07	759.90

SEGMENT G WALL ELEVATIONS

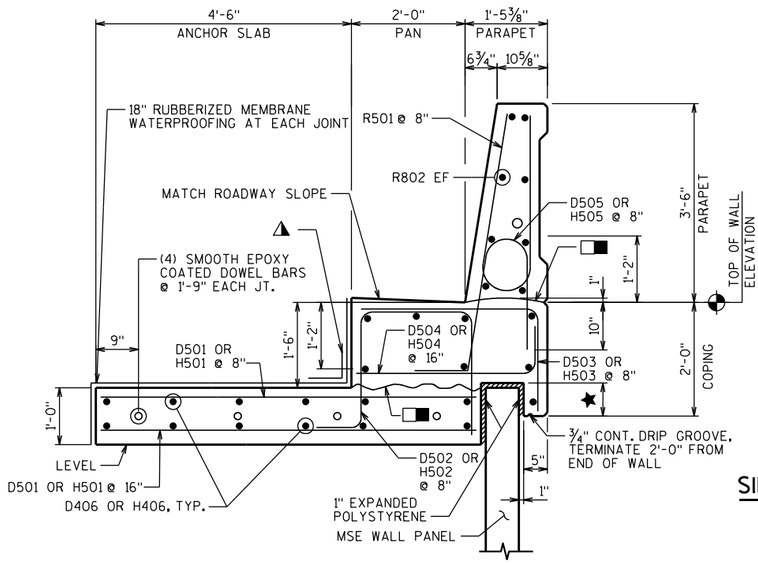
STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
16+79.09	796.85	760.07	759.90
16+88.35	797.04	760.13	759.81
16+97.60	797.22	760.17	759.78

SEGMENT H WALL ELEVATIONS

STATION	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GROUND EL.
16+97.60	797.22	760.17	759.78
17+12.60	797.46	760.27	759.77
17+27.60	797.64	760.50	759.79
17+42.60	797.83	760.60	759.99
17+57.60	798.04	760.72	760.19
17+72.60	798.22	760.85	760.26
17+87.60	798.35	760.89	760.28
18+02.60	798.47	760.93	760.32
18+17.60	798.57	760.95	760.39
18+32.60	798.65	760.90	760.38
18+47.60	798.72	760.87	760.32
18+62.60	798.77	760.83	760.35
18+77.60	798.81	760.78	760.39
18+92.60	798.83	760.70	760.39
19+07.60	798.84	760.60	760.32
19+22.60	798.82	760.49	760.22
19+37.60	798.74	760.37	760.09
19+52.60	798.64	760.37	760.00
19+67.60	798.56	760.50	759.92
19+82.60	798.48	760.63	759.89
19+97.60	798.39	760.77	760.10
20+12.60	798.28	761.15	760.49
20+27.60	798.15	762.03	760.95
20+42.60	798.00	762.91	762.36
20+57.60	797.84	763.78	763.00
20+72.60	797.67	764.00	763.17
20+87.60	797.47	764.00	763.26
21+02.60	797.26	764.00	763.32
21+17.60	797.04	764.00	763.39
21+32.60	796.79	764.00	763.42
21+47.60	796.53	764.00	763.51
21+62.60	796.26	764.00	763.50
21+77.60	795.97	764.00	763.42
21+92.60	795.66	764.00	763.32
22+07.60	795.33	764.00	763.35
22+22.60	794.99	764.00	763.33
22+37.60	794.65	764.00	763.24
22+52.60	794.31	764.00	763.38
22+67.60	793.97	764.00	763.51
22+82.60	793.64	764.60	763.55
22+97.60	793.30	766.82	763.68
23+12.60	792.96	769.80	763.77
23+27.60	792.62	772.78	763.89
23+42.60	792.28	775.76	764.09
23+57.60	791.94	778.73	764.14
23+72.60	791.60	781.71	764.23
23+87.60	791.28	784.69	764.65
24+02.60	790.99	787.67	769.41
24+17.60	790.72	790.65	778.35

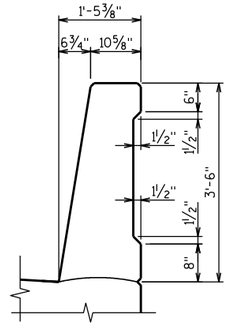
LEGEND

◹ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.



SEGMENTS D & H

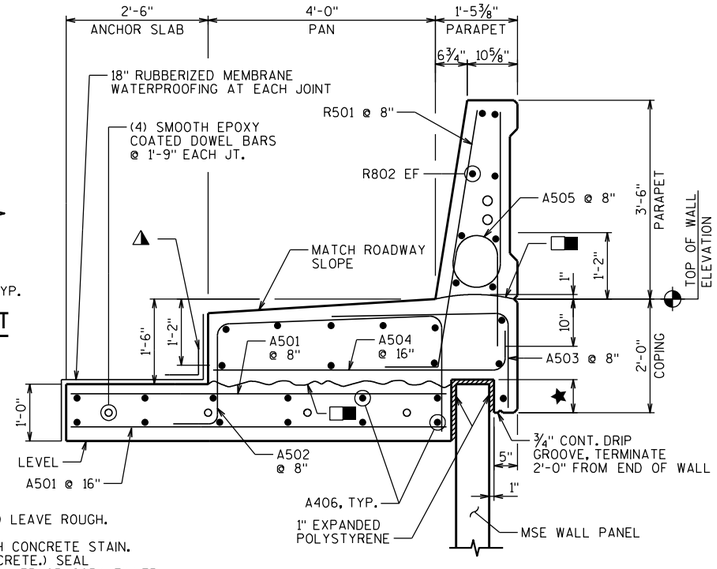
(TYPICAL SECTION)



SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMENSIONS

PARAPET EXPANSION JOINT

DO NOT RUN BARS THRU JOINT



SEGMENT A

(TYPICAL SECTION)

LEGEND

- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ★ 3" MIN., 6" MAX.
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

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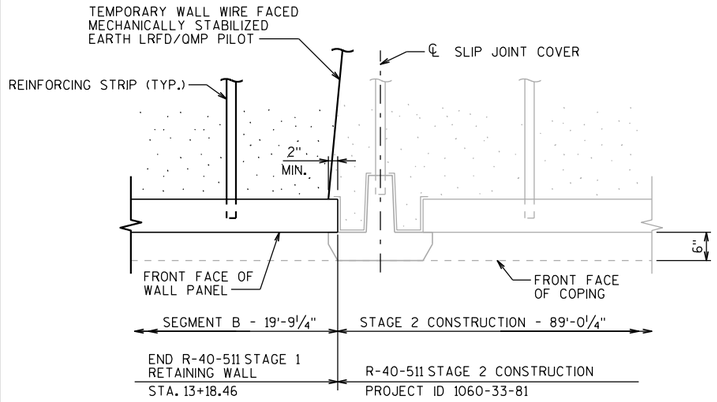
ELEVATION TABLES & PARAPET DETAILS

SHEET 11 OF 29

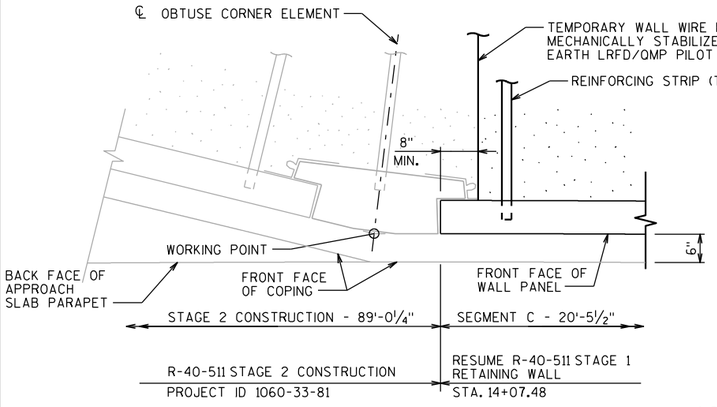
8

8

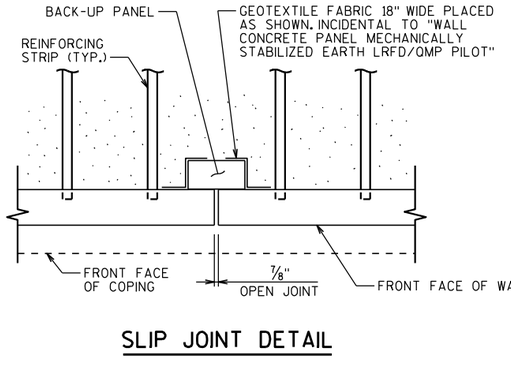
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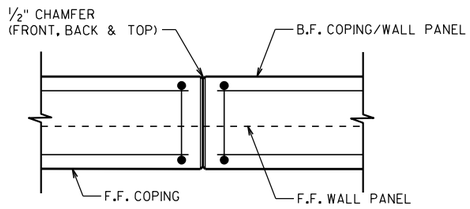
STAGE BREAK DETAIL 1



STAGE BREAK DETAIL 2

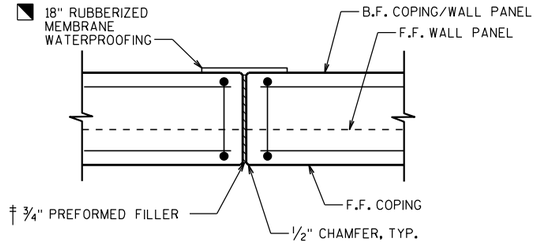


SLIP JOINT DETAIL



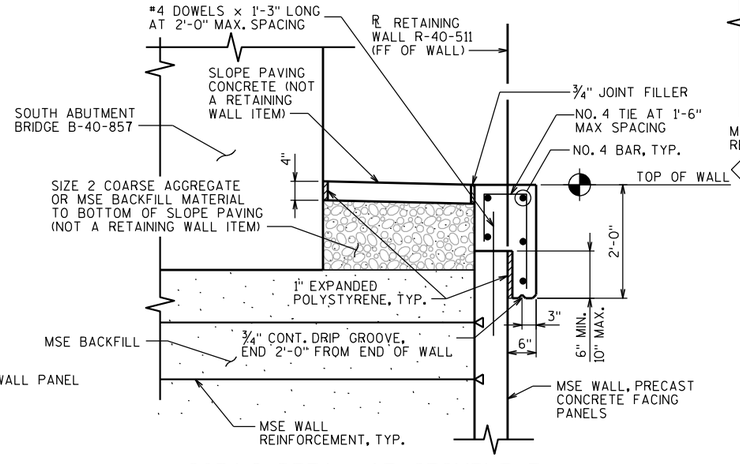
COPING CONTRACTION JOINT SEGMENT F

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.



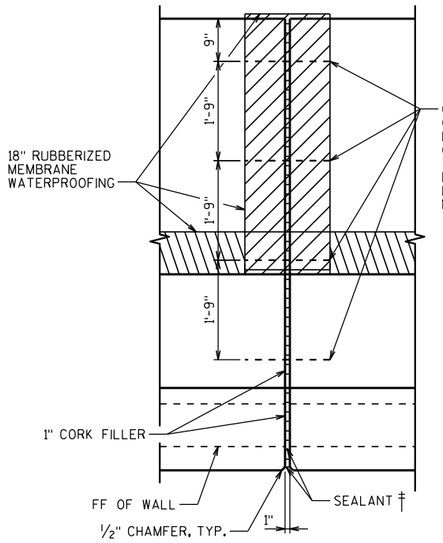
COPING EXPANSION JOINT SEGMENT F

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.



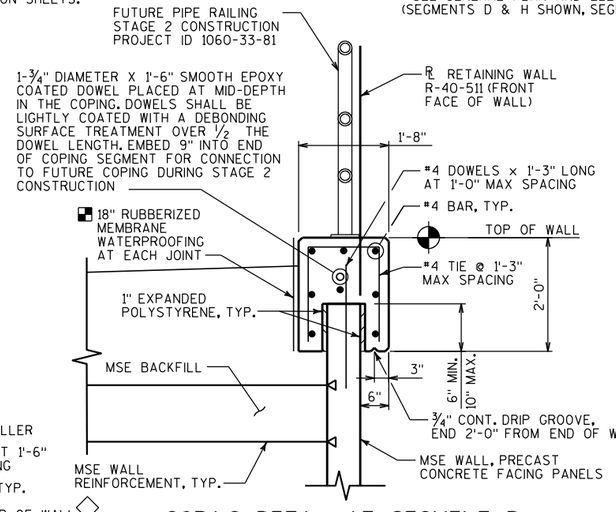
COPING DETAIL AT SEGMENT F

SEGMENT F - STA. 15+96.45 TO STA. 16+79.09

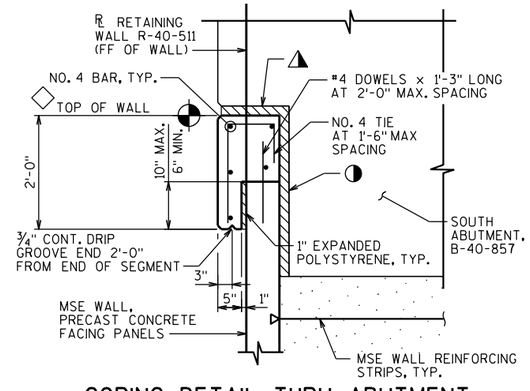


ANCHOR SLAB EXPANSION JOINT SEGMENTS A, D & H

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS
SEE GENERAL PLAN AND ELEVATION SHEETS
(SEGMENTS D & H SHOWN, SEGMENT A SIMILAR)



COPING DETAIL AT SEGMENT B



COPING DETAIL THRU ABUTMENT

(SEGMENT F)

LEGEND

- † NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ◥ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- ◪ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING.
- ◑ 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- ▲ 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- ◇ SEE "ELEVATION TABLES AND PARAPET DETAILS" SHEET FOR ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

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COPING & ANCHOR SLAB DETAILS

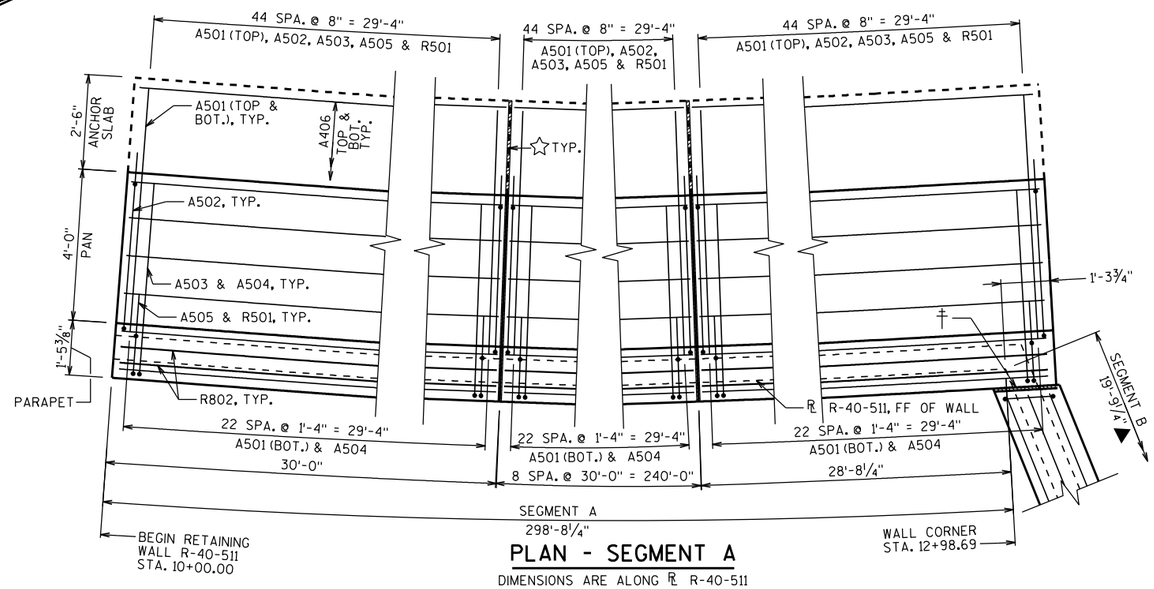
SHEET 12 OF 29

STATE PROJECT NUMBER
1060-33-80

8

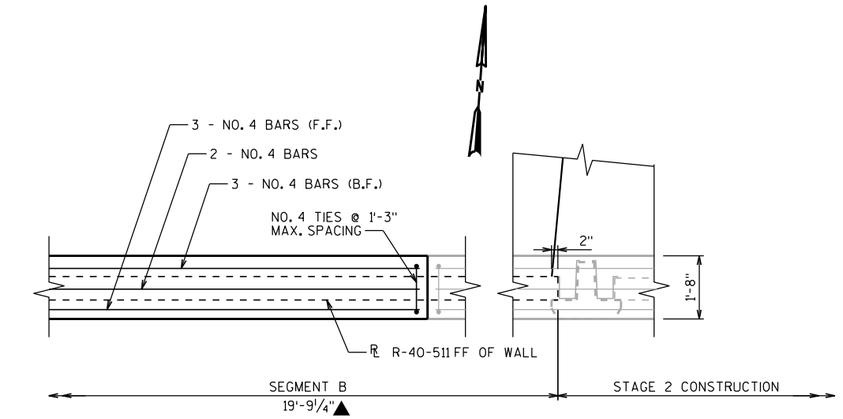
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STATE PROJECT NUMBER
1060-33-80



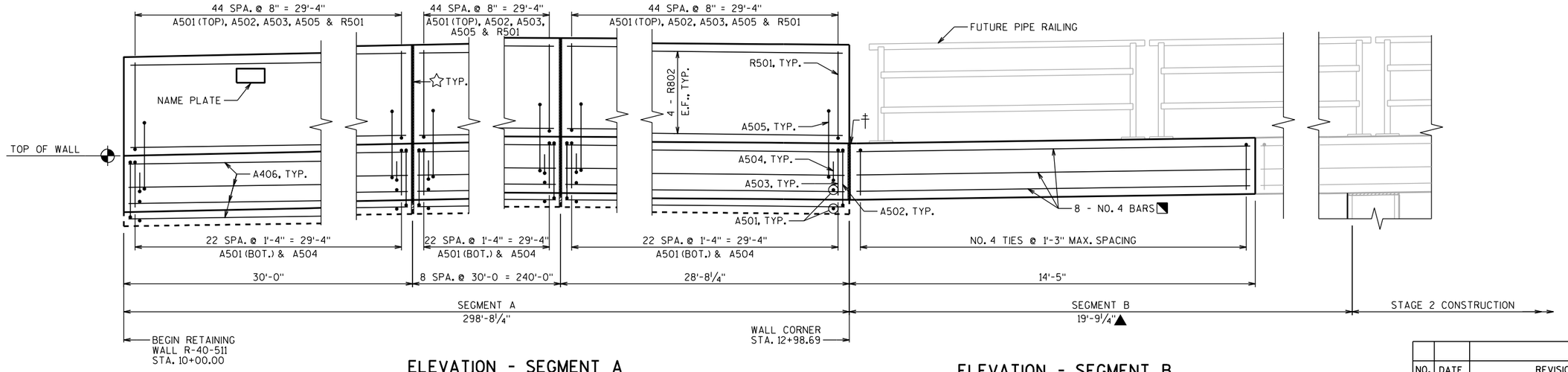
PLAN - SEGMENT A

DIMENSIONS ARE ALONG ℄ R-40-511



PLAN - SEGMENT B

DIMENSIONS ARE ALONG ℄ R-40-511



ELEVATION - SEGMENT A

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℄ R-40-511

ELEVATION - SEGMENT B

LOOKING NORTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℄ R-40-511

LEGEND

- ▲ WALL PANELS TO BE CONSTRUCTED IN THIS CONTRACT. MOMENT SLAB, PARAPET AND COPING APPLY FROM STA. 12+98.69 TO STA. 13+13.10.
- ☆ 1" CORK FILLER
- † ¾" PREFORMED FILLER, NON-BITUMINOUS JOINT SEALER ON ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH CONCRETE STAIN.
- ◥ FOR ADDITIONAL INFORMATION SEE 'COPING DETAIL AT SEGMENT B' ON "COPING & ANCHOR SLAB DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

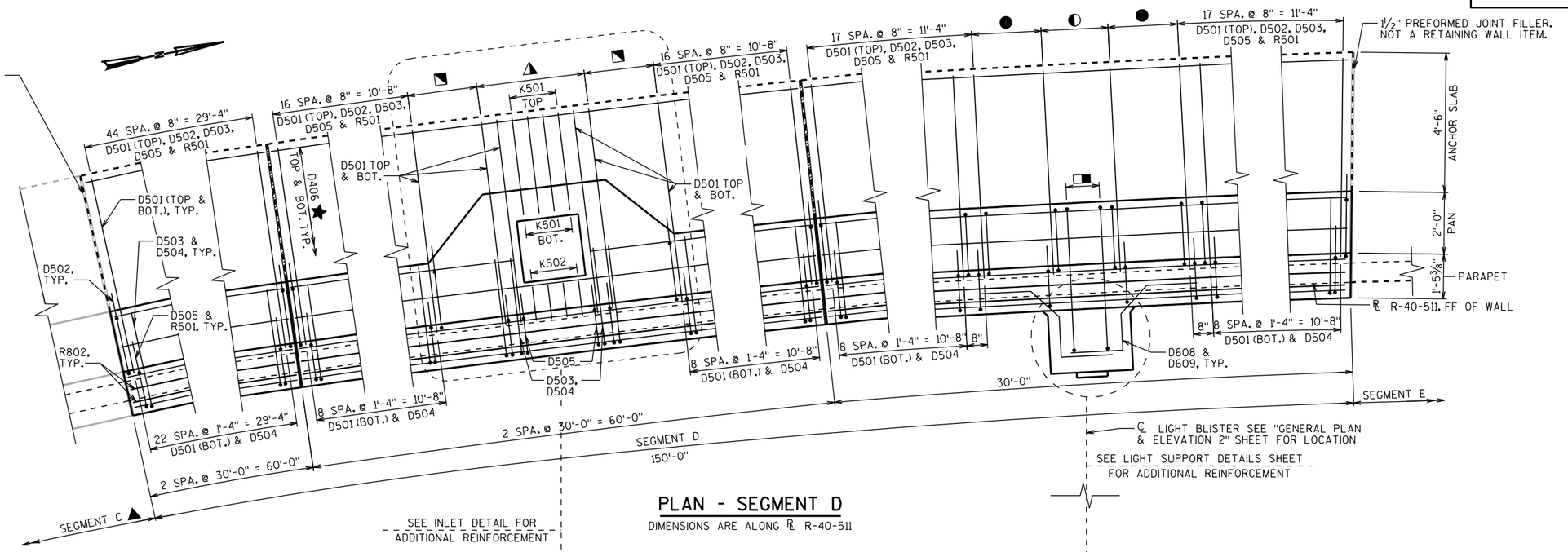
DRAWN BY KTM | PLANS CK'D. ENS

SEGMENT A
PLAN & ELEVATION

SHEET 13 OF 29

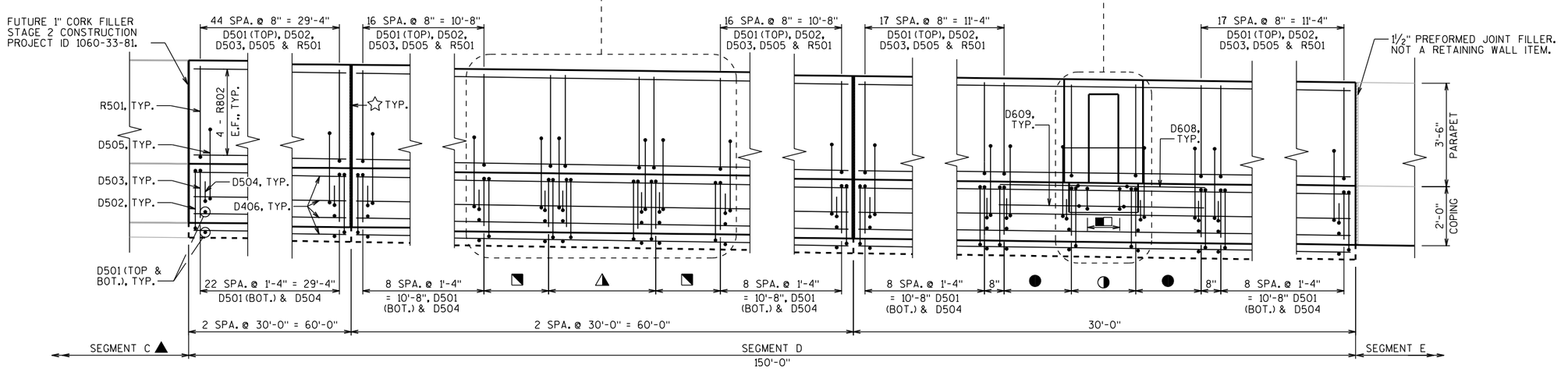
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PLOT SCALE : 4:1

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1060-33-80



PLAN - SEGMENT D

DIMENSIONS ARE ALONG ℄ R-40-511



ELEVATION - SEGMENT D

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℄ R-40-511

LEGEND

- ● 4 SPA. @ 6¾" = 2'-3", D501 (TOP & BOT.), D502, D503, D504, D505 & R501
- ◐ 5 EQ. SPA. = 2'-2", D501 (TOP & BOT.), D502, D503, D504, & D505
- ◭ 7 SPA. @ 6" = 3'-6", R501
- ▭ D507, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ◹ 4 SPA. @ 6¾" = 2'-3", D501 (TOP), D503, D505 & R501
  2 SPA. @ 1'-1½" = 2'-3", D501 (BOT.) & D504
- ▲ WALL PANELS TO BE CONSTRUCTED IN THIS CONTRACT. MOMENT SLAB, PARAPET AND COPING WILL BE CONSTRUCTED IN FUTURE CONTRACT ID 1060-33-81.
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

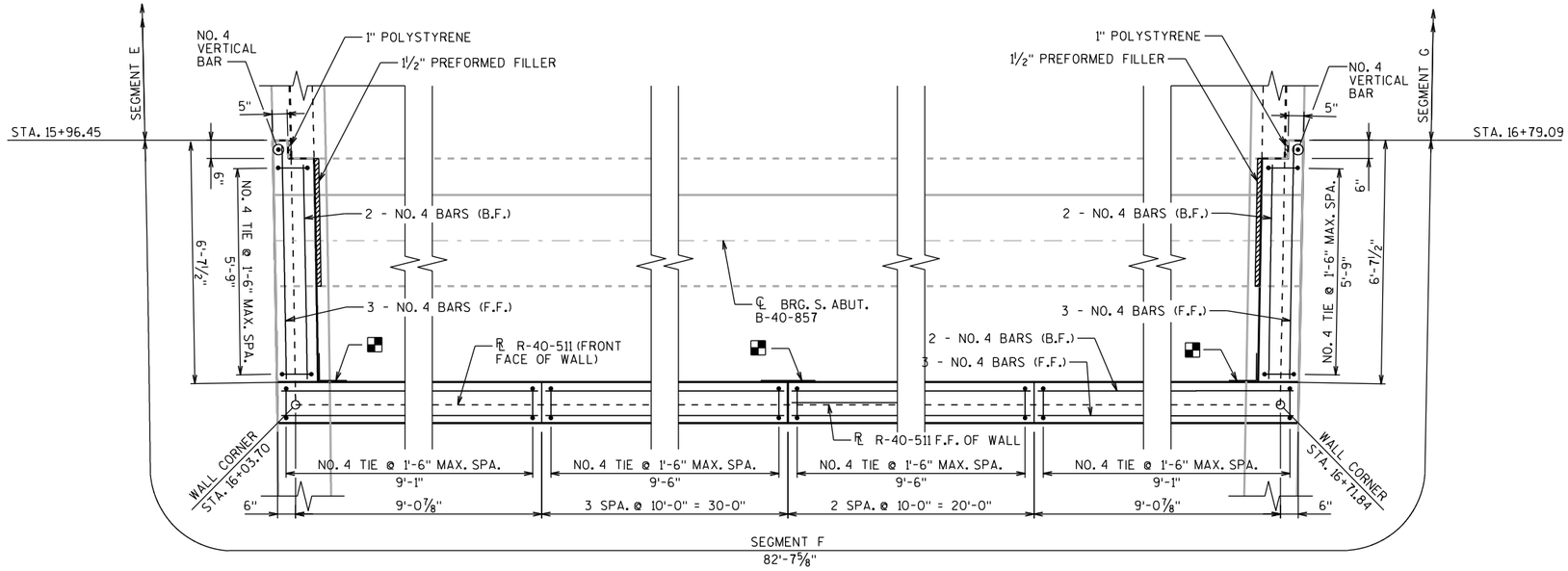
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SEGMENT D
PLAN & ELEVATION

SHEET 14 OF 29

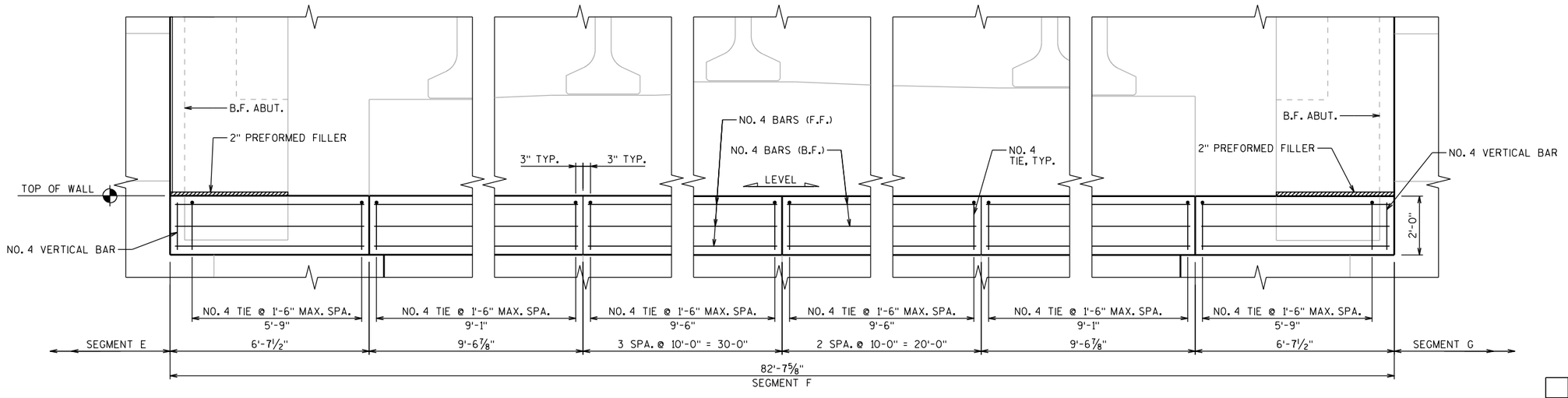
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PLOT NAME : 080305_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT F

DIMENSIONS ARE ALONG FRONT FACE OF COPING



LEGEND

■ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING

ELEVATION - SEGMENT F

LOOKING SOUTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG FRONT FACE OF COPING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

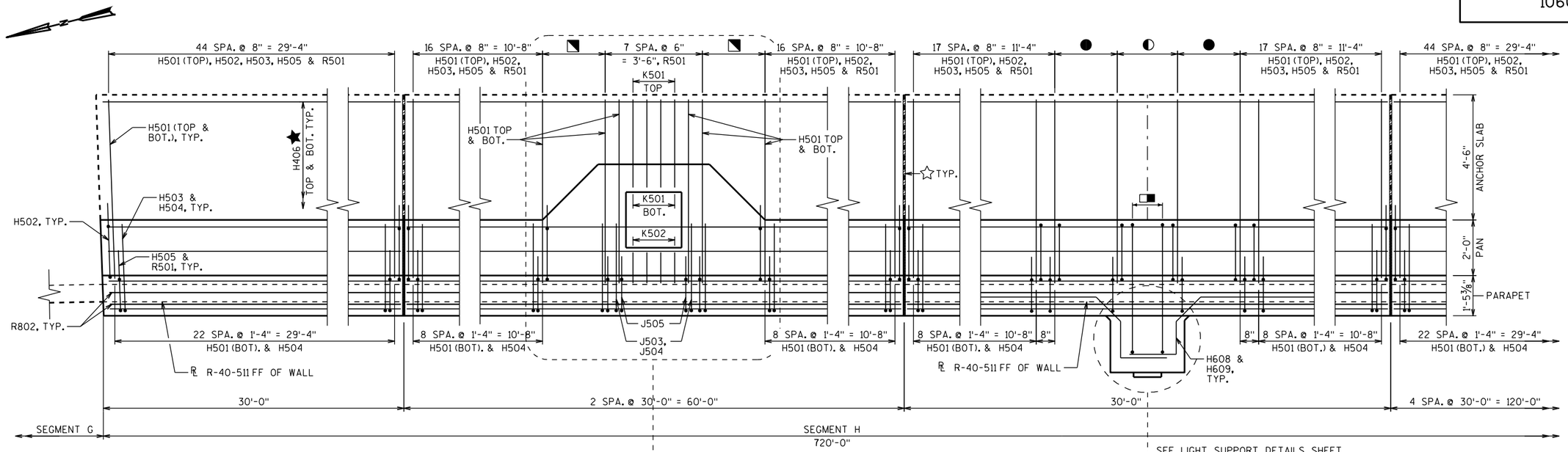
STRUCTURE R-40-511

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SEGMENT F
PLAN & ELEVATION

SHEET 15 OF 29

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1060-33-80



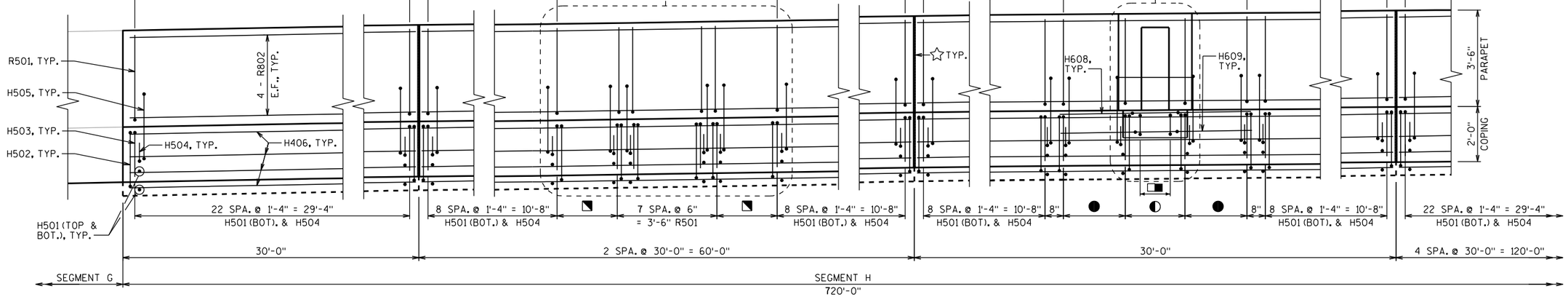
SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

SEE LIGHT SUPPORT DETAILS SHEET FOR ADDITIONAL REINFORCEMENT

℄ LIGHT BLISTER SEE "GENERAL PLAN & ELEVATION 2" SHEET FOR LOCATION

PLAN - SEGMENT H

DIMENSIONS ARE ALONG ℄ R-40-511



LEGEND

- ● 4 SPA. @ 6¾" = 2'-3", H501 (TOP & BOT.), H502, H503, H504, H505 & R501
- ◐ 5 EQ. SPA. = 2'-2", H501 (TOP & BOT.), H502, H503, H504, & H505
- ◘ H507, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ◥ 4 SPA. @ 6¾" = 2'-3", H501 (TOP), H503, H505 & R501
  2 SPA. @ 1'-1½" = 2'-3", H501 (BOT.) & H504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

ELEVATION - SEGMENT H

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℄ R-40-511

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

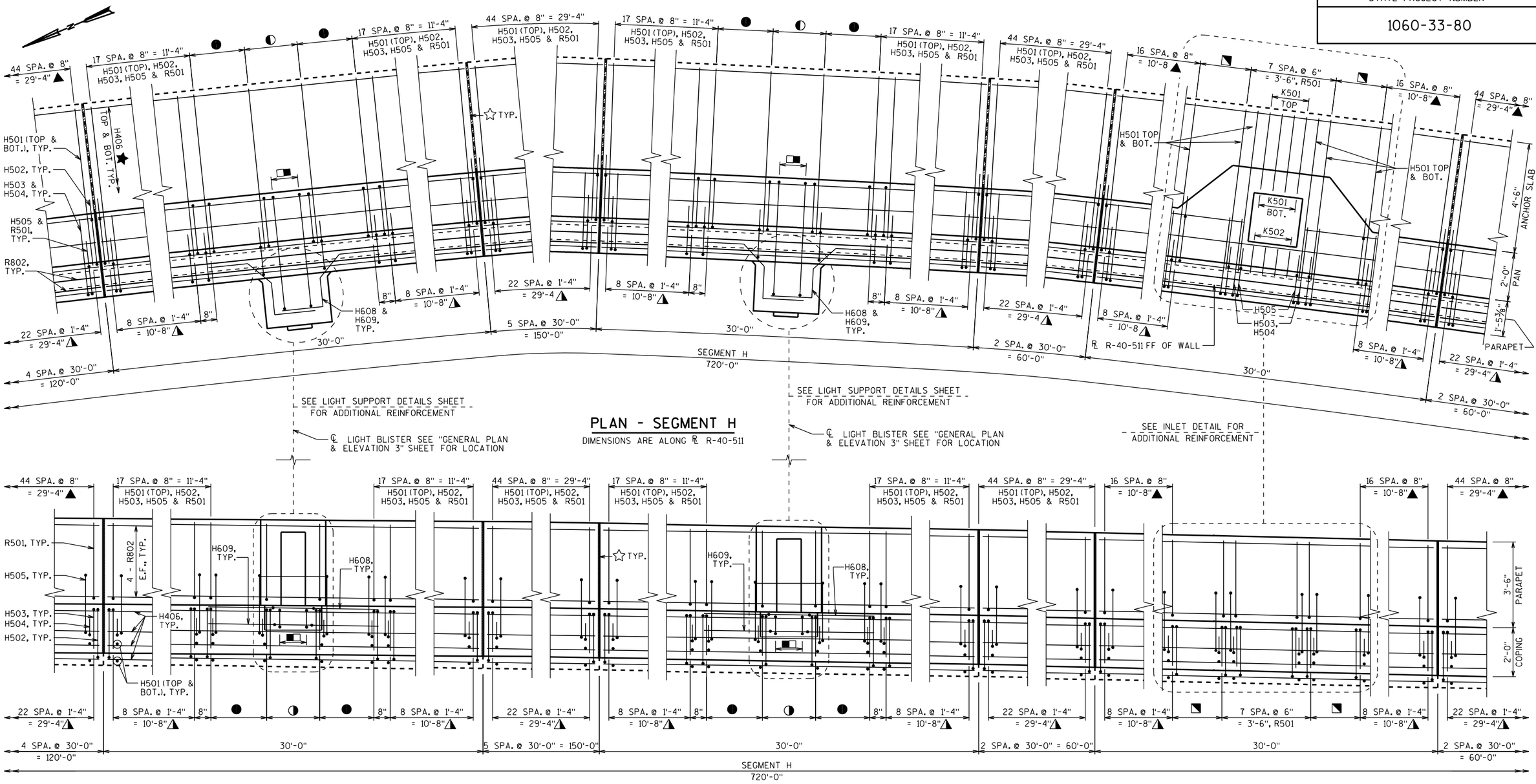
STRUCTURE R-40-511

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SEGMENT H
PLAN & ELEVATION
(1 OF 3)

SHEET 16 OF 29

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT H

DIMENSIONS ARE ALONG ℄ R-40-511

ELEVATION - SEGMENT H

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℄ R-40-511

LEGEND

- ● 4 SPA. @ 6¾" = 2'-3", H501 (TOP & BOT.), H502, H503, H504, H505 & R501
- ◐ 5 EQ. SPA. = 2'-2", H501 (TOP & BOT.), H502, H503, H504, & H505
- ▲ H501 (TOP), H502, H503, H505 & R501
- ◭ H501 (BOT.) & H504
- ▭ H507, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ◹ 4 SPA. @ 6¾" = 2'-3", H501 (TOP), H503, H505 & R501
  2 SPA. @ 1'-1½" = 2'-3", H501 (BOT.) & H504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

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STATE OF WISCONSIN
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STRUCTURE R-40-511

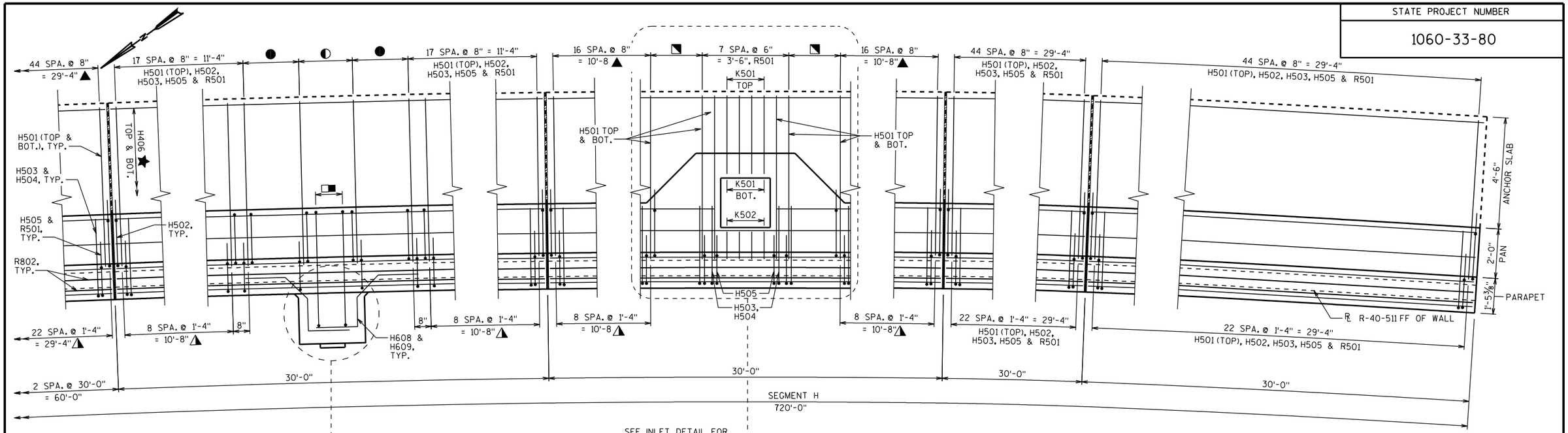
DRAWN BY KTM | PLANS CK'D. ENS

SEGMENT H
PLAN & ELEVATION
(2 OF 3)

SHEET 17 OF 29

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PLOT BY : MSCJJO
PLOT NAME : 080308_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



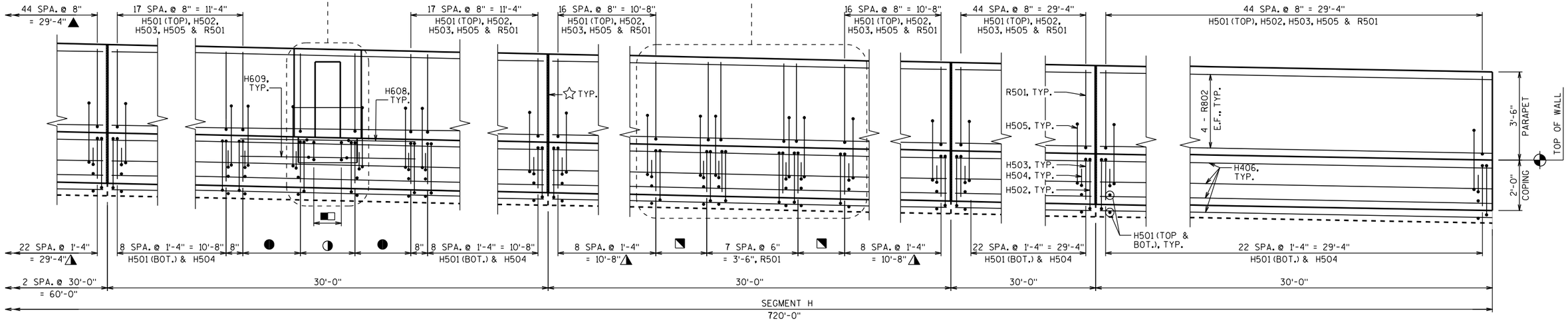
SEE LIGHT SUPPORT DETAILS SHEET FOR ADDITIONAL REINFORCEMENT

SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

℄ LIGHT BLISTER SEE "GENERAL PLAN & ELEVATION 3" SHEET FOR LOCATION

PLAN - SEGMENT H

DIMENSIONS ARE ALONG ℞ R-40-511



LEGEND

- ● 4 SPA. @ 6¾" = 2'-3", H501 (TOP & BOT.), H502, H503, H504, H505 & R501
- ◐ 5 EQ. SPA. = 2'-2", H501 (TOP & BOT.), H502, H503, H504, & H505
- ▲ H501 (TOP), H502, H503, H505 & R501
- ◭ H501 (BOT.) & H504
- ▭■ H507, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ◥ 4 SPA. @ 6¾" = 2'-3", H501 (TOP), H503, H505 & R501
2 SPA. @ 1'-1½" = 2'-3", H501 (BOT.) & H504
- ★ FIELD CUT REINFORCEMENT AS REQUIRED
- ☆ 1" CORK FILLER

ELEVATION - SEGMENT H

LOOKING SOUTHEAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG ℞ R-40-511

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STRUCTURE R-40-511

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SEGMENT H
PLAN & ELEVATION
(3 OF 3)

SHEET 18 OF 29

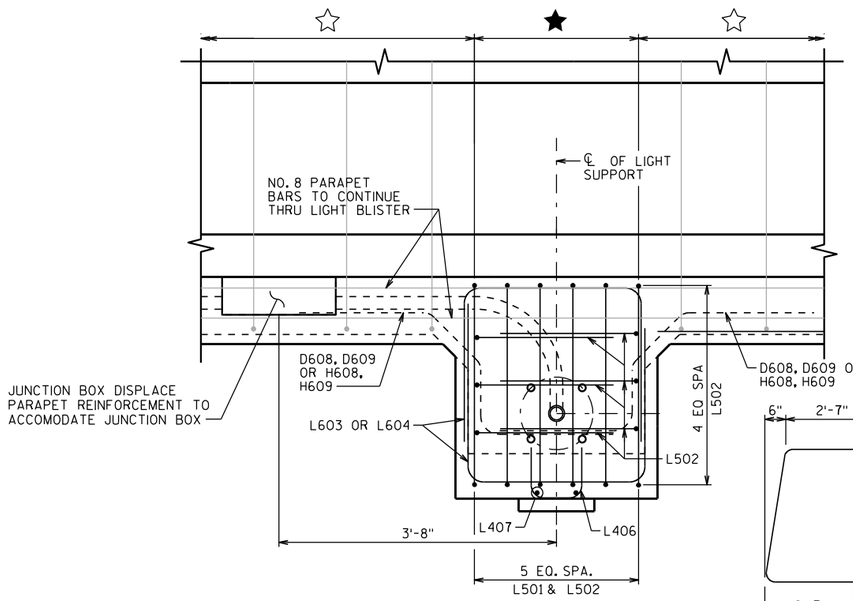
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PLOT BY : MSCJJO
PLOT NAME : 080309_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80

NOTES

SEE "ELEVATION TABLES & PARAPET DETAILS" AND "COPING & ANCHOR SLAB DETAILS" SHEETS FOR STANDARD REINFORCEMENT DETAILS IN ANCHOR SLAB.



LIGHT SUPPORT PLAN

★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING

☆ SEE SEGMENT REINFORCEMENT DETAILS FOR SPACING

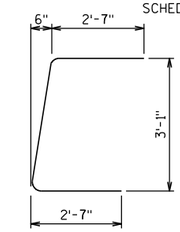
LIGHT SUPPORT BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L501	X	6	8'-1"	X	LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X	LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X	LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X	LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X	LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X	LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X	LIGHT SUPPORT - VERTICAL

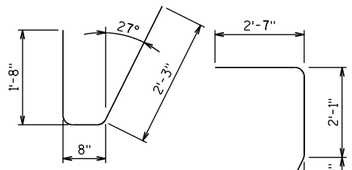
NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

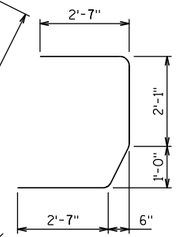
BAR SCHEDULE FOR ONE LIGHT SUPPORT ONLY. SEE "REINFORCEMENT SCHEDULE" SHEET FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.



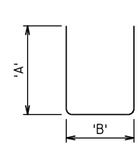
L501



L505

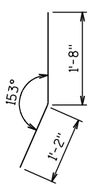


L502

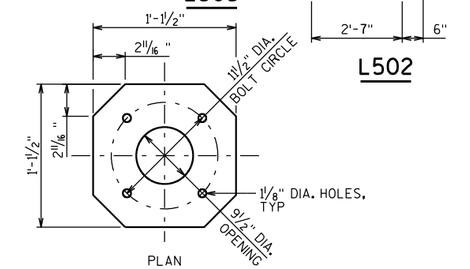


L503, L604, L406

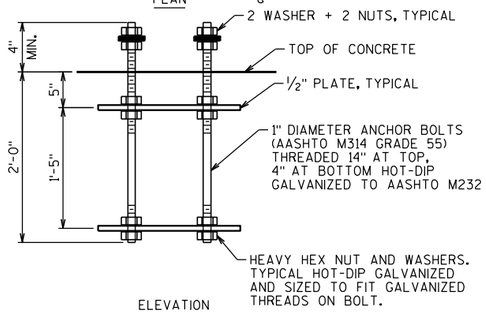
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



L407

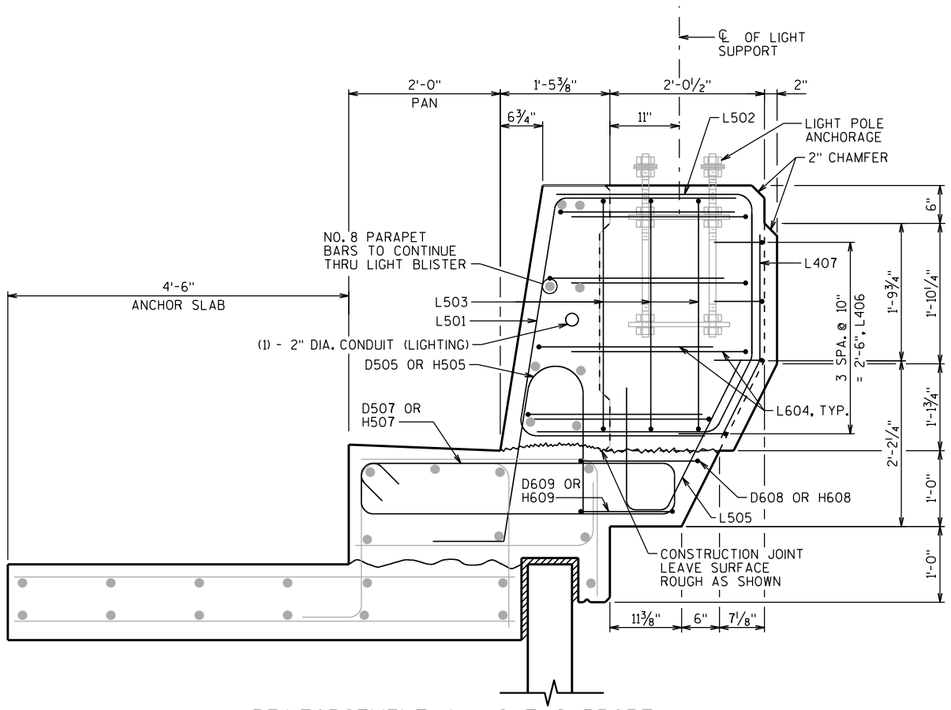


PLAN



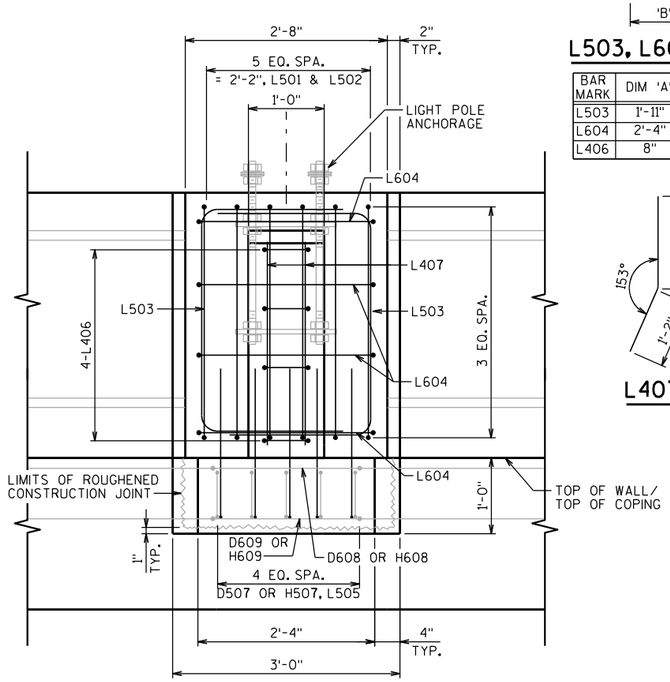
ELEVATION

ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT ℄ LIGHT SUPPORT



REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

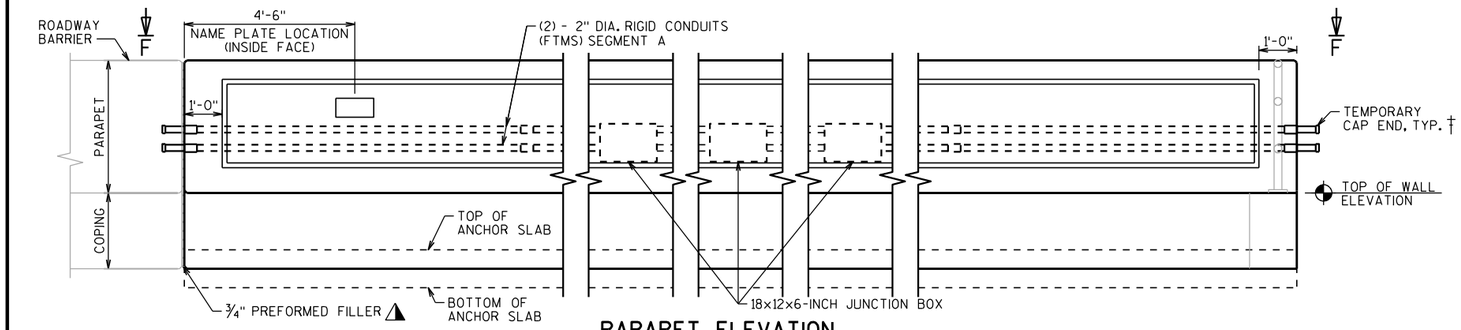
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LIGHT SUPPORT DETAILS (1 OF 2)

SHEET 19 OF 29

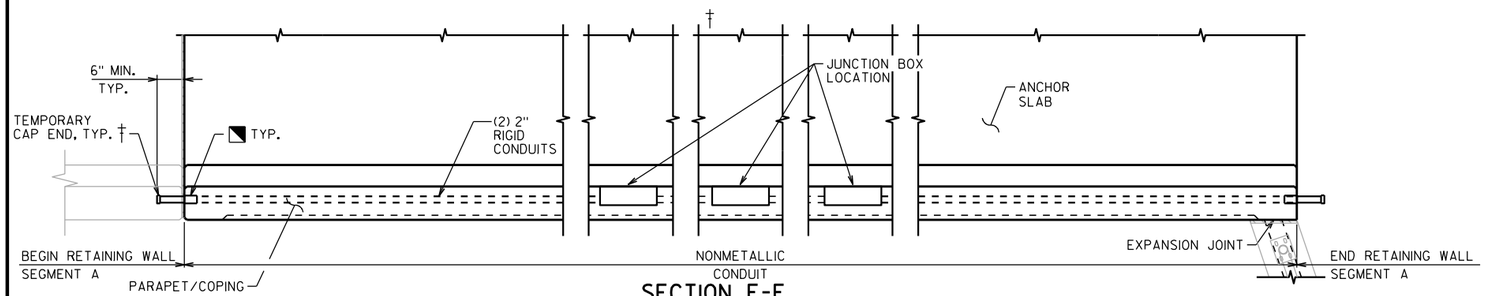
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8



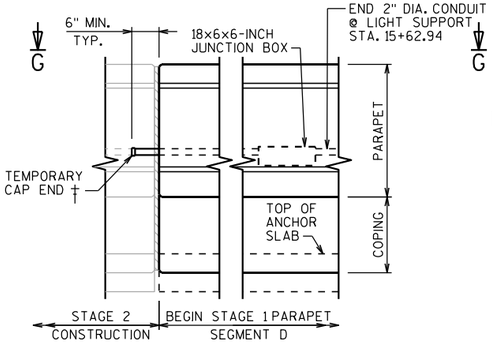
PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT A



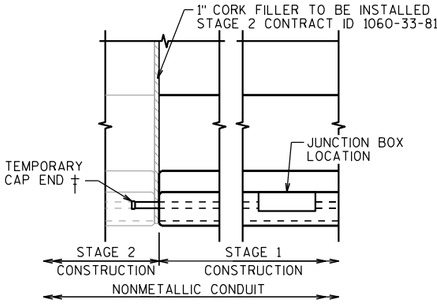
SECTION F-F

SEGMENT A - 2 CONDUITS REQUIRED



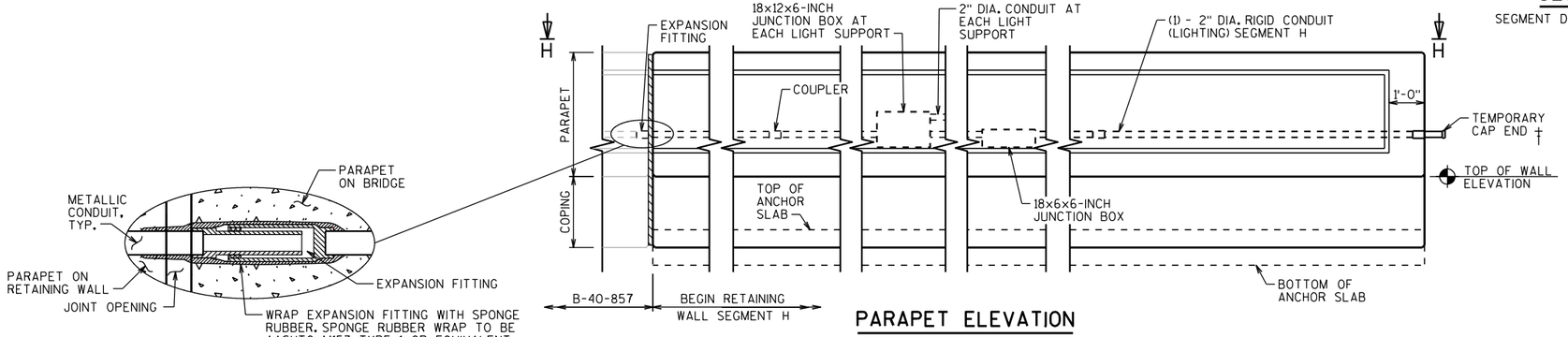
PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT D



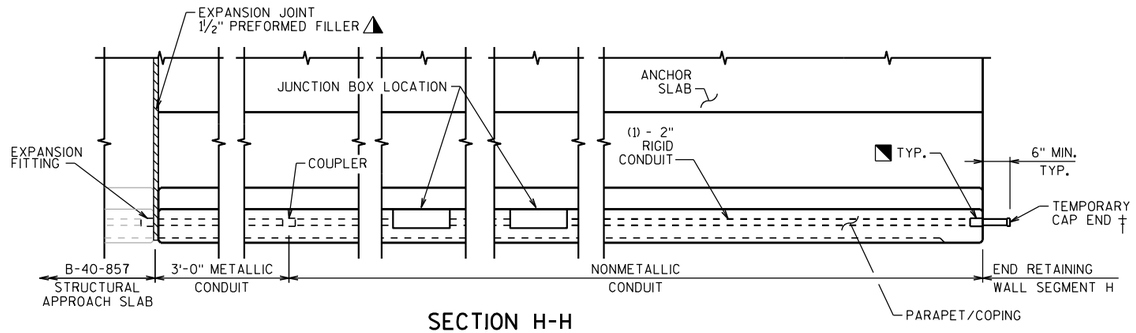
SECTION G-G

SEGMENT D - 1 CONDUIT REQUIRED



PARAPET ELEVATION

OUTSIDE FACE OF PARAPET - SEGMENT H



SECTION H-H

SEGMENT H - 1 CONDUIT REQUIRED

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NOTES:

18×12×6-INCH JUNCTION BOX REQUIRED 10'-0" FROM BEGINNING AND END OF SEGMENT A AND AT STA. 11+50 FOR FTMS.

18×6×6-INCH JUNCTION BOX REQUIRED AT LIGHT SUPPORT LOCATION IN SEGMENT D AT STA. 15+63.

18×6×6-INCH JUNCTION BOX REQUIRED 10'-0" FROM END OF SEGMENT H.

18×12×6-INCH JUNCTION BOX REQUIRED AT EACH LIGHT SUPPORT LOCATION IN SEGMENT H.

SEE GENERAL PLAN & ELEVATION SHEETS FOR LIGHT SUPPORT STATIONING.

SEE "LIGHT SUPPORT DETAILS (1 OF 2)" SHEET FOR REINFORCEMENT DETAILS AND LOCATION OF JUNCTION BOX AT LIGHT POLE BASE.

LEGEND

† EXPANSION FITTINGS, COUPLERS, ANGLES, AND TEMPORARY END CAPS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

◥ APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING: O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

◭ PREFORMED JOINT FILLER NOT A RETAINING WALL ITEM.

8

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

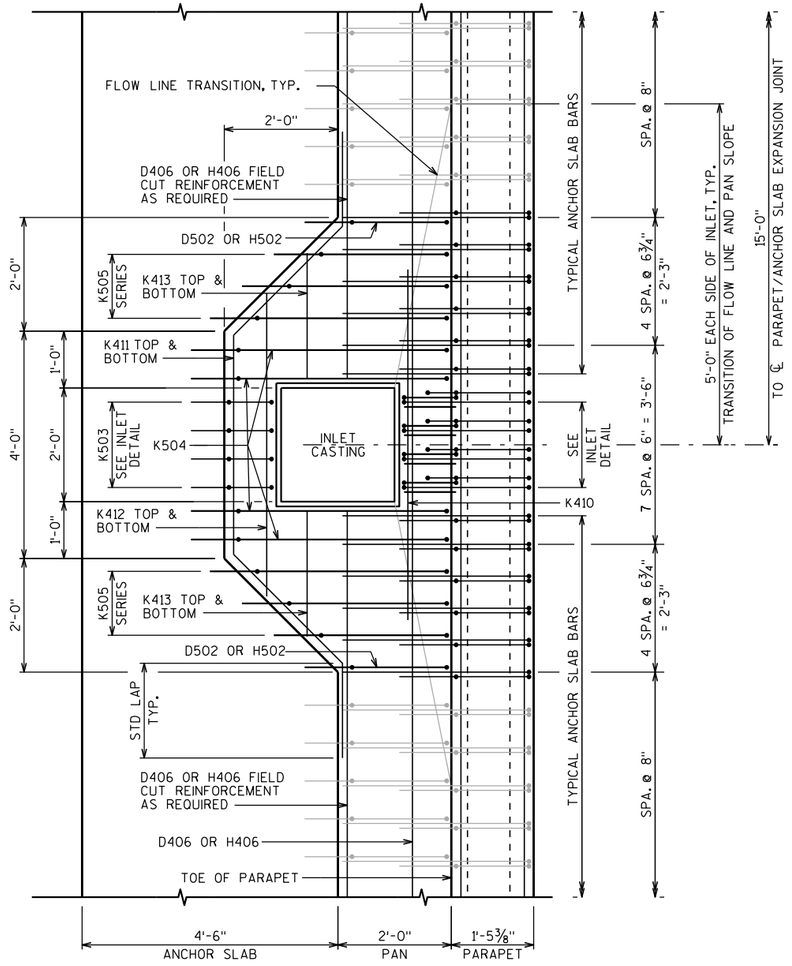
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LIGHT SUPPORT DETAILS (2 OF 2)

SHEET 20 OF 29

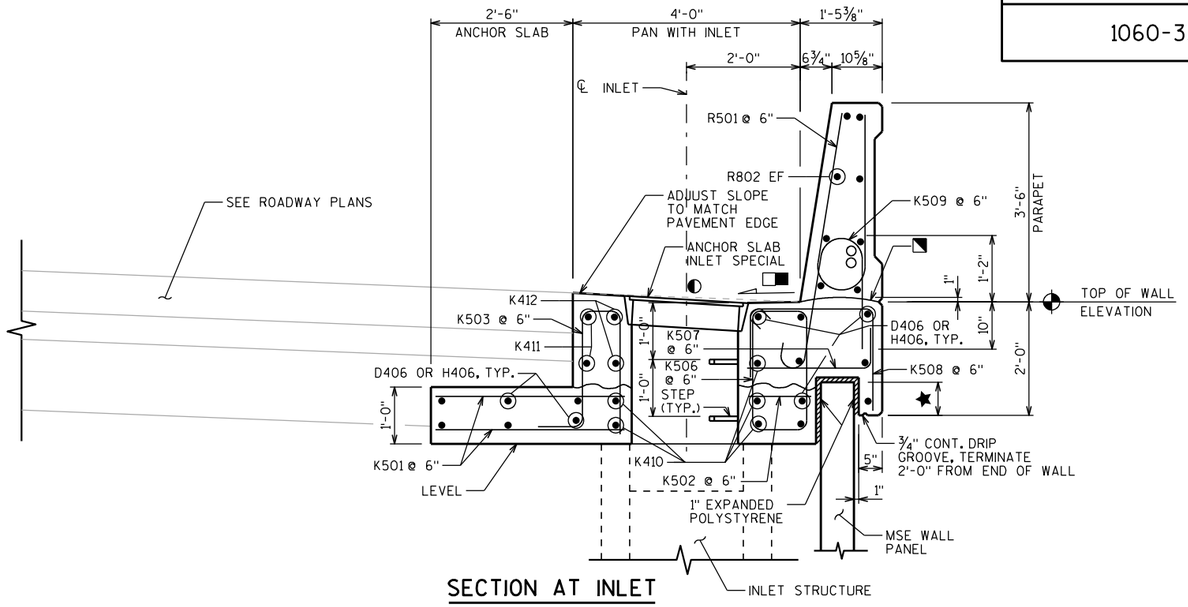
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PLOT DATE : 01-MAY-2014 11:23
PLOT BY : MSCJJO
PLOT NAME : 080310_ls
PLOT SCALE : 4:1

STATE PROJECT NUMBER
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TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED.



SECTION AT INLET

INLET BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
K501	X	8	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	4	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	4	5'-4"	X		COPING - VERTICAL TIE
K504	X	4	8'-7"	X		COPING - VERTICAL TIE
K505	X	6	7'-9"	X	△	COPING - VERTICAL TIE
K506	X	4	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	4	2'-6"	X		COPING - VERTICAL TIE
K508	X	4	4'-8"	X		COPING - VERTICAL TIE
K509	X	4	5'-5"	X		COPING - VERTICAL TIE
K410	X	5	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	2	14'-0"	X		COPING - LONGITUDINAL
K412	X	2	5'-1"			COPING - LONGITUDINAL
K413	X	4	2'-0"			COPING - LONGITUDINAL

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

BAR SCHEDULE FOR ONE INLET ONLY. SEE "REINFORCEMENT SCHEDULE" SHEET FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.

△ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

LEGEND

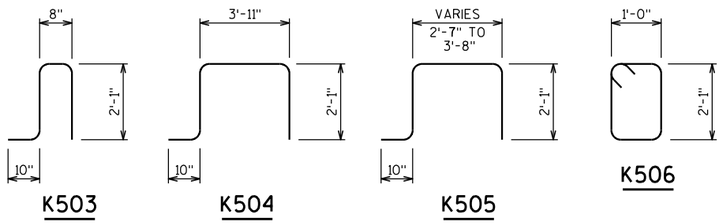
- 2.00%
- ★ 3" MIN, 6" MAX.
- CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- TO CALCULATE TOP OF WALL ELEVATION, CONTINUE ROADWAY SLOPE TO TOE OF PARAPET

NOTES

LOCATE ℄ INLETS 15'-0" AWAY FROM EXPANSION JOINTS.

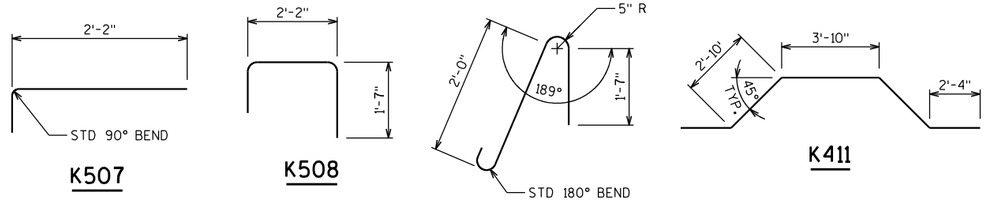
STEP SHALL COMPLY WITH ASTM C-478.

STEP IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY RETAINING WALLS.



BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
K505	2 SERIES OF 3	7'-3" TO 8'-4"



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STRUCTURE R-40-511

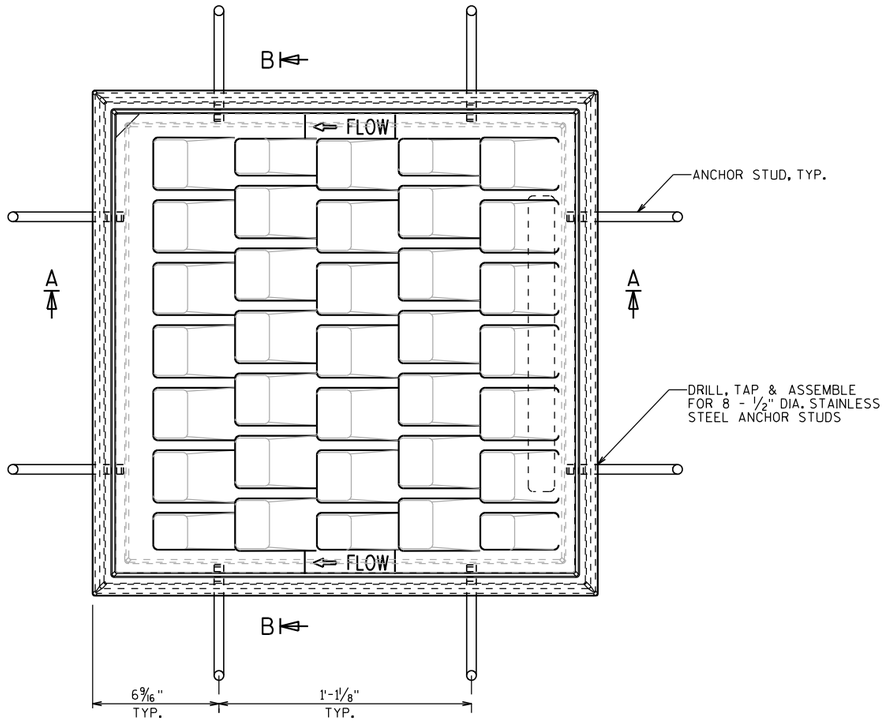
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INLET DETAILS

SHEET 21 OF 29

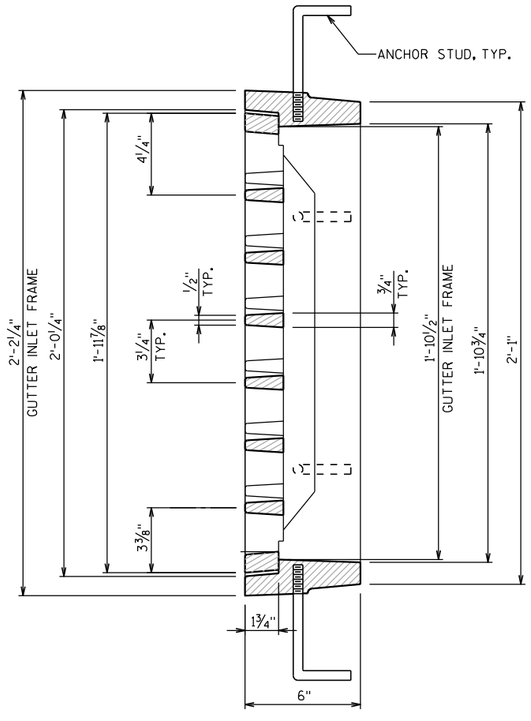
STATE PROJECT NUMBER

1060-33-80

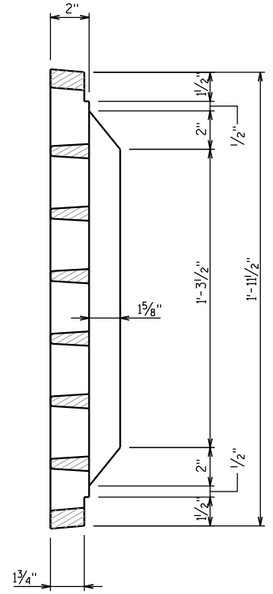


GUTTER INLET FRAME & GRATE TOP

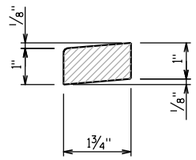
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



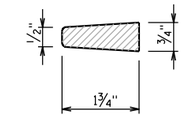
SECTION B-B



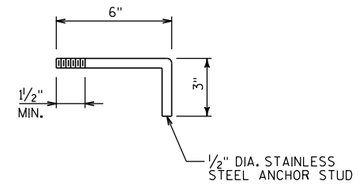
INLET GRATE



SIDE RIB DETAIL

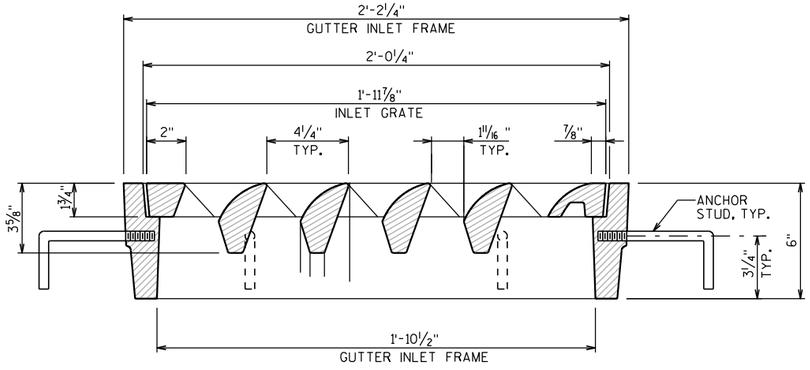


MIDDLE RIB DETAIL

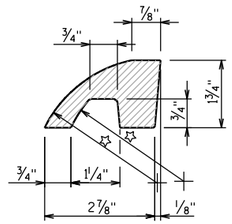


ANCHOR STUD DETAIL

(8 - 1/2" DIA. STAINLESS STEEL ANCHOR STUDS REQUIRED)

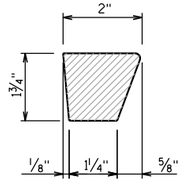


SECTION A-A

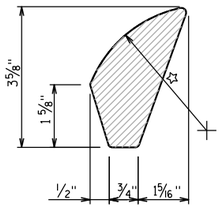


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

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STRUCTURE R-40-511

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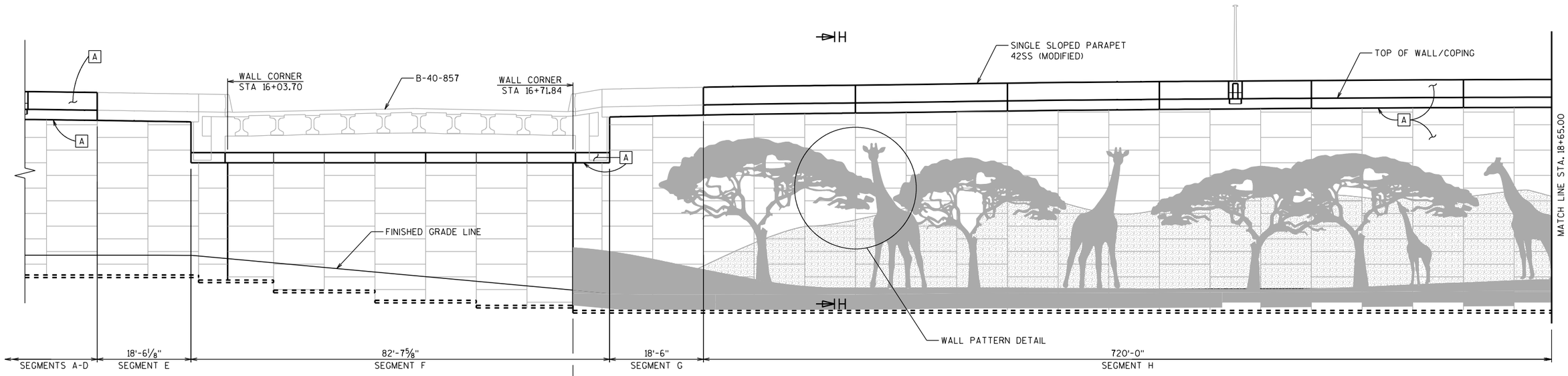
ANCHOR SLAB
INLET COVER
SPECIAL

SHEET 22 OF 29

8

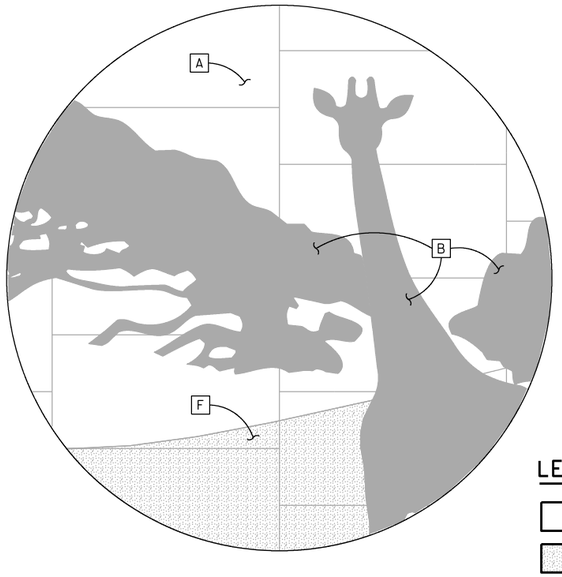
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STATE PROJECT NUMBER
1060-33-80



ELEVATION

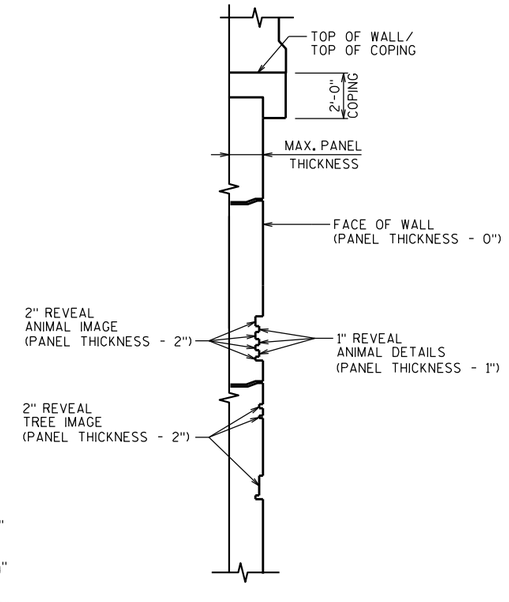
LOOKING AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)



WALL PATTERN DETAIL

LEGEND

- PANEL THICKNESS + 0"
- PANEL THICKNESS - 3/4"
- PANEL THICKNESS - 1.5"
- [X] STAIN MARK - SEE "AESTHETIC WALL TREATMENT DETAILS (4 OF 4)" SHEET FOR DETAILS



SECTION H-H

RELIEF PATTERN DETAIL

NOTES:

ELECTRONIC FILES OF THE DECORATIVE PATTERNS ARE AVAILABLE FROM:
WISCONSIN DEPARTMENT OF TRANSPORTATION
JEFF BOHEN P.E., 141 NW BARSTOW STREET, WAUKESHA,
WISCONSIN 53187, (262) 548-6459

TO THE GREATEST EXTENT POSSIBLE, LAYOUT ANIMAL FIGURES SUCH THAT VERTICAL PANEL JOINTS DO NOT PASS THROUGH ANIMAL HEADS. PROVIDE SUFFICIENT DIMENSIONS IN SHOP DRAWING SUBMITTAL TO LOCATE SHAPES ON PANELS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC/ENS

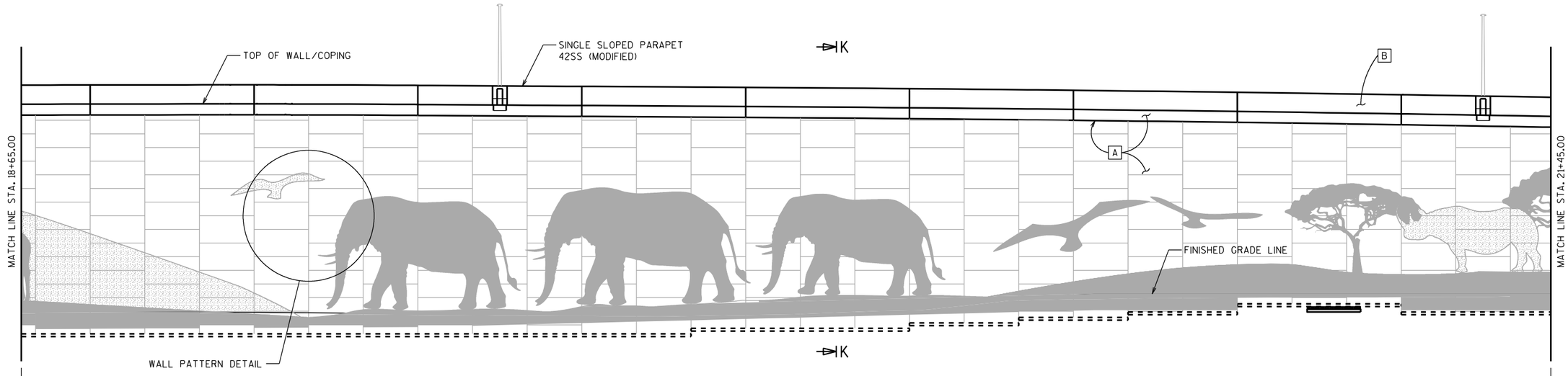
AESTHETIC WALL TREATMENT DETAILS (1 OF 4)

SHEET 23 OF 29

8

8

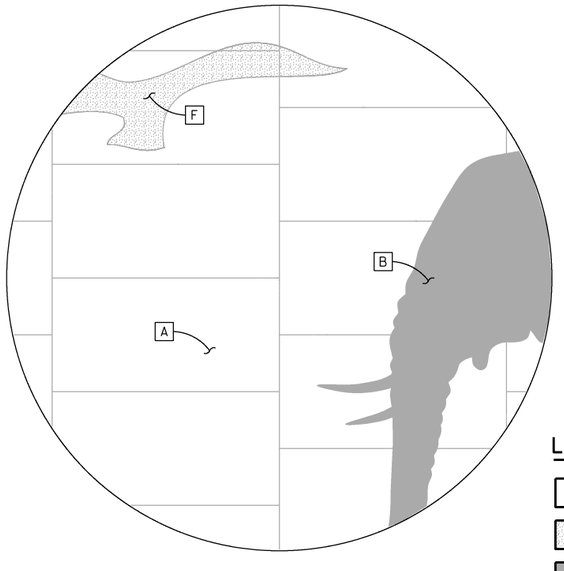
STATE PROJECT NUMBER
1060-33-80



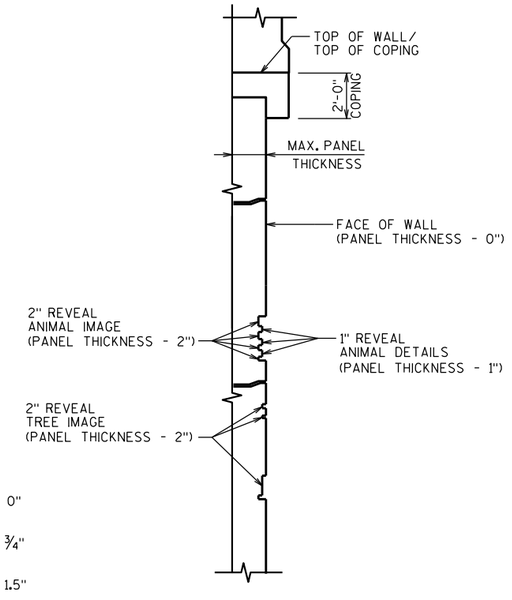
SEGMENT H - 720'-0"
MSE CONCRETE PANEL IMAGE RELIEF PATTERN
SEE DETAILS THIS SHEET

ELEVATION

LOOKING AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)



WALL PATTERN DETAIL



SECTION K-K

RELIEF PATTERN DETAIL

LEGEND

- PANEL THICKNESS + 0"
- PANEL THICKNESS - ¾"
- PANEL THICKNESS - 1.5"
- [X] STAIN MARK - SEE "AESTHETIC WALL TREATMENT DETAILS (4 OF 4)" SHEET FOR DETAILS

NOTES:

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC/ENS

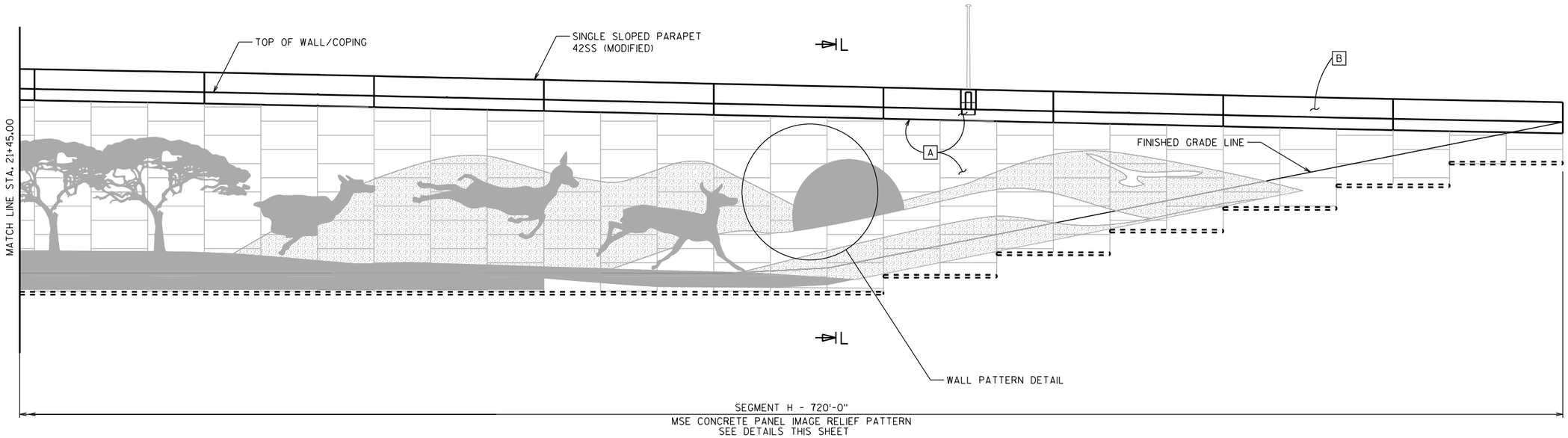
AESTHETIC WALL TREATMENT DETAILS (2 OF 4)

SHEET 24 OF 29

8

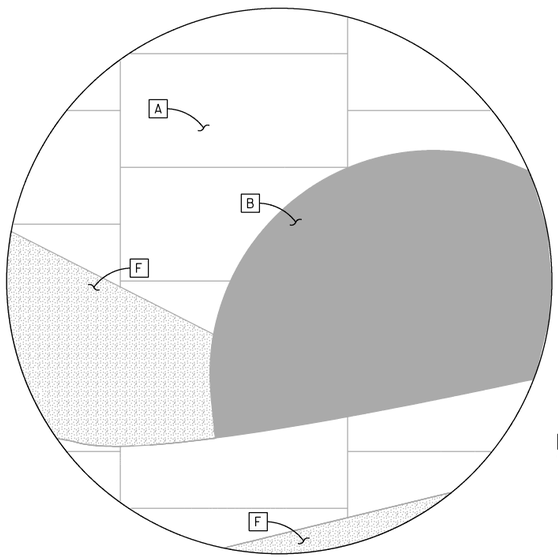
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STATE PROJECT NUMBER
1060-33-80



ELEVATION

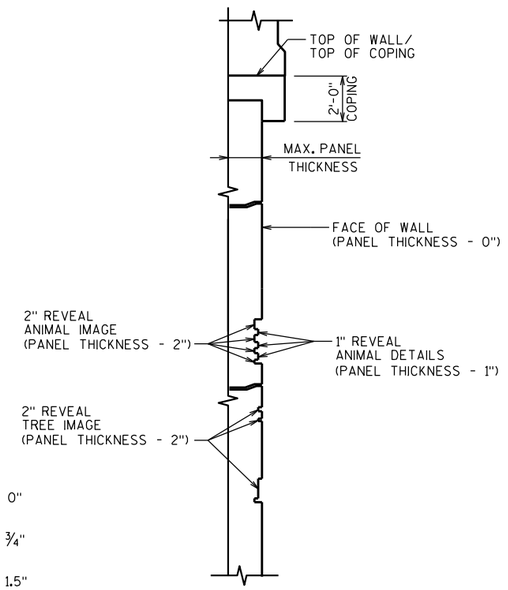
LOOKING AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)



WALL PATTERN DETAIL

LEGEND

- PANEL THICKNESS + 0"
- PANEL THICKNESS - ¾"
- PANEL THICKNESS - 1.5"
- [X] STAIN MARK - SEE "AESTHETIC WALL TREATMENT DETAILS (4 OF 4)" SHEET FOR DETAILS



SECTION L-L

RELIEF PATTERN DETAIL

NOTES:

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WISCONSIN DEPARTMENT OF TRANSPORTATION
JEFF BOHEN P.E., 141 NW BARSTOW STREET, WAUKESHA, WISCONSIN 53187, (262) 548-6459

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

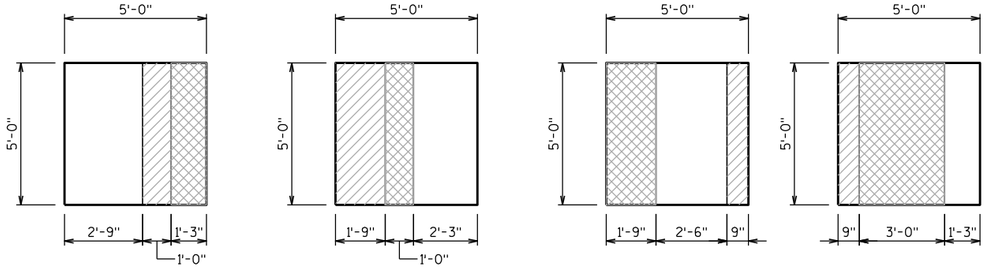
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AESTHETIC WALL TREATMENT DETAILS (3 OF 4)

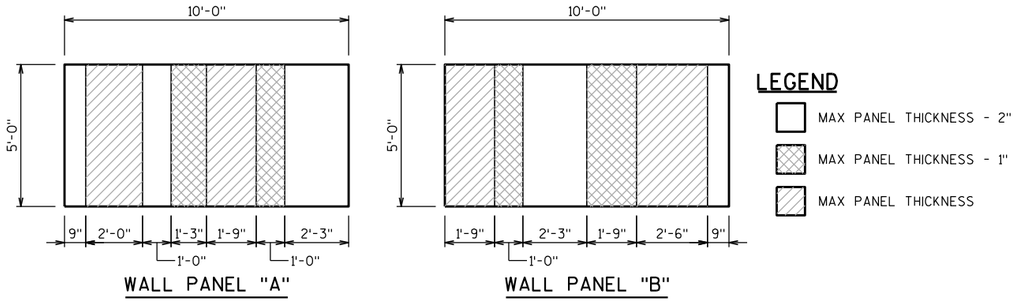
SHEET 25 OF 29

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STATE PROJECT NUMBER
1060-33-80

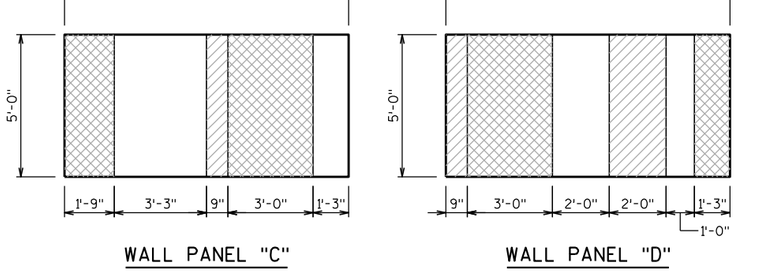


5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

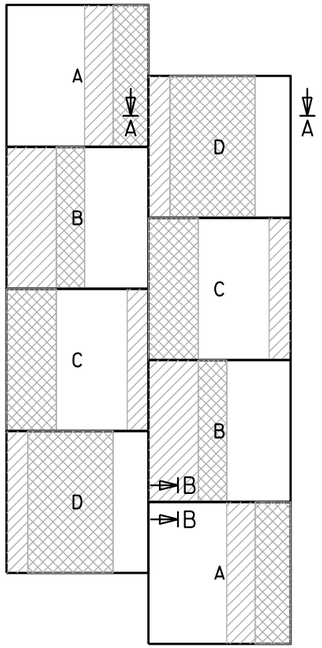


LEGEND

- MAX PANEL THICKNESS - 2"
- MAX PANEL THICKNESS - 1"
- MAX PANEL THICKNESS

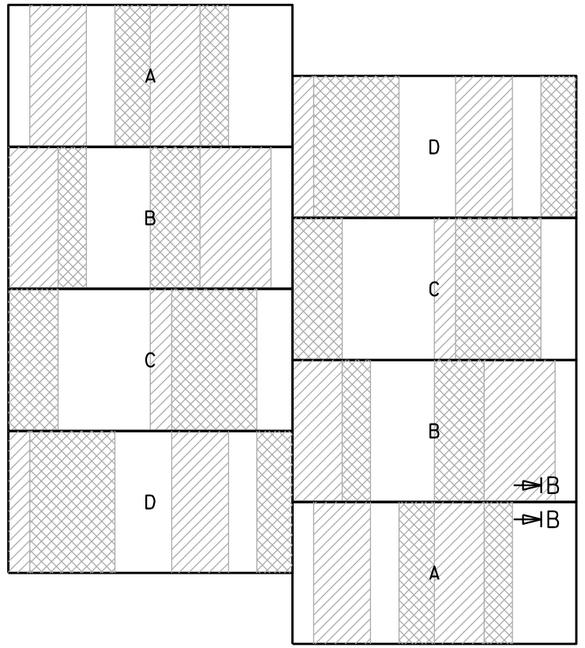


5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN

PATTERN REPEATS 5' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED

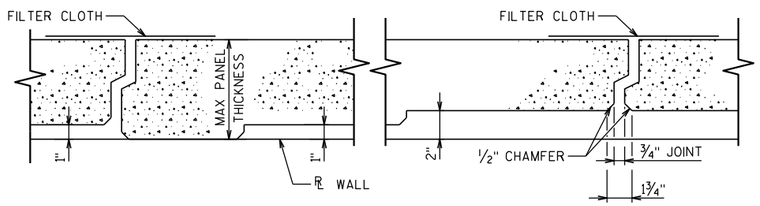


TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

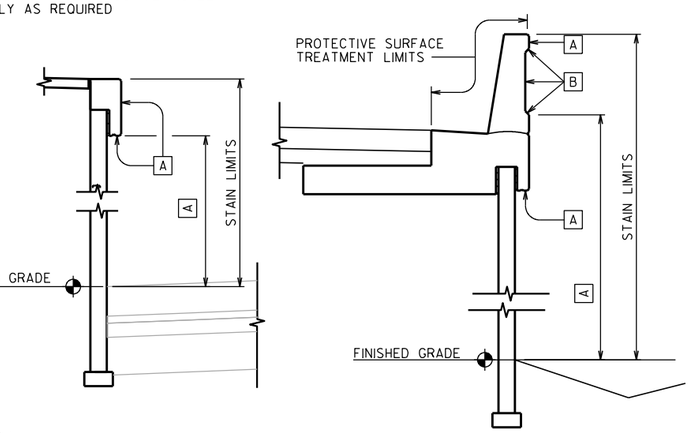
PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED

ARCHITECTURAL SURFACE TREATMENT NOTES:

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-511".



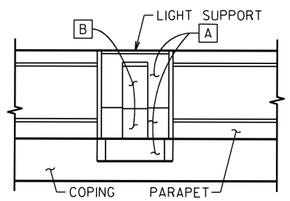
SECTION A-A



MSE WALL STAINING DIAGRAMS

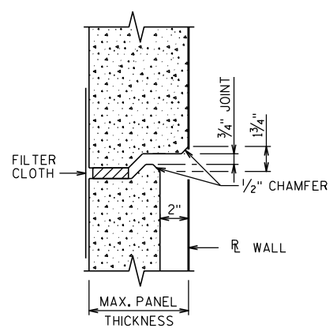
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS
		WALLS	MOUNTAIN
F	ACCENT COLOR 5	WALLS	ANIMALS, TREES, SUN, AND GROUND



OUTSIDE ELEVATION OF PARAPET STAINING DIAGRAM

(AT LIGHT SUPPORT)



SECTION B-B

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #1 - 33448
ACCENT COLOR #5 - 25177

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

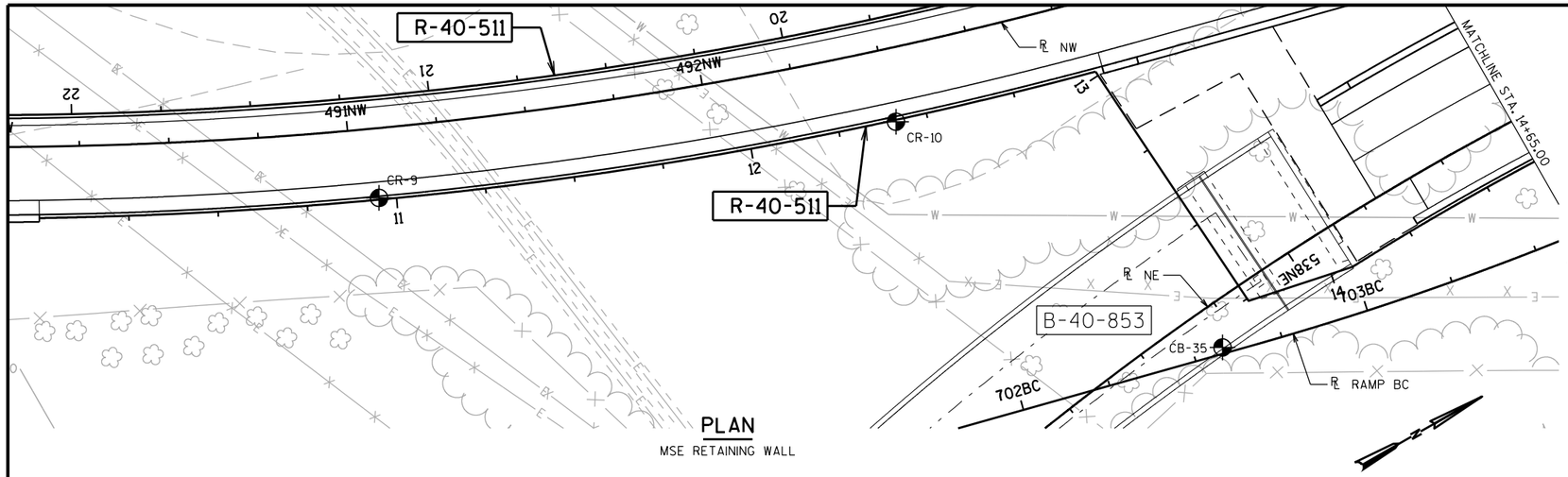
STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. JWC/ENS

AESTHETIC WALL TREATMENT DETAILS (4 OF 4)

SHEET 26 OF 29

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PLOT BY : MSCJJO
PLOT NAME : 080404_ae
PLOT SCALE : 5.333333:1



PLAN

MSE RETAINING WALL

NOTE:

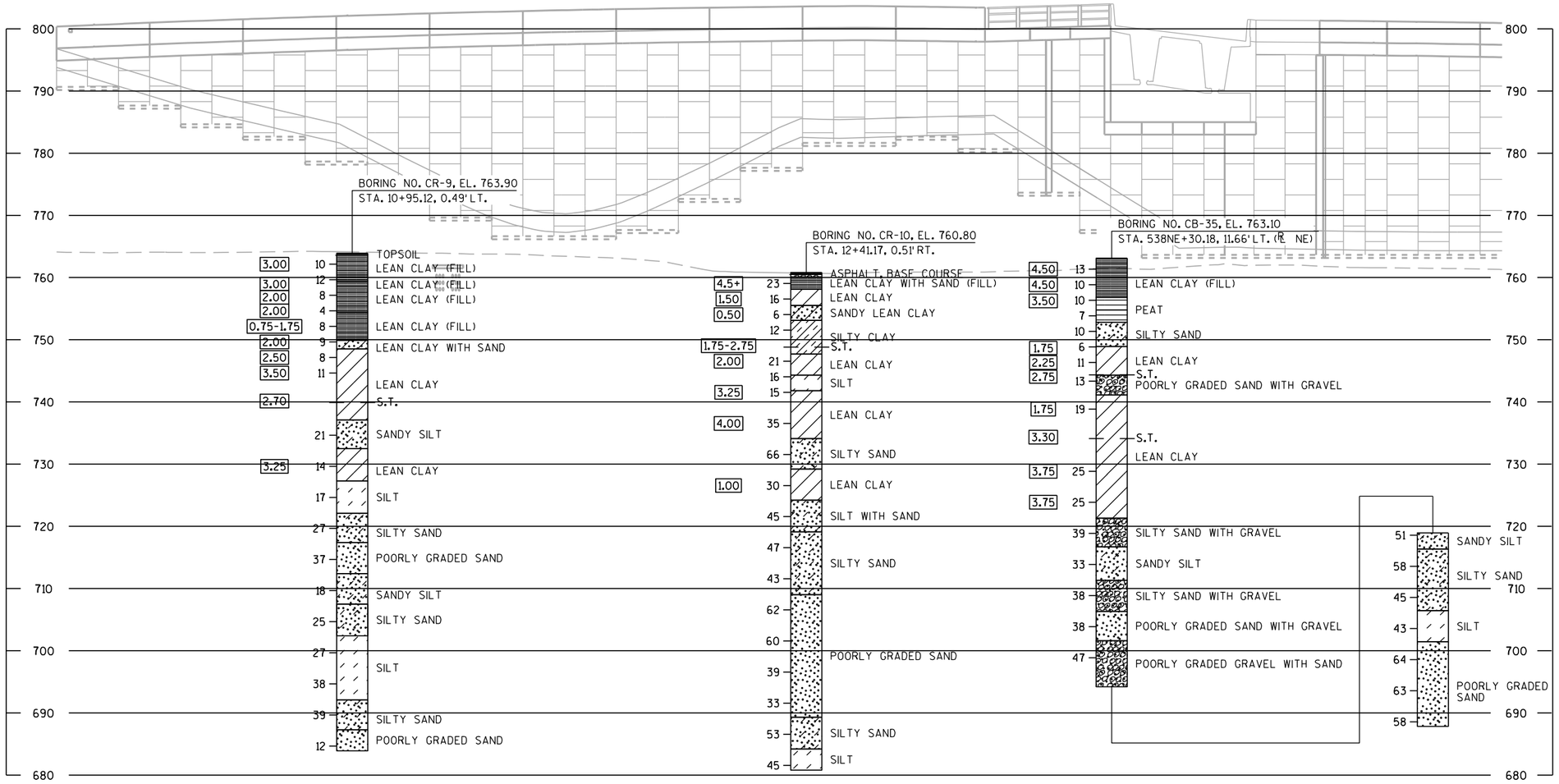
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ FOR RETAINING WALL R-40-511 UNLESS NOTED OTHERWISE.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS CR-9 & CR-10 COMPLETED BY: GESTRA ENGINEERING, INC.
SOIL BORINGS CB-35 COMPLETED BY: RVT

SOIL BORING TAKEN:
MAY 21, 2012 - BORING CB-35
MAY 9, 2012 - BORING CR-9
JUNE 1, 2012 - BORING CR-10



ELEVATION

STATE PROJECT NUMBER

1060-33-80

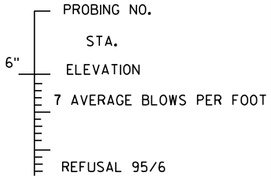
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

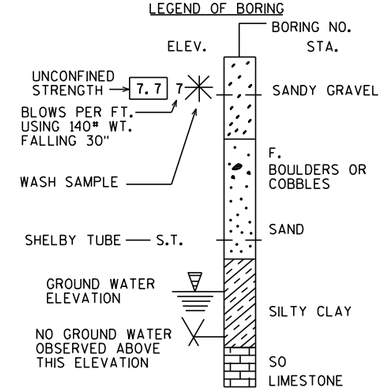
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

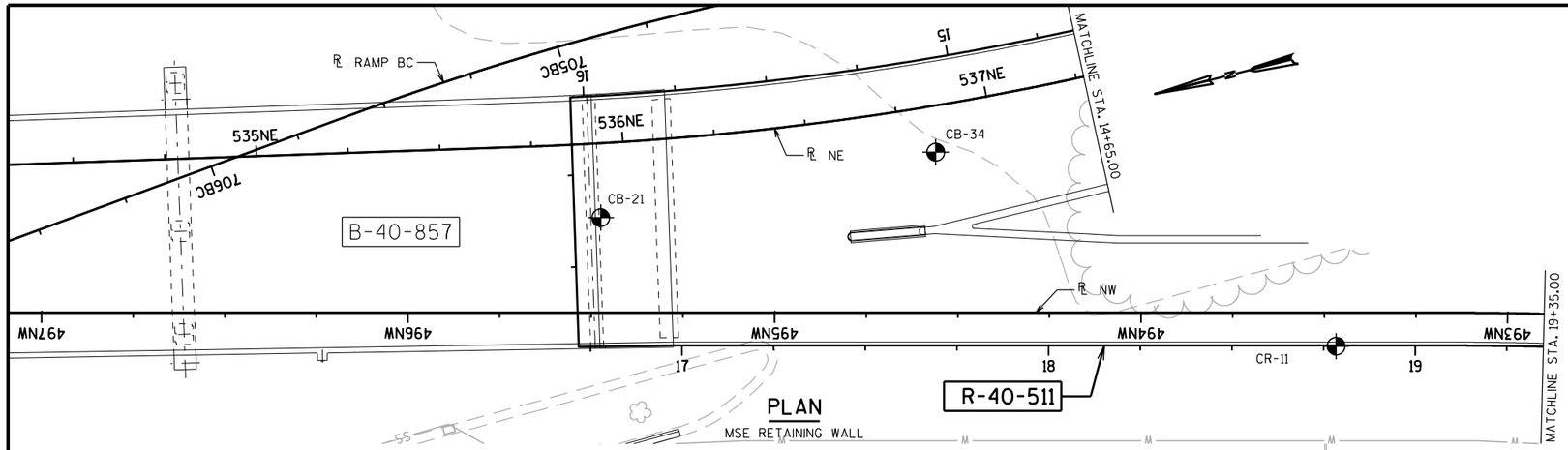
DRAWN BY KTM | PLANS CK'D. SB

SUBSURFACE EXPLORATION 1

SHEET 27 OF 29

8

8



NOTE:

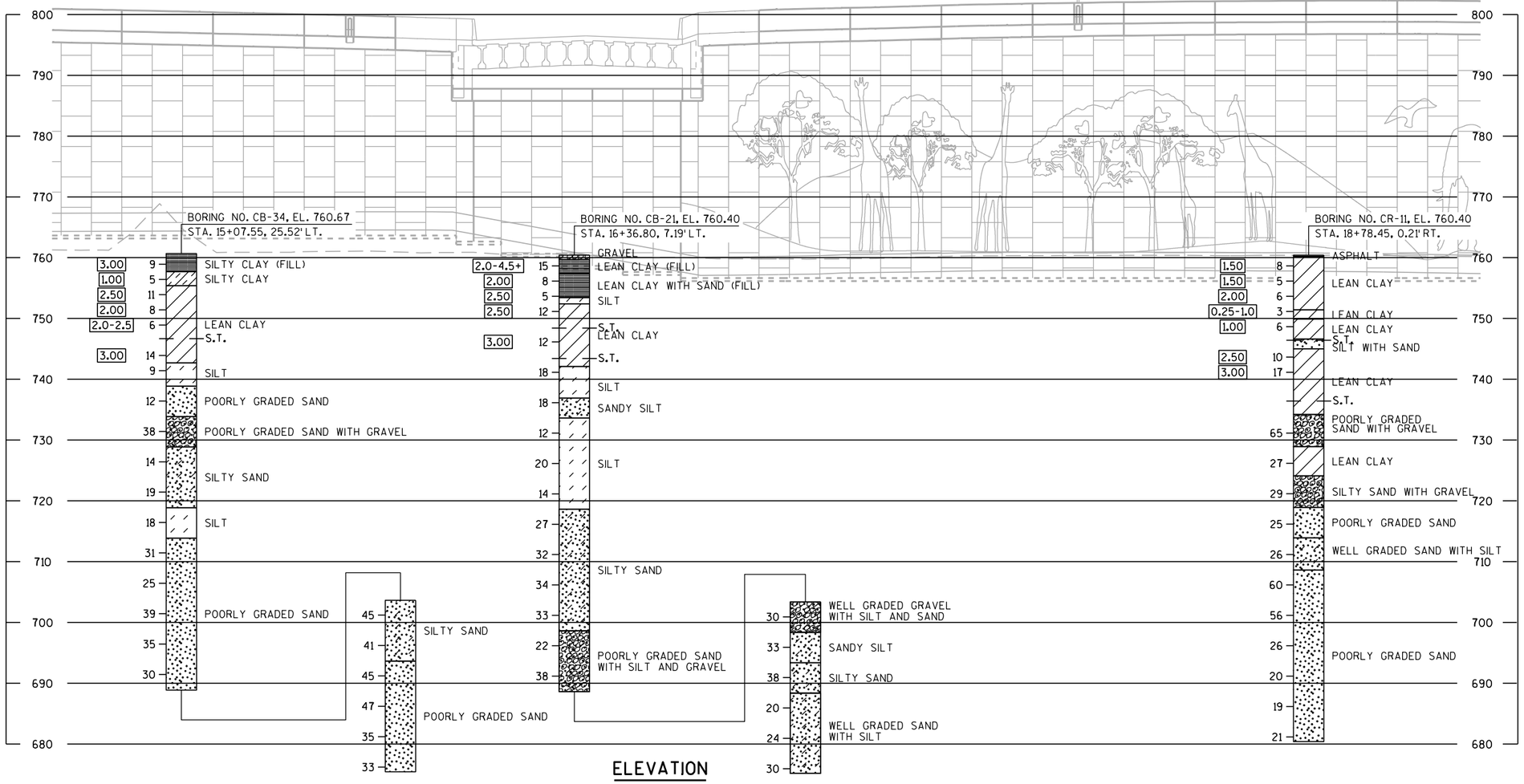
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BORING STATIONS AND OFFSETS ARE BASED ON ℄ FOR RETAINING WALL R-40-511.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAR. 28, 2012 - BORING CB-21
MAY 15, 2012 - BORING CB-34
MAY 9, 2012 - BORING CR-11



ELEVATION

STATE PROJECT NUMBER

1060-33-80

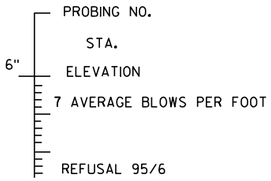
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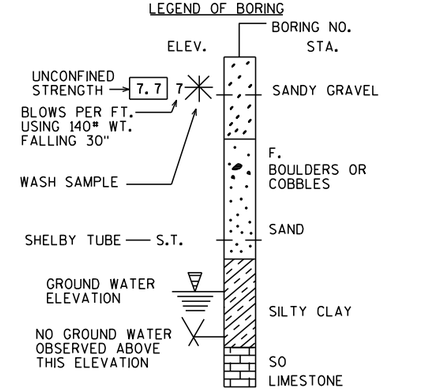
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SAND · PEAT · LIMESTONE
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LEGEND OF PROBING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

DRAWN BY KTM | PLANS CK'D. SB

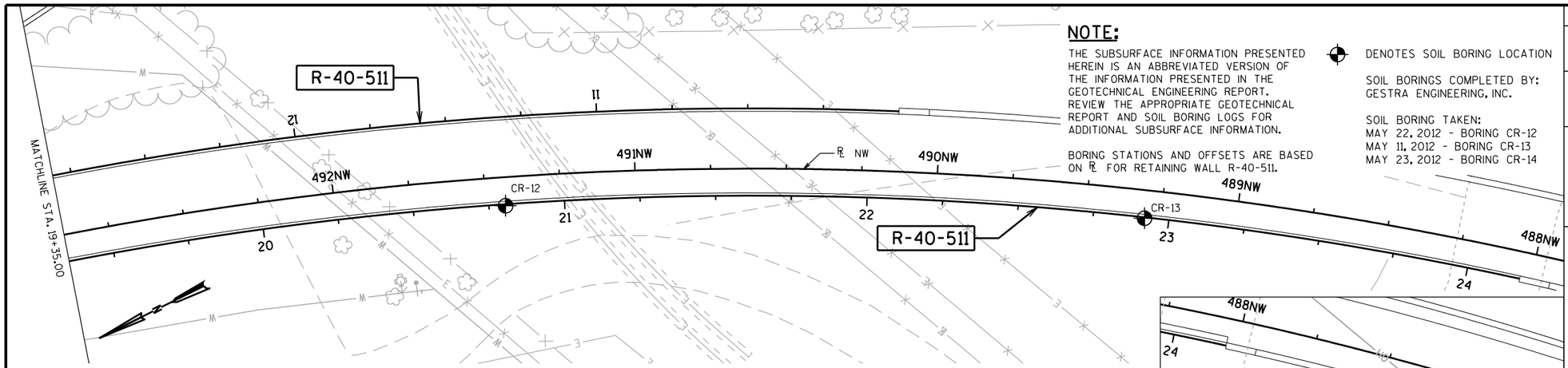
SUBSURFACE EXPLORATION 2

SHEET 28 OF 29

8

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PLAN

MSE RETAINING WALL

NOTE:

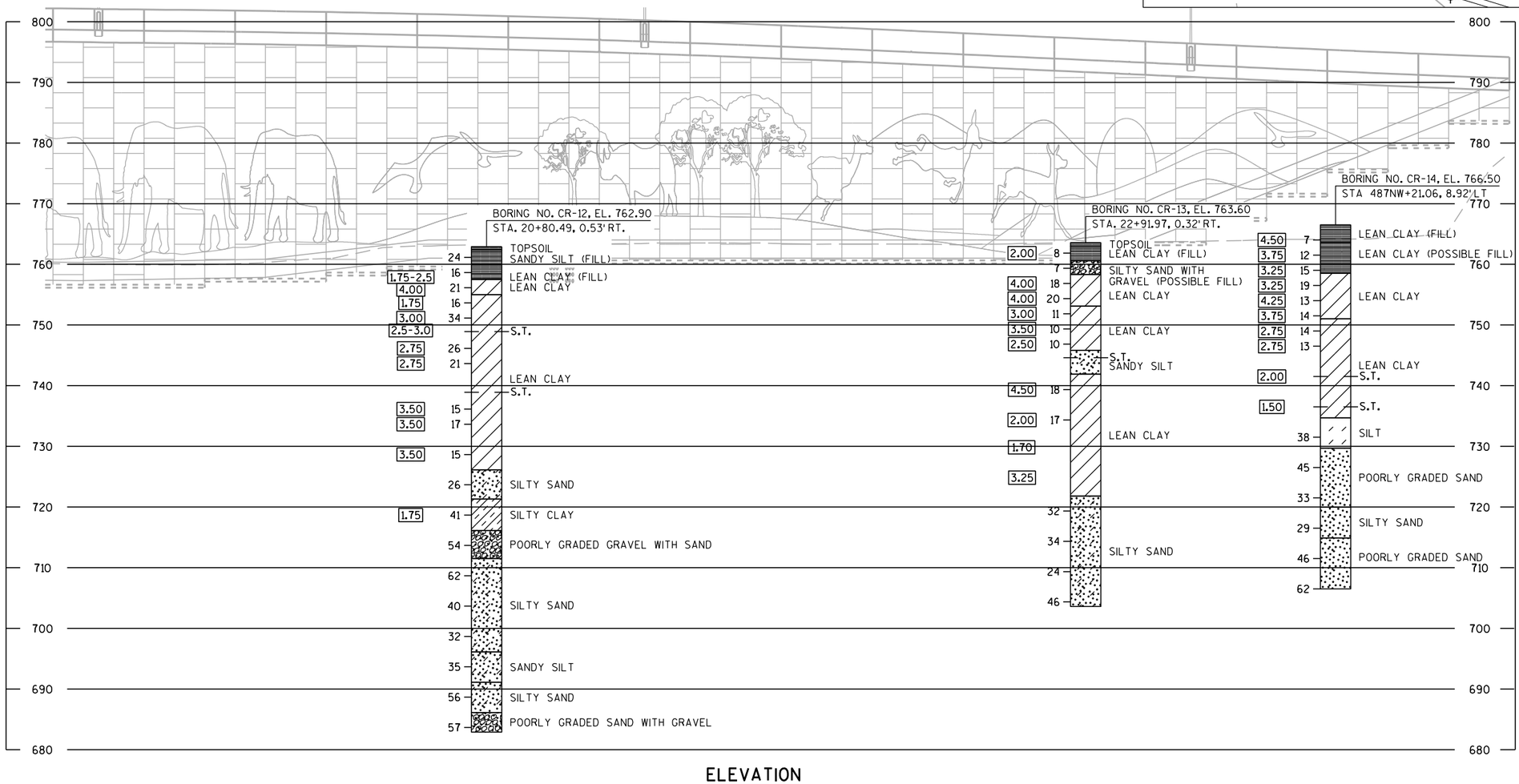
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ FOR RETAINING WALL R-40-511.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 22, 2012 - BORING CR-12
MAY 11, 2012 - BORING CR-13
MAY 23, 2012 - BORING CR-14



ELEVATION

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-511

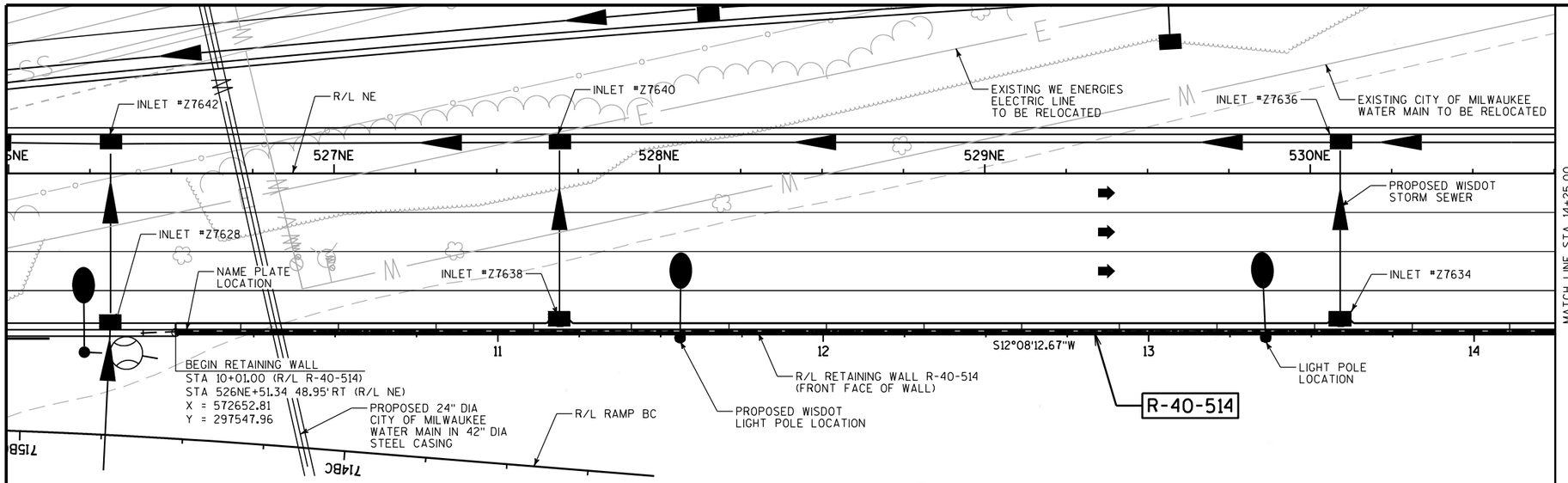
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SUBSURFACE EXPLORATION 3

SHEET 29 OF 29

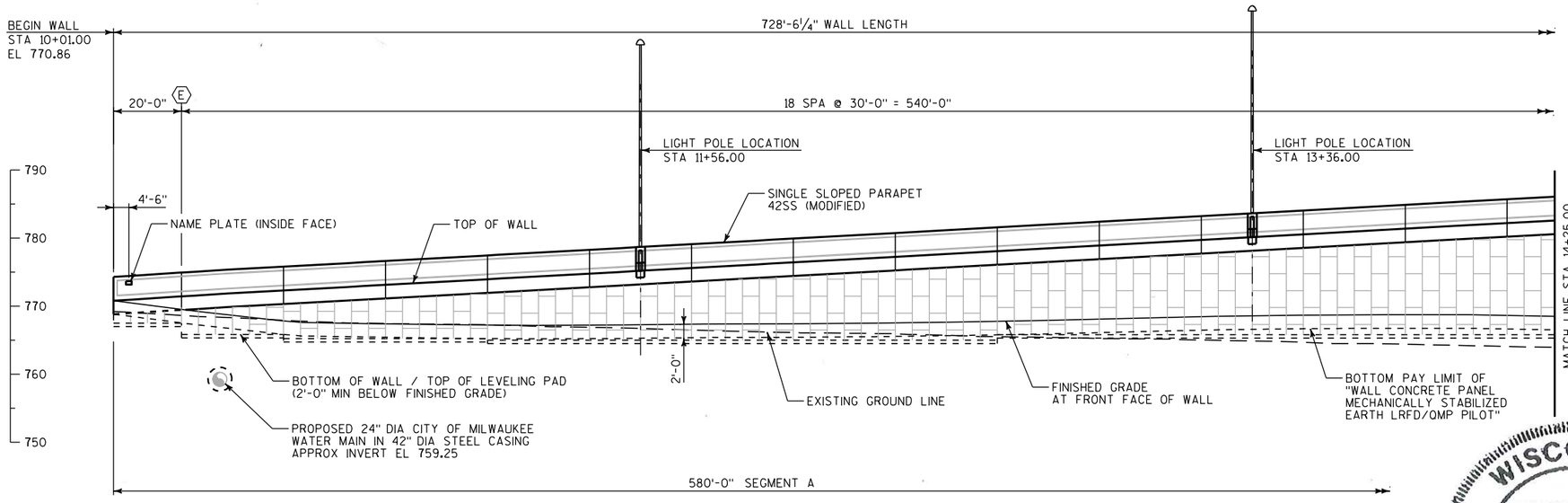
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PLAN

MSE RETAINING WALL



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY (SEGMENT C) TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHAGE LOAD ABOVE THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE RETAINING WALL OUTSIDE OF THE NORTH ABUTMENT LIMITS OF BRIDGE B-40-857 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES
4. TYPICAL SECTIONS (1 OF 2)
5. TYPICAL SECTIONS (2 OF 2)
6. ELEVATION TABLES & REINFORCEMENT SCHEDULE
7. SEGMENT A REINFORCEMENT DETAILS
8. SEGMENT C REINFORCEMENT DETAILS
9. SEGMENT E REINFORCEMENT DETAILS
10. INLET DETAILS
11. ANCHOR SLAB INLET COVER SPECIAL
12. LIGHT BLISTER DETAILS
13. AESTHETIC WALL TREATMENT DETAILS
14. SUBSURFACE EXPLORATION (1 OF 2)
15. SUBSURFACE EXPLORATION (2 OF 2)

LEGEND

- [C] CONTRACTION JOINT
- (E) EXPANSION JOINT
- TRAFFIC DIRECTION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN EDWARD K. McCRIGHT E-37422 MILWAUKEE, WI 5/1/14 PROFESSIONAL ENGINEER

STRUCTURE R-40-514

WALL ALONG USH 45 S.B. TO I.H. 94 E.B.

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	AAG	TEK	EKM

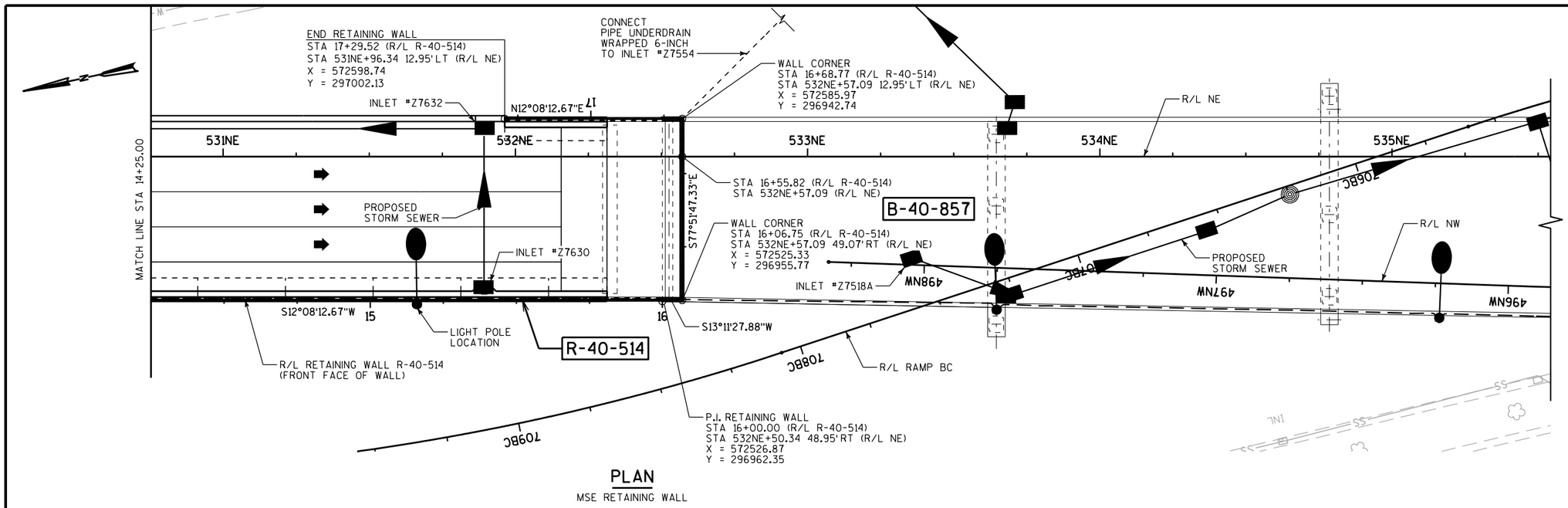
GENERAL PLAN & ELEVATION (1 OF 2)

SHEET 1 OF 15

2913

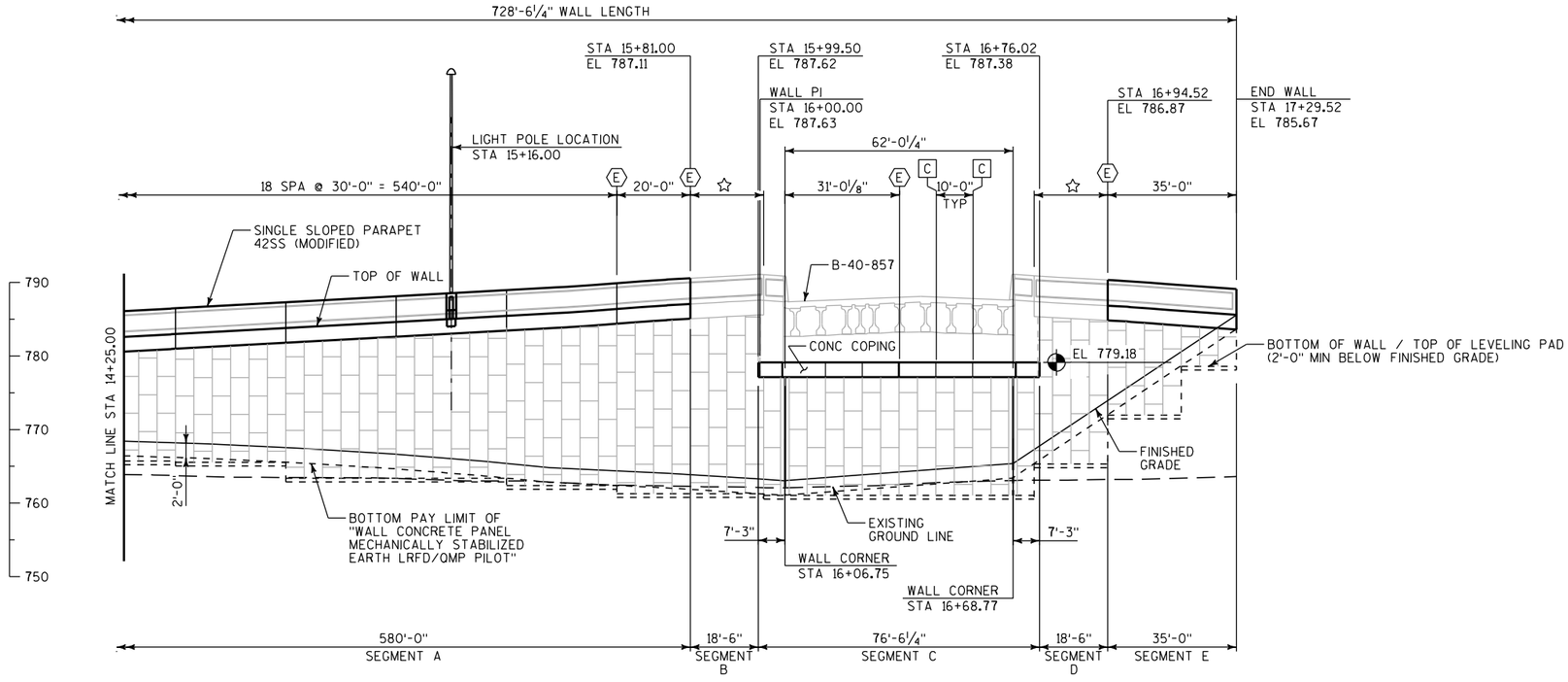
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STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL



ELEVATION

LOOKING AT FRONT FACE OF WALL

LEGEND

- TRAFFIC DIRECTION
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- ☆ STRUCTURAL APPROACH SLAB, SEE B-40-857 PLANS FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 2)

SHEET 2 OF 15

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	SEGMENT E	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	420	---	---	---	25	445
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	345	---	---	---	21	366
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	53,400	---	---	---	2,990	56,390
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	121	---	1	---	8	130
517.1050.S.0004	ARCHITECTURAL SURFACE TREATMENT R-40-514	SF	6,470	450	1,105	305	220	8,550
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	580	20	155	20	35	810
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	3	---	---	---	---	3
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	590	---	---	---	---	590
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	5	---	---	---	---	5
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	3	---	---	---	---	3
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	3	---	---	---	---	3
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD / OMP PILOT	SF	7,630	485	1,255	345	290	10,005
	NON-BID ITEMS							
	PREFORMED JOINT FILLER	SIZE						¾", 1½", 2"
	NON-BITUMINOUS JOINT FILLER	SIZE						¾", 2"
	CORK FILLER	SIZE						1"
	NAME PLATE	EACH						1
	EXPANDED POLYSTYRENE	SIZE						1"

ALL ITEMS ARE CATEGORY 3030

WALL EXTERNAL STABILITY EVALUATION

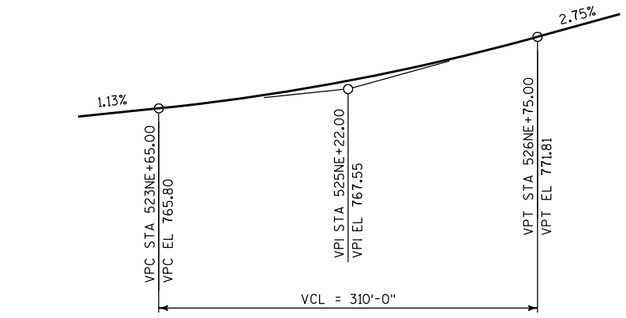
DIMENSIONS	STA. 14+50	STA. 16+00	STA. 16+25	STA. 12+50
WALL HEIGHT (FEET)	17.5	26	17	12
EXPOSED WALL HEIGHT (FEET)	15.5	24	15	10
MINIMUM LENGTH OF REINFORCEMENT (FEET) ✳	12.3	18.2	18.2	8.4
WALL STATION	14+50	16+00	16+25	12+50
BORING USED	CR-34	CB-19	CB-19	CR-35
CAPACITY TO DEMAND RATIO (CDR)				
SLIDING (CDR > 1.0)	1.16	1.23	1.27	1.06
ECCENTRICITY (CDR > 1.0)	1.30	1.41	> 4.0	1.15
BEARING (CDR > 1.0)	1.10	1.50	1.85	1.36
GLOBAL STABILITY (CDR > 1.0)	1.11	1.14	1.15	1.35

✳ MINIMUM LENGTH APPLIES ONLY AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

SOIL PARAMETERS

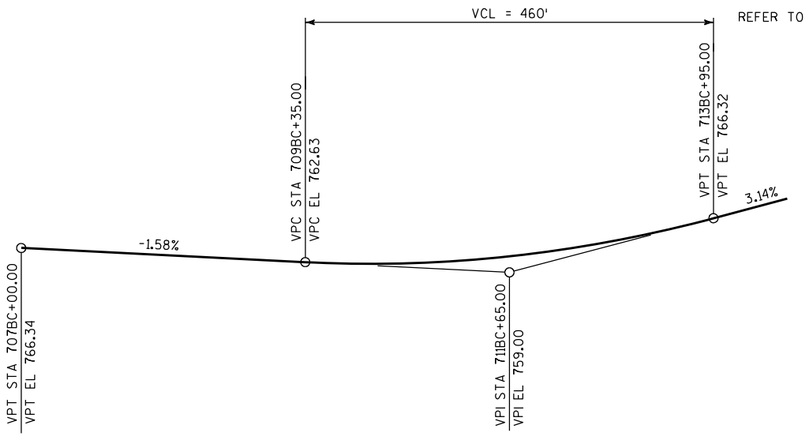
SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		UNDRAINED SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
MSE BACKFILL ✳	120	0	30	0	30
COHESIVE FILL / BACKFILL	130	2000	0	50-75	30
NATIVE LEAN CLAY (STIFF TO VERY STIFF)	135	1500-2500	0	50-75	30-32
NATIVE LEAN CLAY (VERY STIFF TO HARD)	135	3000-4000	0	100-150	32
NATIVE SAND/SILT (LOOSE TO MED DENSE)	125	0	30	0	30
NATIVE SAND/SILT (MED DENSE TO DENSE)	125	0	32-33	0	32-33
NATIVE SAND/SILT (DENSE)	125	0	36	0	36

✳ DESIGN WALL FOR THESE VALUES



PROFILE GRADE LINE USH 45 SB TO USH 45 EB

R/L NE



PROFILE GRADE LINE BLUEMOUND RD TO USH 45 SB ON RAMP

R/L BC

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO NAVD 88 DATUM.

ALL STATIONS AND DIMENSIONS ALONG THE R/L FOR R-40-514 ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (M.S.E.) RETAINING WALL.

PROVIDE COMPLETE DESIGN, PLANS, DETAILS, AND SHOP DRAWINGS FOR THE RETAINING WALL, IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED MAXIMUM CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½" INCHES, THE CONTACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

WALL PHASE AND SEGMENT DESIGNATIONS DO NOT CORRESPOND TO ROADWAY STAGING DESIGNATIONS.

COORDINATE THE CONSTRUCTION OF WALL R-40-514 WITH THE NORTH ABUTMENT OF B-40-857.

COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES, WITH THE CONSTRUCTION OF THE MSE WALL.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF THE LEVELING PAD IS TAKEN AS A CONSTANT 2'-0" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENT A AND SEGMENT E CAST-IN-PLACE ANCHOR SLAB & PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" & "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENT C CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND INSIDE FACES OF PARAPETS AND THE EXPOSED TOP SURFACE OF THE ANCHOR SLAB.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE SHALL BE EPOXY COATED.

REFER TO S.D.D. 12A3-10 FOR NAME PLATE DETAILS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

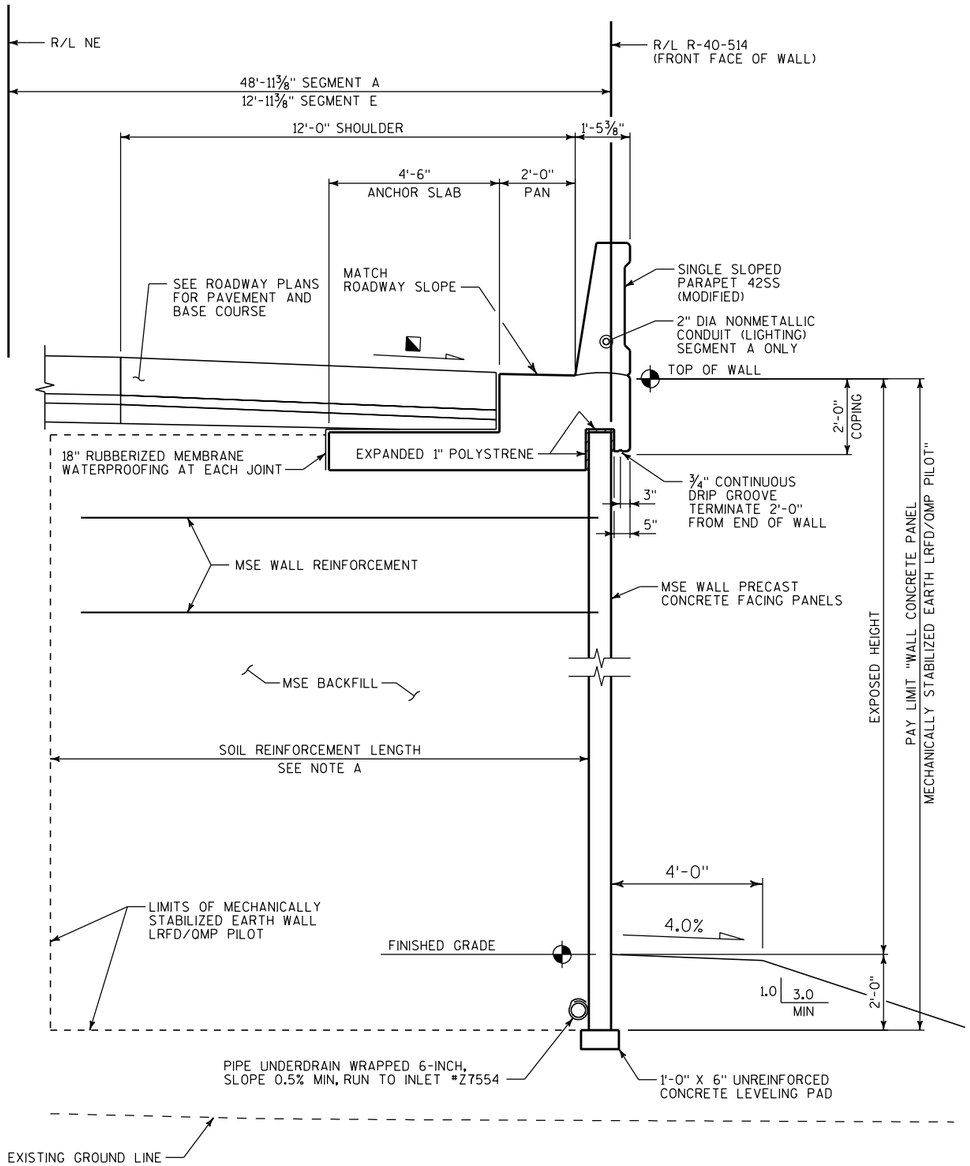
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GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES

SHEET 3 OF 15

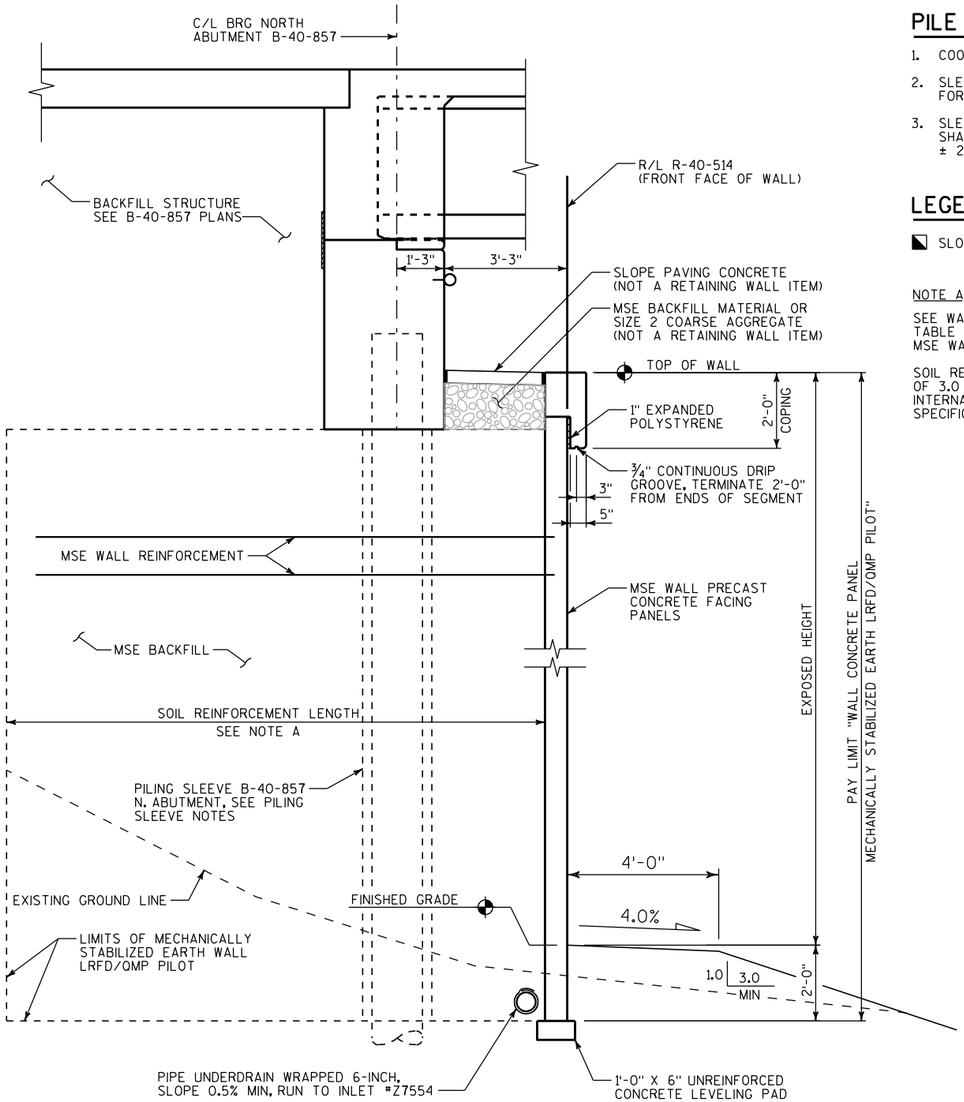
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STATE PROJECT NUMBER
1060-33-80



SEGMENTS A & E - TYPICAL WALL SECTION

SEGMENT A LOOKING SOUTH - STA 10+01.00 TO STA 15+81.00
SEGMENT E LOOKING NORTH - STA 16+94.52 TO STA 17+29.52



SEGMENT C - TYPICAL WALL SECTION

STA 16+00.00 TO STA 16+75.52
LOOKING EAST

PILE SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-857 PLANS.
2. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
3. SLEEVES SHALL BE PLACED BEFORE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.

LEGEND

◥ SLOPE VARIES 4.0% TO 2%

NOTE A

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 3 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

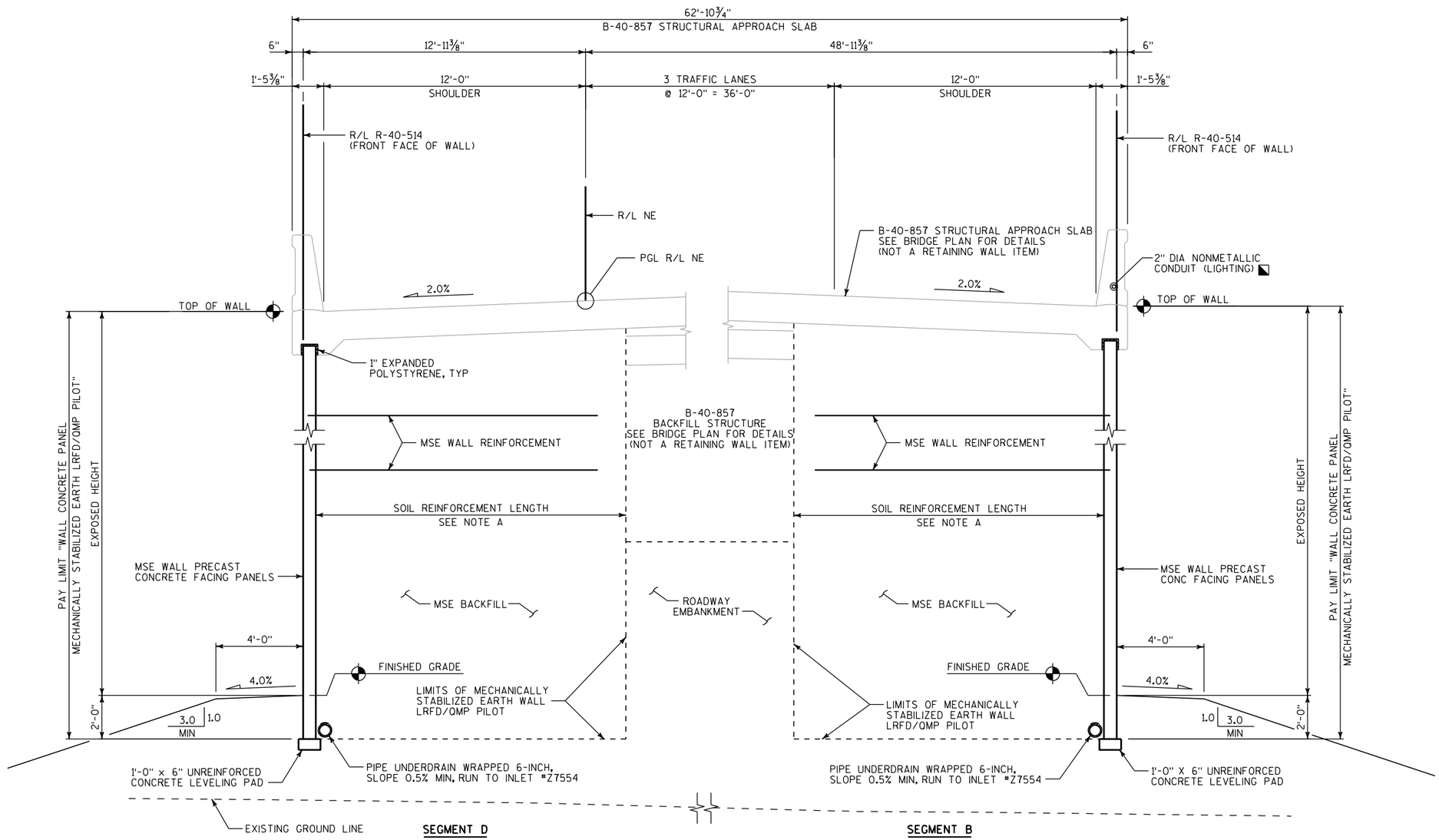
STRUCTURE R-40-514

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TYPICAL SECTIONS
(1 OF 2)

SHEET 4 OF 15

STATE PROJECT NUMBER
1060-33-80



LEGEND

◥◣ NOT A RETAINING WALL ITEM

NOTE A

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 3 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

SEGMENTS B & D - TYPICAL WALL SECTION

SEGMENT B - STA 15+81.00 TO STA 15+99.50 LOOKING SOUTH
SEGMENT D - STA 16+76.02 TO STA 16+94.52 LOOKING SOUTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

TYPICAL SECTIONS
(2 OF 2)

SHEET 5 OF 15

STATE PROJECT NUMBER
1060-33-80

SEGMENT A WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+01.00	770.79	770.73	769.20
10+11.00	771.10	770.19	768.92
10+21.00	771.43	769.65	768.61
10+36.00	771.88	768.81	768.26
10+51.00	772.29	767.99	767.91
10+66.00	772.71	767.70	767.59
10+81.00	773.12	767.56	767.43
10+96.00	773.53	767.46	767.32
11+11.00	773.94	767.39	767.24
11+26.00	774.36	767.33	767.02
11+41.00	774.77	767.36	766.85
11+56.00	775.18	767.41	766.69
11+71.00	775.59	767.48	766.46
11+86.00	776.01	767.52	766.26
12+01.00	776.42	767.55	766.08
12+16.00	776.83	767.62	766.00
12+31.00	777.24	767.70	765.90
12+46.00	777.66	767.81	765.67
12+61.00	778.07	767.94	765.48
12+76.00	778.48	768.08	765.38
12+91.00	778.89	768.24	765.24
13+06.00	779.31	768.42	765.15
13+21.00	779.72	768.60	765.01
13+36.00	780.13	768.72	764.88
13+51.00	780.54	768.82	764.64
13+66.00	780.96	768.87	764.48
13+81.00	781.37	768.90	764.38
13+96.00	781.78	768.88	764.21
14+11.00	782.19	768.79	764.04
14+26.00	782.61	768.65	763.92
14+41.00	783.02	768.41	763.79
14+56.00	783.43	768.12	763.58
14+71.00	783.84	767.76	763.51
14+86.00	784.26	767.32	763.47
15+01.00	784.67	766.84	763.40
15+16.00	785.08	766.24	763.11
15+31.00	785.49	765.60	763.05
15+46.00	785.91	764.98	762.81
15+61.00	786.42	764.61	762.51
15+71.00	786.79	764.37	762.40
15+81.00	787.11	764.09	762.31

SEGMENT B WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
15+81.00	787.11	764.09	762.31
15+90.50	787.37	763.79	762.24
15+99.50	787.63	763.50	762.17

SEGMENT C WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
15+99.50	779.18	763.50	762.17
16+06.74	779.18	763.23	762.14
16+17.75	779.18	763.67	762.23
16+27.75	779.18	764.05	762.38
16+37.75	779.18	764.43	762.59
16+47.75	779.18	764.81	762.83
16+57.75	779.18	765.19	762.96
16+68.77	779.18	765.61	763.10
16+76.02	779.18	767.85	763.14

SEGMENT D WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
16+76.02	787.39	767.85	763.14
16+85.02	787.13	771.00	763.18
16+94.52	786.87	774.16	763.24

SEGMENT E WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
16+94.52	786.87	774.16	763.24
17+12.02	786.28	779.96	763.38
17+29.52	785.67	785.77	763.68

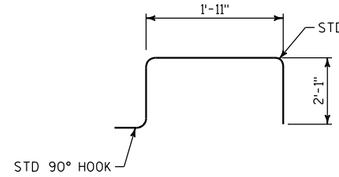
BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	1363	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	848	6'-1"	X		COPING - VERTICAL TIE
A503	X	893	4'-8"	X		COPING - VERTICAL TIE
A504	X	470	3'-6"	X		COPING - VERTICAL TIE
A505	X	893	5'-8"	X		PARAPET & COPING - VERTICAL STIRRUP
A406	X	360	29'-4"			ANCHOR SLAB AND COPING - LONGITUDINAL
A407	X	40	19'-4"			ANCHOR SLAB AND COPING - LONGITUDINAL
K501	X	24	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	12	1'-0"			COPING - VERTICAL TIE
K503	X	12	5'-4"	X		ANCHOR SLAB - HORIZONTAL TOP
K404	X	12	8'-8"	X		ANCHOR SLAB & COPING - LONGITUDINAL
K505	X	18	7'-9"	X	◭	COPING - VERTICAL TIE - SERIES
K406	X	12	6'-10"	X		COPING - LONGITUDINAL
K507	X	12	2'-11"	X		COPING - VERTICAL TIE
K408	X	12	4'-10"	X		COPING - LONGITUDINAL
K509	X	12	5'-5"	X		COPING - VERTICAL TIE
K410	X	15	6'-2"			COPING - LONGITUDINAL
K411	X	6	13'-11"	X		COPING - VERTICAL STIRRUP
K412	X	6	5'-4"			COPING - VERTICAL TIE
K413	X	12	2'-2"			COPING - VERTICAL TIE
L501	X	18	8'-1"	X		LIGHT SUPPORT - TIE
L502	X	18	8'-2"	X		LIGHT SUPPORT - VERTICAL TIE
L503	X	18	6'-6"	X		LIGHT SUPPORT - HORIZONTAL TIE
L604	X	24	6'-8"	X		LIGHT SUPPORT - HORIZONTAL TIE
L505	X	15	4'-4"	X		LIGHT SUPPORT - VERTICAL TIE
L406	X	12	1'-10"	X		LIGHT SUPPORT - HORIZONTAL TIE
L407	X	6	2'-10"	X		LIGHT SUPPORT - VERTICAL
L508	X	15	10'-3"	X		LIGHT SUPPORT - STIRRUP
L609	X	6	5'-1"	X		LIGHT SUPPORT - HORIZONTAL
L610	X	6	4'-9"	X		LIGHT SUPPORT - HORIZONTAL
R501	X	881	6'-8"	X		PARAPET - VERTICAL TIE
R802	X	144	29'-4"			PARAPET - LONGITUDINAL
R803	X	16	19'-8"			PARAPET - LONGITUDINAL

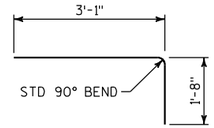
BILL OF BARS - SEGMENT E

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
E501	X	80	6'-5"	X	COPING - VERTICAL TIE
E502	X	53	6'-1"	X	COPING - LONGITUDINAL
E503	X	53	4'-8"	X	COPING - VERTICAL TIE
E504	X	27	3'-1"		COPING - LONGITUDINAL
E405	X	53	5'-8"	X	COPING - VERTICAL STIRRUP
E406	X	20	34'-4"		COPING - VERTICAL TIE
R501	X	53	6'-8"	X	PARAPET - VERTICAL TIE
R804	X	8	34'-8"		PARAPET - LONGITUDINAL

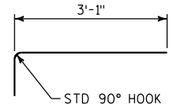
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.



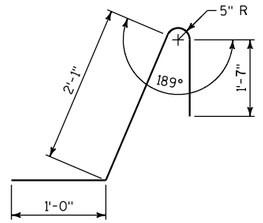
A502 & E502



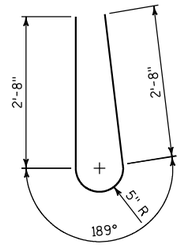
A503 & E503



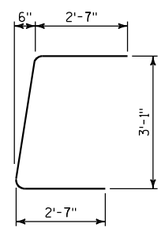
A504 & E504



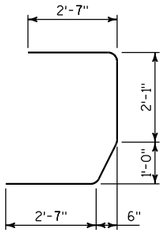
A505 & E505



R501



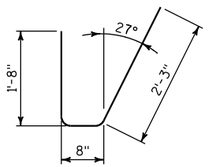
L501



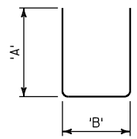
L502

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
K505	6 SERIES OF 3	7'-3" TO 8'-4"

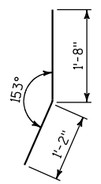


L505

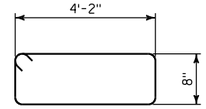


L503, L604, L406

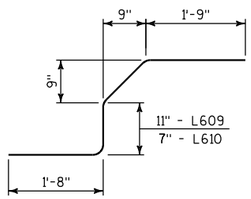
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



L407



L508



L609 & L610

LEGEND

◪ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

◭ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY ASW | PLANS CK'D. EKM

ELEVATION TABLES & REINFORCEMENT SCHEDULE

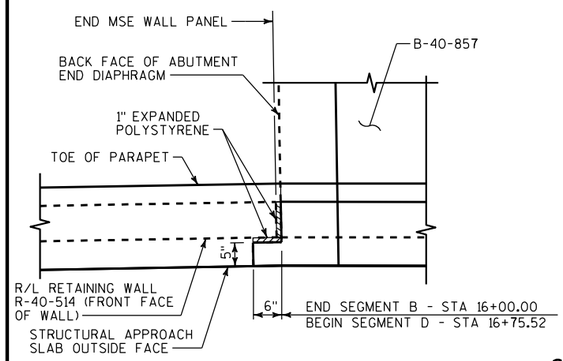
SHEET 6 OF 15

8

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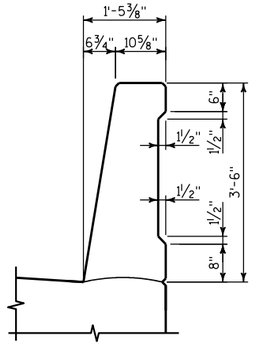
STATE PROJECT NUMBER

1060-33-80

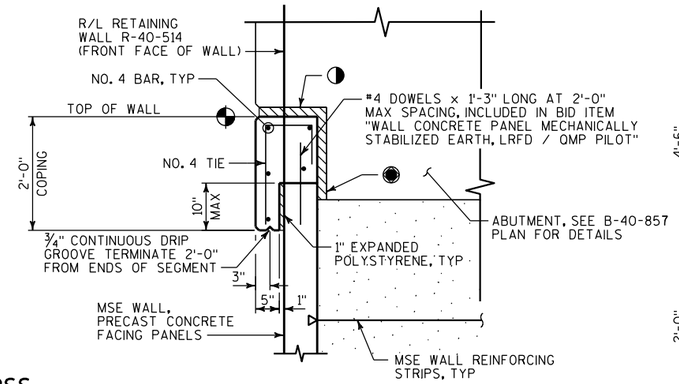


END SEGMENT B / BEGIN SEGMENT D DETAIL

(SEE B-40-857 PLANS FOR ADDITIONAL DETAILS)

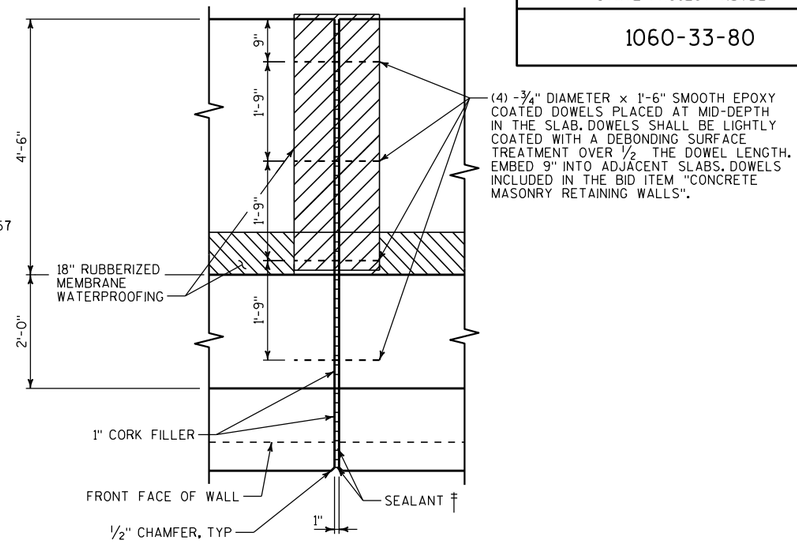


SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMINSIONS



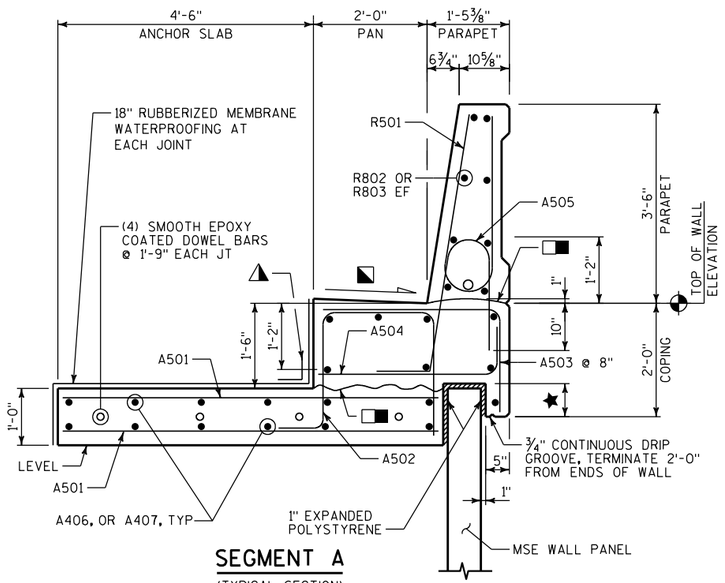
COPING DETAIL THRU ABUTMENT

(SEGMENT C)



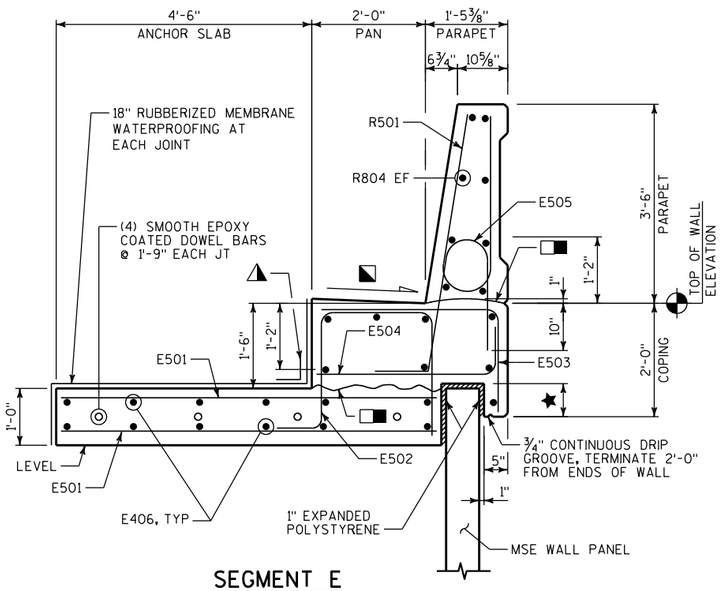
ANCHOR SLAB EXPANSION JOINT SEGMENTS A & E

DO NOT RUN BAR STEEL THRU JOINT. EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS



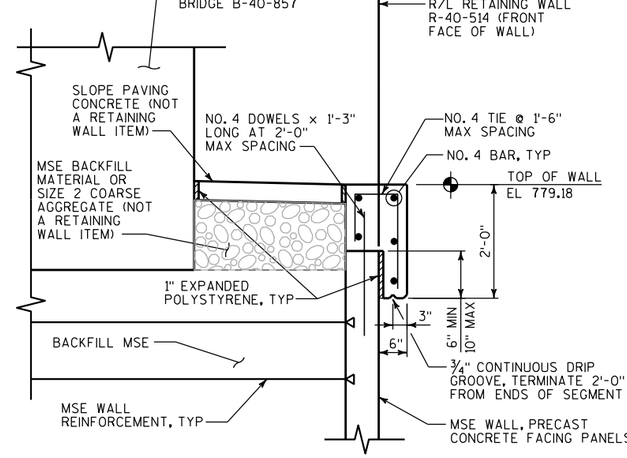
SEGMENT A

(TYPICAL SECTION)
STA 10+01.00 TO STA 15+81.00



SEGMENT E

(TYPICAL SECTION)
STA 16+94.52 TO STA 17+29.52



COPING DETAIL AT SEGMENT C

STA 16+00.00 TO STA 16+75.52

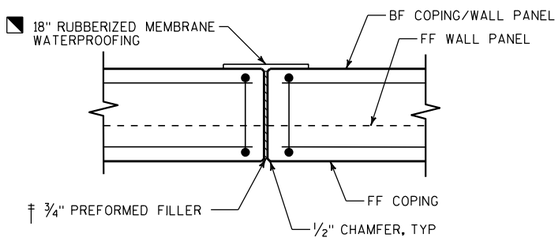
LEGEND

- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ★ 3" MIN, 6" MAX.
- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- SEE PAN SLOPE TABLE

PAN SLOPE TABLE

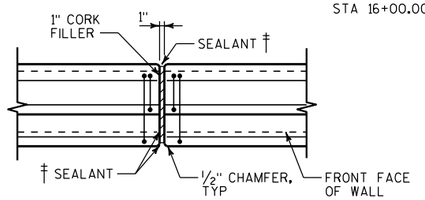
SEGMENT A		SEGMENT E	
STATION	SLOPE	STATION	SLOPE
10+01.00	4.00%	16+94.52	2.00%
15+49.66	4.00%	17+25.86	4.00%
15+81.00	2.00%	17+29.52	4.00%

LINEARLY INTERPOLATE PAN SLOPE BETWEEN STATIONS



COPING EXPANSION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATION OF JOINTS.
SEE GENERAL PLAN AND ELEVATION SHEETS.



PARAPET EXPANSION JOINT

DO NOT RUN BARS THRU JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

PARAPET, COPING, & ANCHOR SLAB DETAILS

SHEET 7 OF 15

2919

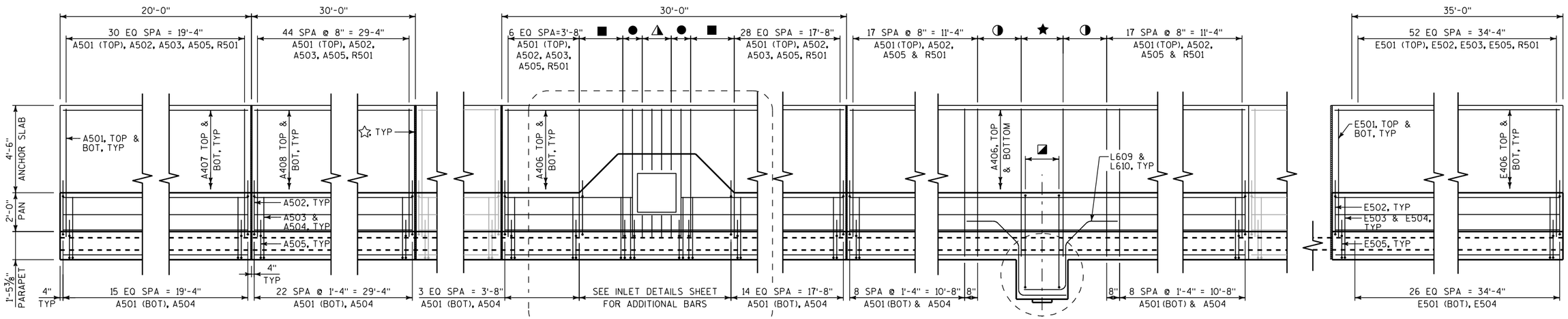
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STATE PROJECT NUMBER

1060-33-80



TYPICAL 20'-0" PLAN

SEGMENT A
STA 10+01.00 TO 10+21.00 &
STA 15+61.00 TO 15+81.00

TYPICAL 30'-0" PLAN

SEGMENT A
STA 10+21.00 TO STA 11+11.00 &
STA 11+41.00 TO STA 13+51.00 &
STA 13+81.00 TO STA 15+31.00

TYPICAL 30'-0" PLAN WITH INLET

SEGMENT A
STA 11+11.00 TO STA 11+41.00 &
STA 13+51.00 TO 13+81.00 &
STA 15+31.00 TO STA 15+61.00

SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

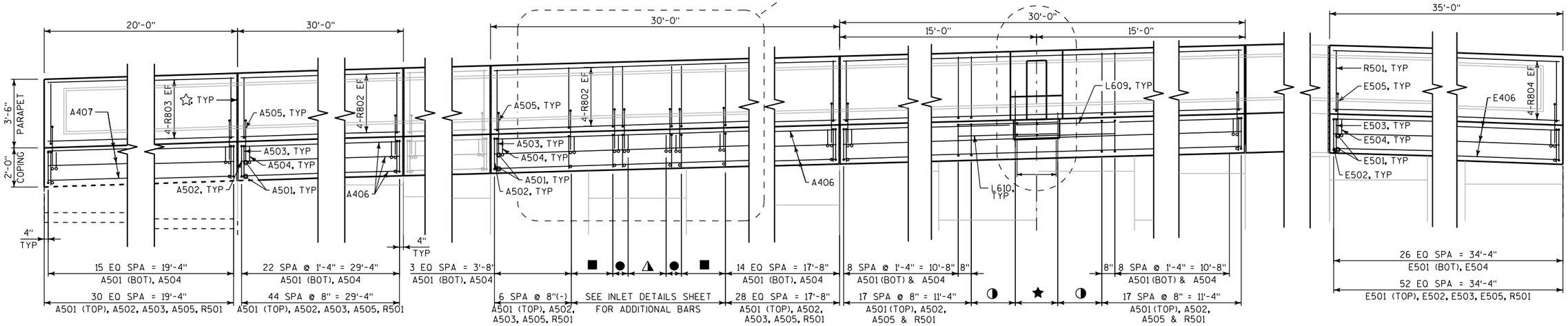
TYPICAL 30'-0" PLAN WITH LIGHT BLISTER

SEGMENT A
STA 11+56.00, STA 13+36.00 & STA 15+16.00

SEE LIGHT BLISTER DETAIL FOR ADDITIONAL REINFORCEMENT

35'-0" PLAN

SEGMENT E
STA 16+94.52 TO STA 17+29.52



TYPICAL 20'-0" ELEVATION

STA 10+01.00 TO 10+21.00 &
STA 15+61.00 TO 15+81.00

TYPICAL 30'-0" ELEVATION

STA 10+21.00 TO STA 11+11.00 &
STA 11+41.00 TO STA 13+51.00 &
STA 13+81.00 TO STA 15+31.00

TYPICAL 30'-0" ELEVATION WITH INLET

STA 11+11.00 TO STA 11+41.00 &
STA 13+51.00 TO 13+81.00 &
STA 15+31.00 TO STA 15+61.00

TYPICAL 30'-0" PLAN WITH LIGHT BLISTER

SEGMENT A
STA 11+56.00, STA 13+36.00
& STA 15+16.00

35'-0" ELEVATION

STA 16+94.52 TO STA 17+29.52

LEGEND

- ☆ 1" CORK FILLER
- ■ 4 SPA @ 6¾" = 2'-3", A501 (TOP), A503, A505 & R501
  2 SPA @ 1'-1½" = 2'-3", A501 (BOTTOM) & A504
- ◑ 4 SPA @ 6¾" = 2'-3"
  A501 (TOP & BOTTOM), A502, A503, A504, A505 & R501
- ★ A501 (TOP & BOTTOM), A502, A503, A504 & A505 TO MATCH LIGH SUPPORT SPACING, SEE LIGHT SUPPORT DETAILS SHEET
- ◭ SEE INLET DETAILS SHEET FOR BAR MARKS & SPACING
- ● 2 SPA @ 6" = 1'-0", A501 (TOP & BOTTOM), A502, A503, A504, A505 & R501
- ◪ L508, SEE LIGHT SUPPORT DETAILS SHEET FOR SPACING

NOTES

DIMENSIONS ARE ALONG R/L R-40-514

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY ASW | PLANS CK'D. EKM

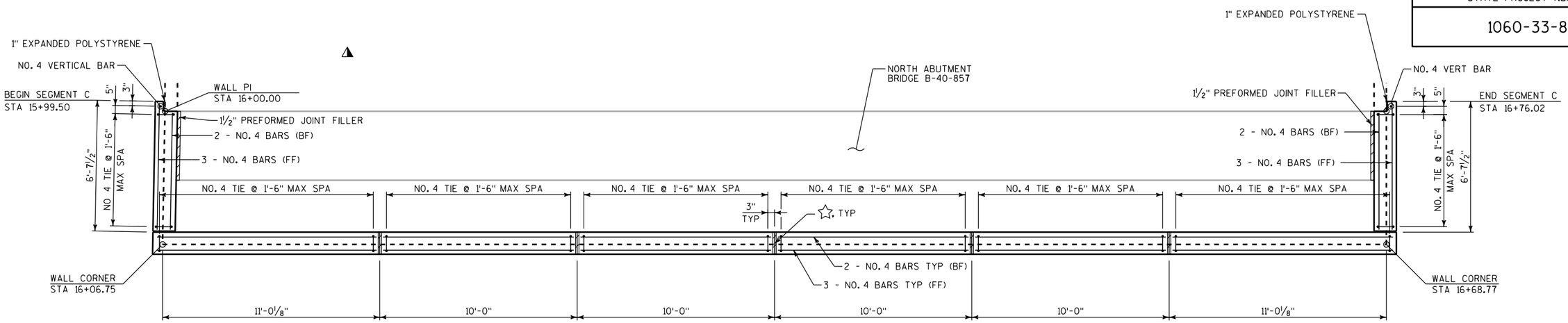
SEGMENT A & E REINFORCEMENT DETAILS

SHEET 8 OF 15

8

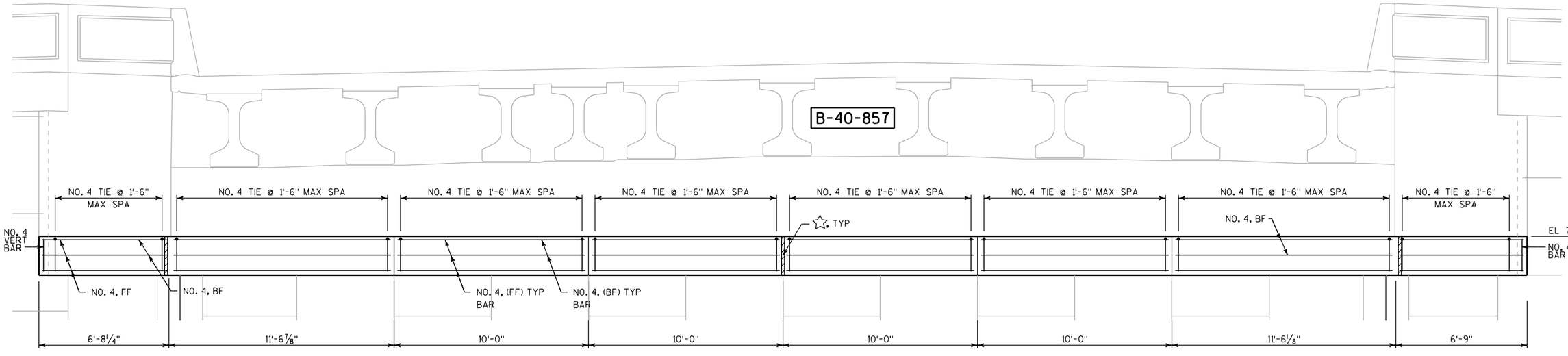
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STATE PROJECT NUMBER
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PLAN - SEGMENT C

DIMENSIONS ALONG R/L R-40-514



ELEVATION - SEGMENT C

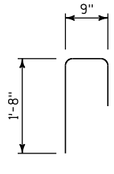
LOOKING AT FRONT FACE OF WALL

8

8

LEGEND

☆ ¾" PREFORMED JOINT FILLER



NO. 4 TIE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

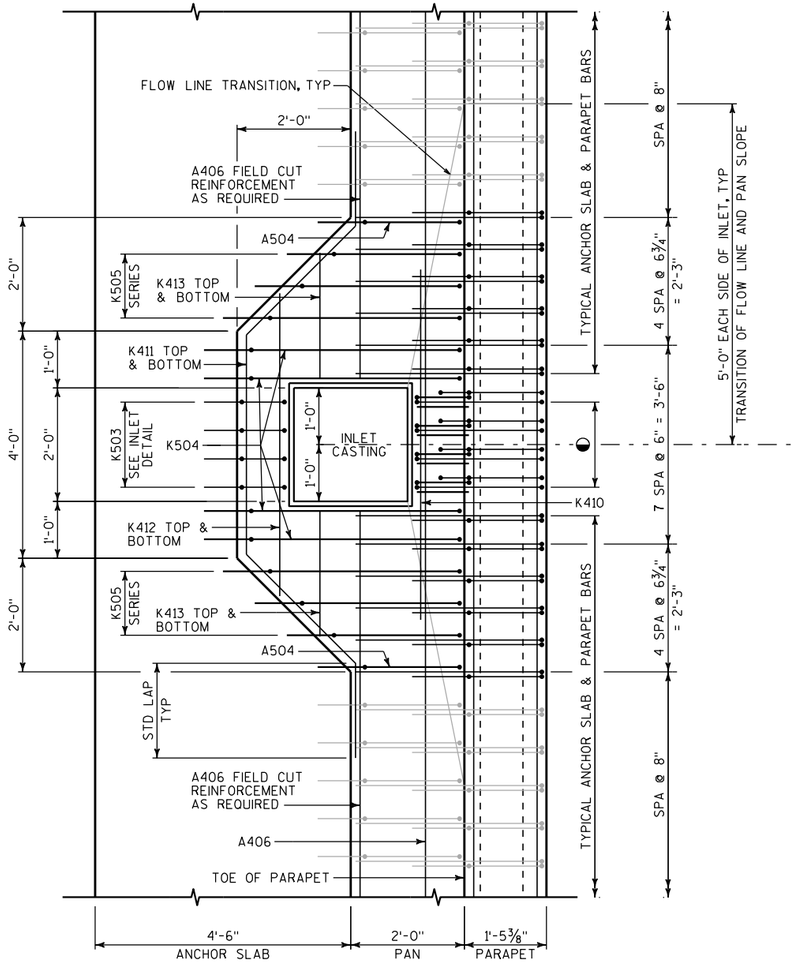
DRAWN BY ASW | PLANS CK'D. EKM

SEGMENT C REINFORCEMENT DETAILS

SHEET 9 OF 15

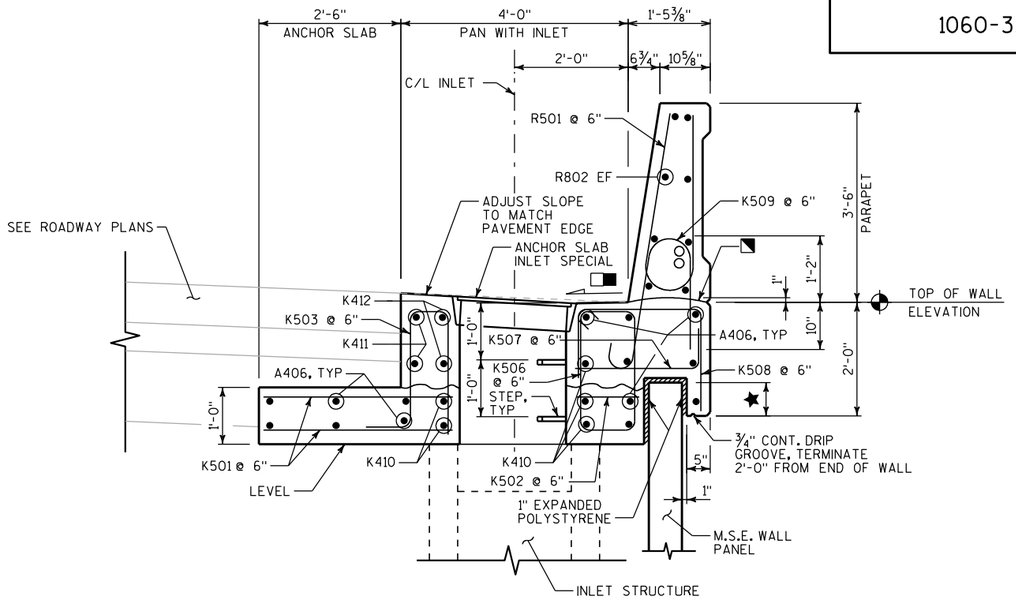
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PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED



SECTION AT INLET

INLET LOCATION TABLE	
INLET NO.	C/L STATION
Z7638	11+19.00
Z7634	13+59.00
Z7630	15+39.00

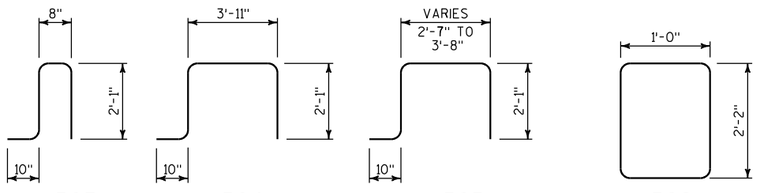
STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

LEGEND

- MATCH ROADWAY PLANS
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT STRIKE OFF AS SHOWN AND LEAVE ROUGH
- K502, K506, K507, K508 & R501



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

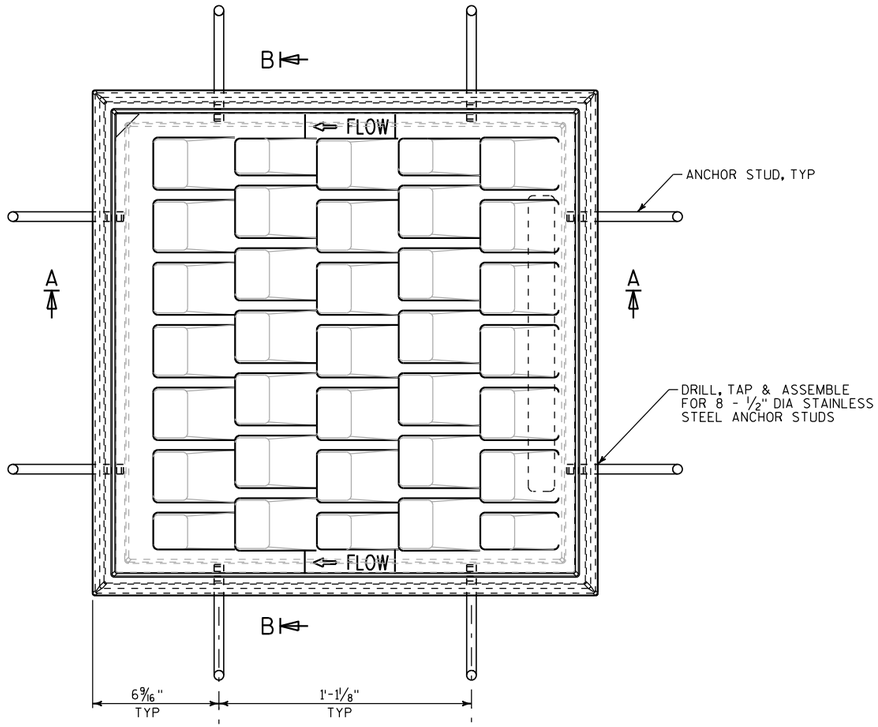
INLET DETAILS

SHEET 10 OF 15

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PLOT DATE : 30-APR-2014 13:38
PLOT BY : MSCTEK
PLOT NAME : R514_080307_de
PLOT SCALE : 2.666667:1

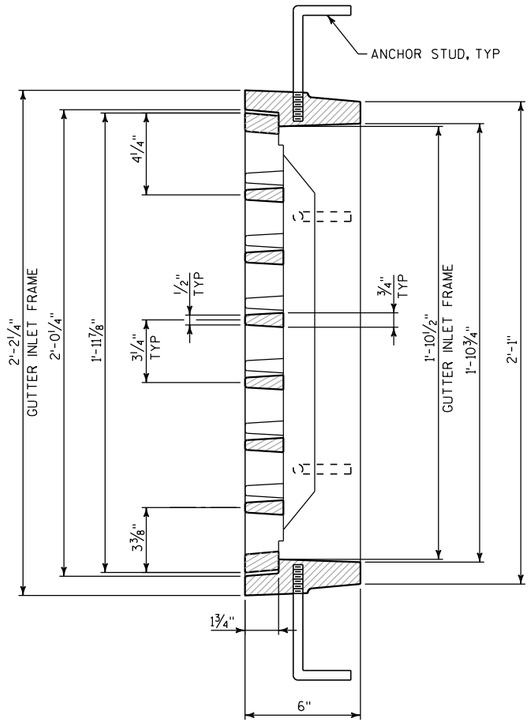
STATE PROJECT NUMBER

1060-33-80

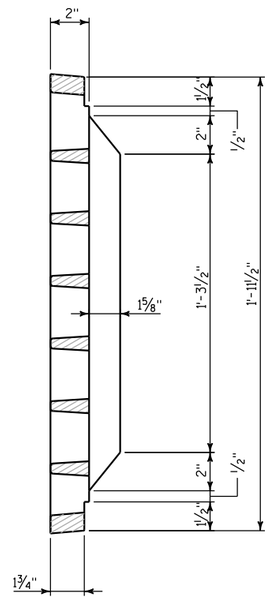


GUTTER INLET FRAME & GRATE TOP

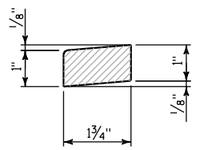
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



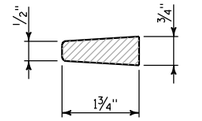
SECTION B-B



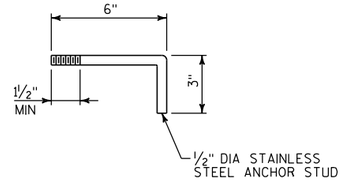
INLET GRATE



SIDE RIB DETAIL

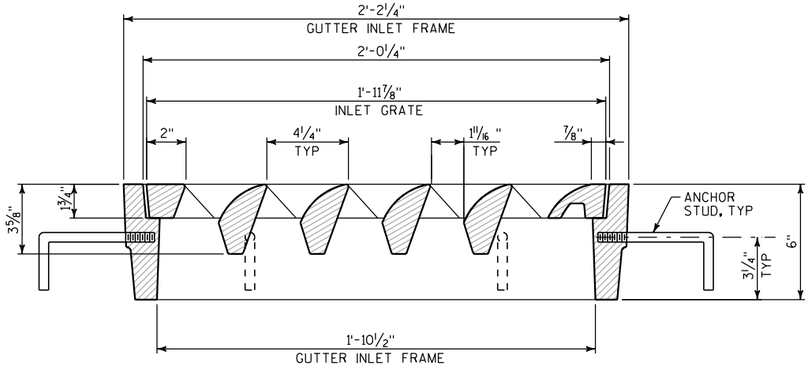


MIDDLE RIB DETAIL

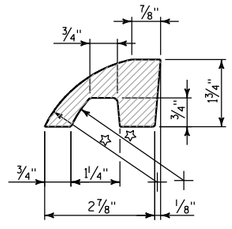


ANCHOR STUD DETAIL

(8 - 1/2" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

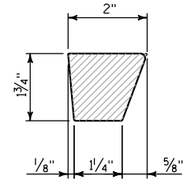


SECTION A-A

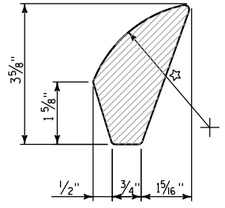


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

ANCHOR SLAB
INLET COVER
SPECIAL

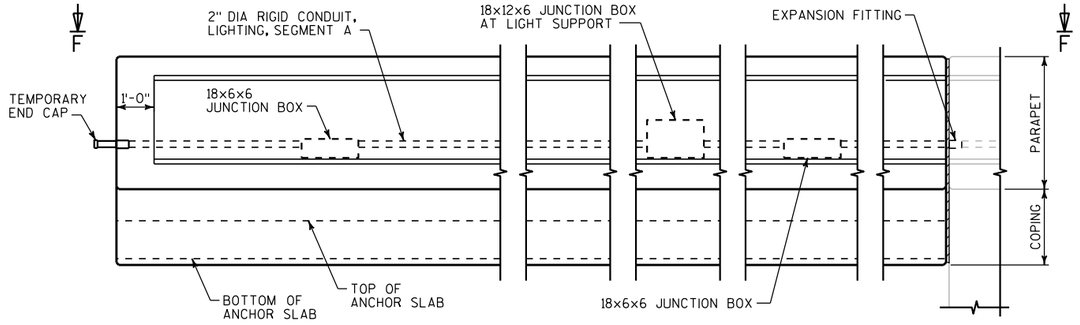
SHEET 11 OF 15

8

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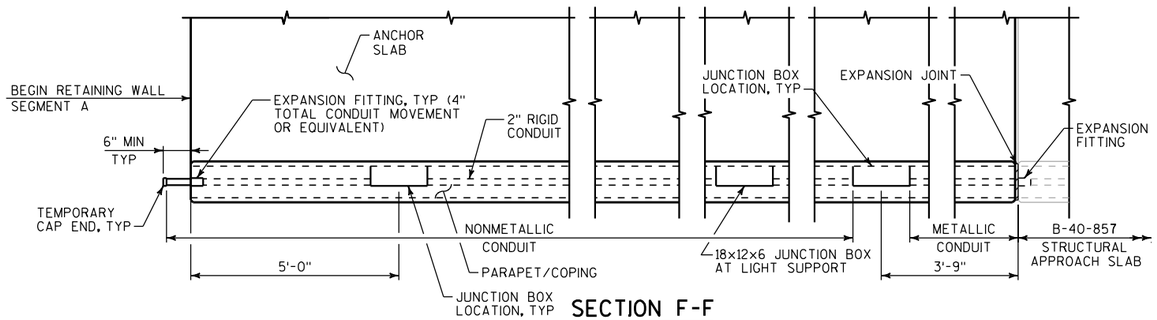
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STATE PROJECT NUMBER
1060-33-80



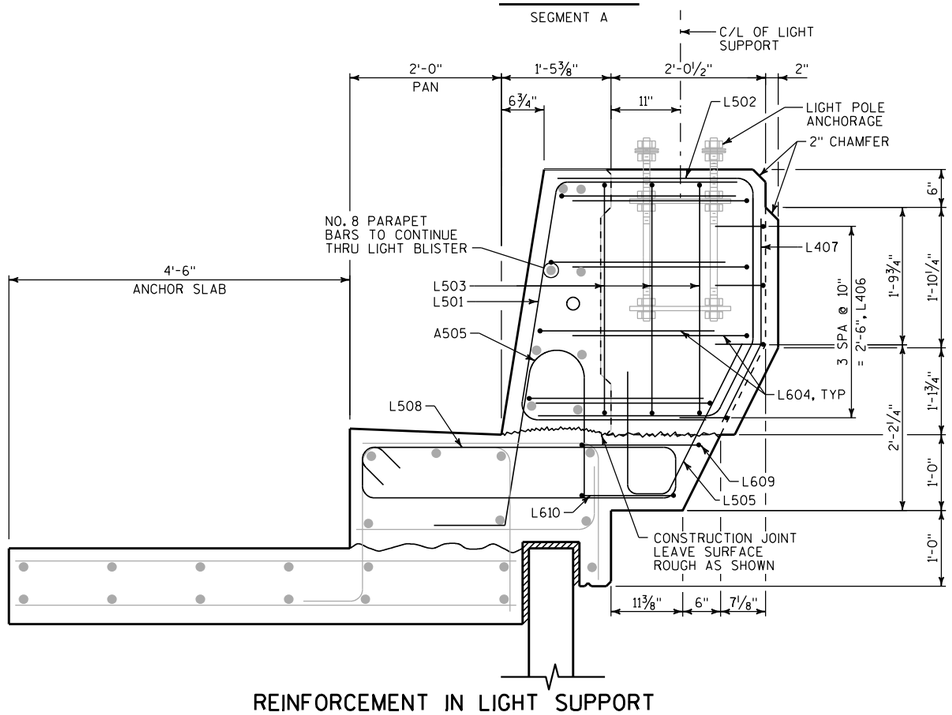
PARAPET ELEVATION

OUTSIDE FACE OF PARAPET



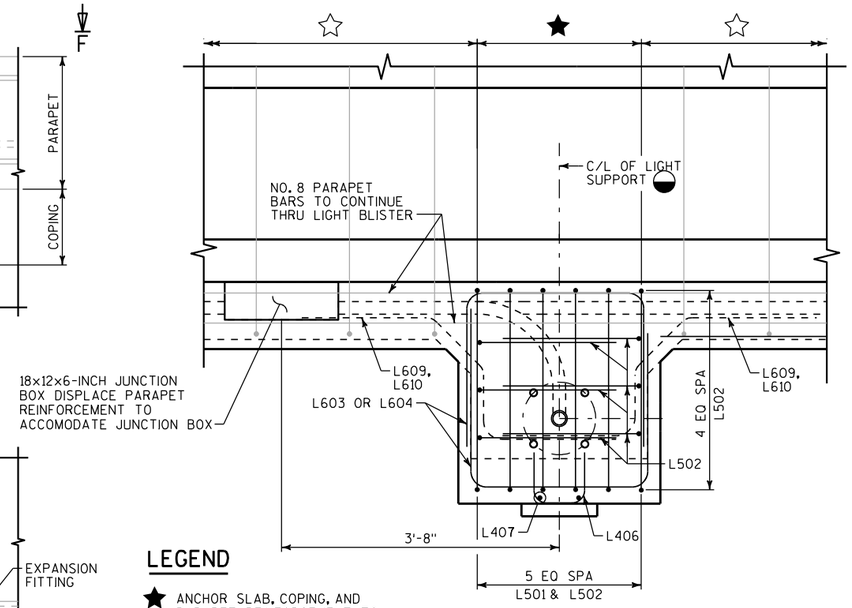
SECTION F-F

SEGMENT A



REINFORCEMENT IN LIGHT SUPPORT

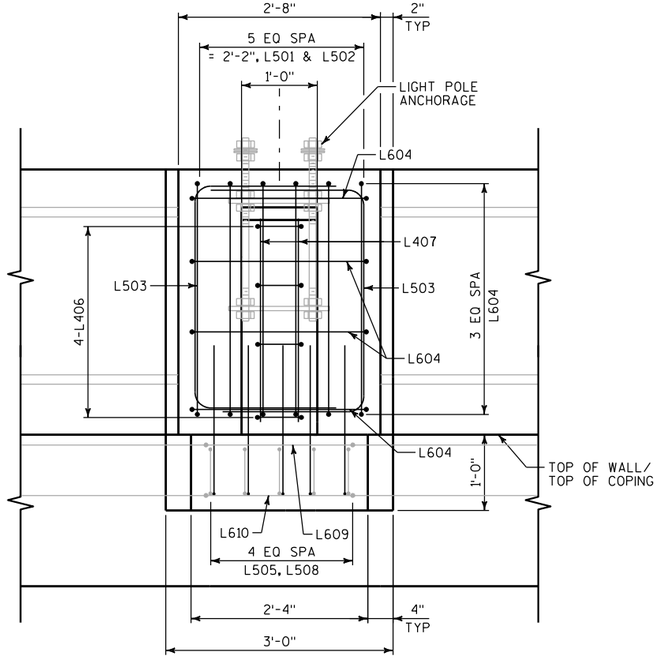
CROSS SECTION AT C/L LIGHT SUPPORT



LIGHT SUPPORT PLAN

LEGEND

- ★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING
- ☆ SEE SEGMENT REINFORCEMENT DETAILS FOR SPACING
- ◒ LIGHT SUPPORTS LOCATED AT:
  STA 11+56.00
  STA 13+36.00
  STA 15+16.00



REINFORCEMENT IN LIGHT SUPPORT

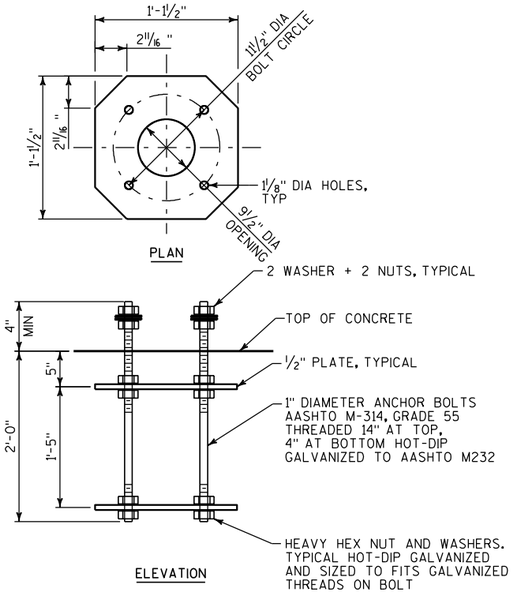
OUTSIDE ELEVATION

NOTES

18x12x6 JUNCTION BOX REQUIRED AT EACH LIGHT SUPPORT LOCATION.

18x6x6 JUNCTION BOX REQUIRED 5'-0" FROM BEGINING OF SEGMENT A AND 3'-9" FROM END OF SEGMENT A AS SHOWN IN DETAIL FOR LIGHTING.

SEE "ELEVATION TABLES & REINFORCEMENT SCHEDULE" SHEET FOR LIGHT SUPPORT REINFORCING BAR SCHEDULE.



ANCHOR ASSEMBLY LIGHT POLE STRUCTURES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY ASW | PLANS CK'D. EKM

LIGHT SUPPORT DETAILS

SHEET 12 OF 15

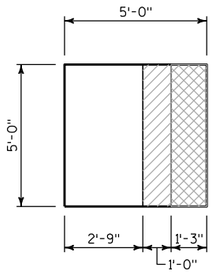
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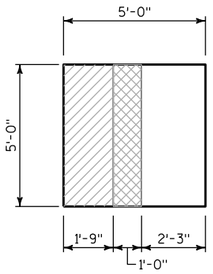
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PLOT BY : MSCTEK
PLOT NAME : R514_080309_de
PLOT SCALE : 2:1

STATE PROJECT NUMBER

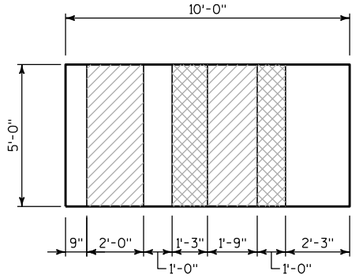
1060-33-80



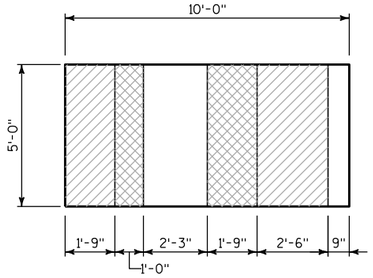
WALL PANEL "A"



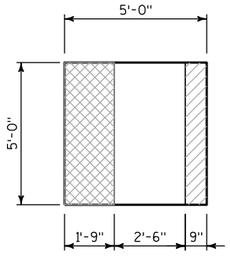
WALL PANEL "B"



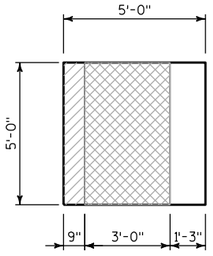
WALL PANEL "A"



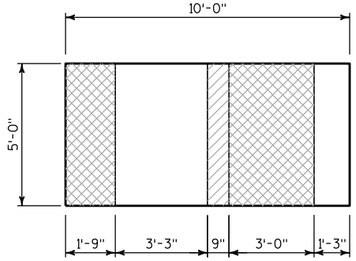
WALL PANEL "B"



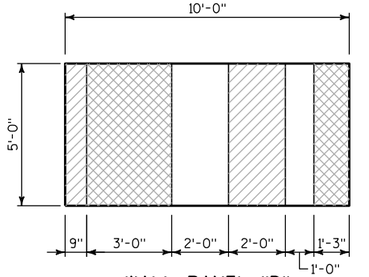
WALL PANEL "C"



WALL PANEL "D"



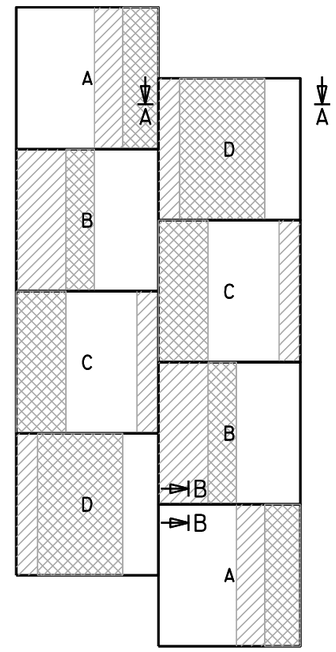
WALL PANEL "C"



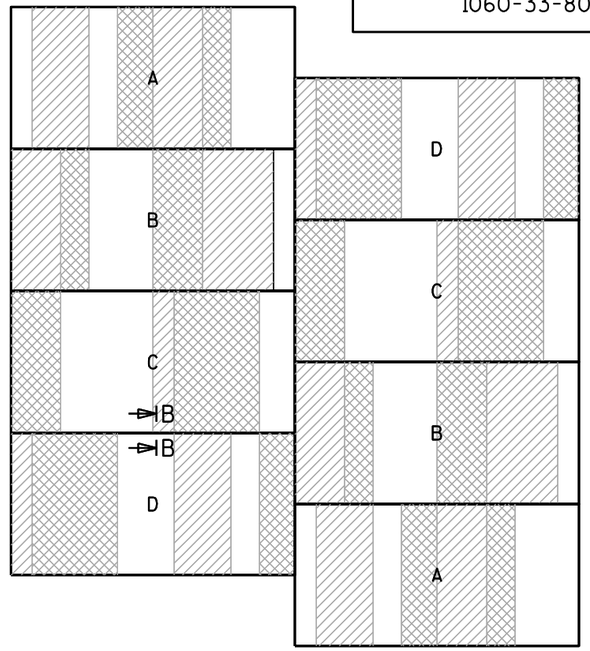
WALL PANEL "D"

5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



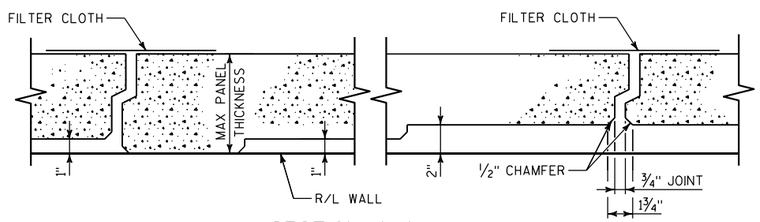
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"



SECTION A-A

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

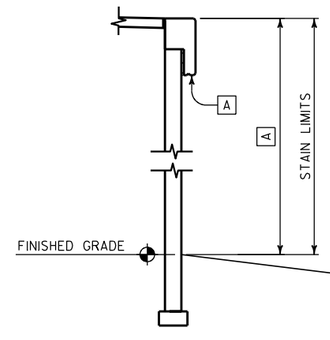
STAIN COLORS

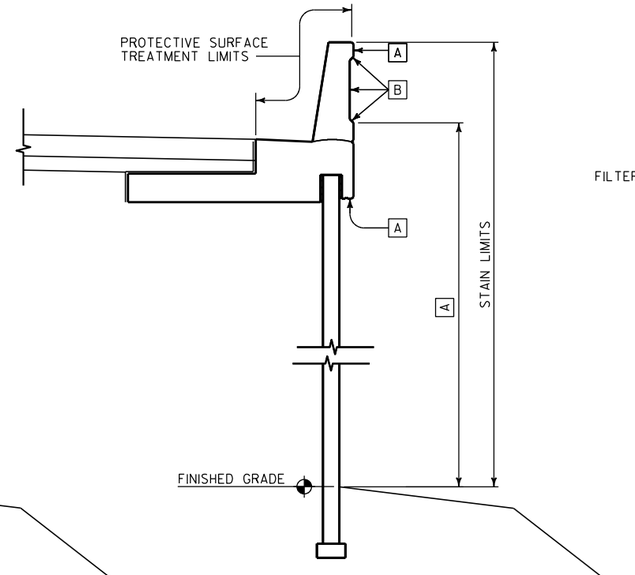
THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

BASE COLOR - 33564

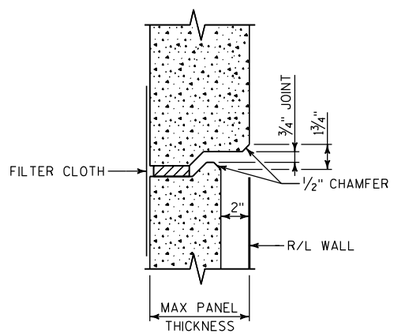
ACCENT COLOR 1 - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.





MSE WALL STAINING DIAGRAM



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

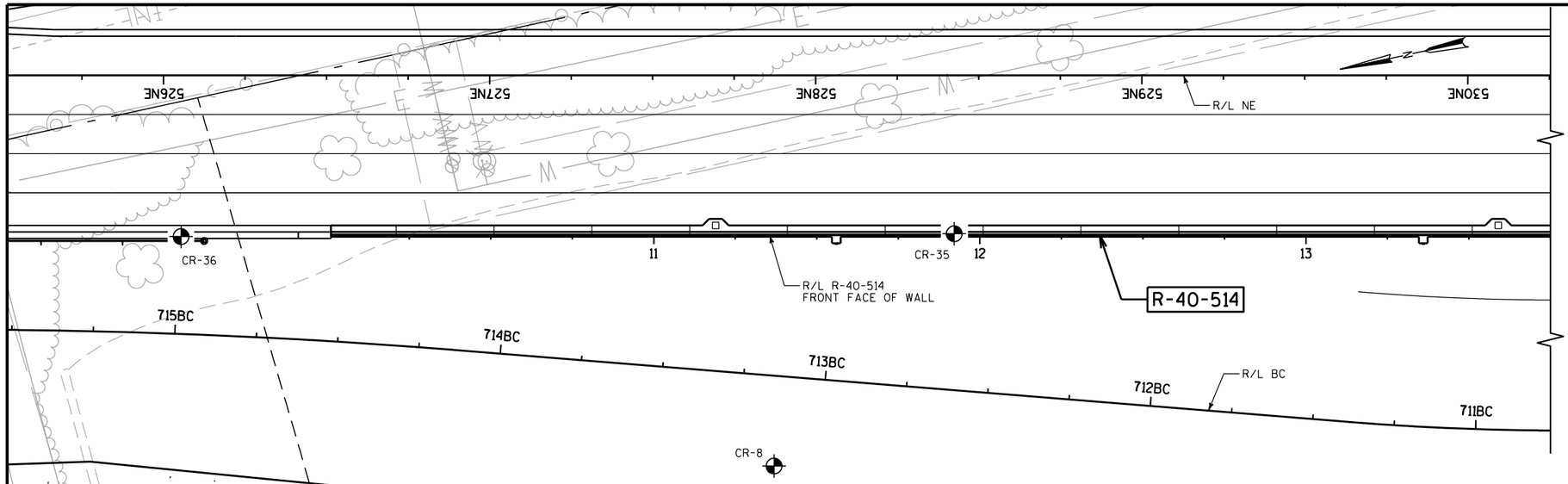
DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 13 OF 15

8

8



NOTES

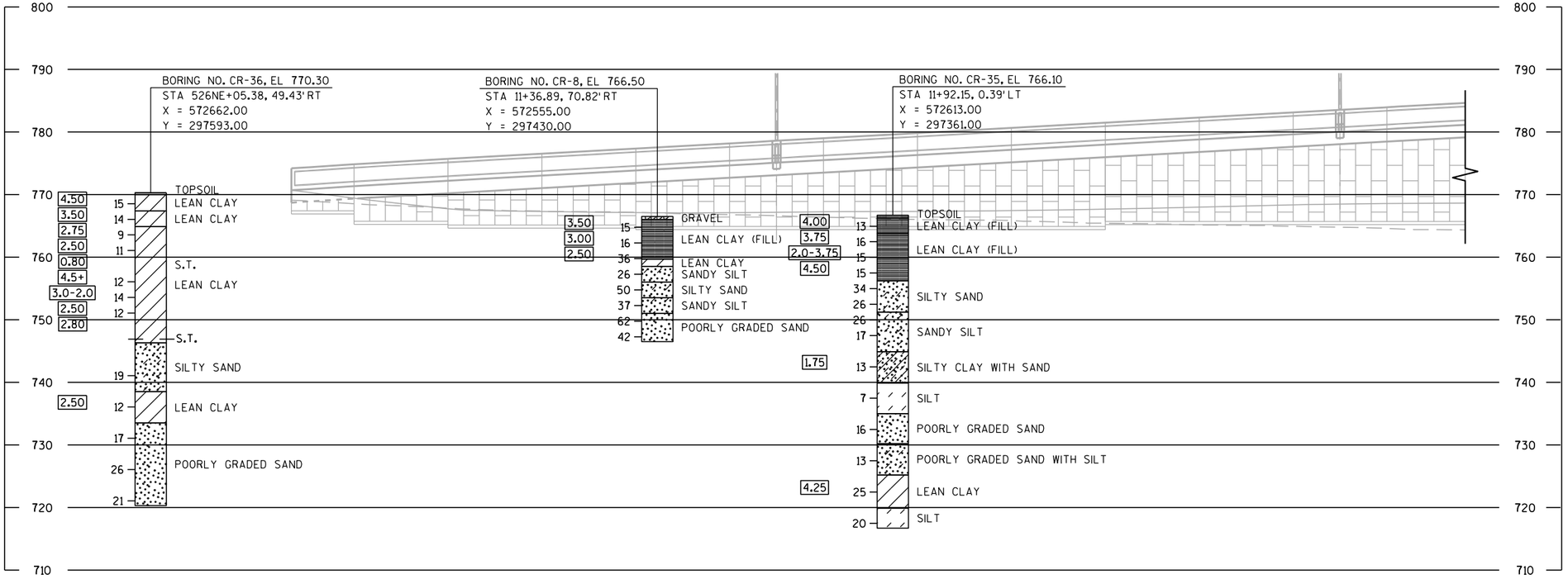
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-514, UNLESS NOTED OTHERWISE.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 2, 2012 - BORING CR-8
JUNE 7, 2012 - BORING CR-35
APRIL 8, 2012 - BORING CR-36



8

8

STATE PROJECT NUMBER

1060-33-80

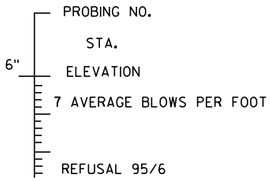
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

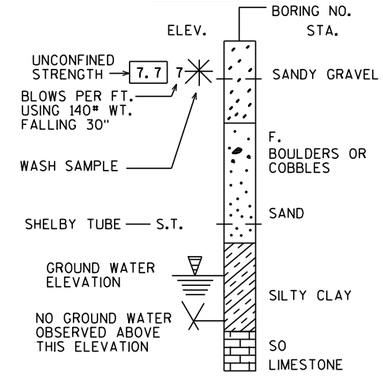
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY	TEK	PLANS CK'D.	EKM

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 14 OF 15

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-514\cds\R514_080501_se.dgn
PLOT DATE : 30-APR-2014 13:39
PLOT BY : MSCTEK
PLOT NAME : R514_080501_se
PLOT SCALE : 40:1

NOTES

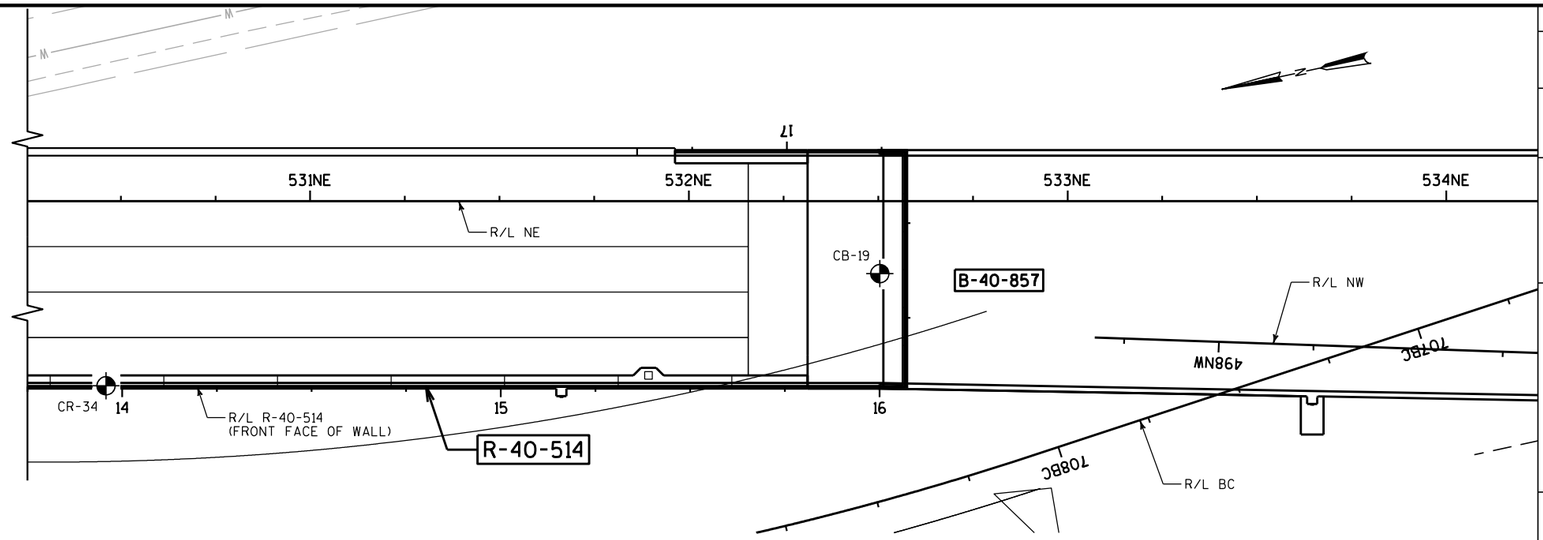
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

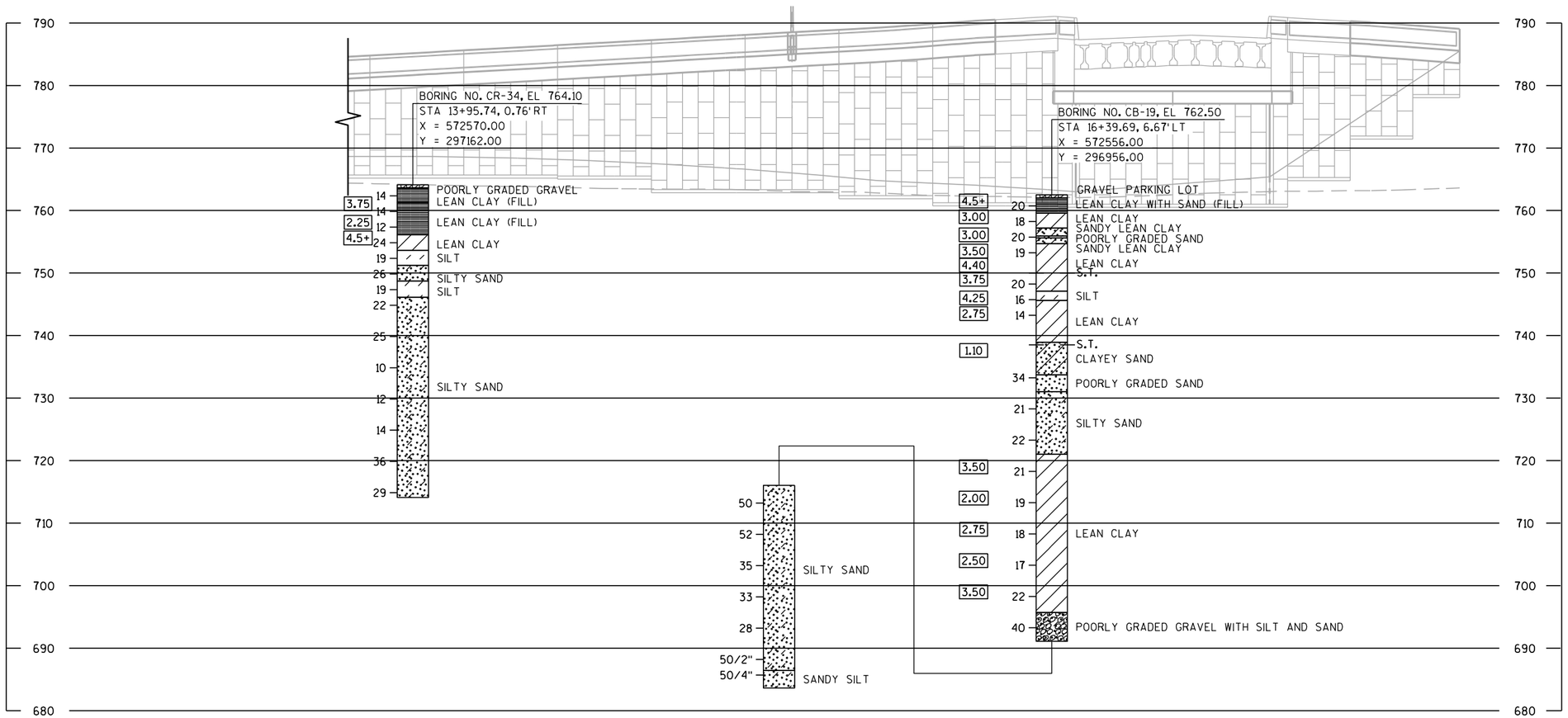
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-514.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JUNE 5, 2012 - BORING CR-34
MAY 22, 2012 - BORING CB-19





STATE PROJECT NUMBER

1060-33-80

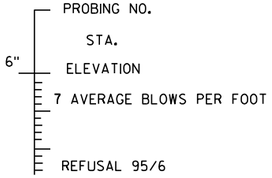
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

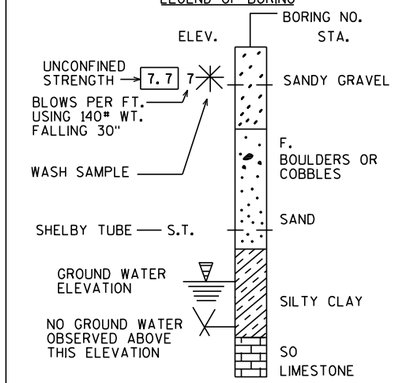
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-514

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 2)

SHEET 15 OF 15

8

8

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE NORTH ABUTMENT BODY OF BRIDGE B-40-849 TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHARGE LOAD ABOVE THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL IN FRONT OF THE SOUTH ABUTMENT BODY OF BRIDGE B-40-855 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A VERTICAL EARTH SURCHARGE LOAD BEHIND THE ABUTMENT AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF THE ABUTMENT BODY FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

R/L LEGEND

(RL1) RETAINING WALL ALIGNMENT KINK
STA 11+70.27 (R/L RETAINING WALL)
STA 582SE+18.68, 8'-11⅜" RT (R/L SE)
X = 572281.75, Y = 294392.30

(RL2) RETAINING WALL ALIGNMENT KINK
STA 12+30.30 (R/L RETAINING WALL)
STA 582SE+80.27, 10'-11⅜" RT (R/L SE)
X = 572300.29, Y = 294449.40

(RL3) RETAINING WALL R-40-522 CORNER
STA 12+70.30 (R/L RETAINING WALL)
STA 583SE+20.27, 10'-11⅜" RT (R/L SE)
X = 572311.37, Y = 294487.83

HORIZONTAL CURVE DATA

WALL CURVE

P.I. =	STA 13+44.78
X =	572262.36
Y =	294523.18
Δ =	2°43'36.72" LT
D =	6°36'59.54"
R =	865.95'
T =	20.61
L =	41.21
E =	0.25
P.C. =	STA 13+24.17
X =	572259.61
Y =	294502.75
P.T. =	STA 13+65.38
X =	572264.13
Y =	294543.71

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, NOTES & PROFILE GRADE LINES
3. TYPICAL WALL SECTION (1 OF 3)
4. TYPICAL WALL SECTION (2 OF 3)
5. TYPICAL WALL SECTION (3 OF 3)
6. ELEVATION TABLES & REINFORCEMENT SCHEDULE
7. PARAPET, COPING & ANCHOR SLAB DETAILS
8. SEGMENT B REINFORCEMENT DETAILS
9. SEGMENT E & F REINFORCEMENT DETAILS
10. LIGHT SUPPORT DETAILS
11. INLET DETAILS
12. ANCHOR SLAB INLET COVER SPECIAL
13. AESTHETIC WALL TREATMENT DETAILS
14. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-522 (STAGE 1)

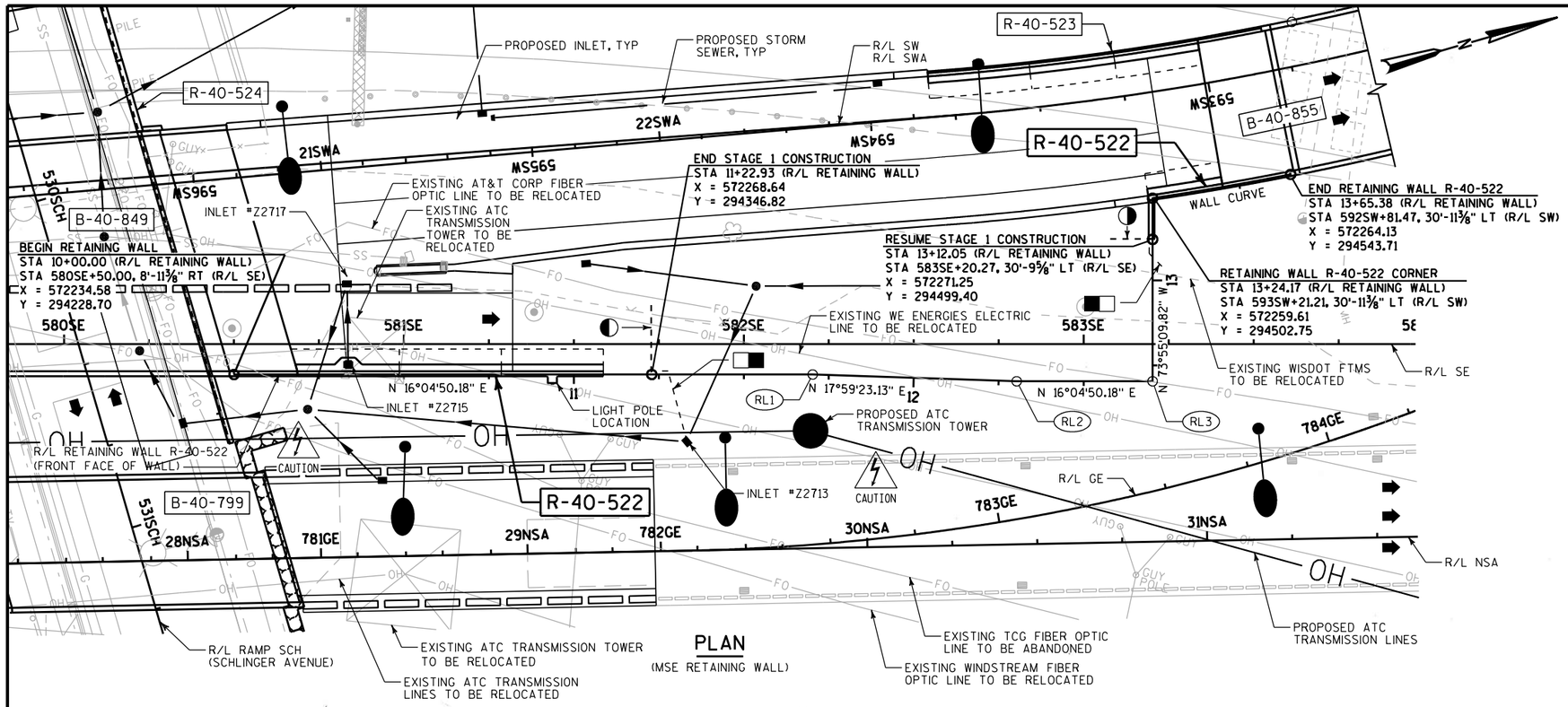
RAMP SE RETAINING WALL, B-40-849 TO B-40-855

COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~: WEST ALLIS
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY: EKM	DESIGN CK'D.: AAG
DRAWN BY: MS	PLANS CK'D.: EKM

GENERAL PLAN & ELEVATION

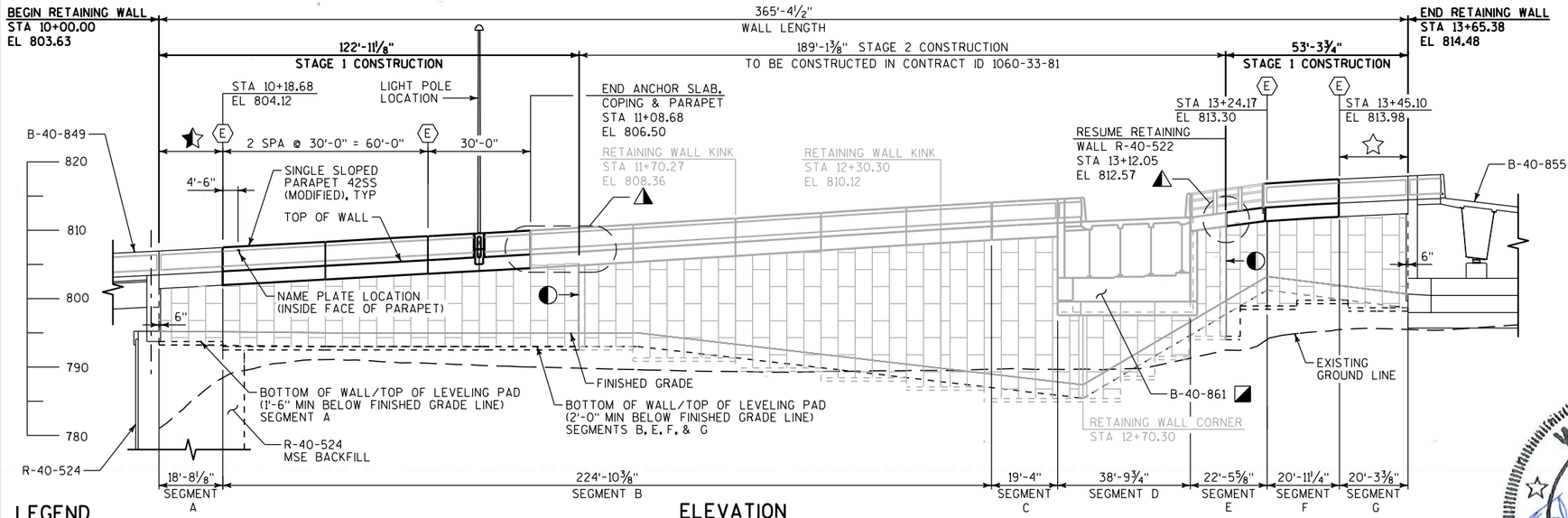
SHEET 1 OF 14

WISCONSIN
EDWARD K. McCRIGHT
E37422
MILWAUKEE, WI
5/1/14
PROFESSIONAL ENGINEER



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- STRUCTURAL APPROACH SLAB, SEE B-40-849 PLANS
- STRUCTURAL APPROACH SLAB SEE B-40-855 PLANS
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT, SEE SHEETS 3 & 4 FOR DETAILS
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE SHEET 4 FOR DETAILS
- TO BE CONSTRUCTED IN CONTRACT ID 1060-33-81
- SEE SHEET 9 FOR RESUME RETAINING WALL COPING DETAILS
- SEE SHEET 8 FOR END ANCHOR SLAB, COPING AND PARAPET DETAILS
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO PROPOSED INLET NO. Z2713
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN APPROX LOCATION STA 13+05.00, 2.00' RT INVERT EL 796.00

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID - ITEM	UNIT	SEGMENT A	SEGMENT B	SEGMENT E	SEGMENT F	SEGMENT G	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	65	---	15	---	80
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	---	55	---	13	---	68
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	---	7,410	---	2,045	---	9,455
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	19	1	5	---	25
517.1050.S.0005	ARCHITECTURAL SURFACE TREATMENT R-40-522	SF	150	1,085	140	235	265	1,875
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	---	26	11	---	---	37
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	19	105	13	21	21	179
612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	---	---	1	---	---	1
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	---	3	---	3	---	6
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	---	73	---	20	---	93
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	---	1	---	2	---	3
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	---	1	---	---	---	1
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	---	1	---	---	---	1
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	---	1	---	---	---	1
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	185	1,295	160	275	305	2,220
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	---	120	155	---	---	275
	NON BID ITEMS							
	PREFORMED JOINT FILLER	SIZE						¾"
	NON-BITUMINOUS JOINT FILLER	SIZE						¾", 1"
	CORK FILLER	SIZE						1"
	NAME PLATE	EACH						1
	EXPANDED POLYSTYRENE	SIZE						1"

ALL ITEMS ARE CATEGORY 3040

WALL EXTERNAL STABILITY EVALUATION

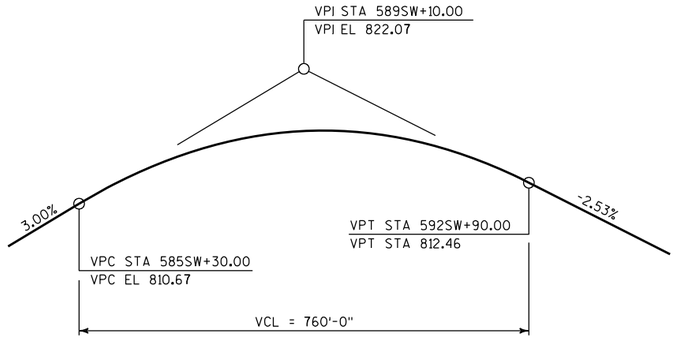
DIMENSIONS		
WALL HEIGHT (FEET)	13.5	15.8
EXPOSED WALL HEIGHT (FEET)	11.5	13.8
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	9.5	11
WALL STATION (R/L RETAINING WALL R-40-522)	11+08.68	13+65.38
BORING USED	SR-42, SR-43, SB-17	CB-22, CB-32
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING	1.06	1.15
ECCENTRICITY	1.12	1.25
BEARING	1.01	1.33
GLOBAL STABILITY	1.06	1.10

⚹ FINAL DESIGN FOR INTERNAL STABILITY, EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
MSE BACKFILL ⚹	120	30	0	30	0
NEW FILL	133	0	2000	30	0
EXISTING CLAY FILL	130	0	900	28	0
HARD NATIVE CLAY	145	0	4500	36	200
STIFF NATIVE CLAY	135	0	1000	30	75
VERY STIFF NATIVE CLAY	135	0	2500	32	100

⚹ DESIGN WALL FOR THESE VALUES.



PROFILE GRADE LINE - SW

(SOUTH TO WEST RAMP)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATION ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/ QMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-522 WITH THE NORTH ABUTMENT OF BRIDGE B-40-849 AND SOUTH ABUTMENT OF BRIDGE B-40-855.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE TO BE EPOXY COATED.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR SEGMENTS B AND F CAST-IN-PLACE ANCHOR SLAB, COPING AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" & "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR SEGMENT E CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE AT LEAST 2'-0" BELOW FINISHED GRADE. FOR SEGMENTS B, E, F & G, THE TOP OF THE LEVELING PAD IS ASSUMED TO BE AT LEAST 1'-6" BELOW FINISHED GRADE FOR SEGMENT A.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

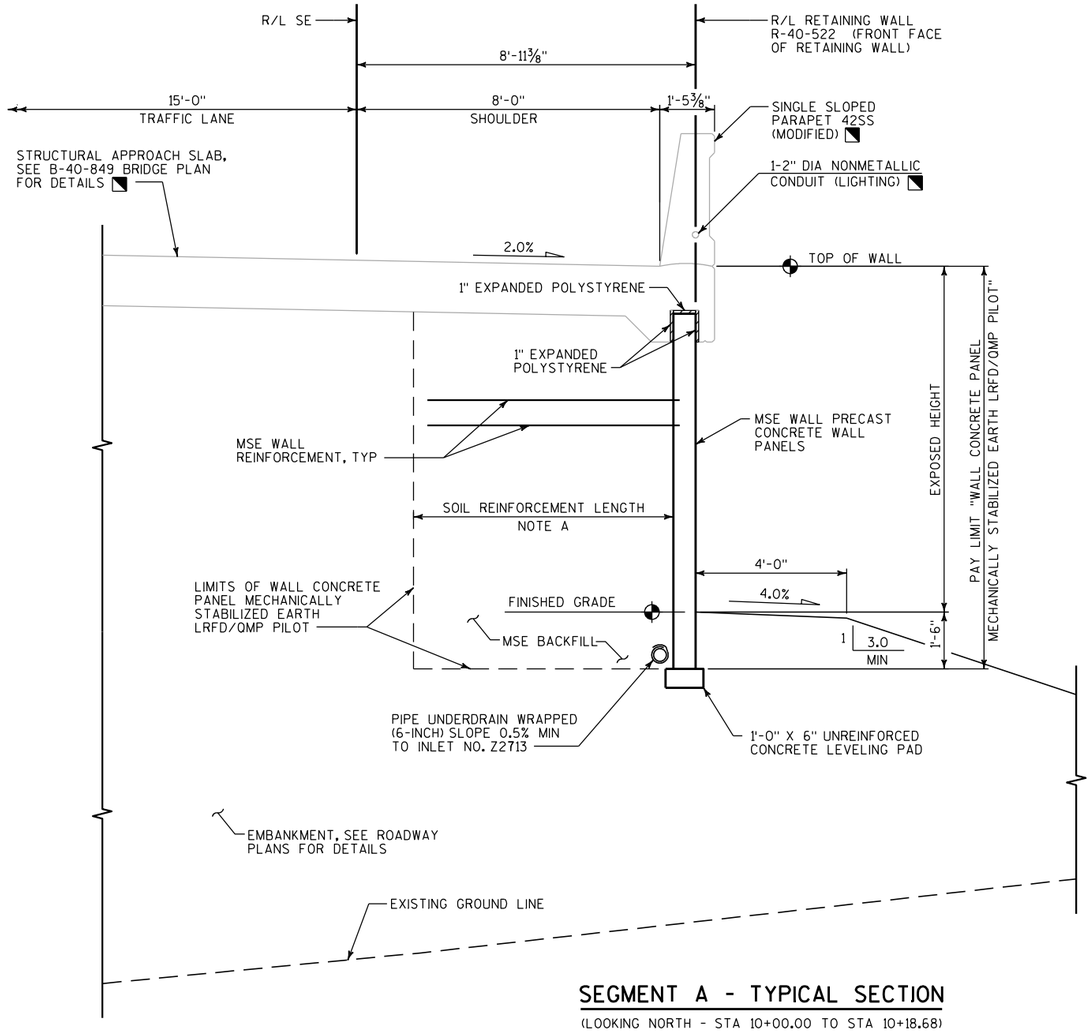
STRUCTURE R-40-522 (STAGE 1)

DRAWN BY MS | PLANS CK'D. EKM

QUANTITIES, NOTES & PROFILE GRADE LINES

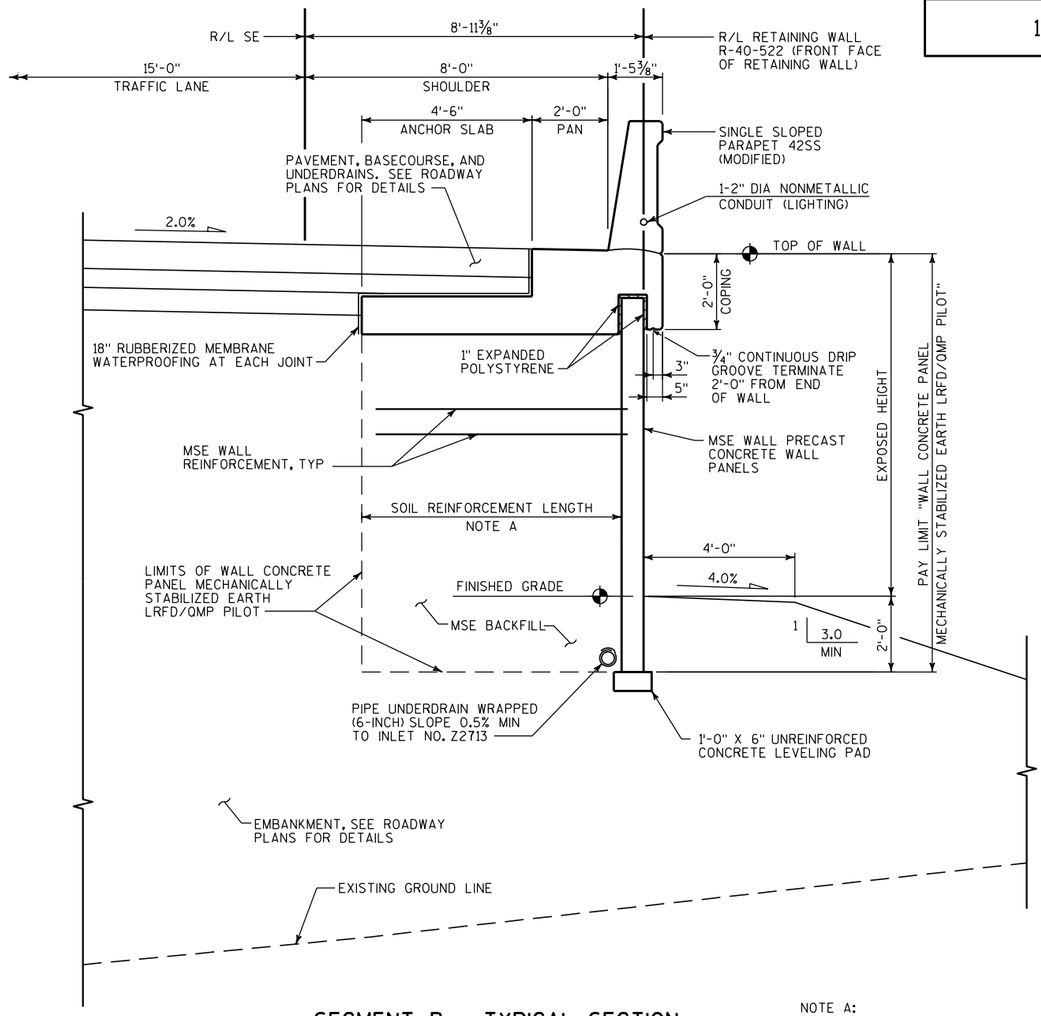
SHEET 2 OF 14

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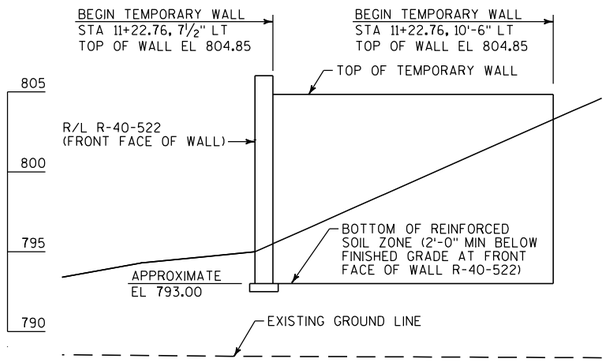
SEGMENT A - TYPICAL SECTION

(LOOKING NORTH - STA 10+00.00 TO STA 10+18.68)



SEGMENT B - TYPICAL SECTION

(LOOKING NORTH - STA 10+18.68 TO STA 11+08.68)



ELEVATION AT TEMPORARY WALL

LOOKING SOUTH - STA 11+22.76

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

LEGEND

NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY MS | PLANS CK'D. EKM

TYPICAL WALL SECTIONS (1 OF 3)

SHEET 3 OF 14

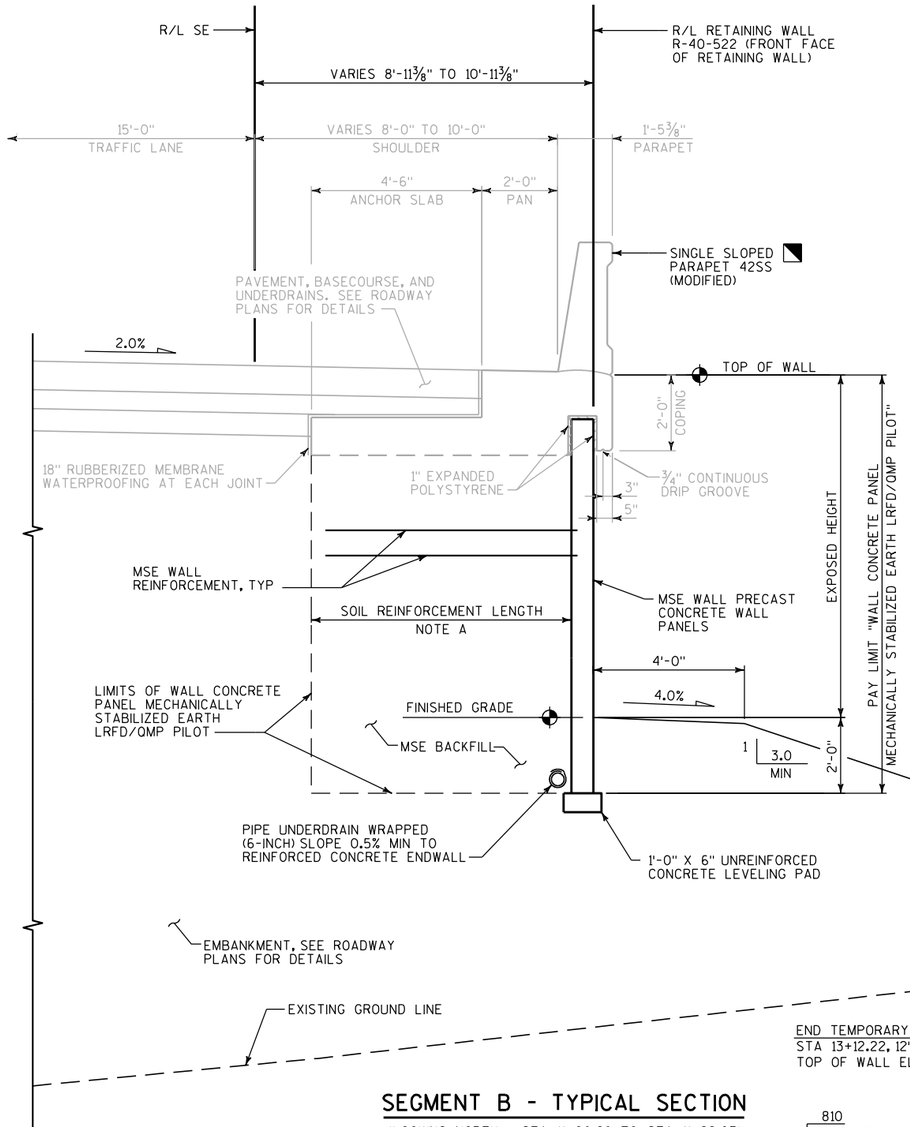
STATE PROJECT NUMBER

1060-33-80

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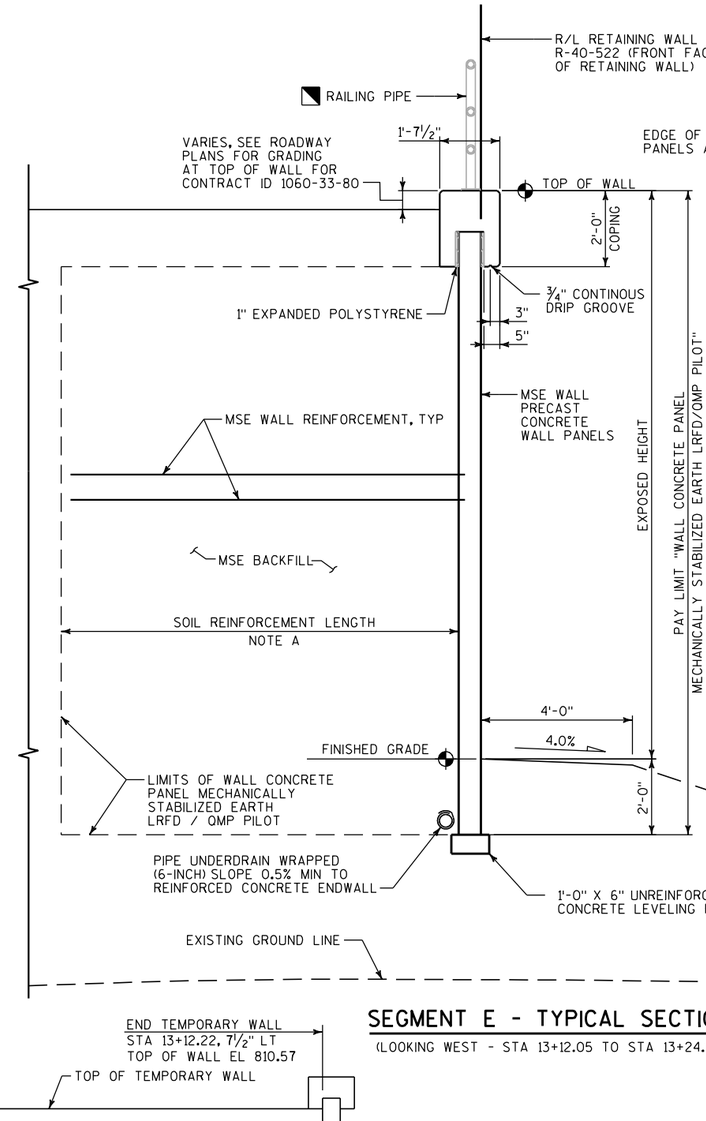
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STATE PROJECT NUMBER
1060-33-80



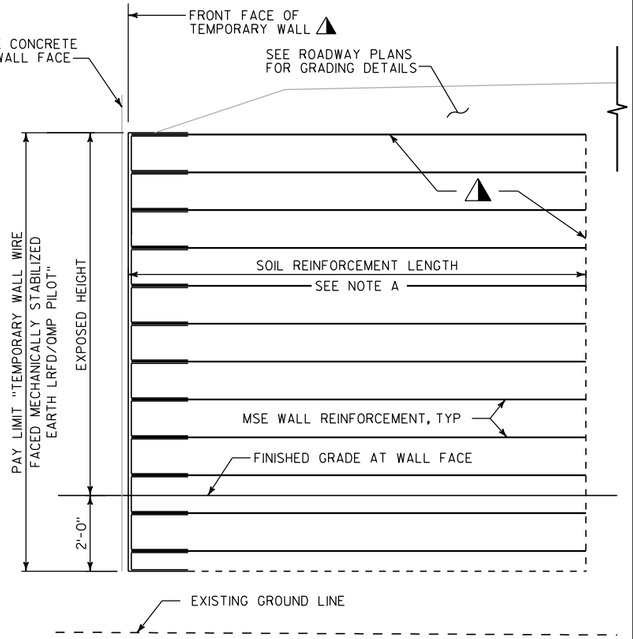
SEGMENT B - TYPICAL SECTION

(LOOKING NORTH - STA 11+08.68 TO STA 11+22.93)



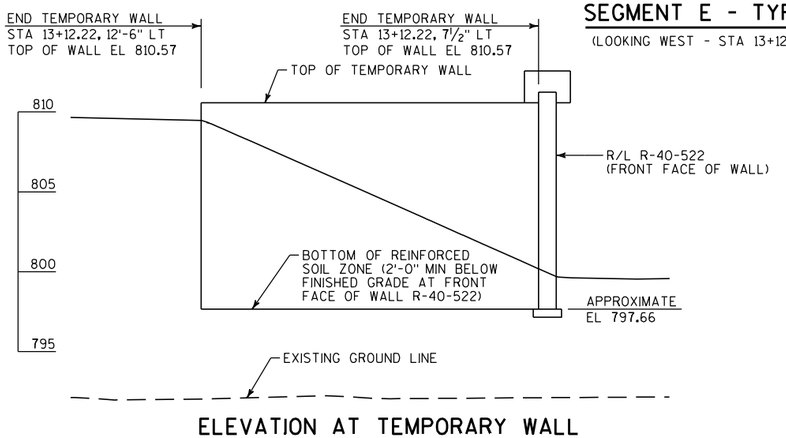
SEGMENT E - TYPICAL SECTION

(LOOKING WEST - STA 13+12.05 TO STA 13+24.17)



SECTION THRU TEMPORARY WALL

LOOKING WEST - STA 11+22.76, LOOKING SOUTH - STA 13+12.22



ELEVATION AT TEMPORARY WALL

LOOKING WEST - STA 13+12.22

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

LEGEND

- TO BE CONSTRUCTED IN CONTRACT ID 1060-33-81
- LIMITS OF TEMPORARY WALL WIRE FACED MECHANICALLY STABILZED EARTH LRFD/OMP PILOT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY MS | PLANS CK'D. EKM

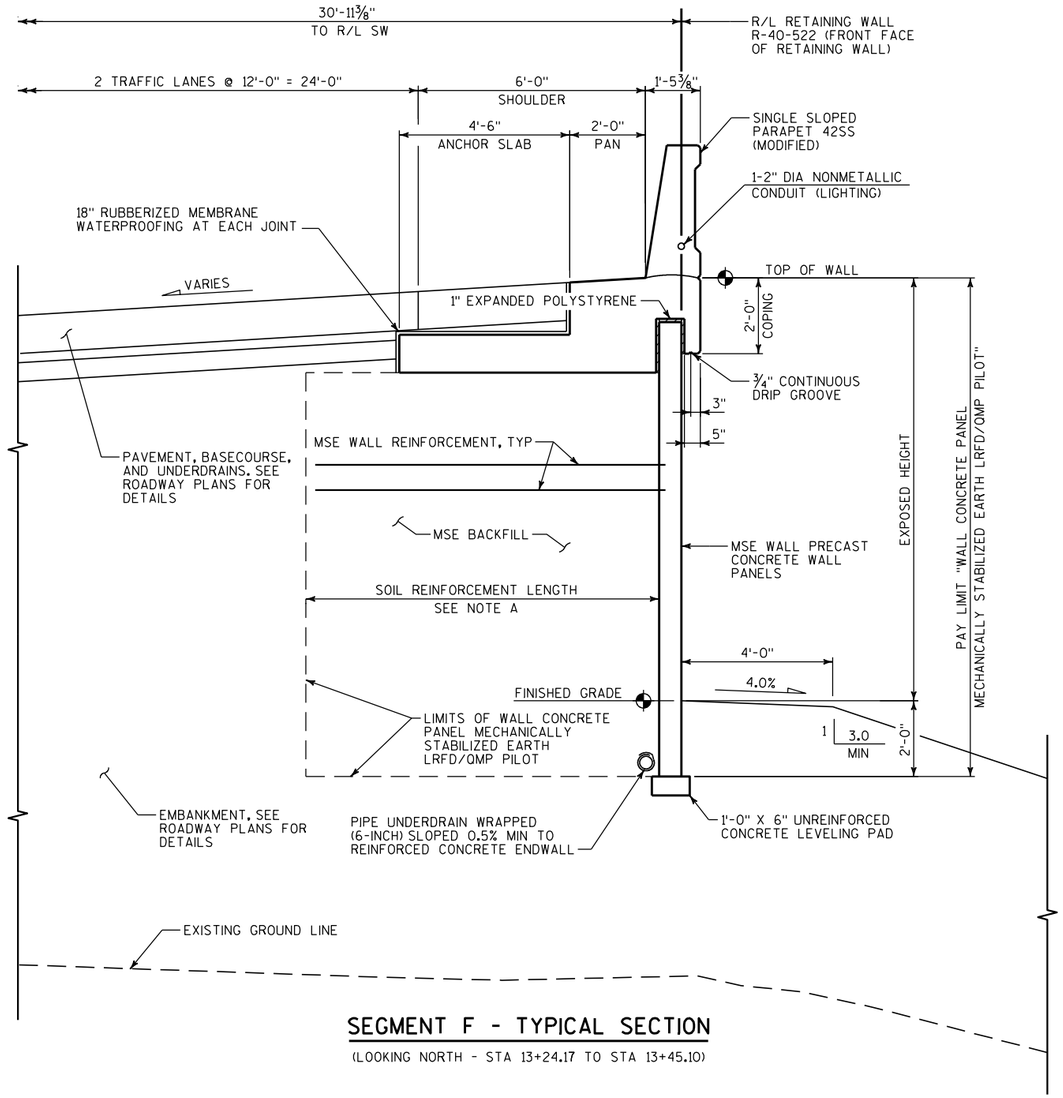
TYPICAL WALL SECTIONS (2 OF 3)

SHEET 4 OF 14

8

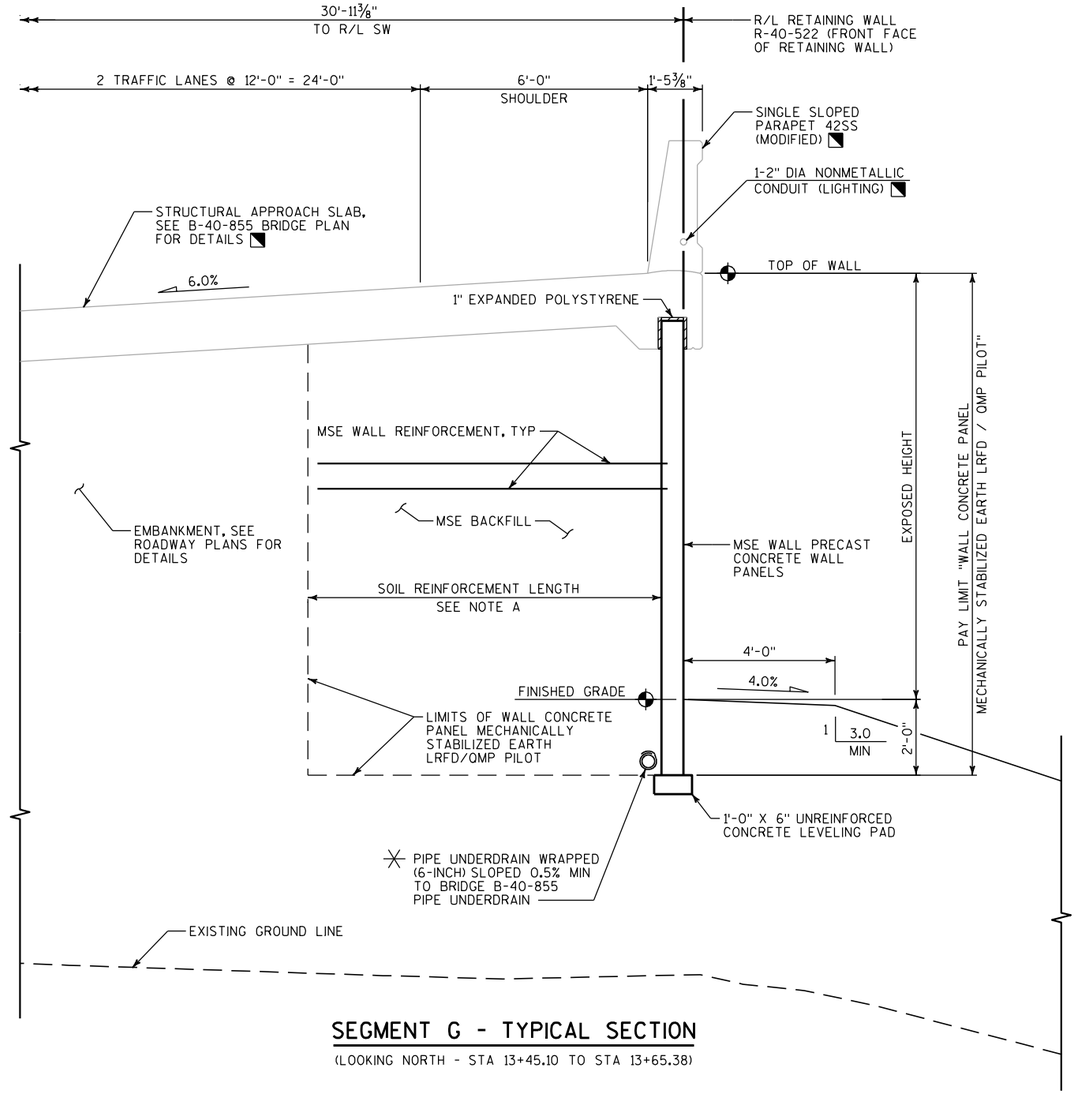
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STATE PROJECT NUMBER
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SEGMENT F - TYPICAL SECTION

(LOOKING NORTH - STA 13+24.17 TO STA 13+45.10)



SEGMENT G - TYPICAL SECTION

(LOOKING NORTH - STA 13+45.10 TO STA 13+65.38)

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

LEGEND

- ◥ NOT A RETAINING WALL ITEM
- ✳ PIPE FITTINGS REQUIRED TO CONNECT PIPE UNDERDRAIN WRAPPED (6-INCH) TO BRIDGE B-40-855 UNDERDRAIN ARE INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY MS | PLANS CK'D. EKM

TYPICAL WALL SECTIONS (3 OF 3)

SHEET 5 OF 14

STATE PROJECT NUMBER
1060-33-80

SEGMENT A WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+00.00	803.63	795.22	781.17
10+09.35	803.89	795.18	785.24
10+18.68	804.12	795.14	788.57

SEGMENT B WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+18.68	804.12	795.14	788.57
10+33.68	804.53	795.07	790.50
10+48.68	804.90	795.01	791.10
10+63.68	805.29	795.00	790.44
10+78.68	805.67	795.00	790.01
10+93.68	806.08	795.00	789.92
11+08.68	806.50	795.00	789.49
☆ 11+23.68	806.91	795.00	788.38
☆ 11+38.68	807.35	795.00	788.69

SEGMENT E WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
13+12.05	812.57	799.66	792.13
13+23.66	813.30	803.07	793.90

SEGMENT F WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
13+24.17	813.30	803.22	794.03
13+34.63	813.64	802.57	794.73
13+45.10	813.98	801.92	795.42

SEGMENT G WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
13+45.10	813.98	801.92	795.42
13+55.24	814.23	801.28	795.93
13+65.38	814.48	800.65	796.10

BILL OF BARS - SEGMENT B

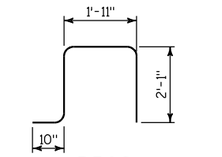
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
B501	X	221	6'-5"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
B502	X	137	6'-7"	X	COPING - VERTICAL TIE
B503	X	137	4'-8"	X	COPING - HORIZONTAL TIE
B504	X	83	3'-10"	X	COPING - HORIZONTAL TIE
B505	X	137	5'-11"	X	PARAPET/COPING - VERTICAL TIE
B406	X	60	29'-7"		ANCHOR SLAB & COPING - LONGITUDINAL
B607	X	2	5'-11"	X	ANCHOR SLAB - LIGHT BASE HORIZONTAL
B608	X	2	4'-9"	X	ANCHOR SLAB - LIGHT BASE HORIZONTAL
B509	X	5	10'-3"	X	ANCHOR SLAB - LIGHT BLISTER STIRRUP
B410	X	12	3'-7"		ANCHOR SLAB & COPING - LONGITUDINAL
R501	X	135	6'-8"	X	PARAPET - VERTICAL TIE
R802	X	24	29'-7"		PARAPET - LONGITUDINAL

BILL OF BARS - SEGMENT B - LIGHT SUPPORT

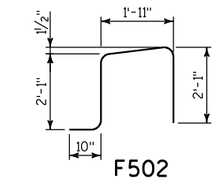
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
L501	X	6	8'-1"	X	LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X	LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X	LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X	LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X	LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X	LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X	LIGHT SUPPORT - VERTICAL

BILL OF BARS - SEGMENT F

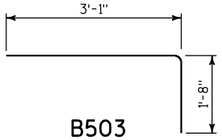
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
F501	X	53	6'-5"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
F502	X	35	6'-7"	X	COPING - VERTICAL TIE
F503	X	35	4'-8"	X	COPING - HORIZONTAL TIE
F504	X	18	3'-10"	X	COPING - HORIZONTAL TIE
F505	X	35	5'-11"	X	PARAPET/COPING - VERTICAL TIE
F406	X	20	21'-7"		ANCHOR SLAB & COPING - LONGITUDINAL
R501	X	35	6'-8"	X	PARAPET - VERTICAL TIE - 42SS PARAPET
R803	X	8	21'-7"		PARAPET - LONGITUDINAL



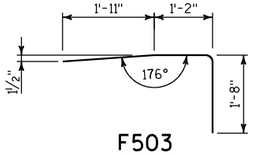
B502



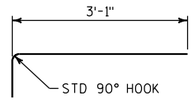
F502



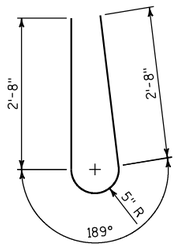
B503



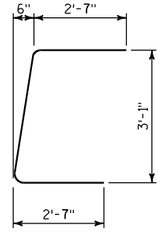
F503



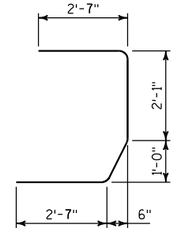
B504 & F504



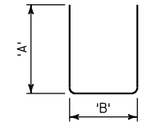
R501



L501

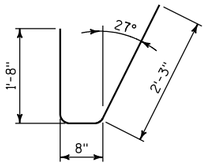


L502

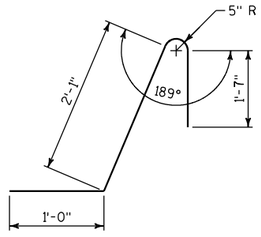


L503, L604, L406

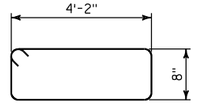
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



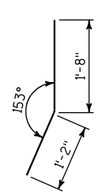
L505



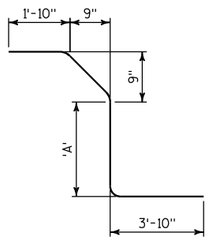
B505 & F505



B509



L407



B607 & B608

BAR MARK	DIM 'A'
B607	2'-7"
B608	2'-1"

LEGEND

◣ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

☆ TOP OF WALL ELEVATION AT CONCLUSION OF PROJECT ID 1060-33-81. TOP OF WALL PANELS SHALL BE 1'-6" MIN/ 1'-9" MAX BELOW THIS ELEVATION.

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

SEE INLET DETAIL SHEET FOR REINFORCEMENT SCHEDULE REQUIRED AT INLET LOCATION.

SEE LIGHT SUPPORT DETAILS SHEET FOR REINFORCEMENT SCHEDULE REQUIRED AT LIGHT POLE LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

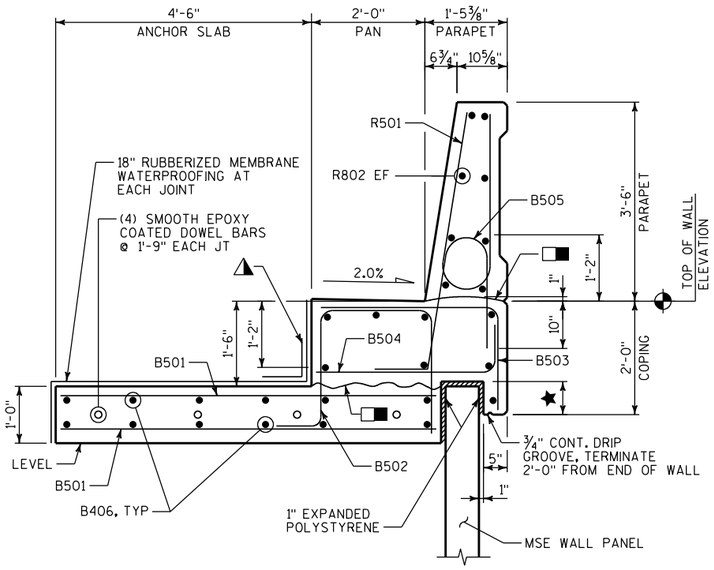
STRUCTURE R-40-522 (STAGE 1)

DRAWN BY BHI | PLANS CK'D. EKM

ELEVATION TABLES & REINFORCEMENT SCHEDULE

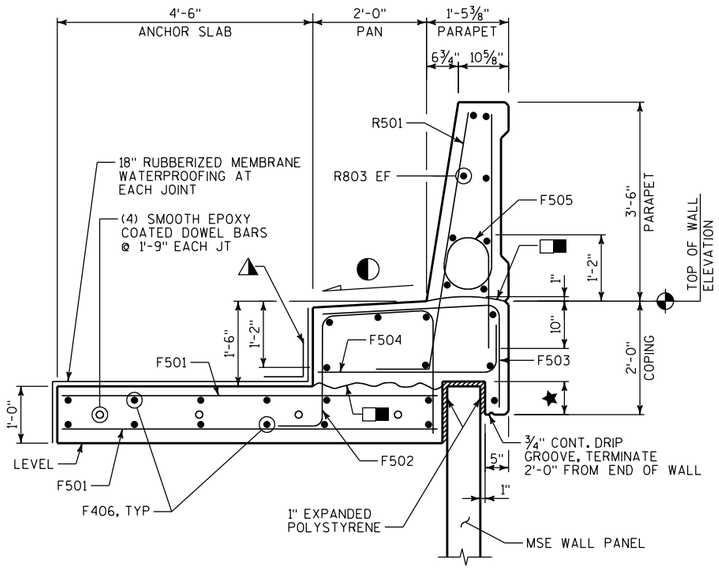
SHEET 6 OF 14

STATE PROJECT NUMBER
1060-33-80



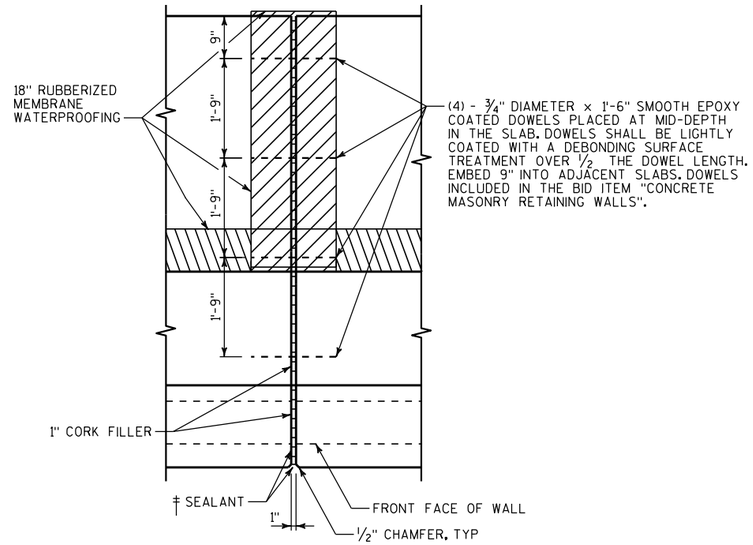
TYPICAL SECTION

SEGMENT B



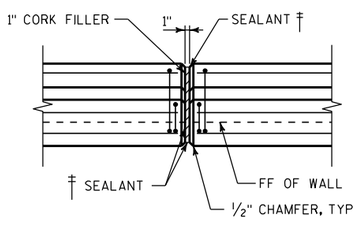
TYPICAL SECTION

SEGMENT F

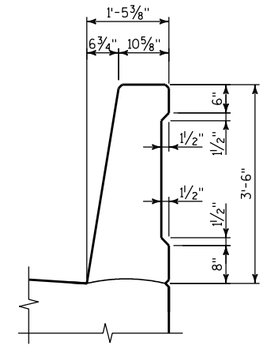


ANCHOR SLAB EXPANSION JOINT

LOCATE EXPANSION JOINTS OVER WALL JOINTS.
DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.



PARAPET EXPANSION JOINT



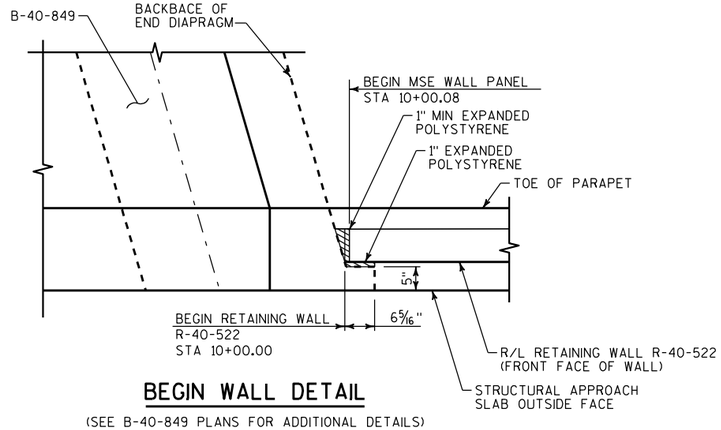
SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMINSIONS

LEGEND

- CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH
- ‡ NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ★ 3" MIN, 6" MAX
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT
- ◐ SLOPE VARIES FROM 5.44% AT STA 13+24.16 TO 6.00% AT STA 13+45.09

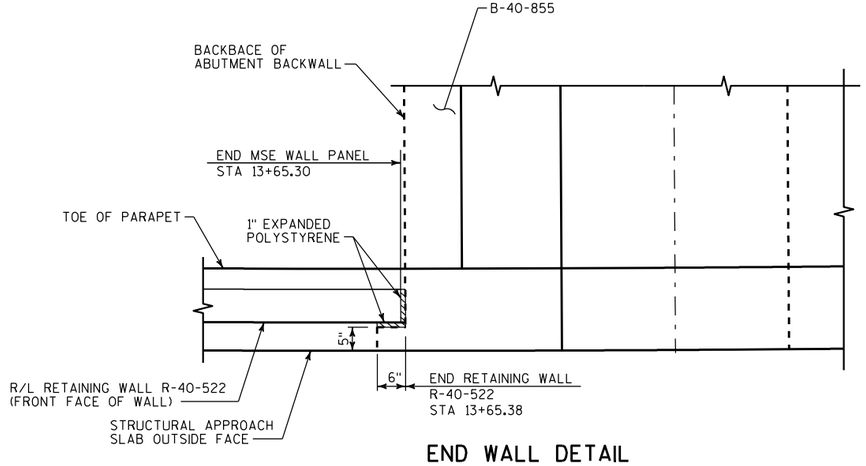
NOTE

SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATION OF EXPANSION JOINTS



BEGIN WALL DETAIL

(SEE B-40-849 PLANS FOR ADDITIONAL DETAILS)



END WALL DETAIL

(SEE B-40-855 PLANS FOR ADDITIONAL DETAILS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY TEK | PLANS CK'D. EKM

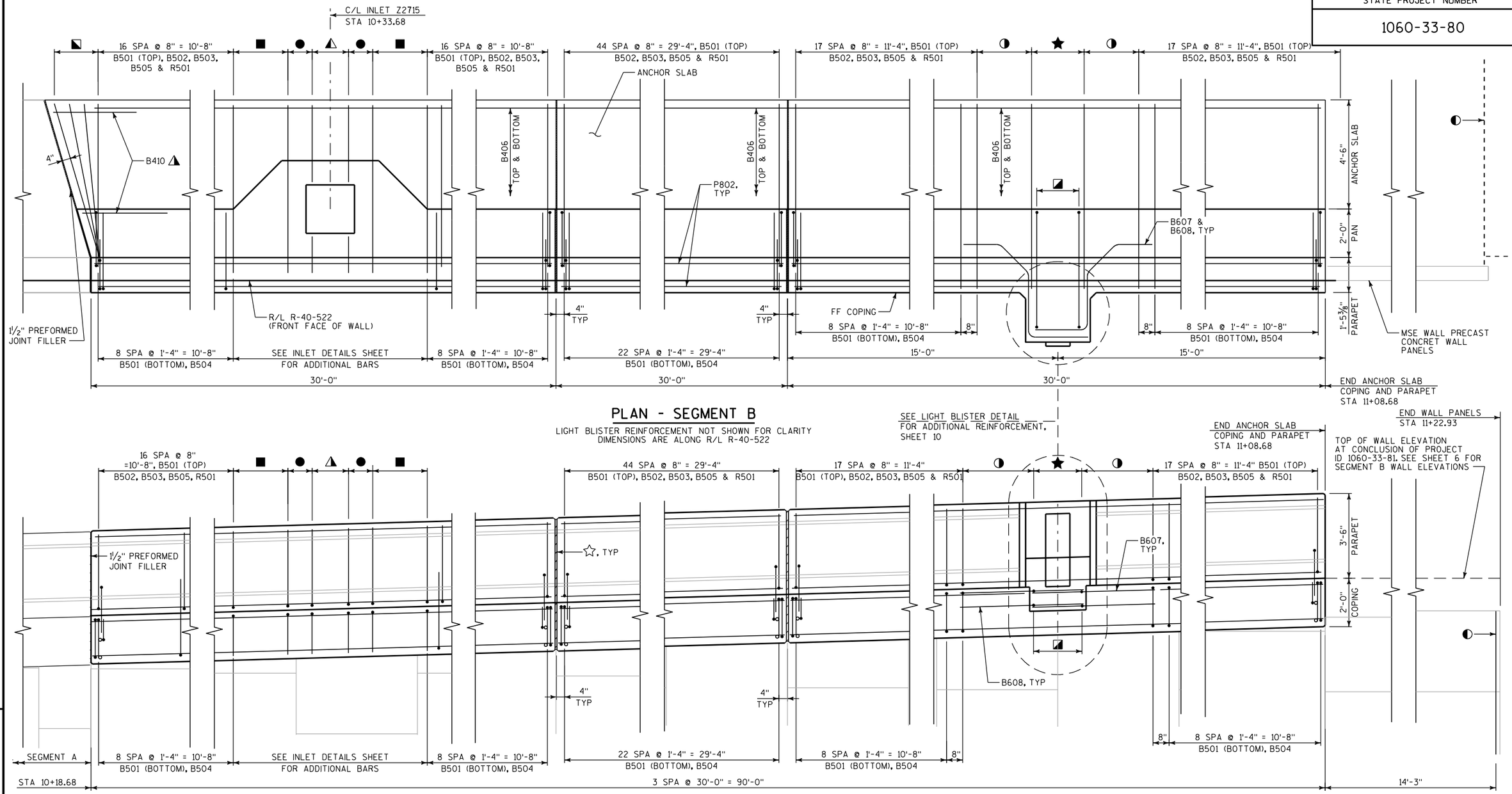
PARAPET, COPING, & ANCHOR SLAB DETAILS

SHEET 7 OF 14

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-522\cds\R522_080302_de.dgn
PLOT DATE : 30-APR-2014 13:49
PLOT BY : MSCTEK
PLOT NAME : R522_080302_de
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER

1060-33-80



PLAN - SEGMENT B

LIGHT BLISTER REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE ALONG R/L R-40-522

ELEVATION - SEGMENT B

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-522

LEGEND

- ☆ 1" CORK FILLER
- ◭ 1'-8" MIN LAP REQUIRED FOR B406 & B410 BARS
- ● 2 SPA @ 6" = 1'-0", B501 (TOP AND BOTTOM), B502, B503, B504, B505 & R501
- ◑ 4 SPA @ 6¾" = 2'-3", B501 (TOP AND BOTTOM), B502, B503, B504, B505 & R501
- ◐ TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE SHEETS 3 & 4 FOR DETAILS
- ◪ B509, SEE LIGHT SUPPORT DETAILS SHEET FOR SPACING
- ◺ SPLAY 3 - B501 (TOP & 2 - B501 (BOTTOM)
- ◭ SEE INLET DETAILS SHEET FOR BAR MARKS AND SPACING
- ★ B501 (TOP AND BOTTOM), B502, B503, B504 & B505 TO MATCH LIGHT SUPPORT SPACING, SEE LIGHT SUPPORT DETAILS SHEET
- ■ 4 SPA @ 6¾" = 2'-3", B501 (TOP), B502, B503, B505 & R501
  2 SPA @ 1'-1½" = 2'-3", B501 (BOTTOM) & B504

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT B REINFORCEMENT DETAILS

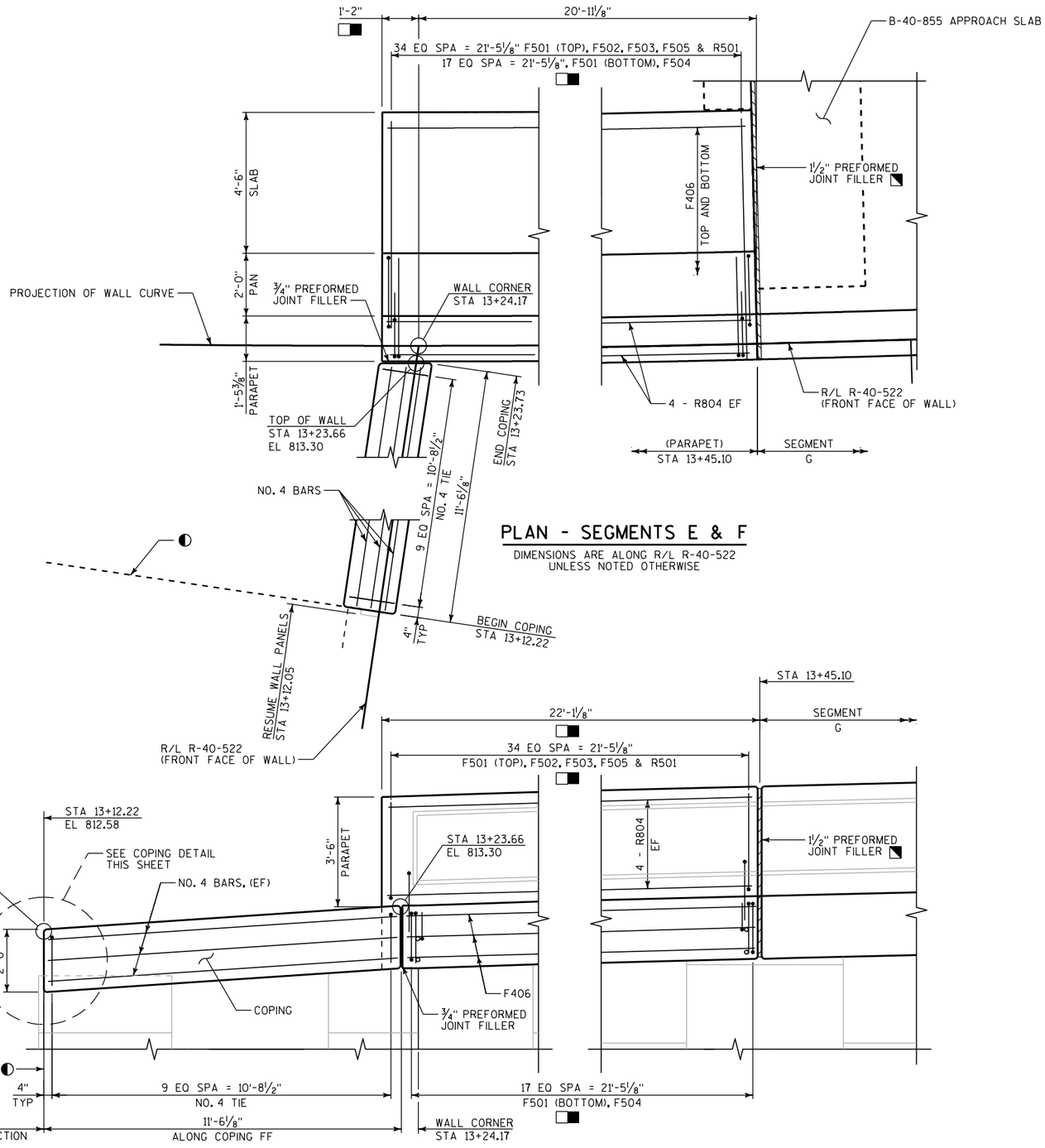
SHEET 8 OF 14

8

8

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PLOT BY : MSCTEK
PLOT NAME : R522_080303_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80

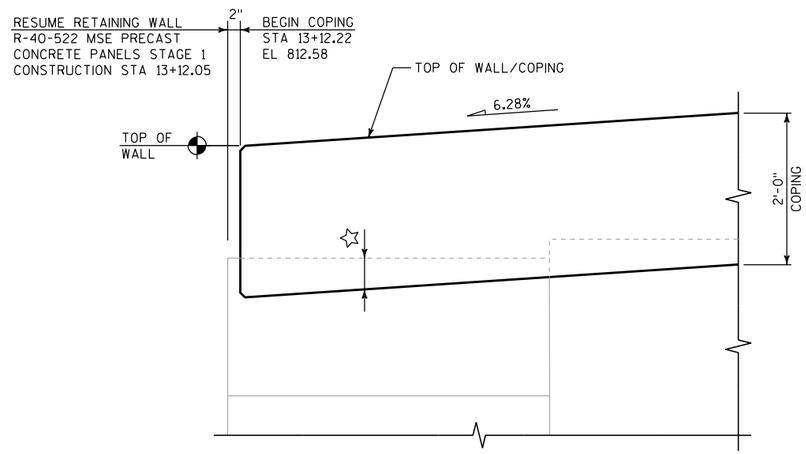


PLAN - SEGMENTS E & F

DIMENSIONS ARE ALONG R/L R-40-522
UNLESS NOTED OTHERWISE

ELEVATION - SEGMENTS E & F

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-522



COPING DETAIL

LOOKING AT FRONT FACE OF WALL

LEGEND

- NOT A RETAINING WALL ITEM
- 3" MIN, 6" MAX
- DIMENSIONS GIVEN ALONG PROJECTION OF WALL CURVE. SEE SHEET 2 FOR HORIZONTAL CURVE DATA
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE SHEET 6 FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY BHI | PLANS CK'D. EKM

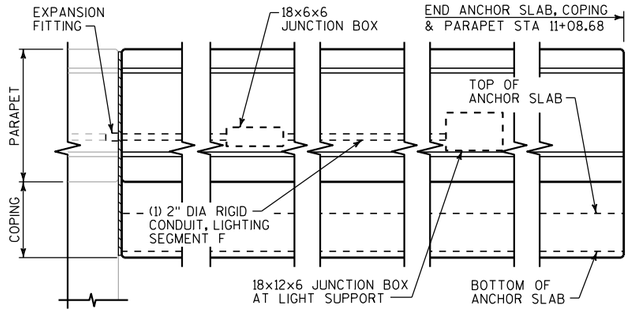
SEGMENTS E & F REINFORCEMENT DETAILS

SHEET 9 OF 14

8

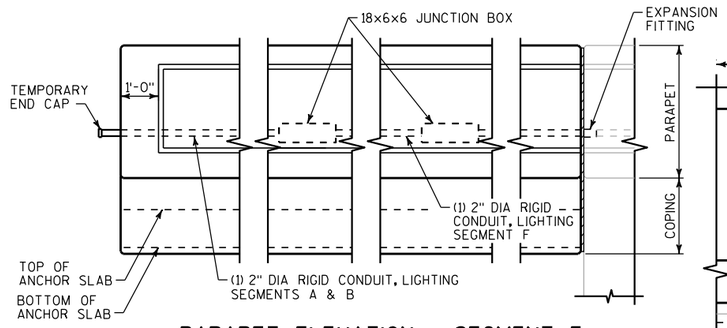
8

STATE PROJECT NUMBER
1060-33-80



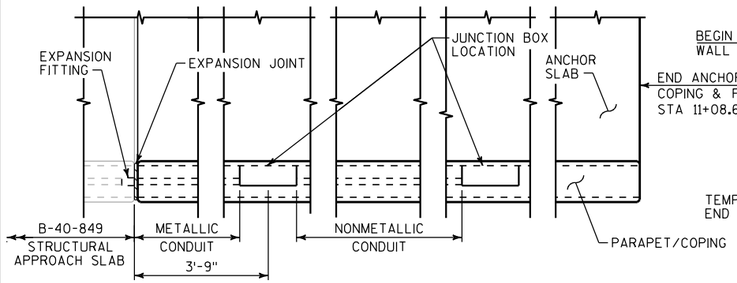
PARAPET ELEVATION - SEGMENT B

OUTSIDE FACE OF PARAPET



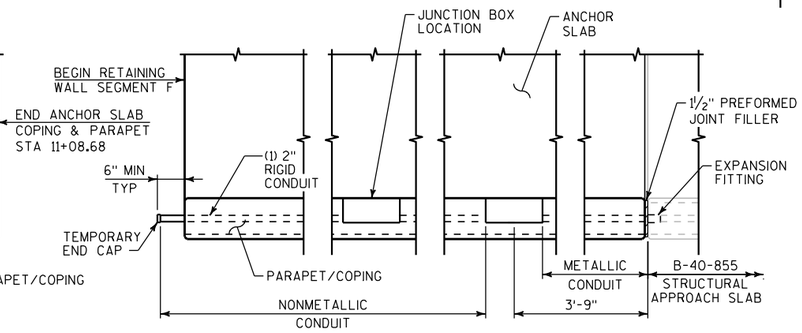
PARAPET ELEVATION - SEGMENT F

OUTSIDE FACE OF PARAPET



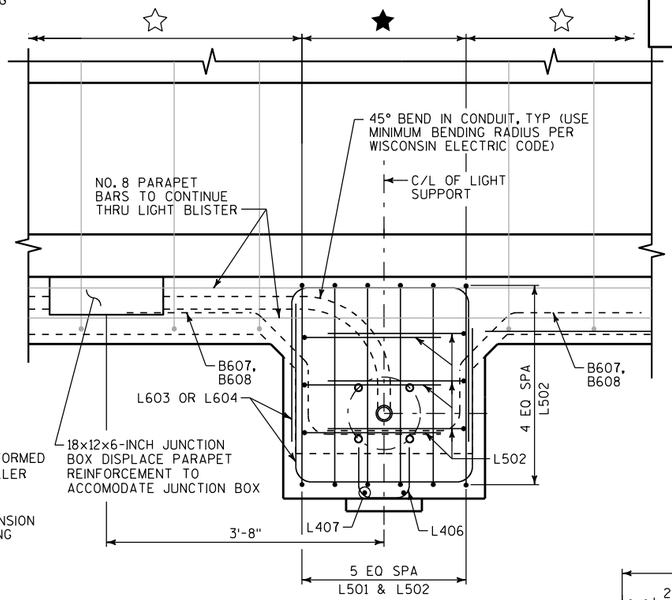
PARAPET PLAN - SEGMENT B

1 CONDUIT REQUIRED



PARAPET PLAN - SEGMENT F

1 CONDUIT REQUIRED



LIGHT SUPPORT PLAN

★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING

☆ SEE SEGMENT REINFORCEMENT DETAILS FOR SPACING

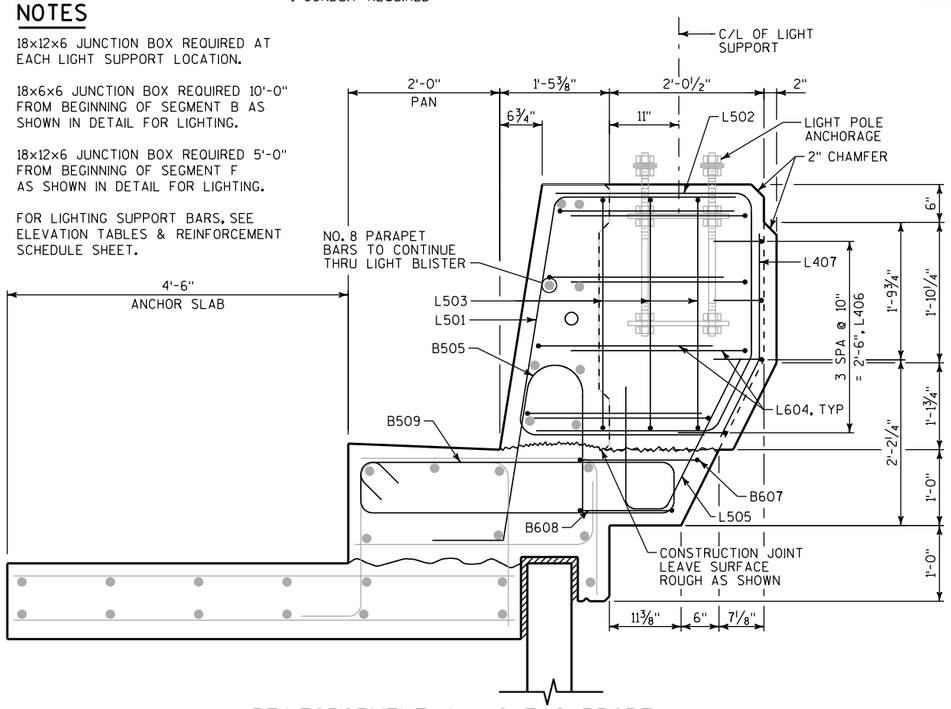
NOTES

18x12x6 JUNCTION BOX REQUIRED AT EACH LIGHT SUPPORT LOCATION.

18x6x6 JUNCTION BOX REQUIRED 10'-0" FROM BEGINNING OF SEGMENT B AS SHOWN IN DETAIL FOR LIGHTING.

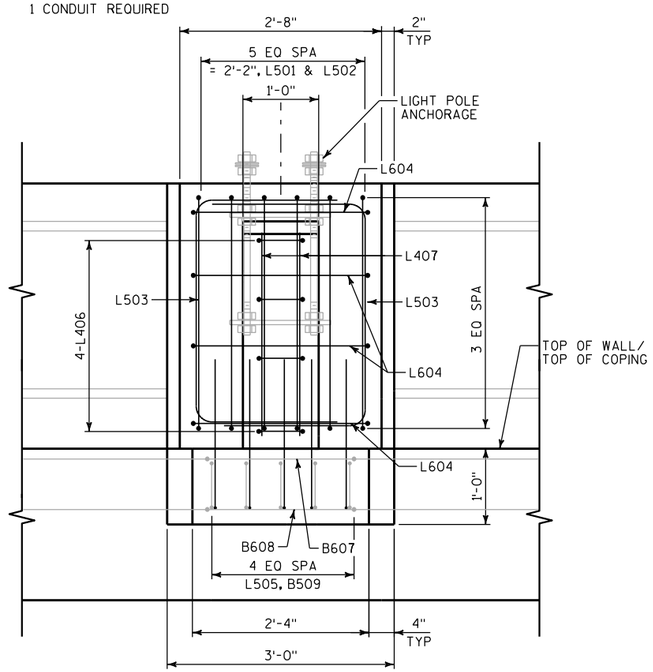
18x12x6 JUNCTION BOX REQUIRED 5'-0" FROM BEGINNING OF SEGMENT F AS SHOWN IN DETAIL FOR LIGHTING.

FOR LIGHTING SUPPORT BARS, SEE ELEVATION TABLES & REINFORCEMENT SCHEDULE SHEET.



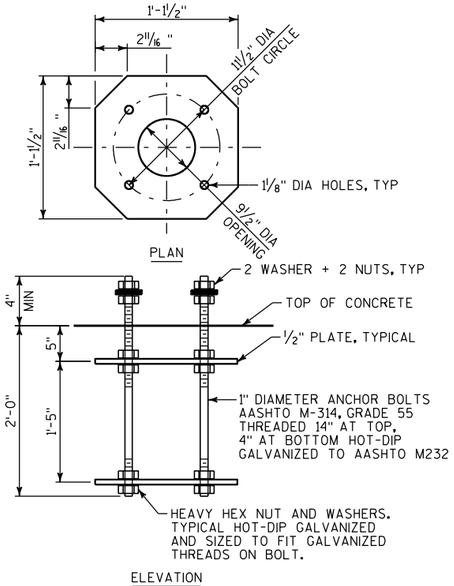
REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT C/L LIGHT SUPPORT



REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION



ANCHOR ASSEMBLY LIGHT POLE STRUCTURES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY BHI | PLANS CK'D. EKM

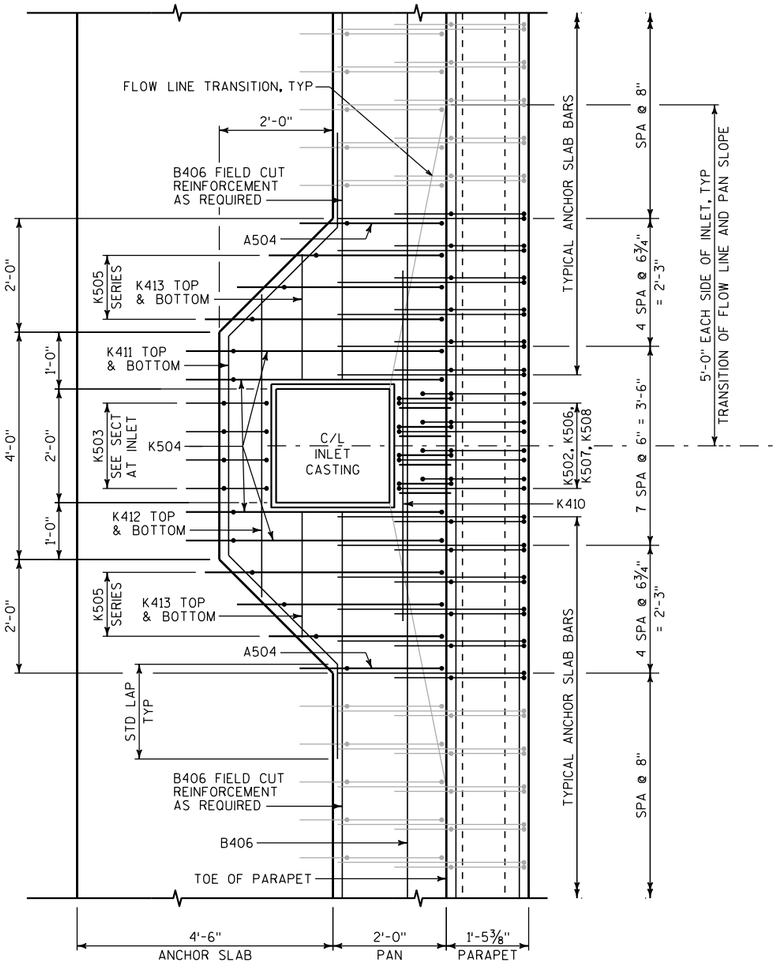
LIGHT SUPPORT DETAILS

SHEET 10 OF 14

8

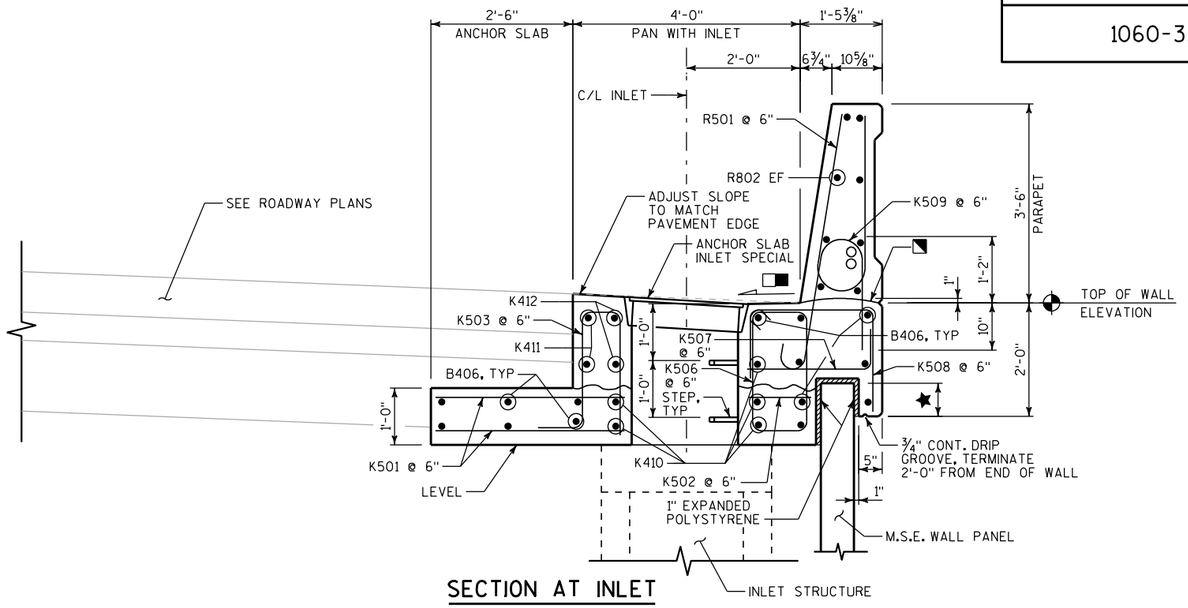
8

STATE PROJECT NUMBER
1060-33-80



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED.



SECTION AT INLET

INLET BILL OF BARS - SEGMENT B

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
K501	X	8	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	4	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	4	5'-4"	X		COPING - VERTICAL TIE
K504	X	4	8'-7"	X		COPING - VERTICAL TIE
K505	X	6	7'-9"	X	⚠	COPING - VERTICAL TIE
K506	X	4	6'-7"	X		COPING - VERTICAL STIRRUP
K507	X	4	2'-6"	X		COPING - VERTICAL TIE
K508	X	4	4'-8"	X		COPING - VERTICAL TIE
K509	X	4	5'-5"	X		COPING - VERTICAL TIE
K410	X	5	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL
K411	X	2	14'-0"	X		COPING - LONGITUDINAL
K412	X	2	5'-1"			COPING - LONGITUDINAL
K413	X	4	2'-0"			COPING - LONGITUDINAL

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A BAR MARK SIGNIFIES BAR SIZE.

⚠ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

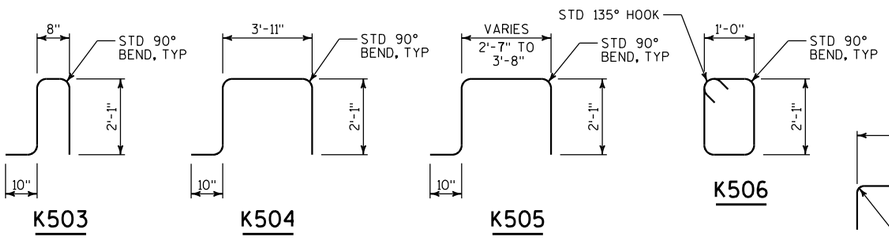
STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

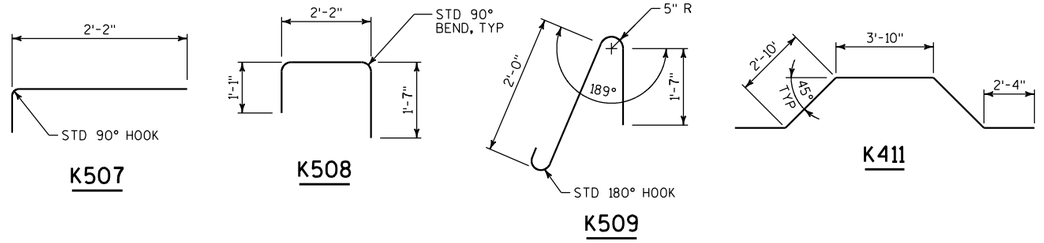
LEGEND

- 2.00%
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH



BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
K505	2 SERIES OF 3	7'-3" TO 8'-4"



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY TEK | PLANS CK'D. EKM

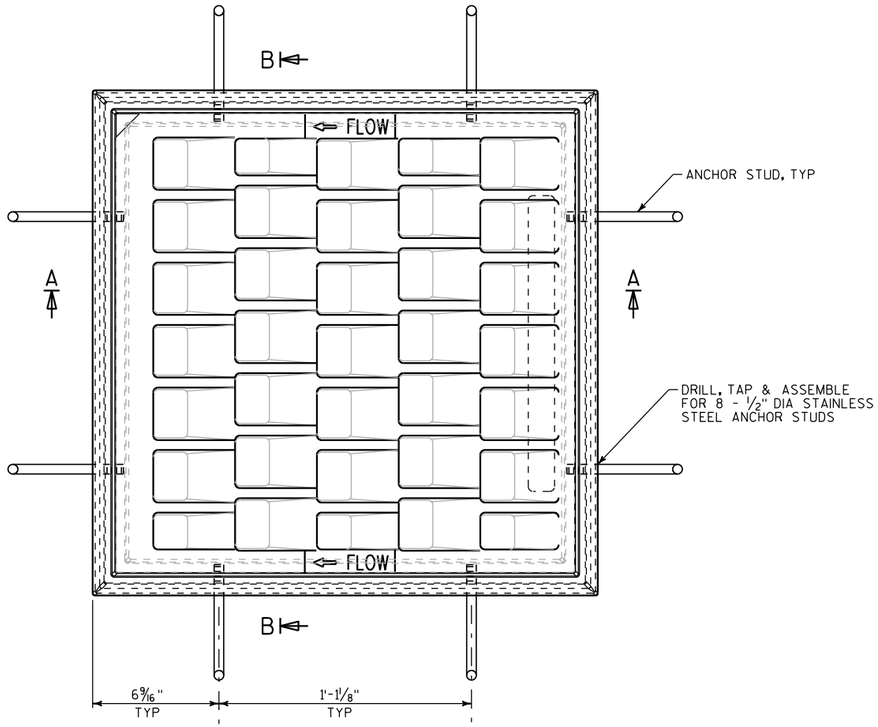
INLET DETAILS

SHEET 11 OF 14

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-522\cds\R522_080306_de.dgn
PLOT DATE : 30-APR-2014 13:49
PLOT BY : MSCTEK
PLOT NAME : R522_080306_de
PLOT SCALE : 2.666667:1

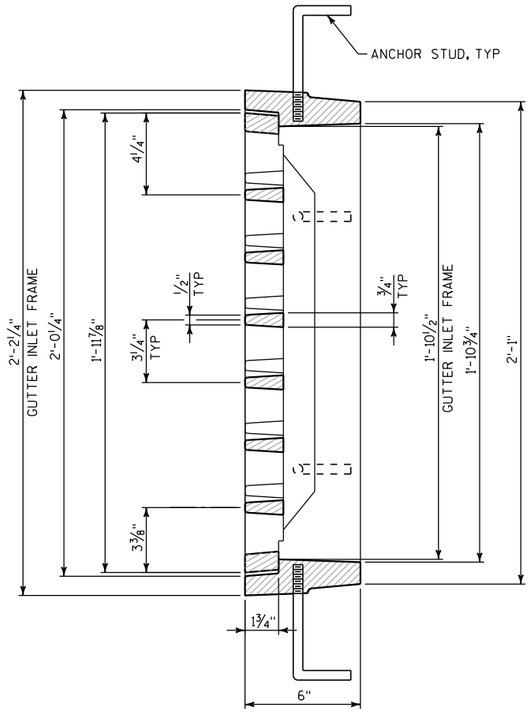
STATE PROJECT NUMBER

1060-33-80

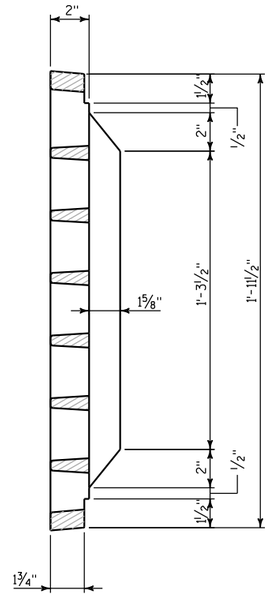


GUTTER INLET FRAME & GRATE TOP

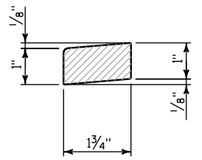
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



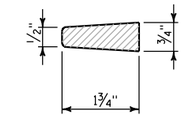
SECTION B-B



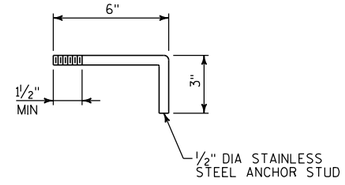
INLET GRATE



SIDE RIB DETAIL

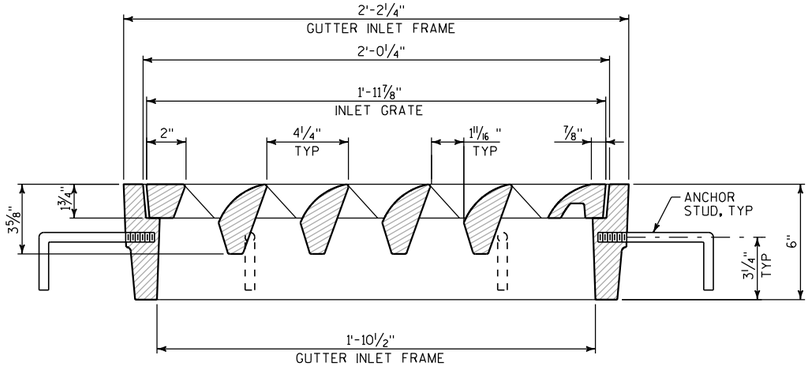


MIDDLE RIB DETAIL

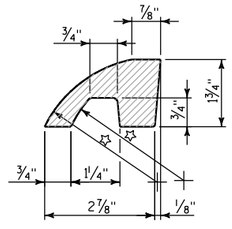


ANCHOR STUD DETAIL

(8 - 1/2" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

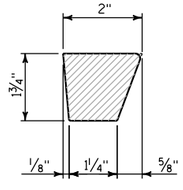


SECTION A-A

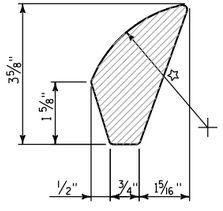


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

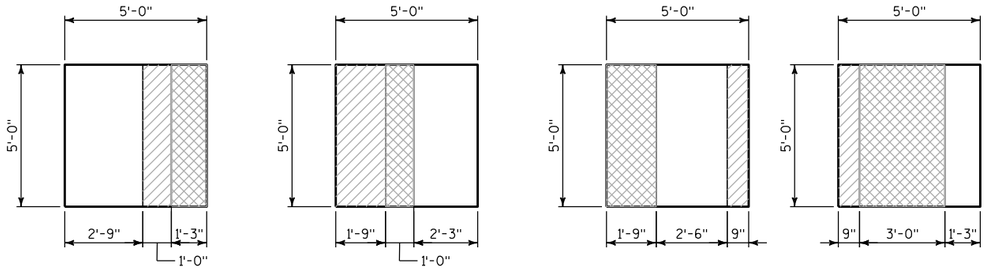
DRAWN BY TEK | PLANS CK'D. EKM

ANCHOR SLAB INLET COVER SPECIAL

SHEET 12 OF 14

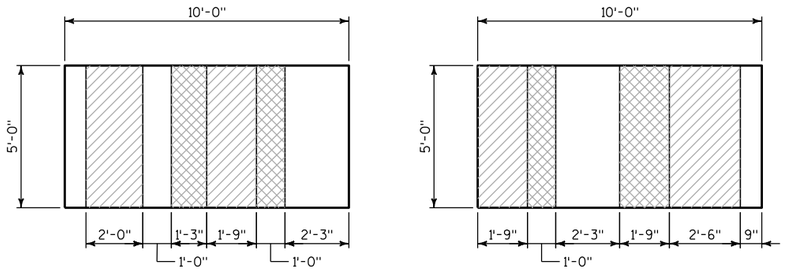
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8

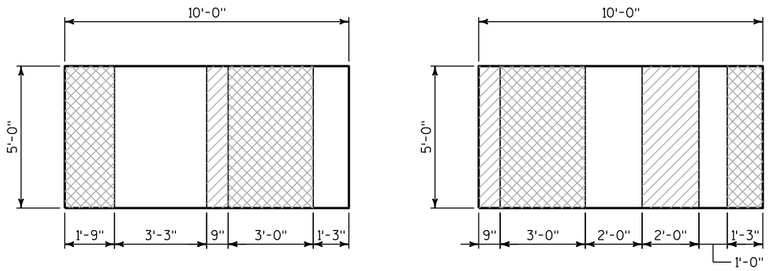


WALL PANEL "A" WALL PANEL "B" WALL PANEL "C" WALL PANEL "D"

5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



WALL PANEL "A" WALL PANEL "B"

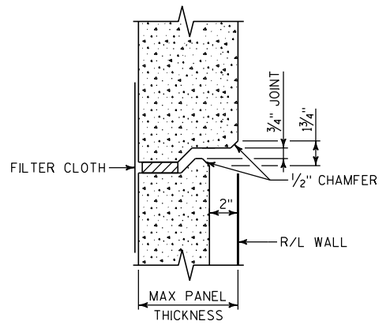


WALL PANEL "C" WALL PANEL "D"

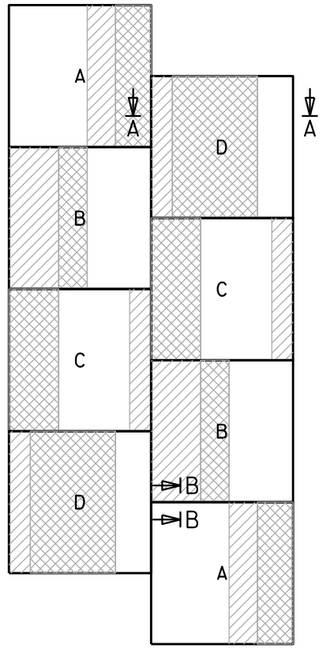
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

LEGEND

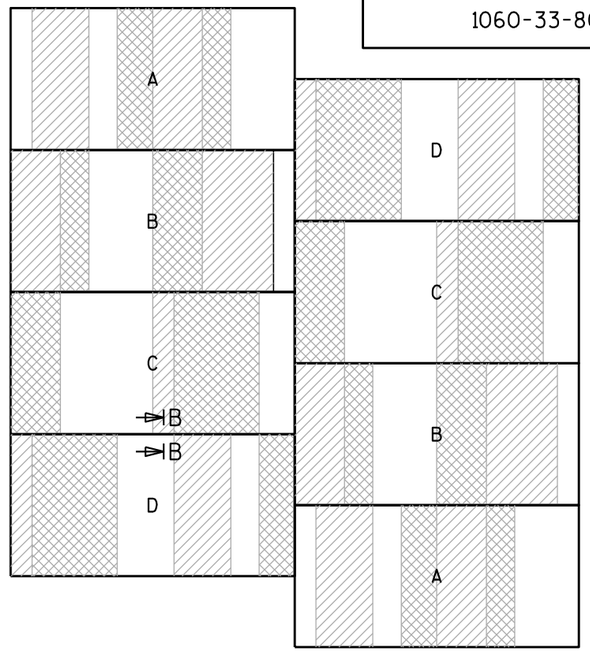
- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS + 0"



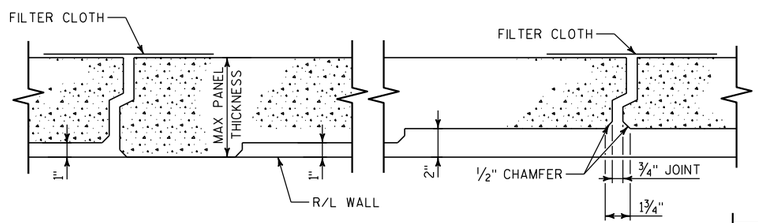
SECTION B-B



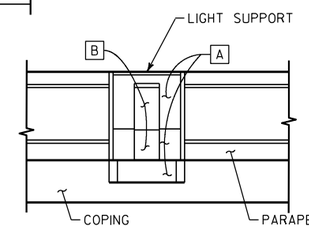
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN



SECTION A-A



OUTSIDE ELEVATION OF PARAPET STAINING DIAGRAM
(AT LIGHT SUPPORT)

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

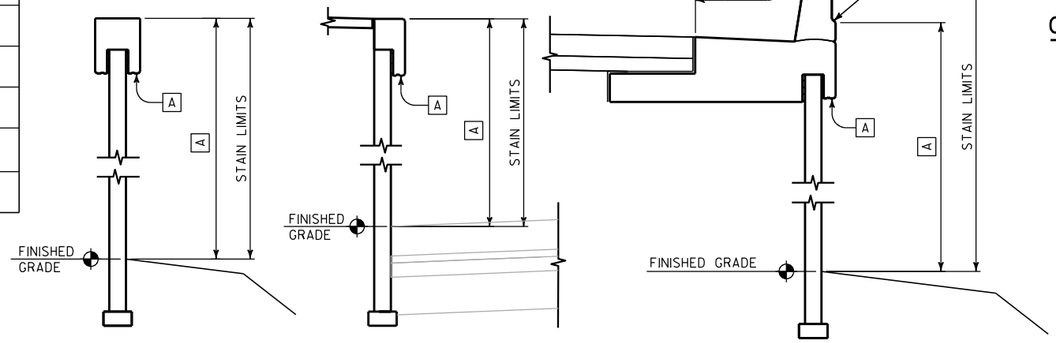
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR #1	VERTICAL FACE PARAPETS	RECESSED PANELS ON BOTH SIDES

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR : 33564
ACCENT COLOR #1: 33448



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

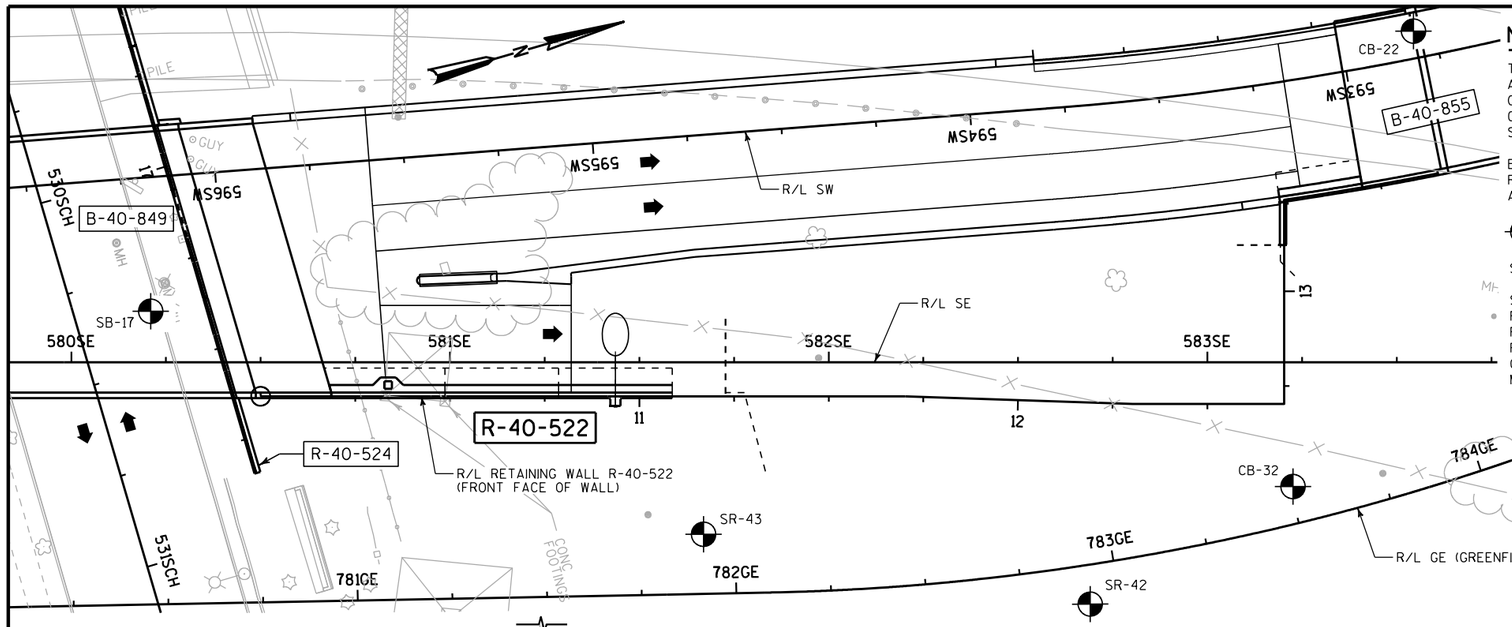
STRUCTURE R-40-522 (STAGE 1)

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 13 OF 14

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-522\cds\R522_080401_ae.dgn
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PLOT NAME : R522_080401_ae
PLOT SCALE : 5.333333:1



NOTE

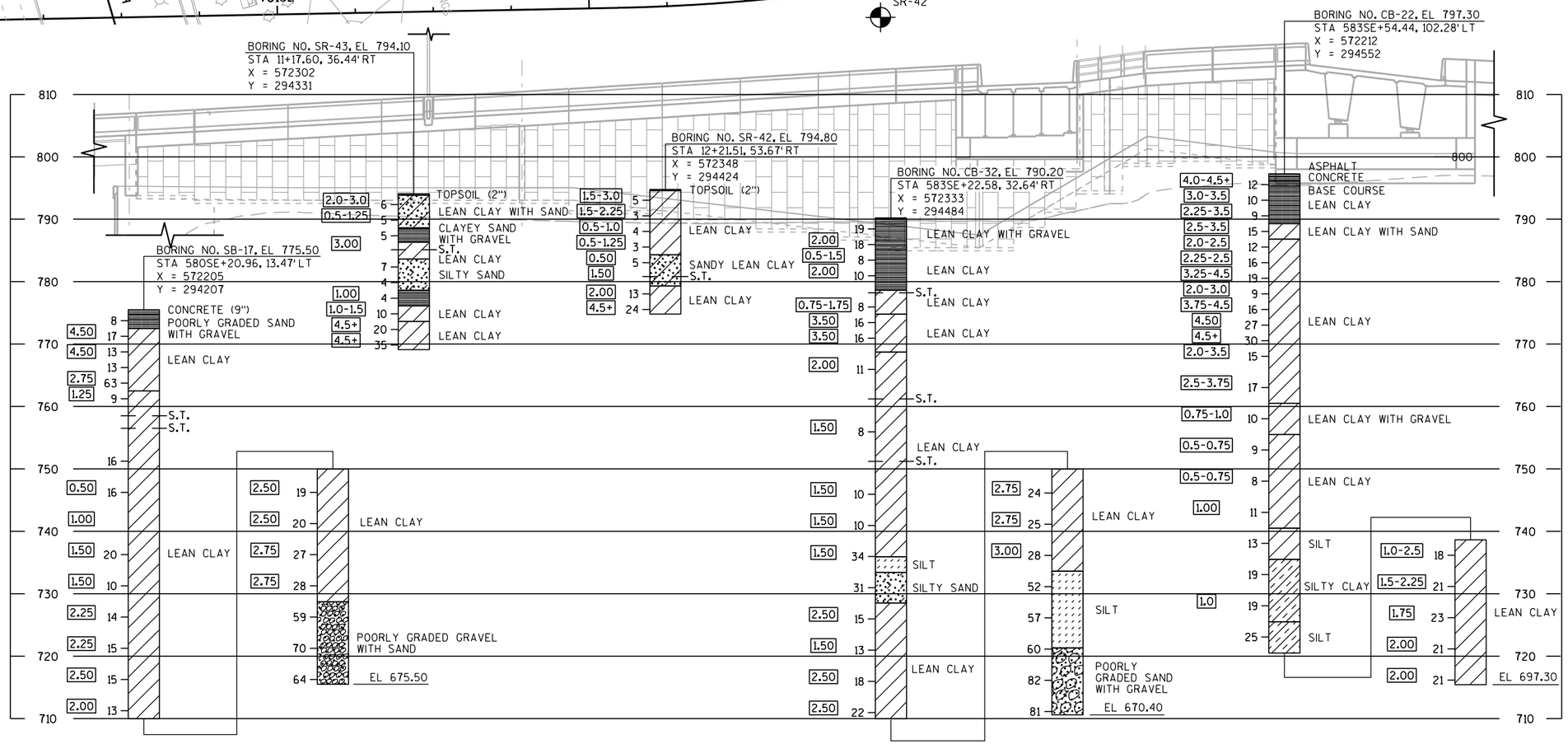
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR R-40-522, BORINGS SB-17, CB-22 & CB-32 ARE BASED ON R/L FOR RAMP SE.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
- FEB 3, 2012 - BORING SB-17
- FEB 9, 2012 - BORING SR-43
- FEB 9, 2012 - BORING SR-42
- OCT 8, 2012 - BORING CB-22
- MAY 15, 2012 - BORING CB-32



STATE PROJECT NUMBER

1060-33-80

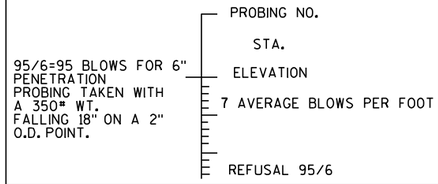
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

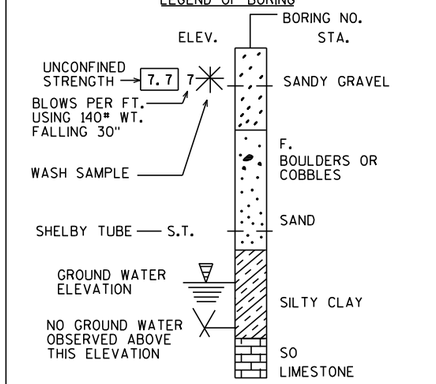
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-522 (STAGE 1)

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION

SHEET 14 OF 14

8

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STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

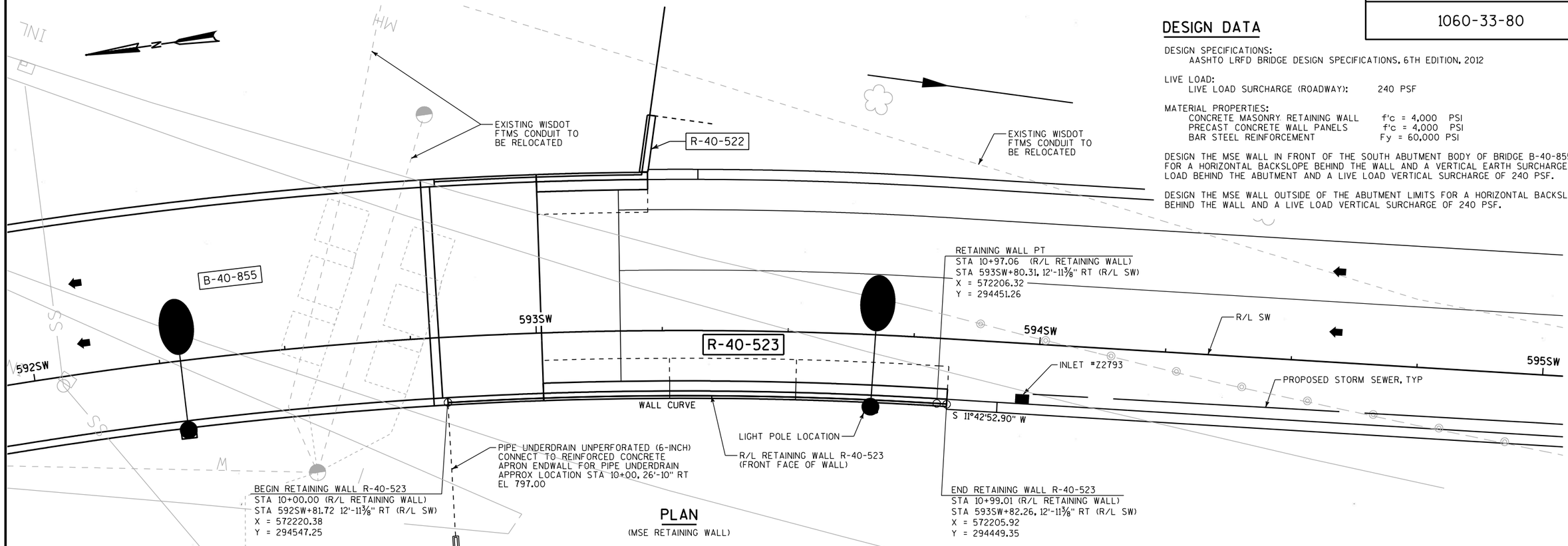
LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE SOUTH ABUTMENT BODY OF BRIDGE B-40-855 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A VERTICAL EARTH SURCHARGE LOAD BEHIND THE ABUTMENT AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

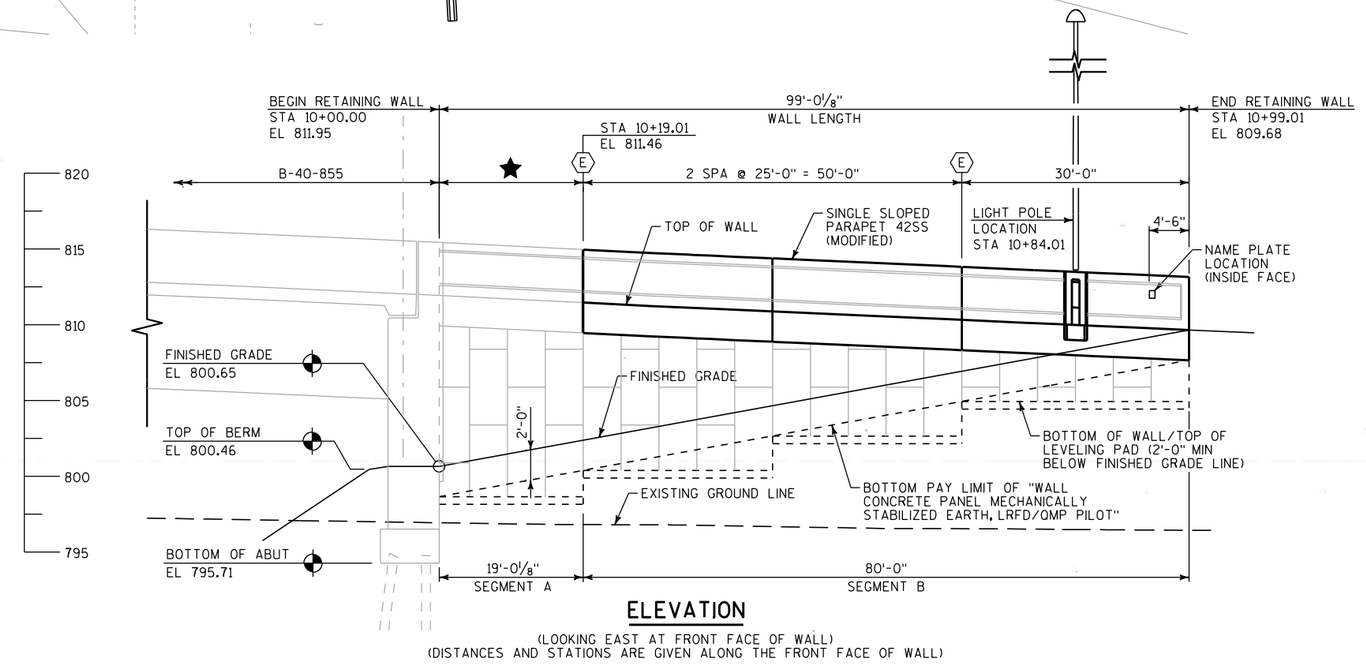


RETAINING WALL PT
STA 10+97.06 (R/L RETAINING WALL)
STA 593SW+80.31, 12'-11⅜" RT (R/L SW)
X = 572206.32
Y = 294451.26

BEGIN RETAINING WALL R-40-523
STA 10+00.00 (R/L RETAINING WALL)
STA 592SW+81.72 12'-11⅜" RT (R/L SW)
X = 572220.38
Y = 294547.25

END RETAINING WALL R-40-523
STA 10+99.01 (R/L RETAINING WALL)
STA 593SW+82.26, 12'-11⅜" RT (R/L SW)
X = 572205.92
Y = 294449.35

PLAN
(MSE RETAINING WALL)



ELEVATION
(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, NOTES & PROFILE GRADE LINE
3. TYPICAL WALL SECTIONS
4. PARAPET, COPING & ANCHOR SLAB DETAILS
5. SEGMENT B REINFORCEMENT DETAILS
6. LIGHT SUPPORT DETAILS
7. AESTHETIC WALL TREATMENT DETAILS
8. SUBSURFACE EXPLORATION

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- ★ STRUCTURAL APPROACH SLAB SEE B-40-855 PLANS



STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-523

B-40-855 SOUTH ABUTMENT WEST WINGWALL

COUNTY	TOWN/~~CITY~~/VILLAGE
MILWAUKEE	WEST ALLIS

DESIGN SPEC, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	AAG	MS	EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID - ITEM	UNIT	SEGMENT A	SEGMENT B	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	57	57
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	---	48	48
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	---	7,135	7,135
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	17	17
517.1050.S.0006	ARCHITECTURAL SURFACE TREATMENT R-40-523	SF	195	365	560
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	30	---	30
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	19	80	99
612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	1	---	1
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	3	---	3
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	---	80	80
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	---	2	2
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	---	1	1
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	---	1	1
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	230	525	755
	NON BID ITEMS				
	NON-BITUMINOUS JOINT FILLER	SIZE			1"
	CORK FILLER	SIZE			1"
	NAME PLATE	EACH			1
	EXPANDED POLYSTYRENE	SIZE			1"

ALL ITEMS ARE CATEGORY 3050

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	
WALL HEIGHT (FEET)	13.2
EXPOSED WALL HEIGHT (FEET)	11.2
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	9.8
WALL STATION (R/L RETAINING WALL R-40-523)	10+00.00
BORING USED	CB-22
CAPACITY TO DEMAND RATIO (CDR)	
SLIDING	1.12
ECCENTRICITY	1.02
BEARING	1.39
GLOBAL STABILITY	1.08

⚹ FINAL DESIGN FOR INTERNAL STABILITY, EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

SOIL PARAMETERS

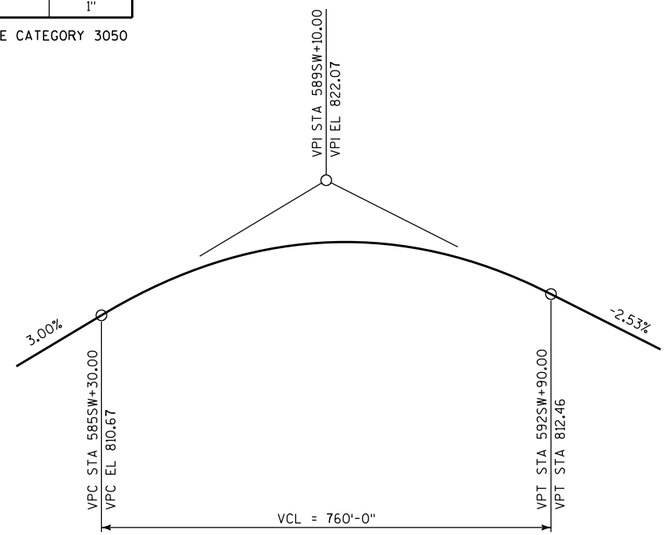
SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
MSE BACKFILL ⚹	120	30	0	30	0
NEW CLAY FILL	133	0	2,000	30	0
EXISTING CLAY FILL	135	0	2,500	32	20
VERY STIFF TO HARD CLAY	135	0	3,000	34	100
STIFF TO VERY STIFF CLAY	133	0	1,000	29	0

⚹ DESIGN WALL FOR THESE VALUES

HORIZONTAL CURVE DATA

WALL CURVE

PI = STA. 10+48.59
X : 572216.19
Y : 294498.84
DELTA = 6°45'54.65" RT
D = 6°58'11.45"
R = 822.05'
T = 48.59
L = 97.06
E = 1.43
PC = STA. 10+00.00
X : 572220.38
Y : 294547.25
PT = STA. 10+97.06
X : 572206.32
Y : 294451.26



PROFILE GRADE LINE - SW

(SOUTH TO WEST RAMP)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-523 WITH THE SOUTH ABUTMENT OF BRIDGE B-40-855.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE TO BE EPOXY COATED.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENT B ANCHOR SLAB, COPING , AND PARAPET ARE PAID FOR UNDER ITEMS "CONCRETE MASONRY RETAINING WALLS" & "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE AT LEAST 2'-0" BELOW FINISHED GRADE.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

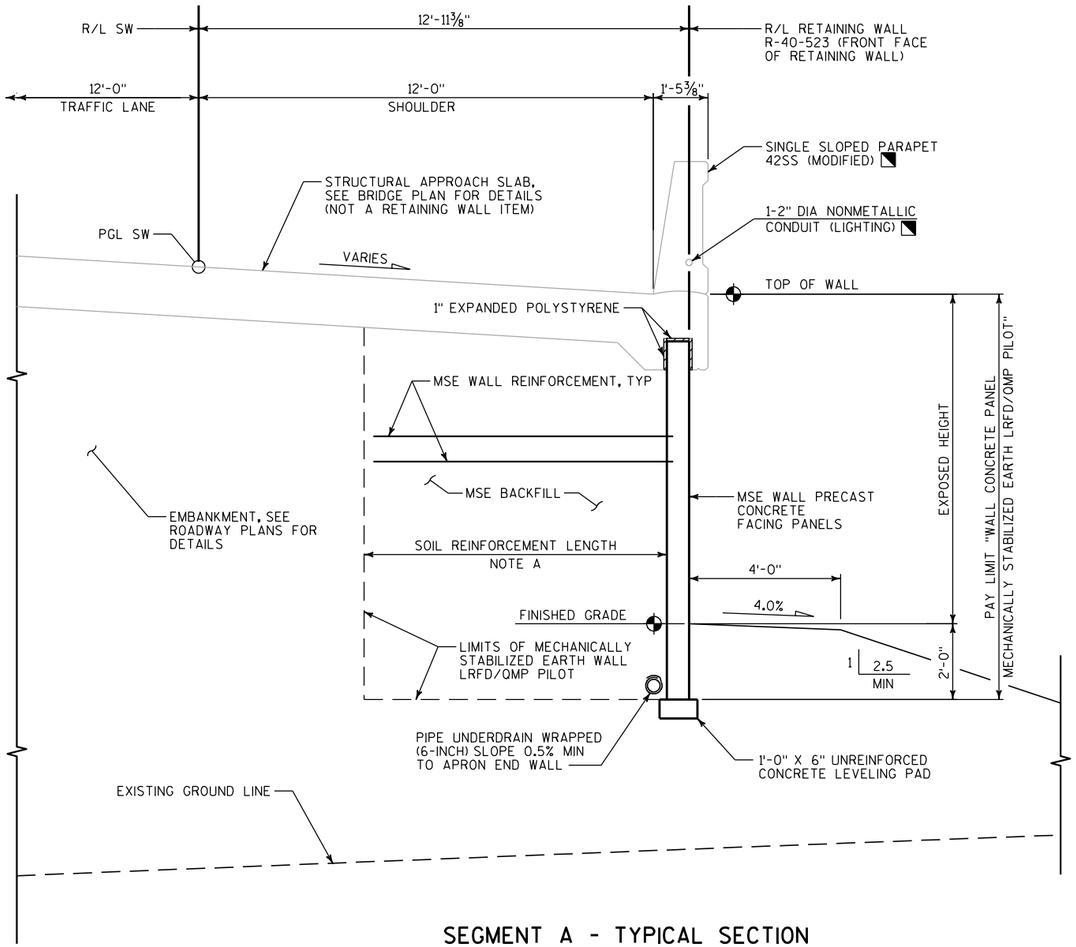
DRAWN BY MS | PLANS CK'D. EKM

QUANTITIES, NOTES & PROFILE GRADE LINE

SHEET 2 OF 8

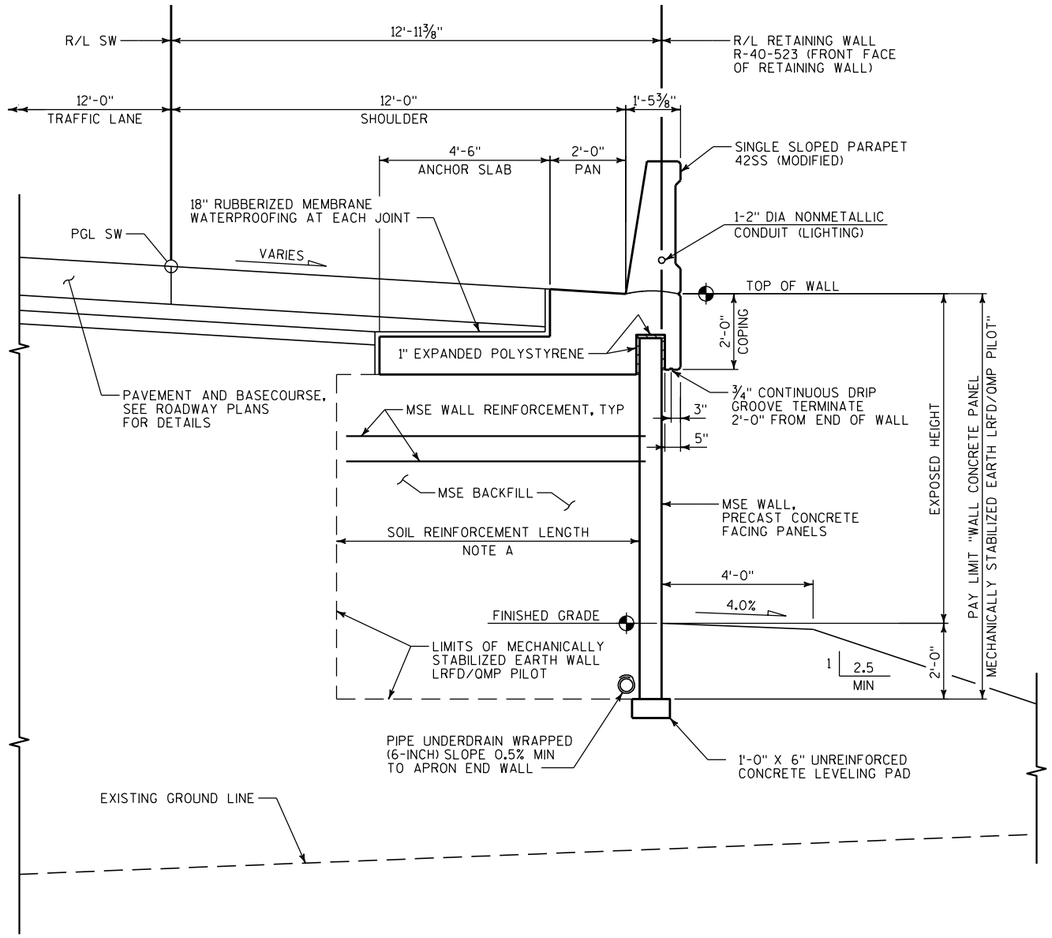
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PLOT BY : MSCTEK
PLOT NAME : R40523_080102_qu
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



SEGMENT A - TYPICAL SECTION

(LOOKING SOUTH - STA 10+00.00 TO STA 10+19.01)



SEGMENT B - TYPICAL SECTION

(LOOKING SOUTH - STA 10+19.01 TO STA 10+99.01)

8

8

LEGEND

◥ NOT A RETAINING WALL ITEM

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

DRAWN BY	MS	PLANS CK'D.	EKM

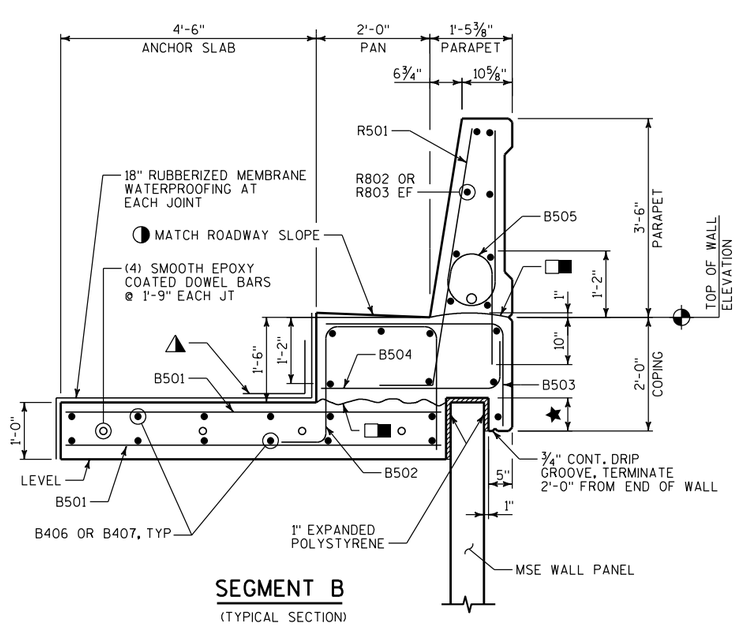
TYPICAL WALL SECTIONS

SHEET 3 OF 8

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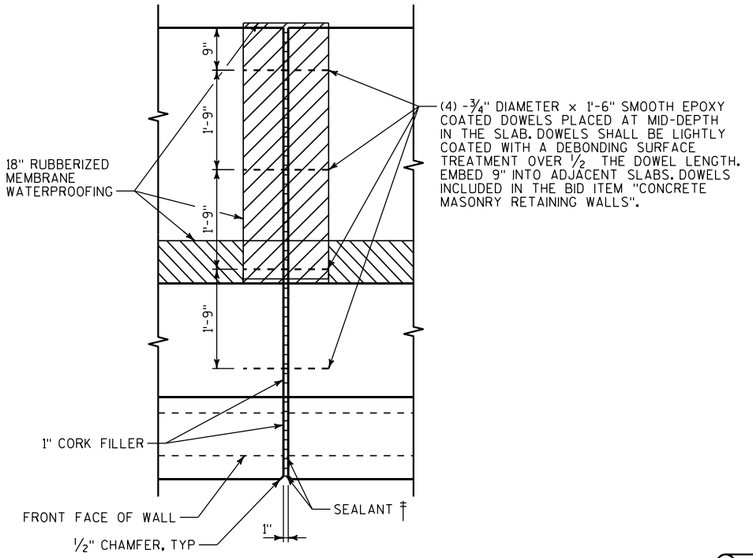
STATE PROJECT NUMBER

1060-33-80



SEGMENT B

(TYPICAL SECTION)
STA 10+19.01 TO STA 10+99.01



ANCHOR SLAB EXPANSION JOINT SEGMENT B

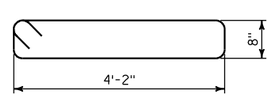
DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEET

BILL OF BARS - SEGMENT B

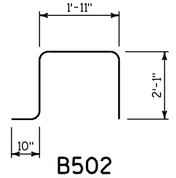
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	198	6'-5"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
B502	X	124	6'-7"	X	COPING - VERTICAL TIE
B503	X	124	4'-8"	X	COPING - HORIZONTAL TIE
B504	X	74	3'-10"	X	COPING - HORIZONTAL TIE
B505	X	124	5'-11"	X	PARAPET/COPING - VERTICAL TIE
B406	X	80	13'-2"		ANCHOR SLAB & COPING - LONGITUDINAL
B407	X	40	15'-8"		ANCHOR SLAB & COPING - LONGITUDINAL
B508	X	5	10'-3"	X	ANCHOR SLAB - LIGHT BLISTER STIRRUP
B609	X	2	5'-1"	X	LIGHT BLISTER HORIZONTAL
B610	X	2	4'-9"	X	LIGHT BLISTER HORIZONTAL
R501	X	125	6'-8"	X	PARAPET - VERTICAL TIE
R802	X	16	24'-7"		PARAPET - LONGITUDINAL
R803	X	8	29'-7"		PARAPET - LONGITUDINAL

NOTES
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

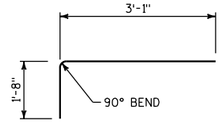
SEE LIGHT SUPPORT DETAILS SHEET FOR ADDITIONAL BARS REQUIRED AT LIGHT SUPPORT.



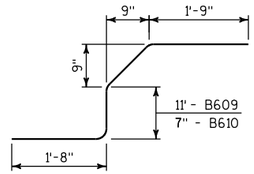
B508



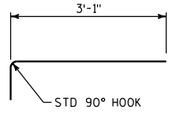
B502



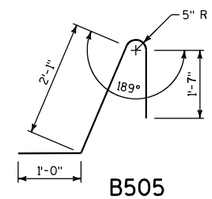
B503



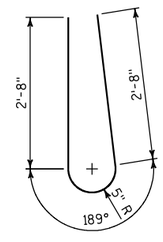
B609 & B610



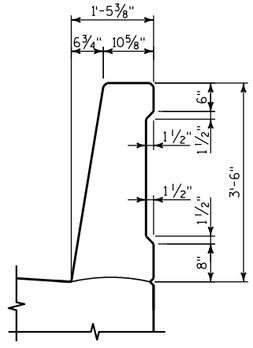
B504



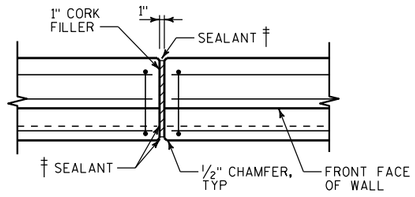
B505



R501



SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMINSIONS



PARAPET EXPANSION JOINT

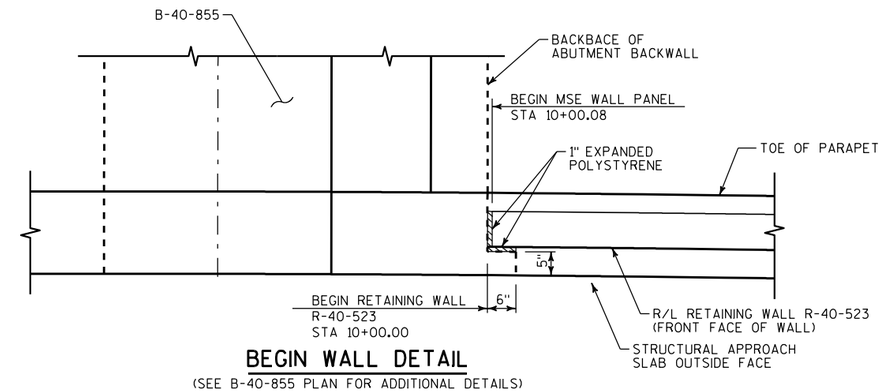
NO NOT RUN BARS THRU JOINT

SEGMENT A WALL ELEVATIONS ◪			
STATION	TOP OF WALL ELEV	FINISHED GRADE	EXISTING GRADE
10+00.00	811.95	800.65	796.91
10+09.51	811.71	801.51	796.85
10+19.01	811.46	802.38	796.80

SEGMENT B WALL ELEVATIONS ◪			
STATION	TOP OF WALL ELEV	FINISHED GRADE	EXISTING GRADE
10+19.01	811.46	802.38	796.80
10+31.51	811.18	803.51	796.77
10+44.01	810.90	804.65	796.66
10+56.51	810.62	805.79	796.57
10+69.01	810.34	806.92	796.52
10+84.01	810.01	808.29	796.48
10+99.01	809.68	809.65	796.43

PAN SLOPE TABLE	
STATION	SLOPE
10+00.00	6.00%
10+18.98	6.00%
10+89.87	4.00%
10+99.01	3.74%

LINEARLY INTERPOLATE PAN SLOPE BETWEEN STATIONS.



BEGIN WALL DETAIL

(SEE B-40-855 PLAN FOR ADDITIONAL DETAILS)

LEGEND

- ◪ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ★ 3" MIN, 6" MAX.
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- ◪ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.
- ◑ SEE PAN SLOPE TABLE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

DRAWN BY BHI | PLANS CK'D. EKM

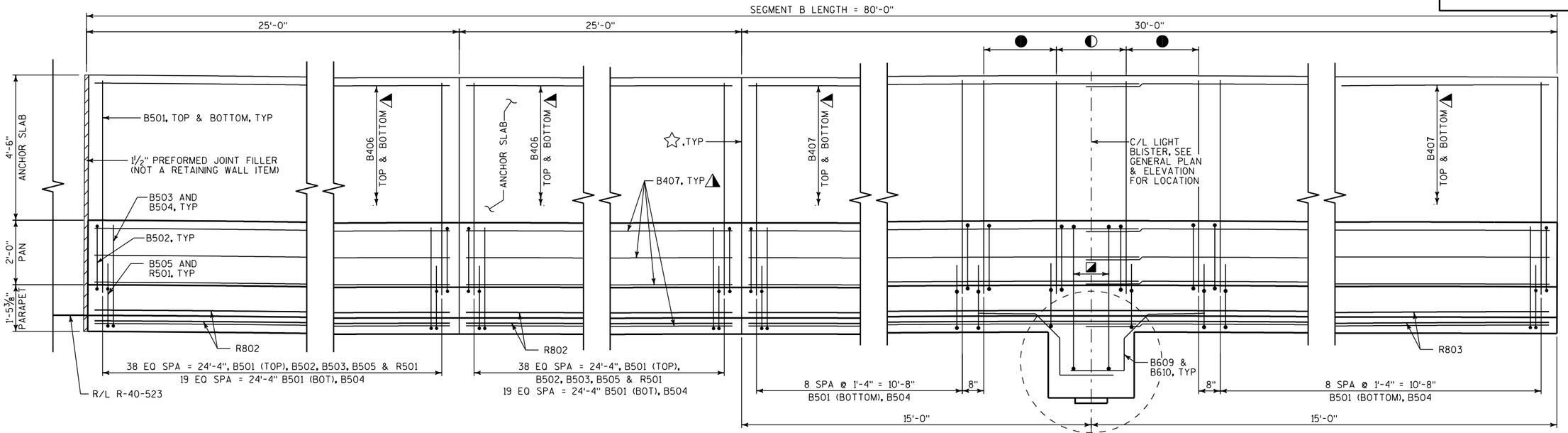
PARAPET, COPING, & ANCHOR SLAB DETAILS

SHEET 4 OF 8

8

8

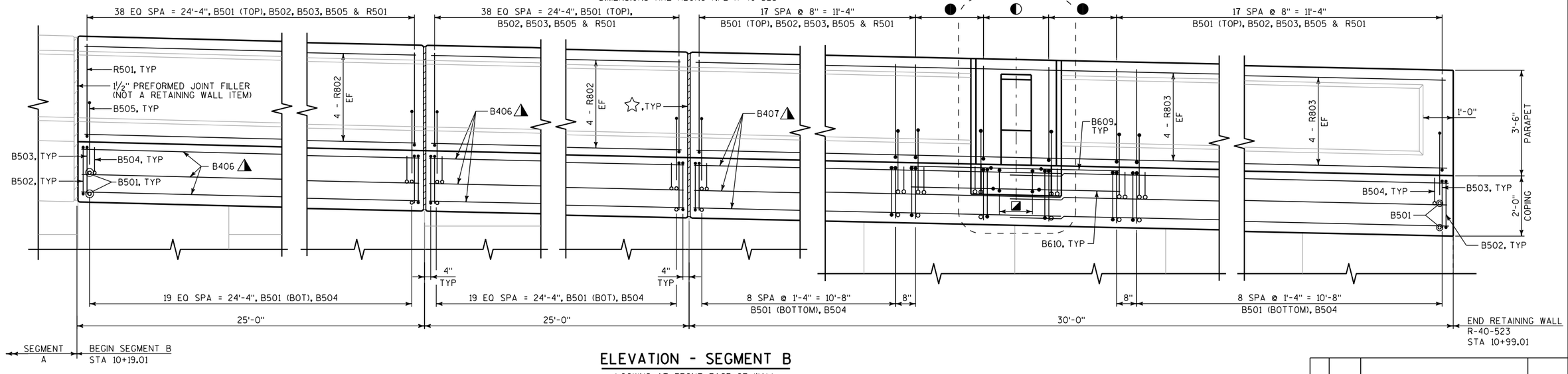
STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT B

DIMENSIONS ARE ALONG R/L R-40-523

SEE LIGHT BLISTER DETAIL FOR ADDITIONAL REINFORCEMENT



ELEVATION - SEGMENT B

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-523

LEGEND

- ● 4 SPA @ 6¾" = 2'-3", B501 (TOP & BOTTOM), B502, B503, B504, B505 & R501
- ◐ B501 (TOP & BOTTOM), B502, B503, B504 & B505 TO MATCH LIGHT SUPPORT SPACING, SEE LIGHT SUPPORT DETAILS SHEET
- ◪ B508, SEE LIGHT SUPPORT DETAILS FOR SPACING
- ☆ 1" CORK FILLER
- ◭ 1'-8" MIN LAP REQ'D FOR B406 AND B407 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

DRAWN BY MS | PLANS CK'D. EKM

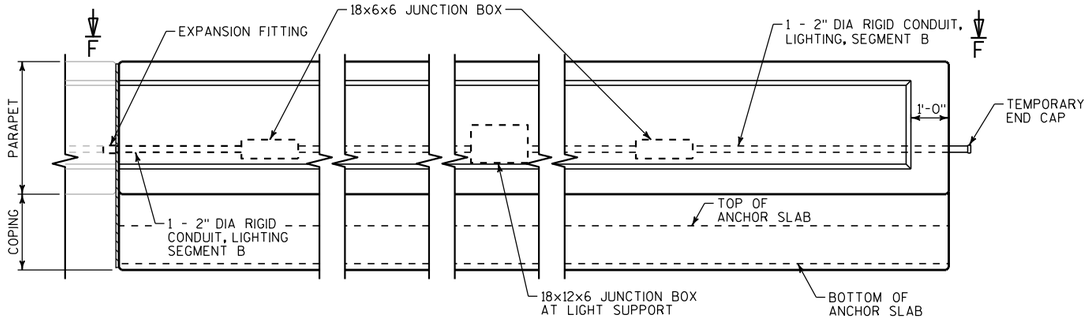
SEGMENT B REINFORCEMENT DETAILS

SHEET 5 OF 8

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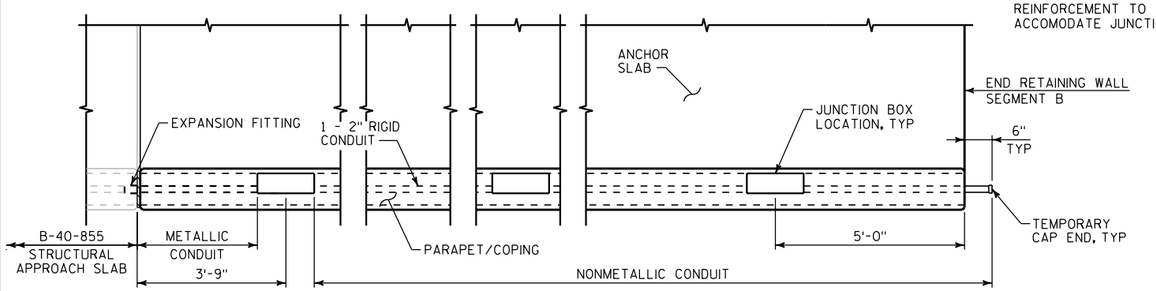
STATE PROJECT NUMBER

1060-33-80



PARAPET ELEVATION

OUTSIDE FACE OF PARAPET



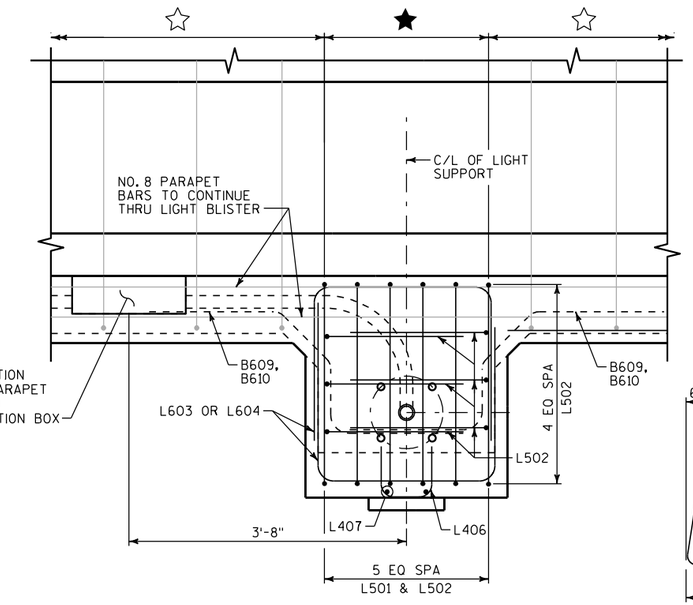
SECTION F-F

SEGMENT B - 1 CONDUIT REQUIRED

NOTES

18x12x6 JUNCTION BOX REQUIRED AT EACH LIGHT SUPPORT LOCATION.

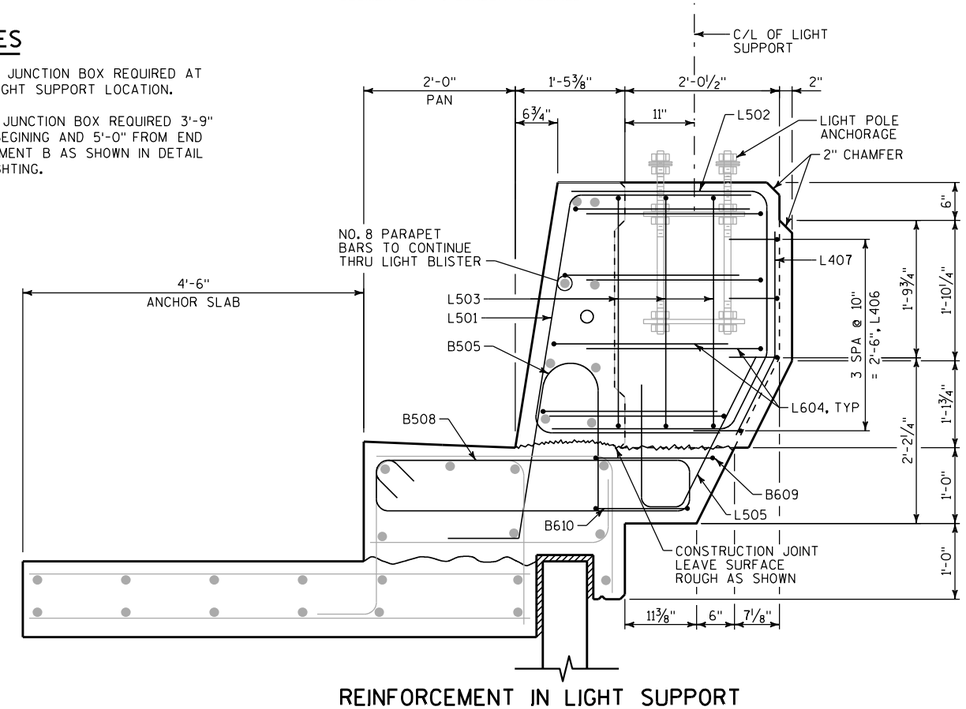
18x6x6 JUNCTION BOX REQUIRED 3'-9" FROM BEGINING AND 5'-0" FROM END OF SEGMENT B AS SHOWN IN DETAIL FOR LIGHTING.



LIGHT SUPPORT PLAN

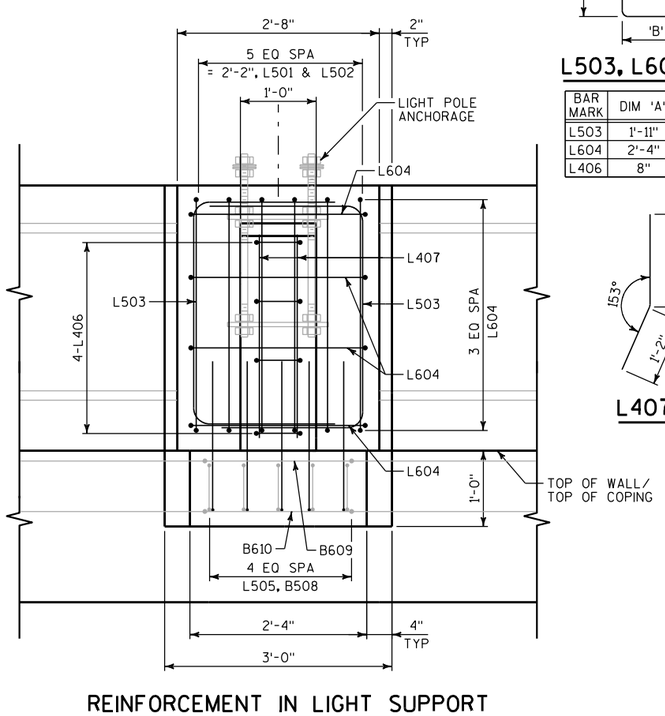
★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING

☆ SEE SEGMENT B REINFORCEMENT DETAILS FOR SPACING



REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT C/L LIGHT SUPPORT



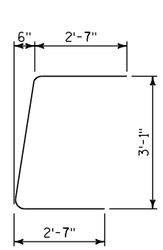
REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION

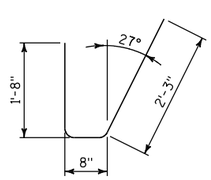
LIGHT SUPPORT BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L501	X	6	8'-1"	X	LIGHT SUPPORT - STIRRUP
L502	X	6	8'-2"	X	LIGHT SUPPORT - VERTICAL TIE
L503	X	6	6'-6"	X	LIGHT SUPPORT - HORIZONTAL TIE
L604	X	8	6'-8"	X	LIGHT SUPPORT - HORIZONTAL TIE
L505	X	5	4'-6"	X	LIGHT SUPPORT - VERTICAL TIE
L406	X	4	1'-10"	X	LIGHT SUPPORT - HORIZONTAL TIE
L407	X	2	2'-10"	X	LIGHT SUPPORT - VERTICAL

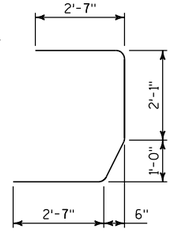
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



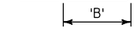
L501



L505

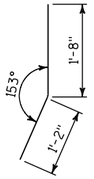


L502

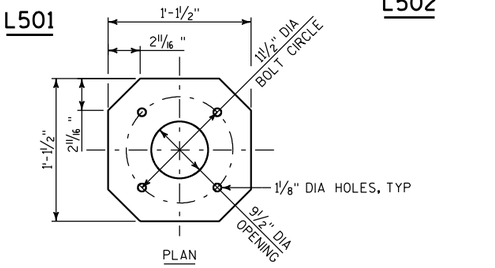


L503, L604, L406

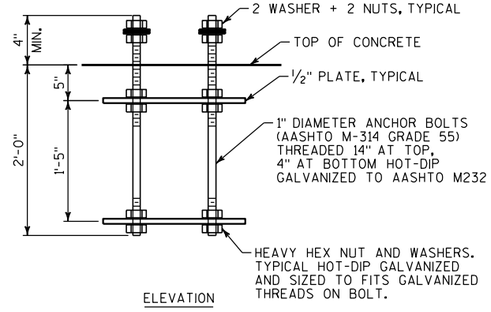
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



L407



PLAN



ELEVATION

ANCHOR ASSEMBLY LIGHT POLE STRUCTURES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

DRAWN BY TEK | PLANS CK'D. EKM

LIGHT SUPPORT DETAILS

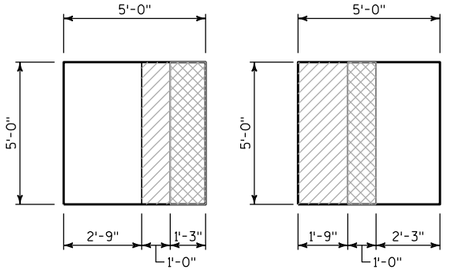
SHEET 6 OF 8

8

8

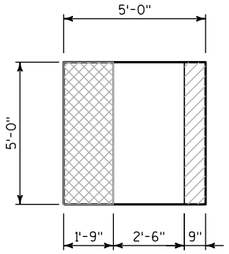
STATE PROJECT NUMBER

1060-33-80

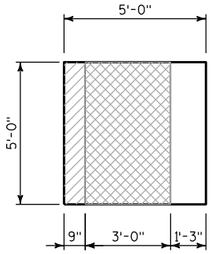


WALL PANEL "A"

WALL PANEL "B"

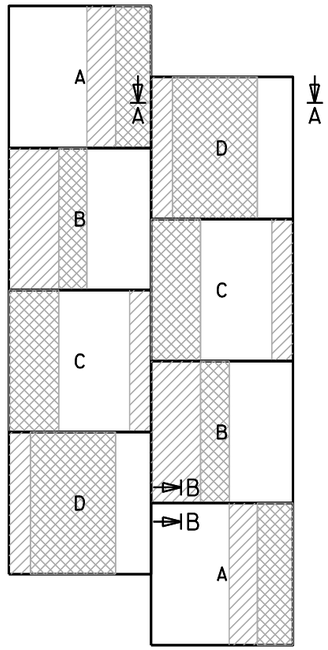


WALL PANEL "C"

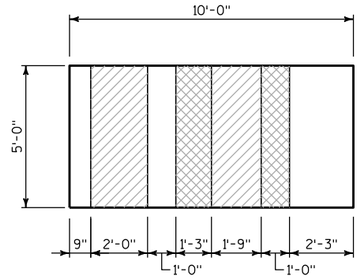


WALL PANEL "D"

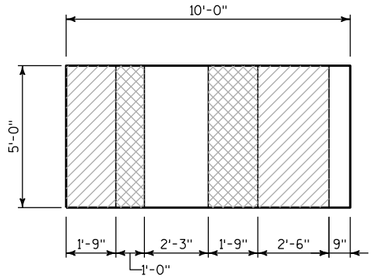
5'-0" X 5'-0" MSE CONCRETE
PANEL RAISED SURFACE DETAILS



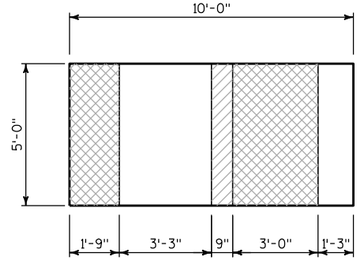
TYPICAL 5'-0" X 5'-0" MSE
CONCRETE PANEL PATTERN



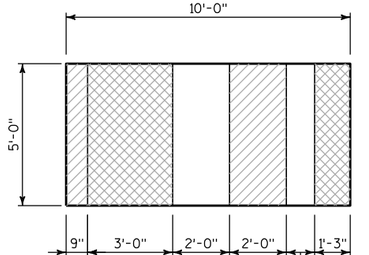
WALL PANEL "A"



WALL PANEL "B"

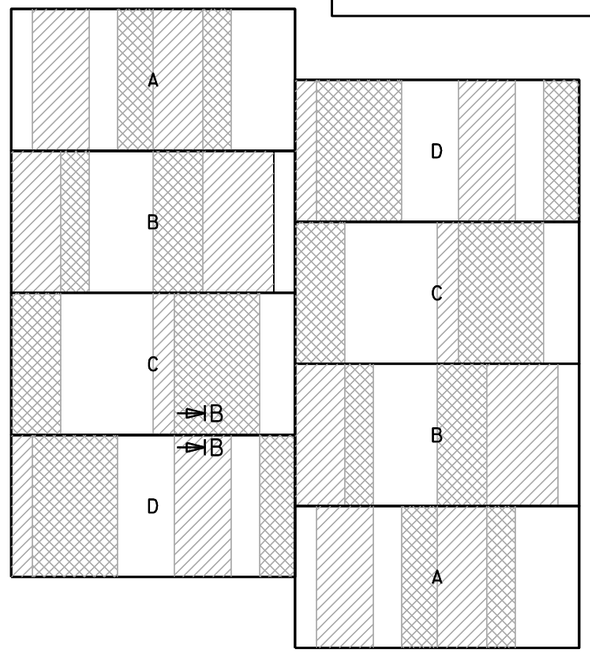


WALL PANEL "C"



WALL PANEL "D"

5'-0" X 10'-0" MSE CONCRETE
PANEL RAISED SURFACE DETAILS



TYPICAL 5'-0" X 10'-0" MSE
CONCRETE PANEL PATTERN

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

BASE COLOR - 33564
ACCENT COLOR #1 - 33448

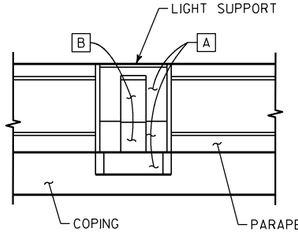
LEGEND

PANEL THICKNESS - 2"

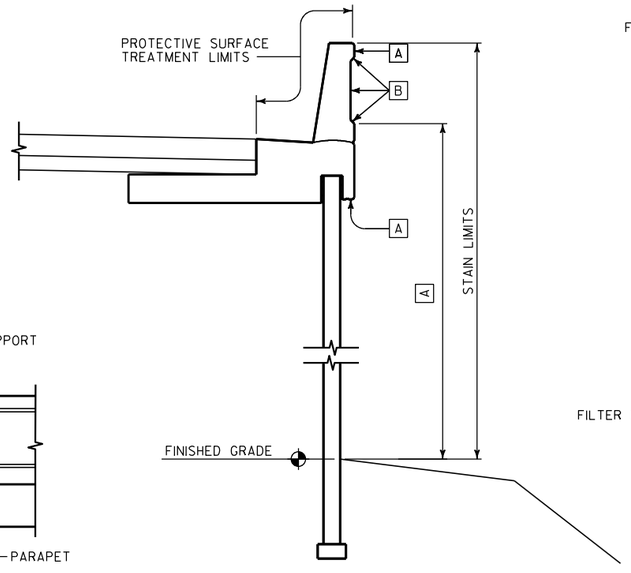
PANEL THICKNESS - 1"

PANEL THICKNESS - 0"

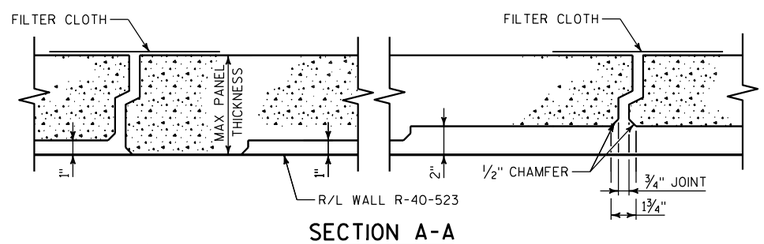
CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



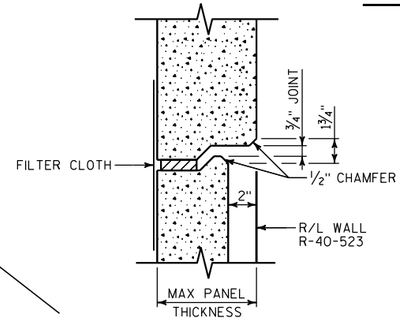
OUTSIDE ELEVATION OF PARAPET
STAINING DIAGRAM
(AT LIGHT SUPPORT)



MSE WALL STAINING DIAGRAM



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

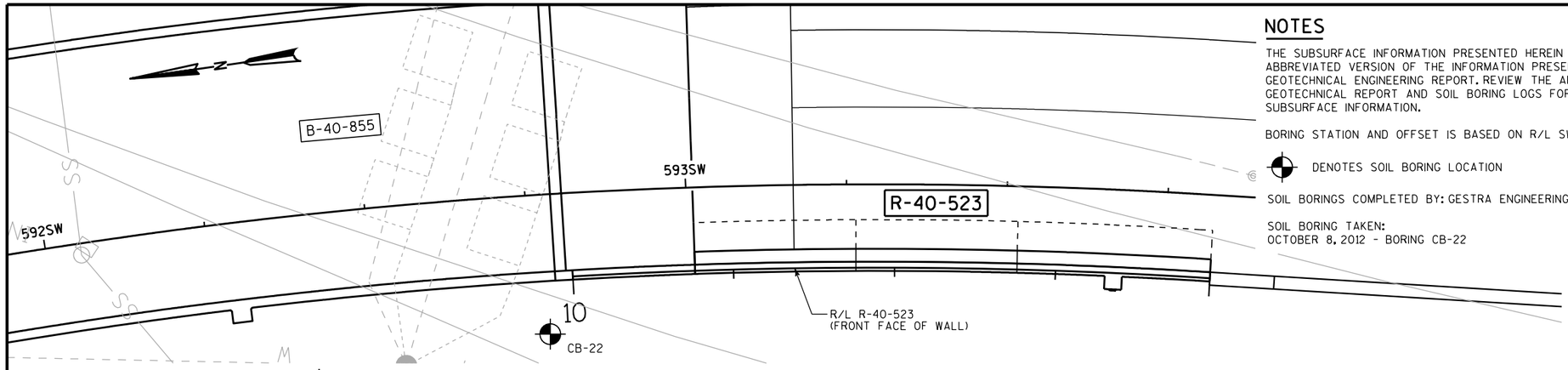
DRAWN BY MS | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 7 OF 8

8

8



NOTES

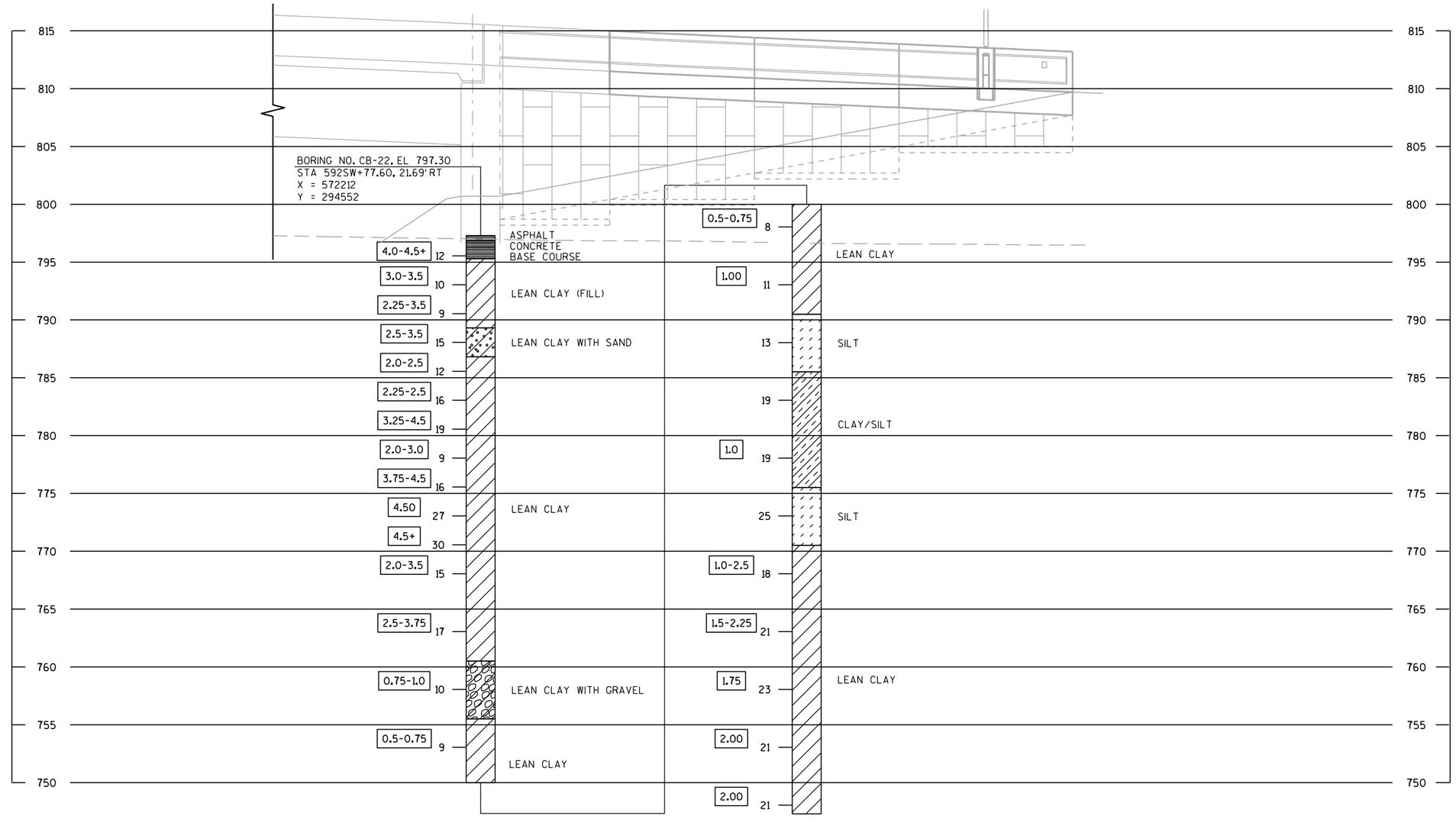
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATION AND OFFSET IS BASED ON R/L SW.

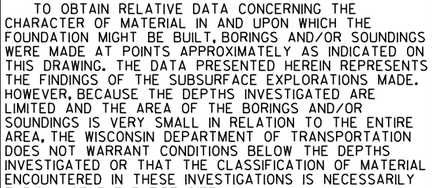
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

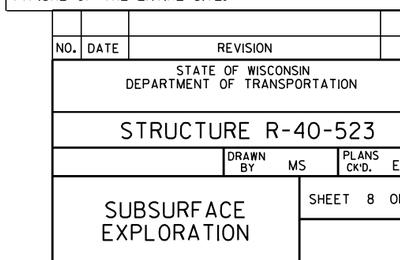
SOIL BORING TAKEN:
OCTOBER 8, 2012 - BORING CB-22



LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-523

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION

SHEET 8 OF 8

8

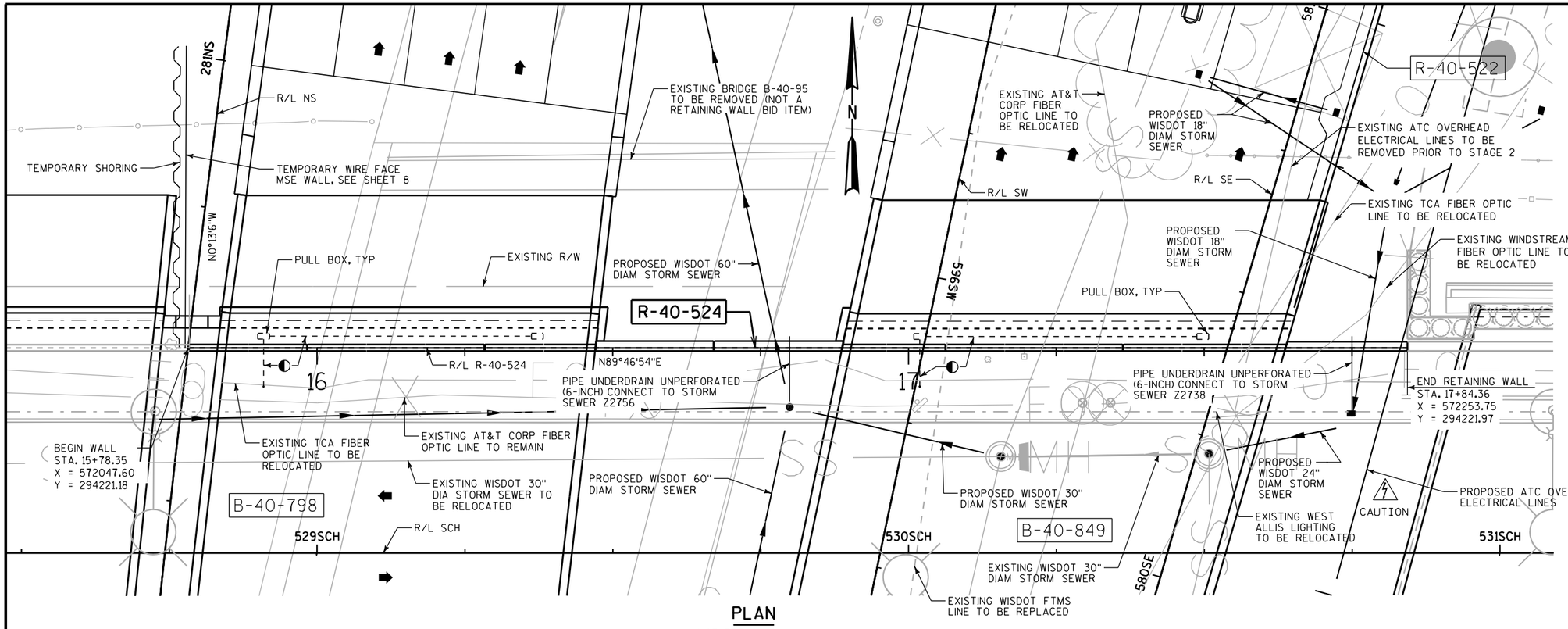
8

STATE PROJECT NUMBER
1060-33-80

✳ CONSTRUCTION OF RETAINING WALL R-40-524 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

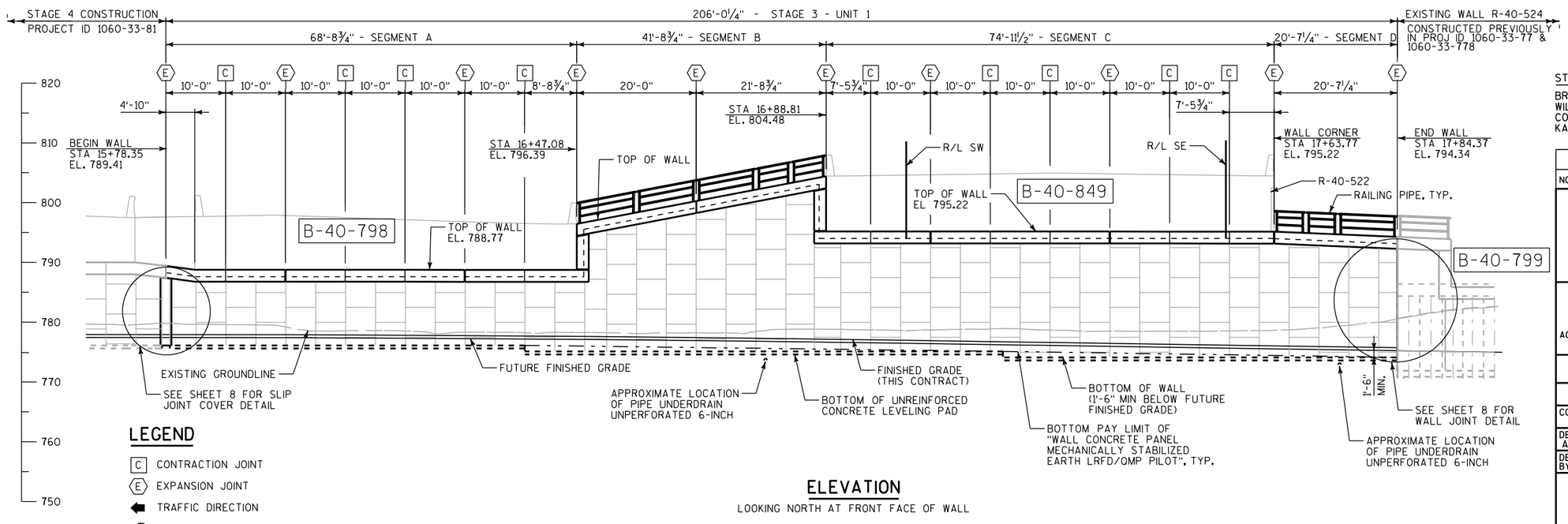
LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, DESIGN DATA & GENERAL NOTES
3. CONSTRUCTION STAGING
4. TYPICAL SECTIONS
5. SEGMENT A & B COPING PLAN & ELEVATION
6. SEGMENT C & D COPING PLAN & ELEVATION
7. MSE WALL DETAILS
8. TEMPORARY WALL TYPICAL SECTIONS
9. PIPE RAILING DETAILS
10. AESTHETIC WALL TREATMENT DETAILS
11. SUBSURFACE EXPLORATION



PLAN

MSE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- TRAFFIC DIRECTION
- CONDUIT RIGID NONMETTALIC SCHEDULE 80 2-INCH



5/9/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/14/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-524-001

RETAINING WALL NORTH OF SCHLINGER AVE.

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WEST ALLIS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	MS	DESIGN CK'D.	KES	DRAWN BY	MS	PLANS CK'D.	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 11

8

8

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL AND A TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

COORDINATE THE CONSTRUCTION OF WALL R-40-524 WITH THE NORTH ABUTMENTS OF BRIDGES B-40-798 AND B-40-849.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES WITH THE CONSTRUCTION OF THE WALL. COORDINATION INCLUDES THE LOCATIONS OF THE MSE PANEL JOINTS AND THE MSE REINFORCING STRIPS RELATIVE TO THE PROPOSED INLETS AND STRUCTURES.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELLED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

PLANS, DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES OTHER THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 1'-6" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST RESULTS.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-798 AND B-40-849 BRIDGE QUANTITIES.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	TOTAL
511.1200.0002	TEMPORARY SHORING R-40-524	SF	350	---	---	---	350
513.2000	RAILING PIPE R-40-524	LS	---	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5	5	5	---	15
514.1050.S	ARCHITECTURAL SURFACE TREATMENT R-40-524	SF	765	935	1,405	395	3,500
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	---	15	---	15	30
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	40	75	20	205
645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A	SY	---	5	---	5	10
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	10	---	10	---	20
652.0325	CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	LF	75	---	85	---	160
653.0105	PULL BOXES STEEL 12 X 24 -INCH	EACH	2	---	2	---	4
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	940	1,075	1,590	445	4,050
SPV.0165.4740	TEMPORARY WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	730	---	---	---	730
	NON-BID ITEMS						
	PREFORMED JOINT FILLER	SIZE					¾", 2"
	NON-BITUMINOUS JOINT FILLER	SIZE					¾"
	CORK FILLER	SIZE					1"
	NAME PLATE	EACH					1
	EXPANDED POLYSTYRENE	SIZE					1"

ALL ITEMS ARE CATEGORY 3060

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE EARTH SURCHARGE LOAD ABOVE THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

MATERIAL PROPERTIES

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

WALL EXTERNAL STABILITY EVALUATION

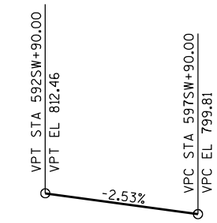
DIMENSIONS			
WALL HEIGHT (FEET)	20.9	29.4	30
EXPOSED WALL HEIGHT (FEET)	11.8	27.9	19.7
◥ MINIMUM LENGTH OF REINFORCEMENT (FEET)	14.6	20.6	21
WALL STATION	16+47	16+88	17+40
BORING USED	SB-14	SC-18	SB-17 SC-18
CAPACITY TO DEMAND RATIO (CDR)			
SLIDING	1.47	1.35	1.39
ECCENTRICITY	>10	1.53	9.66
BEARING	2.57	1.66	6.72
GLOBAL STABILITY	1.42	1.14	1.05

◥ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

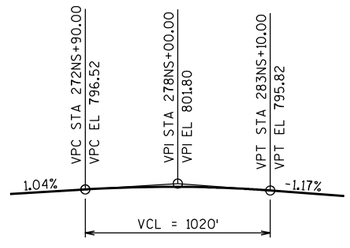
MSE WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		UNDRAINED FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)	DRAINED FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)
MSE BACKFILL ✳	120	30	0	30	0
CLAY FILL	125	0	1000	30	0
EXISTING GRANULAR FILL	125	30	0	30	0
STIFF CLAY	130	0	1000-1500	30-31	75
VERY STIFF CLAY	135	0	2000-3000	32-33	100-200

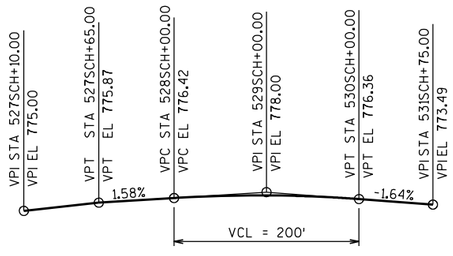
✳ DESIGN WALL FOR THESE VALUES



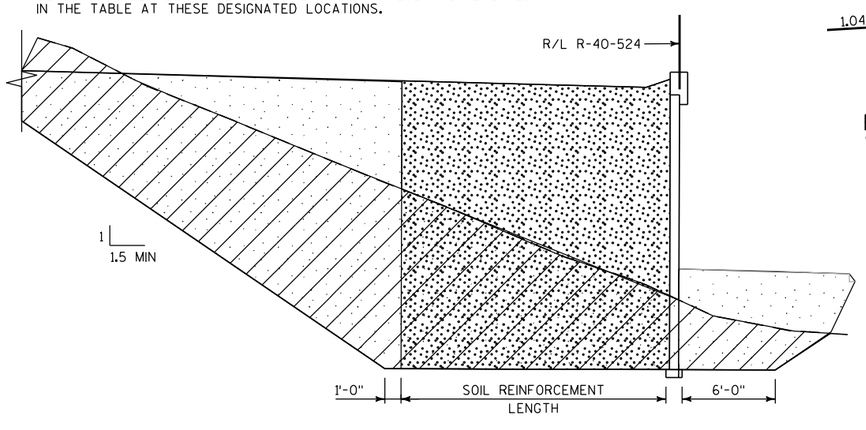
PROFILE GRADE LINE S-W
R/L SW



PROFILE GRADE LINE N-S
R/L NS



PROFILE GRADE LINE SCHLINGER AVE.
R/L SCH



WALL EXCAVATION LIMITS DIAGRAM

LEGEND

- MSE BACKFILL - INCLUDED IN THE BID ITEM WALL CONCRETE PANEL MECHANILCALLY STABILIZED EARTH LRFD
- WALL EXCAVATION - INCLUDED IN THE BID ITEM CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD
- EMBANKMENT - NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

DRAWN BY MS | PLANS CK'D. KES

QUANTITIES, DESIGN DATA & GENERAL NOTES

SHEET 2 OF 11

8

8

STATE PROJECT NUMBER
1060-33-80

BEGIN RETAINING WALL R-40-524 STA 9+98.05

B-40-786

B-40-855

B-40-861

R/L GD

R/L R-40-524

R/L R-40-495

R/L ES

R/L WS

R/L NS

R/L R-40-522

R/L GE

R/L SW

END RETAINING WALL R-40-524 STA 20+65.81

R/L R-40-524

B-40-854

STAGE 4 CONSTRUCTION - PROJECT ID 1060-33-81 UNIT 1

STAGE 1 CONSTRUCTION PROJECT ID 1060-33-77 UNIT 3

STAGE 1 CONSTRUCTION PROJECT ID 1060-33-77 UNIT 2

BEGIN WALL R-40-524 THIS PROJECT STA 15+78.35

END WALL R-40-524 THIS PROJECT STA 17+84.37

R/L R-40-524

R/L SCH

STA 13+64.47

B-40-795 | B-40-796 | B-40-797 | B-40-798 | B-40-849 | B-40-799

526SCH 527SCH 528SCH 529SCH 530SCH 531SCH 532SCH

STAGE 4 CONSTRUCTION PROJECT ID 1060-30-81
UNIT 1

STAGE 3 CONSTRUCTION PROJECT ID 1060-30-80
UNIT 1

STAGE 1 CONSTRUCTION - UNIT 2
PROJECT ID 1060-33-77
SECANT PILE WALL ONLY

STAGE 2 CONSTRUCTION - UNIT 2
PROJECT ID 1060-33-78
PRECAST PANELS & SECANT
PILE WALL EXTENSIONS

WALL STAGING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

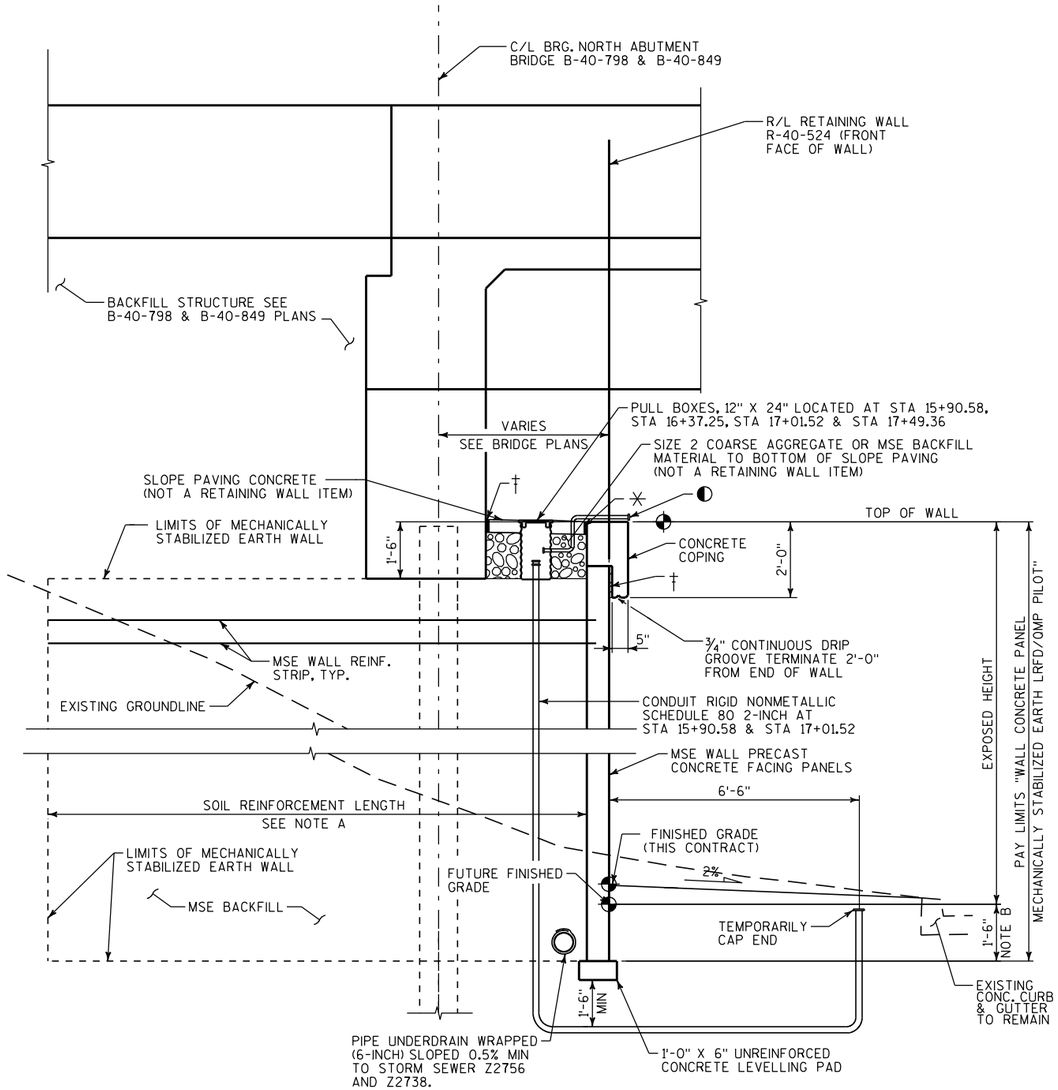
STRUCTURE R-40-524-001

DRAWN BY MS | PLANS CK'D. KES

CONSTRUCTION STAGING

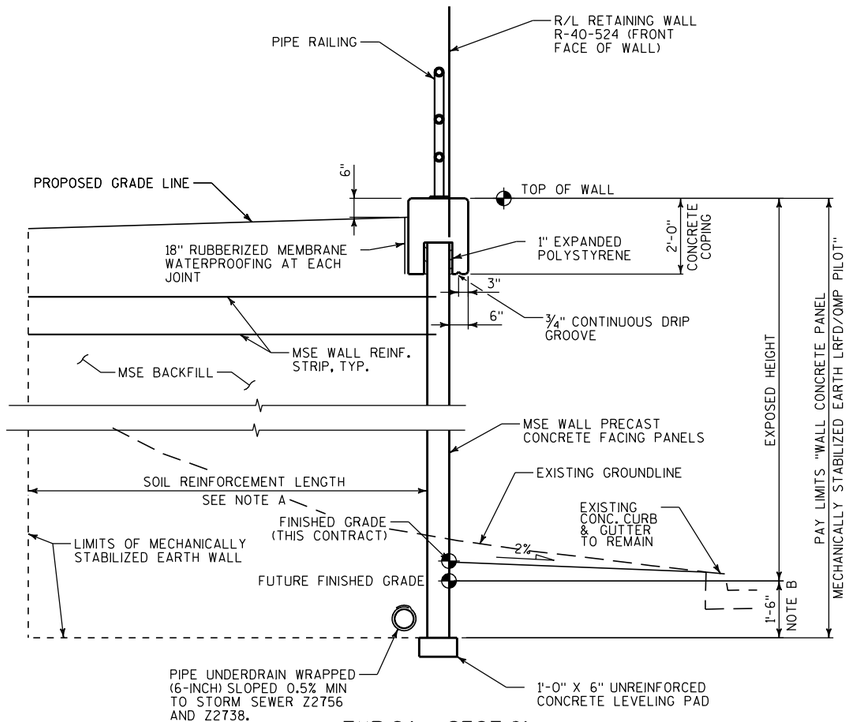
SHEET 3 OF 11

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION

LOOKING EAST - STA. 15+78.35 TO STA. 16+47.08
LOOKING EAST - STA. 16+88.81 TO STA. 17+63.77



TYPICAL SECTION

LOOKING EAST - STA. 16+47.08 TO STA. 16+88.81
LOOKING EAST - STA. 17+63.77 TO STA. 17+84.37

LEGEND

† 1" EXPANDED POLYSTYRENE

✳ ¾" JOINT FILLER

◐ 1" DIA FLEXIBLE METALLIC CONDUIT, LIQUID TIGHT, PAID FOR AS BID ITEM "CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH". EXTEND AS SHOWN AND TEMPORARILY CAP END

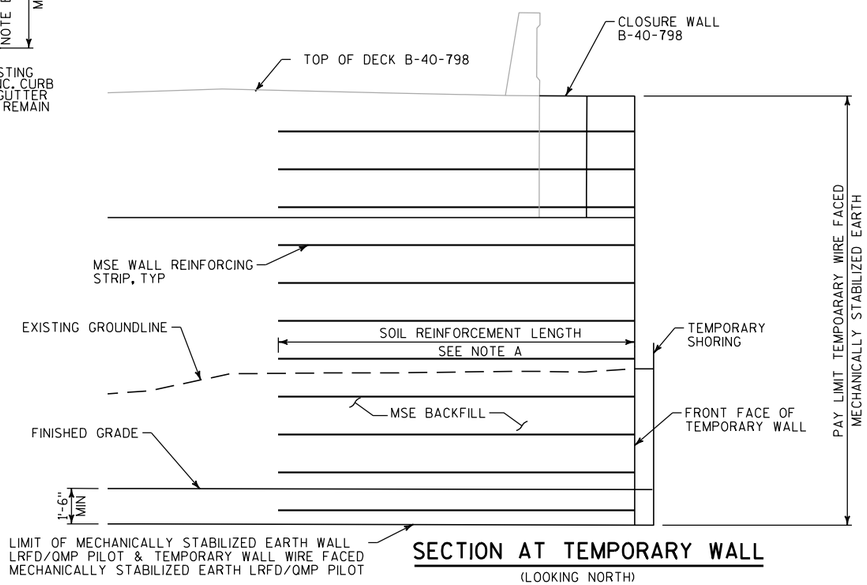
NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 2 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NOTE B:

MINIMUM DIMENSION FROM FUTURE FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE FABRICATOR OF THE WALL PANELS.



SECTION AT TEMPORARY WALL

(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

DRAWN BY MS | PLANS CK'D. KES

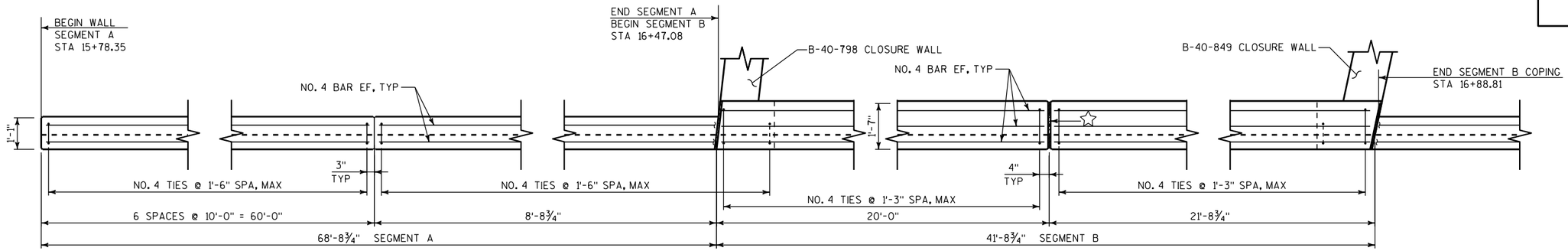
TYPICAL SECTIONS

SHEET 4 OF 11

8

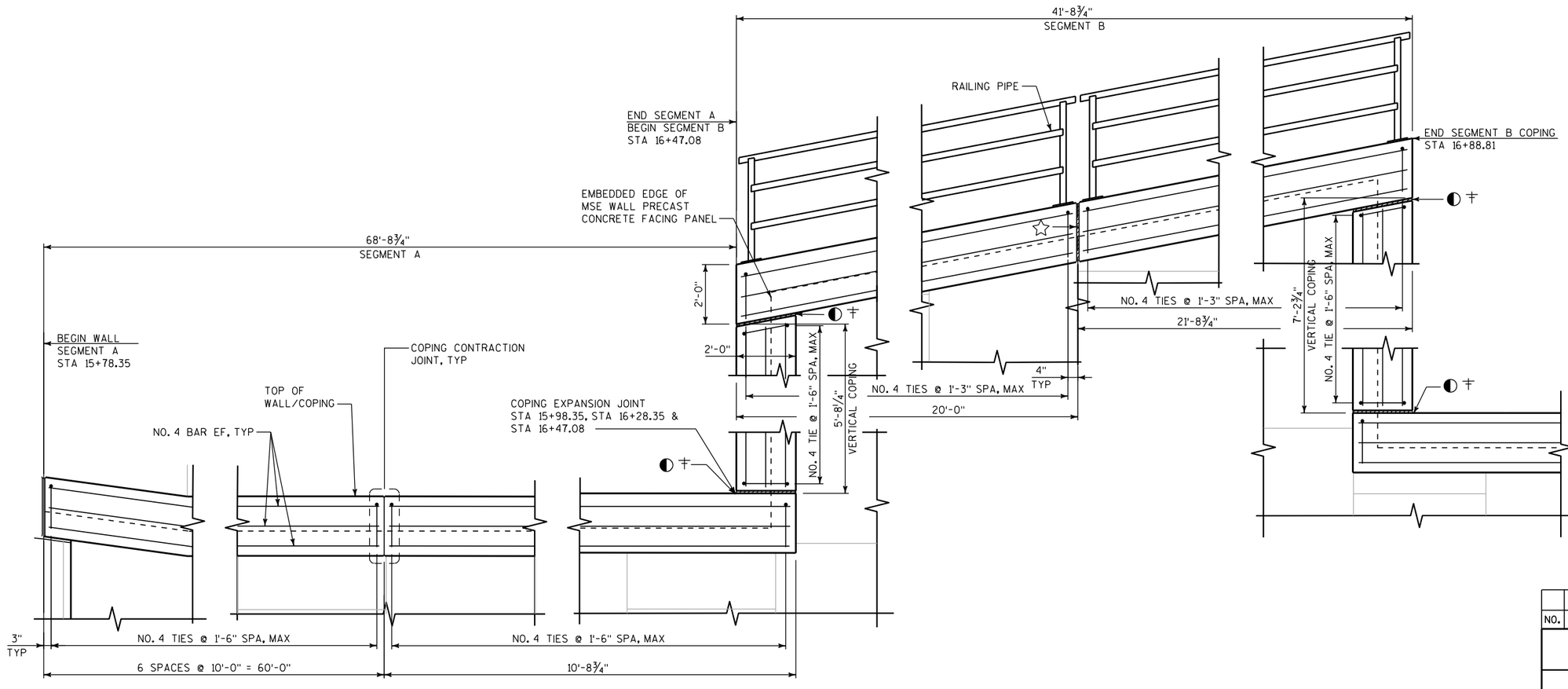
8

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A & B

DIMENSIONS ARE ALONG R/L R-40-524



ELEVATION - SEGMENT A & B

LOOKING NORTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-524

LEGEND

- ☆ 1" CORK FILLER
- ◐ 1" PREFORMED JOINT FILLER
- ⊣ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

DRAWN BY	MS	PLANS CK'D.	KES

SEGMENT A & B
COPING PLAN
& ELEVATION

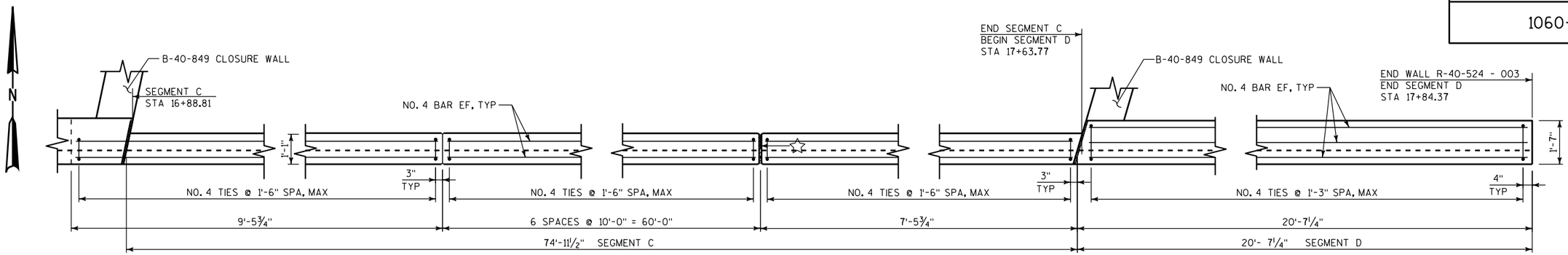
SHEET 5 OF 11

8

8

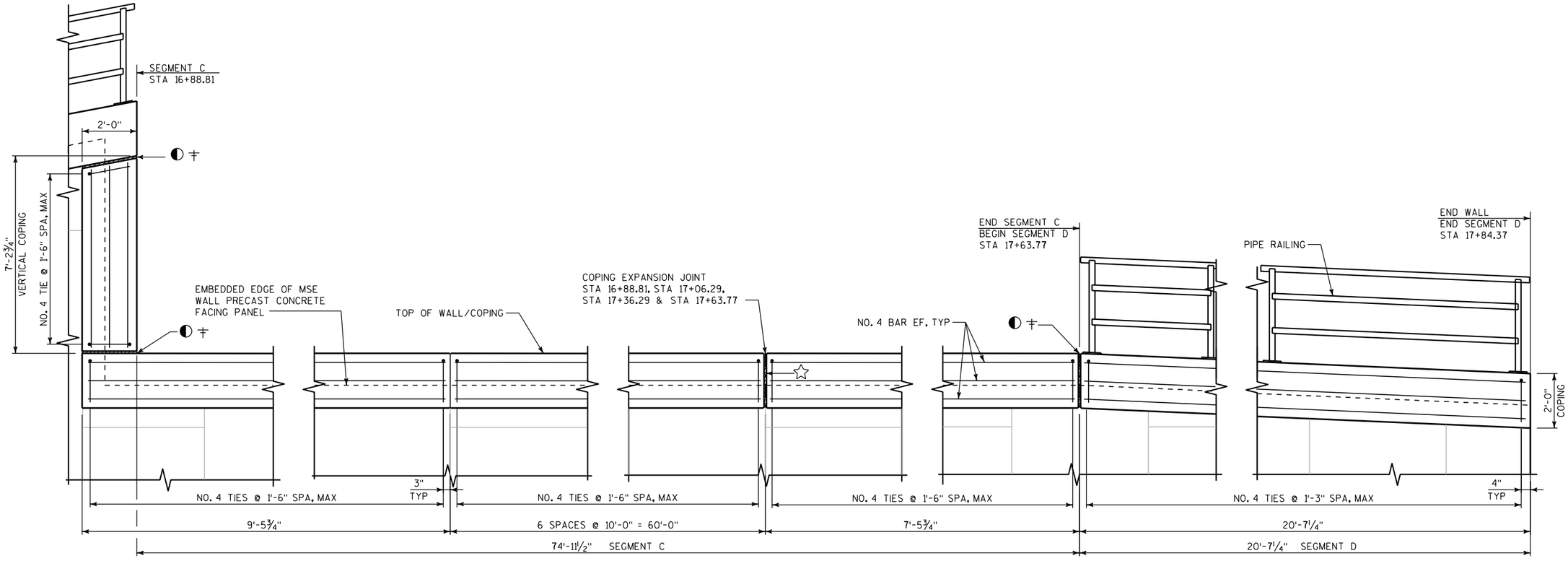
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PLOT DATE : 02-MAY-2014 10:45
PLOT BY : MSCKES
PLOT NAME : R524_080201_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT C & D

DIMENSIONS ARE ALONG R/L R-40-524



LEGEND

☆ 1" CORK FILLER

◐ 1" PREFORMED JOINT FILLER

⊣ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

ELEVATION - SEGMENT C & D

LOOKING NORTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-524

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

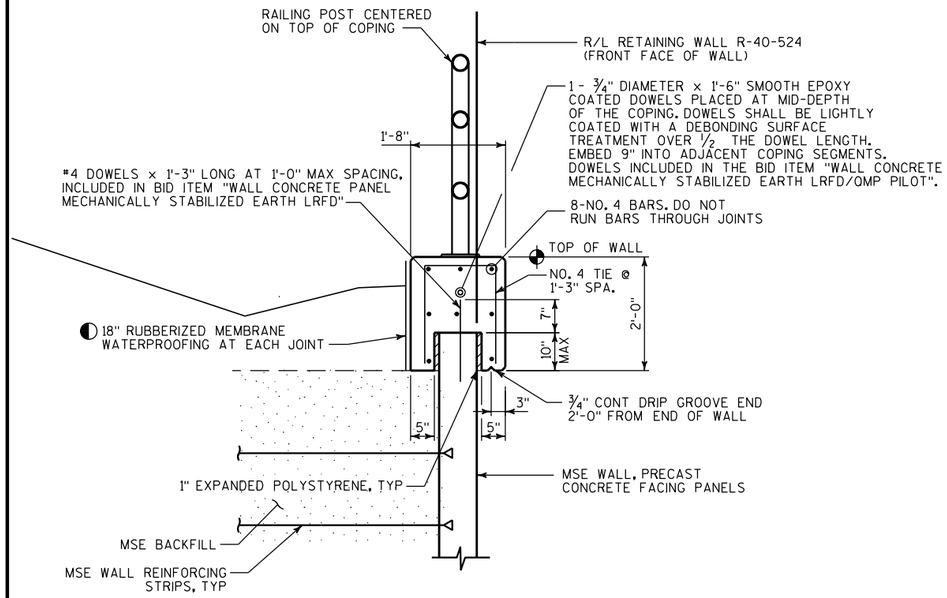
DRAWN BY	MS	PLANS CK'D.	KES

SEGMENT C & D
COPING PLAN
& ELEVATION

SHEET 6 OF 11

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PLOT BY : MSCKES
PLOT NAME : R524_080202_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



COPING SECTION - SEGMENTS B & D

SEGMENT A WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
15+78.35	789.41	778.30	777.33	780.10
15+83.12	788.77	778.30	777.19	779.82
15+88.35	788.77	778.28	777.18	779.77
15+98.35	788.77	778.23	777.18	779.43
16+08.35	788.77	778.14	777.20	778.71
16+18.35	788.77	778.02	777.15	778.69
16+28.35	788.77	777.91	777.15	778.49
16+38.35	788.77	777.80	777.06	778.40
16+47.08	788.77	777.71	777.00	778.45

SEGMENT B WALL ELEVATIONS ◪

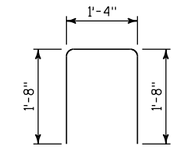
STATION	TOP OF WALL EL	FINISHED GRADE EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
16+47.08	796.39	777.71	777.00	778.45
16+67.08	800.27	777.47	776.82	778.38
16+88.81	804.48	777.18	776.56	779.00

SEGMENT C WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
16+88.81	795.22	777.18	776.56	779.00
16+96.29	795.22	777.08	776.43	778.87
17+06.29	795.22	776.95	776.32	778.84
17+16.29	795.22	776.80	776.12	779.01
17+26.29	795.22	776.64	776.01	778.85
17+36.29	795.22	775.44	775.81	778.67
17+46.29	795.22	775.25	775.62	778.67
17+56.29	795.22	775.10	775.49	778.70
17+63.77	795.22	775.99	775.33	778.78

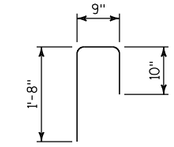
SEGMENT D WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
17+63.77	795.22	775.99	775.33	778.78
17+84.37	794.34	775.68	775.34	783.75



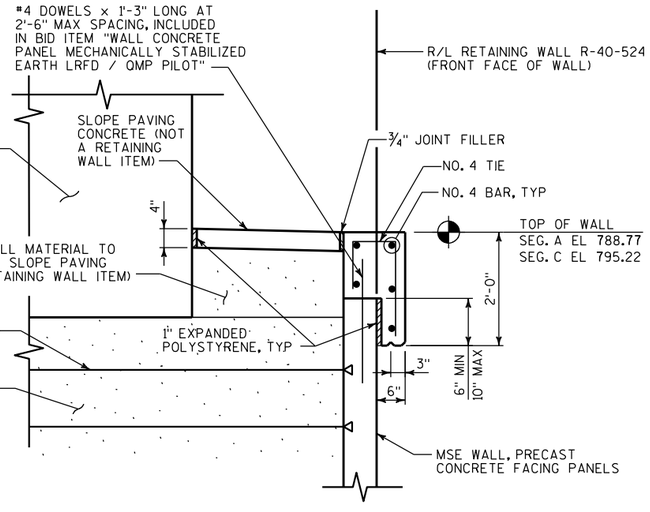
SEGMENT B & D

(NO. 4 VERT TIE)

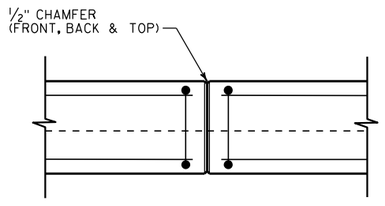


SEGMENT A & C

(NO. 4 VERT TIE)

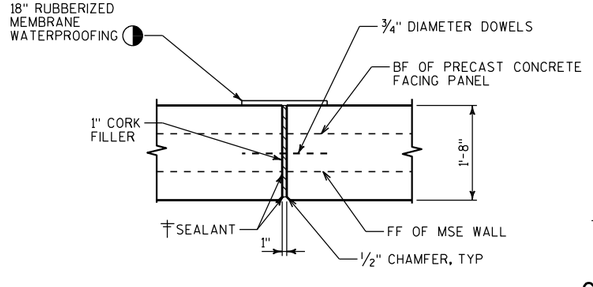


COPING DETAIL AT SEGMENTS A & C



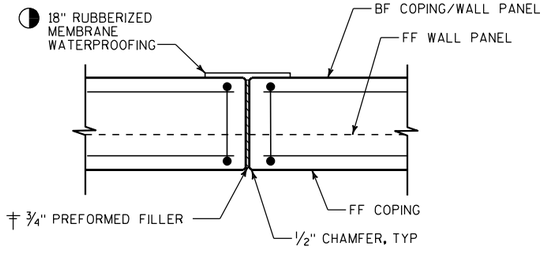
COPING CONTRACTION JOINT SEGMENTS A & C

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.



COPING EXPANSION JOINT SEGMENTS B & D

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER



COPING EXPANSION JOINT SEGMENTS A & C

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER

NOTE

SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATION OF CONTRACTION / EXPANSION JOINTS

LEGEND

- SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PRECAST PANEL.
- LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

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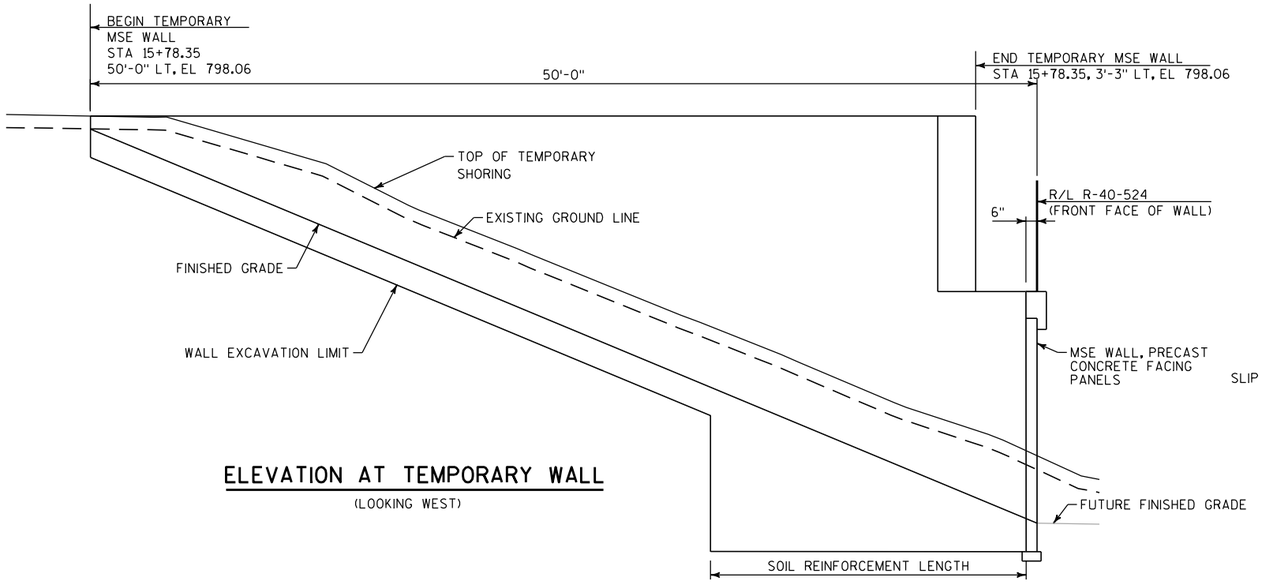
MSE WALL DETAILS

SHEET 7 OF 11

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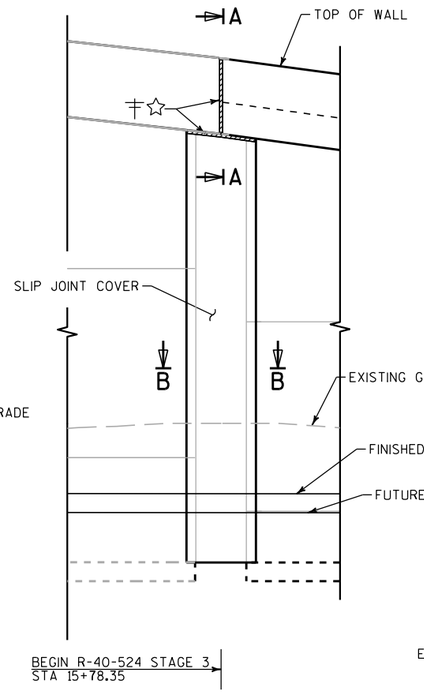
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STATE PROJECT NUMBER
1060-33-80

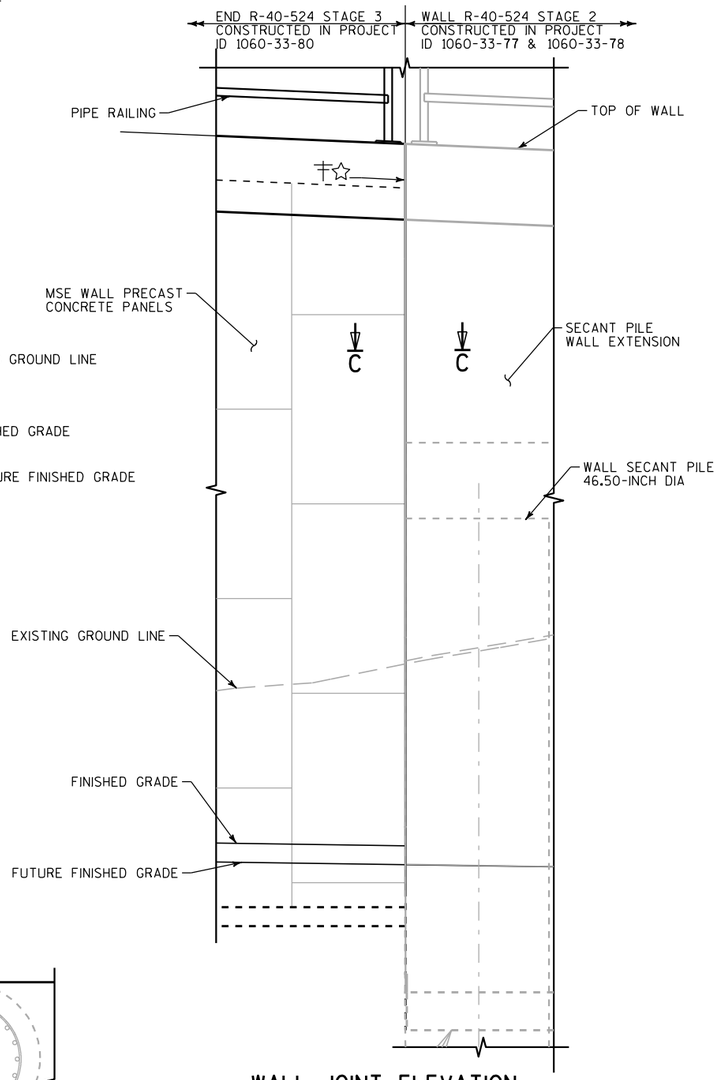


ELEVATION AT TEMPORARY WALL

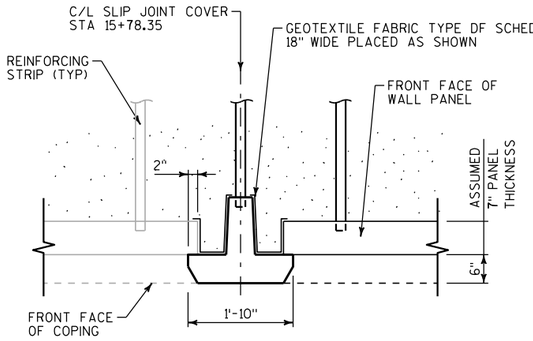
(LOOKING WEST)



SLIP JOINT COVER ELEVATION



WALL JOINT ELEVATION

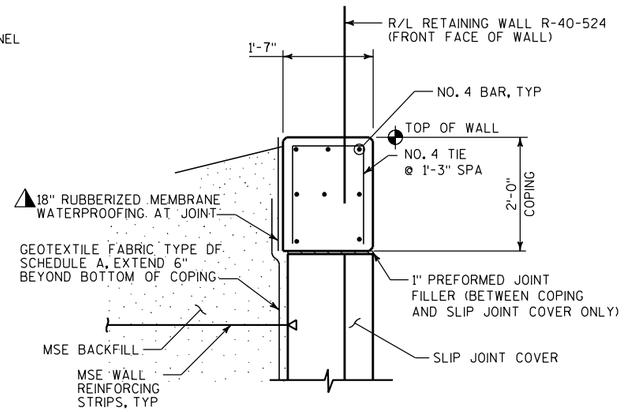


SECTION B-B SLIP JOINT COVER DETAIL

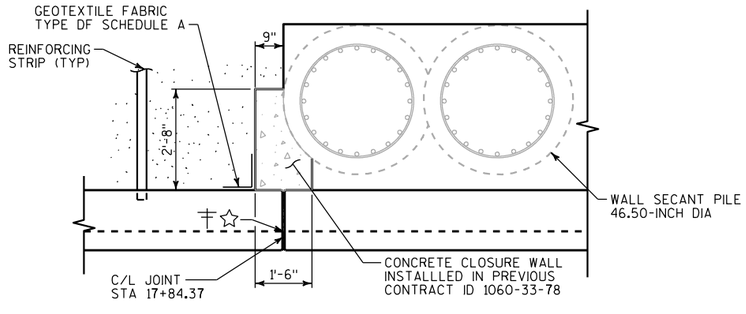
(STA 15+78.35 - LOOKING NORTH)
(SLIP JOINT COVER INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD / OMP PILOT")

LEGEND

- ☆ 1" PREFORMED JOINT FILLER
- ◐ 1" CORK FILLER
- ◭ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING.
- ⊣ SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)



SECTION A-A SLIP JOINT DETAIL



SECTION C-C WALL JOINT DETAIL

(STA 17+84.37 - LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

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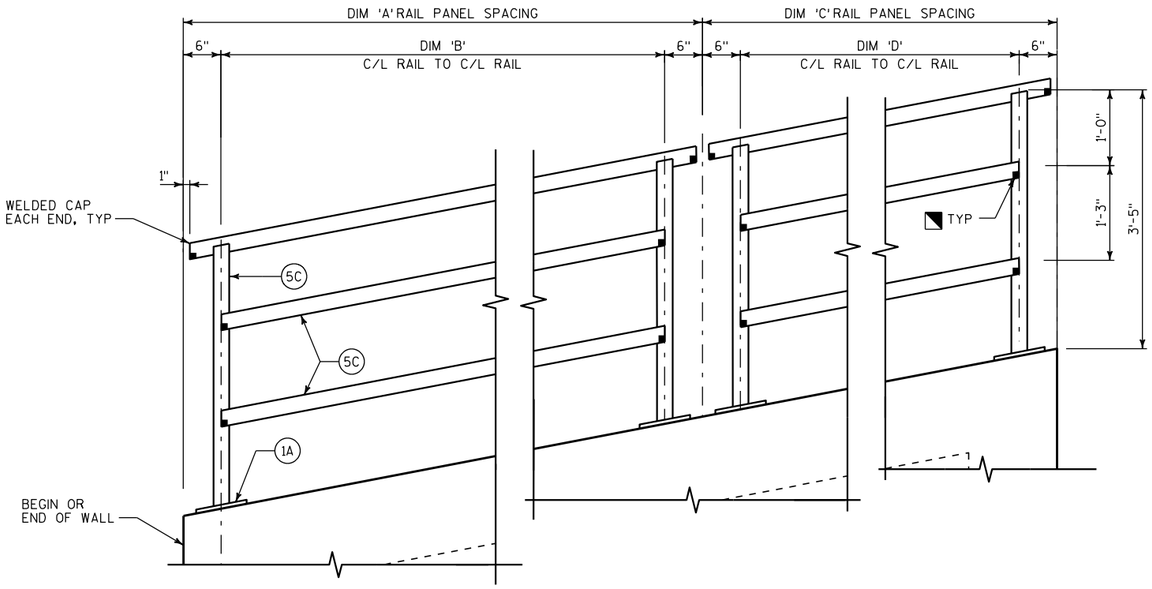
TEMPORARY WALL TYPICAL SECTIONS

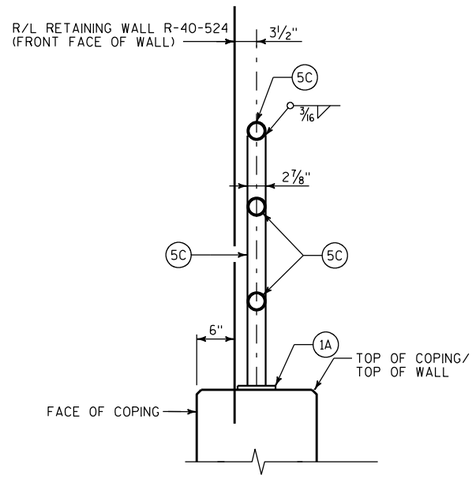
SHEET 8 OF 11

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-524\cds\R524_080204_de.dgn PLOT DATE : 02-MAY-2014 10:45 PLOT BY : MSCKES PLOT NAME : R524_080204_de PLOT SCALE : 3.999992:1

STATE PROJECT NUMBER
1060-33-80





WALL RAILING SECTION

LEGEND

(1A) PLATE ⅝" × 6" × 8" WITH ¾" × 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MINIMUM OF 7" INTO CONCRETE.

(5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING/ TOP OF WALL. WELD TO 5C.

DIM	SEGMENT B	SEGMENT D
A	3 SPACES @ 10'-0"	1 SPACE @ 10'-0"
B	9'-0" EACH PANEL	9'-0" EACH PANEL
C	2 SPACES @ 5'-10⅜"	2 SPACES @ 5'-3⅝"
D	4'-10⅜" EACH PANEL	4'-3⅝" EACH PANEL

NOTES

BID ITEM "RAILING PIPE R-40-524" INCLUDES ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

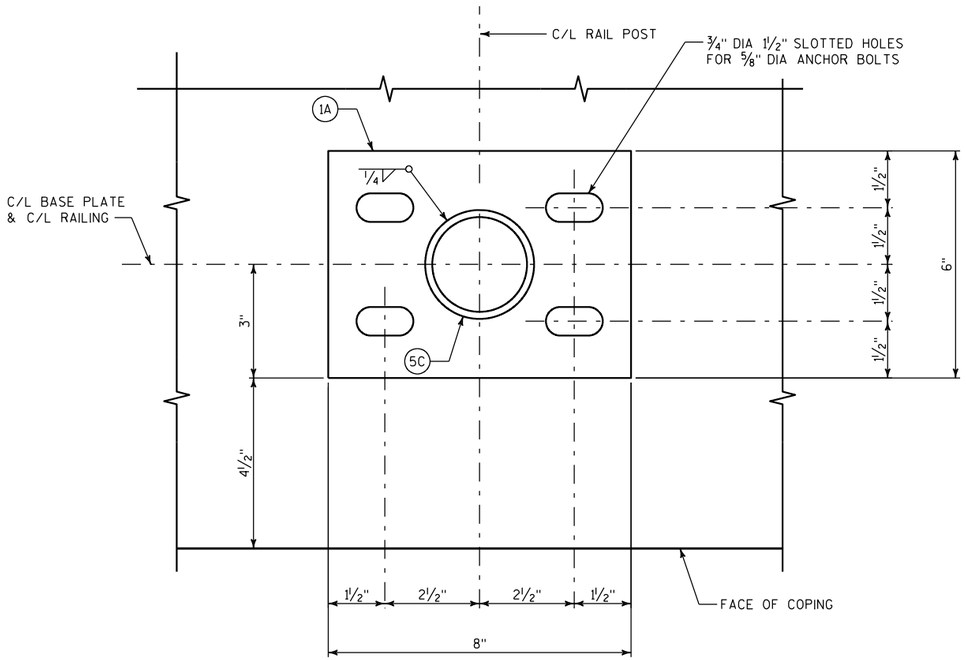
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

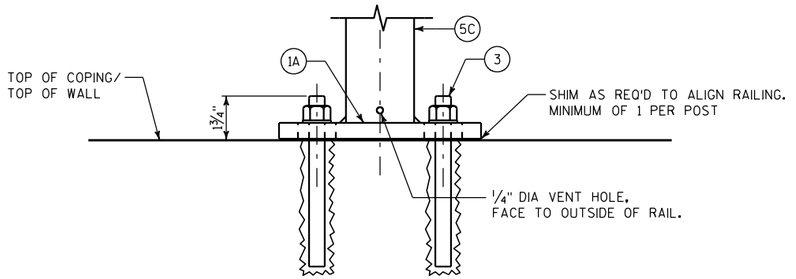
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

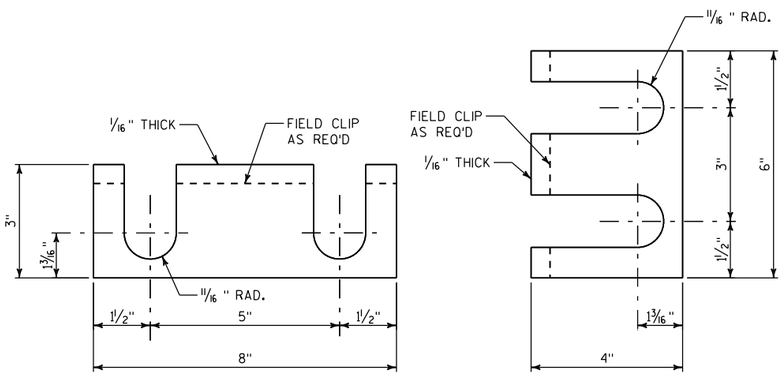
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

DRAWN BY MS | PLANS CK'D. KES

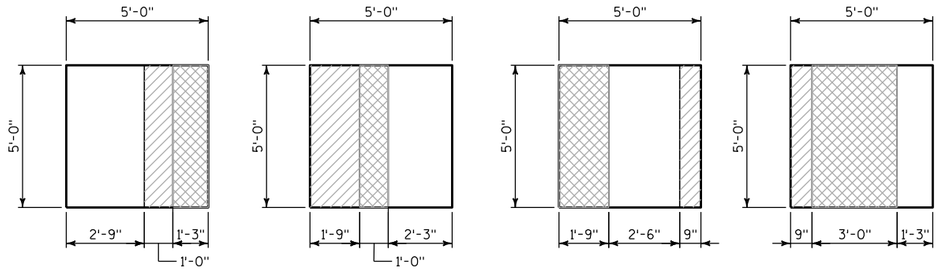
PIPE RAILING DETAILS

SHEET 9 OF 11

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-524\cds\R524_080301_rp.dgn
PLOT DATE : 09-MAY-2014 13:39
PLOT BY : MSCKES
PLOT NAME : R524_080301_rp
PLOT SCALE : 2:1

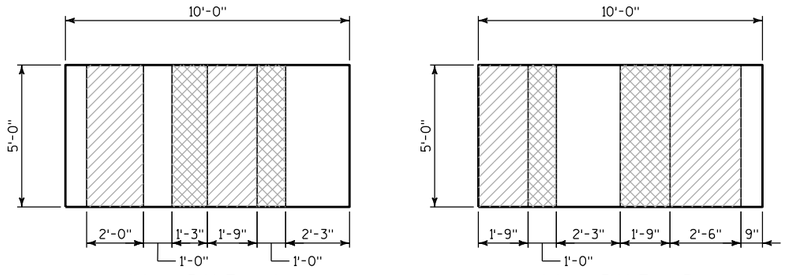
STATE PROJECT NUMBER

1060-33-80

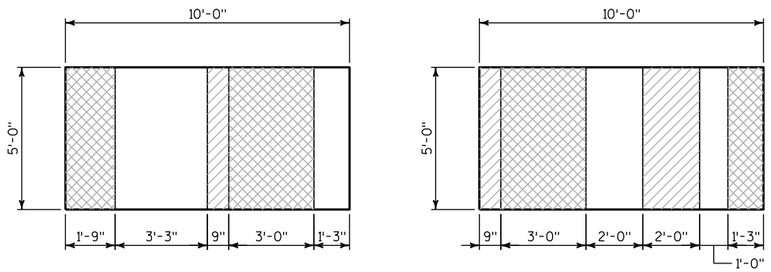


WALL PANEL "A" WALL PANEL "B" WALL PANEL "C" WALL PANEL "D"

5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



WALL PANEL "A" WALL PANEL "B"

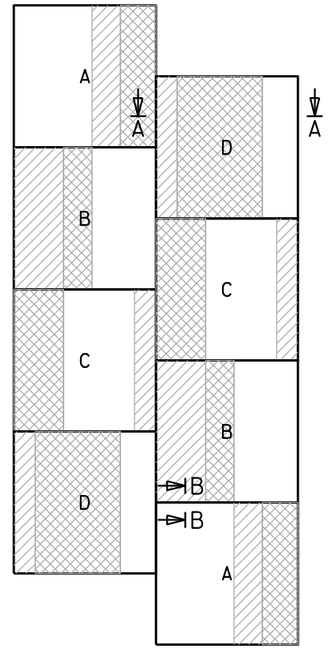


WALL PANEL "C" WALL PANEL "D"

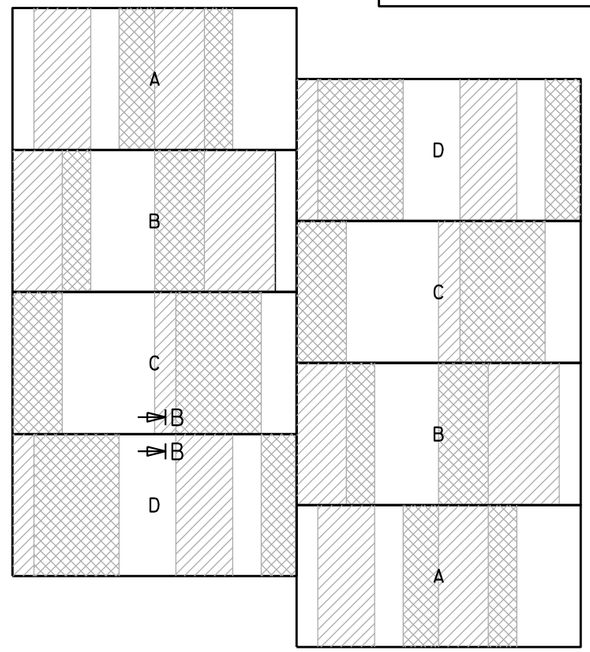
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS + 0"



TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

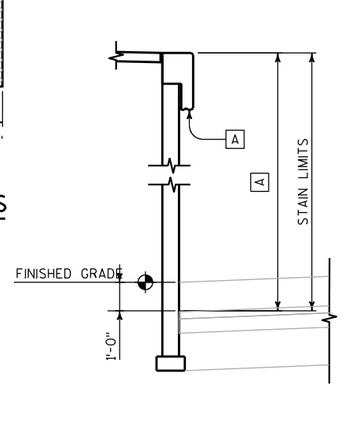
CONCRETE STAINING SCHEDULE

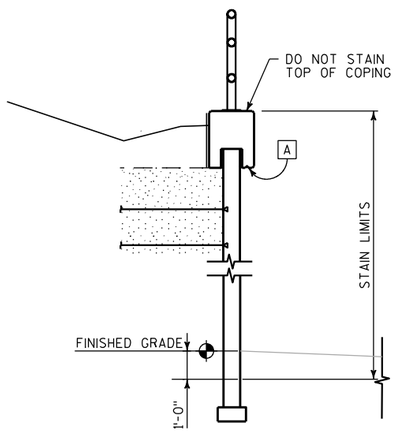
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

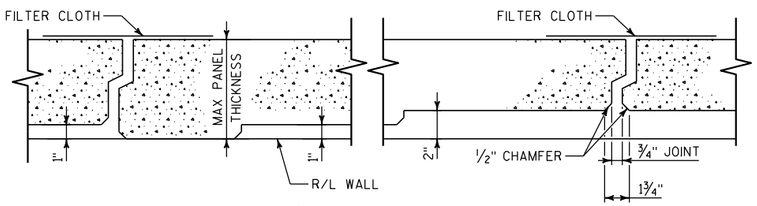
BASE COLOR : 33564



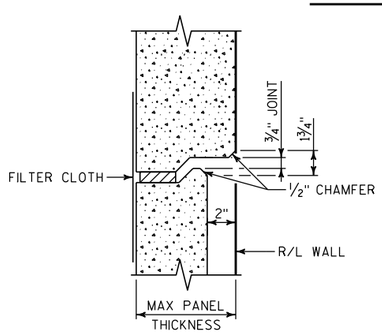


MSE WALL STAINING DIAGRAMS

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

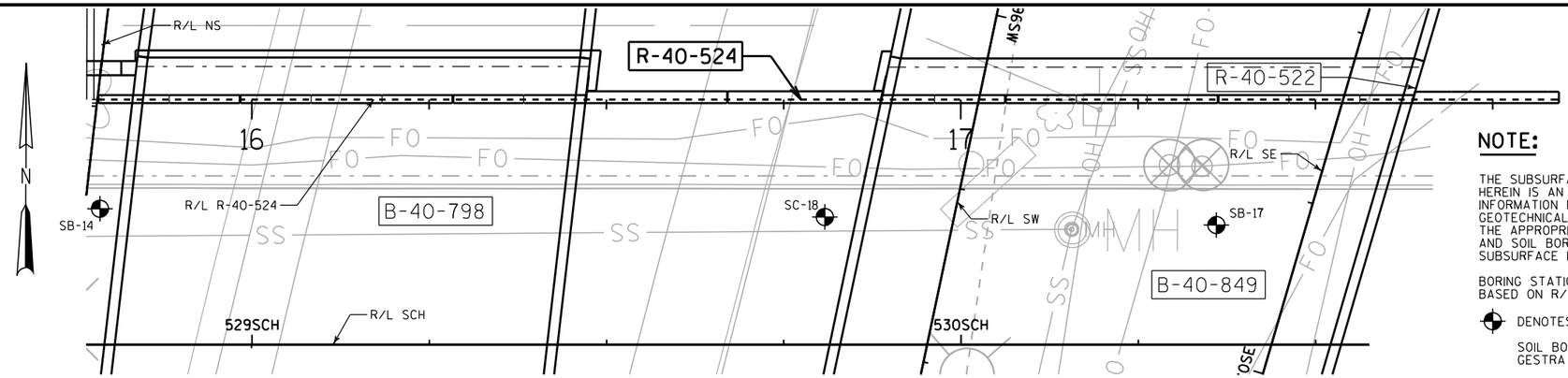
DRAWN BY MS | PLANS CK'D. KES

AESTHETIC WALL TREATMENT DETAILS

SHEET 10 OF 11

8

8



NOTE:

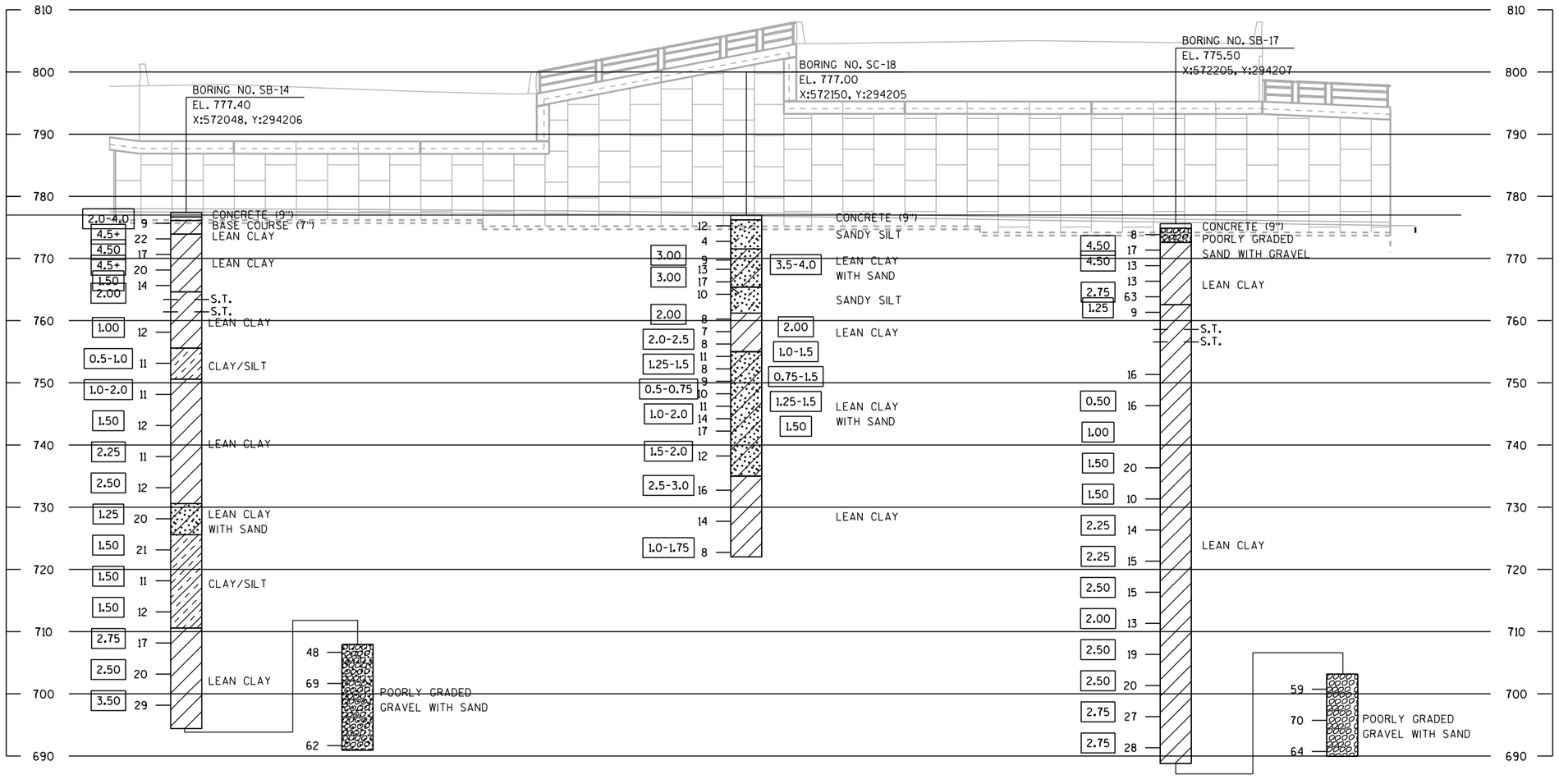
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-524.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 27, 2012 - BORING SB-14
FEB. 3, 2012 - BORING SB-17



STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-001

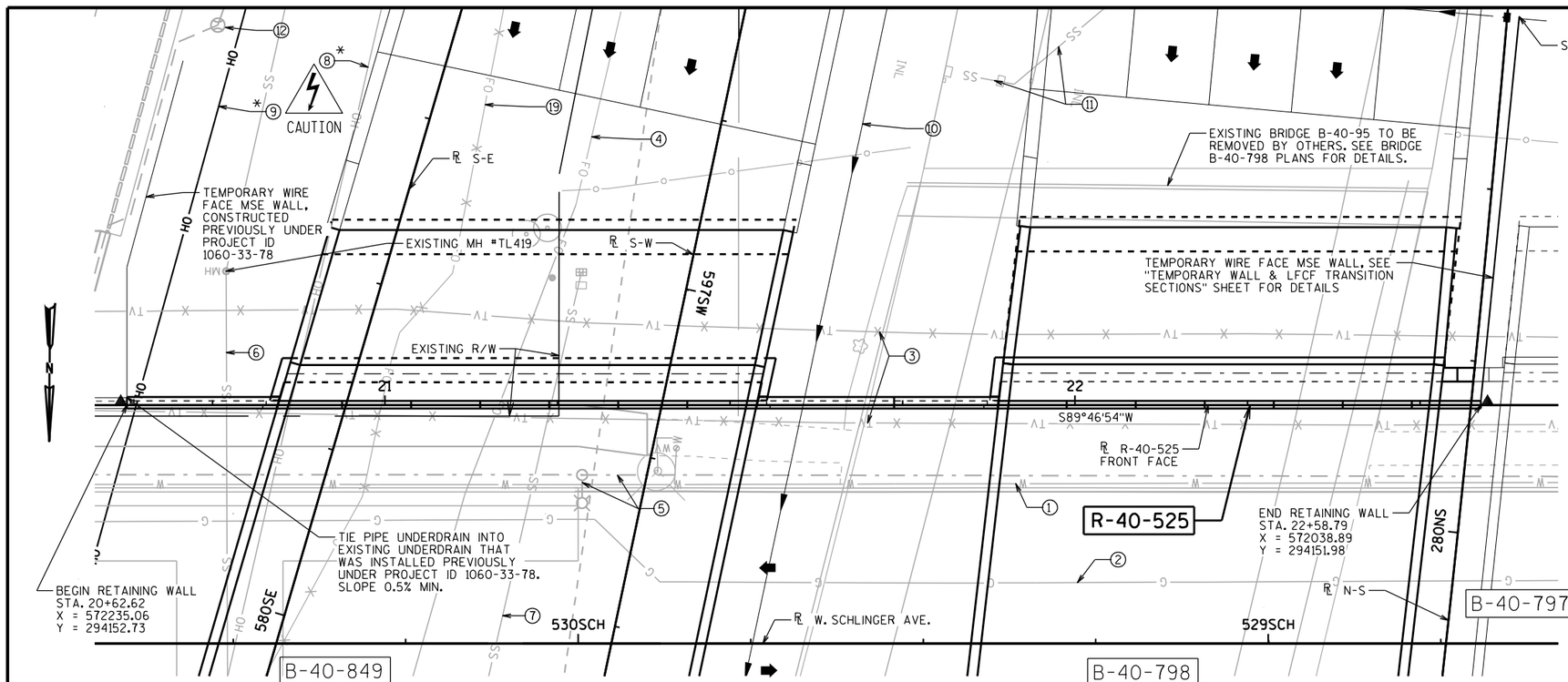
DRAWN BY MS | PLANS CK'D. KES

SUBSURFACE EXPLORATION

SHEET 11 OF 11

8 8

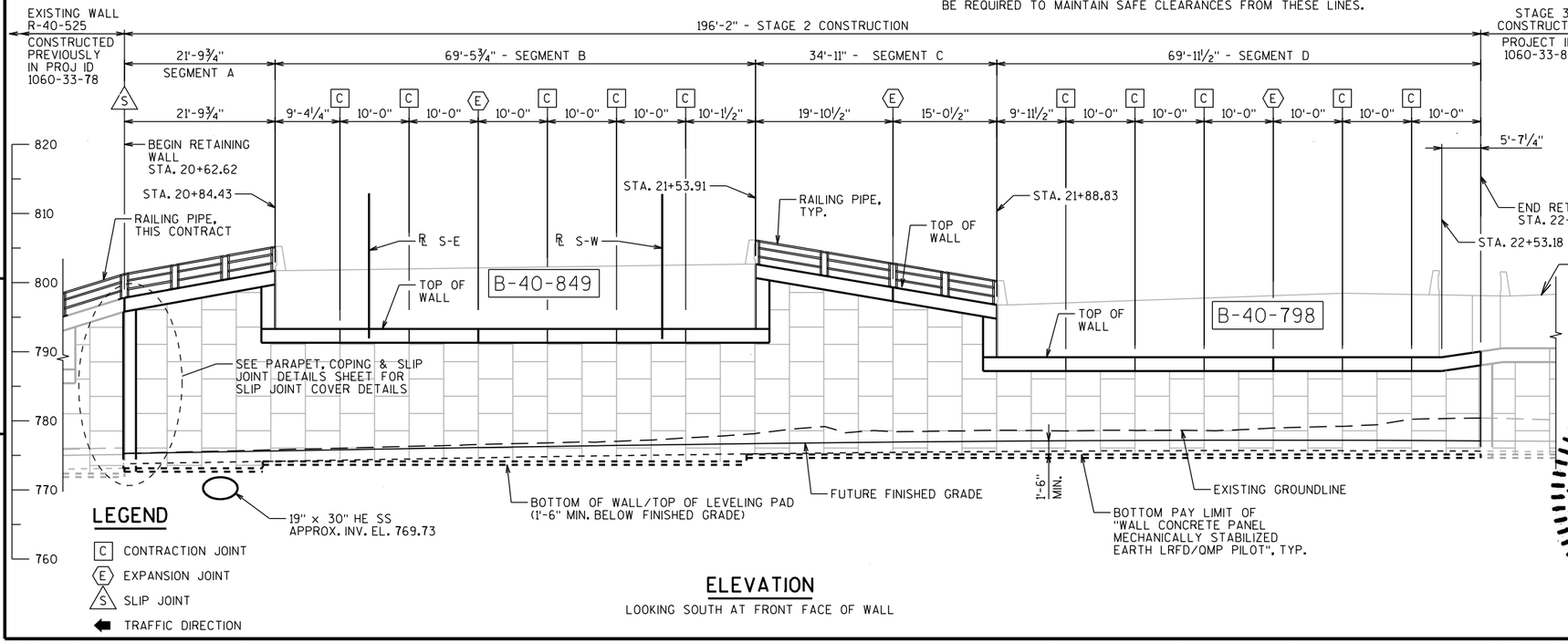
STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL

* CONSTRUCTION OF RETAINING WALL R-40-525 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

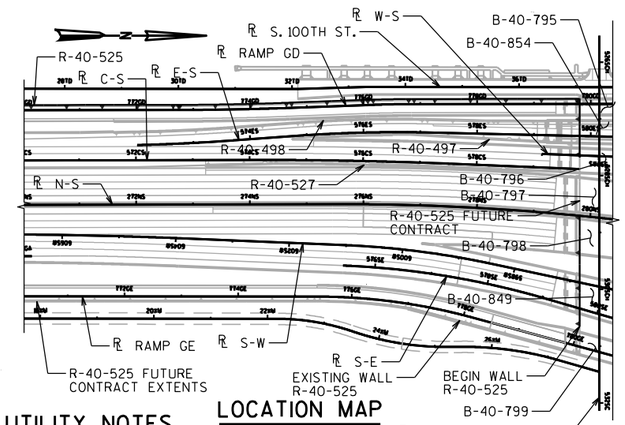


ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- S — SLIP JOINT
- TRAFFIC DIRECTION



LOCATION MAP

UTILITY NOTES

1. EXISTING CITY OF WEST ALLIS WATER MAIN TO REMAIN
2. EXISTING WE ENERGIES GAS LINE TO BE RELOCATED
3. ABANDONED TIME WARNER CABLE COMMUNICATIONS LINE
4. EXISTING AT&T CORP FIBER OPTIC LINE TO BE RELOCATED
5. EXISTING WISDOT LIGHTING TO BE RELOCATED
6. EXISTING WISDOT 19" X 30" HORIZONTAL ELLIPTICAL STORM SEWER TO REMAIN
7. EXISTING WISDOT 12" STORM SEWER TO BE REMOVED
8. EXISTING ATC OVERHEAD TRANSMISSION LINES TO BE RELOCATED
9. PROPOSED ATC OVERHEAD TRANSMISSION LINES TO BE IN PLACE BY STAGE 2
10. PROPOSED WISDOT 60" STORM SEWER
11. EXISTING WISDOT STORM SEWER TO BE REMOVED
12. EXISTING WISDOT FTMS PULL BOX
19. ABANDONED WINDSTREAM FIBER OPTIC LINE

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION 1
2. GENERAL PLAN & ELEVATION 2
3. GENERAL PLAN & ELEVATION 3
4. GENERAL PLAN & ELEVATION 4
5. GENERAL PLAN & ELEVATION 5
6. GENERAL PLAN & ELEVATION 6
7. QUANTITIES, DESIGN DATA & GENERAL NOTES
8. PROFILE GRADE LINES
9. WALL ELEVATIONS
10. CONSTRUCTION STAGING
11. TYPICAL SECTIONS 1
12. TYPICAL SECTIONS 2
13. TYPICAL SECTIONS 3
14. TYPICAL SECTIONS 4
15. TEMPORARY WALL & LFCF TRANSITION SECTIONS
16. PARAPET, COPING & SLIP JOINT DETAILS
17. SEGMENTS A & B REINFORCEMENT DETAILS
18. SEGMENTS C & D REINFORCEMENT DETAILS
19. PILING SLEEVE LAYOUT
20. PIPE RAILING DETAILS
21. AESTHETIC WALL TREATMENT DETAILS PATTERN 1
22. AESTHETIC WALL TREATMENT DETAILS PATTERN 2
23. SUBSURFACE EXPLORATION 1
24. SUBSURFACE EXPLORATION 2
25. SUBSURFACE EXPLORATION 3
26. SUBSURFACE EXPLORATION 4
27. SUBSURFACE EXPLORATION 5

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR — 05/15/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-525

RETAINING WALL SOUTH OF SCHLINGER AVE.

COUNTY	~~TOWN/CITY/VILLAGE~~
MILWAUKEE	WEST ALLIS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JJO	JWC	JJO	JWC

GENERAL PLAN & ELEVATION 1

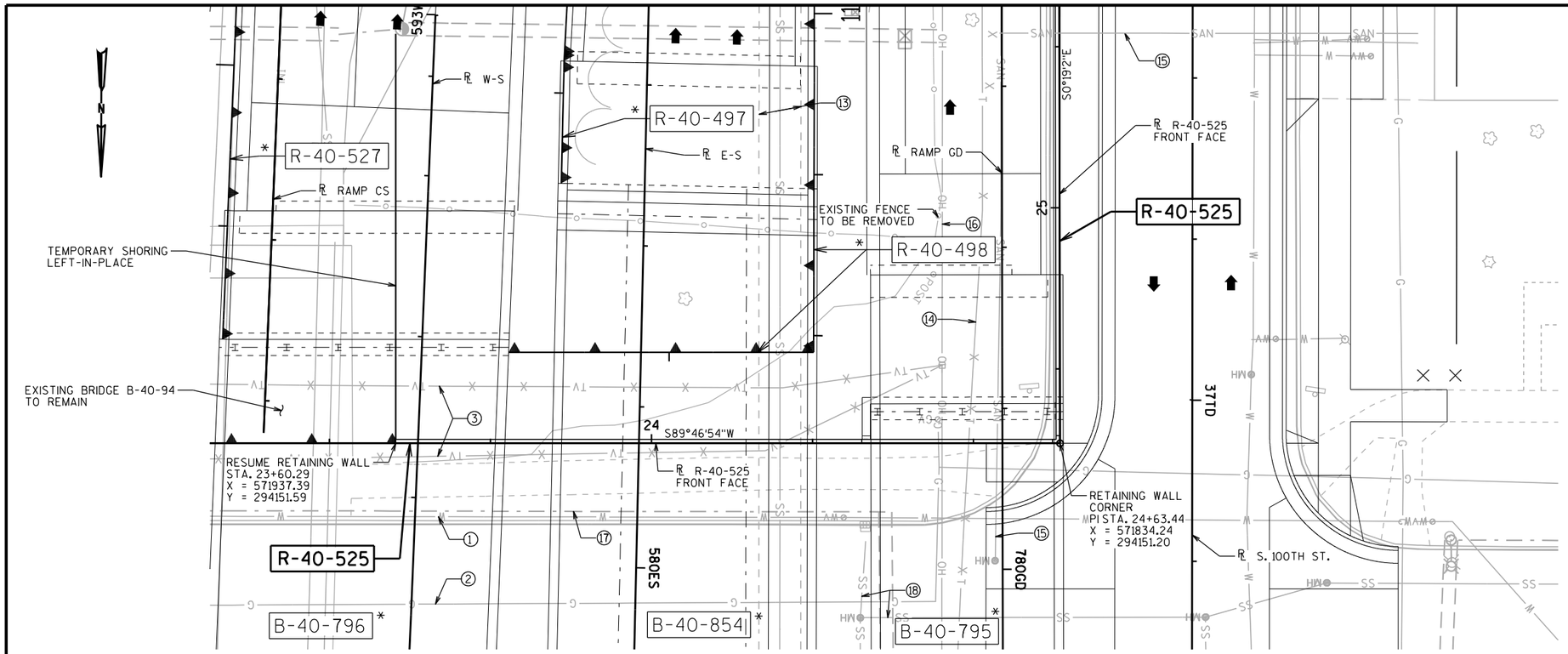
SHEET 1 OF 27

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 359-2300

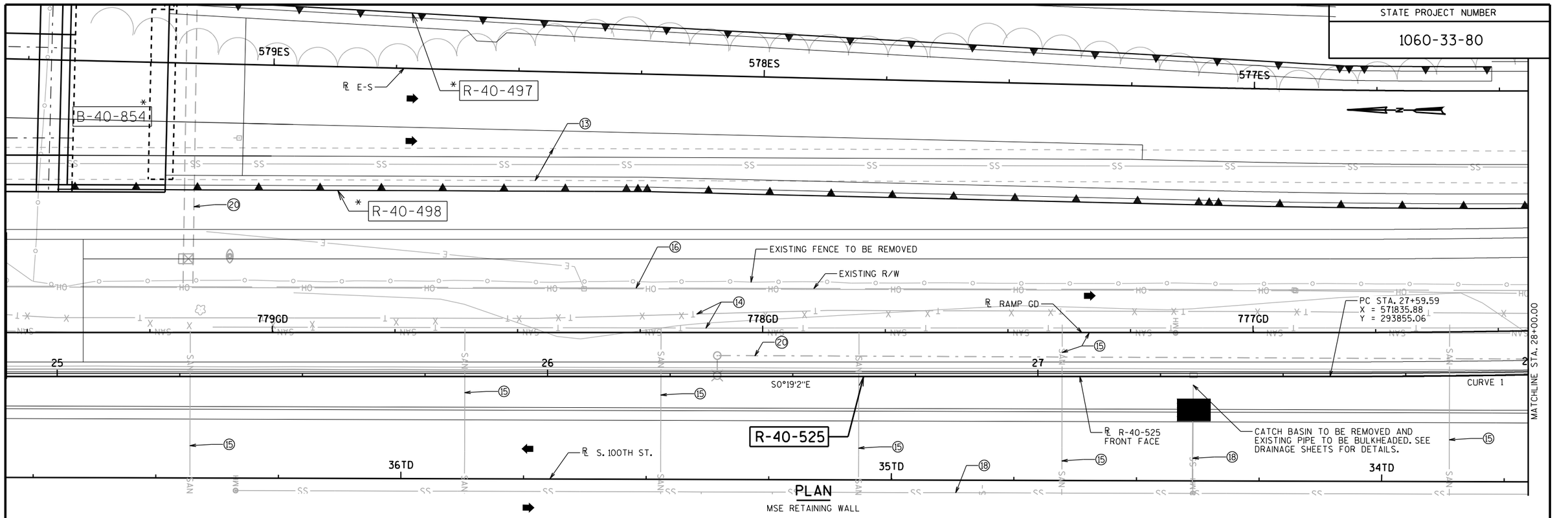
WISCONSIN — JOSHUA J ODENWALD E-41771-6 RUBICON WI — 5/9/14 — PROFESSIONAL ENGINEER

STATE PROJECT NUMBER
1060-33-80


N
R-40-527
R-40-497
R-40-498
R-40-525
R-40-525
R-40-525

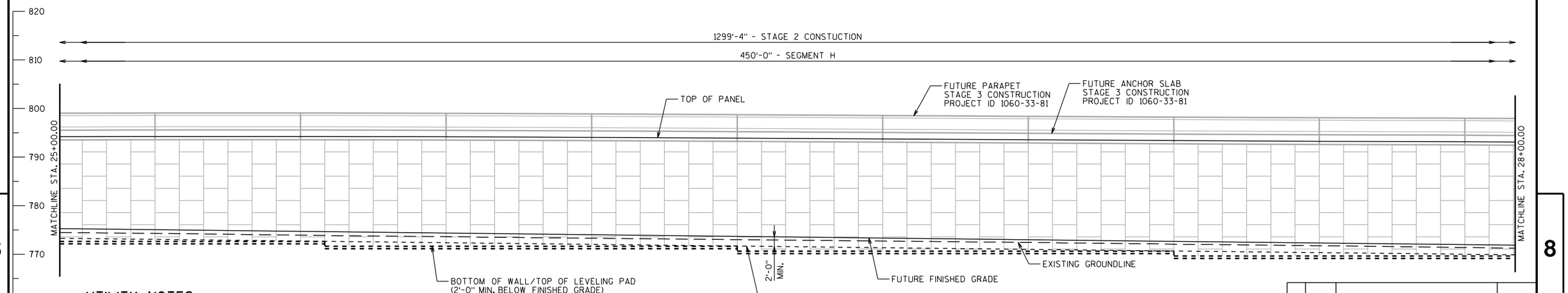
STATE PROJECT NUMBER

1060-33-80



PLAN

MSE RETAINING WALL



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

UTILITY NOTES

⑬ EXISTING WISDOT 78" STORM SEWER TO REMAIN, APPROX. INV. EL. 734'

⑭ ABANDONED AT&T WIS UNDERGROUND LINE

⑮ EXISTING CITY OF WEST ALLIS SANITARY SEWER TO BE RELOCATED

⑯ EXISTING WE ENERGIES OVERHEAD ELECTRIC LINE TO BE RELOCATED

⑱ EXISTING WISDOT STORM SEWER TO REMAIN

⑳ EXISTING CITY OF WEST ALLIS LIGHTING TO BE RELOCATED

LEGEND

⬅ TRAFFIC DIRECTION

* BRIDGE B-40-854 AND RETAINING WALLS R-40-497 AND R-40-498 WILL ALL BE CONSTRUCTED IN FUTURE CONTRACT 1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 3

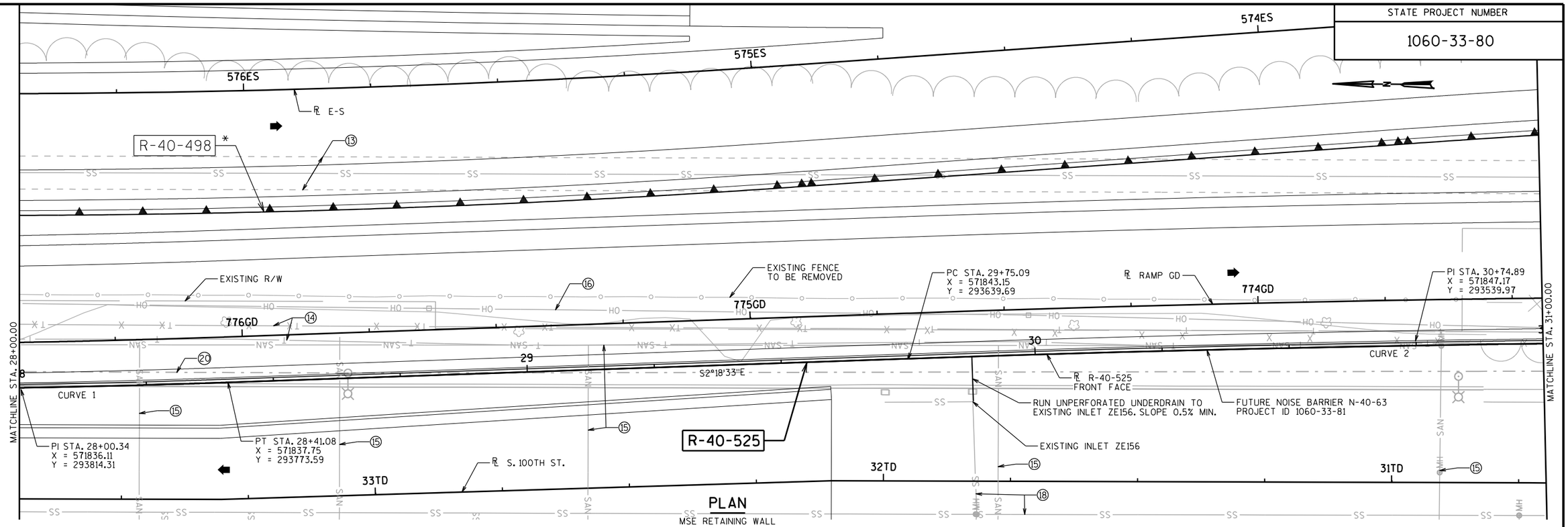
SHEET 3 OF 27

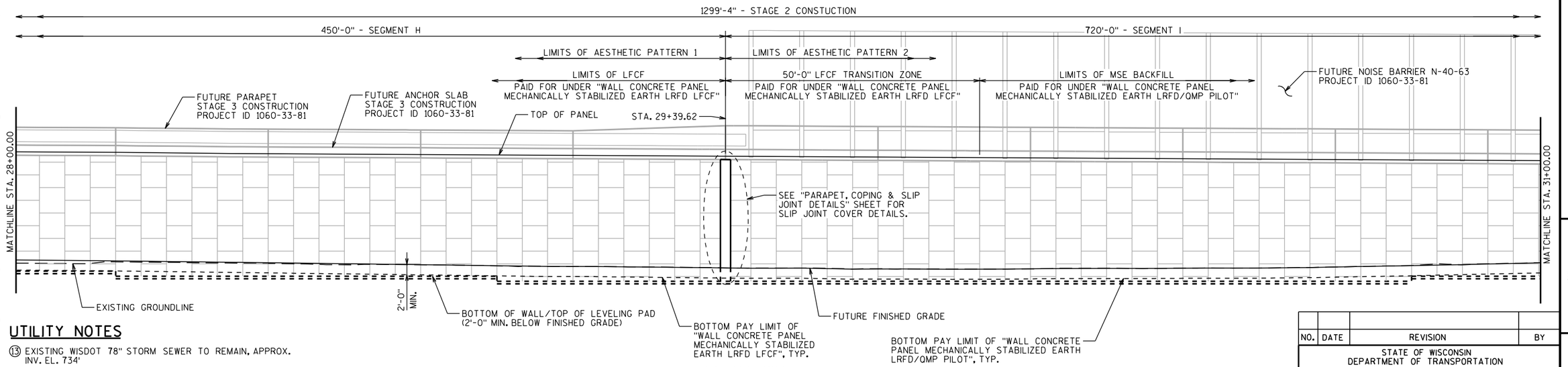
8

8

STATE PROJECT NUMBER

1060-33-80





ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

UTILITY NOTES

⑬ EXISTING WISDOT 78" STORM SEWER TO REMAIN, APPROX. INV. EL. 734'

⑭ ABANDONED AT&T WIS UNDERGROUND LINE

⑮ EXISTING CITY OF WEST ALLIS SANITARY SEWER TO BE RELOCATED

⑯ EXISTING WE ENERGIES OVERHEAD ELECTRIC LINE TO BE RELOCATED

⑱ EXISTING WISDOT STORM SEWER TO REMAIN

⑳ EXISTING CITY OF WEST ALLIS LIGHTING TO BE RELOCATED

LEGEND

◀ TRAFFIC DIRECTION

* RETAINING WALL R-40-498 WILL BE CONSTRUCTED IN FUTURE CONTRACT 1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 4

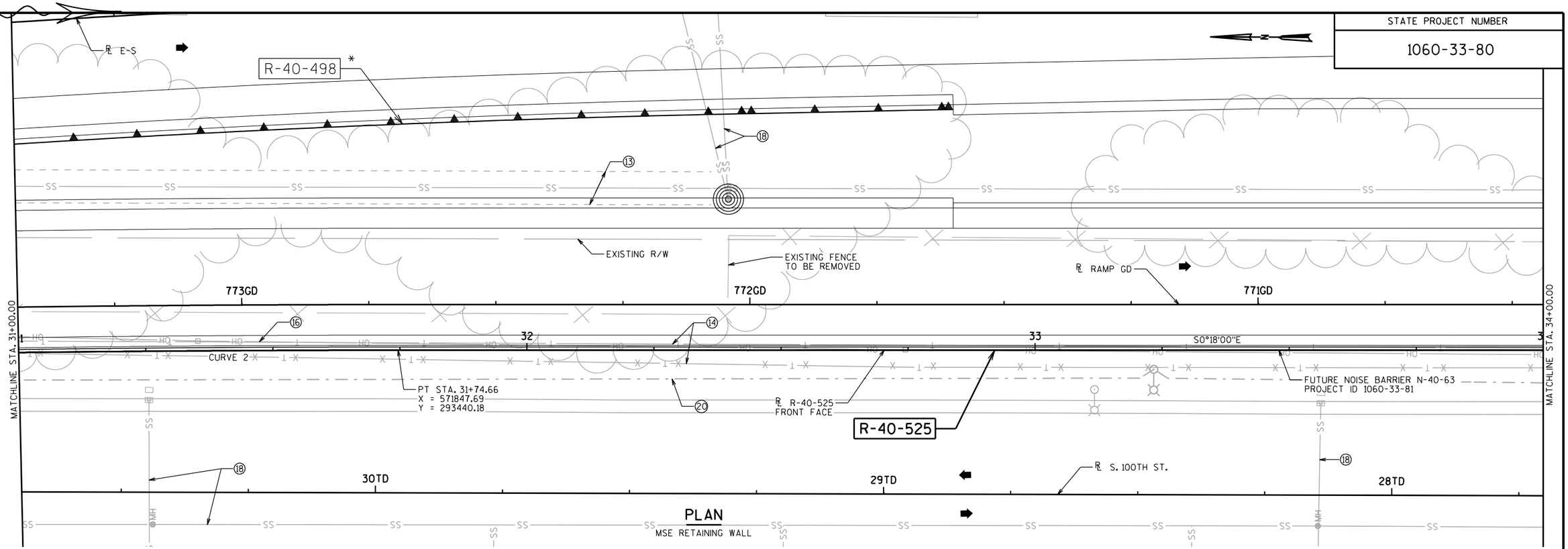
SHEET 4 OF 27

2964

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STATE PROJECT NUMBER

1060-33-80

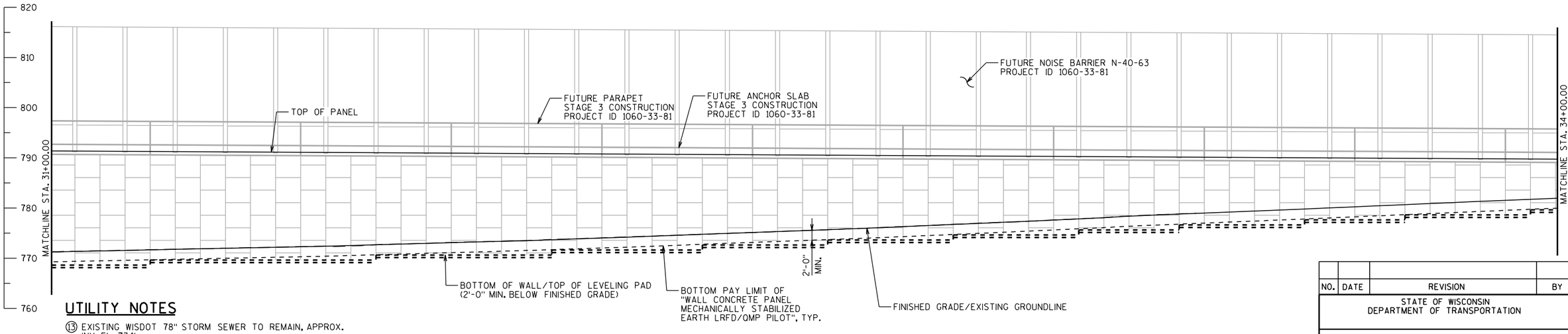


PLAN

MSE RETAINING WALL

1299'-4" - STAGE 2 CONSTUCTION

720'-0" - SEGMENT I



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

UTILITY NOTES

⑬ EXISTING WISDOT 78" STORM SEWER TO REMAIN, APPROX. INV. EL. 734'

⑭ ABANDONED AT&T WIS UNDERGROUND LINE

⑯ EXISTING WE ENERGIES OVERHEAD ELECTRIC LINE TO BE RELOCATED

⑱ EXISTING WISDOT STORM SEWER TO REMAIN

⑳ EXISTING CITY OF WEST ALLIS LIGHTING TO BE RELOCATED

LEGEND

◀ TRAFFIC DIRECTION

* RETAINING WALL R-40-498 WILL BE CONSTRUCTED IN FUTURE CONTRACT 1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

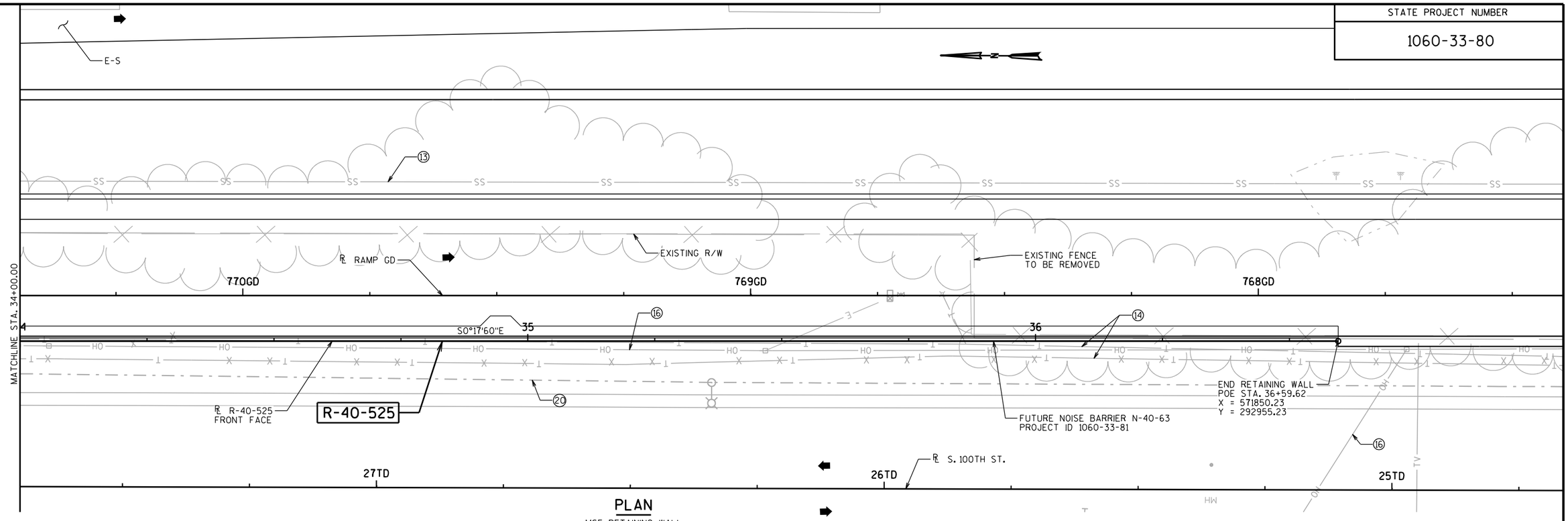
STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 5

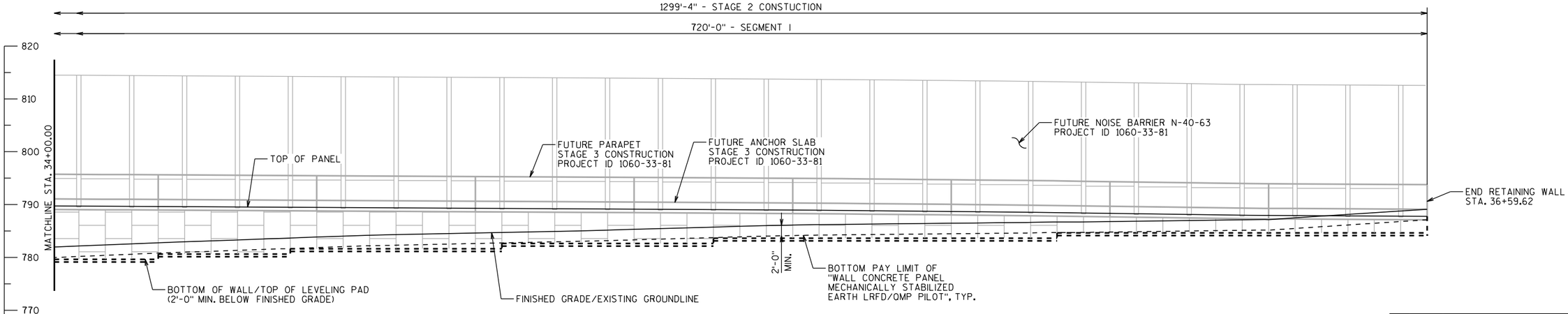
SHEET 5 OF 27

STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

UTILITY NOTES

(13) EXISTING WISDOT 78" STORM SEWER TO REMAIN, APPROX. INV. EL. 734'

(14) ABANDONED AT&T WIS UNDERGROUND LINE

(16) EXISTING WE ENERGIES OVERHEAD ELECTRIC LINE TO BE RELOCATED

(20) EXISTING CITY OF WEST ALLIS LIGHTING TO BE RELOCATED

LEGEND

TRAFFIC DIRECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

GENERAL PLAN & ELEVATION 6

SHEET 6 OF 27

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-525\cds\080106_gp.dgn PLOT DATE : 01-MAY-2014 13:47 PLOT BY : MSCJJO PLOT NAME : 080106_gp PLOT SCALE : 20:1

STATE PROJECT NUMBER
1060-33-80

GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION, 2012 WITH INTERIM REVISIONS, UNLESS OTHERWISE NOTED.

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT-TO-OUT OF BAR.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL AND A TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

COORDINATE THE CONSTRUCTION OF WALL R-40-525 WITH THE SOUTH ABUTMENTS OF BRIDGES B-40-798 AND B-40-849.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENTS A, B, C AND D CAST-IN-PLACE COPING ARE INCLUDED IN THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL. SEE AESTHETIC WALL TREATMENT DETAILS PATTERN SHEETS FOR DIFFERENT AESTHETIC TREATMENT TYPES AND LIMITS.

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½ INCHES. FOR PANEL THICKNESSES OTHER THAN 7½ INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEMS "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT", "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF" AND "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE PLAN QUANTITIES FOR THE ITEMS "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" AND "WALL CONCRETE PANEL MECHANICALY STABILIZED EARTH LRFD LFCF" ARE BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL OR PANEL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 2'-0" BELOW FUTURE FINISHED GRADE OR FINISHED GRADE FOR MEASUREMENT PURPOSES. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

THE PLAN QUANTITY FOR THE ITEM "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM TOP TO BOTTOM OF WALL AS SHOWN IN THE PLANS. THE BOTTOM OF THE WALL IS TAKEN AS A CONSTANT 2'-0" BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST RESULTS.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEMS "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" AND "TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE COST OF FURNISHING AND PLACING LIGHTWEIGHT FOAMED CONCRETE FILL (LFCF) WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF". SEE ROADWAY PLANS FOR THE QUANTITY OF LIGHTWEIGHT FOAMED CONCRETE FILL OUTSIDE OF THE REINFORCED SOIL ZONE.

THE REMOVAL OF EXISTING STRUCTURES IS INCLUDED AS A LUMP SUM PAY ITEM AS PART OF THE B-40-798 BRIDGE QUANTITIES.

LIGHTWEIGHT FOAMED CONCRETE FILL (LFCF) SHALL BE PLACED IN LIFTS NOT EXCEEDING 2 FEET IN DEPTH. EACH SUCCESSIVE LIFT WILL BE PLACED ATER A MINIMUM OF 24 HOURS.

THE CONTRACTOR SHALL PROVIDE SUITABLE SUPPORTS FOR THE MSE REINFORCING STRIPS AND FACING PANELS DURING PLACEMENT OF LIGHTWEIGHT FOAMED CONCRETE FILL.

THE STANDARD PANEL SIZE SHALL BE 5'HIGH X 5'WIDE. 5'HIGH BY 10'WIDE STANDARD PANELS WILL NOT BE ALLOWED.

THIS CONTRACT COVERS STAGE 2 CONSTRUCTION OF R-40-525. STAGE 3 CONSTRUCTION WILL BE CONSTRUCTED IN FUTURE PROJECT ID 1060-33-81.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	SEGMENT E	SEGMENT F	SEGMENT G	SEGMENT H	SEGMENT I	TOTAL
511.2200.0003	TEMPORARY SHORING LEFT IN PLACE R-40-525	SF	-	-	-	-	1,039	-	-	-	-	1,039
513.2000.0005	RAILING PIPE R-40-525	LS	-	-	-	-	-	-	-	-	-	1
516.0100	DAMPPROOFING	SY	-	-	-	-	130	37	31	792	93	1,083
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2	2	5	2	-	-	-	-	-	11
517.1050.S.0008	ARCHITECTURAL SURFACE TREATMENT R-40-525	SF	466	1,153	746	812	1,667	480	394	10,184	10,144	26,046
612.0106	PIPE UNDERDRAIN 6-INCH	LF	-	-	-	-	72	39	19	450	50	629
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	-	-	-	-	-	-	-	9	9
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	22	70	35	70	-	-	-	-	670	866
645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A	SY	-	-	-	-	60	32	16	375	42	524
SPV.0090.4430	PILING SLEEVES	LF	-	-	-	-	50	62	-	-	-	112
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	567	1,292	850	952	-	-	-	-	8,944	12,605
SPV.0165.4720	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF	SF	-	-	-	-	1,667	480	394	10,184	1,200	13,925
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	-	-	-	647	-	-	-	-	-	647
												-
	NON BID ITEMS											-
	PREFORMED JOINT FILLER	SIZE										3/4", 1 1/2"
	NON-BITUMINOUS JOINT SEALER	SIZE										1"
	EXPANDED POLYSTYRENE	SIZE										3/4", 1"

ALL ITEMS ARE CATEGORY 3070

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS									
DESIGN WALL HEIGHT (FEET) FINAL CONDITION	28.1	24.1	41.1	35.1	21.0	24.1	25.6	25.3	16.0
WALL HEIGHT (FEET) THIS CONTRACT	19.7	12.4	26.3	35.1	21.0	24.1	25.6	25.3	16.0
EXPOSED WALL HEIGHT (FEET)	17.7	10.4	24.3	33.1	19.0	22.1	23.6	23.3	14.0
◥ MINIMUM LENGTH OF REINFORCEMENT (FEET)	19.7	18.9	28.8	24.6	14.7	16.9	17.9	17.7	11.2
◐ REINFORCEMENT LENGTH/RETAINED HEIGHT RATIO	0.70	0.78	0.70	0.70	0.70	0.70	0.70	0.70	0.70
WALL STATION	20+85	22+58	23+60	24+00	25+00	27+40	29+45	30+00	33+00
BORING USED	SB-16 SB-18	SB-15	SB-13	SB-20	SB-10 SB-20	SR-35 SR-36	SR-36 SR-37 SR-61	SR-37 SR-61	SR-38 SR-39
CAPACITY TO DEMAND RATIO (CDR)									
SLIDING	1.53	1.93	>10	>10	>10	>10	>10	1.03	1.43
ECCENTRICITY	9.98	1.19	1.34	8.02	4.87	6.38	3.95	1.44	1.31
BEARING	2.04	1.71	6.80	3.85	4.99	5.06	4.69	1.07	3.07
GLOBAL STABILITY	1.08	1.00	1.29	1.02	1.41	1.00	1.15	1.01	1.81

◥ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

◐ VALUES GIVEN TO INCLUDE FINAL CONDITION

MSE WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
LFCF BACKFILL	40	0	2900	80	0
RETAINED MSE WALL FILL *	120	30	0	30	0
NEW COHESIVE FILL	125	0	1000	30	0
EXISTING GRANULAR FILL	125	30	0	30	0
MEDIUM STIFF CLAY	130	0	500-750	29	0
STIFF CLAY	135	0	1000-1500	30-31	75
VERY STIFF CLAY	135	0	2000-3000	32-33	100-200
HARD CLAY	140	0	3500-4000	32-34	200

* DESIGN WALL FOR THESE VALUES

MSE WALL SOIL PARAMETERS

TYPE	DRY UNIT WEIGHT (PCF)	MINIMUM UNCONFINED COMPRESSIVE STRENGTH AT 28 DAYS (PSI)
LFCF GRADE 1	30 - 34	70
LFCF GRADE 2 (TOP 3 FEET)	40 - 46	120

MATERIAL PROPERTIES

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE (CONSTRUCTION/MAINTENANCE): 100 PSF
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE EARTH SURCHARGE LOAD ABOVE THE BEAM SEATS PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL (AT THE TOP OF THE WALL OR 1'-6" ABOVE THE TOP OF THE PANEL, AS APPLICABLE), AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

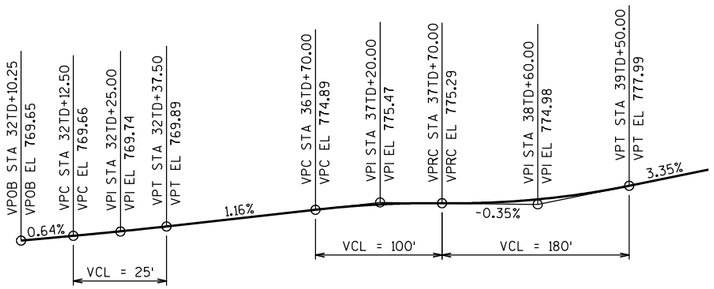
STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

QUANTITIES, DESIGN DATA & GENERAL NOTES

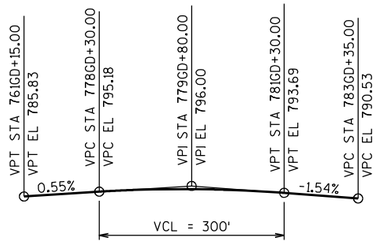
SHEET 7 OF 27

STATE PROJECT NUMBER
1060-33-80



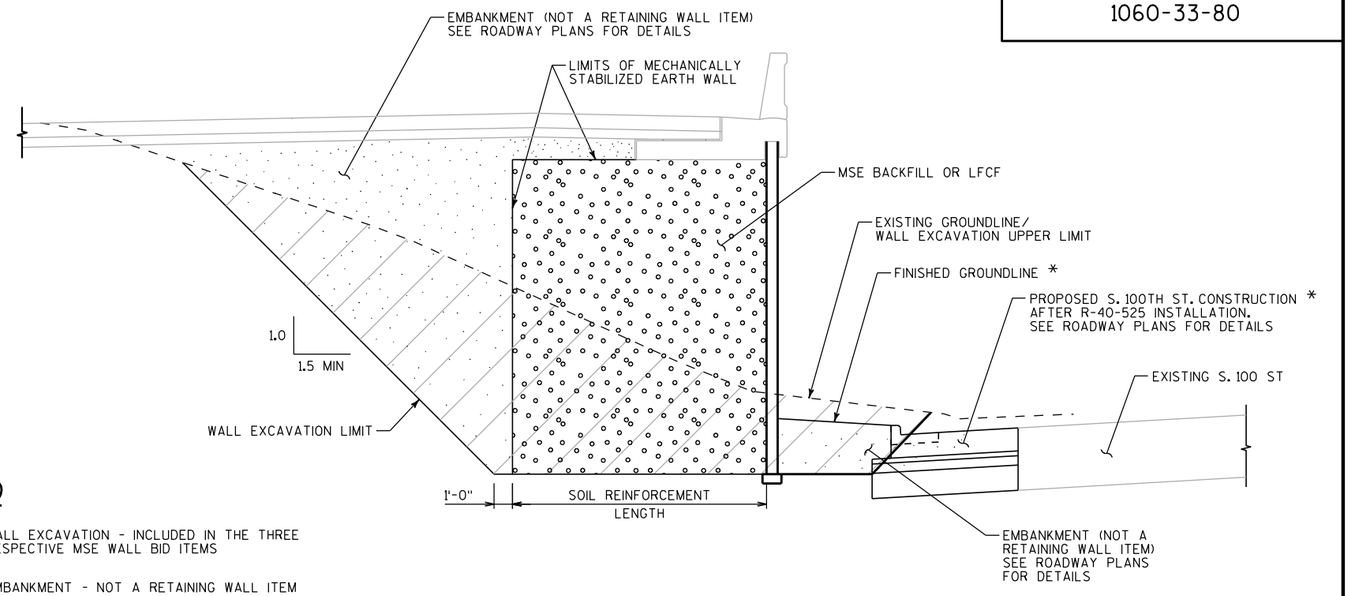
PROFILE GRADE LINE S. 100TH ST.

℄ 'TD'



PROFILE GRADE LINE RAMP GD

℄ 'GD'



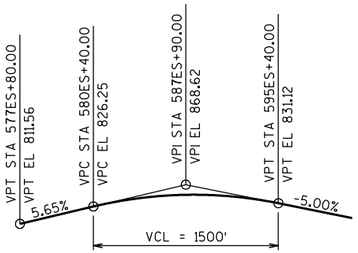
LEGEND

- WALL EXCAVATION - INCLUDED IN THE THREE RESPECTIVE MSE WALL BID ITEMS
- EMBANKMENT - NOT A RETAINING WALL ITEM
- MSE BACKFILL OR LFCF- INCLUDED IN THE THREE RESPECTIVE MSE WALL BID ITEMS

WALL EXCAVATION LIMITS DIAGRAM

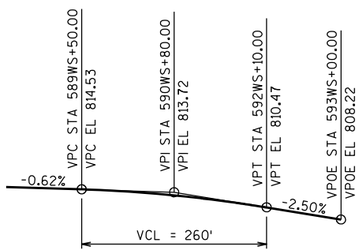
LOOKING SOUTH ALONG S. 100 ST
(LOOKING WEST ALONG W. SCHLINGER AVE. SIMILAR)

* SHOWN FOR S. 100 ST. AT W. SCHLINGER AVE., NO PROPOSED ROADWAY CONSTRUCTION OCCURS IN THIS CONTRACT. SEE ROADWAY PLANS FOR DETAILS TO DETERMINE FINISHED GROUNDLINE.



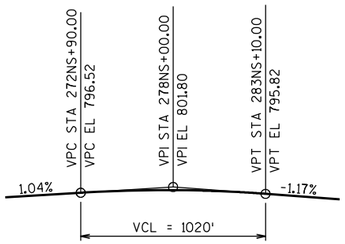
PROFILE GRADE LINE E-S

℄ 'ES'



PROFILE GRADE LINE W-S

℄ 'WS'

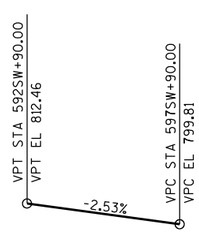


PROFILE GRADE LINE N-S

℄ 'NS'

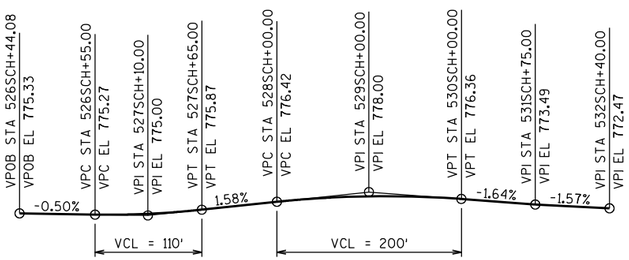
HORIZONTAL CURVE DATA

WALL CURVE 1		WALL CURVE 2	
P.I. =	28+00.34	P.I. =	30+74.89
X:	571836.11	X:	571847.17
Y:	293814.31	Y:	293539.97
Δ =	1°59'31" LEFT	Δ =	2°0'33" RIGHT
D =	2°26'40"	D =	1°0'24"
T =	40.75'	T =	99.80'
L =	81.49'	L =	199.57'
R =	2343.95'	R =	5691.05'
P.C. =	27+59.59	P.C. =	29+75.09
X:	571835.88	X:	571843.15
Y:	293855.06	Y:	293639.69
P.T. =	28+41.08	P.T. =	31+74.66
X:	571837.75	X:	571847.69
Y:	293773.59	Y:	293440.18



PROFILE GRADE LINE S-W

℄ 'SW'



PROFILE GRADE LINE SCHLINGER AVE.

℄ 'SCH'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

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PROFILE GRADE LINES

SHEET 8 OF 27

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STATE PROJECT NUMBER
1060-33-80

SEGMENT A WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
20+62.62	797.79	775.27	775.27
20+73.53	799.76	775.45	775.54
20+84.43	801.73	775.63	775.81

SEGMENT B WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
20+84.43	793.29	775.63	775.81
20+93.79	793.29	775.78	776.04
21+03.79	793.29	775.95	776.29
21+13.79	793.29	776.11	776.53
21+23.79	793.29	776.27	776.78
21+33.79	793.29	776.44	777.02
21+43.79	793.29	776.58	777.51
21+53.91	793.29	776.72	778.16

SEGMENT C WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
21+53.91	802.66	776.72	778.16
21+63.85	800.99	776.83	779.15
21+73.79	799.31	776.93	778.40
21+81.31	798.05	776.99	778.49
21+88.83	796.78	777.05	778.61

SEGMENT D WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
21+88.83	789.21	777.05	778.61
21+98.79	789.21	777.10	778.53
22+08.79	789.21	777.14	778.59
22+18.79	789.21	777.17	778.57
22+28.79	789.21	777.18	778.96
22+38.79	789.21	777.18	779.21
22+48.79	789.21	777.15	780.20
22+58.79	790.04	777.12	780.40

SEGMENT E WALL ELEVATIONS ◥

STATION	TOP OF◐ PANEL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
23+60.29	798.98	775.89	778.84
23+70.29	798.98	775.75	778.37
23+80.29	798.98	775.61	778.23
23+95.29	797.44	775.44	777.17
24+10.29	795.89	775.31	776.76
24+21.47	794.74	775.27	776.44
24+32.65	793.59	775.29	776.33

SEGMENT F WALL ELEVATIONS ◥

STATION	TOP OF◐ PANEL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
24+32.65	786.07	775.29	776.33
24+35.29	786.07	775.31	776.25
24+45.29	786.07	775.35	775.78
24+55.29	786.07	775.20	775.47
24+63.44	786.07	774.96	774.94
24+70.62	786.07	775.63	774.88

SEGMENT G WALL ELEVATIONS ◥

STATION	TOP OF◐ PANEL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
24+70.62	793.91	775.63	774.88
24+80.12	793.95	775.58	774.72
24+89.62	793.98	775.43	774.60

SEGMENT H WALL ELEVATIONS ◥

STATION	TOP OF◐ PANEL EL	FUTURE FINISHED GRADE EL	EXISTING GROUND EL
24+89.62	793.98	775.43	774.60
25+04.62	794.02	775.21	774.42
25+19.62	794.05	775.04	774.27
25+34.62	794.05	774.87	774.09
25+49.62	794.05	774.70	773.92
25+64.62	794.02	774.52	773.76
25+79.62	793.99	774.35	773.60
25+94.62	793.93	774.18	773.44
26+09.62	793.86	774.01	773.27
26+24.62	793.78	773.84	773.13
26+39.62	793.70	773.67	773.00
26+54.62	793.62	773.49	772.85
26+69.62	793.54	773.32	772.69
26+84.62	793.45	773.15	772.54
26+99.62	793.37	772.98	772.40
27+14.62	793.29	772.81	772.24
27+29.62	793.21	772.64	772.05
27+44.62	793.13	772.46	771.89
27+59.62	793.05	772.29	771.73
27+74.62	793.02	772.12	771.56
27+89.62	792.96	771.96	771.35
28+04.62	792.88	771.79	771.17
28+19.62	792.80	771.63	771.45
28+34.62	792.66	771.29	771.29
28+49.62	792.56	771.21	771.12
28+64.62	792.47	771.09	770.84
28+79.62	792.39	770.89	770.87
28+94.62	792.31	770.68	770.66
29+09.62	792.23	770.55	770.54
29+24.62	792.15	770.43	770.43
29+39.62	792.07	770.26	770.27

SEGMENT I WALL ELEVATIONS ◥

STATION	TOP OF◐ PANEL EL	FINISHED GRADE EL	EXISTING GROUND EL
29+39.62	792.07	770.26	770.27
29+54.62	791.98	770.22	770.23
29+69.62	791.90	770.05	770.07
29+84.62	791.82	770.02	770.01
29+99.62	791.74	770.09	770.03
30+14.62	791.66	770.18	770.18
30+29.62	791.57	770.21	770.21
30+44.62	791.49	770.25	770.25
30+59.62	791.41	770.44	770.44
30+74.62	791.33	770.71	770.71
30+89.62	791.25	771.03	771.05
31+04.62	791.17	771.36	771.36
31+19.62	791.08	771.66	771.67
31+34.62	791.00	771.98	771.98
31+49.62	790.92	772.29	772.29
31+64.62	790.84	772.68	772.68
31+79.62	790.76	773.11	773.11
31+94.62	790.67	773.52	773.52
32+09.62	790.59	774.04	774.04
32+24.62	790.51	774.58	774.58
32+39.62	790.43	775.14	775.15
32+54.62	790.35	775.69	775.69
32+69.62	790.26	776.30	776.30
32+84.62	790.18	776.95	776.95
32+99.62	790.10	777.61	777.60
33+14.62	790.02	778.38	778.39
33+29.62	789.94	779.01	779.01
33+44.62	789.86	779.61	779.61
33+59.62	789.77	780.25	780.25
33+74.62	789.69	780.90	780.90
33+89.62	789.61	781.52	781.53
34+04.62	789.53	782.16	782.16
34+19.62	789.45	782.78	782.78
34+34.62	789.37	783.32	783.32
34+49.62	789.28	783.87	783.87
34+64.62	789.20	784.32	784.32
34+79.62	789.12	784.63	784.63
34+94.62	789.04	784.94	784.94
35+09.62	788.96	785.33	785.33
35+24.62	788.87	785.75	785.75
35+39.62	788.79	786.13	786.12
35+54.62	788.67	786.32	786.32
35+69.62	788.53	786.48	786.48
35+84.62	788.39	786.63	786.62
35+99.62	788.19	786.79	786.79
36+14.62	787.99	786.99	786.99
36+29.62	787.82	787.15	787.16
36+44.62	787.74	787.74	787.15
36+59.62	787.66	787.66	787.22

LEGEND

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

◐ TOP OF PANEL ELEVATION TOLERANCE IS 1"±. THIS IS TO ACCOMODATE TO THE EXTENTS POSSIBLE THE OPTION OF FABRICATING PANELS THAT ARE LEVEL ON TOP.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

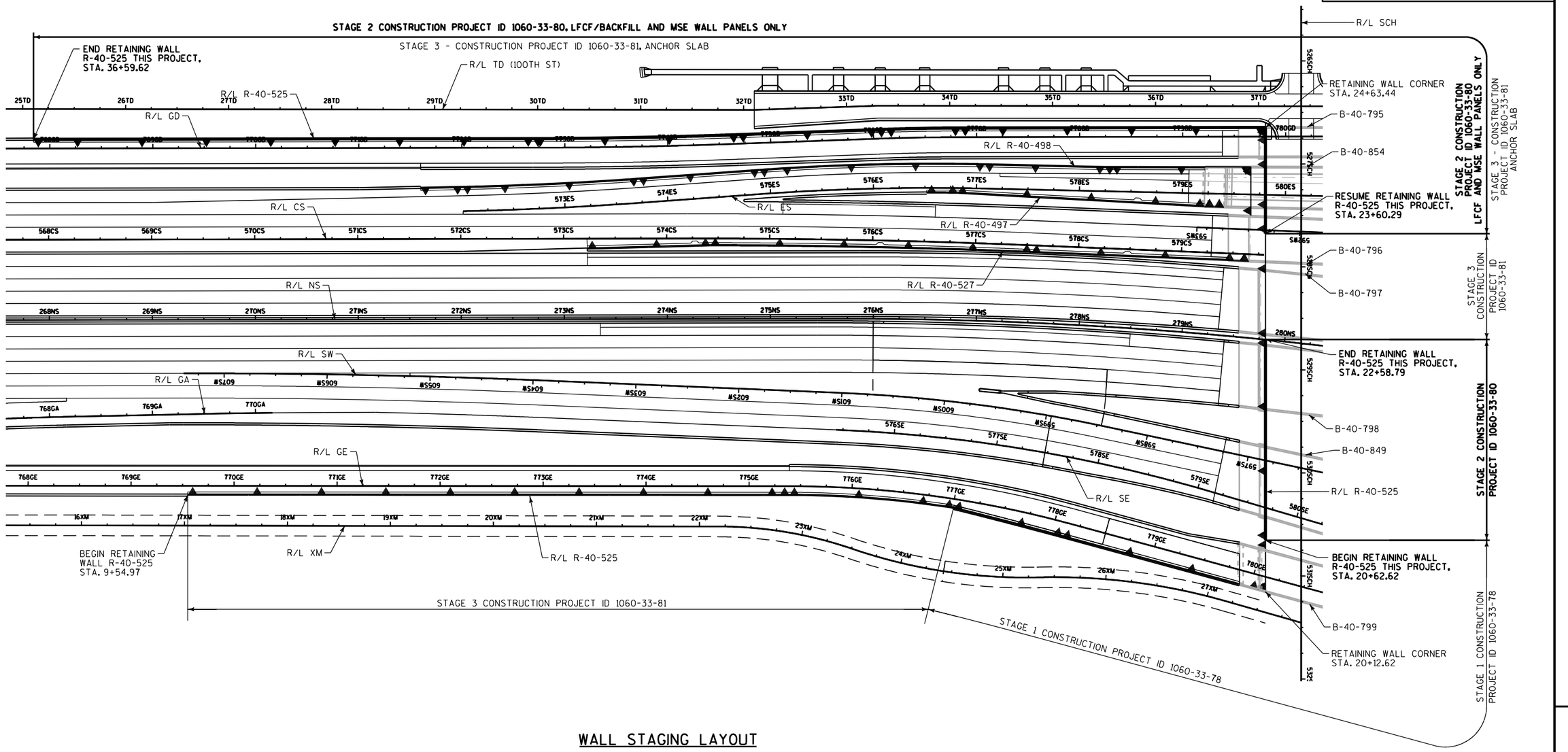
DRAWN BY JJO | PLANS CK'D. JWC

WALL ELEVATIONS

SHEET 9 OF 27

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STATE PROJECT NUMBER
1060-33-80



WALL STAGING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

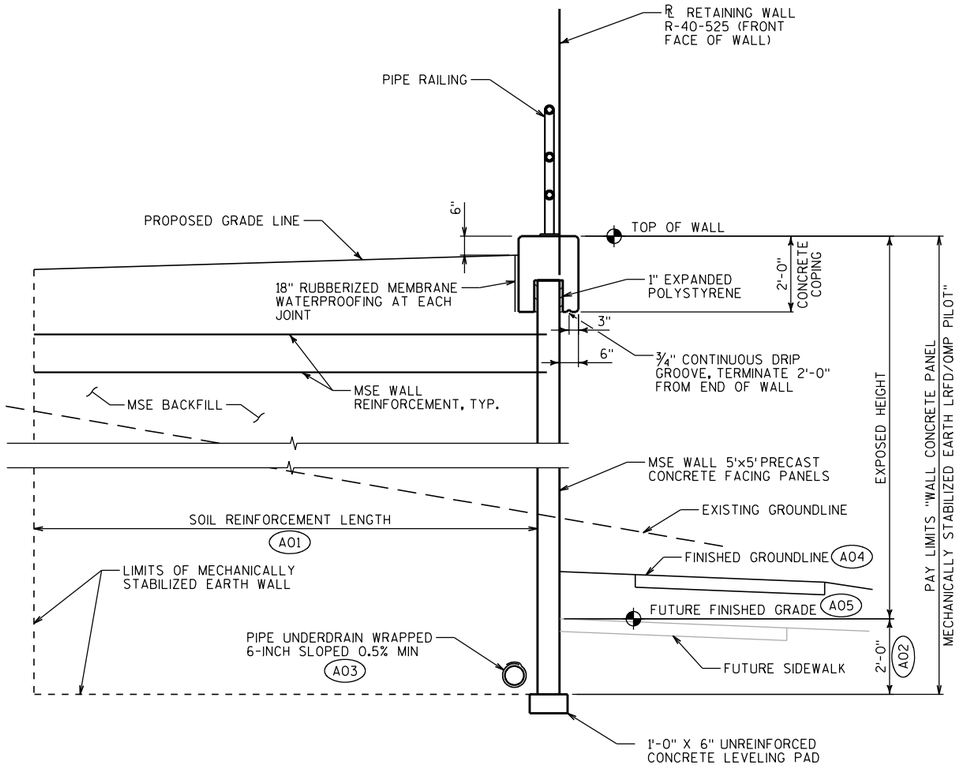
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CONSTRUCTION STAGING

SHEET 10 OF 27

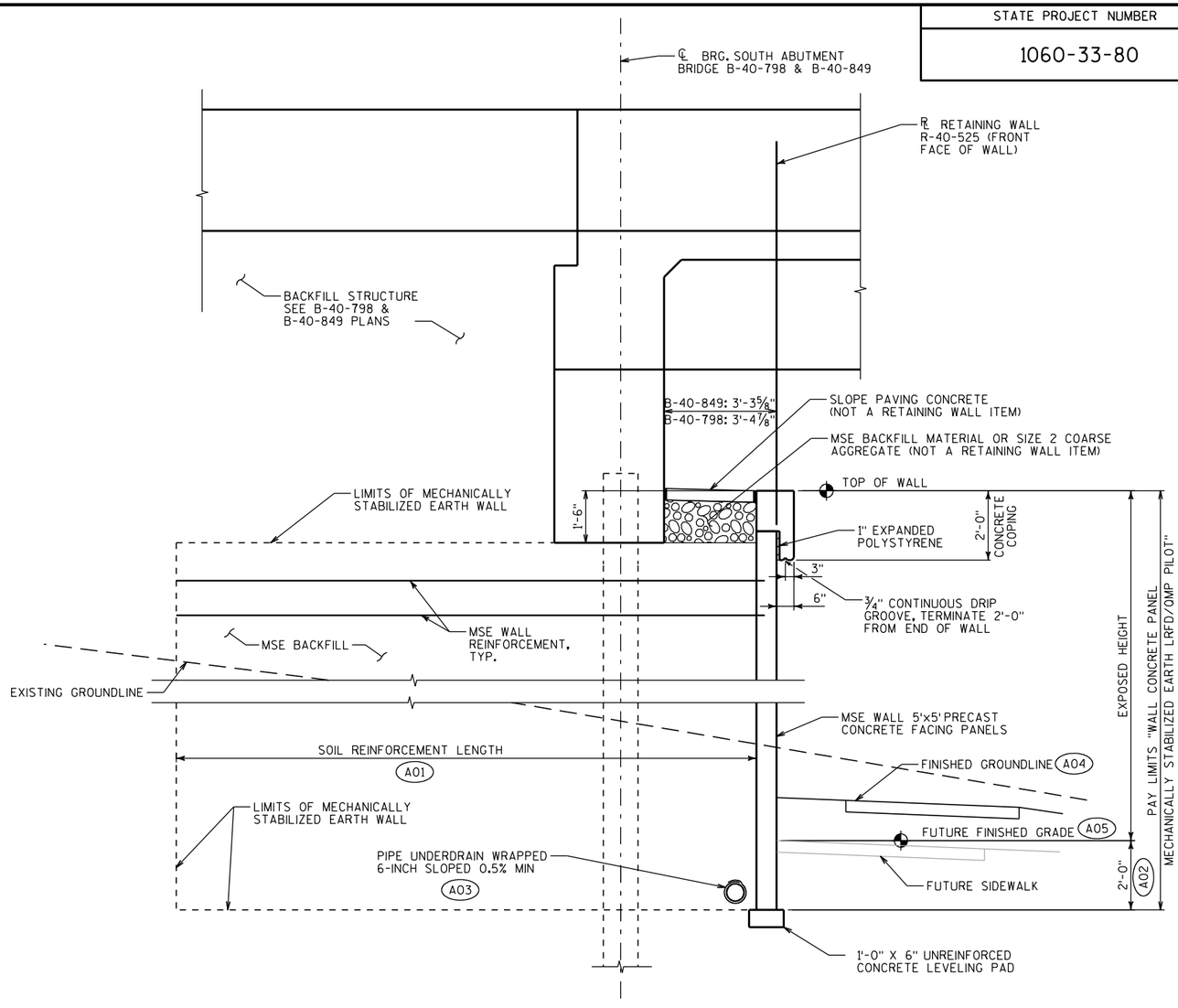
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STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION - SEGMENTS A & C

LOOKING WEST - STA. 20+62.62 TO STA. 20+84.43
LOOKING WEST - STA. 21+53.91 TO STA. 21+88.83



TYPICAL SECTION - SEGMENTS B & D

LOOKING WEST - STA. 20+84.43 TO STA. 21+53.91
LOOKING WEST - STA. 21+88.83 TO STA. 22+58.79

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES, DESIGN DATA & GENERAL NOTES" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(A02) MINIMUM DIMENSION FROM FUTURE FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) REMOVE STAGE 1 CAP ON PIPE UNDERDRAIN WRAPPED AND CONNECT STAGE 2 PIPE UNDERDRAIN WRAPPED AT STA. 20+62.62. SEE GENERAL PLAN AND ELEVATION. CONNECTION OF PIPE UNDERDRAIN WRAPPED IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH". PENETRATE AND CAP PIPE UNDERDRAIN WRAPPED TEMPORARILY FOR STAGE 3 CONSTRUCTION AT TEMPORARY WALL WIRE FACED MSE AT STA. 22+58.79. CAP WILL BE REMOVED DURING STAGE 3 CONSTRUCTION, ALLOWING FOR CONNECTION OF PIPE UNDERDRAIN WRAPPED BETWEEN STAGES.

(A04) STAGE 2 CONSTRUCTION (THIS CONTRACT), SEE ROADWAY PLANS FOR DETAILS TO CONSTRUCT FINISHED GROUNDLINE.

(A05) FUTURE CONSTRUCTION, PROJECT ID 1060-33-88, SEE "WALL ELEVATIONS" SHEET FOR FUTURE FINISHED GRADE ELEVATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

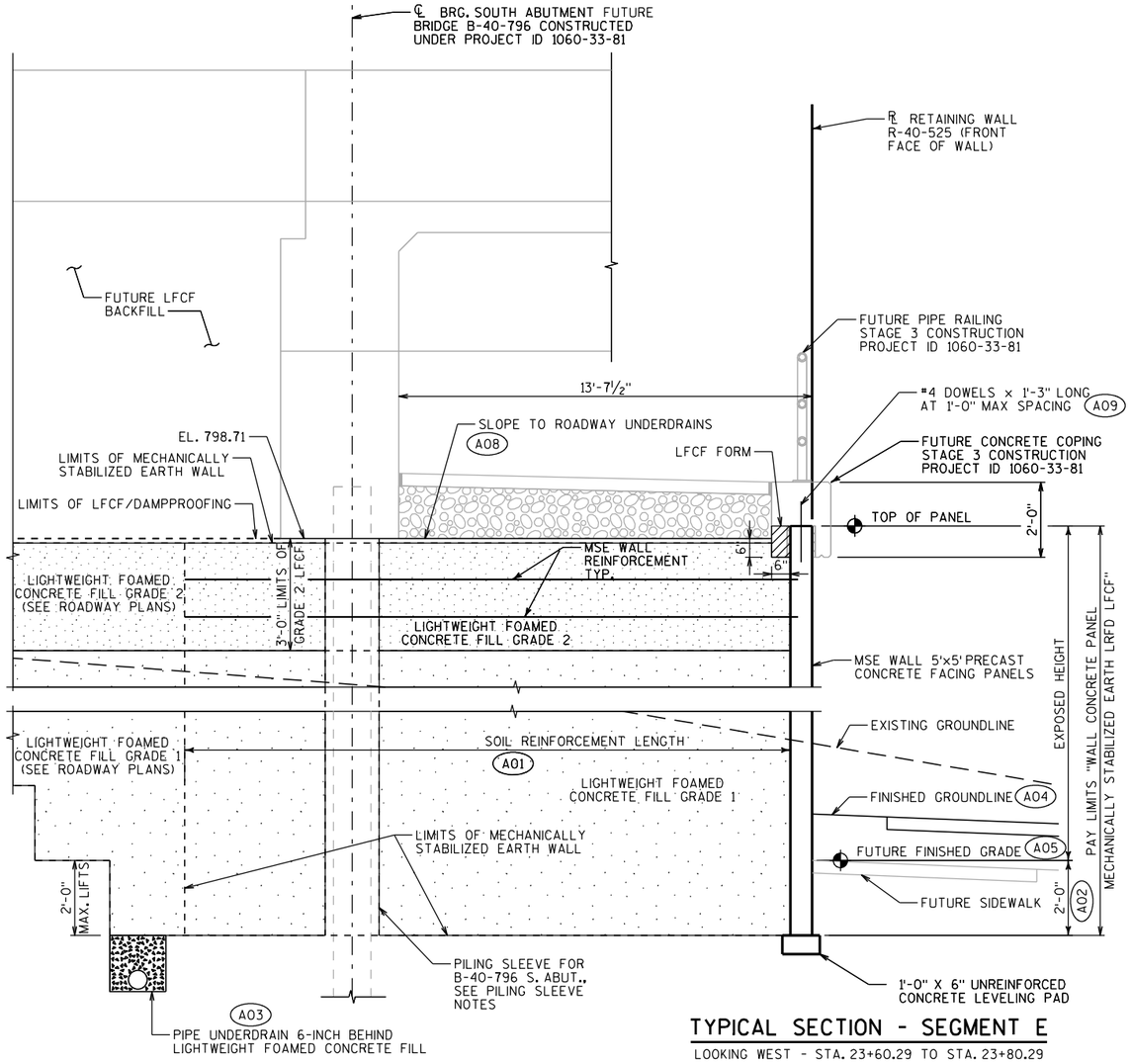
STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

TYPICAL SECTIONS 1

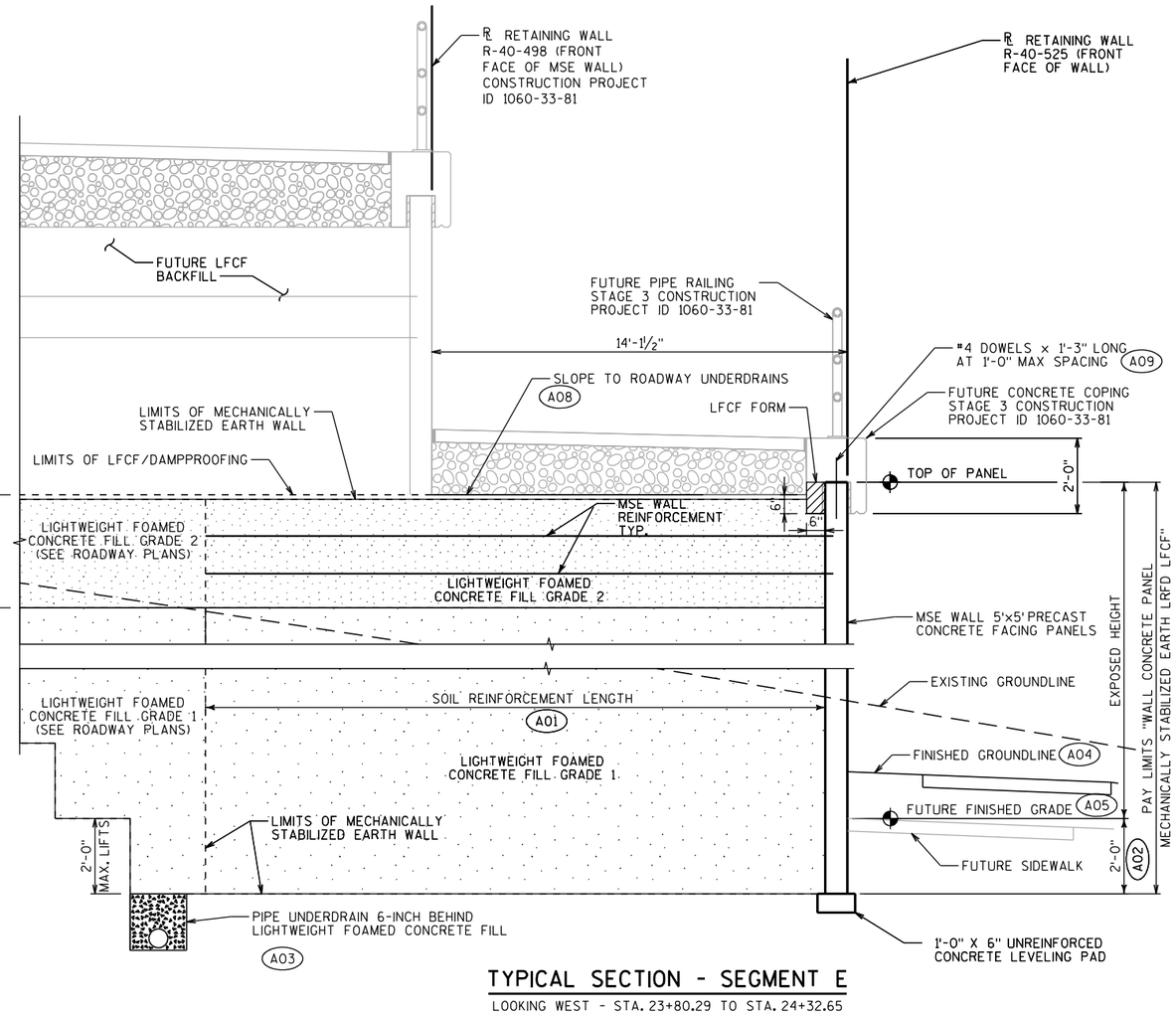
SHEET 11 OF 27

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION - SEGMENT E

LOOKING WEST - STA. 23+60.29 TO STA. 23+80.29



TYPICAL SECTION - SEGMENT E

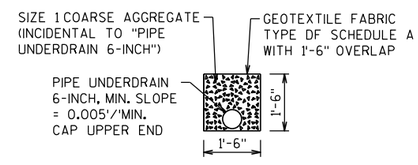
LOOKING WEST - STA. 23+80.29 TO STA. 24+32.65

PILING SLEEVE NOTES

1. PLACE PILING SLEEVE FOR BRIDGE B-40-795 & B-40-796 AS PART OF WALL R-40-525 CONSTRUCTION. SEE "PILING SLEEVE LAYOUT" SHEET FOR LAYOUT.
2. PILING SLEEVES TO BE PAID FOR WITH WALL R-40-525.
3. PILING SLEEVES SHALL BE CORRUGATED STEEL PIPE.
4. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
5. SLEEVES SHALL BE PLACED BEFORE LFCF BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.
6. INSTALLATION ELEVATION AT BOTTOM OF MSE REINFORCED ZONE VARIES. SEE "WALL ELEVATIONS" SHEET FOR WALL ELEVATIONS.

LEGEND

- (A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES, DESIGN DATA & GENERAL NOTES" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.
- (A02) MINIMUM DIMENSION FROM FUTURE FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.
- (A03) CONNECT PIPE UNDERDRAIN TO EXISTING INLET ZE156 USING PIPE UNDERDRAIN UNPERFORATED. SEE GENERAL PLAN AND ELEVATION. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO MANHOLE IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". PENETRATE AND CAP PIPE UNDERDRAIN WRAPPED TEMPORARILY FOR STAGE 2 CONSTRUCTION AT TEMPORARY SHORING LEFT-IN-PLACE AT STA. 23+60.29. CAP WILL BE REMOVED DURING STAGE 3 CONSTRUCTION, ALLOWING FOR CONNECTION OF PIPE UNDERDRAIN WRAPPED BETWEEN STAGES.
- (A04) STAGE 2 CONSTRUCTION (THIS CONTRACT), SEE ROADWAY PLANS FOR DETAILS TO CONSTRUCT FINISHED GROUNDLINE.
- (A05) FUTURE CONSTRUCTION, PROJECT ID 1060-33-88, SEE "WALL ELEVATIONS" SHEET FOR FUTURE FINISHED GRADE ELEVATIONS.
- (A08) CAST LFCF OR BLADE TOP SURFACE AFTER CURING TO PROVIDE A MINIMUM 2% SLOPE TO ROADWAY UNDERDRAINS (INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF"). SEE ROADWAY PLANS FOR UNDERDRAIN LOCATIONS.
- (A09) WRAP OR OTHERWISE PROTECT EXPOSED REINFORCEMENT BARS FROM LONG TERM EXPOSURE TO THE SUN (INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH ITEMS).



PIPE UNDERDRAIN DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

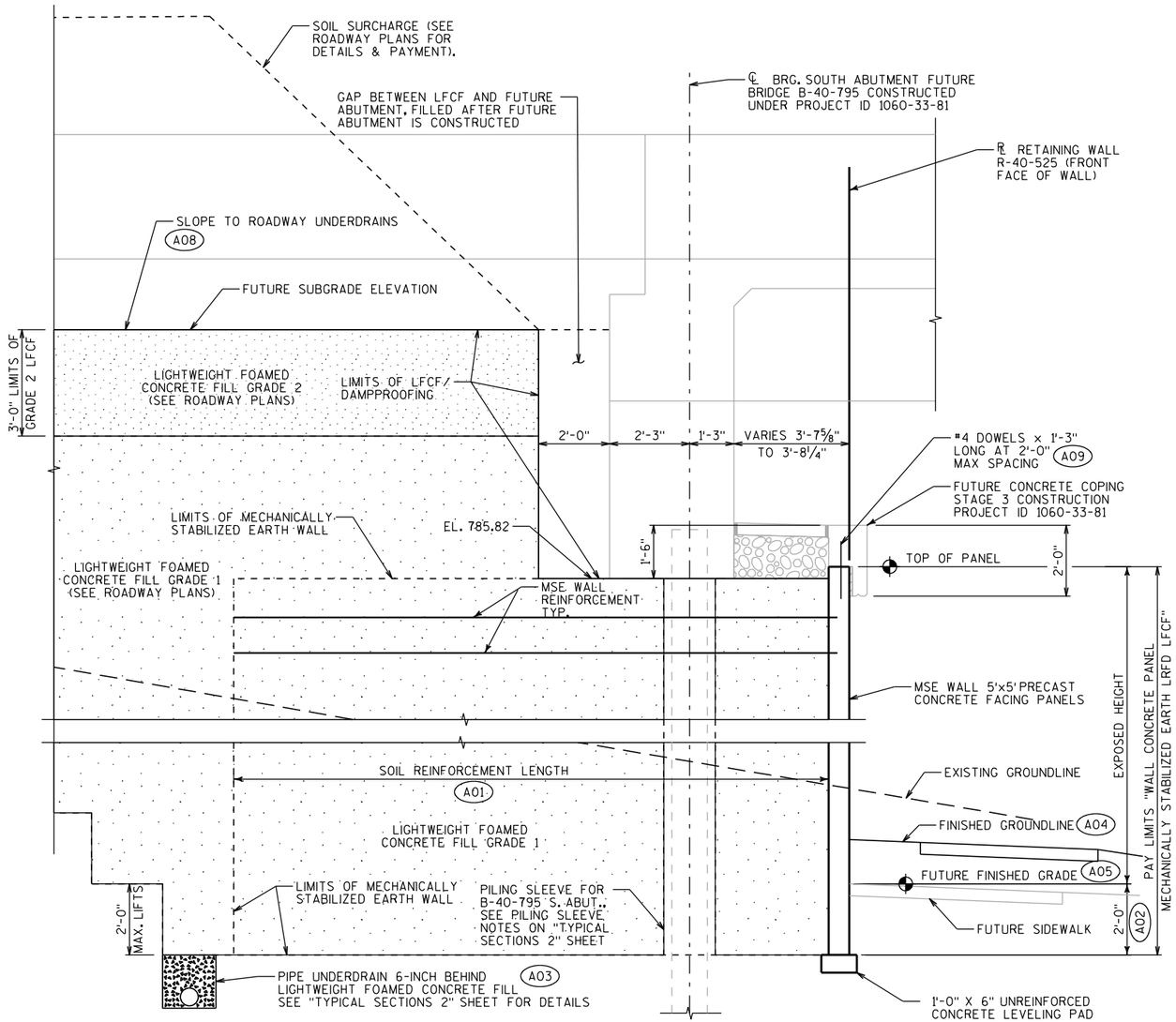
STRUCTURE R-40-525

DRAWN BY	JJO	PLANS CK'D.	JWC

TYPICAL SECTIONS 2

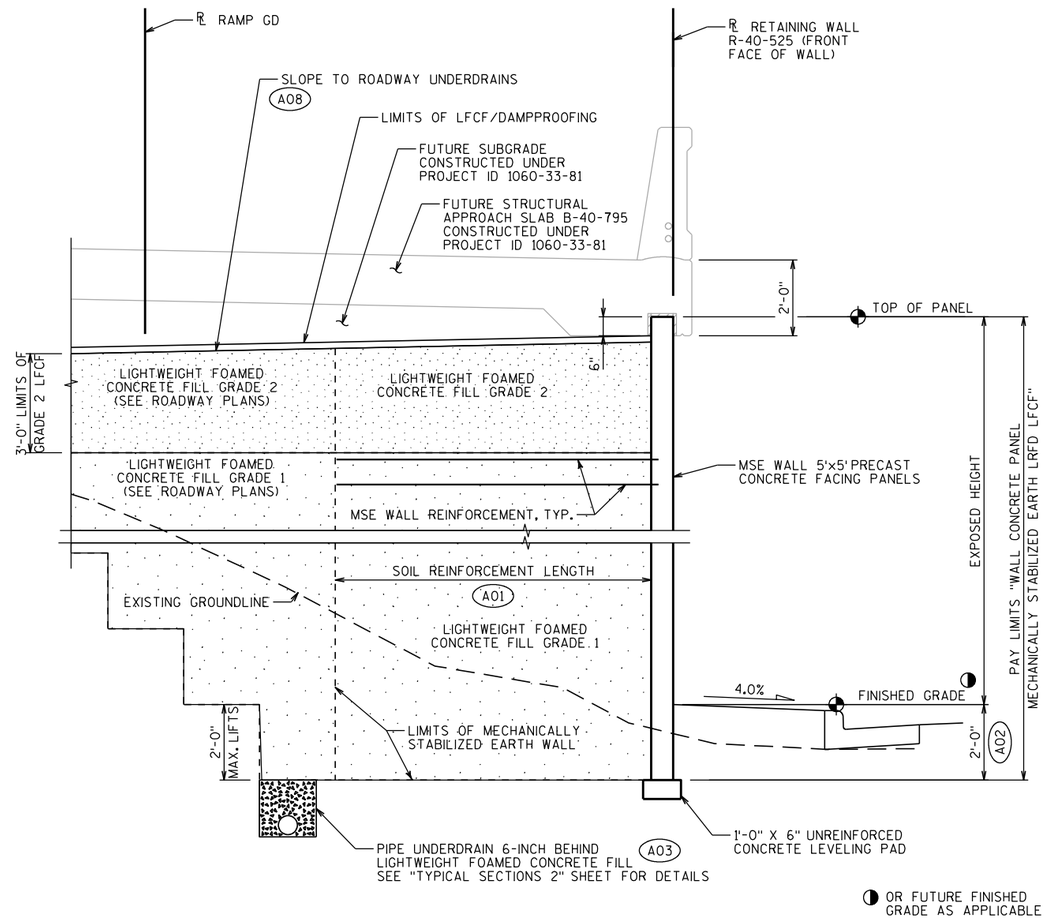
SHEET 12 OF 27

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION - SEGMENT F

LOOKING WEST - STA. 24+32.65 TO STA. 24+70.62



TYPICAL SECTION - SEGMENT G

LOOKING SOUTH - STA 24+70.62 TO STA 24+89.62

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES, DESIGN DATA & GENERAL NOTES" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(A02) MINIMUM DIMENSION FROM FUTURE FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN TO EXISTING INLET ZE156 USING PIPE UNDERDRAIN UNPERFORATED. SEE GENERAL PLAN AND ELEVATION. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO MANHOLE IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". PENETRATE AND CAP PIPE UNDERDRAIN WRAPPED TEMPORARILY FOR STAGE 2 CONSTRUCTION AT TEMPORARY SHORING LEFT-IN-PLACE AT STA. 23+60.29. CAP WILL BE REMOVED DURING STAGE 3 CONSTRUCTION, ALLOWING FOR CONNECTION OF PIPE UNDERDRAIN WRAPPED BETWEEN STAGES.

(A04) STAGE 2 CONSTRUCTION (THIS CONTRACT), SEE ROADWAY PLANS FOR DETAILS TO CONSTRUCT FINISHED GROUNDLINE.

(A05) FUTURE CONSTRUCTION, PROJECT ID 1060-33-88, SEE "WALL ELEVATIONS" SHEET FOR FUTURE FINISHED GRADE ELEVATIONS.

(A08) CAST LFCF OR BLADE TOP SURFACE AFTER CURING TO PROVIDE A MINIMUM 2% SLOPE TO ROADWAY UNDERDRAINS (INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF"). SEE ROADWAY PLANS FOR UNDERDRAIN LOCATIONS.

(A09) WRAP OR OTHERWISE PROTECT EXPOSED REINFORCEMENT BARS FROM LONG TERM EXPOSURE TO THE SUN (INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH ITEMS).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

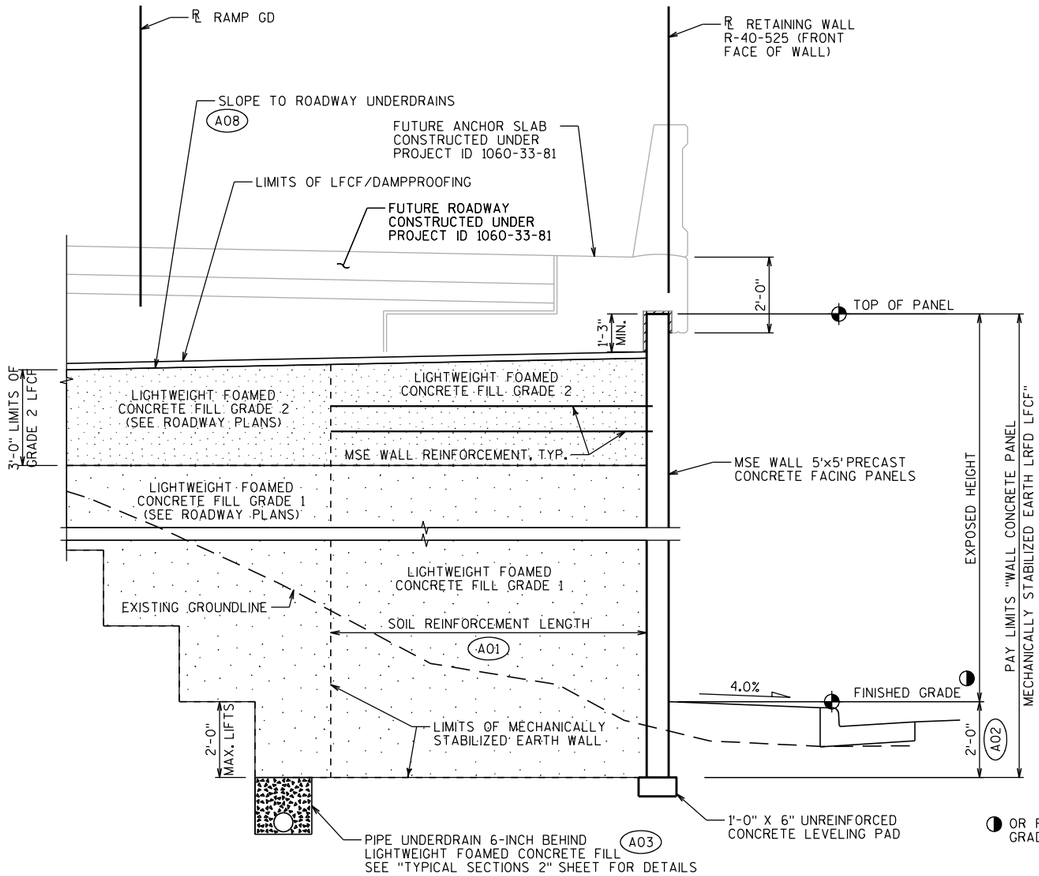
DRAWN BY JJO | PLANS CK'D. JWC

TYPICAL SECTIONS 3

SHEET 13 OF 27

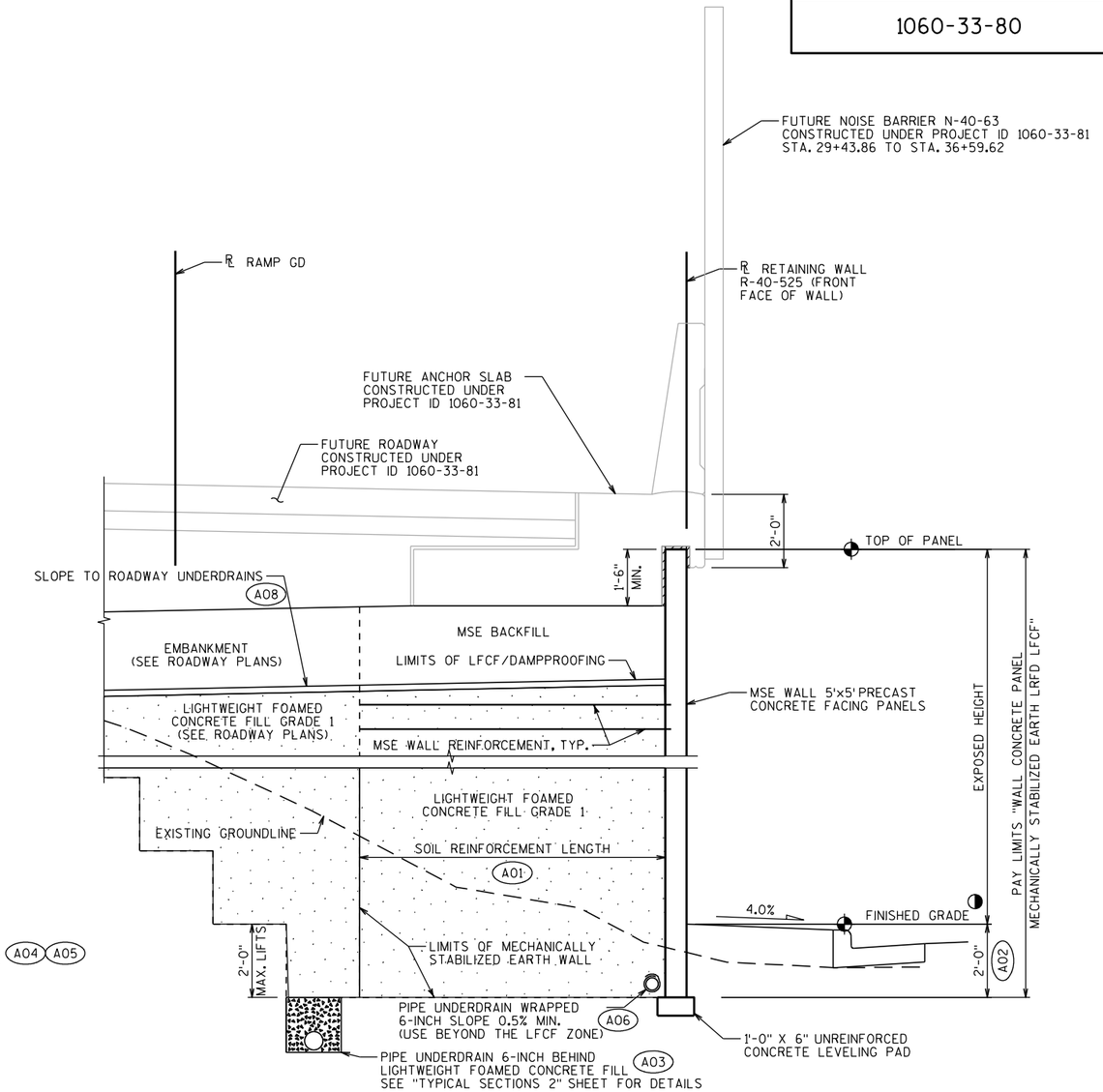
STATE PROJECT NUMBER

1060-33-80



TYPICAL SECTION - SEGMENT H

LOOKING SOUTH - STA 24+89.62 TO STA 29+39.62



TYPICAL SECTION - SEGMENT I

LOOKING SOUTH - STA 29+39.62 TO STA 36+59.62
(SECTION IS THRU LFCF TRANSITION ZONE. SEE "TEMPORARY WALL & LFCF TRANSITION SECTIONS" SHEET FOR DETAILS)

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES, DESIGN DATA & GENERAL NOTES" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(A02) MINIMUM DIMENSION FROM FUTURE FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN TO EXISTING INLET ZE156 USING PIPE UNDERDRAIN UNPERFORATED. SEE GENERAL PLAN AND ELEVATION. CONNECTION OF PIPE UNDERDRAIN UNPERFORATED TO MANHOLE IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". PENETRATE AND CAP PIPE UNDERDRAIN WRAPPED TEMPORARILY FOR STAGE 2 CONSTRUCTION AT TEMPORARY SHORING LEFT-IN-PLACE AT STA. 23+60.29. CAP WILL BE REMOVED DURING STAGE 3 CONSTRUCTION, ALLOWING FOR CONNECTION OF PIPE UNDERDRAIN WRAPPED BETWEEN STAGES.

(A04) STAGE 2 CONSTRUCTION (THIS CONTRACT). SEE ROADWAY PLANS FOR DETAILS TO CONSTRUCT FINISHED GROUNDLINE.

(A05) FUTURE CONSTRUCTION, PROJECT ID 1060-33-88. SEE "WALL ELEVATIONS" SHEET FOR FUTURE FINISHED GRADE ELEVATIONS.

(A06) CONNECT PIPE UNDERDRAIN WRAPPED TO PIPE UNDERDRAIN AT END OF LFCF ZONE.

(A08) CAST LFCF OR BLADE TOP SURFACE AFTER CURING TO PROVIDE A MINIMUM 2% SLOPE TO ROADWAY UNDERDRAINS (INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF"). SEE ROADWAY PLANS FOR UNDERDRAIN LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

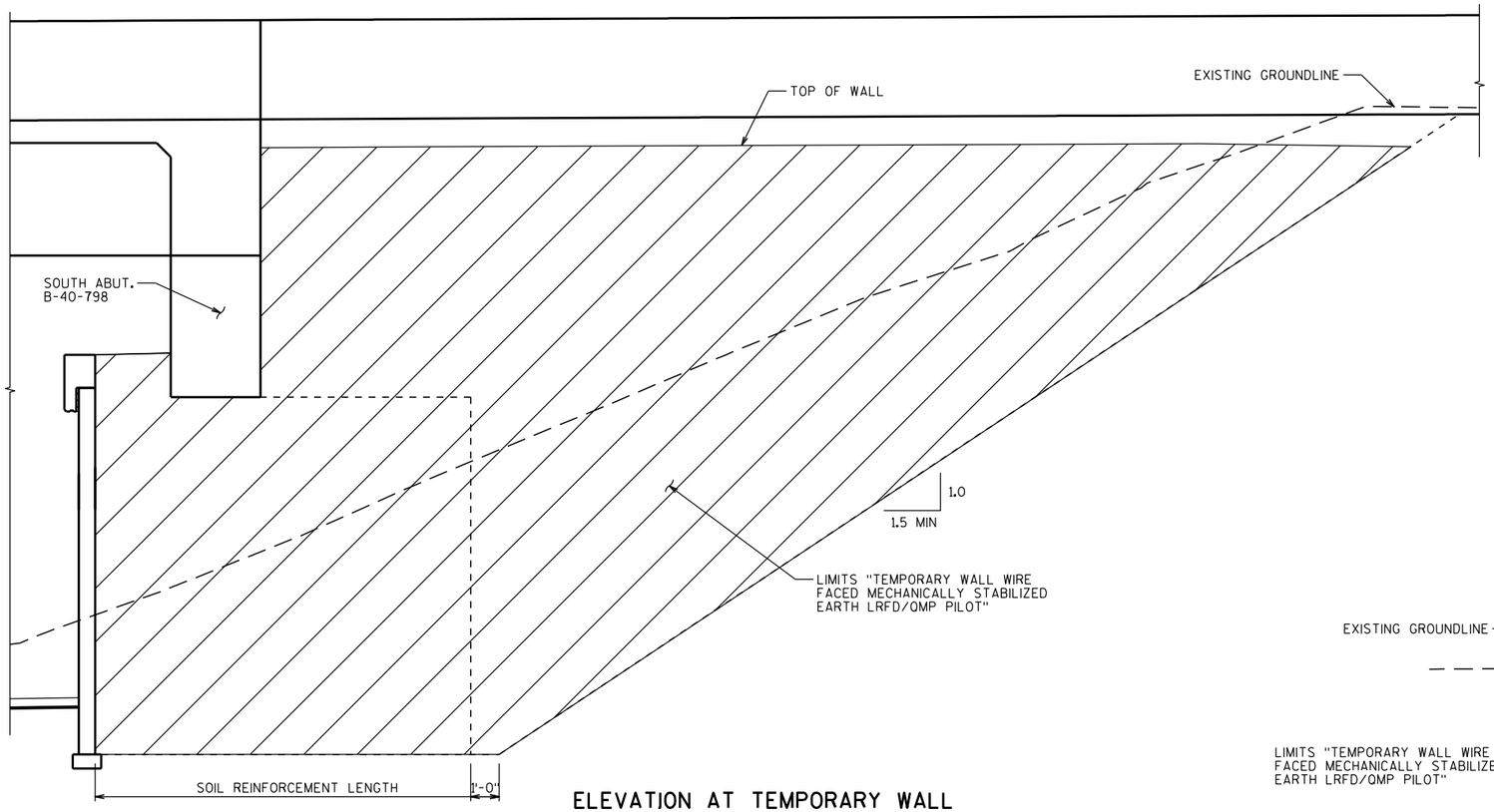
TYPICAL SECTIONS 4

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8

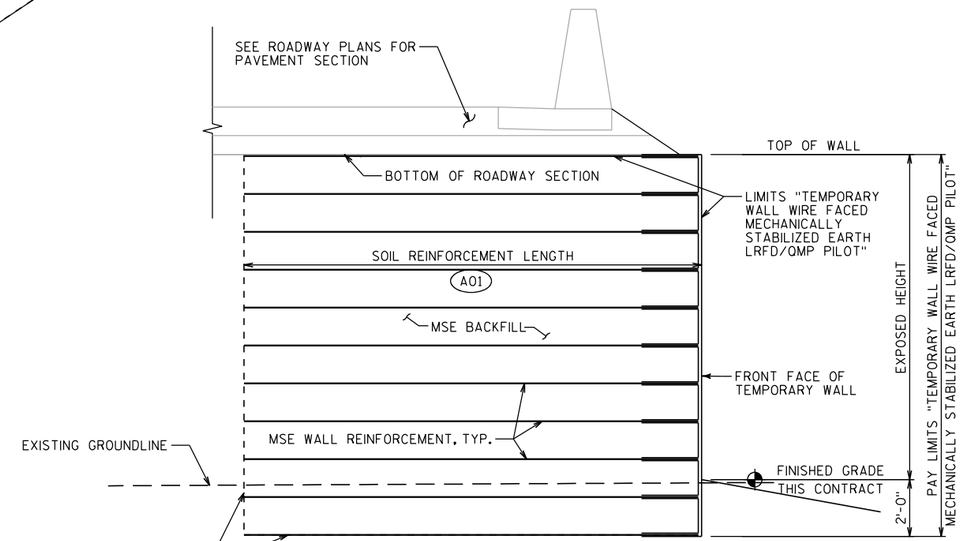
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STATE PROJECT NUMBER
1060-33-80



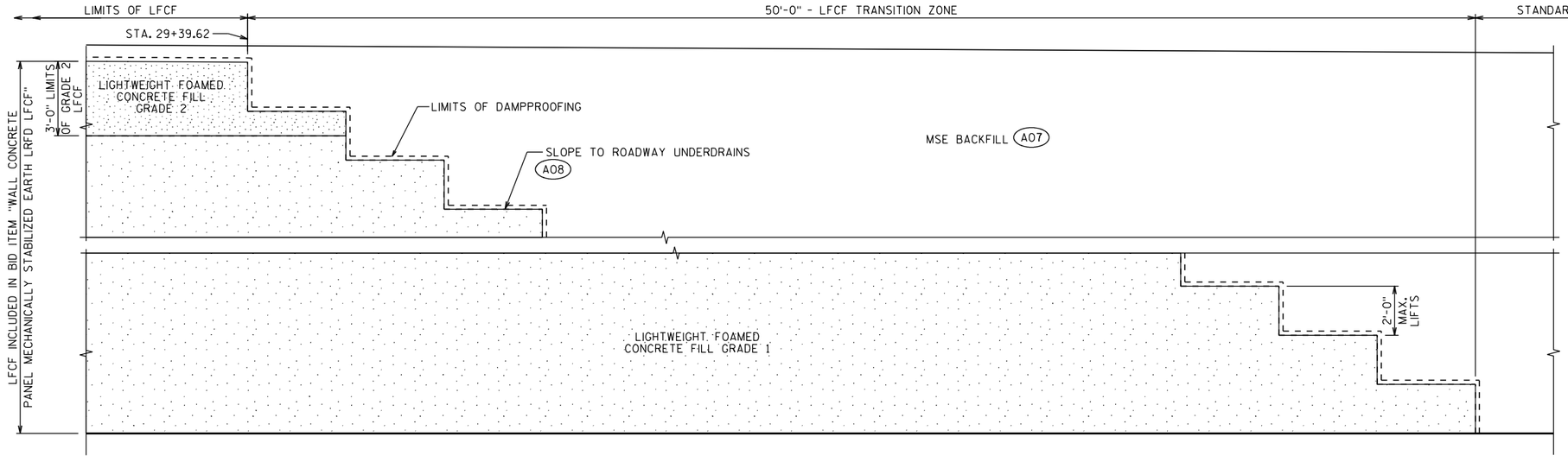
ELEVATION AT TEMPORARY WALL

LOOKING EAST ALONG ℄ NS



TYPICAL SECTION - TEMPORARY WALL

LOOKING SOUTH - STA. 22+58.79



LONGITUDINAL SECTION ALONG RAMP GD

LOOKING EAST
THRU LFCF TRANSITION

LEGEND

(A01) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "QUANTITIES, DESIGN DATA & GENERAL NOTES" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(A07) MSE BACKFILL IN THE TRANSITION ZONE IS INCLUDED IN THE BID ITEM " WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF".

(A08) CAST LFCF OR BLADE TOP SURFACE AFTER CURING TO PROVIDE A MINIMUM 2% SLOPE TO ROADWAY UNDERDRAINS (INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD LFCF"). SEE ROADWAY PLANS FOR UNDERDRAIN LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

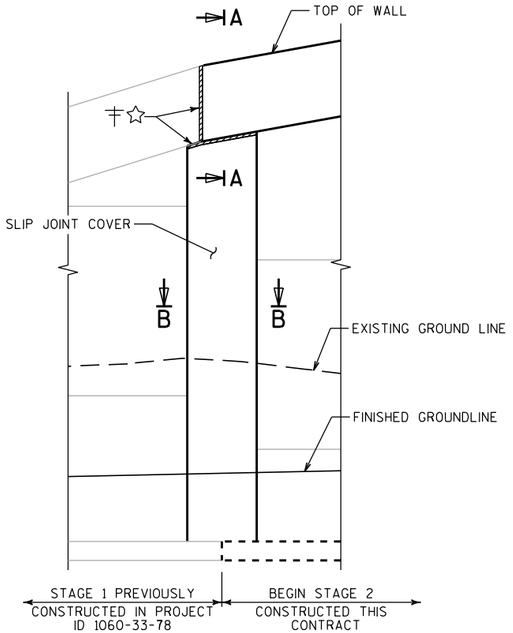
TEMPORARY WALL & LFCF TRANSITION SECTIONS

SHEET 15 OF 27

8

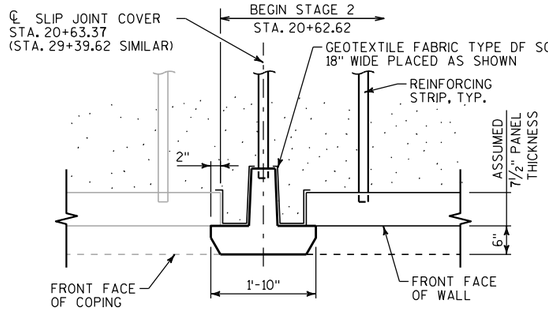
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STATE PROJECT NUMBER
1060-33-80



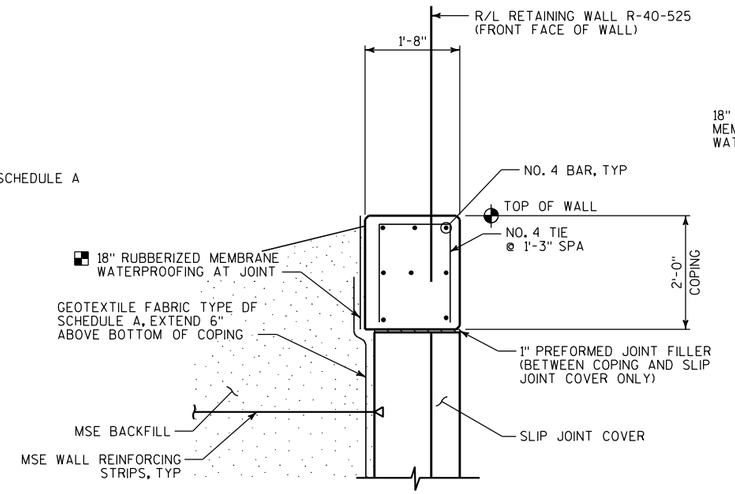
SLIP JOINT COVER ELEVATION

STA. 20+62.62 (STA. 29+39.62 SIMILAR)

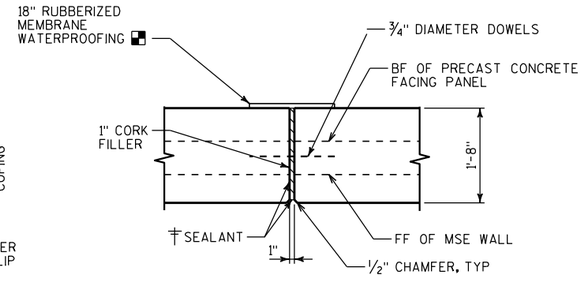


SECTION B-B SLIP JOINT COVER DETAIL

STA 20+62.62 (STA 29+39.62 SIMILAR)
(SLIP JOINT COVER INCIDENTAL TO RESPECTIVE MSE WALL CONCRETE PANEL PAY ITEMS

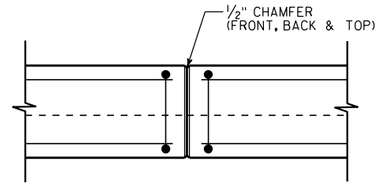


SECTION A-A SLIP JOINT DETAIL



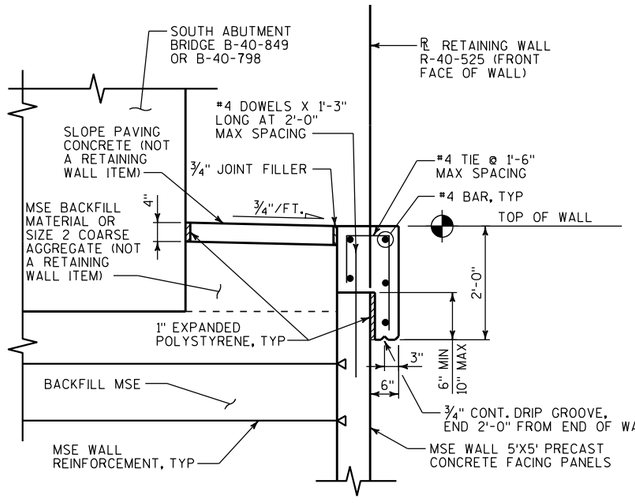
COPING EXPANSION JOINT SEGMENTS A & C

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER

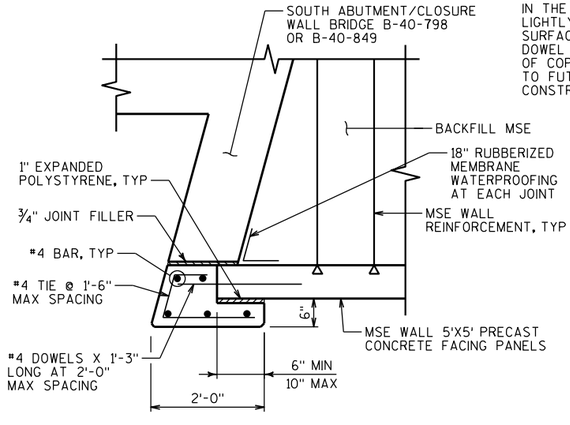


COPING CONTRACTION JOINT SEGMENTS B & D

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.

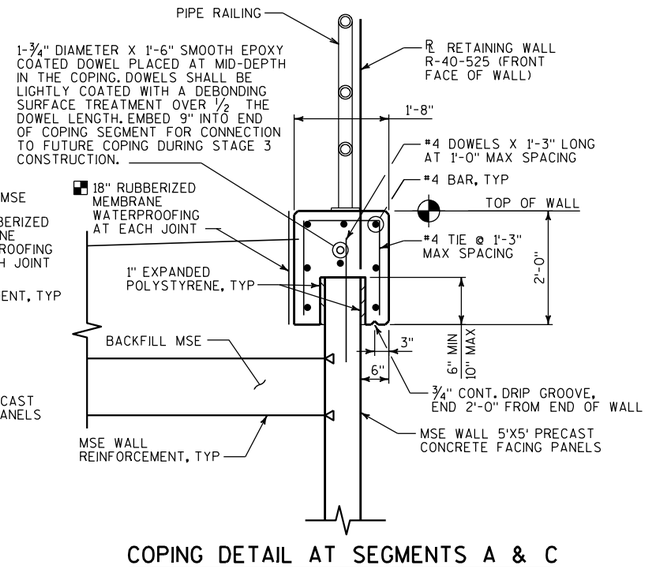


COPING DETAIL AT SEGMENTS B & D

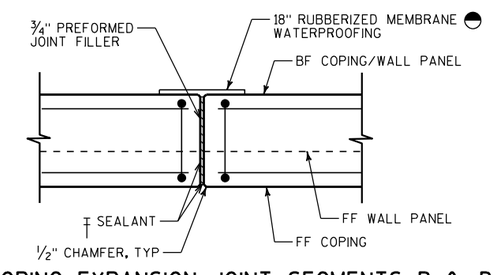


VERTICAL COPING DETAIL

ALL VERTICAL COPINGS ARE SIMILAR



COPING DETAIL AT SEGMENTS A & C

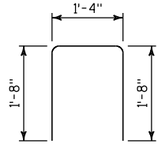


COPING EXPANSION JOINT SEGMENTS B & D

DO NOT RUN BAR STEEL THRU JOINT.
FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.
SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER

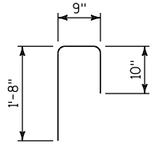
LEGEND

- ☆ 1" PREFORMED JOINT FILLER
- ⊣ NON-BITUMINOUS JOINT SEALER ON ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH CONCRETE STAIN.
- ▪ MEMBRANE WATERPROOFING TO EXTEND FROM TOP TO BOTTOM OF COPING
- ◓ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL



SEGMENT A & C

(NO. 4 VERT TIE)



SEGMENT B & D

(NO. 4 VERT TIE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

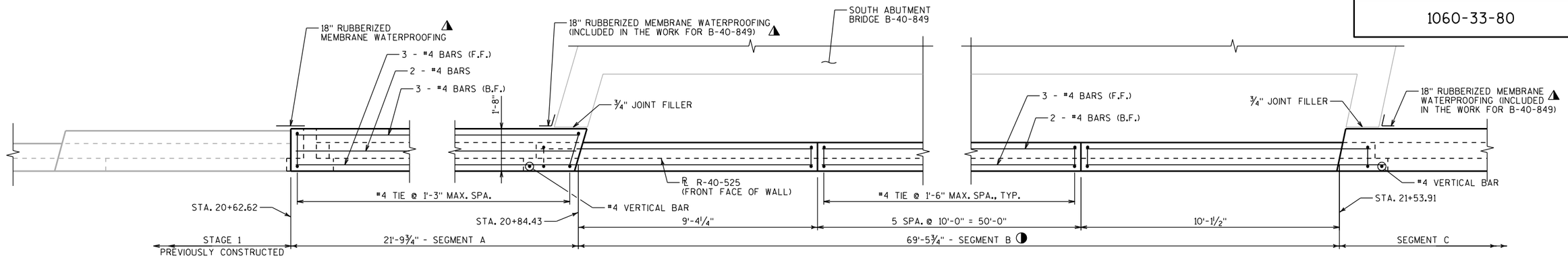
PARAPET, COPING & SLIP JOINT DETAILS

SHEET 16 OF 27

8

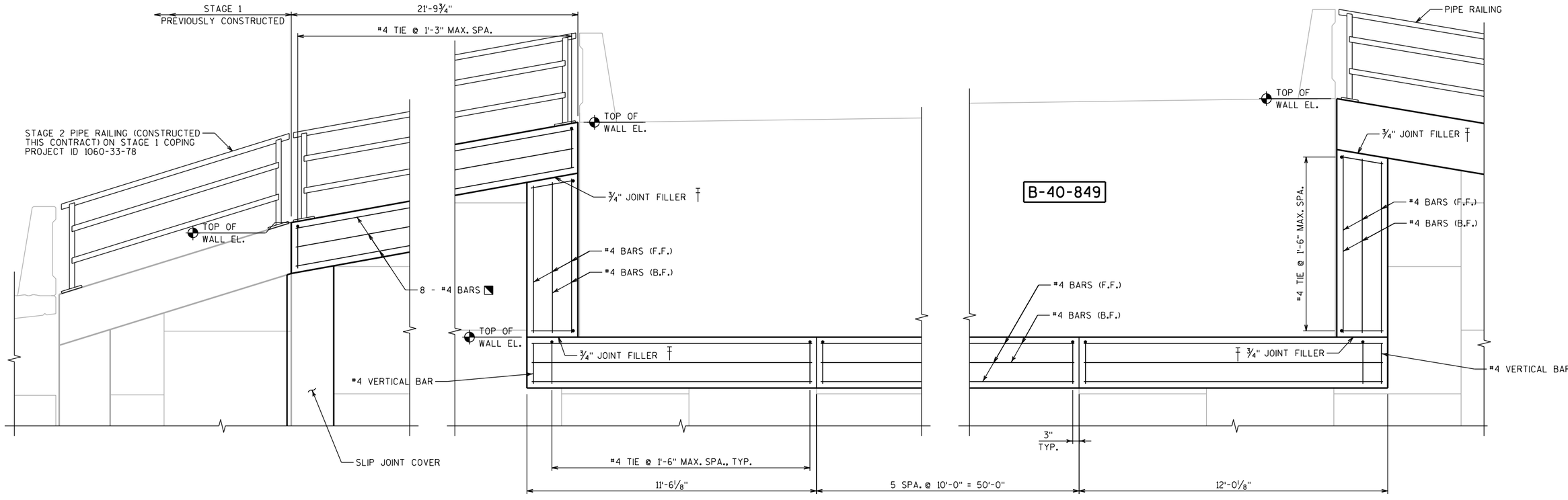
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STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENTS A & B

DIMENSIONS ALONG ℄ R-40-525



ELEVATION - SEGMENTS A & B

LOOKING AT FRONT FACE OF WALL

LEGEND

- ⊤ NON-BITUMINOUS JOINT SEALER ON ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH CONCRETE STAIN.
- ◑ SEGMENT B INCLUDES 2-¾" GAPS BETWEEN COPINGS AND BRIDGE PARAPETS ON B-40-849.
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- ◹ FOR ADDITIONAL INFORMATION SEE 'COPING DETAIL AT SEGMENTS A & C'ON "PARAPET, COPING & SLIP JOINT DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

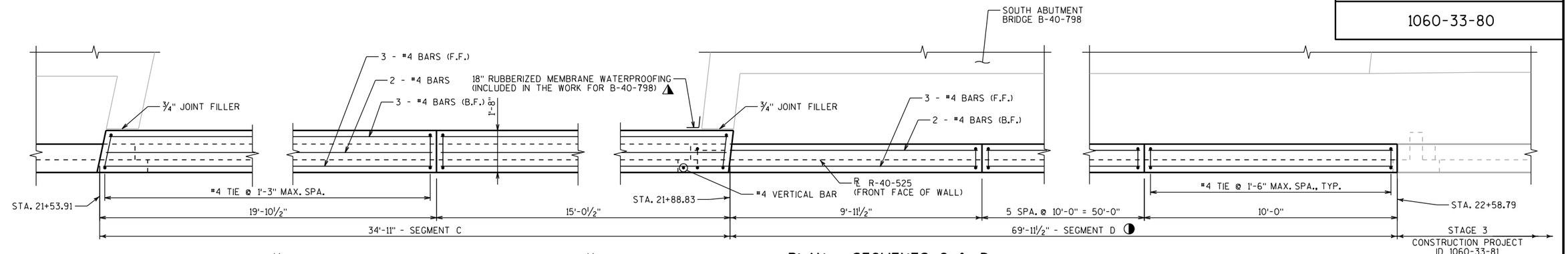
DRAWN BY JJO | PLANS CK'D. JWC

SEGMENTS A & B REINFORCEMENT DETAILS

SHEET 17 OF 27

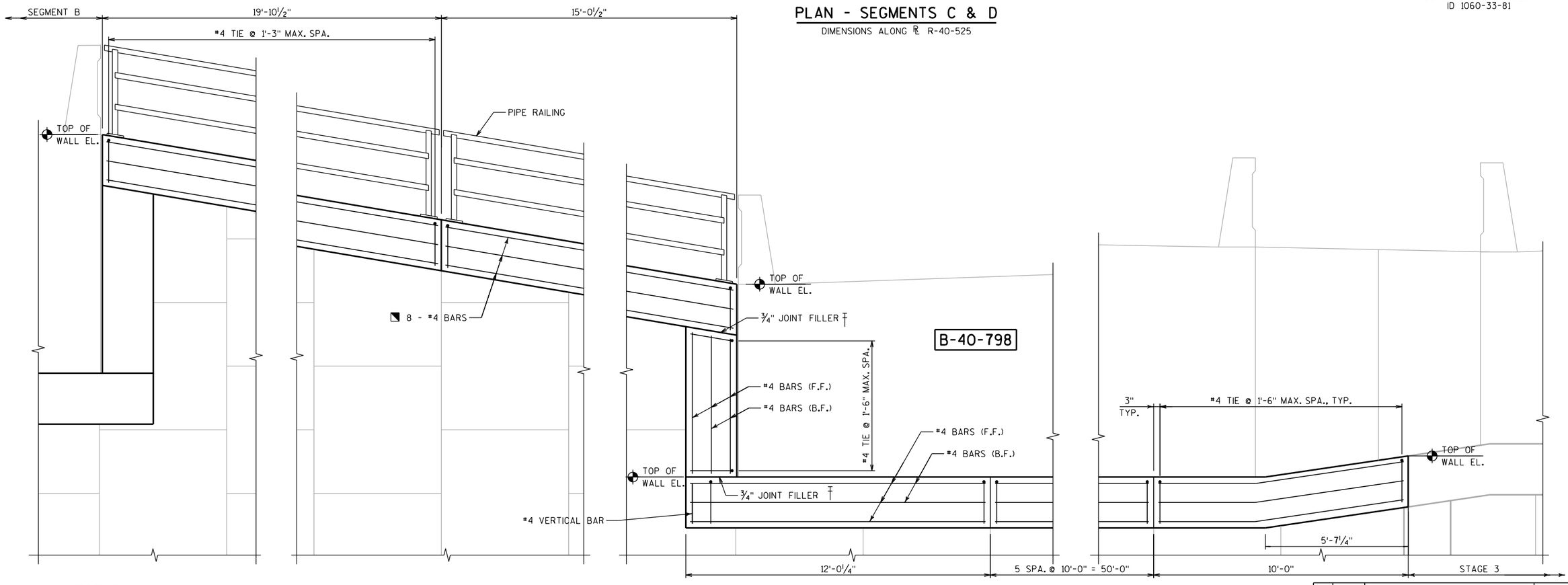
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PLOT DATE : 01-MAY-2014 13:48
PLOT BY : MSCJJO
PLOT NAME : 080302_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENTS C & D

DIMENSIONS ALONG ℄ R-40-525



ELEVATION - SEGMENTS C & D

LOOKING AT FRONT FACE OF WALL

LEGEND

- ⌶ NON-BITUMINOUS JOINT SEALER ON ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). COLOR TO MATCH CONCRETE STAIN.
- ◑ SEGMENT D INCLUDES 2-¾" GAPS BETWEEN COPINGS AND BRIDGE PARAPETS ON B-40-798.
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- ◥ FOR ADDITIONAL INFORMATION SEE 'COPING DETAIL AT SEGMENTS A & C' ON "PARAPET, COPING & SLIP JOINT DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

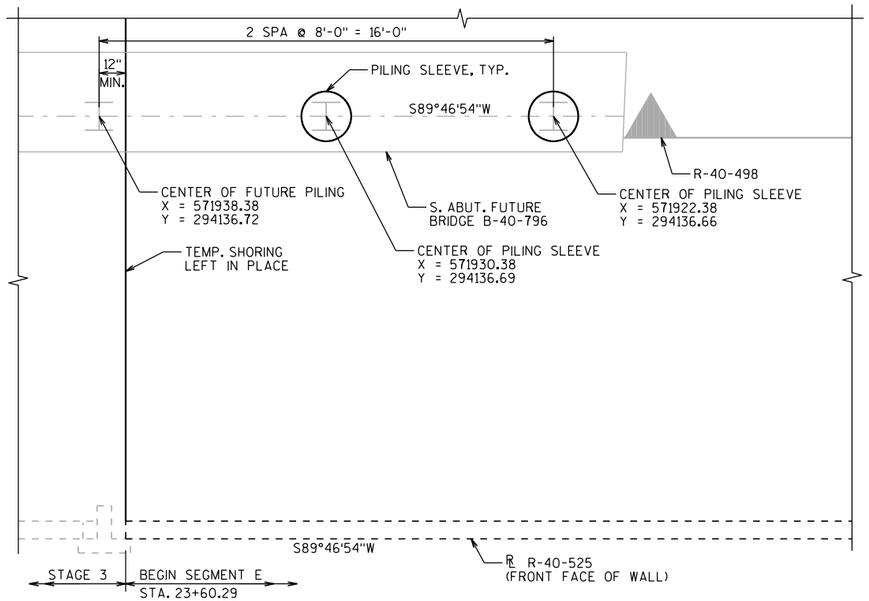
SEGMENTS C & D REINFORCEMENT DETAILS

SHEET 18 OF 27

8

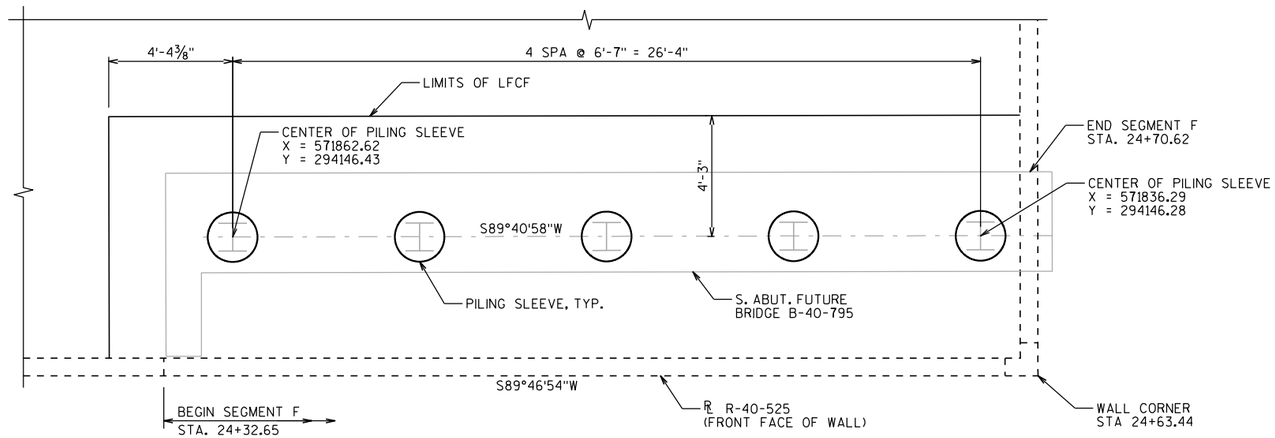
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STATE PROJECT NUMBER
1060-33-80



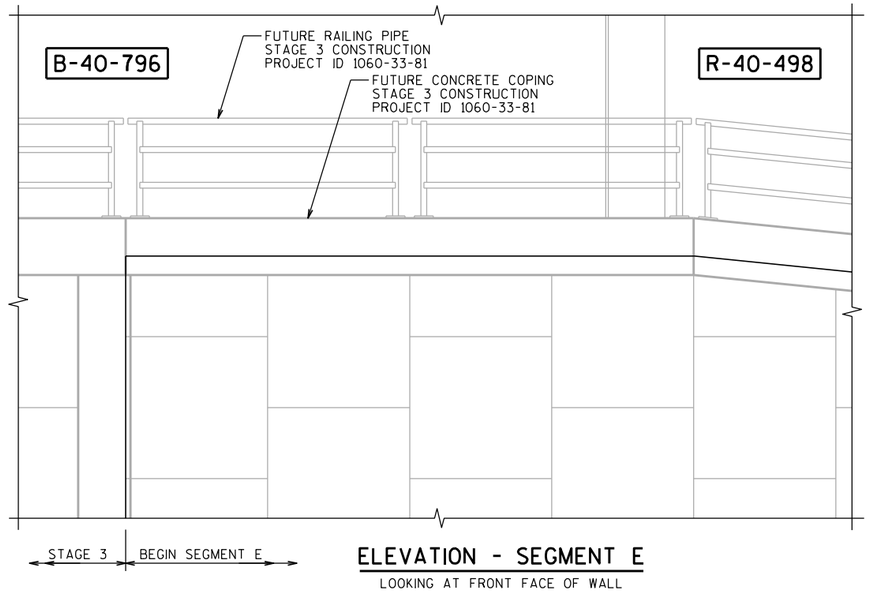
PLAN - SEGMENT E

DIMENSIONS ALONG ℄ R-40-525



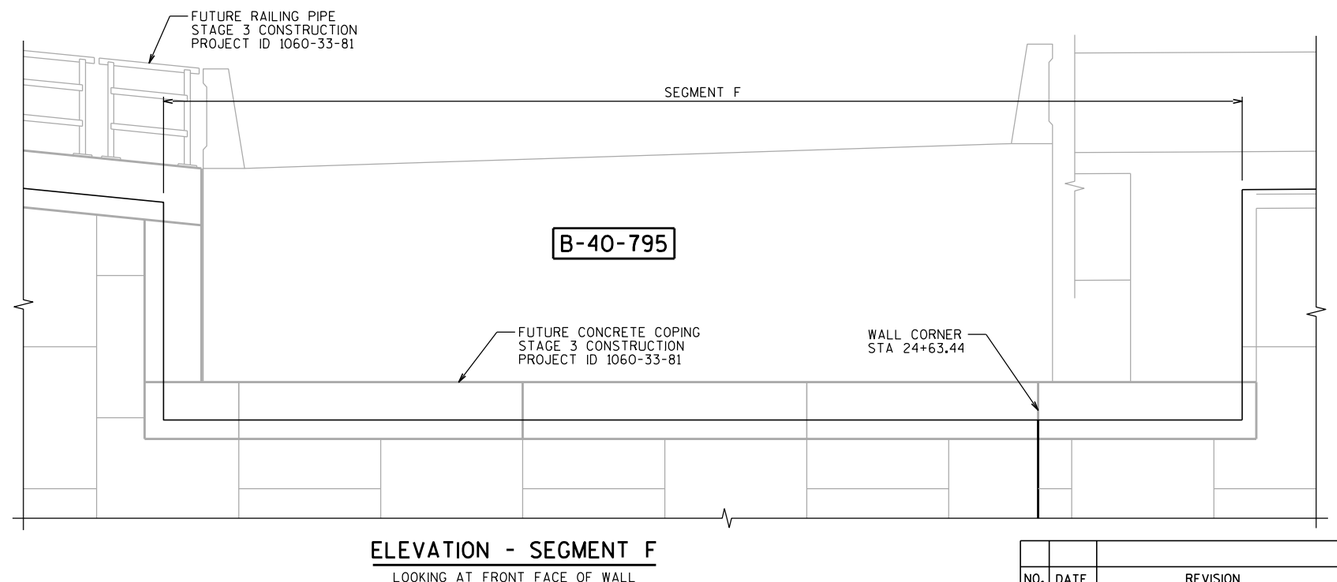
PLAN - SEGMENT F

DIMENSIONS ALONG ℄ R-40-525



ELEVATION - SEGMENT E

LOOKING AT FRONT FACE OF WALL



ELEVATION - SEGMENT F

LOOKING AT FRONT FACE OF WALL

PILING SLEEVE NOTES

1. PILING SLEEVES MUST BE USED AT LOCATIONS SHOWN ON THE PLANS. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES" AND ARE INCLUDED UNDER BID ITEM "PILING SLEEVES."
2. PILING SLEEVES SHALL BE 21" DIA. CORRUGATED STEEL PIPE AND CONSTRUCTED AS STATED IN THE SPECIAL PROVISION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

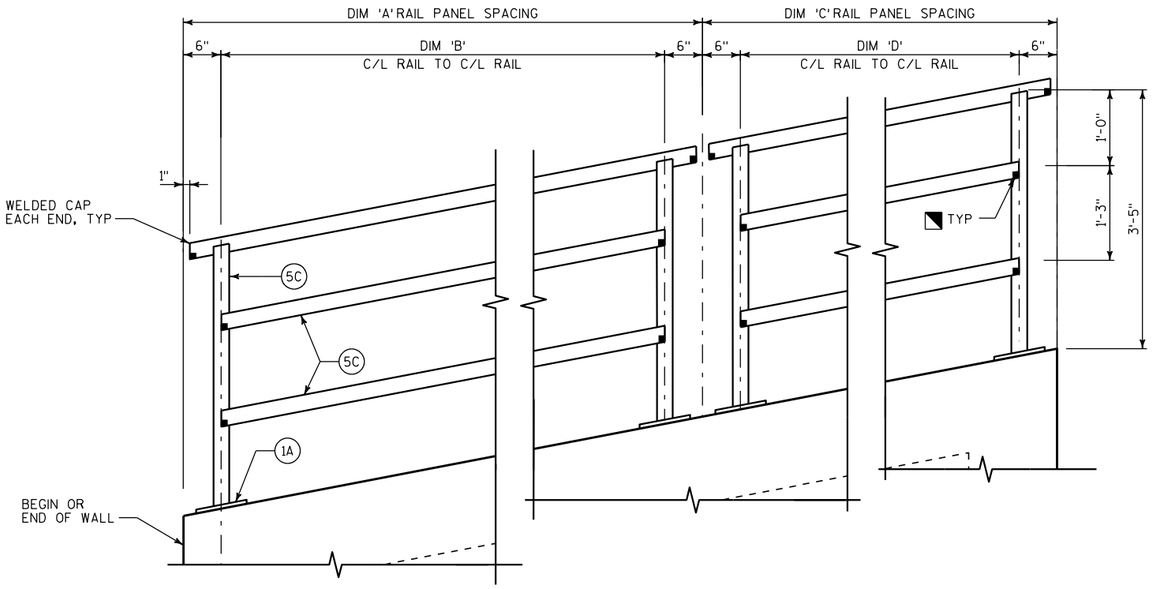
DRAWN BY JJO | PLANS CK'D. JWC

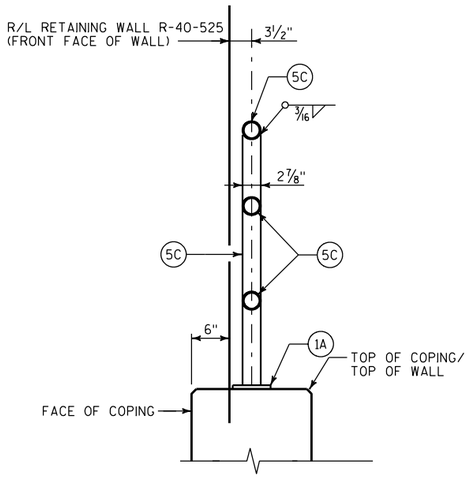
PILING SLEEVE LAYOUT

SHEET 19 OF 27

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PLOT DATE : 01-MAY-2014 13:48
PLOT BY : MSCJJO
PLOT NAME : 080304_de
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
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WALL RAILING SECTION

LEGEND

(1A) PLATE ⅝" × 6" × 8" WITH ¾" × 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MINIMUM OF 6" INTO CONCRETE.

(5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING/ TOP OF WALL. WELD TO 5C.

◥ ½" DIA. DRAIN HOLE AT BOTTOM OF EACH RAIL END.

DIM	STAGE 1	SEGMENT A	SEGMENT C
A	1 SPACES @ 9'-1⅜"	3 SPACE @ 7'-3¼"	2 SPACE @ 9'-10¼"
B	8'-1⅜" EACH PANEL	6'-3¼" EACH PANEL	8'-10¼" EACH PANEL
C	-	-	2 SPACES @ 7'-6¼"
D	-	-	6'-6¼" EACH PANEL

NOTES

BID ITEM "RAILING PIPE R-40-525" INCLUDES ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

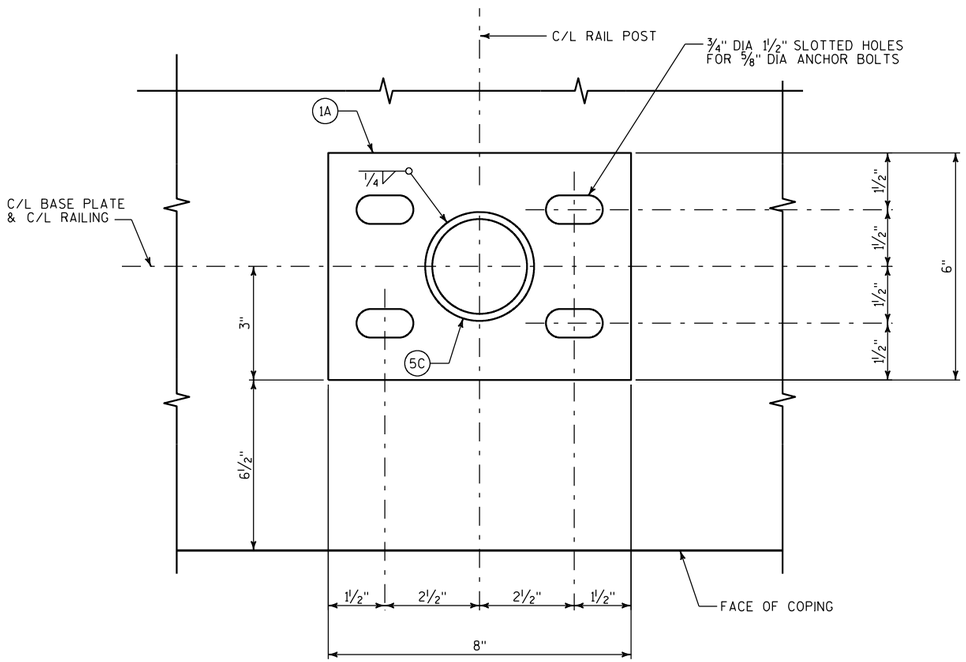
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

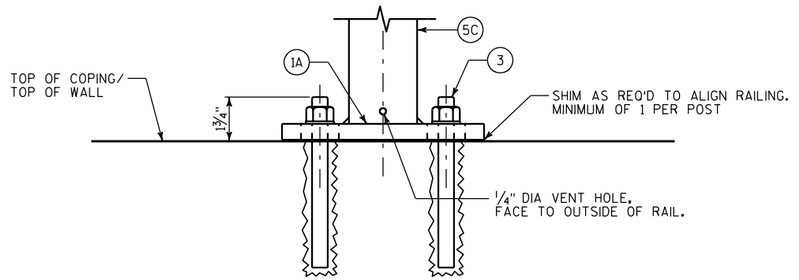
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

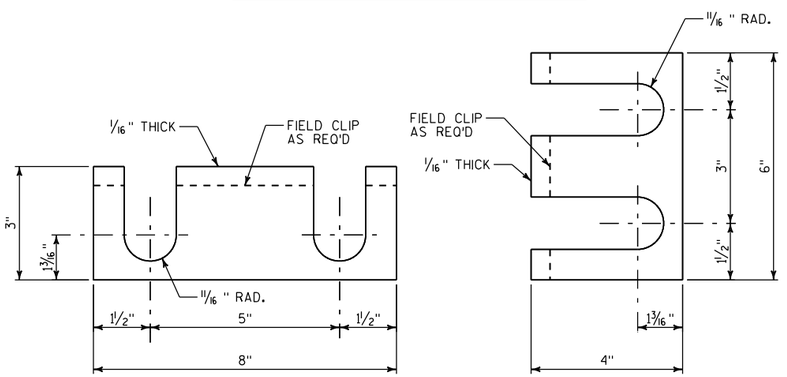
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

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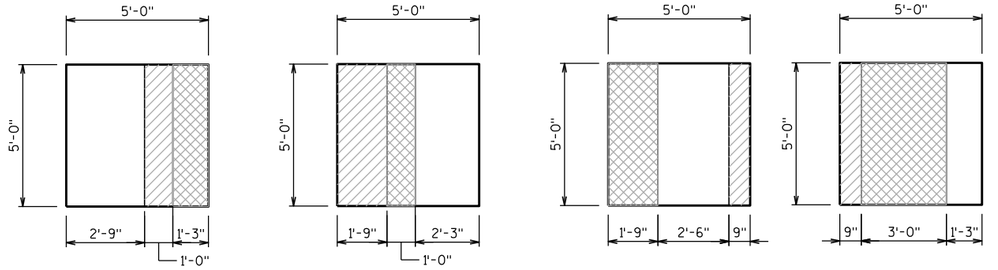
PIPE RAILING DETAILS

SHEET 20 OF 27

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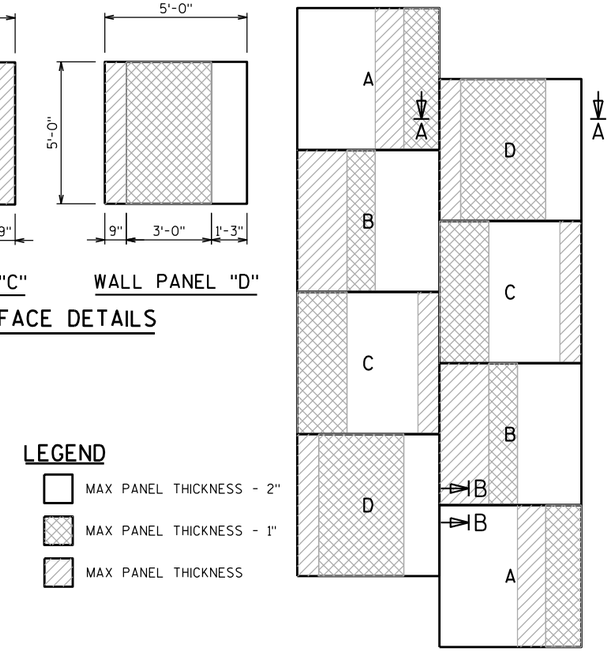
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WALL PANEL "A" WALL PANEL "B" WALL PANEL "C" WALL PANEL "D"

5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



LEGEND

- MAX PANEL THICKNESS - 2"
- MAX PANEL THICKNESS - 1"
- MAX PANEL THICKNESS

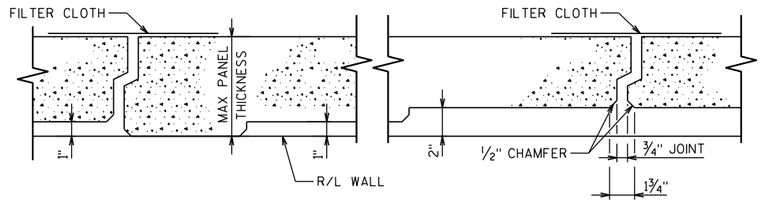
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN 1

PATTERN REPEATS 5' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED

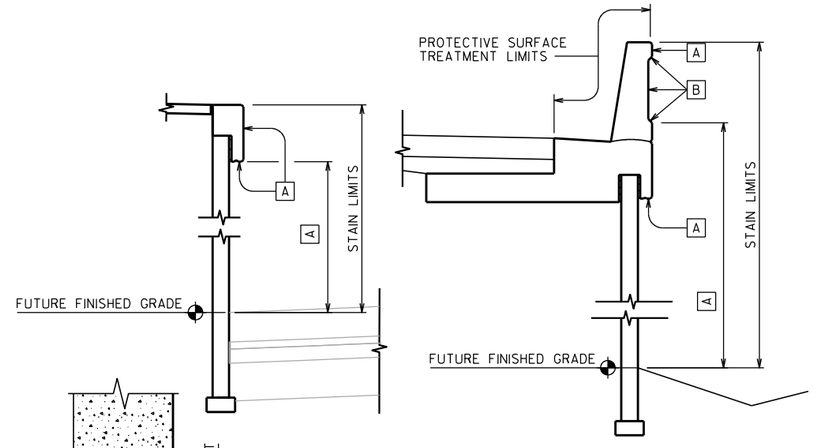
ARCHITECTURAL SURFACE TREATMENT NOTES:

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-525".

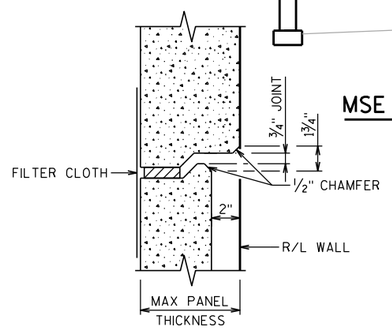
PATTERN 1 SHALL BE INCORPORATED INTO PANELS FROM STA. 20+62.62 TO STA. 29+39.62.



SECTION A-A



MSE WALL STAINING DIAGRAMS



SECTION B-B

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #1 - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

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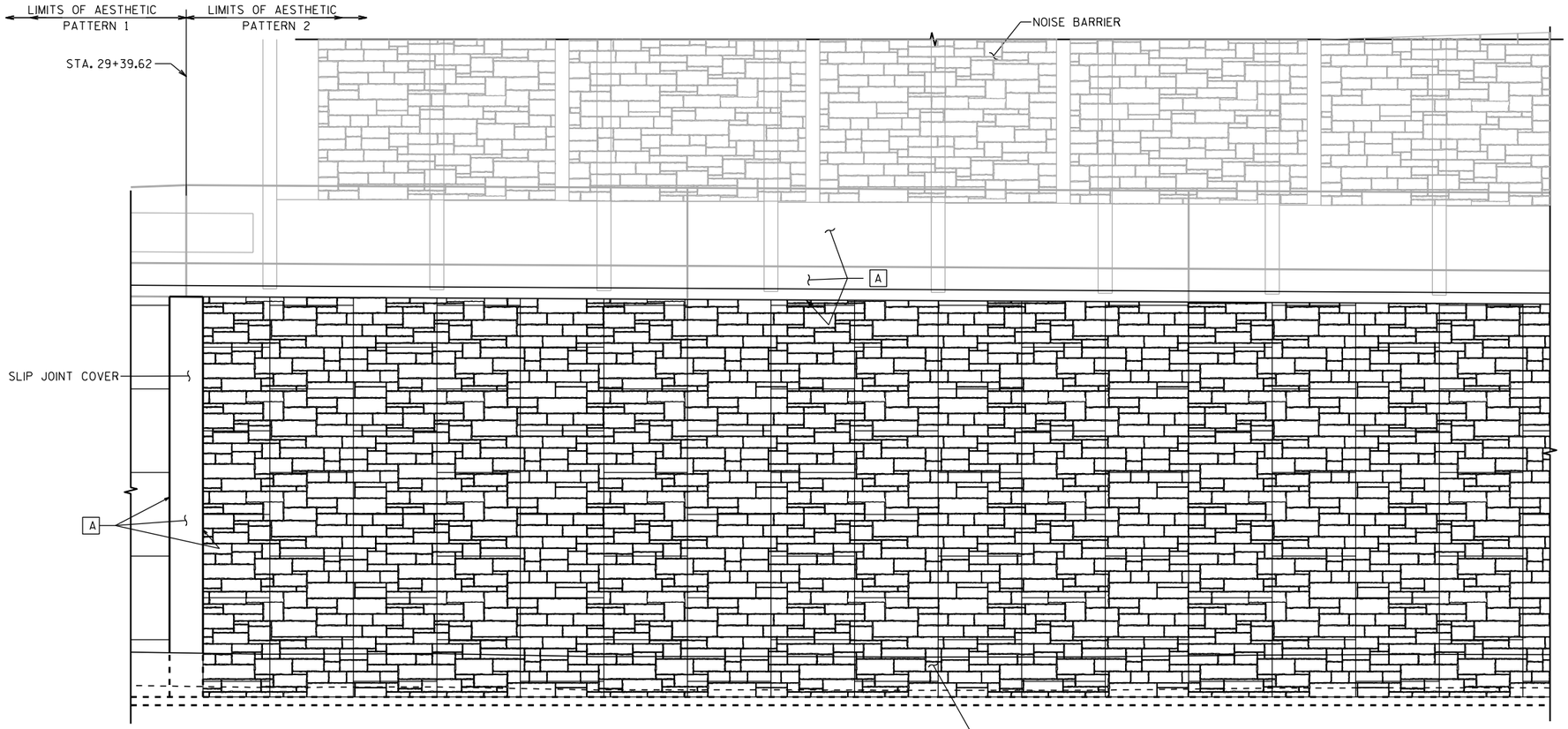
AESTHETIC WALL TREATMENT DETAILS PATTERN 1

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ELEVATION PATTERN 2

ARCHITECTURAL SURFACE TREATMENT NOTES:

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-525".

PATTERN 2 SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF OF 1½".

PATTERN 2 SHALL BE INCORPORATED INTO PANELS FROM STA. 29+39.62 TO STA. 36+59.62.

CONCRETE STAINING SCHEDULE

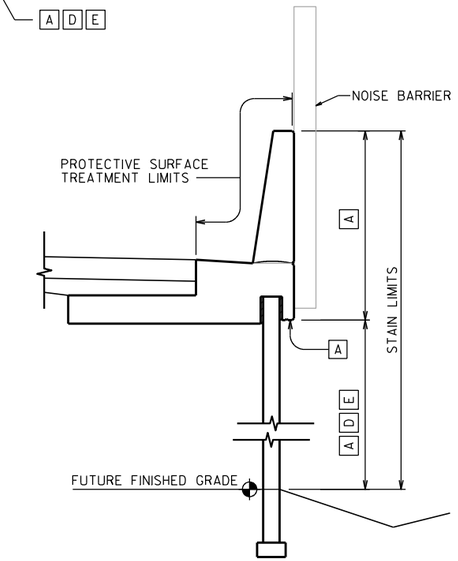
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
D	ACCENT COLOR #3	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
E	ACCENT COLOR #4	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE

STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #3 - 33522
ACCENT COLOR #4 - 36424

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



MSE WALL STAINING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. ENS

AESTHETIC WALL TREATMENT DETAILS PATTERN 2

SHEET 22 OF 27

8

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-525\cds\080502_ae.dgn PLOT DATE : 01-MAY-2014 13:48 PLOT BY : MSCJJO PLOT NAME : 080502_ae PLOT SCALE : 8:1

NOTE:

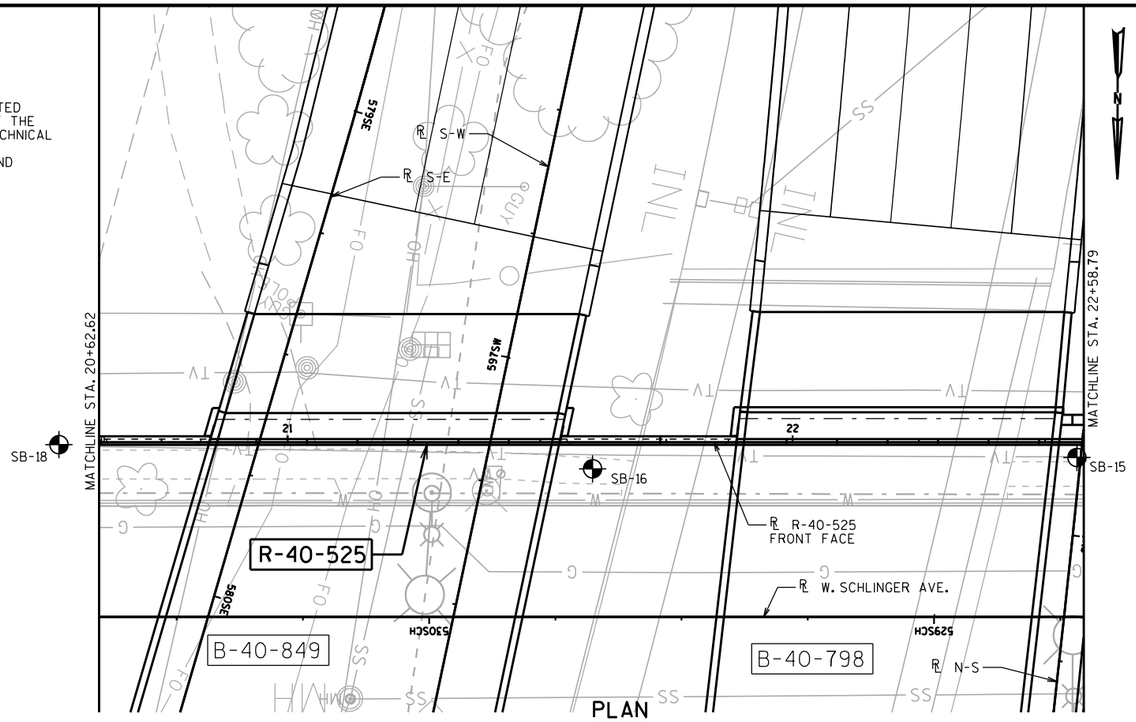
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

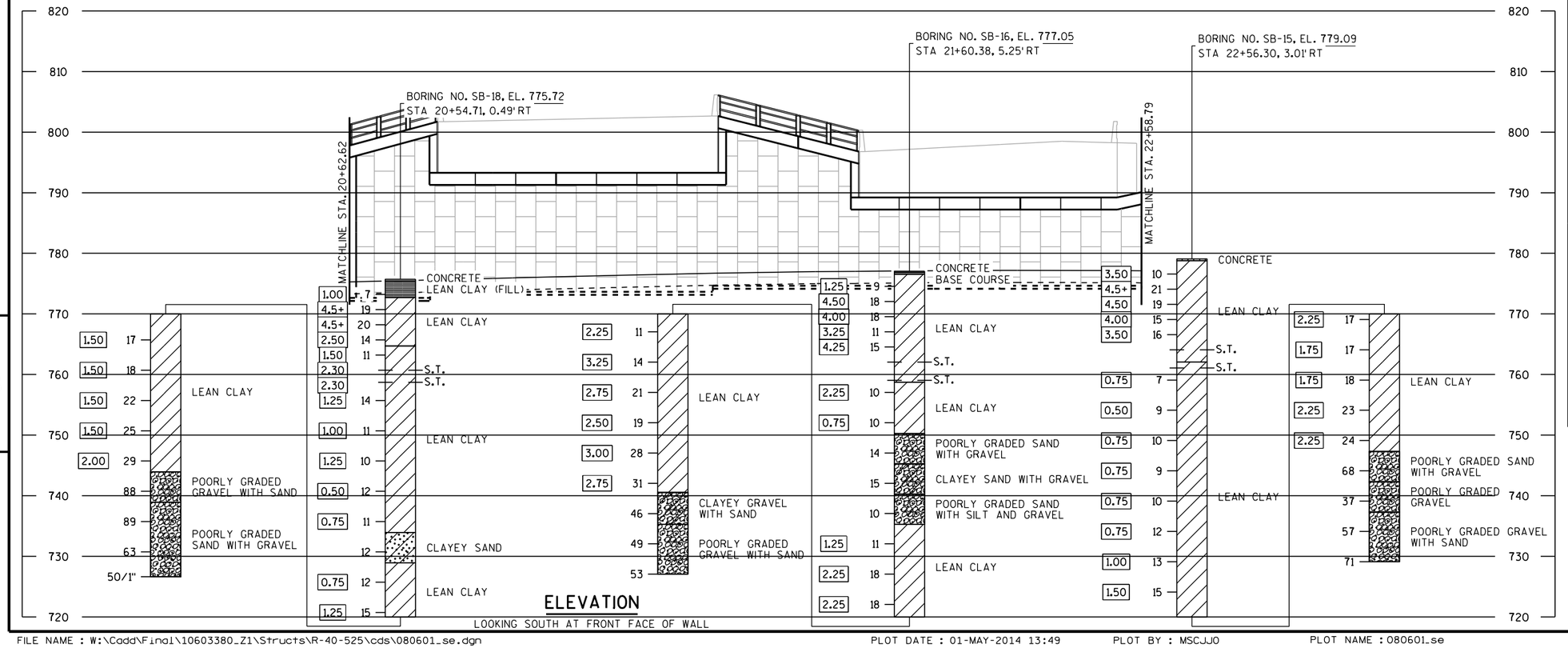
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
FEB. 2, 2012 - BORING SB-15
FEB. 6, 2012 - BORING SB-16
FEB. 1, 2012 - BORING SB-18



PLAN



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

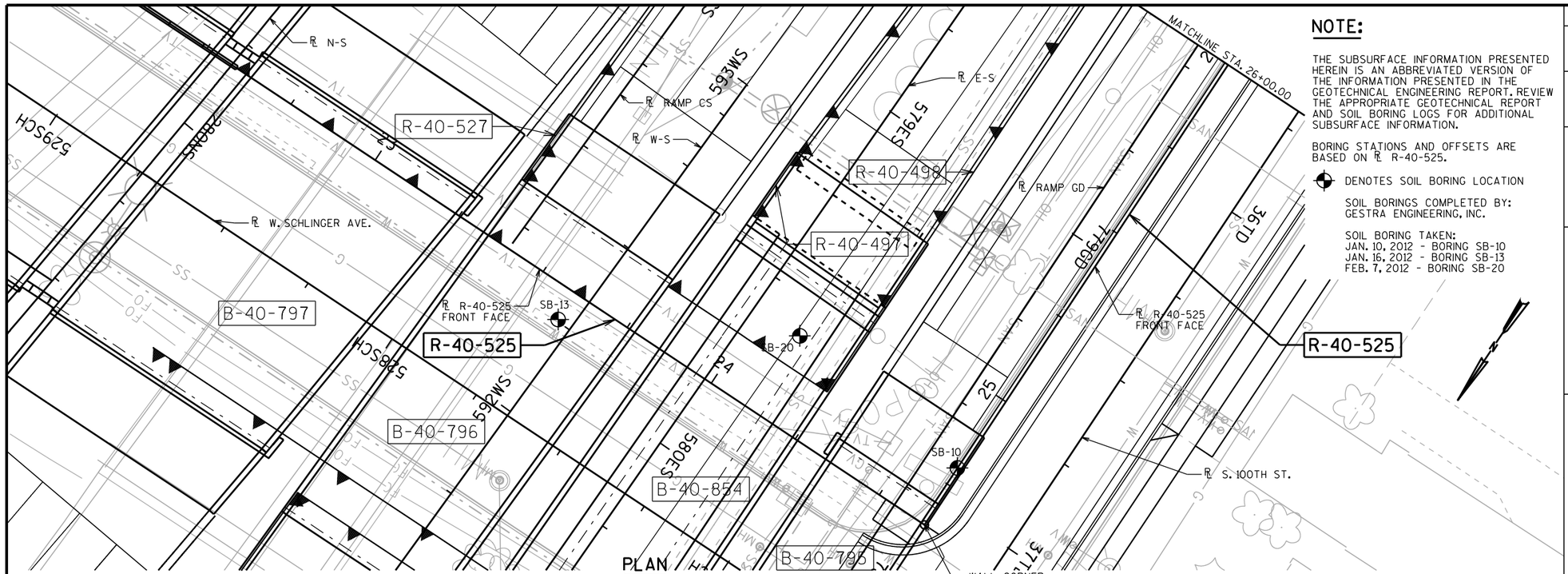
STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

SUBSURFACE EXPLORATION 1

SHEET 23 OF 27

8



NOTE:

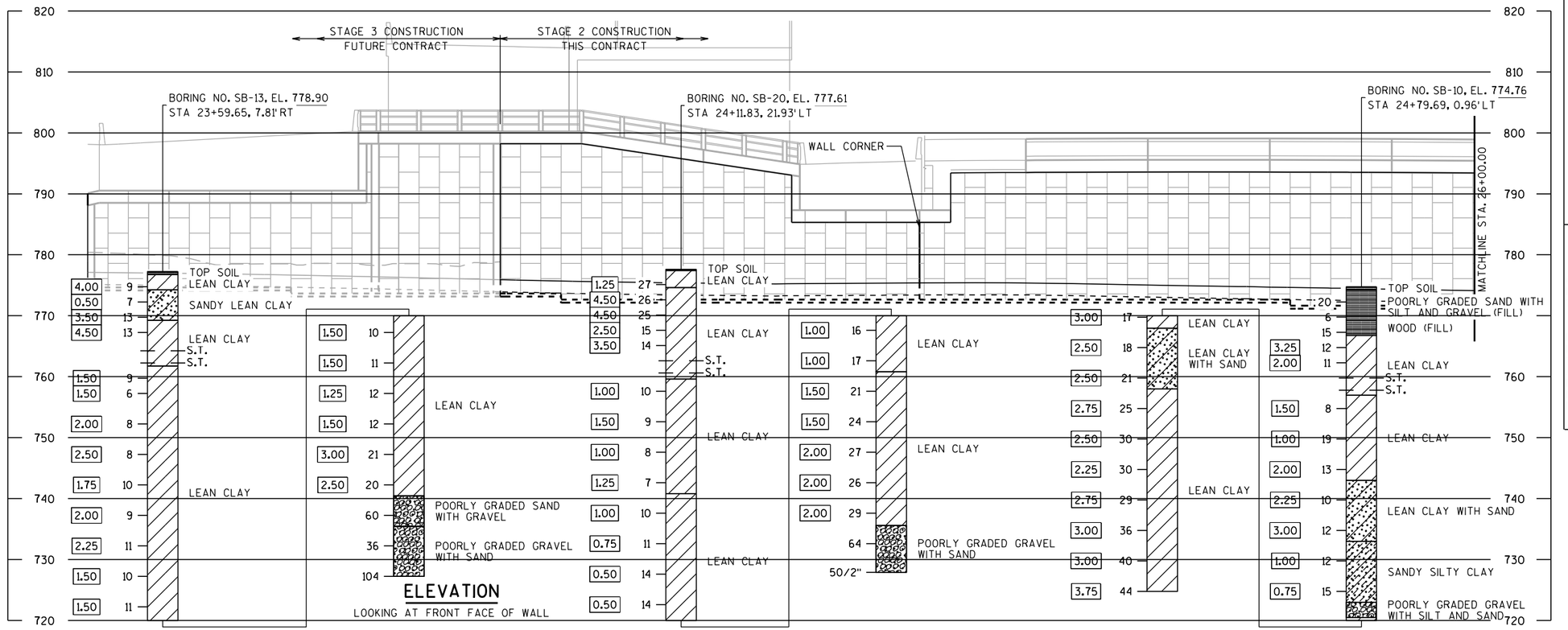
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 10, 2012 - BORING SB-10
JAN. 16, 2012 - BORING SB-13
FEB. 7, 2012 - BORING SB-20



STATE PROJECT NUMBER

1060-33-80

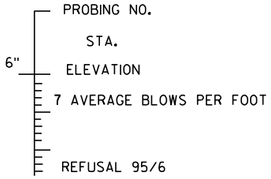
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

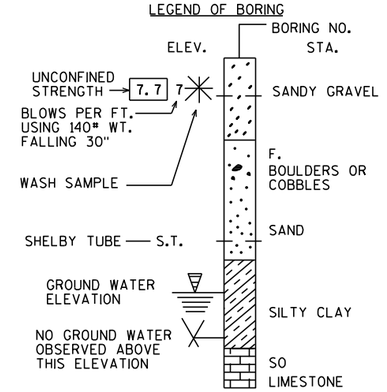
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO · PLANS CK'D. JWC

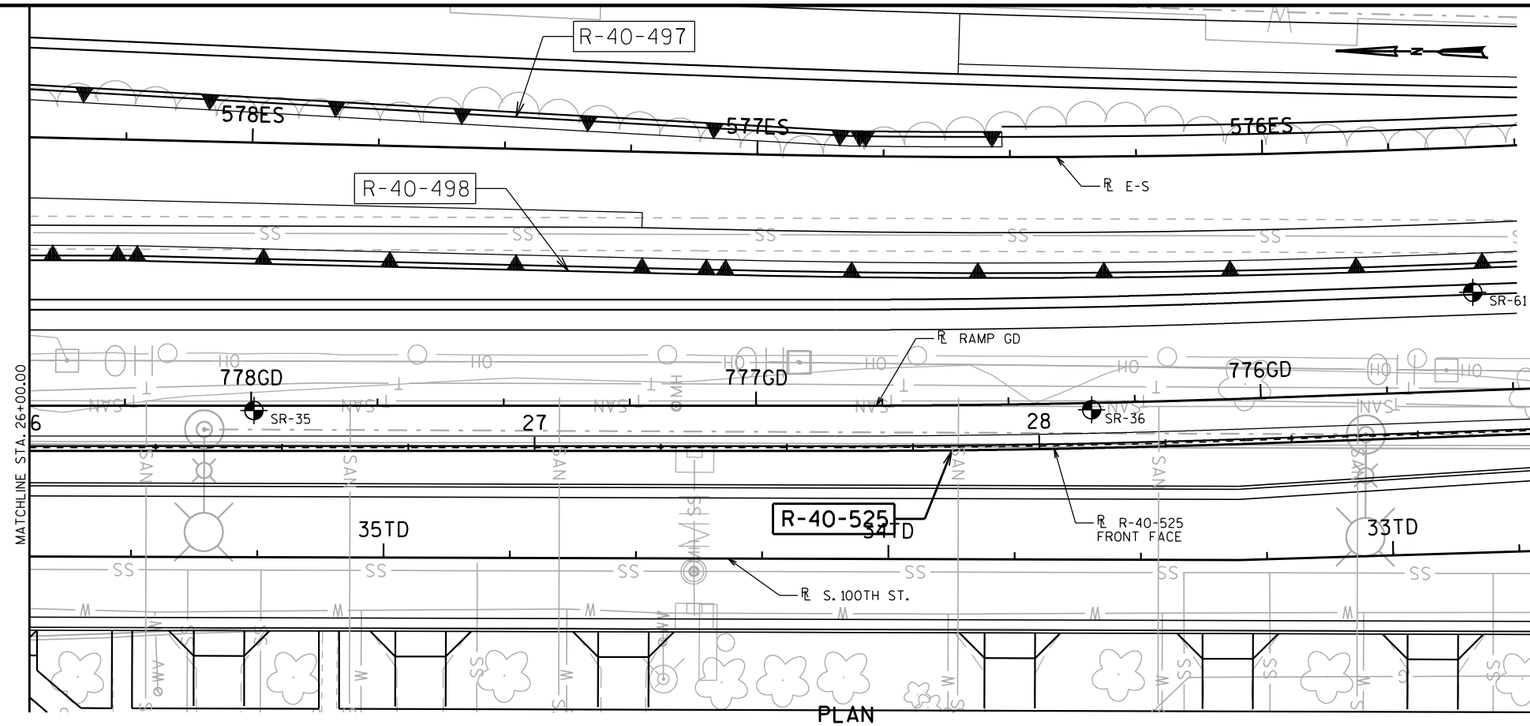
SUBSURFACE EXPLORATION 2

SHEET 24 OF 27

8

8

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PLOT DATE : 01-MAY-2014 13:49
PLOT BY : MSCJJO
PLOT NAME : 080602_se
PLOT SCALE : 30:1



PLAN

NOTE:

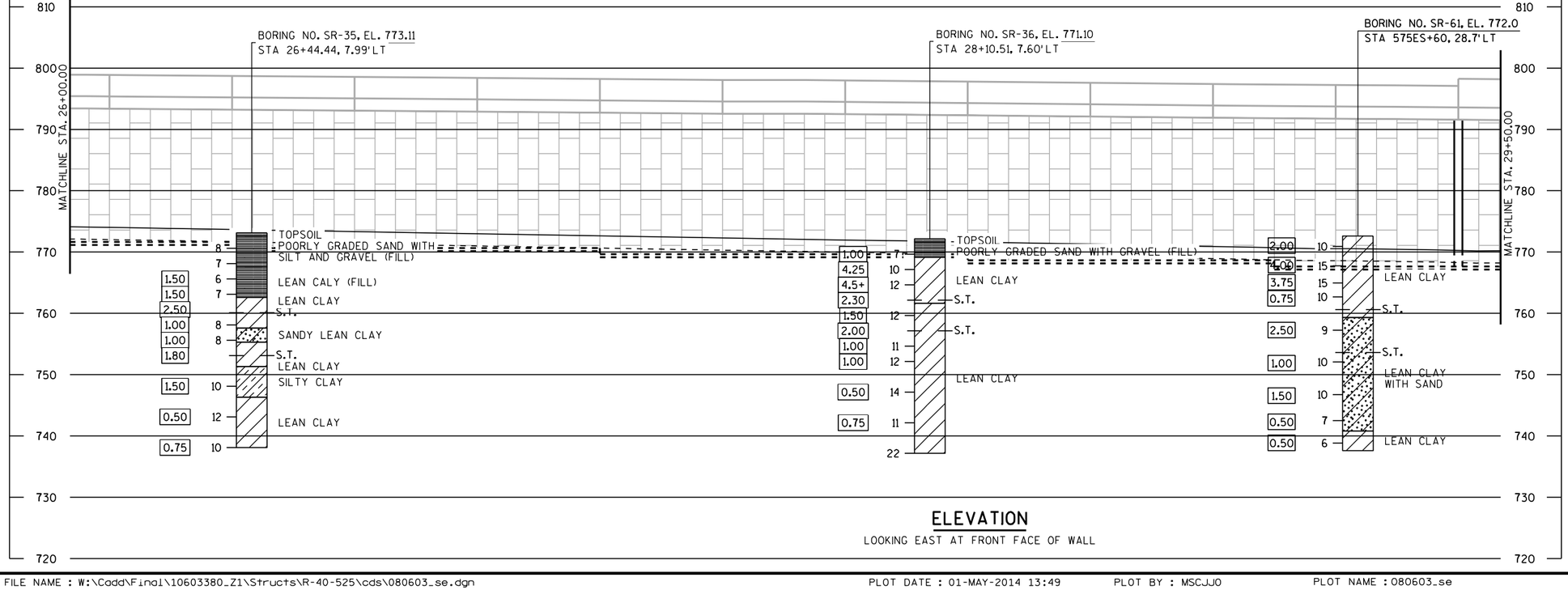
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BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 19, 2012 - BORING SR-35
JAN. 19, 2012 - BORING SR-36
APR. 18, 2012 - BORING SR-61



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

STATE PROJECT NUMBER

1060-33-80

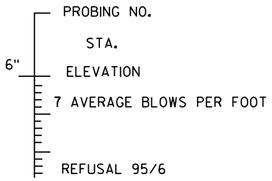
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

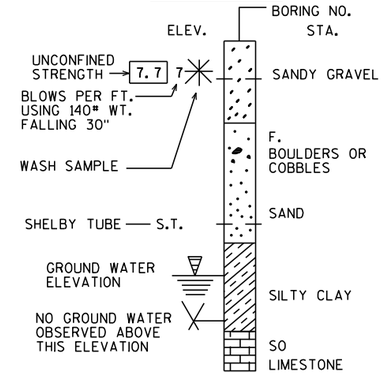
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

SUBSURFACE EXPLORATION 3

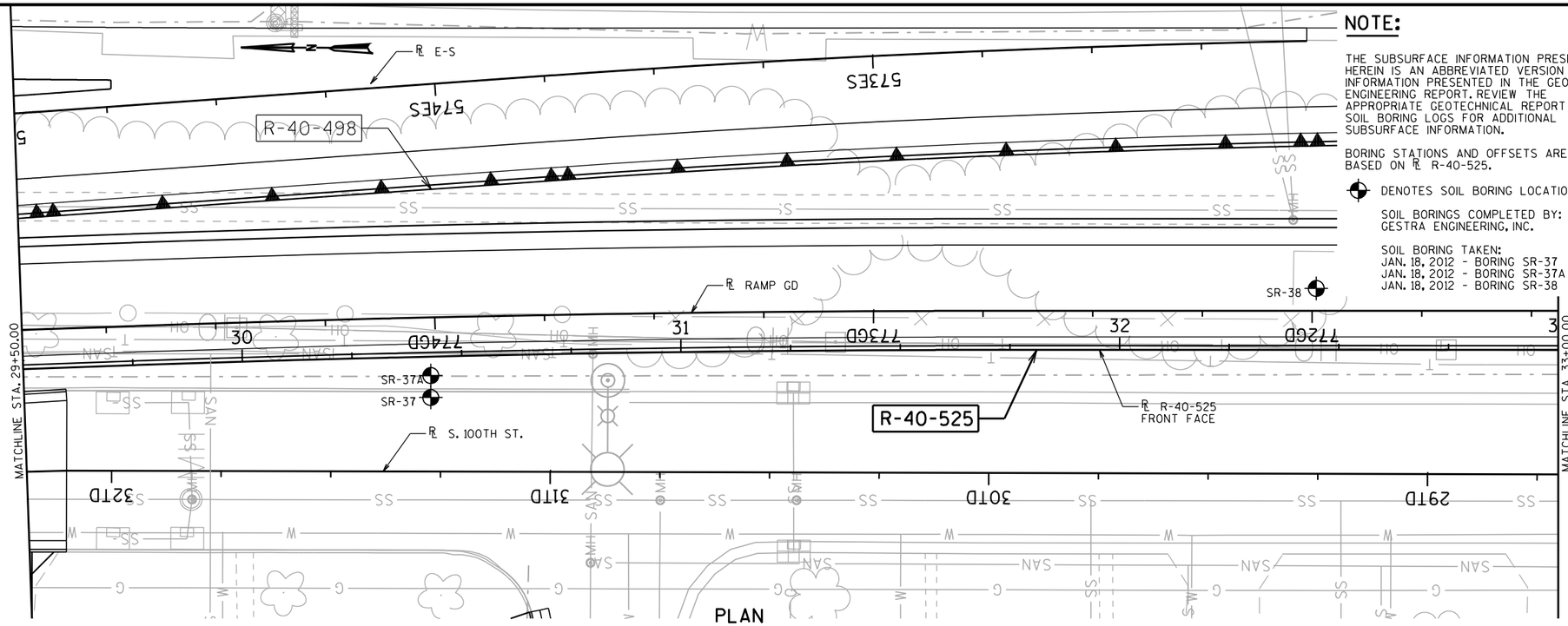
SHEET 25 OF 27

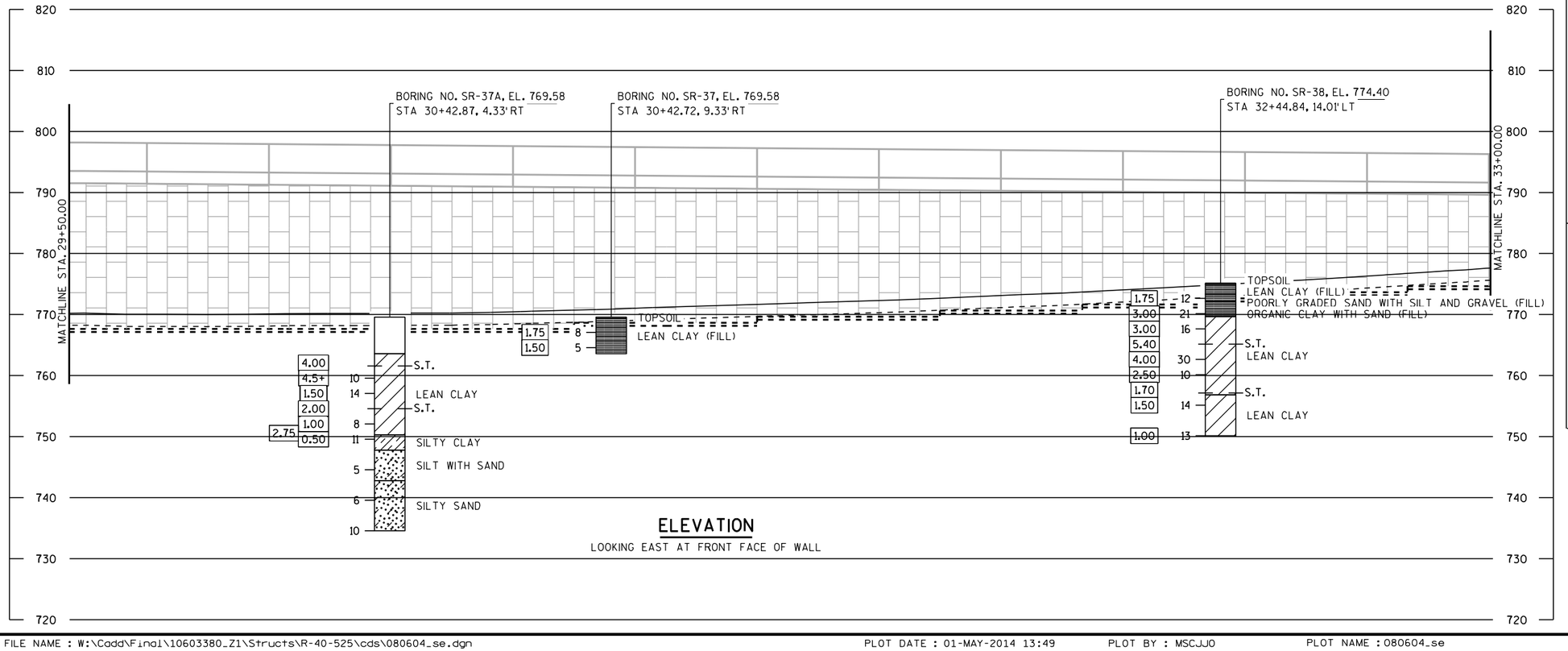
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ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

NOTE:

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BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 18, 2012 - BORING SR-37
JAN. 18, 2012 - BORING SR-37A
JAN. 18, 2012 - BORING SR-38

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

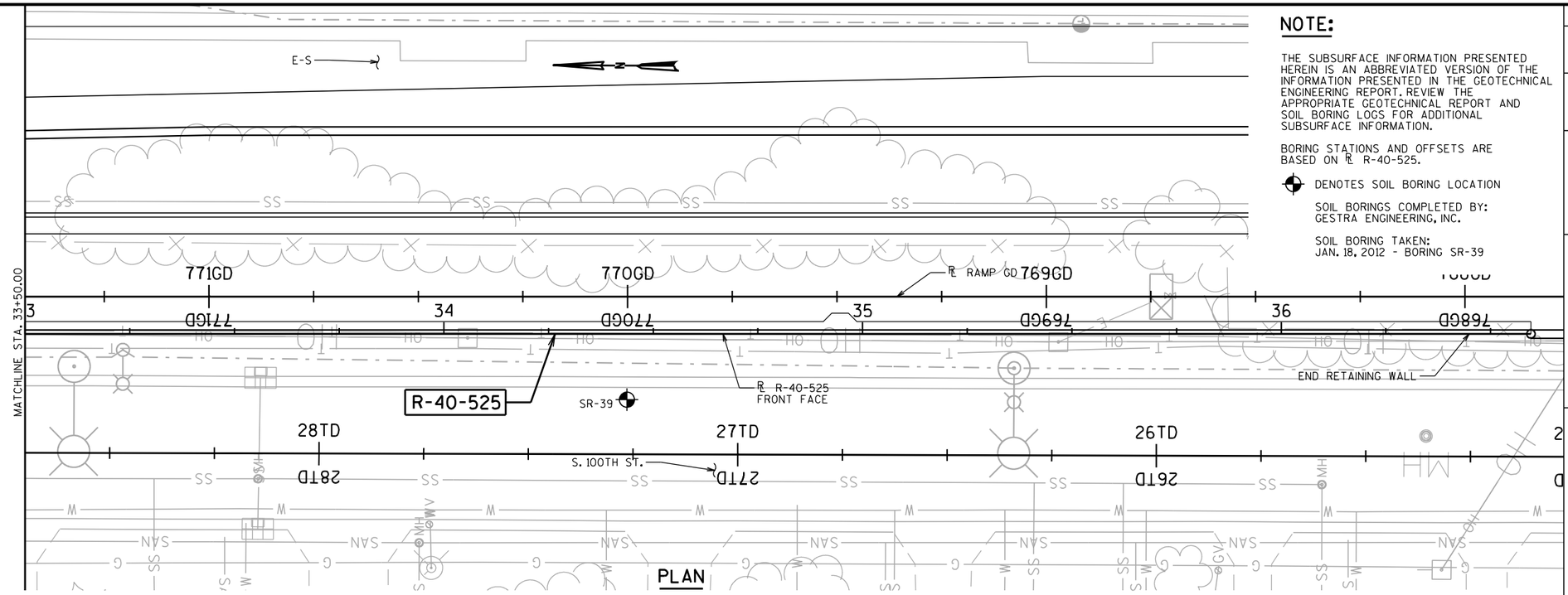
STRUCTURE R-40-525

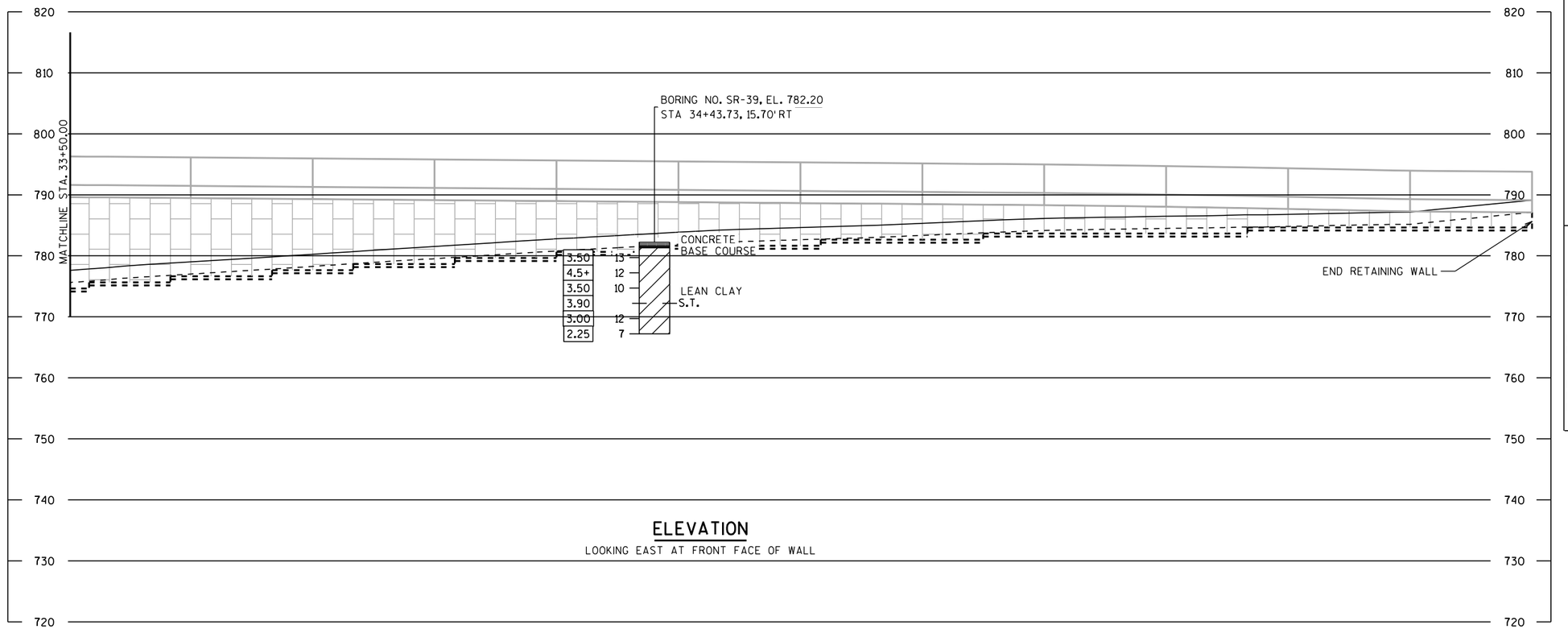
DRAWN BY JJO | PLANS CK'D. JWC

SUBSURFACE EXPLORATION 4

SHEET 26 OF 27

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-525\cds\080604_se.dgn PLOT DATE : 01-MAY-2014 13:49 PLOT BY : MSCJJO PLOT NAME : 080604_se PLOT SCALE : 30:1





ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

NOTE:

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BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 18, 2012 - BORING SR-39

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

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SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

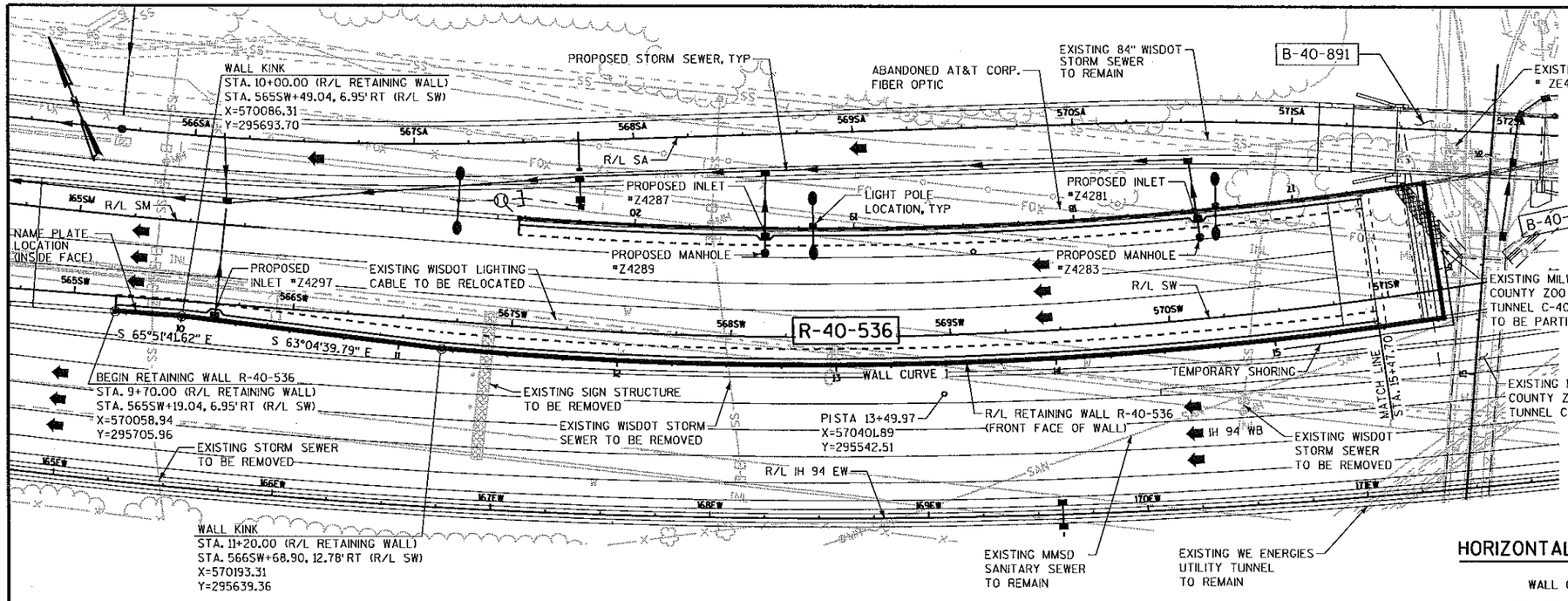
SUBSURFACE EXPLORATION 5

SHEET 27 OF 27

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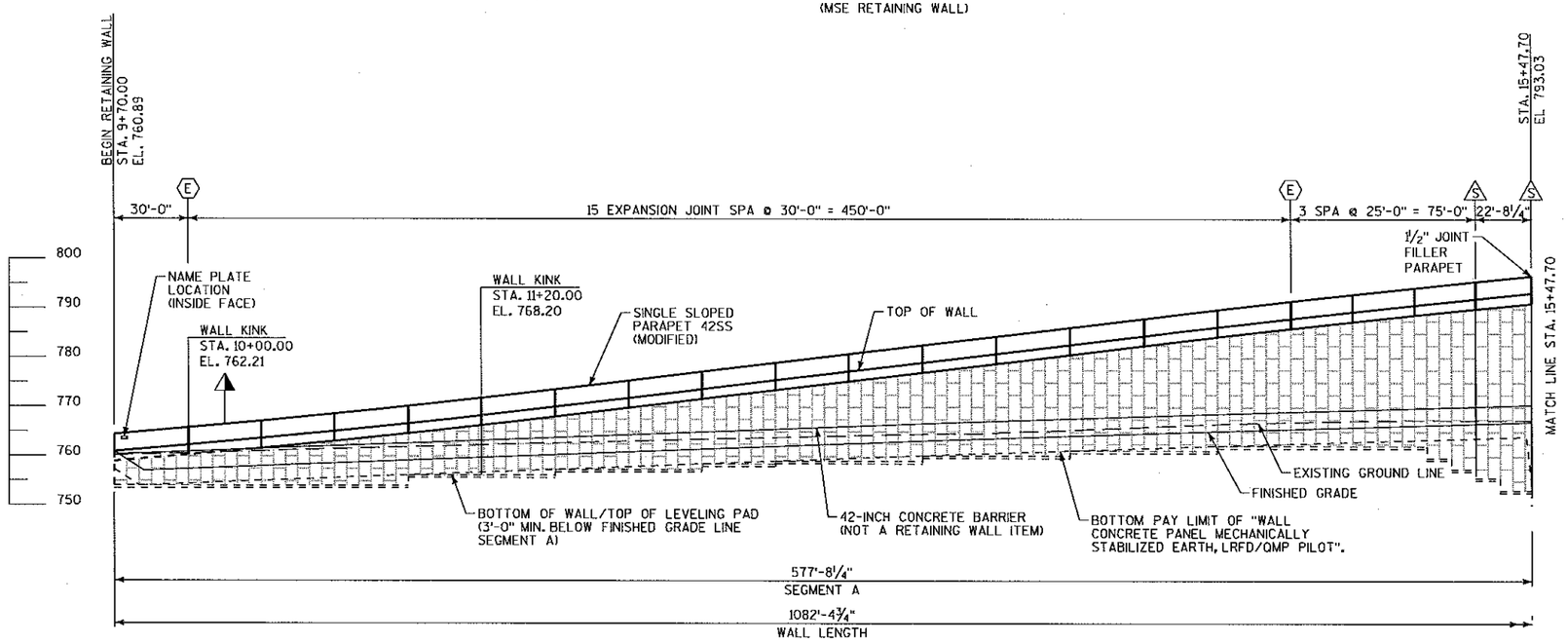
8

STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING NORTHEAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A VERTICAL EARTH SURCHARGE LOAD BEHIND THE ABUTMENT PLUS A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF THE ABUTMENT LIMITS FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

SEE NOTE A05 ON SHEET 6 FOR ADDITIONAL DESIGN CRITERIA.

HORIZONTAL CURVE DATA

WALL CURVE 1

PI= STA. 13+49.97
X = 570401.89
Y = 295542.51
DELTA = 13°42'37.13" LT
D = 2°59'42.55"
R = 1912.95'
T = 229.97
L = 457.75
E = 13.77
PC = STA. 11+20.00
X = 570193.31
Y = 295639.36
PT = STA. 15+77.75
X = 570627.49
Y = 295497.86

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. QUANTITIES, NOTES & PROFILE GRADE LINE
4. TYPICAL WALL SECTIONS (1 OF 3)
5. TYPICAL WALL SECTIONS (2 OF 3)
6. TYPICAL WALL SECTIONS (3 OF 3)
7. PARAPET & ANCHOR SLAB DETAILS
8. SEGMENT A PLAN & ELEVATION
9. SEGMENT C PLAN & ELEVATION
10. SEGMENT E PLAN & ELEVATION
11. INLET DETAILS
12. ANCHOR SLAB INLET COVER SPECIAL
13. SEGMENT E CONDUIT & LIGHT SUPPORT DETAILS
14. BILL OF BARS
15. AESTHETIC WALL TREATMENT DETAILS
16. SUBSURFACE EXPLORATION (1 OF 2)
17. SUBSURFACE EXPLORATION (2 OF 2)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- (S) VERTICAL SLIP JOINT
- DRAINAGE INLET, SEE SHEET 11 FOR STATIONS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
5/1/2014

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-536

RAMP WS RETAINING WALL, B-40-852 WEST ABUT.

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WEST ALLIS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

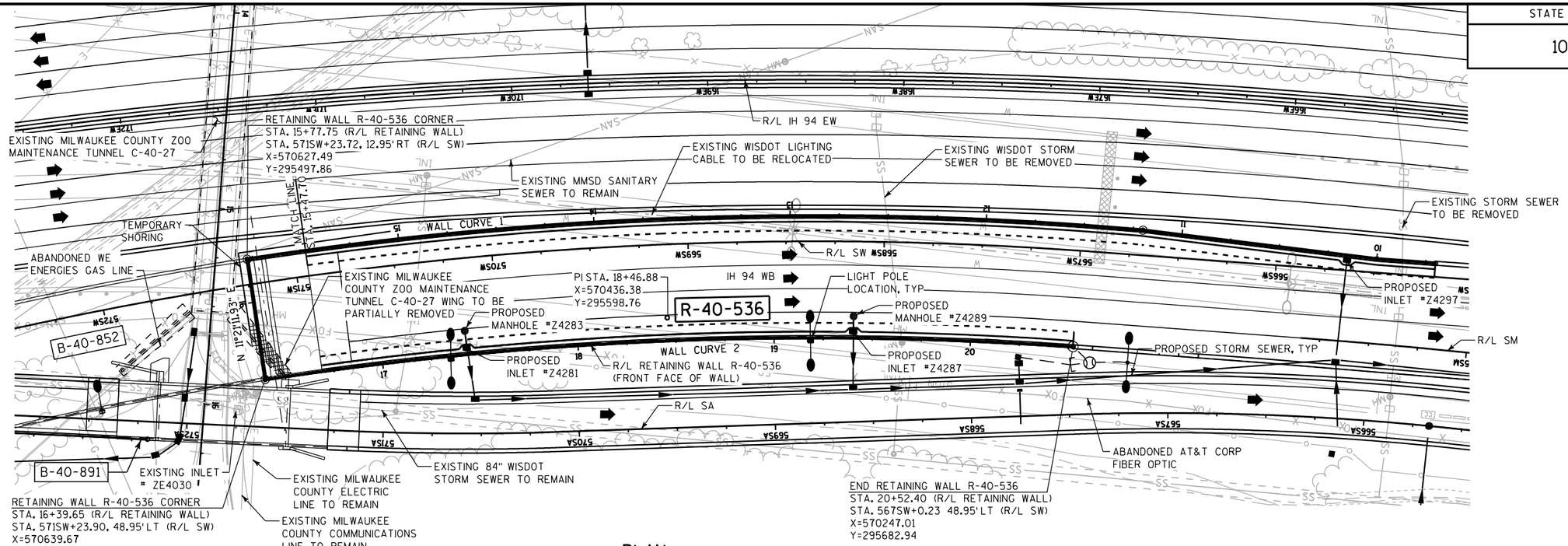
GENERAL PLAN & ELEVATION (1 OF 2)

SHEET 1 OF 17

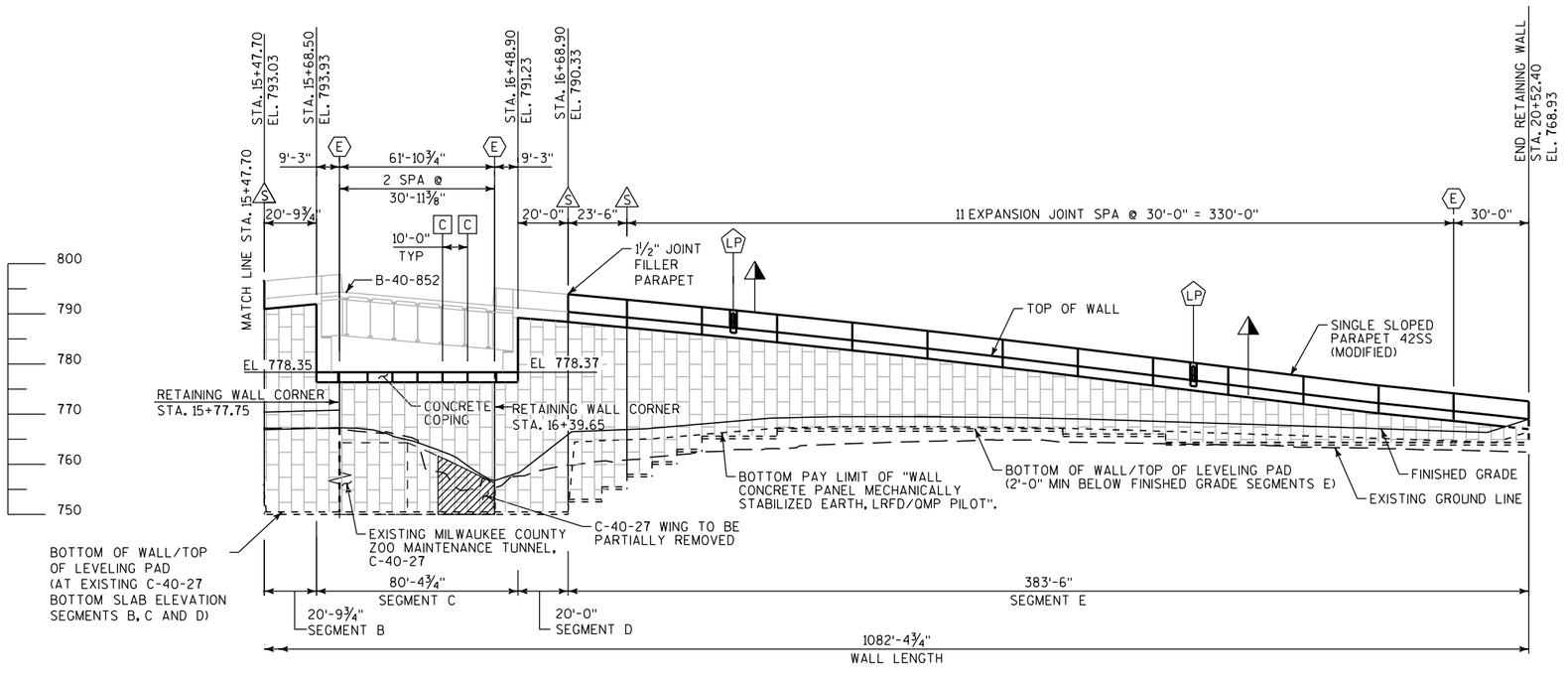
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8

STATE PROJECT NUMBER
1060-33-80



PLAN
(MSE RETAINING WALL)



ELEVATION
(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

HORIZONTAL CURVE DATA

WALL CURVE 1	WALL CURVE 2
PI = STA. 13+49.97	PI = STA. 18+46.88
X = 570401.89	X = 570436.38
Y = 295542.51	Y = 295598.76
DELTA = 13°42'37.13" LT	DELTA = 12°46'33.20" RT
D = 2°59'42.55"	D = 3°05'43.11"
R = 1912.95'	R = 1851.05'
T = 229.97	T = 207.23
L = 457.75	L = 412.75
E = 13.77	E = 11.56
PC = STA. 11+20.00	PC = STA. 16+39.65
X = 570193.31	X = 570639.67
Y = 295639.36	Y = 295558.54
PT = STA. 15+77.75	PT = STA. 20+52.40
X = 570627.49	X = 570247.01
Y = 295497.86	Y = 295682.94

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- (S) VERTICAL SLIP JOINT
- (LP) LIGHT POLE BASE SEE SHEET 13 FOR STATIONS
- DRAINAGE INLET, SEE SHEET 11 FOR STATIONS
- [C] CONTRACTION JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

GENERAL PLAN & ELEVATION (2 OF 2)

SHEET 2 OF 17

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-536\cds\R40536_080102_gp.dgn
PLOT DATE : 30-APR-2014 14:07
PLOT BY : MSCM1M
PLOT NAME : R40536_080102_gp
PLOT SCALE : 60:1

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	SEGMENT E	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	409	-	10	-	272	691
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	339	-	-	-	227	566
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LBS	52,348	-	-	-	36,123	88,471
511.2200.0004	TEMPORARY SHORING LEFT IN PLACE R-40-536	SF	-	-	-	-	-	2,061
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	30	3	1	3	20	57
517.1050.S.0009	ARCHITECTURAL SURFACE TREATMENT R-40-536	SF	8,897	867	2,137	780	4,445	17,126
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	120	-	-	-	-	120
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	607	22	85	21	403	1,138
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	-	-	-	-	4	4
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-	-	-	-	403	403
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-	-	-	-	2	2
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	-	-	-	-	2	2
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	1	-	-	-	2	3
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	10,052	909	2,297	820	5,212	19,289
	NON-BID ITEMS							
	NAME PLATE	EACH	-	-	-	-	-	1
	PREFORMED JOINT FILLER	SIZE	-	-	-	-	-	3/4",1 1/2"
	NON-BITUMINOUS JOINT SEALER	SIZE	-	-	-	-	-	3/4"
	CORK FILLER	SIZE	-	-	-	-	-	1"
	EXPANDED POLYSTYRENE	SIZE	-	-	-	-	-	1"

ALL ITEMS ARE CATEGORY 3080

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE BRIDGE QUANTITIES.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½" INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½" INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

PRECAST PANEL FACING SHALL BE 5'X 5'MSE WALL PANELS

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-536 WITH THE WEST ABUTMENT OF BRIDGE B-40-852.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE TO BE EPOXY COATED.

GENERAL NOTES

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENTS A & E CAST-IN-PLACE COPING AND ANCHOR SLAB, COPING AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" & "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

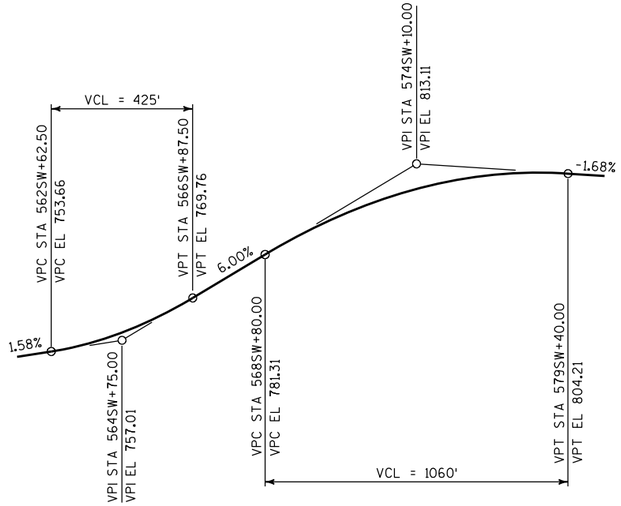
THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE SEGMENTS C CAST-IN-PLACE COPING ARE INCIDENTAL TO THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD QMP/PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE AT LEAST 3'-0" BELOW FINISHED GRADE FOR SEGMENT A, 2'-0" BELOW EXISTING GROUND FOR SEGMENT E, AND AT EXISTING C-40-27 BOTTOM SLAB ELEVATION FOR SEGMENTS B, C & D.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PARTIAL REMOVAL OF THE EXISTING MILWAUKEE COUNTY ZOO MAINTENANCE TUNNEL C-40-27 WINGWALL SHALL BE INCIDENTAL TO ITEM "CONCRETE MASONRY RETAINING WALLS".



PROFILE GRADE LINE - SW

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS					
WALL HEIGHT (FEET)	16.8	27.2	44.5	34.5	16.1
EXPOSED WALL HEIGHT (FEET)	14.8	25.2	42.5	32.5	14.1
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹⚹	11.8	19.2	36.0	24.5	11.5
WALL STATION (R/L RETAINING WALL R-40-536)	12+52	15+03	15+76	16+87	18+09
BORING USED	WR-19	WR-21	WR-21	WR-21	WR-20
CAPACITY TO DEMAND RATIO (CDR)					
SLIDING	1.46	1.52	1.43	2.29	1.42
ECCENTRICITY	1.21	1.37	1.21	1.96	1.24
BEARING	1.96	2.89	1.02	1.65	1.65
GLOBAL STABILITY	1.63	1.23	1.17	5.44	1.11

⚹⚹ FINAL DESIGN FOR INTERNAL STABILITY, EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
MSE BACKFILL ⚹	120	30	0	30	0
EXISTING GRANULAR FILL	125	33	0	32-33	0
EXISTING COHESIVE FILL	125-130	0	1,500-4,500	31-32	50-100
NATIVE COHESIVE CLAY TILL (VERY STIFF TO HARD)	120-125	0	3,000-4,000	30-33	50-100
NATIVE GRANULAR TILL (MEDIUM DENSE TO VERY DENSE)	120-125	32-33	0	32-33	0
NEW GRANULAR FILL	125	32	0	32	0
NEW COHESIVE FILL	125	0	1,500-2,000	31-32	0-10

⚹ DESIGN WALL FOR THESE VALUES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

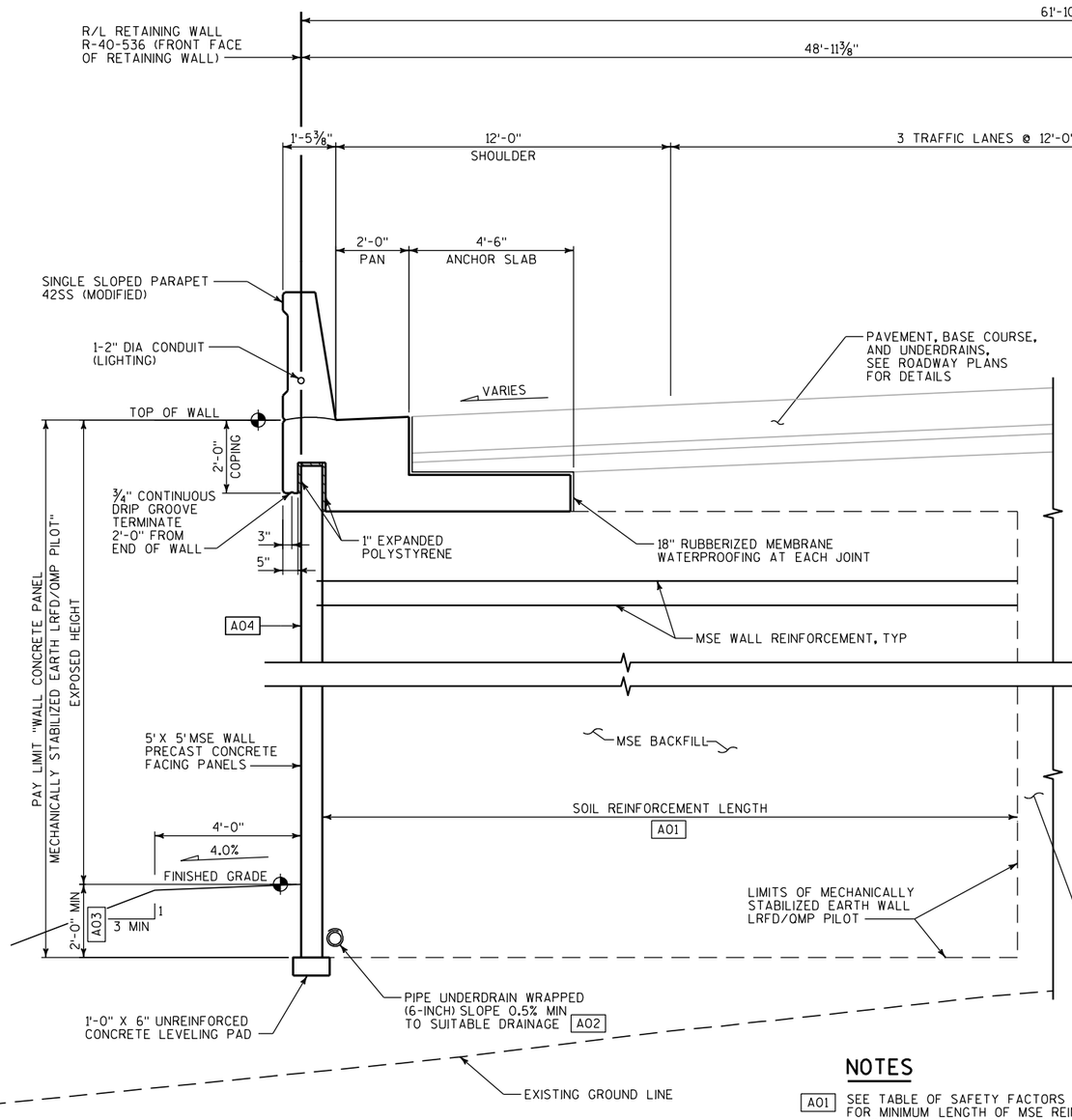
DRAWN BY MR | PLANS CK'D. MHZ

QUANTITIES, NOTES & PROFILE GRADE LINE

SHEET 3 OF 17

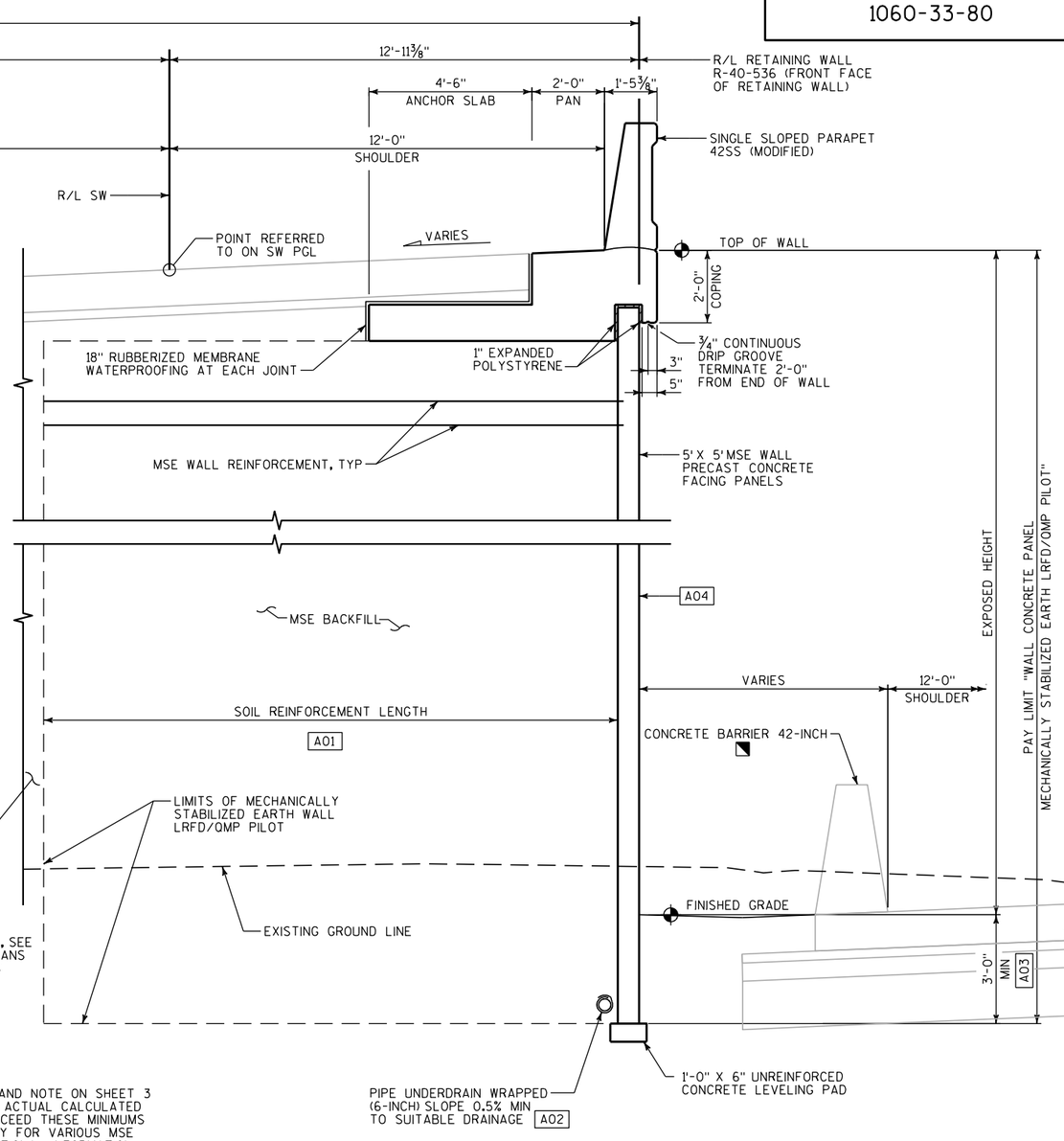
STATE PROJECT NUMBER

1060-33-80



SEGMENT E - TYPICAL SECTION

(LOOKING EAST - STA 16+68.90 TO STA 20+52.40)



SEGMENT A - TYPICAL SECTION

(LOOKING EAST - STA 9+70.00 TO STA 15+47.70)

NOTES

A01 SEE TABLE OF SAFETY FACTORS FOR MSE WALLS AND NOTE ON SHEET 3 FOR MINIMUM LENGTH OF MSE REINFORCING STRIPS. ACTUAL CALCULATED LENGTHS OF REINFORCING STRIPS WILL NEED TO EXCEED THESE MINIMUMS IN ORDER TO SATISFY MINIMUM FACTORS OF SAFETY FOR VARIOUS MSE PARAMETERS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

A02 CONNECT PIPE UNDERDRAIN WRAPPED TO STRUCTURE "Z4289 AT STA. 12+67.12 AND STA. 19+40.40 AND TO STRUCTURE "Z4283 AT STA. 14+70.83 AND 17+43.27 USING PIPE UNDERDRAIN UNPERFORATED. SEE GENERAL PLAN AND ELEVATION. CONNECTION OF PIPE UNDERDRAIN TO INLET IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". SLOPE PIPE UNDERDRAIN FROM BEGINNING OF WALL TO INLET "Z4297. SLOPE PIPE UNDERDRAIN FROM END OF WALL TOWARD TO INLET "Z4287.

A03 TOP OF LEVELING PAD TO BE A MINIMUM OF 3'-0" BELOW FINISHED GRADE FOR SEGMENT A, 2'-0" BELOW EXISTING GRADE FOR SEGMENTS E AND AT EXISTING C-40-27 BOTTOM SLAB ELEVATION FOR SEGMENTS B, C, AND D.

A04 SEE SHEET 15 FOR AESTHETIC WALL TREATMENT DETAILS.

LEGEND

▩ NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS (1 OF 3)

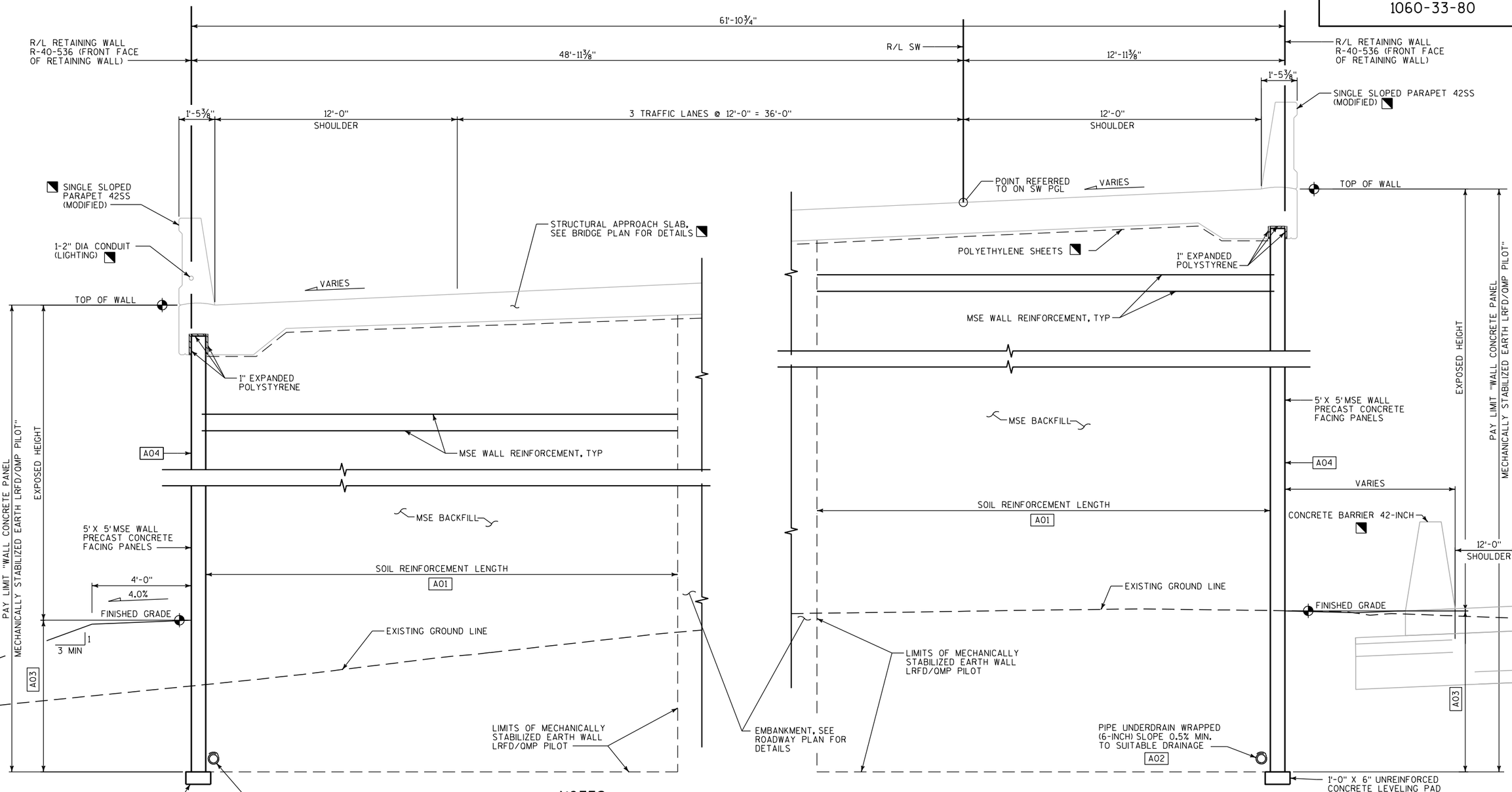
SHEET 4 OF 17

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8

STATE PROJECT NUMBER

1060-33-80



SEGMENT D - TYPICAL SECTION

(LOOKING EAST - STA 16+48.90 TO STA 16+68.90)

SEGMENT B - TYPICAL SECTION

(LOOKING EAST - STA 15+47.70 TO STA. 15+68.50)

NOTES

A01 SEE TABLE OF SAFETY FACTORS FOR MSE WALLS AND NOTE ON SHEET 3 FOR MINIMUM LENGTH OF MSE REINFORCING STRIPS. ACTUAL CALCULATED LENGTHS OF REINFORCING STRIPS WILL NEED TO EXCEED THESE MINIMUMS IN ORDER TO SATISFY MINIMUM FACTORS OF SAFETY FOR VARIOUS MSE PARAMETERS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

A02 CONNECT PIPE UNDERDRAIN WRAPPED TO DRAINAGE PIPES OF BRIDGES B-40-852 AND B-40-891, THEN CONNECT TO INLET "ZE4030 USING PIPE UNDERDRAIN UNPERFORATED. PIPE UNDERDRAIN UNPERFORATED IS INCLUDED IN BRIDGE B-40-891 BID ITEMS.

A03 TOP OF LEVELING PAD TO BE A MINIMUM OF 3'-0" BELOW FINISHED GRADE FOR SEGMENT A, 2'-0" BELOW EXISTING GRADE FOR SEGMENTS E AND AT EXISTING C-40-27 BOTTOM SLAB ELEVATION FOR SEGMENTS B, C, AND D.

A04 SEE SHEET 15 FOR AESTHETIC WALL TREATMENT DETAILS.

LEGEND

◥ NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

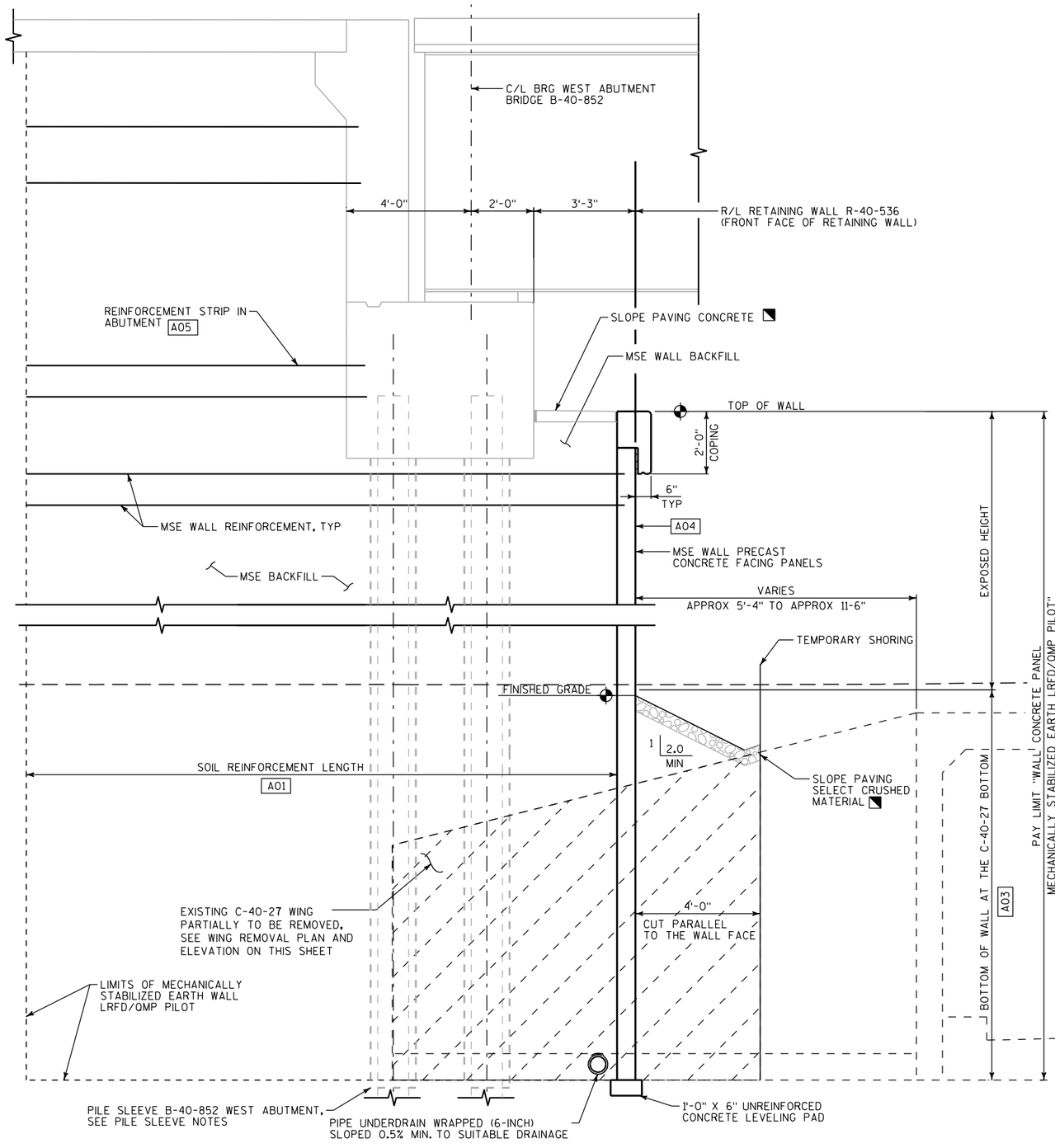
TYPICAL WALL SECTIONS (2 OF 3)

SHEET 5 OF 17

8

8

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION AT B-40-852 WEST ABUTMENT

(LOOKING NORTH - SEGMENT C STA. 15+68.50 TO STA. 16+48.90)

NOTES

A01 SEE TABLE OF SAFETY FACTORS FOR MSE WALLS AND NOTE ON SHEET 3 FOR MINIMUM LENGTH OF MSE REINFORCING STRIPS. ACTUAL CALCULATED LENGTHS OF REINFORCING STRIPS WILL NEED TO EXCEED THESE MINIMUMS IN ORDER TO SATISFY MINIMUM FACTORS OF SAFETY FOR VARIOUS MSE PARAMETERS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

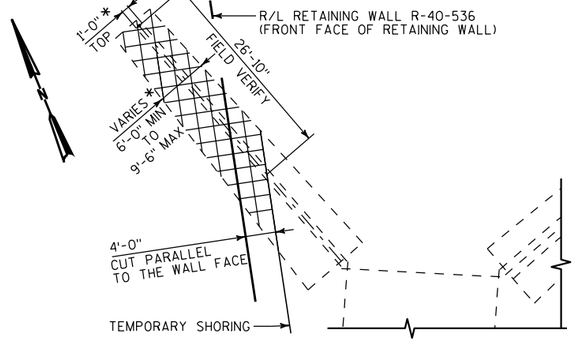
A03 TOP OF LEVELING PAD TO BE A MINIMUM OF 3'-0" BELOW FINISHED GRADE FOR SEGMENT A, 2'-0" BELOW EXISTING GRADE FOR SEGMENTS E AND AT EXISTING C-40-27 BOTTOM SLAB ELEVATION FOR SEGMENTS B, C, AND D. PAY LIMIT FOR "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" AT THE TOP OF LEVELING PAD ELEVATION.

A04 SEE SHEET 15 FOR AESTHETIC WALL TREATMENT DETAILS.

A05 NON-FACTORED SUPERSTRUCTURE LATERAL LOAD TRANSFERRED TO ABUTMENT TO BE TAKEN AS 3.0 KLF OF ABUTMENT. THIS FORCE MUST BE ADDED TO EARTH PRESSURE LOADS FOR THE DESIGN OF THE REINFORCING STRIPS ATTACHED TO THE ABUTMENT. COORDINATE INSTALLATION WITH BRIDGE CONTRACTOR.

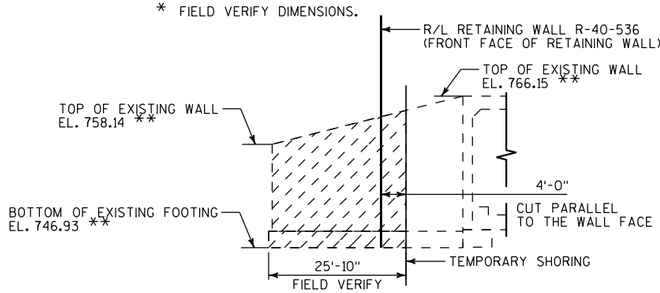
PILE SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-852 PLANS.
2. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
3. SLEEVES SHALL BE PLACED BEFORE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.



WING WALL REMOVAL PLAN

* FIELD VERIFY DIMENSIONS.



WING WALL REMOVAL ELEVATION

** FIELD VERIFY EXISTING ELEVATIONS.

LEGEND

◥ NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS (3 OF 3)

SHEET 6 OF 17

8

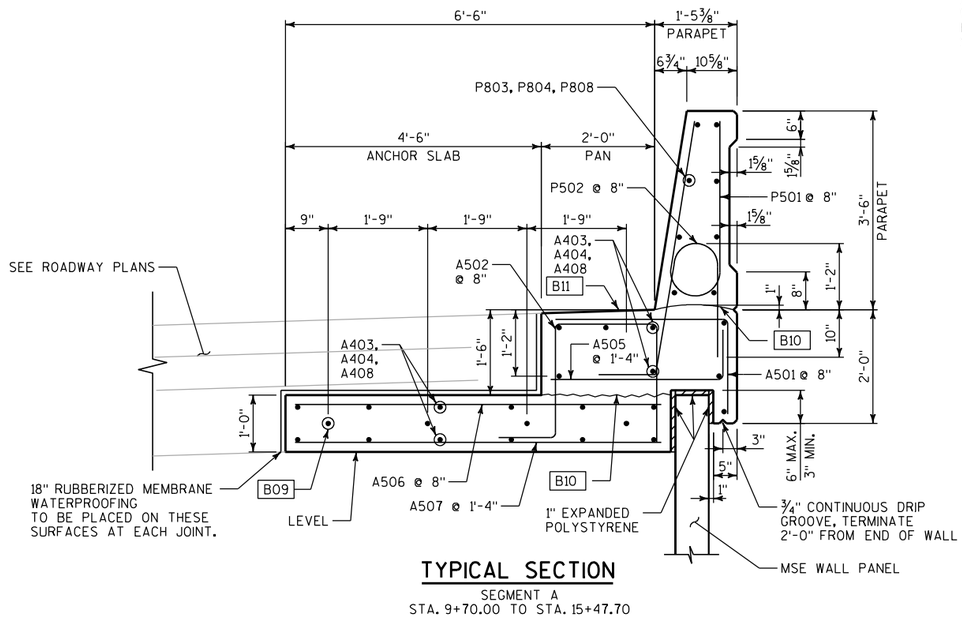
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STATE PROJECT NUMBER
1060-33-80

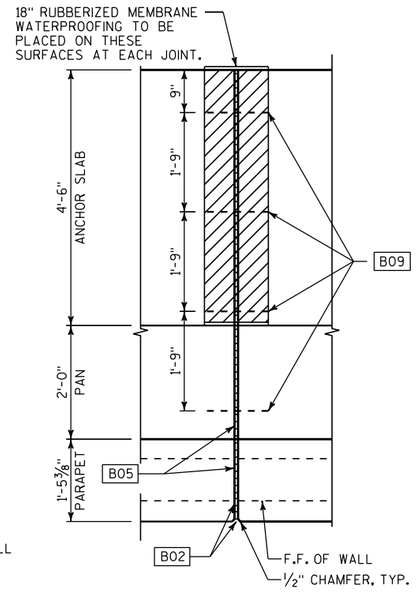
GEOMETRY TABLE

WALL STATION	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
9+70.00	760.89	760.89	757.89
9+75.00	761.11	759.30	756.30
10+00.00	762.21	757.43	754.43
10+25.00	763.34	757.91	754.91
10+50.00	764.53	758.38	755.38
10+75.00	765.78	758.86	755.86
11+00.00	767.09	759.33	756.33
11+20.00	768.20	759.71	756.71
11+25.00	768.48	759.80	756.80
11+50.00	769.97	760.27	757.27
11+75.00	771.46	760.75	757.75
12+00.00	772.96	761.22	758.22
12+25.00	774.50	761.69	758.69
12+50.00	775.99	762.17	759.17
12+75.00	777.48	762.64	759.64
13+00.00	778.96	763.10	760.10
13+25.00	780.45	763.54	760.54
13+50.00	781.93	763.97	760.97
13+75.00	783.37	764.39	761.39
14+00.00	784.76	764.79	761.79
14+25.00	786.18	765.18	762.18
14+50.00	787.66	765.64	762.64
14+75.00	789.09	766.01	763.01
15+00.00	790.48	766.34	763.34
15+25.00	791.83	766.66	763.66
15+50.00	793.13	766.97	749.80
15+68.50	778.37	767.17	749.80
15+75.00	778.37	767.26	749.80
16+00.00	778.37	765.57	749.80
16+25.00	778.37	761.21	749.80
16+50.00	791.18	758.27	749.80
16+75.00	790.05	767.24	765.24
17+00.00	788.87	767.60	765.60
17+25.00	787.65	768.18	766.18
17+50.00	786.37	769.19	767.19
17+75.00	785.05	769.49	767.49
18+00.00	783.68	769.51	767.51
18+25.00	782.27	769.40	767.40
18+50.00	780.80	769.24	767.24
18+75.00	779.29	768.97	766.97
19+00.00	777.75	768.61	766.61
19+25.00	776.21	768.21	766.21
19+50.00	774.67	767.81	765.81
19+75.00	773.13	767.39	765.39
20+00.00	771.72	766.95	764.95
20+25.00	770.40	766.51	764.51
20+50.00	769.06	768.55	766.55
20+52.40	768.93	768.93	766.93

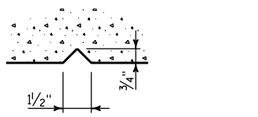


TYPICAL SECTION

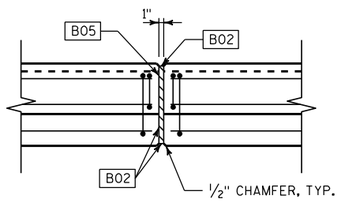
SEGMENT A
STA. 9+70.00 TO STA. 15+47.70



ANCHOR SLAB EXPANSION JOINT

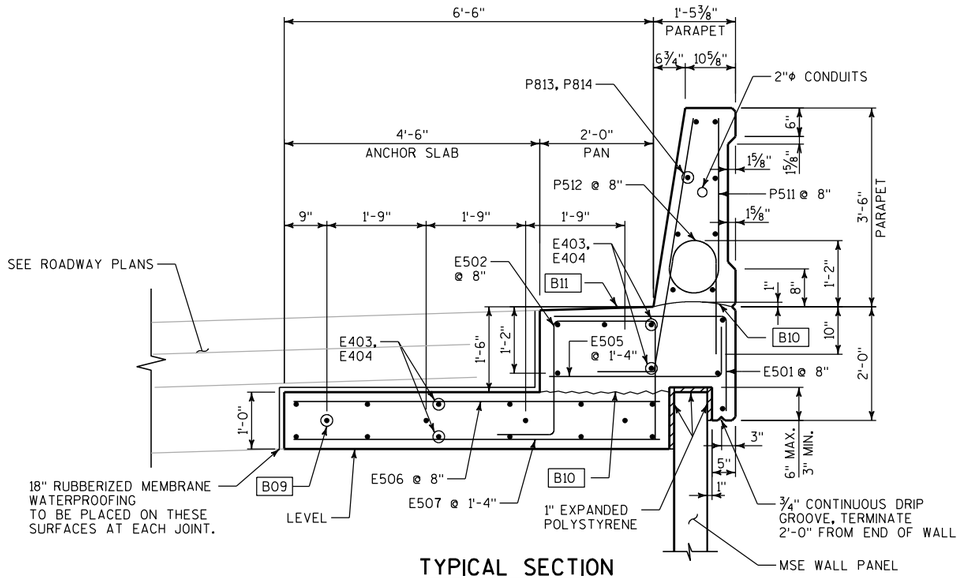


¾" DRIP GROOVE



PARAPET EXPANSION JOINT

(DO NOT RUN BARS THRU JOINT)



TYPICAL SECTION

SEGMENT E
STA. 16+68.90 TO STA. 20+52.40

NOTES

- B02 NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)
- B05 1" CORK FILLER
- B09 ¾" DIAMETER x 1'-6" SMOOTH EPOXY COATED DOWELS PLACED AT MID-DEPTH IN THE SLAB. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT SLABS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".
- B10 CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- B11 MATCH ROADWAY SLOPE

LEGEND

F.F. FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

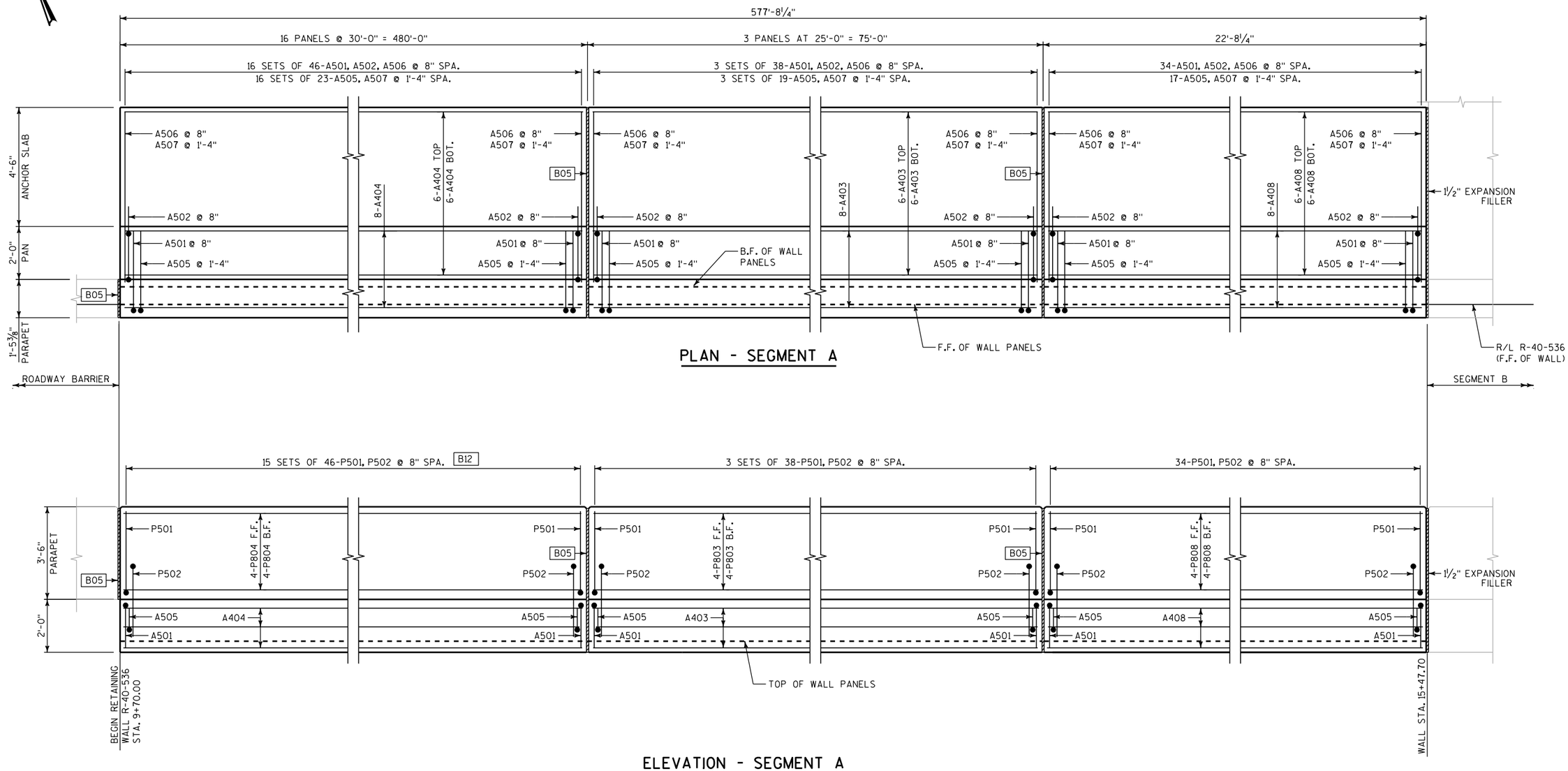
PARAPET & ANCHOR SLAB DETAILS

SHEET 7 OF 17

8

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STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A

ELEVATION - SEGMENT A

(LOOKING AT FRONT FACE OF WALL)

NOTES

B05 1" CORK FILLER

B12 FOR TYPICAL REINFORCEMENT SPACING AND ADDITIONAL REINFORCEMENT AT INLET LOCATION SEE SHEET 11

LEGEND

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

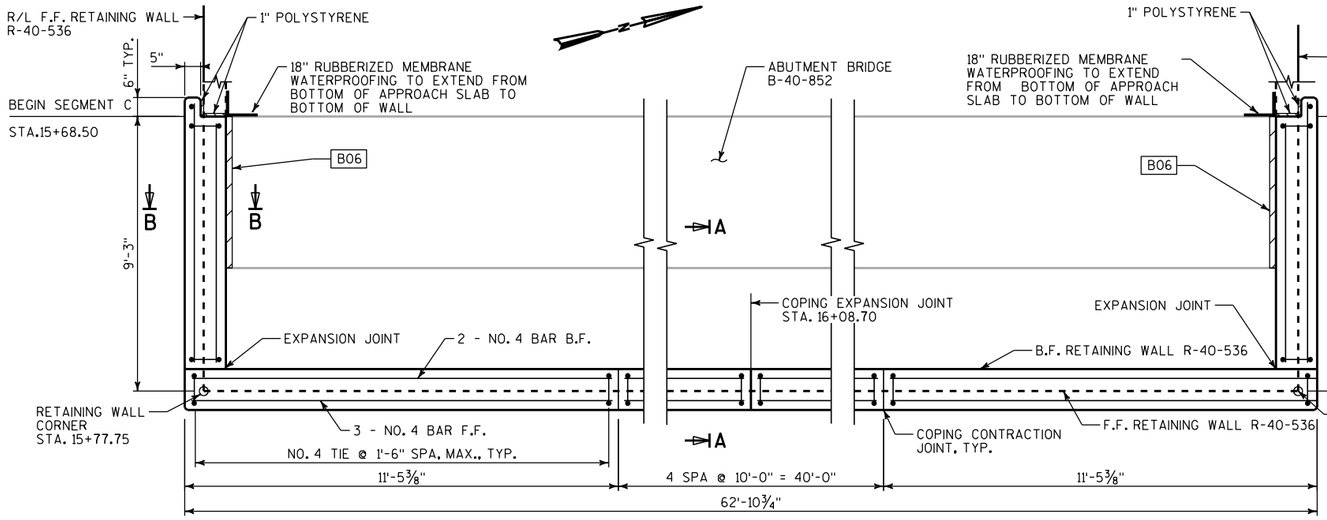
SEGMENT A PLAN & ELEVATION

SHEET 8 OF 17

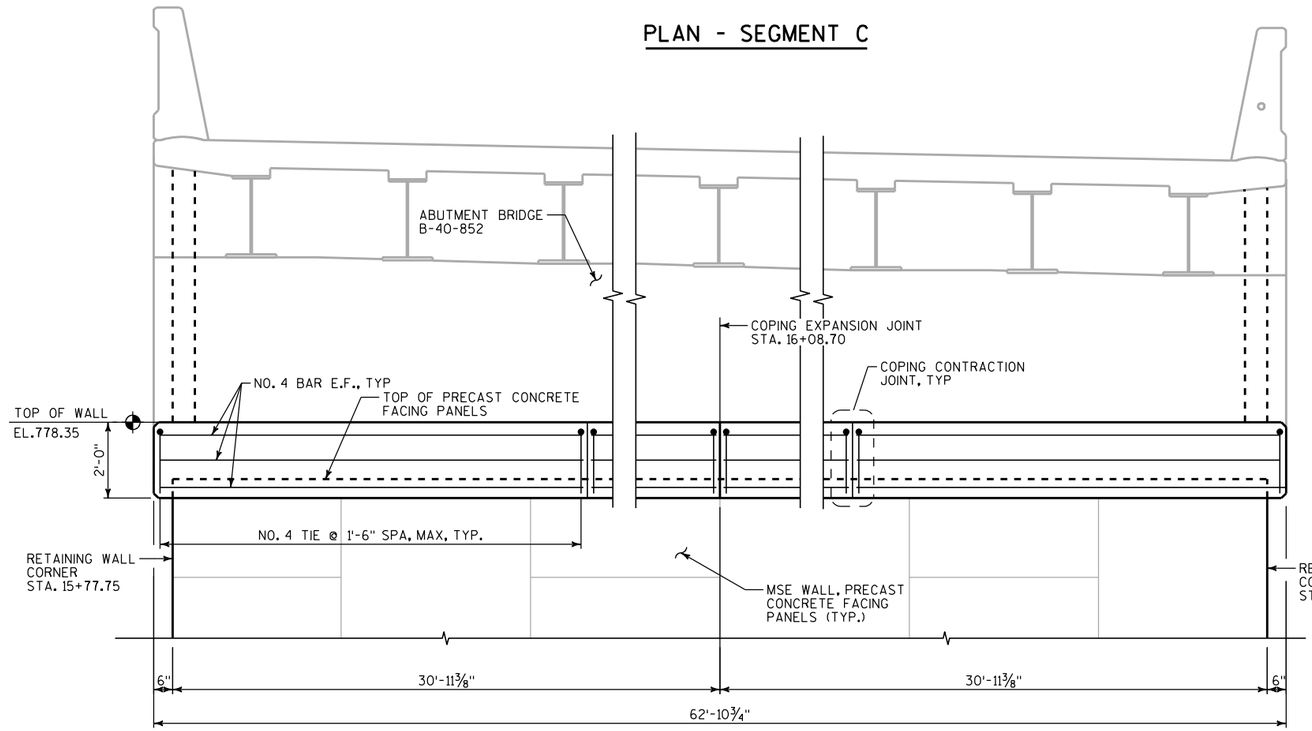
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8

STATE PROJECT NUMBER
1060-33-80

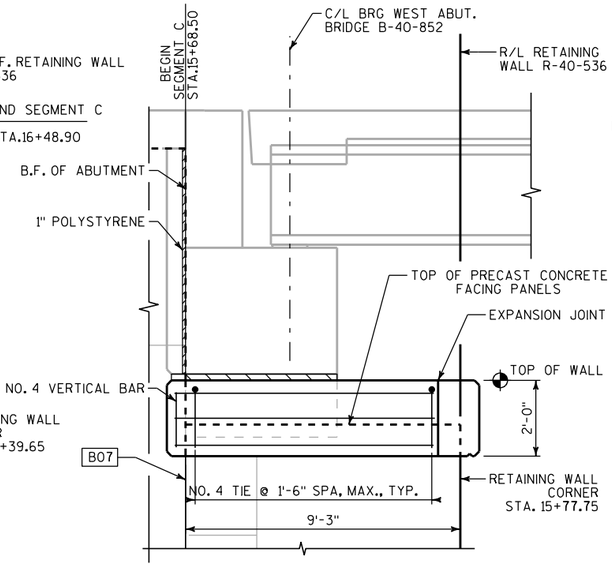


PLAN - SEGMENT C



OUTSIDE ELEVATION - SEGMENT C

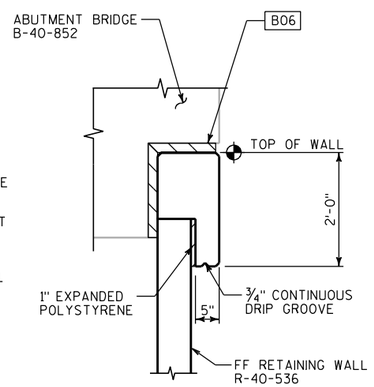
(LOOKING WEST)



OUTSIDE ELEVATION - SEGMENT C

(LOOKING NORTH) *

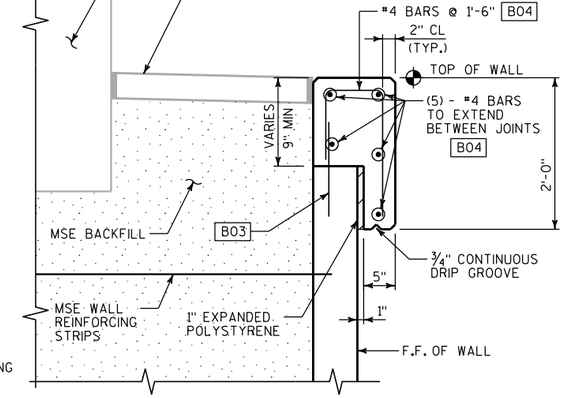
* ELEVATION LOOKING SOUTH IS SIMILAR TO LOOKING NORTH ELEVATION, BUT MIRROR IMAGE



SECTION B-B

NOTES

- B02 NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)
- B03 #4 DOWELS X 1'-3" LONG AT 2'-0" MAX. SPACING, INCLUDED IN BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD".
- B04 COPING EPOXY COATED REINFORCEMENT IS INCLUDED IN BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD"
- B05 1" CORK FILLER
- B06 ½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER
- B07 ¾" PREFORMED JOINT FILLER
- B08 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS



SECTION A-A

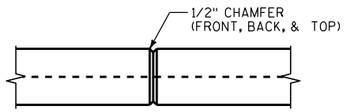
LEGEND

F.F. FRONT FACE

B.F. BACK FACE

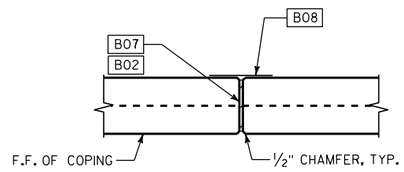
E.F. EACH FACE

◥ NOT A RETAINING WALL ITEM



COPING CONTRACTION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT



COPING EXPANSION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

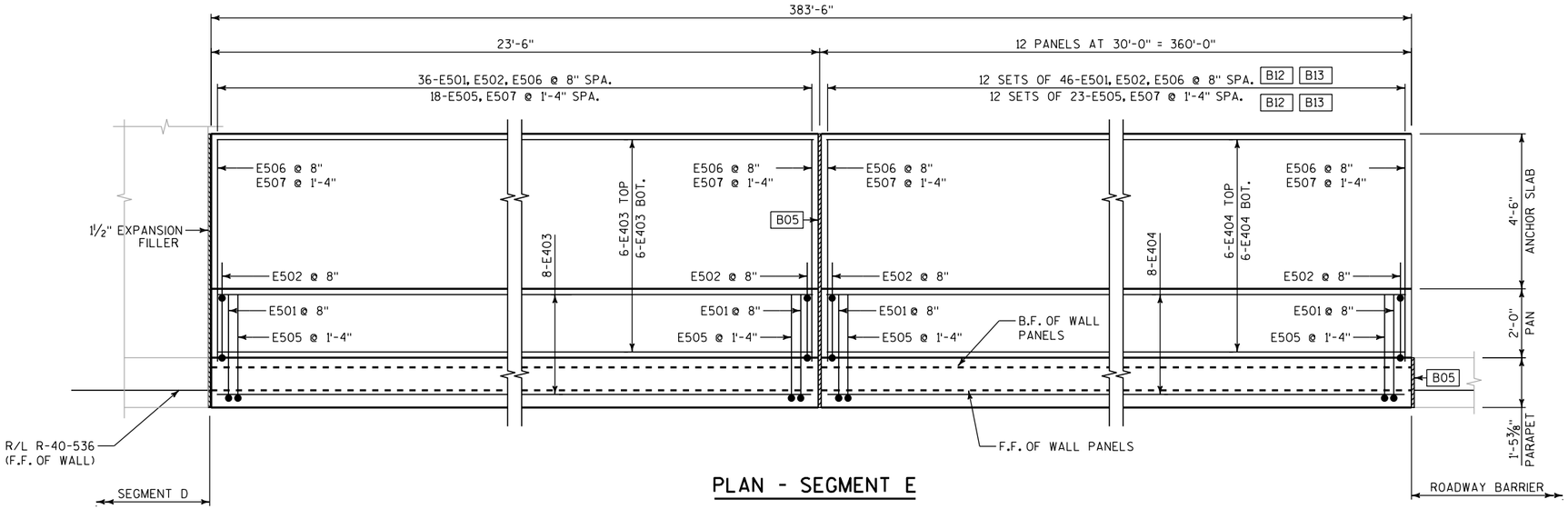
DRAWN BY MR | PLANS CK'D. MHZ

SEGMENT C PLAN & ELEVATION

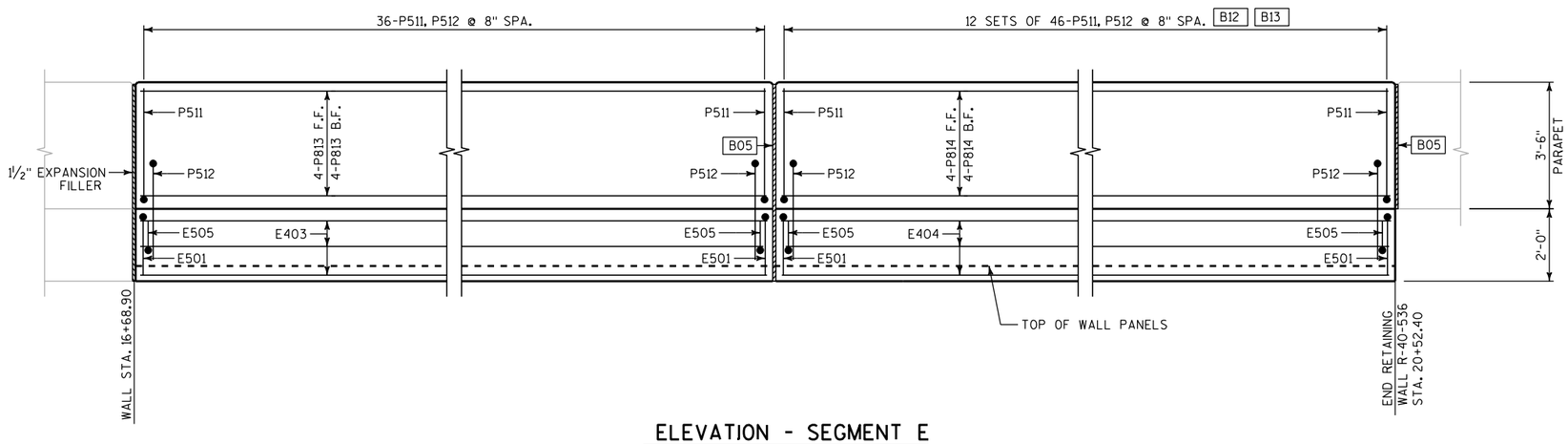
SHEET 9 OF 17

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PLOT DATE : 30-APR-2014 14:07
PLOT BY : MSCM1M
PLOT NAME : R40536_080109_de
PLOT SCALE : 6:1

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT E



ELEVATION - SEGMENT E

(LOOKING AT FRONT FACE OF WALL)

NOTES

B05 1" CORK FILLER

B12 FOR TYPICAL REINFORCEMENT SPACING AND ADDITIONAL REINFORCEMENT AT INLET LOCATION SEE SHEET 11

B13 FOR TYPICAL REINFORCEMENT SPACING AND ADDITIONAL REINFORCEMENT AT LIGHT SUPPORT LOCATION SEE SHEET 13

LEGEND

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

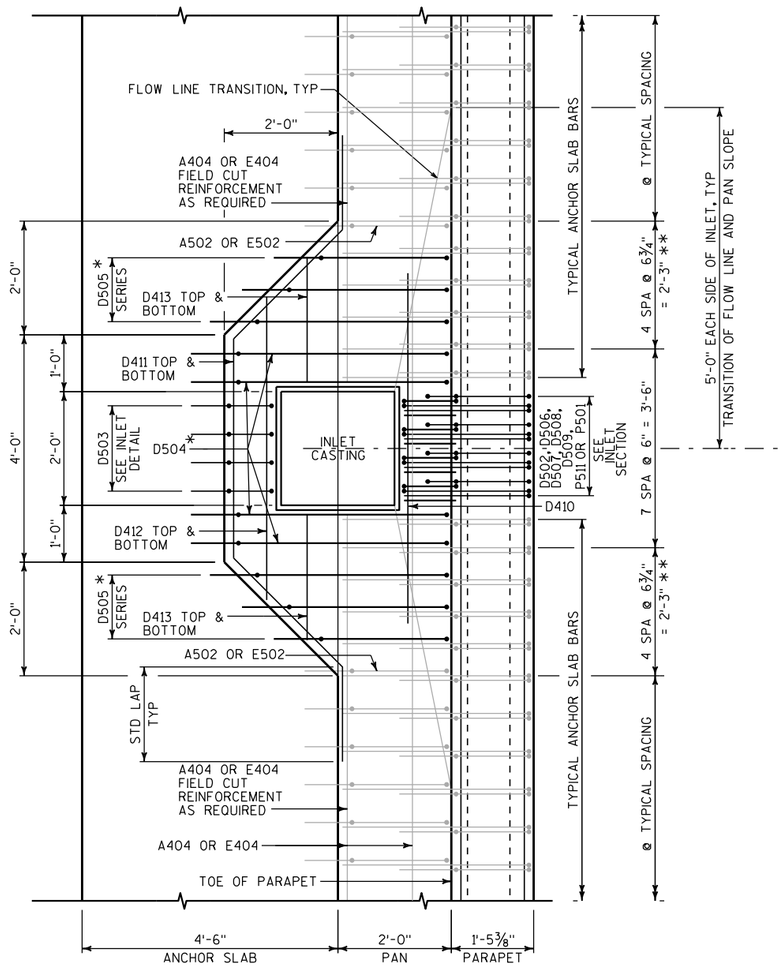
SEGMENT E PLAN & ELEVATION

SHEET 10 OF 17

8

8

STATE PROJECT NUMBER
1060-33-80

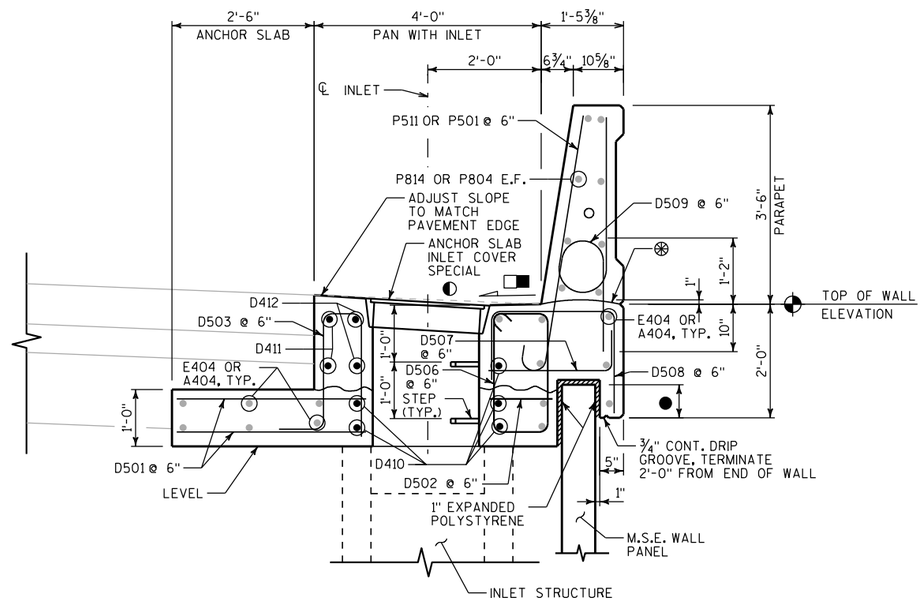


TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED.
SEE SHEET 14 FOR TOTAL BARS REQUIRED.

* D504 AND D505 TO REPLACE E502 OR A502 AT THE INLET LOCATION

** 4 SPA @ 6¾" = 2'-3", E501, E502, E506, P511, P512 (OR A501, A502, A506, P501, P502)
2 SPA @ 1'-1½" = 2'-3", E507, E505 (OR A507, A505)



SECTION AT INLET

SEE SHEET 14 FOR TOTAL BARS REQUIRED.

DRAINAGE INLET LOCATIONS

WALL STATION	ROADWAY STATION	SEGMENT
10+14.97	565SW+64.09	A
17+43.48	570SW+17.32	E
19+40.40	568SW+15.19	E

(STATIONS ARE GIVEN AT ℄ OF INLET)

STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

LEGEND

- 2.00%
- 3" MIN, 6" MAX
- CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- CONTINUE ROADWAY SLOPE TO CALCULATE TOP OF WALL ELEVATION

NOTES

DO NOT PLACE THE INLET WITHIN 6'-0" OF THE LIGHT POLE BASE.

LOCATE INLETS 8'-0" AWAY FROM EXPANSION JOINTS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

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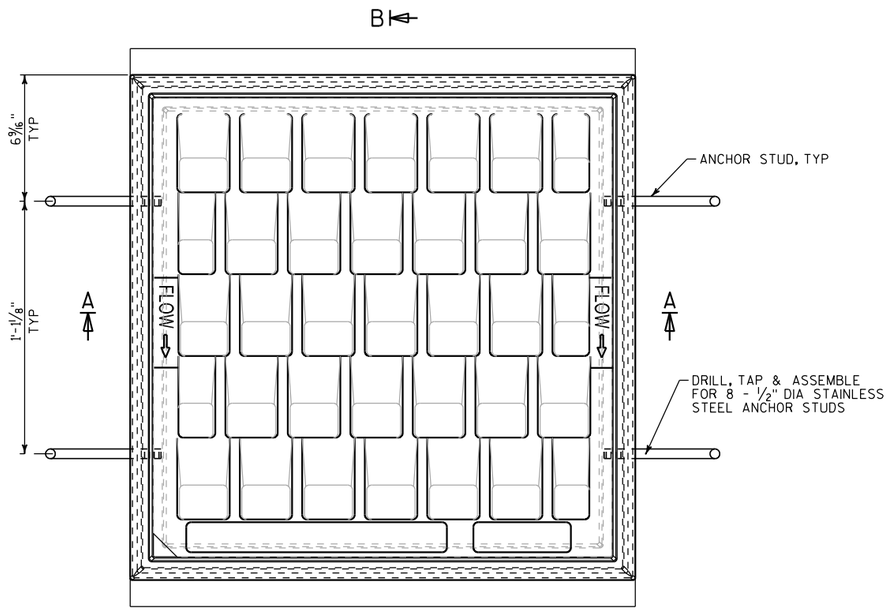
INLET DETAILS

SHEET 11 OF 17

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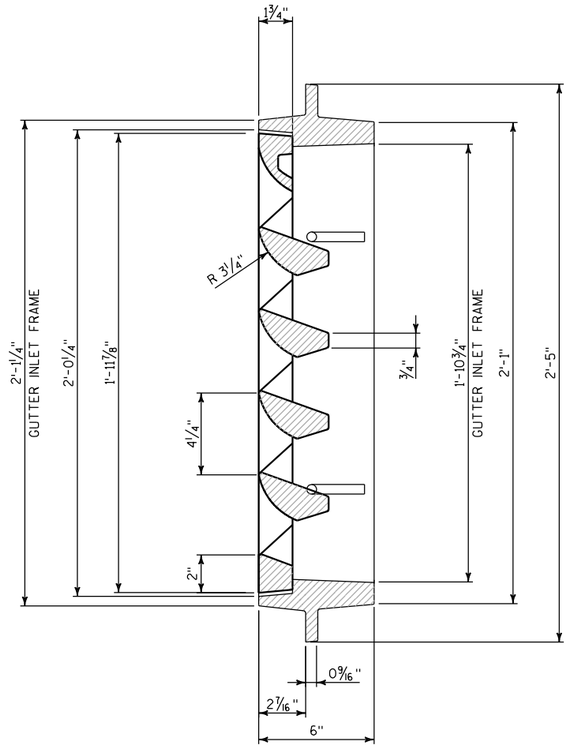
STATE PROJECT NUMBER

1060-33-80

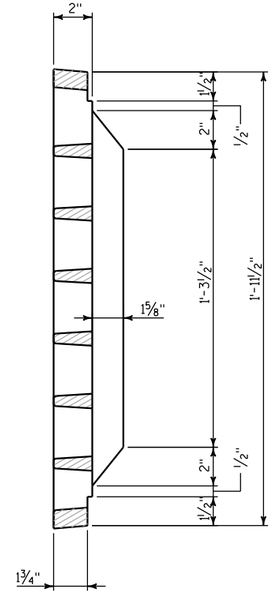


GUTTER INLET FRAME & GRATE TOP

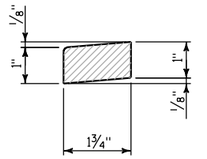
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



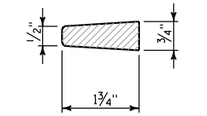
SECTION B-B



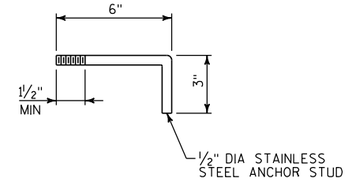
INLET GRATE



SIDE RIB DETAIL

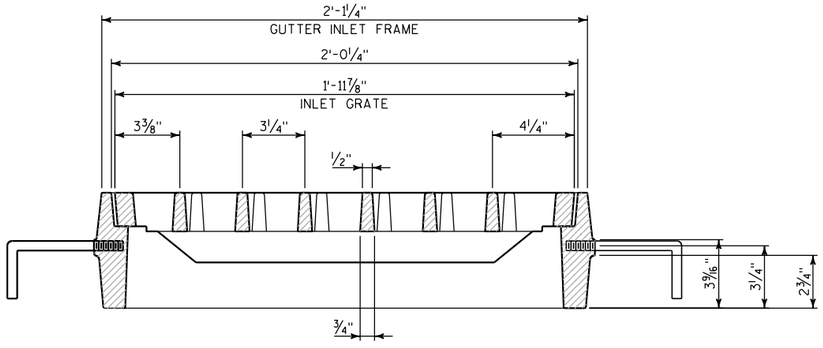


MIDDLE RIB DETAIL

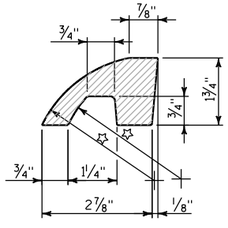


ANCHOR STUD DETAIL

(8 - ½" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

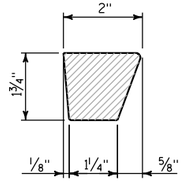


SECTION A-A

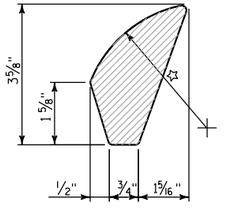


FRONT VANE DETAIL

☆ 3¼" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3¼" RADIUS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

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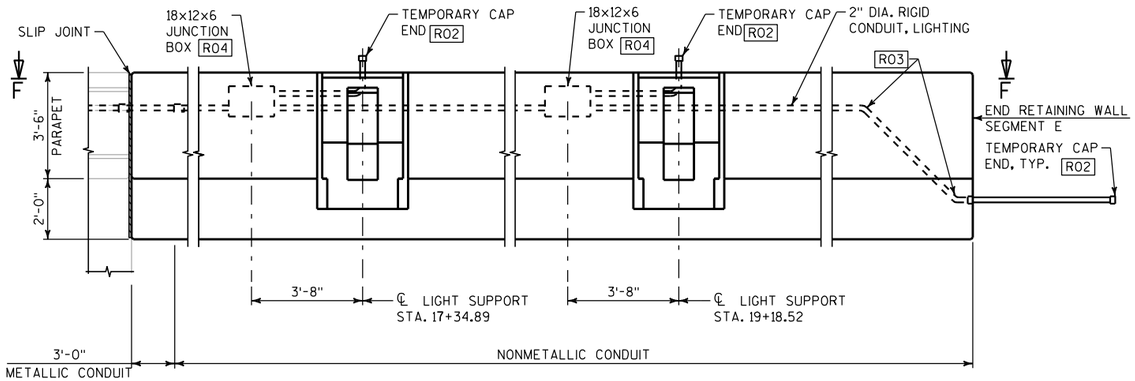
ANCHOR SLAB
INLET COVER
SPECIAL

SHEET 12 OF 17

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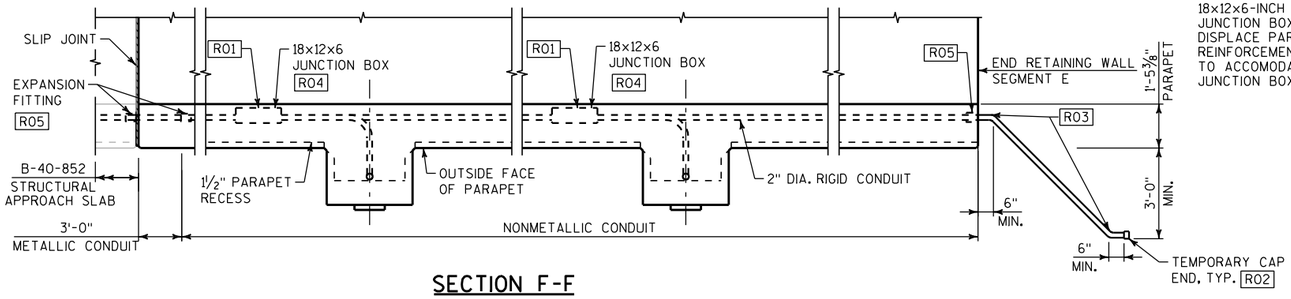
8

STATE PROJECT NUMBER
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PARAPET ELEVATION

OUTSIDE FACE OF PARAPET



SECTION F-F

NOTES:

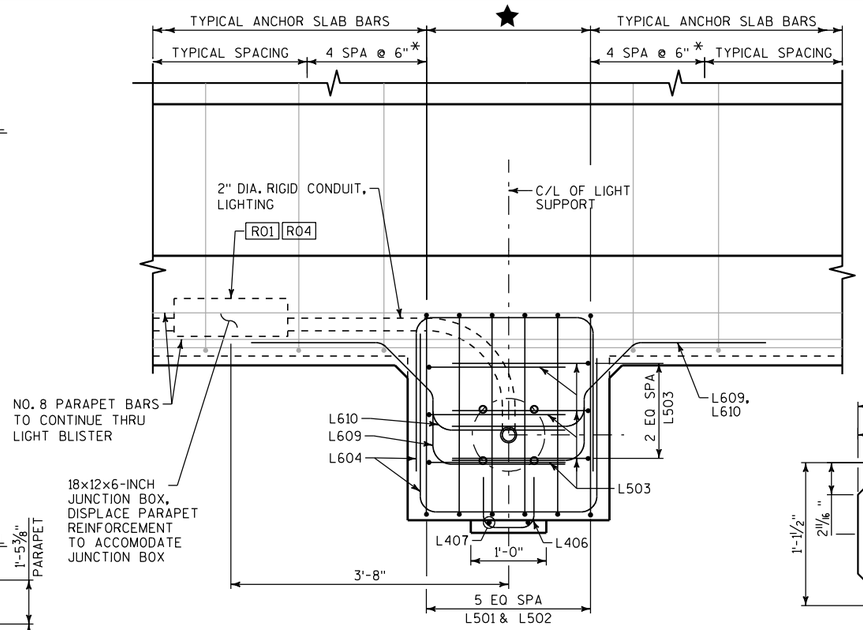
R01 CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

R02 TEMPORARY CAP ENDS TO BE INCIDENTAL TO CORRESPONDING CONDUIT BID ITEMS.

R03 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRICAL CODE.

R04 JUNCTION BOX IS REQUIRED AT LIGHT SUPPORT LOCATION.

R05 O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT). EXPANSION FITTINGS AT EACH EXPANSION JOINT LOCATION. EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"



LIGHT SUPPORT PLAN

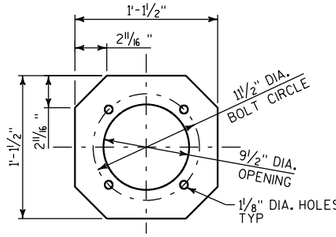
★ ANCHOR SLAB, COPING, AND PARAPET REINFORCEMENT TO MATCH LIGHT SUPPORT SPACING. 4 OF EACH - E501, E502, E506, P511, P512, E507, E505 (EXTRA TO TYPICAL BAR QUANTITIES PER PANEL).

* 4 SPA @ 6" = 2'-0", E501, E502, E506, P511, P512
2 SPA @ 1'-0" = 2'-0", E507, E505

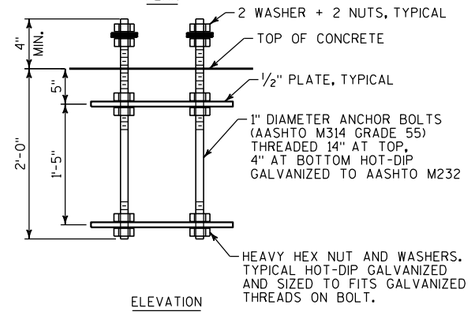
LIGHTING LOCATIONS

WALL STATION	ROADWAY STATION	SEGMENT
17+34.89	570SW+26.13	E
19+18.52	568SW+37.64	E

(STATIONS ARE GIVEN AT ℄ OF LIGHT POLE)

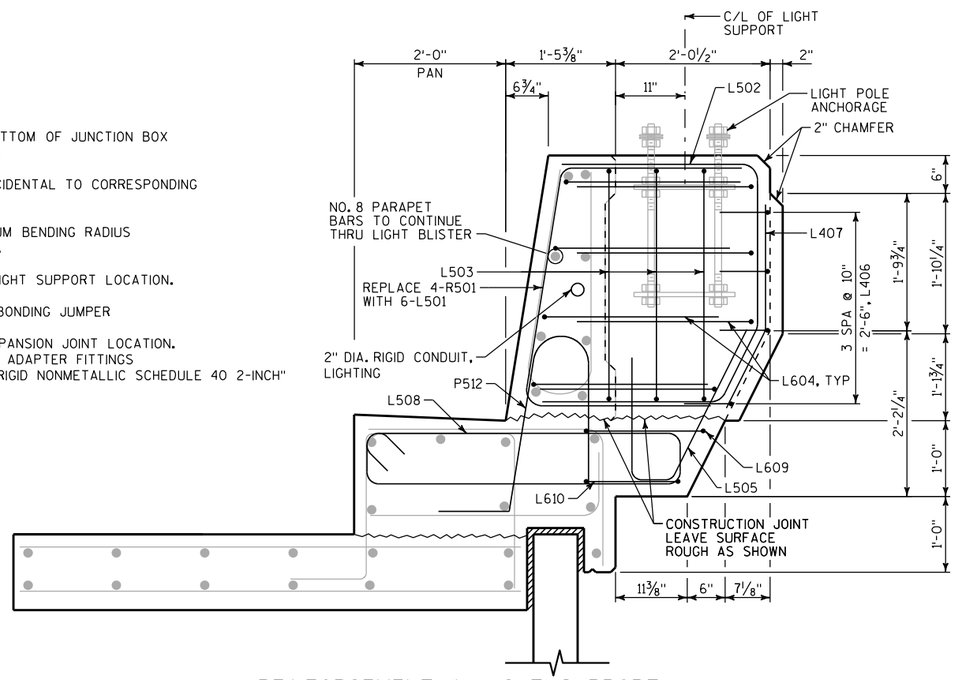


PLAN



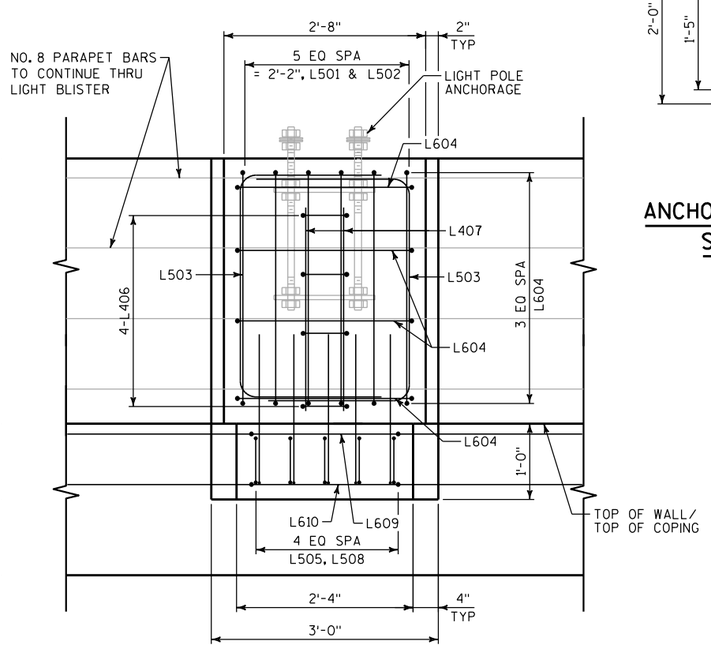
ELEVATION

ANCHOR ASSEMBLY LIGHT POLE STRUCTURES SPECIAL



REINFORCEMENT IN LIGHT SUPPORT

CROSS SECTION AT C/L LIGHT SUPPORT



REINFORCEMENT IN LIGHT SUPPORT

OUTSIDE ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

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SEGMENT E CONDUIT & LIGHT SUPPORT DETAILS

SHEET 13 OF 17

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STATE PROJECT NUMBER
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BILL OF BARS ✳

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	884	4'-8"	X	-	ANCHOR SLAB-TRANS. SEG. A
A502	X	874	6'-5"	X	-	ANCHOR SLAB-TRANS. SEG. A
A403	X	60	24'-7"	-	-	ANCHOR SLAB-LONG. SEG. A
A404	X	320	29'-7"	-	-	ANCHOR SLAB-LONG. SEG. A
A505	X	442	4'-0"	X	-	ANCHOR SLAB-TRANS. SEG. A
A506	X	884	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. A
A507	X	442	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. A
A408	X	20	22'-3"	-	-	ANCHOR SLAB-LONG. SEG. A
P501	X	888	6'-8"	X	-	PARAPET- VERT. SEG. A
P502	X	884	5'-10"	X	-	PARAPET- VERT. SEG. A
P803	X	24	24'-7"	-	-	PARAPET- LONG. SEG. A
P804	X	128	29'-7"	-	-	PARAPET- LONG. SEG. A
P808	X	8	22'-3"	-	-	PARAPET- LONG. SEG. A
E501	X	596	4'-8"	X	-	ANCHOR SLAB-TRANS. SEG. E
E502	X	576	6'-5"	X	-	ANCHOR SLAB-TRANS. SEG. E
E403	X	20	23'-1"	-	-	ANCHOR SLAB-LONG. SEG. E
E404	X	240	29'-7"	-	-	ANCHOR SLAB-LONG. SEG. E
E505	X	302	4'-0"	X	-	ANCHOR SLAB-TRANS. SEG. E
E506	X	596	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. E
E507	X	302	6'-4"	-	-	ANCHOR SLAB-HORIZ. SEG. E
P511	X	604	6'-6"	X	-	PARAPET- VERT. SEG. E
P512	X	596	5'-10"	X	-	PARAPET- VERT. SEG. E.
P813	X	8	23'-1"	-	-	PARAPET- LONG. SEG. E
P814	X	96	29'-7"	-	-	PARAPET- LONG. SEG. E

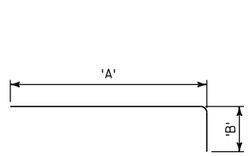
LIGHT SUPPORT BILL OF BARS ✳

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
L501	X	12	8'-1"	X	-	LIGHT SUPPORT - TIE SEG.E
L502	X	12	8'-2"	X	-	LIGHT SUPPORT -VERTICAL TIE SEG.E
L503	X	12	6'-6"	X	-	LIGHT SUPPORT - HORIZONTAL TIE SEG.E
L604	X	16	6'-8"	X	-	LIGHT SUPPORT - HORIZONTAL TIE SEG.E
L505	X	10	4'-4"	X	-	LIGHT SUPPORT - VERTICAL TIE SEG.E
L406	X	8	1'-10"	X	-	LIGHT SUPPORT - HORIZONTAL TIE SEG.E
L407	X	4	2'-10"	X	-	LIGHT SUPPORT - VERTICAL SEG.E
L508	X	10	10'-3"	X	-	LIGHT SUPPORT - STIRRUP SEG.E
L609	X	4	5'-1"	X	-	LIGHT SUPPORT - HORIZONTAL SEG.E
L610	X	4	4'-9"	X	-	LIGHT SUPPORT - HORIZONTAL SEG.E

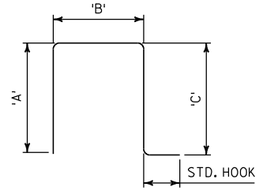
INLET BILL OF BARS ✳

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D501	X	24	3'-2"	-	-	ANCHOR SLAB - HORIZ. TOP & BOT.
D502	X	12	1'-0"	-	-	ANCHOR SLAB - HORIZONTAL TOP
D503	X	12	5'-4"	X	-	COPING - VERTICAL TIE
D504	X	12	8'-7"	X	-	COPING - VERTICAL TIE
D505	X	18	7'-9"	X	X	COPING - VERTICAL TIE
D506	X	12	6'-11"	X	-	COPING - VERTICAL STIRRUP
D507	X	12	2'-11"	X	-	COPING - VERTICAL TIE
D508	X	12	4'-8"	X	-	COPING - VERTICAL TIE
D509	X	12	5'-5"	X	-	COPING - VERTICAL TIE
D410	X	15	6'-6"	-	-	ANCHOR SLAB & COPING - LONG.
D411	X	6	14'-0"	X	-	COPING - LONGITUDINAL
D412	X	6	5'-1"	-	-	COPING - LONGITUDINAL
D413	X	12	2'-0"	-	-	COPING - LONGITUDINAL

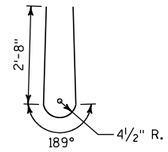
✳ NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



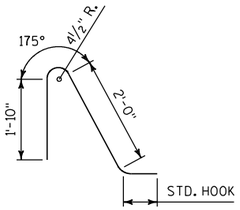
BAR MARK	DIM 'A'	DIM 'B'
A501	3'-1"	1'-8"
A505	3'-1"	1'-0"
E501	3'-1"	1'-8"
E505	3'-1"	1'-0"



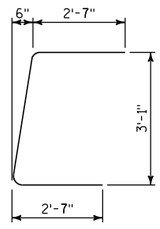
BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
A502	2'-0"	1'-10"	2'-1"
E502	2'-0"	1'-10"	2'-1"



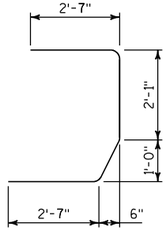
P501
P511



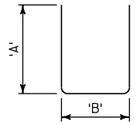
P502
P512



L501

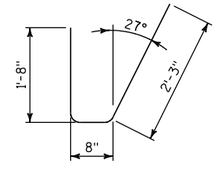


L502

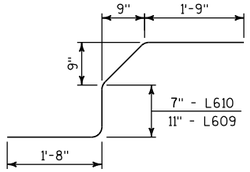


L503, L604, L406

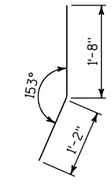
BAR MARK	DIM 'A'	DIM 'B'
L503	1'-11"	2'-11"
L604	2'-4"	2'-4"
L406	8"	8"



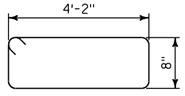
L505



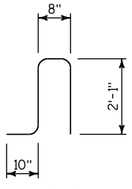
L609
L610



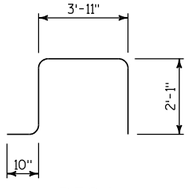
L407



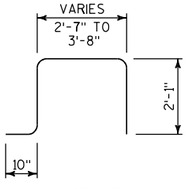
L508



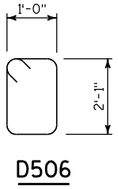
D503



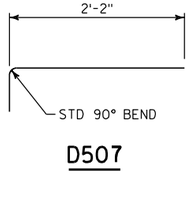
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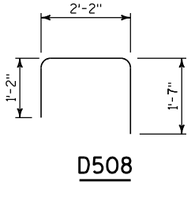
D505



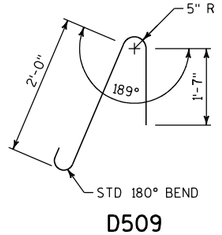
D506



D507



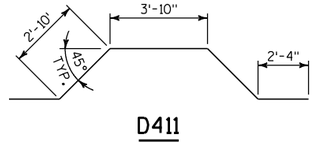
D508



D509

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
D505	2 SERIES OF 3	7'-3" TO 8'-4"



D411

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

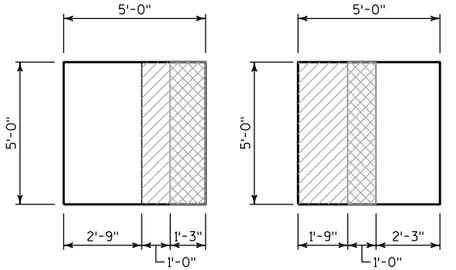
DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS

SHEET 14 OF 17

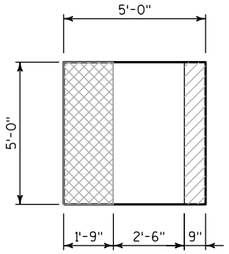
STATE PROJECT NUMBER

1060-33-80

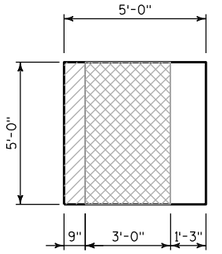


WALL PANEL "A"

WALL PANEL "B"

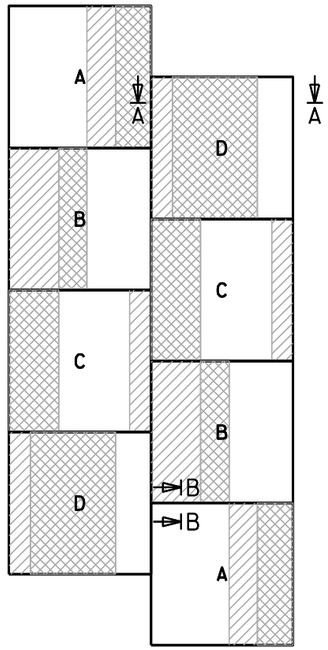


WALL PANEL "C"

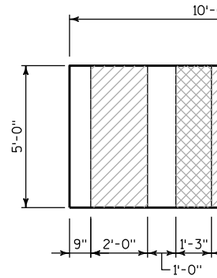


WALL PANEL "D"

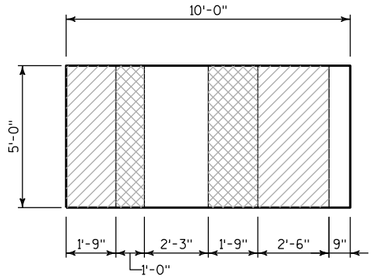
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



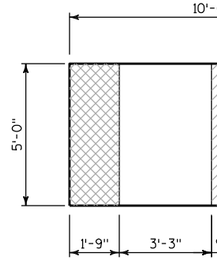
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



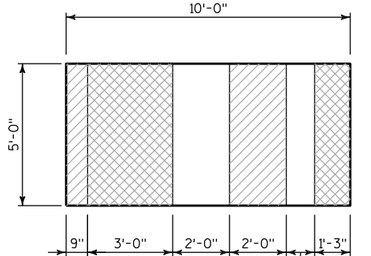
WALL PANEL "A"



WALL PANEL "B"

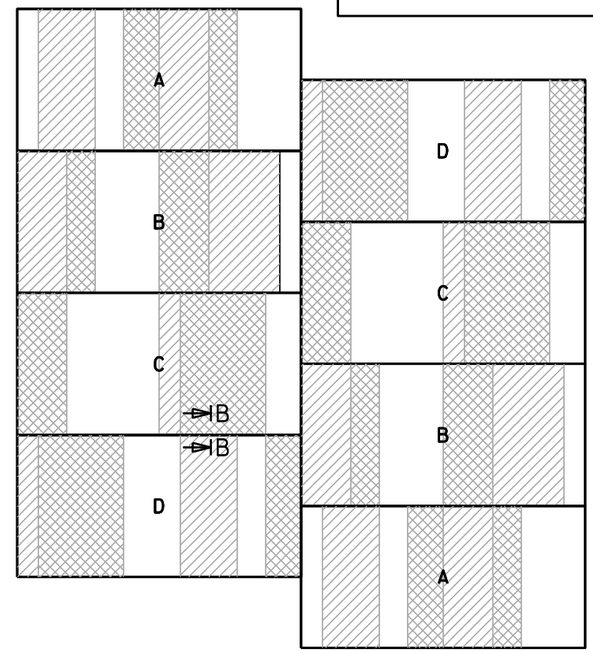


WALL PANEL "C"



WALL PANEL "D"

5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

CONCRETE STAINING SCHEDULE

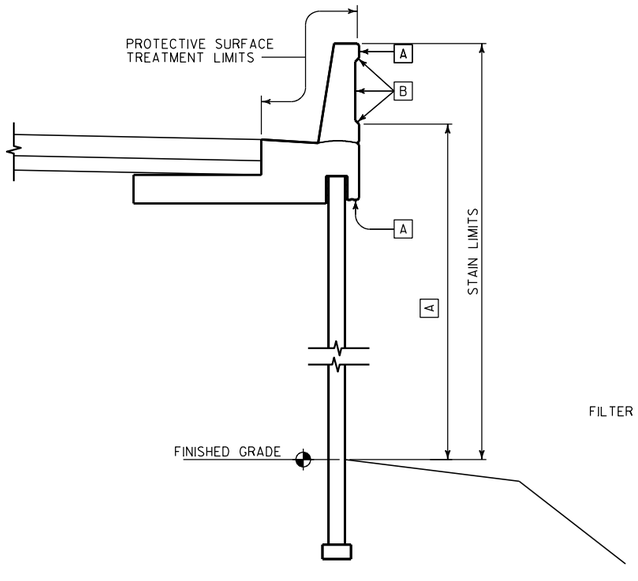
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO 1'-0" BELOW FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

STAIN COLORS

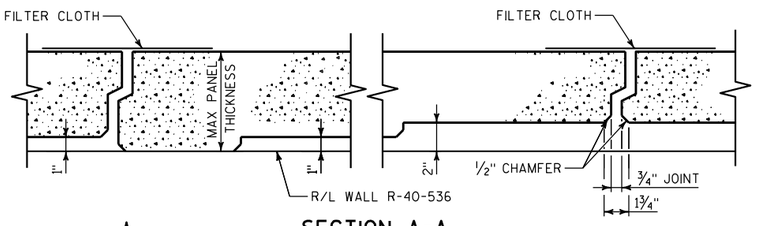
THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

BASE COLOR - 33564

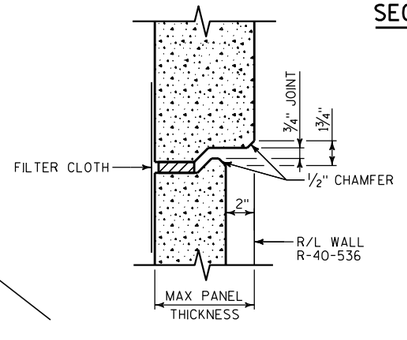
ACCENT COLOR #1 - 33448



MSE WALL STAINING DIAGRAM



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

AESTHETIC WALL TREATMENT DETAILS

SHEET 15 OF 17

8

8

NOTE:

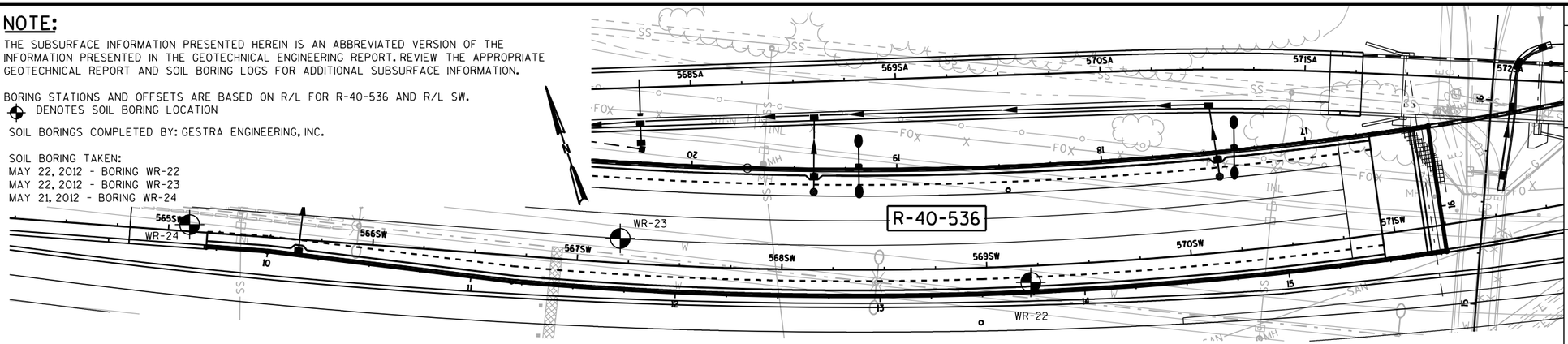
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR R-40-536 AND R/L SW.

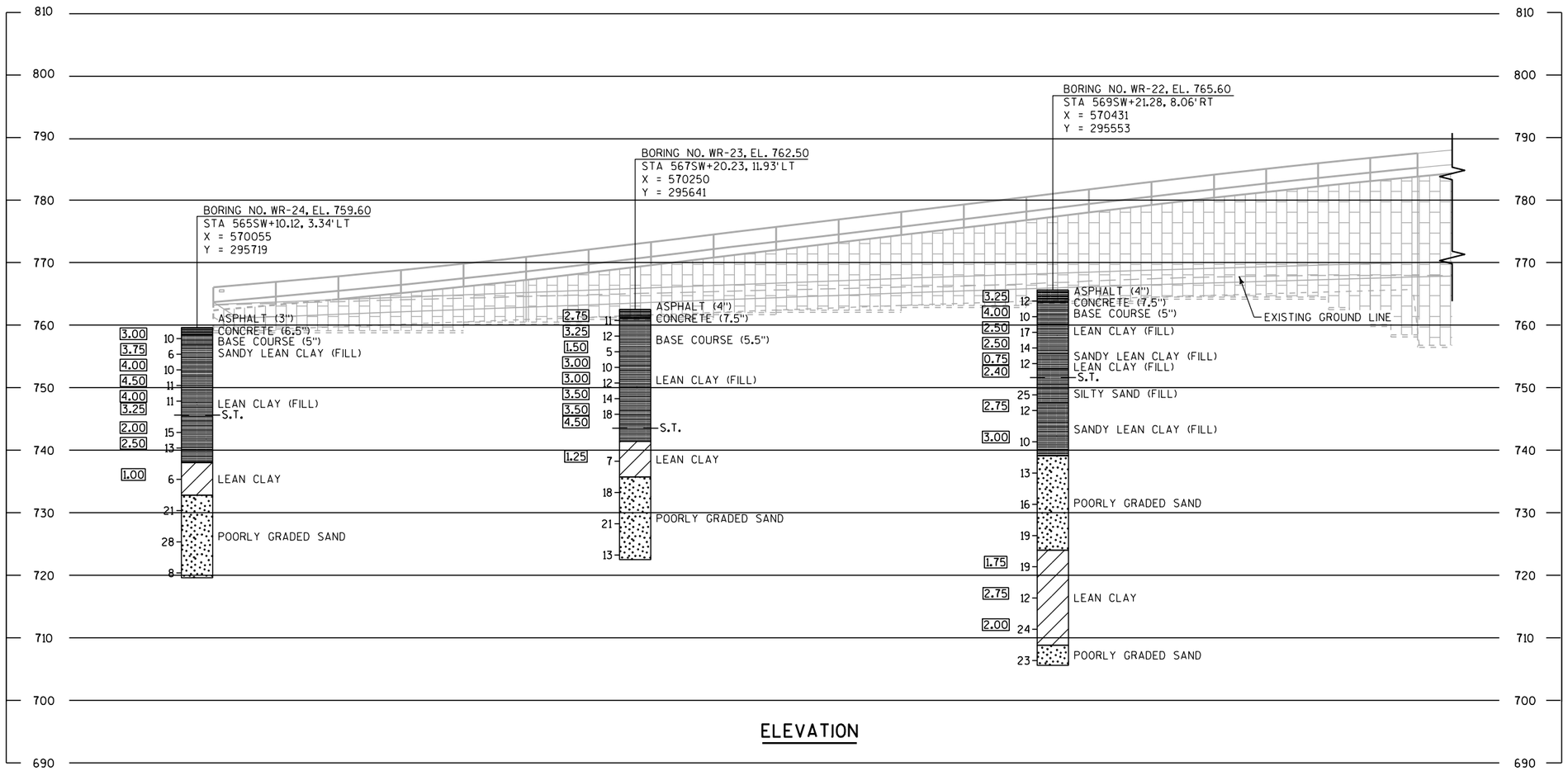
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 22, 2012 - BORING WR-22
MAY 22, 2012 - BORING WR-23
MAY 21, 2012 - BORING WR-24



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

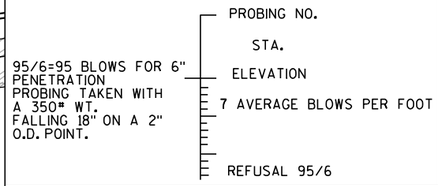
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

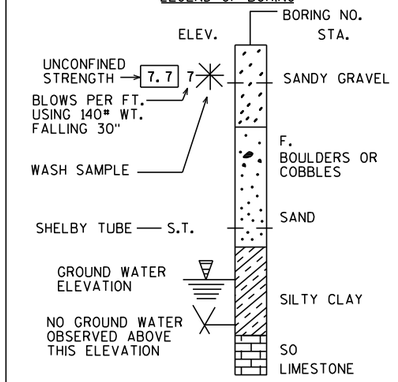
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 16 OF 17

8

8

NOTE:

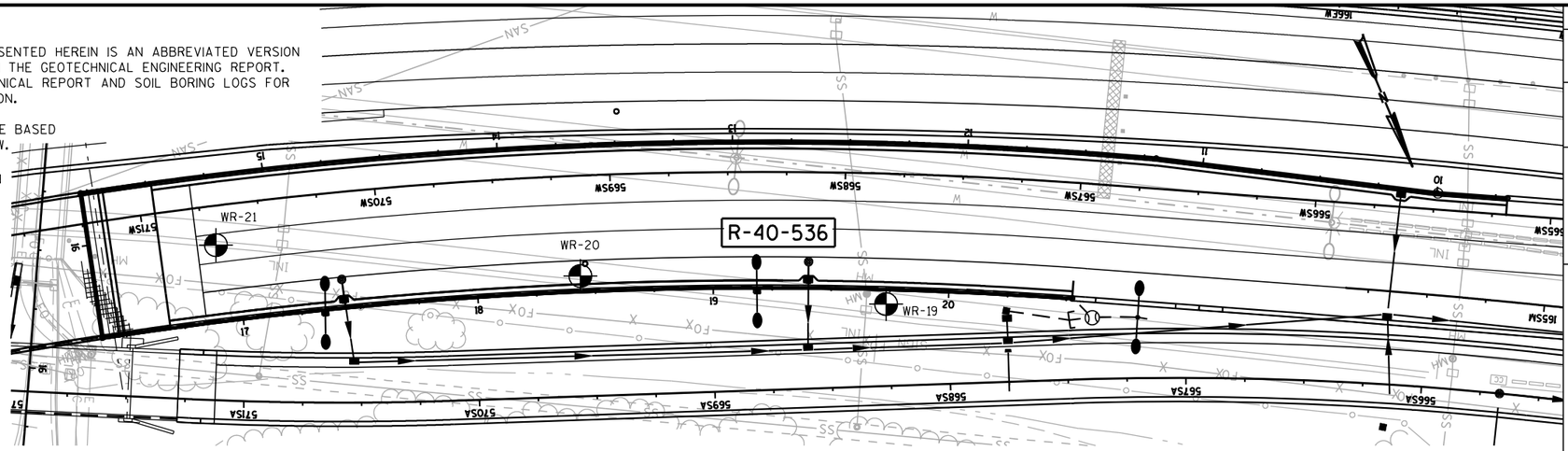
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR R-40-536 AND R/L SW.

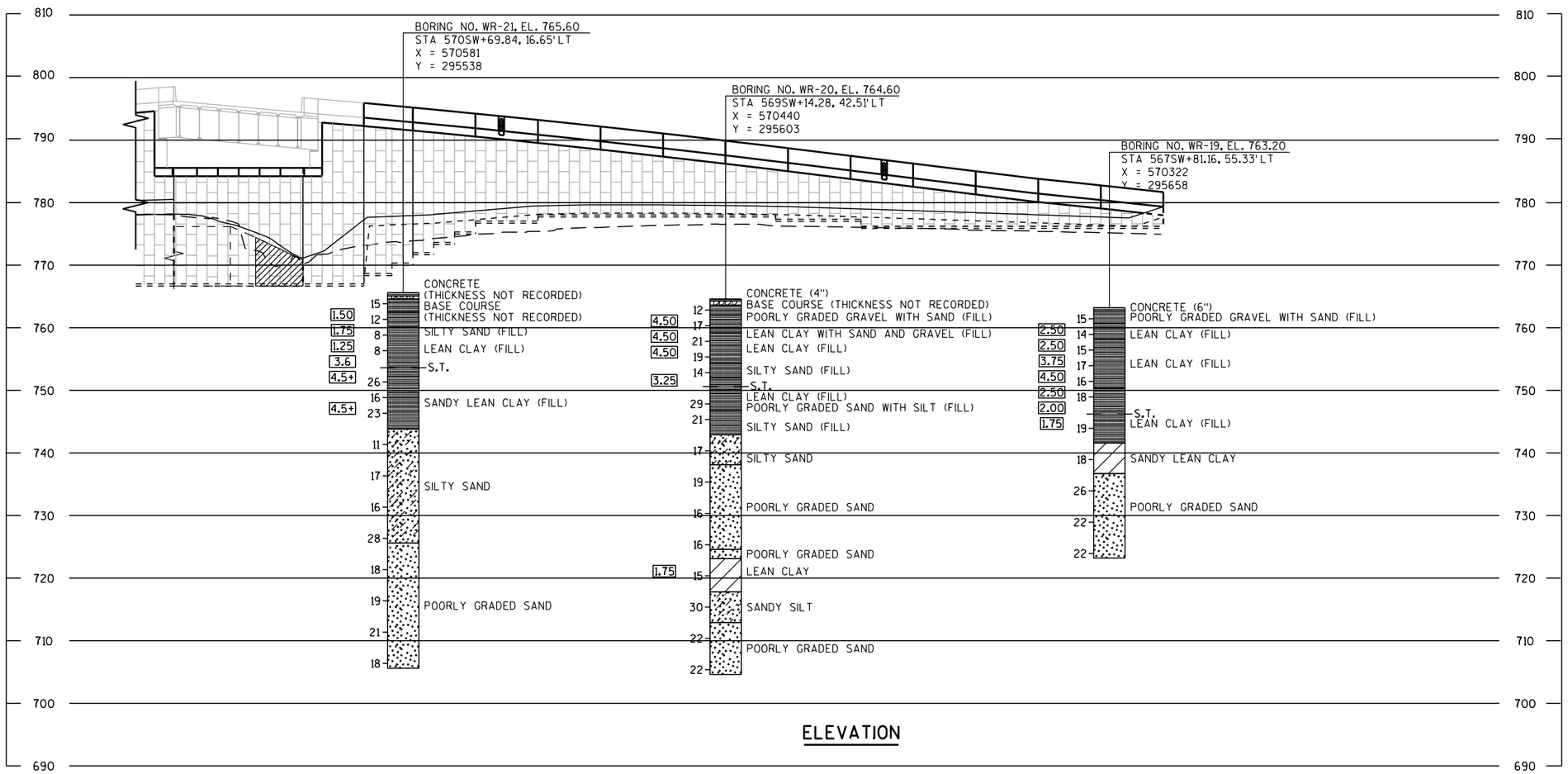
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV 17, 2011 - BORING WR-19
NOV 17, 2011 - BORING WR-20
NOV 17, 2011 - BORING WR-21



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

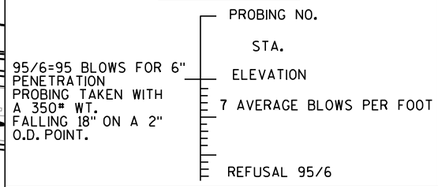
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

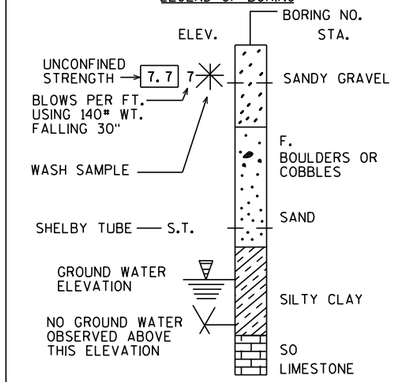
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-536

DRAWN BY MR | PLANS CK'D. MHZ

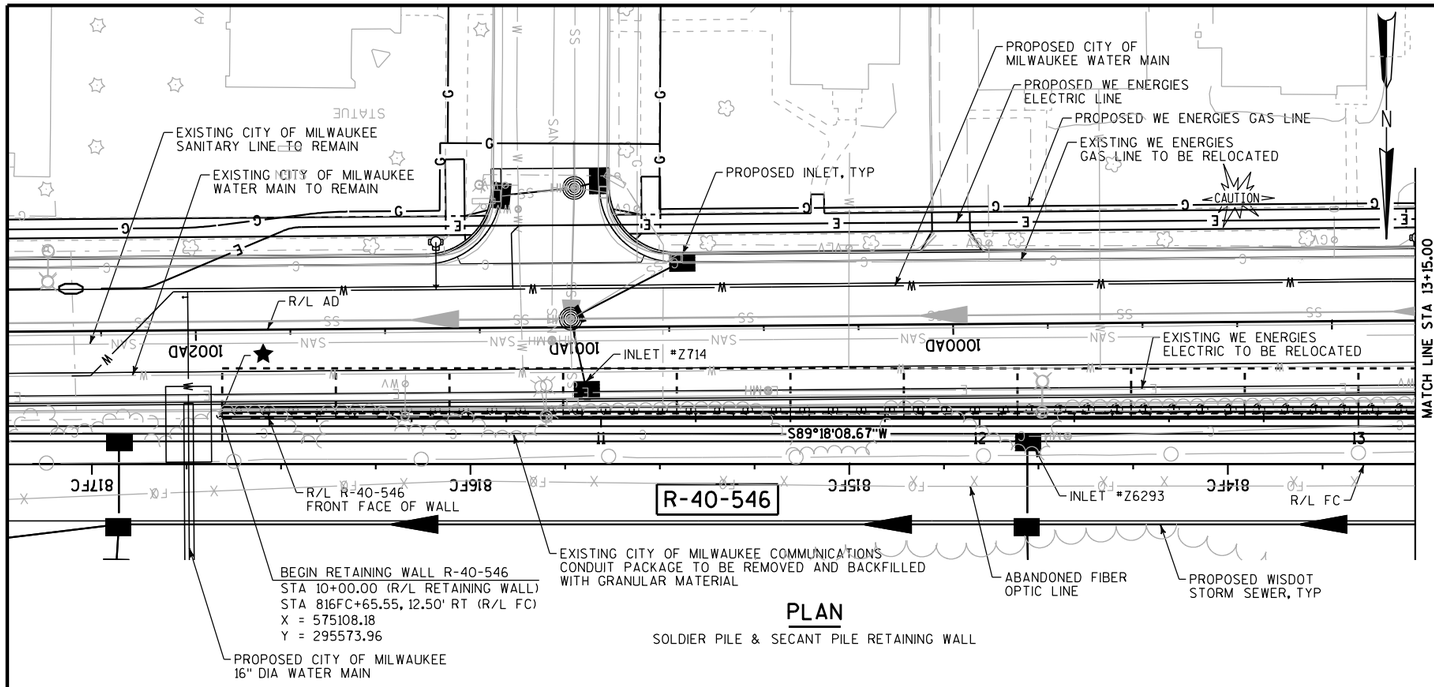
SUBSURFACE EXPLORATION (2 OF 2)

SHEET 17 OF 17

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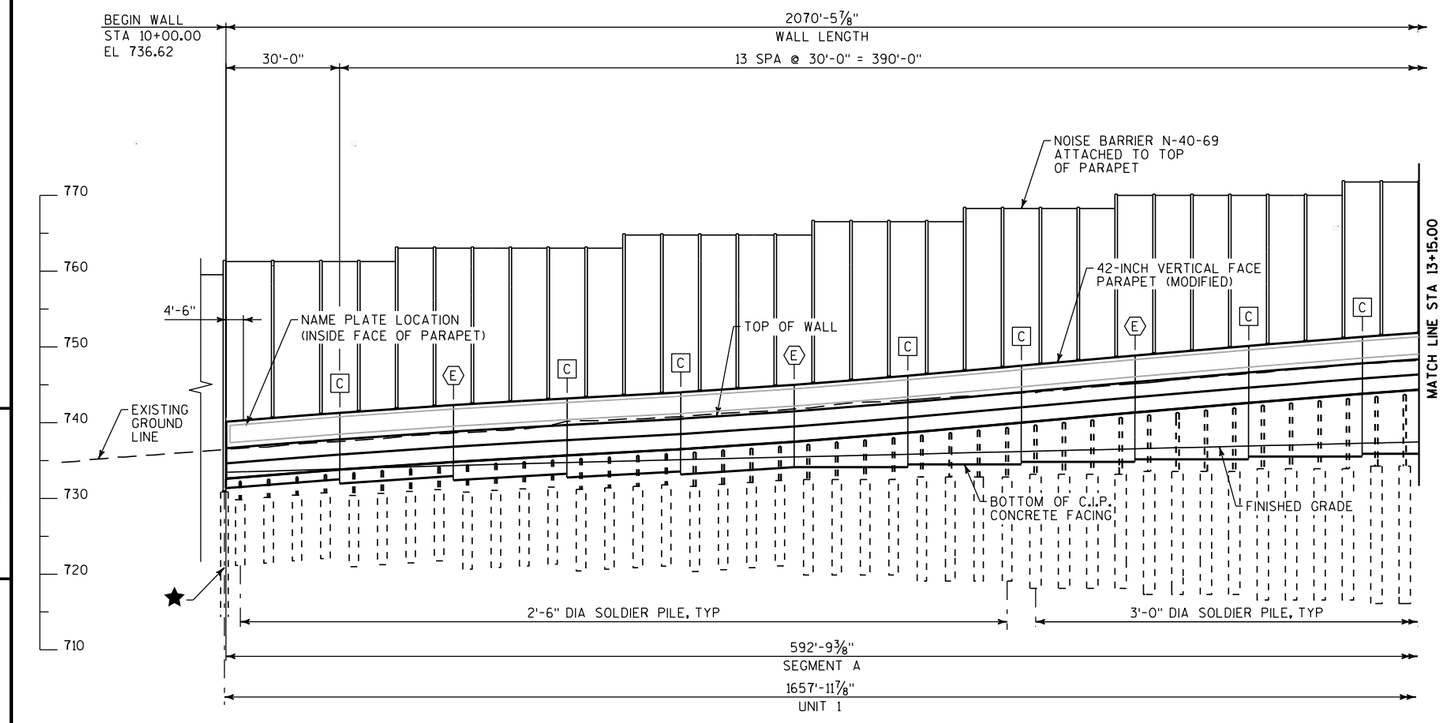
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PLAN

SOLDIER PILE & SECANT PILE RETAINING WALL



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 5)
2. GENERAL PLAN & ELEVATION (2 OF 5)
3. GENERAL PLAN & ELEVATION (3 OF 5)
4. GENERAL PLAN & ELEVATION (4 OF 5)
5. GENERAL PLAN & ELEVATION (5 OF 5)
6. GENERAL NOTES & QUANTITIES
7. ROADWAY PROFILE GRADE LINES
8. TOP OF WALL & INTERIM PROFILE GRADE LINES
9. TYPICAL WALL SECTIONS (1 OF 4)
10. TYPICAL WALL SECTIONS (2 OF 4)
11. TYPICAL WALL SECTIONS (3 OF 4)
12. TYPICAL WALL SECTIONS (4 OF 4)
13. CONSTRUCTION SEQUENCE
14. SOLDIER PILE DATA TABLES (1 OF 4)
15. SOLDIER PILE DATA TABLES (2 OF 2)
16. SOLDIER PILE DATA TABLES (3 OF 4)
17. SOLDIER PILE DATA TABLES (4 OF 4)
18. SOLDIER PILE TIEBACK ANCHOR DETAILS
19. TIEBACK ANCHOR DATA TABLES (1 OF 4)
20. TIEBACK ANCHOR DATA TABLES (2 OF 4)
21. TIEBACK ANCHOR DATA TABLES (3 OF 4)
22. TIEBACK ANCHOR DATA TABLES (4 OF 4)
23. WALL SECANT PILE DATA TABLE & DETAILS
24. WALL SECANT PILE CAP & COPING DETAILS
25. WALL COPING & FACING DETAILS (1 OF 2)
26. WALL COPING & FACING DETAILS (2 OF 2)
27. WALL FACING ELEVATION (1 OF 5)
28. WALL FACING ELEVATION (2 OF 5)
29. WALL FACING ELEVATION (3 OF 5)
30. WALL FACING ELEVATION (4 OF 5)
31. WALL FACING ELEVATION (5 OF 5)
32. WALL COPING & FACING REINFORCING SCHEDULE
33. WALL ANCHOR SLAB DETAILS (1 OF 2)
34. WALL ANCHOR SLAB DETAILS (2 OF 2)
35. WALL ANCHOR SLAB PLAN (1 OF 4)
36. WALL ANCHOR SLAB PLAN (2 OF 4)
37. WALL ANCHOR SLAB PLAN (3 OF 4)
38. WALL ANCHOR SLAB PLAN (4 OF 4)
39. WALL ANCHOR SLAB REINFORCING SCHEDULE
40. INLET DETAILS
41. ANCHOR SLAB INLET COVER SPECIAL
42. AESTHETIC WALL TREATMENT ELEVATION (1 OF 2)
43. AESTHETIC WALL TREATMENT ELEVATION (2 OF 2)
44. AESTHETIC WALL TREATMENT DETAILS
45. FENCE DECORATIVE WING (1 OF 3)
46. FENCE DECORATIVE WING (2 OF 3)
47. FENCE DECORATIVE WING (3 OF 3)
48. RAILING PIPE DETAILS
49. SUBSURFACE EXPLORATION (1 OF 5)
50. SUBSURFACE EXPLORATION (2 OF 5)
51. SUBSURFACE EXPLORATION (3 OF 5)
52. SUBSURFACE EXPLORATION (4 OF 5)
53. SUBSURFACE EXPLORATION (5 OF 5)

DESIGN DATA

DESIGN SPECIFICATION:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:

LIVE LOAD SURCHARGE (ROADWAY):	240 PSF
LIVE LOAD SURCHARGE (NON-ROADWAY):	100 PSF
LIVE LOAD SURCHARGE (CONSTRUCTION):	100 PSF

NOISE BARRIER:

CASE 1 - MAX. HEIGHT ABOVE ROADWAY BARRIER	- 17.75 FEET
MAX. POST SPACING	- 10 FEET
CASE 2 - MAX. HEIGHT ABOVE ROADWAY BARRIER	- 18.50 FEET
MAX. POST SPACING	- 10 FEET
CASE 3 - MAX. HEIGHT ABOVE ROADWAY BARRIER	- 20.75 FEET
MAX. POST SPACING	- 10 FEET
CASE 4 - MAX. HEIGHT ABOVE ROADWAY BARRIER	- 21.50 FEET
MAX. POST SPACING	- 10 FEET
CASE 5 - MAX. HEIGHT ABOVE ROADWAY BARRIER	- 23.00 FEET
MAX. POST SPACING	- 10 FEET
NOISE BARRIER DEAD LOAD	40 PSF
WIND PRESSURE ON NOISE BARRIER (NORMAL TO BARRIER, EITHER DIRECTION)	37.5 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
WALL SECANT PILE	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI
STRUCTURAL STEEL HS	Fy = 50,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c = 3,500 PSI
*TIMBER LAGGING	fbo = 1,000 PSI
	E = 1,700,000 PSI

*MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, ≥2" WIDE, REFERENCE AASHTO LRFD SPECIFICATION TABLE 8.4.1.1.4-1

LEGEND

- (E) WALL FACING EXPANSION JOINT
- [C] WALL FACING CONTRACTION JOINT
- ➡ TRAFFIC DIRECTION
- ★ C/L NOISE BARRIER GROUND MOUNTED POST 6" FROM BEGINNING OF WALL. NOISE BARRIER FOOTING TO BE INSTALLED SO THAT TOP OF FOOTING ELEVATION IS BELOW BOTTOM OF WALL FACING.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 2015 — 6/12/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN EDWARD K. MCCRIGHT E-37422 MILWAUKEE WI 6/12/14 PROFESSIONAL ENGINEER

STRUCTURE R-40-546

WALL ALONG I-94 EB EXIT RAMP TO 84TH ST.

COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~: MILWAUKEE
DESIGN SPEC: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY CJW/EKM	DESIGN CK'D XRB/AAG
DRAWN BY TEK	PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (1 OF 5)

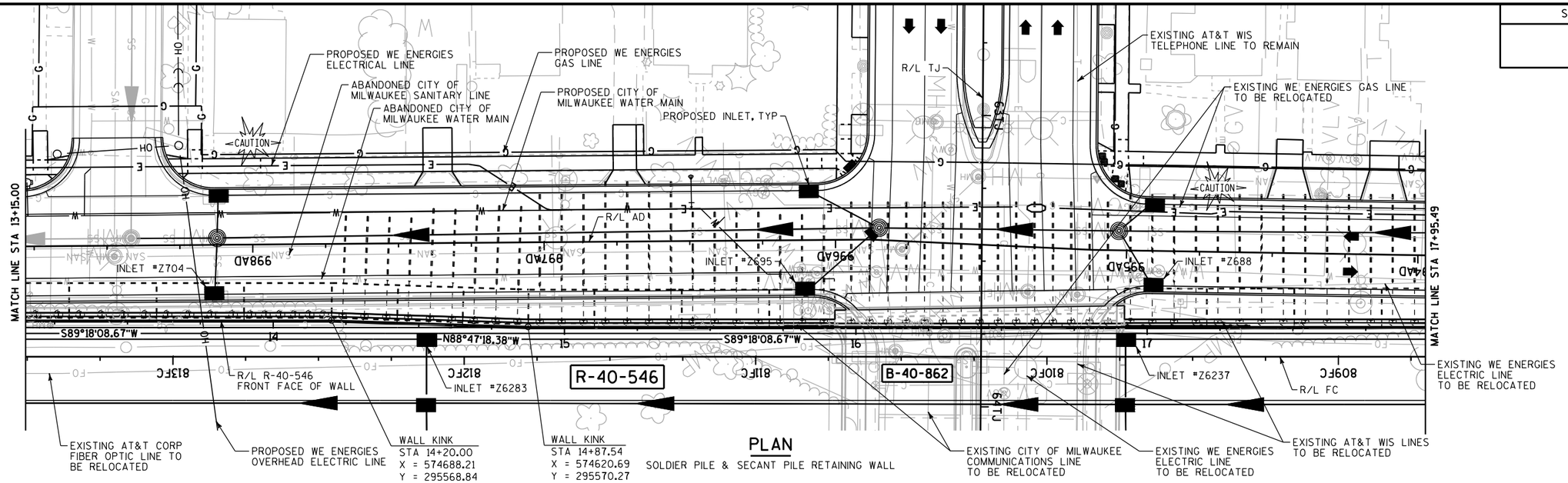
SHEET 1 OF 53

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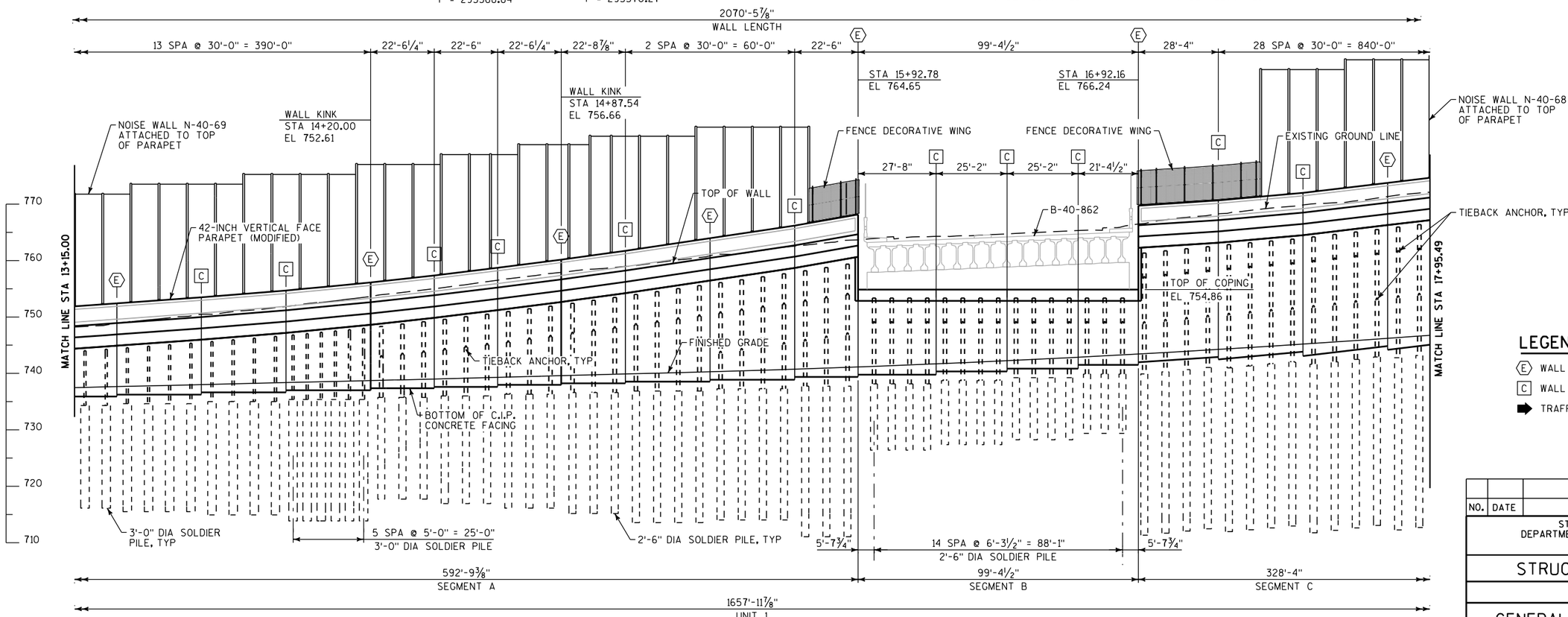
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STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE & SECANT PILE RETAINING WALL



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- (E) WALL FACING EXPANSION JOINT
- [C] WALL FACING CONTRACTION JOINT
- TRAFFIC DIRECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

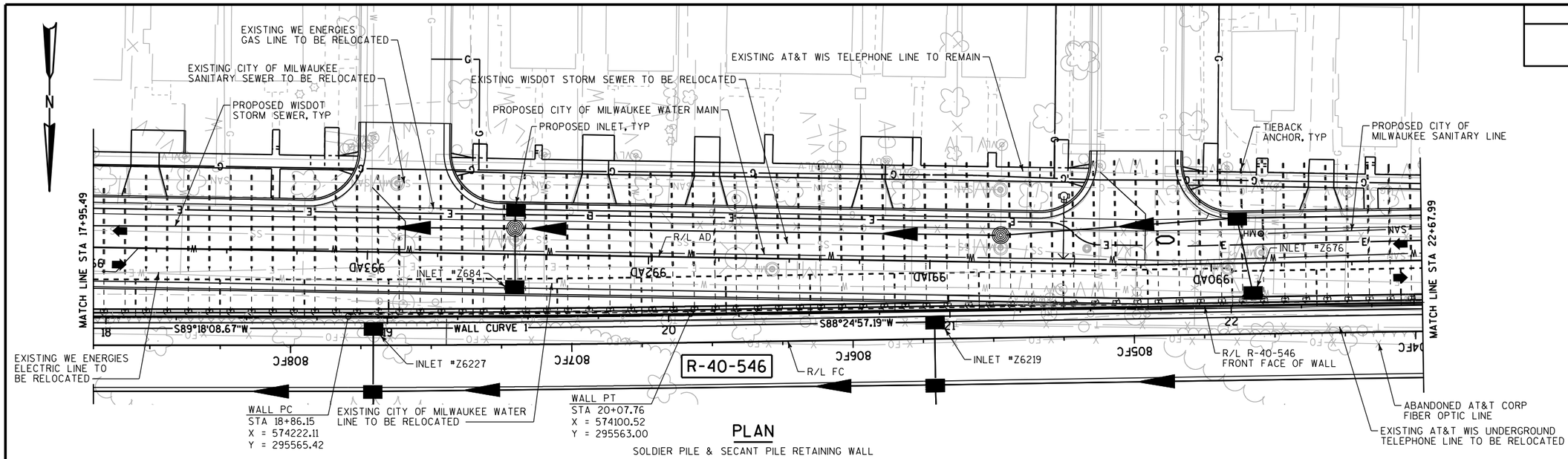
STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 5)

SHEET 2 OF 53

STATE PROJECT NUMBER
1060-33-80

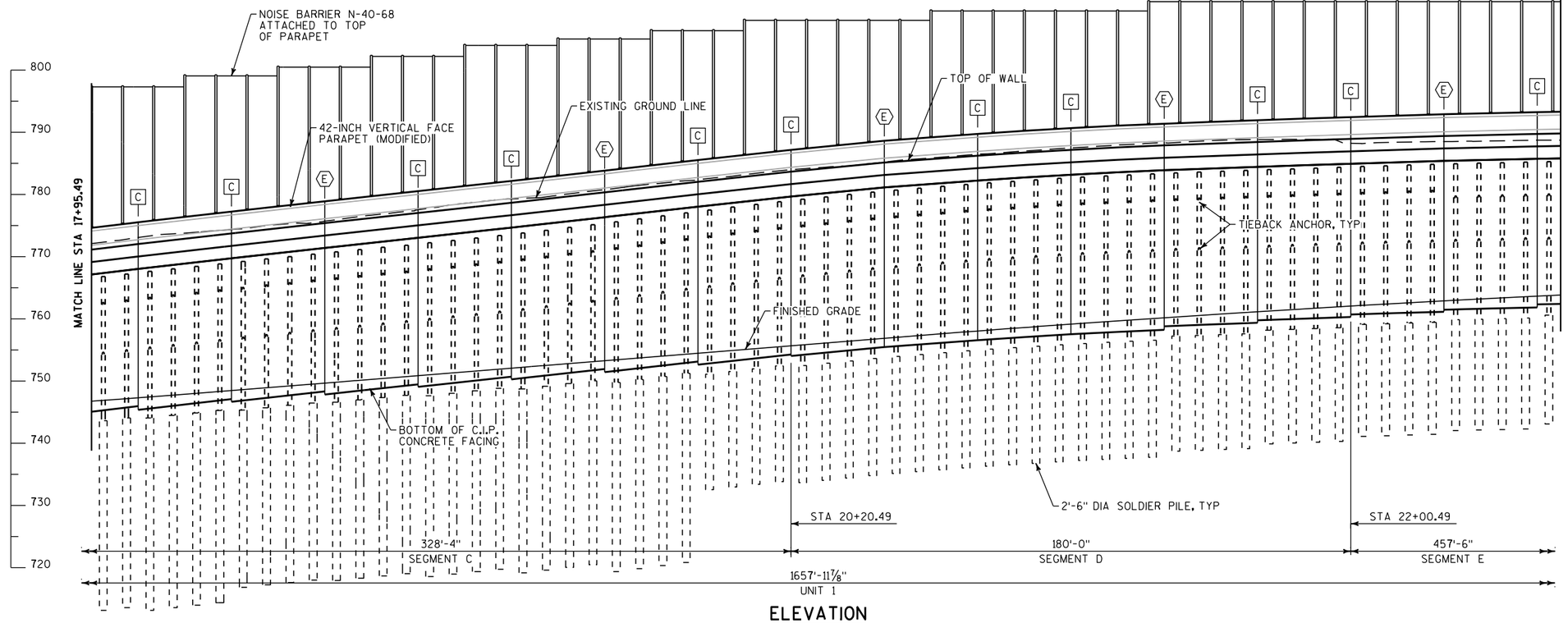


PLAN

SOLDIER PILE & SECANT PILE RETAINING WALL

2070'-5⅞"
WALL LENGTH

28 SPA @ 30'-0" = 840'-0"



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- (E) WALL FACING EXPANSION JOINT
- [C] WALL FACING CONTRACTION JOINT
- TRAFFIC DIRECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

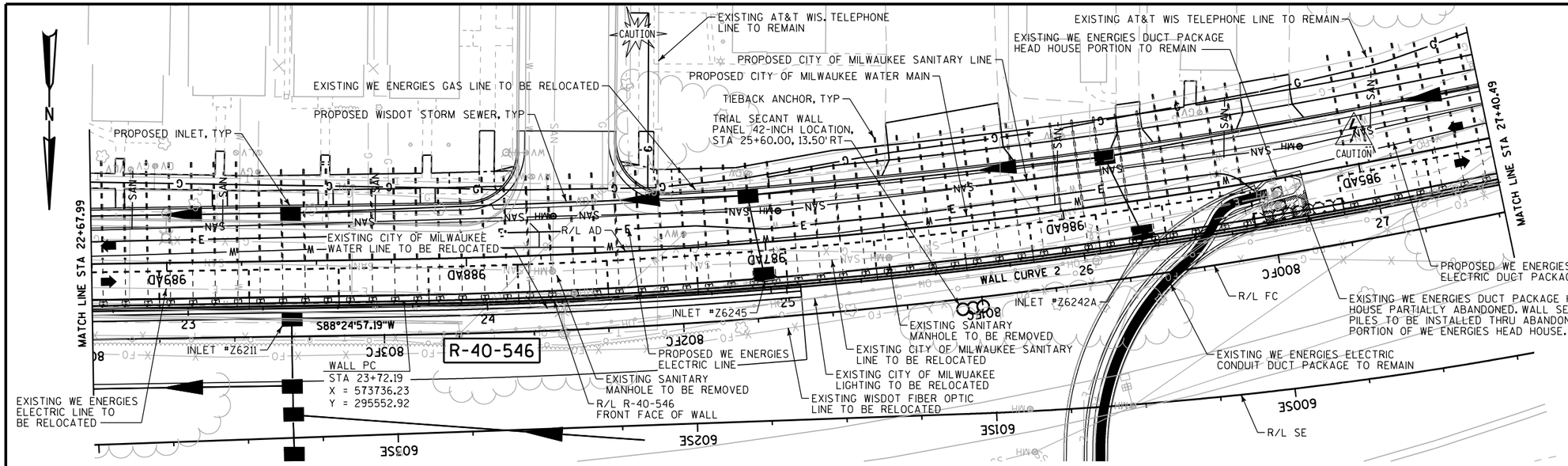
GENERAL PLAN & ELEVATION (3 OF 5)

SHEET 3 OF 53

3007

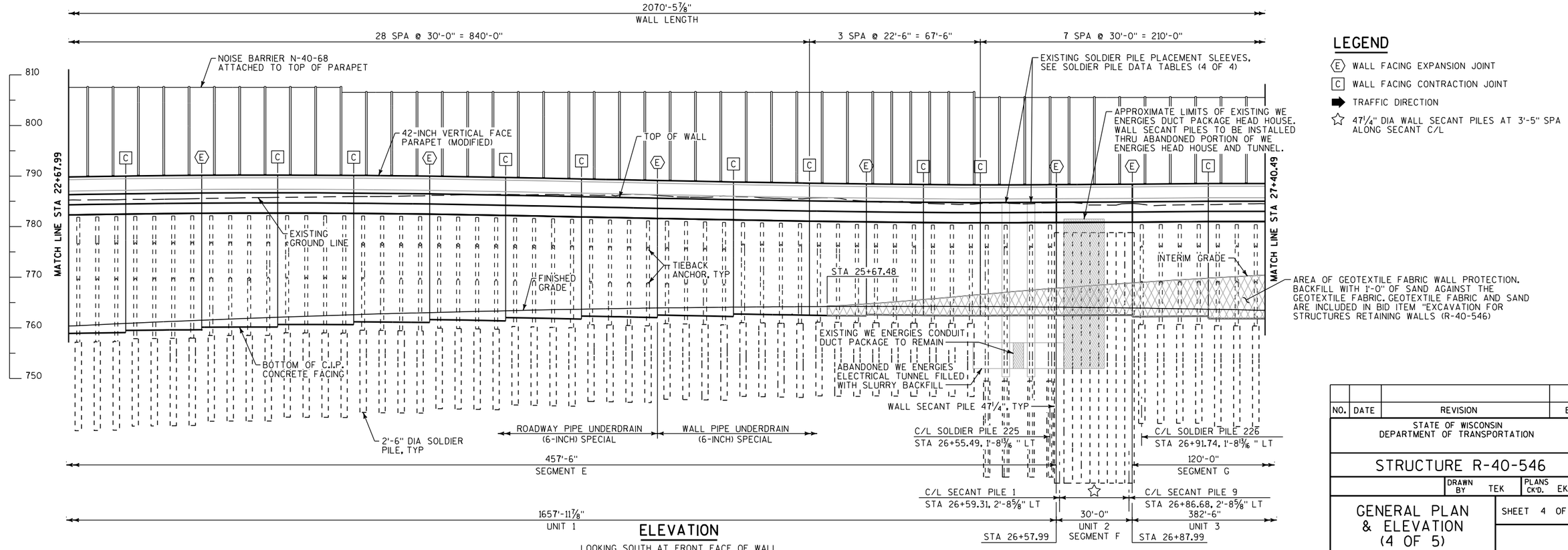
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PLOT NAME : R546_080103_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE & SECANT PILE RETAINING WALL



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- (E) WALL FACING EXPANSION JOINT
- [C] WALL FACING CONTRACTION JOINT
- TRAFFIC DIRECTION
- ☆ 47¼" DIA WALL SECANT PILES AT 3'-5" SPA ALONG SECANT C/L

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (4 OF 5)

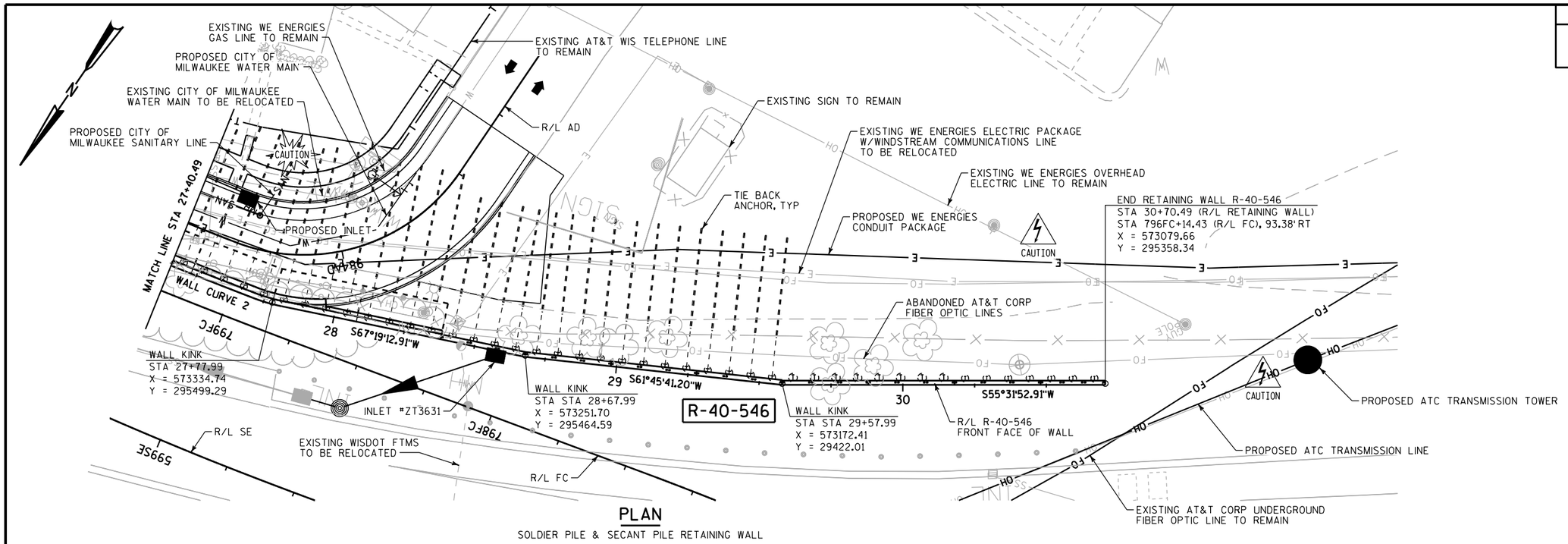
SHEET 4 OF 53

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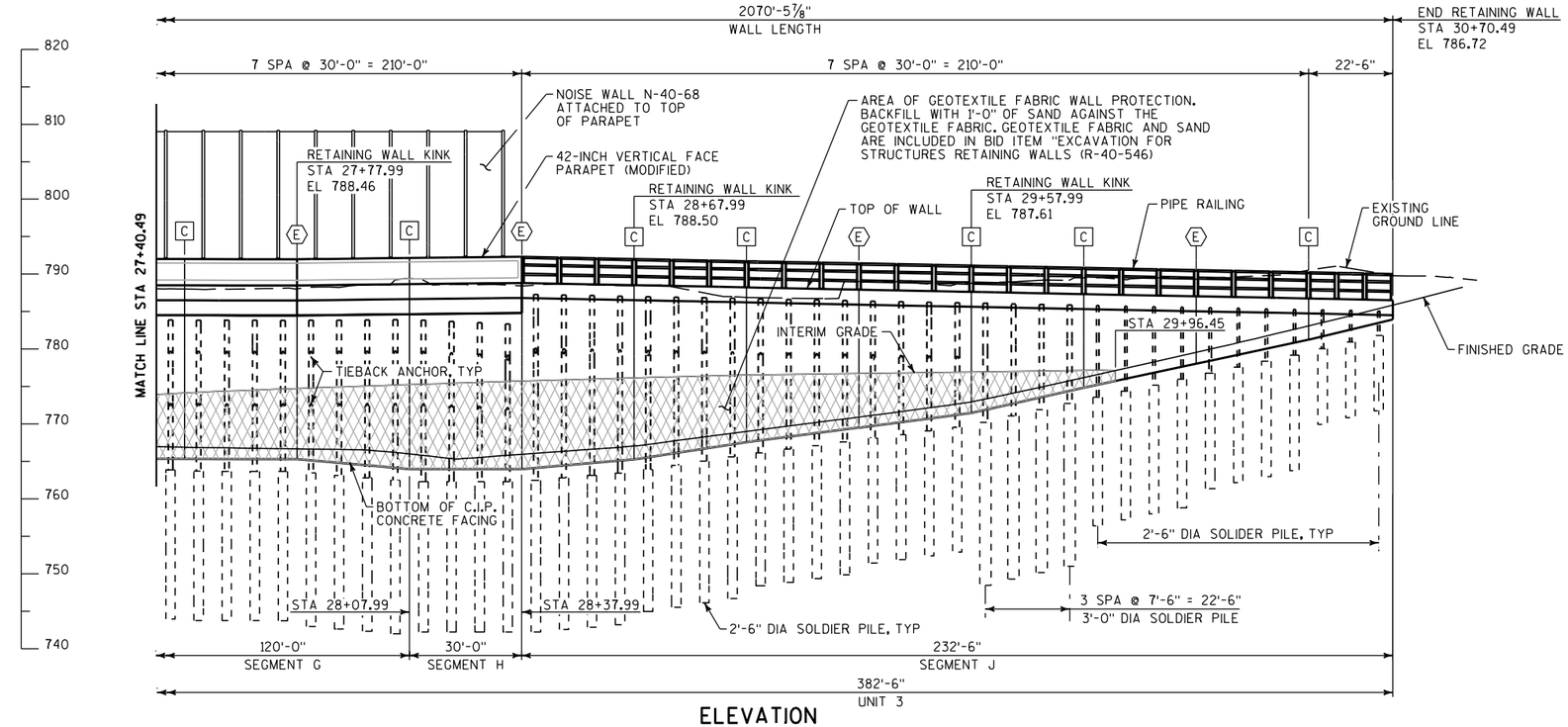
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PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE & SECANT PILE RETAINING WALL



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- (E) WALL FACING EXPANSION JOINT
- [C] WALL FACING CONTRACTION JOINT
- TRAFFIC DIRECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (5 OF 5)

SHEET 5 OF 53

8

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STATE PROJECT NUMBER

1060-33-80

ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	UNIT 1	UNIT 2	UNIT 3	TOTAL
206.3000.0002	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546	LS	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	270	5	35	310
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	---	171	---	171
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3,401	59	465	3,925
505.0415	BAR STEEL REINFORCEMENT HS RETAINING WALLS	LB	---	45,590	---	45,590
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	336,885	5,235	43,135	385,255
506.0605	STRUCTURAL STEEL HS	LB	618,755	---	148,045	766,800
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	7,116	---	1,491	8,607
513.2000.0006	RAILING PIPE R-40-546	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	382	12	35	429
517.0600.0003	PAINTING EPOXY SYSTEM R-40-546	LS	---	---	---	1
517.1050.S.0010	ARCHITECTURAL SURFACE TREATMENT R-40-546	SF	28,210	550	6,475	35,235
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	835	---	220	1,055
SPV.0060.4105	ANCHOR ASSEMBLIES NOISE BARRIER STRUCTURES	EACH	152	3	15	170
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	3	---	---	3
SPV.0060.4150	TIEBACK ANCHORS	EACH	286	---	60	346
SPV.0060.4155	TIEBACK ANCHORS PERFORMANCE TESTS	EACH	15	---	3	18
SPV.0060.4175	THERMAL INTEGRITY PROFILER (TIP) TESTING WALL SECANT PILE 47.24-INCH	EACH	---	3	---	3
SPV.0075.4205	OBSTRUCTIONS WALL SECANT PILE	HRS	---	12	---	12
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	29	---	6	35
SPV.0090.0126	PIPE UNDERDRAIN 6-INCH SPECIAL	LF	---	---	570	570
SPV.0090.4410	FENCE DECORATIVE WING	LF	62	---	---	62
SPV.0090.4440	FOUNDATION DRILLING	LF	9,605	---	2,200	11,805
SPV.0090.4450	WALL SECANT PILE 47.24-INCH	LF	---	446	---	446
SPV.0105.4520	TRIAL SECANT WALL PANEL 47.24-INCH	LS	---	---	---	1
SPV.0110.4600	TIMBER LAGGING	MBM	90	---	20	110
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	30,300	---	6,990	37,290
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				3/4"
	CORK FILLER	SIZE				1"
	NON-BITUMINOUS JOINT FILLER	SIZE				3/4", 1"
	POLYVINYL CHLORIDE WATERSTOP	TYPE				B
	NAME PLATE	EACH				1

ALL ITEMS ARE CATEGORY 3090

HORIZONTAL CURVE DATA

WALL CURVE 1

PI = STA 20+29.46
X : 574161.30
Y : 295564.68
DELTA = 0°53'11.48" LT
D = 0°43'44.32"
R = 7859.75'
T = 60.81
L = 121.61
E = 0.24
PC = STA 19+68.65
X : 574222.11
Y : 295565.42
PT = STA 20+90.26
X : 574100.52
Y : 295563.00

WALL CURVE 2

PI = STA 26+58.34
X : 573532.65
Y : 295547.29
DELTA = 12°02'54.68" LT
D = 2°58'08.68"
R = 1929.75'
T = 203.65
L = 405.80
E = 10.72
PC = STA 24+54.69
X : 573736.23
Y : 295552.92
PT = STA 28+60.49
X : 573334.74
Y : 295499.29

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE SHOWN OR NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SHOWN OR NOTED.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE SHOWN OR NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-546 WITH THE CONSTRUCTION OF THE NORTH ABUTMENT OF BRIDGE B-40-862.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

THE GEOTECHNICAL DATA PROVIDED FOR THIS STRUCTURE IN THE GEOTECHNICAL EXPLORATION AND RETAINING WALL EVALUATION REPORT GOVERNS OVER ANY DESCREPANCY WITH THE SUBSURFACE EXPLORATION AND GEOTECHNICAL DATA SHOWN IN THE PLANS.

BACKFILL ALL SPACES EXCAVATED AT THE BACK FACE AND NOT OCCUPIED BY THE NEW STRUCTURE WITH STRUCTURAL BACKFILL.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-862 BRIDGE QUANTITIES.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546".

WALL ANCHOR SLAB, COPING & PARAPET EXPANSION JOINTS TO MATCH ALL WALL FACING EXPANSION & CONTRACTION JOINTS.

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED CONDITION		DRAINED CONDITION	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
SAND FILL	125	28	0	28	0
CLAY FILL	125-135	0	2000-3500	30	0-100
MEDIUM STIFF CLAY	122-130	0	400-750	26	0
STIFF CLAY	130	0	1500	28	0
VERY STIFF CLAY	130-135	0	2000-3000	30	0
HARD CLAY	135	0	3500-4500	30-34	0
DENSE SILT	130	30	0	30	0
DENSE SAND AND GRAVEL	133-140	34-36	0	34-36	0

SOLDIER PILE WALL NOTES

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE SOLDIER PILE WALL COPING, CAST-IN-PLACE CONCRETE FACING, MOMENT SLAB AND PARAPET IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE MOMENT SLAB, SOLDIER PILES AND FOOTINGS IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546". AFTER WALL SOLDIER PILE CONSTRUCTION HAS BEEN COMPLETED, ALL EARTHWORK IN FRONT OF THE RETAINING WALL IS PAID FOR UNDER THE ROADWAY ITEM "COMMON EXCAVATION". SEE ROADWAY PLAN FOR EXCAVATION LIMITS.

FLOWABLE BACKFILL AND CLSM ARE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546". SEE SPECIAL PROVISIONS FOR DESCRIPTION OF FLOWABLE BACKFILL AND CLSM.

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600, PAINTING EPOXY SYSTEM R-40-546.

FILL TO TOP OF SHAFT ELEVATION WHERE NEEDED TO PROVIDE WORKING SURFACE. FILL INCIDENTAL TO BID ITEM "CONCRETE MASONRY SOLDIER PILE FOOTINGS".

SECANT PILE WALL NOTES

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE SECANT PILE COPING AND PARAPET IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

FILL TO TOP OF SHAFT ELEVATION WHERE NEEDED TO PROVIDE WORKING SURFACE. FILL INCIDENTAL TO BID ITEMS "WALL SECANT PILE 47.24-INCH".

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE SECANT PILE COPING IS PAID FOR UNDER THE ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546". AFTER WALL SECANT PILE, SECANT PILE CAP, AND TIEBACK INSTALLATION HAS BEEN COMPLETED, ALL EARTHWORK IN FRONT OF THE RETAINING WALL IS PAID FOR UNDER THE ROADWAY ITEM "COMMON EXCAVATION". SEE ROADWAY PLAN FOR EXCAVATION LIMITS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

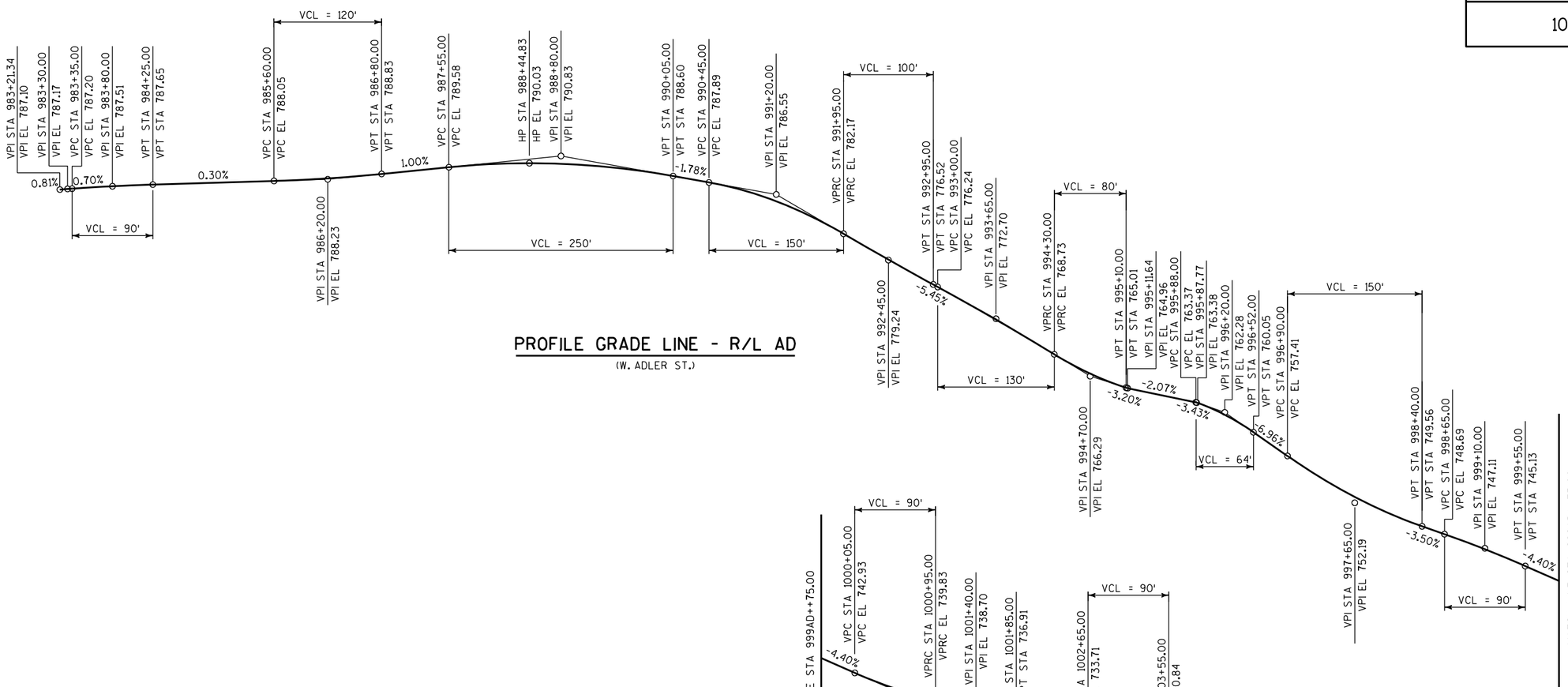
DRAWN BY BHI | PLANS CK'D. EKM

GENERAL NOTES & QUANTITIES

SHEET 6 OF 53

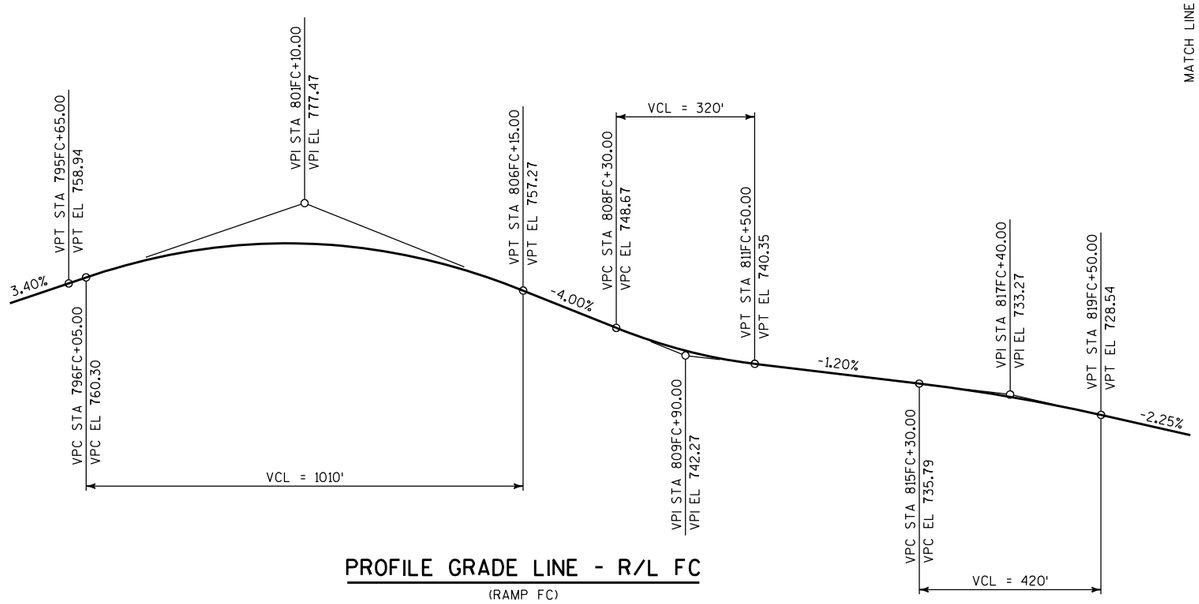
3010

STATE PROJECT NUMBER
1060-33-80



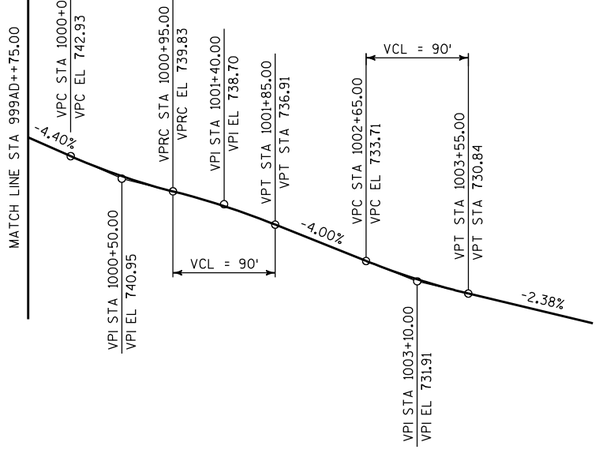
PROFILE GRADE LINE - R/L AD

(W. ADLER ST.)



PROFILE GRADE LINE - R/L FC

(RAMP FC)



PROFILE GRADE LINE - R/L AD

(W. ADLER ST.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

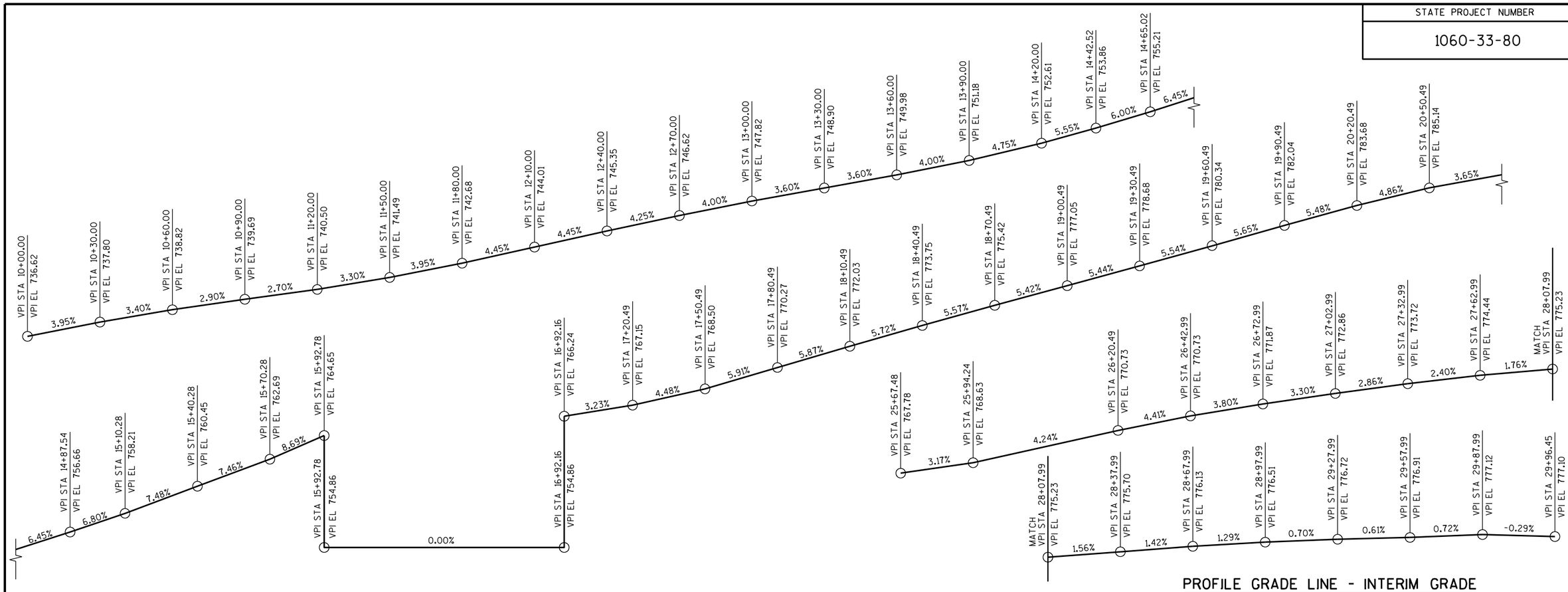
ROADWAY PROFILE GRADE LINES

SHEET 7 OF 53

8

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PROFILE GRADE LINE - INTERIM GRADE

(TOP OF INTERIM GRADE AT WALL FACE)

PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

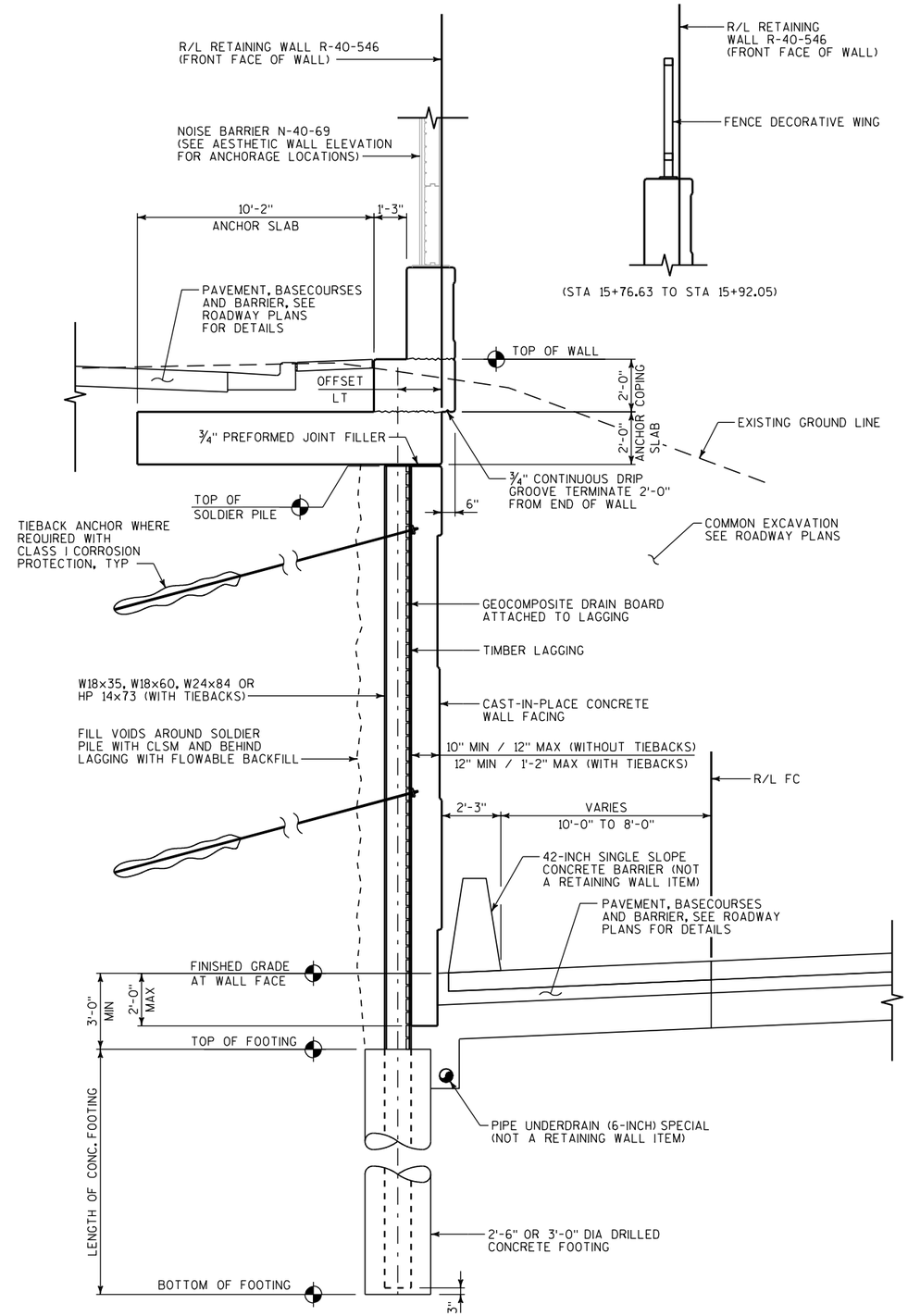
TOP OF WALL & INTERIM PROFILE GRADE LINES

SHEET 8 OF 53

8

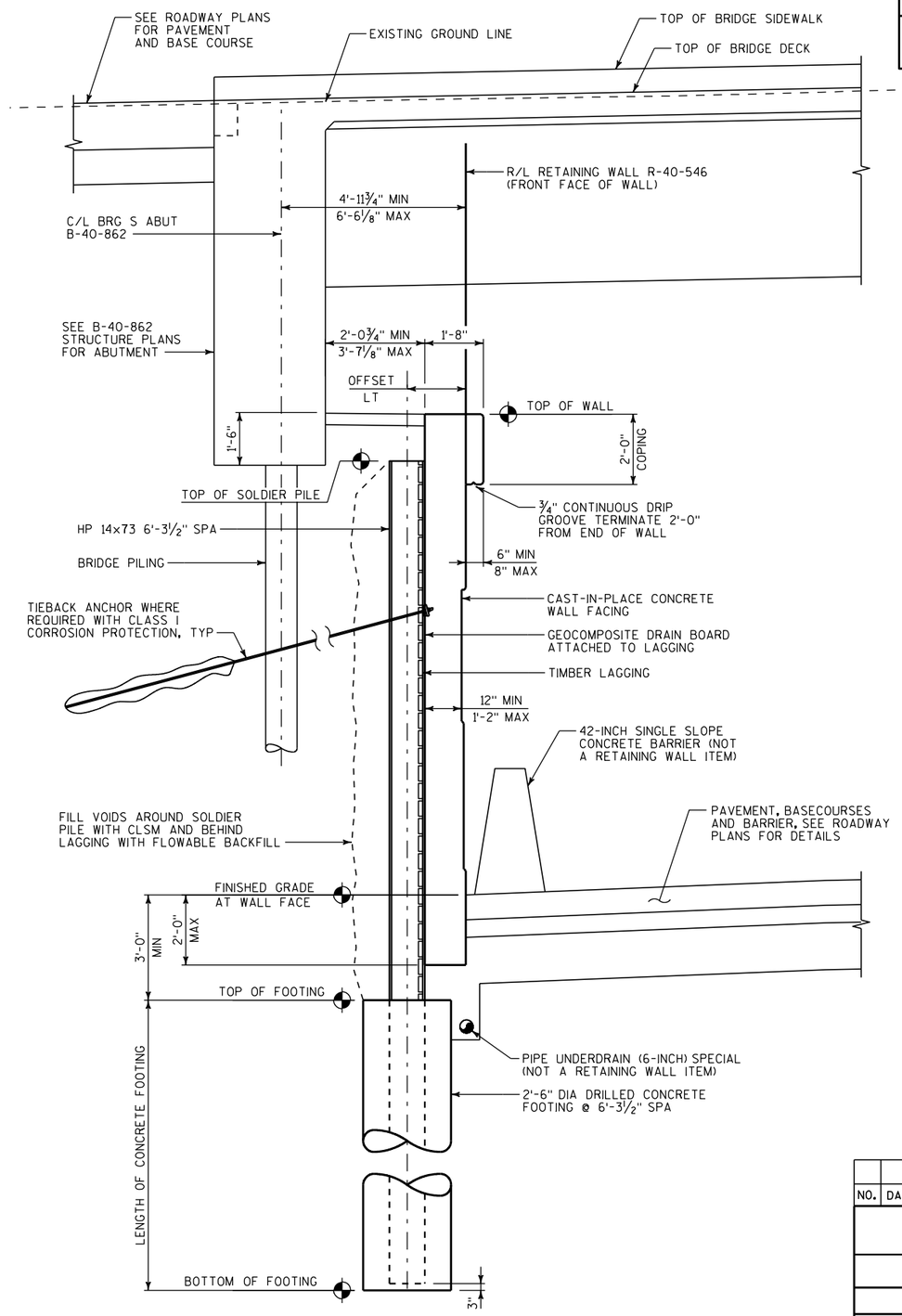
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TYPICAL SECTION - UNIT 1 - SEGMENT A

LOOKING WEST
(STA 10+00.00 TO STA 15+92.78)



TYPICAL SECTION - UNIT 1 - SEGMENT B

LOOKING WEST
STA 15+92.78 TO STA 16+92.16

LEGEND

◑ 2'-0" SEGMENT A
2'-7" SEGMENT C

◐ 2'-0" SEGMENT A
1'-9" SEGMENT C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

TYPICAL SECTIONS
(1 OF 4)

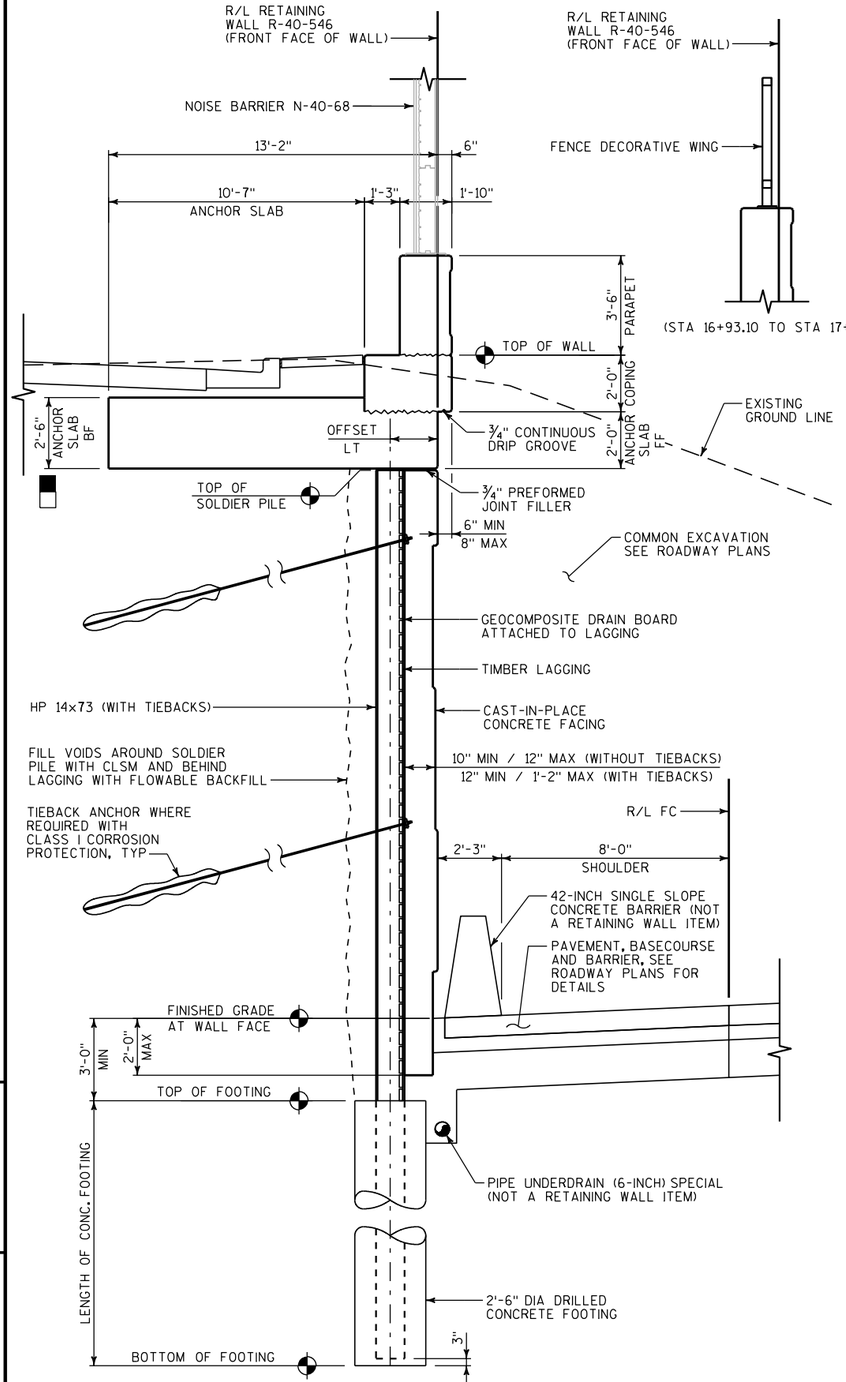
SHEET 9 OF 53

STATE PROJECT NUMBER
1060-33-80

8

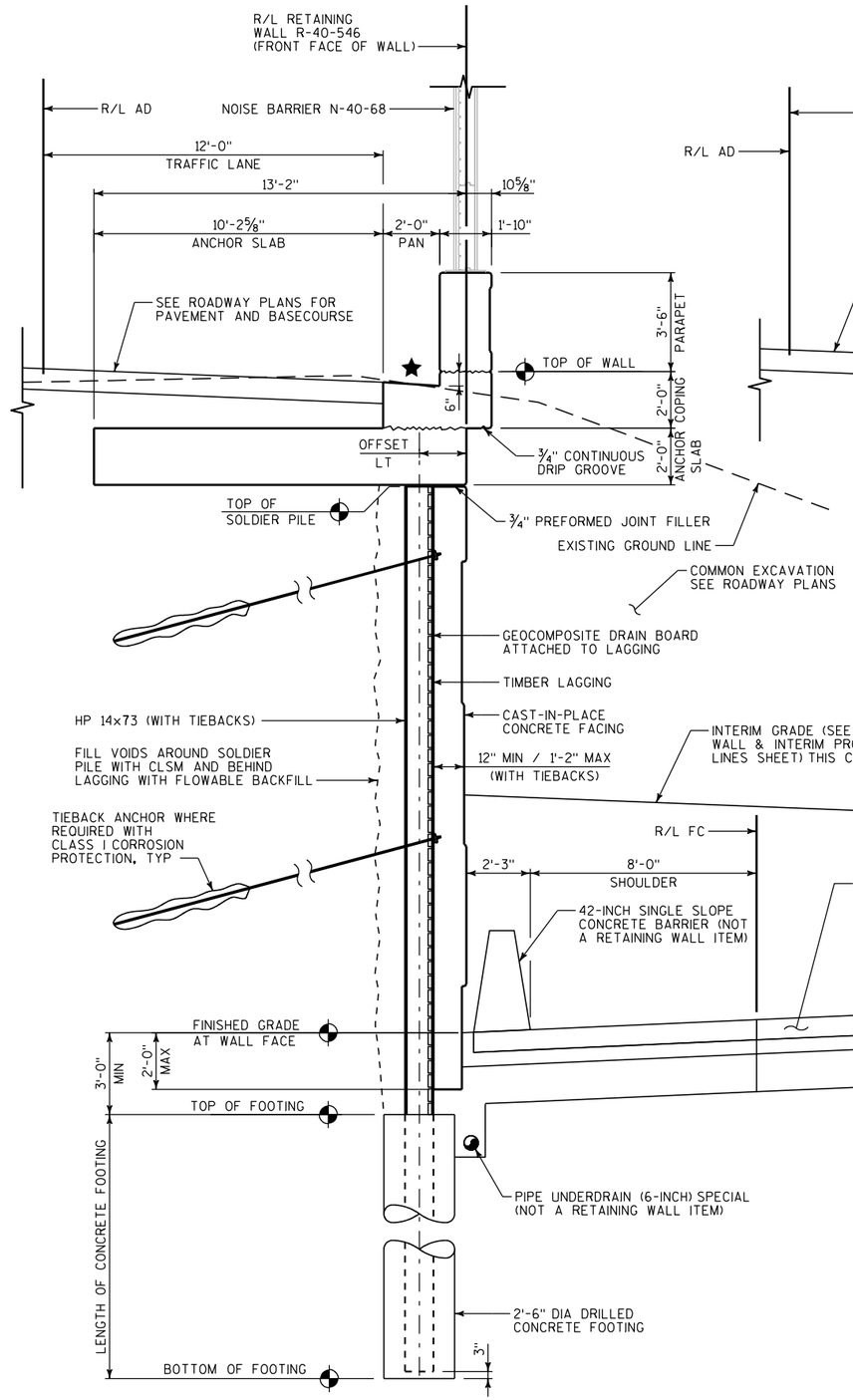
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STATE PROJECT NUMBER
1060-33-80



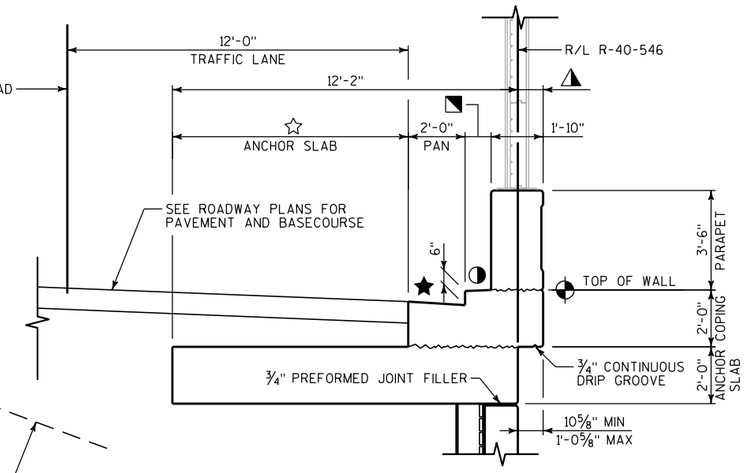
TYPICAL SECTION - UNIT 1 SEGMENT C / SEGMENT D

LOOKING WEST
SEGMENT C - STA 16+92.16 TO STA 20+20.49
SEGMENT D - STA 20+20.49 TO STA 20+99.47



TYPICAL SECTION - UNIT 1 - SEGMENT D

LOOKING WEST
SEGMENT D - STA 20+99.47 TO STA 22+00.49



TRANSITION SECTION - UNIT 1 - SEGMENT D

LOOKING WEST - TRANSITION AREAS
SEGMENT D - STA 20+99.47 TO STA 21+68.82

LEGEND

- SEGMENT D VARIES 1'-10" TO 0" (STA 20+99.47 TO STA 21+56.80)
- VARIES 6" TO 10⅝" (STA 21+56.77 TO STA 21+68.82)
- VARIES 7'-4⅝" TO 9'-2⅝" (STA 20+99.47 TO STA 21+56.80)
- SLOPE PAN ¾" PER FOOT
- SLOPE 4% MAX
- SEGMENT C - 2'-6" ANCHOR SLAB BACKFACE
  SEGMENT D - 2'-0" ANCHOR SLAB BACKFACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

TYPICAL SECTIONS (2 OF 4)

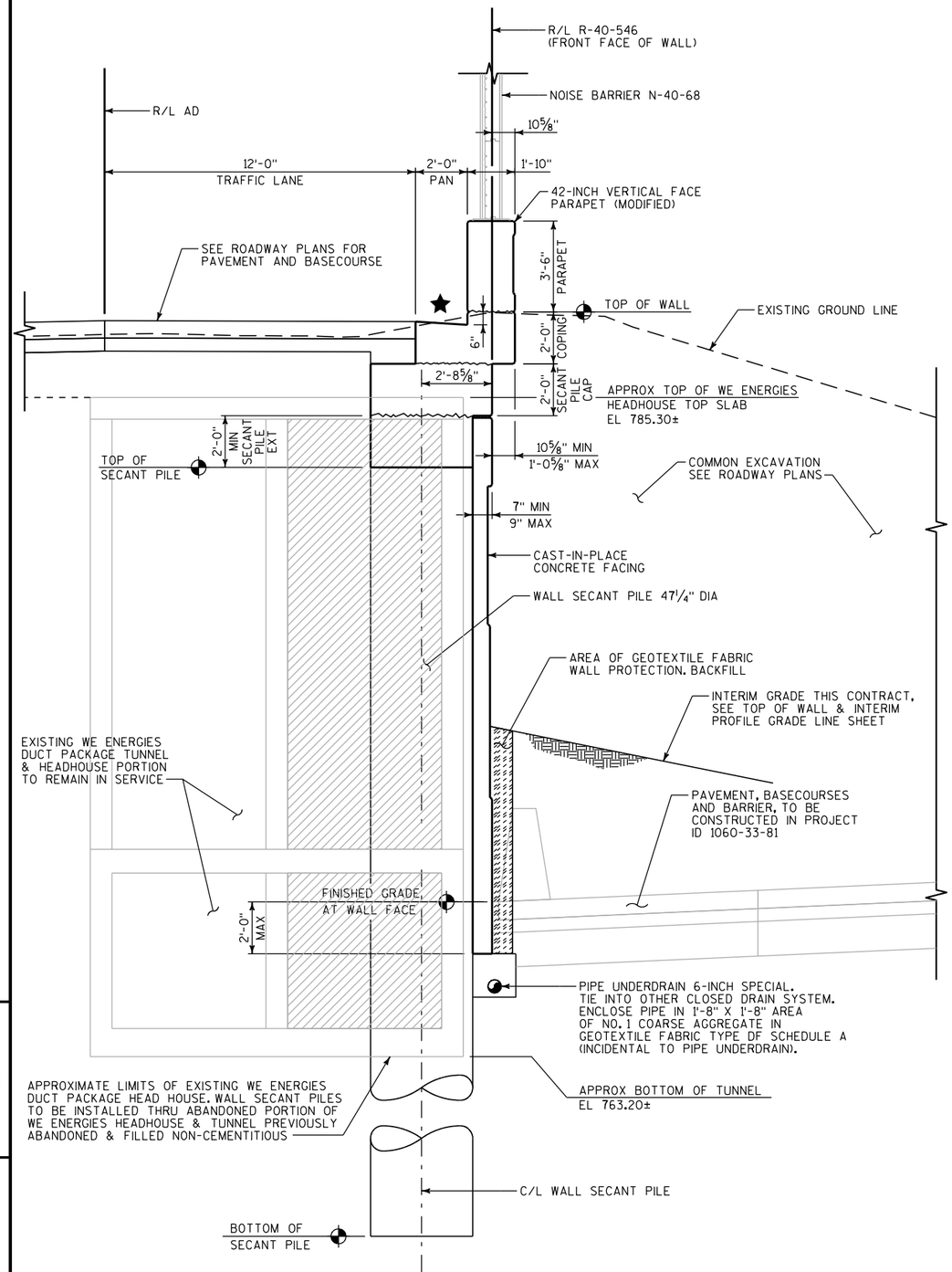
SHEET 10 OF 53

8

8

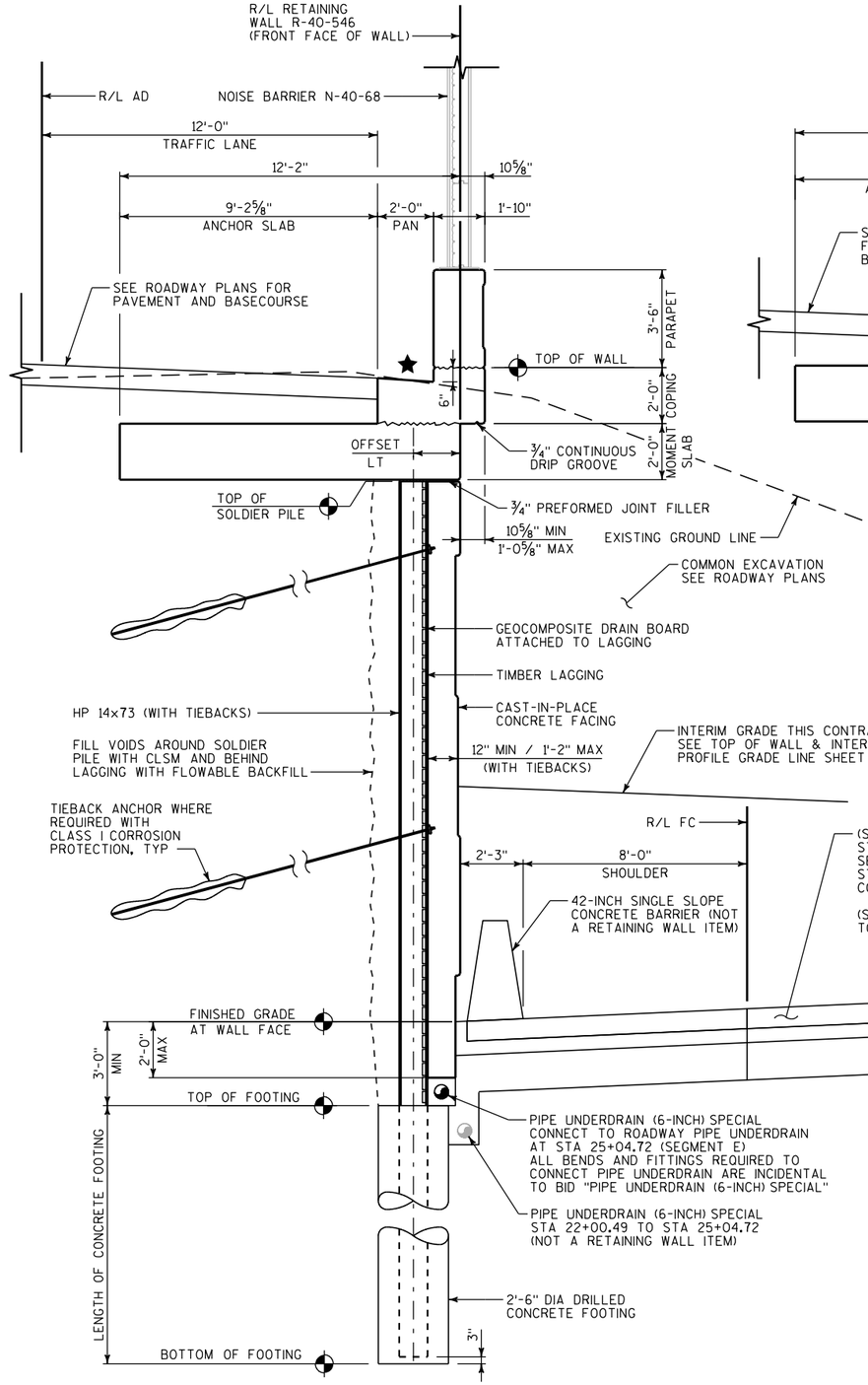
STATE PROJECT NUMBER

1060-33-80



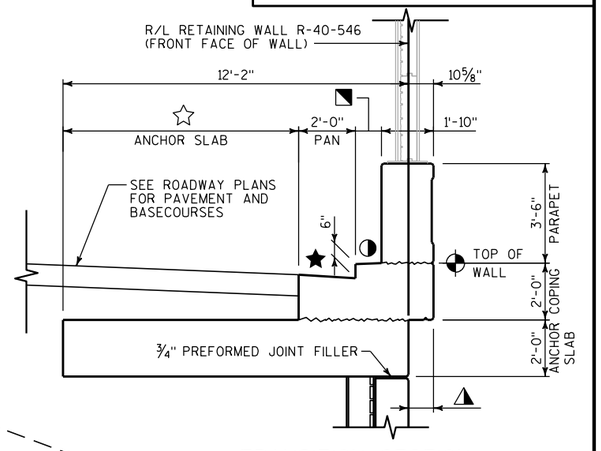
TYPICAL SECTION - UNIT 2 - SEGMENT F

LOOKING WEST
STA 26+57.99 TO STA 26+87.99



TYPICAL SECTION - UNIT 1 - SEGMENT E / UNIT 2 - SEGMENT G

LOOKING WEST
SEGMENT E - STA 22+00.49 TO STA 26+57.99
SEGMENT G - STA 26+87.99 TO STA 27+96.57



TRANSITION SECTION
UNIT 3 - SEGMENT G

LOOKING WEST - TRANSITION AREA
STA 27+71.08 TO STA 27+96.57

LEGEND

- VARIES 0" TO 1'-9¾" STA 27+81.54 TO 27+96.57
- VARIES 10⅝" TO 6" STA 27+71.08 TO STA 28+07.99
- VARIES 9'-2⅝" TO 7'-4⅞" STA 27+81.54 TO 27+96.57
- SLOPE PAN ¾" PER FOOT
- SLOPE 4% MAX

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

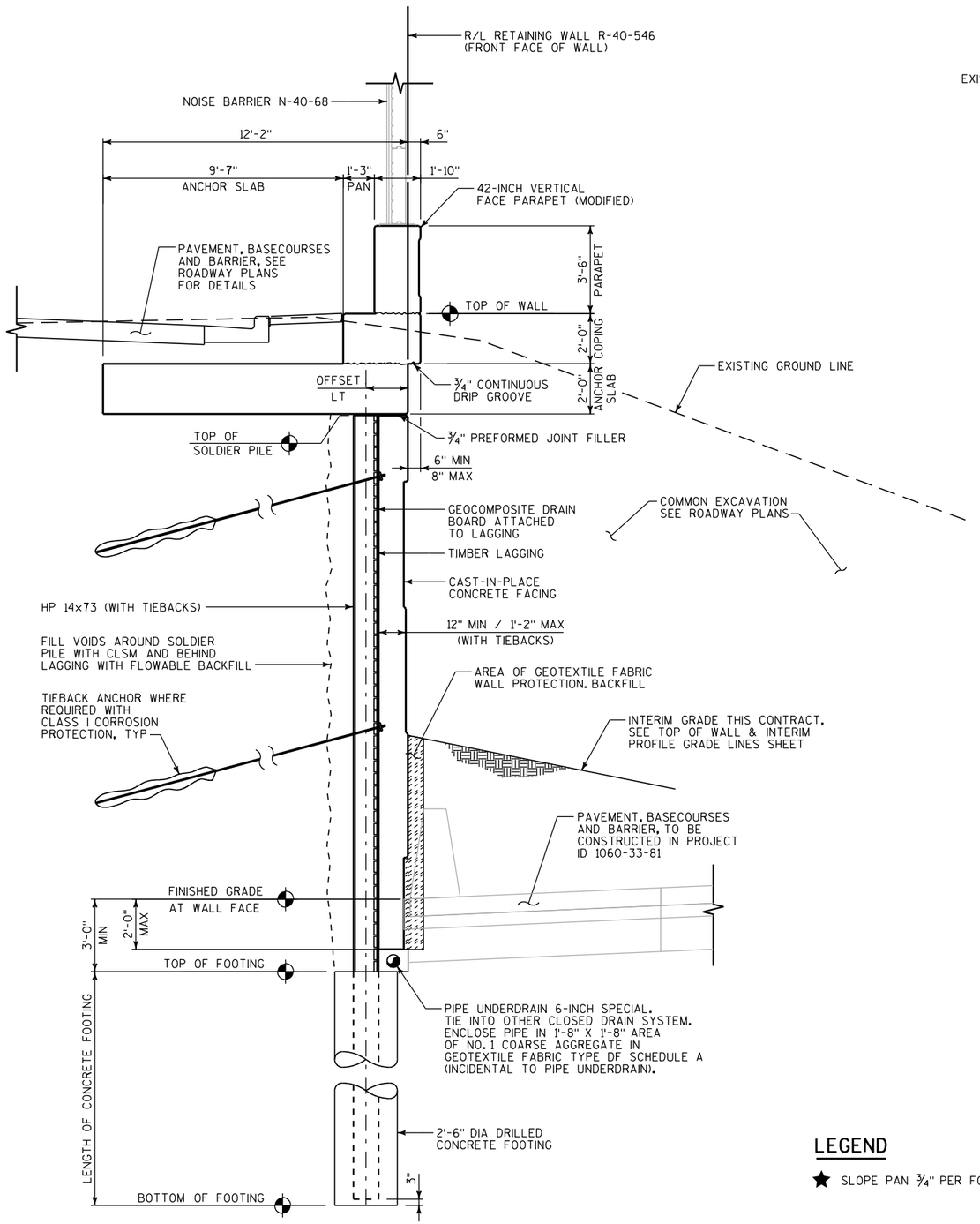
TYPICAL SECTIONS
(3 OF 4)

SHEET 11 OF 53

8

8

STATE PROJECT NUMBER
1060-33-80

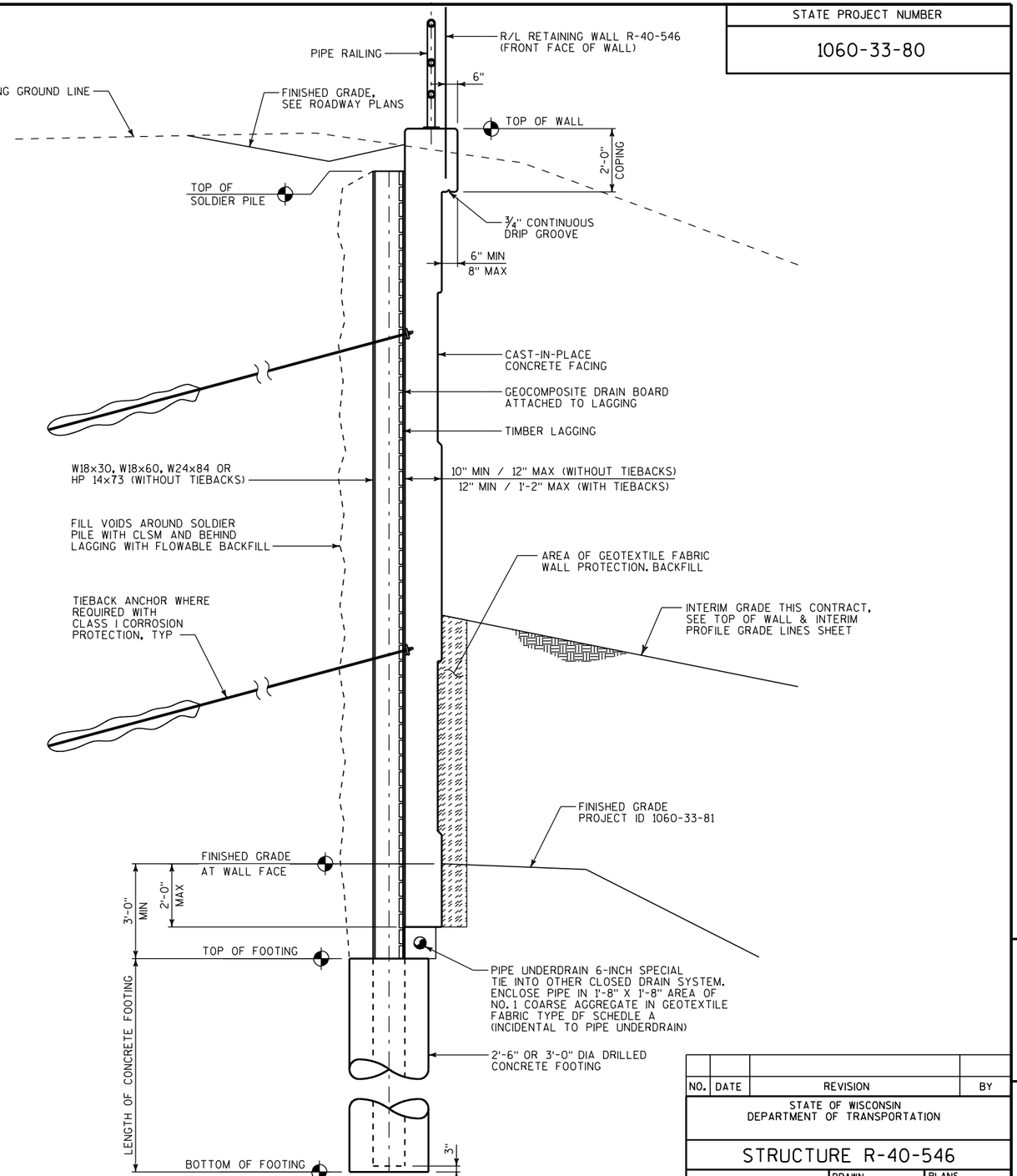


TYPICAL SECTION - UNIT 3 - SEGMENT G / SEGMENT H

LOOKING SOUTHWEST
SEGMENT G - STA 27+96.57 TO STA 28+07.99
SEGMENT H - STA 28+07.99 TO STA 28+37.99

LEGEND

★ SLOPE PAN ¾" PER FOOT



TYPICAL SECTION - UNIT 3 - SEGMENT J

LOOKING SOUTHWEST
STA 28+37.99 TO STA 30+70.49

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

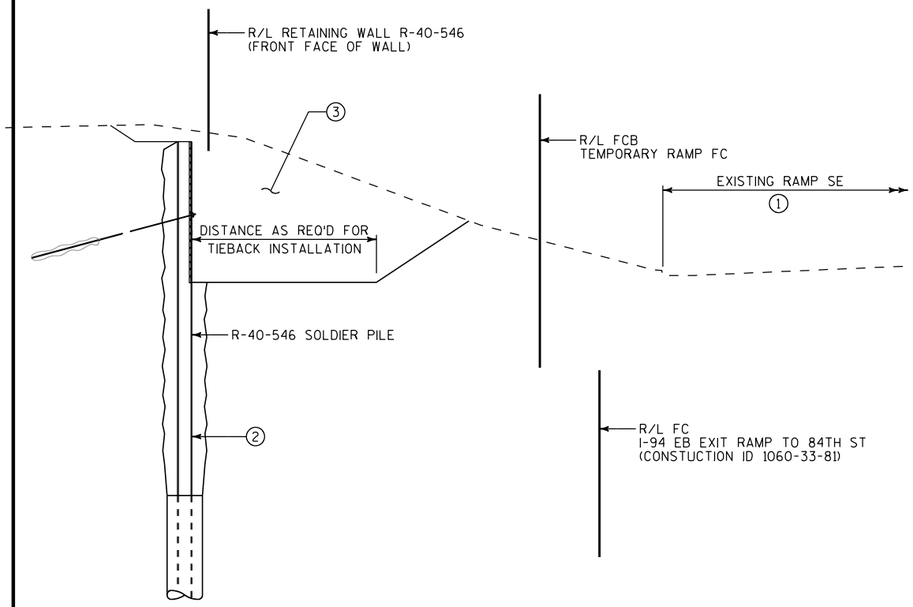
TYPICAL SECTIONS
(4 OF 4)

SHEET 12 OF 53

8

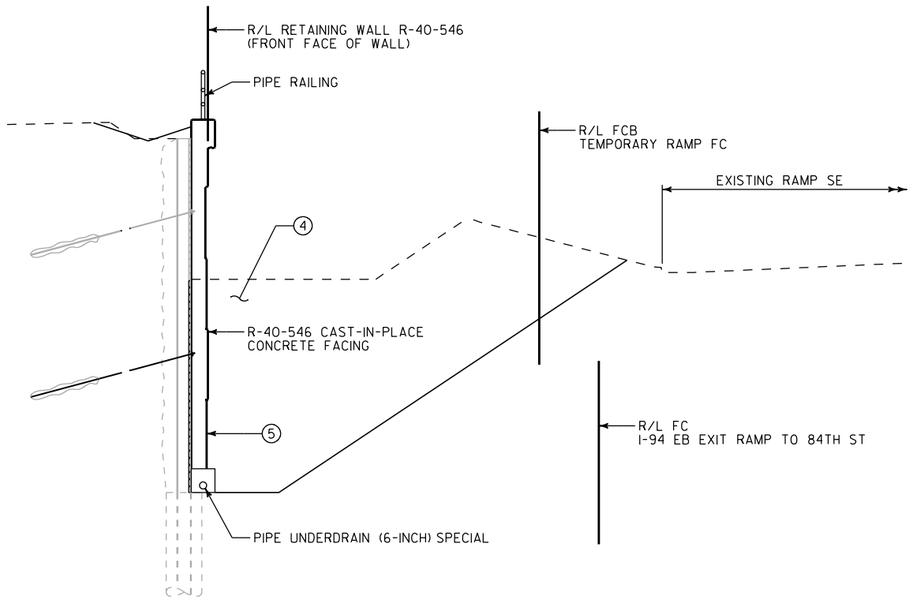
8

STATE PROJECT NUMBER
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TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 1

SEGMENT J - LOOKING WEST - STEPS 1, 2, 3



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 2

SEGMENT J - LOOKING WEST - STEPS 4, 5

PROPOSED CONSTRUCTION SEQUENCE

THE CONSTRUCTION SEQUENCE SHOWN IS A PROPOSED SEQUENCE AND THE CONTRACTOR MAY VARY THE SEQUENCE TO SUIT THEIR PROPOSED CONSTRUCTION METHODOLOGY.

PROPOSED CONSTRUCTION SEQUENCE 1 - ROADWAY STAGE 1B THRU 2C

1. EXISTING RAMP SE REMAINS OPEN TO TRAFFIC
2. INSTALL R-40-546 SOLDIER PILES.
3. INSTALL R-40-546 TIMBER LAGGING, EXCAVATE IN FRONT OF WALL AND INSTALL TIEBACK ANCHORS IN A TOP-DOWN MANNER.

PROPOSED CONSTRUCTION SEQUENCE 2 - ROADWAY STAGE 1B THRU 2C

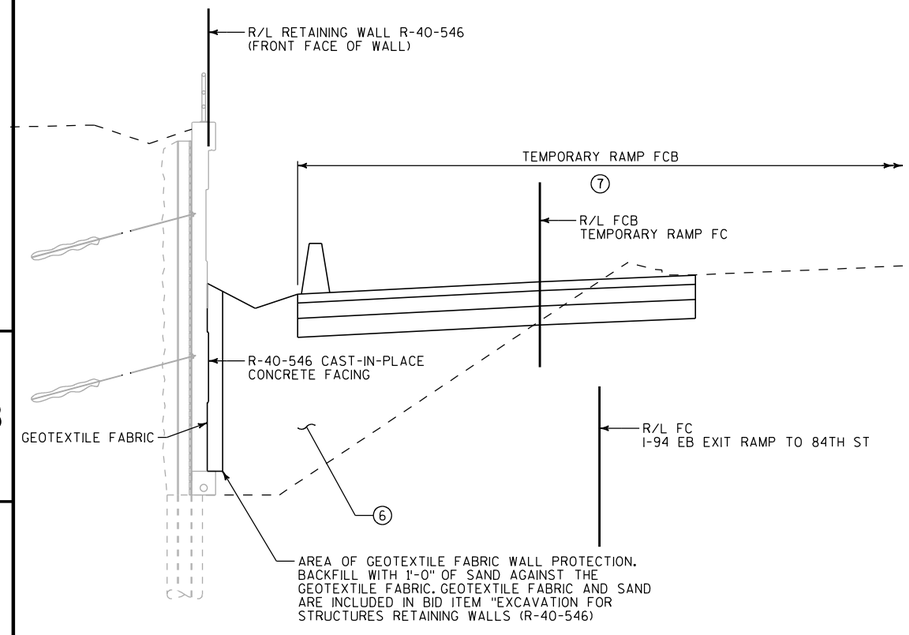
4. COMPLETE R-40-546 LAGGING, EXCAVATION AND TIEBACK INSTALLATION TO TOP OF FOOTING.
5. INSTALL R-40-546 CAST-IN-PLACE CONCRETE FACING AND MOMENT SLAB.

PROPOSED CONSTRUCTION SEQUENCE 3 - ROADWAY STAGE 3

6. INSTALL WALL PROTECTION, PLACE ROADWAY EMBANKMENT IN FRONT OF R-40-546 AND CONSTRUCT TEMPORARY RAMP FCB.
7. SHIFT EXISTING RAMP SE TRAFFIC TO TEMPORARY RAMP FCB.

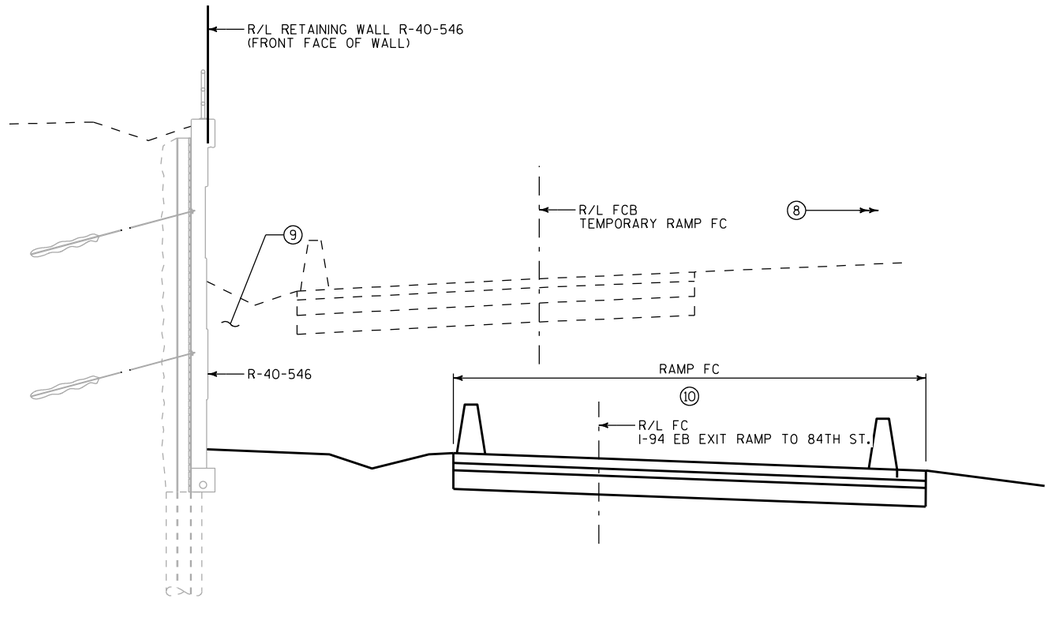
PROPOSED CONSTRUCTION SEQUENCE 4 - ROADWAY STAGE 4 THRU 5B

8. CONSTRUCT NEW RAMP SE, SHIFT TEMPORARY RAMP FCB TRAFFIC TO NEW RAMP SE.
9. DEMOLISH TEMPORARY RAMP FCB AND EXISTING RAMP SE, EXCAVATE IN FRONT OF R-40-546 TO FINAL GRADE, REMOVE WALL PROTECTION.
10. CONSTRUCT RAMP FC



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 3

SEGMENT J - LOOKING WEST - STEPS 6, 7



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE 4

SEGMENT J - LOOKING WEST - STEPS 8, 9, 10

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

CONSTRUCTION SEQUENCE

SHEET 13 OF 53

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STATE PROJECT NUMBER

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SOLDIER PILE DATA TABLE

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
1	10+03.75	1'-8⅞"	736.62	733.53	15'-6"	736.77	732.52	729.85	721.18	8'-8"	2'-6"	W18x35	11'-4"	---	---	---
2	10+11.25	1'-8⅞"	736.82	733.64	15'-5"	737.06	732.81	730.15	721.48	8'-8"	2'-6"	W18x35	11'-4"	---	---	---
3	10+18.75	1'-8⅞"	737.20	733.76	15'-6"	737.36	733.11	730.44	721.78	8'-8"	2'-6"	W18x35	11'-4"	---	---	---
4	10+26.25	1'-8⅞"	737.42	733.87	15'-5"	737.65	733.41	730.74	722.07	8'-8"	2'-6"	W18x35	11'-4"	---	---	---
5	10+33.75	1'-8⅞"	737.64	733.98	16'-8"	737.93	733.68	730.43	721.01	9'-5"	2'-6"	W18x35	12'-8"	---	---	---
6	10+41.25	1'-8⅞"	737.88	734.09	16'-8"	738.18	733.93	730.68	721.27	9'-5"	2'-6"	W18x35	12'-8"	---	---	---
7	10+48.75	1'-8⅞"	738.31	734.20	16'-10"	738.44	734.19	730.94	721.52	9'-5"	2'-6"	W18x35	12'-8"	---	---	---
8	10+56.25	1'-8⅞"	738.51	734.30	16'-9"	738.69	734.44	731.19	721.78	9'-5"	2'-6"	W18x35	12'-8"	---	---	---
9	10+63.75	1'-8⅞"	738.71	734.40	18'-1"	738.93	734.68	730.85	720.68	10'-2"	2'-6"	W18x35	14'-0"	---	---	---
10	10+71.25	1'-8⅞"	739.03	734.51	18'-2"	739.15	734.90	731.06	720.90	10'-2"	2'-6"	W18x35	14'-0"	---	---	---
11	10+78.75	1'-8⅞"	739.19	734.60	18'-1"	739.36	735.11	731.28	721.11	10'-2"	2'-6"	W18x35	14'-0"	---	---	---
12	10+86.25	1'-8⅞"	739.70	734.71	18'-5"	739.58	735.33	731.50	721.33	10'-2"	2'-6"	W18x35	14'-0"	---	---	---
13	10+93.75	1'-8⅞"	740.26	734.80	19'-10"	739.79	735.54	731.21	720.46	10'-9"	2'-6"	W18x35	15'-1"	---	---	---
14	11+01.25	1'-8⅞"	740.35	734.90	19'-9"	739.99	735.74	731.41	720.66	10'-9"	2'-6"	W18x35	15'-1"	---	---	---
15	11+08.75	1'-8⅞"	740.51	735.00	19'-8"	740.20	735.95	731.61	720.86	10'-9"	2'-6"	W18x35	15'-1"	---	---	---
16	11+16.25	1'-8⅞"	740.69	735.09	19'-8"	740.40	736.15	731.82	721.07	10'-9"	2'-6"	W18x35	15'-1"	---	---	---
17	11+23.75	1'-9⅛"	740.98	735.19	20'-8"	740.62	736.37	731.62	720.37	11'-3"	2'-6"	W18x60	16'-0"	---	---	---
18	11+31.25	1'-9⅛"	741.27	735.28	20'-8"	740.87	736.62	731.87	720.62	11'-3"	2'-6"	W18x60	16'-0"	---	---	---
19	11+38.75	1'-9⅛"	741.45	735.37	20'-7"	741.12	736.87	732.12	720.87	11'-3"	2'-6"	W18x60	16'-0"	---	---	---
20	11+46.25	1'-9⅛"	741.68	735.46	20'-7"	741.37	737.12	732.37	721.12	11'-3"	2'-6"	W18x60	16'-0"	---	---	---
21	11+53.75	1'-9⅛"	741.96	735.55	22'-1"	741.64	737.41	732.49	719.91	12'-7"	2'-6"	W18x60	17'-6"	---	---	---
22	11+61.25	1'-9⅛"	742.39	735.64	22'-6"	741.94	737.66	732.49	719.91	12'-7"	2'-6"	W18x60	17'-9"	---	---	---
23	11+68.75	1'-9⅛"	742.73	735.73	22'-10"	742.23	737.99	732.49	719.91	12'-7"	2'-6"	W18x60	18'-1"	---	---	---
24	11+76.25	1'-9⅛"	742.88	735.82	23'-0"	742.53	738.24	732.49	719.91	12'-7"	2'-6"	W18x60	18'-4"	---	---	---
25	11+83.75	1'-9⅛"	743.14	735.91	24'-1"	742.85	738.60	732.85	719.10	13'-9"	2'-6"	W18x60	19'-6"	---	---	---
26	11+91.25	1'-9⅛"	743.41	736.00	24'-4"	743.18	738.93	732.85	719.10	13'-9"	2'-6"	W18x60	19'-10"	---	---	---
27	11+98.75	1'-9⅛"	743.61	736.09	24'-7"	743.51	739.26	732.85	719.10	13'-9"	2'-6"	W18x60	20'-2"	---	---	---
28	12+06.25	1'-9⅛"	743.82	736.18	24'-9"	743.84	739.60	732.85	719.10	13'-9"	2'-6"	W18x60	20'-6"	---	---	---
29	12+13.75	2'-0 1/16"	744.00	736.27	25'-11"	744.18	739.93	733.18	718.09	15'-1"	3'-0"	W24x84	21'-10"	---	---	---
30	12+21.25	2'-0 1/16"	744.30	736.36	26'-3"	744.51	740.26	733.18	718.09	15'-1"	3'-0"	W24x84	22'-2"	---	---	---
31	12+28.75	2'-0 1/16"	744.69	736.45	26'-8"	744.85	740.59	733.18	718.09	15'-1"	3'-0"	W24x84	22'-6"	---	---	---
32	12+36.25	2'-0 1/16"	745.03	736.54	27'-0"	745.18	740.93	733.18	718.09	15'-1"	3'-0"	W24x84	22'-10"	---	---	---
33	12+43.75	2'-0 1/16"	745.30	736.63	28'-1"	745.51	741.27	733.52	717.27	16'-3"	3'-0"	W24x84	24'-0"	---	---	---
34	12+51.25	2'-0 1/16"	745.70	736.72	28'-6"	745.83	741.52	733.52	717.27	16'-3"	3'-0"	W24x84	24'-3"	---	---	---
35	12+58.75	2'-0 1/16"	746.01	736.81	28'-9"	746.14	741.85	733.52	717.27	16'-3"	3'-0"	W24x84	24'-7"	---	---	---
36	12+66.25	2'-0 1/16"	746.33	736.90	29'-1"	746.46	742.18	733.52	717.27	16'-3"	3'-0"	W24x84	24'-11"	---	---	---
37	12+73.75	2'-0 1/16"	746.64	736.99	30'-2"	746.77	742.54	733.87	716.54	17'-4"	3'-0"	W24x84	26'-0"	---	---	---
38	12+81.25	2'-0 1/16"	747.01	737.08	30'-6"	747.07	742.79	733.87	716.54	17'-4"	3'-0"	W24x84	26'-3"	---	---	---
39	12+88.75	2'-0 1/16"	747.29	737.17	30'-10"	747.37	743.12	733.87	716.54	17'-4"	3'-0"	W24x84	26'-7"	---	---	---
40	12+96.25	2'-0 1/16"	747.69	737.26	31'-2"	747.67	743.37	733.87	716.54	17'-4"	3'-0"	W24x84	26'-10"	---	---	---
41	13+03.75	2'-0 1/16"	747.89	737.35	31'-10"	747.96	743.65	734.24	716.07	18'-2"	3'-0"	W24x84	27'-7"	---	---	---
42	13+11.25	2'-0 1/16"	748.15	737.44	32'-2"	748.23	743.99	734.24	716.07	18'-2"	3'-0"	W24x84	27'-11"	---	---	---
43	13+18.75	2'-0 1/16"	748.33	737.53	32'-4"	748.50	744.24	734.24	716.07	18'-2"	3'-0"	W24x84	28'-2"	---	---	---
44	13+26.25	2'-0 1/16"	748.56	737.62	32'-6"	748.77	744.49	734.24	716.07	18'-2"	3'-0"	W24x84	28'-5"	---	---	---
45	13+33.75	2'-0 1/16"	749.11	737.71	33'-9"	749.04	744.73	734.57	715.40	19'-2"	3'-0"	W24x84	29'-4"	---	---	---
46	13+41.25	2'-0 1/16"	749.48	737.80	34'-1"	749.31	745.07	734.57	715.40	19'-2"	3'-0"	W24x84	29'-8"	---	---	---
47	13+48.75	2'-0 1/16"	749.89	737.89	34'-6"	749.58	745.32	734.57	715.40	19'-2"	3'-0"	W24x84	29'-11"	---	---	---
48	13+56.25	2'-0 1/16"	750.20	737.98	34'-10"	749.85	745.57	734.57	715.40	19'-2"	3'-0"	W24x84	30'-2"	---	---	---

SOLDIER PILE DATA TABLE

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
49	13+63.75	2'-0 1/16"	750.46	738.07	35'-7"	750.13	745.90	734.98	714.90	20'-1"	3'-0"	W24x84	31'-0"	---	---	---
50	13+71.25	2'-0 1/16"	750.93	738.16	36'-1"	750.43	746.15	734.98	714.90	20'-1"	3'-0"	W24x84	31'-3"	---	---	---
51	13+78.75	2'-0 1/16"	751.24	738.25	36'-5"	750.73	746.48	734.98	714.90	20'-1"	3'-0"	W24x84	31'-7"	---	---	---
52	13+86.25	2'-0 1/16"	751.60	738.34	36'-9"	751.03	746.73	734.98	714.90	20'-1"	3'-0"	W24x84	31'-10"	---	---	---
53	13+92.50	2'-0 1/16"	752.00	738.41	38'-2"	751.30	747.01	735.35	713.85	21'-6"	3'-0"	W24x84	33'-2"	---	---	---
54	13+97.50	2'-0 1/16"	752.34	738.47	38'-6"	751.54	747.26	735.35	713.85	21'-6"	3'-0"	W24x84	33'-5"	---	---	---
55	14+02.50	2'-0 1/16"	752.58	738.53	38'-9"	751.78	747.51	735.35	713.85	21'-6"	3'-0"	W24x84	33'-8"	---	---	---
56	14+07.50	2'-0 1/16"	752.87	738.59	39'-1"	752.01	747.76	735.35	713.85	21'-6"	3'-0"	W24x84	33'-11"	---	---	---
57	14+12.50	2'-0 1/16"	753.17	738.65	39'-4"	752.25	748.01	735.35	713.85	21'-6"	3'-0"	W24x84	34'-2"	---	---	---
58	14+17.50	2'-0 1/16"	753.44	738.71	39'-8"	752.49	748.18	735.35	713.85	21'-6"	3'-0"	W24x84	34'-4"	---	---	---
59	14+23.77	1'-8 13/16"	753.94	738.78	36'-3"	752.82	748.53	735.69	717.69	18'-0"	2'-6"	HP14x73	30'-10"	742.82	---	---
60	14+31.27	1'-8 13/16"	754.34	738.86	36'-8"	753.24	748.94	735.69	717.69	18'-0"	2'-6"	HP14x73	31'-3"	743.24	---	---
61	14+38.77	1'-8 13/16"	754.78	738.96	37'-2"	753.65	749.36	735.69	717.69	18'-0"	2'-6"	HP14x73	31'-8"	743.65	---	---
62	14+46.27	1'-8 13/16"	755.24	739.06	38'-5"	754.09	749.78	735.94	716.86	19'-1"	2'-6"	HP14x73	32'-11"	744.09	---	---
63	14+53.77	1'-8 13/16"	755.73	739.16	38'-11"	754.54	750.28	735.94	716.86	19'-1"	2'-6"	HP14x73	33'-5"	744.54	---	---
64	14+61.27	1'-8 13/16"	756.26	739.26	39'-5"	754.99	750.69	735.94	716.86	19'-1"	2'-6"	HP14x73	33'-10"	744.99	---	---
65	14+68.77	1'-8 13/16"	756.77	739.35	40'-8"	755.45	751.21	736.29	716.13	20'-2"	2'-6"	HP14x73	35'-1"	745.45	---	---
66	14+76.27	1'-8 13/16"	757.23	739.45	41'-2"	755.93	751.63	736.29	716.13	20'-2"	2'-6"	HP14x73	35'-6"	745.93	---	---
67	14+83.77	1'-8 13/16"	757.72	739.55	41'-8"	756.42	752.13	736.29	716.13	20'-2"	2'-6"	HP14x73	36'-0"	746.42	---	---
68	14+91.53	1'-8 13/16"	758.14	739.66	43'-0"	756.93	752.66	736.58	715.16	21'-5"	2'-6"	HP14x73	37'-6"	746.93	---	---
69	14+99.03	1'-8 13/16"	758.50	739.76	43'-5"	757.44	753.16	736.58	715.16	21'-5"	2'-6"	HP14x73	38'-0"	747.44	---	---
70	15+06.53	1'-8 13/16"	758.77	739.85	43'-8"	757.95	753.66	736.58	715.16	21'-5"	2'-6"	HP14x73	38'-6"	747.95	---	---
71	15+14.03	1'-8 13/16"	759.10	739.94	45'-7"	758.49	754.21	736.88	713.54	23'-4"	2'-6"	HP14x73	40'-8"	748.49	---	---
72	15+21.53	1'-8 13/16"	759.59	740.03	46'-1"	759.05	754.79	736.88	713.54	23'-4"	2'-6"	HP14x73	41'-3"	749.05	---	---
73	15+29.03	1'-8 13/16"	760.09	740.12	46'-7"	759.61	755.38	736.88	713.54	23'-4"	2'-6"	HP14x73	41'-10"	749.61	---	---
74	15+36.53	1'-8 13/16"	760.51	740.23	47'-0"	760.17	755.88	736.88	713.54	23'-4"	2'-6"	HP14x73	42'-4"	750.17	---	---
75	15+44.03	1'-8 13/16"	761.11	740.34	49'-2"	760.73	756.45	737.20	711.95	25'-3"	2'-6"	HP14x73	44'-6"	750.73	743.73	---
76	15+51.53	1'-8 13/16"	761.25	740.44	49'-4"	761.29	757.03	737.20	711.95	25'-3"	2'-6"	HP14x73	45'-1"	751.29	744.29	---
77	15+59.03	1'-8 13/16"	761.80	740.56	49'-11"	761.85	757.62	737.20	711.95	25'-3"	2'-6"	HP14x73	45'-8"	751.85	744.85	---
78	15+66.53	1'-8 13/16"	762.33	740.69	50'-5"	762.41	758.12	737.20	711.95	25'-3"	2'-6"	HP14x73	46'-2"	752.41	745.41	---
79	15+74.03	1'-8 13/16"	762.71	740.81	51'-9"	763.02	758.77	737.69	711.02	26'-8"	2'-6"	HP14x73	47'-9"	753.02	746.02	---
80	15+81.53	1'-8 13/16"	763.14	740.94	52'-2"	763.67	759.44	737.69	711.02	26'-8"	2'-6"	HP14x73	48'-5"	753.67	746.67	---
81	15+89.03	1'-8 13/16"	763.57	741.07	52'-7"	764.32	760.02	737.69	711.02	26'-8"	2'-6"	HP14x73	49'-0"	754.32	747.32	---
82	15+98.43	1'-8 13/16"	763.90	741.25	37'-7"	754.86	753.11	738.11	726.36	11'-9"	2'-6"	HP14x73	26'-9"	748.86	---	---
83	16+04.72	1'-8 13/16"	764.24	741.37	37'-11"	754.86	753.11	738.11	726.36	11'-9"	2'-6"	HP14x73	26'-9"	748.86	---	---
84	16+11.01	1'-8 13/16"	764.13	741.50	37'-10"	754.86	753.11	738.11	726.36	11'-9"	2'-6"	HP14x73	26'-9"	748.86	---	---
85	16+17.30	1'-8 13/16"	764.23	741.64	37'-11"	754.86	753.11	738.11	726.36	11'-9"	2'-6"	HP14x73	26'-9"	748.86	---	---

KNOWN OBSTRUCTION LEGEND

(1) ABANDONED WE ENERGIES ELECTRICAL TUNNEL, SEE SOLDIER PILE DATA TABLES (4 OF 4) FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SOLDIER PILE DATA TABLES (1 OF 4)

SHEET 14 OF 53

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080301_da.dgn PLOT DATE : 01-MAY-2014 12:55 PLOT BY : MSCEKM PLOT NAME : R546_080301_da PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

SOLDIER PILE DATA TABLE (CONTINUED)

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
86	16+23.60	1'-8 13/16 "	764.27	741.74	36'-11"	754.86	753.11	738.69	727.36	11'-4"	2'-6"	HP14x73	25'-9"	748.86	---	---
87	16+29.89	1'-8 13/16 "	764.37	741.88	37'-1"	754.86	753.11	738.69	727.36	11'-4"	2'-6"	HP14x73	25'-9"	748.86	---	---
88	16+36.18	1'-8 13/16 "	764.47	742.02	37'-2"	754.86	753.11	738.69	727.36	11'-4"	2'-6"	HP14x73	25'-9"	748.86	---	---
89	16+42.47	1'-8 13/16 "	764.64	742.16	37'-4"	754.86	753.11	738.69	727.36	11'-4"	2'-6"	HP14x73	25'-9"	748.86	---	---
90	16+48.76	1'-8 13/16 "	764.80	742.31	36'-8"	754.86	753.11	739.19	728.19	11'-0"	2'-6"	HP14x73	24'-11"	748.86	---	---
91	16+55.05	1'-8 13/16 "	764.92	742.47	36'-9"	754.86	753.11	739.19	728.19	11'-0"	2'-6"	HP14x73	24'-11"	748.86	---	---
92	16+61.35	1'-8 13/16 "	765.08	742.62	36'-11"	754.86	753.11	739.19	728.19	11'-0"	2'-6"	HP14x73	24'-11"	748.86	---	---
93	16+67.64	1'-8 13/16 "	765.22	742.77	37'-1"	754.86	753.11	739.19	728.19	11'-0"	2'-6"	HP14x73	24'-11"	748.86	---	---
94	16+73.93	1'-8 13/16 "	765.33	742.94	36'-0"	754.86	753.11	739.86	729.36	10'-6"	2'-6"	HP14x73	23'-9"	748.86	---	---
95	16+80.22	1'-8 13/16 "	765.80	743.10	36'-6"	754.86	753.11	739.86	729.36	10'-6"	2'-6"	HP14x73	23'-9"	748.86	---	---
96	16+86.51	1'-8 13/16 "	766.01	743.26	36'-8"	754.86	753.11	739.86	729.36	10'-6"	2'-6"	HP14x73	23'-9"	748.86	---	---
97	16+94.24	1'-8 13/16 "	766.55	743.48	54'-9"	766.31	762.06	740.39	711.81	28'-7"	2'-6"	HP14x73	50'-3"	757.31	749.31	---
98	17+01.74	1'-8 13/16 "	767.19	743.69	55'-2"	766.55	762.30	740.63	712.05	28'-7"	2'-6"	HP14x73	50'-3"	757.55	749.55	---
99	17+09.24	1'-8 13/16 "	767.63	743.91	55'-5"	766.79	762.54	740.87	712.29	28'-7"	2'-6"	HP14x73	50'-3"	757.79	749.79	---
100	17+16.74	1'-8 13/16 "	767.98	744.12	55'-6"	767.03	762.78	741.11	712.53	28'-7"	2'-6"	HP14x73	50'-3"	758.03	750.03	---
101	17+24.24	1'-8 13/16 "	768.43	744.35	56'-6"	767.32	763.07	740.99	711.99	29'-0"	2'-6"	HP14x73	51'-1"	758.32	750.32	---
102	17+31.74	1'-8 13/16 "	768.86	744.58	56'-7"	767.66	763.41	741.32	712.32	29'-0"	2'-6"	HP14x73	51'-1"	758.66	750.66	---
103	17+39.24	1'-8 13/16 "	769.26	744.81	56'-8"	767.99	763.74	741.66	712.66	29'-0"	2'-6"	HP14x73	51'-1"	758.99	750.99	---
104	17+46.74	1'-8 13/16 "	769.59	745.05	56'-8"	768.33	764.08	742.00	713.00	29'-0"	2'-6"	HP14x73	51'-1"	759.33	751.33	---
105	17+54.24	1'-8 13/16 "	770.03	745.29	58'-3"	768.72	764.47	741.64	711.80	29'-10"	2'-6"	HP14x73	52'-8"	759.72	751.72	---
106	17+61.74	1'-8 13/16 "	770.19	745.54	58'-0"	769.16	764.91	742.08	712.25	29'-10"	2'-6"	HP14x73	52'-8"	760.16	752.16	---
107	17+69.24	1'-8 13/16 "	770.56	745.79	57'-11"	769.61	765.36	742.52	712.69	29'-10"	2'-6"	HP14x73	52'-8"	760.61	752.61	---
108	17+76.74	1'-8 13/16 "	771.02	746.06	57'-11"	770.05	765.80	742.97	713.13	29'-10"	2'-6"	HP14x73	52'-8"	761.05	753.05	---
109	17+84.24	1'-8 13/16 "	771.58	746.32	59'-6"	770.49	766.24	742.74	712.16	30'-7"	2'-6"	HP14x73	54'-1"	761.49	753.49	---
110	17+91.74	1'-8 13/16 "	771.92	746.59	59'-4"	770.93	766.68	743.18	712.59	30'-7"	2'-6"	HP14x73	54'-1"	761.93	753.93	---
111	17+99.24	1'-8 13/16 "	772.32	746.86	59'-4"	771.37	767.12	743.62	713.03	30'-7"	2'-6"	HP14x73	54'-1"	762.37	754.37	---
112	18+06.74	1'-8 13/16 "	772.81	747.14	59'-5"	771.81	767.56	744.06	713.47	30'-7"	2'-6"	HP14x73	54'-1"	762.81	754.81	---
113	18+14.24	1'-8 13/16 "	773.28	747.43	60'-7"	772.25	768.00	743.91	712.75	31'-2"	2'-6"	HP14x73	55'-3"	763.25	755.25	---
114	18+21.74	1'-8 13/16 "	773.68	747.71	60'-7"	772.68	768.43	744.34	713.18	31'-2"	2'-6"	HP14x73	55'-3"	763.68	755.68	---
115	18+29.24	1'-8 13/16 "	773.93	748.00	60'-4"	773.11	768.86	744.77	713.61	31'-2"	2'-6"	HP14x73	55'-3"	764.11	756.11	---
116	18+36.74	1'-8 13/16 "	774.24	748.31	60'-3"	773.54	769.29	745.21	714.04	31'-2"	2'-6"	HP14x73	55'-3"	764.54	756.54	---
117	18+44.24	1'-8 13/16 "	774.46	748.61	58'-2"	773.96	769.71	745.21	716.37	28'-10"	2'-6"	HP14x73	53'-4"	764.96	756.96	---
118	18+51.74	1'-8 13/16 "	775.02	748.91	58'-3"	774.38	770.12	745.62	716.79	28'-10"	2'-6"	HP14x73	53'-4"	765.38	757.38	---
119	18+59.24	1'-8 13/16 "	775.32	749.21	58'-2"	774.79	770.54	746.04	717.21	28'-10"	2'-6"	HP14x73	53'-4"	765.79	757.79	---
120	18+66.74	1'-8 13/16 "	775.46	749.51	57'-11"	775.21	770.96	746.46	717.62	28'-10"	2'-6"	HP14x73	53'-4"	766.21	758.21	---
121	18+74.24	1'-8 13/16 "	775.89	749.81	58'-10"	775.62	771.37	746.37	717.12	29'-3"	2'-6"	HP14x73	54'-3"	766.62	758.62	---
122	18+81.74	1'-8 13/16 "	776.43	750.11	58'-11"	776.03	771.78	746.78	717.53	29'-3"	2'-6"	HP14x73	54'-3"	767.03	759.03	---
123	18+89.24	1'-8 13/16 "	776.82	750.41	58'-11"	776.44	772.19	747.19	717.94	29'-3"	2'-6"	HP14x73	54'-3"	767.44	759.44	---
124	18+96.74	1'-8 13/16 "	777.27	750.71	59'-0"	776.85	772.60	747.60	718.35	29'-3"	2'-6"	HP14x73	54'-3"	767.85	759.85	---
125	19+04.24	1'-8 13/16 "	777.80	751.01	59'-11"	777.25	773.00	747.59	717.92	29'-8"	2'-6"	HP14x73	55'-1"	768.25	760.25	---
126	19+11.74	1'-8 13/16 "	778.37	751.31	60'-1"	777.66	773.41	748.00	718.33	29'-8"	2'-6"	HP14x73	55'-1"	768.66	760.66	---
127	19+19.24	1'-8 13/16 "	778.77	751.61	60'-1"	778.07	773.82	748.41	718.74	29'-8"	2'-6"	HP14x73	55'-1"	769.07	761.07	---
128	19+26.74	1'-8 13/16 "	779.19	751.91	60'-1"	778.48	774.23	748.81	719.15	29'-8"	2'-6"	HP14x73	55'-1"	769.48	761.48	---
129	19+34.24	1'-8 13/16 "	779.36	752.21	60'-8"	778.89	774.64	748.80	718.72	30'-1"	2'-6"	HP14x73	55'-11"	769.89	761.89	---
130	19+41.74	1'-8 13/16 "	779.62	752.51	60'-6"	779.30	775.05	749.22	719.14	30'-1"	2'-6"	HP14x73	55'-11"	770.30	762.30	---
131	19+49.24	1'-8 13/16 "	780.10	752.81	60'-7"	779.72	775.47	749.64	719.55	30'-1"	2'-6"	HP14x73	55'-11"	770.72	762.72	---
132	19+56.74	1'-8 13/16 "	780.57	753.11	60'-8"	780.13	775.89	750.05	719.97	30'-1"	2'-6"	HP14x73	55'-11"	771.13	763.13	---
133	19+64.24	1'-8 13/16 "	781.02	753.41	61'-9"	780.55	776.30	749.97	719.30	30'-8"	2'-6"	HP14x73	57'-0"	771.55	763.55	---

SOLDIER PILE DATA TABLE (CONTINUED)

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
134	19+71.74	1'-8 13/16 "	781.46	753.71	61'-9"	780.98	776.73	750.39	719.73	30'-8"	2'-6"	HP14x73	57'-0"	771.98	763.98	---
135	19+79.24	1'-8 13/16 "	781.83	754.01	61'-9"	781.40	777.15	750.82	720.15	30'-8"	2'-6"	HP14x73	57'-0"	772.40	764.40	---
136	19+86.74	1'-8 13/16 "	782.23	754.31	61'-8"	781.83	777.57	751.24	720.57	30'-8"	2'-6"	HP14x73	57'-0"	772.83	764.83	---
137	19+94.24	1'-8 13/16 "	782.60	754.61	53'-4"	782.25	777.99	751.16	729.33	21'-10"	2'-6"	HP14x73	48'-8"	773.25	765.25	---
138	20+01.74	1'-8 13/16 "	782.94	754.91	53'-3"	782.66	778.40	751.57	729.74	21'-10"	2'-6"	HP14x73	48'-8"	773.66	765.66	---
139	20+09.24	1'-8 13/16 "	783.41	755.21	53'-4"	783.07	778.81	751.98	730.15	21'-10"	2'-6"	HP14x73	48'-8"	774.07	766.07	---
140	20+16.74	1'-8 13/16 "	783.80	755.51	53'-3"	783.48	779.22	752.39	730.55	21'-10"	2'-6"	HP14x73	48'-8"	774.48	766.48	---
141	20+24.24	1'-8 13/16 "	784.13	755.81	53'-8"	783.86	779.61	752.53	730.53	22'-0"	2'-6"	HP14x73	49'-1"	774.86	766.86	---
142	20+31.74	1'-8 13/16 "	784.40	756.11	53'-7"	784.23	779.98	752.89	730.89	22'-0"	2'-6"	HP14x73	49'-1"	775.23	767.23	---
143	20+39.24	1'-8 13/16 "	784.60	756.41	53'-5"	784.59	780.34	753.26	731.26	22'-0"	2'-6"	HP14x73	49'-1"	775.59	767.59	---
144	20+46.74	1'-8 13/16 "	785.00	756.71	53'-5"	784.96	780.70	753.62	731.62	22'-0"	2'-6"	HP14x73	49'-1"	775.96	767.96	---
145	20+54.24	1'-8 13/16 "	785.44	757.01	50'-5"	785.28	781.03	753.94	735.11	18'-10"	2'-6"	HP14x73	45'-11"	776.28	768.28	---
146	20+61.74	1'-8 13/16 "	785.74	757.30	50'-5"	785.55	781.30	754.22	735.38	18'-10"	2'-6"	HP14x73	45'-11"	776.55	768.55	---
147	20+69.24	1'-8 13/16 "	786.01	757.60	50'-5"	785.83	781.57	754.49	735.66	18'-10"	2'-6"	HP14x73	45'-11"	776.83	768.83	---
148	20+76.74	1'-8 13/16 "	786.30	757.89	50'-5"	786.10	781.85	754.76	735.93	18'-10"	2'-6"	HP14x73	45'-11"	777.10	769.10	---
149	20+84.24	1'-8 13/16 "	786.58	758.17	50'-5"	786.37	782.12	755.03	736.20	18'-10"	2'-6"	HP14x73	45'-11"	777.37	769.37	---
150	20+91.74	1'-8 13/16 "	786.85	758.45	50'-5"	786.62	782.37	755.28	736.45	18'-10"	2'-6"	HP14x73	45'-11"	777.62	769.62	---
151	20+99.24	1'-8 13/16 "	787.08	758.72	50'-5"	786.85	782.60	755.52	736.69	18'-10"	2'-6"	HP14x73	45'-11"	777.85	769.85	---
152	21+06.74	1'-8 13/16 "	787.37	759.00	50'-6"	787.08	782.83	755.74	736.91	18'-10"	2'-6"	HP14x73	45'-11"	778.08	770.08	---
153	21+14.24	1'-8 13/16 "	787.61	759.26	50'-6"	787.29	783.04	755.95	737.12	18'-10"	2'-6"	HP14x73	45'-11"	778.29	770.29	---
154	21+21.74	1'-8 13/16 "	787.80	759.53	50'-6"	787.48	783.23	756.14	737.31	18'-10"	2'-6"	HP14x73	45'-11"	778.48	770.48	---
155	21+29.24	1'-8 13/16 "	788.01	759.78	50'-7"	787.65	783.40	756.32	737.49	18'-10"	2'-6"	HP14x73	45'-11"	778.65	770.65	---
156	21+36.74	1'-8 13/16 "	788.25	760.03	50'-8"	787.82	783.57	756.48	737.65	18'-10"	2'-6"	HP14x73	45'-11"	778.82	770.82	---
157	21+44.24	1'-8 13/16 "	788.35	760.29	49'-8"	787.97	783.72	757.22	738.72	18'-6"	2'-6"	HP14x73	45'-0"	778.97	770.97	---
158	21+51.74	1'-8 13/16 "	788.57	760.54	49'-9"	788.10	783.85	757.35	738.85	18'-6"	2'-6"	HP14x73	45'-0"	779.10	771.10	---
159	21+59.24	1'-8 13/16 "	788.70	760.78	49'-9"	788.24	783.99	757.49	738.99	18'-6"	2'-6"	HP14x73	45'-0"	779.24	771.24	---
160	21+66.74	1'-8 13/16 "	788.81	761.01	49'-9"	788.37	784.12	757.62	739.12	18'-6"	2'-6"	HP14x73	45'-0"	779.37	771.37	---
161	21+74.24	1'-8 13/16 "	788.84	761.25	49'-0"	788.50	784.25	758.16	739.91	18'-3"	2'-6"	HP14x73	44'-4"	779.50	771.50	---
162	21+81.74	1'-8 13/16 "	788.86	761.48	48'-10"	788.63	784.38	758.30	740.05	18'-3"	2'-6"	HP14x73	44'-4"	779.63	771.63	---
163	21+89.24	1'-8 13/16 "	788.86	761.70	48'-9"	788.77	784.52	758.43	740.18	18'-3"	2'-6"	HP14x73	44'-4"	779.77	771.77	---
164	21+96.74	1'-8 13/16 "	788.53	761.93	48'-3"	788.90	784.65	758.56	740.31	18'-3"	2'-6"	HP14x73	44'-4"	779.90	771.90	---
165	22+04.24	1'-8 13/16 "	788.20	762.14	47'-2"	789.02	784.77	759.10	741.10	18'-0"	2'-6"	HP14x73	43'-8"	780.02	772.02	---
166	22+11.74	1'-8 13/16 "	788.37	762.36	47'-2"	789.13	784.88	759.22	741.22	18'-0"	2'-6"	HP14x73	43'-8"	778.13	771.13	---
167	22+19.24	1'-8 13/16 "	788.44	762.57	47'-2"	789.24	784.99	759.33	741.33	18'-0"	2'-6"	HP14x73	43'-8"	778.24	771.24	---
168	22+26.74	1'-8 13/16 "	788.47	762.78	47'-1"	789.35	785.10	759.43	741.43	18'-0"	2'-6"	HP14x73	43'-8"	778.35	771.35	---
169	22+34.24	1'-8 13/16 "	788.54	762.97	46'-7"	789.45	785.20	759.86	742.03	17'-10"	2'-6"	HP14x73	43'-2"	778.45	771.45	---
170	22+41.74	1'-8 13/16 "	788.55	763.17	46'-6"	789.54	785.29	759.95	742.12	17'-10"	2'-6"	HP14x73	43'-2"	778.54	771.54	---
171	22+49.24	1'-8 13/16 "	788.64	763.37	46'-6"	789.62	785.37	760.04	742.20	17'-10"	2'-6"	HP14x73	43'-2"	778.62	771.62	---

KNOWN OBSTRUCTION LEGEND

(1) ABANDONED WE ENERGIES ELECTRICAL TUNNEL, SEE SOLDIER PILE DATA TABLES (4 OF 4) FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SOLDIER PILE DATA TABLES (2 OF 4)

SHEET 15 OF 53

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STATE PROJECT NUMBER
1060-33-80

SOLDIER PILE DATA TABLE (CONTINUED)

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
172	22+56.74	1'-8 13/16"	788.70	763.55	46'-5"	789.70	785.45	760.11	742.28	17'-10"	2'-6"	HP14x73	43'-2"	778.70	771.70	---
173	22+64.24	1'-8 13/16"	788.73	763.73	45'-7"	789.77	785.52	760.69	743.19	17'-6"	2'-6"	HP14x73	42'-4"	778.77	771.77	---
174	22+71.74	1'-8 13/16"	788.74	763.92	45'-6"	789.84	785.59	760.75	743.25	17'-6"	2'-6"	HP14x73	42'-4"	778.84	771.84	---
175	22+79.24	1'-8 13/16"	788.78	764.09	45'-6"	789.90	785.65	760.81	743.31	17'-6"	2'-6"	HP14x73	42'-4"	778.90	771.90	---
176	22+86.74	1'-8 13/16"	788.79	764.27	45'-5"	789.95	785.70	760.87	743.37	17'-6"	2'-6"	HP14x73	42'-4"	778.95	771.95	---
177	22+94.24	1'-8 13/16"	788.83	764.43	44'-9"	790.00	785.75	761.34	744.09	17'-3"	2'-6"	HP14x73	41'-8"	779.00	772.00	---
178	23+01.74	1'-8 13/16"	788.86	764.60	44'-9"	790.05	785.80	761.38	744.13	17'-3"	2'-6"	HP14x73	41'-8"	779.05	772.05	---
179	23+09.24	1'-8 13/16"	788.93	764.76	44'-10"	790.08	785.83	761.42	744.17	17'-3"	2'-6"	HP14x73	41'-8"	779.08	772.08	---
180	23+16.74	1'-8 13/16"	789.00	764.92	44'-10"	790.11	785.86	761.44	744.19	17'-3"	2'-6"	HP14x73	41'-8"	779.11	772.11	---
181	23+24.24	1'-8 13/16"	789.07	765.07	44'-1"	790.13	785.88	761.96	745.05	16'-11"	2'-6"	HP14x73	40'-10"	779.13	772.13	---
182	23+31.74	1'-8 13/16"	789.13	765.22	44'-1"	790.15	785.90	761.98	745.06	16'-11"	2'-6"	HP14x73	40'-10"	779.15	772.15	---
183	23+39.24	1'-8 13/16"	789.19	765.35	44'-2"	790.16	785.91	762.00	745.08	16'-11"	2'-6"	HP14x73	40'-10"	779.16	772.16	---
184	23+46.74	1'-8 13/16"	789.25	765.49	44'-2"	790.17	785.92	762.00	745.08	16'-11"	2'-6"	HP14x73	40'-10"	779.17	772.17	---
185	23+54.24	1'-8 13/16"	789.26	765.63	43'-6"	790.17	785.91	762.50	745.83	16'-8"	2'-6"	HP14x73	40'-1"	779.17	772.17	---
186	23+61.74	1'-8 13/16"	789.29	765.76	43'-6"	790.16	785.90	762.49	745.82	16'-8"	2'-6"	HP14x73	40'-1"	779.16	772.16	---
187	23+69.24	1'-8 13/16"	789.36	765.88	43'-7"	790.14	785.89	762.47	745.81	16'-8"	2'-6"	HP14x73	40'-1"	779.14	772.14	---
188	23+76.74	1'-8 13/16"	789.41	766.01	43'-8"	790.12	785.87	762.46	745.79	16'-8"	2'-6"	HP14x73	40'-1"	779.12	772.12	---
189	23+84.24	1'-8 13/16"	789.44	766.13	42'-9"	790.09	785.84	763.01	746.76	16'-3"	2'-6"	HP14x73	39'-1"	779.09	772.09	---
190	23+91.74	1'-8 13/16"	789.45	766.24	42'-9"	790.06	785.81	762.98	746.73	16'-3"	2'-6"	HP14x73	39'-1"	779.06	772.06	---
191	23+99.24	1'-8 13/16"	789.51	766.35	42'-10"	790.02	785.77	762.93	746.68	16'-3"	2'-6"	HP14x73	39'-1"	779.02	772.02	---
192	24+06.74	1'-8 13/16"	789.57	766.44	43'-0"	789.97	785.72	762.89	746.64	16'-3"	2'-6"	HP14x73	39'-1"	778.97	771.97	---
193	24+14.24	1'-8 13/16"	789.64	766.54	42'-2"	789.92	785.67	763.42	747.51	15'-11"	2'-6"	HP14x73	38'-2"	778.92	771.92	---
194	24+21.74	1'-8 13/16"	789.75	766.64	42'-4"	789.87	785.62	763.37	747.45	15'-11"	2'-6"	HP14x73	38'-2"	778.87	771.87	---
195	24+29.24	1'-8 13/16"	789.80	766.73	42'-5"	789.81	785.55	763.30	747.39	15'-11"	2'-6"	HP14x73	38'-2"	778.81	771.81	---
196	24+36.74	1'-8 13/16"	789.85	766.82	42'-7"	789.74	785.48	763.23	747.32	15'-11"	2'-6"	HP14x73	38'-2"	778.74	771.74	---
197	24+44.24	1'-8 13/16"	789.80	766.91	41'-6"	789.66	785.41	763.83	748.33	15'-6"	2'-6"	HP14x73	37'-1"	778.66	771.66	---
198	24+51.74	1'-8 13/16"	789.79	766.99	41'-7"	789.59	785.34	763.75	748.25	15'-6"	2'-6"	HP14x73	37'-1"	778.59	771.59	---
199	24+59.24	1'-8 13/16"	789.82	767.07	41'-8"	789.51	785.26	763.68	748.18	15'-6"	2'-6"	HP14x73	37'-1"	778.51	771.51	---
200	24+66.74	1'-8 13/16"	789.76	767.15	41'-8"	789.44	785.19	763.60	748.10	15'-6"	2'-6"	HP14x73	37'-1"	778.44	771.44	---
201	24+74.24	1'-8 13/16"	789.69	767.21	40'-9"	789.37	785.11	764.11	748.95	15'-2"	2'-6"	HP14x73	36'-2"	778.37	771.37	---
202	24+81.74	1'-8 13/16"	789.70	767.27	40'-10"	789.30	785.04	764.04	748.88	15'-2"	2'-6"	HP14x73	36'-2"	778.30	771.30	---
203	24+89.24	1'-8 13/16"	789.81	767.34	41'-1"	789.22	784.97	763.97	748.81	15'-2"	2'-6"	HP14x73	36'-2"	778.22	771.22	---
204	24+96.74	1'-8 13/16"	789.82	767.39	41'-2"	789.15	784.90	763.90	748.73	15'-2"	2'-6"	HP14x73	36'-2"	778.15	771.15	---
205	25+04.24	1'-8 13/16"	789.54	767.45	40'-2"	789.07	784.82	764.32	749.41	14'-11"	2'-6"	HP14x73	35'-5"	778.07	771.07	---
206	25+11.74	1'-8 13/16"	789.33	767.49	40'-0"	789.00	784.75	764.25	749.33	14'-11"	2'-6"	HP14x73	35'-5"	778.00	771.00	---
207	25+19.24	1'-8 13/16"	789.29	767.54	40'-1"	788.93	784.67	764.17	749.26	14'-11"	2'-6"	HP14x73	35'-5"	777.93	770.93	---
208	25+26.74	1'-8 13/16"	789.55	767.58	40'-5"	788.86	784.60	764.10	749.19	14'-11"	2'-6"	HP14x73	35'-5"	777.86	770.86	---
209	25+34.24	1'-8 13/16"	789.37	767.61	39'-6"	788.79	784.54	764.54	749.95	14'-7"	2'-6"	HP14x73	34'-7"	777.79	---	---
210	25+41.74	1'-8 13/16"	789.18	767.65	39'-4"	788.72	784.47	764.47	749.89	14'-7"	2'-6"	HP14x73	34'-7"	777.72	---	---
211	25+49.24	1'-8 13/16"	789.05	767.68	39'-3"	788.66	784.41	764.41	749.83	14'-7"	2'-6"	HP14x73	34'-7"	777.66	---	---
212	25+56.74	1'-8 13/16"	788.98	767.70	39'-3"	788.60	784.35	764.35	749.77	14'-7"	2'-6"	HP14x73	34'-7"	777.60	---	---
213	25+64.24	1'-8 13/16"	789.18	767.72	44'-4"	788.54	784.29	764.29	744.88	19'-5"	2'-6"	HP14x73	39'-5"	777.54	---	---
214	25+71.74	1'-8 13/16"	789.08	767.73	44'-4"	788.49	784.24	764.24	744.82	19'-5"	2'-6"	HP14x73	39'-5"	777.49	---	---
215	25+79.24	1'-8 13/16"	788.65	767.75	43'-11"	788.44	784.20	764.20	744.78	19'-5"	2'-6"	HP14x73	39'-5"	777.44	---	---
216	25+86.74	1'-8 13/16"	788.38	767.75	43'-3"	788.40	784.15	764.40	745.15	19'-3"	2'-6"	HP14x73	39'-0"	777.40	---	---
217	25+94.24	1'-8 13/16"	788.34	767.75	43'-3"	788.36	784.11	764.36	745.11	19'-3"	2'-6"	HP14x73	39'-0"	777.36	---	---
218	26+01.74	1'-8 13/16"	788.11	767.75	43'-1"	788.32	784.07	764.32	745.07	19'-3"	2'-6"	HP14x73	39'-0"	777.32	---	---
219	26+09.24	1'-8 13/16"	788.02	767.75	43'-0"	788.28	784.03	764.28	745.03	19'-3"	2'-6"	HP14x73	39'-0"	777.28	---	---

SOLDIER PILE DATA TABLE (CONTINUED)

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
220	26+16.74	1'-8 13/16"	787.92	767.74	43'-0"	788.25	784.00	764.25	745.00	19'-3"	2'-6"	HP14x73	39'-0"	777.25	---	---
221	26+24.24	1'-8 13/16"	787.92	767.72	43'-0"	788.25	784.00	764.25	745.00	19'-3"	2'-6"	HP14x73	39'-0"	777.25	---	(1)
222	26+30.49	1'-8 13/16"	788.08	767.71	62'-1"	788.25	784.00	753.00	726.00	27'-0"	2'-6"	HP14x73	58'-0"	780.25	---	(1)
223	26+37.99	1'-8 13/16"	788.09	767.69	62'-1"	788.26	784.02	753.02	726.02	27'-0"	2'-6"	HP14x73	58'-0"	780.26	---	(1)
224	26+47.99	1'-8 13/16"	788.01	767.65	62'-0"	788.28	784.03	753.03	726.03	27'-0"	2'-6"	HP14x73	58'-0"	780.28	---	(1)
225	26+55.49	1'-8 13/16"	788.17	767.62	62'-2"	788.30	784.05	753.05	726.05	27'-0"	2'-6"	HP14x73	58'-0"	780.30	---	(1)
226	26+91.74	1'-8 13/16"	787.91	767.41	54'-5"	788.38	784.13	764.04	733.54	30'-6"	2'-6"	HP14x73	50'-7"	777.38	770.38	---
227	26+99.24	1'-8 13/16"	787.66	767.36	54'-2"	788.41	784.16	764.07	733.57	30'-6"	2'-6"	HP14x73	50'-7"	777.41	770.41	---
228	27+06.74	1'-8 13/16"	787.74	767.29	54'-2"	788.44	784.19	764.10	733.60	30'-6"	2'-6"	HP14x73	50'-7"	777.44	770.44	---
229	27+14.24	1'-8 13/16"	787.80	767.22	54'-2"	788.47	784.22	764.14	733.64	30'-6"	2'-6"	HP14x73	50'-7"	777.47	770.47	---
230	27+21.74	1'-8 13/16"	787.85	767.16	55'-4"	788.49	784.24	763.66	732.58	31'-1"	2'-6"	HP14x73	51'-8"	777.49	770.49	---
231	27+29.24	1'-8 13/16"	787.91	767.09	55'-4"	788.50	784.25	763.66	732.58	31'-1"	2'-6"	HP14x73	51'-8"	777.50	770.50	---
232	27+36.74	1'-8 13/16"	788.01	767.02	55'-6"	788.50	784.25	763.67	732.58	31'-1"	2'-6"	HP14x73	51'-8"	777.50	770.50	---
233	27+44.24	1'-8 13/16"	788.01	766.93	55'-6"	788.50	784.25	763.67	732.58	31'-1"	2'-6"	HP14x73	51'-8"	777.50	770.50	---
234	27+51.74	1'-8 13/16"	787.97	766.85	55'-5"	788.49	784.24	763.66	732.57	31'-1"	2'-6"	HP14x73	51'-8"	777.49	770.49	---
235	27+59.24	1'-8 13/16"	787.97	766.79	55'-6"	788.47	784.22	763.64	732.56	31'-1"	2'-6"	HP14x73	51'-8"	777.47	770.47	---
236	27+66.74	1'-8 13/16"	788.00	766.74	55'-6"	788.46	784.21	763.63	732.54	31'-1"	2'-6"	HP14x73	51'-8"	777.46	770.46	---
237	27+74.24	1'-8 13/16"	788.09	766.68	55'-7"	788.46	784.21	763.63	732.54	31'-1"	2'-6"	HP14x73	51'-8"	777.46	770.46	---
238	27+81.74	1'-8 13/16"	788.22	766.81	57'-7"	788.48	784.21	763.46	730.71	32'-9"	2'-6"	HP14x73	53'-6"	777.48	770.48	---
239	27+89.24	1'-8 13/16"	788.21	766.75	57'-10"	788.52	784.29	763.13	730.38	32'-9"	2'-6"	HP14x73	53'-11"	777.52	770.52	---
240	27+96.74	1'-8 13/16"	788.50	766.57	58'-6"	788.57	784.29	762.79	730.04	32'-9"	2'-6"	HP14x73	54'-3"	777.57	770.57	---
241	28+04.24	1'-8 13/16"	789.21	766.18	59'-6"	788.61	784.38	762.46	729.71	32'-9"	2'-6"	HP14x73	54'-8"	777.61	770.61	---
242	28+11.74	1'-8 13/16"	789.13	765.78	60'-0"	788.65	784.38	762.30	729.13	33'-2"	2'-6"	HP14x73	55'-3"	777.65	770.65	---
243	28+19.24	1'-8 13/16"	788.59	765.37	59'-6"	788.69	784.46	762.30	729.13	33'-2"	2'-6"	HP14x73	55'-4"	777.69	770.69	---
244	28+26.74	1'-8 13/16"	788.58	765.51	59'-6"	788.74	784.46	762.30	729.13	33'-2"	2'-6"	HP14x73	55'-4"	777.74	770.74	---
245	28+34.24	1'-8 13/16"	788.50	765.79	59'-5"	788.78	784.55	762.30	729.13	33'-2"	2'-6"	HP14x73	55'-5"	777.78	770.78	---
246	28+41.74	1'-8 13/16"	788.52	766.06	49'-10"	788.76	787.03	762.45	738.70	23'-9"	2'-6"	HP14x73	48'-4"	777.76	770.76	---
247	28+49.24	1'-8 13/16"	788.67	766.33	49'-9"	788.69	787.00	762.75	739.00	23'-9"	2'-6"	HP14x73	48'-0"	777.69	770.69	---
248	28+56.74	1'-8 13/16"	788.55	766.60	49'-3"	788.61	786.88	763.05	739.30	23'-9"	2'-6"	HP14x73	47'-7"	777.61	770.61	---
249	28+64.24	1'-8 13/16"	788.45	766.86	48'-11"	788.54	786.85	763.35	739.60	23'-9"	2'-6"	HP14x73	47'-3"	777.54	770.54	---
250	28+71.74	1'-8 13/16"	788.43	767.24	39'-6"	788.47	786.72	763.80	748.97	14'-10"	2'-6"	HP14x73	37'-9"	779.47	---	---
251	28+79.24	1'-8 13/16"	788.17	767.75	38'-8"	788.39	786.64	764.39	749.56	14'-10"	2'-6"	HP14x73	37'-1"	779.39	---	---
252	28+86.74	1'-8 13/16"	787.45	768.24	37'-4"	788.32	786.57	764.98	750.15	14'-10"	2'-6"	HP14x73	36'-5"	779.32	---	---
253	28+94.24	1'-8 13/16"	786.95	768.73	36'-3"	788.24	786.49	765.58	750.74	14'-10"	2'-6"	HP14x73	35'-9"	779.24	---	---
254	29+01.74	1'-8 13/16"	786.84	769.22	34'-0"	788.17	786.45	766.12	752.87	13'-3"	2'-6"	HP14x73	33'-7"	779.17	---	---
255	29+09.24	1'-8 13/16"	786.78	769.70	33'-6"	788.10	786.35	766.60	753.35	13'-3"	2'-6"	HP14x73	33'-0"	779.10	---	---
256	29+16.74	1'-8 13/16"	786.71	770.18	32'-11"	788.02	786.34	767.09	753.84	13'-3"	2'-6"	HP14x73	32'-6"	779.02	---	---
257	29+24.24	1'-8 13/16"	788.95	770.65	34'-8"	787.95	786.25	767.58	754.33	13'-3"	2'-6"	HP14x73	31'-11"	778.95	---	---

KNOWN OBSTRUCTION LEGEND

(1) ABANDONED WE ENERGIES ELECTRICAL TUNNEL, SEE SOLDIER PILE DATA TABLES (4 OF 4) FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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SOLDIER PILE DATA TABLES (3 OF 4)

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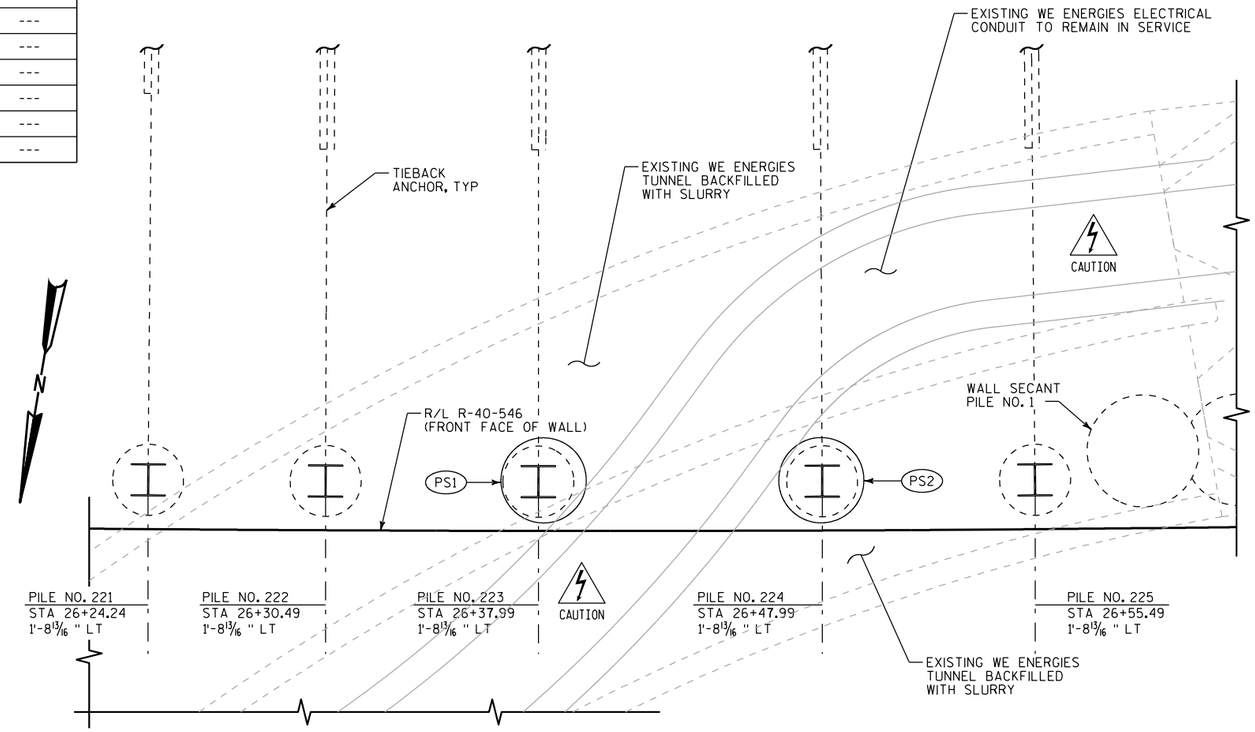
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SOLDIER PILE DATA TABLE (CONTINUED)

PILE NO.	WALL R/L STA	OFFSET LEFT	APPROX EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIE BACK ELEV 1	TIE BACK ELEV 2	KNOWN OBSTRUCTION
258	29+31.74	1'-8 13/16"	788.99	771.13	32'-10"	787.87	786.15	768.07	756.15	11'-11"	2'-6"	HP14x73	30'-0"	778.87	---	---
259	29+39.24	1'-8 13/16"	789.14	771.62	32'-6"	787.80	786.06	768.56	756.64	11'-11"	2'-6"	HP14x73	29'-5"	778.80	---	---
260	29+46.74	1'-8 13/16"	788.65	772.12	31'-7"	787.72	786.05	769.05	757.13	11'-11"	2'-6"	HP14x73	28'-11"	778.72	---	---
261	29+54.24	1'-8 13/16"	788.68	772.65	31'-1"	787.65	785.95	769.53	757.62	11'-11"	2'-6"	HP14x73	28'-4"	778.65	---	---
262	29+61.74	2'-0 1/16"	788.81	773.31	40'-5"	787.58	785.87	770.20	748.45	21'-9"	3'-0"	W24x84	37'-5"	---	---	---
263	29+69.24	2'-0 1/16"	788.95	774.11	39'-8"	787.50	785.80	771.05	749.30	21'-9"	3'-0"	W24x84	36'-6"	---	---	---
264	29+76.74	2'-0 1/16"	789.16	774.93	39'-1"	787.43	785.72	771.89	750.14	21'-9"	3'-0"	W24x84	35'-7"	---	---	---
265	29+84.24	2'-0 1/16"	789.18	775.75	38'-3"	787.35	785.65	772.73	750.98	21'-9"	3'-0"	W24x84	34'-8"	---	---	---
266	29+91.74	2'-0 1/16"	789.48	776.58	33'-2"	787.28	785.55	773.55	756.38	17'-2"	3'-0"	W24x84	29'-2"	---	---	---
267	29+99.24	2'-0 1/16"	789.24	777.41	32'-1"	787.20	785.52	774.35	757.19	17'-2"	3'-0"	W24x84	28'-4"	---	---	---
268	30+06.74	2'-0 1/16"	789.41	778.25	31'-6"	787.13	785.41	775.16	757.99	17'-2"	3'-0"	W24x84	27'-5"	---	---	---
269	30+14.24	2'-0 1/16"	789.53	779.10	30'-9"	787.06	785.37	775.96	758.79	17'-2"	3'-0"	W24x84	26'-7"	---	---	---
270	30+21.74	1'-9 1/8"	789.38	779.96	28'-1"	786.98	785.25	776.75	761.34	15'-5"	2'-6"	W18x60	23'-11"	---	---	---
271	30+29.24	1'-9 1/8"	789.58	780.82	27'-6"	786.91	785.22	777.56	762.14	15'-5"	2'-6"	W18x60	23'-1"	---	---	---
272	30+36.74	1'-9 1/8"	789.77	781.71	26'-10"	786.83	785.11	778.36	762.94	15'-5"	2'-6"	W18x60	22'-2"	---	---	---
273	30+44.24	1'-9 1/8"	790.14	782.61	26'-5"	786.76	785.08	779.16	763.74	15'-5"	2'-6"	W18x60	21'-4"	---	---	---
274	30+51.74	1'-8 7/8"	790.76	783.51	20'-11"	786.69	785.00	780.00	769.92	10'-1"	2'-6"	W18x35	15'-1"	---	---	---
275	30+59.24	1'-8 7/8"	790.74	784.43	20'-0"	786.61	784.90	780.90	770.82	10'-1"	2'-6"	W18x35	14'-1"	---	---	---
276	30+66.74	1'-8 7/8"	790.10	785.36	18'-5"	786.54	784.80	781.80	771.71	10'-1"	2'-6"	W18x35	13'-1"	---	---	---

KNOWN OBSTRUCTION LEGEND

(1) ABANDONED WE ENERGIES ELECTRICAL TUNNEL,
SEE SOLDIER PILE DATA TABLES (4 OF 4) FOR DETAILS



EXISTING SOLDIER PILE PLACEMENT SLEEVE DETAIL

36" DIA STEEL CASING SLEEVES INSTALLED BY
WE ENERGIES AT EXISTING ELECTRIC CONDUIT TUNNEL

LEGEND

(PS1) EXISTING 36" STEEL CASING SLEEVE
BACKFILLED WITH GRAVEL / SAND SLURRY
TOP OF CASING EL 788.13
C/L OF CASING STA 26+38.10, 1.76' LT
X = 573472.06
Y = 295525.58

(PS2) EXISTING 36" STEEL CASING SLEEVE
BACKFILLED WITH GRAVEL / SAND SLURRY
TOP OF CASING EL 788.13
C/L OF CASING STA 26+47.89, 1.75' LT
X = 573462.42
Y = 295523.95

REMOVE AS REQUIRED TO INSTALL TIMBER LAGGING,
DRAINBOARD, AND TIEBACK ANCHOR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SOLDIER PILE DATA TABLES (4 OF 4)

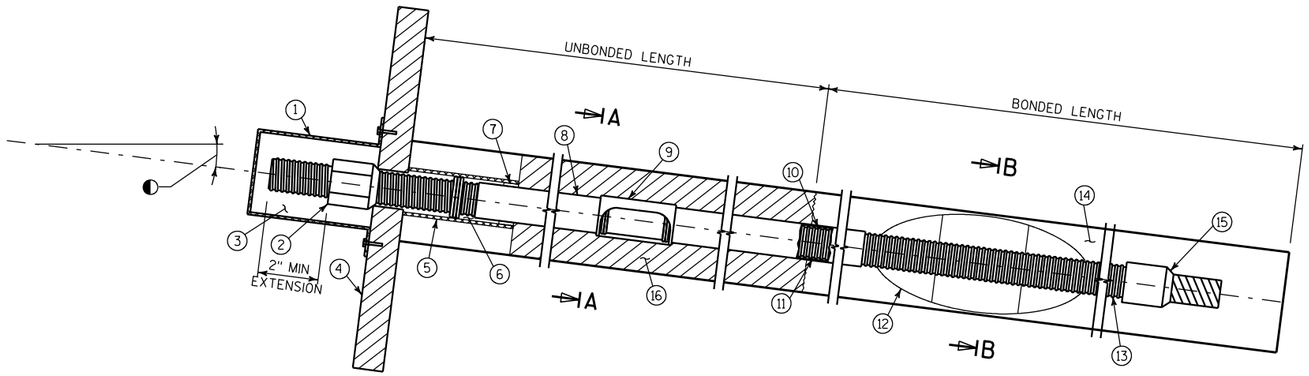
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1060-33-80

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ENCAPSULATED TIEBACK

(BAR TENDON SHOWN, PRESTRESSED STEEL TENDONS MAY BE USED AS AN ALTERNATE)

LEGEND

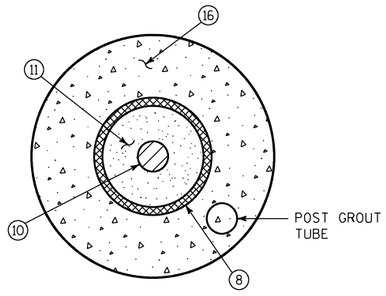
1. ANCHORAGE COVER
2. NUT
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. ANTICORROSION GREASE
7. SEAL
8. SMOOTH PVC BOND BREAKER
9. PROTECTED BAR COUPLER
10. BAR TENDON
11. ENCAPSULATION GROUT
12. CENTRALIZERS
13. CORRUGATED PVC
14. ANCHOR GROUT
15. END CAP
16. GROUT

✳ BEARING PLATE SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE "TIEBACK ANCHORS" SPECIAL PROVISION (SPV.0060.4150)

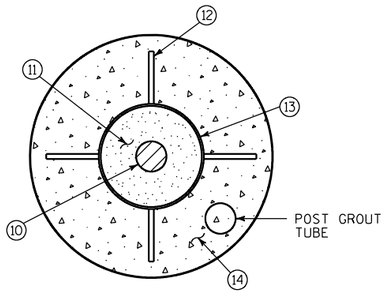
◐ ANGLE FRON VERTICAL, SEE TIEBACK ANCHOR DATA TABLES.

NOTE

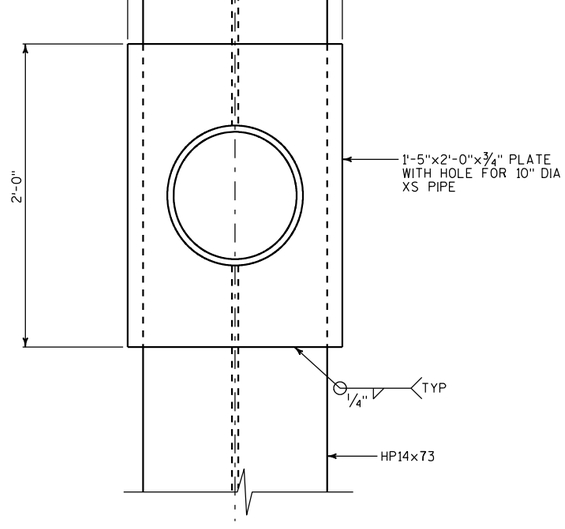
HP 14x73 SHALL BE PRE-FABRICATED WITH ANCHORAGE DETAIL SHOWN BEFORE INSTALLATION INTO DRILLED CONCRETE FOOTING. BEARING PLATE, STIFFENERS, HSS 10" DIA TUBE, PIPE, AND ANCHOR MODIFICATIONS TO THE HP 14x73 ARE INCLUDED IN THE BID ITEM "TIEBACK ANCHORS".

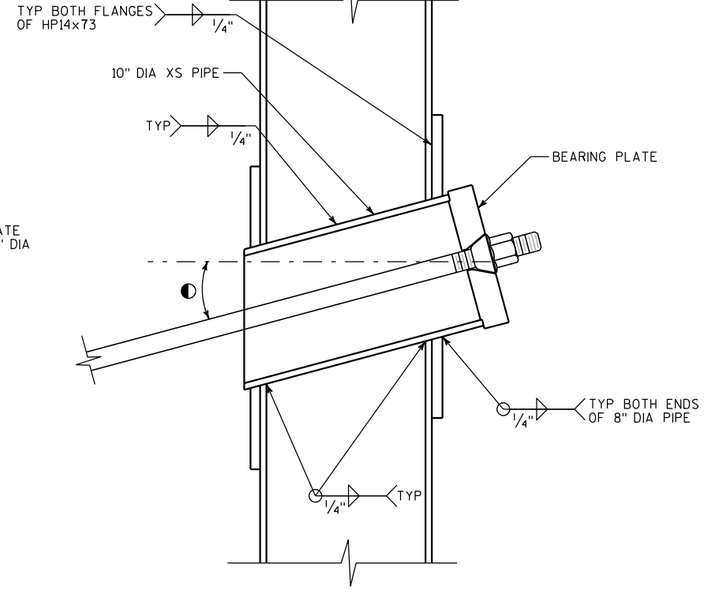


SECTION A-A



SECTION B-B

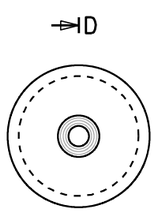




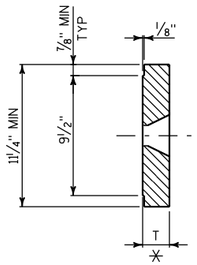
SECTION C-C

HP 14x73 ANCHOR DETAIL

(BEARING PLATE, TENDON & ANCHOR HEAD NOT SHOWN FOR CLARITY)



PLAN



SECTION D-D

BEARING PLATE DETAILS

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SOLDIER PILE TIEBACK ANCHOR DETAILS

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080305_de.dgn PLOT DATE : 01-MAY-2014 12:56 PLOT BY : MSCEKM PLOT NAME : R546_080305_de PLOT SCALE : 8:1

STATE PROJECT NUMBER

1060-33-80

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
59	1	742.82	30	90°	17	15	74	59	85
60	2	743.24	30	90°	17	15	74	59	85
61	3	743.65	30	90°	22	15	74	59	85
62	4	744.09	30	90°	18	15	80	64	92
63	5	744.54	30	90°	18	15	80	64	92
64	6	744.99	30	90°	18	15	80	64	92
65	7	745.45	30	90°	21	15	93	74	107
66	8	745.93	30	90°	21	15	93	74	107
67	9	746.42	30	90°	21	15	93	74	107
68	10	746.93	30	90°	24	15	107	86	123
69	11	747.44	30	90°	24	15	107	86	123
70	12	747.95	30	90°	24	15	107	86	123
71	13	748.49	30	90°	28	15	125	100	144
72	14	749.05	30	90°	28	15	125	100	144
73	15	749.61	30	90°	28	15	125	100	144
74	16	750.17	30	90°	28	15	125	100	144
75	17	750.73	30	90°	23	15	104	83	120
75	18	743.73	30	90°	12	15	52	42	60
76	19	751.29	30	90°	23	15	104	83	120
76	20	744.29	30	90°	12	15	52	42	60
77	21	751.85	30	90°	23	15	104	83	120
77	22	744.85	30	90°	12	15	52	42	60
78	23	752.41	30	90°	23	15	102	82	117
78	24	745.41	30	90°	17	15	75	60	86
79	25	753.02	30	90°	23	15	102	82	117
79	26	746.02	30	90°	17	15	75	60	86
80	27	753.67	30	90°	27	15	121	97	139
80	28	746.67	30	90°	18	15	79	63	91
81	29	754.32	30	90°	27	15	121	97	139
81	30	747.32	30	90°	18	15	79	63	91
82	31	748.86	15	90°	25	15	115	69	132
83	32	748.86	15	90°	25	15	115	69	132
84	33	748.86	15	90°	25	15	115	69	132
85	34	748.86	15	90°	25	15	115	69	132
86	35	748.86	15	90°	25	15	115	69	132
87	36	748.86	15	90°	25	15	115	69	132
88	37	748.86	15	90°	25	15	115	69	132
89	38	748.86	15	90°	25	15	115	69	132
90	39	748.86	15	90°	25	15	115	69	132
91	40	748.86	15	90°	25	15	115	69	132
92	41	748.86	15	90°	25	15	115	69	132
93	42	748.86	15	90°	25	15	115	69	132
94	43	748.86	15	90°	25	15	115	69	132
95	44	748.86	15	90°	25	15	115	69	132
96	45	748.86	15	90°	25	15	115	69	132

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
97	46	757.31	30	90°	29	15	130	104	150
97	47	749.31	30	90°	20	15	90	72	103
98	48	757.55	30	90°	29	15	130	104	150
98	49	749.55	30	90°	20	15	90	72	103
99	50	757.79	30	90°	29	15	130	104	150
99	51	749.79	30	90°	20	15	90	72	103
100	52	758.03	30	90°	29	15	130	104	150
100	53	750.03	30	90°	20	15	90	72	103
101	54	758.32	30	90°	29	15	130	104	150
101	55	750.32	30	90°	20	15	90	72	103
102	56	758.66	30	90°	29	15	130	104	150
102	57	750.66	30	90°	20	15	90	72	103
103	58	758.99	30	90°	29	15	130	104	150
103	59	750.99	30	90°	20	15	90	72	103
104	60	759.33	30	90°	29	15	130	104	150
104	61	751.33	30	90°	20	15	90	72	103
105	62	759.72	30	90°	29	15	130	104	150
105	63	751.72	30	90°	20	15	90	72	103
106	64	760.16	30	90°	30	15	135	108	155
106	65	752.16	30	90°	22	15	100	80	115
107	66	760.61	30	90°	30	15	135	108	155
107	67	752.61	30	90°	22	15	100	80	115
108	68	761.05	30	90°	30	15	135	108	155
108	69	753.05	30	90°	22	15	100	80	115
109	70	761.49	30	90°	30	15	136	109	156
109	71	753.49	30	90°	24	15	110	88	126
110	72	761.93	30	90°	30	15	136	109	156
110	73	753.93	30	90°	24	15	110	88	126
111	74	762.37	30	90°	30	15	136	109	156
111	75	754.37	30	90°	24	15	110	88	126
112	76	762.81	30	90°	30	15	136	109	156
112	77	754.81	30	90°	24	15	110	88	126
113	78	763.25	30	90°	31	15	140	112	161
113	79	755.25	30	90°	25	15	110	88	126
114	80	763.68	30	90°	31	15	140	112	161
114	81	755.68	30	90°	25	15	110	88	126
115	82	764.11	30	90°	31	15	140	112	161
115	83	756.11	30	90°	25	15	110	88	126
116	84	764.54	30	90°	31	15	140	112	161
116	85	756.54	30	90°	25	15	110	88	126
117	86	764.96	30	90°	31	15	140	112	161
117	87	756.96	30	90°	26	15	115	92	132
118	88	765.38	30	90°	31	15	140	112	161
118	89	757.38	30	90°	26	15	115	92	132
119	90	765.79	30	90°	31	15	140	112	161
119	91	757.79	30	90°	26	15	115	92	132
120	92	766.21	30	90°	31	16	140	112	161
120	93	758.21	30	90°	27	15	120	96	138

LEGEND

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR MINIMUM BONDED ANCHOR LENGTH = 15'-0"

◭ ELEVATION GIVEN AT FRONT FACE OF SOLDIER PILE

** HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

TIEBACK ANCHOR DATA TABLES (1 OF 4)

SHEET 19 OF 53

3023

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080306_da.dgn PLOT DATE : 01-MAY-2014 12:56 PLOT BY : MSCEKM PLOT NAME : R546_080306_da PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
121	94	766.62	30	90°	31	16	140	112	161
121	95	758.62	30	90°	27	15	120	96	138
122	96	767.03	30	90°	31	16	140	112	161
122	97	759.03	30	90°	27	15	120	96	138
123	98	767.44	30	90°	31	16	140	112	161
123	99	759.44	30	90°	28	15	125	100	144
124	100	767.85	30	90°	31	16	140	112	161
124	101	759.85	30	90°	28	15	125	100	144
125	102	768.25	30	90°	31	16	140	112	161
125	103	760.25	30	90°	28	15	125	100	144
126	104	768.66	30	90°	32	17	145	116	167
126	105	760.66	30	90°	29	15	130	104	150
127	106	769.07	30	90°	32	17	145	116	167
127	107	761.07	30	90°	29	15	130	104	150
128	108	769.48	30	90°	32	17	145	116	167
128	109	761.48	30	90°	29	15	130	104	150
129	110	769.89	30	90°	32	17	145	116	167
129	111	761.89	30	90°	30	15	135	108	155
130	112	770.30	30	90°	32	17	145	116	167
130	113	762.30	30	90°	30	15	135	108	155
131	114	770.72	30	90°	32	17	145	116	167
131	115	762.72	30	90°	30	15	135	108	155
132	116	771.13	30	90°	32	17	145	116	167
132	117	763.13	30	90°	30	15	135	108	155
133	118	771.55	30	90°	32	17	145	116	167
133	119	763.55	30	90°	31	15	140	112	161
134	120	771.98	30	90°	32	17	145	116	167
134	121	763.98	30	90°	31	15	140	112	161
135	122	772.40	30	90°	32	17	145	116	167
135	123	764.40	30	90°	31	15	140	112	161
136	124	772.83	30	90°	33	17	148	118	170
136	125	764.83	30	90°	33	15	148	118	170
137	126	773.25	30	90°	33	17	148	118	170
137	127	765.25	30	90°	33	15	148	118	170
138	128	773.66	30	90°	33	17	148	118	170
138	129	765.66	30	90°	33	15	148	118	170
139	130	774.07	30	90°	33	17	148	118	170
139	131	766.07	30	90°	33	15	148	118	170
140	132	774.48	30	90°	33	17	148	118	170
140	133	766.48	30	90°	33	15	148	118	170
141	134	774.86	30	90°	33	17	148	118	170
141	135	766.86	30	90°	33	15	148	118	170
142	136	775.23	30	90°	33	17	148	118	170
142	137	767.23	30	90°	33	15	148	118	170
143	138	775.59	30	90°	33	17	148	118	170
143	139	767.59	30	90°	33	15	148	118	170
144	140	775.96	30	90°	33	17	148	118	170
144	141	767.96	30	90°	33	15	148	118	170

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
145	142	776.28	30	90°	33	17	148	118	170
145	143	768.28	30	90°	33	15	148	118	170
146	144	776.55	30	90°	33	17	148	118	170
146	145	768.55	30	90°	33	15	148	118	170
147	146	776.83	30	90°	33	17	148	118	170
147	147	768.83	30	90°	33	15	148	118	170
148	148	777.10	30	90°	33	17	148	118	170
148	149	769.10	30	90°	33	15	148	118	170
149	150	777.37	30	90°	34	17	155	124	178
149	151	769.37	30	90°	34	15	150	120	173
150	152	777.62	30	90°	34	17	155	124	178
150	153	769.62	30	90°	34	15	150	120	173
151	154	777.85	30	90°	34	17	155	124	178
151	155	769.85	30	90°	34	15	150	120	173
152	156	778.08	30	90°	34	17	155	124	178
152	157	770.08	30	90°	34	15	150	120	173
153	158	778.29	30	90°	35	17	155	124	178
153	159	770.29	30	90°	35	15	155	124	178
154	160	778.48	30	90°	35	17	155	124	178
154	161	770.48	30	90°	35	15	155	124	178
155	162	778.65	30	90°	35	17	155	124	178
155	163	770.65	30	90°	35	15	155	124	178
156	164	778.82	30	90°	36	17	160	128	184
156	165	770.82	30	90°	35	15	155	124	178
157	166	778.97	30	90°	36	17	160	128	184
157	167	770.97	30	90°	35	15	155	124	178
158	168	779.10	30	90°	36	17	160	128	184
158	169	771.10	30	90°	35	15	155	124	178
159	170	779.24	30	90°	36	17	160	128	184
159	171	771.24	30	90°	35	15	155	124	178
160	172	779.37	30	90°	36	17	160	128	184
160	173	771.37	30	90°	35	15	155	124	178
161	174	779.50	30	90°	36	17	160	128	184
161	175	771.50	30	90°	35	15	155	124	178
162	176	779.63	30	90°	36	17	160	128	184
162	177	771.63	30	90°	35	15	155	124	178
163	178	779.77	30	90°	36	17	160	128	184
163	179	771.77	30	90°	35	15	155	124	178
164	180	779.90	30	90°	36	17	160	128	184
164	181	771.90	30	90°	35	15	155	124	178
165	182	780.02	30	90°	36	17	160	128	184
165	183	772.02	30	90°	35	15	155	124	178
166	184	778.13	30	90°	38	16	173	138	199
166	185	771.13	30	90°	27	15	120	96	138
167	186	778.24	30	90°	38	16	173	138	199
167	187	771.24	30	90°	27	15	120	96	138
168	188	778.35	30	90°	38	16	173	138	199
168	189	771.35	30	90°	27	15	120	96	138

LEGEND

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR MINIMUM BONDED ANCHOR LENGTH = 15'-0"

◭ ELEVATION GIVEN AT FRONT FACE OF SOLDIER PILE

** HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

TIEBACK ANCHOR DATA TABLES (2 OF 4)

SHEET 20 OF 53

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080307_da.dgn PLOT DATE : 01-MAY-2014 12:56 PLOT BY : MSCEKM PLOT NAME : R546_080307_da PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
169	190	778.45	30	90°	38	16	173	138	199
169	191	771.45	30	90°	37	15	120	96	138
170	192	778.54	30	90°	38	16	173	138	199
170	193	771.54	30	90°	37	15	120	96	138
171	194	778.62	30	90°	38	16	173	138	199
171	195	771.62	30	90°	37	15	120	96	138
172	196	778.70	30	90°	38	16	173	138	199
172	197	771.70	30	90°	37	15	120	96	138
173	198	778.77	30	90°	37	15	165	132	190
173	199	771.77	30	90°	26	15	115	92	132
174	200	778.84	30	90°	37	15	165	132	190
174	201	771.84	30	90°	26	15	115	92	132
175	202	778.90	30	90°	37	16	165	132	190
175	203	771.90	30	90°	26	15	115	92	132
176	204	778.95	30	90°	37	16	165	132	190
176	205	771.95	30	90°	26	15	115	92	132
177	206	779.00	30	90°	35	15	158	126	182
177	207	772.00	30	90°	21	15	95	76	109
178	208	779.05	30	90°	35	15	158	126	182
178	209	772.05	30	90°	21	15	95	76	109
179	210	779.08	30	90°	35	15	158	126	182
179	211	772.08	30	90°	21	15	95	76	109
180	212	779.11	30	90°	32	15	145	116	167
180	213	772.11	30	90°	20	15	90	72	103
181	214	779.13	30	90°	32	15	145	116	167
181	215	772.13	30	90°	20	15	90	72	103
182	216	779.15	30	90°	32	15	145	116	167
182	217	772.15	30	90°	20	15	90	72	103
183	218	779.16	30	90°	32	15	145	116	167
183	219	772.16	30	90°	20	15	90	72	103
184	220	779.17	30	90°	32	15	145	116	167
184	221	772.17	30	90°	20	15	90	72	103
185	222	779.17	30	90°	32	15	145	116	167
185	223	772.17	30	90°	20	15	90	72	103
186	224	779.16	30	90°	32	15	145	116	167
186	225	772.16	30	90°	20	15	90	72	103
187	226	779.14	30	90°	32	15	145	116	167
187	227	772.14	30	90°	20	15	90	72	103
188	228	779.12	30	90°	32	15	145	116	167
188	229	772.12	30	90°	20	15	90	72	103
189	230	779.09	30	90°	32	15	140	112	161
189	231	772.09	30	90°	20	15	80	64	92
190	232	779.06	30	90°	32	15	140	112	161
190	233	772.06	30	90°	20	15	80	64	92
191	234	779.02	30	90°	32	15	140	112	161
191	235	772.02	30	90°	20	15	80	64	92
192	236	778.97	30	90°	32	15	140	112	161
192	237	771.97	30	90°	20	15	80	64	92

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)	
193	238	778.92	30	90°	30	15	136	109	156	
193	239	771.92	30	90°	17	15	75	60	86	
194	240	778.87	30	90°	30	15	136	109	156	
194	241	771.87	30	90°	17	15	75	60	86	
195	242	778.81	30	90°	30	15	136	109	156	
195	243	771.81	30	90°	17	15	75	60	86	
196	244	778.74	30	90°	30	15	136	109	156	
196	245	771.74	30	90°	17	15	75	60	86	
197	246	778.66	30	90°	30	15	136	109	156	
197	247	771.66	30	90°	17	15	75	60	86	
198	248	778.59	30	90°	30	15	136	109	156	
198	249	771.59	30	90°	17	15	75	60	86	
199	250	778.51	30	90°	30	15	136	109	156	
199	251	771.51	30	90°	17	15	75	60	86	
200	252	778.44	30	90°	29	15	131	105	151	
200	253	771.44	30	90°	16	15	70	56	81	
201	254	778.37	30	90°	29	15	131	105	151	
201	255	771.37	30	90°	16	15	70	56	81	
202	256	778.30	30	90°	29	15	131	105	151	
202	257	771.30	30	90°	16	15	70	56	81	
203	258	778.22	30	90°	29	15	114	91	131	
203	259	771.22	30	90°	16	15	70	56	81	
204	260	778.15	30	90°	29	15	114	91	131	
204	261	771.15	30	90°	16	15	70	56	81	
205	262	778.07	30	90°	29	15	114	91	131	
205	263	771.07	30	90°	16	15	70	56	81	
206	264	778.00	30	90°	29	15	114	91	131	
206	265	771.00	30	90°	16	15	70	56	81	
207	266	777.93	30	90°	29	15	114	91	131	
207	267	770.93	30	90°	16	15	70	56	81	
208	268	777.86	30	90°	29	15	114	91	131	
208	269	770.86	30	90°	16	15	70	56	81	
209	270	777.79	30	90°	33	15	150	120	173	
210	271	777.72	30	90°	33	15	150	120	173	
211	272	777.66	30	90°	33	15	150	120	173	
212	273	777.60	30	90°	33	15	150	120	173	
213	274	777.54	30	90°	33	15	150	120	173	
214	275	777.49	30	90°	33	15	150	120	173	
215	276	777.44	30	90°	33	15	150	120	173	
216	277	777.40	30	90°	33	15	150	120	173	
217	278	777.36	30	90°	33	15	150	120	173	
218	279	777.32	30	90°	36	15	160	128	184	
219	280	777.28	30	90°	36	15	160	128	184	
220	281	777.25	30	90°	36	15	160	128	184	
221	282	777.25	30	90°	36	15	160	128	184	
222	283	780.25	25	90°	37	15	167	134	192	
223	284	780.26	25	90°	37	15	167	134	192	★
224	285	780.28	25	90°	37	15	167	134	192	★
225	286	780.30	25	90°	37	15	167	134	192	

LEGEND

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR MINIMUM BONDED ANCHOR LENGTH = 15'-0"

◭ ELEVATION GIVEN AT FRONT FACE OF SOLDIER PILE

** HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

★ REMOVE EXISTING STEEL SOLDIER PILE PLACEMENT SLEEVE AS REQUIRED TO INSTALL TIEBACK ANCHOR. REMOVAL INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-546"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

TIEBACK ANCHOR DATA TABLES (3 OF 4)

SHEET 21 OF 53

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080308_da.dgn
PLOT DATE : 01-MAY-2014 12:56
PLOT BY : MSCEKM
PLOT NAME : R546_080308_da
PLOT SCALE : 2:1

STATE PROJECT NUMBER

1060-33-80

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
226	287	777.38	30	90	29	15	130	78	150
226	288	770.38	30	90	18	15	80	48	92
227	289	777.41	30	90	29	15	130	78	150
227	290	770.41	30	90	18	15	80	48	92
228	291	777.44	30	90	29	15	130	78	150
228	292	770.44	30	90	18	15	80	48	92
229	293	777.47	30	90	30	15	134	80	154
229	294	770.47	30	90	19	15	82	49	94
230	295	777.49	30	90	30	15	134	80	154
230	296	770.49	30	90	19	15	82	49	94
231	297	777.50	30	90	30	15	134	80	154
231	298	770.50	30	90	19	15	82	49	94
232	299	777.50	30	90	32	15	142	85	163
232	300	770.50	30	90	18	15	80	48	92
233	301	777.50	30	90	32	15	142	85	163
233	302	770.50	30	90	18	15	80	48	92
234	303	777.49	30	90	32	15	142	85	163
234	304	770.49	30	90	18	15	80	48	92
235	305	777.47	30	90	32	15	142	85	163
235	306	770.47	30	90	18	15	80	48	92
236	307	777.46	30	90	33	15	150	90	173
236	308	770.46	30	90	15	15	70	42	81
237	309	777.46	30	87	33	15	150	90	173
237	310	770.46	30	87	15	15	70	42	81
238	311	777.48	30	93	33	15	150	90	173
238	312	770.48	30	93	15	15	70	42	81
239	313	777.52	30	90	33	15	150	90	173
239	314	770.52	30	90	15	15	70	42	81
240	315	777.57	30	90	33	15	150	90	173
240	316	770.57	30	90	15	15	70	42	81
241	317	777.61	30	90	33	15	150	90	173
241	318	770.61	30	90	15	15	70	42	81
242	319	777.65	30	90	31	15	150	90	173
242	320	770.65	30	90	19	15	85	51	98
243	321	777.69	30	90	31	15	150	90	173
243	322	770.69	30	90	19	15	85	51	98
244	323	777.74	30	90	31	15	150	90	173
244	324	770.74	30	90	19	15	85	51	98
245	325	777.78	30	90	31	15	150	90	173
245	326	770.78	30	90	19	15	85	51	98
246	327	777.76	30	90	31	15	145	87	167
246	328	770.76	30	90	22	15	95	57	109
247	329	777.69	30	90	31	15	145	87	167
247	330	770.69	30	90	22	15	95	57	109
248	331	777.61	30	90	31	15	145	87	167
248	332	770.61	30	90	22	15	95	57	109
249	333	777.54	30	88	31	15	145	87	167
249	334	770.54	30	88	22	15	95	57	109

TIEBACK ANCHOR SCHEDULE

PILE NO.	TIEBACK NUMBER	◭ TIEBACK ELEVATION	TIEBACK VERTICAL ORIENTATION (DEGREES)	** TIEBACK HORIZONTAL ORIENTATION (DEGREES)	* ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	60% LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
250	335	779.47	30	92°	32	15	144	86	166
251	336	779.39	30	90°	32	15	144	86	166
252	337	779.32	30	90°	32	15	144	86	166
253	338	779.24	30	90°	32	15	144	86	166
254	339	779.17	30	90°	26	15	115	69	132
255	340	779.10	30	90°	26	15	115	69	132
256	341	779.02	30	90°	26	15	115	69	132
257	342	778.95	30	90°	26	15	115	69	132
258	343	778.87	30	90°	18	15	80	48	92
259	344	778.80	30	90°	18	15	80	48	92
260	345	778.72	30	90°	18	15	80	48	92
261	346	778.65	30	90°	18	15	80	48	92

LEGEND

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR MINIMUM BONDED ANCHOR LENGTH = 15'-0"

◭ ELEVATION GIVEN AT FRONT FACE OF SOLDIER PILE

** HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

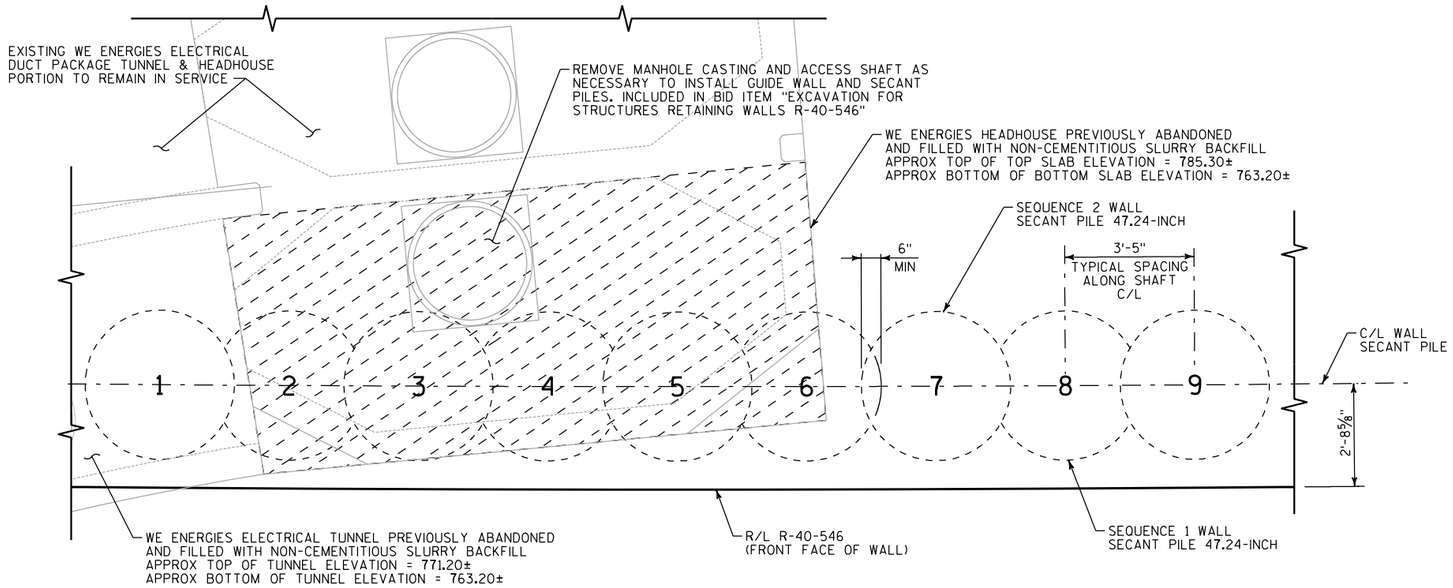
DRAWN BY BHI | PLANS CK'D. EKM

TIEBACK ANCHOR DATA TABLES (4 OF 4)

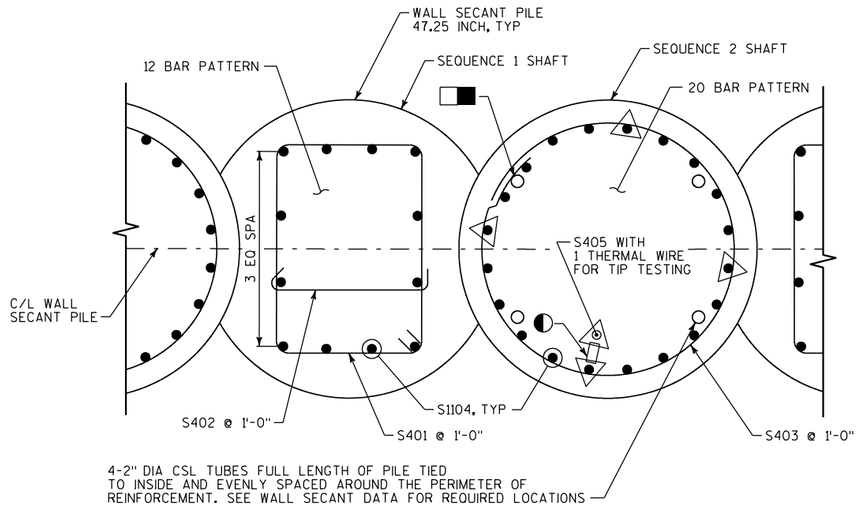
SHEET 22 OF 53

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STATE PROJECT NUMBER
1060-33-80



WALL SECANT PILE LAYOUT



TYPICAL SECANT PILE REINFORCEMENT

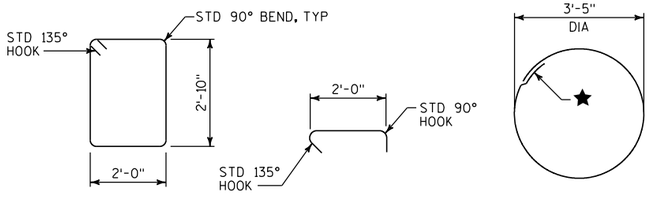
WALL SECANT PILE DATA

SHAFT NO.	WALL R/L STA	OFFSET LEFT	INSTALL SEQUENCE	APPROX EXISTING GROUND	FINISHED GRADE AT WALL FACE	TOP OF WALL	TOP OF SHAFT	BOTTOM OF SHAFT	SHAFT LENGTH (FT)	SHAFT VOLUME (CY)	TIE MARK	TIE NO. REQ'D	INSTRUMENTATION	KNOWN OBSTRUCTIONS
1	26+59.31	2'-8⅝"	2	788.23	767.60	788.30	782.30	732.80	49.5	22	S403	50	CSL TUBES/TIP TESTING	WE ENERGIES ELECTRICAL TUNNEL
2	26+62.73	2'-8⅝"	1	788.28	767.58	788.31	782.30	732.80	49.5	22	S401 / S402	50		WE ENERGIES ELECTRIC HEAD HOUSE
3	26+66.15	2'-8⅝"	2	788.17	767.56	788.32	782.30	732.80	49.5	22	S403	50	CSL TUBES	WE ENERGIES ELECTRIC HEAD HOUSE
4	26+69.57	2'-8⅝"	1	787.87	767.55	788.32	782.30	732.80	49.5	22	S401 / S402	50		WE ENERGIES ELECTRIC HEAD HOUSE
5	26+73.00	2'-8⅝"	2	787.74	767.53	788.33	782.30	732.80	49.5	22	S403	50	CSL TUBES/TIP TESTING	WE ENERGIES ELECTRIC HEAD HOUSE
6	26+76.42	2'-8⅝"	1	787.73	767.50	788.34	782.30	732.80	49.5	22	S401 / S402	50		WE ENERGIES ELECTRIC HEAD HOUSE
7	26+79.84	2'-8⅝"	2	787.73	767.48	788.34	782.30	732.80	49.5	22	S403	50	CSL TUBES	
8	26+83.26	2'-8⅝"	1	787.93	767.46	788.35	782.30	732.80	49.5	22	S401 / S402	50		
9	26+86.68	2'-8⅝"	2	788.04	767.44	788.36	782.30	732.80	49.5	22	S403	50	CSL TUBES/TIP TESTING	

SECANT PILE BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
S401		200	10'-2"	X	HORIZONTAL TIE - SEQUENCE 1 SHAFT
S402		200	2'-8"	X	HORIZONTAL TIE - SEQUENCE 1 SHAFT
S403		250	12'-2"	X	HORIZONTAL TIE - SEQUENCE 2 SHAFT
S405		6	25'-4"		VERTICAL - SHAFTS 1, 5, AND 9
S1104		148	53'-1"		VERTICAL

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



NOTE

CSL TUBES INCIDENTAL TO BID ITEM "WALL SECANT PILE 47.24-INCH"

LEGEND

- 4 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.
- 5 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 4 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.
- THERMAL WIRE SPACER, 10' MAX VERTICAL SPACING. MAINTAIN CONSTANT SPACING (2" MIN) BETWEEN THERMAL WIRES. SPACERS ARE INCIDENTAL TO BID ITEM "THERMAL INTEGRITY PROFILE (TIP) TESTING"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

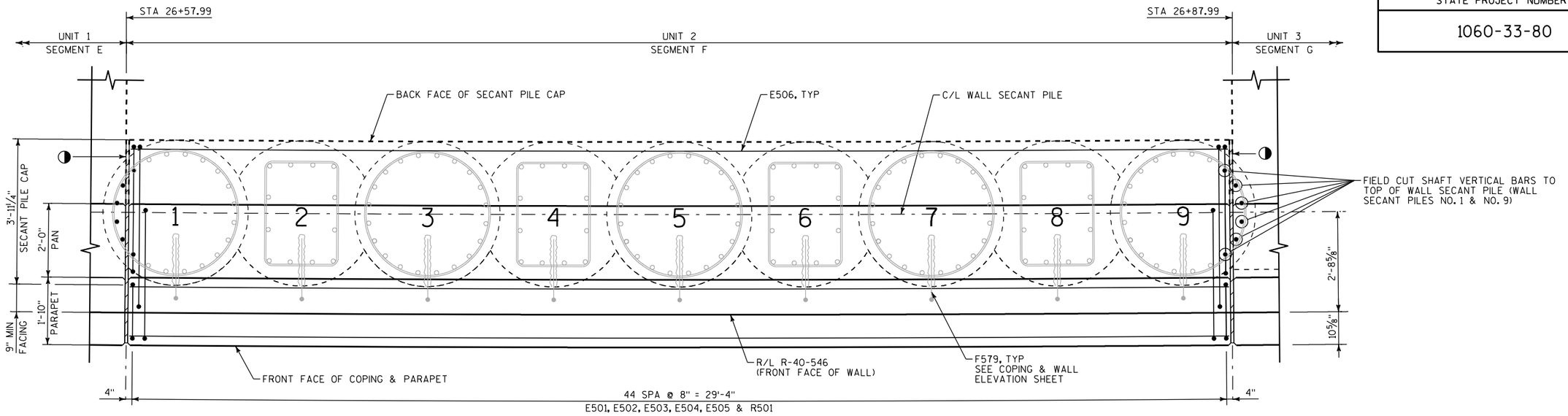
DRAWN BY TEK | PLANS CK'D. EKM

WALL SECANT PILE DATA TABLE & DETAILS

SHEET 23 OF 53

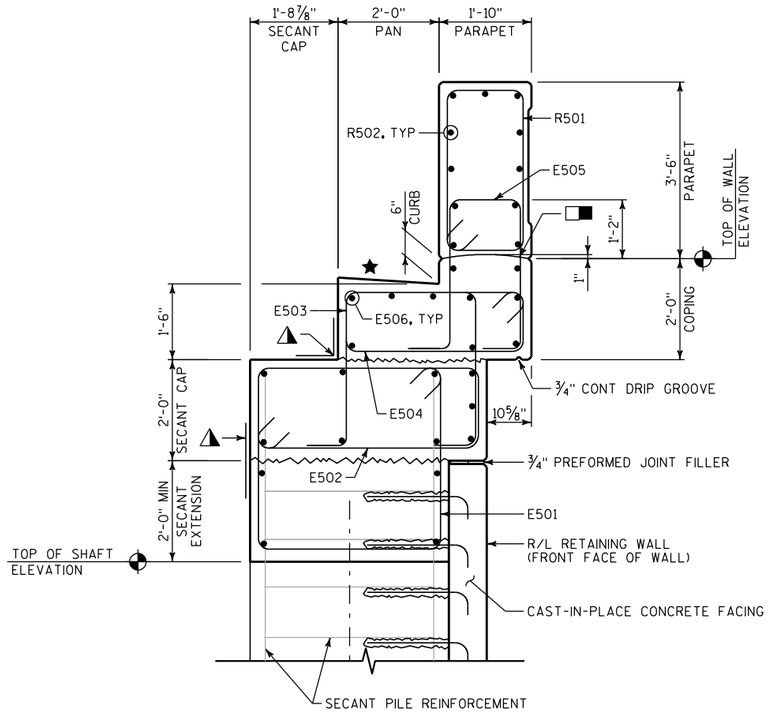
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PLOT BY : MSCEKM
PLOT NAME : R546_080401_da
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80



WALL SECANT PILE EXTENSION, CAP & COPING LAYOUT

UNIT 2 - SEGMENT F



UNIT 2 - TYPICAL SECTION

STA 9+65.83 TO STA 9+95.83

BILL OF BARS - SECANT EXTENSION

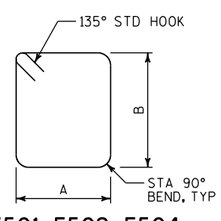
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
E501	X	45	14'-11"	X	SECANT EXTENSION - VERTICAL STIRRUP
E502	X	45	12'-5"	X	SECANT COPING - VERTICAL STIRRUP
E503	X	45	9'-11"	X	SECANT COPING - VERTICAL TIE
E504	X	45	9'-11"	X	COPING - VERTICAL STIRRUP
E505	X	45	8'-8"	X	COPING - VERTICAL TIE
E506	X	23	29'-6"		SECANT EXTENSION, CAP AND COPING - LONGITUDINAL

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS - PARAPET

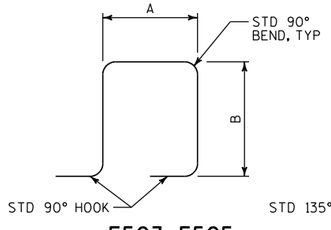
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
R501	X	45	9'-11"		PARAPET - VERTICAL STIRRUP
R502	X	11	29'-6"	X	PARAPET - LONGITUDINAL

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



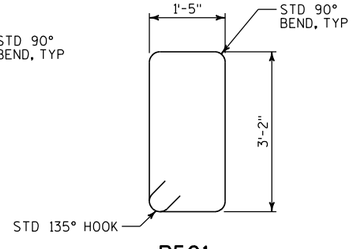
E501, E502, E504

BAR MARK	A	B
E501	3'-7"	3'-7"
E502	4'-4"	1'-7"
E504	3'-6"	1'-2"



E503, E505

BAR MARK	A	B
E503	2'-7"	3'-1"
E505	1'-5"	3'-0"



R501

LEGEND

- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- 1" CORK FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- ★ SLOPE PAN ¾" PER FOOT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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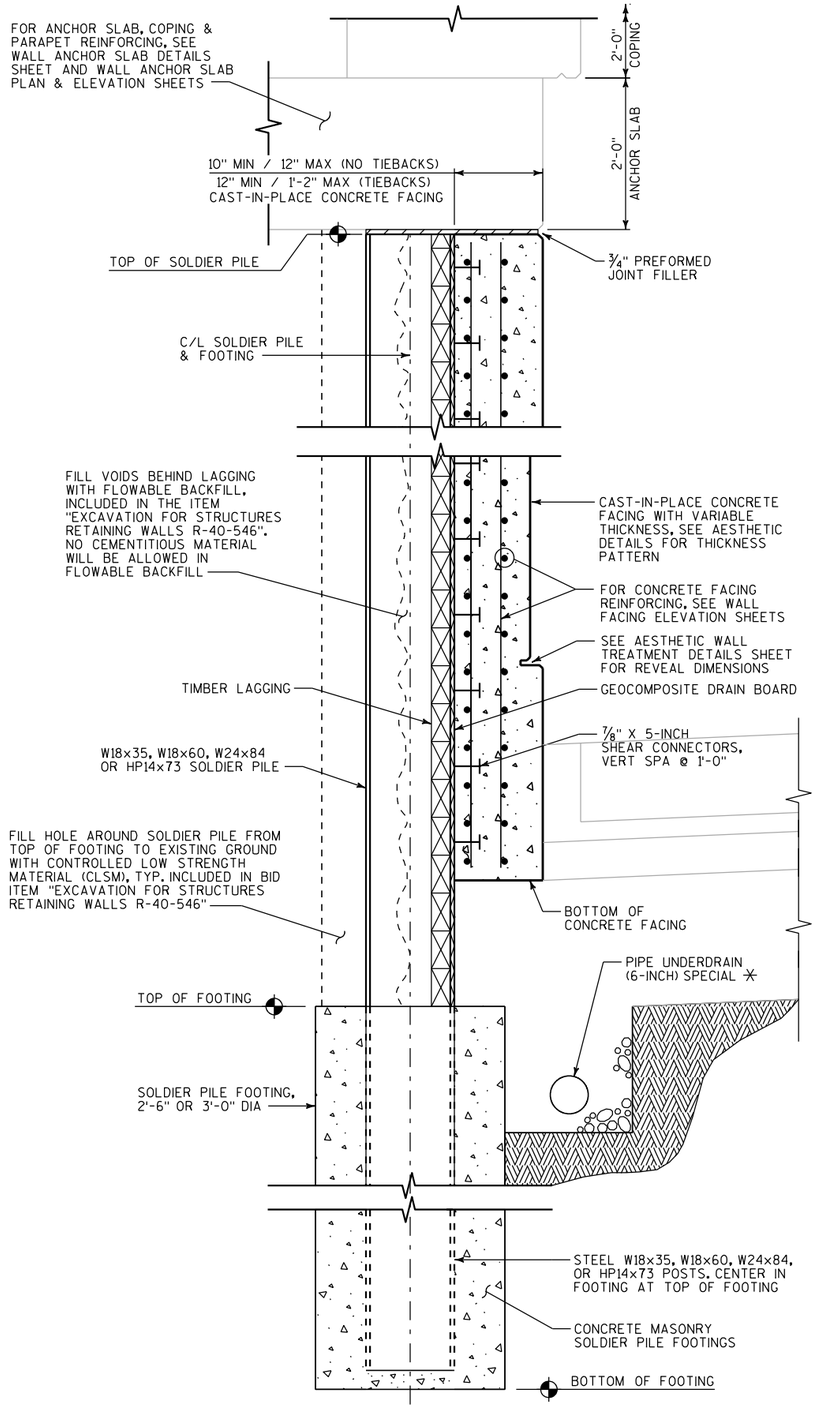
WALL SECANT PILE CAP & COPING DETAILS

SHEET 24 OF 53

8

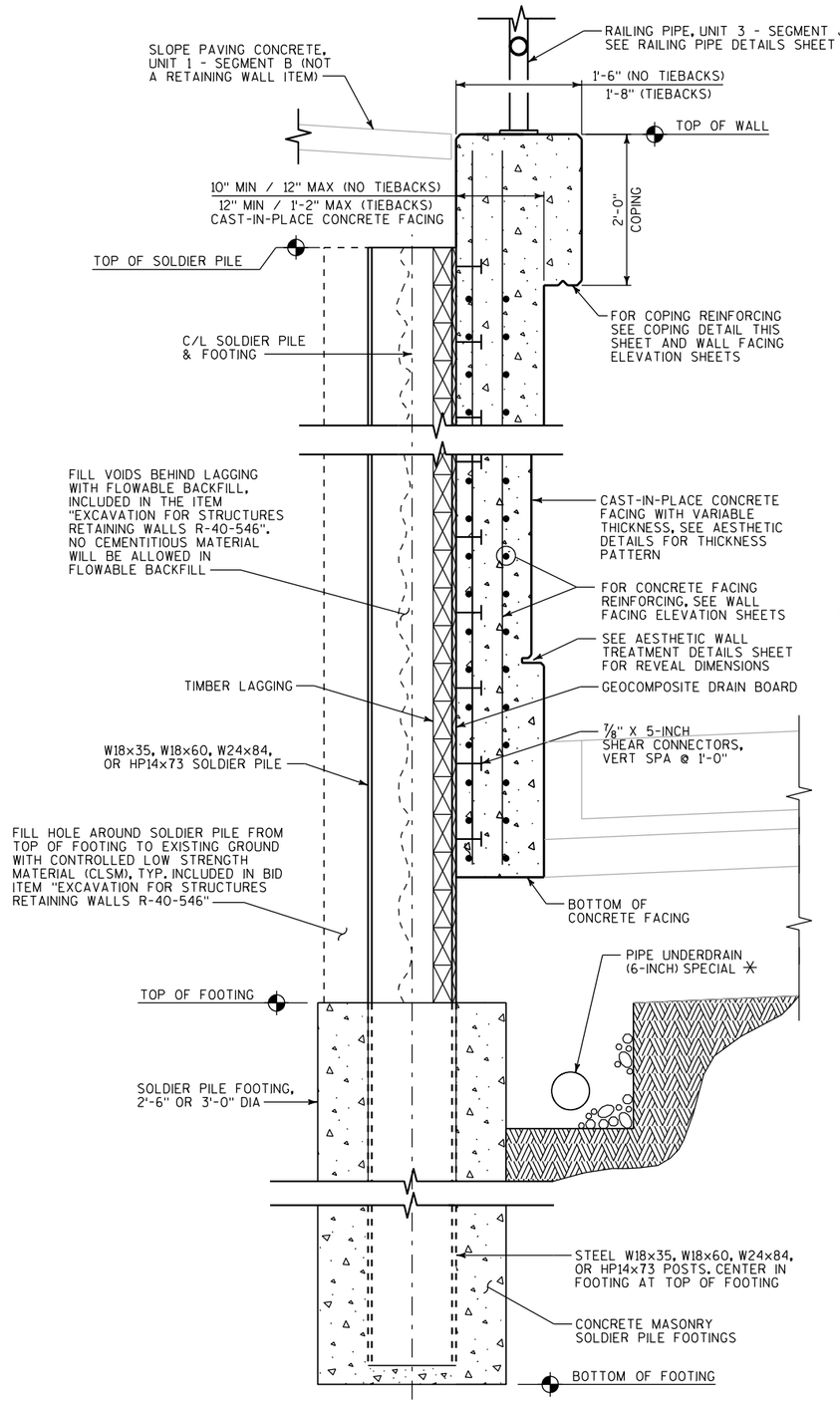
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PLOT BY : MSCEKM
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PLOT SCALE : 6:1



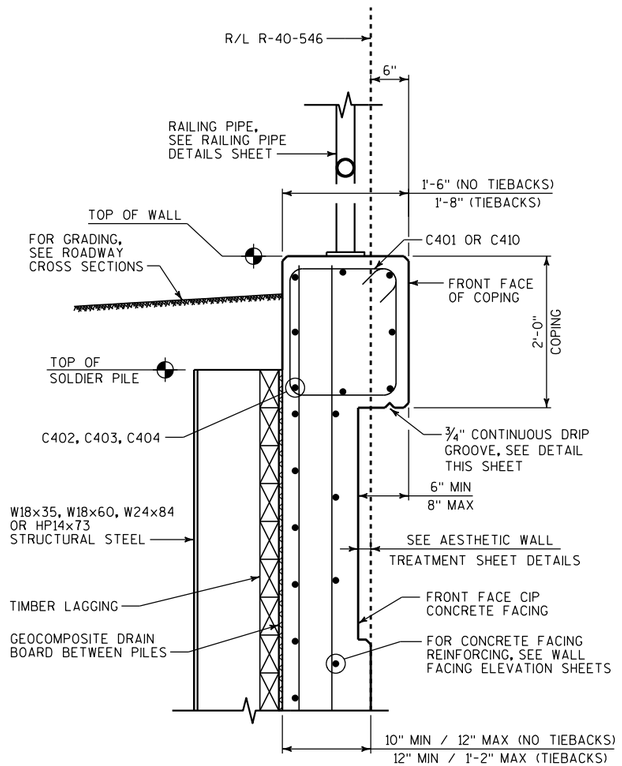
SOLDIER PILE AND WALL SECTION - UNITS 1 & 3

SEGMENTS A, C, D, E, G & H
(ANCHOR SLAB REINFORCEMENT NOT SHOWN)
(LOOKING WEST)



SOLDIER PILE AND WALL SECTION - UNITS 1 & 3

SEGMENTS B & J
(COPING REINFORCEMENT NOT SHOWN)
(LOOKING NORTH)

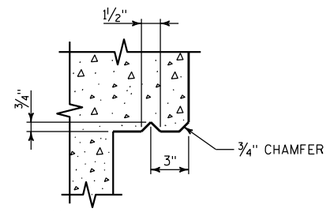


COPING DETAIL

(UNIT 3 - SEGMENT J SHOWN)
(WELDED STUD CONNECTORS NOT SHOWN)
(UNIT 1 - SEGMENT B SIMILAR)

LEGEND

✳ SEE TYPICAL SECTIONS FOR PIPE LOCATIONS



¾" CONTINUOUS DRIP GROOVE DETAIL

TERMINATE 2'-0" FROM ENDS OF WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

WALL COPING & FACING DETAILS (1 OF 2)

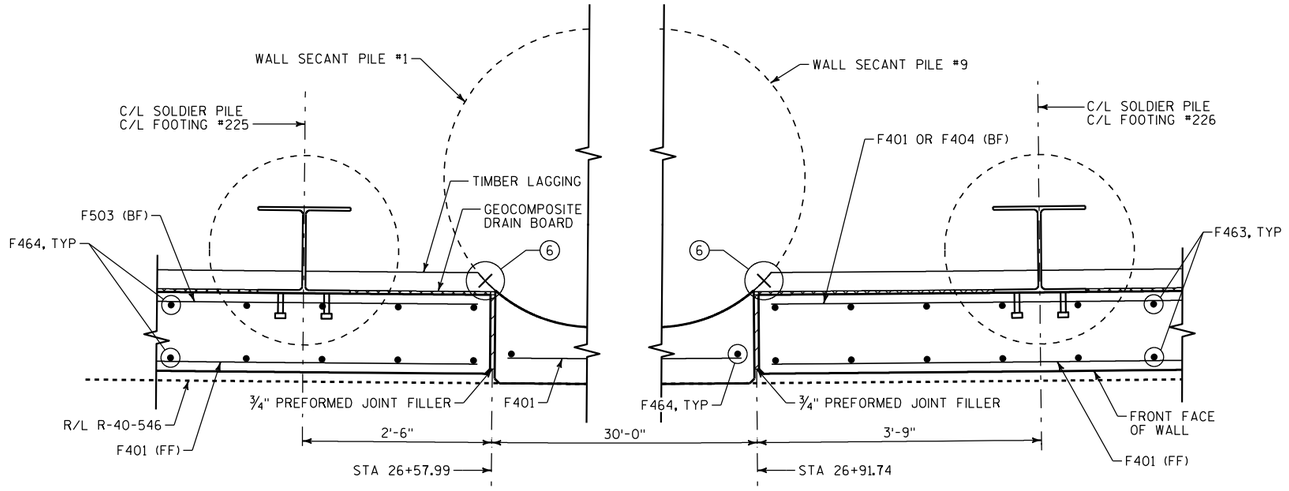
SHEET 25 OF 53

8

8

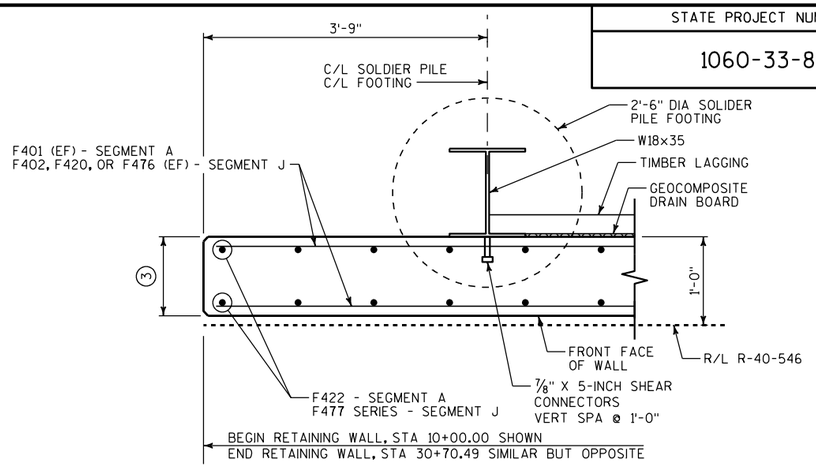
STATE PROJECT NUMBER

1060-33-80



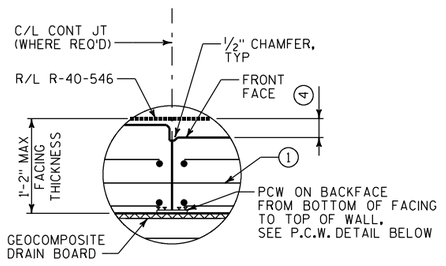
SECTION AT UNIT 2

SEE WALL SECANT PILE DATA TABLES &
DETAILS SHEET FOR ADDITONAL INFORMATION

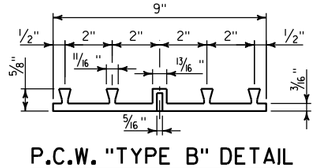


SECTION AT BEGINNING/END OF WALL

(SEGMENT A / SEGMENT J)



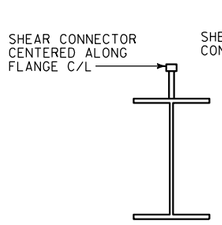
CONTRACTION JOINT DETAIL



P.C.W. "TYPE B" DETAIL

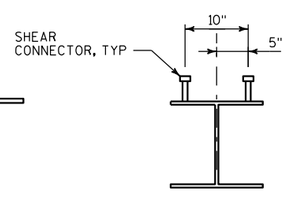
(POLYVINYL CHLORIDE WATERSTOP)

(INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS")
P.C.W. SHALL BE BUTT SPLICED AT ANY INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.



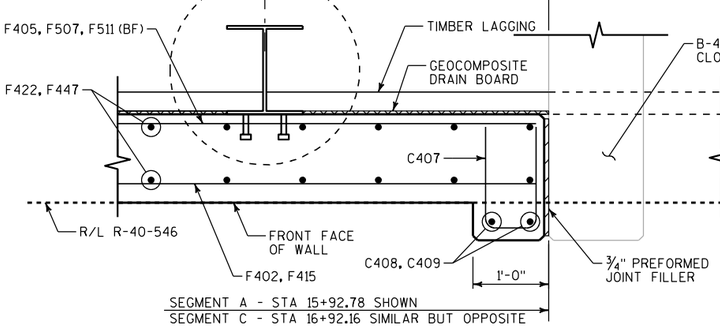
STUD LAYOUT

W18x35, W18x60, & W24x84



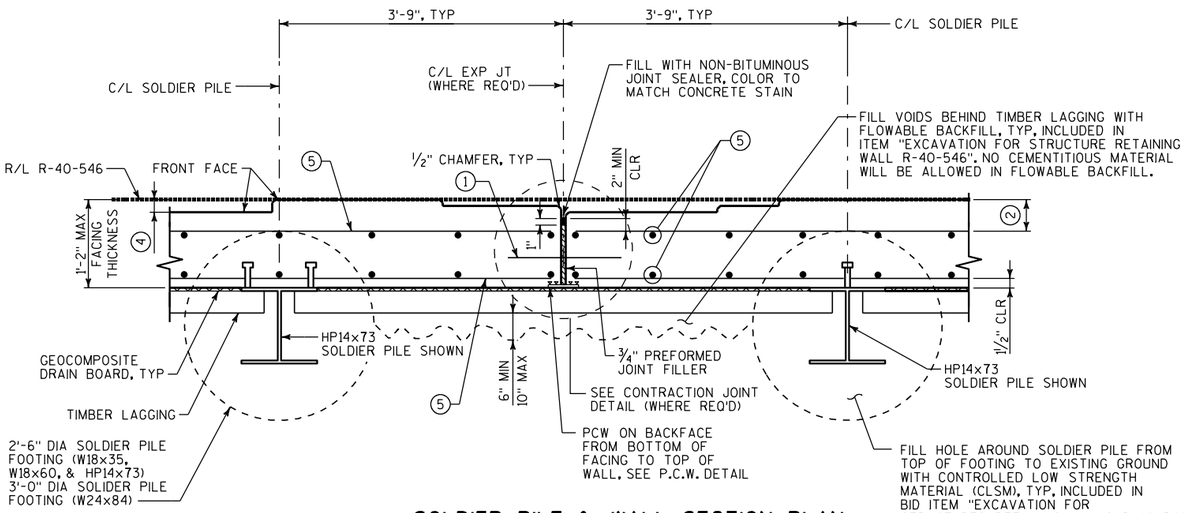
STUD LAYOUT

HP14x73 WITH TIEBACKS



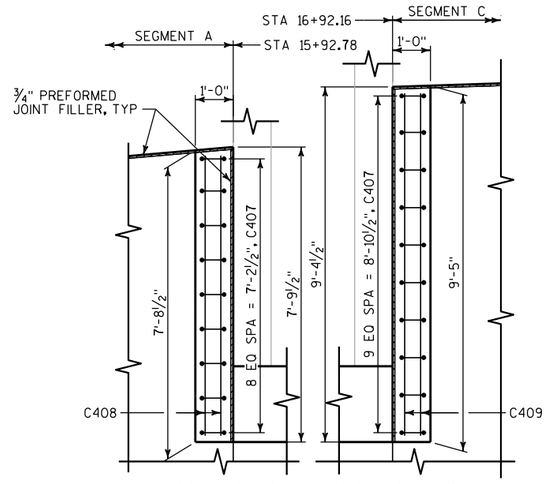
SECTION AT VERTICAL COPING

(SEGMENT A / SEGMENT C)



SOLDIER PILE & WALL SECTION PLAN

(SEE GENERAL PLAN & ELEVATION SHEETS FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)



VERTICAL COPING DETAIL

(ANCHOR SLAB NOT SHOWN FOR CLARITY)

NOTES

1. ¾" DIA X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED AT 2'-0" CENTERS MID-DEPTH IN THE WALL. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER ½ THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALL. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".
2. 5" CLEAR FROM MAX. WALL THICKNESS.
3. 10" MIN, 1'-0" MAX.
4. SEE AESTHETIC WALL TREATMENT DETAILS SHEET.
5. SEE COPING AND WALL ELEVATION SHEETS FOR REINFORCEMENT BAR MARKS.
6. ANCHOR LAGGING TO SECANT PILE AS NECESSARY TO TEMPORARILY RETAIN EXISTING MATERIAL AND AS A LEFT-IN-PLACE CONCRETE FACING BACK FACE FORM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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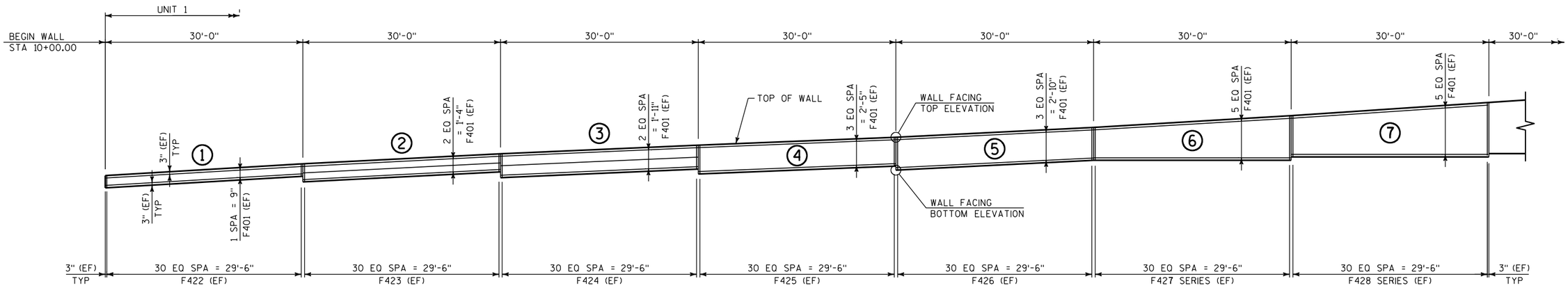
COPING & WALL FACING DETAILS (2 OF 2)

SHEET 26 OF 53

8

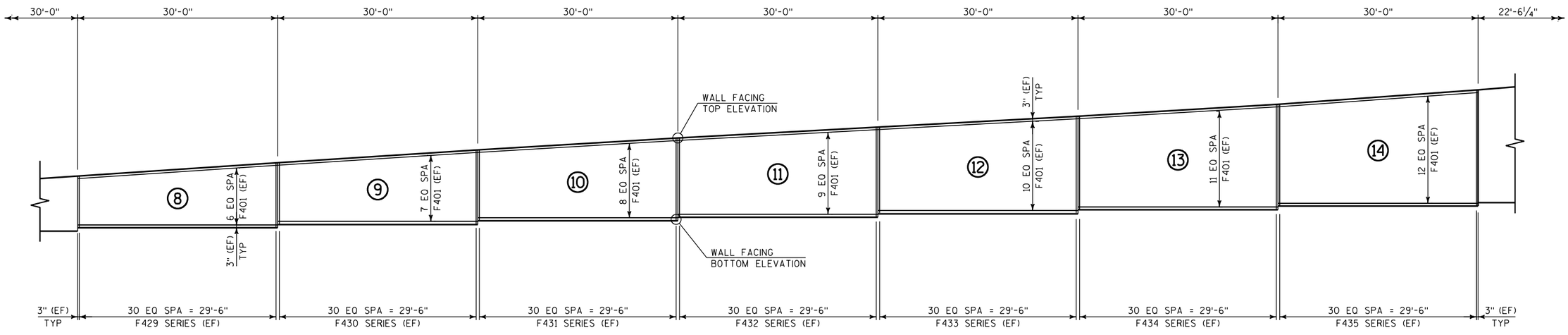
8

STATE PROJECT NUMBER
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PARTIAL WALL FACING ELEVATION

(PANELS 1 THRU 7)



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION	
	START	END	START	END
1	731.37	732.55	732.62	733.80
2	731.97	732.99	733.80	734.82
3	732.40	733.27	734.82	735.69
4	732.77	733.58	735.69	736.50
5	733.17	734.16	736.50	737.49
6	734.16	734.16	737.49	738.68
7	734.51	734.51	738.68	740.01

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION	
	START	END	START	END
8	734.84	734.84	740.01	741.35
9	735.18	735.18	741.35	742.62
10	735.54	735.54	742.62	743.82
11	735.90	735.90	743.82	744.90
12	736.23	736.23	744.90	745.98
13	736.65	736.65	745.98	747.18
14	737.01	737.01	747.18	748.61

PARTIAL WALL FACING ELEVATION

(PANELS 8 THRU 14)

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

LEGEND

(X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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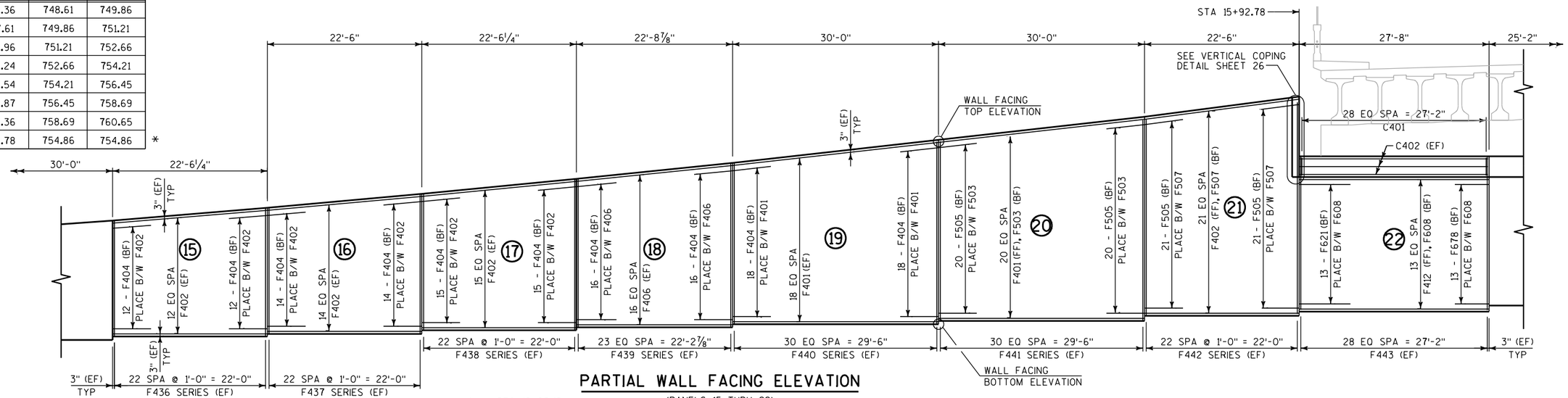
WALL FACING ELEVATION (1 OF 5)

SHEET 27 OF 53

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080503_el.dgn
PLOT DATE : 01-MAY-2014 12:56
PLOT BY : MSCEKM
PLOT NAME : R546_080503_el
PLOT SCALE : 16:1

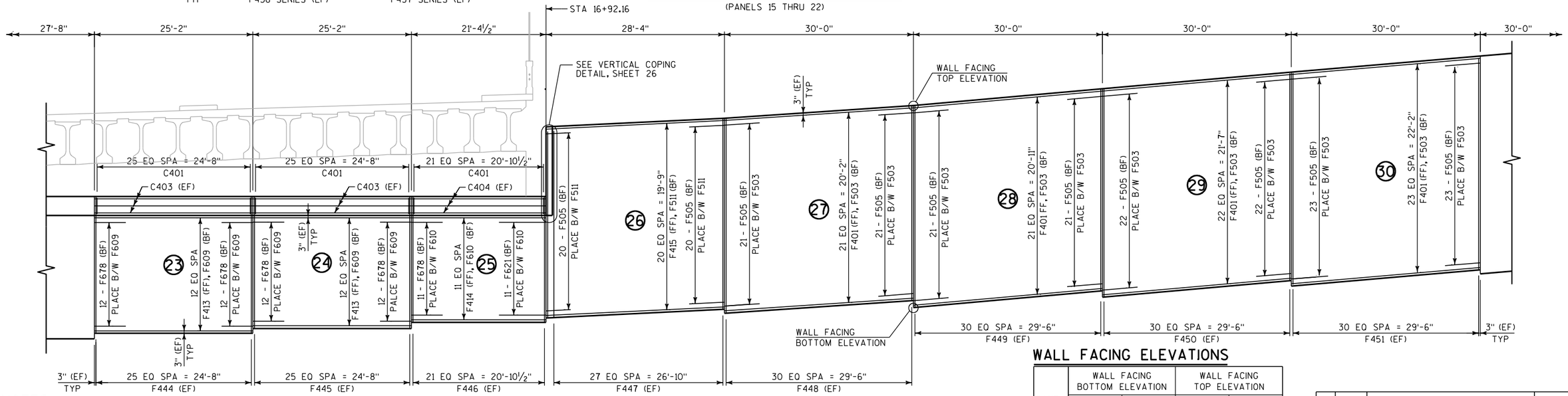
WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION START	WALL FACING BOTTOM ELEVATION END	WALL FACING TOP ELEVATION START	WALL FACING TOP ELEVATION END	
15	737.36	737.36	748.61	749.86	
16	737.61	737.61	749.86	751.21	
17	737.96	737.96	751.21	752.66	
18	738.24	738.24	752.66	754.21	
19	738.54	738.54	754.21	756.45	
20	738.87	738.87	756.45	758.69	
21	739.36	739.36	758.69	760.65	
22	739.78	739.78	754.86	754.86	*



PARTIAL WALL FACING ELEVATION

(PANELS 15 THRU 22)



PARTIAL WALL FACING ELEVATION

(PANELS 23 THRU 30)

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION START	WALL FACING BOTTOM ELEVATION END	WALL FACING TOP ELEVATION START	WALL FACING TOP ELEVATION END	
23	740.36	740.36	754.86	754.86	*
24	740.86	740.86	754.86	754.86	*
25	741.53	741.53	754.86	754.86	*
26	741.99	742.90	762.24	763.15	
27	742.48	743.83	763.15	764.50	
28	743.08	744.85	764.50	766.27	
29	744.19	745.95	766.27	768.03	
30	745.36	747.08	768.03	769.75	

NOTES

ONLY WALL FACING & COPING SHOWN FOR CLARITY.

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

LEGEND

(X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

* WALL FACING TOP ELEVATION INCLUDES COPING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
1060-33-80

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

COPING AND WALL ELEVATION (2 OF 5)

SHEET 28 OF 53

3032

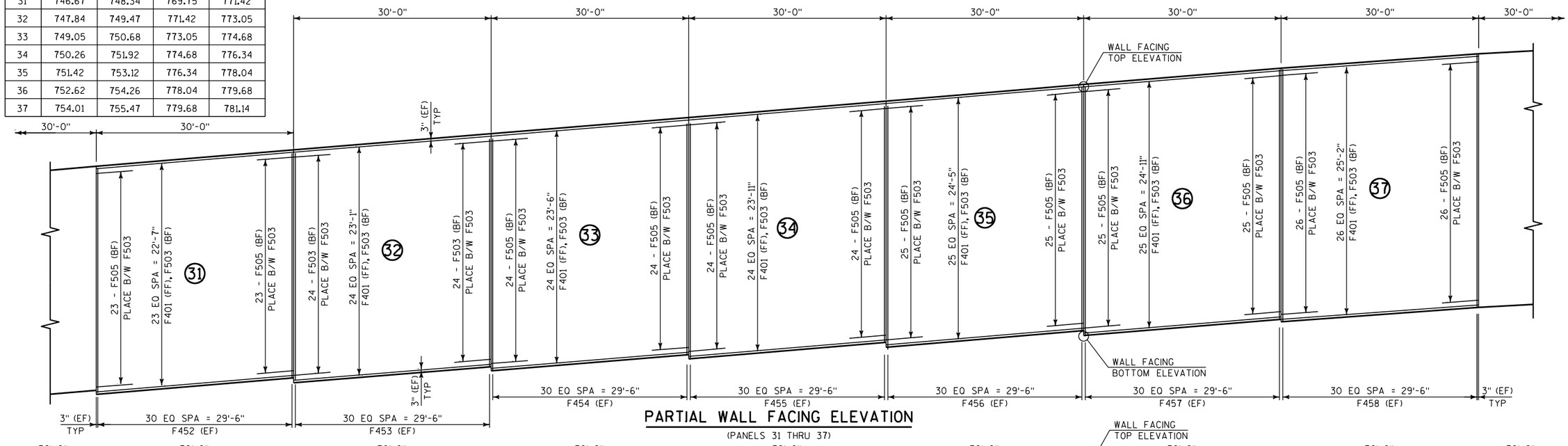
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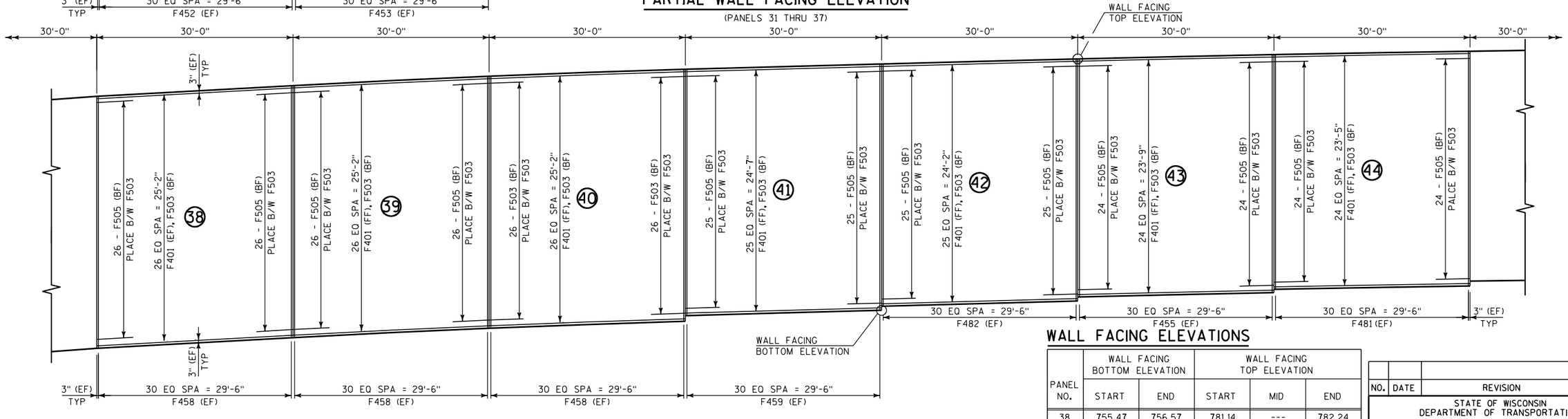
WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION	
	START	END	START	END
31	746.67	748.34	769.75	771.42
32	747.84	749.47	771.42	773.05
33	749.05	750.68	773.05	774.68
34	750.26	751.92	774.68	776.34
35	751.42	753.12	776.34	778.04
36	752.62	754.26	778.04	779.68
37	754.01	755.47	779.68	781.14



PARTIAL WALL FACING ELEVATION

(PANELS 31 THRU 37)



PARTIAL WALL FACING ELEVATION

(PANELS 38 THRU 44)

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

LEGEND

(X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION		
	START	END	START	MID	END
38	755.47	756.57	781.14	---	782.24
39	756.57	757.07	782.24	---	782.74
40	757.52	758.23	783.19	783.57	783.90
41	758.82	759.35	783.90	784.17	784.43
42	759.76	760.29	784.43	784.70	784.96
43	760.71	761.15	784.96	785.19	785.40
44	761.48	761.82	785.40	785.58	785.74

STATE PROJECT NUMBER

1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

COPING AND WALL ELEVATION (3 OF 5)

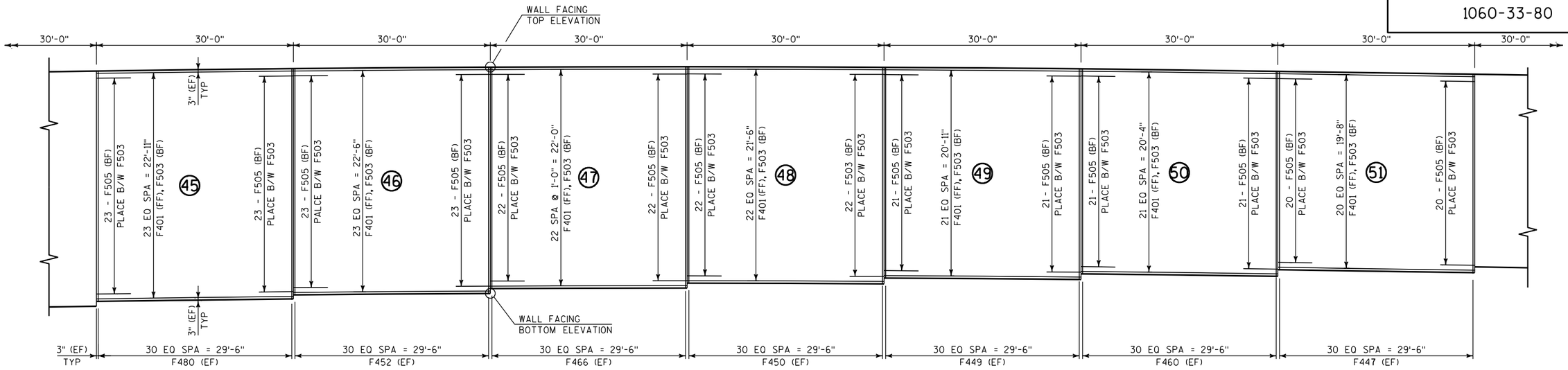
SHEET 29 OF 53

3033

8

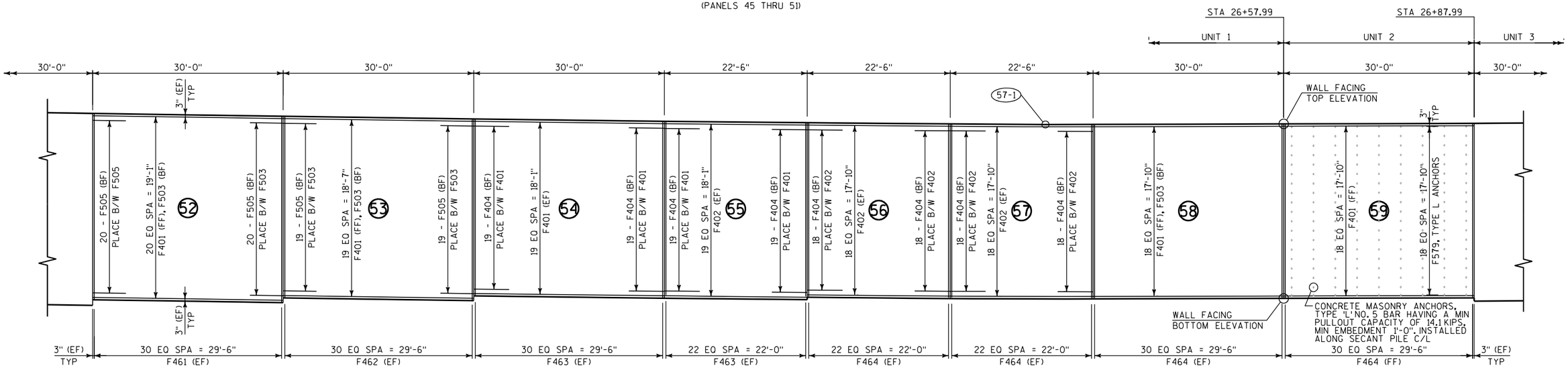
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STATE PROJECT NUMBER
1060-33-80



PARTIAL WALL FACING ELEVATION

(PANELS 45 THRU 51)



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION		
	START	END	START	MID	END
45	762.32	762.56	785.74	785.87	785.98
46	762.98	763.12	785.98	786.07	786.12
47	763.62	763.67	786.12	786.16	786.17
48	764.17	764.11	786.17	786.15	786.11
49	764.69	764.53	786.11	786.04	785.95
50	765.12	764.87	785.95	785.84	785.70
51	765.53	765.23	785.70	785.55	785.40

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

LEGEND

(X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

★ SEE WALL FACING ELEVATION FOR ADDITINAL TOP ELEVATION INFORMATION

PARTIAL WALL FACING ELEVATION

(PANELS 52 THRU 59)

TOP OF WALL LOW POINT FOR INLET

(57-1) STA 26+20.49
EL. 784.24

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION		
	START	END	START	START	END
52	765.82	765.53	785.40	785.26	785.11
53	766.03	765.74	785.11	784.96	784.82
54	766.24	765.99	784.82	784.69	784.57
55	765.99	765.84	784.57	784.49	784.42
56	766.09	765.97	784.42	784.36	784.30
★ 57	765.97	765.92	784.30	784.25	784.25
58	765.92	765.97	784.25	784.27	784.30
59	765.97	766.03	784.30	784.33	784.36

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

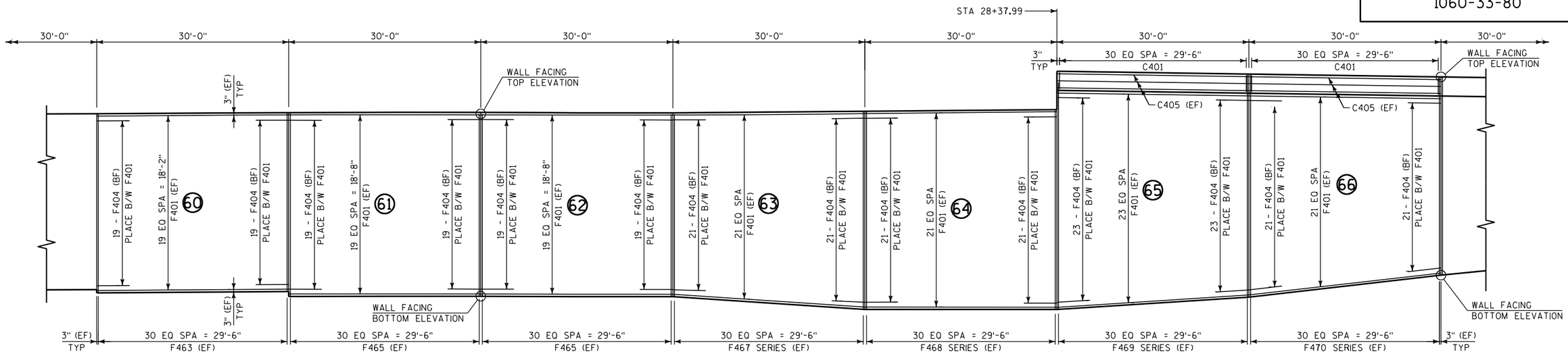
DRAWN BY TEK | PLANS CK'D. EKM

COPING AND WALL ELEVATION (4 OF 5)

SHEET 30 OF 53

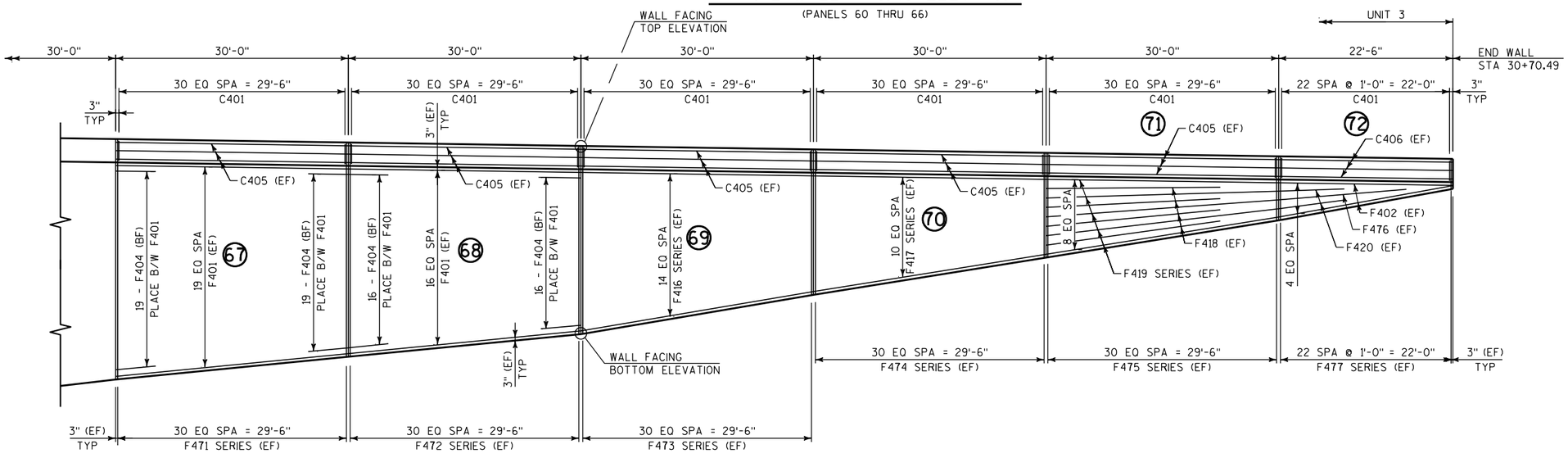
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PLOT DATE : 01-MAY-2014 12:56
PLOT BY : MSCEKM
PLOT NAME : R546_080506_el
PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-80



PARTIAL WALL FACING ELEVATION

(PANELS 60 THRU 66)



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION			
	START	END	START	MID	END	
60	765.69	765.82	784.36	784.42	784.49	
61	765.32	765.33	784.49	784.50	784.50	
62	765.33	765.29	784.50	784.46	784.46	
63	765.29	763.96	784.46	---	784.63	
64	763.96	763.97	784.63	---	784.80	
65	763.97	765.17	788.80	---	788.50	*
66	765.17	767.54	788.50	---	788.21	*

NOTES

ONLY WALL FACING & COPING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

LEGEND

(X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

* WALL FACING TOP ELEVATION INCLUDES COPING

PARTIAL WALL FACING ELEVATION

(PANELS 67 THRU 72)

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING BOTTOM ELEVATION		WALL FACING TOP ELEVATION		
	START	END	START	END	
67	767.54	769.49	788.21	787.91	*
68	769.49	771.45	787.91	787.61	*
69	771.45	774.82	787.61	787.32	*
70	774.82	778.02	787.32	787.02	*
71	778.02	781.22	787.02	786.72	*
72	781.22	783.92	786.72	786.50	*

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

COPING AND WALL ELEVATION (5 OF 5)

SHEET 31 OF 53

STATE PROJECT NUMBER

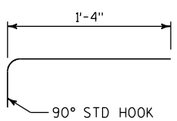
1060-33-80

BILL OF BARS - FACING

BAR MARK	COAT	NUMBER REQUIRED UNIT 1	UNIT 2	UNIT 3	TOTAL	LENGTH	BENT	SERIES	LOCATION
F401	X	966	19	374	1359	29'-7"			HORIZONTAL
F402	X	226	-	4	230	22'-1"			HORIZONTAL
F503	X	692	-	-	692	29'-7"			HORIZONTAL
F404	X	298	-	356	654	5'-2"			HORIZONTAL BF AT JOINT
F505	X	1372	-	-	1372	5'-6"			HORIZONTAL BF AT JOINT
F406	X	34	-	-	34	22'-4"			HORIZONTAL - PANEL 18 EF
F507	X	22	-	-	22	22'-1"			HORIZONTAL - PANEL 21 BF
F608	X	14	-	-	14	27'-3"			HORIZONTAL - PANEL 22 BF
F609	X	26	-	-	26	24'-9"			HORIZONTAL - PANELS 23 & 24 BF
F610	X	12	-	-	12	20'-11"			HORIZONTAL - PANEL 25 BF
F511	X	21	-	-	21	27'-11"			HORIZONTAL - PANEL 26 BF
F412	X	14	-	-	14	27'-3"			HORIZONTAL - PANEL 22 FF
F413	X	26	-	-	26	24'-9"			HORIZONTAL - PANELS 23 & 24 FF
F414	X	12	-	-	12	20'-11"			HORIZONTAL - PANEL 25 FF
F415	X	21	-	-	21	27'-11"			HORIZONTAL - PANEL 26 FF
F416	X	-	-	30	30	29'-8"		⚠	HORIZONTAL - PANEL 69 EF
F417	X	-	-	22	22	29'-8"		⚠	HORIZONTAL - PANEL 70 EF
F418	X	-	-	10	10	29'-8"		⚠	HORIZONTAL - PANEL 71 EF
F419	X	-	-	8	8	22'-5"			HORIZONTAL - PANEL 71 EF
F420	X	-	-	4	4	8'-4"			HORIZONTAL - PANEL 72 EF
F621	X	24	-	-	24	7'-9"			HORIZONTAL BF AT JOINT - PANELS 22 & 25
F422	X	62	-	-	62	10"			VERTICAL - PANEL 1 EF
F423	X	62	-	-	62	1'-5"			VERTICAL - PANEL 2 EF
F424	X	62	-	-	62	2'-0"			VERTICAL - PANEL 3 EF
F425	X	62	-	-	62	2'-6"			VERTICAL - PANEL 4 EF
F426	X	62	-	-	62	2'-11"		⚠	VERTICAL - PANEL 5 EF
F427	X	62	-	-	62	3'-6"		⚠	VERTICAL - PANEL 6 EF
F428	X	62	-	-	62	4'-5"		⚠	VERTICAL - PANEL 7 EF
F429	X	62	-	-	62	5'-5"		⚠	VERTICAL - PANEL 8 EF
F430	X	62	-	-	62	6'-5"		⚠	VERTICAL - PANEL 9 EF
F431	X	62	-	-	62	7'-3"		⚠	VERTICAL - PANEL 10 EF
F432	X	62	-	-	62	8'-1"		⚠	VERTICAL - PANEL 11 EF
F433	X	62	-	-	62	8'-10"		⚠	VERTICAL - PANEL 12 EF
F434	X	62	-	-	62	9'-6"		⚠	VERTICAL - PANEL 13 EF
F435	X	62	-	-	62	10'-5"		⚠	VERTICAL - PANEL 14 EF
F436	X	46	-	-	46	11'-6"		⚠	VERTICAL - PANEL 15 EF
F437	X	46	-	-	46	12'-6"		⚠	VERTICAL - PANEL 16 EF
F438	X	46	-	-	46	13'-7"		⚠	VERTICAL - PANEL 17 EF
F439	X	48	-	-	48	14'-9"		⚠	VERTICAL - PANEL 18 EF
F440	X	62	-	-	62	16'-4"		⚠	VERTICAL - PANEL 19 EF
F441	X	62	-	-	62	18'-3"		⚠	VERTICAL - PANEL 20 EF
F442	X	46	-	-	46	19'-10"		⚠	VERTICAL - PANEL 21 EF
F443	X	58	-	-	58	14'-9"			VERTICAL - PANEL 22 EF
F444	X	52	-	-	52	14'-2"			VERTICAL - PANEL 23 EF
F445	X	52	-	-	52	13'-8"			VERTICAL - PANEL 24 EF
F446	X	44	-	-	44	13'-0"			VERTICAL - PANEL 25 EF
F447	X	118	-	-	118	19'-9"			VERTICAL - PANELS 26 & 51 EF
F448	X	62	-	-	62	20'-3"			VERTICAL - PANEL 27 EF
F449	X	124	-	-	124	21'-0"			VERTICAL - PANELS 28 & 49 EF
F450	X	124	-	-	124	21'-7"			VERTICAL - PANELS 29 & 48 EF

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



F579

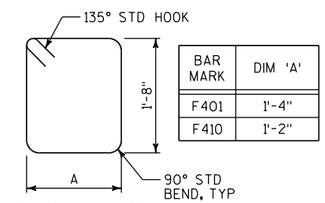
CONCRETE MASONRY ANCHORS, TYPE 'L' NO. 5 BAR HAVING A MINIMUM PULLOUT CAPACITY OF 14.1 KIPS.

BILL OF BARS - FACING CONTINUED

BAR MARK	COAT	NUMBER REQUIRED UNIT 1	UNIT 2	UNIT 3	TOTAL	LENGTH	BENT	SERIES	LOCATION
F451	X	62	-	-	62	22'-3"			VERTICAL - PANEL 30 EF
F452	X	124	-	-	124	22'-7"			VERTICAL - PANELS 31 & 46 EF
F453	X	62	-	-	62	23'-2"			VERTICAL - PANEL 32 EF
F454	X	62	-	-	62	23'-8"			VERTICAL - PANEL 33 EF
F455	X	124	-	-	124	24'-0"			VERTICAL - PANELS 34 & 43 EF
F456	X	62	-	-	62	24'-6"			VERTICAL - PANEL 35 EF
F457	X	62	-	-	62	25'-0"			VERTICAL - PANEL 36 EF
F458	X	248	-	-	248	25'-3"			VERTICAL - PANELS 37 THRU 40 EF
F459	X	62	-	-	62	24'-8"			VERTICAL - PANEL 41 EF
F460	X	62	-	-	62	20'-5"			VERTICAL - PANEL 50 EF
F461	X	62	-	-	62	19'-2"			VERTICAL - PANEL 52 EF
F462	X	62	-	-	62	18'-8"			VERTICAL - PANEL 53 EF
F463	X	108	-	62	170	18'-2"			VERTICAL - PANELS 54, 55 & 60 EF
F464	X	154	31	-	185	17'-11"			VERTICAL - PANELS 56 THRU 58 EF & 59 FF
F465	X	-	-	124	124	18'-9"			VERTICAL - PANELS 61 & 62 EF
F466	X	62	-	-	62	22'-1"			VERTICAL - PANEL 47 EF
F467	X	-	-	62	62	19'-6"		⚠	VERTICAL - PANEL 63 EF
F468	X	-	-	62	62	20'-4"		⚠	VERTICAL - PANEL 64 EF
F469	X	-	-	62	62	23'-8"		⚠	VERTICAL - PANEL 65 EF
F470	X	-	-	62	62	21'-6"		⚠	VERTICAL - PANEL 66 EF
F471	X	-	-	62	62	19'-2"		⚠	VERTICAL - PANEL 67 EF
F472	X	-	-	62	62	16'-11"		⚠	VERTICAL - PANEL 68 EF
F473	X	-	-	62	62	13'-11"		⚠	VERTICAL - PANEL 69 EF
F474	X	-	-	62	62	10'-4"		⚠	VERTICAL - PANEL 70 EF
F475	X	-	-	62	62	6'-10"		⚠	VERTICAL - PANEL 71 EF
F476	X	-	-	2	2	16'-7"			HORIZONTAL - PANEL 72 EF
F477	X	-	-	46	46	3'-7"		⚠	VERTICAL - PANEL 72 EF
F678	X	72	-	-	72	5'-3"			HORIZONTAL BF AT JOINT - PANELS 22 THRU 25
F579	X	-	171	-	171	2'-0"	X		MASONRY ANCHORS TYPE L
F480	X	62	-	-	62	23'-0"			VERTICAL - PANEL 45 EF
F481	X	62	-	-	62	23'-6"			VERTICAL - PANEL 44 EF
F482	X	62	-	-	62	24'-3"			VERTICAL - PANEL 42 EF

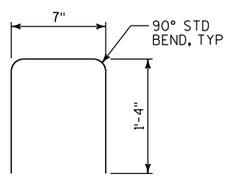
BILL OF BARS - COPING

BAR MARK	COAT	NUMBER REQUIRED UNIT 1	UNIT 2	UNIT 3	TOTAL	LENGTH	BENT	SERIES	LOCATION
C401	X	103	-	124	227	6'-5"	X		COPING - TIE - PANELS 22 THRU 25 & 65 THRU 68
C402	X	8	-	-	8	27'-3"			COPING - LONGITUDINAL - PANEL 22
C403	X	16	-	-	16	24'-9"			COPING - LONGITUDINAL - PANELS 23 & 24
C404	X	8	-	-	8	20'-11"			COPING - LONGITUDINAL - PANEL 25
C405	X	-	-	56	56	29'-7"			COPING - LONGITUDINAL - PANELS 65 THRU 71
C406	X	-	-	8	8	22'-1"			COPING - LONGITUDINAL - PANEL 71
C407	X	19	-	-	19	3'-0"	X		VERTICAL COPING - TIE - PANELS 21 & 26
C408	X	2	-	-	2	7'-5"			VERTICAL COPING - VERTICAL - PANEL 21
C409	X	2	-	-	2	9'-1"			VERTICAL COPING - VERTICAL - PANEL 26
C410	X	-	-	116	116	6'-1"	X		COPING - TIE - PANELS 69 THRU 72



BAR MARK	DIM 'A'
F401	1'-4"
F410	1'-2"

C401 & C410



C407

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
F416	2 SERIES OF 15	29'-7" TO 29'-9"
F417	2 SERIES OF 11	29'-7" TO 29'-9"
F418	2 SERIES OF 5	29'-7" TO 29'-9"
F427	2 SERIES OF 31	2'-11" TO 4'-1"
F428	2 SERIES OF 31	3'-9" TO 5'-1"
F429	2 SERIES OF 31	4'-9" TO 6'-1"
F430	2 SERIES OF 31	5'-9" TO 7'-0"
F431	2 SERIES OF 31	6'-8" TO 7'-10"
F432	2 SERIES OF 31	7'-6" TO 8'-7"
F433	2 SERIES OF 31	8'-3" TO 9'-4"
F434	2 SERIES OF 31	8'-11" TO 10'-1"
F435	2 SERIES OF 31	9'-9" TO 11'-2"
F436	2 SERIES OF 23	10'-10" TO 12'-1"
F437	2 SERIES OF 23	11'-10" TO 13'-2"
F438	2 SERIES OF 23	12'-10" TO 14'-3"
F439	2 SERIES OF 24	14'-0" TO 15'-6"
F440	2 SERIES OF 31	15'-3" TO 17'-6"
F441	2 SERIES OF 31	17'-2" TO 19'-4"
F442	2 SERIES OF 23	18'-11" TO 20'-10"
F467	2 SERIES OF 31	18'-9" TO 20'-3"
F468	2 SERIES OF 31	20'-3" TO 20'-5"
F469	2 SERIES OF 31	22'-10" TO 24'-5"
F470	2 SERIES OF 31	20'-3" TO 22'-10"
F471	2 SERIES OF 31	18'-0" TO 20'-3"
F472	2 SERIES OF 31	15'-9" TO 18'-0"
F473	2 SERIES OF 31	12'-1" TO 15'-9"
F474	2 SERIES OF 31	8'-7" TO 12'-1"
F475	2 SERIES OF 31	5'-1" TO 8'-7"
F477	2 SERIES OF 23	2'-2" TO 5'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

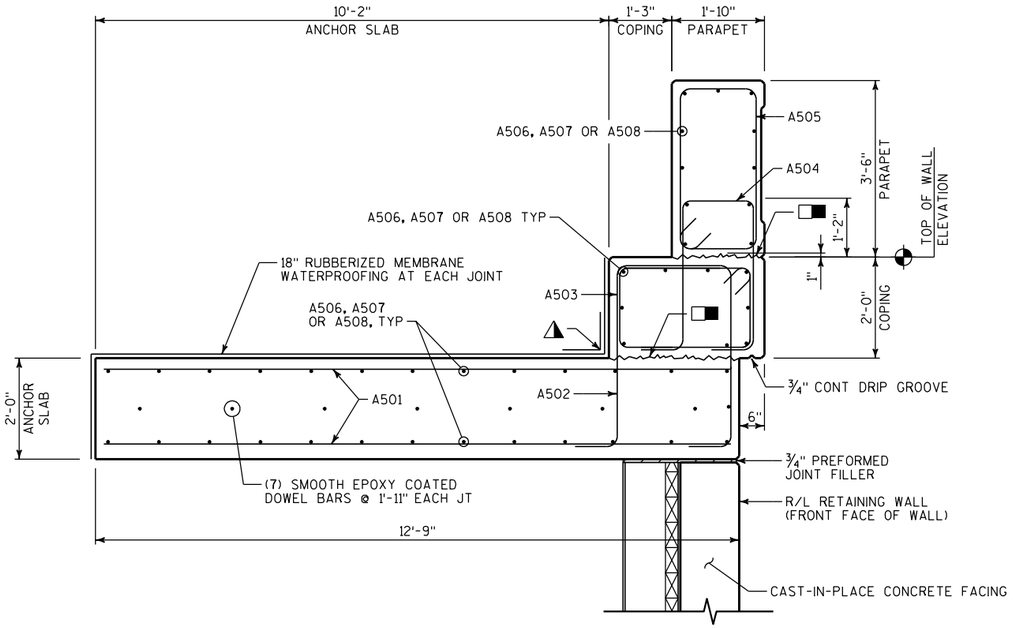
WALL COPING & FACING REINFORCING SCHEDULE

SHEET 32 OF 53

8

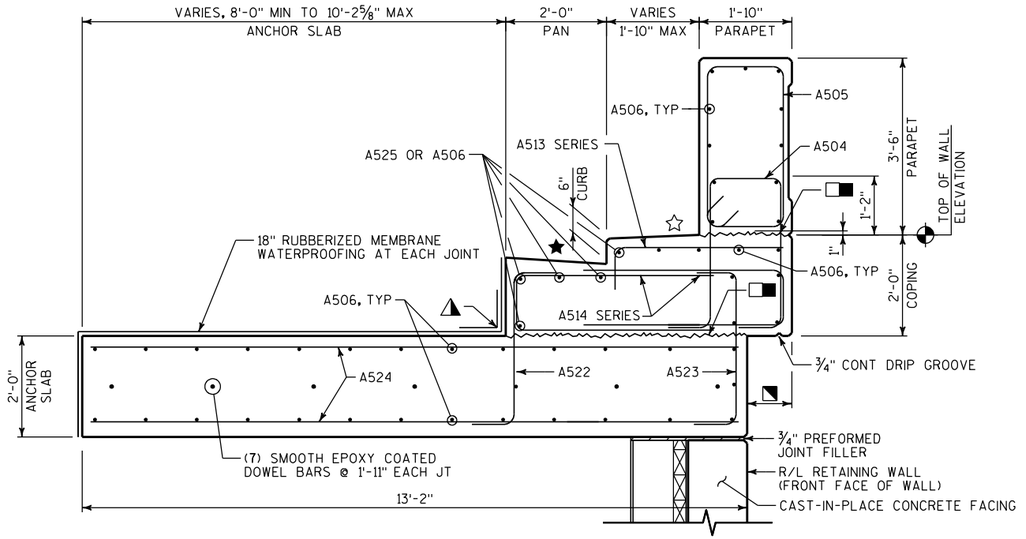
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STATE PROJECT NUMBER
1060-33-80



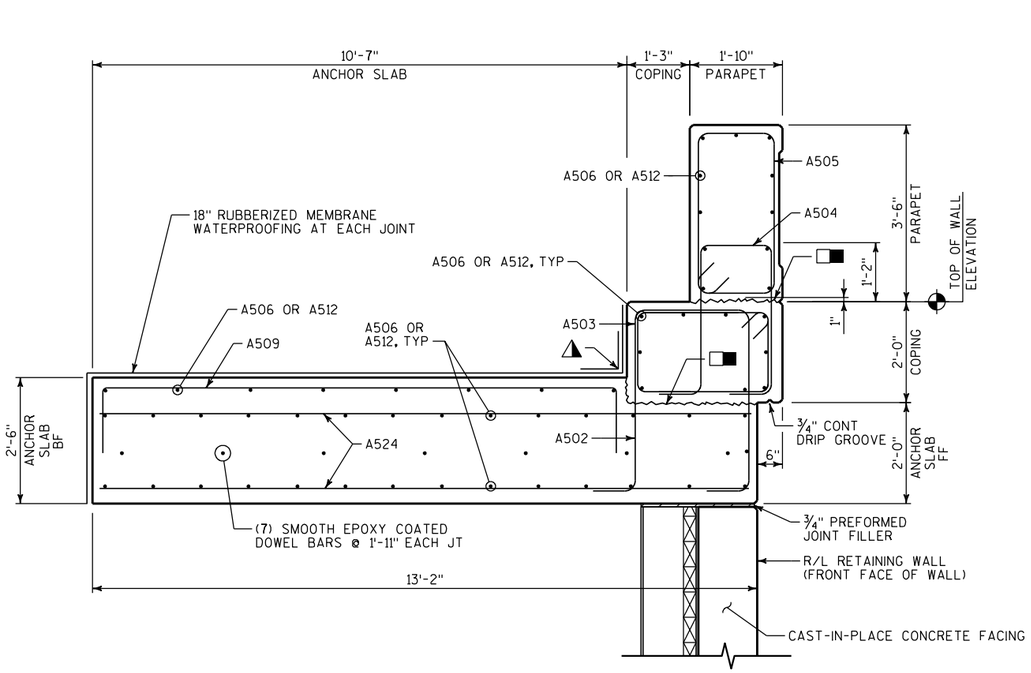
SEGMENT A

(TYPICAL SECTION)
STA 10+00.00 TO STA 15+92.75



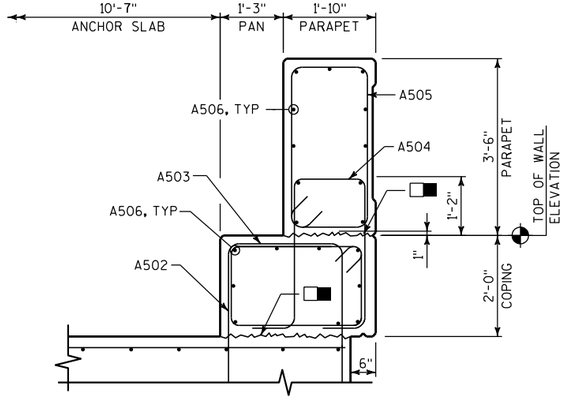
SEGMENT D

(TRANSITION SEGMENT)
STA 20+99.47 TO STA 21+68.89



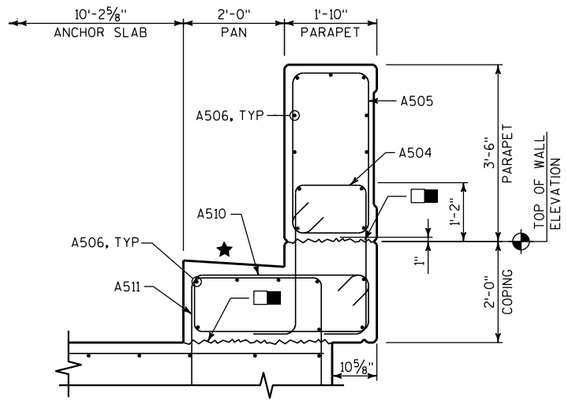
UNIT 1 - TYPICAL SECTION

SEGMENT C



BEGIN SEGMENT D

(TYPICAL SECTION)
STA 20+20.49 TO STA 20+99.47

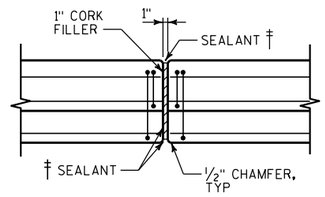


END SEGMENT D

(TYPICAL SECTION)
STA 21+68.89 TO STA 22+00.49

LEGEND

- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † 1" CORK FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- ★ SLOPE PAN 3/4" PER FOOT. SEE WALL ANCHOR SLAB PLAN (2 OF 4) FOR CURB FLOW LINE ELEVATIONS TABLE.
- ☆ 4.00% MAX.



PARAPET EXPANSION JOINT

NO NOT RUN BARS THRU JOINT.
LOCATED AT ALL WALL FACING CONTRACTION AND EXPANSION JOINTS.

NOTES

SEE WALL ANCHOR SLAB REINFORCING SCHEDULE FOR BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

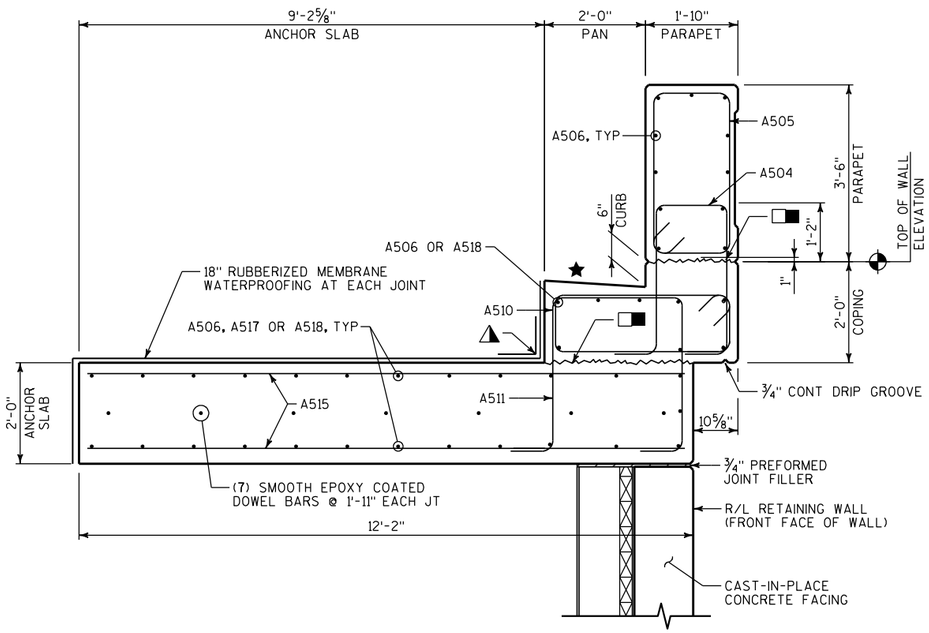
DRAWN BY TEK | PLANS CK'D. EKM

WALL ANCHOR SLAB DETAILS (1 OF 2)

SHEET 33 OF 53

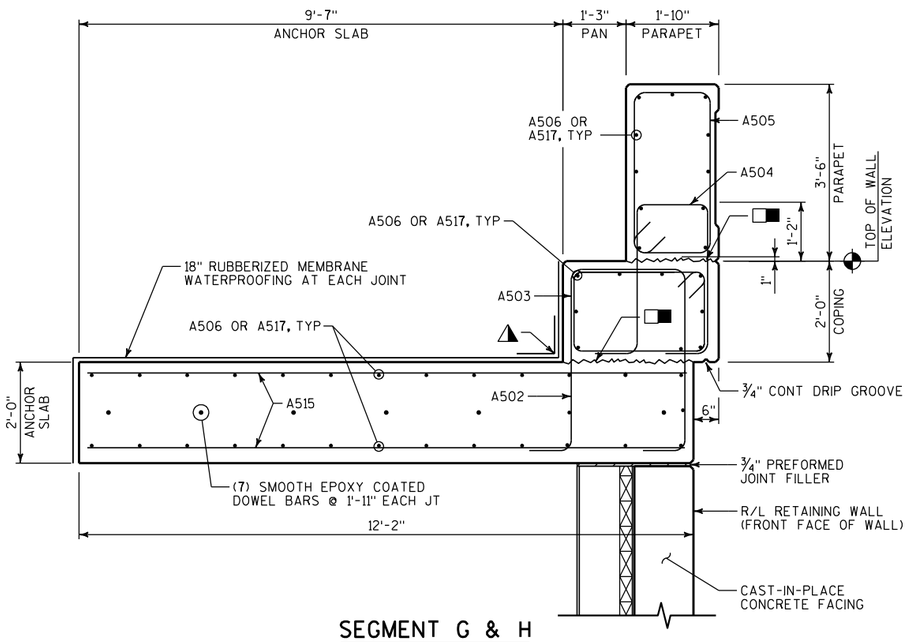
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8



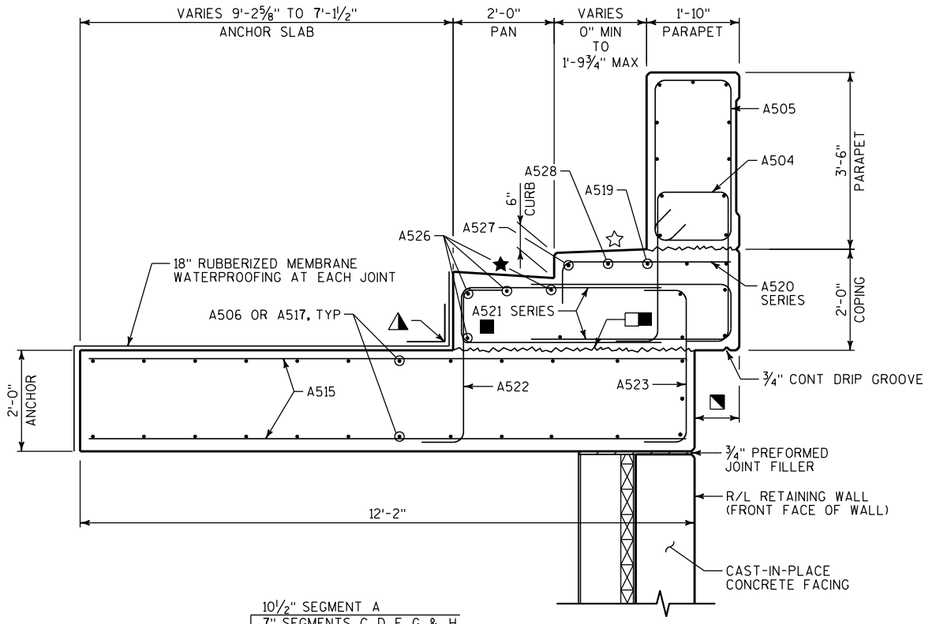
SEGMENTS E & G

(TYPICAL SECTIONS)
STA 22+00.49 TO STA 26+57.99
STA 26+87.99 TO STA 27+81.54



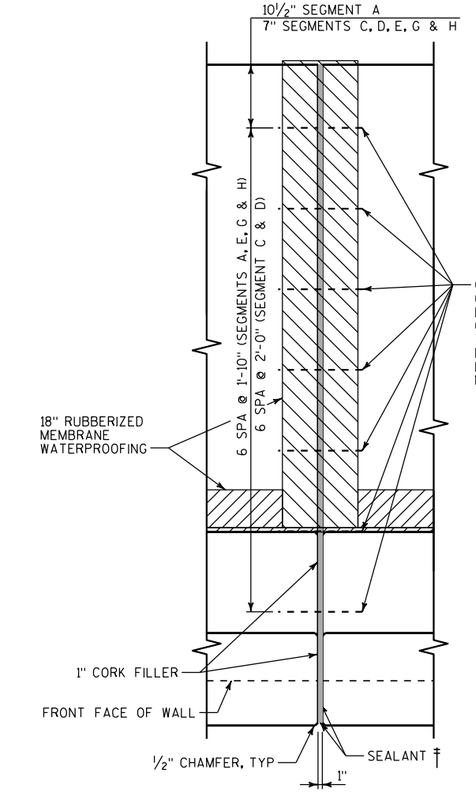
SEGMENT G & H

(TYPICAL SECTION)
STA 27+96.57 TO 28+37.99



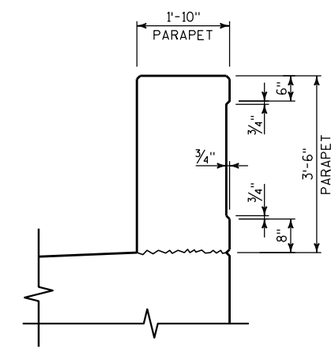
SEGMENT G

(TRANSITION SECTION)
STA 27+81.54 TO STA 27+96.57

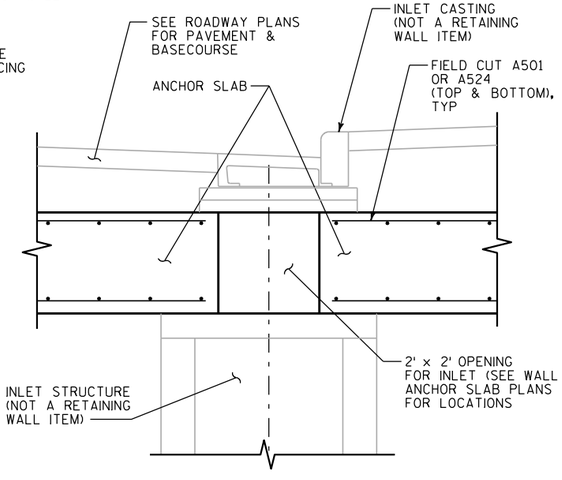


ANCHOR SLAB EXPANSION JOINT SEGMENTS A, C, D, E, G & H

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS.
LOCATED AT ALL WALL FACING CONTRACTION AND EXPANSION JOINTS.



42-INCH VERTICAL FACE PARAPET (MODIFIED)



ANCHOR SLAB/INLET DETAIL

LEGEND

- CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † 1" CORK FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- SLOPE PAN ¾" PER FOOT. SEE WALL ANCHOR SLAB PLAN (4 OF 4) FOR CURB FLOW LINE ELEVATIONS TABLE.
- 4.00% MAX.
- VARIES 6" TO 10⅝".
- 2'-7" MIN LAP REQ'D.

NOTES

SEE WALL ANCHOR SLAB REINFORCING SCHEDULE FOR BAR BEND DIAGRAMS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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WALL ANCHOR SLAB DETAILS (2 OF 2)

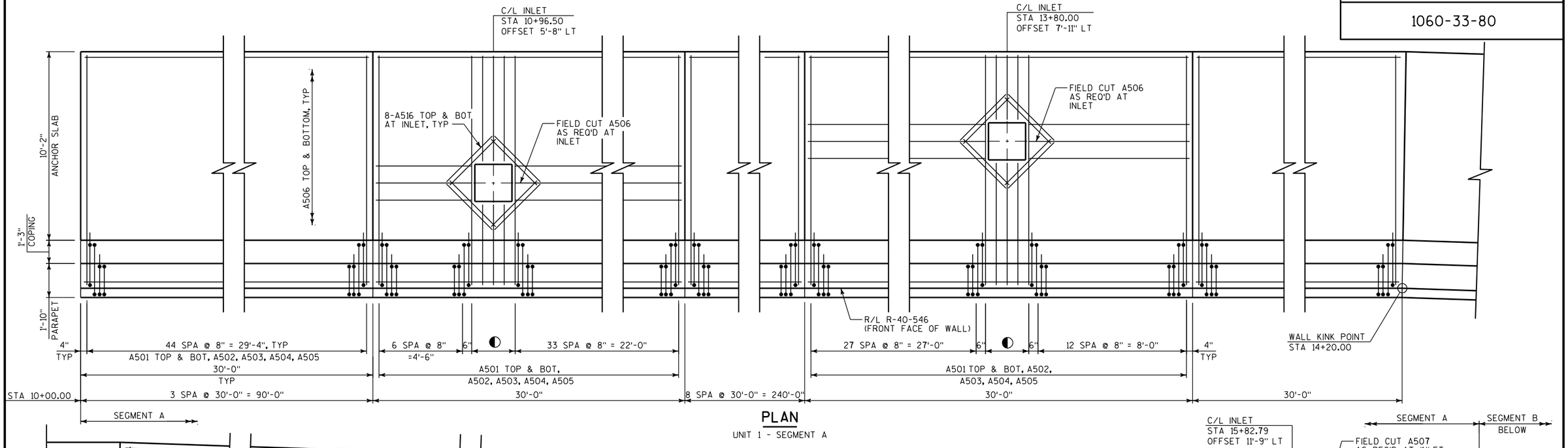
SHEET 34 OF 53

STATE PROJECT NUMBER
1060-33-80

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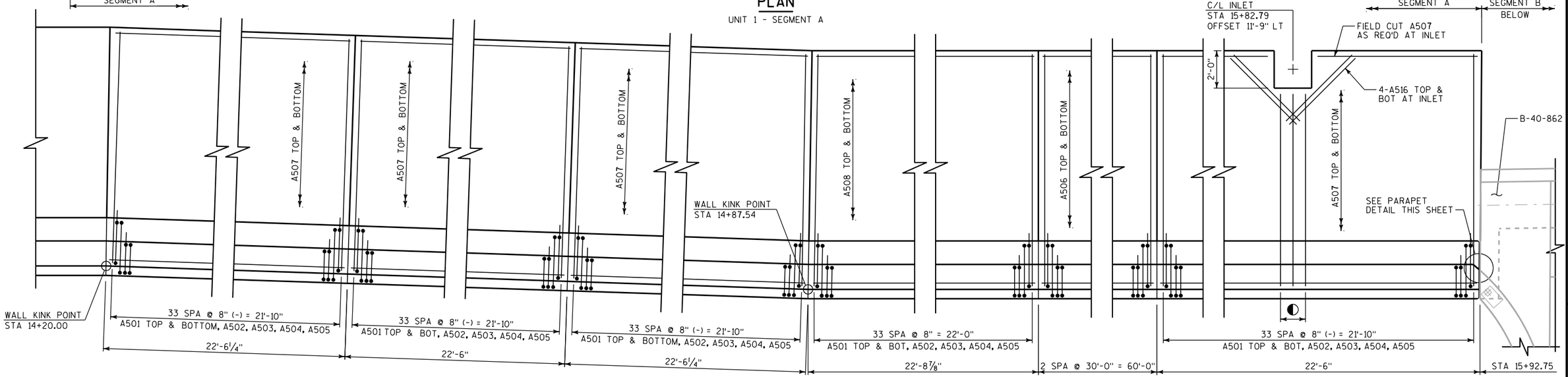
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STATE PROJECT NUMBER
1060-33-80



PLAN

UNIT 1 - SEGMENT A



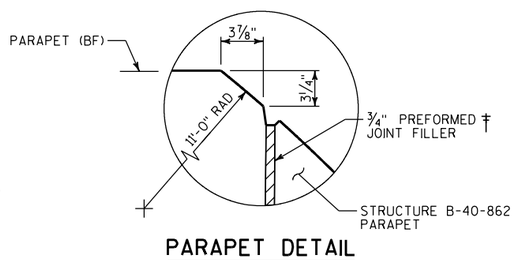
PLAN

UNIT 1 - SEGMENT A

LEGEND

◐ 4 SPA @ 7" = 2'-4"
FIELD CUT A501 TOP & BOTTOM AS REQUIRED
A502, A503, A504 & A505 NOT SHOWN FOR CLARITY

† 3/4" PREFORMED JOINT FILLER WITH NON-BITUMINOUS



PARAPET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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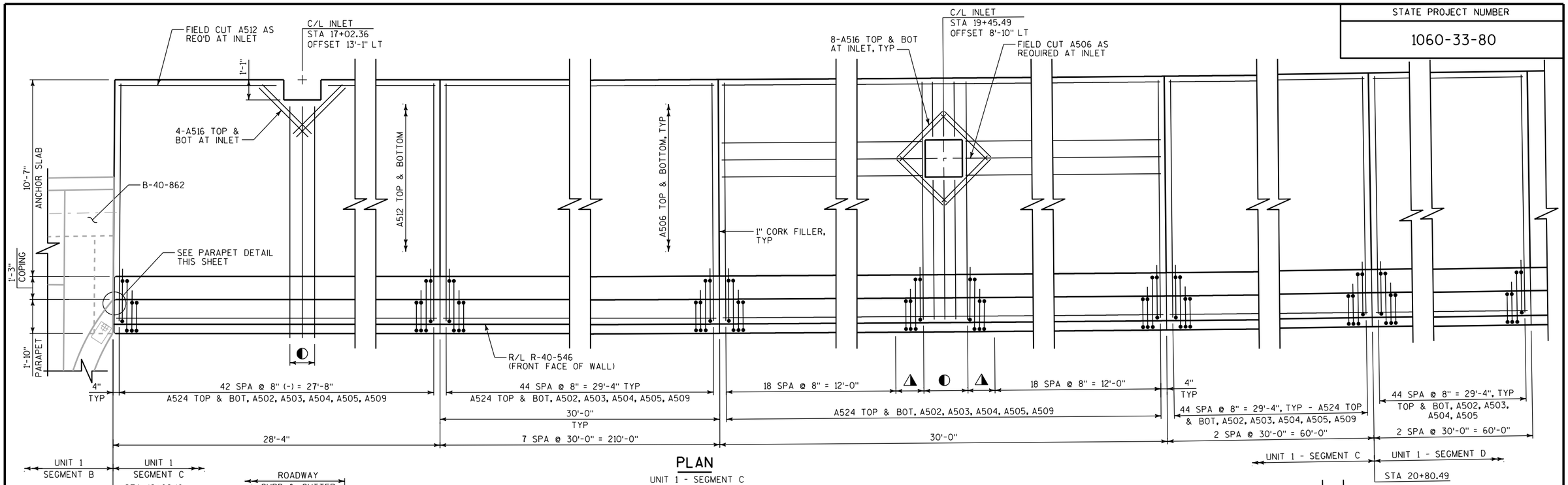
WALL ANCHOR SLAB PLAN (1 OF 4)

SHEET 35 OF 53

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PLOT DATE : 01-MAY-2014 12:56
PLOT BY : MSCEKM
PLOT NAME : R546_080603_de
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER

1060-33-80



PLAN
UNIT 1 - SEGMENT C

PLAN
UNIT 1 - SEGMENT D

LEGEND

◐ 4 SPA @ 7" = 2'-4"
FIELD CUT A524 & A509 TOP & BOTTOM AS REQUIRED
A502, A503, A504 & A505 NOT SHOWN FOR CLARITY

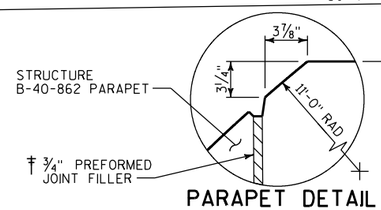
◭ 3 SPA @ 6" = 1'-6"

◹ 4 SPA @ 6" = 2'-0"

† ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS

CURB FLOW LINE ELEVATIONS

SEGMENT D			SEGMENT D		
STATION	OFFSET LEFT	ELEVATION	STATION	OFFSET LEFT	ELEVATION
20+99.49	3.17	786.36	21+40.49	1.85	787.45
21+10.49	4.82	786.68	21+50.49	1.54	787.59
21+20.49	2.49	787.02	21+60.49	1.22	787.76
21+30.49	2.17	787.25	21+68.85	0.95	787.91



PARAPET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

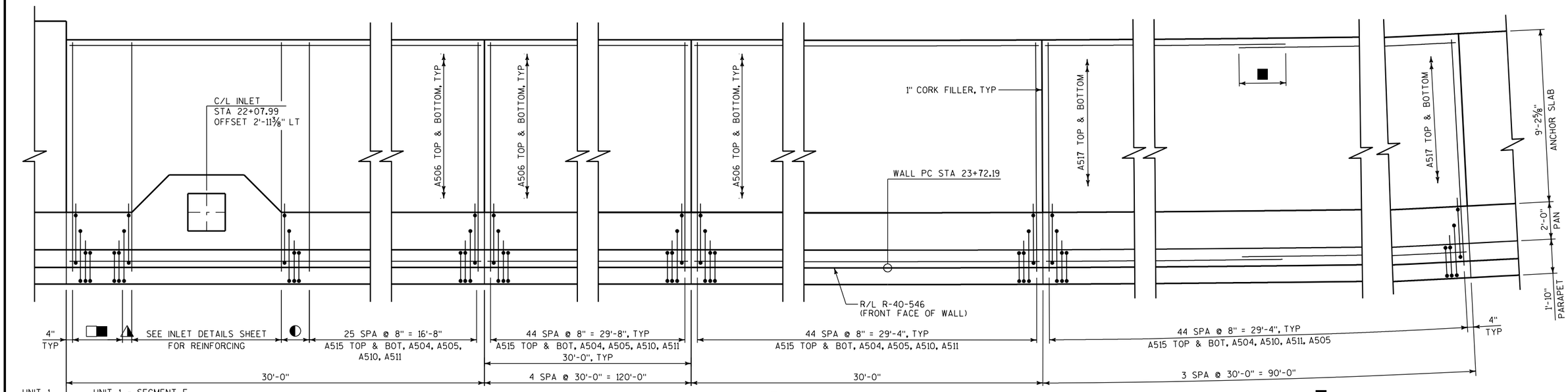
DRAWN BY PRK | PLANS CK'D. EKM

WALL ANCHOR SLAB PLAN (2 OF 4)

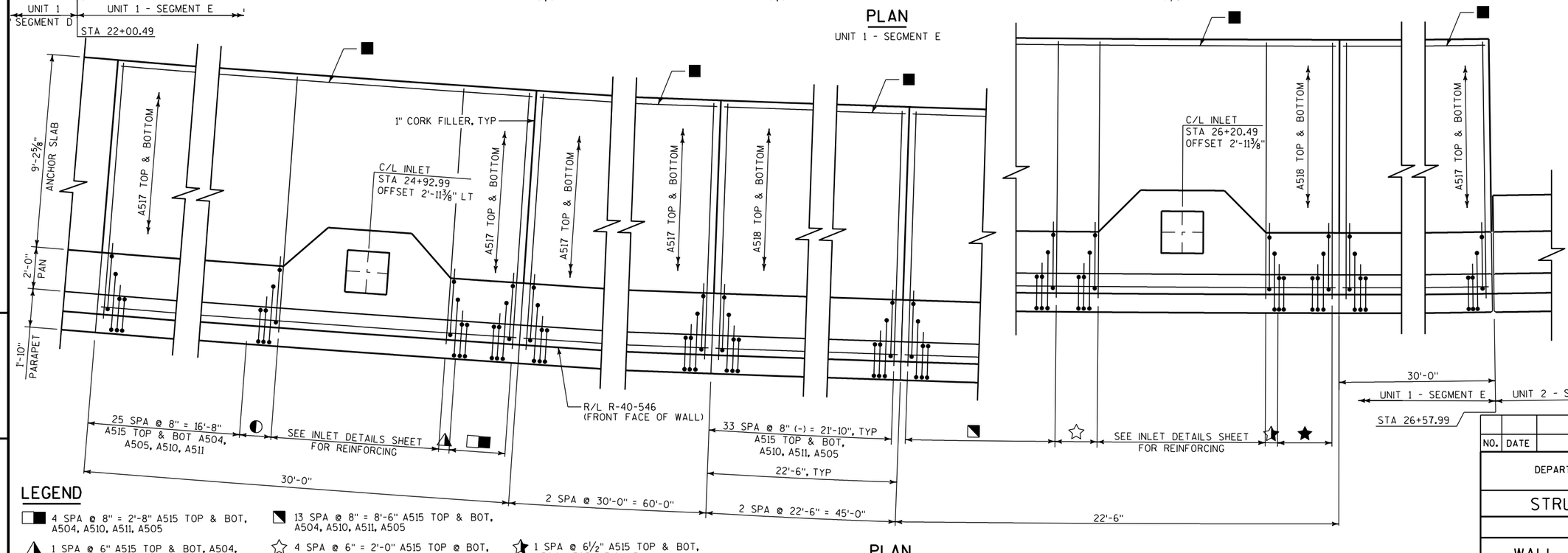
SHEET 36 OF 53

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PLOT BY : MSCEKM
PLOT NAME : R546_080604_de
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
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PLAN
UNIT 1 - SEGMENT E



PLAN
UNIT 1 - SEGMENT E

LEGEND

- 4 SPA @ 8" = 2'-8" A515 TOP & BOT, A504, A510, A511, A505
- 1 SPA @ 6" A515 TOP & BOT, A504, A510, A511, A505
- 3 SPA @ 6" = 1'-6" A515 TOP & BOT A504, A510, A511, A505
- 13 SPA @ 8" = 8'-6" A515 TOP & BOT, A504, A510, A511, A505
- 4 SPA @ 6" = 2'-0" A515 TOP @ BOT, A504, A510, A511, A505
- 2 SPA @ 8" = 1'-4" A515 TOP & BOT, A504, A510, A511, A505
- 1 SPA @ 6½" A515 TOP & BOT, A504, A505, A510, A511
- 2'-11" MIN LAP REQ'D FOR A517 & A518 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY	PRK	PLANS CK'D.	EKM

WALL ANCHOR SLAB PLAN (3 OF 4)

SHEET 37 OF 53

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080605_de.dgn
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PLOT SCALE : 5.333333:1

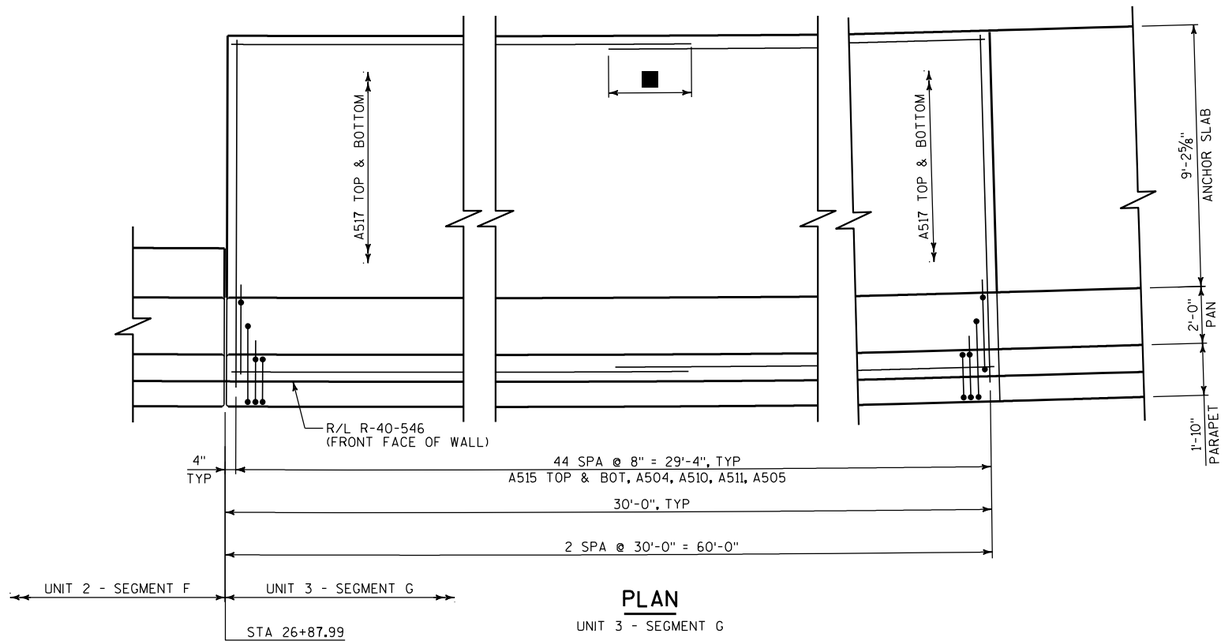
STATE PROJECT NUMBER
1060-33-80

CURB FLOW LINE ELEVATIONS

SEGMENT G		
STATION	OFFSET LEFT	ELEVATION
27+81.54	1.23	787.93
27+89.04	1.71	787.94
27+96.42	3.10	787.90

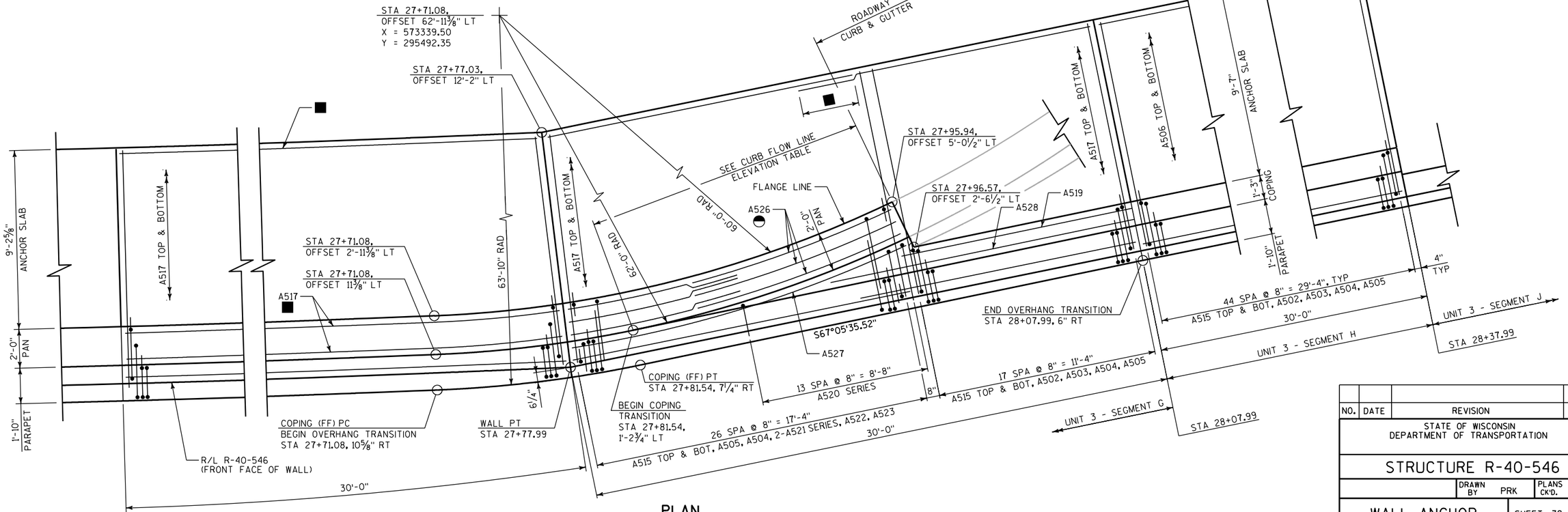
LEGEND

- ■ 2'-11" MIN LAP REQ'D FOR A517 BARS
- ◓ 2'-0" MIN LAP REQ'D FOR A526 BARS



PLAN

UNIT 3 - SEGMENT G



PLAN

UNIT 3 - SEGMENTS G & H

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

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WALL ANCHOR SLAB PLAN (4 OF 4)

SHEET 38 OF 53

STATE PROJECT NUMBER

1060-33-80

BILL OF BARS - ANCHOR SLAB

BAR MARK	COAT	NUMBER REQUIRED UNIT 1	UNIT 3	TOTAL	LENGTH	BENT	SERIES	LOCATION
A501	X	1772	-	1772	12'-5"			ANCHOR SLAB - TRANSVERSE - PANELS 1 THRU 21
A502	X	1505	63	1568	10'-7"	X		ANCHOR SLAB - TRANSVERSE - TIE
A503	X	1505	63	1568	9'-5"	X		ANCHOR SLAB - TRANSVERSE - STIRRUP
A504	X	2356	225	2581	8'-7"	X		ANCHOR SLAB - VERTICAL - TIE
A505	X	2356	225	2581	9'-9"	X		ANCHOR SLAB - VERTICAL - STIRRUP
A506	X	1887	44	1931	29'-7"			ANCHOR SLAB / PARAPET - LONGITUDINAL
A507	X	188	-	188	21'-11"			ANCHOR SLAB / PARAPET - LONGITUDINAL - PANELS 15 THRU 17
A508	X	47	-	47	22'-1"			ANCHOR SLAB / PARAPET - LONGITUDINAL - PANEL 18
A509	X	495	-	495	11'-8"	X		ANCHOR SLAB - TRANSVERSE
A510	X	746	135	881	9'-1"	X		ANCHOR SLAB - TRANSVERSE
A511	X	746	135	881	10'-3"	X		ANCHOR SLAB - TRANSVERSE
A512	X	57	-	57	27'-10"			ANCHOR SLAB / PARAPET - LONGITUDINAL - PANEL 26
A513	X	89	-	89	3'-0"	X	⚠	COPING TRANSITION - TRANSVERSE
A514	X	178	-	178	8'-0"	X	⚠	COPING TRANSITION - TRANSVERSE
A515	X	1370	450	1820	11'-10"			ANCHOR SLAB - TRANSVERSE
A516	X	64	-	64	3'-6"			INLET DIAGONALS
A517	X	616	352	968	16'-3"			ANCHOR SLAB - LONGITUDINAL AT CURVE
A518	X	264	-	264	12'-6"			ANCHOR SLAB - LONGITUDINAL AT CURVE
A519	X	-	3	3	13'-0"			COPING TRANSITION - LONGITUDINAL
A520	X	-	14	14	3'-0"	X	⚠	COPING TRANSITION - TRANSVERSE
A521	X	-	54	54	7'-11"	X	⚠	COPING TRANSITION - TRANSVERSE - TIE
A522	X	89	27	116	4'-6"	X		COPING TRANSITION - TRANSVERSE
A523	X	89	27	116	4'-6"	X		COPING TRANSITION - TRANSVERSE
A524	X	1530	-	1530	12'-8"			ANCHOR SLAB - TRANSVERSE
A525	X	5	-	5	10'-7"			COPING TRANSITION - LONGITUDINAL
A526	X	-	8	8	9'-7"			COPING TRANSITION - LONGITUDINAL
A527	X	-	1	1	18'-2"			COPING TRANSITION - LONGITUDINAL
A528	X	-	1	1	17'-11"			COPING TRANSITION - LONGITUDINAL

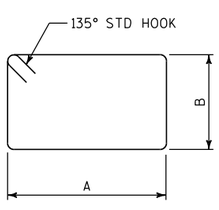
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

BAR SERIES TABLE

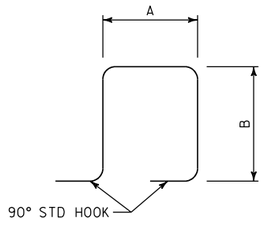
BAR MARK	NO. REQ'D	LENGTH
A513	1 SERIES OF 86	2'-2" TO 3'-11"
A514	2 SERIES OF 86	7'-1" TO 8'-11"
A520	1 SERIES OF 14	2'-4" TO 3'-8"
A521	2 SERIES OF 27	7'-1" TO 8'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY



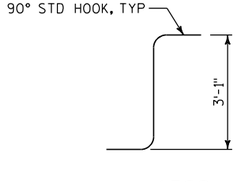
A503, A505, A510

BAR MARK	A	B
A503	2'-9"	1'-8"
A505	1'-5"	3'-2"
A510	3'-6"	1'-2"

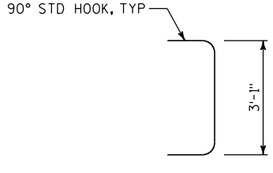


A502, A504, A511

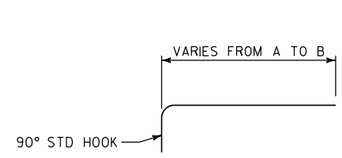
BAR MARK	A	B
A502	2'-3"	3'-7"
A504	1'-5"	3'-0"
A511	2'-11"	3'-1"



A522

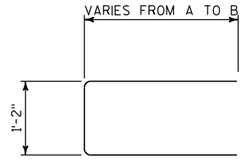


A523



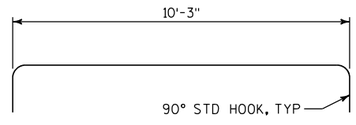
A513. A520

BAR MARK	A	B
A513	1'-5"	3'-2"
A520	1'-7"	2'-11"



A514, A521

BAR MARK	A	B
A514	3'-1"	4'-0"
A521	3'-1"	3'-11"



A509

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

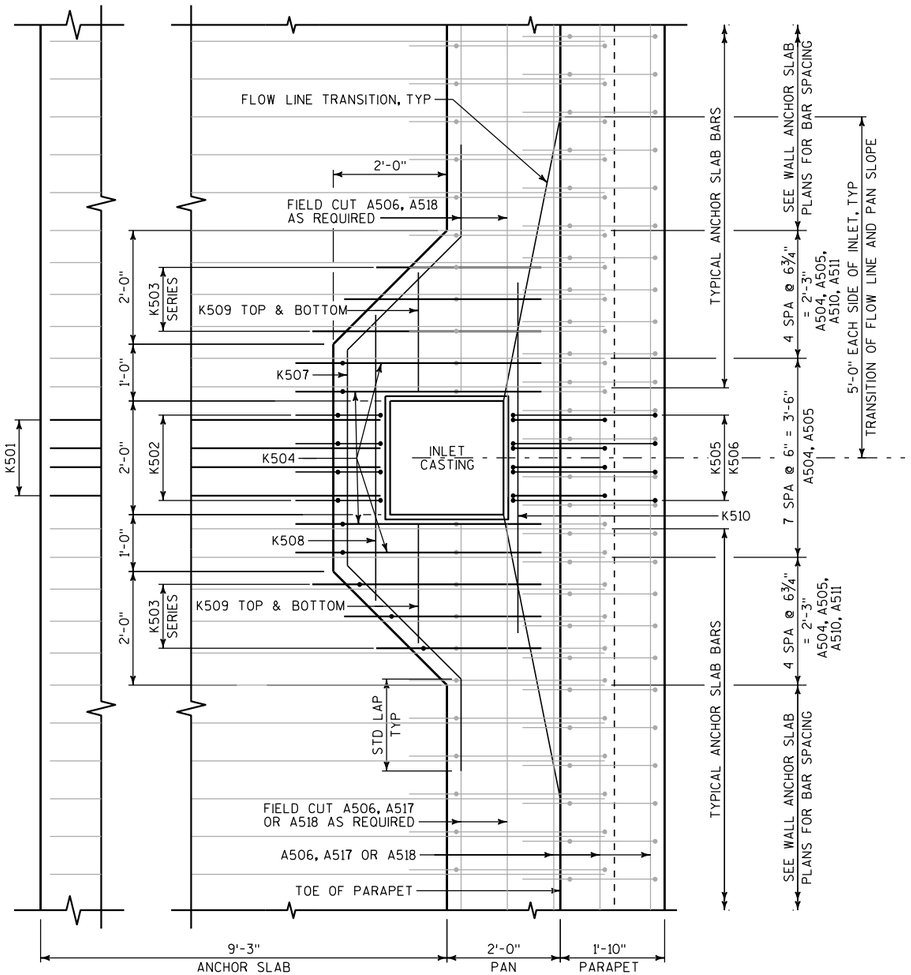
DRAWN BY TEK | PLANS CK'D. EKM

WALL ANCHOR SLAB REINFORCING SCHEDULE

SHEET 39 OF 53

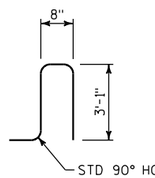
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8

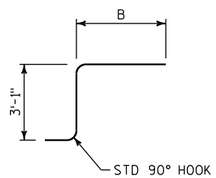


TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED.

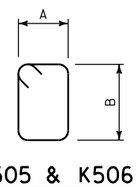


K502



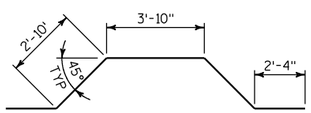
K503 & K504

BAR MARK	DIM A
K503	VARIES 3'-3" TO 2'-1"
K504	3'-6"

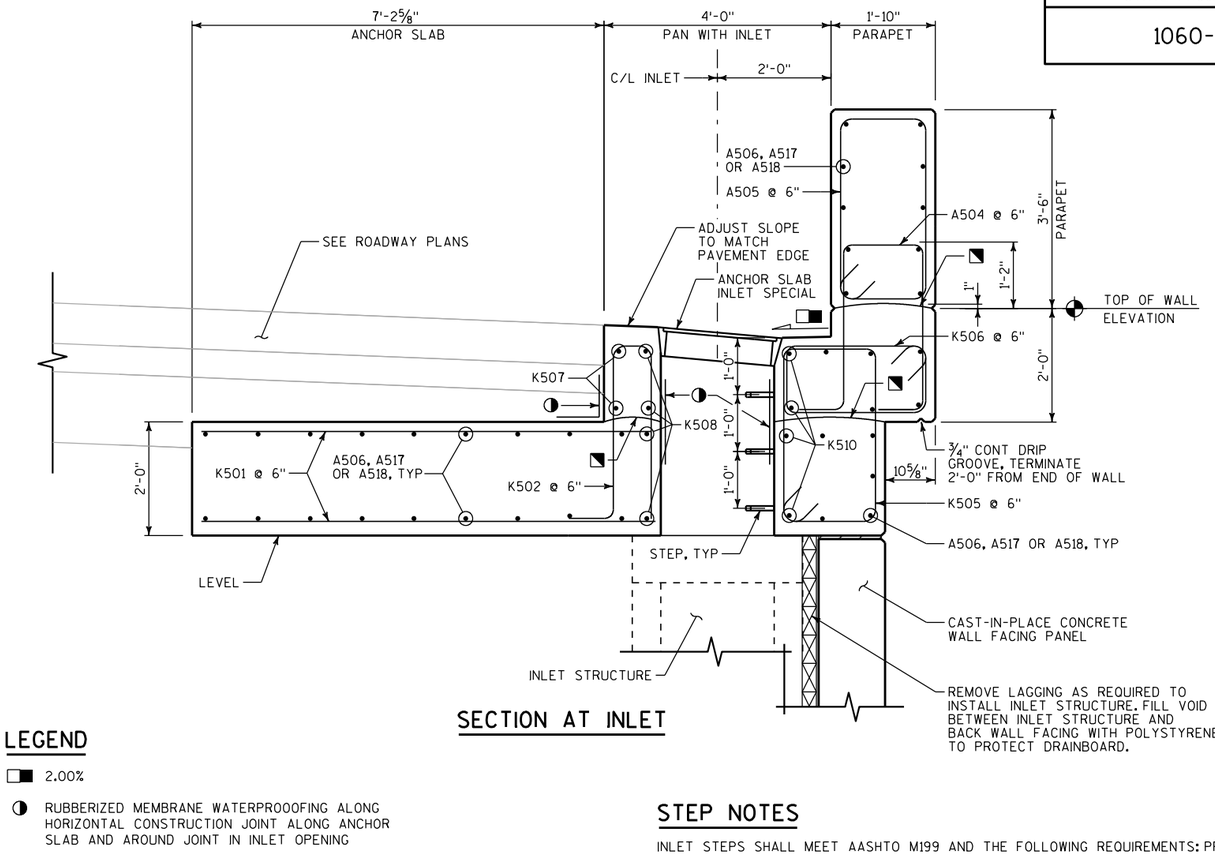


K505 & K506

BAR MARK	DIM A	DIM B
K505	1'-7"	3'-1"
K506	2'-6"	1'-2"



K507



SECTION AT INLET

LEGEND

- 2.00%
- RUBBERIZED MEMBRANE WATERPROOOFING ALONG HORIZONTAL CONSTRUCTION JOINT ALONG ANCHOR SLAB AND AROUND JOINT IN INLET OPENING
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH

STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

STEP SHALL COMPLY WITH ASTM C-478.

INLET BILL OF BARS

BAR MARK	COAT	✳ NO. REQ'D	TOTAL NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
K501	X	8	24	7'-11"			ANCHOR SLAB HORIZONTAL TOP & BOTTOM
K502	X	4	12	7'-0"	X		COPING - VERTICAL TIE
K503	X	6	18	6'-0"	X	⚠	COPING - HORIZONTAL TIE SERIES
K504	X	4	12	6'-7"	X		COPING - HORIZONTAL TIE
K505	X	4	12	9'-11"	X		COPING - HORIZONTAL STIRRUP
K506	X	4	12	7'-11"	X		COPING - VERTICAL STIRRUP
K507	X	2	6	13'-11"	X		COPING - LONGITUDINAL
K508	X	4	12	5'-0"			ANCHOR SLAB AND COPING - LONGITUDINAL
K509	X	4	12	2'-1"			ANCHOR SLAB AND COPING - LONGITUDINAL
K510	X	4	12	6'-2"			ANCHOR SLAB AND COPING - LONGITUDINAL

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

✳ NUMBER OF BARS REQUIRED FOR ONE INLET ONLY.

⚠ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
K503	2 SERIES OF 3	7'-1" TO 5'-11"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

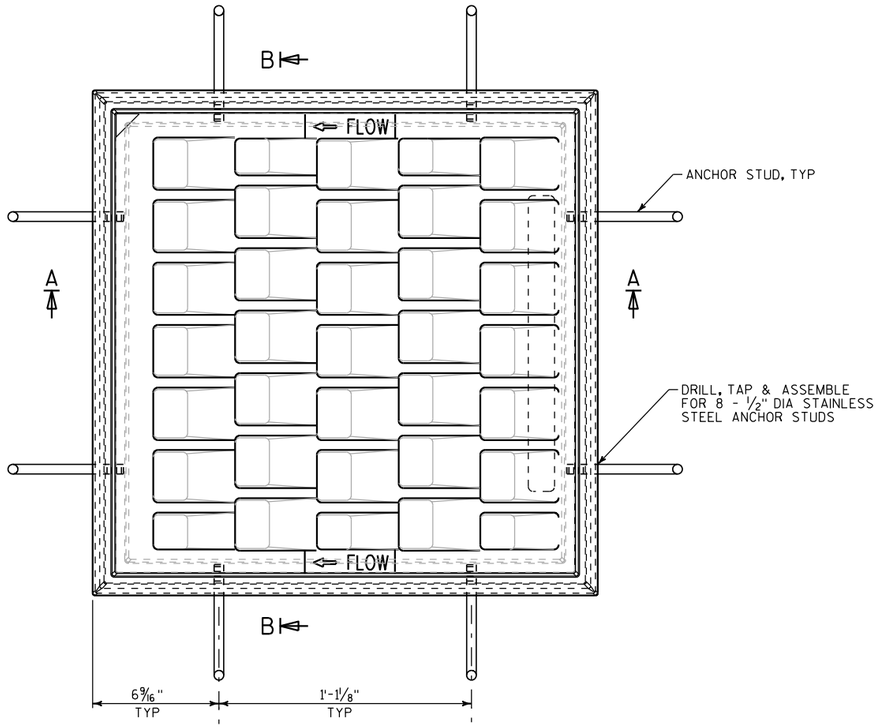
INLET DETAILS

SHEET 40 OF 53

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PLOT NAME : R546_080701_de
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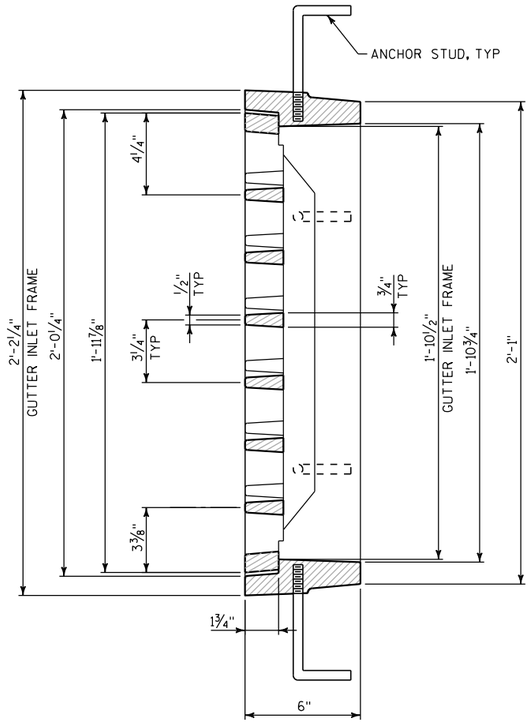
STATE PROJECT NUMBER

1060-33-80

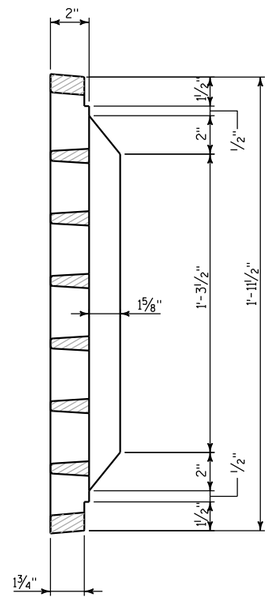


GUTTER INLET FRAME & GRATE TOP

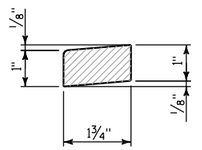
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



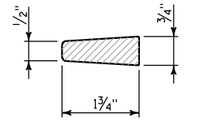
SECTION B-B



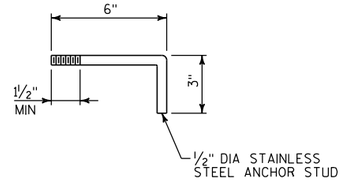
INLET GRATE



SIDE RIB DETAIL

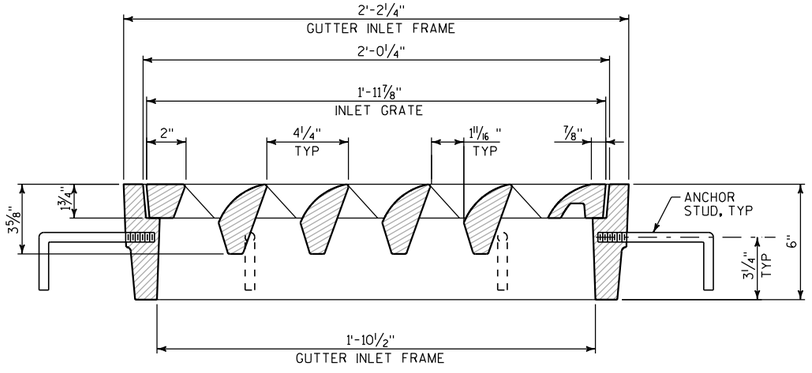


MIDDLE RIB DETAIL

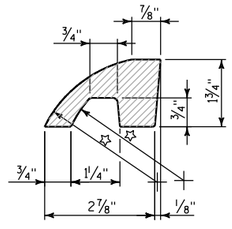


ANCHOR STUD DETAIL

(8 - 1/2" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

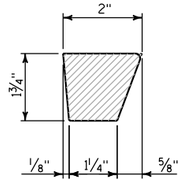


SECTION A-A

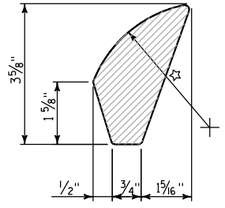


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

ANCHOR SLAB
INLET COVER
SPECIAL

SHEET 41 OF 53

3045

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-546\cds\R546_080702_de.dgn

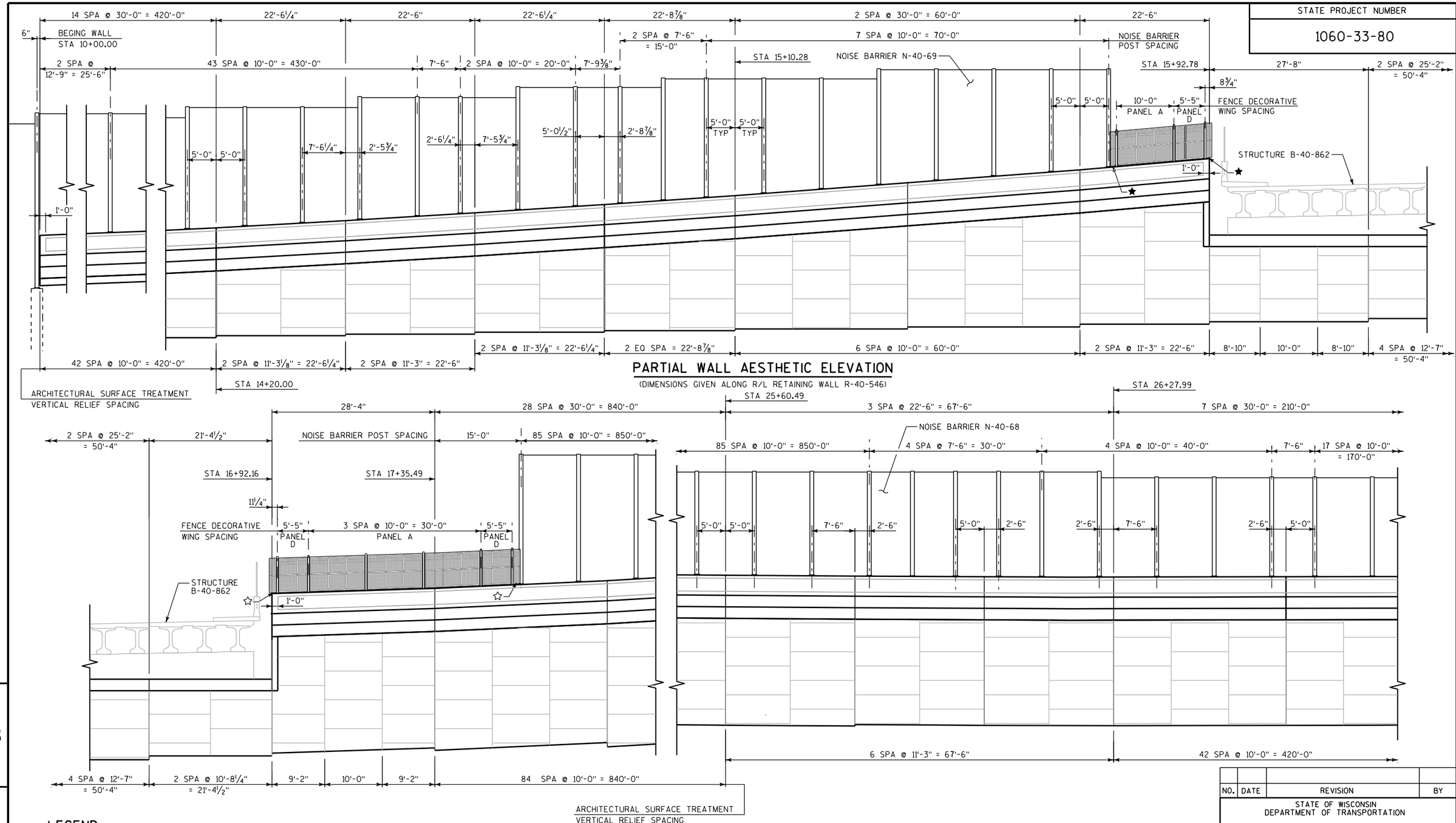
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PLOT BY : MSCEKM

PLOT NAME : R546_080702_de

PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-546)

LEGEND

★ CANTILEVER PANEL, SEE FENCE DECORATIVE WING (2 OF 3) SHEET, SEGMENT A FOR DETAILS

☆ CANTILEVER PANEL, SEE FENCE DECORATIVE WING (2 OF 3) SHEET, SEGMENT C FOR DETAILS

PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-546)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

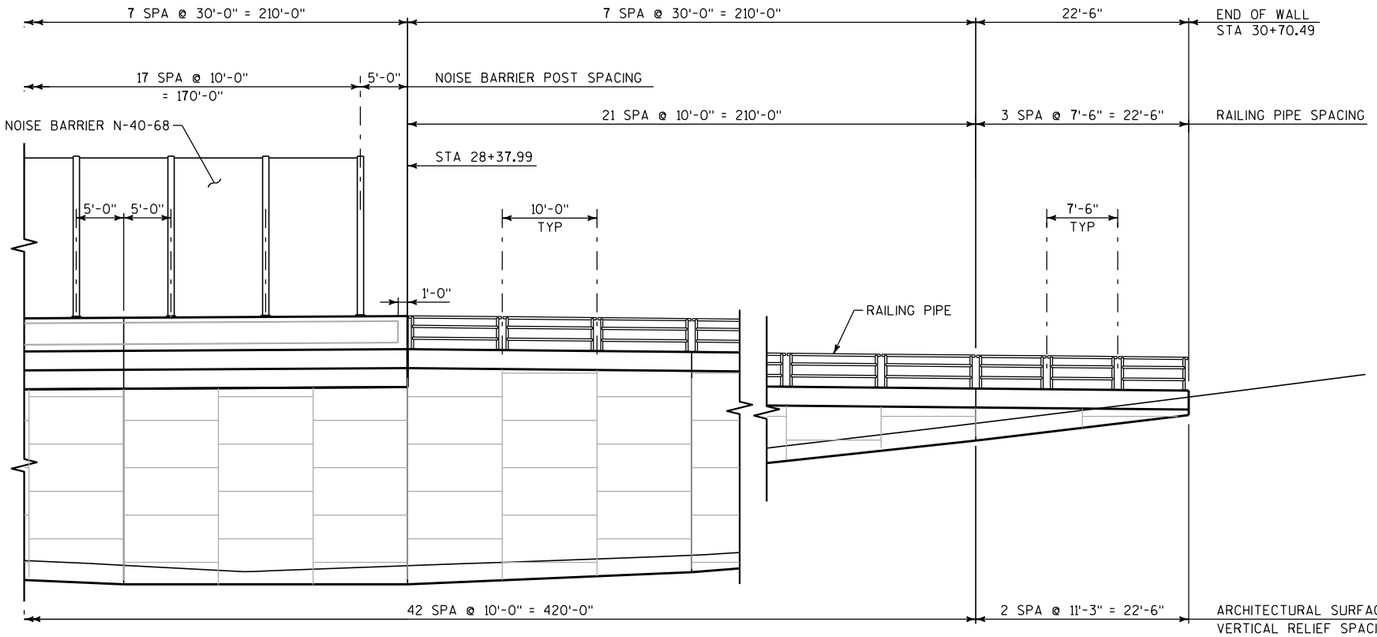
STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT ELEVATION (1 OF 2)

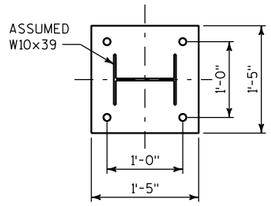
SHEET 42 OF 53

STATE PROJECT NUMBER
1060-33-80

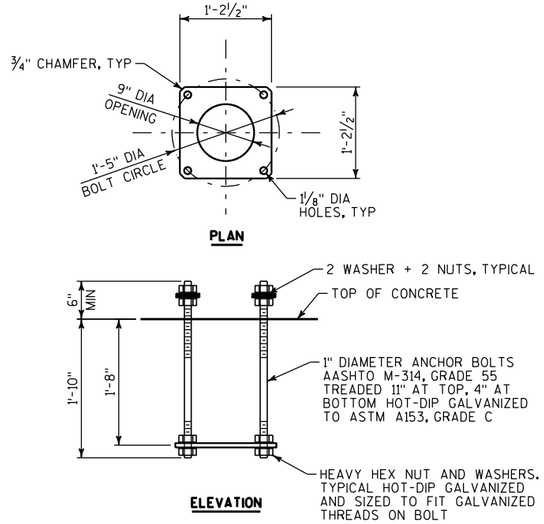


PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-546)



BASE PLATE



ANCHOR ASSEMBLIES NOISE BARRIERS STRUCTURES

NOISE BARRIER ANCHORAGE LOCATIONS

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
1	10+10.25	5"
2	10+25.00	5"
3	10+35.00	5"
4	10+45.00	5"
5	10+55.00	5"
6	10+65.00	5"
7	10+75.00	5"
8	10+85.00	5"
9	10+95.00	5"
10	11+05.00	5"
11	11+15.00	5"
12	11+25.00	5"
13	11+35.00	5"
14	11+45.00	5"
15	11+55.00	5"
16	11+65.00	5"
17	11+75.00	5"
18	11+85.00	5"
19	11+95.00	5"
20	12+05.00	5"
21	12+15.00	5"
22	12+25.00	5"
23	12+35.00	5"
24	12+45.00	5"

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
25	12+55.00	5"
26	12+65.00	5"
27	12+75.00	5"
28	12+85.00	5"
29	12+95.00	5"
30	13+05.00	5"
31	13+15.00	5"
32	13+25.00	5"
33	13+35.00	5"
34	13+45.00	5"
35	13+55.00	5"
36	13+65.00	5"
37	13+75.00	5"
38	13+85.00	5"
39	13+95.00	5"
40	14+05.00	5"
41	14+15.00	5"
42	14+25.00	5"
43	14+35.00	5"
44	14+45.00	5"
45	14+55.00	5"
46	14+62.50	5"
47	14+72.50	5"
48	14+82.50	5"
49	14+90.28	5"

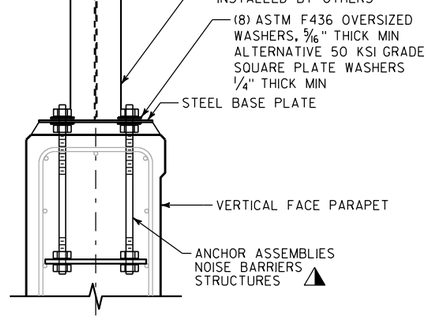
ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
50	14+97.78	5"
51	15+05.28	5"
52	15+15.28	5"
53	15+25.28	5"
54	15+35.28	5"
55	15+45.28	5"
56	15+55.28	5"
57	15+65.28	5"
58	15+75.28	5"
59	17+35.49	5"
60	17+45.49	5"
61	17+55.49	5"
62	17+65.49	5"
63	17+75.49	5"
64	17+85.49	5"
65	17+95.49	5"
66	18+05.49	5"
67	18+15.49	5"
68	18+25.49	5"
69	18+35.49	5"
70	18+45.49	5"
71	18+55.49	5"
72	18+65.49	5"
73	18+75.49	5"
74	18+85.49	5"

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
75	18+95.49	5"
76	19+05.49	5"
77	19+15.49	5"
78	19+25.49	5"
79	19+35.49	5"
80	19+45.49	5"
81	19+55.49	5"
82	19+65.49	5"
83	19+75.49	5"
84	19+85.49	5"
85	19+95.49	5"
86	20+05.49	5"
87	20+15.49	5"
88	20+25.49	5"
89	20+35.49	5"
90	20+45.49	5"
91	20+55.49	5"
92	20+65.49	5"
93	20+75.49	5"
94	20+85.49	5"
95	20+95.49	5"
96	21+05.49	5"
97	21+15.49	5"
98	21+25.49	5"
99	21+35.49	5"

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
100	21+45.49	5"
101	21+55.49	5"
102	21+65.49	1 11/16"
103	21+75.49	⅜"
104	21+85.49	⅜"
105	21+95.49	⅜"
106	22+05.49	⅜"
107	22+15.49	⅜"
108	22+25.49	⅜"
109	22+35.49	⅜"
110	22+45.49	⅜"
111	22+55.49	⅜"
112	22+65.49	⅜"
113	22+75.49	⅜"
114	22+85.49	⅜"
115	22+95.49	⅜"
116	23+05.49	⅜"
117	23+15.49	⅜"
118	23+25.49	⅜"
119	23+35.49	⅜"
120	23+45.49	⅜"
121	23+55.49	⅜"
122	23+65.49	⅜"
123	23+75.49	⅜"
124	23+85.49	⅜"

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
125	23+95.49	⅜"
126	24+05.49	⅜"
127	24+15.49	⅜"
128	24+25.49	⅜"
129	24+35.49	⅜"
130	24+45.49	⅜"
131	24+55.49	⅜"
132	24+65.49	⅜"
133	24+75.49	⅜"
134	24+85.49	⅜"
135	24+95.49	⅜"
136	25+05.49	⅜"
137	25+15.49	⅜"
138	25+25.49	⅜"
139	25+35.49	⅜"
140	25+45.49	⅜"
141	25+55.49	⅜"
142	25+65.49	⅜"
143	25+75.49	⅜"
144	25+85.49	⅜"
145	25+92.99	⅜"
146	26+00.49	⅜"
147	26+07.99	⅜"
148	26+15.49	⅜"
149	26+25.49	⅜"

ANCHORAGE NO.	WALL R/L STA	OFFSET LEFT
150	26+35.49	⅜"
151	26+45.49	⅜"
152	26+55.49	⅜"
153	26+62.99	⅜"
154	26+72.99	⅜"
155	26+82.99	⅜"
156	26+92.99	⅜"
157	27+02.99	⅜"
158	27+12.99	⅜"
159	27+22.99	⅜"
160	27+32.99	⅜"
161	27+42.99	⅜"
162	27+52.99	⅜"
163	27+62.99	⅜"
164	27+72.99	1/16"
165	27+82.99	3 13/16"
166	27+92.99	4 5/16"
167	28+02.99	4¾"
168	28+12.99	5"
169	28+22.99	5"
170	28+32.99	5"



SECTION

(NOISE BARRIER ANCHORED TO TOP OF PARAPET)

LEGEND

△ EXACT LOCATION AND SPACING OF EMBEDDED ANCHOR ASSEMBLY NOISE BARRIER TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

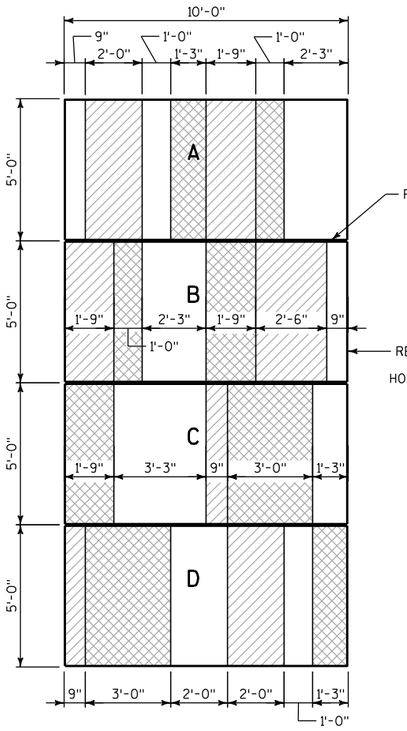
AESTHETIC WALL TREATMENT ELEVATION (2 OF 2)

SHEET 43 OF 53

8

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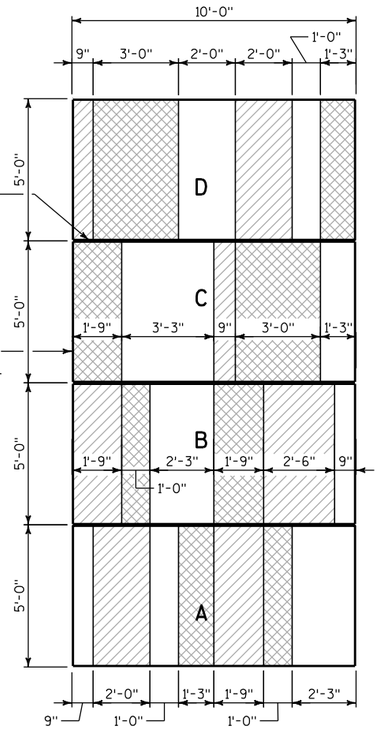
STATE PROJECT NUMBER
1060-33-80



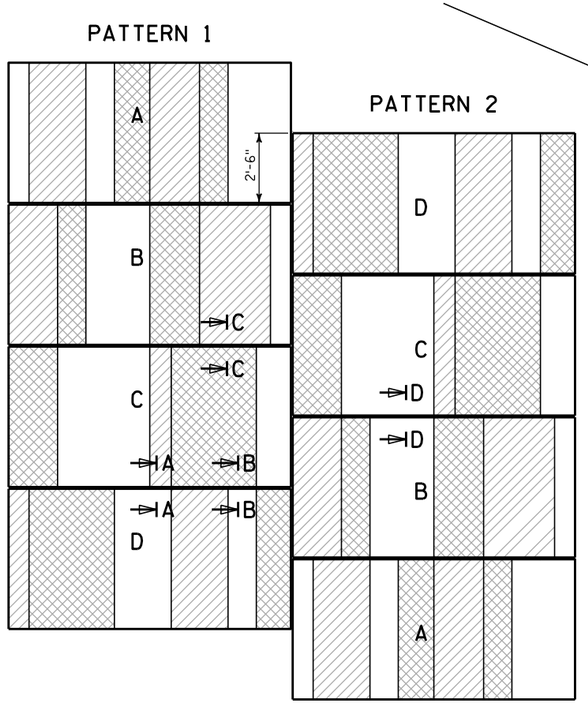
CAST-IN-PLACE PATTERN 1

REVEAL SPACED 5' VERTICALLY, TYP

REVEAL ALONG PATTERN EDGES SPACED 10' HORIZONTALLY EXCEPT AT EXPANSION AND CONTRACTION JOINTS

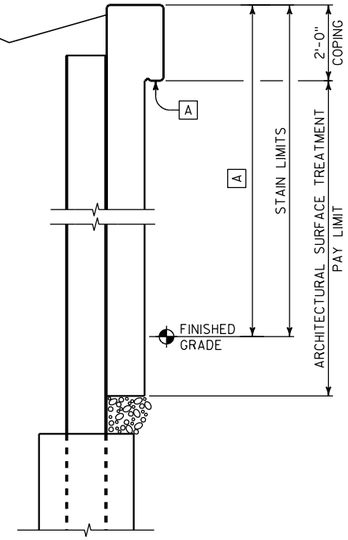


CAST-IN-PLACE PATTERN 2

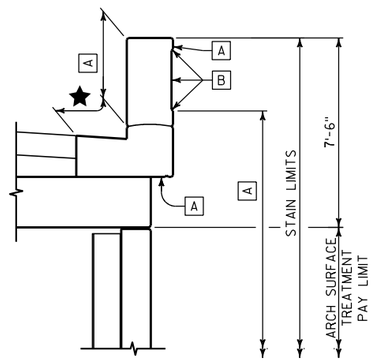


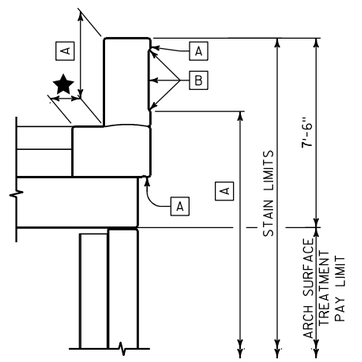
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 2'-6" VERTICALLY REPEAT VERTICALLY AS REQUIRED



WALL STAINING DIAGRAM





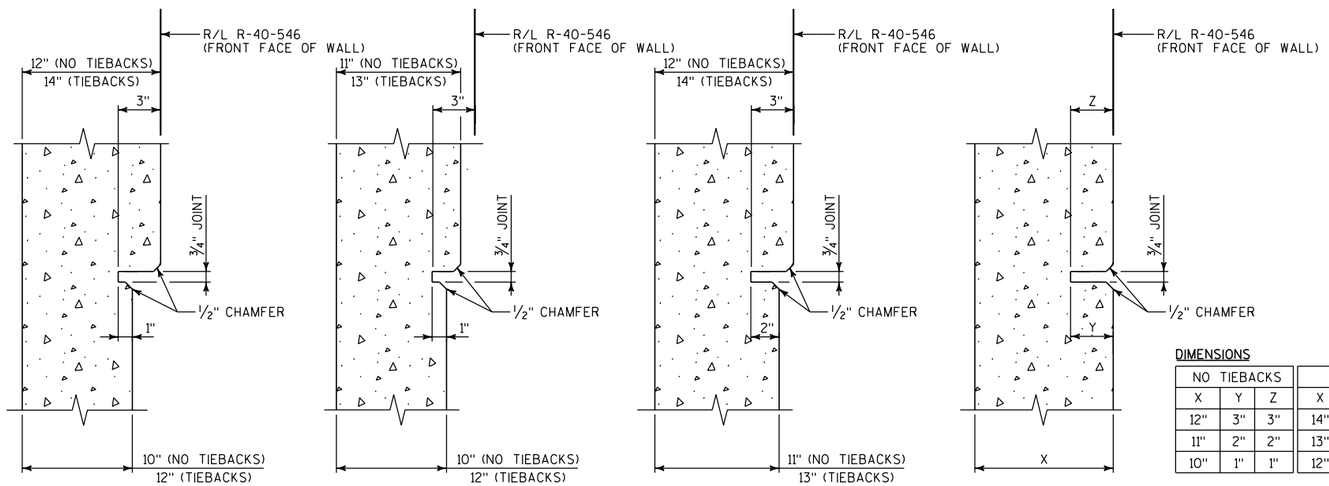
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.
BASE COLOR - 33564

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



REVEAL SECTION A-A

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 2"

REVEAL SECTION B-B

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION C-C

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION D-D

CONCRETE FACING THICKNESS ADJACENT TO REVEAL IS EQUAL

DIMENSIONS

NO TIEBACKS			TIEBACKS		
X	Y	Z	X	Y	Z
12"	3"	3"	14"	3"	3"
11"	2"	2"	13"	2"	2"
10"	1"	1"	12"	1"	1"

LEGEND

FACING THICKNESS		
	NO TIEBACKS	TIEBACKS
	10"	12"
	11"	13"
	12"	14"

★ PROTECTIVE SURFACE TREATMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

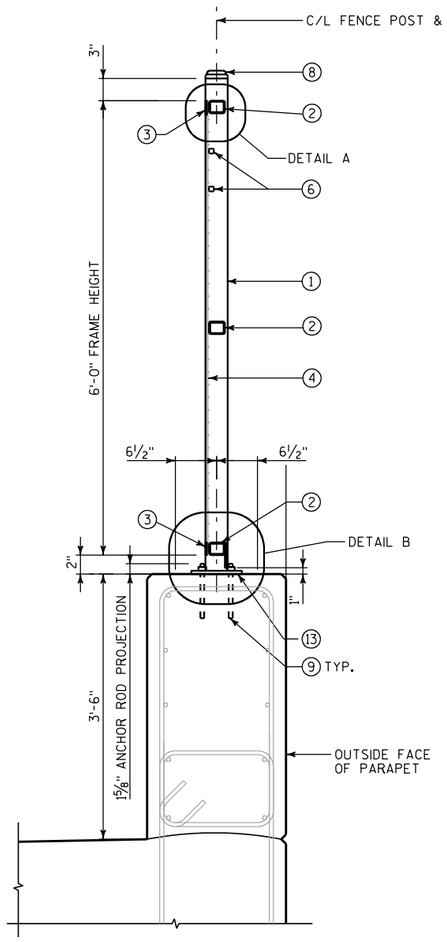
STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

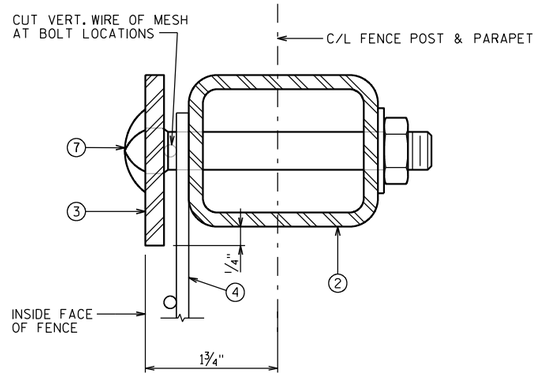
AESTHETIC WALL TREATMENT DETAILS

SHEET 44 OF 53

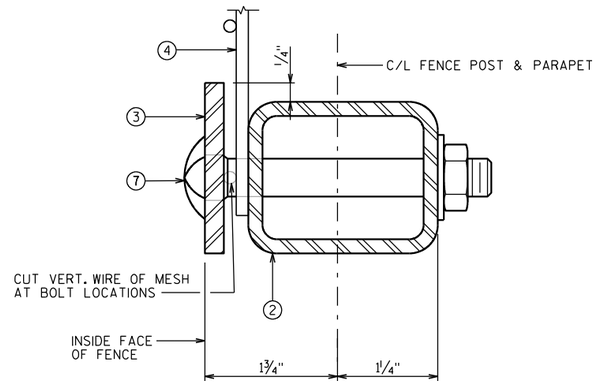
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PLOT BY : MSCEKM
PLOT NAME : R546_080803_ae
PLOT SCALE : 6:1



SECTION THRU PARAPET



DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X 3/16 POST WITH ⅛" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X 3/16. WELD TO NO. 6.
3. PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.
5. NOT USED
6. ¾" x ¾" BAR. WELD TO NO. 2 & 6.
7. ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 & NO. 2 WHERE CONNECTED TO DECORATIVE INSET PLATE FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT.
10. PL 5/16" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 11 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. NOT USED
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE WING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE SHEET 46.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.4.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVINIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COVER THE 2" x 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

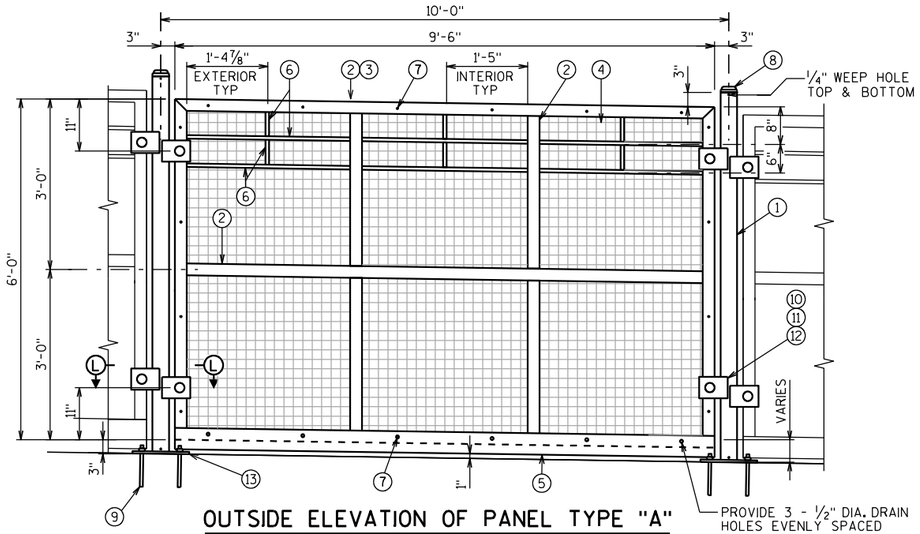
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FENCE DECORATIVE WING (1 OF 3)

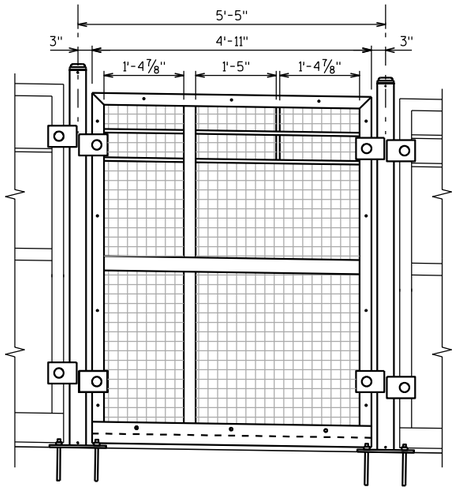
SHEET 45 OF 53

8

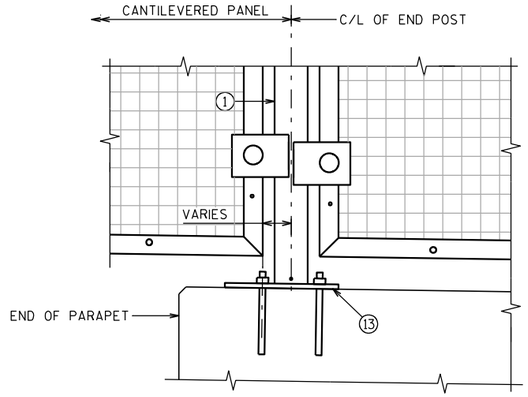
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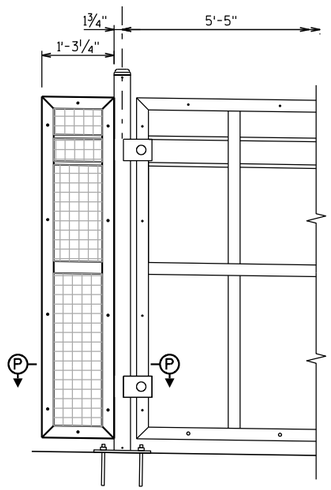
OUTSIDE ELEVATION OF PANEL TYPE "A"



OUTSIDE ELEVATION OF PANEL TYPE "D"

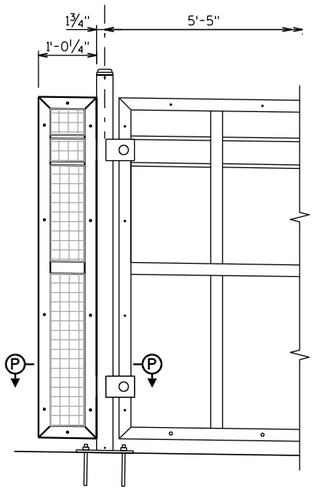


END POST DETAIL



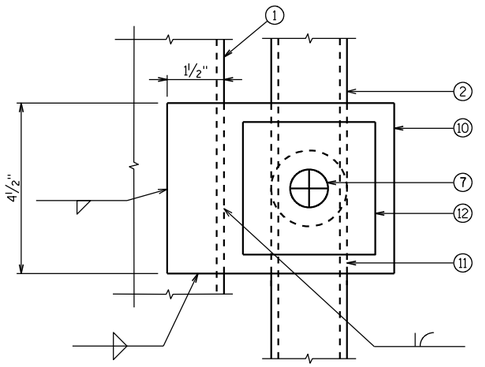
OUTSIDE ELEVATION OF CANTILEVER PANEL

SEGMENT C

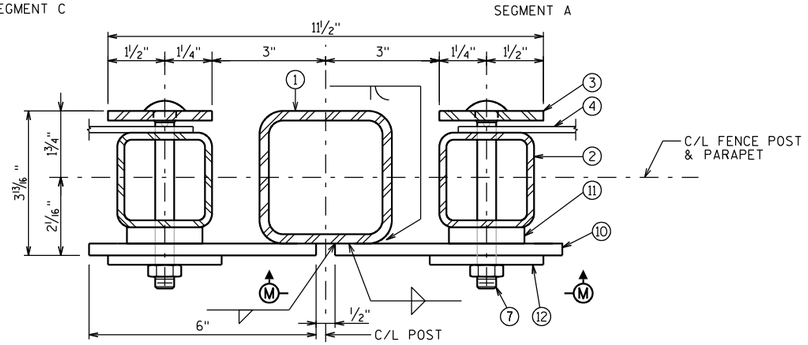


OUTSIDE ELEVATION OF CANTILEVER PANEL

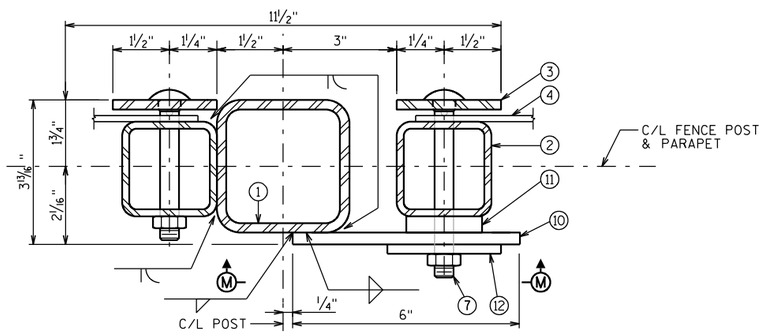
SEGMENT A



ELEVATION M-M



SECTION L-L



SECTION P-P

NOTES

FOR NOTES AND LEGEND, SEE SHEET 28.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON SHEET 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY	TEK	PLANS CK'D.	EKM

FENCE DECORATIVE WING (2 OF 3)

SHEET 46 OF 53

STATE PROJECT NUMBER

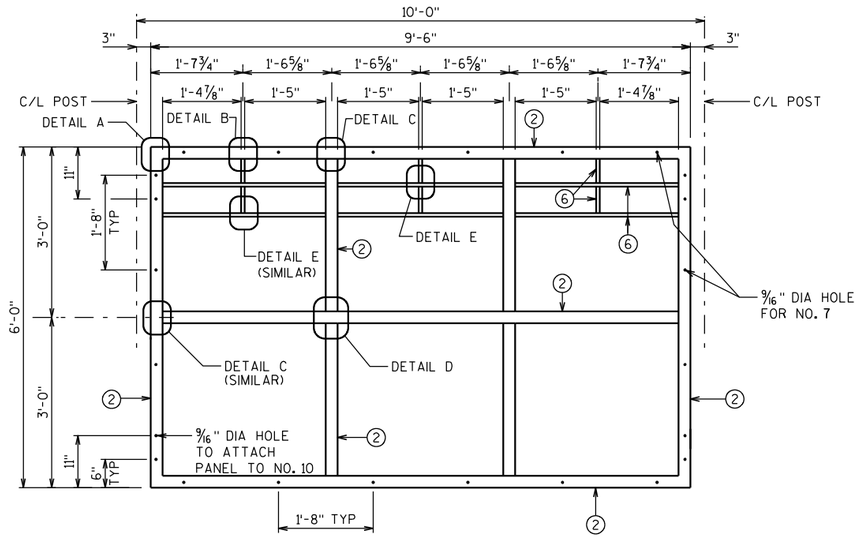
1060-33-80

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8

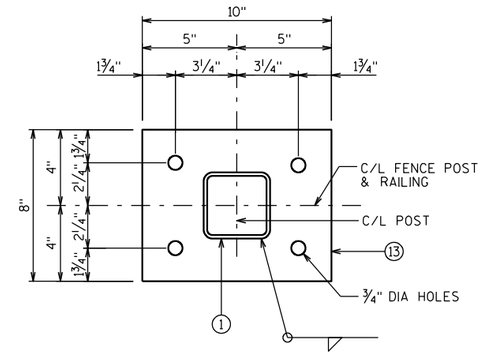
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STATE PROJECT NUMBER
1060-33-80



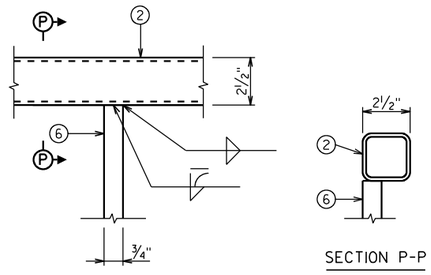
DECORATIVE FENCE BRIDGE PANEL

TYPICAL 10' PANEL SHOWN



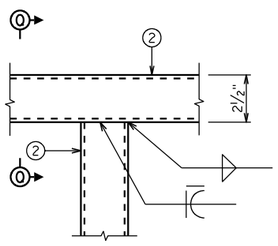
BASE PLATE DETAILS

DETAIL A

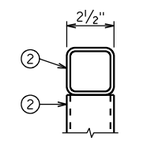


DETAIL B

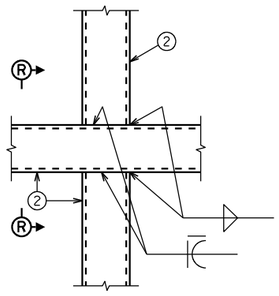
SECTION P-P



DETAIL C

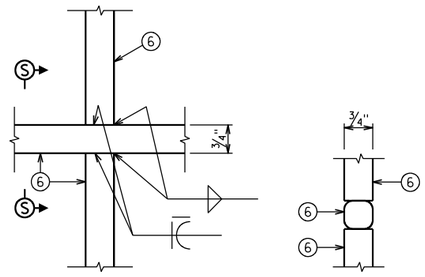


SECTION Q-Q



DETAIL D

SECTION R-R



DETAIL E

SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE FENCE DECORATIVE WING (1 OF 3) SHEET.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY	TEK	PLANS CK'D.	KES

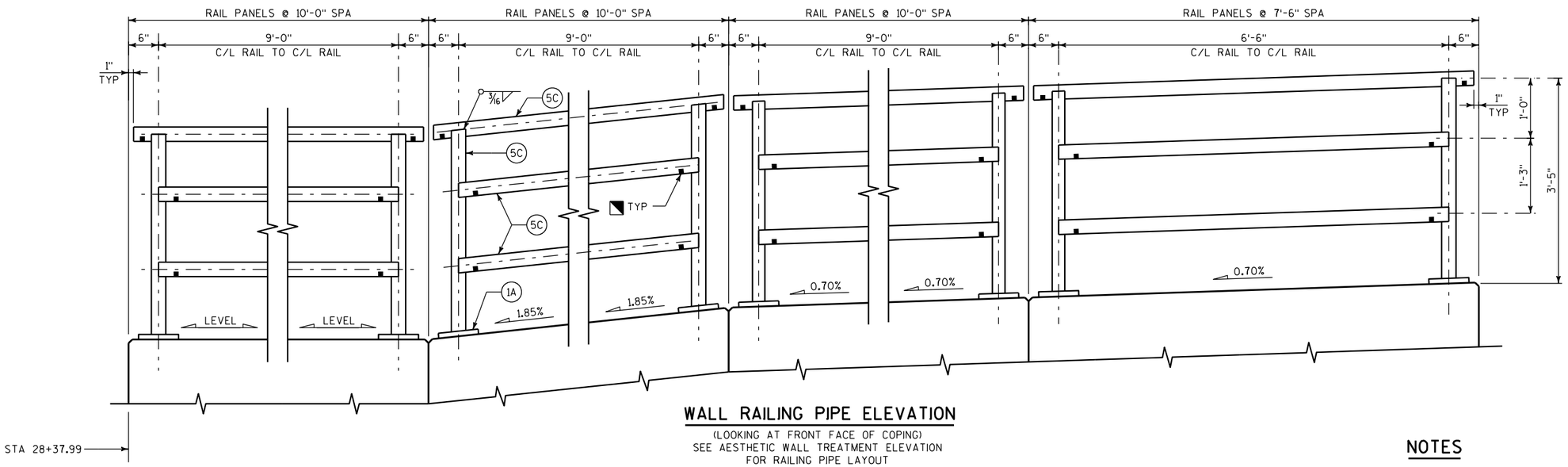
FENCE DECORATIVE WING (3 OF 3)

SHEET 47 OF 53

8

8

STATE PROJECT NUMBER
1060-33-80



WALL RAILING PIPE ELEVATION

(LOOKING AT FRONT FACE OF COPING)
SEE AESTHETIC WALL TREATMENT ELEVATION
FOR RAILING PIPE LAYOUT

LEGEND

- (1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA. EMBED A MIN OF 7".
- (5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO POSTS.
- 1/2" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.
- 20.75% BEGIN WALL. 18.20% END WALL.

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-546", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

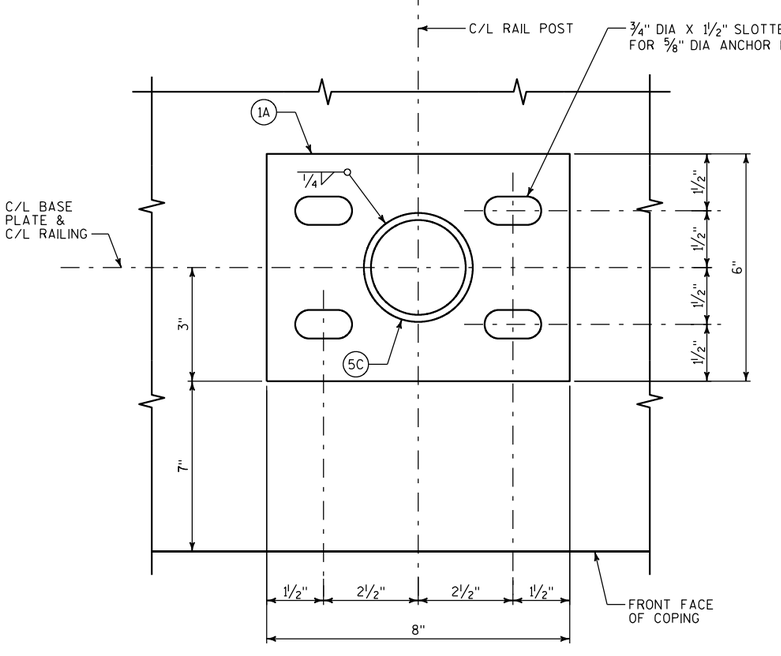
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

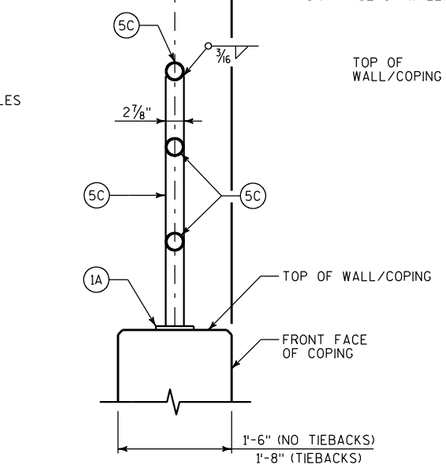
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM A123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

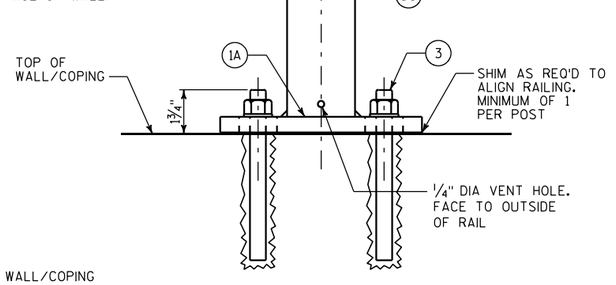
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



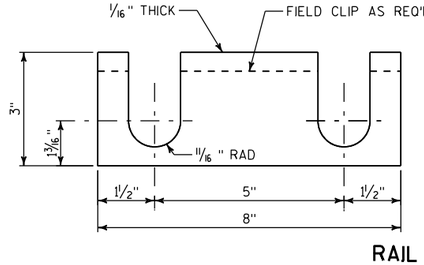
RAIL POST BASE PLATE

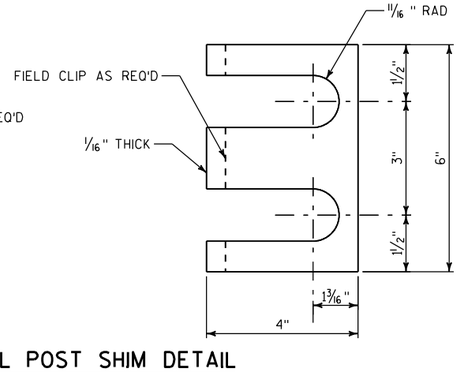


WALL RAILING PIPE SECTION



ANCHOR BOLTS FOR RAIL POST





RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

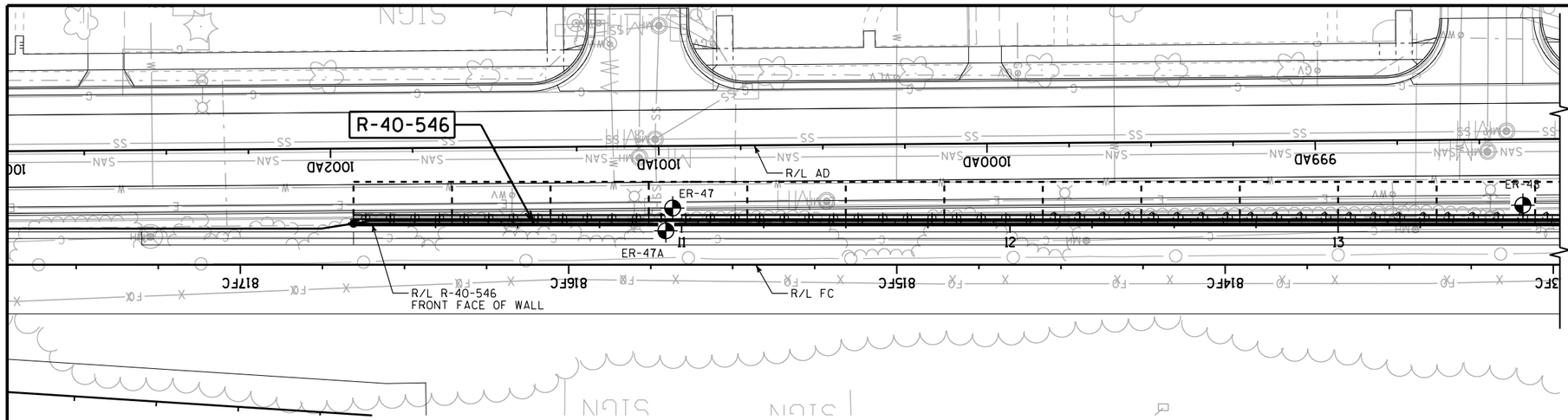
STRUCTURE R-40-546

DRAWN BY TEK | PLANS CK'D. EKM

RAILING PIPE DETAILS

SHEET 48 OF 53

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NOTE

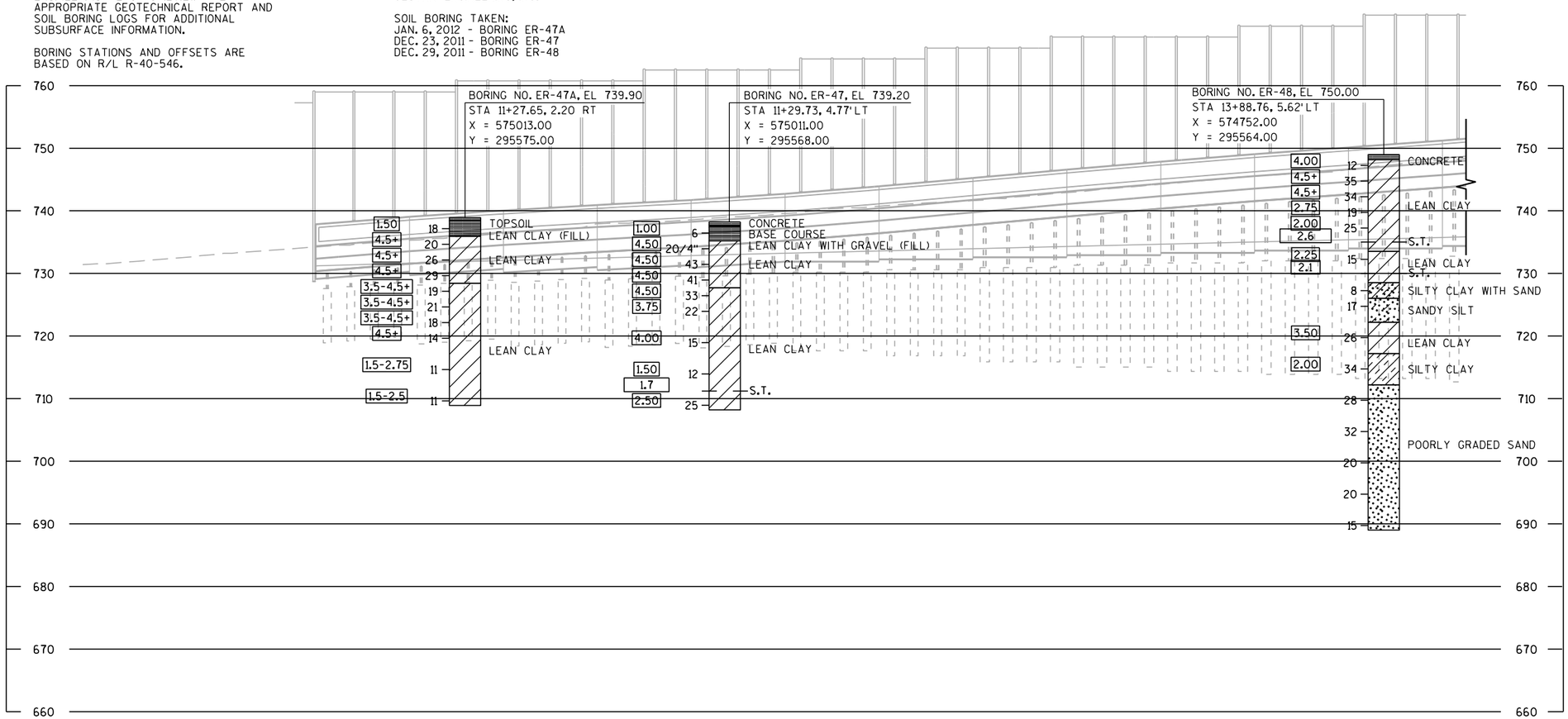
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-546.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 6, 2012 - BORING ER-47A
DEC. 23, 2011 - BORING ER-47
DEC. 29, 2011 - BORING ER-48



STATE PROJECT NUMBER

1060-33-80

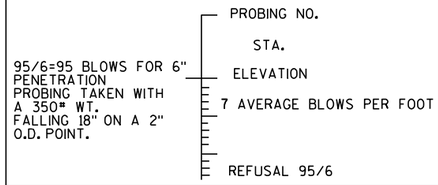
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

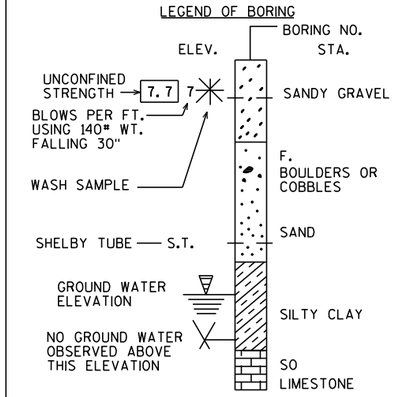
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

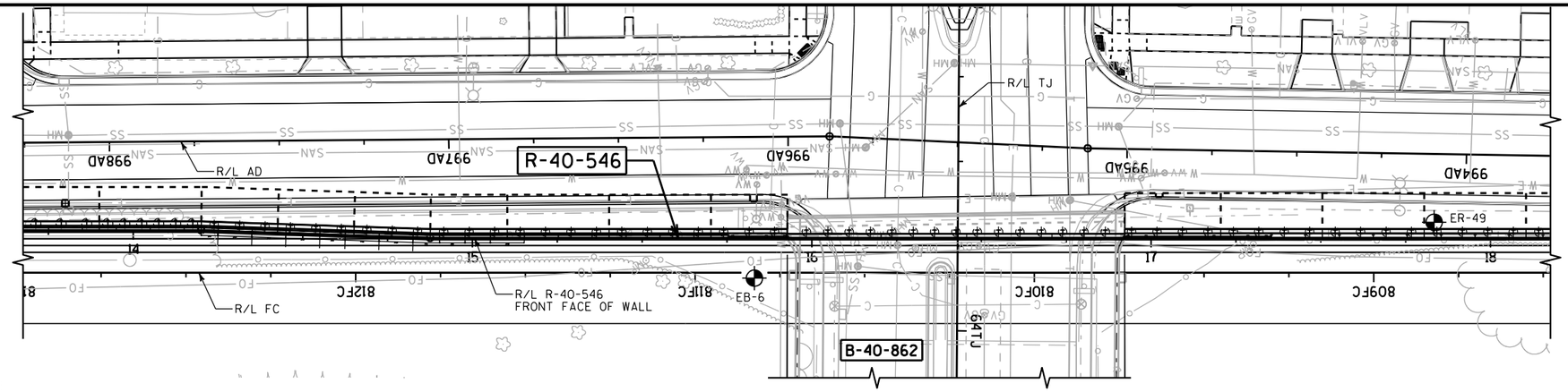
DRAWN BY BHI | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (1 OF 5)

SHEET 49 OF 53

8

8



N

NOTE:

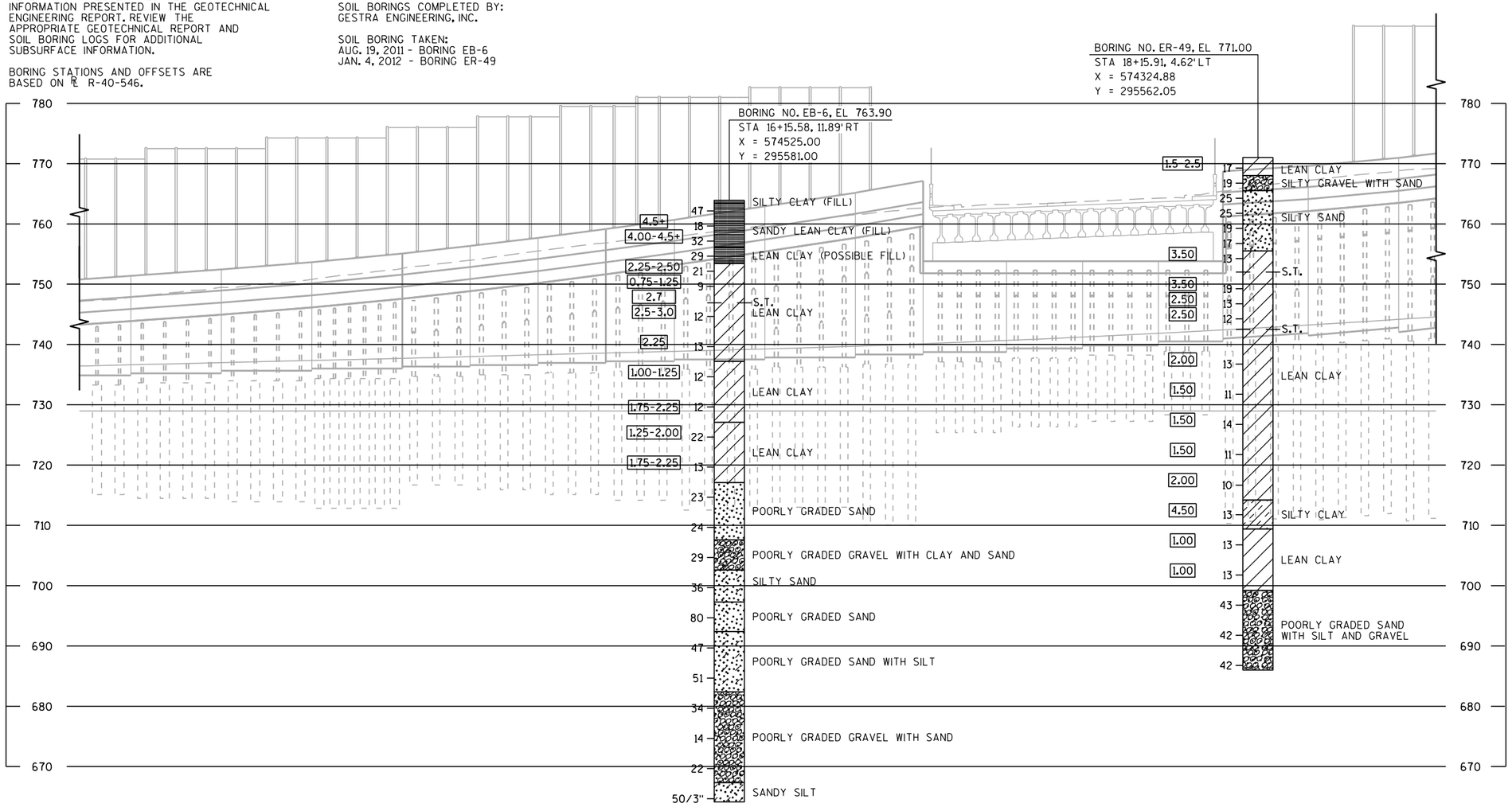
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BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-546.

⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
AUG. 19, 2011 - BORING EB-6
JAN. 4, 2012 - BORING ER-49



8

8

STATE PROJECT NUMBER

1060-33-80

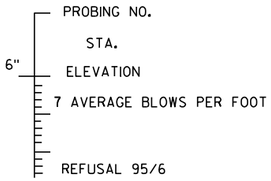
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

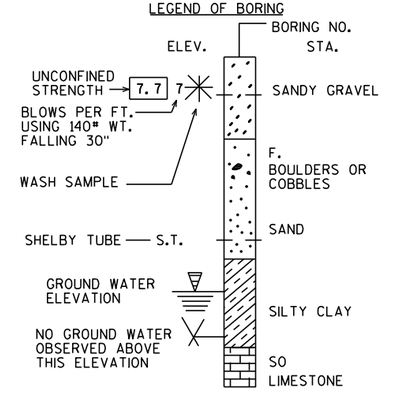
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

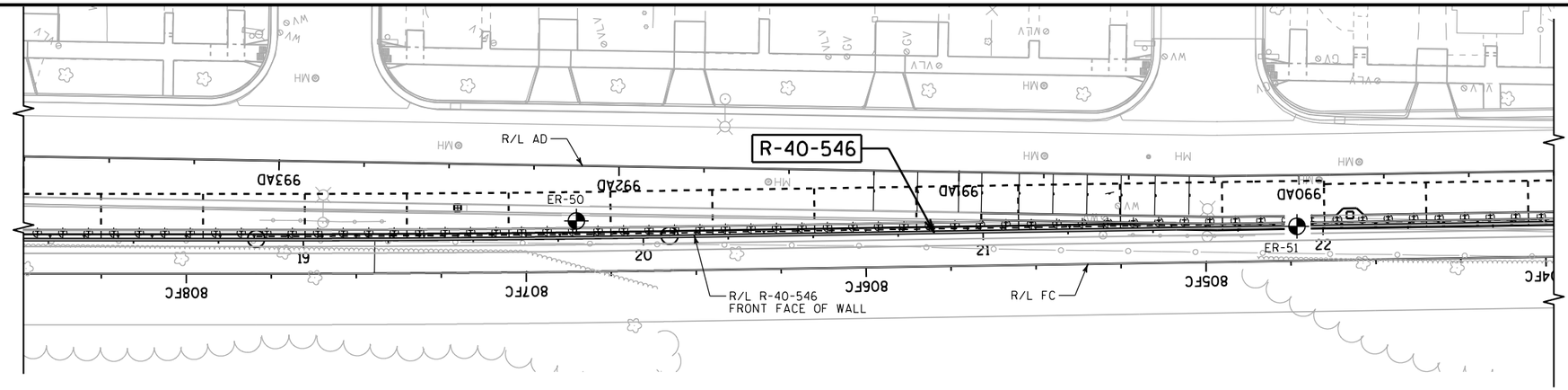
STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 5)

SHEET 50 OF 53

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PLOT BY : MSCEKM
PLOT NAME : R546_080902_se
PLOT SCALE : 40:1



NOTE

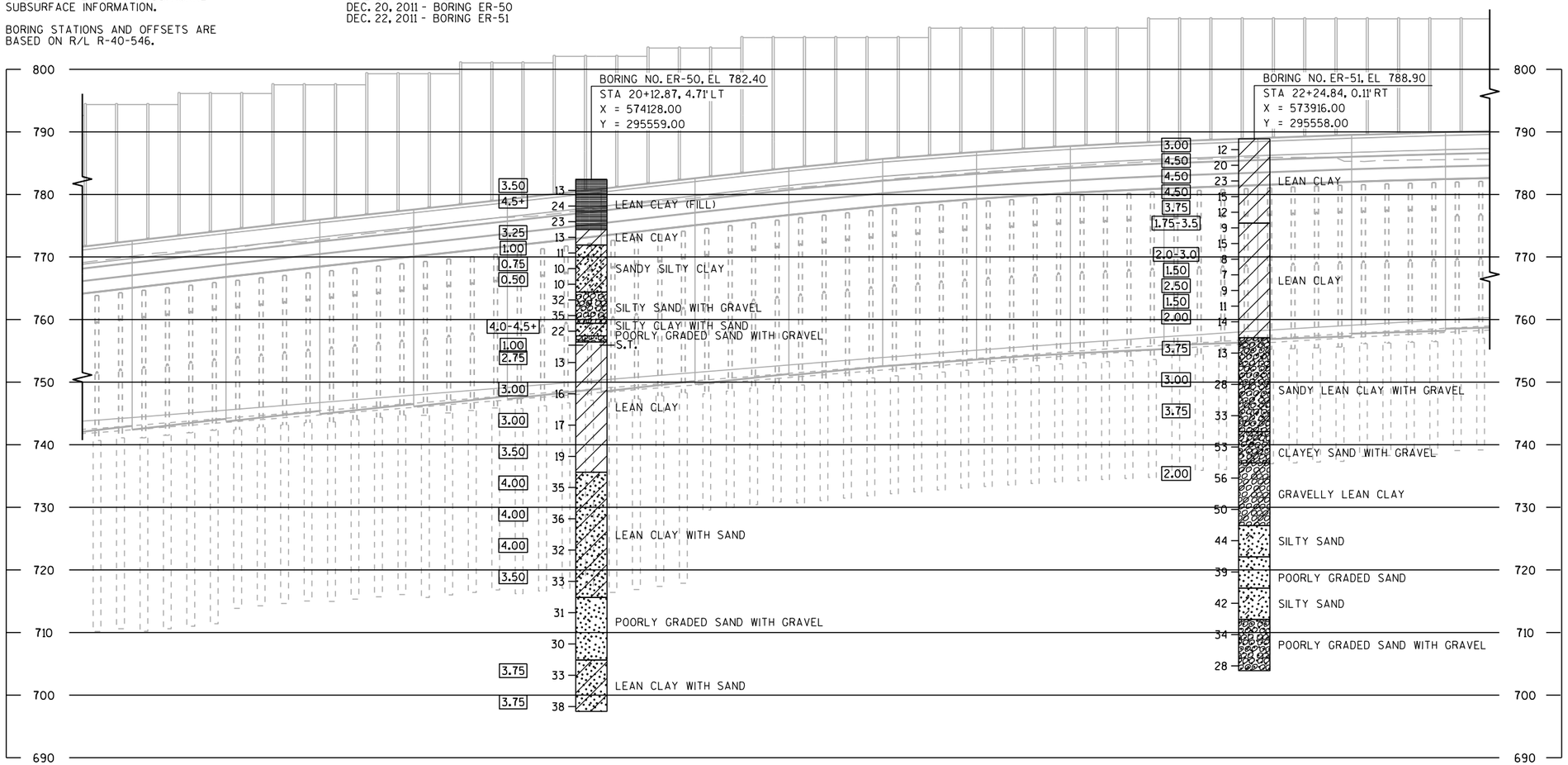
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BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-546.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
DEC. 20, 2011 - BORING ER-50
DEC. 22, 2011 - BORING ER-51



8

STATE PROJECT NUMBER

1060-33-80

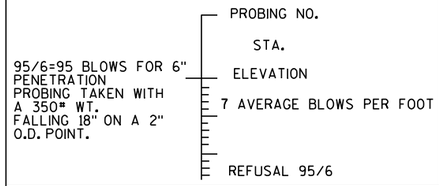
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

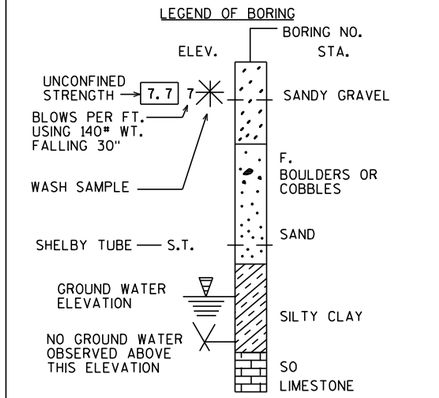
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

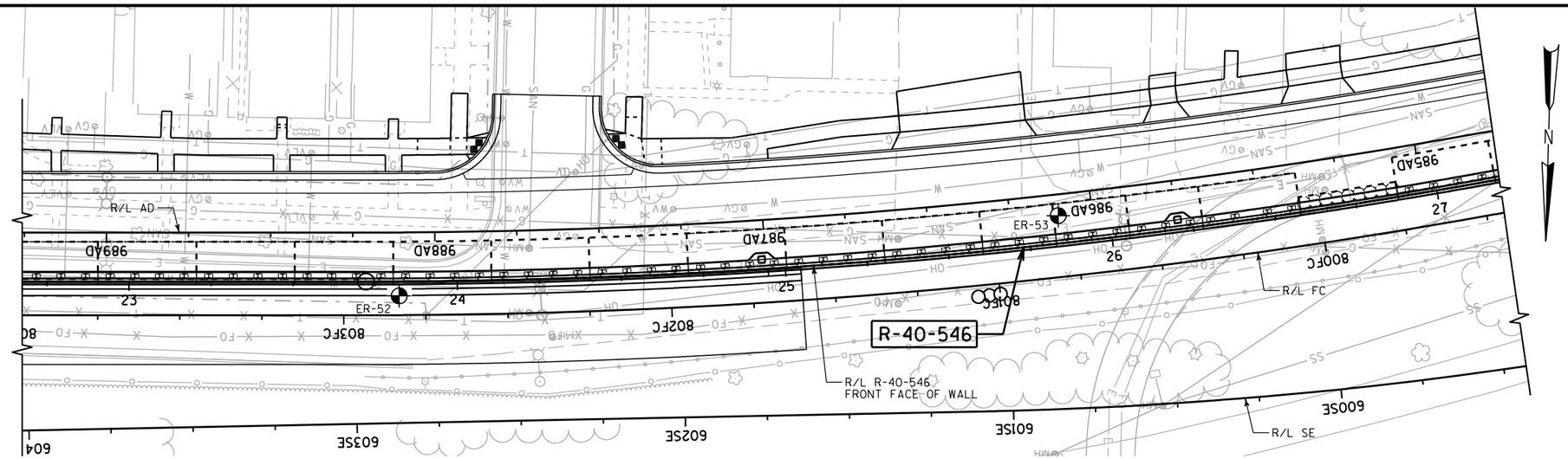
STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (3 OF 5)

SHEET 51 OF 53

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PLOT NAME : R546_080903_se
PLOT SCALE : 40:1



NOTE

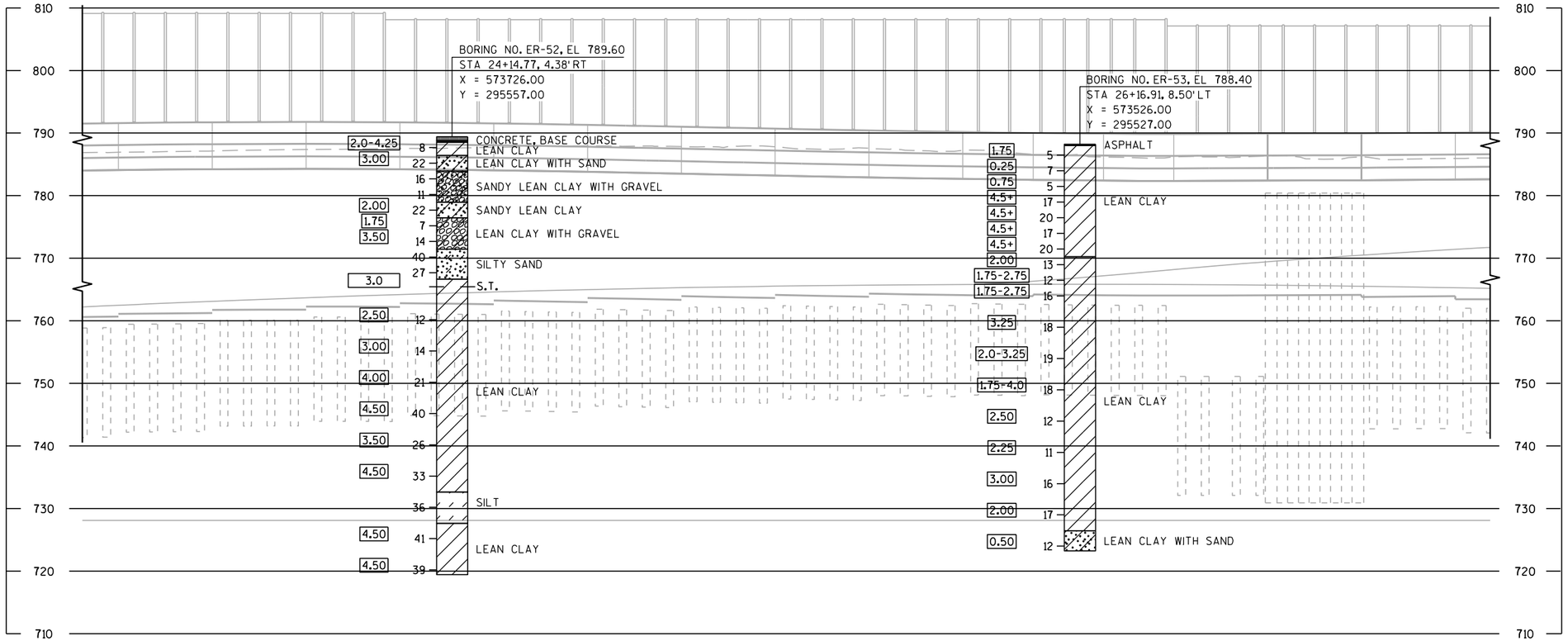
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BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-546.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 3, 2012 - BORING ER-52
JAN. 5, 2012 - BORING ER-53



LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (4 OF 5)

SHEET 52 OF 53

8

NOTE

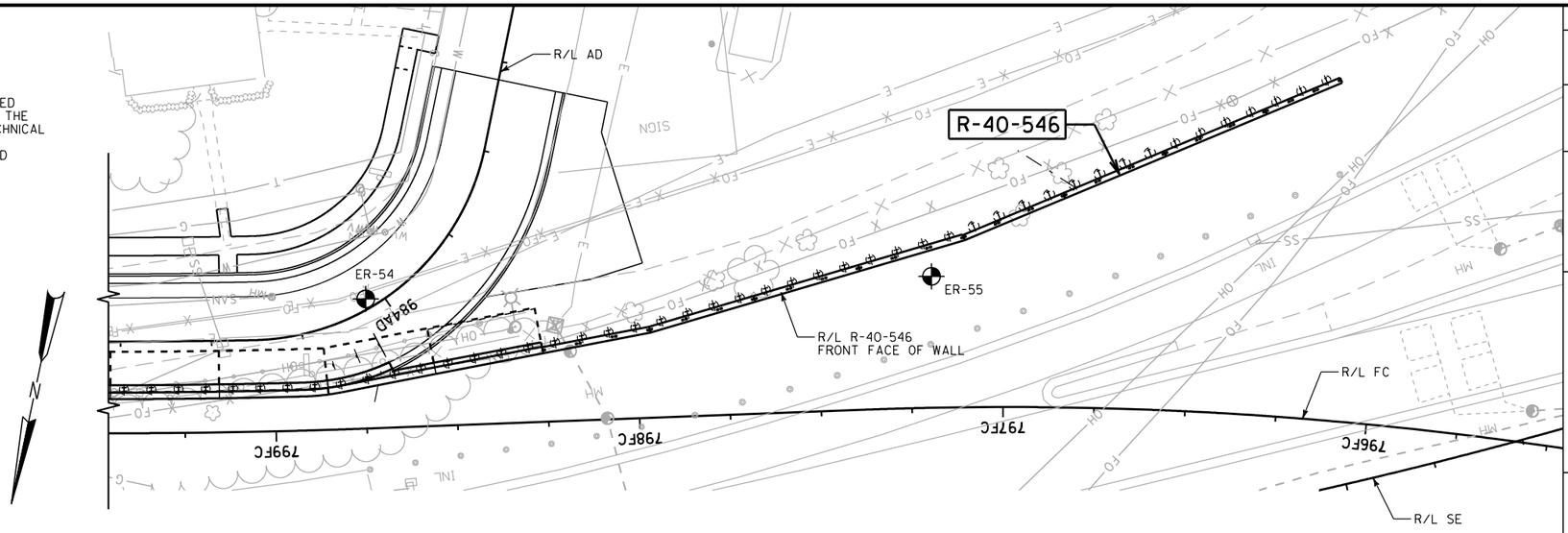
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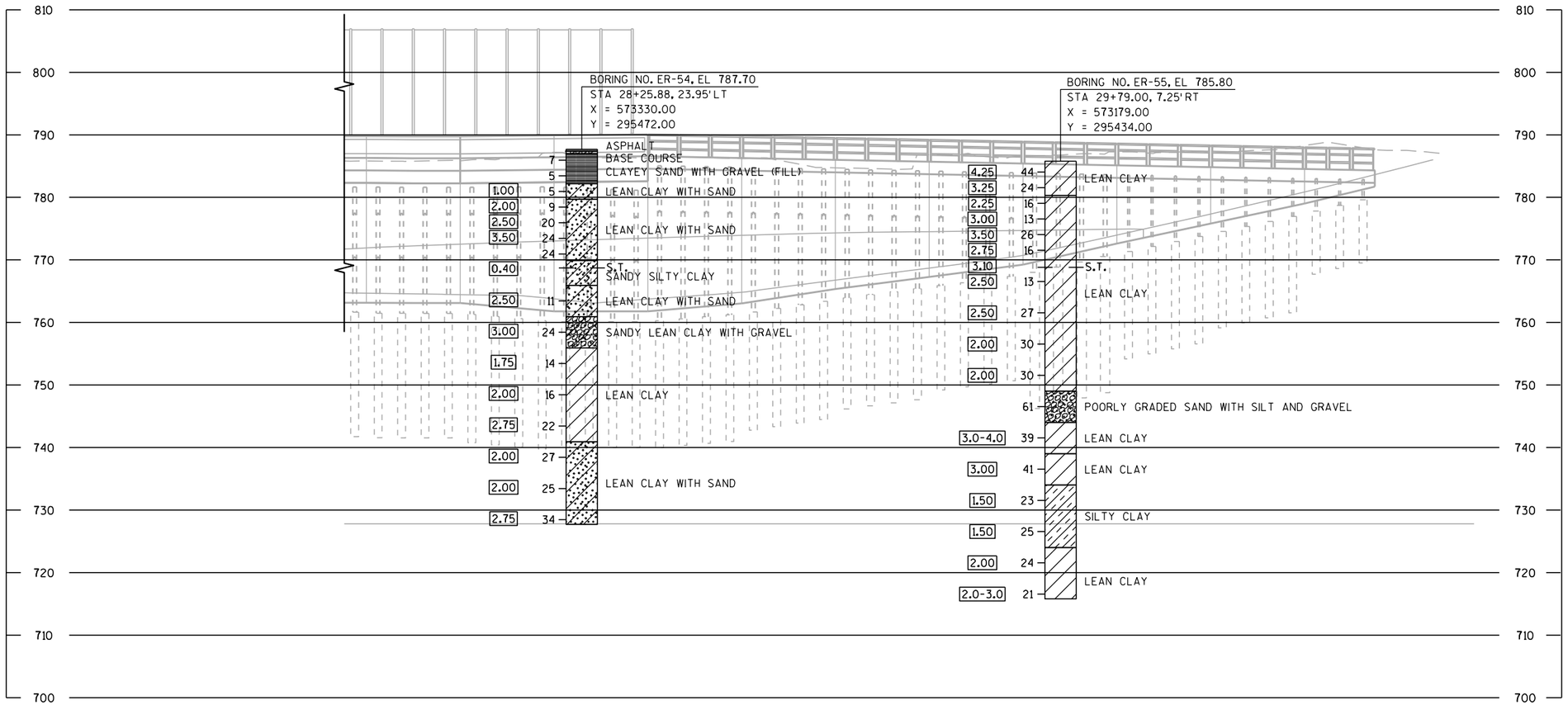
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-546.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 18, 2012 - BORING ER-54
JAN. 24, 2012 - BORING ER-55





STATE PROJECT NUMBER

1060-33-80

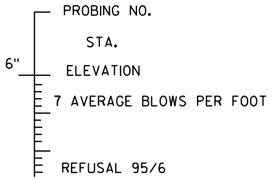
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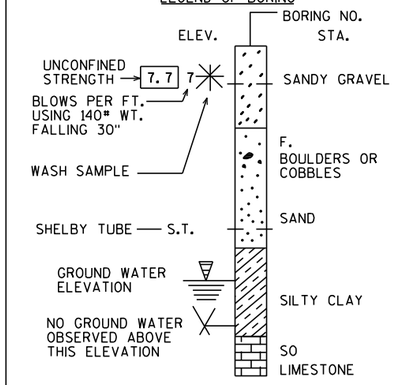
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

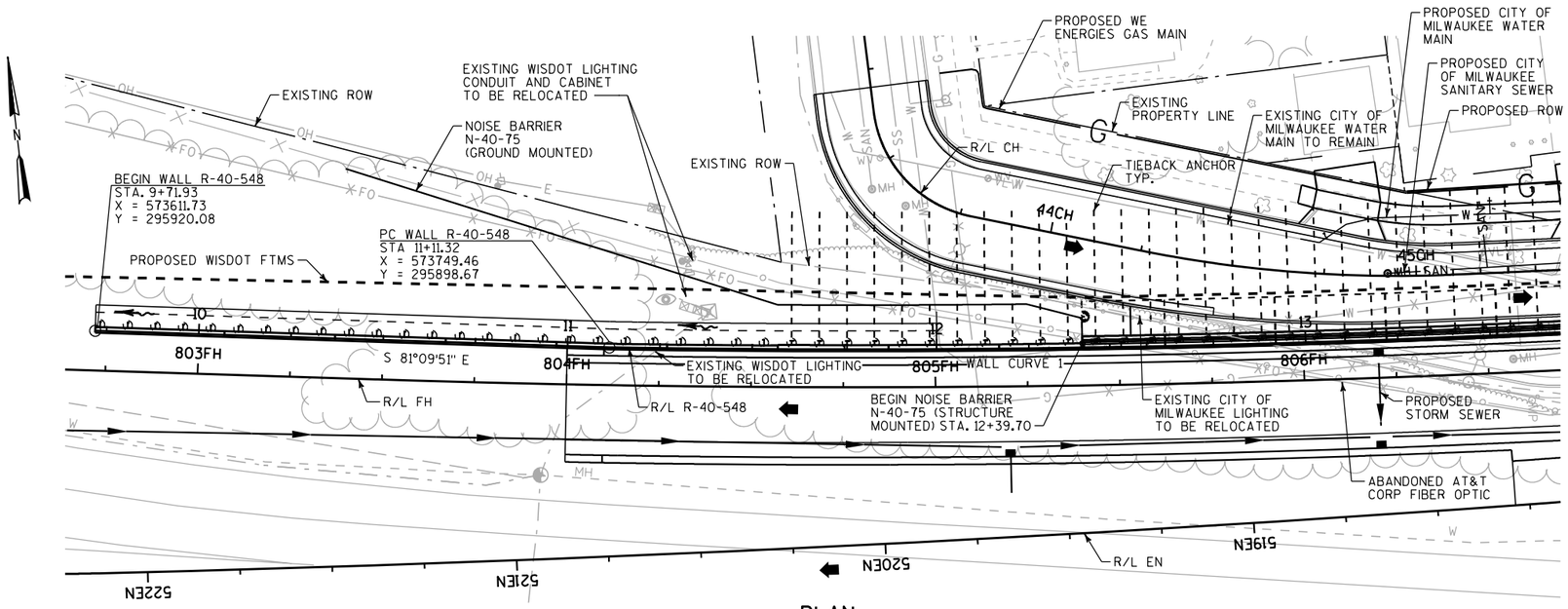
STRUCTURE R-40-546

DRAWN BY BHI | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (5 OF 5)

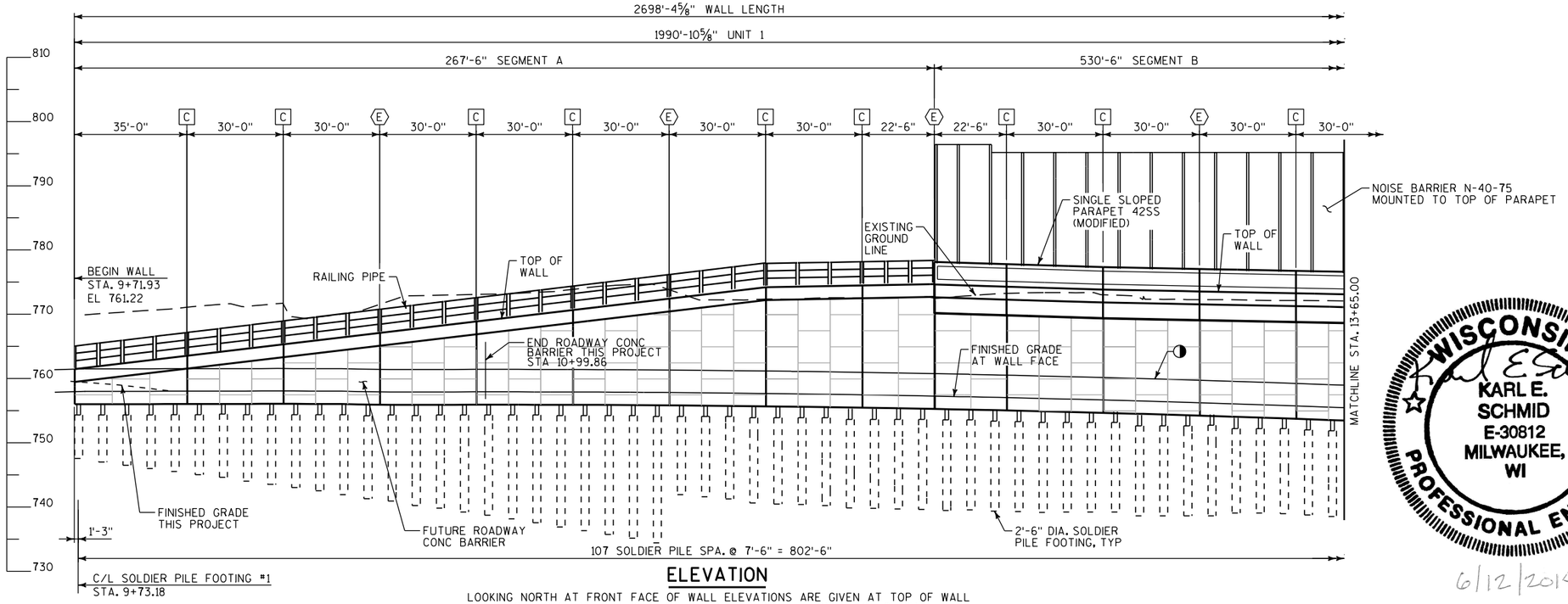
SHEET 53 OF 53

8 8



PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL ELEVATIONS ARE GIVEN AT TOP OF WALL
DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

STATE PROJECT NUMBER

1060-33-80

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 6)
2. GENERAL PLAN & ELEVATION (2 OF 6)
3. GENERAL PLAN & ELEVATION (3 OF 6)
4. GENERAL PLAN & ELEVATION (4 OF 6)
5. GENERAL PLAN & ELEVATION (5 OF 6)
6. GENERAL PLAN & ELEVATION (6 OF 6)
7. QUANTITIES & HORIZONTAL CURVE DATA
8. GENERAL NOTES, DESIGN DATA & TOP OF WALL PGL
9. PROFILE GRADE LINES
10. TYPICAL SECTION 1 UNIT 1 SEGMENT A
11. TYPICAL SECTION 2 UNIT 1 SEGMENT A
12. TYPICAL SECTION 3 UNIT 1 SEGMENT B
13. TYPICAL SECTION 4 UNIT 1 SEGMENT C
14. TYPICAL SECTION 5 UNIT 1 SEGMENT D
15. TYPICAL SECTION 6 UNIT 1 SEGMENT E
16. TYPICAL SECTION 7 UNIT 2
17. TYPICAL SECTION 8 UNIT 3 SEGMENT A
18. TYPICAL SECTION 9 UNIT 3 SEGMENT B
19. SOLDIER PILE DATA TABLE (1 OF 5)
20. SOLDIER PILE DATA TABLE (2 OF 5)
21. SOLDIER PILE DATA TABLE (3 OF 5)
22. SOLDIER PILE DATA TABLE (4 OF 5)
23. SOLDIER PILE DATA TABLE (5 OF 5)
24. TIEBACK ANCHOR DETAILS
25. TIEBACK ANCHOR DATA TABLE (1 OF 3)
26. TIEBACK ANCHOR DATA TABLE (2 OF 3)
27. TIEBACK ANCHOR DATA TABLE (3 OF 3)
28. SOLDIER PILE WALL DETAILS (1 OF 3)
29. SOLDIER PILE WALL DETAILS (2 OF 3)
30. SOLDIER PILE WALL DETAILS (3 OF 3)
31. SHEET PILING WALL DETAILS (1 OF 3)
32. SHEET PILING WALL DETAILS (2 OF 3)
33. SHEET PILING WALL DETAILS (3 OF 3)
34. WALL ELEVATION (1 OF 10)
35. WALL ELEVATION (2 OF 10)
36. WALL ELEVATION (3 OF 10)
37. WALL ELEVATION (4 OF 10)
38. WALL ELEVATION (5 OF 10)
39. WALL ELEVATION (6 OF 10)
40. WALL ELEVATION (7 OF 10)
41. WALL ELEVATION (8 OF 10)
42. WALL ELEVATION (9 OF 10)
43. WALL ELEVATION (10 OF 10)
44. SOLDIER PILE FACING REINFORCING SCHEDULE
45. WALL ANCHOR SLAB PLAN (1 OF 5)
46. WALL ANCHOR SLAB PLAN (2 OF 5)
47. WALL ANCHOR SLAB PLAN (3 OF 5)
48. WALL ANCHOR SLAB PLAN (4 OF 5)
49. WALL ANCHOR SLAB PLAN (5 OF 5)
50. WALL ANCHOR SLAB DETAILS (1 OF 2)
51. WALL ANCHOR SLAB DETAILS (2 OF 2)
52. LIGHT BASE DETAILS
53. SIGN BASE DETAILS (1 OF 2)
54. SIGN BASE DETAILS (2 OF 2)
55. PARAPET CONDUIT DETAILS
56. AESTHETIC WALL TREATMENT DETAILS (1 OF 3)
57. AESTHETIC WALL TREATMENT DETAILS (2 OF 3)
58. AESTHETIC WALL TREATMENT DETAILS (3 OF 3)
59. RAILING PIPE DETAILS
60. FENCE DECORATIVE WING LAYOUT
61. FENCE DECORATIVE WING (1 OF 3)
62. FENCE DECORATIVE WING (2 OF 3)
63. FENCE DECORATIVE WING (3 OF 3)
64. FENCE DECORATIVE WALL (1 OF 2)
65. FENCE DECORATIVE WALL (2 OF 2)
66. SUBSURFACE EXPLORATION (1 OF 5)
67. SUBSURFACE EXPLORATION (2 OF 5)
68. SUBSURFACE EXPLORATION (3 OF 5)
69. SUBSURFACE EXPLORATION (4 OF 5)
70. SUBSURFACE EXPLORATION (5 OF 5)

LEGEND

- INDICATES ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- CONCRETE BARRIER TYPE SS42 (NOT A RETAINING WALL ITEM)

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher — CHIEF STRUCTURES DESIGN ENGINEER — DATE 6/12/14

WISCONSIN KARL E. SCHMID E-30812 MILWAUKEE, WI PROFESSIONAL ENGINEER

6/12/2014

STRUCTURE R-40-548

RETAINING WALL ALONG RAMP FH / RAMP FD

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D.
BHI/CJW	EKM/KRB	BHI	KES

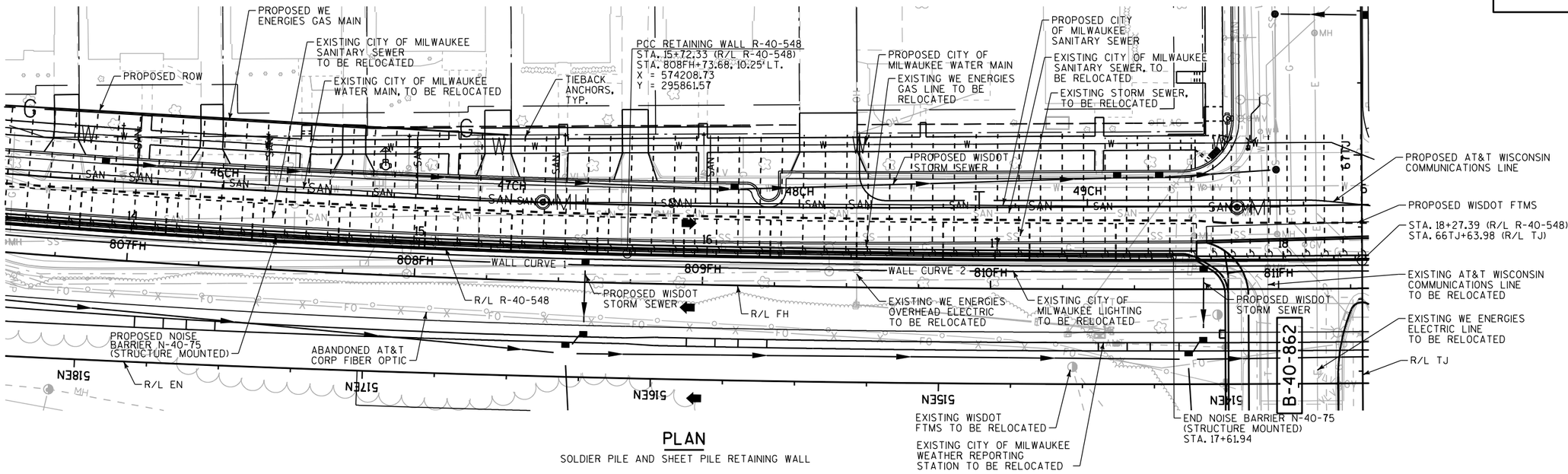
GENERAL PLAN & ELEVATION (1 OF 6)

SHEET 1 OF 70

8

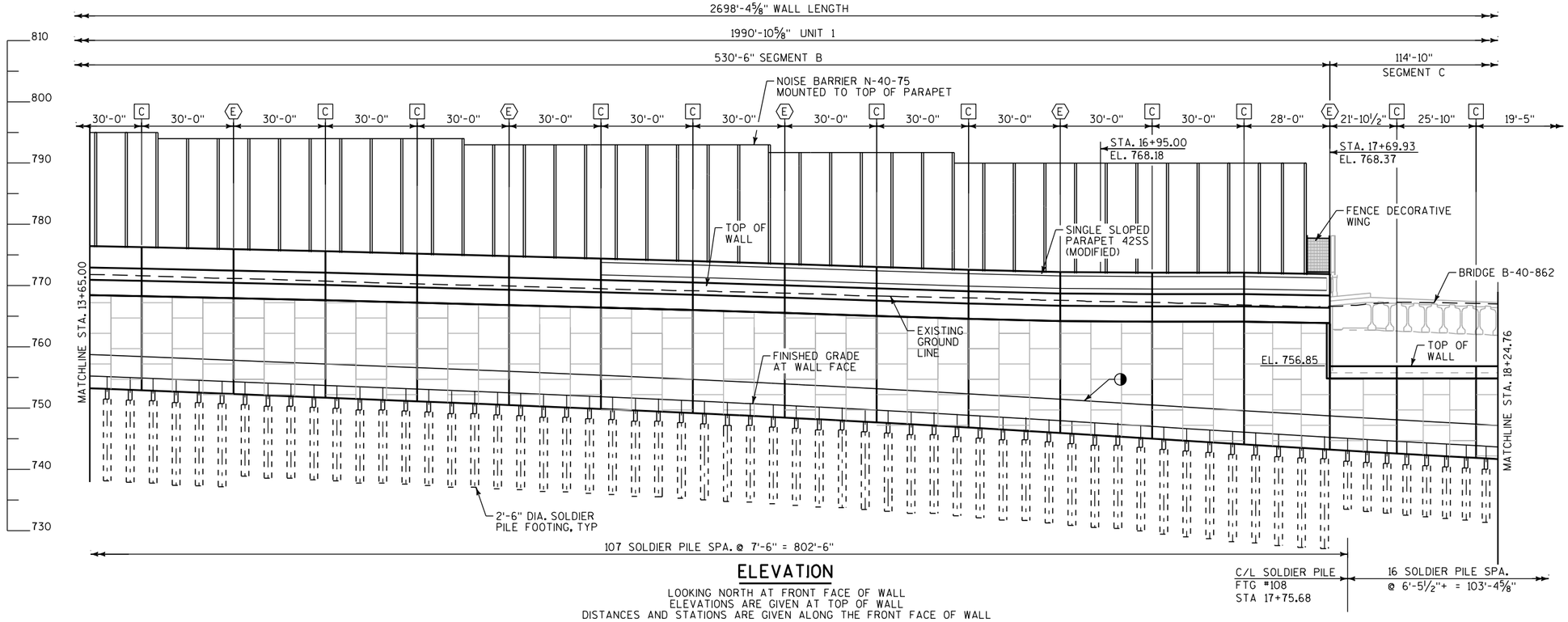
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STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ELEVATIONS ARE GIVEN AT TOP OF WALL
DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- CONCRETE BARRIER TYPE SS42 (NOT A RETAINING WALL ITEM)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

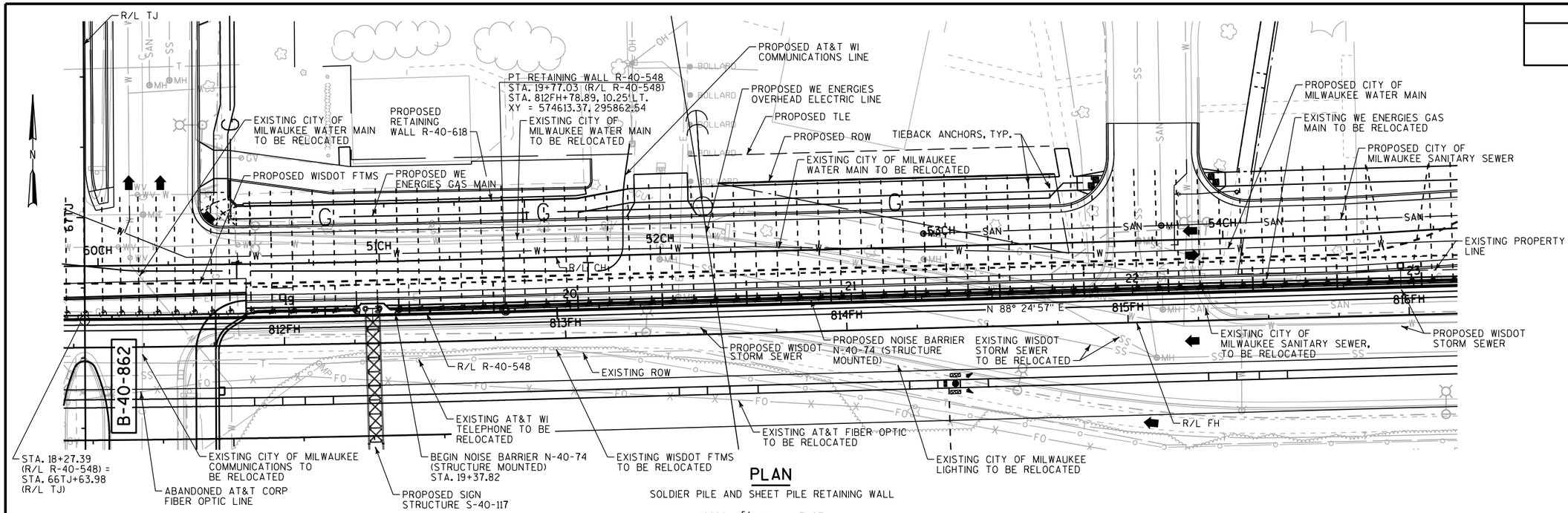
DRAWN BY BHI | PLANS CK'D. KES

GENERAL PLAN & ELEVATION (2 OF 6)

SHEET 2 OF 70

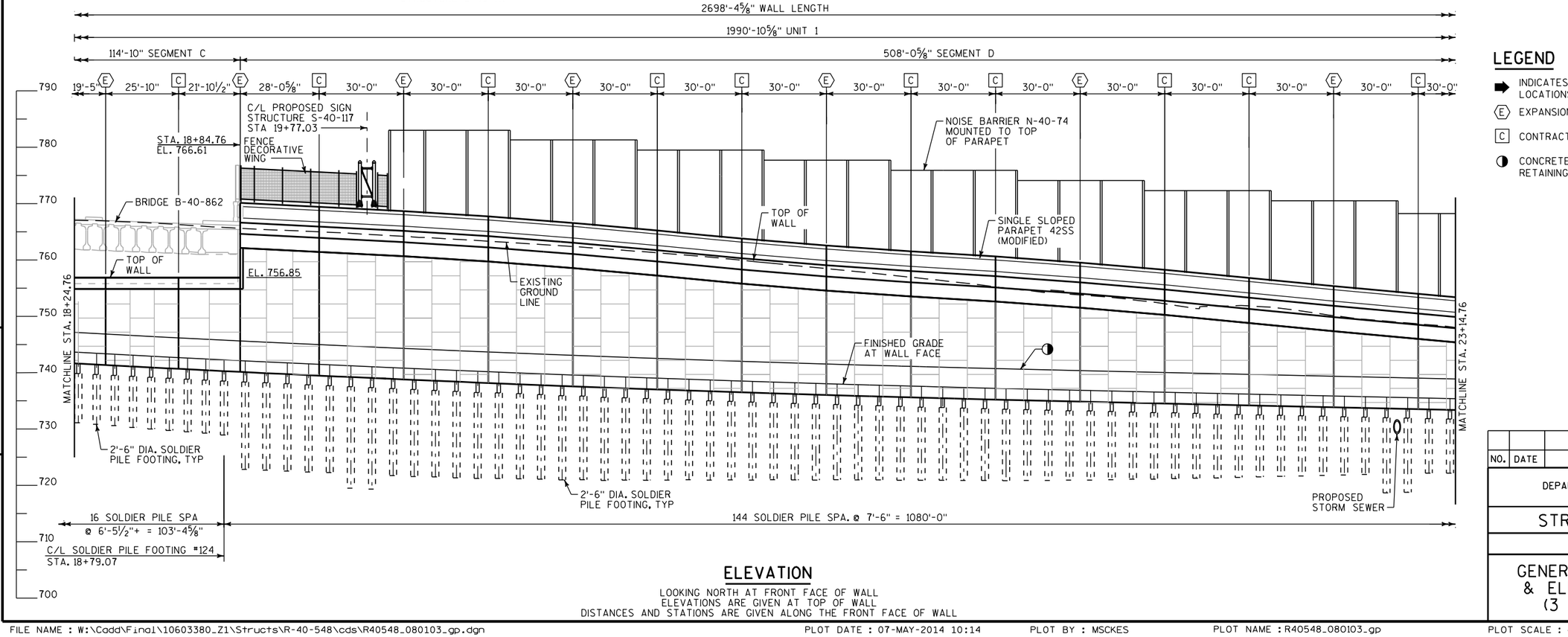
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STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ELEVATIONS ARE GIVEN AT TOP OF WALL
DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- CONCRETE BARRIER TYPE SS42 (NOT A RETAINING WALL ITEM)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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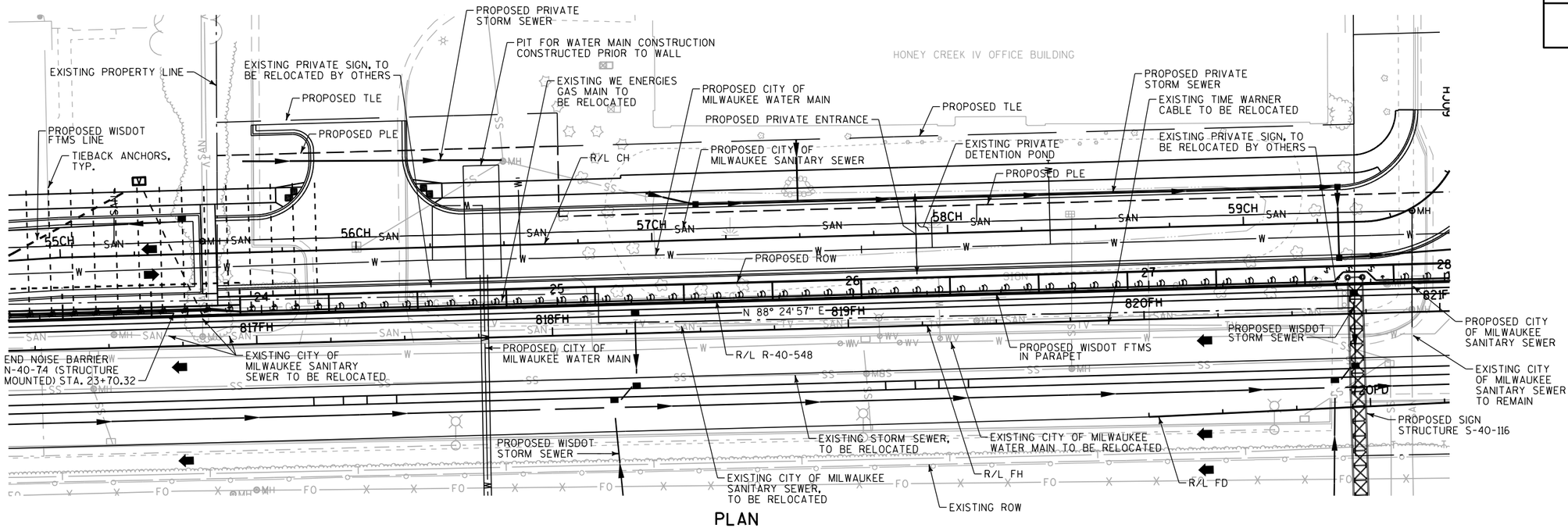
GENERAL PLAN & ELEVATION (3 OF 6)

SHEET 3 OF 70

3060

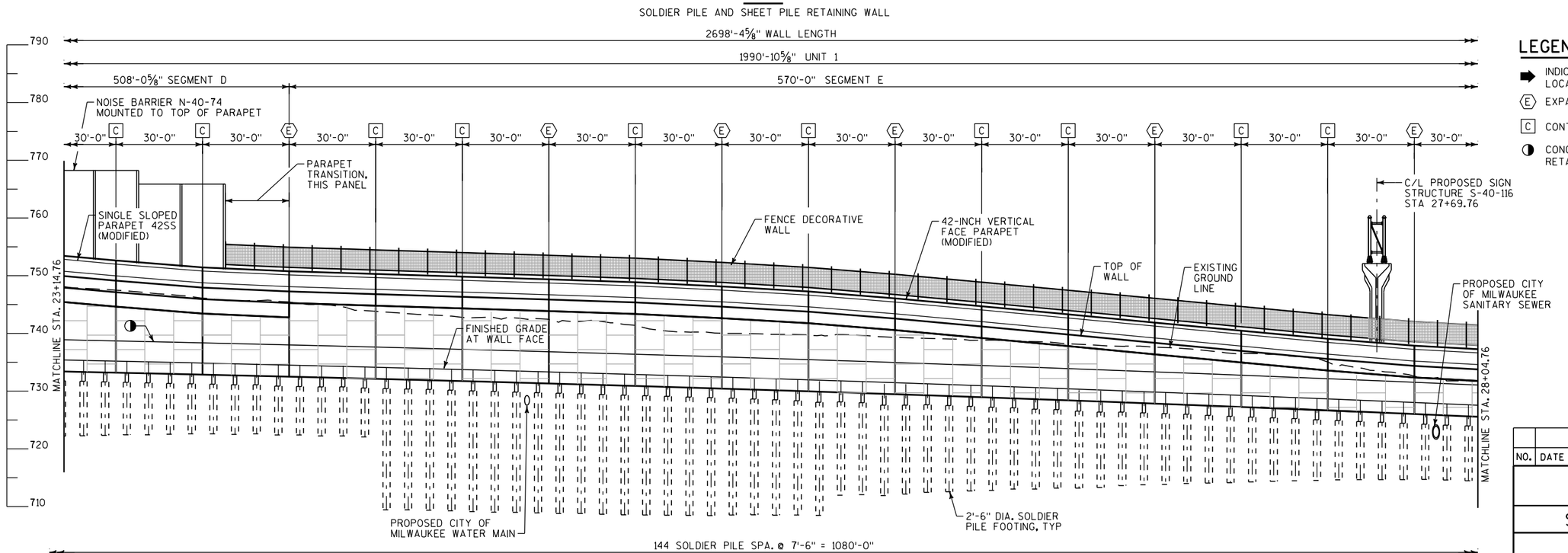
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PLOT BY : MSCKES
PLOT NAME : R40548_080103_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ELEVATIONS ARE GIVEN AT TOP OF WALL
DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

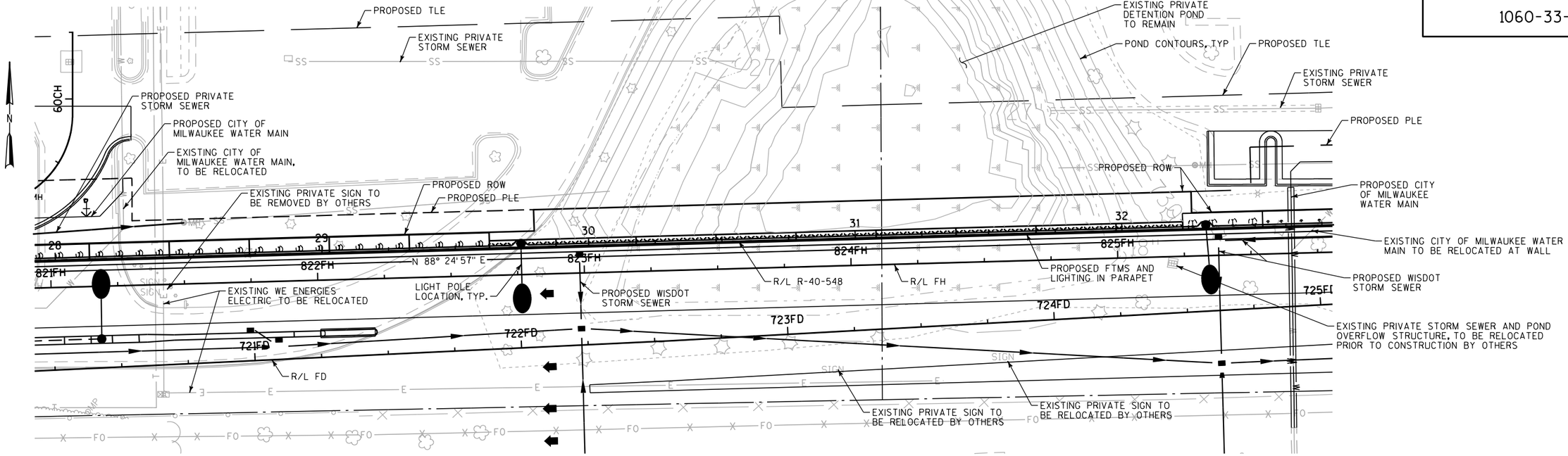
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GENERAL PLAN & ELEVATION (4 OF 6)

SHEET 4 OF 70

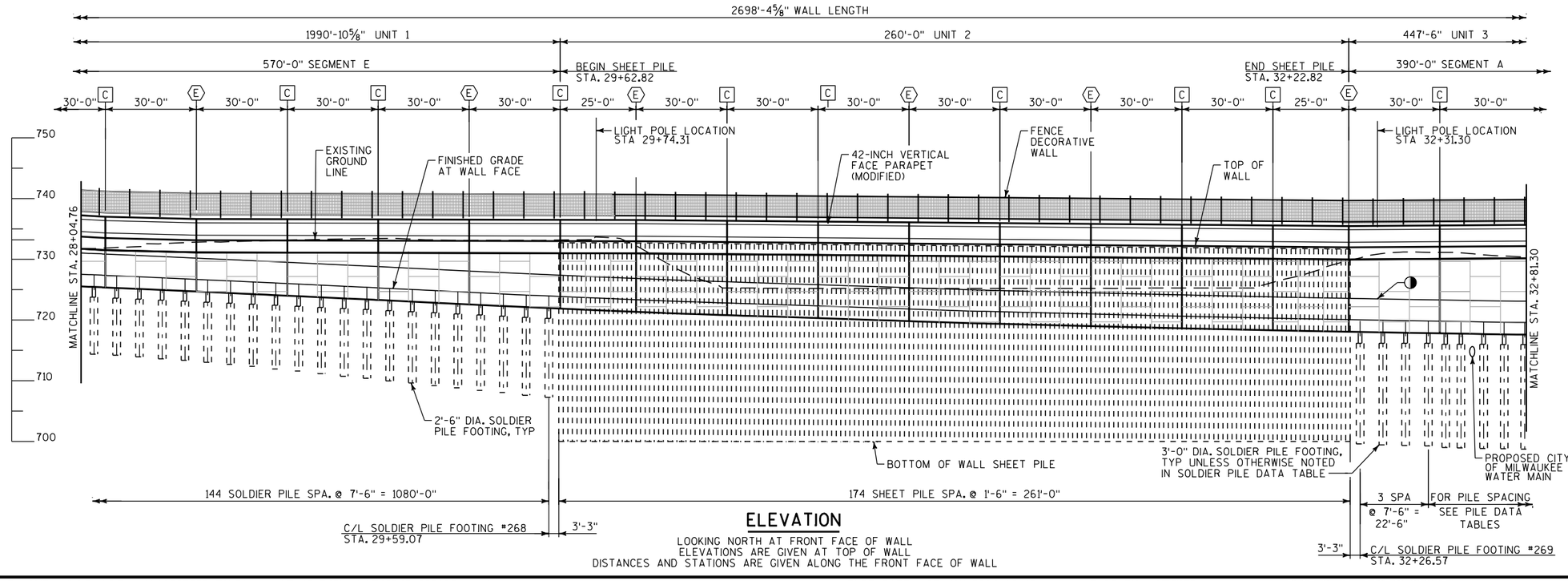
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STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



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ELEVATIONS ARE GIVEN AT TOP OF WALL
DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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GENERAL PLAN & ELEVATION (5 OF 6)

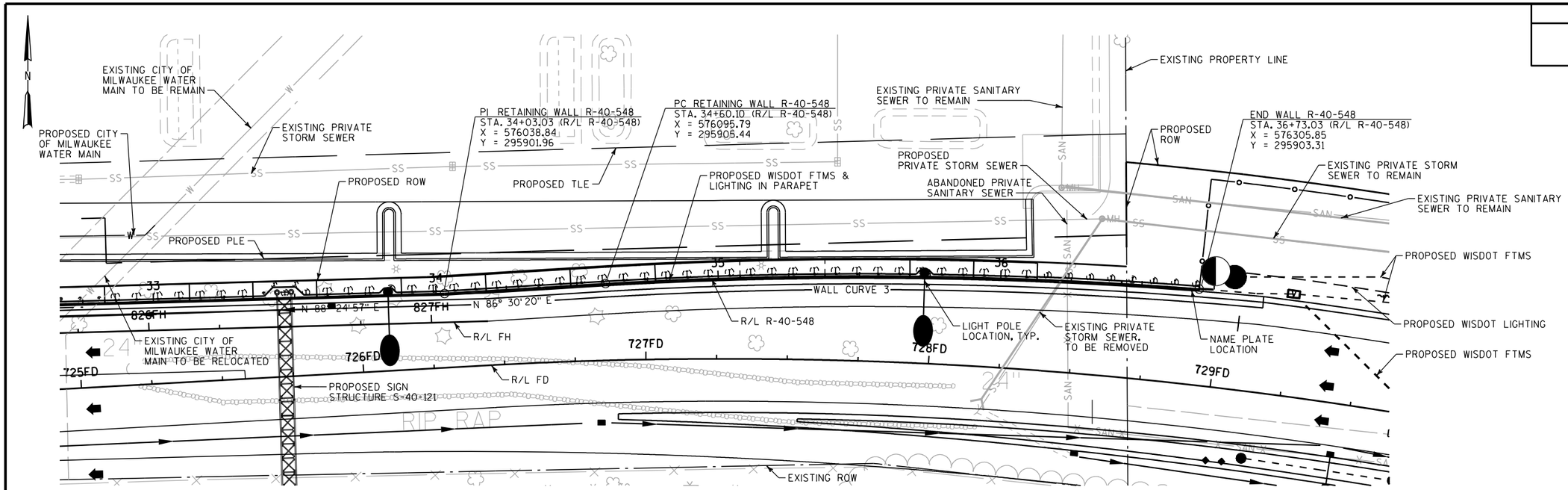
SHEET 5 OF 70

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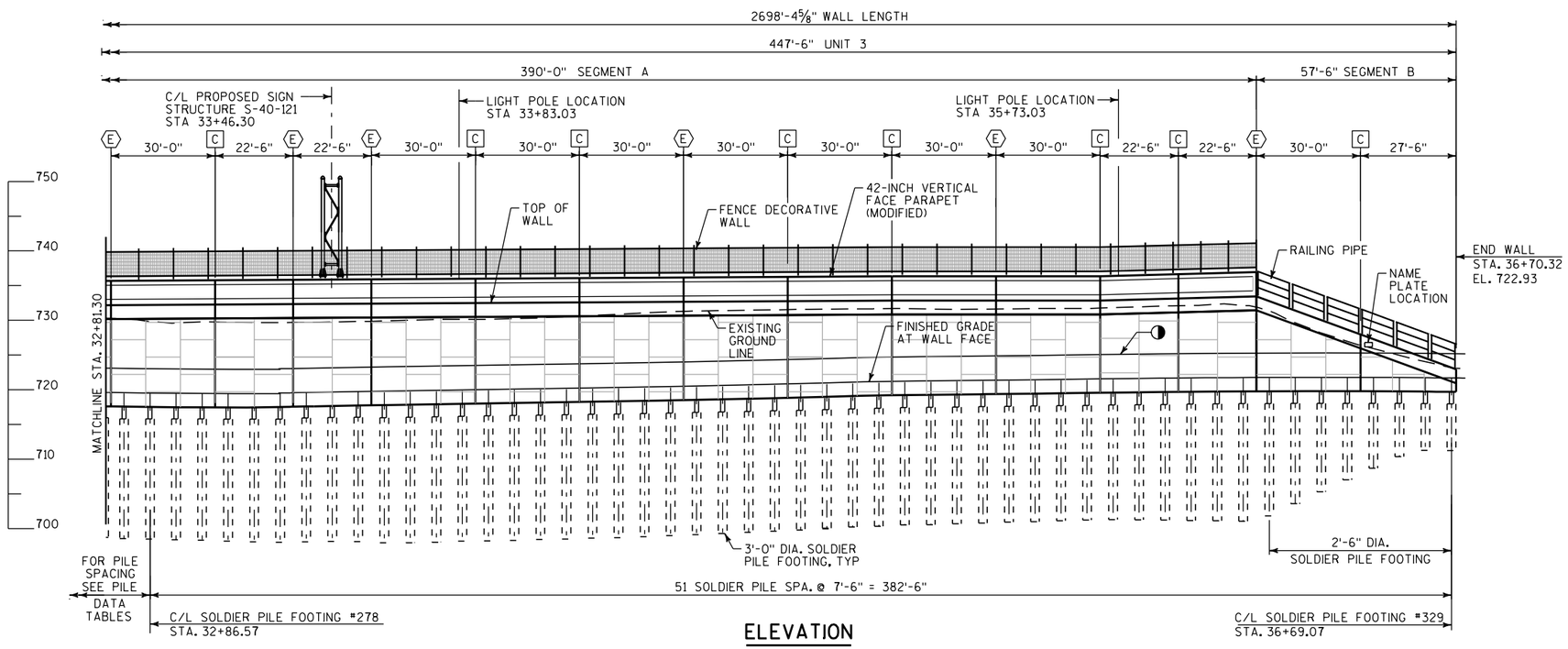
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STATE PROJECT NUMBER
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PLAN

SOLDIER PILE AND SHEET PILE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ELEVATIONS ARE GIVEN AT TOP OF WALL
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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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GENERAL PLAN & ELEVATION (6 OF 6)

SHEET 6 OF 70

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PLOT BY : MSCKES
PLOT NAME : R40548_080106_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	UNIT 1	UNIT 2	UNIT 3	TOTAL
206.2000.0003	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548	LS	----------	----------	----------	1
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	43	----------	----------	43
502.3200	PROTECTIVE SURFACE TREATMENT	SY	834	54	217	1,105
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	3,560	98	419	4,077
505.0415	BAR STEEL REINFORCEMENT HS RETAINING WALLS	LB	----------	1,680	----------	1,680
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	289,960	15,660	45,560	351,180
506.0605	STRUCTURAL STEEL HS	LB	481,250	----------	141,770	623,020
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	6,580	347	702	7,629
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	----------	8,590	----------	8,590
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	----------	8,590	----------	8,590
513.2000.0007	RAILING PIPE R-40-548	LS	----------	----------	----------	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	245	----------	----------	245
517.0600.0004	PAINTING EPOXY SYSTEM R-40-548	LS	----------	----------	----------	1
517.1050.S.0011	ARCHITECTURAL SURFACE TREATMENT R-40-548	SF	24,260	2,765	5,010	32,035
645.0140	GEOTEXTILE FABRIC TYPE SAS	SY	142	----------	----------	142
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,171	780	1,344	3,295
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	1	1	4	6
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	1	----------	3	4
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	642	----------	248	890
SPV.0060.4100	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH	2	----------	2	4
SPV.0060.4105	ANCHOR ASSEMBLIES NOISE BARRIER STRUCTURES	EACH	84	----------	----------	84
SPV.0060.4150	TIEBACK ANCHORS	EACH	220	----------	----------	220
SPV.0060.4155	TIEBACK ANCHORS PERFORMANCE TESTS	EACH	11	----------	----------	11
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	34	----------	12	46
SPV.0090.0126	PIPE UNDERDRAIN 6-INCH SPECIAL	LF	130	----------	----------	130
SPV.0090.4410	FENCE DECORATIVE WING	LF	70	----------	----------	70
SPV.0090.4420	FENCE DECORATIVE WALL	LF	595	260	390	1,245
SPV.0090.4440	FOUNDATION DRILLING	LF	7,639	----------	1,726	9,365
SPV.0090.4470	SHEET PILING INTERLOCK WATERPROOFING	LF	----------	2,490	----------	2,490
SPV.0110.4600	TIMBER LAGGING	MBM	84	----------	17	101
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	27,770	----------	5,790	33,560
SPV.0165.4770	PRESTRESSED PRECAST CONCRETE WALL PANEL	SF	----------	2,765	----------	2,765
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				$^{1}/_{2}$" & $^{3}/_{4}$"
	NON-BITUMINOUS JOINT FILLER	SIZE				$^{1}/_{2}$" & $^{3}/_{4}$"
	SMOOTH DOWEL BARS	SIZE				$^{3}/_{4}$"
	NAME PLATE	EACH				1

ALL ITEMS ARE CATEGORY 3100

HORIZONTAL CURVE DATA

WALL CURVE 1	WALL CURVE 2	WALL CURVE 3
PI = STA. 13+42.08	PI = STA. 17+74.72	PI = STA. 35+69.16
X = 573978.02	X = 574411.06	X = 576204.67
Y = 295866.83	Y = 295856.94	Y = 295911.78
DELTA = 6°37'13.85"LT	DELTA = 2°53'32.44"LT	DELTA = 7°59'40.59"RT
D = 1°26'09.87"	D = 0°42'52.92"	D = 3°40'15.75"
R = 3989.75	R = 8016.75	R = 1560.75
T = 230.76	T = 202.39	T = 109.06
L = 461.01	L = 404.69	L = 217.77
E = 6.67	E = 2.55	E = 3.81
PC = STA. 11+11.32	PCC = STA. 15+72.33	PC = STA. 34+60.10
X = 573749.46	X = 574208.73	X = 576095.79
Y = 295898.67	Y = 295861.57	Y = 295905.44
PCC = STA. 15+72.33	PT = STA. 19+77.03	PT = STA. 36+77.87
X = 574208.73	X = 574613.37	X = 576313.38
Y = 295861.57	Y = 295862.54	Y = 295902.93

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STRUCTURE R-40-548

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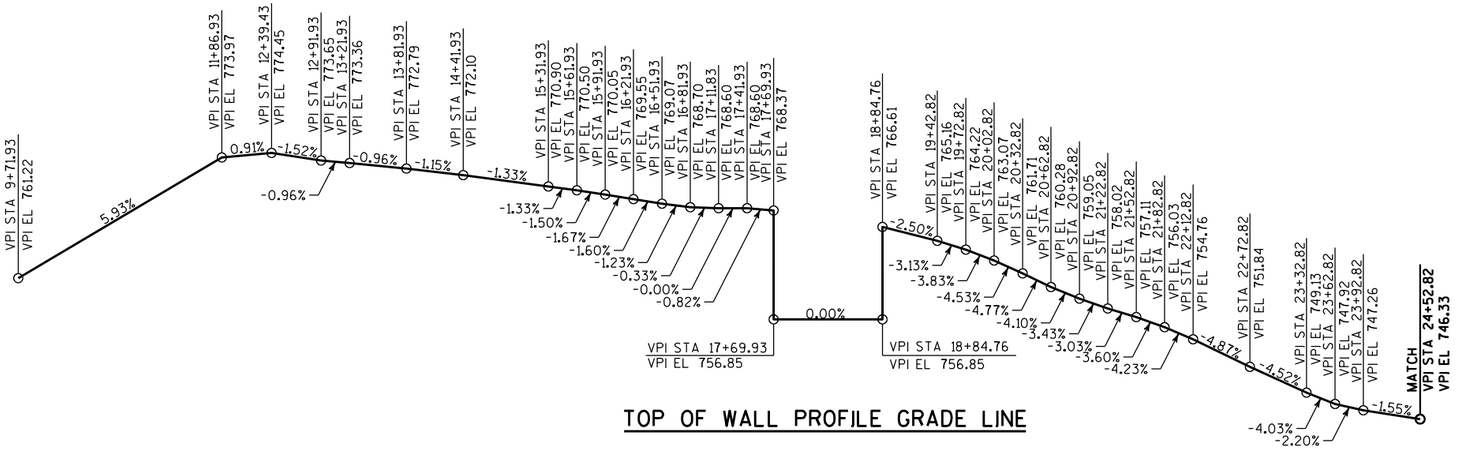
QUANTITIES & HORIZONTAL CURVE DATA

SHEET 7 OF 70

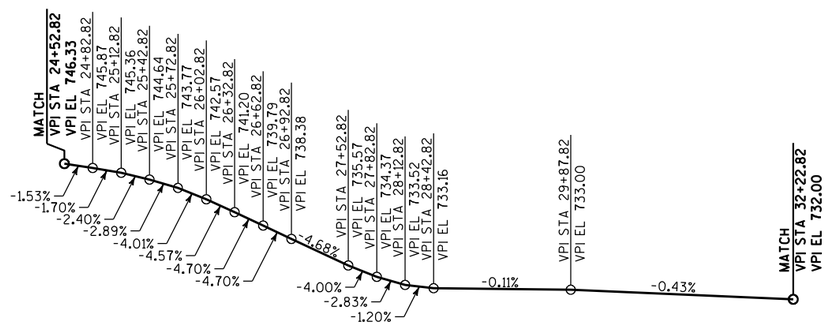
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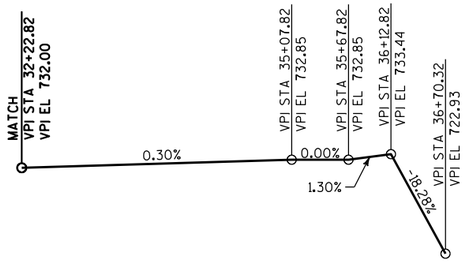
STATE PROJECT NUMBER
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TOP OF WALL PROFILE GRADE LINE



TOP OF WALL PROFILE GRADE LINE (CONTINUED)



TOP OF WALL PROFILE GRADE LINE (CONTINUED)

DESIGN DATA

DESIGN SPECIFICATION:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:

STA 9+73.18 to STA 12+39.48	
LIVE LOAD SURCHARGE:	100 PSF
STA 12+39.48 to STA 17+61.94	
LIVE LOAD SURCHARGE:	240 PSF
NOISE BARRIER:	CASE 1
STA 17+61.94 to STA 19+37.82	
LIVE LOAD SURCHARGE):	240 PSF
STA 19+37.82 to STA 23+70.32	
LIVE LOAD SURCHARGE:	240 PSF
NOISE BARRIER:	CASE 2
STA 23+70.32 to STA 36+13.03	
LIVE LOAD SURCHARGE:	240 PSF
STA 36+13.03 to STA 36+70.32	
LIVE LOAD SURCHARGE:	100 PSF

NOISE BARRIER:
CASE 1 - MAX. HEIGHT ABOVE ROADWAY BARRIER - 20 FEET
MAX. POST SPACING - 10 FEET

CASE 2 - MAX. HEIGHT ABOVE ROADWAY BARRIER - 17 FEET
MAX. POST SPACING - 15 FEET

NOISE BARRIER DEAD LOAD.....60 PSF
WIND PRESSURE ON NOISE BARRIER.....37.5 PSF
(NORMAL TO BARRIER, EITHER DIRECTION)

MATERIAL PROPERTIES:

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI
STRUCTURAL STEEL HS	Fy = 50,000 PSI
STEEL SHEET PILING (ASTM A328)	Fy = 39,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c = 3,500 PSI
✳ TIMBER LAGGING	fbo = 1,000 PSI
	E = 1,700,000 PSI

✳ MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, >2" WIDE, REFERENCE AASHTO LRFD SPECIFICATION "TABLE 8.4.1.1.4-1 - REFERENCE DESIGN VALUES FOR VISUALLY GRADED SAWN LUMBER".

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE SHOWN OR NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SHOWN OR NOTED.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE SHOWN OR NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-548 WITH THE CONSTRUCTION OF THE NORTH ABUTMENT OF BRIDGE B-40-862.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

THE GEOTECHNICAL DATA PROVIDED FOR THIS STRUCTURE IN THE GEOTECHNICAL EXPLORATION AND RETAINING WALL EVALUATION REPORT GOVERNS OVER ANY DESCREPANCY WITH THE SUBSURFACE EXPLORATION AND GEOTECHNICAL DATA SHOWN IN THE PLANS.

BACKFILL ALL SPACES EXCAVATED AT THE BACK FACE AND NOT OCCUPIED BY THE NEW STRUCTURE WITH STRUCTURAL BACKFILL.

EXISTING STRUCTURES ARE NOT SHOWN IN THESE PLANS. THE REMOVAL OF THESE STRUCTURES IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-40-862 BRIDGE QUANTITIES.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548".

SOLDIER PILE WALL NOTES

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE SOLDIER PILE WALL COPING, CAST-IN-PLACE CONCRETE FACING, MOMENT SLAB AND PARAPET IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE MOMENT SLAB, SOLDIER PILES AND FOOTINGS IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548". AFTER WALL SOLDIER PILE CONSTRUCTION HAS BEEN COMPLETED, ALL EARTHWORK IN FRONT OF THE RETAINING WALL IS PAID FOR UNDER THE ROADWAY ITEM "COMMON EXCAVATION". SEE ROADWAY PLAN FOR EXCAVATION LIMITS.

FLOWABLE BACKFILL AND CLSM ARE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548". SEE SPECIAL PROVISIONS FOR DESCRIPTION OF FLOWABLE BACKFILL AND CLSM.

PREPARE SURFACE AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600, "PAINTING EPOXY SYSTEM R-40-548".

FILL TO TOP OF SHAFT ELEVATION WHERE NEEDED TO PROVIDE WORKING SURFACE. FILL INCIDENTAL TO BID ITEM "CONCRETE MASONRY SOLDIER PILE FOOTINGS".

SHEET PILE WALL NOTES

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE SHEET PILE WALL COPING AND PARAPET IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE SHEET PILE WALL IS PAID FOR UNDER THE ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548".

WATERPROOF THE SHEET PILE INTERLOCKS PER THE BID ITEM "SHEET PILING INTERLOCK WATERPROOFING" INCLUDED IN THE CONTRACT SPECIAL PROVISIONS.

PREPARE SURFACE AND PAINT SHEET PILING ON THE WATER SIDE ONLY FROM TOP OF PILING TO 4'-0" BELOW BOTTOM OF RETENTION POND AS SPECIFIED IN SECTION 550.3.11.3 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF SHEET PILING IS MEASURED AND PAID FOR AS PART OF "PILING STEEL SHEET PERMANENT DRIVEN". THE FINAL PAINT COLOR SHALL MATCH THE FEDERAL STANDARD COLOR #33448. PAINTING WILL BE DONE PRIOR TO DRIVING THE PERMANENT STEEL SHEET PILING.

NO.	DATE	REVISION	BY

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STRUCTURE R-40-548

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GENERAL NOTES, DESIGN DATA & TOP OF WALL PGL

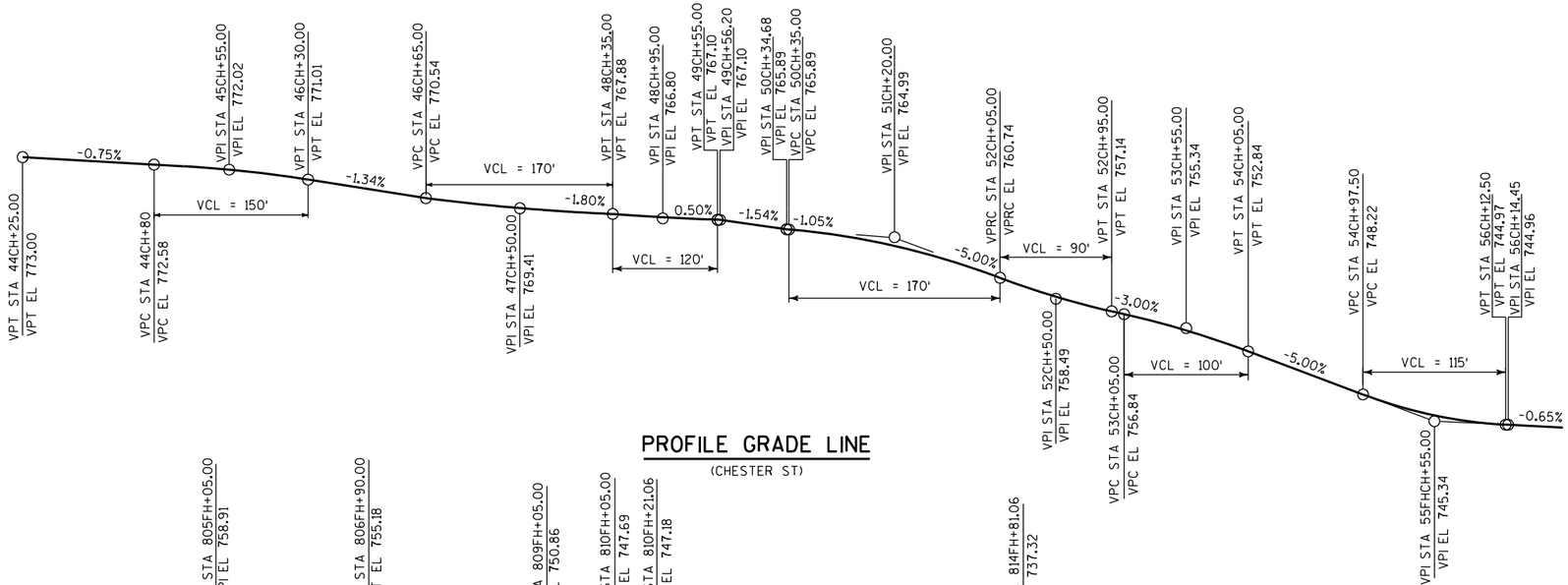
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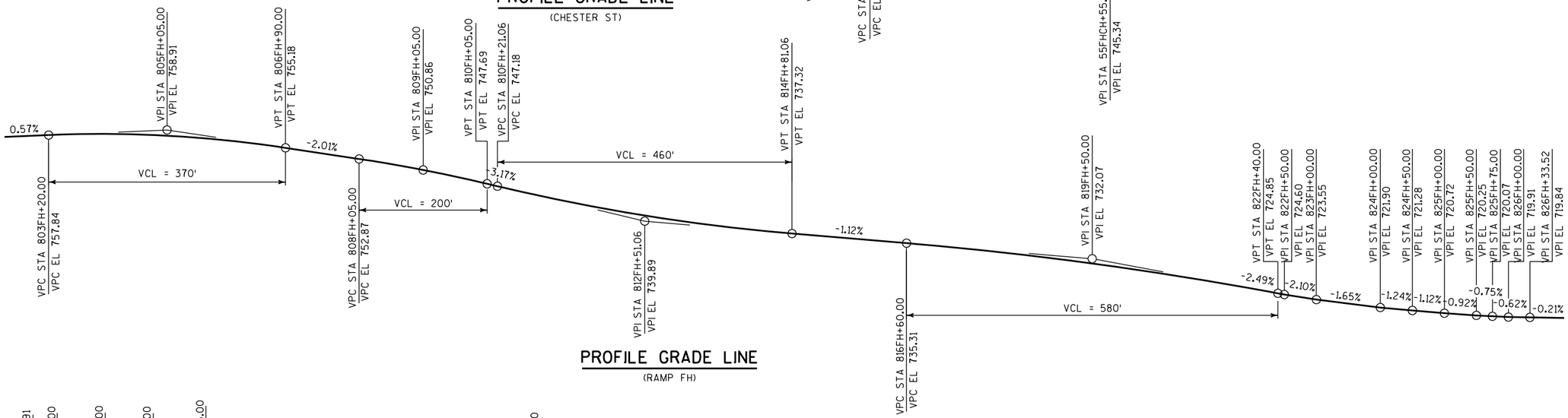
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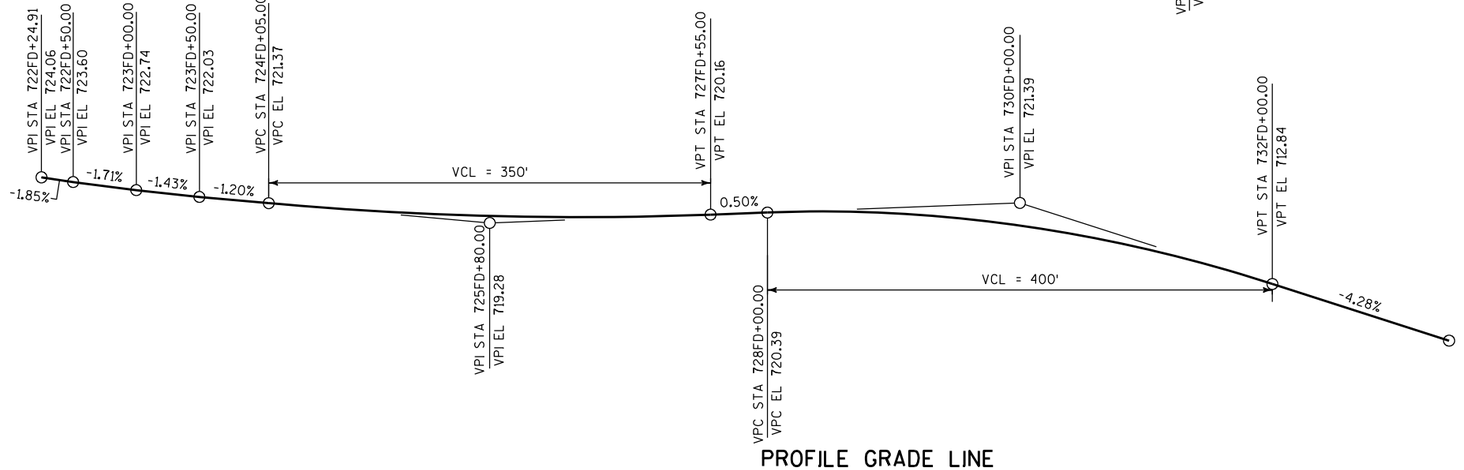
STATE PROJECT NUMBER
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PROFILE GRADE LINE
(CHESTER ST)



PROFILE GRADE LINE
(RAMP FH)



PROFILE GRADE LINE
(RAMP FD)

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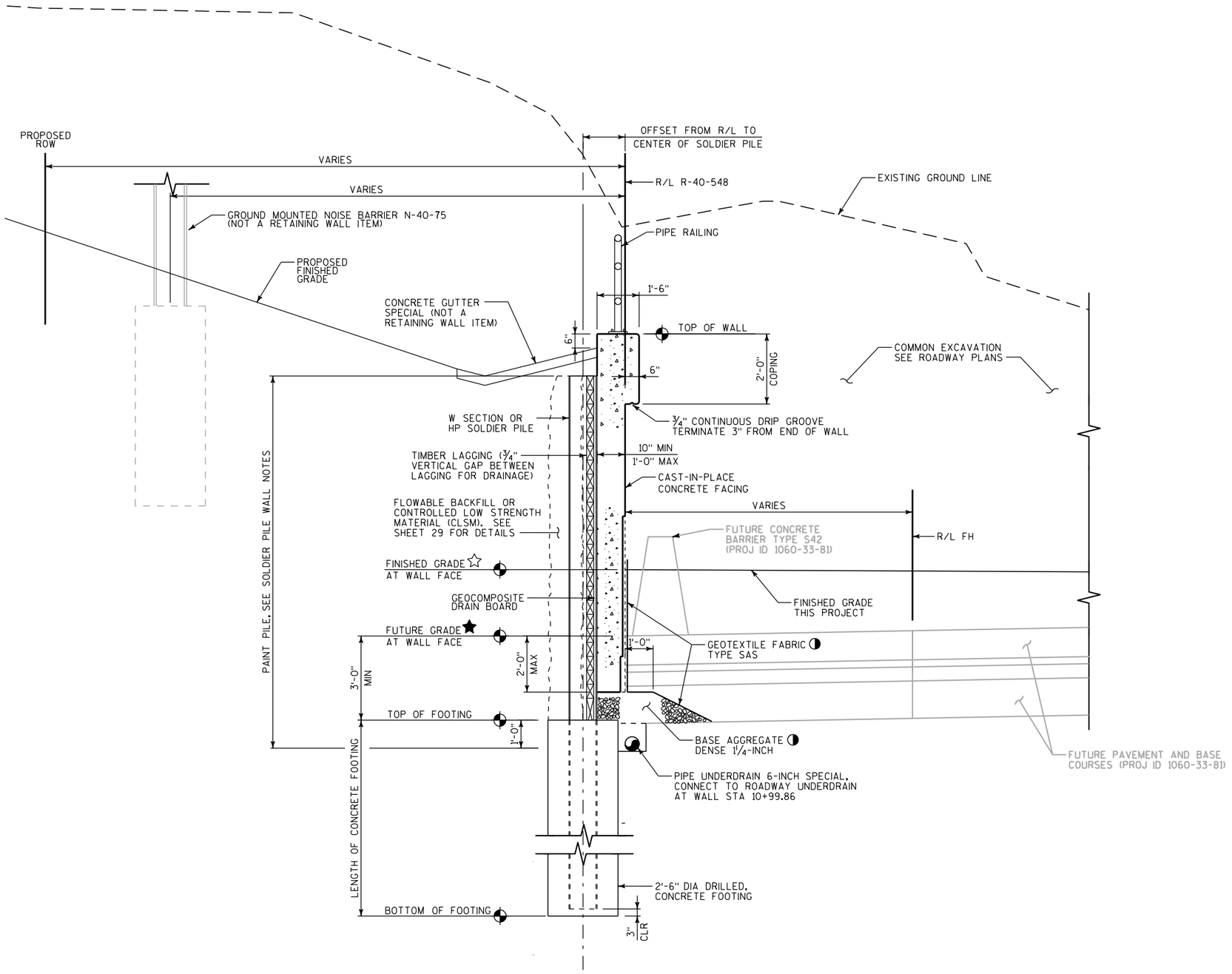
PROFILE GRADE LINES

SHEET 9 OF 70

8

8

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION 1 - STA 9+71.93 TO STA 10+99.86

(LOOKING UPSTATION)

LEGEND

- ☆ FINISHED GRADE AT CONCLUSION OF THIS PROJECT ID 1060-33-80
- ★ FUTURE GRADE - FINISHED GRADE AT CONCLUSION OF PROJECT ID 1060-33-81.
- ◑ PLACE GEOTEXTILE FABRIC OVER BASE AGGREGATE AND AGAINST RETAINING WALL FACE BEFORE BACKFILLING AGAINST WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-548

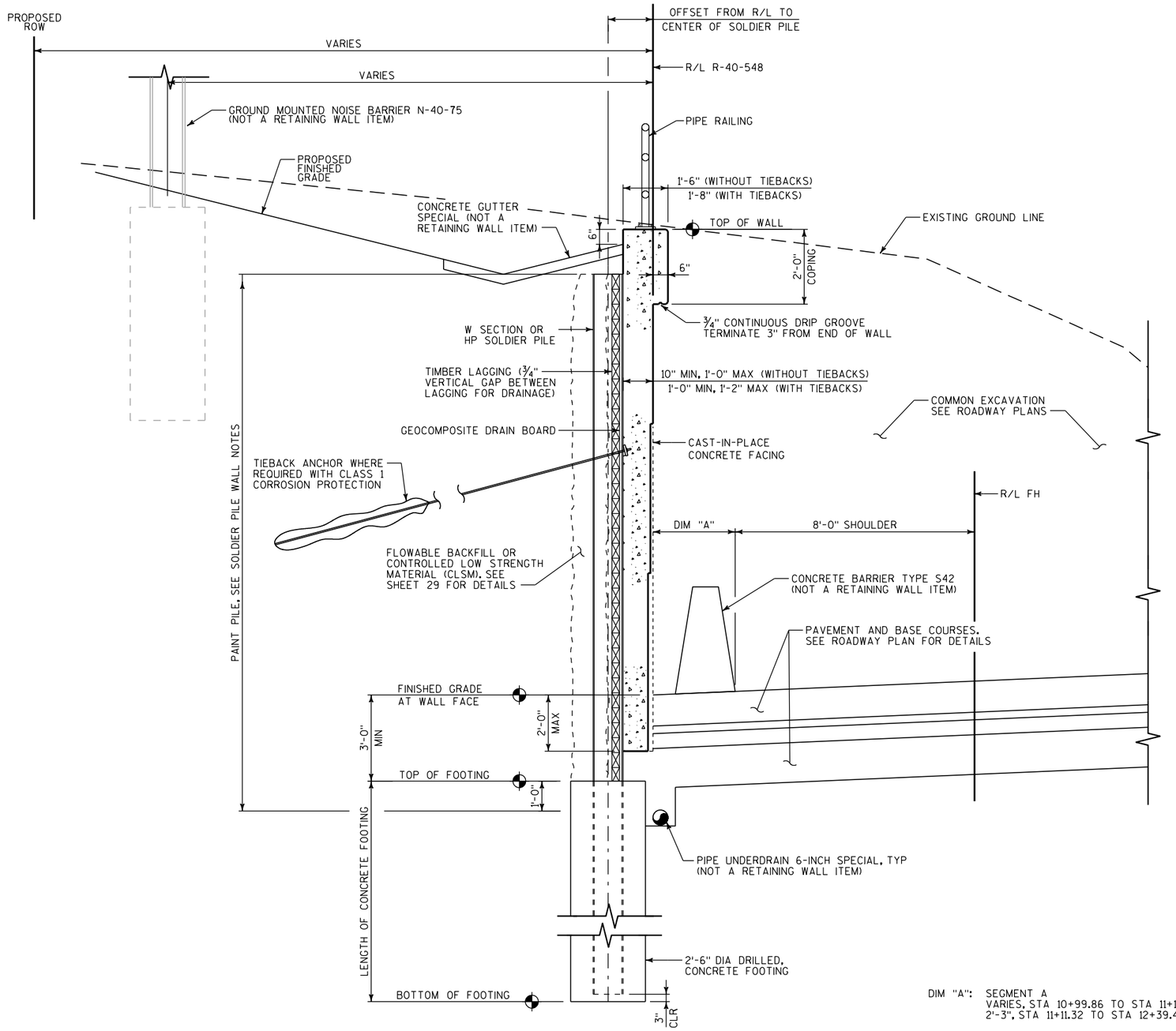
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TYPICAL SECTION 1
UNIT 1
SEGMENT A

SHEET 10 OF 70

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DIM "A": SEGMENT A
VARIES, STA 10+99.86 TO STA 11+11.32
2'-3", STA 11+11.32 TO STA 12+39.43

TYPICAL SECTION 2 - STA 10+99.86 TO STA 12+39.43

(LOOKING UPSTATION)
STA 10+99.86 TO STA 11+56.93 -- NO TIEBACKS
STA 11+56.93 TO STA 12+39.43 -- SINGLE TIEBACK

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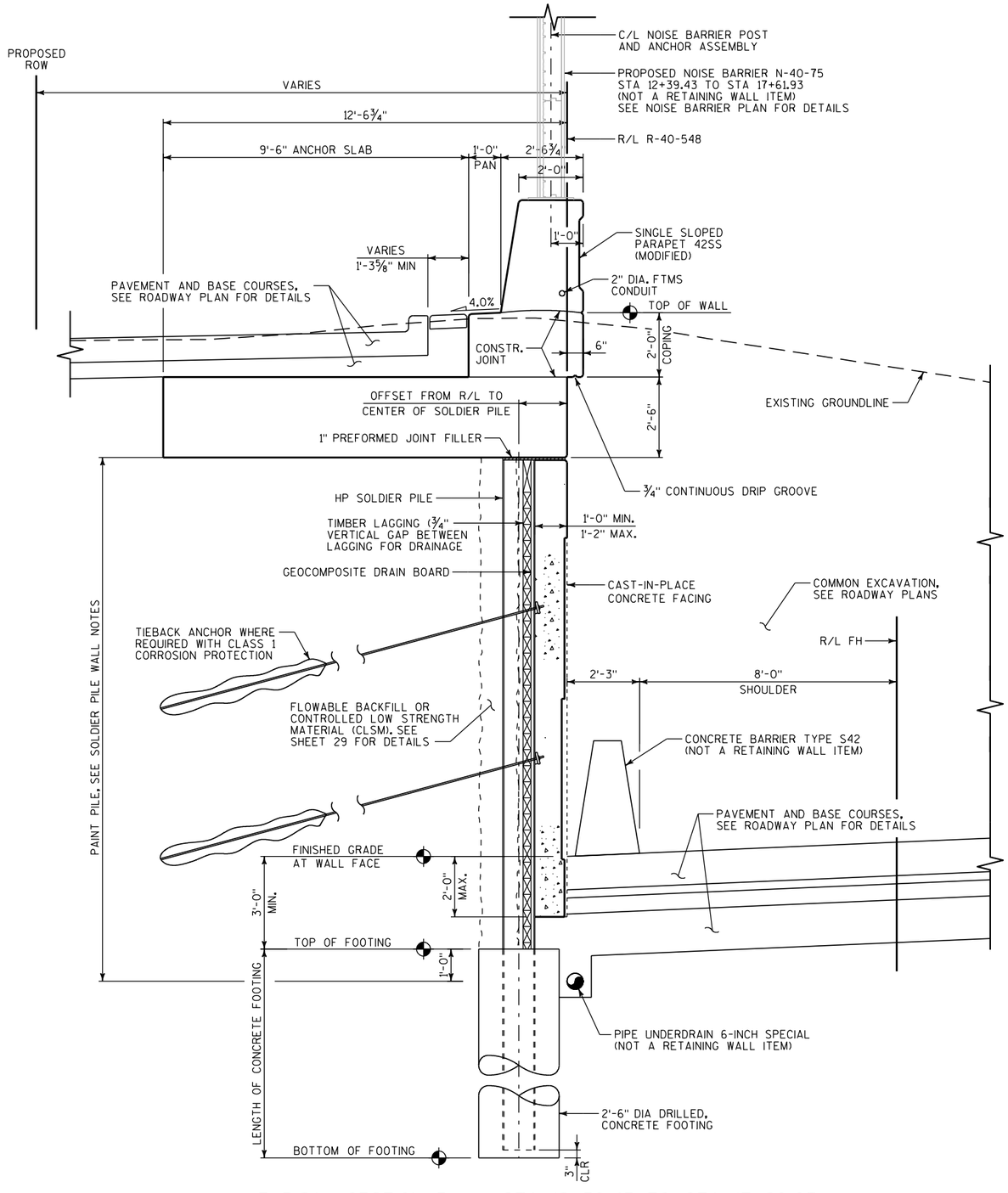
STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 2
UNIT 1
SEGMENT A

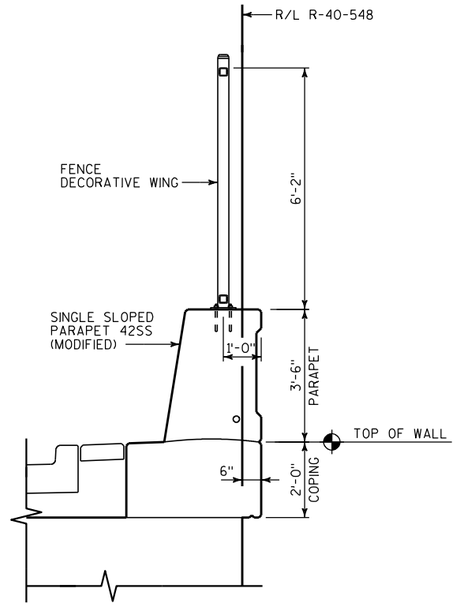
SHEET 11 OF 70

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION 3 - STA 12+39.43 TO STA 17+69.93

(LOOKING UPSTATION)
STA 12+39.43 TO STA 17+11.93 - SINGLE TIEBACK ANCHOR
STA 17+11.93 TO STA 17+69.93 - DOUBLE TIEBACK ANCHORS



TYPICAL SECTION NEAR BRIDGE

STA 17+61.93 TO STA 17+69.93

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

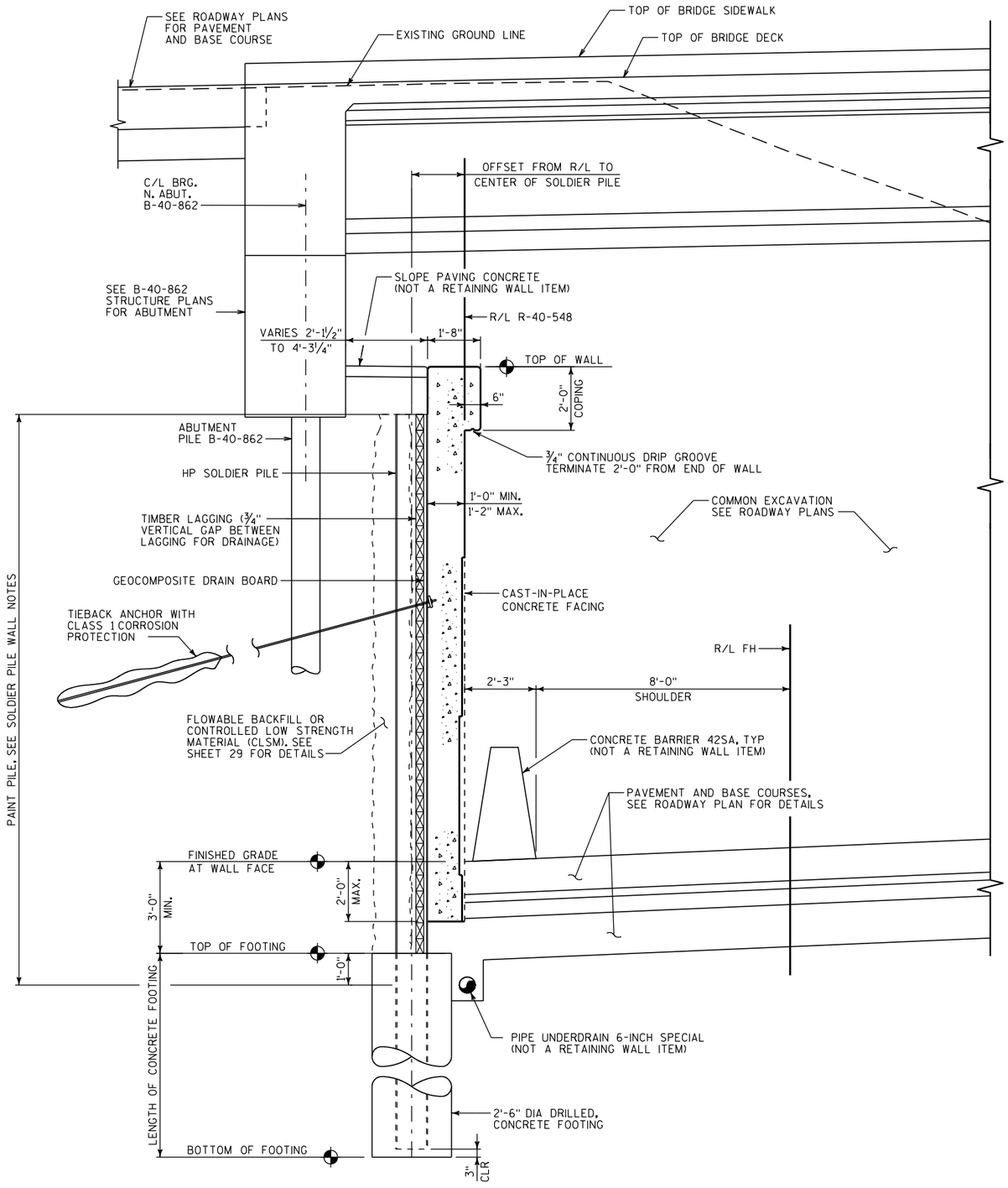
STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 3
UNIT 1
SEGMENT B

SHEET 12 OF 70

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION 4 - STA 17+69.93 TO STA 18+84.76

(LOOKING UPSTATION)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

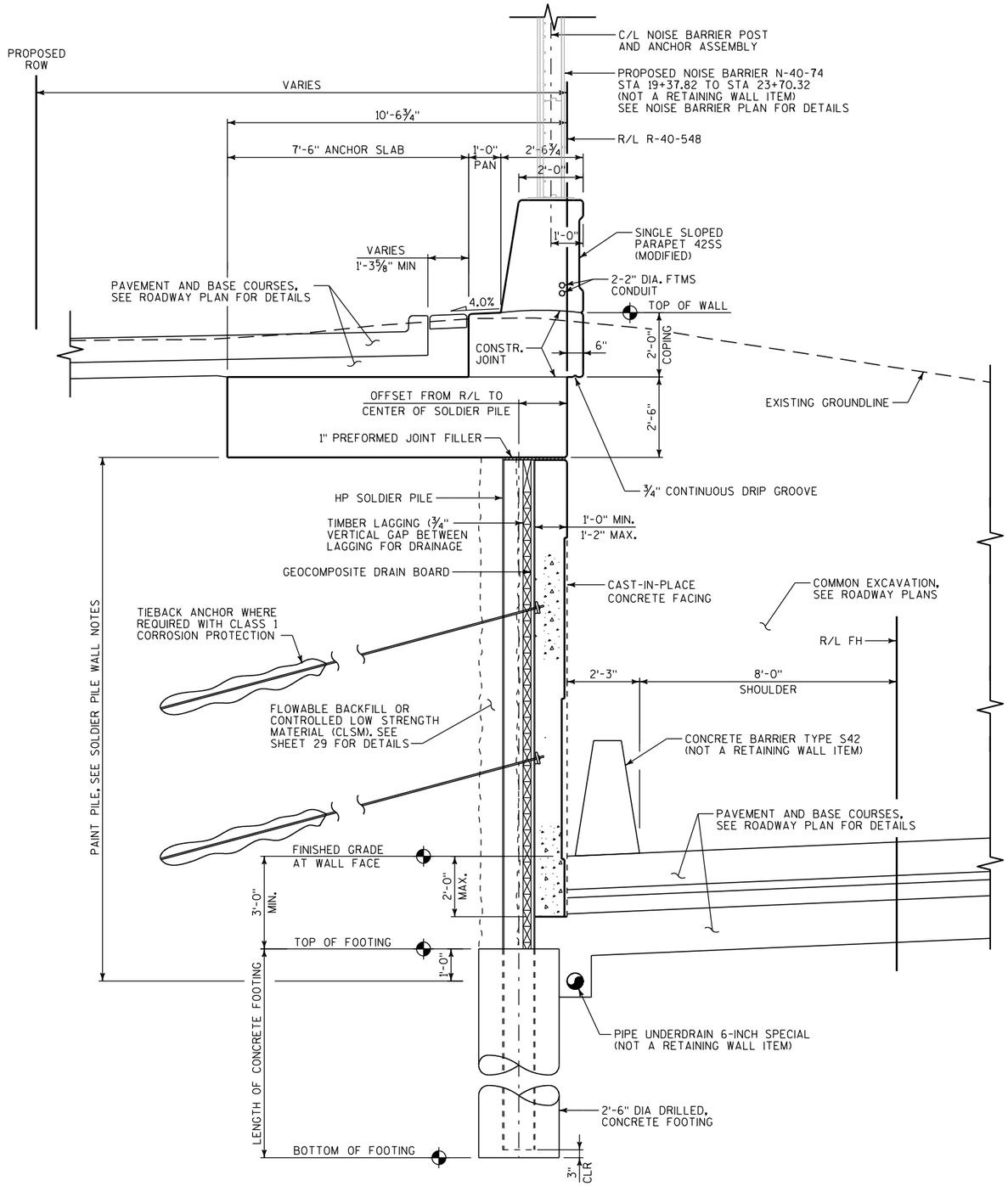
DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 4
UNIT 1
SEGMENT C

SHEET 13 OF 70

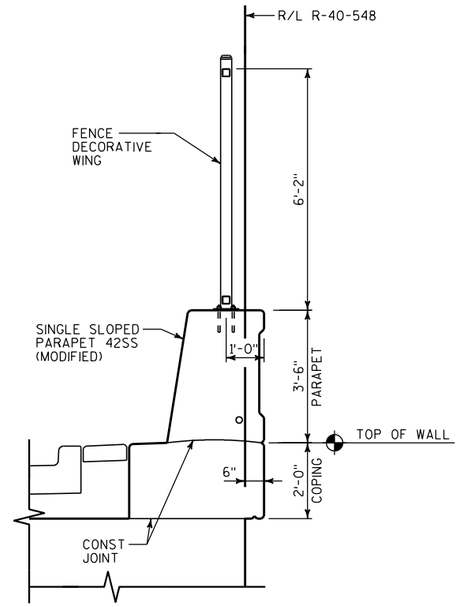
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STATE PROJECT NUMBER
1060-33-80



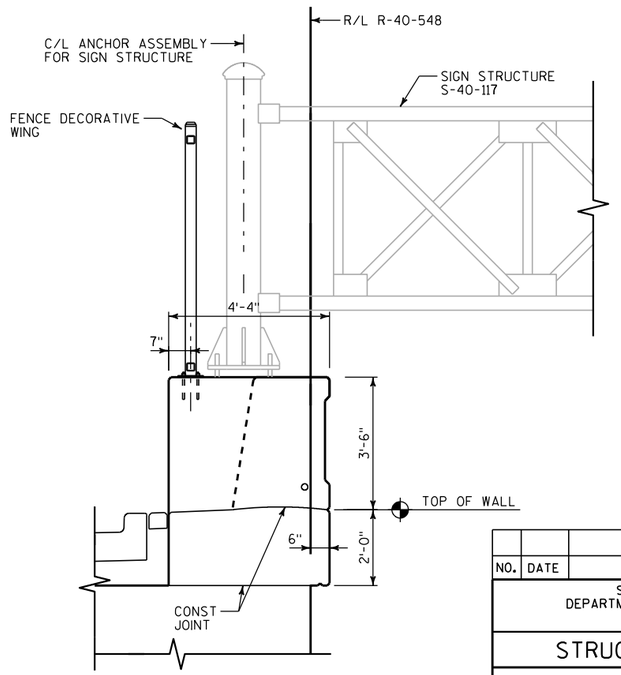
TYPICAL SECTION 5 - STA 18+84.76 TO STA 23+92.82

(LOOKING UPSTATION)



TYPICAL SECTION NEAR BRIDGE

STA 18+84.76 TO STA 19+23.43



TYPICAL SECTION @ SIGN STRUCTURE

STA 19+25.68 TO STA 19+33.68

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 5
UNIT 1
SEGMENT D

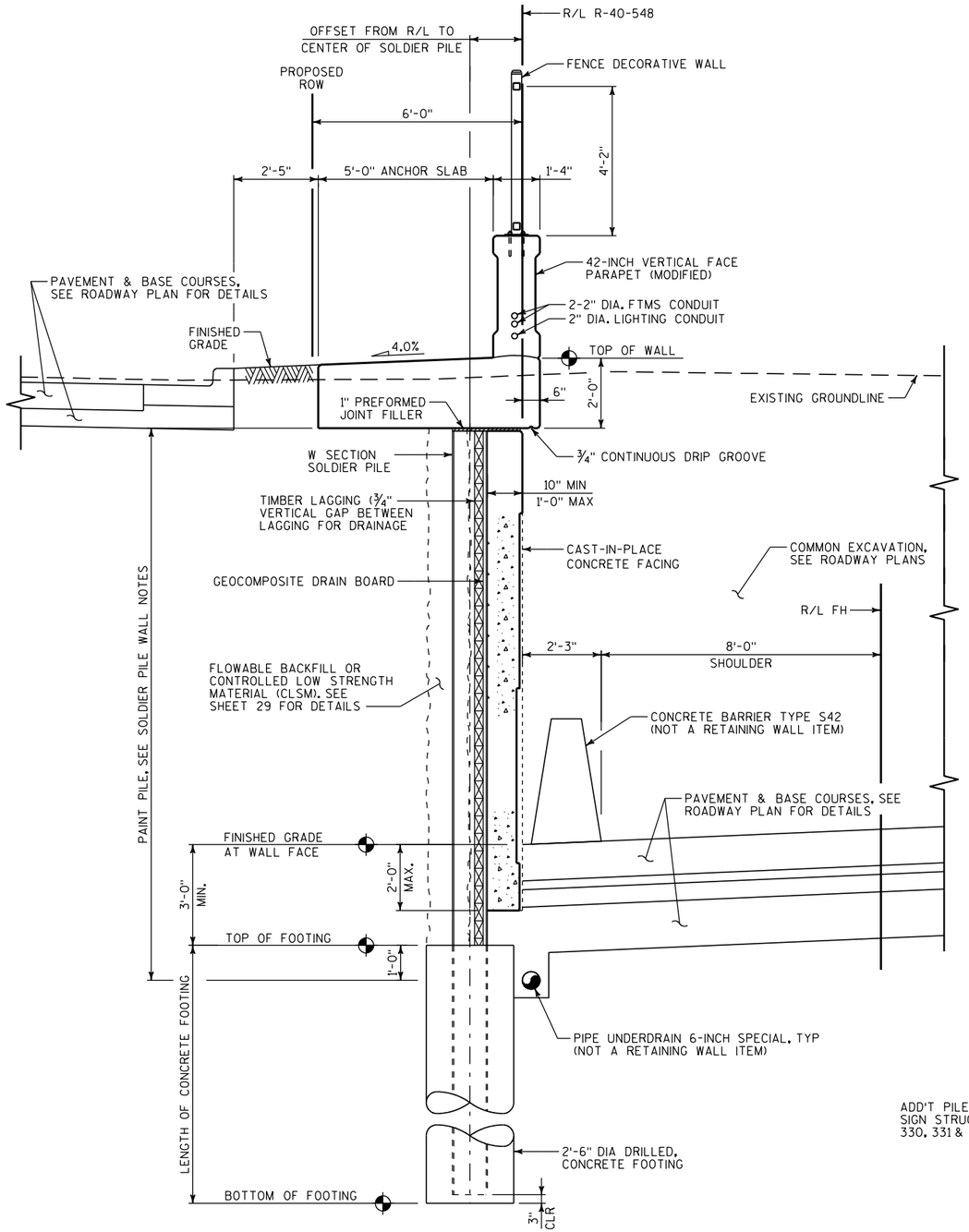
SHEET 14 OF 70

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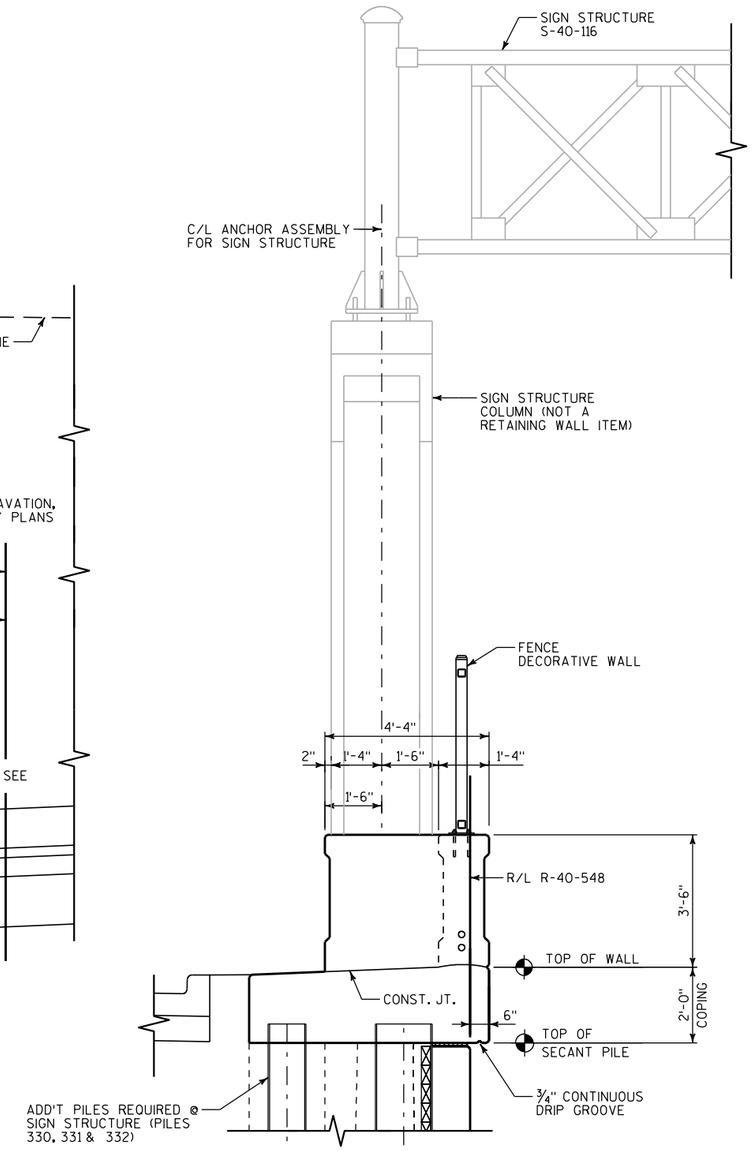
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STATE PROJECT NUMBER
1060-33-80



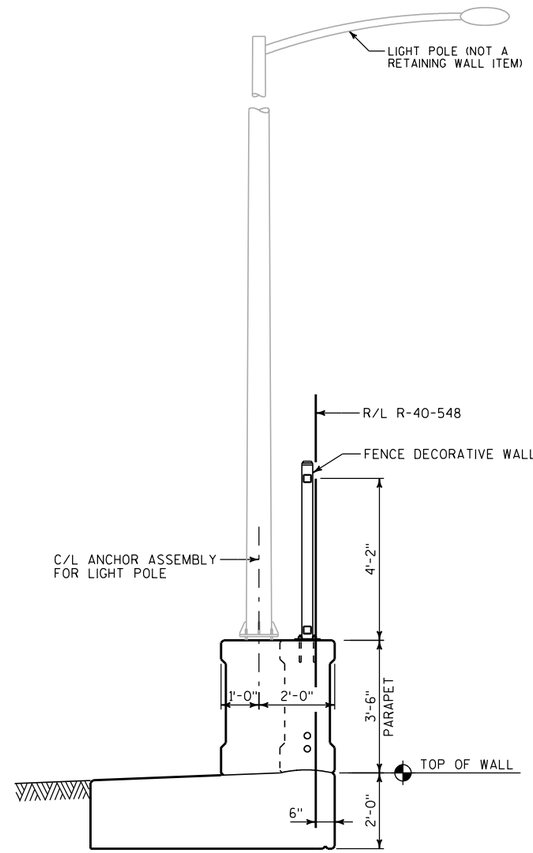
TYPICAL SECTION 6 - STA 23+92.82 to STA 29+62.82

(LOOKING UPSTATION)



AT SIGN STRUCTURE

STA 27+65.76 to STA 27+73.76



AT LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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TYPICAL SECTION 6
UNIT 1
SEGMENT E

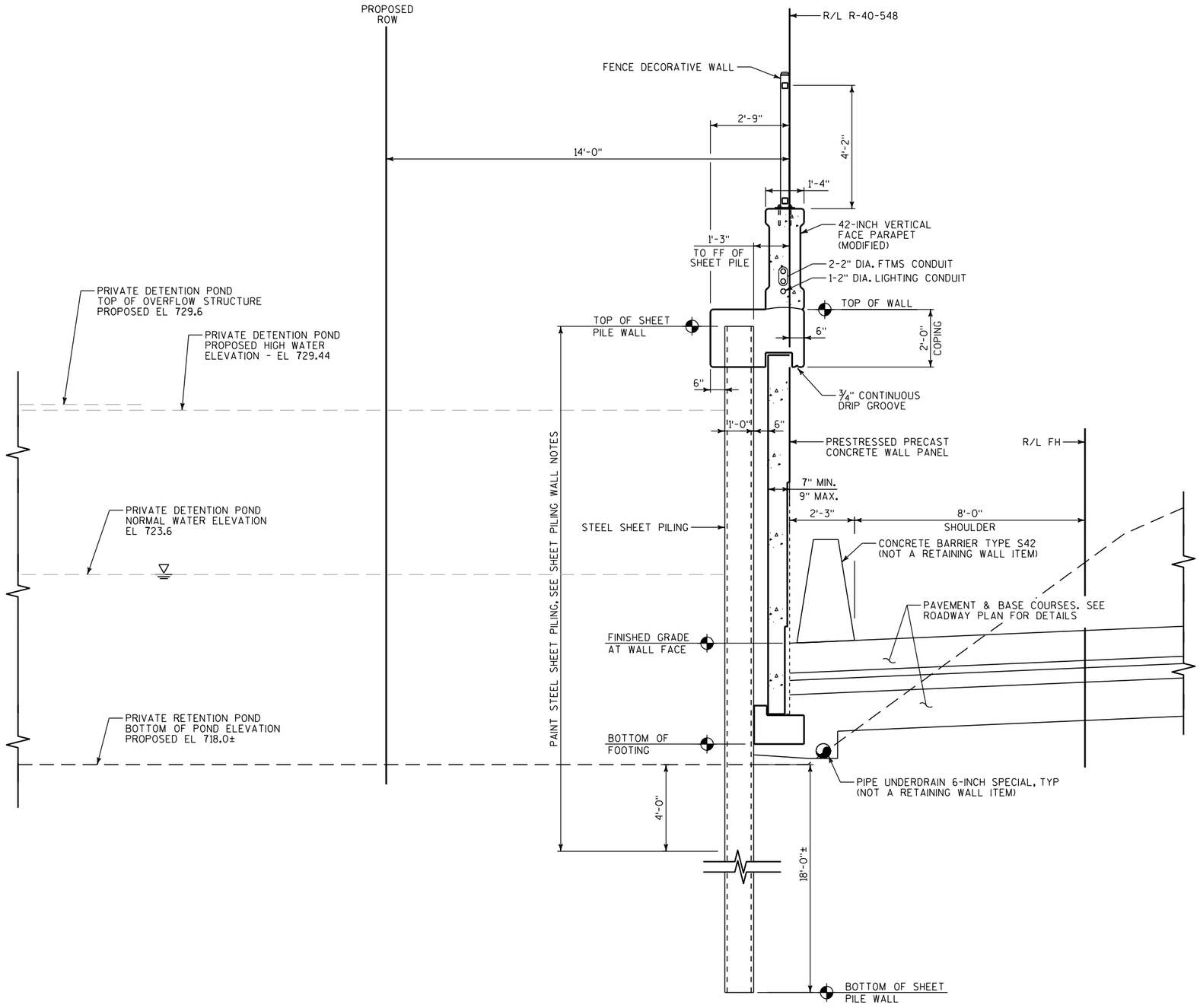
SHEET 15 OF 70

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STATE PROJECT NUMBER

1060-33-80



SHEET PILING DATA TABLE

WALL R/L STA.	FINISHED GRADE AT WALL FACE	TOP OF WALL	TOP OF SHEET PILE	BOTTOM OF SHEET PILE WALL	SHEET PILE SECTION
29+62.82	723.84	733.02	732.52	700.00	PZ-27
29+75.32	723.56	733.01	732.51	700.00	PZ-27
29+87.82	723.32	732.99	732.49	700.00	PZ-27
30+02.82	723.03	732.92	732.42	700.00	PZ-27
30+17.82	722.76	732.86	732.36	700.00	PZ-27
30+32.82	722.51	732.80	732.30	700.00	PZ-27
30+47.82	722.25	732.73	732.23	700.00	PZ-27
30+62.82	722.01	732.67	732.17	700.00	PZ-27
30+77.82	721.77	732.61	732.11	700.00	PZ-27
30+92.82	721.56	732.54	732.04	700.00	PZ-27
31+07.82	721.36	732.48	731.98	700.00	PZ-27
31+22.82	721.15	732.42	731.92	700.00	PZ-27
31+37.82	720.98	732.35	731.85	700.00	PZ-27
31+52.82	720.81	732.29	731.79	700.00	PZ-27
31+67.82	720.64	732.23	731.73	700.00	PZ-27
31+82.82	720.47	732.16	731.66	700.00	PZ-27
31+97.82	720.30	732.10	731.60	700.00	PZ-27
32+10.32	720.18	732.05	731.55	700.00	PZ-27
32+22.82	720.06	732.00	731.50	700.00	PZ-27

TYPICAL SECTION 7 - STA 29+62.82 to STA 32+22.82

(LOOKING UPSTATION)

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

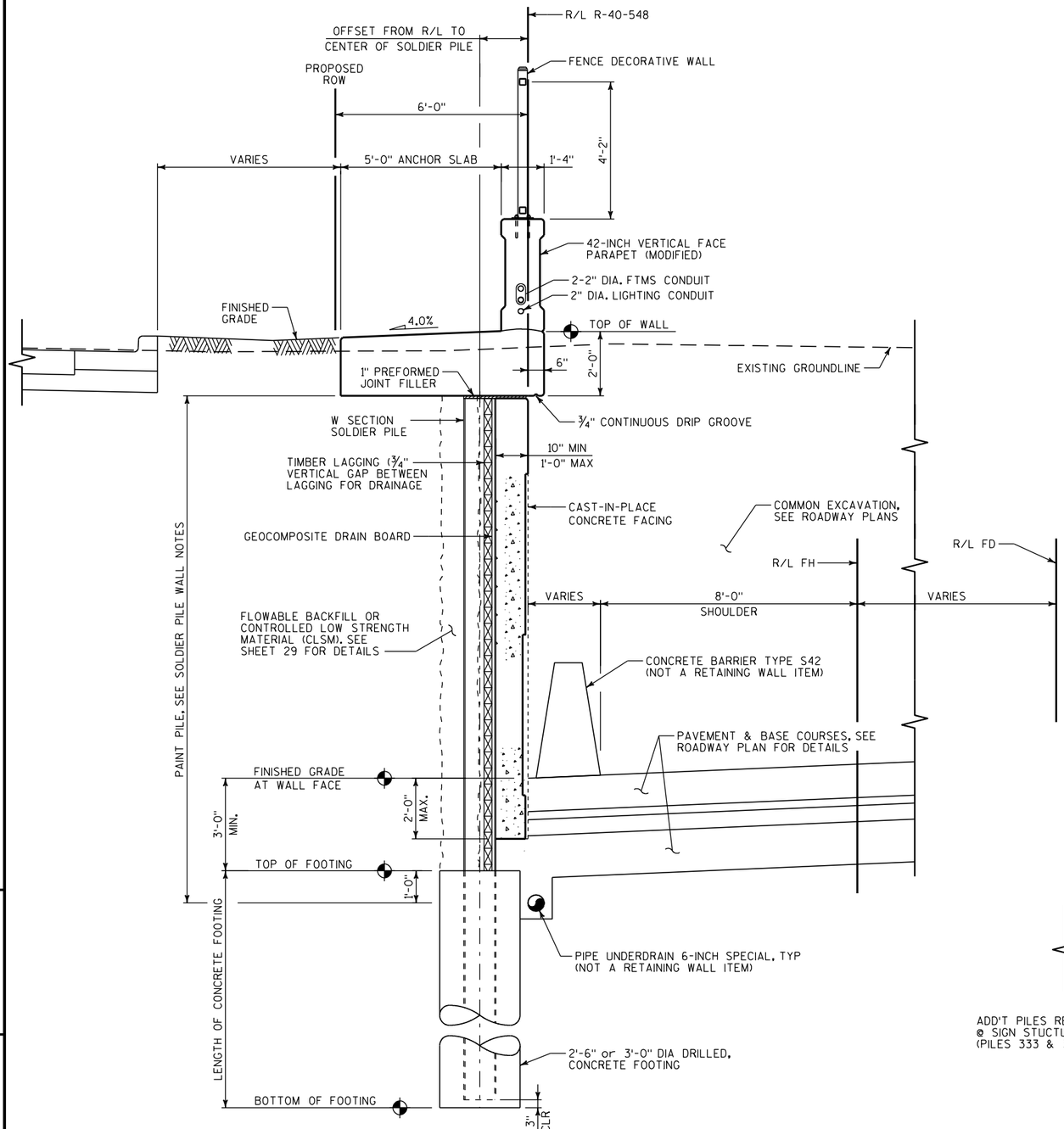
DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 7
UNIT 2

SHEET 16 OF 70

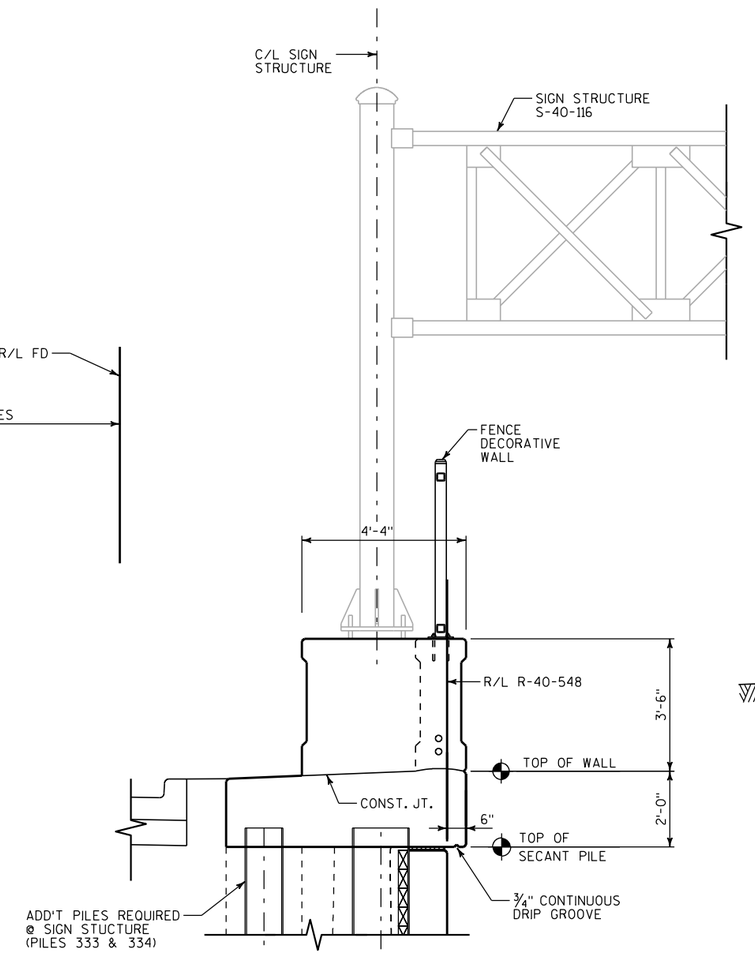
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PLOT DATE : 07-MAY-2014 10:15
PLOT BY : MSCKES
PLOT NAME : R40548_080207_ts
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



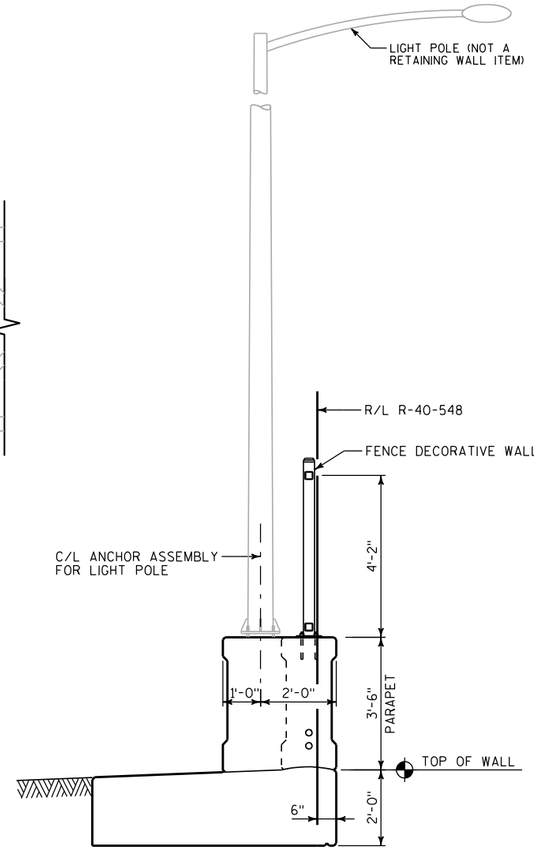
TYPICAL SECTION 8 - STA 32+22.82 to STA 36+12.82

(LOOKING UPSTATION)



AT SIGN STRUCTURE

STA 33+42.30 to STA 33+50.30



AT LIGHT SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

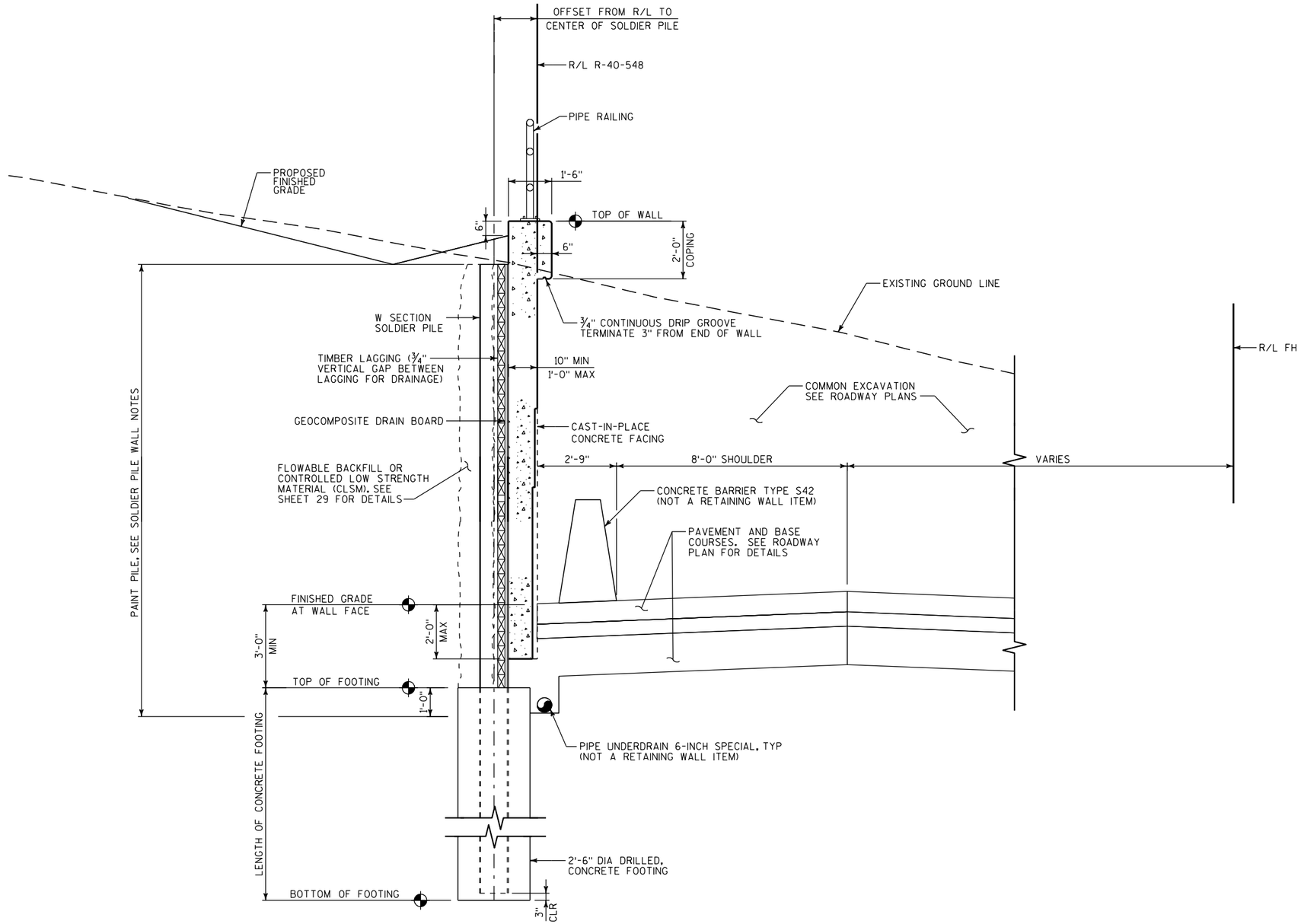
TYPICAL SECTION 8
UNIT 3
SEGMENT A

SHEET 17 OF 70

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STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION 9 - STA 36+12.83 TO STA 36+70.32

(LOOKING UPSTATION)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TYPICAL SECTION 9
UNIT 3
SEGMENT B

SHEET 18 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080209_ts.dgn
PLOT DATE : 07-MAY-2014 10:15
PLOT BY : MSCKES
PLOT NAME : R40548_080209_ts
PLOT SCALE : 4:1

STATE PROJECT NUMBER

1060-33-80

SOLDIER PILE DATA

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FUTURE FINISHED GRADE AT WALL FACE	FINISHED GRADE AT WALL FACE	◐ FOUNDATION DRILLING LENGTH	◥ TOP OF WALL	TOP OF PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIEBACK 1 ELEVATION	TIEBACK 2 ELEVATION	POSSIBLE OBSTRUCTIONS/ COMMENTS
1	9+73.18	1.74	769.56	757.76	757.20	12.21	761.29	759.79	755.87	749.09	6'-9"	2'-6"	W18x35	10'-9"	----	----	
2	9+80.68	1.74	769.86	757.76	757.23	13.14	761.74	760.24	755.90	748.60	7'-4"	2'-6"	W18x35	11'-8"	----	----	
3	9+88.18	1.74	770.10	757.77	757.28	14.04	762.18	760.68	755.95	748.15	7'-10"	2'-6"	W18x35	12'-7"	----	----	
4	9+95.68	1.74	770.34	757.78	757.31	14.96	762.63	761.13	755.98	747.67	8'-4"	2'-6"	W18x35	13'-6"	----	----	
5	10+03.18	1.74	770.59	757.79	757.36	15.86	763.07	761.57	756.03	747.22	8'-10"	2'-6"	W18x35	14'-5"	----	----	
6	10+10.68	1.74	771.01	757.79	757.40	16.76	763.52	762.02	756.07	746.76	9'-4"	2'-6"	W18x35	15'-4"	----	----	
7	10+18.18	1.74	771.29	757.77	757.45	17.66	763.96	762.46	756.12	746.31	9'-10"	2'-6"	W18x35	16'-2"	----	----	
8	10+25.68	1.74	770.98	757.74	757.48	18.58	764.41	762.91	756.15	745.83	10'-4"	2'-6"	W18x35	17'-1"	----	----	
9	10+33.18	1.74	771.29	757.71	757.52	19.49	764.85	763.35	756.19	745.36	10'-10"	2'-6"	W18x35	18'-0"	----	----	
10	10+40.68	1.74	769.30	757.68	757.56	20.40	765.30	763.80	756.23	744.89	11'-4"	2'-6"	W18x35	18'-11"	----	----	
11	10+48.18	1.74	769.31	757.65	757.59	21.34	765.74	764.24	756.26	744.41	11'-10"	2'-6"	W18x35	19'-11"	----	----	
12	10+55.68	1.74	769.80	757.62	757.61	22.29	766.19	764.69	756.28	743.90	12'-5"	2'-6"	W18x35	20'-10"	----	----	
13	10+63.18	1.74	770.63	757.64	757.64	23.24	766.63	765.13	756.30	743.39	12'-11"	2'-6"	W18x35	21'-9"	----	----	
14	10+70.68	1.74	771.91	757.66	757.65	24.21	767.08	765.58	756.32	742.87	13'-5"	2'-6"	W18x35	22'-9"	----	----	
15	10+78.18	1.74	772.62	757.67	757.67	25.17	767.52	766.02	756.33	742.35	14'-0"	2'-6"	W18x35	23'-9"	----	----	
16	10+85.68	1.74	772.70	757.68	757.68	26.14	767.97	766.47	756.35	741.82	14'-6"	2'-6"	W18x35	24'-8"	----	----	
17	10+93.18	1.74	772.78	757.69	757.69	27.13	768.41	766.91	756.35	741.28	15'-1"	2'-6"	W18x35	25'-8"	----	----	
18	11+00.68	1.74	772.86	----	**757.69**	28.12	768.86	767.36	756.36	740.73	15'-7"	2'-6"	W18x60	26'-8"	----	----	
19	11+08.18	1.74	772.98	----	**757.69**	29.12	769.30	767.80	756.36	740.18	16'-2"	2'-6"	W18x60	27'-8"	----	----	
20	11+15.68	1.74	773.15	----	**757.68**	30.15	769.74	768.24	756.35	739.60	16'-9"	2'-6"	W18x60	28'-8"	----	----	
21	11+23.18	1.74	773.39	----	**757.67**	31.16	770.19	768.69	756.34	739.03	17'-4"	2'-6"	W18x60	29'-8"	----	----	
22	11+30.68	1.76	773.83	----	**757.66**	32.19	770.63	769.13	756.33	738.44	17'-11"	2'-6"	W18x60	30'-9"	----	----	
23	11+38.18	1.76	774.17	----	**757.64**	33.23	771.08	769.58	756.31	737.85	18'-6"	2'-6"	W18x60	31'-9"	----	----	
24	11+45.68	1.76	774.35	----	**757.62**	34.29	771.52	770.02	756.29	737.24	19'-1"	2'-6"	W18x60	32'-10"	----	----	
25	11+53.18	1.76	774.14	----	**757.60**	35.33	771.97	770.47	756.26	736.63	19'-8"	2'-6"	W18x60	33'-11"	----	----	
26	11+60.68	1.73	772.88	----	**757.57**	28.31	772.41	770.91	756.23	744.10	12'-2"	2'-6"	HP14x73	26'-10"	763.41	----	SINGLE TIEBACK REQ'D
27	11+68.18	1.73	771.96	----	**757.53**	29.16	772.86	771.36	756.20	743.70	12'-6"	2'-6"	HP14x73	27'-8"	763.86	----	SINGLE TIEBACK REQ'D
28	11+75.68	1.73	771.99	----	**757.50**	30.00	773.30	771.80	756.16	743.31	12'-10"	2'-6"	HP14x73	28'-6"	764.30	----	SINGLE TIEBACK REQ'D
29	11+83.18	1.73	772.03	----	**757.45**	30.85	773.75	772.25	756.12	742.90	13'-3"	2'-6"	HP14x73	29'-5"	764.75	----	SINGLE TIEBACK REQ'D
30	11+90.68	1.73	772.10	----	**757.41**	29.48	774.00	772.50	756.07	742.62	13'-5"	2'-6"	HP14x73	29'-11"	765.00	----	SINGLE TIEBACK REQ'D
31	11+98.18	1.73	772.15	----	**757.36**	29.66	774.07	772.57	756.03	742.49	13'-6"	2'-6"	HP14x73	30'-1"	765.07	----	SINGLE TIEBACK REQ'D
32	12+05.68	1.73	772.28	----	**757.30**	29.93	774.14	772.64	755.97	742.34	13'-8"	2'-6"	HP14x73	30'-4"	765.14	----	SINGLE TIEBACK REQ'D
33	12+13.18	1.73	772.25	----	**757.25**	30.05	774.21	772.71	755.92	742.20	13'-9"	2'-6"	HP14x73	30'-7"	765.21	----	SINGLE TIEBACK REQ'D
34	12+20.68	1.73	772.28	----	**757.18**	30.25	774.28	772.78	755.85	742.03	13'-10"	2'-6"	HP14x73	30'-9"	765.28	----	SINGLE TIEBACK REQ'D
35	12+28.18	1.73	772.33	----	**757.12**	30.45	774.35	772.85	755.79	741.87	13'-11"	2'-6"	HP14x73	31'-0"	765.35	----	SINGLE TIEBACK REQ'D
36	12+35.68	1.73	772.42	----	**757.05**	30.72	774.42	772.92	755.72	741.70	14'-0"	2'-6"	HP14x73	31'-3"	765.42	----	SINGLE TIEBACK REQ'D
37	12+43.18	1.73	772.30	----	**756.98**	30.72	774.39	769.89	755.64	741.58	14'-1"	2'-6"	HP14x73	28'-4"	765.39	----	SINGLE TIEBACK REQ'D
38	12+50.68	1.73	772.63	----	**756.90**	31.10	774.28	769.78	755.57	741.54	14'-0"	2'-6"	HP14x73	28'-3"	765.28	----	SINGLE TIEBACK REQ'D
39	12+58.18	1.73	772.87	----	**756.83**	31.38	774.16	769.66	755.49	741.49	14'-0"	2'-6"	HP14x73	28'-3"	765.16	----	SINGLE TIEBACK REQ'D
40	12+65.68	1.73	773.03	----	**756.74**	31.60	774.05	769.55	755.41	741.43	14'-0"	2'-6"	HP14x73	28'-2"	765.05	----	SINGLE TIEBACK REQ'D
41	12+73.18	1.73	773.10	----	**756.65**	31.75	773.93	769.43	755.32	741.36	14'-0"	2'-6"	HP14x73	28'-1"	764.93	----	SINGLE TIEBACK REQ'D
42	12+80.68	1.73	773.09	----	**756.56**	31.81	773.82	769.32	755.23	741.28	13'-11"	2'-6"	HP14x73	28'-1"	764.82	----	SINGLE TIEBACK REQ'D
43	12+88.18	1.73	773.11	----	**756.47**	31.91	773.71	769.21	755.13	741.20	13'-11"	2'-6"	HP14x73	28'-1"	764.71	----	SINGLE TIEBACK REQ'D
44	12+95.68	1.73	772.70	----	**756.36**	31.62	773.61	769.11	755.03	741.09	13'-11"	2'-6"	HP14x73	28'-1"	764.61	----	SINGLE TIEBACK REQ'D
45	13+03.18	1.73	772.33	----	**756.26**	31.37	773.54	769.04	754.92	740.96	14'-0"	2'-6"	HP14x73	28'-2"	763.54	----	SINGLE TIEBACK REQ'D
46	13+10.68	1.73	772.07	----	**756.15**	31.24	773.47	768.97	754.82	740.83	14'-0"	2'-6"	HP14x73	28'-2"	763.47	----	SINGLE TIEBACK REQ'D
47	13+18.18	1.73	772.03	----	**756.04**	31.34	773.40	768.90	754.71	740.69	14'-0"	2'-6"	HP14x73	28'-3"	763.40	----	SINGLE TIEBACK REQ'D
48	13+25.68	1.73	772.01	----	**755.92**	31.48	773.33	768.83	754.59	740.53	14'-1"	2'-6"	HP14x73	28'-4"	763.33	----	SINGLE TIEBACK REQ'D
49	13+33.18	1.73	771.97	----	**755.80**	30.65	773.26	768.76	754.47	741.31	13'-2"	2'-6"	HP14x73	27'-6"	763.26	----	SINGLE TIEBACK REQ'D
50	13+40.68	1.73	771.89	----	**755.68**	30.73	773.18	768.68	754.35	741.16	13'-2"	2'-6"	HP14x73	27'-7"	763.18	----	SINGLE TIEBACK REQ'D
51	13+48.18	1.73	771.87	----	**755.55**	30.87	773.11	768.61	754.22	740.99	13'-3"	2'-6"	HP14x73	27'-8"	763.11	----	SINGLE TIEBACK REQ'D
52	13+55.68	1.73	771.86	----	**755.42**	31.04	773.04	768.54	754.08	740.82	13'-3"	2'-6"	HP14x73	27'-9"	763.04	----	SINGLE TIEBACK REQ'D
53	13+63.18	1.73	771.82	----	**755.28**	31.18	772.97	768.47	753.95	740.64	13'-4"	2'-6"	HP14x73	27'-10"	762.97	----	SINGLE TIEBACK REQ'D
54	13+70.68	1.73	771.75	----	**755.15**	31.30	772.90	768.40	753.81	740.45	13'-4"	2'-6"	HP14x73	28'-0"	762.90	----	SINGLE TIEBACK REQ'D
55	13+78.18	1.73	771.66	----	**755.00**	31.41	772.83	768.33	753.66	740.25	13'-5"	2'-6"	HP14x73	28'-1"	762.83	----	SINGLE TIEBACK REQ'D
56	13+85.68	1.73	771.53	----	**754.86**	31.46	772.75	768.25	753.52	740.07	13'-5"	2'-6"	HP14x73	28'-3"	762.75	----	SINGLE TIEBACK REQ'D
57	13+93.18	1.73	771.40	----	**754.71**	31.53	772.66	768.16	753.37	739.87	13'-6"	2'-6"	HP14x73	28'-4"	762.66	----	SINGLE TIEBACK REQ'D
58	14+00.68	1.73	771.29	----	**754.55**	31.63	772.57	768.07	753.21	739.66	13'-7"	2'-6"	HP14x73	28'-5"	762.57	----	SINGLE TIEBACK REQ'D
59	14+08.18	1.73	771.18	----	**754.40**	31.72	772.49	767.99	753.06	739.47	13'-7"	2'-6"	HP14x73	28'-7"	762.49	----	SINGLE TIEBACK REQ'D
60	14+15.68	1.73	771.10	----	**754.25**	29.88	772.40	767.90	752.91	741.22	11'-8"	2'-6"	HP14x73	26'-9"	762.40	----	SINGLE TIEBACK REQ'D
61	14+23.18	1.73	771.00	----	**754.10**	29.97	772.31	767.81	752.76	741.03	11'-9"	2'-6"	HP14x73	26'-10"	762.31	----	SINGLE TIEBACK REQ'D
62	14+30.68	1.73	770.88	----	**753.95**	30.04	772.23	767.73	752.61	740.84	11'-9"	2'-6"	HP14x73	26'-11"	762.23	----	SINGLE TIEBACK REQ'D
63	14+38.18	1.73	770.77	----	**753.80**	30.11	772.14	767.64	752.46	740.66	11'-10"	2'-6"	HP14x73	27'-0"	762.14	----	SINGLE TIEBACK REQ'D
64	14+45.68	1.73	770.65	----	**753.64**	30.18	772.05	767.55	752.31	740.47	11'-10"	2'-6"	HP14x73	27'-1"	762.05	----	SINGLE TIEBACK REQ'D
65	14+53.18	1.73	770.55	----	**753.49**	30.27	771.95	767.45	752.15	740.28	11'-11"	2'-6"	HP14x73	27'-3"	761.95	----	SINGLE TIEBACK REQ'D
66	14+60.68	1.73	770.44	----	**753.34**	30.34	771.85	767.35	752.00	740.10	11'-11"	2'-6"	HP14x73	27'-4"	761.85	----	SINGLE TIEBACK REQ'D
67	14+68.18	1.73	770.33	----	**753.19**	30.42	771.75	767.25	751.85	739.92	11'-11"	2'-6"	HP14x73	27'-5"	761.75	----	SINGLE TIEBACK REQ'D
68	14+75.68	1.73	770.23	----	**753.04**	30.49	771.65	767.15	751.70	739.74	12'-0"	2'-6"	HP14x73	27'-5"	761.65	----	SINGLE TIEBACK REQ'D

LEGEND

◥ SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

◐ WHERE EXISTING GROUNDLINE IS ABOVE THE PROPOSED TOP OF WALL, THIS DIMENSION IS MEASURED FROM THE TOP OF WALL INSTEAD OF THE EXISTING GROUNDLINE. NOTE THAT SOME EXCAVATION MAY BE REQUIRED TO ACHIEVE THE TOP OF WALL ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

SOLDIER PILE DATA TABLE (1 OF 5)

SHEET 19 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080301_de.dgn PLOT DATE : 07-MAY-2014 10:15 PLOT BY : MSCKES PLOT NAME : R40548_080301_de PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

SOLDIER PILE DATA

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIEBACK 1 ELEVATION	TIEBACK 2 ELEVATION	POSSIBLE OBSTRUCTIONS/ COMMENTS
69	14+83.18	1.73	770.12	752.89	30.57	771.55	767.05	751.55	739.56	12'-0"	2'-6"	HP14x73	27'-6"	761.55	----	SINGLE TIEBACK REQ'D
70	14+90.68	1.73	770.04	752.74	30.66	771.45	766.95	751.40	739.38	12'-0"	2'-6"	HP14x73	27'-7"	761.45	----	SINGLE TIEBACK REQ'D
71	14+98.18	1.73	769.95	752.58	30.77	771.35	766.85	751.25	739.19	12'-1"	2'-6"	HP14x73	27'-8"	761.35	----	SINGLE TIEBACK REQ'D
72	15+05.68	1.73	769.85	752.43	30.85	771.25	766.75	751.09	739.00	12'-1"	2'-6"	HP14x73	27'-9"	761.25	----	SINGLE TIEBACK REQ'D
73	15+13.18	1.73	769.74	752.28	30.92	771.15	766.65	750.94	738.82	12'-1"	2'-6"	HP14x73	27'-10"	761.15	----	SINGLE TIEBACK REQ'D
74	15+20.68	1.73	769.62	752.12	30.99	771.05	766.55	750.78	738.62	12'-2"	2'-6"	HP14x73	28'-0"	761.05	----	SINGLE TIEBACK REQ'D
75	15+28.18	1.73	769.52	751.96	31.08	770.95	766.45	750.63	738.43	12'-2"	2'-6"	HP14x73	28'-1"	760.95	----	SINGLE TIEBACK REQ'D
76	15+35.68	1.73	769.42	751.79	31.19	770.85	766.35	750.46	738.23	12'-3"	2'-6"	HP14x73	28'-2"	760.85	----	SINGLE TIEBACK REQ'D
77	15+43.18	1.73	769.34	751.63	31.31	770.75	766.25	750.30	738.03	12'-3"	2'-6"	HP14x73	28'-3"	760.75	----	SINGLE TIEBACK REQ'D
78	15+50.68	1.73	769.25	751.45	31.45	770.65	766.15	750.12	737.81	12'-4"	2'-6"	HP14x73	28'-5"	760.65	----	SINGLE TIEBACK REQ'D
79	15+58.18	1.73	769.16	751.28	31.57	770.55	766.05	749.95	737.59	12'-4"	2'-6"	HP14x73	28'-6"	760.55	----	SINGLE TIEBACK REQ'D
80	15+65.68	1.73	769.09	751.10	31.73	770.44	765.94	749.77	737.37	12'-5"	2'-6"	HP14x73	28'-7"	760.44	----	SINGLE TIEBACK REQ'D
81	15+73.18	1.73	769.00	750.92	31.86	770.33	765.83	749.59	737.15	12'-5"	2'-6"	HP14x73	28'-9"	760.33	----	SINGLE TIEBACK REQ'D
82	15+80.68	1.73	768.92	750.74	31.99	770.22	765.72	749.41	736.93	12'-6"	2'-6"	HP14x73	28'-10"	760.22	----	SINGLE TIEBACK REQ'D
83	15+88.18	1.73	768.84	750.56	32.15	770.11	765.61	749.22	736.69	12'-6"	2'-6"	HP14x73	28'-11"	760.11	----	SINGLE TIEBACK REQ'D
84	15+95.68	1.73	768.73	750.36	32.27	769.99	765.49	749.03	736.46	12'-7"	2'-6"	HP14x73	29'-1"	759.99	----	SINGLE TIEBACK REQ'D
85	16+03.18	1.73	768.61	750.18	32.38	769.86	765.36	748.84	736.23	12'-7"	2'-6"	HP14x73	29'-2"	759.86	----	SINGLE TIEBACK REQ'D
86	16+10.68	1.73	768.48	749.98	32.49	769.74	765.24	748.65	735.99	12'-8"	2'-6"	HP14x73	29'-3"	759.74	----	SINGLE TIEBACK REQ'D
87	16+18.18	1.73	768.34	749.78	32.60	769.61	765.11	748.44	735.74	12'-8"	2'-6"	HP14x73	29'-5"	759.61	----	SINGLE TIEBACK REQ'D
88	16+25.68	1.73	768.27	749.58	32.77	769.49	764.99	748.25	735.50	12'-9"	2'-6"	HP14x73	29'-6"	759.49	----	SINGLE TIEBACK REQ'D
89	16+33.18	1.73	768.17	749.37	32.93	769.37	764.87	748.04	735.24	12'-10"	2'-6"	HP14x73	29'-8"	759.37	----	SINGLE TIEBACK REQ'D
90	16+40.68	1.73	768.09	749.16	33.11	769.25	764.75	747.83	734.97	12'-10"	2'-6"	HP14x73	29'-10"	759.25	----	SINGLE TIEBACK REQ'D
91	16+48.18	1.73	768.00	748.95	33.29	769.13	764.63	747.62	734.71	12'-11"	2'-6"	HP14x73	30'-0"	759.13	----	SINGLE TIEBACK REQ'D
92	16+55.68	1.73	767.93	748.73	33.50	769.02	764.52	747.40	734.42	13'-0"	2'-6"	HP14x73	30'-2"	759.02	----	SINGLE TIEBACK REQ'D
93	16+63.18	1.73	767.82	748.51	33.69	768.93	764.43	747.18	734.13	13'-1"	2'-6"	HP14x73	30'-4"	758.93	----	SINGLE TIEBACK REQ'D
94	16+70.68	1.73	767.73	748.29	33.90	768.84	764.34	746.96	733.83	13'-2"	2'-6"	HP14x73	30'-7"	758.84	----	SINGLE TIEBACK REQ'D
95	16+78.18	1.73	767.61	748.06	34.09	768.75	764.25	746.73	733.52	13'-3"	2'-6"	HP14x73	30'-9"	758.75	----	SINGLE TIEBACK REQ'D
96	16+85.68	1.73	767.52	747.84	34.33	768.69	764.19	746.50	733.20	13'-4"	2'-6"	HP14x73	31'-0"	758.69	----	SINGLE TIEBACK REQ'D
97	16+93.18	1.73	767.41	747.60	34.57	768.66	764.16	746.27	732.84	13'-5"	2'-6"	HP14x73	31'-4"	758.66	----	SINGLE TIEBACK REQ'D
98	17+00.68	1.73	767.39	747.37	34.92	768.64	764.14	746.03	732.47	13'-7"	2'-6"	HP14x73	31'-8"	758.64	----	SINGLE TIEBACK REQ'D
99	17+08.18	1.73	767.26	747.13	35.15	768.61	764.11	745.80	732.11	13'-8"	2'-6"	HP14x73	32'-0"	758.61	----	SINGLE TIEBACK REQ'D
100	17+15.68	1.73	767.25	746.90	35.51	768.60	764.10	745.56	731.74	13'-10"	2'-6"	HP14x73	32'-5"	759.60	752.60	DOUBLE TIEBACKS REQ'D
101	17+23.18	1.73	767.21	746.66	35.85	768.60	764.10	745.32	731.36	14'-0"	2'-6"	HP14x73	32'-9"	759.60	752.60	DOUBLE TIEBACKS REQ'D
102	17+30.68	1.73	767.19	746.42	36.21	768.60	764.10	745.09	730.98	14'-1"	2'-6"	HP14x73	33'-2"	759.60	752.60	DOUBLE TIEBACKS REQ'D
103	17+38.18	1.73	766.87	746.19	36.26	768.60	764.10	744.85	730.61	14'-3"	2'-6"	HP14x73	33'-6"	759.60	752.60	DOUBLE TIEBACKS REQ'D
104	17+45.68	1.73	766.79	745.96	36.53	768.57	764.07	744.63	730.26	14'-4"	2'-6"	HP14x73	33'-10"	759.57	752.57	DOUBLE TIEBACKS REQ'D
105	17+53.18	1.73	766.66	745.73	36.72	768.51	764.01	744.40	729.94	14'-6"	2'-6"	HP14x73	34'-1"	759.51	752.51	DOUBLE TIEBACKS REQ'D
106	17+60.68	1.73	766.58	745.50	36.98	768.45	763.95	744.17	729.60	14'-7"	2'-6"	HP14x73	34'-5"	759.45	752.45	DOUBLE TIEBACKS REQ'D
107	17+68.18	1.73	766.56	745.28	37.27	768.38	763.88	743.95	729.29	14'-8"	2'-6"	HP14x73	34'-8"	759.38	752.38	DOUBLE TIEBACKS REQ'D
108	17+75.68	1.73	766.72	745.06	21.00	756.85	755.35	743.73	735.85	7'-10"	2'-6"	HP14x73	19'-6"	750.85	----	DOUBLE TIEBACKS REQ'D
109	17+82.14	1.73	766.97	744.88	21.29	756.85	755.35	743.54	735.56	8'-0"	2'-6"	HP14x73	19'-10"	750.85	----	SINGLE TIEBACK REQ'D
110	17+88.60	1.73	767.19	744.69	21.59	756.85	755.35	743.36	735.26	8'-1"	2'-6"	HP14x73	20'-2"	750.85	----	SINGLE TIEBACK REQ'D
111	17+95.06	1.73	767.26	744.50	21.90	756.85	755.35	743.16	734.95	8'-3"	2'-6"	HP14x73	20'-5"	750.85	----	SINGLE TIEBACK REQ'D
112	18+01.52	1.73	767.23	744.32	22.19	756.85	755.35	742.98	734.66	8'-4"	2'-6"	HP14x73	20'-9"	750.85	----	SINGLE TIEBACK REQ'D
113	18+07.99	1.73	767.18	744.14	22.48	756.85	755.35	742.80	734.37	8'-5"	2'-6"	HP14x73	21'-0"	750.85	----	SINGLE TIEBACK REQ'D
114	18+14.45	1.73	767.12	743.96	22.75	756.85	755.35	742.63	734.10	8'-6"	2'-6"	HP14x73	21'-4"	750.85	----	SINGLE TIEBACK REQ'D
115	18+20.91	1.73	767.05	743.78	23.04	756.85	755.35	742.45	733.81	8'-8"	2'-6"	HP14x73	21'-7"	750.85	----	SINGLE TIEBACK REQ'D
116	18+27.37	1.73	767.00	743.61	23.32	756.85	755.35	742.27	733.53	8'-9"	2'-6"	HP14x73	21'-10"	750.85	----	SINGLE TIEBACK REQ'D
117	18+33.83	1.73	766.97	743.44	23.59	756.85	755.35	742.11	733.26	8'-10"	2'-6"	HP14x73	22'-2"	750.85	----	SINGLE TIEBACK REQ'D
118	18+40.29	1.73	766.85	743.26	23.87	756.85	755.35	741.93	732.98	8'-11"	2'-6"	HP14x73	22'-5"	750.85	----	SINGLE TIEBACK REQ'D
119	18+46.76	1.73	766.71	743.09	24.14	756.85	755.35	741.76	732.71	9'-1"	2'-6"	HP14x73	22'-8"	750.85	----	SINGLE TIEBACK REQ'D
120	18+53.22	1.73	766.58	742.93	24.41	756.85	755.35	741.59	732.44	9'-2"	2'-6"	HP14x73	22'-11"	750.85	----	SINGLE TIEBACK REQ'D
121	18+59.68	1.73	766.38	742.76	24.68	756.85	755.35	741.43	732.17	9'-3"	2'-6"	HP14x73	23'-3"	750.85	----	SINGLE TIEBACK REQ'D
122	18+66.15	1.73	766.14	742.60	24.93	756.85	755.35	741.27	731.92	9'-4"	2'-6"	HP14x73	23'-6"	750.85	----	SINGLE TIEBACK REQ'D
123	18+72.61	1.73	765.94	742.44	25.19	756.85	755.35	741.10	731.66	9'-5"	2'-6"	HP14x73	23'-9"	750.85	----	SINGLE TIEBACK REQ'D
124	18+79.07	1.73	765.74	742.27	25.45	756.85	755.35	740.94	731.40	9'-7"	2'-6"	HP14x73	24'-0"	750.85	----	SINGLE TIEBACK REQ'D
125	18+86.57	1.73	765.55	742.09	40.27	766.56	762.06	740.76	725.28	15'-6"	2'-6"	HP14x73	36'-10"	757.56	750.56	DOUBLE TIEBACKS REQ'D
126	18+94.07	1.73	765.38	741.91	40.28	766.38	761.88	740.58	725.10	15'-6"	2'-6"	HP14x73	36'-10"	757.38	750.38	DOUBLE TIEBACKS REQ'D
127	19+01.57	1.73	765.21	741.73	40.28	766.19	761.69	740.40	724.92	15'-6"	2'-6"	HP14x73	36'-10"	757.19	750.19	DOUBLE TIEBACKS REQ'D
128	19+09.07	1.73	765.06	741.56	40.30	766.00	761.50	740.23	724.76	15'-6"	2'-6"	HP14x73	36'-9"	757.00	750.00	DOUBLE TIEBACKS REQ'D
129	19+16.57	1.73	764.89	741.39	40.29	765.81	761.31	740.05	724.59	15'-5"	2'-6"	HP14x73	36'-9"	756.81	749.81	DOUBLE TIEBACKS REQ'D
130	19+24.07	1.73	764.70	741.21	42.85	765.63	761.13	739.88	721.86	18'-0"	2'-6"	HP14x73	36'-9"	756.63	749.63	DOUBLE TIEBACKS REQ'D
131	19+31.57	1.73	764.49	741.05	42.79	765.44	760.94	739.71	721.70	18'-0"	2'-6"	HP14x73	36'-8"	756.44	749.44	DOUBLE TIEBACKS REQ'D
132	19+39.07	1.73	764.28	740.88	40.16	765.25	760.75	739.55	724.12	15'-5"	2'-6"	HP14x73	36'-8"	756.25	749.25	DOUBLE TIEBACKS REQ'D
133	19+46.57	1.73	764.07	740.72	40.08	765.04	760.54	739.38	723.99	15'-5"	2'-6"	HP14x73	36'-7"	756.04	749.04	DOUBLE TIEBACKS REQ'D
134	19+54.07	1.73	763.86	740.56	39.99	764.81	760.31	739.23	723.88	15'-4"	2'-6"	HP14x73	36'-6"	755.81	748.81	DOUBLE TIEBACKS REQ'D
135	19+61.57	1.73	763.65	740.40	39.89	764.57	760.07	739.07	723.76	15'-4"	2'-6"	HP14x73	36'-4"	755.57	748.57	DOUBLE TIEBACKS REQ'D
136	19+69.07	1.73	763.43	740.24	39.78	764.34	759.84	738.91	723.65	15'-3"	2'-6"	HP14x73	36'-3"	755.34	748.34	DOUBLE TIEBACKS REQ'D

LEGEND

SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

WHERE EXISTING GROUNDLINE IS ABOVE THE PROPOSED TOP OF WALL, THIS DIMENSION IS MEASURED FROM THE TOP OF WALL INSTEAD OF THE EXISTING GROUNDLINE. NOTE THAT SOME EXCAVATION MAY BE REQUIRED TO ACHIEVE THE TOP OF WALL ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

SOLDIER PILE DATA TABLE (2 OF 5)

SHEET 20 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080302_de.dgn PLOT DATE : 07-MAY-2014 10:15 PLOT BY : MSCKES PLOT NAME : R40548_080302_de PLOT SCALE : 8:1

STATE PROJECT NUMBER

1060-33-80

SOLDIER PILE DATA

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIEBACK 1 ELEVATION	TIEBACK 2 ELEVATION	POSSIBLE OBSTRUCTIONS/ COMMENTS
137	19+76.57	1.76	763.20	740.09	39.64	764.08	759.58	738.76	723.56	15'-2"	2'-6"	HP14x73	36'-1"	755.08	748.08	DOUBLE TIEBACKS REQ'D
138	19+84.07	1.76	762.98	739.94	39.48	763.79	759.29	738.61	723.50	15'-1"	2'-6"	HP14x73	35'-10"	754.79	747.79	DOUBLE TIEBACKS REQ'D
139	19+91.57	1.76	762.75	739.79	39.32	763.50	759.00	738.46	723.43	15'-0"	2'-6"	HP14x73	35'-7"	754.50	747.50	DOUBLE TIEBACKS REQ'D
140	19+99.07	1.76	762.50	739.65	39.13	763.21	758.71	738.31	723.37	14'-11"	2'-6"	HP14x73	35'-5"	754.21	747.21	DOUBLE TIEBACKS REQ'D
141	20+06.57	1.76	762.24	739.50	38.91	762.90	758.40	738.17	723.33	14'-10"	2'-6"	HP14x73	35'-1"	753.90	746.90	DOUBLE TIEBACKS REQ'D
142	20+14.07	1.76	761.96	739.37	38.64	762.56	758.06	738.03	723.32	14'-9"	2'-6"	HP14x73	34'-9"	753.56	746.56	DOUBLE TIEBACKS REQ'D
143	20+21.57	1.76	761.66	739.22	38.37	762.22	757.72	737.89	723.29	14'-7"	2'-6"	HP14x73	34'-6"	753.22	746.22	DOUBLE TIEBACKS REQ'D
144	20+29.07	1.76	761.37	739.09	38.10	761.88	757.38	737.75	723.28	14'-6"	2'-6"	HP14x73	34'-2"	752.88	745.88	DOUBLE TIEBACKS REQ'D
145	20+36.57	1.76	761.10	738.95	37.82	761.53	757.03	737.62	723.28	14'-4"	2'-6"	HP14x73	33'-10"	752.53	745.53	DOUBLE TIEBACKS REQ'D
146	20+44.07	1.76	760.79	738.83	37.50	761.17	756.67	737.49	723.29	14'-2"	2'-6"	HP14x73	33'-5"	752.17	745.17	DOUBLE TIEBACKS REQ'D
147	20+51.57	1.76	760.48	738.69	37.19	760.82	756.32	737.36	723.29	14'-1"	2'-6"	HP14x73	33'-1"	751.82	744.82	DOUBLE TIEBACKS REQ'D
148	20+59.07	1.76	760.12	738.57	36.81	760.46	755.96	737.24	723.31	13'-11"	2'-6"	HP14x73	32'-8"	751.46	744.46	DOUBLE TIEBACKS REQ'D
149	20+66.57	1.76	759.73	738.45	36.42	760.13	755.63	737.12	723.31	13'-10"	2'-6"	HP14x73	32'-4"	751.13	744.13	DOUBLE TIEBACKS REQ'D
150	20+74.07	1.76	759.37	738.32	36.07	759.82	755.32	736.99	723.30	13'-8"	2'-6"	HP14x73	32'-1"	750.82	743.82	DOUBLE TIEBACKS REQ'D
151	20+81.57	1.76	758.99	738.21	35.69	759.51	755.01	736.88	723.30	13'-7"	2'-6"	HP14x73	31'-9"	750.51	743.51	DOUBLE TIEBACKS REQ'D
152	20+89.07	1.76	758.62	738.09	35.33	759.20	754.70	736.76	723.30	13'-6"	2'-6"	HP14x73	31'-5"	750.20	743.20	DOUBLE TIEBACKS REQ'D
153	20+96.57	1.76	758.27	737.98	34.98	758.92	754.42	736.65	723.29	13'-4"	2'-6"	HP14x73	31'-2"	749.92	742.92	DOUBLE TIEBACKS REQ'D
154	21+04.07	1.76	757.88	737.87	34.62	758.66	754.16	736.54	723.27	13'-3"	2'-6"	HP14x73	30'-11"	749.66	742.66	DOUBLE TIEBACKS REQ'D
155	21+11.57	1.76	757.49	737.77	34.24	758.41	753.91	736.43	723.25	13'-2"	2'-6"	HP14x73	30'-8"	749.41	742.41	DOUBLE TIEBACKS REQ'D
156	21+19.07	1.76	757.10	737.66	33.87	758.15	753.65	736.33	723.24	13'-1"	2'-6"	HP14x73	30'-5"	749.15	742.15	DOUBLE TIEBACKS REQ'D
157	21+26.57	1.76	756.72	737.56	33.50	757.91	753.41	736.22	723.22	13'-0"	2'-6"	HP14x73	30'-3"	748.91	741.91	DOUBLE TIEBACKS REQ'D
158	21+34.07	1.76	756.31	737.45	33.12	757.68	753.18	736.12	723.18	12'-11"	2'-6"	HP14x73	30'-0"	748.68	741.68	DOUBLE TIEBACKS REQ'D
159	21+41.57	1.76	755.89	737.36	32.71	757.45	752.95	736.03	723.17	12'-10"	2'-6"	HP14x73	29'-10"	748.45	741.45	DOUBLE TIEBACKS REQ'D
160	21+49.07	1.76	755.45	737.26	32.29	757.22	752.72	735.93	723.15	12'-9"	2'-6"	HP14x73	29'-7"	748.22	741.22	DOUBLE TIEBACKS REQ'D
161	21+56.57	1.76	754.99	737.17	31.84	756.97	752.47	735.84	723.16	12'-8"	2'-6"	HP14x73	29'-4"	747.97	740.97	DOUBLE TIEBACKS REQ'D
162	21+64.07	1.76	754.57	737.08	31.39	756.70	752.20	735.75	723.17	12'-7"	2'-6"	HP14x73	29'-1"	747.70	740.70	DOUBLE TIEBACKS REQ'D
163	21+71.57	1.76	754.64	736.99	31.45	756.43	751.93	735.66	723.19	12'-6"	2'-6"	HP14x73	28'-9"	747.43	740.43	DOUBLE TIEBACKS REQ'D
164	21+79.07	1.76	754.05	736.91	30.82	756.16	751.66	735.58	723.22	12'-4"	2'-6"	HP14x73	28'-6"	747.16	740.16	DOUBLE TIEBACKS REQ'D
165	21+86.57	1.76	753.63	736.82	30.37	755.87	751.37	735.49	723.26	12'-3"	2'-6"	HP14x73	28'-2"	746.87	739.87	DOUBLE TIEBACKS REQ'D
166	21+94.07	1.76	753.34	736.74	30.02	755.55	751.05	735.41	723.32	12'-1"	2'-6"	HP14x73	27'-9"	746.55	----	SINGLE TIEBACK REQ'D
167	22+01.57	1.76	752.90	736.65	29.53	755.24	750.74	735.32	723.37	11'-11"	2'-6"	HP14x73	27'-5"	746.24	----	SINGLE TIEBACK REQ'D
168	22+09.07	1.76	752.50	736.57	29.07	754.92	750.42	735.24	723.43	11'-10"	2'-6"	HP14x73	27'-0"	745.92	----	SINGLE TIEBACK REQ'D
169	22+16.57	1.76	751.92	736.49	28.41	754.58	750.08	735.16	723.51	11'-8"	2'-6"	HP14x73	26'-7"	745.58	----	SINGLE TIEBACK REQ'D
170	22+24.07	1.76	751.38	736.40	27.80	754.21	749.71	735.07	723.58	11'-6"	2'-6"	HP14x73	26'-2"	745.21	----	SINGLE TIEBACK REQ'D
171	22+31.57	1.76	751.82	736.32	28.15	753.85	749.35	734.99	723.67	11'-4"	2'-6"	HP14x73	25'-9"	744.85	----	SINGLE TIEBACK REQ'D
172	22+39.07	1.76	751.89	736.24	28.12	753.48	748.98	734.91	723.76	11'-2"	2'-6"	HP14x73	25'-3"	744.48	----	SINGLE TIEBACK REQ'D
173	22+46.57	1.76	751.72	736.15	27.88	753.12	748.62	734.82	723.84	11'-0"	2'-6"	HP14x73	24'-10"	744.12	----	SINGLE TIEBACK REQ'D
174	22+54.07	1.76	751.41	736.07	27.48	752.75	748.25	734.74	723.93	10'-10"	2'-6"	HP14x73	24'-4"	743.75	----	SINGLE TIEBACK REQ'D
175	22+61.57	1.76	750.88	735.98	26.87	752.39	747.89	734.65	724.01	10'-8"	2'-6"	HP14x73	23'-11"	743.39	----	SINGLE TIEBACK REQ'D
176	22+69.07	1.76	750.34	735.90	26.24	752.02	747.52	734.57	724.10	10'-6"	2'-6"	HP14x73	23'-6"	743.02	----	SINGLE TIEBACK REQ'D
177	22+76.57	1.76	749.85	735.82	25.67	751.67	747.17	734.49	724.18	10'-4"	2'-6"	HP14x73	23'-0"	742.67	----	SINGLE TIEBACK REQ'D
178	22+84.07	1.76	749.46	735.73	25.22	751.33	746.83	734.40	724.24	10'-2"	2'-6"	HP14x73	22'-8"	742.33	----	SINGLE TIEBACK REQ'D
179	22+91.57	1.76	749.13	735.65	28.15	750.99	746.49	734.32	720.98	13'-4"	2'-6"	HP14x73	22'-3"	740.99	----	SINGLE TIEBACK REQ'D
180	22+99.07	1.76	748.79	735.57	27.69	750.65	746.15	734.24	721.10	13'-2"	2'-6"	HP14x73	21'-10"	740.65	----	SINGLE TIEBACK REQ'D
181	23+06.57	1.76	748.51	735.48	24.06	750.31	745.81	734.15	724.45	9'-8"	2'-6"	HP14x73	21'-5"	742.31	----	SINGLE TIEBACK REQ'D
182	23+14.07	1.76	748.14	735.40	23.62	749.98	745.48	734.07	724.52	9'-7"	2'-6"	HP14x73	21'-0"	741.98	----	SINGLE TIEBACK REQ'D
183	23+21.57	1.76	747.81	735.31	23.22	749.64	745.14	733.98	724.59	9'-5"	2'-6"	HP14x73	20'-7"	741.64	----	SINGLE TIEBACK REQ'D
184	23+29.07	1.76	747.61	735.23	22.95	749.30	744.80	733.90	724.66	9'-3"	2'-6"	HP14x73	20'-2"	741.30	----	SINGLE TIEBACK REQ'D
185	23+36.57	1.76	747.35	735.14	22.63	748.98	744.48	733.81	724.71	9'-1"	2'-6"	HP14x73	19'-10"	740.98	----	SINGLE TIEBACK REQ'D
186	23+44.07	1.76	747.02	735.06	22.26	748.68	744.18	733.73	724.76	9'-0"	2'-6"	HP14x73	19'-5"	740.68	----	SINGLE TIEBACK REQ'D
187	23+51.57	1.76	746.72	734.98	21.90	748.37	743.87	733.65	724.81	8'-10"	2'-6"	HP14x73	19'-1"	740.37	----	SINGLE TIEBACK REQ'D
188	23+59.07	1.76	746.34	734.89	21.49	748.07	743.57	733.56	724.85	8'-8"	2'-6"	HP14x73	18'-9"	740.07	----	SINGLE TIEBACK REQ'D
189	23+66.57	1.76	745.91	734.81	21.05	747.84	743.34	733.48	724.86	8'-7"	2'-6"	HP14x73	18'-6"	739.84	----	SINGLE TIEBACK REQ'D
190	23+74.07	1.76	745.66	734.72	20.84	747.67	743.17	733.39	724.82	8'-7"	2'-6"	HP14x73	18'-5"	739.67	----	SINGLE TIEBACK REQ'D
191	23+81.57	1.76	745.68	734.63	20.91	747.51	743.01	733.30	724.77	8'-6"	2'-6"	HP14x73	18'-3"	739.51	----	SINGLE TIEBACK REQ'D
192	23+89.07	1.76	745.54	734.54	20.81	747.34	742.84	733.21	724.73	8'-6"	2'-6"	HP14x73	18'-2"	739.34	----	SINGLE TIEBACK REQ'D
193	23+96.57	1.76	745.18	734.45	20.51	747.20	745.20	733.12	724.67	8'-5"	2'-6"	HP14x73	20'-7"	739.20	----	SINGLE TIEBACK REQ'D
194	24+04.07	1.76	744.97	734.36	20.38	747.08	745.08	733.03	724.59	8'-5"	2'-6"	HP14x73	20'-6"	739.08	----	SINGLE TIEBACK REQ'D
195	24+11.57	1.76	744.59	734.27	20.07	746.97	744.97	732.93	724.51	8'-5"	2'-6"	HP14x73	20'-6"	738.97	----	SINGLE TIEBACK REQ'D
196	24+19.07	1.76	743.94	734.17	19.51	746.85	744.85	732.84	724.43	8'-5"	2'-6"	HP14x73	20'-6"	738.85	----	SINGLE TIEBACK REQ'D
197	24+26.57	1.76	743.68	734.08	31.93	746.74	744.74	732.74	711.76	21'-0"	2'-6"	W18x60	33'-0"	----	----	
198	24+34.07	1.76	743.40	733.98	31.71	746.62	744.62	732.65	711.69	20'-11"	2'-6"	W18x60	33'-0"	----	----	
199	24+41.57	1.76	743.20	733.88	31.59	746.50	744.50	732.54	711.61	20'-11"	2'-6"	W18x60	32'-11"	----	----	
200	24+49.07	1.76	742.99	733.78	31.45	746.39	744.39	732.45	711.54	20'-11"	2'-6"	W18x60	32'-11"	----	----	
201	24+56.57	1.76	742.71	733.68	31.25	746.27	744.27	732.34	711.45	20'-11"	2'-6"	W18x60	32'-10"	----	----	
202	24+64.07	1.76	742.70	733.57	31.34	746.16	744.16	732.24	711.36	20'-11"	2'-6"	W18x60	32'-10"	----	----	
203	24+71.57	1.76	742.66	733.47	31.38	746.04	744.04	732.13	711.27	20'-10"	2'-6"	W18x60	32'-10"	----	----	
204	24+79.07	1.76	742.54	733.36	31.35	745.93	743.93	732.03	711.18	20'-10"	2'-6"	W18x60	32'-9"	----	----	

LEGEND

SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

WHERE EXISTING GROUNDLINE IS ABOVE THE PROPOSED TOP OF WALL, THIS DIMENSION IS MEASURED FROM THE TOP OF WALL INSTEAD OF THE EXISTING GROUNDLINE. NOTE THAT SOME EXCAVATION MAY BE REQUIRED TO ACHIEVE THE TOP OF WALL ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

SOLDIER PILE DATA TABLE (3 OF 5)

SHEET 21 OF 70

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STATE PROJECT NUMBER
1060-33-80

SOLDIER PILE DATA

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIEBACK 1 ELEVATION	TIEBACK 2 ELEVATION	POSSIBLE OBSTRUCTIONS/ COMMENTS
205	24+86.57	1.76	741.99	733.26	30.89	745.81	743.81	731.92	711.10	20'-10"	2'-6"	W18x60	32'-9"	----	----	
206	24+94.07	1.76	742.08	733.15	31.05	745.68	743.68	731.82	711.03	20'-9"	2'-6"	W18x60	32'-8"	----	----	
207	25+01.57	1.76	742.03	733.04	31.09	745.55	743.55	731.70	710.94	20'-9"	2'-6"	W18x60	32'-8"	----	----	
208	25+09.07	1.76	741.54	732.93	30.67	745.42	743.42	731.60	710.86	20'-9"	2'-6"	W18x60	32'-7"	----	----	
209	25+16.57	1.76	740.89	732.82	30.08	745.27	743.27	731.48	710.81	20'-8"	2'-6"	W18x60	32'-6"	----	----	
210	25+24.07	1.76	740.39	732.70	29.60	745.09	743.09	731.37	710.79	20'-7"	2'-6"	W18x60	32'-4"	----	----	
211	25+31.57	1.76	740.22	732.59	29.43	744.91	742.91	731.26	710.79	20'-6"	2'-6"	W18x60	32'-2"	----	----	
212	25+39.07	1.76	740.12	732.47	29.36	744.73	742.73	731.14	710.76	20'-5"	2'-6"	W18x60	32'-0"	----	----	
213	25+46.57	1.76	740.00	732.35	29.24	744.53	742.53	731.02	710.76	20'-3"	2'-6"	W18x60	31'-10"	----	----	
214	25+54.07	1.76	739.90	732.23	29.12	744.31	742.31	730.90	710.78	20'-1"	2'-6"	W18x60	31'-7"	----	----	
215	25+61.57	1.76	739.82	732.11	29.02	744.10	742.10	730.78	710.81	20'-0"	2'-6"	W18x60	31'-4"	----	----	
216	25+69.07	1.76	739.80	731.99	28.97	743.88	741.88	730.66	710.83	19'-10"	2'-6"	W18x60	31'-1"	----	----	
217	25+76.57	1.76	739.65	731.87	28.73	743.62	741.62	730.54	710.92	19'-7"	2'-6"	W18x60	30'-9"	----	----	
218	25+84.07	1.76	739.79	731.75	25.50	743.32	741.32	730.42	714.30	16'-2"	2'-6"	W18x60	27'-1"	----	----	
219	25+91.57	1.76	739.64	731.62	25.26	743.02	741.02	730.29	714.38	15'-11"	2'-6"	W18x60	26'-8"	----	----	
220	25+99.07	1.76	739.37	731.50	24.90	742.72	740.72	730.16	714.47	15'-8"	2'-6"	W18x60	26'-4"	----	----	
221	26+06.57	1.76	739.24	731.37	24.66	742.40	740.40	730.04	714.59	15'-5"	2'-6"	W18x60	25'-10"	----	----	
222	26+14.07	1.76	739.11	731.24	24.38	742.06	740.06	729.91	714.73	15'-2"	2'-6"	W18x60	25'-4"	----	----	
223	26+21.57	1.76	739.01	731.11	24.15	741.71	739.71	729.78	714.86	14'-11"	2'-6"	W18x60	24'-11"	----	----	
224	26+29.07	1.76	738.81	730.98	23.82	741.37	739.37	729.64	714.98	14'-8"	2'-6"	W18x60	24'-5"	----	----	
225	26+36.57	1.76	738.84	730.85	23.70	741.02	739.02	729.52	715.14	14'-5"	2'-6"	W18x60	23'-11"	----	----	
226	26+44.07	1.76	738.64	730.72	23.37	740.67	738.67	729.38	715.27	14'-1"	2'-6"	W18x60	23'-5"	----	----	
227	26+51.57	1.76	738.59	730.58	23.19	740.32	738.32	729.25	715.40	13'-10"	2'-6"	W18x60	22'-11"	----	----	
228	26+59.07	1.76	738.34	730.44	22.82	739.97	737.97	729.10	715.53	13'-7"	2'-6"	W18x60	22'-6"	----	----	
229	26+66.57	1.76	738.10	730.30	22.44	739.61	737.61	728.97	715.66	13'-4"	2'-6"	W18x60	22'-0"	----	----	
230	26+74.07	1.76	737.90	730.16	22.11	739.26	737.26	728.83	715.78	13'-1"	2'-6"	W18x60	21'-6"	----	----	
231	26+81.57	1.76	737.78	730.02	21.87	738.91	736.91	728.69	715.91	12'-9"	2'-6"	W18x60	21'-0"	----	----	
232	26+89.07	1.76	737.74	729.88	21.71	738.56	736.56	728.55	716.03	12'-6"	2'-6"	W18x60	20'-7"	----	----	
233	26+96.57	1.76	737.53	729.74	21.37	738.20	736.20	728.41	716.16	12'-3"	2'-6"	W18x60	20'-1"	----	----	
234	27+04.07	1.76	737.33	729.59	21.07	737.85	735.85	728.26	716.26	12'-0"	2'-6"	W18x60	19'-8"	----	----	
235	27+11.57	1.76	736.96	729.44	20.60	737.50	735.50	728.11	716.37	11'-9"	2'-6"	W18x60	19'-2"	----	----	
236	27+19.07	1.76	736.55	729.30	20.07	737.15	735.15	727.97	716.48	11'-6"	2'-6"	W18x60	18'-8"	----	----	
237	27+26.57	1.76	736.49	729.15	19.90	736.80	734.80	727.82	716.59	11'-3"	2'-6"	W18x60	18'-3"	----	----	
238	27+34.07	1.76	736.36	729.00	19.67	736.45	734.45	727.67	716.69	11'-0"	2'-6"	W18x60	17'-10"	----	----	
239	27+41.57	1.76	736.00	728.85	19.21	736.10	734.10	727.52	716.79	10'-9"	2'-6"	W18x60	17'-4"	----	----	
240	27+49.07	1.76	735.56	728.69	18.69	735.74	733.74	727.36	716.87	10'-6"	2'-6"	W18x60	16'-11"	----	----	
241	27+56.57	1.76	734.37	728.54	17.43	735.42	733.42	727.21	716.94	10'-3"	2'-6"	W18x60	16'-6"	----	----	
242	27+64.07	1.76	733.99	728.38	17.03	735.12	733.12	727.05	716.96	10'-1"	2'-6"	W18x60	16'-2"	----	----	
243	27+71.57	1.76	733.41	728.23	16.43	734.82	732.82	726.89	716.98	9'-11"	2'-6"	W18x60	15'-11"	----	----	
244	27+79.07	1.76	732.96	728.07	15.96	734.52	732.52	726.74	717.01	9'-9"	2'-6"	W18x60	15'-7"	----	----	
245	27+86.57	1.76	732.30	727.91	15.33	734.26	732.26	726.58	716.97	9'-7"	2'-6"	W18x60	15'-4"	----	----	
246	27+94.07	1.76	731.76	727.75	14.88	734.05	732.05	726.42	716.88	9'-6"	2'-6"	W18x60	15'-3"	----	----	
247	28+01.57	1.76	731.77	727.59	15.00	733.84	731.84	726.25	716.77	9'-6"	2'-6"	W18x60	15'-1"	----	----	
248	28+09.07	1.76	731.78	727.42	15.11	733.63	731.63	726.09	716.66	9'-5"	2'-6"	W18x60	15'-0"	----	----	
249	28+16.57	1.76	731.97	727.26	15.49	733.47	731.47	725.92	716.48	9'-5"	2'-6"	W18x60	15'-0"	----	----	
250	28+24.07	1.76	732.10	727.09	15.88	733.38	731.38	725.76	716.22	9'-6"	2'-6"	W18x60	15'-2"	----	----	
251	28+31.57	1.76	732.57	726.93	16.61	733.29	731.29	725.59	715.96	9'-8"	2'-6"	W18x60	15'-4"	----	----	
252	28+39.07	1.76	732.75	726.75	17.06	733.20	731.20	725.42	715.69	9'-9"	2'-6"	W18x60	15'-7"	----	----	
253	28+46.57	1.76	732.87	726.59	17.50	733.15	731.15	725.25	715.37	9'-11"	2'-6"	W18x60	15'-10"	----	----	
254	28+54.07	1.76	732.93	726.41	17.94	733.15	731.15	725.08	714.99	10'-1"	2'-6"	W18x60	16'-2"	----	----	
255	28+61.57	1.76	733.04	726.24	18.42	733.14	731.14	724.91	714.62	10'-3"	2'-6"	W18x60	16'-7"	----	----	
256	28+69.07	1.76	733.13	726.07	18.89	733.13	731.13	724.74	714.25	10'-6"	2'-6"	W18x60	16'-11"	----	----	
257	28+76.57	1.76	733.19	725.89	19.33	733.12	731.12	724.56	713.86	10'-8"	2'-6"	W18x60	17'-4"	----	----	
258	28+84.07	1.76	733.27	725.71	19.81	733.11	731.11	724.38	713.46	10'-11"	2'-6"	W18x60	17'-8"	----	----	
259	28+91.57	1.76	733.34	725.54	20.27	733.11	731.11	724.20	713.07	11'-2"	2'-6"	W18x60	18'-1"	----	----	
260	28+99.07	1.76	733.40	725.36	20.70	733.10	731.10	724.03	712.69	11'-4"	2'-6"	W18x60	18'-5"	----	----	
261	29+06.57	1.76	733.45	725.18	21.15	733.09	731.09	723.85	712.30	11'-7"	2'-6"	W18x60	18'-10"	----	----	
262	29+14.07	1.76	733.32	725.00	21.42	733.08	731.08	723.67	711.90	11'-9"	2'-6"	W18x60	19'-3"	----	----	
263	29+21.57	1.76	733.20	724.82	21.69	733.07	731.07	723.49	711.51	12'-0"	2'-6"	W18x60	19'-7"	----	----	
264	29+29.07	1.76	733.15	724.64	22.03	733.06	731.06	723.31	711.11	12'-2"	2'-6"	W18x60	20'-0"	----	----	
265	29+36.57	1.76	733.12	724.46	22.40	733.06	731.06	723.13	710.72	12'-5"	2'-6"	W18x60	20'-5"	----	----	
266	29+44.07	1.76	733.12	724.28	22.79	733.05	731.05	722.95	710.33	12'-7"	2'-6"	W18x60	20'-9"	----	----	
267	29+51.57	1.76	733.14	724.11	23.20	733.04	731.04	722.77	709.94	12'-10"	2'-6"	W18x60	21'-2"	----	----	
268	29+59.07	1.76	733.15	723.93	23.59	733.03	731.03	722.60	709.56	13'-0"	2'-6"	W18x60	21'-6"	----	----	
269	32+26.57	1.76	729.95	720.06	27.84	732.01	730.01	718.72	702.12	16'-7"	3'-0"	W24x84	27'-11"	----	----	
270	32+34.07	1.76	730.89	720.00	28.93	732.03	730.03	718.66	701.95	16'-9"	3'-0"	W24x84	28'-1"	----	----	
271	32+41.57	1.76	730.71	719.94	28.92	732.06	730.06	718.60	701.79	16'-10"	3'-0"	W24x84	28'-4"	----	----	
272	32+49.07	1.76	730.55	719.88	28.93	732.08	730.08	718.54	701.63	16'-11"	3'-0"	W24x84	28'-6"	----	----	

LEGEND

◥ SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

◐ WHERE EXISTING GROUNDLINE IS ABOVE THE PROPOSED TOP OF WALL, THIS DIMENSION IS MEASURED FROM THE TOP OF WALL INSTEAD OF THE EXISTING GROUNDLINE. NOTE THAT SOME EXCAVATION MAY BE REQUIRED TO ACHIEVE THE TOP OF WALL ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

SOLDIER PILE DATA TABLE (4 OF 5)

SHEET 22 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080304_de.dgn PLOT DATE : 07-MAY-2014 10:15 PLOT BY : MSCKES PLOT NAME : R40548_080304_de PLOT SCALE : 8:1

STATE PROJECT NUMBER

1060-33-80

SOLDIER PILE DATA

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FOUNDATION DRILLING LENGTH	TOP OF WALL	TOP OF PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	FOOTING DIAMETER	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	TIEBACK 1 ELEVATION	TIEBACK 2 ELEVATION	POSSIBLE OBSTRUCTIONS/ COMMENTS
273	32+54.82	1.79	730.50	719.84	28.97	732.10	730.10	718.51	701.52	17'-0"	2.50	W18x119	28'-7"	----	----	
274	32+59.82	1.79	730.45	719.80	29.03	732.11	730.11	718.47	701.42	17'-1"	2.50	W18x119	28'-9"	----	----	
275	32+67.32	1.79	730.37	719.76	29.09	732.13	730.13	718.42	701.29	17'-2"	2.50	W18x119	28'-11"	----	----	
276	32+74.07	1.79	730.40	719.72	29.23	732.15	730.15	718.38	701.17	17'-3"	2.50	W18x119	29'-0"	----	----	
277	32+80.82	1.79	730.44	719.67	29.39	732.17	730.17	718.34	701.05	17'-3"	2.50	W18x119	29'-2"	----	----	
278	32+86.57	2.00	730.08	719.63	29.15	732.19	730.19	718.30	700.93	17'-4"	3.00	W24x84	29'-4"	----	----	
279	32+94.07	2.00	729.42	719.59	28.62	732.21	730.21	718.25	700.80	17'-5"	3.00	W24x84	29'-5"	----	----	
280	33+01.57	2.00	729.05	719.55	28.36	732.24	730.24	718.22	700.69	17'-6"	3.00	W24x84	29'-7"	----	----	
281	33+09.07	2.00	728.89	719.51	28.30	732.26	730.26	718.18	700.58	17'-7"	3.00	W24x84	29'-9"	----	----	
282	33+16.57	2.00	728.93	719.47	28.47	732.28	730.28	718.14	700.47	17'-8"	3.00	W24x84	29'-10"	----	----	
283	33+24.07	2.00	729.00	719.44	28.65	732.30	730.30	718.10	700.35	17'-9"	3.00	W24x84	30'-0"	----	----	
284	33+31.57	2.00	729.07	719.41	28.79	732.33	730.33	718.08	700.27	17'-10"	3.00	W24x84	30'-1"	----	----	
285	33+39.07	2.00	729.14	719.38	28.96	732.35	730.35	718.05	700.18	17'-10"	3.00	W24x84	30'-3"	----	----	
286	33+46.57	2.00	729.21	719.35	29.12	732.37	730.37	718.02	700.08	17'-11"	3.00	W24x84	30'-4"	----	----	
287	33+54.07	2.00	729.27	719.33	29.27	732.39	730.39	718.00	700.01	18'-0"	3.00	W24x84	30'-5"	----	----	
288	33+61.57	2.00	729.34	719.31	29.40	732.42	730.42	717.98	699.94	18'-1"	3.00	W24x84	30'-6"	----	----	
289	33+69.07	2.00	729.31	719.34	29.35	732.44	730.44	718.00	699.96	18'-1"	3.00	W24x84	30'-6"	----	----	
290	33+76.57	2.00	729.27	719.38	29.25	732.46	730.46	718.05	700.03	18'-0"	3.00	W24x84	30'-6"	----	----	
291	33+84.07	2.00	729.27	719.42	29.17	732.48	730.48	718.09	700.10	18'-0"	3.00	W24x84	30'-5"	----	----	
292	33+91.57	2.00	729.28	719.47	29.10	732.51	730.51	718.14	700.17	18'-0"	3.00	W24x84	30'-4"	----	----	
293	33+99.07	2.00	729.32	719.51	29.07	732.53	730.53	718.18	700.25	17'-11"	3.00	W24x84	30'-4"	----	----	
294	34+06.57	2.00	729.43	719.57	29.08	732.55	730.55	718.24	700.34	17'-11"	3.00	W24x84	30'-3"	----	----	
295	34+14.07	2.00	729.57	719.61	29.15	732.57	730.57	718.28	700.42	17'-10"	3.00	W24x84	30'-2"	----	----	
296	34+21.57	2.00	729.70	719.68	29.18	732.60	730.60	718.34	700.53	17'-10"	3.00	W24x84	30'-1"	----	----	
297	34+29.07	2.00	729.84	719.75	29.18	732.62	730.62	718.42	700.67	17'-9"	3.00	W24x84	30'-0"	----	----	
298	34+36.57	2.00	729.98	719.83	29.18	732.64	730.64	718.49	700.81	17'-8"	3.00	W24x84	29'-11"	----	----	
299	34+44.07	2.00	730.12	719.90	29.17	732.66	730.66	718.57	700.95	17'-7"	3.00	W24x84	29'-9"	----	----	
300	34+51.57	2.00	730.26	719.99	29.14	732.69	730.69	718.66	701.12	17'-6"	3.00	W24x84	29'-7"	----	----	
301	34+59.07	2.00	730.40	720.09	29.09	732.71	730.71	718.75	701.31	17'-5"	3.00	W24x84	29'-5"	----	----	
302	34+66.57	2.00	730.53	720.19	29.02	732.73	730.73	718.86	701.52	17'-4"	3.00	W24x84	29'-3"	----	----	
303	34+74.07	2.00	730.65	720.30	28.92	732.75	730.75	718.96	701.73	17'-3"	3.00	W24x84	29'-1"	----	----	
304	34+81.57	2.00	730.79	720.39	28.88	732.78	730.78	719.06	701.91	17'-2"	3.00	W24x84	28'-11"	----	----	
305	34+89.07	2.00	730.90	720.50	28.78	732.80	730.80	719.16	702.12	17'-1"	3.00	W24x84	28'-9"	----	----	
306	34+96.57	2.00	731.00	720.55	28.78	732.82	730.82	719.22	702.21	17'-0"	3.00	W24x84	28'-8"	----	----	
307	35+04.07	2.00	731.08	720.59	28.80	732.84	730.84	719.26	702.28	17'-0"	3.00	W24x84	28'-7"	----	----	
308	35+11.57	2.00	731.15	720.64	28.78	732.85	730.85	719.31	702.37	16'-11"	3.00	W24x84	28'-6"	----	----	
309	35+19.07	2.00	731.22	720.68	28.75	732.85	730.85	719.35	702.47	16'-11"	3.00	W24x84	28'-5"	----	----	
310	35+26.57	2.00	731.28	720.73	28.70	732.85	730.85	719.40	702.57	16'-10"	3.00	W24x84	28'-4"	----	----	
311	35+34.07	2.00	731.32	720.78	28.63	732.85	730.85	719.45	702.69	16'-9"	3.00	W24x84	28'-2"	----	----	
312	35+41.57	2.00	731.35	720.83	28.55	732.85	730.85	719.50	702.80	16'-8"	3.00	W24x84	28'-1"	----	----	
313	35+49.07	2.00	731.38	720.87	28.48	732.85	730.85	719.54	702.90	16'-8"	3.00	W24x84	28'-0"	----	----	
314	35+56.57	2.00	731.40	720.92	28.39	732.85	730.85	719.59	703.00	16'-7"	3.00	W24x84	27'-11"	----	----	
315	35+64.07	2.00	731.40	720.96	28.30	732.85	730.85	719.63	703.10	16'-6"	3.00	W24x84	27'-10"	----	----	
316	35+71.57	2.00	731.39	721.01	28.25	732.90	730.90	719.68	703.14	16'-6"	3.00	W24x84	27'-10"	----	----	
317	35+79.07	2.00	731.38	721.05	28.26	733.00	731.00	719.72	703.12	16'-7"	3.00	W24x84	27'-11"	----	----	
318	35+86.57	2.00	731.36	721.09	28.28	733.10	731.10	719.75	703.07	16'-8"	3.00	W24x84	28'-1"	----	----	
319	35+94.07	2.00	731.32	721.12	28.30	733.19	731.19	719.78	703.02	16'-9"	3.00	W24x84	28'-3"	----	----	
320	36+01.57	2.00	731.24	721.14	28.29	733.29	731.29	719.81	702.96	16'-10"	3.00	W24x84	28'-5"	----	----	
321	36+09.07	2.00	731.18	721.16	28.31	733.39	731.89	719.82	702.87	16'-11"	3.00	W24x84	29'-1"	----	----	
322	36+16.57	1.74	731.34	721.17	27.65	732.75	731.25	719.84	703.69	16'-2"	2.50	W18x35	27'-7"	----	----	
323	36+24.07	1.74	729.65	721.18	24.23	731.38	729.88	719.84	705.42	14'-5"	2.50	W18x35	24'-6"	----	----	ABANDONED SANITARY SEWER
324	36+31.57	1.74	728.15	721.17	21.04	730.01	728.51	719.84	707.12	12'-9"	2.50	W18x35	21'-5"	----	----	
325	36+39.07	1.74	726.95	721.16	18.14	728.64	727.14	719.83	708.81	11'-0"	2.50	W18x35	18'-4"	----	----	
326	36+46.57	1.74	725.90	721.15	15.39	727.27	725.77	719.82	710.51	9'-4"	2.50	W18x35	15'-4"	----	----	
327	36+54.07	1.74	724.95	721.13	12.78	725.90	724.40	719.80	712.17	7'-8"	2.50	W18x35	12'-3"	----	----	
328	36+61.57	1.74	724.04	721.10	10.22	724.53	723.03	719.77	713.02	6'-9"	2.50	W18x35	10'-1"	----	----	
329	36+69.07	1.74	723.19	721.07	7.73	723.16	721.66	719.74	712.99	6'-9"	2.50	W18x35	8'-9"	----	----	
330	27+60.32	5.33	734.18	728.46	17.23	735.27	735.27	727.13	716.95	10'-2"	2.00	W12x35	16'-4"	----	----	ADD'T PILE @ SIGN STRUCTURE S-40-116
331	27+67.82	5.33	733.70	728.30	16.73	734.97	734.97	726.97	716.97	10'-0"	2.00	W12x35	16'-0"	----	----	ADD'T PILE @ SIGN STRUCTURE S-40-116
332	27+75.32	5.33	733.19	728.15	16.19	734.67	734.67	726.81	716.99	9'-10"	2.00	W12x35	15'-9"	----	----	ADD'T PILE @ SIGN STRUCTURE S-40-116
333	33+42.81	5.33	729.17	719.37	29.04	732.36	732.36	718.04	700.13	17'-11"	2.00	W12x35	30'-3"	----	----	ADD'T PILE @ SIGN STRUCTURE S-40-121
334	33+50.31	5.33	729.24	719.34	29.20	732.38	732.38	718.01	700.04	18'-0"	2.00	W12x35	30'-5"	----	----	ADD'T PILE @ SIGN STRUCTURE S-40-121

LEGEND

◥ SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

◐ WHERE EXISTING GROUNDLINE IS ABOVE THE PROPOSED TOP OF WALL, THIS DIMENSION IS MEASURED FROM THE TOP OF WALL INSTEAD OF THE EXISTING GROUNDLINE. NOTE THAT SOME EXCAVATION MAY BE REQUIRED TO ACHIEVE THE TOP OF WALL ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

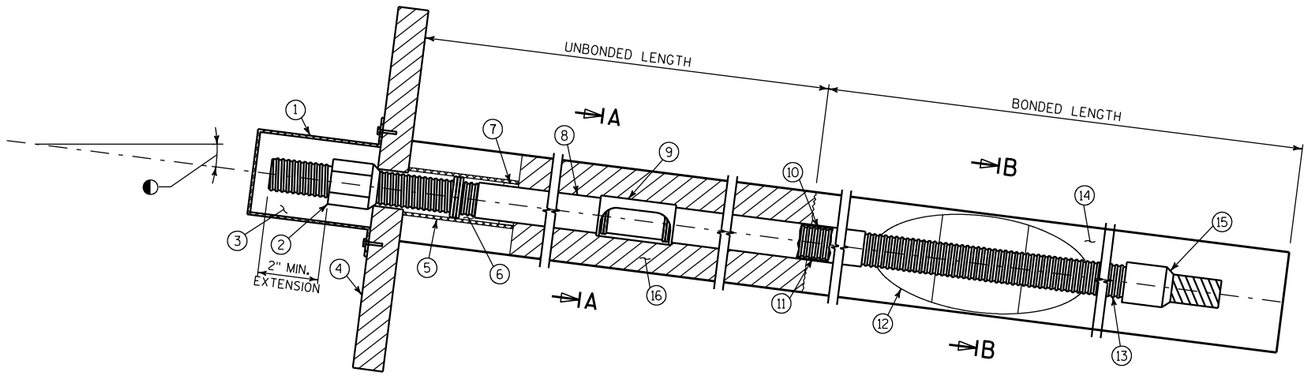
SOLDIER PILE DATA TABLE (5 OF 5)

SHEET 23 OF 70

8

8

STATE PROJECT NUMBER
1060-33-80



ENCAPSULATED TIEBACK

(BAR TENDON SHOWN, PRESTRESSED STEEL TENDONS MAY BE USED AS AN ALTERNATE)

LEGEND

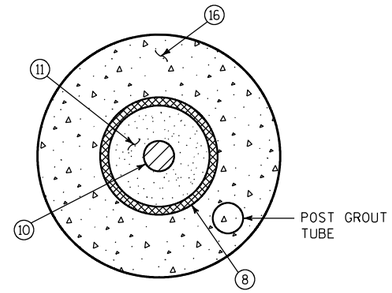
1. ANCHORAGE COVER
2. NUT
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. ANTICORROSION GREASE
7. SEAL
8. SMOOTH PVC BOND BREAKER
9. PROTECTED BAR COUPLER
10. BAR TENDON
11. ENCAPSULATION GROUT
12. CENTRALIZERS
13. CORRUGATED PVC
14. ANCHOR GROUT
15. END CAP
16. GROUT

⚹ BEARING PLATE SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE "TIEBACK ANCHORS" SPECIAL PROVISION (SPV.0060.4150)

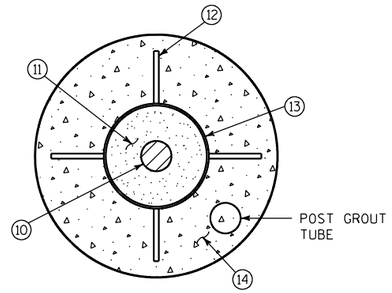
◐ ANGLE FROM VERTICAL. SEE TIEBACK ANCHOR DATA TABLES.

NOTE

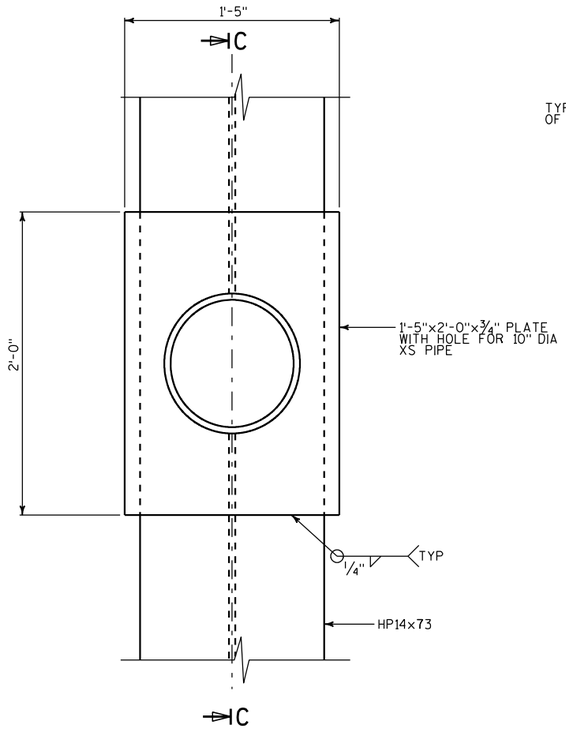
HP 14x73 SHALL BE PRE-FABRICATED WITH ANCHORAGE DETAIL SHOWN BEFORE INSTALLATION INTO DRILLED CONCRETE FOOTING. BEARING PLATE, 10" DIA PIPE, FLANGE PLATES AND ANCHOR MODIFICATIONS TO THE HP 14x73 ARE INCLUDED IN THE BID ITEM "TIEBACK ANCHORS".



SECTION A-A

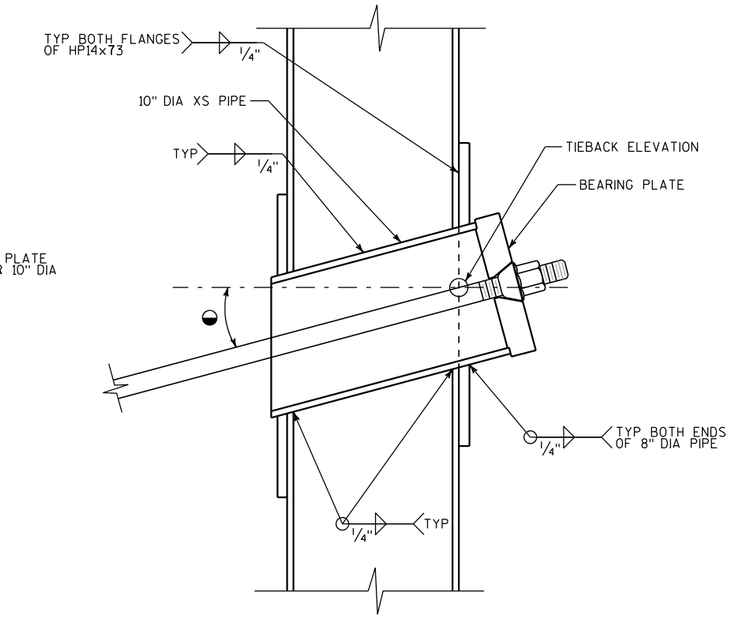


SECTION B-B

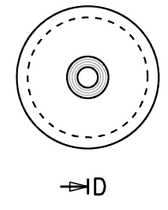


HP 14x73 ANCHOR DETAIL

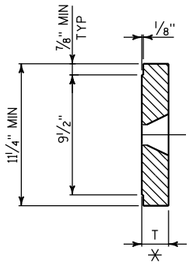
(BEARING PLATE, TENDON & ANCHOR HEAD NOT SHOWN FOR CLARITY)



SECTION C-C



PLAN



SECTION D-D

BEARING PLATE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TIEBACK ANCHOR DETAILS

SHEET 24 OF 70

8

8

STATE PROJECT NUMBER

1060-33-80

TIEBACK ANCHOR SCHEDULE
(STA 11+56.93 to STA 15+09.43)

PILE NO.	TIEBACK NUMBER	TIEBACK VERTICAL ORIENTATION (DEGREES)	✳ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	115% DESIGN PROOF TEST LOAD (KIPS)
26	1	20°	90°	25	15	110	68	98
27	2	20°	90°	25	15	110	68	98
28	3	20°	90°	25	15	110	68	98
29	4	20°	90°	25	15	110	68	98
30	5	20°	90°	25	15	110	68	98
31	6	20°	90°	25	15	110	68	98
32	7	20°	90°	25	15	110	68	98
33	8	20°	90°	25	15	110	68	98
34	9	20°	90°	25	15	110	68	98
35	10	20°	90°	25	15	110	68	98
36	11	20°	90°	25	15	110	68	98
37	12	20°	90°	25	15	110	68	98
38	13	20°	90°	25	15	110	68	98
39	14	20°	90°	25	15	110	68	98
40	15	20°	90°	25	15	110	68	98
41	16	20°	90°	25	15	110	68	98
42	17	20°	90°	25	15	110	68	98
43	18	20°	90°	25	15	110	68	98
44	19	20°	90°	25	15	110	68	98
45	20	20°	90°	25	15	110	68	98
46	21	20°	90°	25	15	110	68	98
47	22	20°	90°	25	15	110	88	127
48	23	20°	90°	25	15	110	88	127
49	24	20°	90°	25	15	110	88	127
50	25	20°	90°	25	15	110	88	127
51	26	20°	90°	25	15	110	88	127
52	27	20°	90°	25	15	110	88	127
53	28	20°	90°	25	15	110	88	127
54	29	20°	90°	25	15	110	88	127
55	30	20°	90°	25	15	110	88	127
56	31	20°	90°	25	15	110	100	144
57	32	20°	90°	25	15	110	100	144
58	33	20°	90°	22	15	105	100	144
59	34	20°	90°	22	15	105	100	144
60	35	20°	90°	22	15	105	100	144
61	36	20°	90°	22	15	105	88	127
62	37	20°	90°	22	15	105	88	127
63	38	20°	90°	22	15	105	88	127
64	39	20°	90°	22	15	105	88	127
65	40	20°	90°	22	15	105	88	127
66	41	20°	90°	22	15	105	88	127
67	42	20°	90°	22	15	105	88	127
68	43	20°	90°	22	15	105	88	127
69	44	20°	90°	22	15	100	88	127
70	45	20°	90°	22	15	100	88	127
71	46	20°	90°	22	15	100	88	127
72	47	20°	90°	22	15	100	88	127

TIEBACK ANCHOR SCHEDULE
(STA 15+09.43 to STA 18+01.93)

PILE NO.	TIEBACK NUMBER	TIEBACK VERTICAL ORIENTATION (DEGREES)	✳ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	115% DESIGN PROOF TEST LOAD (KIPS)
73	48	20°	90°	22	15	100	88	127
74	49	20°	90°	22	15	100	88	127
75	50	20°	90°	22	15	100	96	138
76	51	20°	90°	22	15	100	96	138
77	52	20°	90°	22	15	100	96	138
78	53	20°	90°	22	15	100	96	138
79	54	20°	90°	22	15	100	96	138
80	55	20°	90°	22	15	100	96	138
81	56	20°	90°	22	15	100	96	138
82	57	20°	90°	22	15	100	96	138
83	58	20°	90°	22	15	100	96	138
84	59	20°	90°	22	15	100	96	138
85	60	20°	90°	22	15	100	96	138
86	61	20°	90°	22	15	100	96	138
87	62	20°	90°	22	15	100	96	138
88	63	20°	90°	22	15	100	96	138
89	64	20°	90°	22	15	100	96	138
90	65	20°	90°	22	15	100	96	138
91	66	20°	90°	22	15	100	96	138
92	67	20°	90°	22	15	100	96	138
93	68	20°	90°	22	15	100	96	138
94	69	20°	90°	21	15	100	96	138
95	70	20°	90°	21	15	100	96	138
96	71	20°	90°	21	15	100	102	146
97	72	20°	90°	21	15	100	102	146
98	73	20°	90°	21	15	100	102	146
99	74	20°	90°	21	15	100	102	146
100	75A	20°	90°	17	15	80	84	121
	75B	20°	90°	12	15	50	84	121
101	76A	20°	90°	17	15	80	84	121
	76B	20°	90°	12	15	50	84	121
102	77A	20°	90°	17	15	80	84	121
	77B	20°	90°	12	15	50	84	121
103	78A	20°	90°	17	15	80	84	121
	78B	20°	90°	12	15	50	84	121
104	79A	20°	90°	17	15	80	84	121
	79B	20°	90°	12	15	50	84	121
105	80A	20°	90°	17	15	80	84	121
	80B	20°	90°	12	15	50	84	121
106	81A	20°	90°	17	15	80	84	121
	81B	20°	90°	12	15	50	84	121
107	82A	20°	90°	17	15	80	84	121
	82B	20°	90°	12	15	50	84	121
108	83	15°	90°	25	15	110	60	121
109	84	15°	90°	25	15	110	60	121
110	85	15°	90°	25	15	110	60	121
111	86	15°	90°	25	15	110	60	121

LEGEND

✳ HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

◑ ESTIMATED BONDED ANCHOR LENGTH BASED ON 8" DIA ANCHOR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TIEBACK ANCHOR DATA TABLE (1 OF 3)

SHEET 25 OF 70

8

8

STATE PROJECT NUMBER

1060-33-80

TIEBACK ANCHOR SCHEDULE
(STA 18+01.93 to STA 20+26.93)

PILE NO.	TIEBACK NUMBER	TIEBACK VERTICAL ORIENTATION (DEGREES)	✳ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	115% DESIGN PROOF TEST LOAD (KIPS)
112	87	15°	90°	25	15	110	60	127
113	88	15°	90°	25	15	110	60	127
114	89	15°	90°	25	15	110	60	138
115	90	15°	90°	25	15	110	60	138
116	91	15°	90°	25	15	110	60	138
117	92	15°	90°	25	15	110	60	138
118	93	15°	90°	25	15	110	60	138
119	94	15°	90°	25	15	110	60	138
120	95	15°	90°	25	15	110	60	138
121	96	15°	90°	25	15	110	60	138
122	97	15°	90°	25	15	110	60	138
123	98	15°	90°	25	15	110	60	138
124	99	15°	90°	25	15	110	60	138
125	100A	15°	90°	23	16	100	80	138
	100B	15°	90°	20	15	80	80	138
126	101A	15°	90°	23	16	100	80	138
	101B	15°	90°	20	15	80	80	138
127	102A	15°	90°	23	16	100	80	138
	102B	15°	90°	20	15	80	80	138
128	103A	15°	90°	23	16	100	80	138
	103B	15°	90°	20	15	80	80	138
129	104A	15°	90°	23	16	100	80	127
	104B	15°	90°	20	15	80	80	127
130	105A	15°	90°	23	16	100	80	127
	105B	15°	90°	20	15	80	80	127
131	106A	15°	90°	23	16	100	80	127
	106B	15°	90°	20	15	80	80	127
132	107A	15°	90°	23	16	100	80	127
	107B	15°	90°	20	15	80	80	127
133	108A	15°	90°	23	16	100	80	127
	108B	15°	90°	20	15	80	80	144
134	109A	15°	90°	23	16	100	80	144
	109B	15°	90°	20	15	80	80	144
135	110A	15°	90°	23	16	100	80	144
	110B	15°	90°	20	15	80	80	144
136	111A	15°	90°	23	16	100	80	127
	111B	15°	90°	20	15	80	80	127
137	112A	15°	90°	21	16	95	80	127
	112B	15°	90°	13	15	60	80	127
138	113A	15°	90°	21	16	95	80	127
	113B	15°	90°	13	15	60	80	127
139	114A	15°	90°	21	15	95	80	127
	114B	15°	90°	13	15	60	80	127
140	115A	15°	90°	21	15	95	80	127
	115B	15°	90°	13	15	60	80	127
141	116A	15°	90°	21	15	95	80	127
	116B	15°	90°	13	15	60	80	127

TIEBACK ANCHOR SCHEDULE
(STA 20+26.93 to STA 22+06.93)

PILE NO.	TIEBACK NUMBER	TIEBACK VERTICAL ORIENTATION (DEGREES)	✳ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	115% DESIGN PROOF TEST LOAD (KIPS)
142	117A	15°	90°	21	15	95	88	127
	117B	15°	90°	13	15	60	88	127
143	118A	15°	90°	21	15	95	96	138
	118B	15°	90°	13	15	60	96	138
144	119A	15°	90°	21	15	95	96	138
	119B	15°	90°	13	15	60	96	138
145	120A	25°	90°	23	15	100	96	138
	120B	25°	90°	17	15	70	96	138
146	121A	25°	90°	23	15	100	96	138
	121B	25°	90°	17	15	70	96	138
147	122A	25°	90°	23	15	100	96	138
	122B	25°	90°	17	15	70	96	138
148	123A	25°	90°	23	15	100	96	138
	123B	25°	90°	17	15	70	96	138
149	124A	25°	90°	23	15	100	96	138
	124B	25°	90°	17	15	70	96	138
150	125A	25°	90°	23	15	100	96	138
	125B	25°	90°	17	15	70	96	138
151	126A	25°	90°	23	15	100	96	138
	126B	25°	90°	17	15	70	96	138
152	127A	25°	90°	23	15	100	96	138
	127B	25°	90°	17	15	70	96	138
153	128A	25°	90°	23	18	100	96	138
	128B	25°	90°	17	15	70	102	146
154	129A	25°	90°	23	18	100	102	146
	129B	25°	90°	17	15	70	102	146
155	130A	25°	90°	23	18	100	102	146
	130B	25°	90°	17	15	70	84	121
156	131A	25°	90°	23	18	100	84	121
	131B	25°	90°	17	15	70	84	121
157	132A	25°	90°	23	18	100	84	121
	132B	25°	90°	17	15	70	84	121
158	133A	25°	90°	23	18	100	84	121
	133B	25°	90°	17	15	70	84	121
159	134A	25°	90°	26	18	115	84	121
	134B	25°	90°	13	15	60	84	121
160	135A	25°	90°	26	18	115	84	121
	135B	25°	90°	13	15	60	84	121
161	136A	25°	90°	26	18	115	84	121
	136B	25°	90°	13	15	60	84	121
162	137A	25°	90°	26	18	115	84	121
	137B	25°	90°	13	15	60	84	121
163	138A	25°	90°	26	18	100	84	121
	138B	25°	90°	13	15	60	84	121
164	139A	25°	90°	26	18	100	84	121
	139B	25°	90°	13	15	60	84	121
165	140	25°	90°	22	18	100	84	121

LEGEND

✳ HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

◑ ESTIMATED BONDED ANCHOR LENGTH BASED ON 8" DIA ANCHOR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

TIEBACK ANCHOR DATA TABLE (2 OF 3)

SHEET 26 OF 70

8

8

STATE PROJECT NUMBER
1060-33-80

TIEBACK ANCHOR SCHEDULE
(STA 22+06.93 to STA 24+39.43)

PILE NO.	TIEBACK NUMBER	TIEBACK VERTICAL ORIENTATION (DEGREES)	⚹ TIEBACK HORIZONTAL ORIENTATION (DEGREES)	◑ ESTIMATED BONDED ANCHOR LENGTH (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	115% DESIGN PROOF TEST LOAD (KIPS)
166	141	25°	90°	27	27	125	100	144
167	142	25°	90°	27	27	125	100	144
168	143	25°	90°	27	27	125	100	144
169	144	25°	90°	27	27	125	100	144
170	145	25°	90°	27	27	125	100	144
171	146	25°	90°	27	27	125	100	144
172	147	25°	90°	27	27	125	100	144
173	148	25°	90°	27	27	125	100	144
174	149	25°	90°	27	27	125	100	144
175	150	25°	90°	27	27	125	100	144
176	151	25°	90°	27	27	125	100	144
177	152	25°	90°	24	24	100	80	115
178	153	25°	90°	24	24	100	80	115
179	154	30°	100°	27	27	125	100	144
180	155	30°	80°	27	27	125	100	144
181	156	25°	90°	24	24	100	80	115
182	157	25°	90°	24	24	100	80	115
183	158	25°	90°	24	24	100	80	115
184	159	25°	90°	15	15	50	48	69
185	160	25°	90°	15	15	50	48	69
186	161	25°	90°	15	15	50	48	69
187	162	25°	90°	15	15	50	48	69
188	163	25°	90°	15	15	50	48	69
189	164	30°	90°	15	15	50	48	69
190	165	30°	90°	15	15	50	48	69
191	166	30°	90°	15	15	50	48	69
192	167	30°	90°	15	15	50	48	69
193	168	30°	90°	15	15	50	48	69
194	169	30°	90°	15	15	50	48	69
195	170	30°	90°	15	15	50	48	69
196	171	30°	90°	15	15	50	48	69

8

8

LEGEND

⚹ HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

◑ ESTIMATED BONDED ANCHOR LENGTH BASED ON 8" DIA ANCHOR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

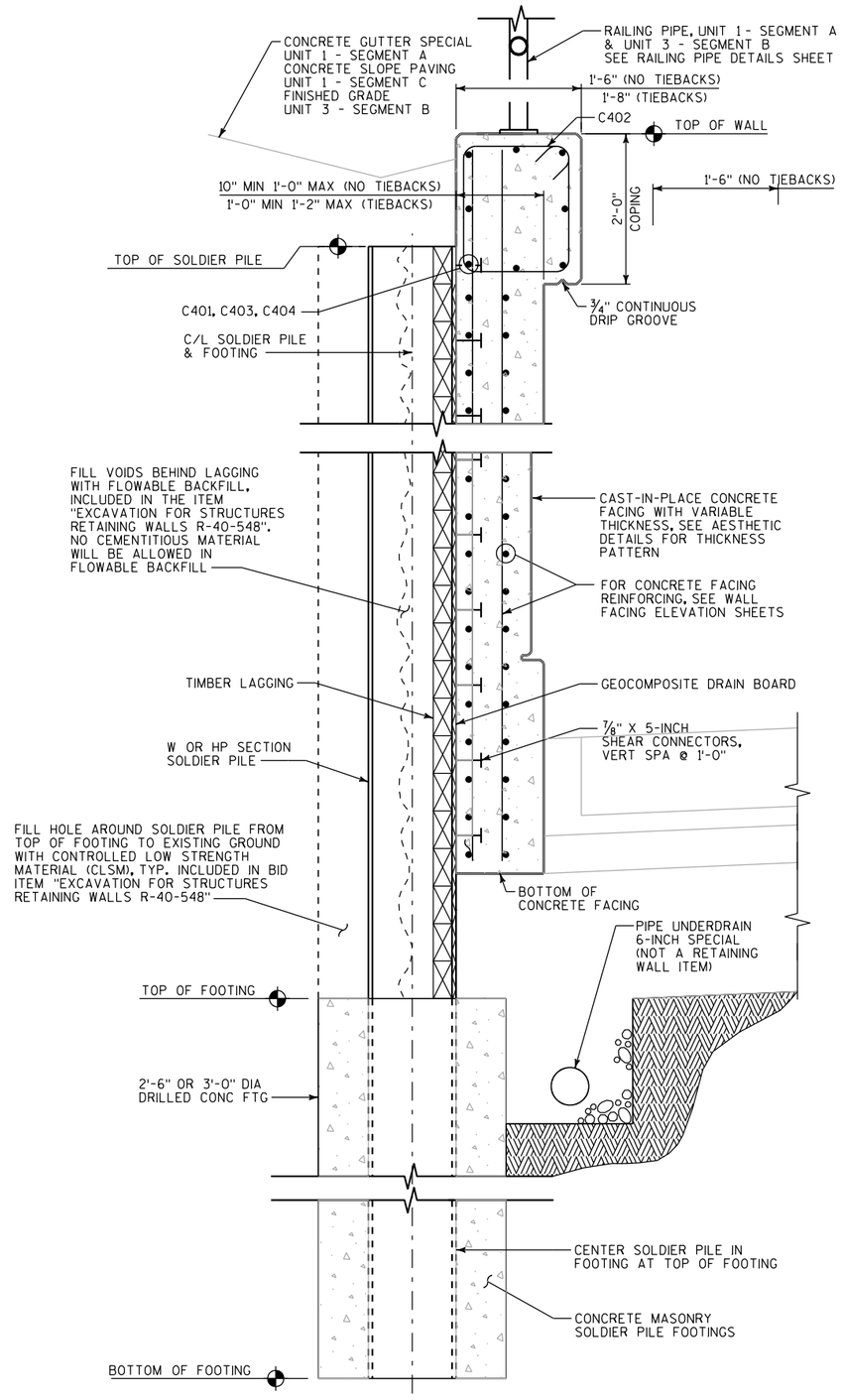
DRAWN BY	BHI	PLANS CK'D.	KES

TIEBACK ANCHOR DATA TABLE (3 OF 3)

SHEET 27 OF 70

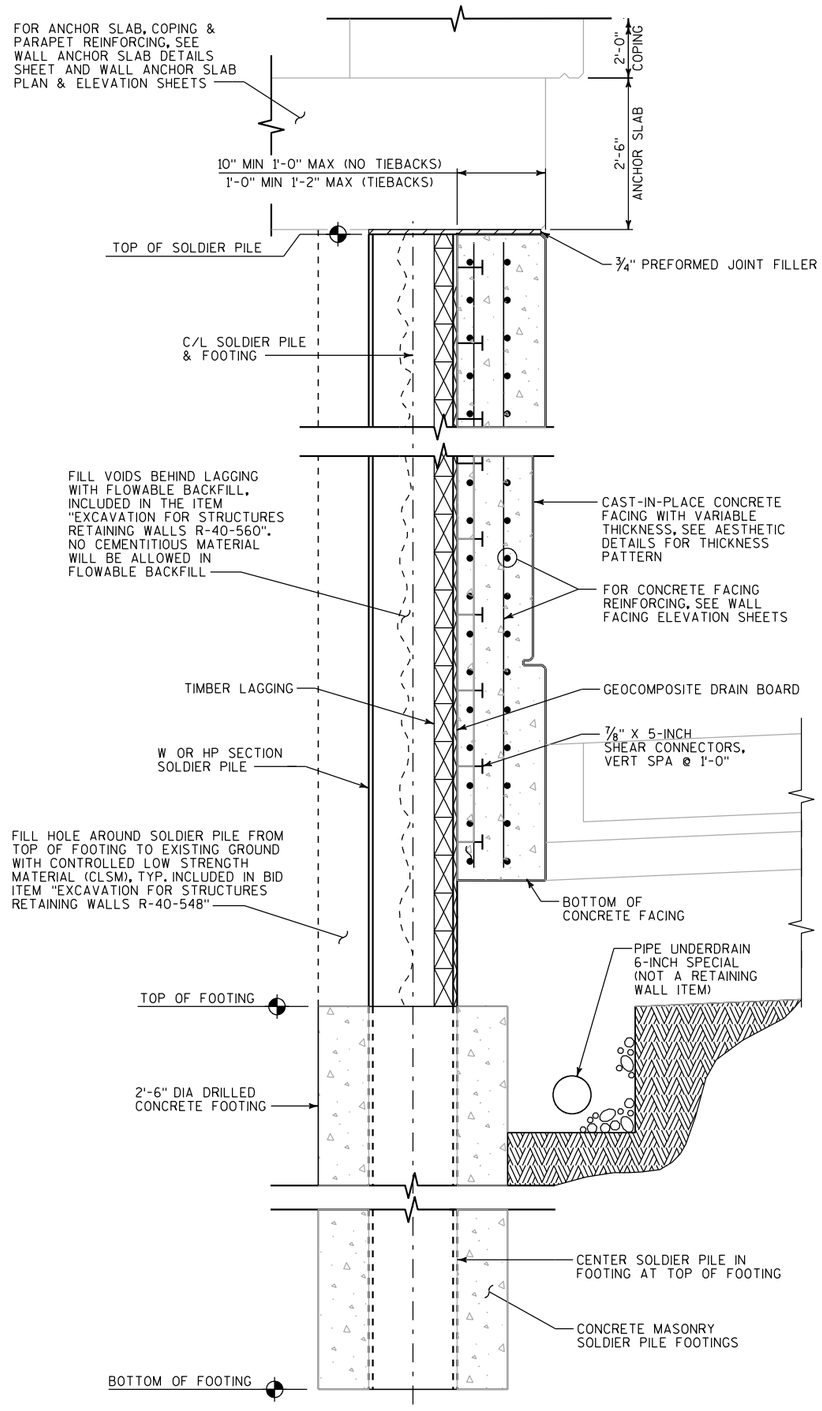
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STATE PROJECT NUMBER
1060-33-80



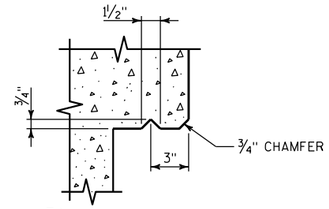
SOLDIER PILE AND WALL SECTION W/COPING

(TIEBACKS NOT SHOWN)
(LOOKING EAST)



SOLDIER PILE AND WALL SECTION W/ANCHOR SLAB

(ANCHOR SLAB REINFORCEMENT & TIEBACKS NOT SHOWN)
(LOOKING EAST)



¾" CONTINUOUS DRIP GROOVE DETAIL

TERMINATE 2'-0" FROM ENDS OF WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

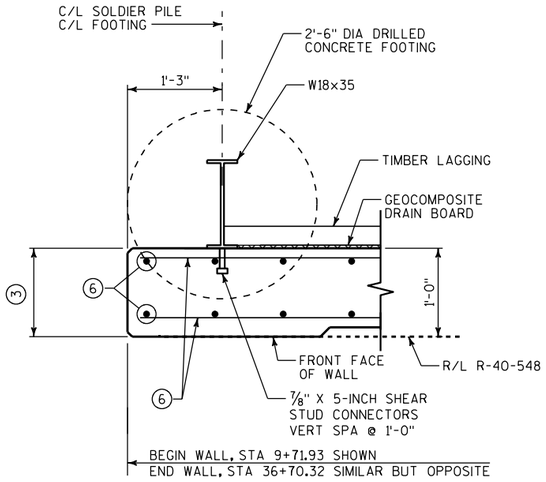
SOLDIER PILE WALL DETAILS (1 OF 3)

SHEET 28 OF 70

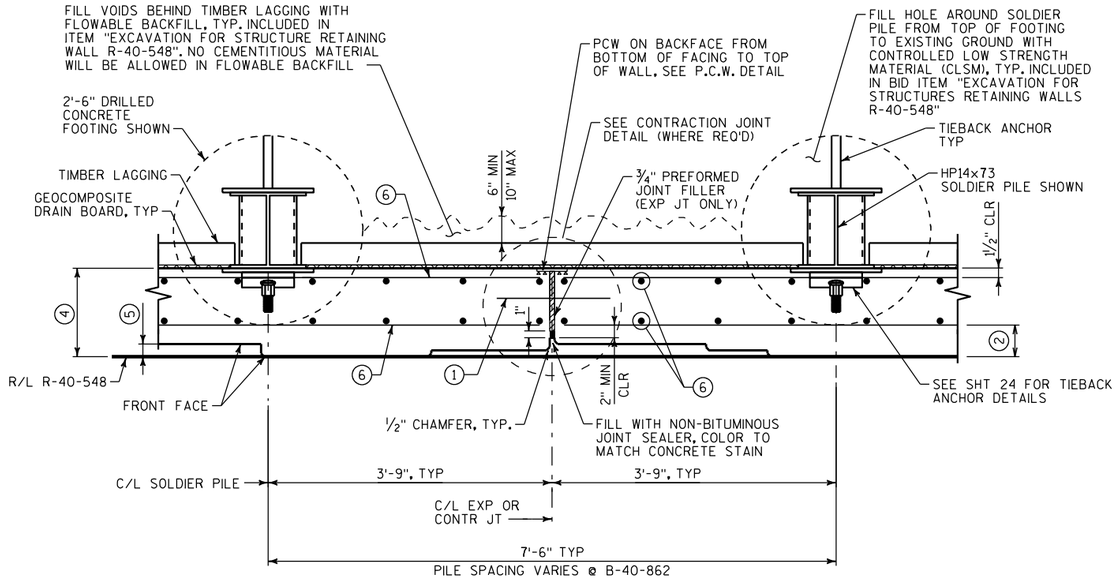
8

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STATE PROJECT NUMBER
1060-33-80

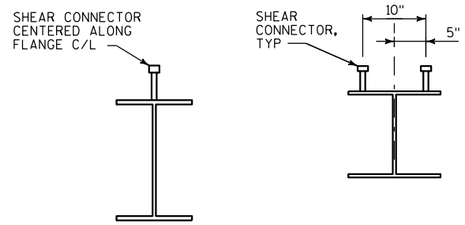


SECTION AT BEGINNING / END OF WALL



SOLDIER PILE SECTION - TIEBACK ANCHORS

(SEE GENERAL PLAN & ELEVATION SHEETS FOR LOCATION OF CONTRACTION & EXPANSION JOINTS)

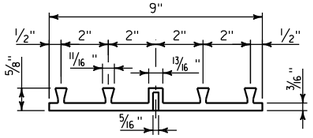


STUD LAYOUT

W18x35, W18x60, W24x84 & HP14x73 WITH 1 TIEBACK

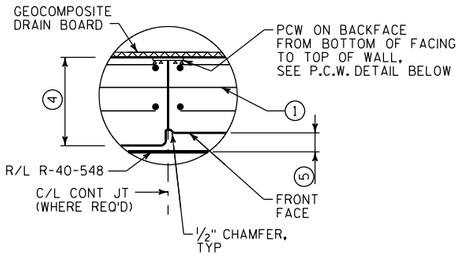
STUD LAYOUT

HP14x73 WITH 2 TIEBACKS & HP14x73 WITH 1 TIEBACK UNDER BRIDGE B-40-862

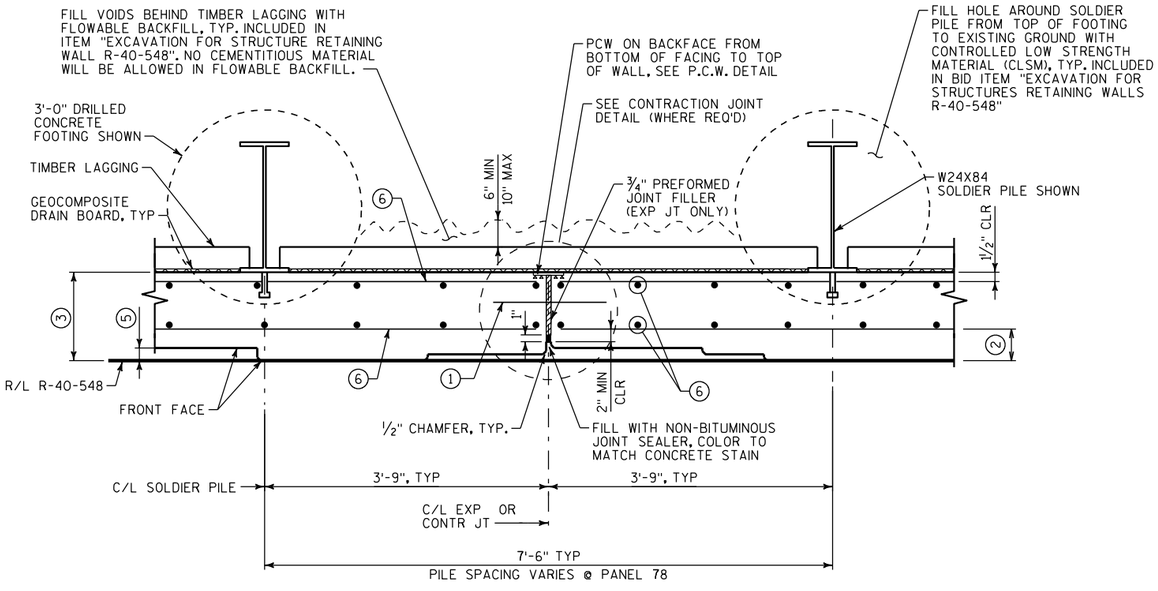


P.C.W. "TYPE B" DETAIL

(POLYVINYL CHLORIDE WATERSTOP)
(INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS")
P.C.W. SHALL BE BUTT SPLICED AT ANY INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.



CONTRACTION JOINT DETAIL



SOLDIER PILE SECTION - NO TIEBACK ANCHORS

(SEE GENERAL PLAN & ELEVATION SHEETS FOR LOCATION OF CONTRACTION & EXPANSION JOINTS)

NOTES

1. 3/4" DIA X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED AT 2'-0" CENTERS MID-DEPTH IN THE WALL. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALL. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".
2. 4" CLR. FROM MAX. WALL THICKNESS.
3. 10" MIN, 1'-0" MAX.
4. 1'-0" MIN, 1'-2" MAX.
5. SEE AESTHETIC WALL TREATMENT DETAILS SHEET.
6. SEE WALL ELEVATION SHEETS FOR REINFORCEMENT BAR MARKS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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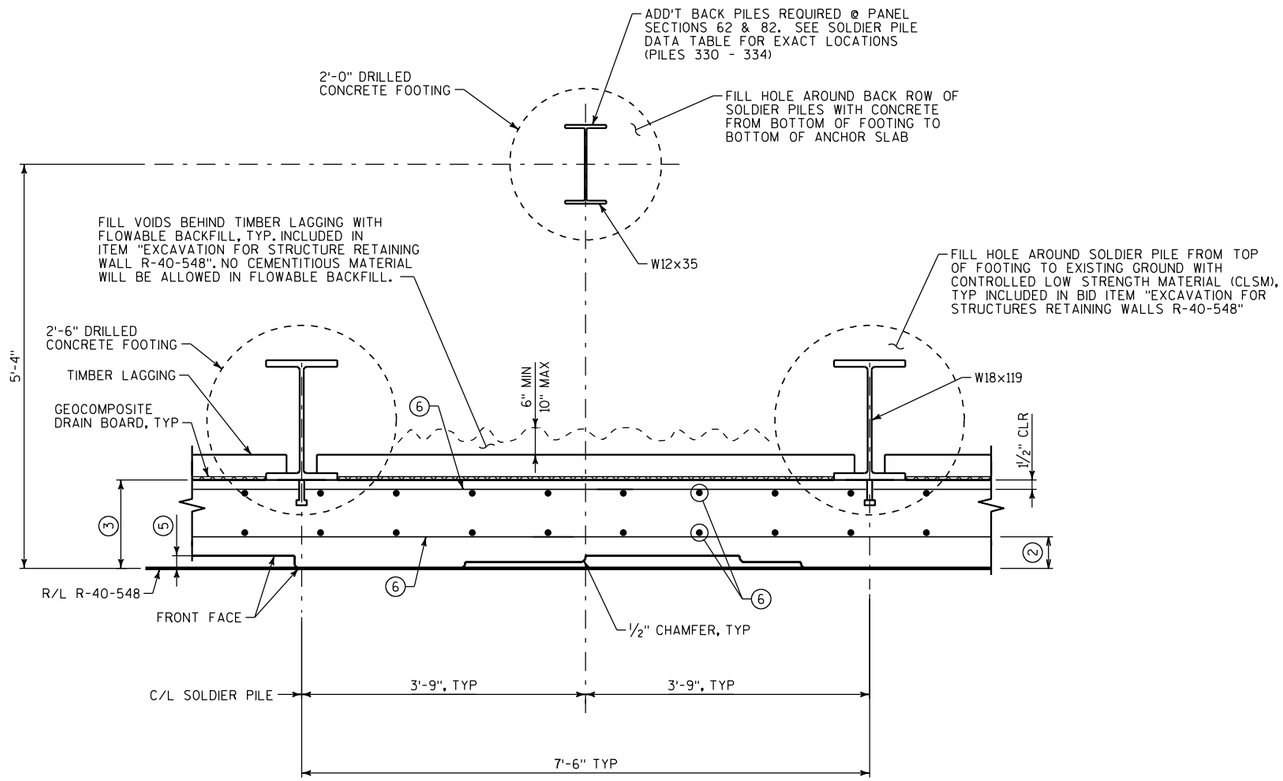
SOLDIER PILE WALL DETAILS (2 OF 3)

SHEET 29 OF 70

8

8

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SOLDIER PILE SECTION @ SIGN STRUCTURE

(TYP OF 2 LOCATIONS)

NOTES

(2) 4" CLR. FROM MAX. WALL THICKNESS.

(3) 10" MIN, 1'-0" MAX.

(5) SEE AESTHETIC WALL TREATMENT DETAILS SHEET.

(6) SEE WALL ELEVATION SHEETS FOR REINFORCEMENT BAR MARKS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

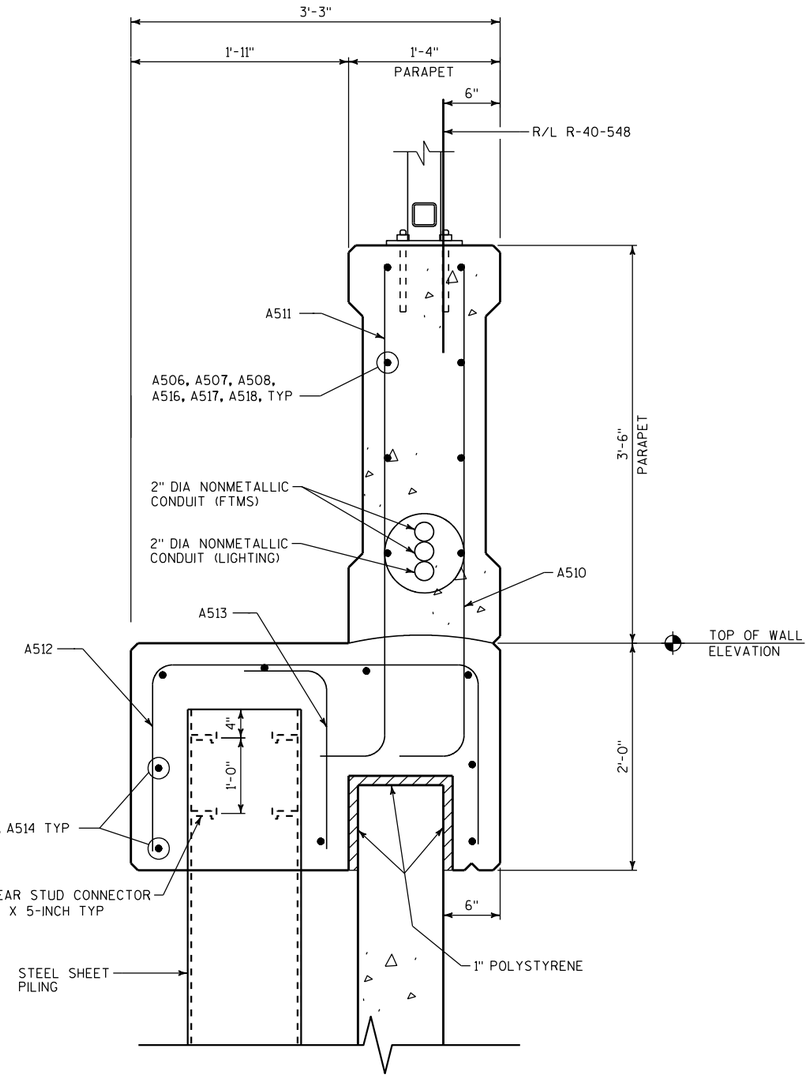
DRAWN BY TEK | PLANS CK'D. KES

SOLDIER PILE WALL DETAILS (3 OF 3)

SHEET 30 OF 70

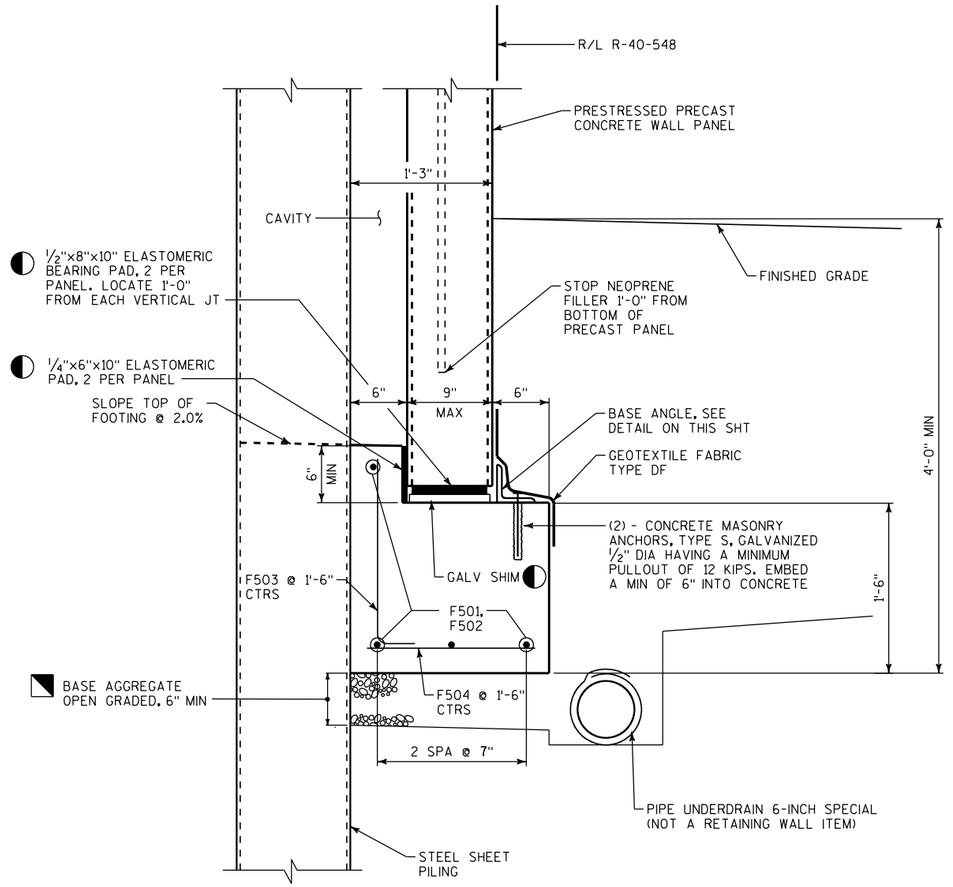
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1060-33-80



TYPICAL SHEET PILING SECTION - TOP OF WALL

UNIT 2

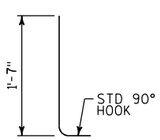


TYPICAL SHEET PILING SECTION - BOTTOM OF WALL

UNIT 2

FOOTING BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
F501	X	28	29'-6"		FOOTING LONGITUDINAL
F502	X	8	24'-6"		FOOTING LONGITUDINAL
F503	X	183	1'-10"	X	FOOTING VERTICAL
F504	X	183	1'-3"		FOOTING TRANSVERSE



F503

LEGEND

INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-548"

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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SHEET PILING WALL DETAILS (1 OF 3)

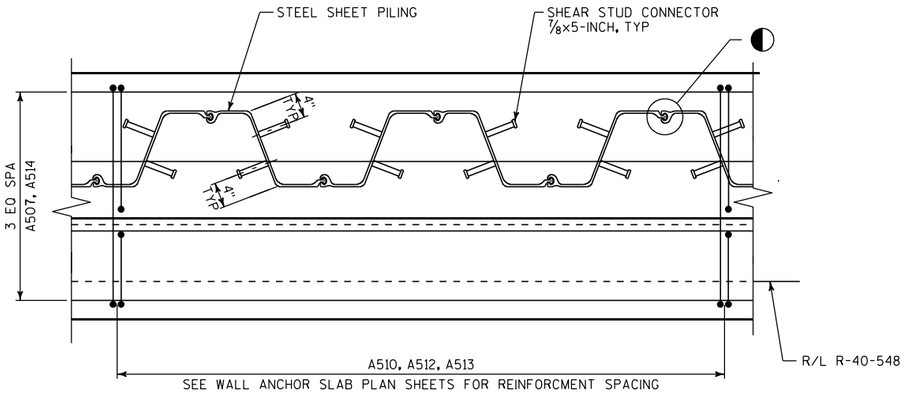
SHEET 31 OF 70

8

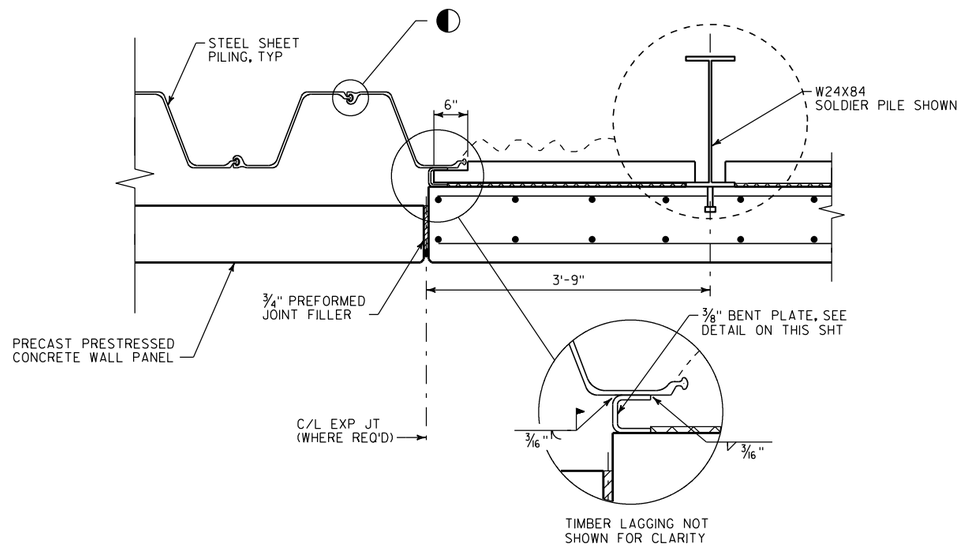
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STATE PROJECT NUMBER
1060-33-80

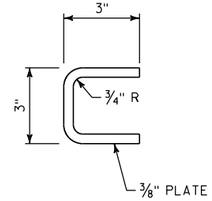


TOP OF WALL PLAN

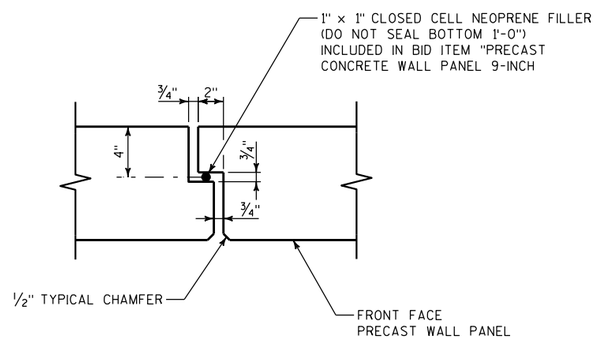


SHEET PILE/ SOLDIER PILE WALL JOINT

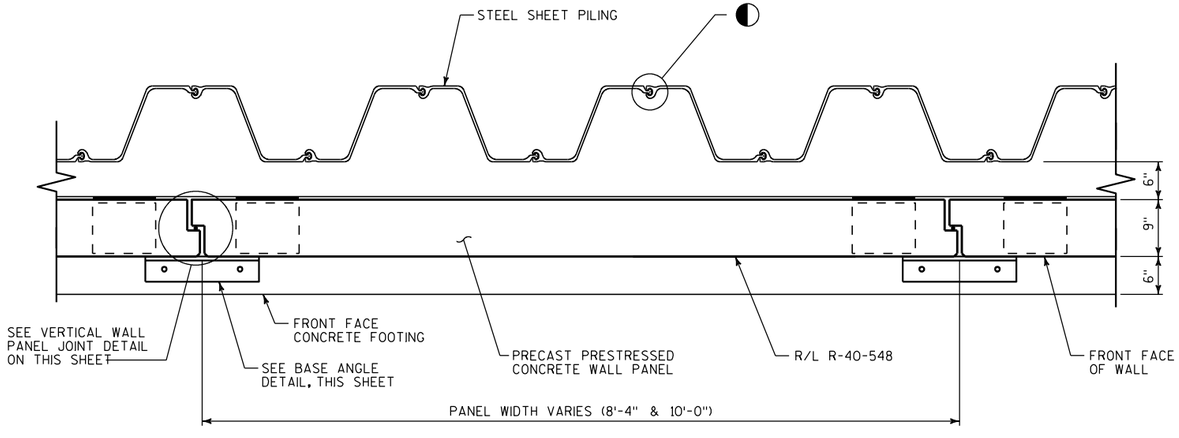
TYPICAL AT BEGINNING AND END OF UNIT 2



BENT PLATE DETAIL



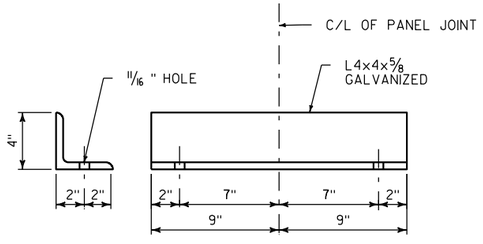
VERTICAL WALL PANEL JOINT DETAIL



TYPICAL FOOTING PLAN

LEGEND

◐ WATERPROOF SHEET PILING INTERLOCKS FROM TOP OF PILING TO 4'-0" BELOW dETENTION POND BOTTOM ELEVATION. SEE SPECIAL PROVISIONS FOR ACCEPTABLE MATERIALS.



BASE ANGLE DETAIL

(1 AT EACH PANEL JOINT)
INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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SHEET PILING WALL DETAILS (2 OF 3)

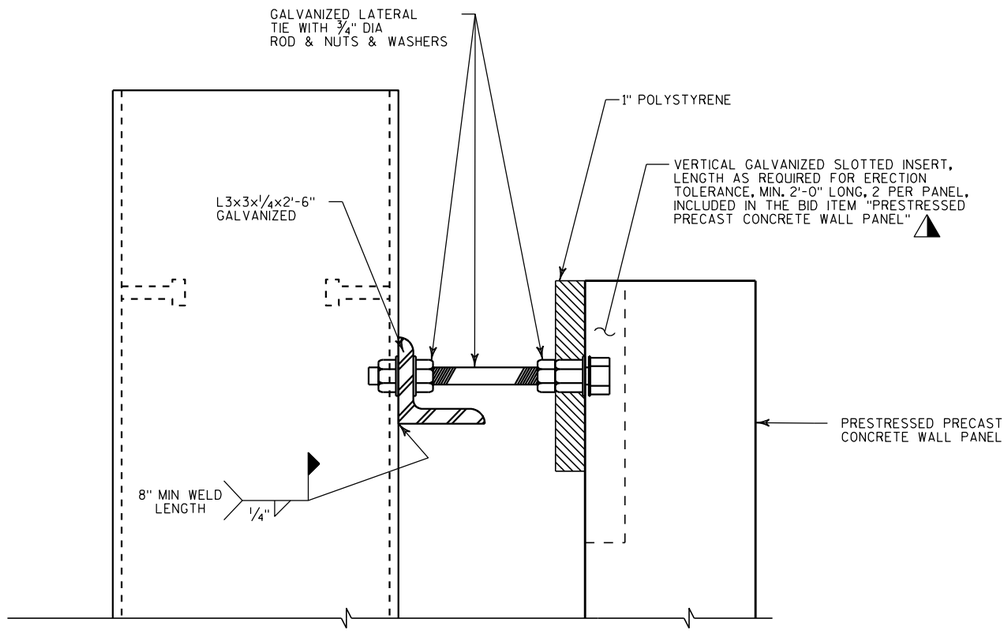
SHEET 32 OF 70

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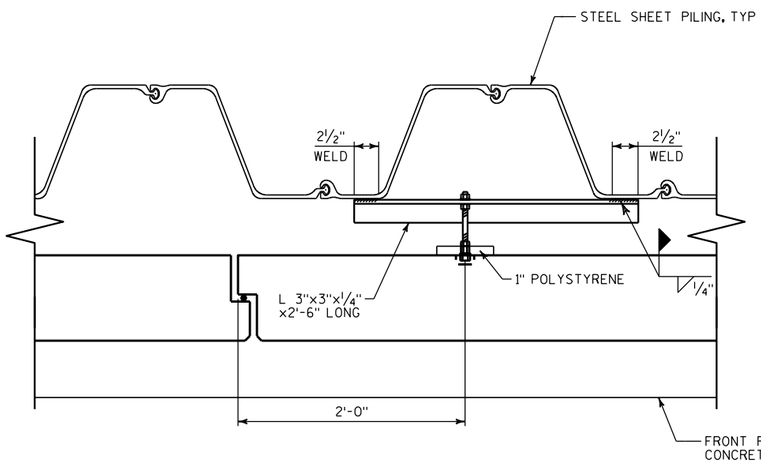
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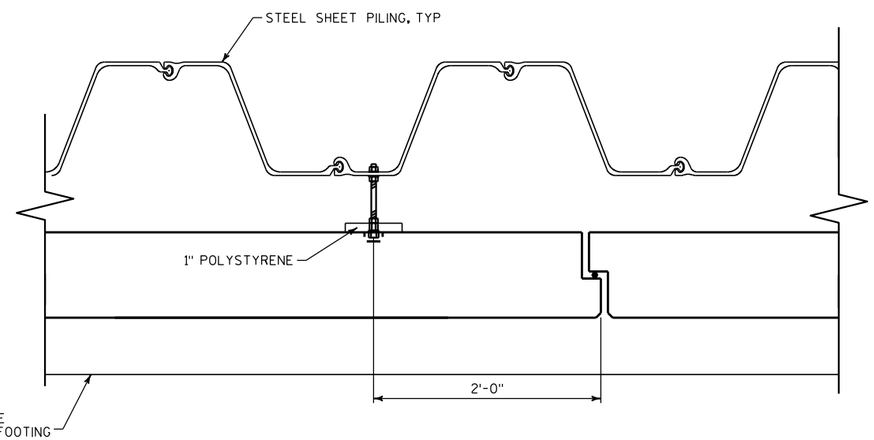
STATE PROJECT NUMBER
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TOP OF PRESTRESSED PRECAST WALL PANEL CONNECTION DETAIL



WALL PANEL CONNECTION SCENARIO 1



WALL PANEL CONNECTION SCENARIO 2

LEGEND

⚠ DESIGN THE VERTICAL SLOTTED INSERT FOR THE FOLLOWING SERVICE LOADS:

LOADS:

WIND = 3200 LBS TENSION
3200 LBS COMPRESSION

IMPACT = 2930 LBS COMPRESSION

LOCATE SLOTTED INSERTS 2'-0" FROM EDGE OF PANEL ON 10'-0" WIDE PANELS.
FOR PANELS LESS THAN 10'-0" WIDE, LOCATE INSERTS 1'-0" FROM EACH EDGE.

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STRUCTURE R-40-548

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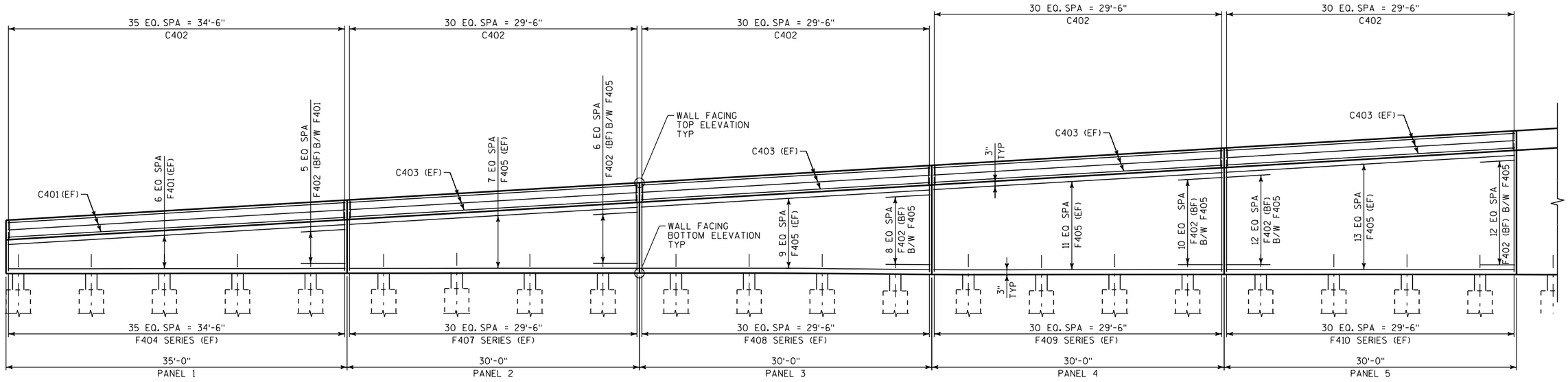
SHEET PILING WALL DETAILS (3 OF 3)

SHEET 33 OF 70

8

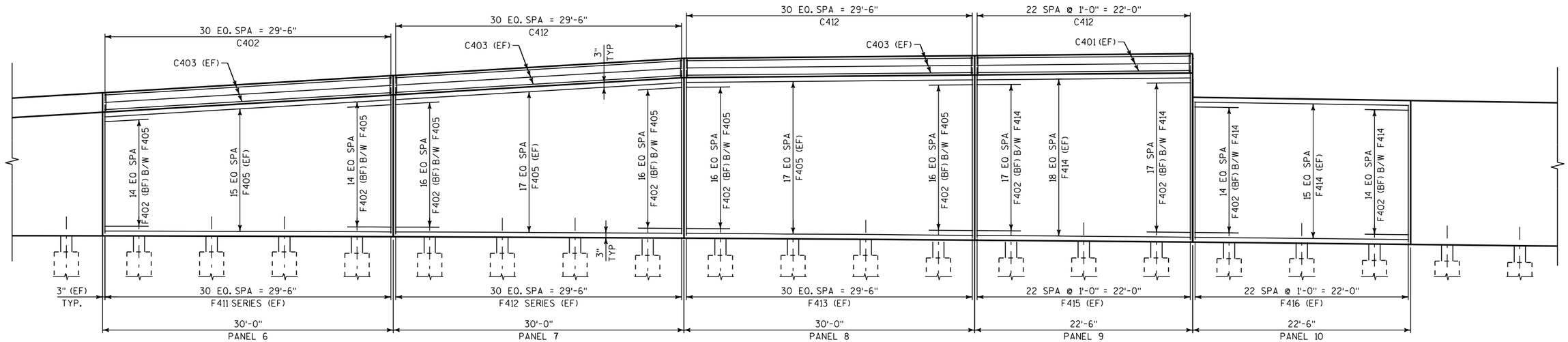
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WALL FACING ELEVATION

PANEL 1 THRU 5



8

8

WALL FACING ELEVATIONS

	PANEL NO.	WALL FACING TOP ELEVATION START	WALL FACING TOP ELEVATION END	WALL FACING BOTTOM ELEVATION START	WALL FACING BOTTOM ELEVATION END
*	1	761.22	763.30	755.74	755.78
*	2	763.30	765.07	755.78	755.80
*	3	765.07	766.85	755.80	755.66
*	4	766.85	768.63	755.66	755.67
*	5	768.63	770.41	755.67	755.65

WALL FACING ELEVATIONS

	PANEL NO.	WALL FACING TOP ELEVATION START	WALL FACING TOP ELEVATION END	WALL FACING BOTTOM ELEVATION START	WALL FACING BOTTOM ELEVATION END
*	6	770.41	772.19	755.65	755.56
*	7	772.19	773.97	755.56	755.42
*	8	773.97	774.24	755.42	755.21
*	9	774.24	774.45	755.21	755.01
	10	769.95	769.61	755.01	754.77

WALL FACING ELEVATION

PANEL 6 THRU 10

LEGEND

* WALL FACING TOP ELEVATION INCLUDES COPING

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

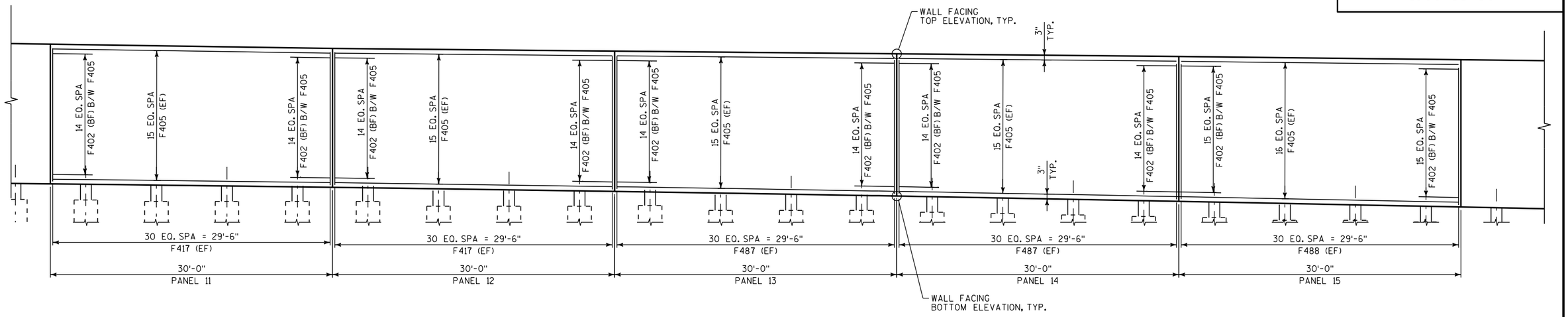
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WALL ELEVATION
(1 OF 10)

SHEET 34 OF 70

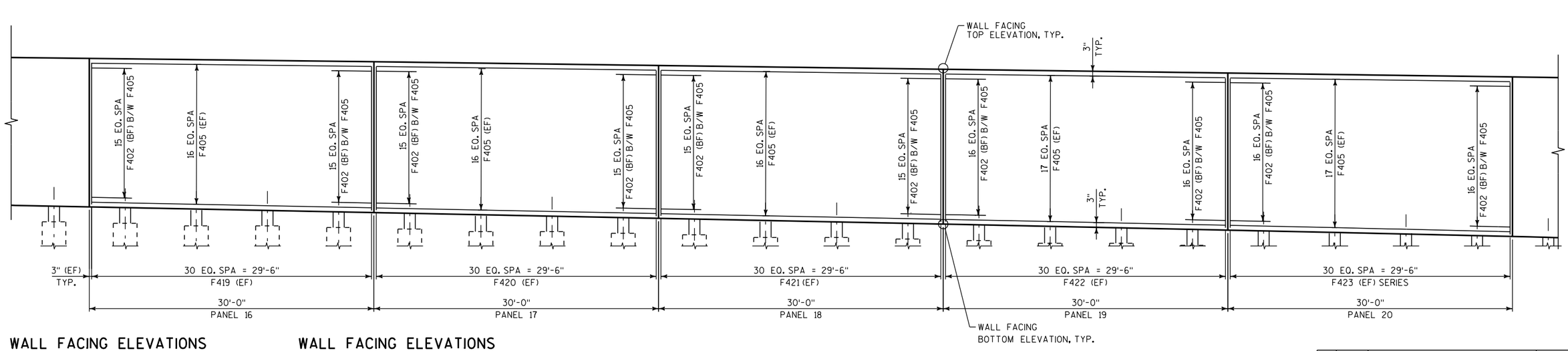
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WALL FACING ELEVATION

PANEL 11 THRU 15



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
11	769.61	769.15	754.77	754.40
12	769.15	768.86	754.40	753.97
13	768.86	768.57	753.97	753.48
14	768.57	768.28	753.48	752.92
15	768.28	767.95	752.92	752.31

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
16	767.95	767.60	752.31	751.71
17	767.60	767.20	751.71	751.10
18	767.20	766.80	751.10	750.50
19	766.80	766.40	750.50	749.87
20	766.40	766.00	749.87	749.19

WALL FACING ELEVATION

PANEL 16 THRU 20

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

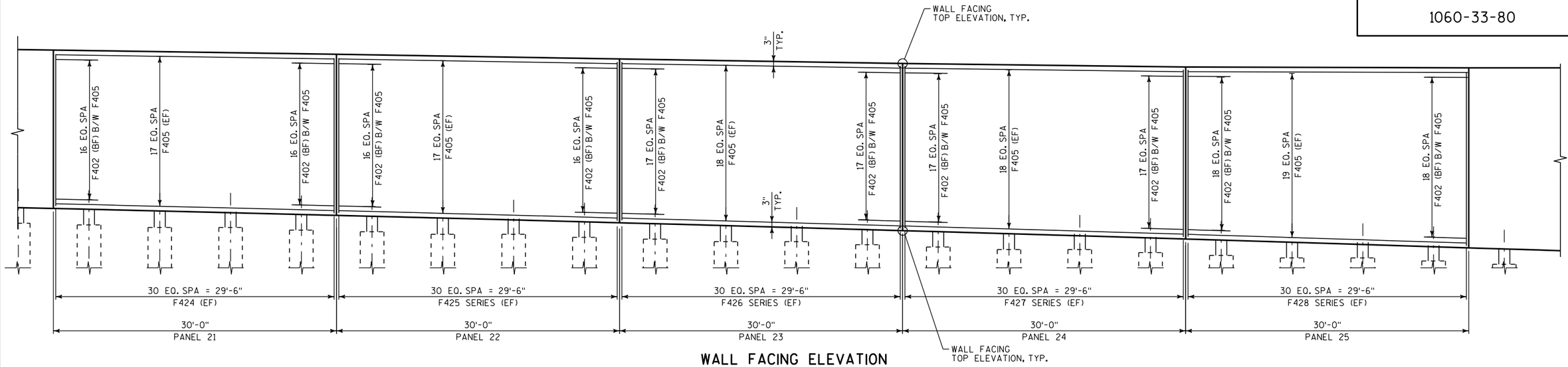
DRAWN BY	BHI	PLANS CK'D.	KES

WALL ELEVATION (2 OF 10)

SHEET 35 OF 70

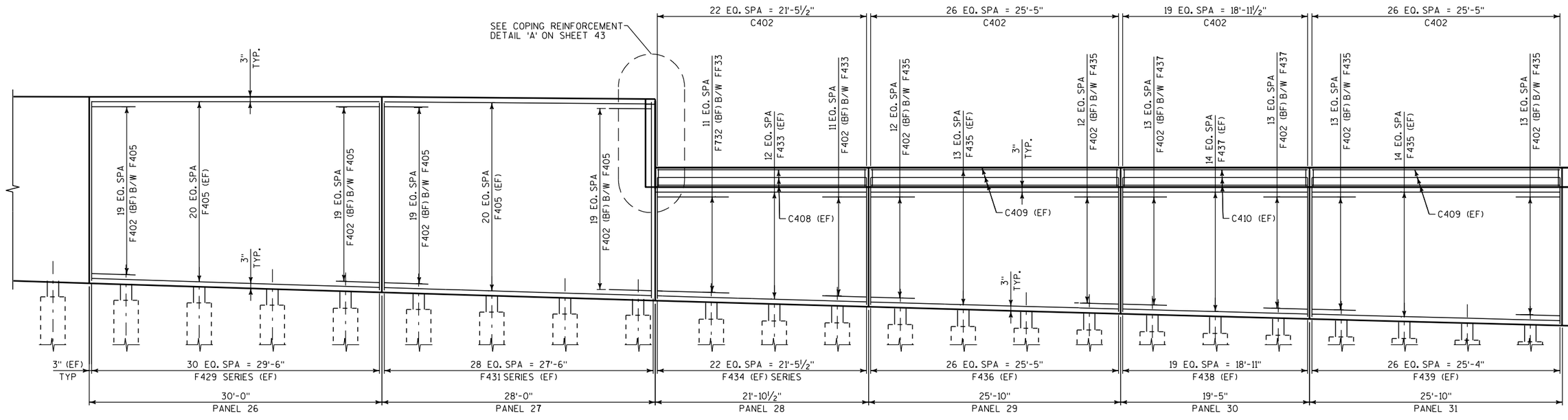
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WALL FACING ELEVATION

PANEL 21 THRU 25



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
21	766.00	765.55	749.19	748.46
22	765.55	765.05	748.46	747.67
23	765.05	764.57	747.67	746.84
24	764.57	764.20	746.84	745.95
25	764.20	764.10	745.95	745.01

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
26	764.10	764.10	745.01	744.07
27	764.10	763.87	744.07	746.23
28	756.85	756.85	746.23	742.59
29	756.85	756.85	742.59	741.87
30	756.85	756.85	741.87	741.35
31	756.85	756.85	741.35	740.68

WALL FACING ELEVATION

PANEL 26 THRU 31

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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WALL ELEVATION (3 OF 10)

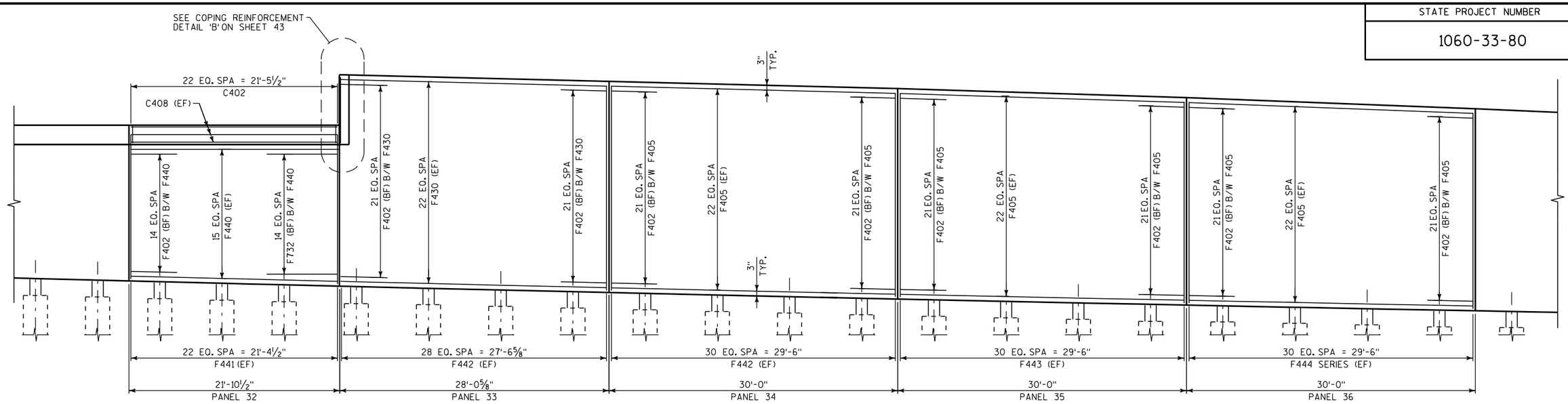
SHEET 36 OF 70

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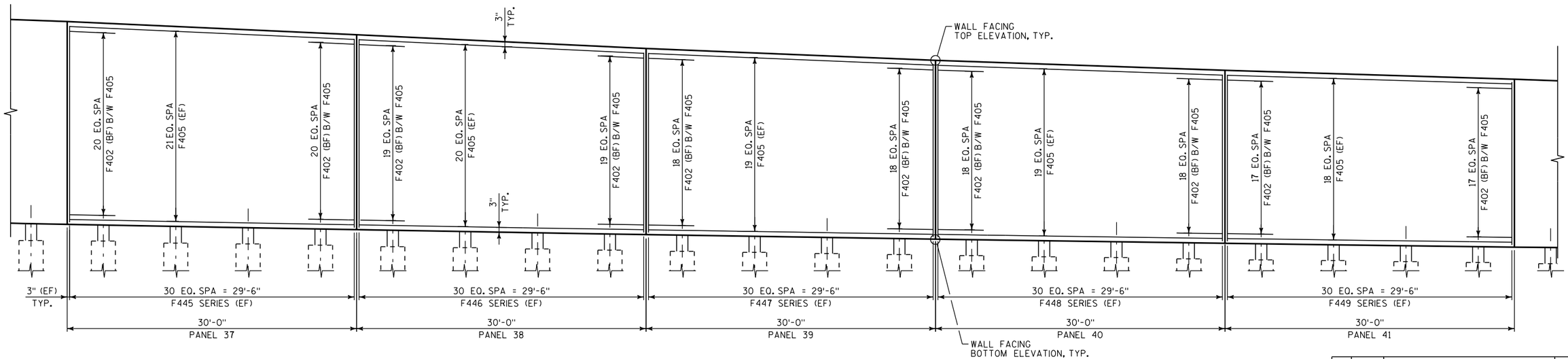
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STATE PROJECT NUMBER
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WALL FACING ELEVATION

PANEL 32 THRU 36



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
32	756.85	756.85	740.68	740.14
33	762.11	761.41	740.14	739.47
34	761.41	760.66	739.47	738.80
35	760.66	759.72	738.80	738.17
36	759.72	758.57	738.17	737.58

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
37	758.57	757.21	737.58	737.03
38	757.21	755.78	737.03	736.51
39	755.78	754.55	736.51	736.04
40	754.55	753.52	736.04	735.61
41	753.52	752.61	735.61	735.22

WALL FACING ELEVATION

PANEL 37 THRU 31

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

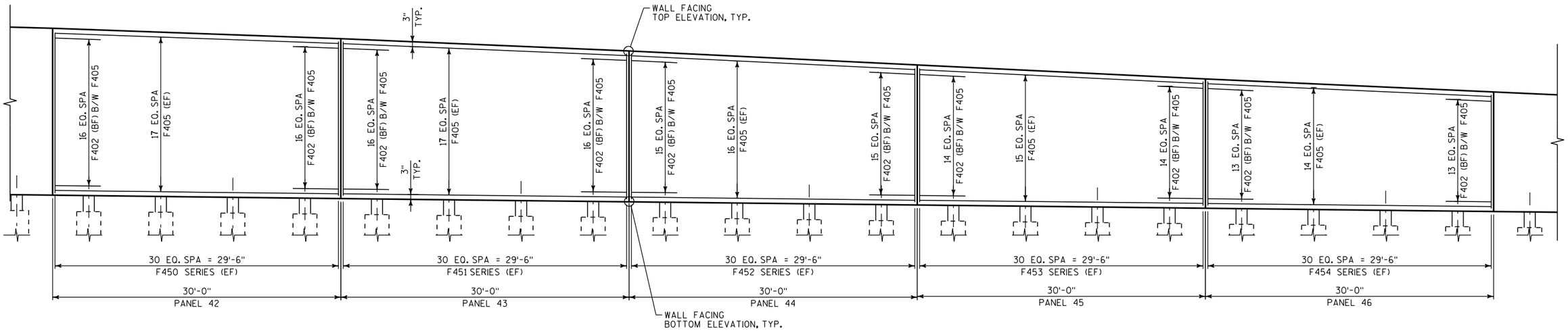
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WALL ELEVATION (4 OF 10)

SHEET 37 OF 70

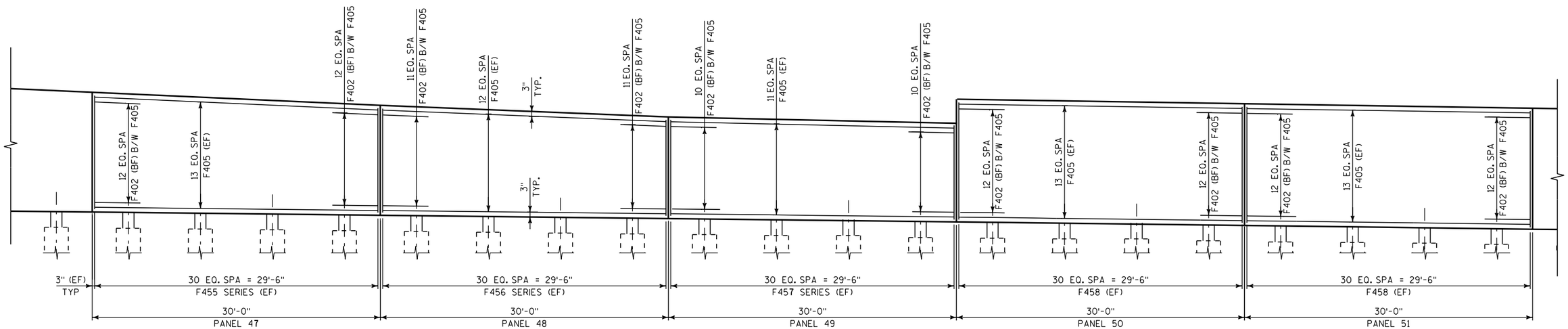
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WALL FACING ELEVATION

PANEL 42 THRU 46



WALL FACING ELEVATION

PANEL 47 THRU 51

8

8

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
42	752.61	751.53	735.22	734.87
43	751.53	750.26	734.87	734.53
44	750.26	748.80	734.53	734.20
45	748.80	747.34	734.20	733.86
46	747.34	745.98	733.86	733.52

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
47	745.98	744.63	733.52	733.19
48	744.63	743.42	733.19	732.85
49	743.42	742.76	732.85	732.50
50	745.26	744.80	732.50	732.13
51	744.80	744.33	732.13	731.74

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

FOR EXPANSION AND CONTRACTION JOINT LOCATIONS, SEE GENERAL PLAN & ELEVATION SHEETS.

WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

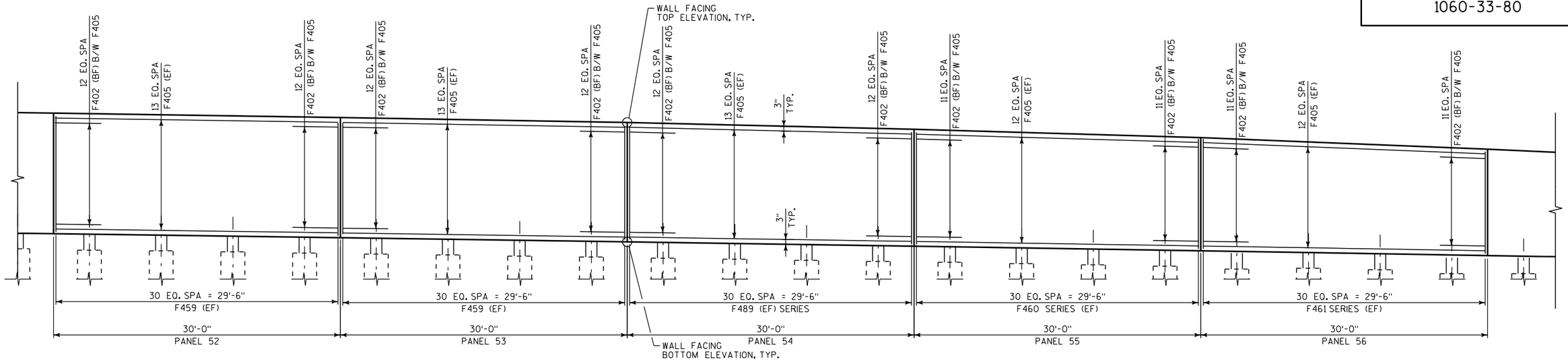
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WALL ELEVATION (5 OF 10)

SHEET 38 OF 70

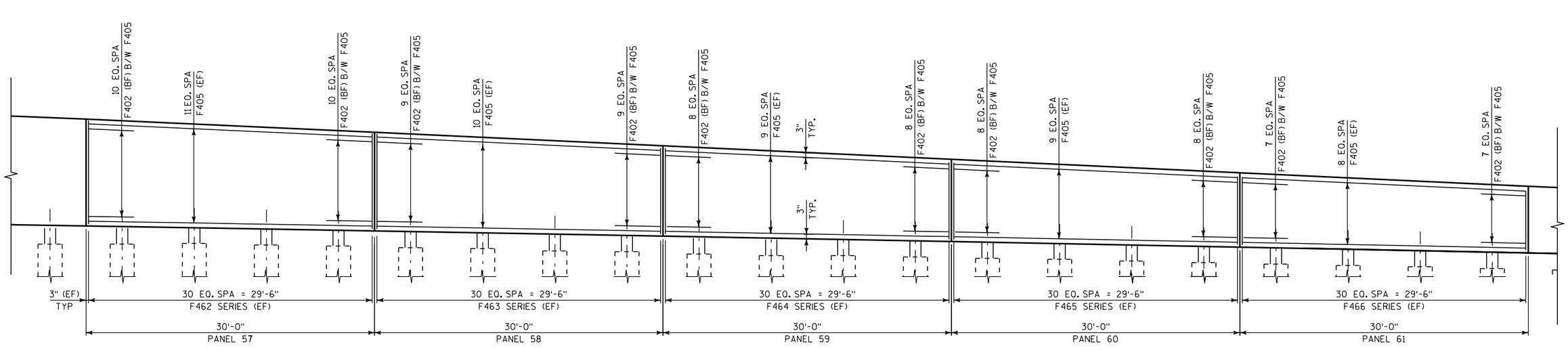
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANEL 52 THRU 56



WALL FACING ELEVATION

PANEL 57 THRU 61

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
52	744.33	743.87	731.74	731.33
53	743.87	743.36	731.33	730.89
54	743.36	742.64	730.89	730.43
55	742.64	741.77	730.43	729.96
56	741.77	740.57	729.96	729.46

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
57	740.57	739.20	729.46	728.94
58	739.20	737.79	728.94	728.40
59	737.79	736.38	728.40	727.84
60	736.38	734.98	727.84	727.25
61	734.98	733.57	727.25	726.65

NOTES

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WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

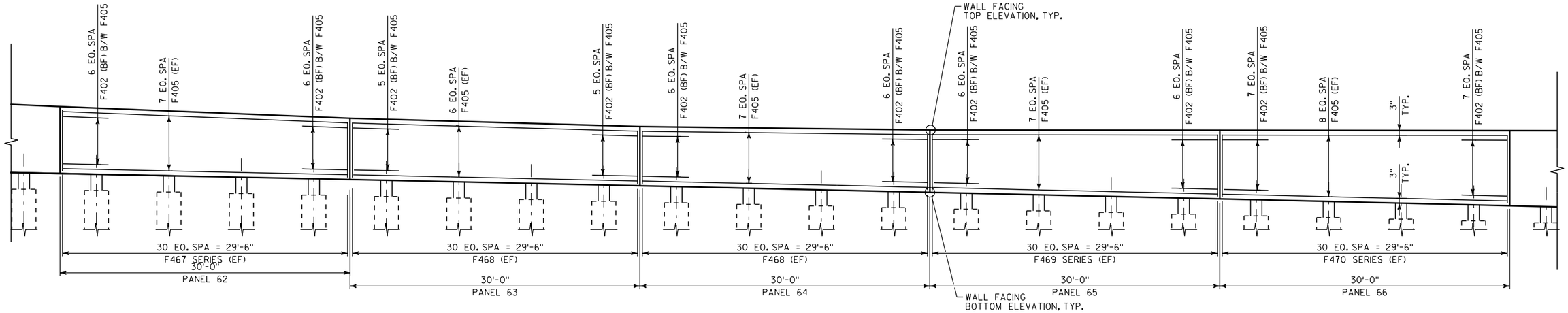
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WALL ELEVATION (6 OF 10)

SHEET 39 OF 70

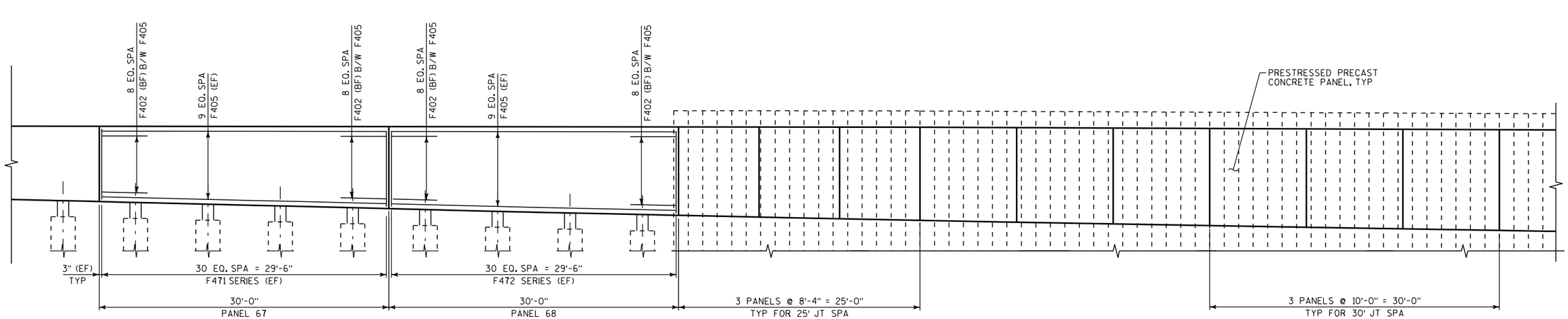
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANEL 52 THRU 56



WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
62	733.57	732.37	726.65	726.02
63	732.37	731.52	726.02	725.38
64	731.52	731.16	725.38	724.71
65	731.16	731.13	724.71	724.02
66	731.13	731.09	724.02	723.31

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
67	731.09	731.06	723.31	722.58
68	731.06	731.03	722.58	721.89
69	731.03	731.00	721.89	721.36
70	731.00	730.87	721.36	720.82
71	730.87	730.74	720.82	720.32

WALL FACING ELEVATION

PANEL 67 THRU 71

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

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WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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WALL ELEVATION (7 OF 10)

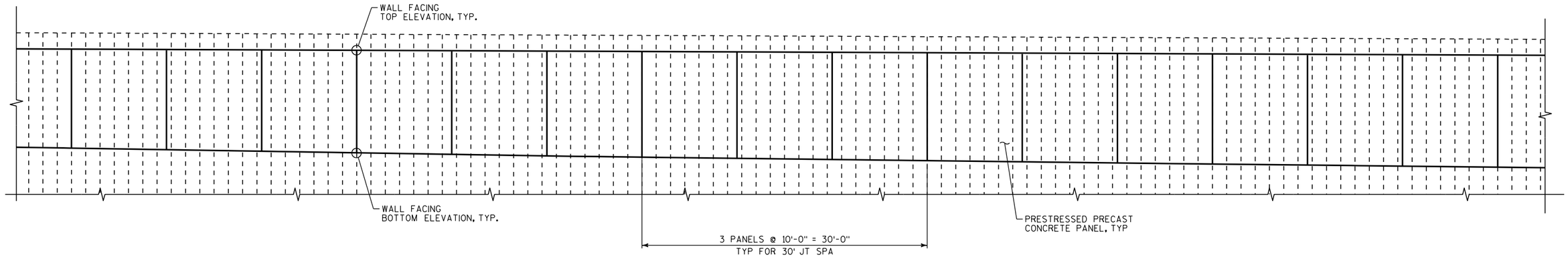
SHEET 40 OF 70

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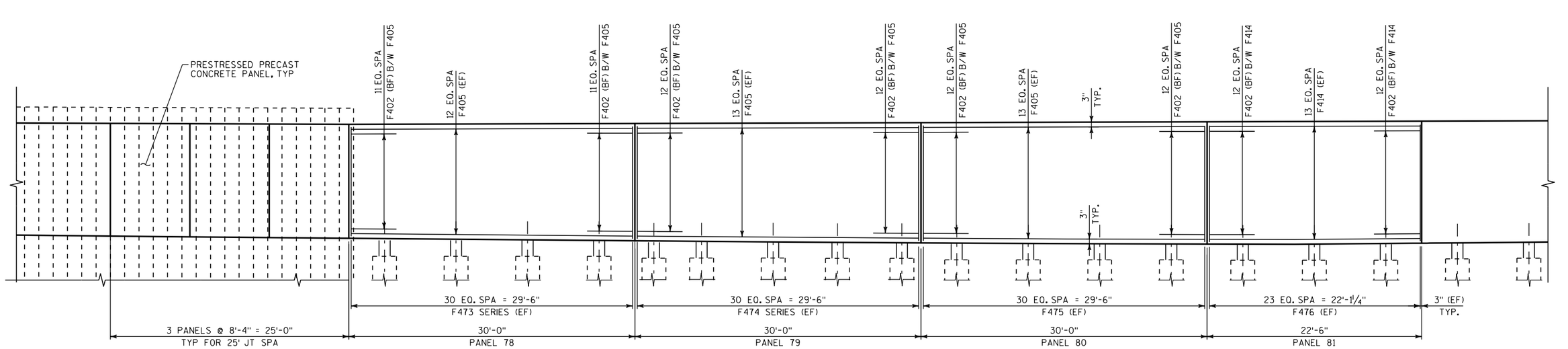
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANEL 72 THRU 76



WALL FACING ELEVATION

PANEL 77 THRU 81

8

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WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
72	730.74	730.61	720.32	719.83
73	730.61	730.48	719.83	719.37
74	730.48	730.36	719.37	719.00
75	730.36	730.23	719.00	718.65
76	730.23	730.10	718.65	718.31

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
77	730.10	729.99	718.31	718.08
78	729.99	730.09	718.08	717.81
79	730.09	730.18	717.81	717.60
80	730.18	730.27	717.60	717.47
81	730.27	730.34	717.47	717.56

NOTES

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WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

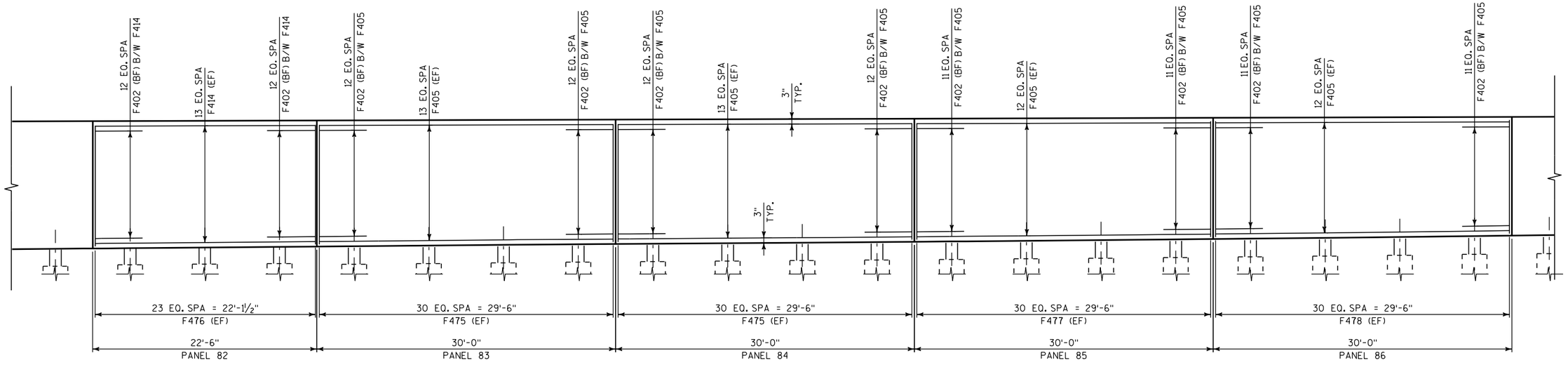
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WALL ELEVATION (8 OF 10)

SHEET 41 OF 70

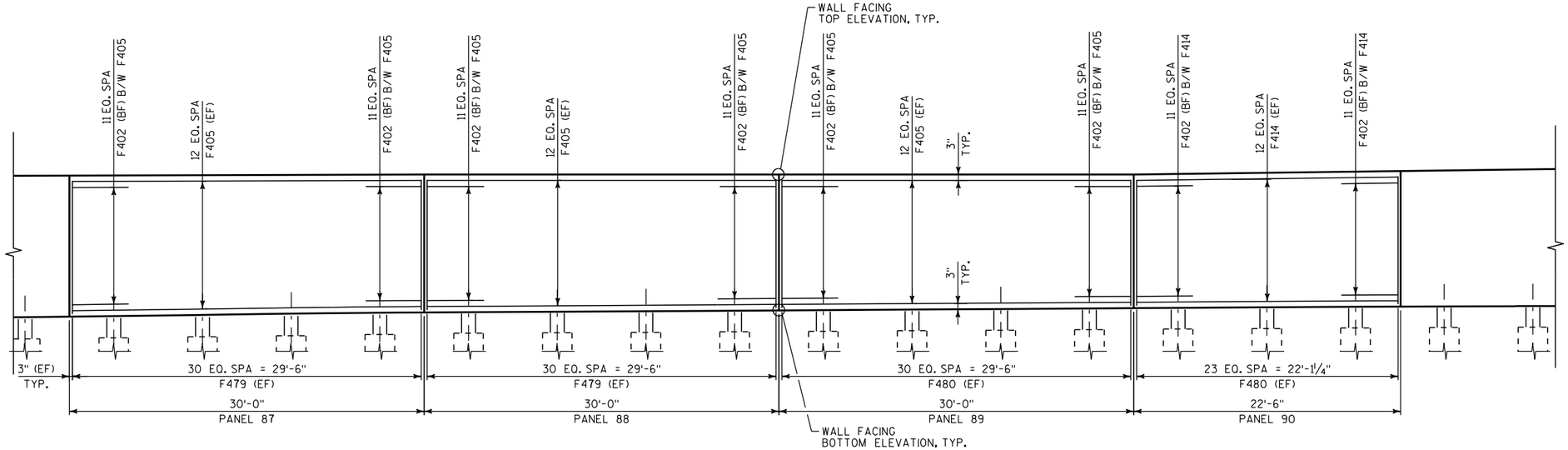
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANEL 82 THRU 86



WALL FACING ELEVATION

PANEL 87 THRU 90

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
82	730.34	730.40	717.56	717.76
83	730.40	730.49	717.76	718.02
84	730.49	730.58	718.02	718.24
85	730.58	730.67	718.24	718.51
86	730.67	730.76	718.51	718.86

WALL FACING ELEVATIONS

PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
	START	END	START	END
87	730.76	730.85	718.86	719.21
88	730.85	730.85	719.21	719.38
89	730.85	730.85	719.38	719.57
90	730.85	731.14	719.57	719.70

NOTES

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WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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WALL ELEVATION
(9 OF 10)

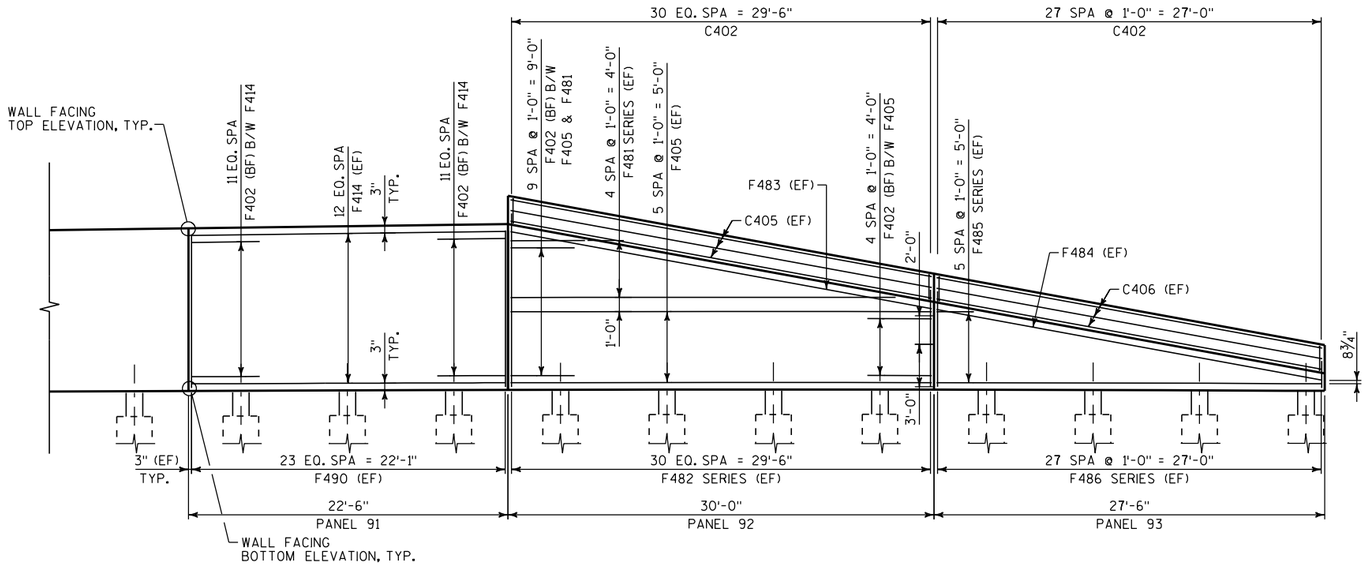
SHEET 42 OF 70

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STATE PROJECT NUMBER
1060-33-80

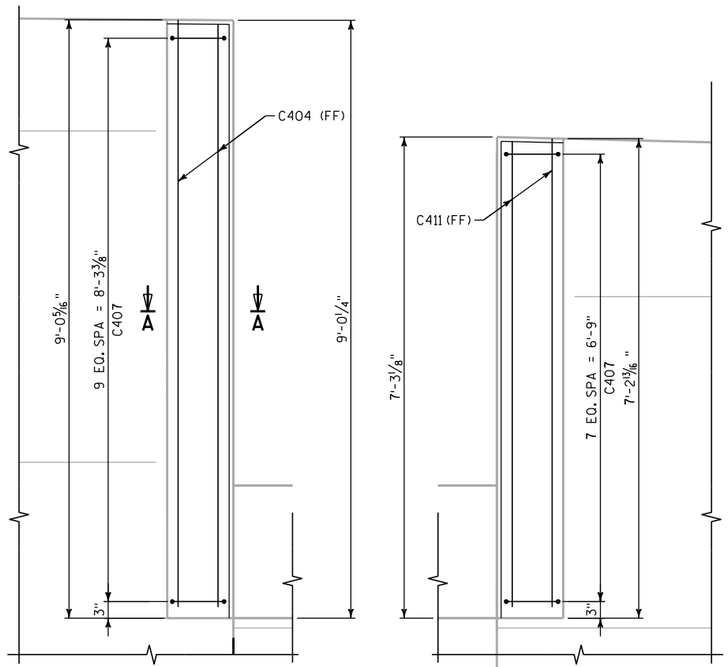


WALL FACING ELEVATION

PANEL 91 THRU 93

WALL FACING ELEVATIONS

	PANEL NO.	WALL FACING TOP ELEVATION		WALL FACING BOTTOM ELEVATION	
		START	END	START	END
	91	731.14	731.43	719.70	719.77
*	92	733.43	727.96	719.77	719.78
*	93	727.96	722.93	719.78	719.70

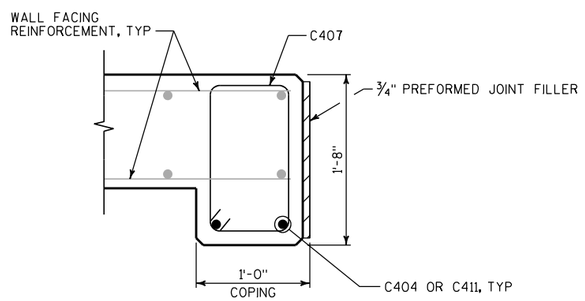


COPING REINFORCEMENT

DETAIL A

COPING REINFORCEMENT

DETAIL B



SECTION A-A

VERTICAL COPING, TYP

LEGEND

* WALL FACING TOP ELEVATION INCLUDES COPING

NOTES

ONLY WALL FACING SHOWN FOR CLARITY

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WALL FACING TOP ELEVATION INCLUDES ¾" PREFORMED JOINT FILLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

WALL ELEVATION
(10 OF 10)

SHEET 43 OF 70

8

8

STATE PROJECT NUMBER
1060-33-80

BILL OF BARS UNIT 1 - WALL FACING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
F401	X	14	34'-6"			LONGITUDINAL EF
F402	X	1884	4'-6"			LONGITUDINAL BF
F403	X	0	0'-0"			NOT USED
F404	X	72	6'-1"		⚠	VERTICAL EF
F405	X	1762	29'-6"			LONGITUDINAL EF
F406	X	0	0'-0"			NOT USED
F407	X	62	8'-0"		⚠	VERTICAL EF
F408	X	62	9'-10"		⚠	VERTICAL EF
F409	X	62	11'-8"		⚠	VERTICAL EF
F410	X	62	13'-5"		⚠	VERTICAL EF
F411	X	62	15'-3"		⚠	VERTICAL EF
F412	X	62	17'-2"		⚠	VERTICAL EF
F413	X	62	18'-2"			VERTICAL EF
F414	X	70	22'-0"			LONGITUDINAL EF
F415	X	46	18'-7"			VERTICAL EF
F416	X	46	14'-3"			VERTICAL EF
F417	X	124	14'-4"			VERTICAL EF
F418	X	62	15'-1"		⚠	VERTICAL EF
F419	X	62	15'-3"			VERTICAL EF
F420	X	62	15'-6"			VERTICAL EF
F421	X	62	15'-8"			VERTICAL EF
F422	X	62	15'-11"			VERTICAL EF
F423	X	62	16'-3"		⚠	VERTICAL EF
F424	X	62	16'-5"			VERTICAL EF
F425	X	62	16'-9"		⚠	VERTICAL EF
F426	X	62	17'-1"		⚠	VERTICAL EF
F427	X	62	17'-6"		⚠	VERTICAL EF
F428	X	62	18'-3"		⚠	VERTICAL EF
F429	X	62	19'-2"		⚠	VERTICAL EF
F430	X	88	27'-6"			LONGITUDINAL EF
F431	X	58	18'-5"		⚠	VERTICAL EF
F732	X	27	7'-4"			LONGITUDINAL BF
F433	X	26	21'-5"			LONGITUDINAL EF
F434	X	46	12'-0"		⚠	VERTICAL EF
F435	X	58	25'-4"			LONGITUDINAL EF
F436	X	54	13'-10"			VERTICAL EF
F437	X	30	18'-11"			LONGITUDINAL EF
F438	X	40	14'-7"			VERTICAL EF
F439	X	54	15'-1"			VERTICAL EF
F440	X	32	21'-5"			LONGITUDINAL EF
F441	X	46	15'-9"			VERTICAL EF
F442	X	120	21'-6"			VERTICAL EF
F443	X	62	21'-2"			VERTICAL EF
F444	X	62	20'-9"		⚠	VERTICAL EF
F445	X	62	20'-1"		⚠	VERTICAL EF
F446	X	62	19'-3"		⚠	VERTICAL EF
F447	X	62	18'-6"		⚠	VERTICAL EF
F448	X	62	17'-9"		⚠	VERTICAL EF
F449	X	62	17'-2"		⚠	VERTICAL EF
F450	X	62	16'-6"		⚠	VERTICAL EF
F451	X	62	15'-9"		⚠	VERTICAL EF

BILL OF BARS UNIT 1 - WALL FACING CONTINUED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
F452	X	62	14'-9"		⚠	VERTICAL EF
F453	X	62	13'-7"		⚠	VERTICAL EF
F454	X	62	12'-6"		⚠	VERTICAL EF
F455	X	62	11'-6"		⚠	VERTICAL EF
F456	X	62	10'-7"		⚠	VERTICAL EF
F457	X	62	10'-0"		⚠	VERTICAL EF
F458	X	124	12'-2"			VERTICAL EF
F459	X	124	11'-11"			VERTICAL EF
F460	X	62	11'-7"		⚠	VERTICAL EF
F461	X	62	11'-0"		⚠	VERTICAL EF
F462	X	62	10'-3"		⚠	VERTICAL EF
F463	X	62	9'-5"		⚠	VERTICAL EF
F464	X	62	8'-6"		⚠	VERTICAL EF
F465	X	62	7'-8"		⚠	VERTICAL EF
F466	X	62	6'-11"		⚠	VERTICAL EF
F467	X	62	6'-2"		⚠	VERTICAL EF
F468	X	124	5'-6"		⚠	VERTICAL EF
F469	X	62	6'-4"		⚠	VERTICAL EF
F470	X	62	7'-0"		⚠	VERTICAL EF
F471	X	62	7'-8"		⚠	VERTICAL EF
F472	X	62	8'-4"		⚠	VERTICAL EF
F487	X	62	14'-6"			VERTICAL EF
F488	X	62	14'-8"			VERTICAL EF
F489	X	62	11'-11"		⚠	VERTICAL EF

BILL OF BARS UNIT 3 - WALL FACING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
F402	X	363	4'-11"			LONGITUDINAL BF
F405	X	280	29'-6"			LONGITUDINAL EF
F414	X	108	22'-0"			LONGITUDINAL EF
F473	X	62	11'-8"		⚠	VERTICAL EF
F474	X	62	12'-0"		⚠	VERTICAL EF
F475	X	186	11'-11"			VERTICAL EF
F476	X	96	12'-3"			VERTICAL EF
F477	X	62	11'-9"			VERTICAL EF
F478	X	62	11'-6"			VERTICAL EF
F479	X	62	11'-3"			VERTICAL EF
F480	X	110	10'-10"			VERTICAL EF
F481	X	10	16'-3"		⚠	LONGITUDINAL EF
F482	X	62	10'-5"		⚠	VERTICAL EF
F483	X	2	30'-0"			LONGITUDINAL EF
F484	X	2	27'-5"			LONGITUDINAL EF
F485	X	12	15'-0"			LONGITUDINAL EF
F486	X	56	5'-3"		⚠	VERTICAL EF
F490	X	110	11'-0"			VERTICAL EF

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
F404	2 SERIES OF 36	5'-0" TO 7'-1"
F407	2 SERIES OF 31	7'-1" TO 8'-10"
F408	2 SERIES OF 31	8'-10" TO 10'-9"
F409	2 SERIES OF 31	10'-9" TO 12'-6"
F410	2 SERIES OF 31	12'-6" TO 14'-4"
F411	2 SERIES OF 31	14'-4" TO 16'-2"
F412	2 SERIES OF 31	16'-2" TO 18'-1"
F418	2 SERIES OF 31	14'-11" TO 15'-2"
F423	2 SERIES OF 31	16'-1" TO 16'-4"
F425	2 SERIES OF 31	16'-8" TO 16'-11"
F426	2 SERIES OF 31	16'-11" TO 17'-3"
F427	2 SERIES OF 31	17'-3" TO 17'-10"
F428	2 SERIES OF 31	17'-10" TO 18'-8"
F429	2 SERIES OF 31	18'-8" TO 19'-7"
F431	2 SERIES OF 29	17'-2" TO 19'-7"
F434	2 SERIES OF 23	10'-2" TO 13'-10"
F444	2 SERIES OF 31	20'-6" TO 21'-1"
F445	2 SERIES OF 31	19'-9" TO 20'-6"
F446	2 SERIES OF 31	18'-10" TO 19'-9"
F447	2 SERIES OF 31	18'-1" TO 18'-10"
F448	2 SERIES OF 31	17'-5" TO 18'-1"
F449	2 SERIES OF 31	16'-11" TO 17'-5"
F450	2 SERIES OF 31	16'-2" TO 16'-11"
F451	2 SERIES OF 31	15'-3" TO 16'-2"
F452	2 SERIES OF 31	14'-2" TO 15'-3"
F453	2 SERIES OF 31	13'-0" TO 14'-2"
F454	2 SERIES OF 31	12'-0" TO 13'-0"
F455	2 SERIES OF 31	11'-0" TO 12'-0"
F456	2 SERIES OF 31	10'-1" TO 11'-0"
F457	2 SERIES OF 31	9'-10" TO 10'-1"
F460	2 SERIES OF 31	11'-4" TO 11'-9"
F461	2 SERIES OF 31	10'-8" TO 11'-4"
F462	2 SERIES OF 31	9'-10" TO 10'-8"
F463	2 SERIES OF 31	8'-11" TO 9'-10"
F464	2 SERIES OF 31	8'-1" TO 8'-11"
F465	2 SERIES OF 31	7'-3" TO 8'-1"
F466	2 SERIES OF 31	6'-6" TO 7'-3"
F467	2 SERIES OF 31	5'-11" TO 6'-6"
F469	2 SERIES OF 31	6'-0" TO 6'-8"
F470	2 SERIES OF 31	6'-8" TO 7'-4"
F471	2 SERIES OF 31	7'-4" TO 8'-0"
F472	2 SERIES OF 31	8'-0" TO 8'-8"
F473	2 SERIES OF 31	11'-5" TO 11'-10"
F474	2 SERIES OF 31	11'-10" TO 12'-2"
F481	2 SERIES OF 5	5'-3" TO 27'-0"
F482	2 SERIES OF 31	7'-9" TO 13'-2"
F485	2 SERIES OF 6	3'-0" TO 27'-0"
F486	2 SERIES OF 27	2'-9" TO 7'-9"
F489	2 SERIES OF 31	11'-9" TO 12'-0"

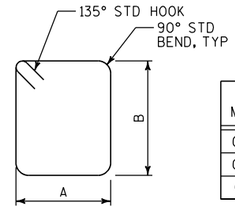
BUNDLE AND TAG EACH SERIES SEPARATELY

BILL OF BARS UNIT 1 - COPING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
C401	X	8	34'-6"			LONGITUDINAL EF
C402	X	311	6'-2"	X		VERTICAL STIRRUP
C403	X	56	29'-6"			LONGITUDINAL EF
C404	X	2	8'-6"			LONGITUDINAL EF
C407	X	22	4'-4"	X		STIRRUP
C408	X	16	21'-5"			VERTICAL EF
C409	X	16	25'-5"			VERTICAL EF
C410	X	8	18'-11"			VERTICAL EF
C411	X	2	6'-9"			VERTICAL EF
C412	X	85	6'-6"	X		VERTICAL STIRRUP

BILL OF BARS UNIT 2 - COPING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
C402	X	59	6'-2"	X		COPING VERTICAL TIE
C405	X	8	29'-9"			COPING LONGITUDINAL
C406	X	8	27'-2"			COPING LONGITUDINAL



BAR MARK	DIM A	DIM B
C402	1'-2"	1'-8"
C407	7"	1'-4"
C412	1'-4"	1'-8"

C402, C407, C412

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

SOLDIER PILE FACING REINFORCING SCHEDULE

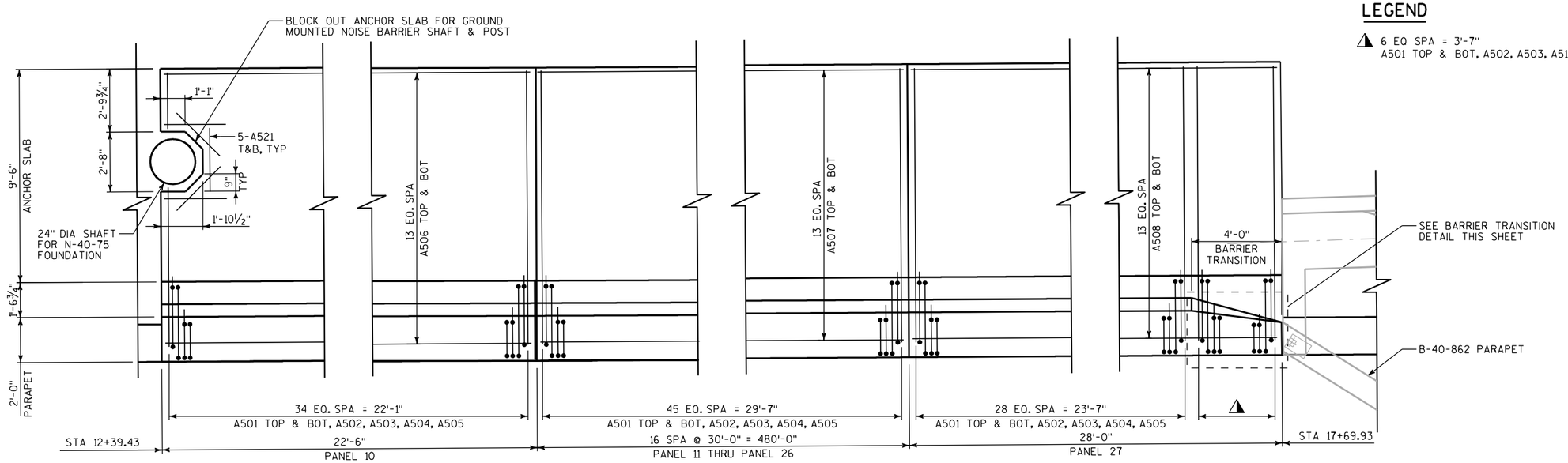
SHEET 44 OF 70

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PLOT DATE : 09-MAY-2014 14:04
PLOT BY : MSCKES
PLOT NAME : R40548_080511_de
PLOT SCALE : 8:1

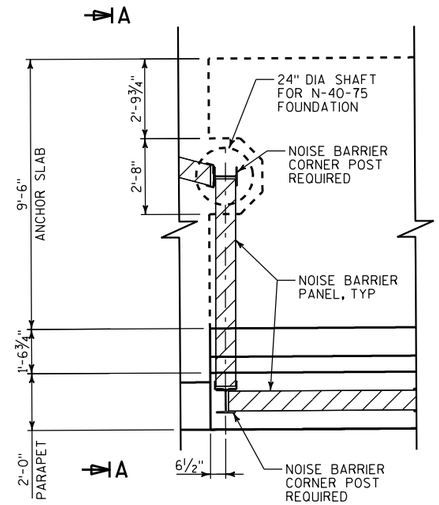
STATE PROJECT NUMBER
1060-33-80

LEGEND

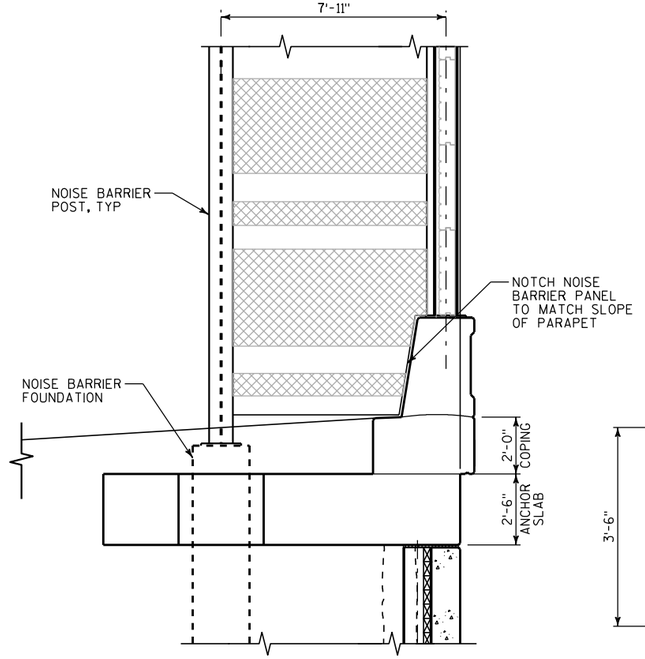
⚠ 6 EQ SPA = 3'-7"
A501 TOP & BOT, A502, A503, A517 SERIES, A518 SERIES



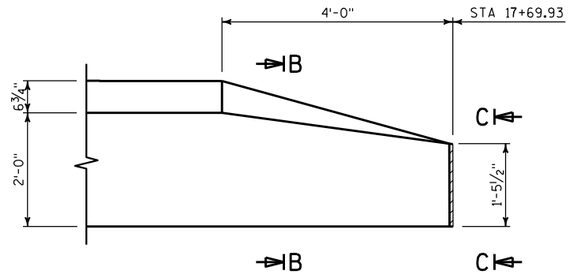
PLAN



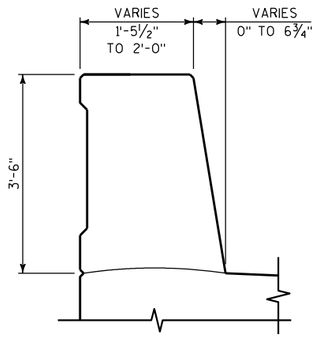
PARTIAL PLAN
(SHOWING NOISE BARRIER N-40-75)



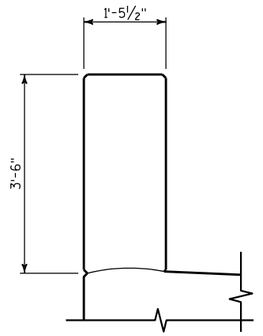
SECTION A-A
(SHOWING NOISE BARRIER N-40-75)



BARRIER TRANSITION DETAIL



SECTION B-B



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

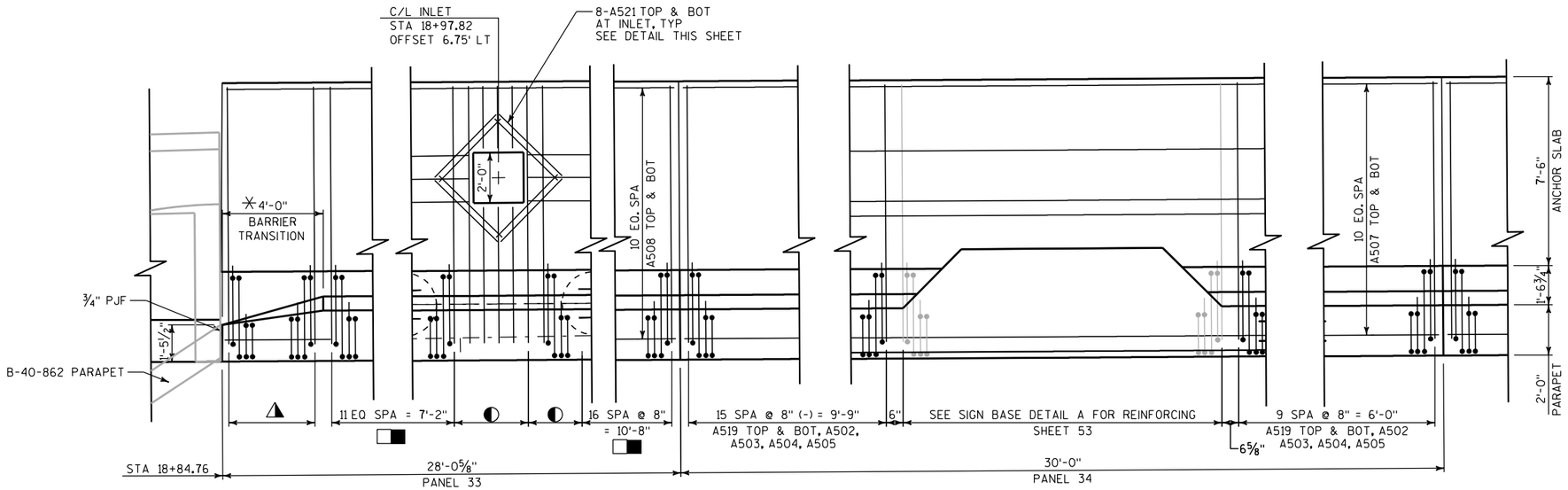
WALL ANCHOR SLAB PLAN (1 OF 5)

SHEET 45 OF 70

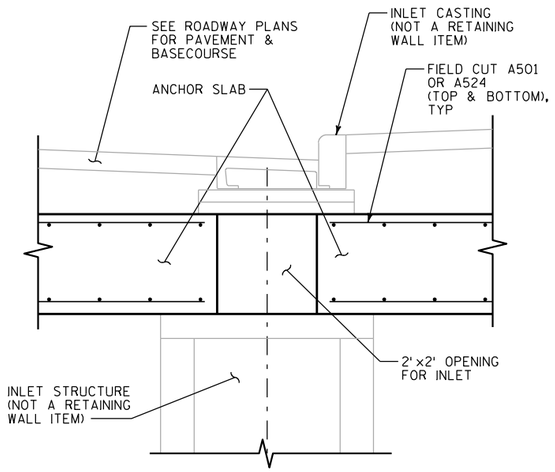
8

8

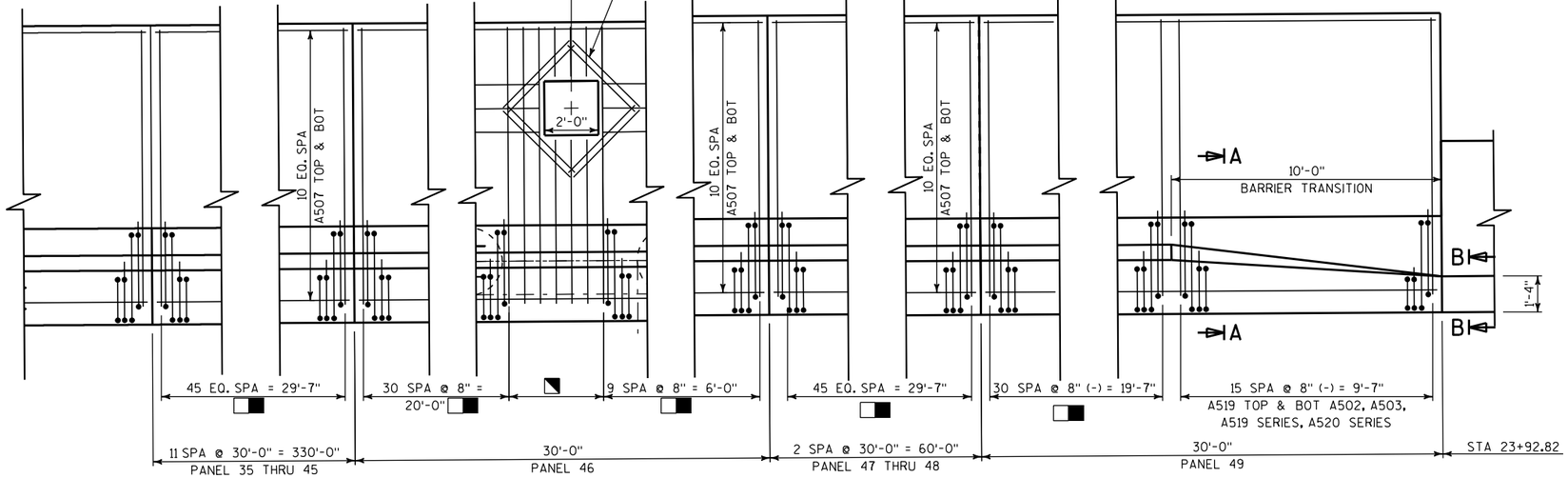
STATE PROJECT NUMBER
1060-33-80



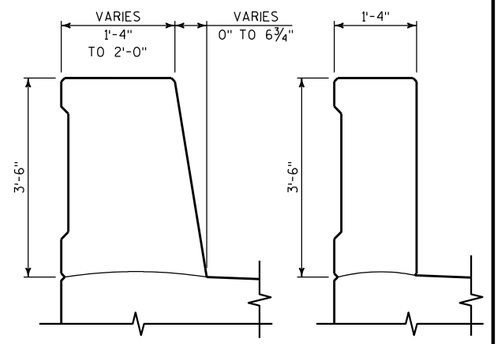
PLAN



ANCHOR SLAB/INLET DETAIL



PLAN



SECTION A-A SECTION B-B

LEGEND

- ◐ 5 SPA @ 7" = 2'-11"
  FIELD CUT A519 TOP & BOT AND A508 AS REQUIRED
  A502, A503, A504 & A505 NOT SHOWN FOR CLARITY
- ◪ 6 SPA @ 7" = 3'-6"
  FIELD CUT A519 TOP & BOT AS REQUIRED
  A502, A503, A504 & A505 NOT SHOWN FOR CLARITY
- ◧ A519 TOP & BOT, A502, A503, A504, A505
- ◭ 6 EQ SPA = 3'-7"
  A519 TOP & BOT, A502, A503, A517 SERIES, A518 SERIES
- ✳ SEE BARRIER TRANSITION DETAILS ON SHEET 45,
  DETAILS ARE SIMILAR BUT OPPOSITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

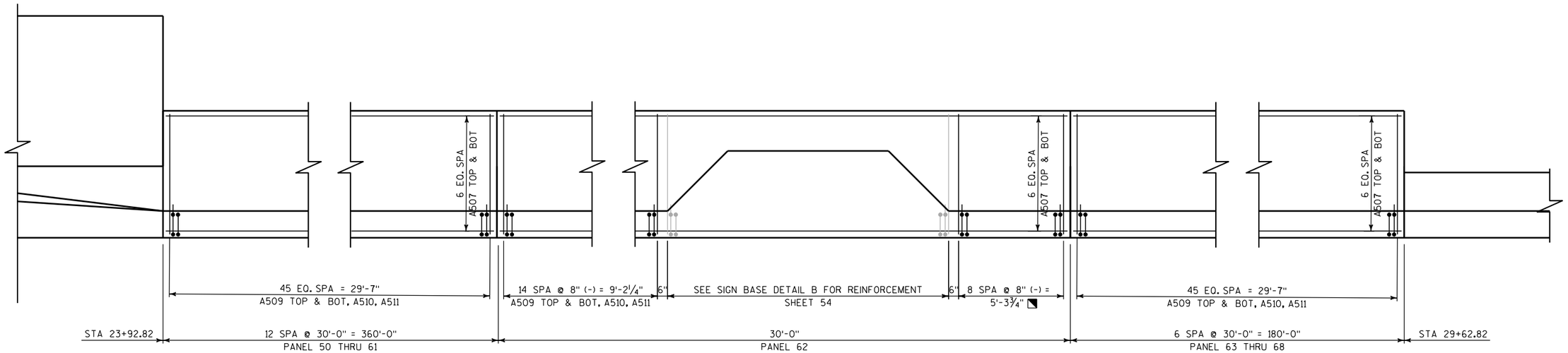
STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

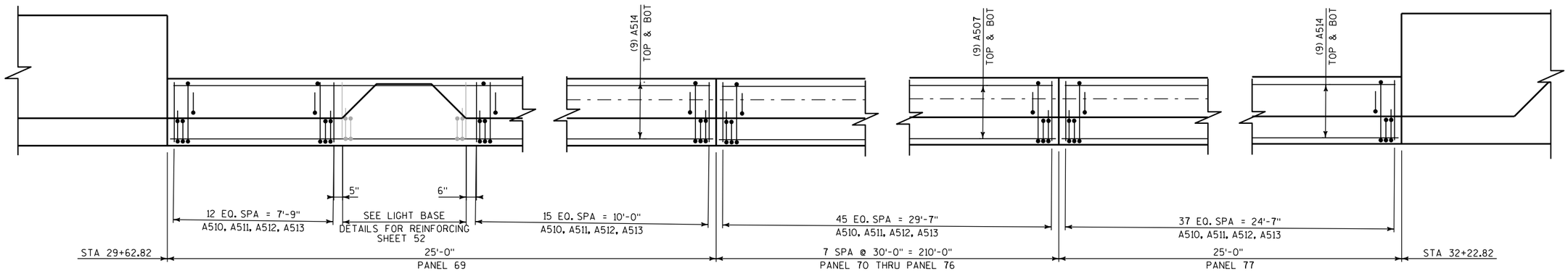
WALL ANCHOR SLAB PLAN (2 OF 5)

SHEET 46 OF 70

STATE PROJECT NUMBER
1060-33-80



PLAN



PLAN

8

8

LEGEND

◥ A509 TOP & BOT, A510, A511

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

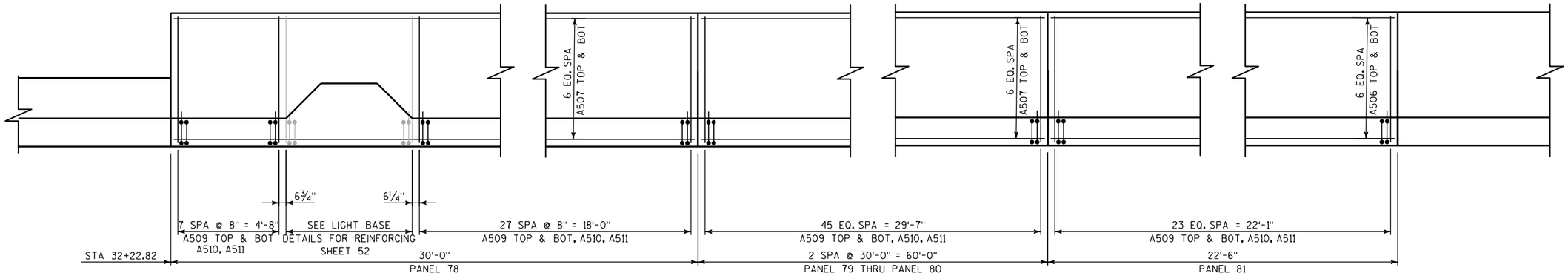
DRAWN BY BHI | PLANS CK'D. KES

WALL ANCHOR
SLAB PLAN
(3 OF 5)

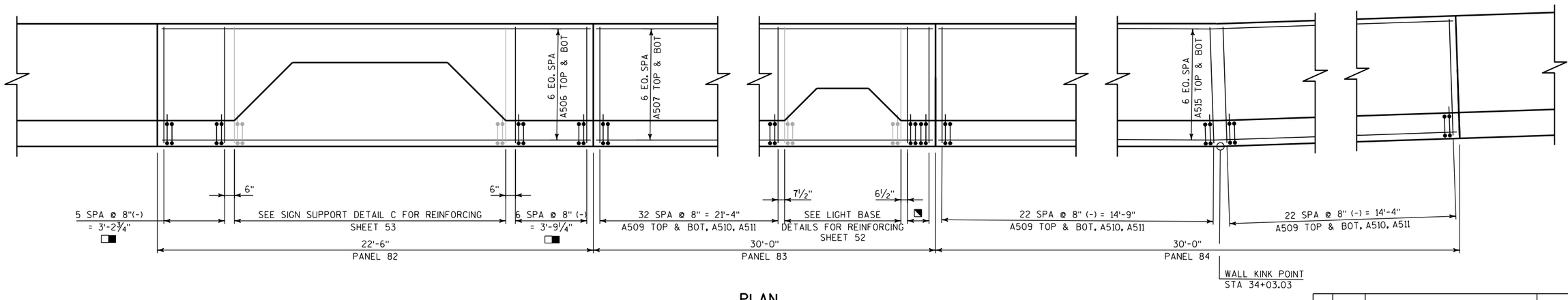
SHEET 47 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080514_de.dgn PLOT DATE : 07-MAY-2014 10:17 PLOT BY : MSCKES PLOT NAME : R40548_080514_de PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



PLAN



PLAN

LEGEND

- 2 SPA @ 8" = 1'-4"
  A509 TOP & BOT, A510, A511
- A509 TOP & BOT, A510, A511

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

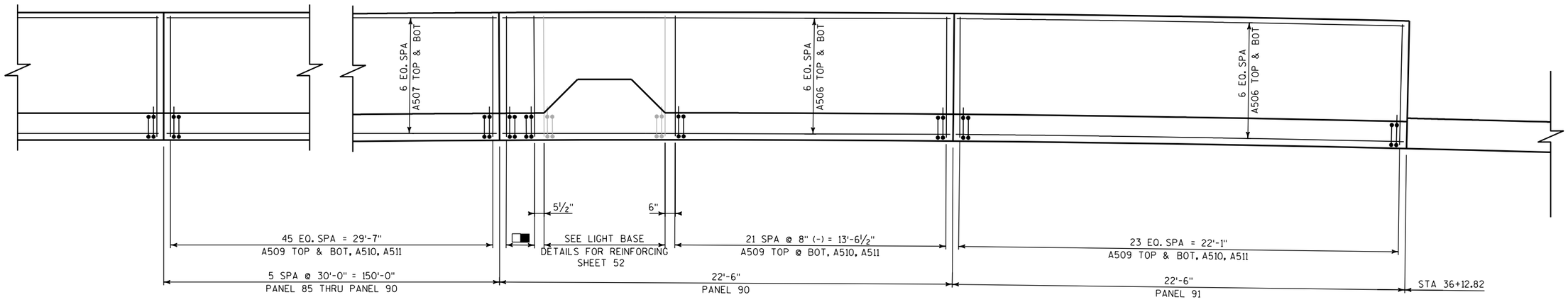
STRUCTURE R-40-548

DRAWN BY BHI | PLANS CK'D. KES

WALL ANCHOR
SLAB PLAN
(4 OF 5)

SHEET 48 OF 70

STATE PROJECT NUMBER
1060-33-80



PLAN

8

8

LEGEND

3 SPA @ 6" = 1'-6"
A509 TOP & BOT, A510, A511

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

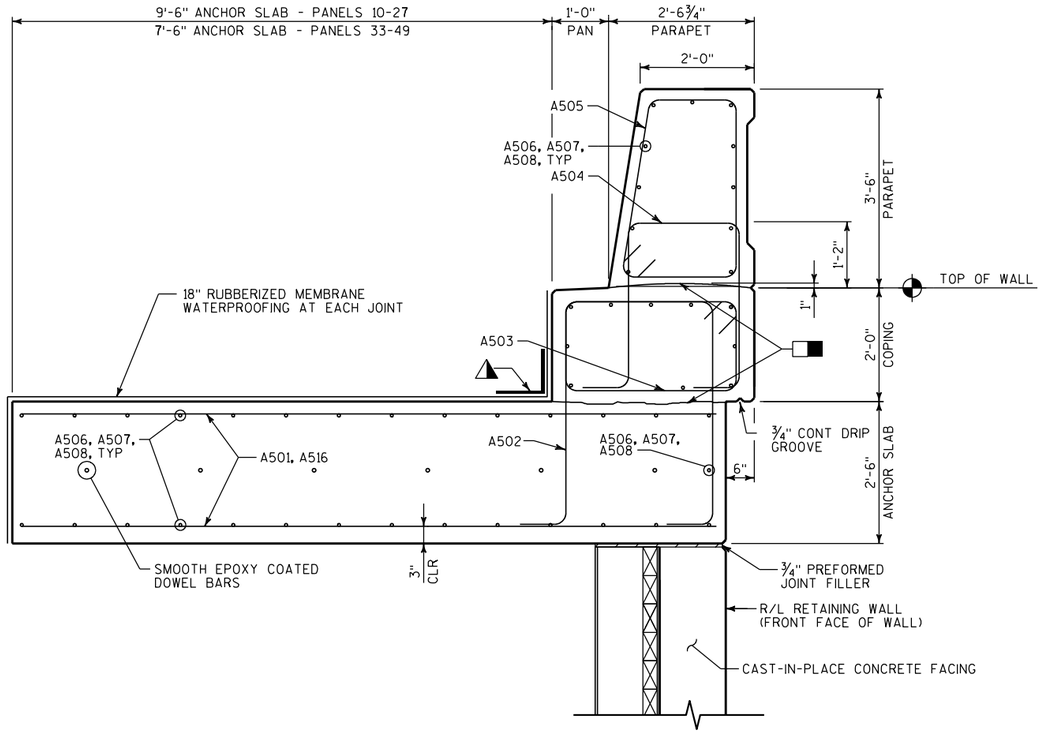
DRAWN BY BHI | PLANS CK'D. KES

WALL ANCHOR
SLAB PLAN
(5 OF 5)

SHEET 49 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080516_de.dgn
PLOT DATE : 07-MAY-2014 10:18
PLOT BY : MSCKES
PLOT NAME : R40548_080516_de
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80

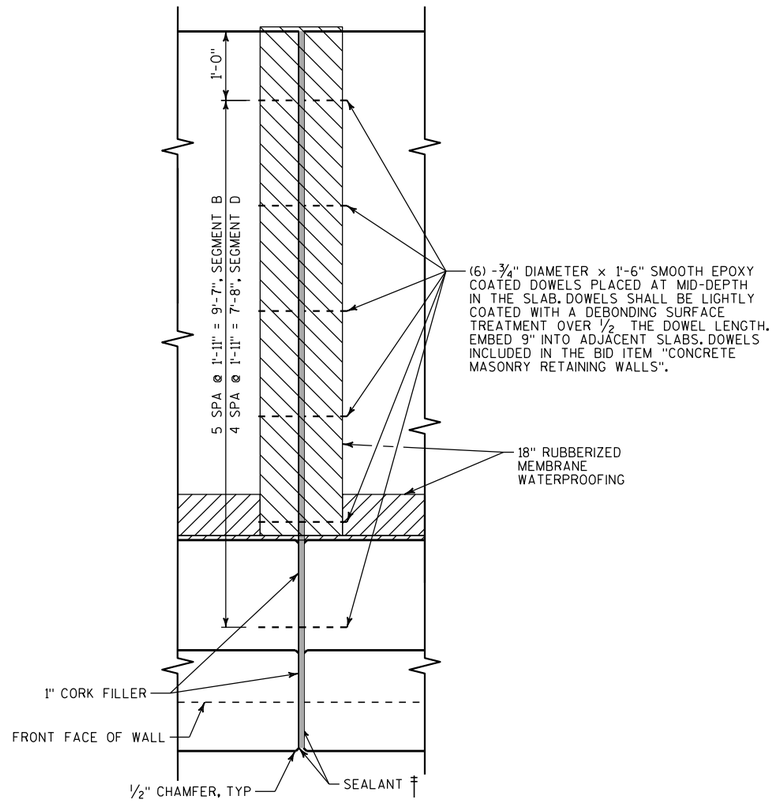


UNIT 1 - TYPICAL SECTION

SEGMENT B & SEGMENT D

LEGEND

- ◭ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- ◨ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † 1" CORK FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.



ANCHOR SLAB EXPANSION JOINT SEGMENTS B & D

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS.
LOCATED AT ALL WALL FACING CONTRACTION AND EXPANSION JOINTS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY PRK | PLANS CK'D. KES

WALL ANCHOR SLAB DETAILS (1 OF 2)

SHEET 50 OF 70

STATE PROJECT NUMBER
1060-33-80

BILL OF BARS UNIT 1 - SLAB/PARAPET

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	1614	12'-3"			TRANSVERSE TOP & BOTTOM
A502	X	1532	11'-4"	X		VERTICAL TIE
A503	X	1532	10'-2"	X		VERTICAL TIE
A504	X	2877	8'-5"	X		VERTICAL TIE
A505	X	1508	10'-6"	X		VERTICAL TIE
A506	X	49	22'-1"			LONGITUDINAL
A507	X	1909	29'-7"			LONGITUDINAL
A508	X	92	27'-7"			LONGITUDINAL
A509	X	926	5'-11"			TRANSVERSE TOP & BOTTOM
A510	X	1680	7'-1"	X		VERTICAL TIE
A511	X	852	7'-1"	X		VERTICAL TIE
A516	X	1566	10'-3"			TRANSVERSE TOP & BOTTOM
A517	X	14	9'-10"	X	⚠	VERTICAL TIE
A518	X	14	8'-0"	X	⚠	VERTICAL TIE
A519	X	16	7'-11"	X	⚠	VERTICAL TIE
A520	X	16	9'-7"	X	⚠	VERTICAL TIE
A521	X	42	3'-6"			HORIZONTAL ⊗ INLET BLOCK OUT

BILL OF BARS UNIT 2 - SLAB/PARAPET

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A507	X	63	29'-7"			LONGITUDINAL
A510	X	398	7'-1"	X		VERTICAL TIE
A511	X	796	7'-1"	X		VERTICAL TIE
A512	X	398	6'-0"	X		VERTICAL TIE
A513	X	796	2'-0"	X		VERTICAL TIE
A514	X	18	24'-7"			LONGITUDINAL

BILL OF BARS UNIT 3 - SLAB/PARAPET

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A506	X	92	22'-1"			LONGITUDINAL
A507	X	207	29'-7"			LONGITUDINAL
A508	X	0	27'-7"			LONGITUDINAL
A509	X	1176	5'-11"			TRANSVERSE TOP & BOTTOM
A510	X	527	7'-1"	X		VERTICAL TIE
A511	X	897	7'-1"	X		VERTICAL TIE
A515	X	23	29'-7"	X		LONGITUDINAL

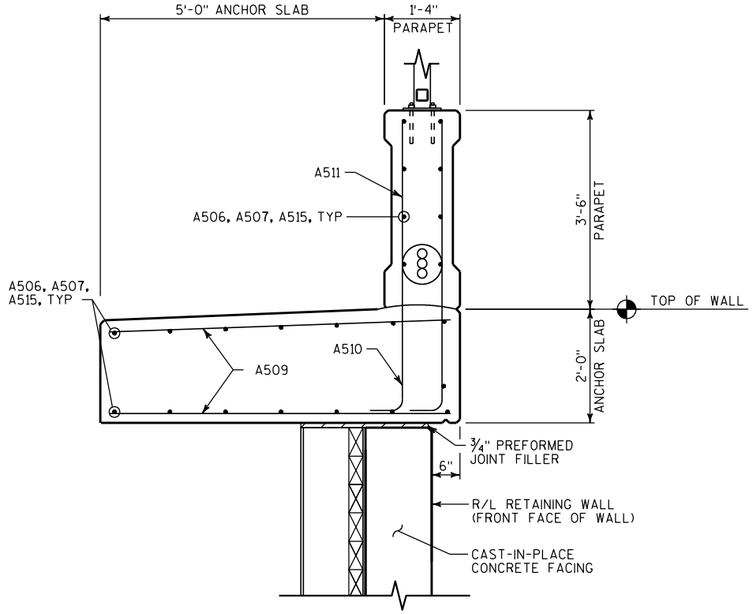
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

BAR SERIES TABLE

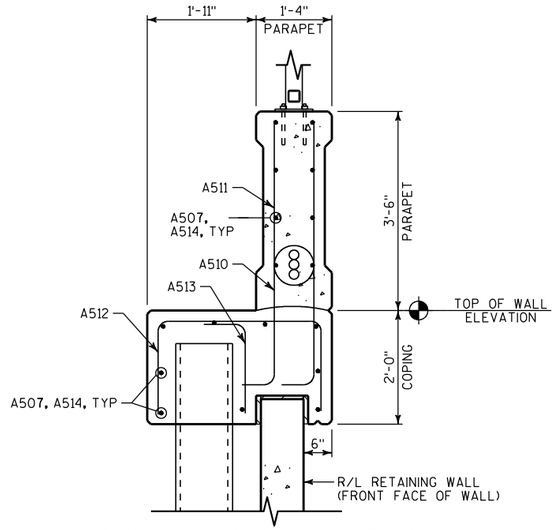
BAR MARK	NO. REQ'D	LENGTH
A517	2 SERIES OF 7	9'-1" TO 10'-7"
A518	2 SERIES OF 7	7'-7" TO 8'-5"
A519	1 SERIES OF 16	7'-4" TO 8'-5"
A520	1 SERIES OF 16	8'-7" TO 10'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY



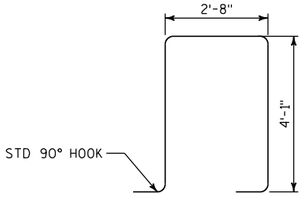
UNIT 1 - TYPICAL SECTION

PANELS 50-68, 78-91

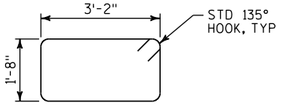


UNIT 2 - TYPICAL SECTION

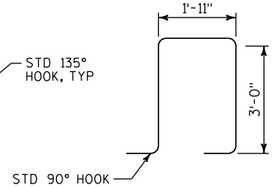
PANELS 69-77



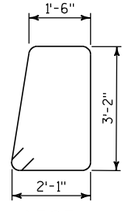
A502



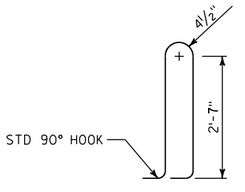
A503



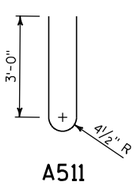
A504



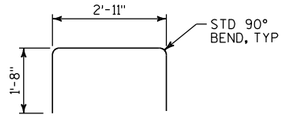
A505



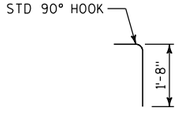
A510



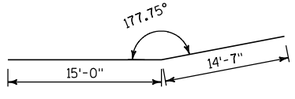
A511



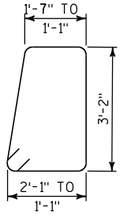
A512



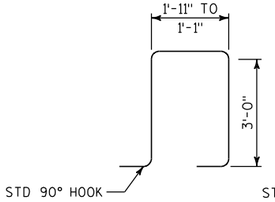
A513



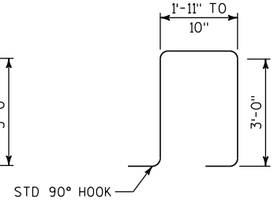
A515



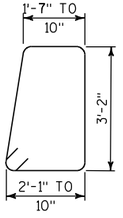
A517



A518



A519



A520

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

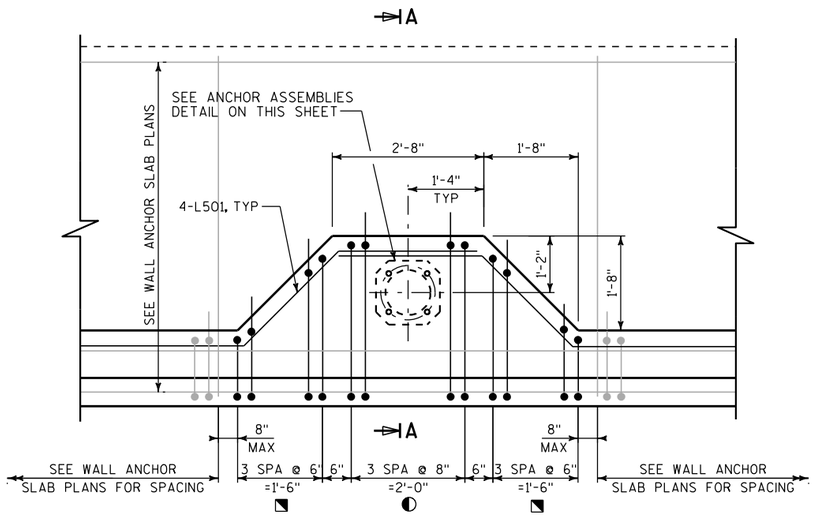
DRAWN BY PRK | PLANS CK'D. KES

WALL ANCHOR SLAB DETAILS (2 OF 2)

SHEET 51 OF 70

8

8



LIGHT BASE DETAILS

LEGEND

◥ A509 TOP & BOT (NOT SHOWN FOR CLARITY) L502 (SERIES), L503 (SERIES)

◐ A509 TOP & BOT 9 (NOT SHOWN FOR CLARITY) L504, L505

BILL OF BARS UNIT 2 - LIGHT BASE

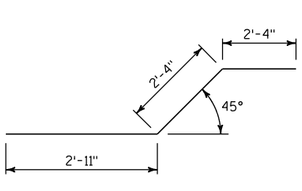
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
L501	X	4	8'-3"	X		LIGHT BASE HORIZONTAL
L502	X	8	10'-1"	X	⚠	LIGHT BASE VERTICAL TIE
L503	X	8	7'-9"	X	⚠	LIGHT BASE VERTICAL TIE
L504	X	4	12'-1"	X		LIGHT BASE VERTICAL TIE
L505	X	4	8'-9"	X		LIGHT BASE VERTICAL TIE

BILL OF BARS UNIT 3 - LIGHT BASE

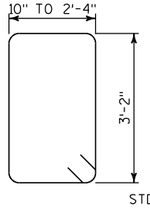
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
L501	X	12	8'-3"	X		LIGHT BASE HORIZONTAL
L502	X	24	10'-1"	X	⚠	LIGHT BASE VERTICAL TIE
L503	X	24	7'-9"	X	⚠	LIGHT BASE VERTICAL TIE
L504	X	12	12'-1"	X		LIGHT BASE VERTICAL TIE
L505	X	12	8'-9"	X		LIGHT BASE VERTICAL TIE

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

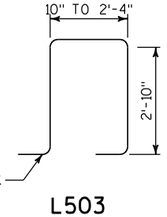
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS



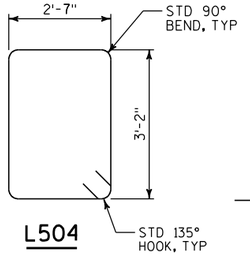
L501



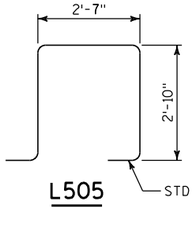
L502



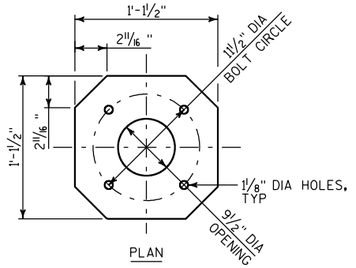
L503

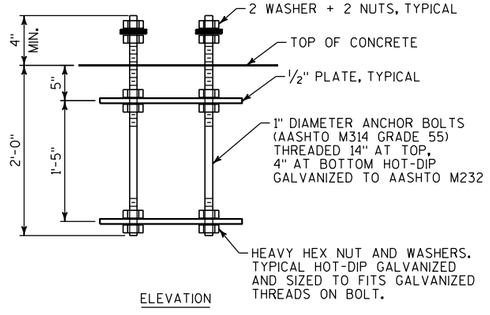


L504



L505



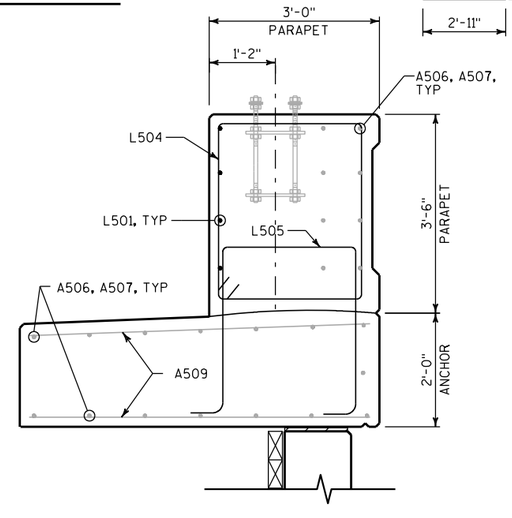


ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
L502	6 SERIES OF 4	8'-7" TO 11'-7"
L503	6 SERIES OF 4	7'-0" TO 8'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY



SECTION A-A
REINFORCEMENT IN LIGHT SUPPORT

BILL OF BARS UNIT 1 - SIGN BASE

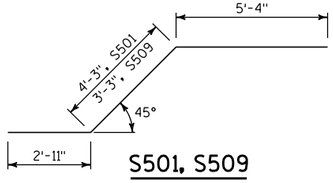
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
S501	X	8	12'-5"	X		SIGN BASE - LONGITUDINAL
S502	X	14	8'-10"	X	⚠	SIGN BASE TRANSITION - VERTICAL TIE
S503	X	14	11'-6"	X	⚠	SIGN BASE TRANSITION - VERTICAL TIE
S504	X	22	10'-5"	X		SIGN BASE - VERTICAL TIE
S505	X	11	15'-0"	X		SIGN BASE - VERTICAL TIE
S506	X	10	12'-4"	X	⚠	SIGN BASE TRANSITION- VERTICAL TIE
S507	X	10	12'-3"	X	⚠	SIGN BASE TRANSITION - VERTICAL TIE
S508	X	11	15'-9"	X		SIGN BASE - VERTICAL TIE
S509	X	16	11'-5"	X		SIGN BASE - VERTICAL TIE
S510	X	11	5'-7"	X		SIGN BASE - VERTICAL TIE
S511	X	16	12'-9"	X		SIGN BASE - VERT @ SIGN BRIDGE ANCHORS
S512	X	20	7'-2"	X		SIGN BASE - HORIZ @ SIGN BRIDGE ANCHORS
S715	X	7	2'-10"	X		SIGN BASE - PILE TENSION TIE

BILL OF BARS UNIT 3 - SIGN BASE

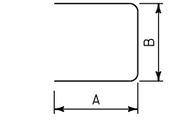
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
S501	X	8	12'-5"	X		SIGN BASE - LONGITUDINAL
S502	X	14	8'-10"	X	⚠	SIGN BASE TRANSITION - VERTICAL TIE
S503	X	14	11'-6"	X	⚠	SIGN BASE TRANSITION - VERTICAL TIE
S504	X	11	10'-5"	X		SIGN BASE - VERTICAL TIE
S605	X	11	15'-0"	X		SIGN BASE - VERTICAL TIE
S813	X	24	12'-2"			SIGN BASE - VERTICAL DOWEL
S514	X	10	14'-0"			SIGN BASE - HORIZONTAL TIE
S715	X	5	2'-10"	X		SIGN BASE - PILE TENSION TIE

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

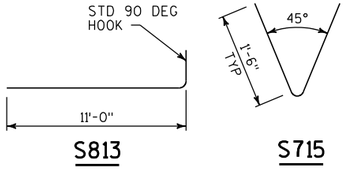
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS



S501, S509



BAR MARK	DIM. 'A'	DIM. 'B'
S510	2'-0"	1'-8"
S511	5'-3"	2'-6"
S512	2'-6"	2'-4½"



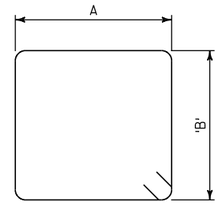
S813 S715

STATE PROJECT NUMBER
1060-33-80

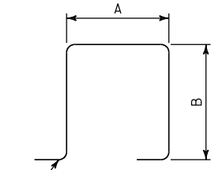
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
S502	4 SERIES OF 7	10'-5" TO 7'-3"
S503	4 SERIES OF 7	14'-8" TO 8'-5"
S506	2 SERIES OF 5	14'-8" TO 10'-0"
S507	2 SERIES OF 5	14'-6" TO 10'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY



BAR MARK	DIM. 'A'	DIM. 'B'
S503	9" TO 3'-10"	3'-2"
S505	3'-10"	3'-2"
S507	1'-7" TO 3'-10"	3'-2"
S514	4'-4"	2'-4"



BAR MARK	DIM. 'A'	DIM. 'B'
S502	9" TO 3'-10"	3'-0"
S504	3'-10"	3'-0"
S506	1'-7" TO 3'-10"	3'-0"
S508	3'-5"	5'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

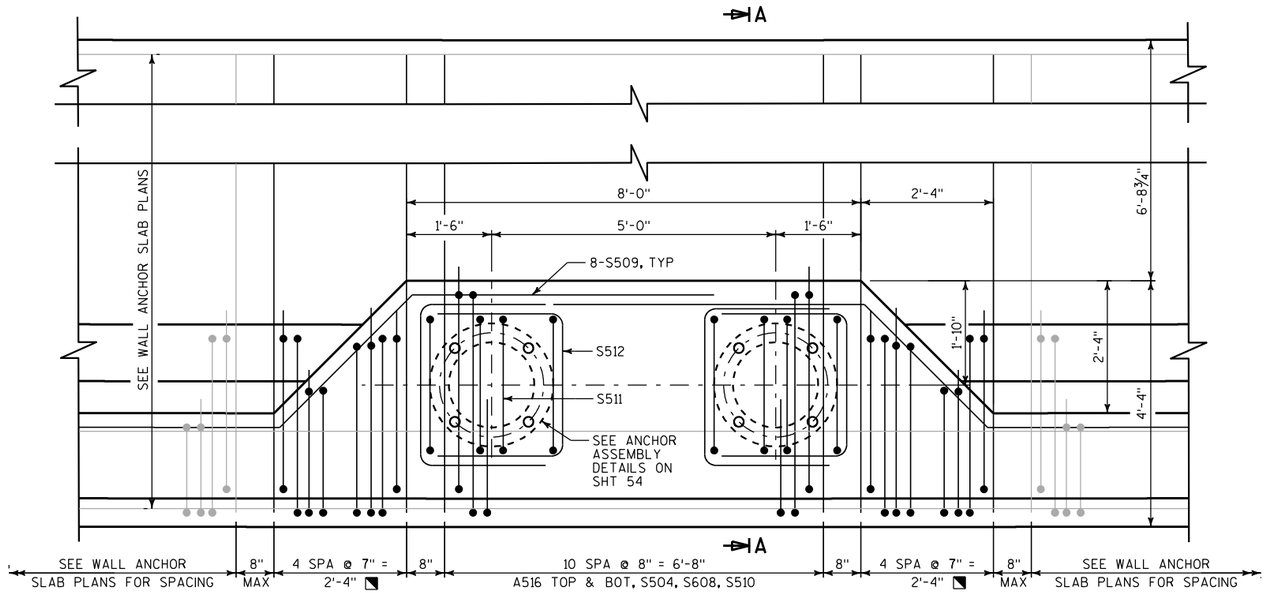
DRAWN BY BHI | PLANS CK'D. KES

LIGHT BASE DETAILS

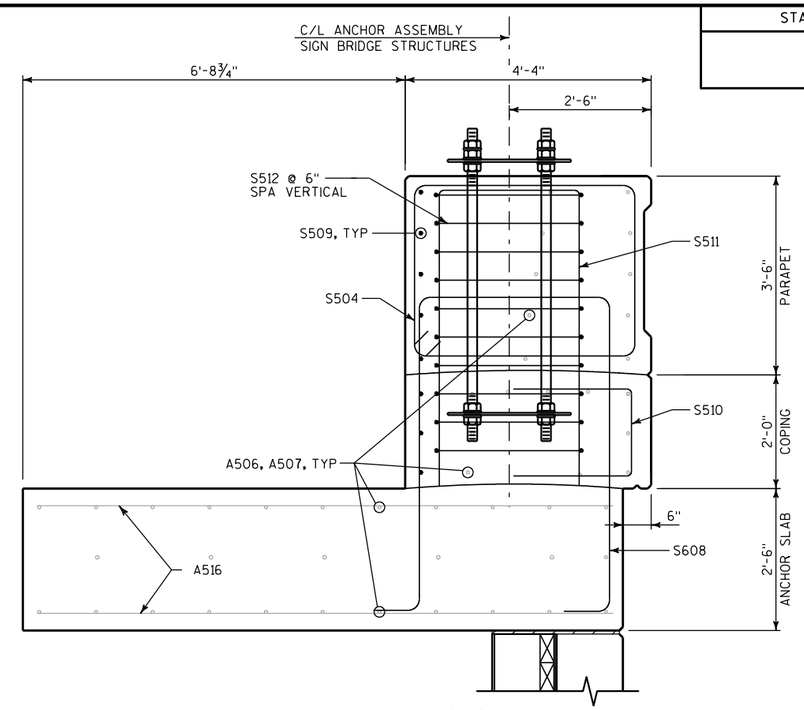
SHEET 52 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080519_de.dgn PLOT DATE : 07-MAY-2014 10:18 PLOT BY : MSCKES PLOT NAME : R40548_080519_de PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80

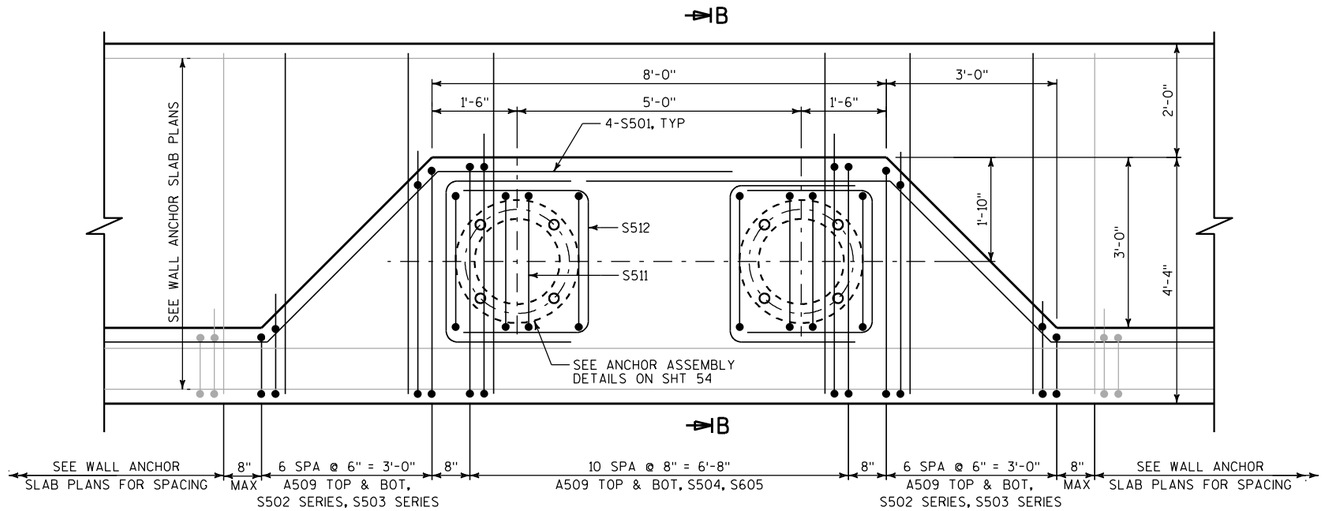


SIGN BASE DETAIL A

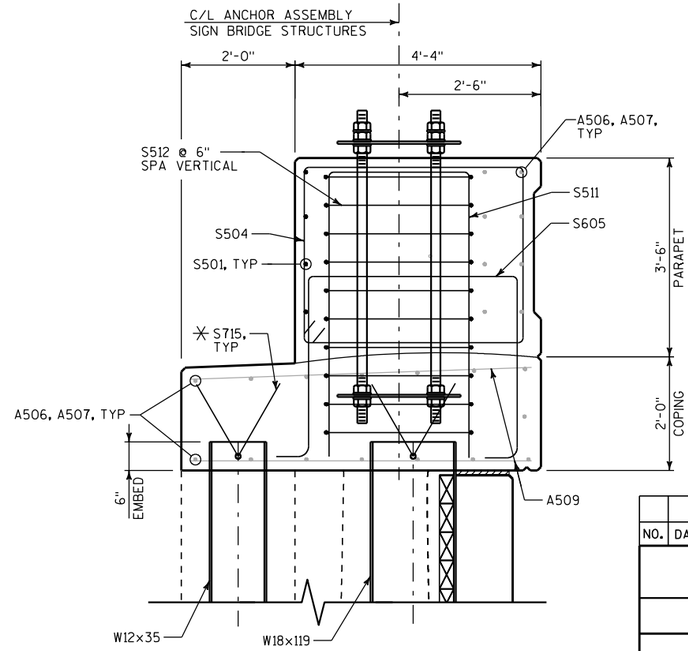


SECTION A-A

REINFORCEMENT IN SIGN BASE A



SIGN BASE DETAIL C



SECTION B-B

REINFORCEMENT IN SIGN BASE C

✳ S715 REQUIRED AT PILES 285 - 287, & 333 - 334

LEGEND

◥ A516 TOP & BOT, A502, A503 S506 (SERIES), S507 (SERIES)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

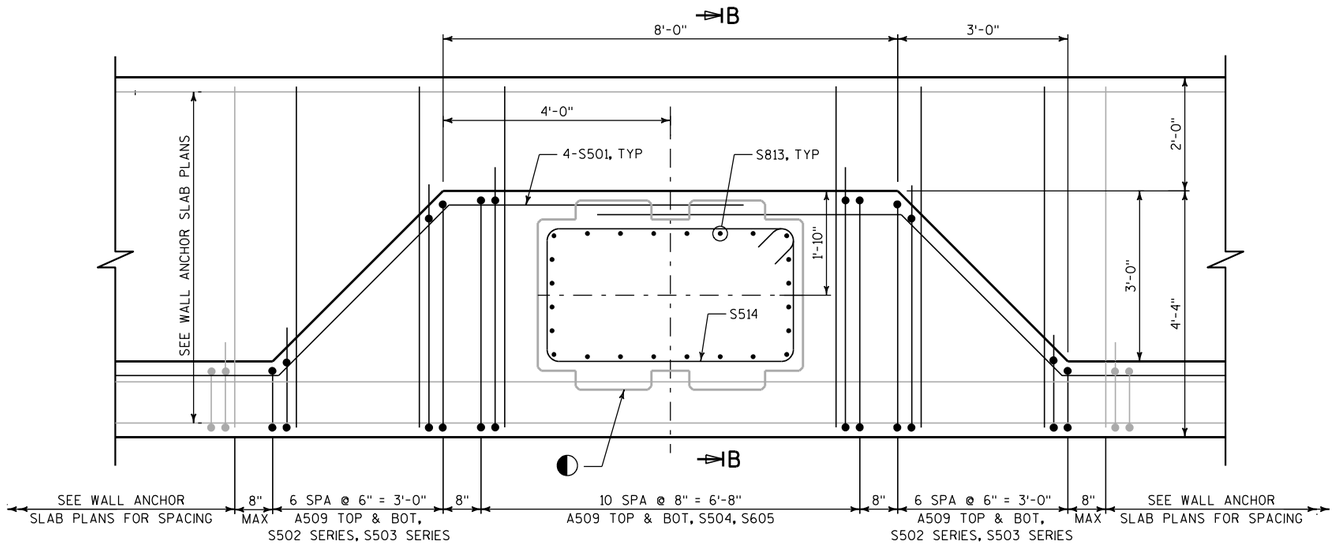
STRUCTURE R-40-548

DRAWN BY PRK | PLANS CK'D. KES

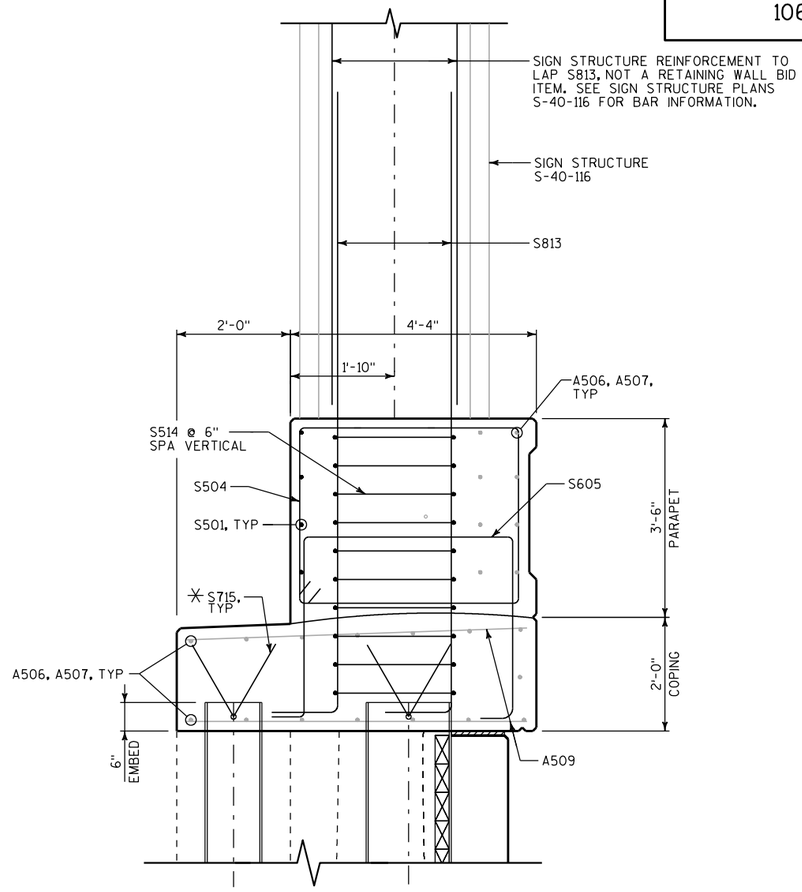
SIGN BASE DETAILS (1 OF 2)

SHEET 53 OF 70

STATE PROJECT NUMBER
1060-33-80



SIGN BASE DETAIL B



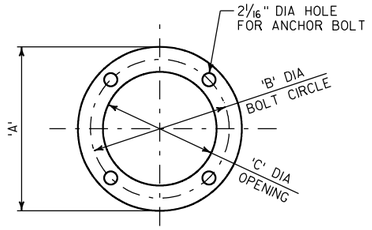
SECTION B-B

REINFORCEMENT IN SIGN BASE B

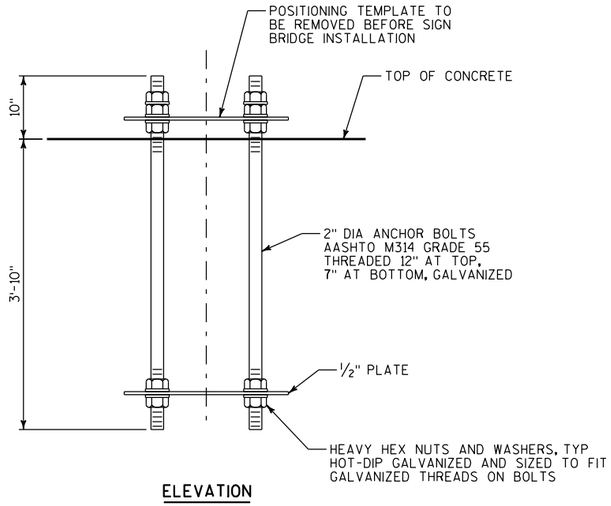
✳ S715 REQUIRED AT PILES 241 - 244, & 330 - 332

ANCHOR PLATE/TEMPLATE DIMENSIONS

STRUCTURE NO.	'A'	'B'	'C'
S-40-117	2'-2"	1'-10"	1'-6"
S-40-121	1'-10¾"	1'-6¾"	1'-2¾"

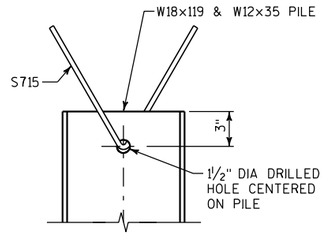


STEEL ANCHOR PLATE/ TOP TEMPLATE PLAN



ELEVATION

ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES



PILE HOLD DOWN

LEGEND

◐ FOR COLUMN DIMENSIONS, SEE SIGN STRUCTURE PLANS FOR S-40-116

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY PRK | PLANS CK'D. KES

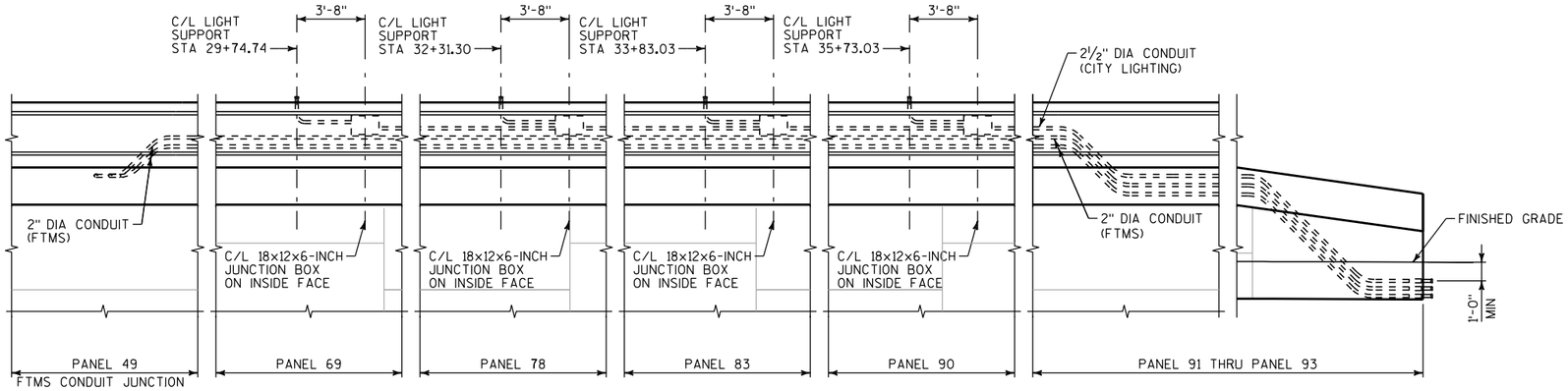
SIGN BASE DETAILS (2 OF 2)

SHEET 54 OF 70

8

8

STATE PROJECT NUMBER
1060-33-80



EXTERIOR ELEVATION OF PARAPET

(LOOKING NORTH)
(DIMENSIONS MEASURED ALONG EXTERIOR FACE OF PARAPET)

NOTES

EXPANSION FITTINGS, BENDS, SPONGE RUBBER WRAP, TEMPORARY END CAPS, AND ADAPTER FITTINGS ARE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH", "CONDUIT RIGID METALLIC 2.5-INCH", OR "CONDUIT RIGID METALLIC 3-INCH".

FOR APPROVED MANUFACTURERS OF JUNCTION BOXES, SEE APPROVED MATERIAL LIST.

LEGEND

(R01) APPROVED MANUFACTURER OR EQUIVALENT FOR EXPANSION FITTINGS WITH 4" TOTAL CONDUIT MOVEMENT.

2" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER

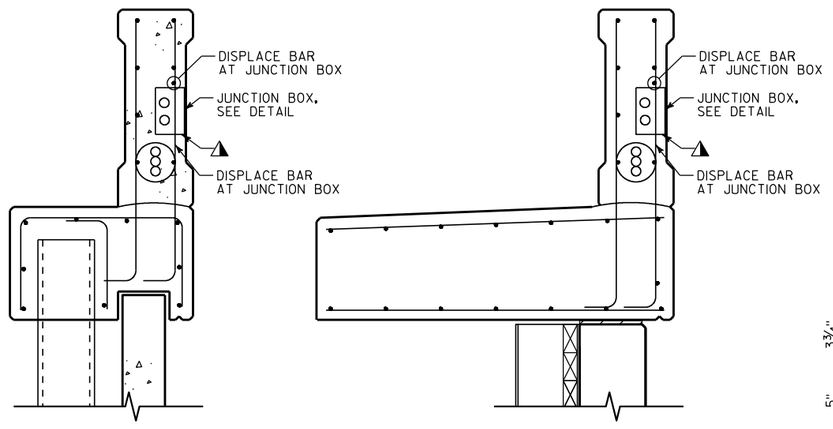
2½" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-250 AND BONDING JUMPER

3" DIA. CONDUITS:
O-Z/GEDNEY TYPE AX-300 AND BONDING JUMPER

EQUIVALENTS ARE SUBJECT TO DEPARTMENT APPROVAL

(R02) 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

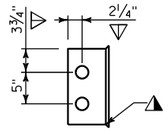
(R03) WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.



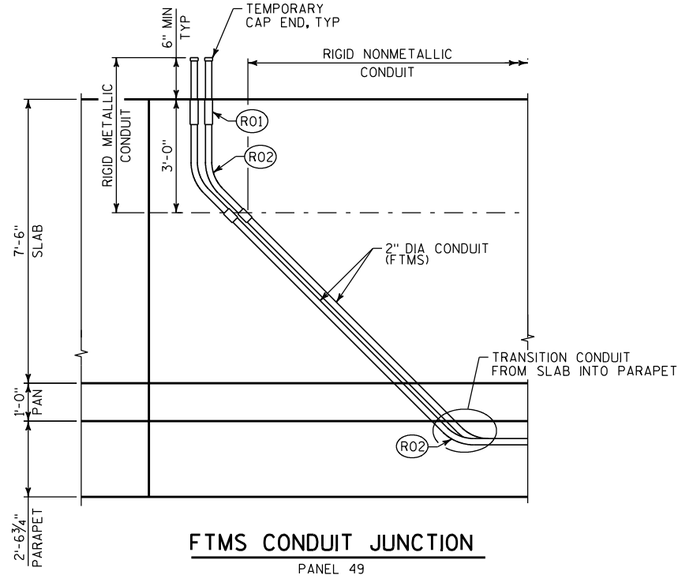
SECTIONS THRU PARAPET

▲ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX

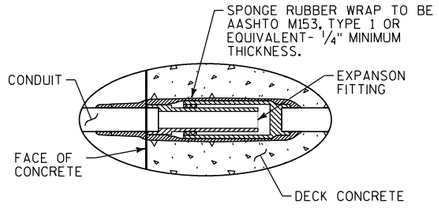


JUNCTION BOX DETAIL



FTMS CONDUIT JUNCTION

PANEL 49



EXPANSION FITTING DETAIL

POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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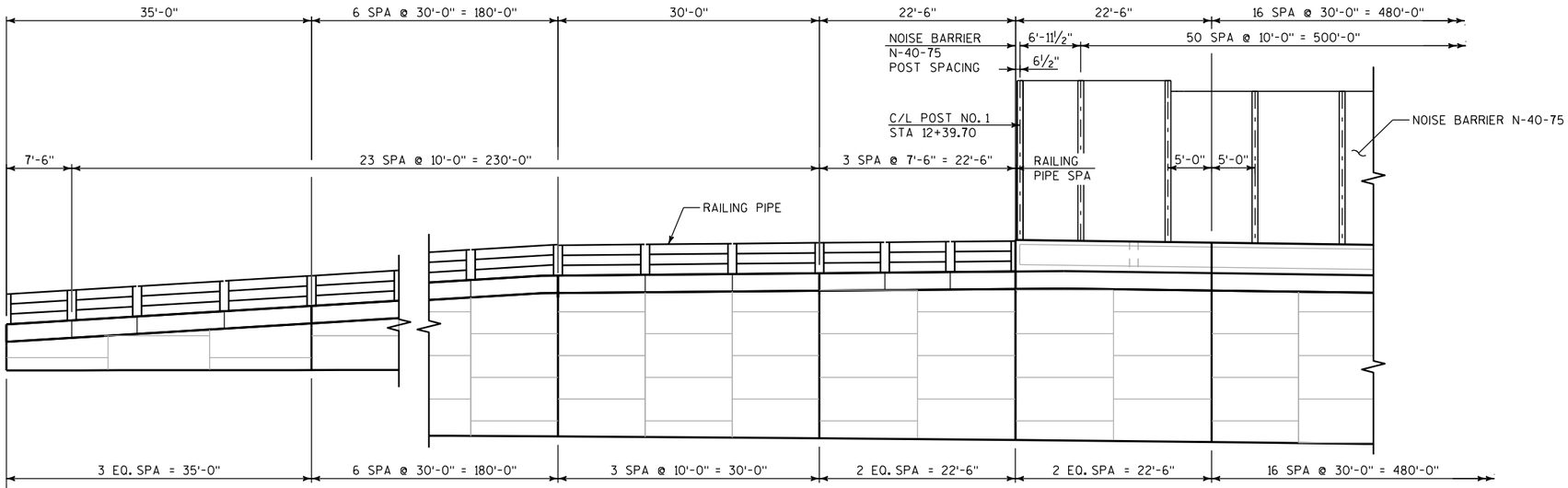
PARAPET CONDUIT DETAILS

SHEET 55 OF 70

8

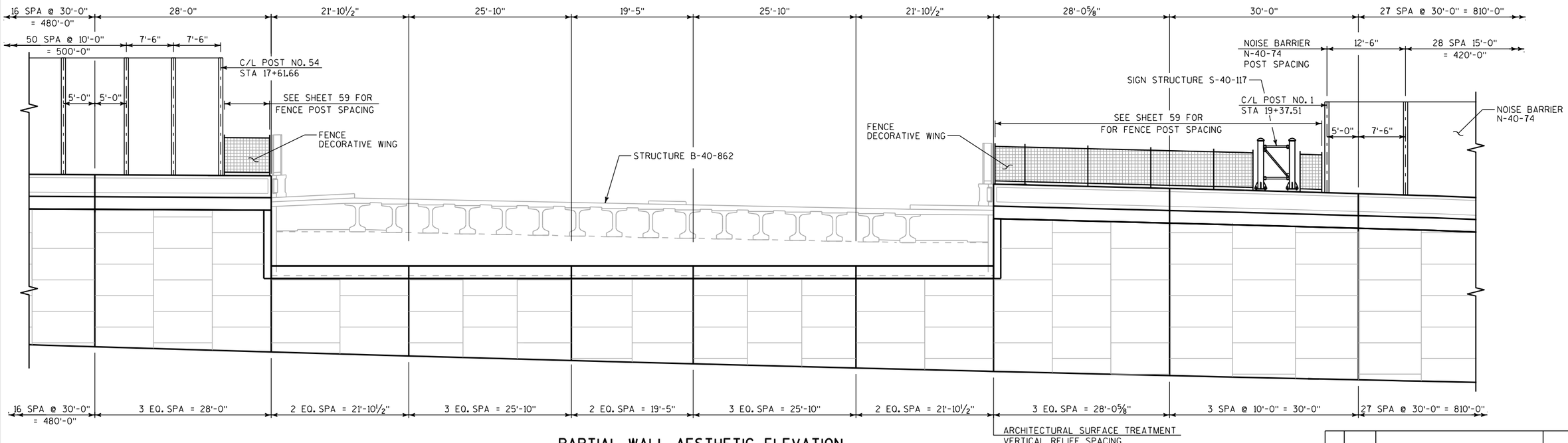
8

STATE PROJECT NUMBER
1060-33-80



PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-548)



PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-548)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

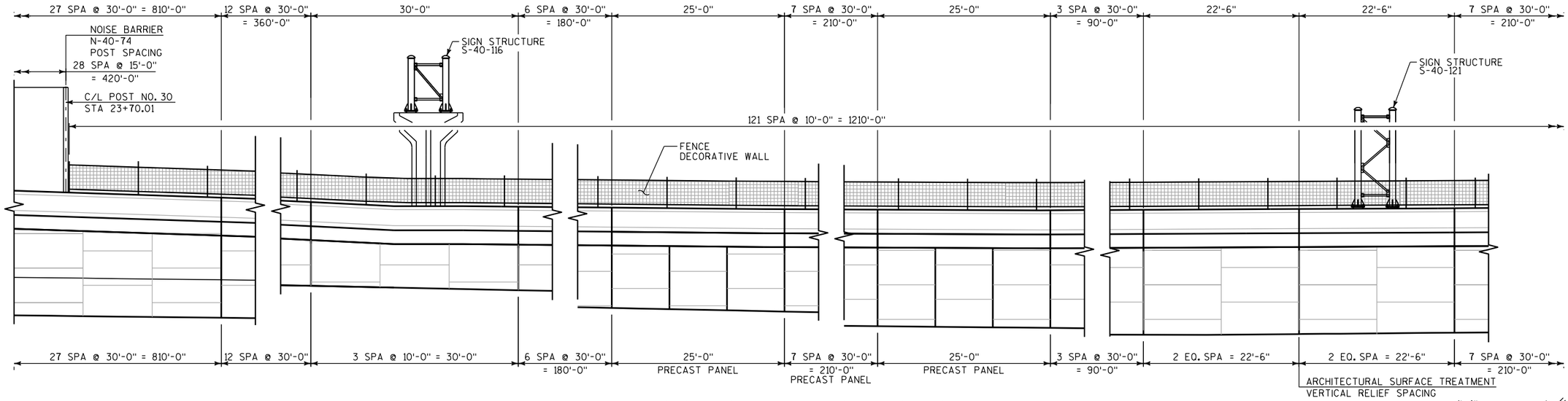
DRAWN BY BHI | PLANS CK'D. KES

AESTHETIC WALL TREATMENT DETAILS (1 OF 3)

SHEET 56 OF 70

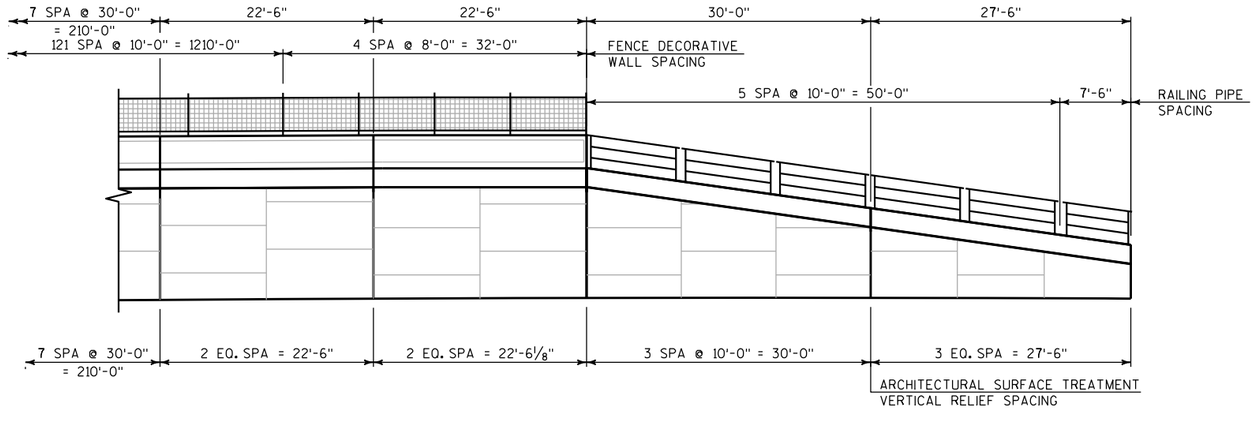
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PLOT DATE : 07-MAY-2014 10:18
PLOT BY : MSCKES
PLOT NAME : R40548_080601_ae
PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-80



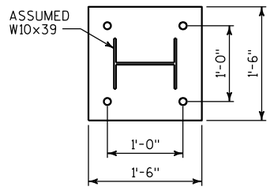
PARTIAL WALL AESTHETIC ELEVATION

(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-548)

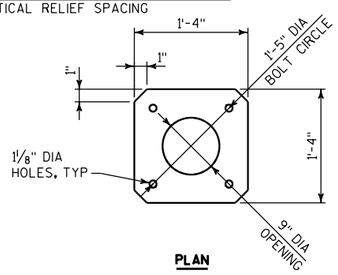


PARTIAL WALL AESTHETIC ELEVATION

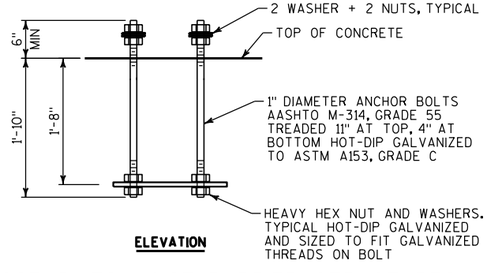
(DIMENSIONS GIVEN ALONG R/L RETAINING WALL R-40-548)



BASE PLATE

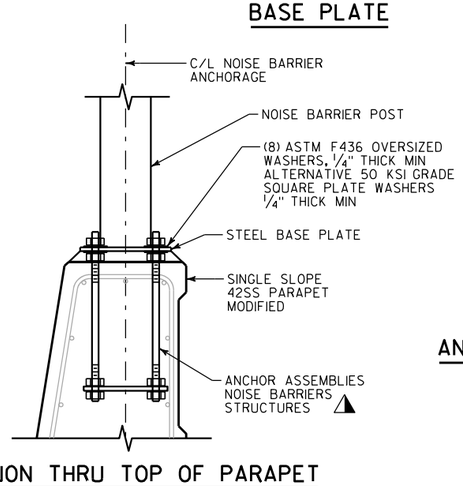


PLAN



ELEVATION

ANCHOR ASSEMBLIES NOISE BARRIER STRUCTURES



SECTION THRU TOP OF PARAPET

(FOR STRUCTURE MOUNTED NOISE BARRIER)

LEGEND

⚠ EXACT LOCATION AND SPACING OF EMBEDDED ANCHOR ASSEMBLY NOISE BARRIER TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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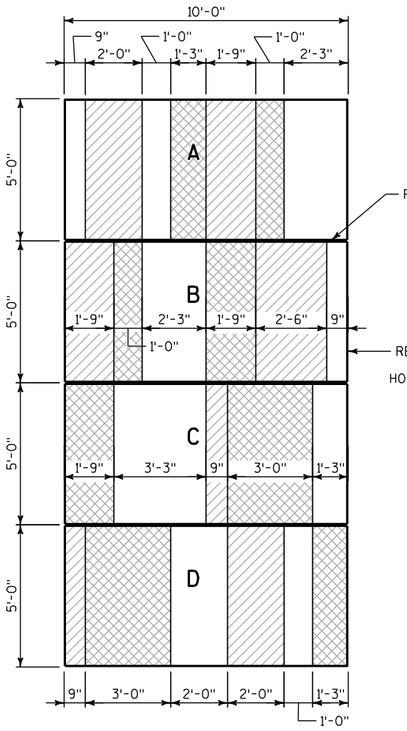
AESTHETIC WALL TREATMENT DETAILS (2 OF 3)

SHEET 57 OF 70

8

8

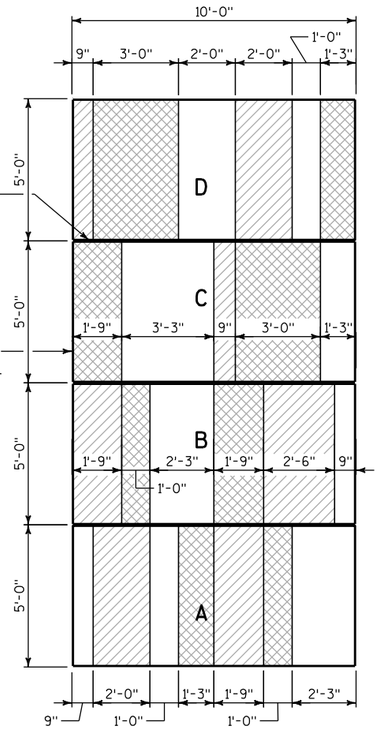
STATE PROJECT NUMBER
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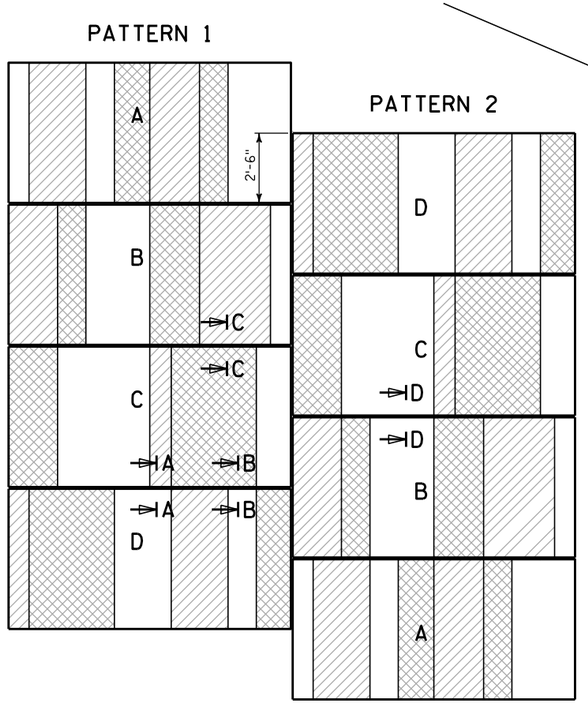
CAST-IN-PLACE PATTERN 1

REVEAL SPACED 5' VERTICALLY, TYP

REVEAL ALONG PATTERN EDGES SPACED 10' HORIZONTALLY EXCEPT AT EXPANSION AND CONTRACTION JOINTS

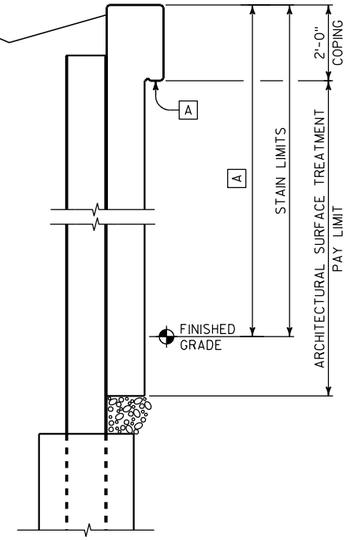


CAST-IN-PLACE PATTERN 2

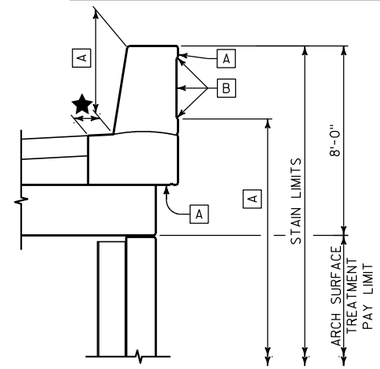


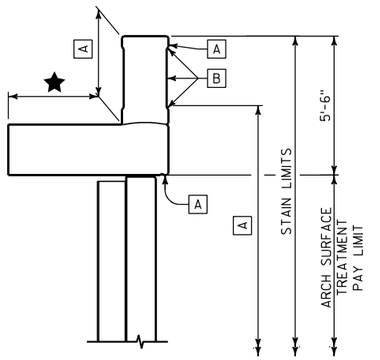
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 2'-6" VERTICALLY REPEAT VERTICALLY AS REQUIRED



WALL STAINING DIAGRAM





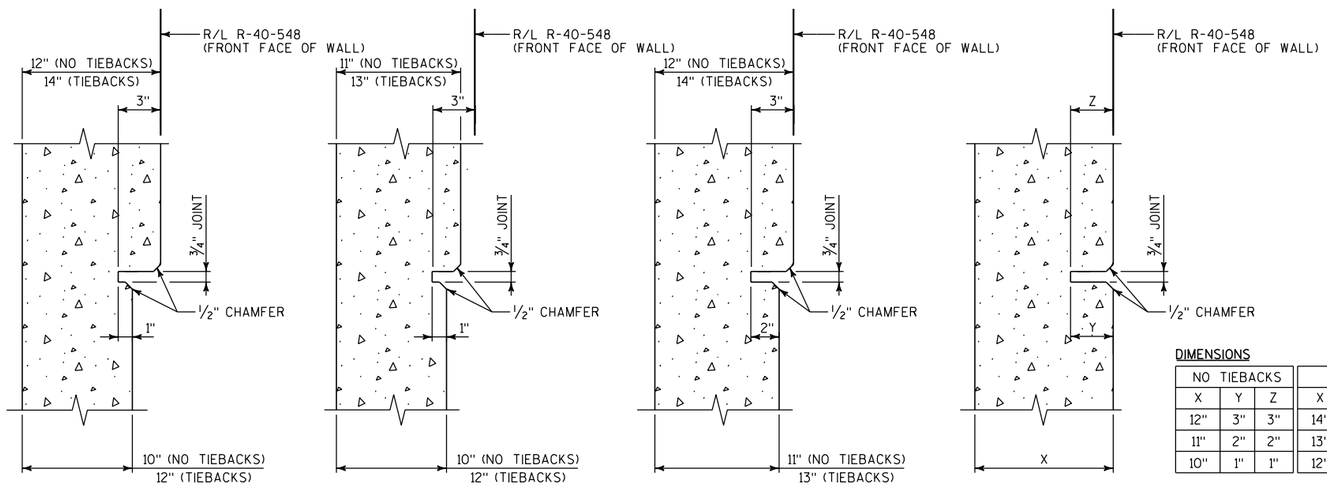
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.
BASE COLOR - 33564

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



DIMENSIONS

NO TIEBACKS			TIEBACKS		
X	Y	Z	X	Y	Z
12"	3"	3"	14"	3"	3"
11"	2"	2"	13"	2"	2"
10"	1"	1"	12"	1"	1"

REVEAL SECTION A-A

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 2"

REVEAL SECTION B-B

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION C-C

CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION D-D

CONCRETE FACING THICKNESS ADJACENT TO REVEAL IS EQUAL

LEGEND

	FACING THICKNESS	
	NO TIEBACKS	TIEBACKS
☐	10"	12"
▨	11"	13"
▨	12"	14"

★ PROTECTIVE SURFACE TREATMENT

NO.	DATE	REVISION	BY

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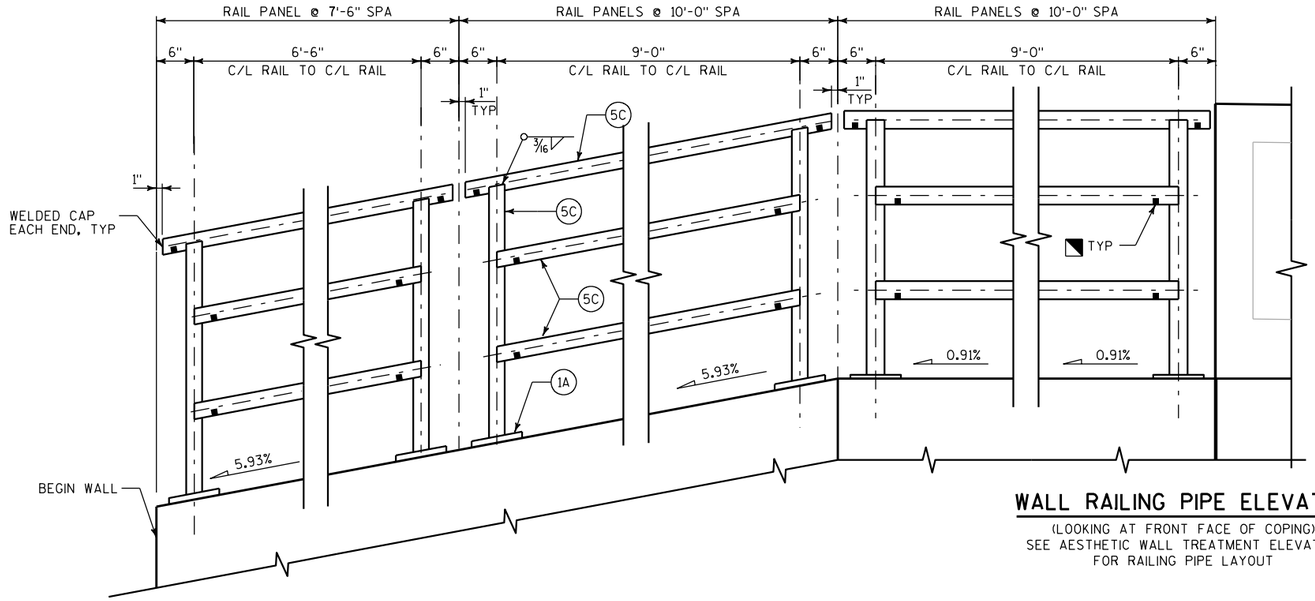
STRUCTURE R-40-548

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AESTHETIC WALL TREATMENT DETAILS (3 OF 3)

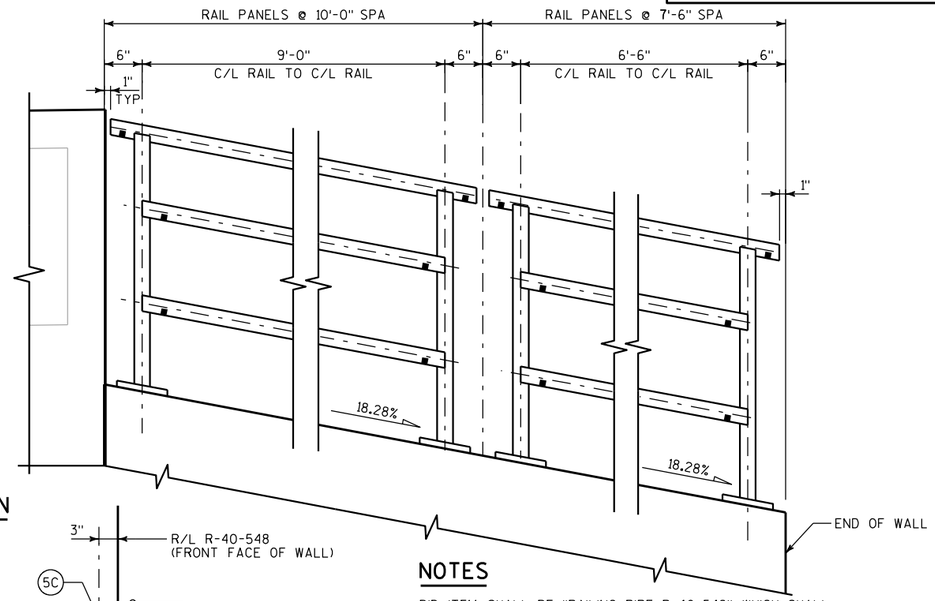
SHEET 58 OF 70

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WALL RAILING PIPE ELEVATION

(LOOKING AT FRONT FACE OF COPING)
SEE AESTHETIC WALL TREATMENT ELEVATION FOR RAILING PIPE LAYOUT



NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-548", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

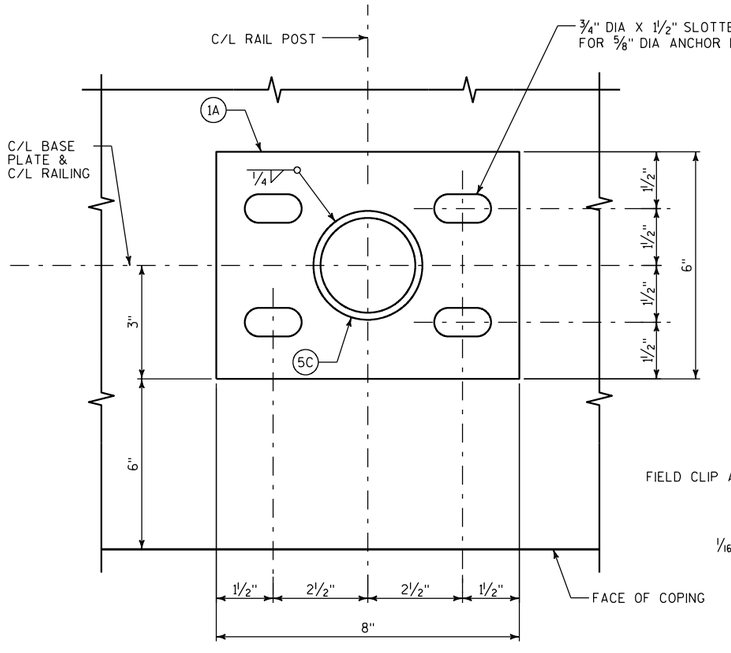
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

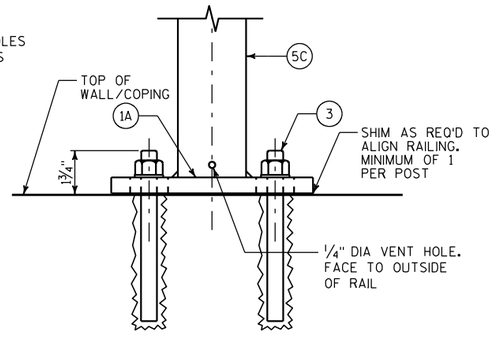
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM A123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

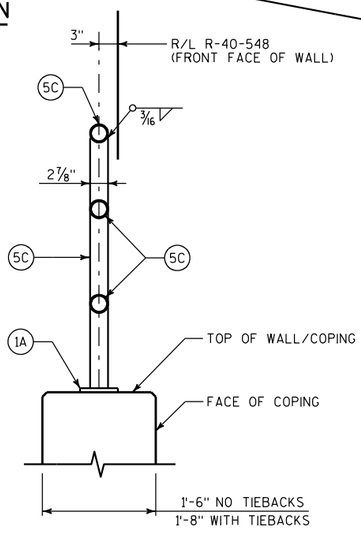
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



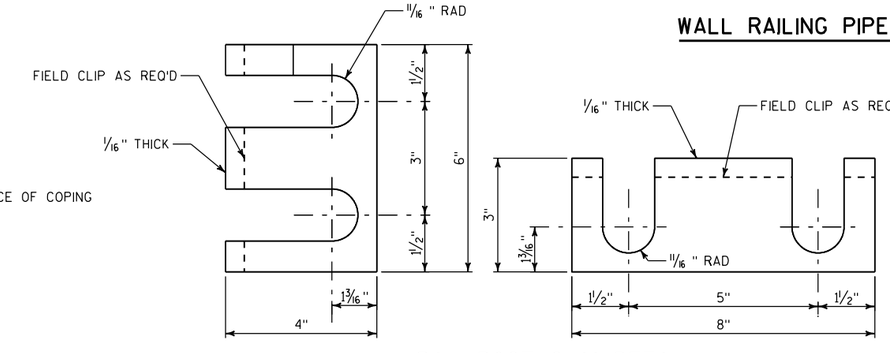
RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



WALL RAILING PIPE SECTION



RAIL POST SHIM DETAIL

(2 SETS PER POST)

LEGEND

- (1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA. EMBED A MIN OF 7".
- (5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO POSTS.
- 1/2" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-548

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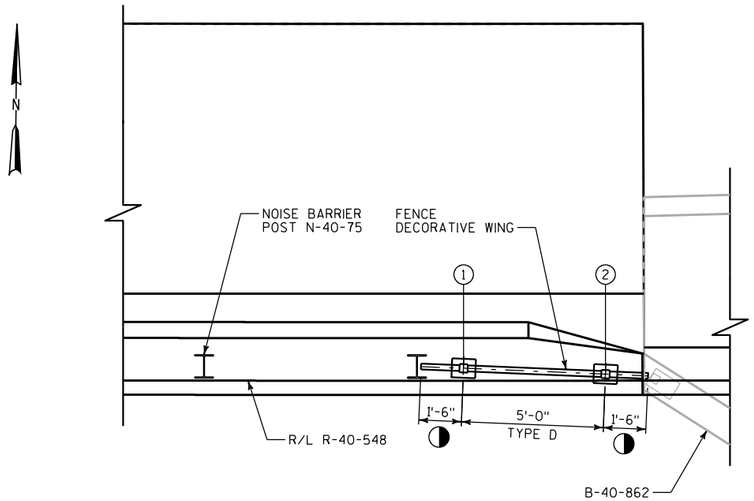
RAILING PIPE DETAILS

SHEET 59 OF 70

8

8

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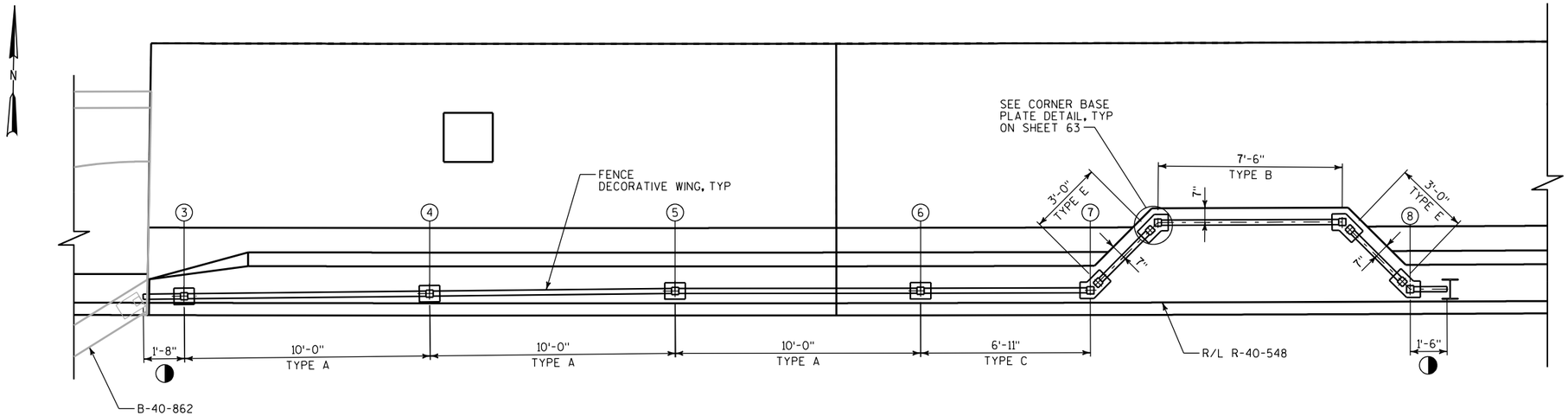
FENCE POST LOCATIONS

POST NUMBER	STATION	OFFSET
1	17+63.58	0.44' LT
2	17+68.57	0.23' LT
3	18+86.25	0.27' LT
4	18+96.25	0.39' LT
5	19+06.25	0.50' LT
6	19+16.25	0.50' LT
7	19+23.17	0.50' LT
8	19+36.19	0.50' LT

LEGEND

(X) POST NUMBER

◑ FENCE CANTILEVER, SEE SHT 62 FOR DETAILS



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

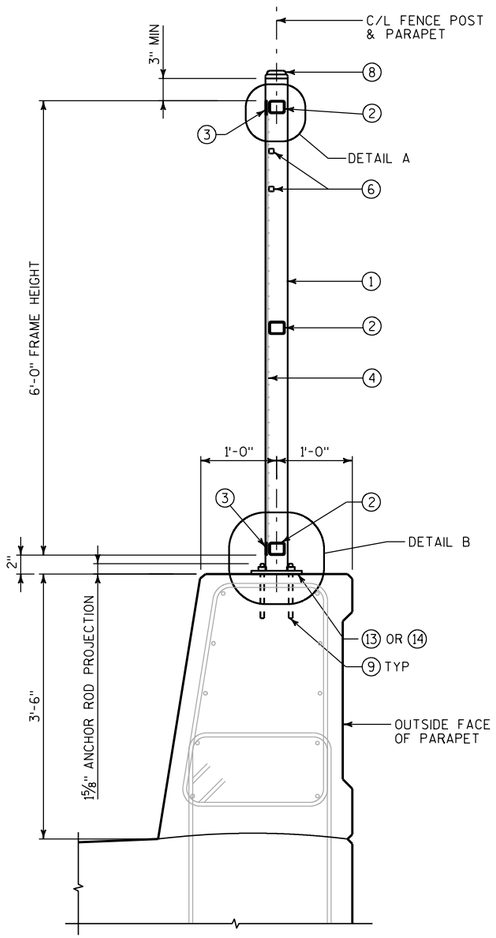
STRUCTURE R-40-548

DRAWN BY PRK | PLANS CK'D. KES

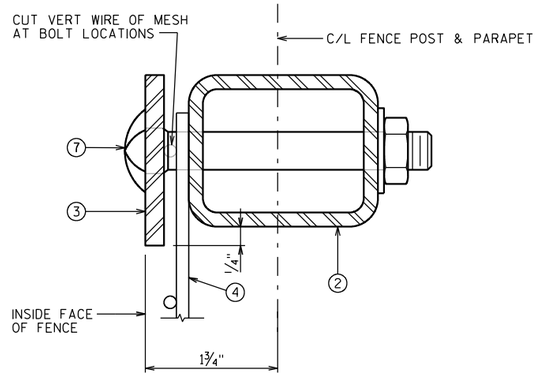
FENCE DECORATIVE WING LAYOUT

SHEET 60 OF 70

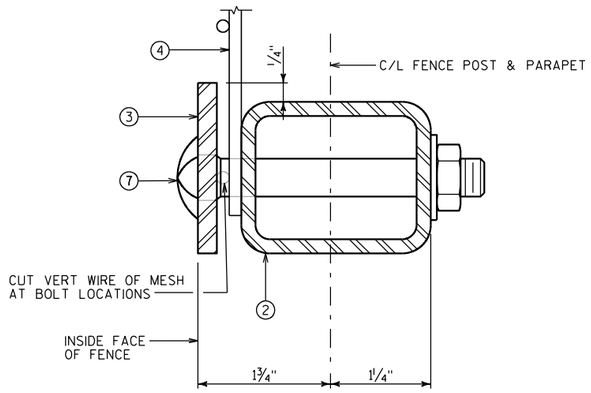
STATE PROJECT NUMBER
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SECTION THRU PARAPET



DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X 3/16 POST WITH ⅛" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X 3/16. WELD TO NO. 6. HORIZONTAL MEMEBERS WILL BE SLOPED TO MATCH TOP OF PARAPET.
3. PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.
5. NOT USED
6. ¾" x ¾" BAR. WELD TO NO. 2 & 6. HORIZONTAL MEMBERS WILL BE SLOPED TO MATCH TOP OF PARAPET.
7. ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 & NO. 2 WHERE CONNECTED TO DECORATIVE INSET PLATE FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY WITH A 7" MINIMUM EMBEDMENT.
10. PL 5/16" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 11 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE WING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE 62.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

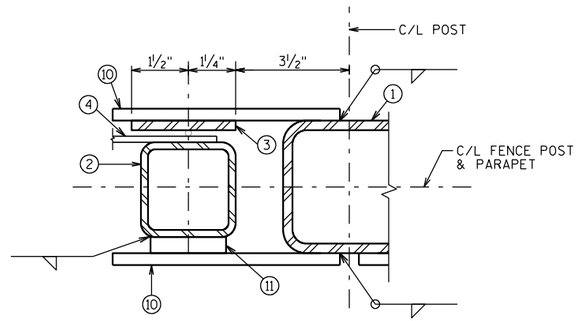
VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.4.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVINIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COVER THE 2" x 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.



SECTION K-K

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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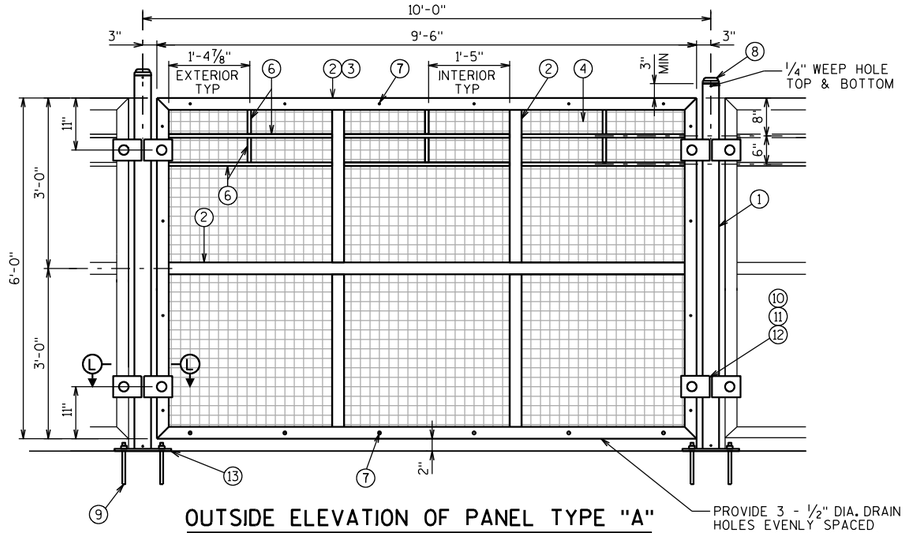
FENCE DECORATIVE WING (1 OF 3)

SHEET 61 OF 70

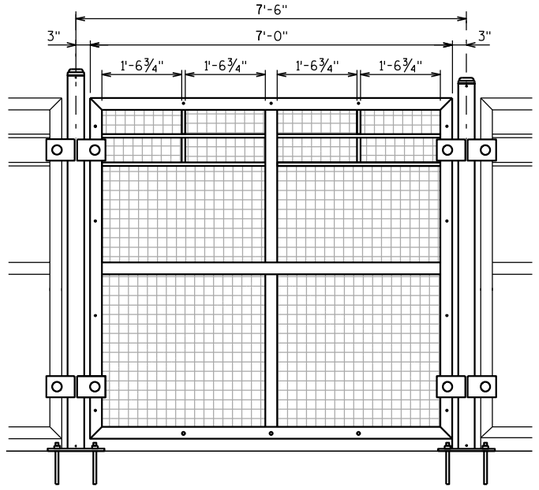
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PLOT NAME : R40548_080606_fe
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STATE PROJECT NUMBER

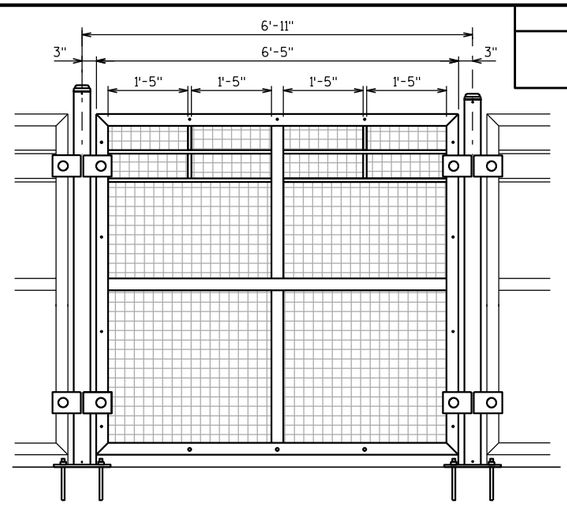
1060-33-80



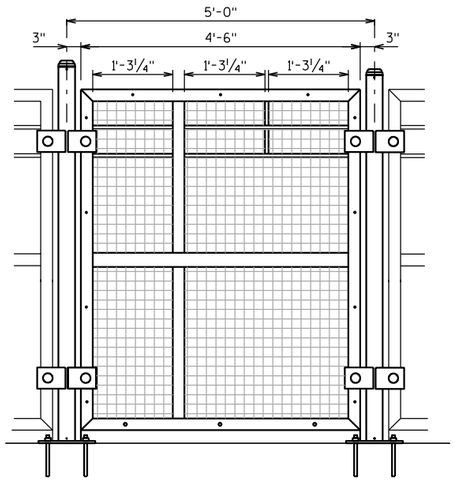
OUTSIDE ELEVATION OF PANEL TYPE "A"



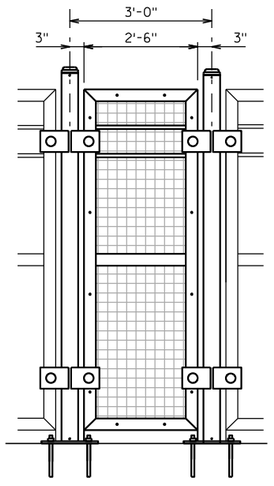
OUTSIDE ELEVATION OF PANEL TYPE "B"



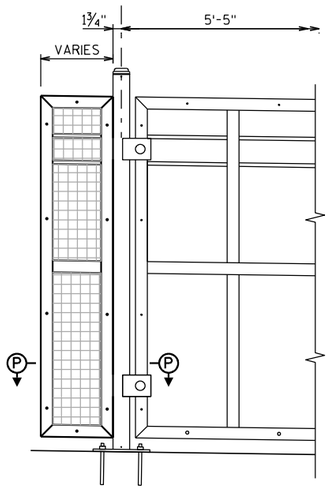
OUTSIDE ELEVATION OF PANEL TYPE "C"



OUTSIDE ELEVATION OF PANEL TYPE "D"

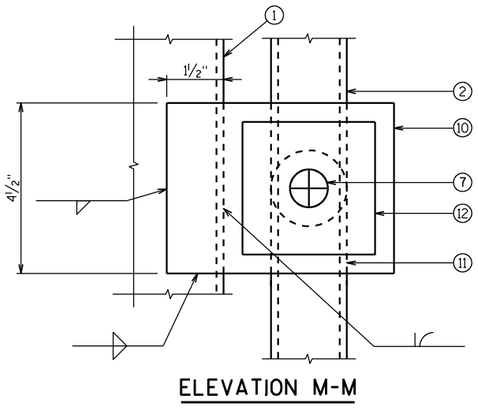


OUTSIDE ELEVATION OF PANEL TYPE "E"

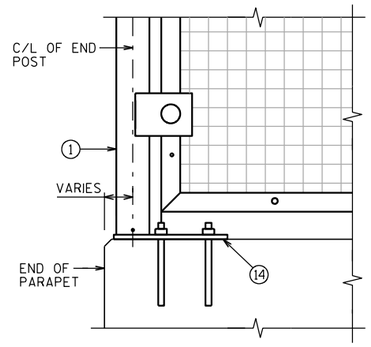


OUTSIDE ELEVATION OF CANTILEVER PANEL

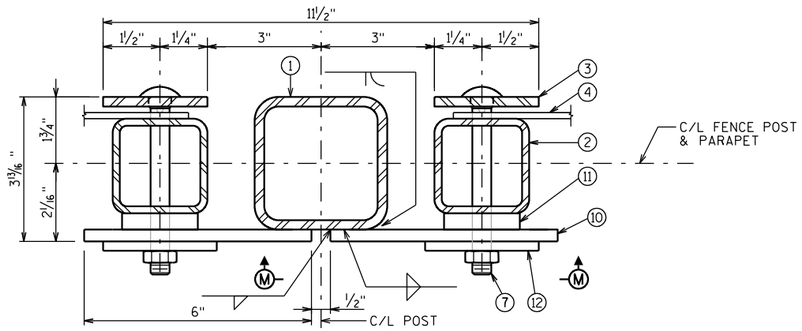
SEGMENT C



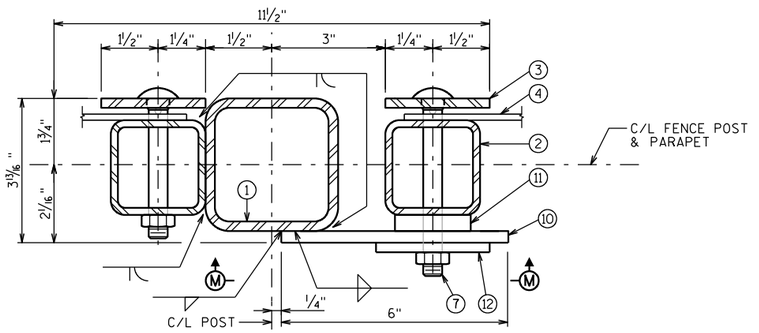
ELEVATION M-M



END POST DETAIL



SECTION L-L



SECTION P-P

NOTES

FOR NOTES AND LEGEND, SEE SHEET 61.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON SHEET 63.

HORIZONTAL FENCE MEMBERS WILL BE SLOPED TO MATCH TOP OF PARAPET SLOPE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

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FENCE DECORATIVE WING (2 OF 3)

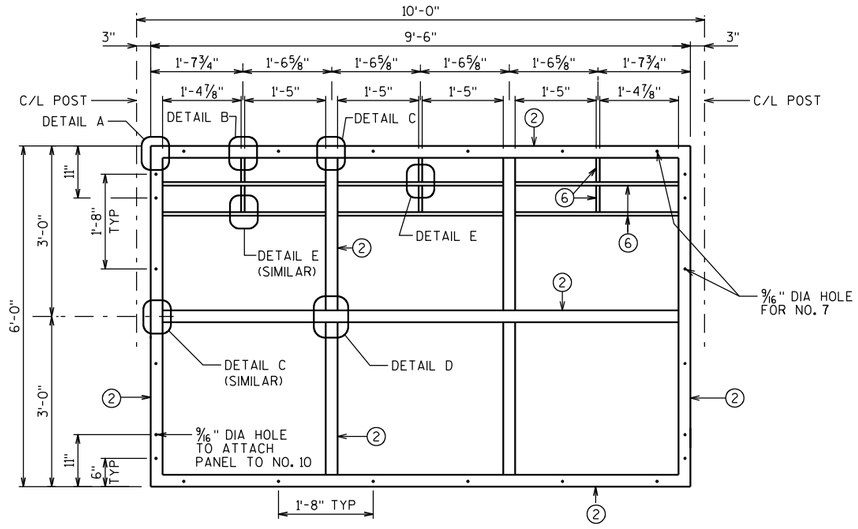
SHEET 62 OF 70

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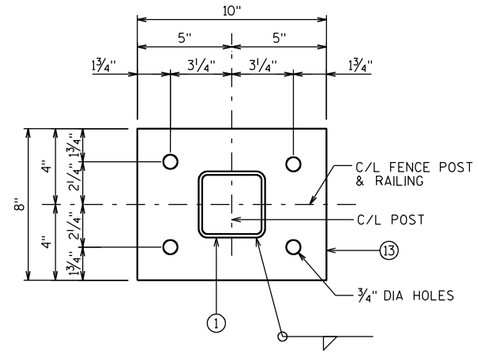
STATE PROJECT NUMBER

1060-33-80

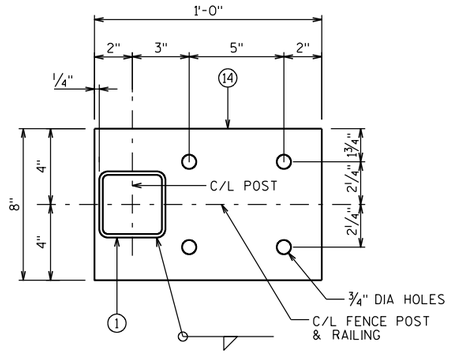


DECORATIVE FENCE WING PANEL

TYPICAL 10'-0" PANEL SHOWN

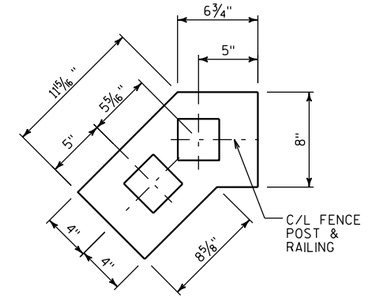


BASE PLATE



END BASE PLATE

(INSTALL AT END SECTIONS)



CORNER BASE PLATE

BASE PLATE DETAILS

DETAIL A

DETAIL B

SECTION P-P

DETAIL C

SECTION Q-Q

DETAIL D

SECTION R-R

DETAIL E

SECTION S-S

NOTES

FOR NOTES AND LEGEND, SEE SHEET 61.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

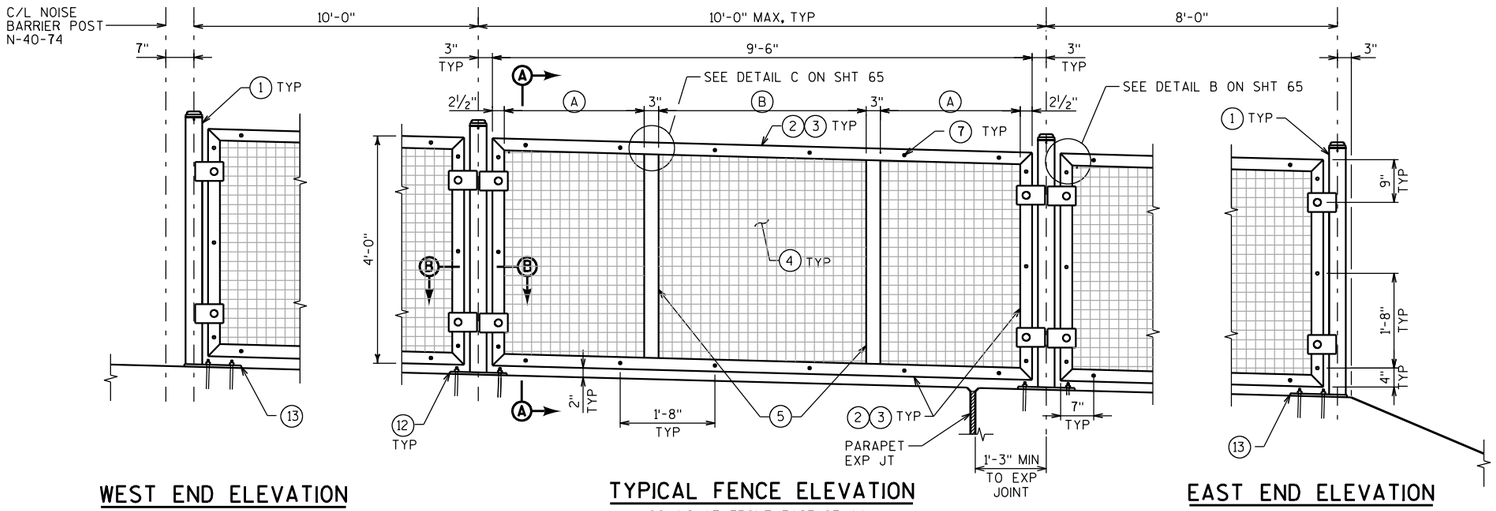
FENCE DECORATIVE WING (3 OF 3)

SHEET 63 OF 70

8

8

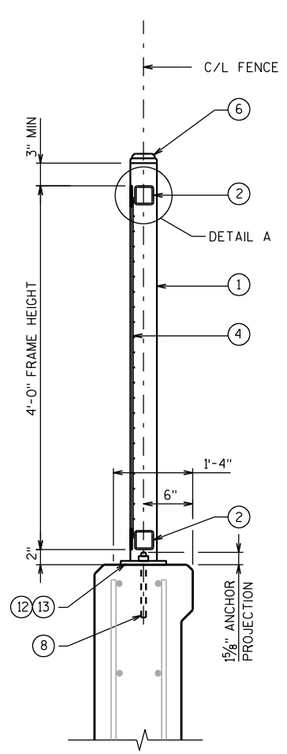
STATE PROJECT NUMBER
1060-33-80



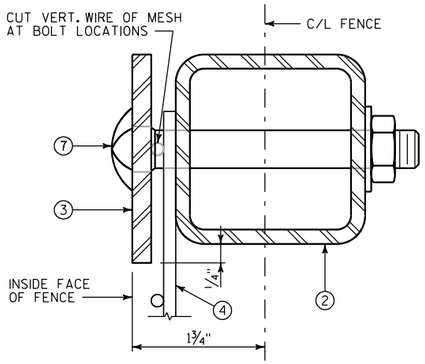
WEST END ELEVATION
(LOOKING AT FRONT FACE OF WALL)

TYPICAL FENCE ELEVATION
(LOOKING AT FRONT FACE OF WALL)

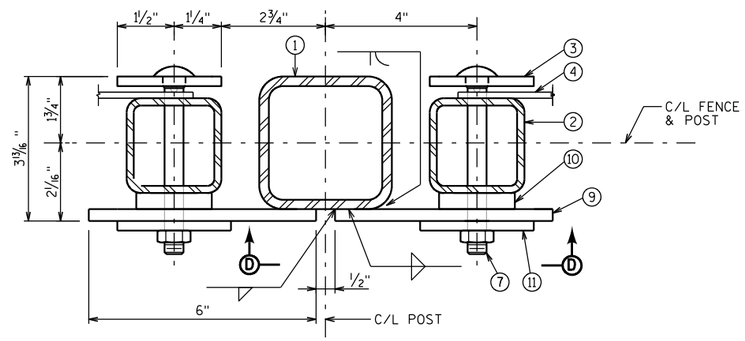
EAST END ELEVATION
(LOOKING AT FRONT FACE OF WALL)



SECTION A-A



DETAIL A

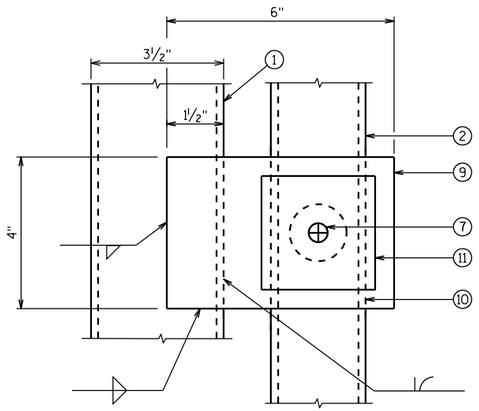


SECTION B-B

POST SPACING DIMENSIONS

POST SPACING	PATTERN DESCRIPTION (OPEN AREAS)
10 FT	(A) 2'-4¼" (B) 3'-10½"
7 FT TO 9.9 FT	REVISE (A) AND (B) WITH POST SPACING RATIO
4 FT TO 6.9 FT	TWO EQUAL PANELS
LESS THAN 4 FT	NOT ALLOWED, EXCEPT AT LIGHT POLES

* SEE GENERAL PLAN & ELEVATION FOR POST SPACING.



ELEVATION D-D

LEGEND

(1) HSS 3½ × 3½ × ⅜ POST WITH ¼" DIA. VENT HOLES TOP & BOTTOM ON THE OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO BASE PLATE AND NO. 6, TYP.

(2) HSS 2½ X 2½ X ⅜. WELD TO NO. 5.

(3) PL 2¾" × ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.

(4) STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.

(5) HSS 3 X 2½ X ⅜. WELD TO NO. 2.

(6) 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.

(7) ½" DIA. CARRIAGE BOLT, WASHER AND NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 FOR SQUARE PORTION OF THE BOLT HEAD.

(8) ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 6" MINIMUM EMBEDMENT.

(9) PL ¼" X 4" X 6" CONNECTION WITH 1½" DIA. HOLES FOR NO. 7. USE NO. 11 TO COVER 1½" DIA. ADJUSTMENT HOLES.

(10) PL ⅜" X 2" X 4".

(11) PL WASHER ¼" X 3" X 3".

(12) PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.

(13) PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.

(14) ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.

NOTES

THE BID ITEM WILL BE "FENCE DECORATIVE WALL" WHICH WILL INCLUDE ALL ITEMS SHOWN.

POST BASE PLATES WILL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS WILL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING WILL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, AND SHIMS WILL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND WILL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS WILL BE GALVANIZED.

VENT HOLES WILL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL WILL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.5.

PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVINIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COVER THE 2" X 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

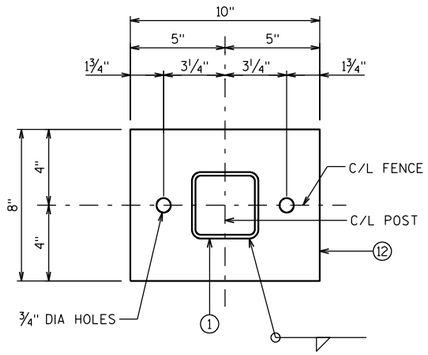
FENCE DECORATIVE WALL (1 OF 2)

SHEET 64 OF 70

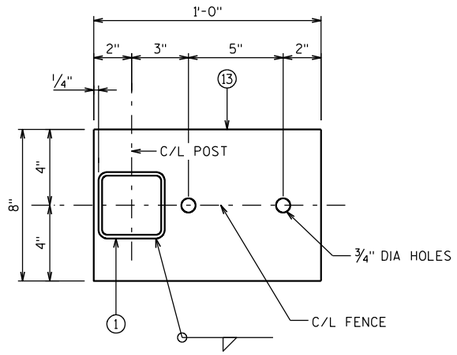
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STATE PROJECT NUMBER
1060-33-80



BASE PLATE



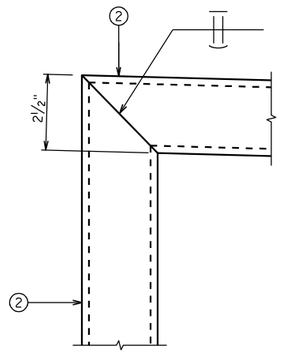
END BASE PLATE
(INSTALL AT END SECTIONS)

BASE PLATE DETAILS

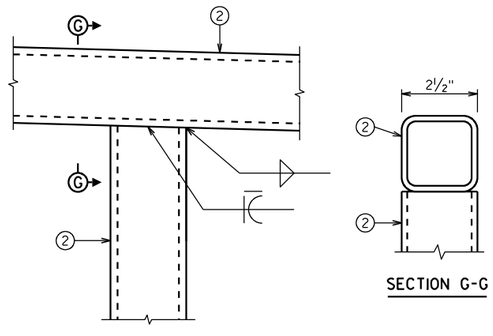
NOTES

FOR NOTES AND LEGEND, SEE SHEET 64.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.



DETAIL B



DETAIL C

SECTION G-G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

FENCE DECORATIVE WALL (2 OF 2)

SHEET 65 OF 70

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-548\cds\R40548_080610_fe.dgn PLOT DATE : 07-MAY-2014 10:18 PLOT BY : MSCKES PLOT NAME : R40548_080610_fe PLOT SCALE : 0.166667:1

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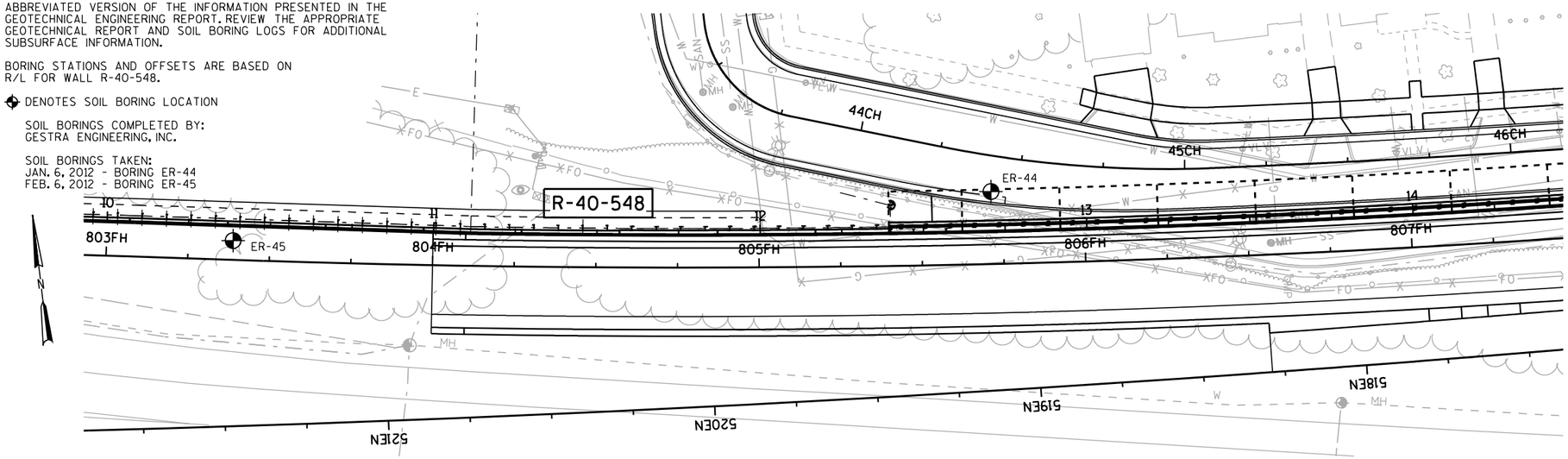
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

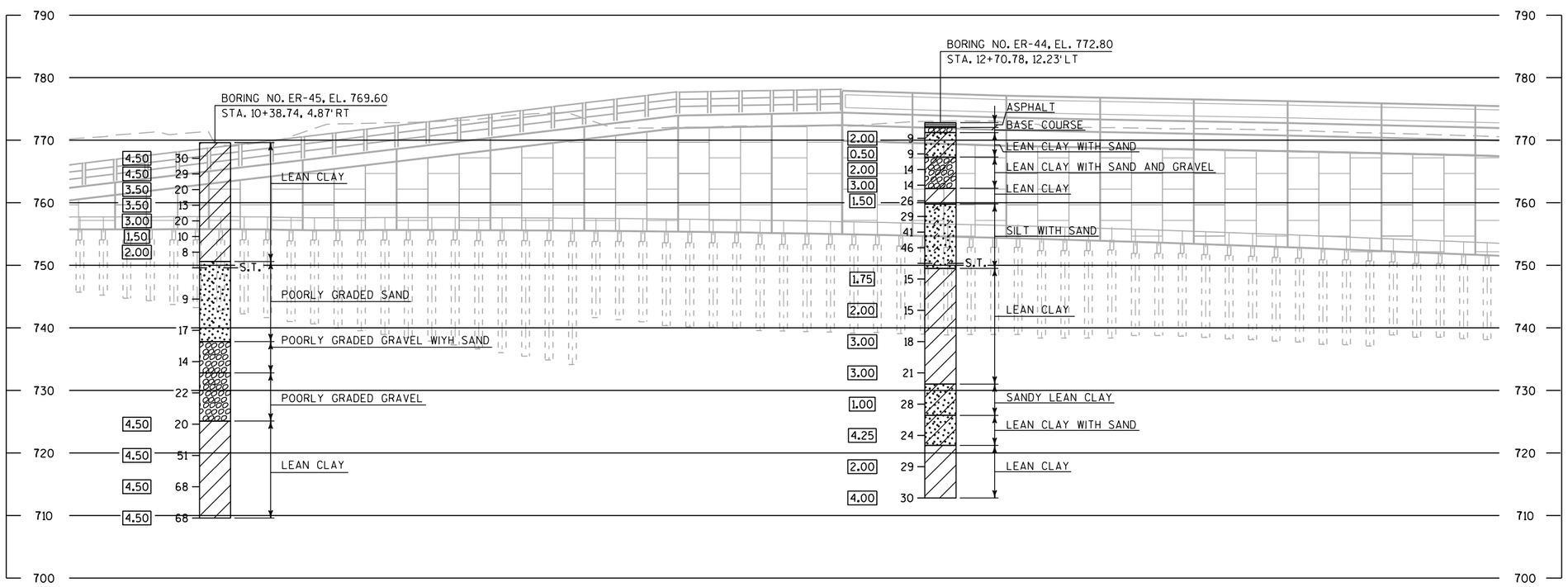
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR WALL R-40-548.

◈ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JAN. 6, 2012 - BORING ER-44
FEB. 6, 2012 - BORING ER-45





STATE PROJECT NUMBER

1060-33-80

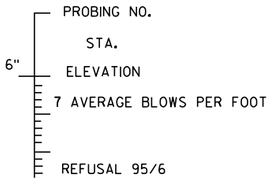
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

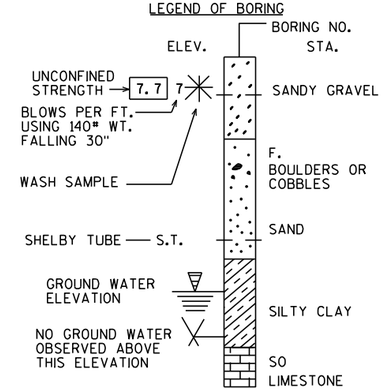
TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (1 OF 5)

SHEET 66 OF 70

8

8

NOTES:

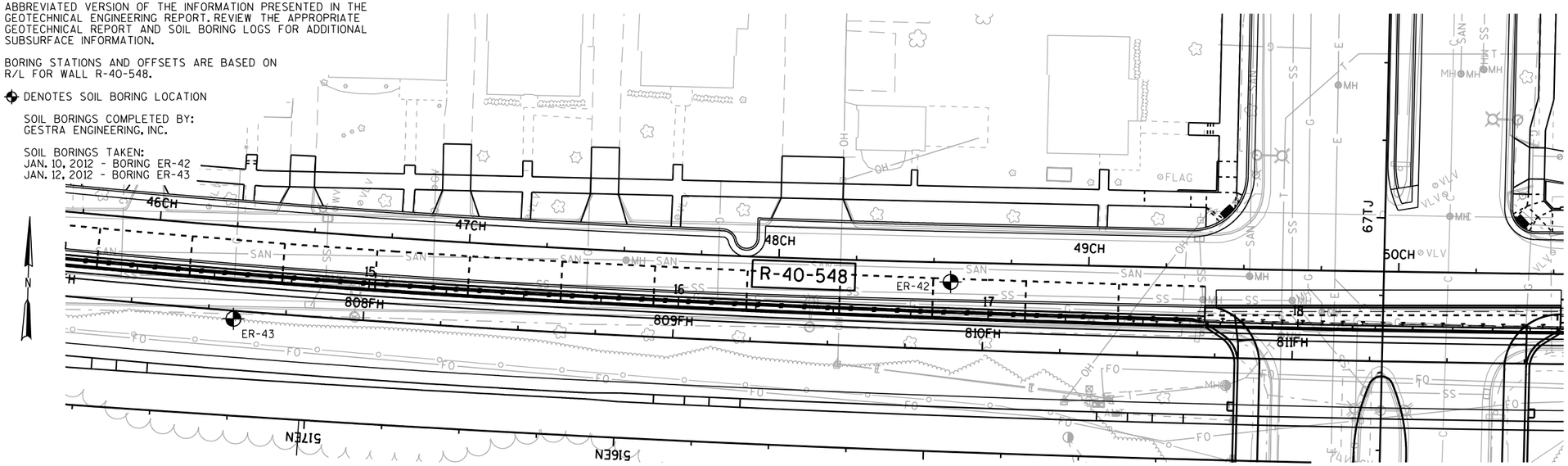
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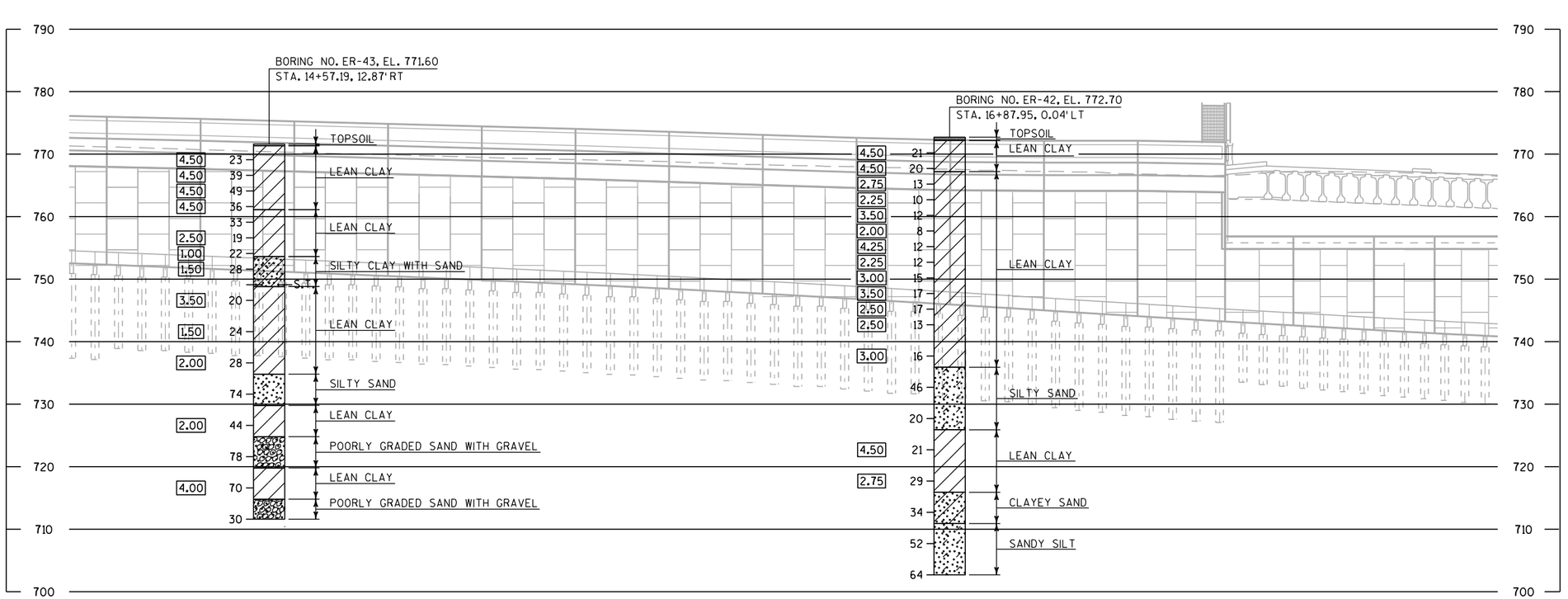
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR WALL R-40-548.

◈ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JAN. 10, 2012 - BORING ER-42
JAN. 12, 2012 - BORING ER-43





STATE PROJECT NUMBER

1060-33-80

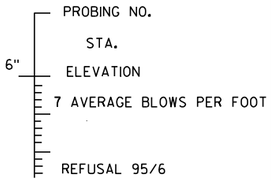
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

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SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (2 OF 5)

SHEET 67 OF 70

8

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PLOT BY : MSCKES
PLOT NAME : R40548_080702_se
PLOT SCALE : 40:1

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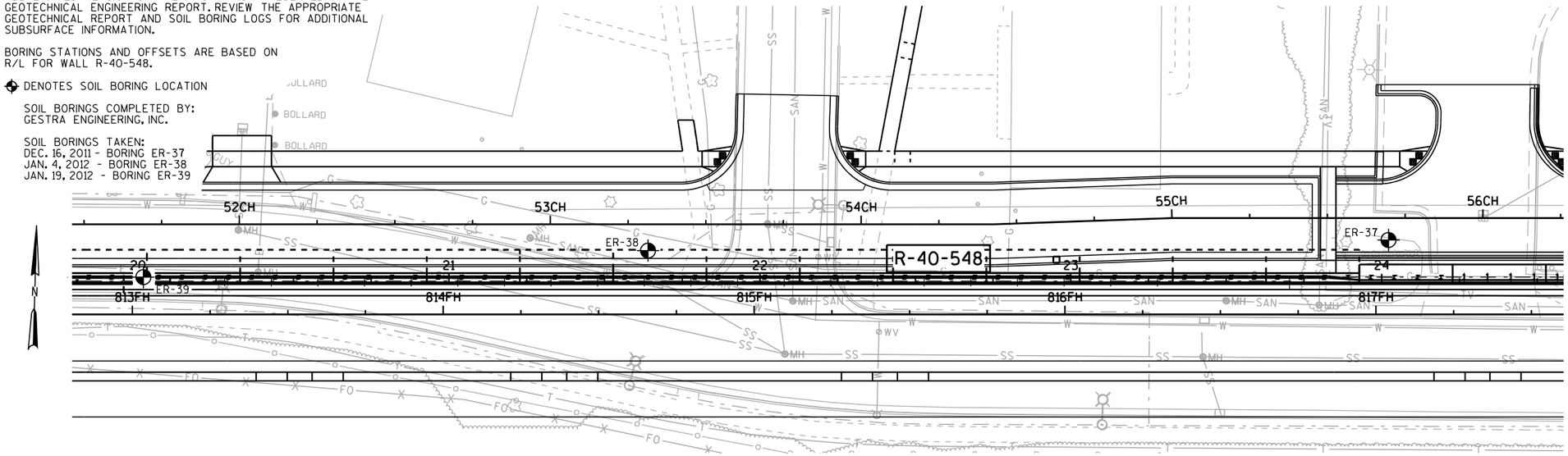
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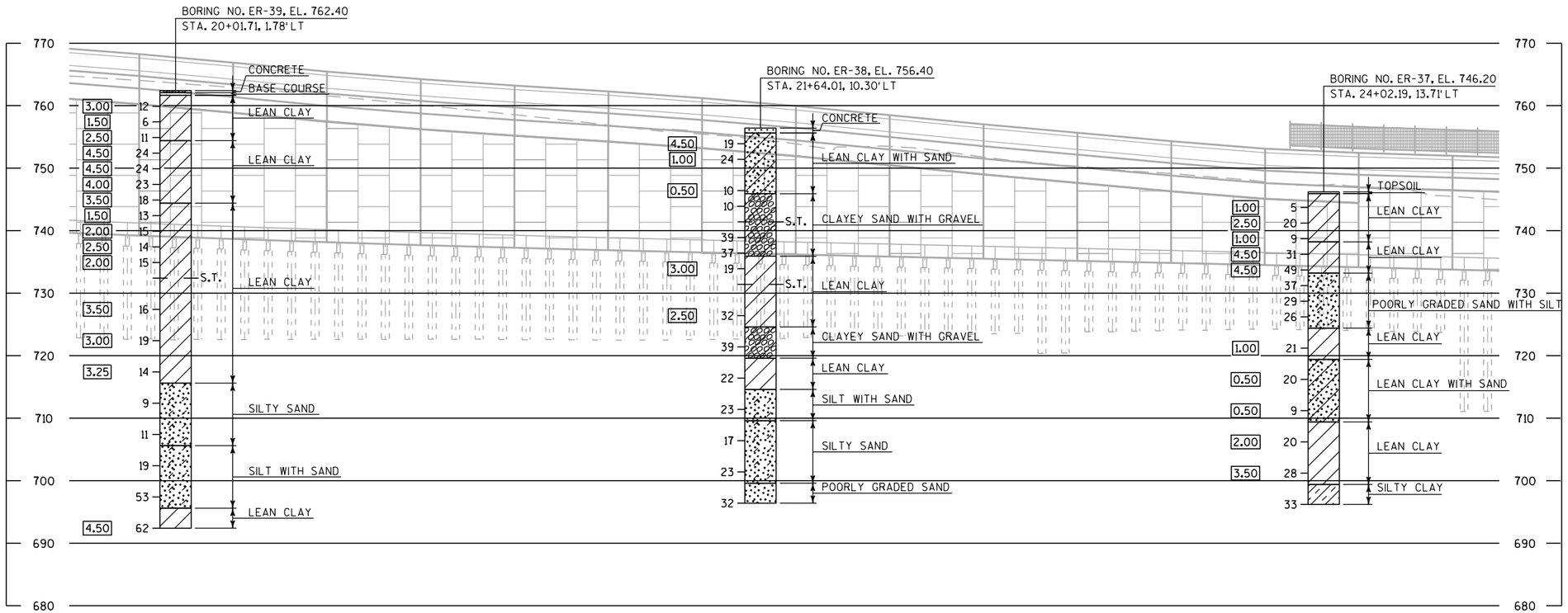
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR WALL R-40-548.

◈ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
DEC. 16, 2011 - BORING ER-37
JAN. 4, 2012 - BORING ER-38
JAN. 19, 2012 - BORING ER-39





STATE PROJECT NUMBER

1060-33-80

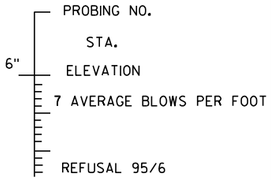
ABBREVIATIONS

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WS — WEATHERED SO — SOUND

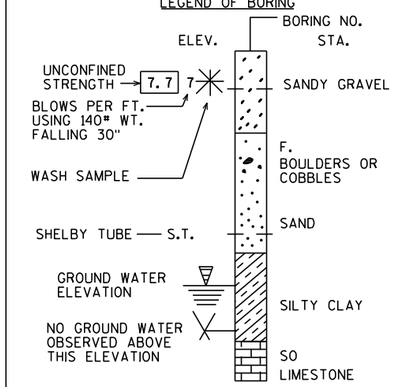
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (3 OF 5)

SHEET 68 OF 70

8

8

NOTES:

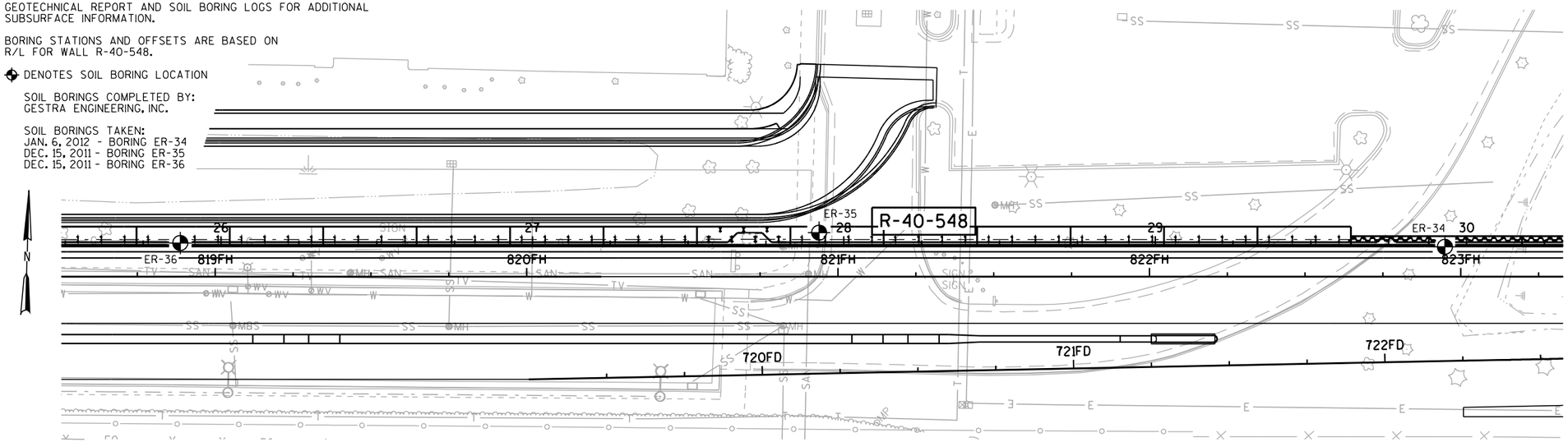
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BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR WALL R-40-548.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JAN. 6, 2012 - BORING ER-34
DEC. 15, 2011 - BORING ER-35
DEC. 15, 2011 - BORING ER-36



STATE PROJECT NUMBER

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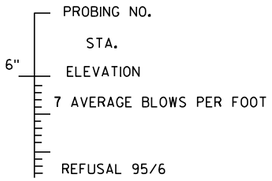
ABBREVIATIONS

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MATERIAL SYMBOLS

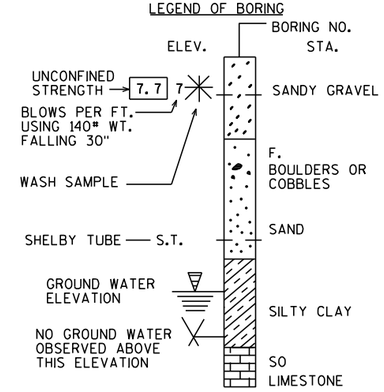
TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (4 OF 5)

SHEET 69 OF 70

8

8

NOTES:

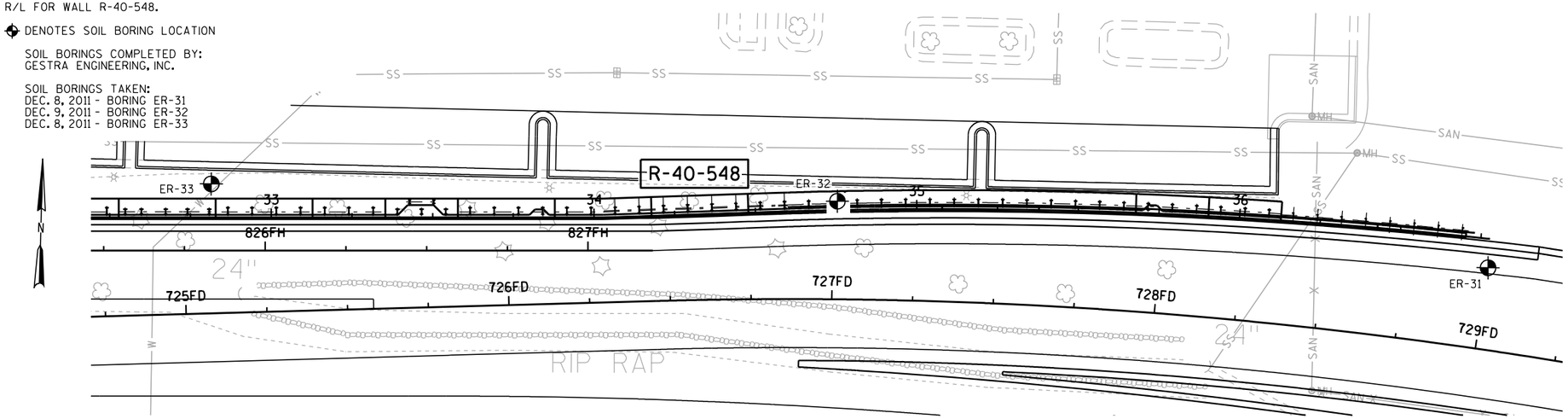
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

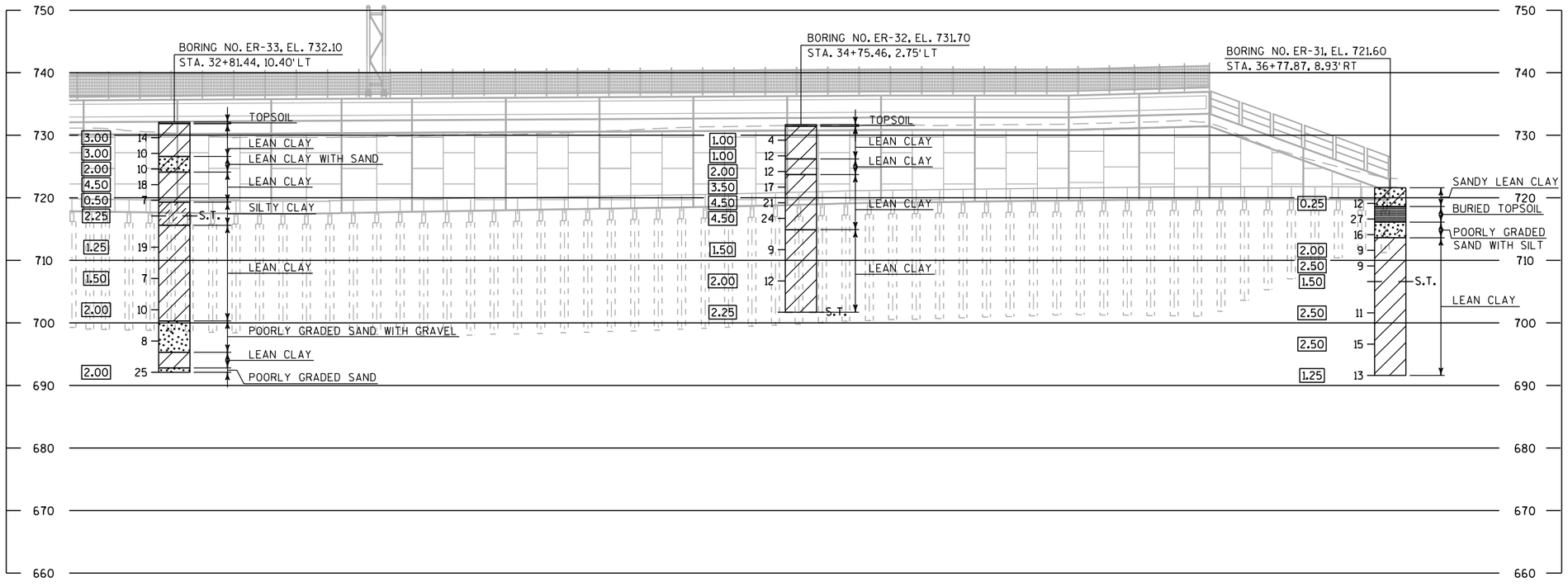
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR WALL R-40-548.

⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
DEC. 8, 2011 - BORING ER-31
DEC. 9, 2011 - BORING ER-32
DEC. 8, 2011 - BORING ER-33





STATE PROJECT NUMBER

1060-33-80

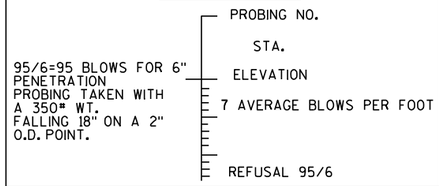
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

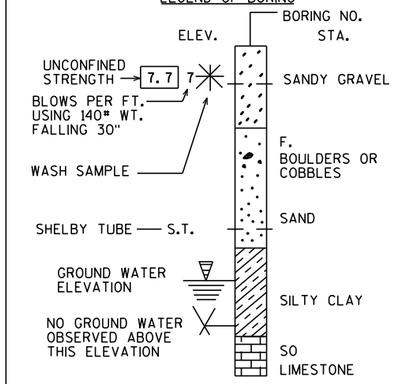
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-548

DRAWN BY TEK | PLANS CK'D. KES

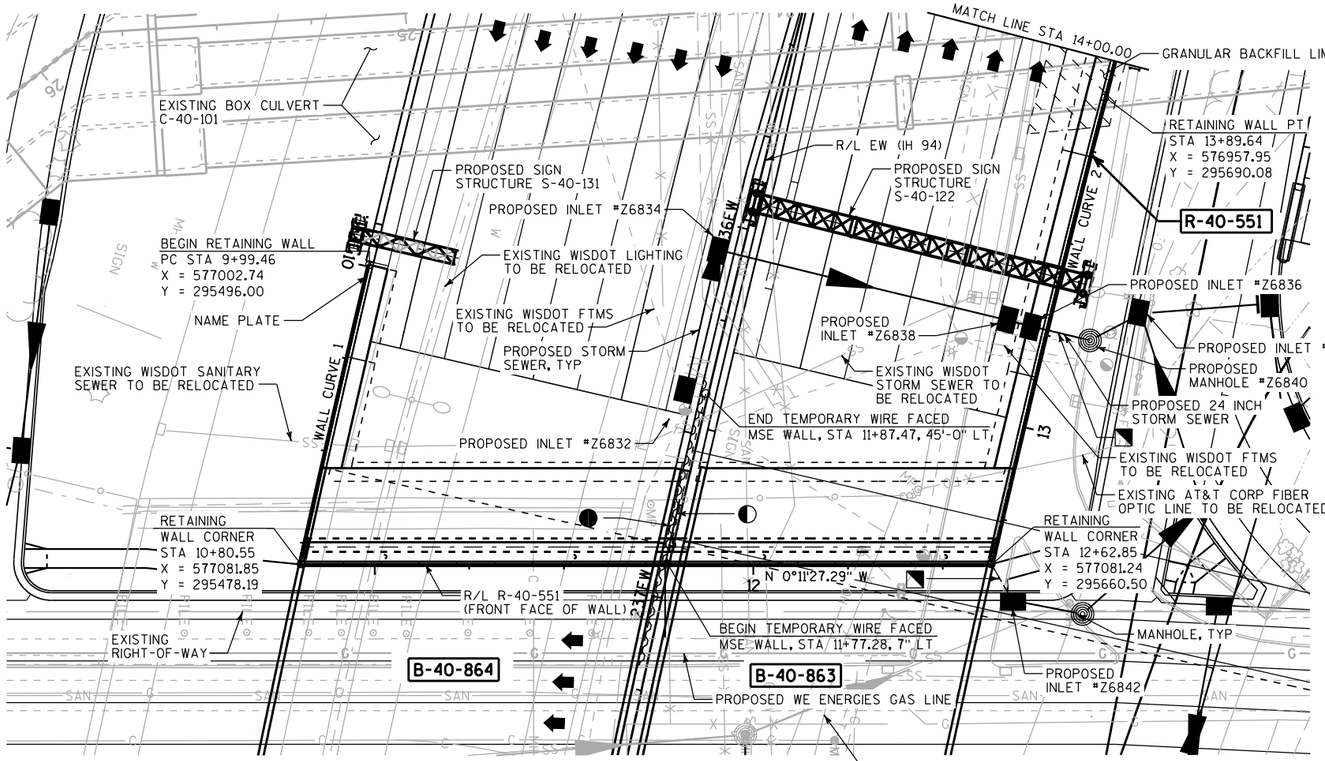
SUBSURFACE EXPLORATION (5 OF 5)

SHEET 70 OF 70

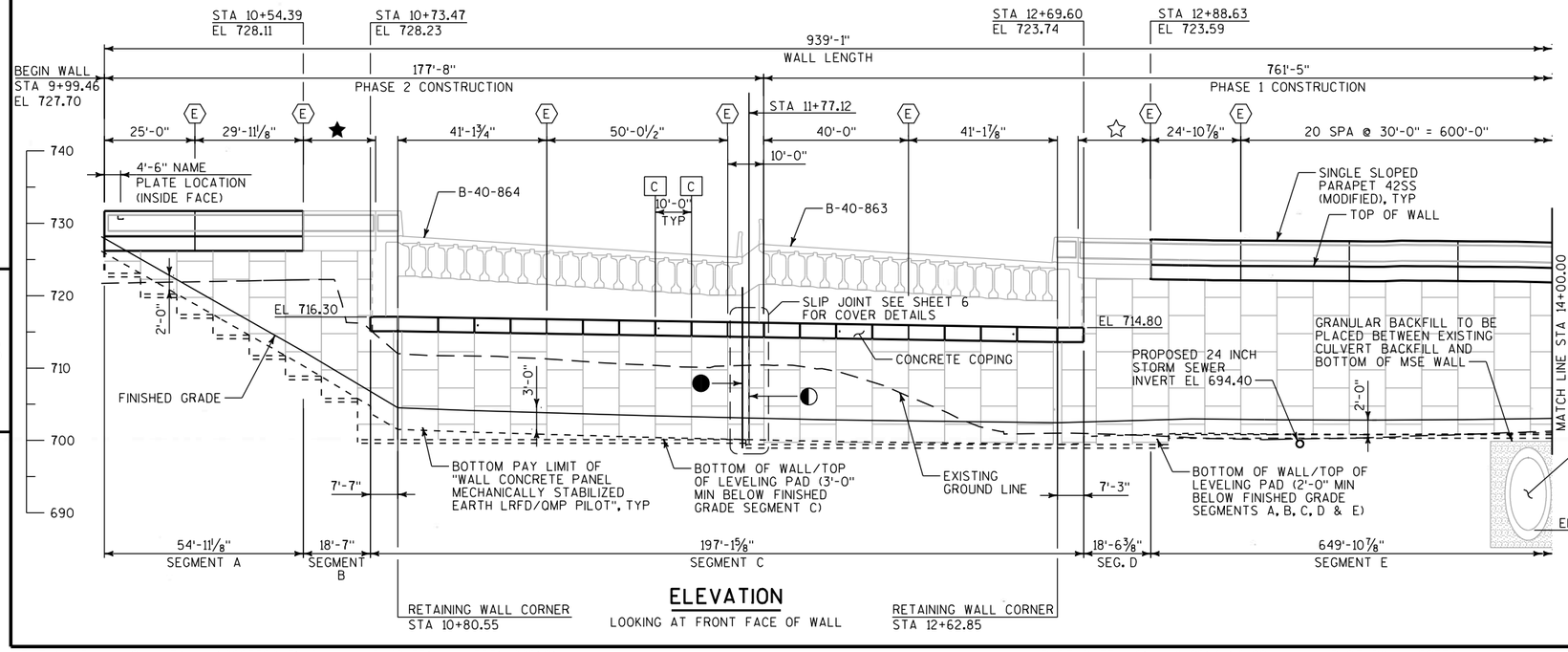
8

8

STATE PROJECT NUMBER
1060-33-80



PLAN
(MSE RETAINING WALL)



ELEVATION
LOOKING AT FRONT FACE OF WALL

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY) _____ 240 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY RETAINING WALL ____ f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS _____ f'c = 4,000 PSI
BAR STEEL REINFORCEMENT _____ Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY (SEGMENT C) TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHAGE LOAD ABOVE THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE OF THE WEST ABUTMENT LIMITS OF BRIDGES B-40-863 AND B-40-864 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES
4. TYPICAL WALL SECTION (1 OF 3)
5. TYPICAL WALL SECTION (2 OF 3)
6. TYPICAL WALL SECTION (3 OF 3)
7. ELEVATION TABLES & REINFORCEMENT SCHEDULE
8. PARAPET, COPING & ANCHOR SLAB DETAILS
9. SEGMENT A REINFORCEMENT DETAILS
10. SEGMENT C REINFORCEMENT DETAILS
11. SEGMENT E REINFORCEMENT DETAILS (1 OF 3)
12. SEGMENT E REINFORCEMENT DETAILS (2 OF 3)
13. SEGMENT E REINFORCEMENT DETAILS (3 OF 3)
14. INLET DETAILS
15. ANCHOR SLAB INLET COVER SPECIAL
16. AESTHETIC WALL TREATMENT DETAILS (1 OF 2)
17. AESTHETIC WALL TREATMENT DETAILS (2 OF 2)
18. SUBSURFACE EXPLORATION (1 OF 2)
19. SUBSURFACE EXPLORATION (2 OF 2)

LEGEND

- (E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- C CONTRACTION JOINT IN COPING
- TRAFFIC DIRECTION
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE TYPICAL WALL SECTIONS (3 OF 3) SHEET FOR DETAILS
- TEMPORARY SHORING, SEE DETAIL ON TYPICAL SECTIONS (3 OF 3) SHEET FOR DETAILS
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO INLET
- ★ STRUCTURAL APPROACH SLAB, SEE STRUCTURE B-40-864 PLANS FOR DETAILS
- ☆ STRUCTURAL APPROACH SLAB, SEE STRUCTURE B-40-863 PLANS FOR DETAILS

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN EDWARD K. McCRIGHT E-37422 MILWAUKEE, WI 5/1/14 PROFESSIONAL ENGINEER

STRUCTURE R-40-551

RETAINING WALL W. OF 84TH ST. UNDER IH-94

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

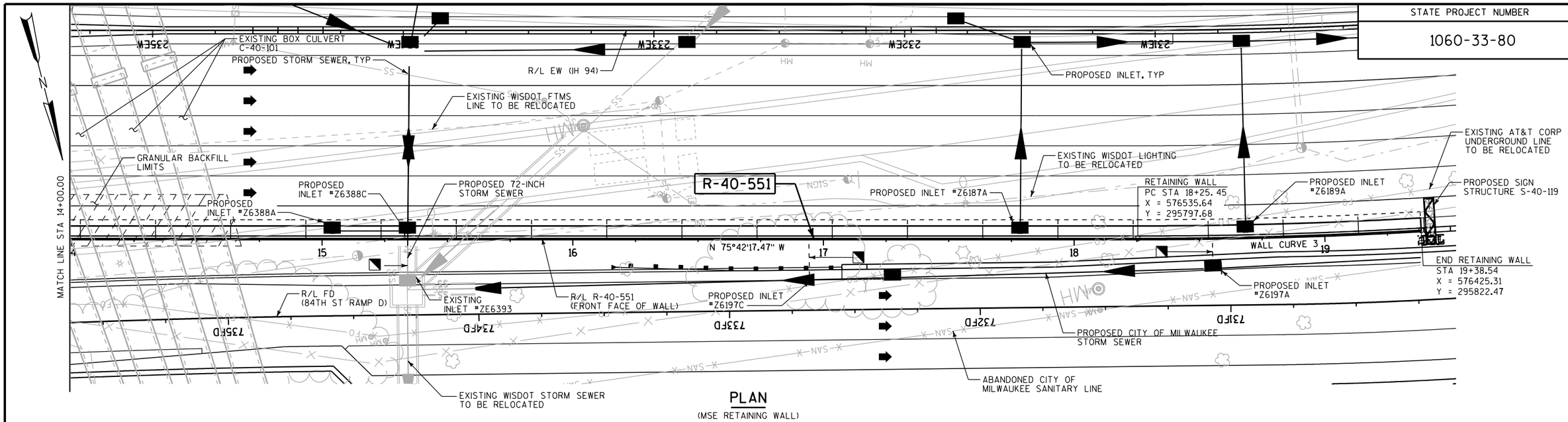
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	AAG	BHI	EKM

GENERAL PLAN & ELEVATION (1 OF 2)

SHEET 1 OF 19

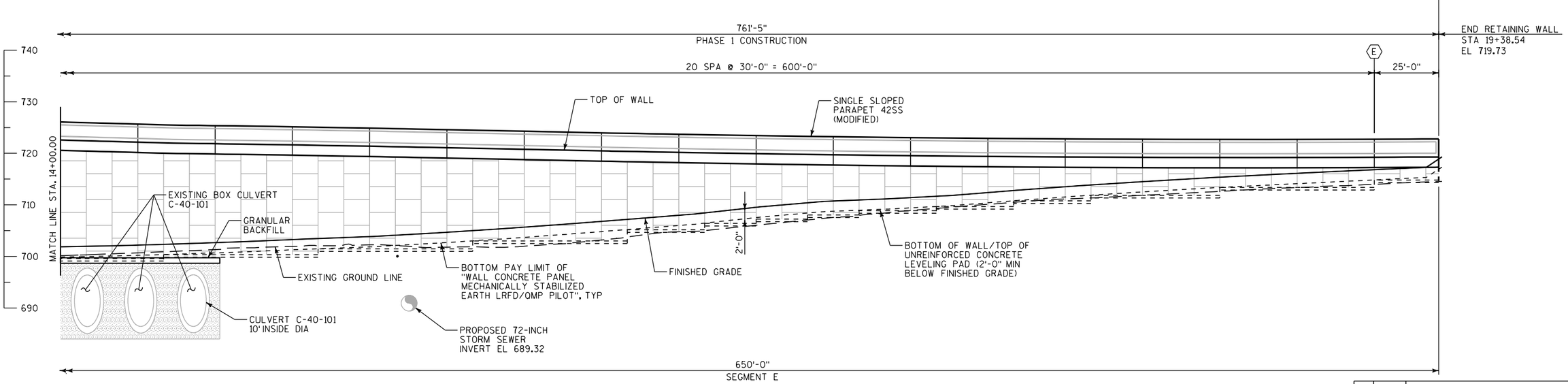
STATE PROJECT NUMBER

1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

LEGEND

- (E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO PROPOSED DRAINAGE STRUCTURE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 2)

SHEET 2 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-551\cds\R551_080102_gp.dgn
PLOT DATE : 01-MAY-2014 14:00
PLOT BY : MSCTEK
PLOT NAME : R551_080102_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80

ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SEG. A	SEG. B	SEG. C	SEG. D	SEG. E	TOTAL
209.0100	BACKFILL GRANULAR	CY	---	---	---	---	100	100
502.3200	PROTECTIVE SURFACE TREATMENT	SY	50	---	---	---	605	655
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	40	---	---	---	465	505
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	5,300	---	---	---	63,385	68,685
511.1200.0003	TEMPORARY SHORING R-40-551	SF	---	---	990	---	---	990
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	11	---	1	---	128	140
517.1050.S.0012	ARCHITECTURAL SURFACE TREATMENT R-40-551	SF	445	300	2,760	400	8,355	12,260
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	---	---	11	---	46	57
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	55	19	197	19	651	941
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	---	---	---	---	6	6
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	---	---	10	---	---	10
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	---	---	---	---	1,300	1,300
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	---	---	95	---	---	95
653.0105	PULL BOXES 12X24-INCH	EACH	---	---	4	---	---	4
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	---	---	---	---	2	2
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	---	---	---	---	5	5
SPV.0060.4190	CONCRETE POLYMER PULL BOX	EACH	---	---	4	---	---	4
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	555	340	3,155	440	9,655	14,145
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	---	---	875	---	---	875
	NON-BID ITEMS							
	NAME PLATE	EACH						1
	JOINT FILLER	SIZE						3/4", 1 1/2", 2"
	CORK FILLER	SIZE						1"
	EXPANDED POLYSTYRENE	SIZE						1"
	NONBITUMINOUS JOINT FILLER	SIZE						3/4", 1", 1 1/2", 2"

ALL ITEMS ARE CATEGORY 3110

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ALONG THE R/L FOR R-40-551 ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED MAXIMUM CONCRETE WALL PANEL THICKNESS OF 7 1/2 INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7 1/2 INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

WALL PHASE AND SEGMENT DESIGNATIONS DO NOT CORRESPOND TO ROADWAY STAGING DESIGNATIONS.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-551 WITH THE WEST ABUTMENTS OF B-40-863 AND B-40-864.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES WITH THE CONSTRUCTION OF THE MSE WALL.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF THE LEVELING PAD IS ASSUMED TO BE AT LEAST 2'-0" BELOW FINISHED GRADE FOR SEGMENTS A, B, D & E AND 3'-0" BELOW FINISHED GRADE FOR SEGMENT C.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

BEVEL ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE SHAL BE EPOXY COATED.

REFER TO S.D.D. 12A3-10 FOR NAMEPLATE DETAILS.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENTS A, E & F CAST-IN-PLACE ANCHOR SLAB, COPING AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" AND "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT C CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LRFD/OMP PILOT".

THE STANDARD PANEL SIZE SHALL BE 5' HIGH X 10' WIDE. 5' HIGH X 5' WIDE PANELS WILL NOT BE ALLOWED.

HORIZONTAL CURVE DATA

WALL CURVE 1

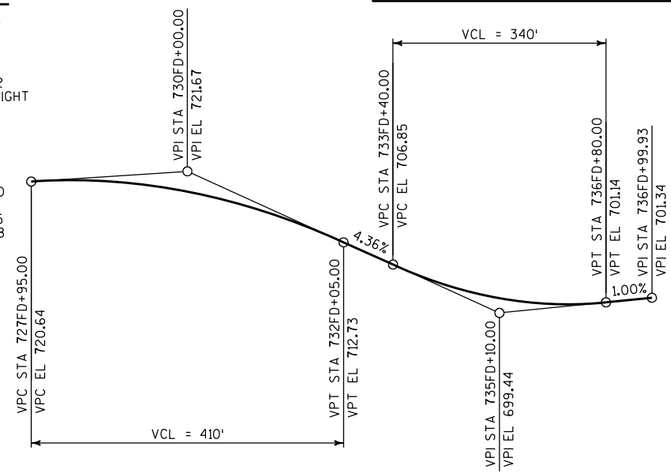
P.I. = 10+39.59
X = 577041.82
Y = 295486.84
Δ = 0°59'59" LEFT
D = 1°13'13"
T = 40.96'
L = 81.91'
R = 4694.95'
P.C. = 9+98.63
X = 577001.94
Y = 295496.19
P.T. = 10+80.55
X = 577081.85
Y = 295478.19

WALL CURVE 2

P.I. = 13+26.25
X = 577019.39
Y = 295674.42
Δ = 1°36'30" RIGHT
D = 1°16'06"
T = 63.40'
L = 126.79'
R = 4517.05'
P.C. = 12+62.85
X = 577081.24
Y = 295660.50
P.T. = 13+89.64
X = 576957.95
Y = 295690.08

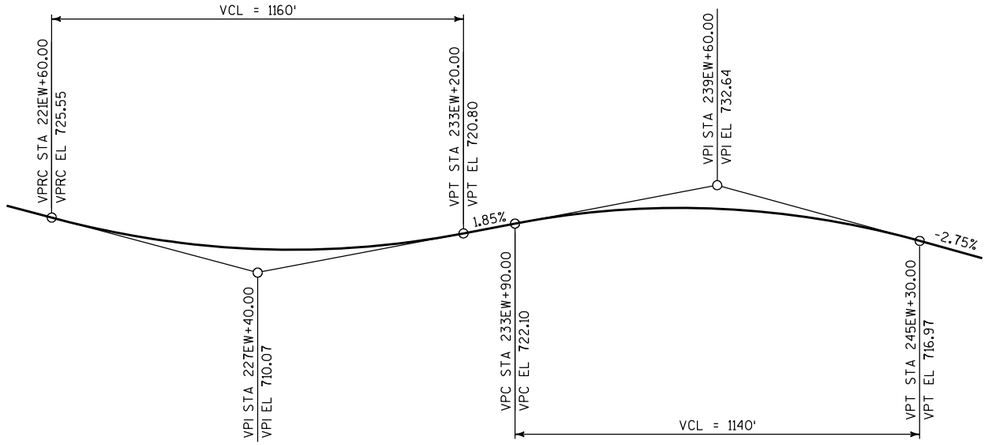
WALL CURVE 3

P.I. = 18+82.63
X = 576480.23
Y = 295811.80
Δ = 3°18'13" LEFT
D = 2°53'22"
T = 57.18'
L = 114.33'
R = 1982.95'
P.C. = 18+25.45
X = 576535.64
Y = 295797.68
P.T. = 19+39.78
X = 576424.10
Y = 295822.71



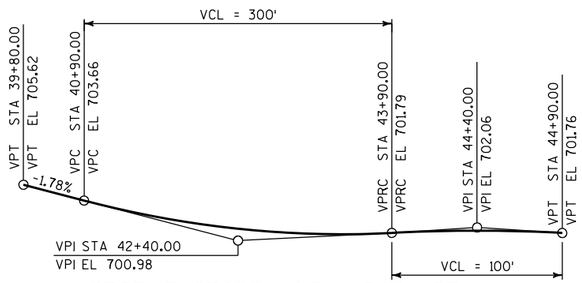
PROFILE GRADE LINE - RAMP 84TH ST TO IH 94 WB

R/L 'FD'



PROFILE GRADE LINE - IH 94 EB/WB

R/L 'EW'



PROFILE GRADE LINE - 84TH ST

R/L 'F'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES

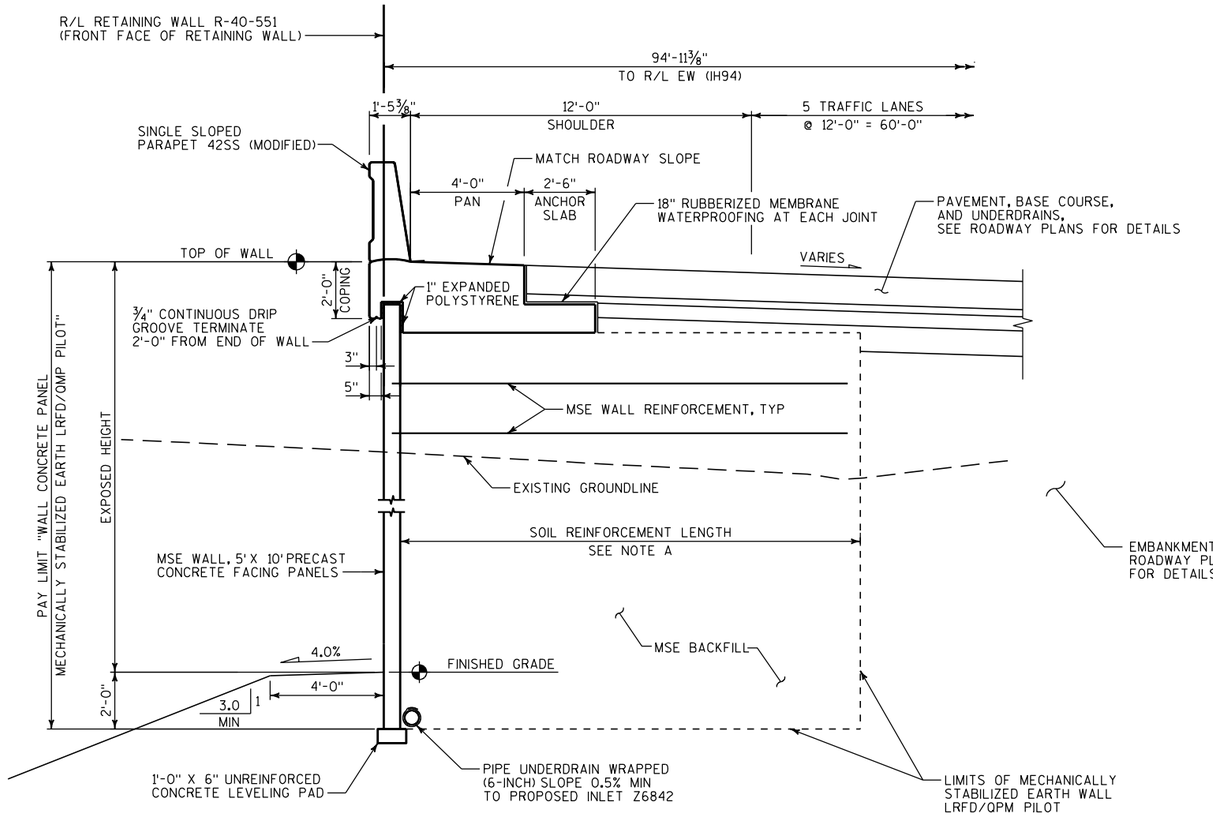
SHEET 3 OF 19

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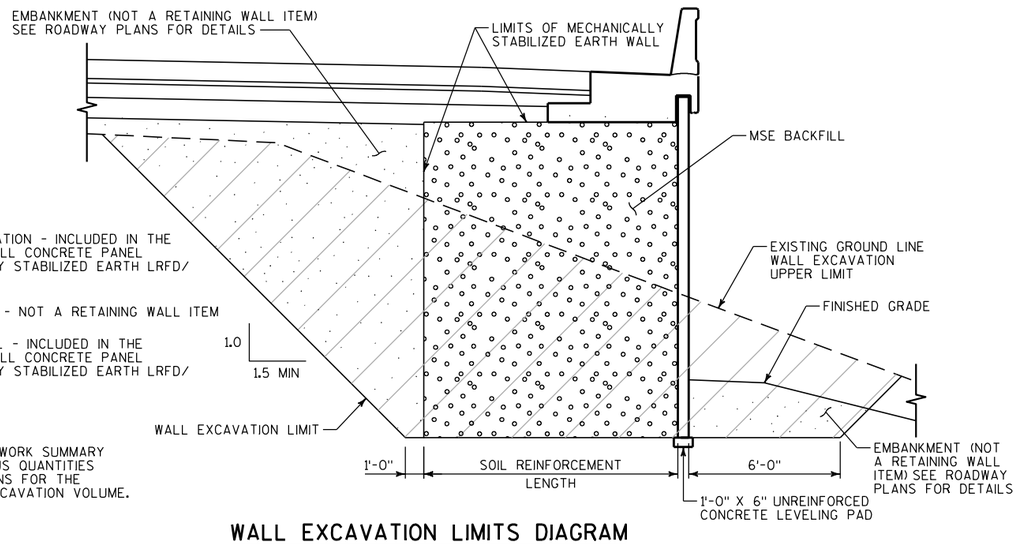
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STATE PROJECT NUMBER
1060-33-80



SEGMENT A - TYPICAL WALL SECTIONS

LOOKING WEST - STA 9+99.46 TO STA 10+54.39



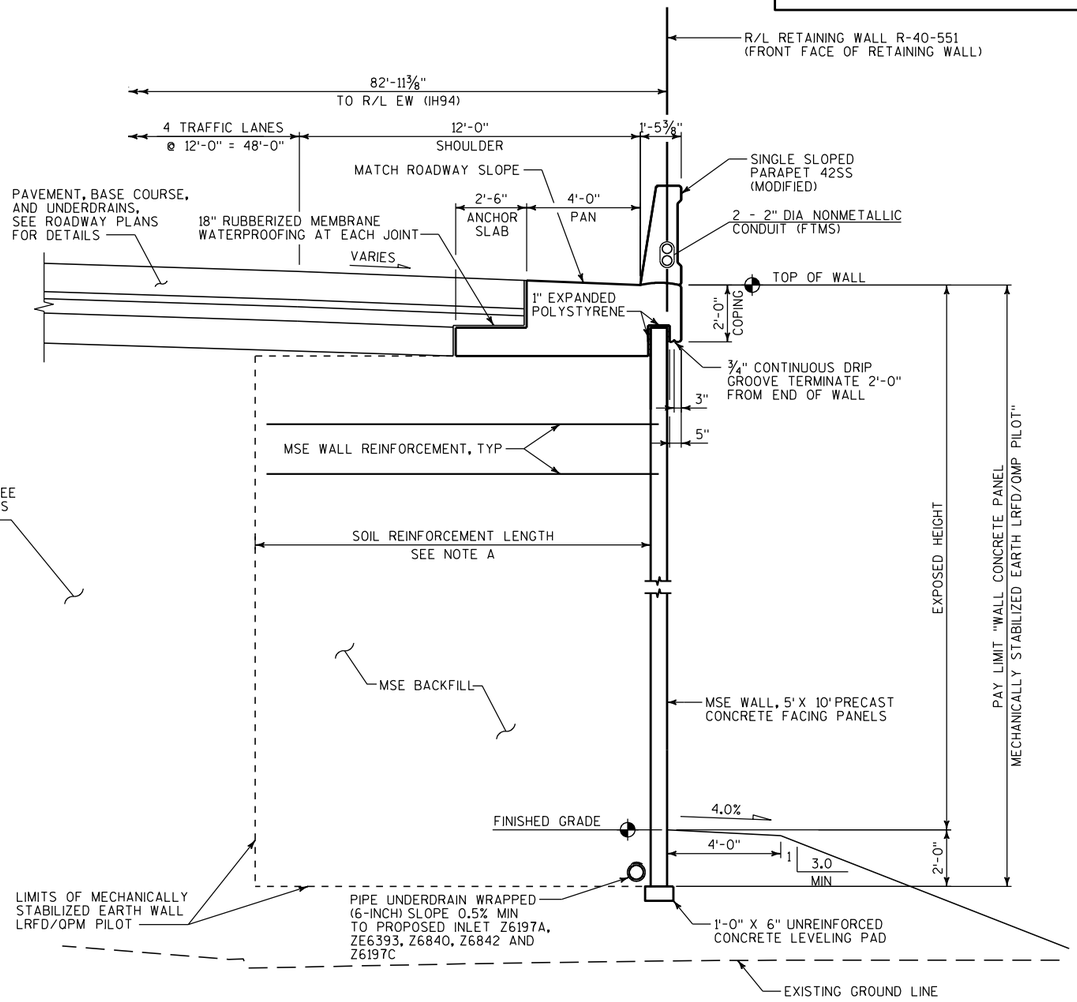
WALL EXCAVATION LIMITS DIAGRAM

LEGEND

- WALL EXCAVATION - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/ QMP PILOT"
- EMBANKMENT - NOT A RETAINING WALL ITEM
- MSE BACKFILL - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/ QMP PILOT"

NOTE

REFER TO THE EARTHWORK SUMMARY OF THE MISCELLANEOUS QUANTITIES IN THE ROADWAY PLANS FOR THE CALCULATED WALL EXCAVATION VOLUME.



SEGMENT E - TYPICAL WALL SECTIONS

LOOKING WEST - STA 12+88.63 TO STA 19+38.54

NOTE A

SEE WALL EXTERNAL STABILITY TABLE ON SHEET 5 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

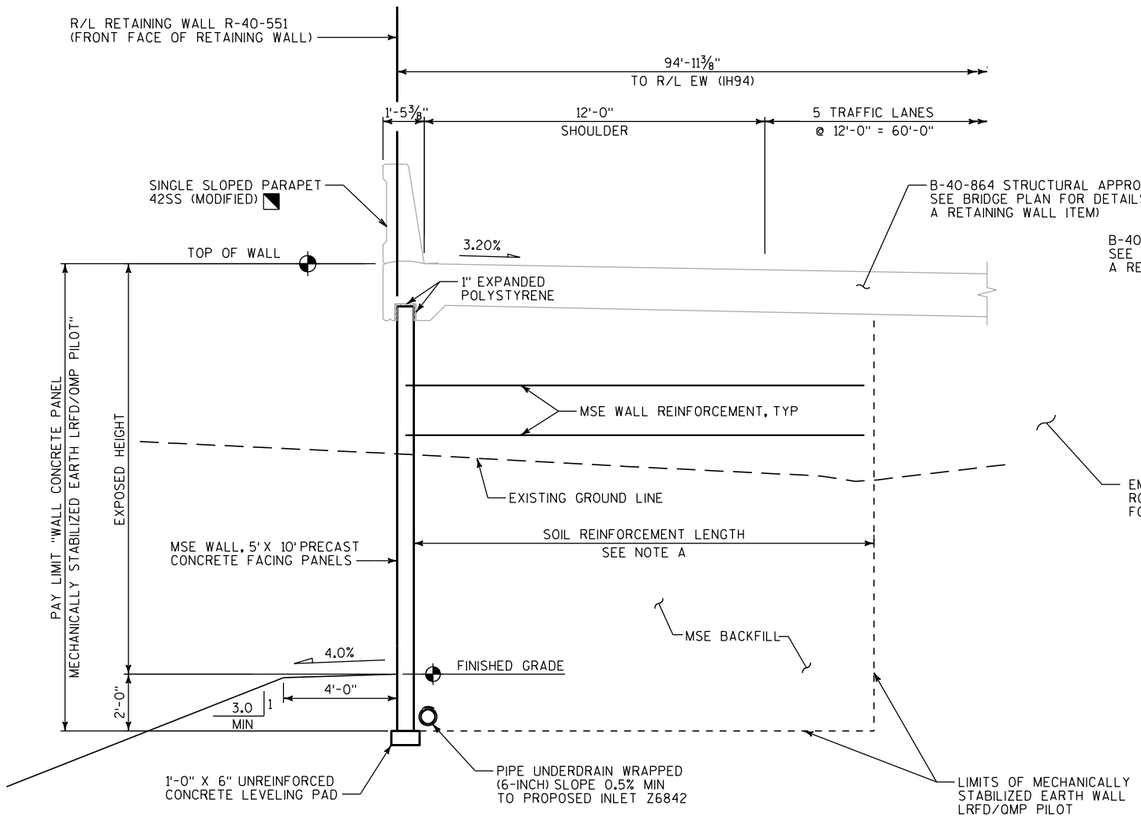
TYPICAL WALL SECTIONS (1 OF 3)

SHEET 4 OF 19

8

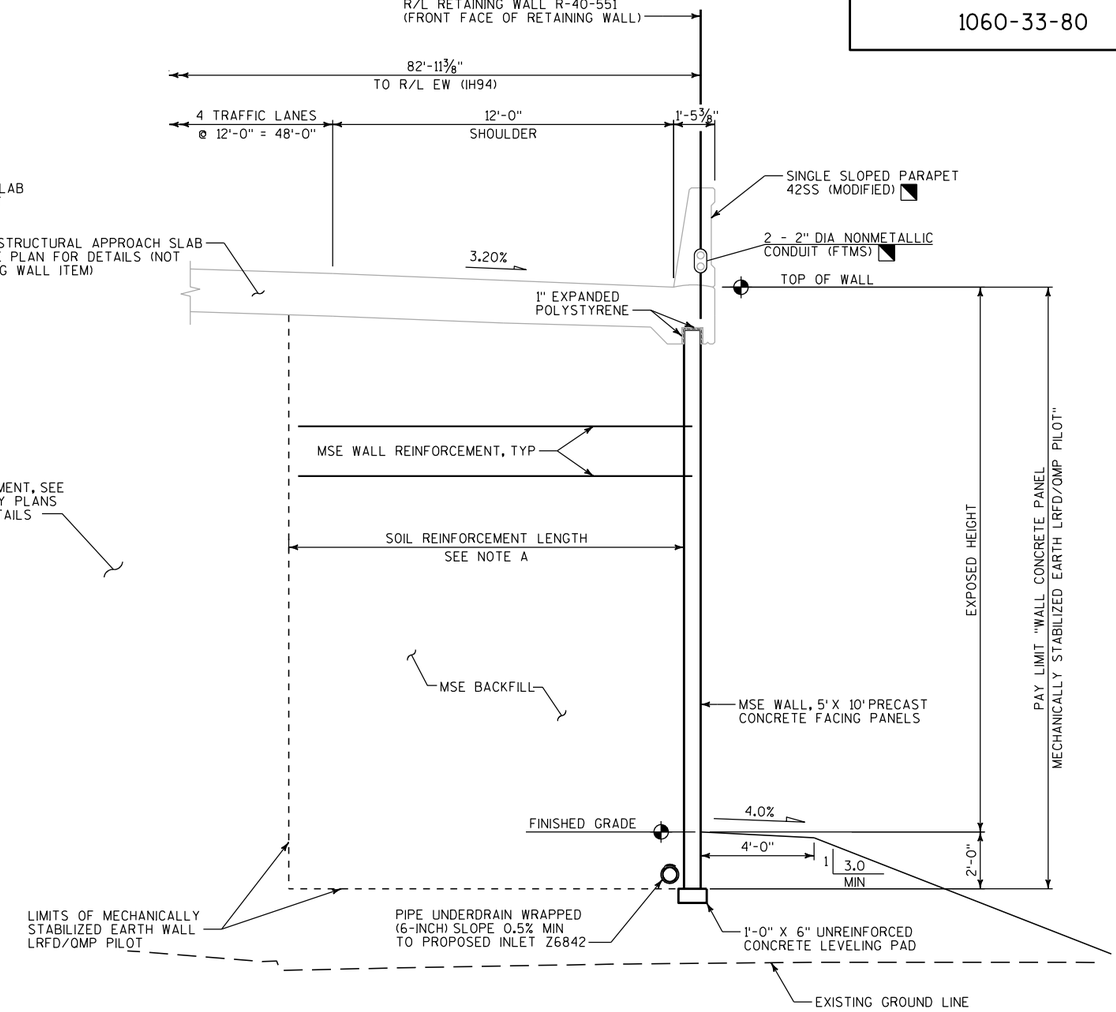
8

STATE PROJECT NUMBER
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SEGMENT B - TYPICAL WALL SECTIONS

LOOKING WEST - STA 10+54.39 TO STA 10+73.47



SEGMENT D - TYPICAL WALL SECTIONS

LOOKING WEST - STA 12+69.60 TO STA 12+88.63

NOTE A

SEE WALL EXTERNAL STABILITY TABLE ON THIS SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		UNDRAINED SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
MSE BACKFILL ⚹	120	0	30	0	30
PROPOSED FILL ⚹	130	0	30	0	30
GRANULAR FILL	130	0	28	0	28
COHESIVE FILL	120-135	1500-2000	0	0-100	29-32
NATIVE COHESIVE - (VERY STIFF TO HARD)	135	2250	0	100	32
LOOSE TO MED DENSE NATIVE GRANULAR	133	0	32	0	32
MED DENSE TO DENSE NATIVE GRANULAR	133-135	0	32-34	0	32-34

⚹ DESIGN WALL FOR THESE VALUES

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS						
WALL HEIGHT (FEET)	18.0	16.0	14.0	25.0	23.0	15.5
EXPOSED WALL HEIGHT (FEET)	16.0	16.0	11.0	23.0	21.0	13.5
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	12.6	18.9	18.2	17.5	20.0	10.9
WALL STATION	10+50	11+25	12+25	12+75	14+75	16+50
BORING USED	EB-16	EB-14, EB-16	EB-12, EB-14	EB-12, EC-2	ER-26	ER-27
CAPACITY TO DEMAND RATIO (CDR)						
SLIDING (CDR > 1.0)	1.1	1.5	1.5	1.1	1.4	1.1
ECCENTRICITY (CDR > 1.0)	1.3	2.9	1.7	1.4	2.1	1.2
BEARING (CDR > 1.0)	1.4	1.5	1.6	1.8	1.0	1.6
GLOBAL STABILITY (CDR > 1.0)	1.1	1.2	1.2	1.1	1.1	1.1

⚹ MINIMUM LENGTH APPLIES ONLY AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

LEGEND

NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

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TYPICAL WALL SECTIONS (2 OF 3)

SHEET 5 OF 19

8

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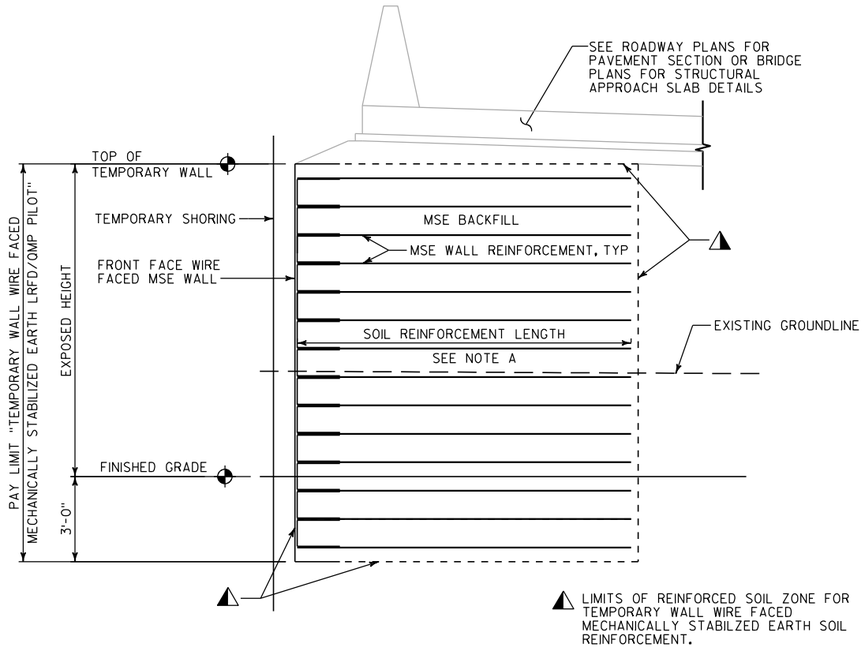
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STATE PROJECT NUMBER
1060-33-80

NOTE A

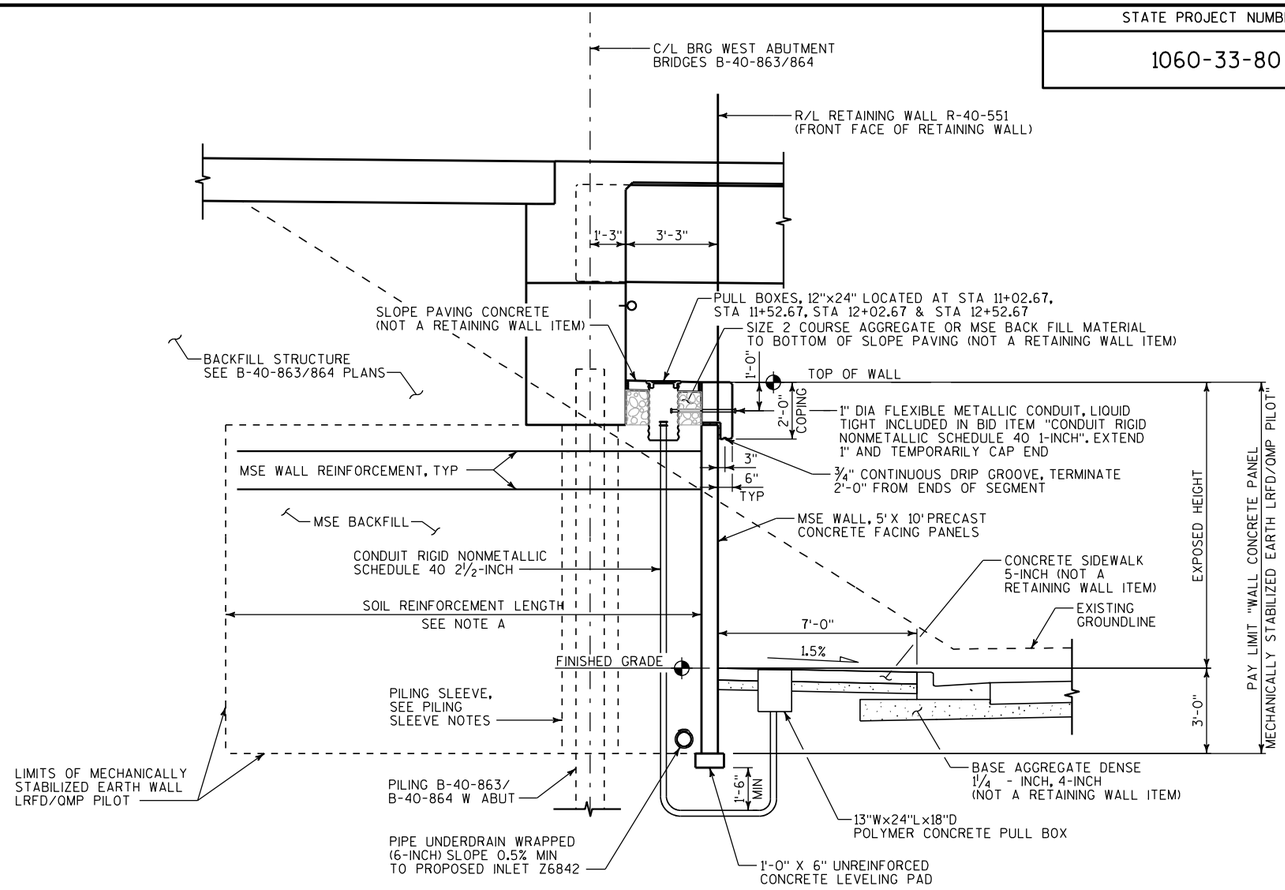
SEE WALL EXTERNAL STABILITY TABLE ON SHEET 5 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.



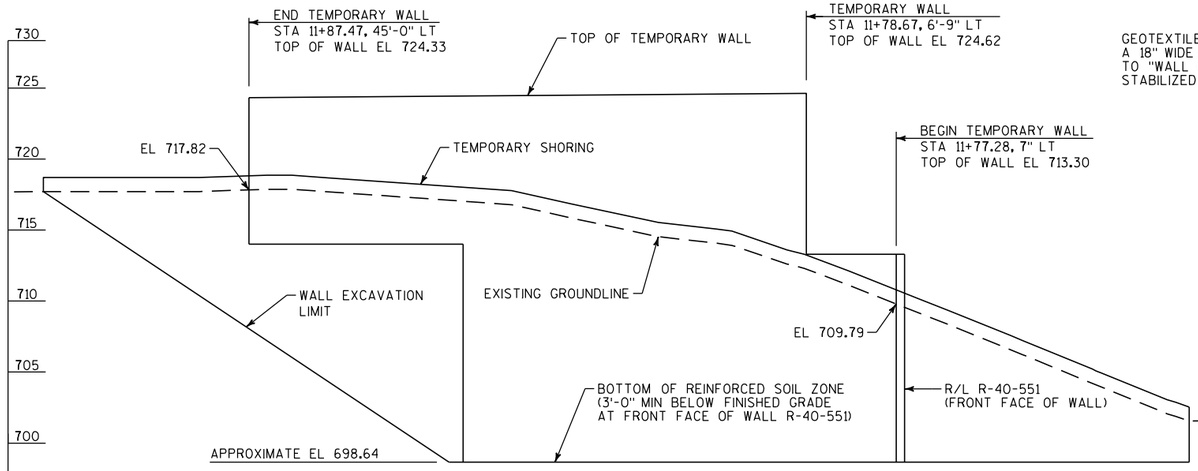
WIRE FACED WALL - TYPICAL SECTION

LOOKING WEST - STA 11+77.28, 7" LT TO STA 11+87.47, 45'-0" LT



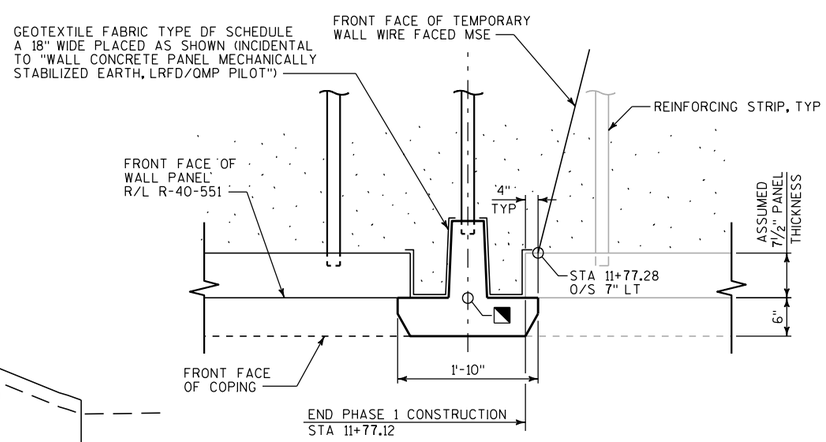
TYPICAL SECTION AT B-40-863/864 WEST ABUTMENT

(LOOKING NORTH - SEGMENT C STA 10+72.97 TO STA 12+70.10)



ELEVATION AT TEMPORARY WALL AND TEMPORARY SHORING

LOOKING NORTH



SLIP JOINT COVER DETAIL

(SLIP JOINT COVER INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LRFD / OMP PILOT")

C/L SLIP JOINT COVER STA 11+76.70

PILING SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-863 AND B-40-864 PLANS.
2. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
3. SLEEVES SHALL BE PLACED BEFORE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

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TYPICAL WALL SECTIONS (3 OF 3)

SHEET 6 OF 19

8

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STATE PROJECT NUMBER
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SEGMENT A WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
9+99.46	727.70	727.13	720.91
10+11.96	727.80	723.58	721.03
10+24.46	727.90	720.03	721.13
10+39.43	728.01	715.78	721.26
10+54.39	728.11	711.52	721.41

SEGMENT B WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+54.39	728.11	711.52	721.41
10+63.93	728.17	708.68	720.05
10+73.47	728.23	705.83	714.27

SEGMENT C WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+73.47	716.30	705.83	714.27
10+80.55	716.30	703.72	711.19
10+91.70	716.21	703.52	710.91
11+01.70	716.13	703.35	710.86
11+11.70	716.04	703.21	710.71
11+21.70	715.96	703.06	710.47
11+31.70	715.88	702.91	710.11
11+41.70	715.80	702.76	709.82
11+51.70	715.71	702.61	709.54
11+61.70	715.63	702.50	709.34
11+71.70	715.55	702.39	709.49
11+81.70	715.47	702.28	709.64
11+91.70	715.39	702.17	709.44
12+01.70	715.30	702.07	708.73
12+11.70	715.22	702.00	707.26
12+21.70	715.14	701.93	705.30
12+31.70	715.06	701.87	703.20
12+41.70	714.97	701.80	701.05
12+51.70	714.89	701.73	700.14
12+62.85	714.80	701.66	700.24
12+69.60	714.80	701.76	700.19

SEGMENT D WALL ELEVATIONS ◥

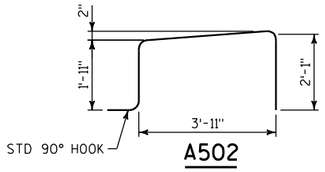
STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
12+69.60	723.74	701.76	700.19
12+79.12	723.67	701.89	700.03
12+88.63	723.59	702.03	699.87

SEGMENT E WALL ELEVATIONS ◥

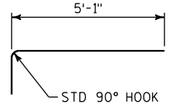
STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
12+88.63	723.59	702.03	699.87
13+01.09	723.48	702.18	699.56
13+13.54	723.37	702.13	699.40
13+28.54	723.27	702.06	699.38
13+43.54	723.22	702.04	699.54
13+58.54	723.18	702.05	699.79
13+73.54	723.12	702.09	700.02
13+88.54	723.06	702.18	700.29
14+03.54	722.98	702.30	700.56
14+18.54	722.90	702.45	700.83
14+33.54	722.81	702.64	701.12
14+48.54	722.71	702.85	701.43
14+63.54	722.60	703.11	701.73
14+78.54	722.48	703.38	702.11
14+93.54	722.36	703.69	702.35
15+08.54	722.22	704.00	702.50
15+23.54	722.07	704.29	702.65
15+38.54	721.92	704.70	702.36
15+53.54	721.76	705.13	702.22
15+68.54	721.60	705.61	702.20
15+83.54	721.43	706.11	702.38
15+98.54	721.27	706.65	702.88
16+13.54	721.11	707.23	703.59
16+28.54	720.95	707.82	704.54
16+43.54	720.81	708.41	705.24
16+58.54	720.67	709.14	705.68
16+73.54	720.54	709.96	706.48
16+88.54	720.42	710.61	707.25
17+03.54	720.31	711.17	707.97
17+18.54	720.20	711.47	708.64
17+33.54	720.11	711.83	709.31
17+48.54	720.02	712.24	709.94
17+63.54	719.94	712.81	710.50
17+78.54	719.87	713.39	711.09
17+93.54	719.81	713.93	711.56
18+08.54	719.76	714.44	711.89
18+23.54	719.72	714.93	712.26
18+38.54	719.69	715.37	712.65
18+53.54	719.67	715.80	713.05
18+68.54	719.66	716.19	713.44
18+83.54	719.66	716.56	713.79
18+98.54	719.67	716.91	714.08
19+13.54	719.69	717.26	714.40
19+26.04	719.71	717.55	714.71
19+38.54	719.73	719.33	714.96

BILL OF BARS - SEGMENT A

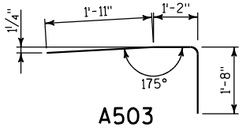
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
A501	X	127	6'-5"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	84	8'-1"	X	ANCHOR SLAB - VERTICAL TIE
A503	X	84	4'-8"	X	ANCHOR SLAB - VERTICAL TIE
A504	X	43	5'-6"	X	ANCHOR SLAB - VERTICAL TIE
A505	X	84	5'-10"	X	ANCHOR SLAB - VERTICAL TIE
A406	X	46	24'-7"		ANCHOR SLAB - LONGITUDINAL
A407	X	23	6'-6"		ANCHOR SLAB - LONGITUDINAL
R501	X	84	6'-7"	X	PARAPET - VERTICAL TIE
R802	X	8	24'-7"		PARAPET - LONGITUDINAL
R803	X	8	29'-7"		PARAPET - LONGITUDINAL



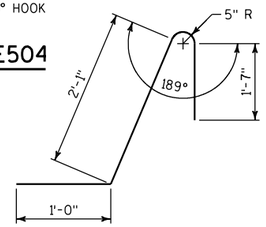
A502



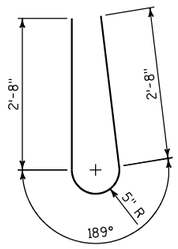
A504 & E504



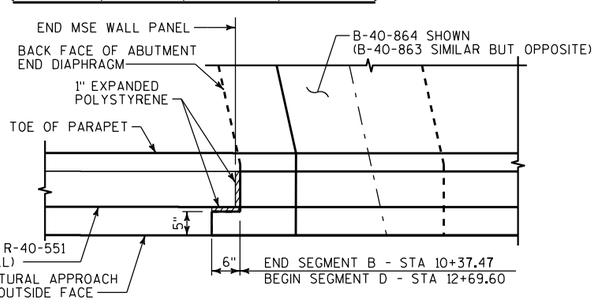
A503



A505 & E505

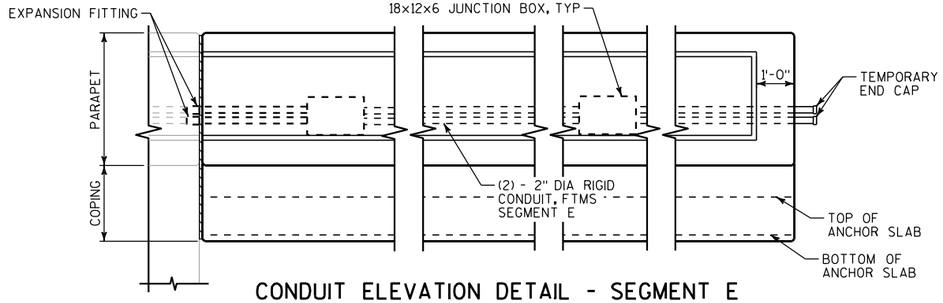


R501



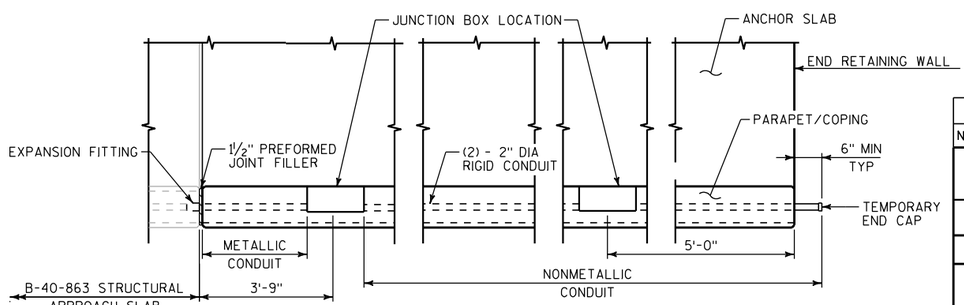
END SEGMENT B / BEGIN SEGMENT D DETAIL

(SEE B-40-863 AND B-40-864 PLANS FOR ADDITIONAL DETAILS)



CONDUIT ELEVATION DETAIL - SEGMENT E

OUTSIDE FACE OF PARAPET (LOOKING SOUTH)



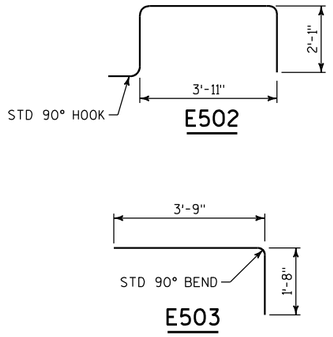
CONDUIT PLAN DETAIL - SEGMENT E

2 CONDUITS REQUIRED

BILL OF BARS - SEGMENT E

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
E501	X	1472	6'-5"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
E502	X	970	8'-3"	X	ANCHOR SLAB - VERTICAL TIE
E503	X	970	5'-4"	X	ANCHOR SLAB - VERTICAL TIE
E504	X	502	5'-6"	X	ANCHOR SLAB - VERTICAL TIE
E505	X	970	5'-10"	X	ANCHOR SLAB - VERTICAL TIE
E406	X	46	24'-7"		ANCHOR SLAB - LONGITUDINAL
E407	X	460	29'-7"		ANCHOR SLAB - LONGITUDINAL
E408	X	16	2'-11"		ANCHOR SLAB - LONGITUDINAL
R501	X	990	6'-7"	X	PARAPET - VERTICAL TIE
R802	X	16	24'-7"		PARAPET - LONGITUDINAL
R803	X	160	29'-7"		PARAPET - LONGITUDINAL
K501	X	40	3'-2"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	20	1'-0"		ANCHOR SLAB - HORIZONTAL TOP
K503	X	20	5'-4"	X	COPING - VERTICAL TIE
K504	X	20	6'-9"	X	COPING - VERTICAL TIE
K505	X	20	2'-7"	X	COPING - VERTICAL TIE
K506	X	20	4'-8"	X	COPING - VERTICAL TIE
K507	X	20	5'-6"	X	COPING - VERTICAL TIE
K408	X	30	6'-6"		ANCHOR SLAB - LONGITUDINAL

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.



NOTE

18x12x6 JUNCTION BOX REQUIRED 3'-9" FROM BEGINNING AND 5'-0" FROM END OF SEGMENT E AS SHOWN IN DETAIL FOR FTMS.

LEGEND

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

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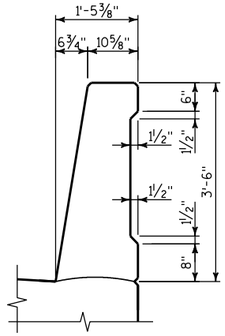
ELEVATION TABLES & REINFORCEMENT SCHEDULE

SHEET 7 OF 19

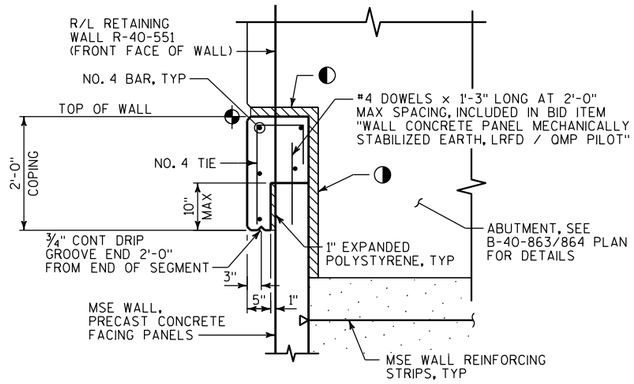
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STATE PROJECT NUMBER
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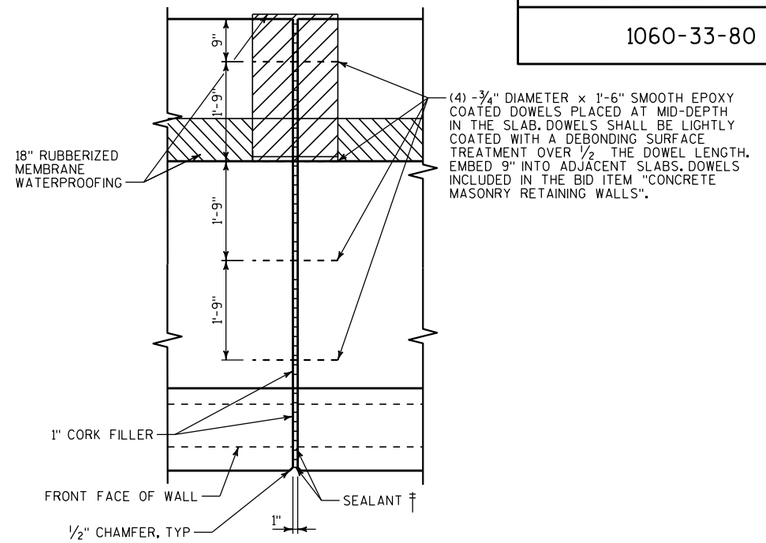


SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMINSIONS



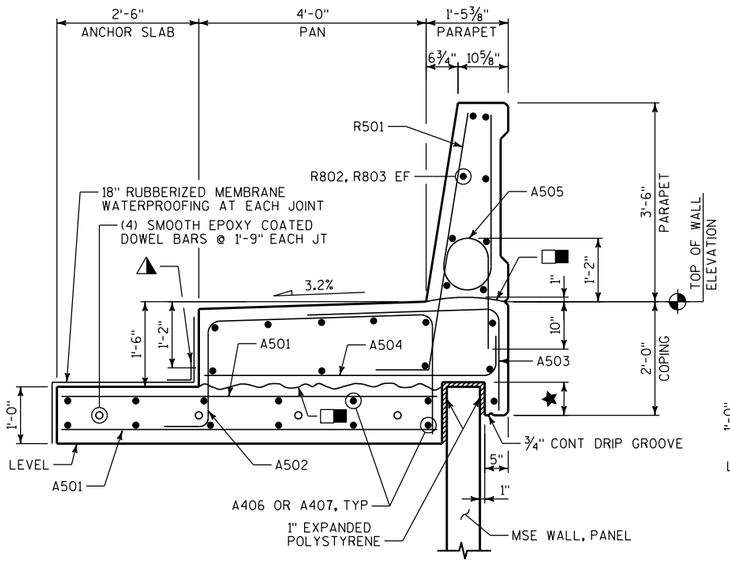
COPING DETAIL THRU ABUTMENT

(SEGMENT C)



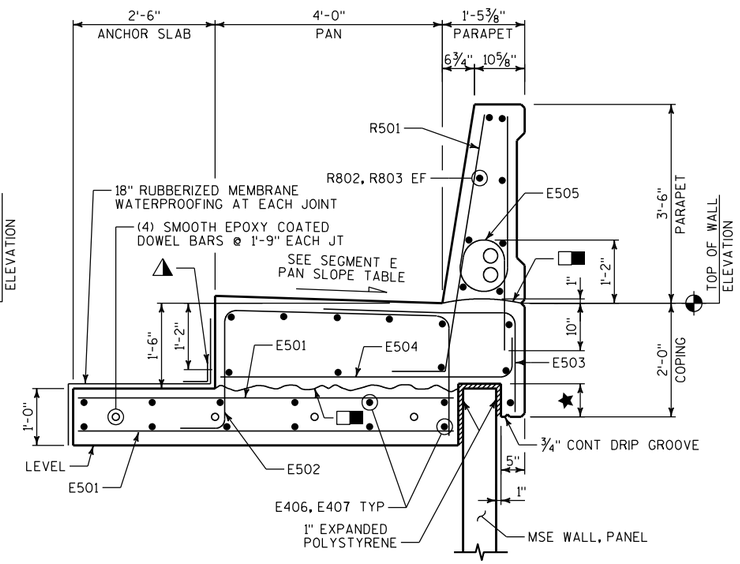
ANCHOR SLAB EXPANSION JOINT SEGMENTS A & E

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN.
FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS



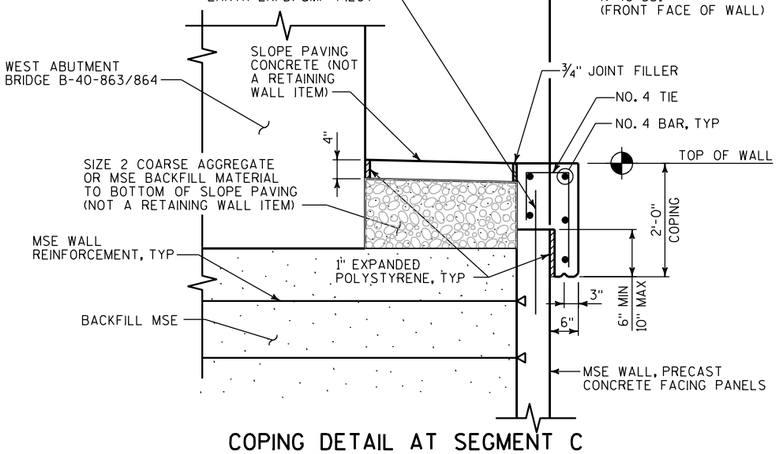
TYPICAL SECTION

(SEGMENT A)



TYPICAL SECTION

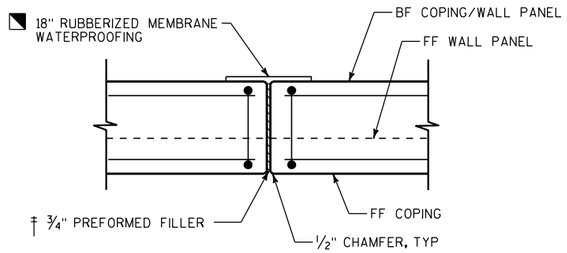
(SEGMENT E)



COPING DETAIL AT SEGMENT C

LEGEND

- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- † NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ★ 3" MIN, 6" MAX.
- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.
- 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

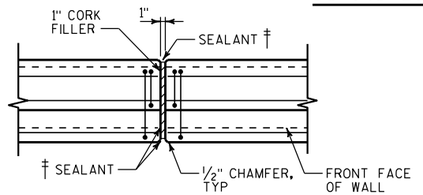


COPING EXPANSION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.

SEGMENT E PAN SLOPE TABLE	
STATION	SLOPE
12+88.63	3.20%
13+19.67	3.20%
13+33.42	4.00%
18+39.99	4.00%
19+38.54	2.69%

LINEARLY INTERPOLATE PAN SLOPE BETWEEN STATIONS



PARAPET EXPANSION JOINT

DO NOT RUN BARS THRU JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

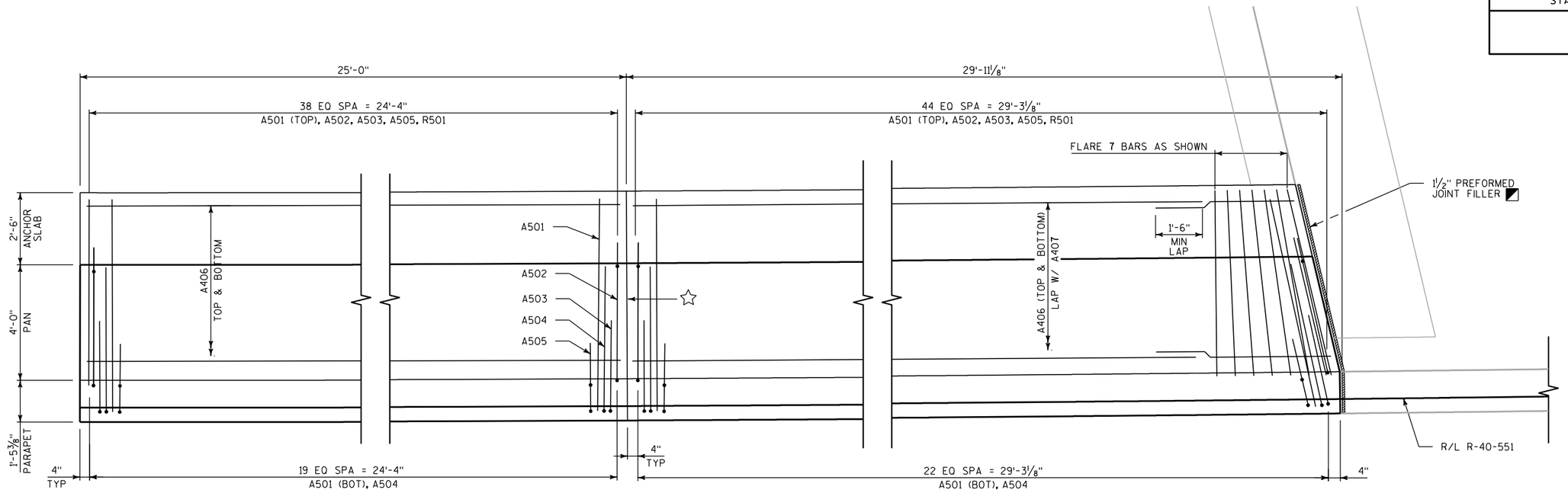
PARAPET, COPING, & ANCHOR SLAB DETAILS

SHEET 8 OF 19

8

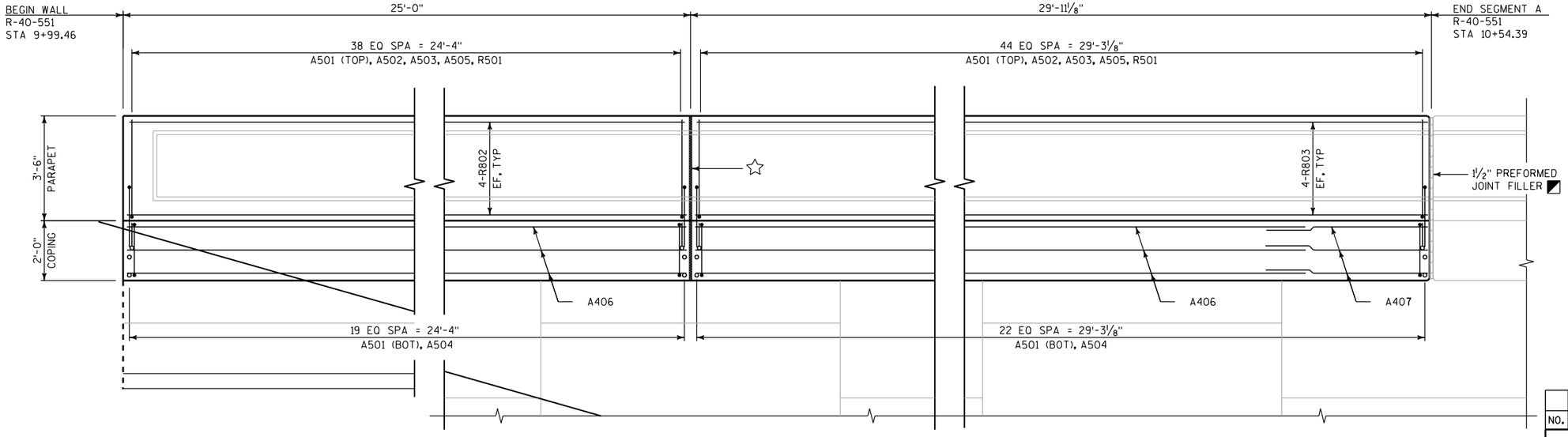
8

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A

DIMENSIONS ARE ALONG R/L R-40-551



LEGEND

☆ 1" CORK FILLER

◪ NOT A RETAINING WALL ITEM

OUTSIDE ELEVATION - SEGMENT A

LOOKING NORTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-551

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

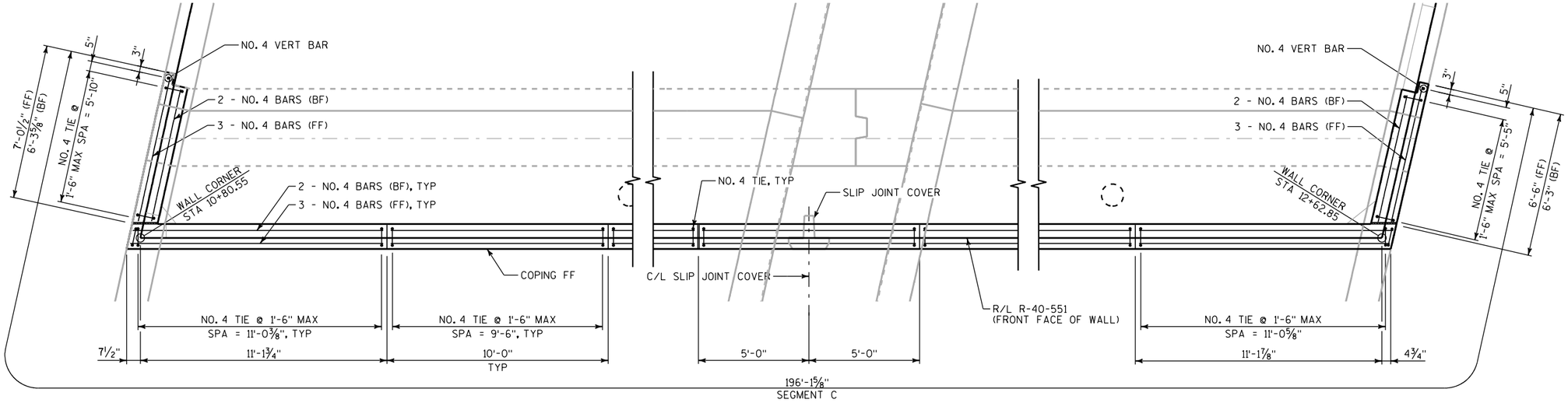
STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT A REINFORCEMENT DETAILS

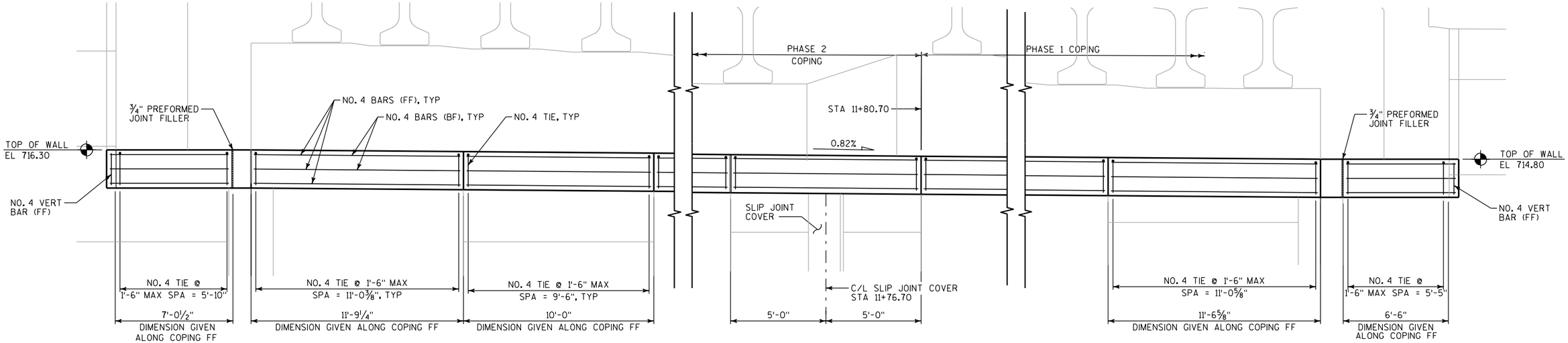
SHEET 9 OF 19

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-551
UNLESS NOTED OTHERWISE



ELEVATION - SEGMENT C

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-551
UNLESS NOTED OTHERWISE

NOTE

FOR LOCATIONS OF EXPANSION & CONTRACTION JOINTS, SEE GENERAL PLAN & ELEVATION SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

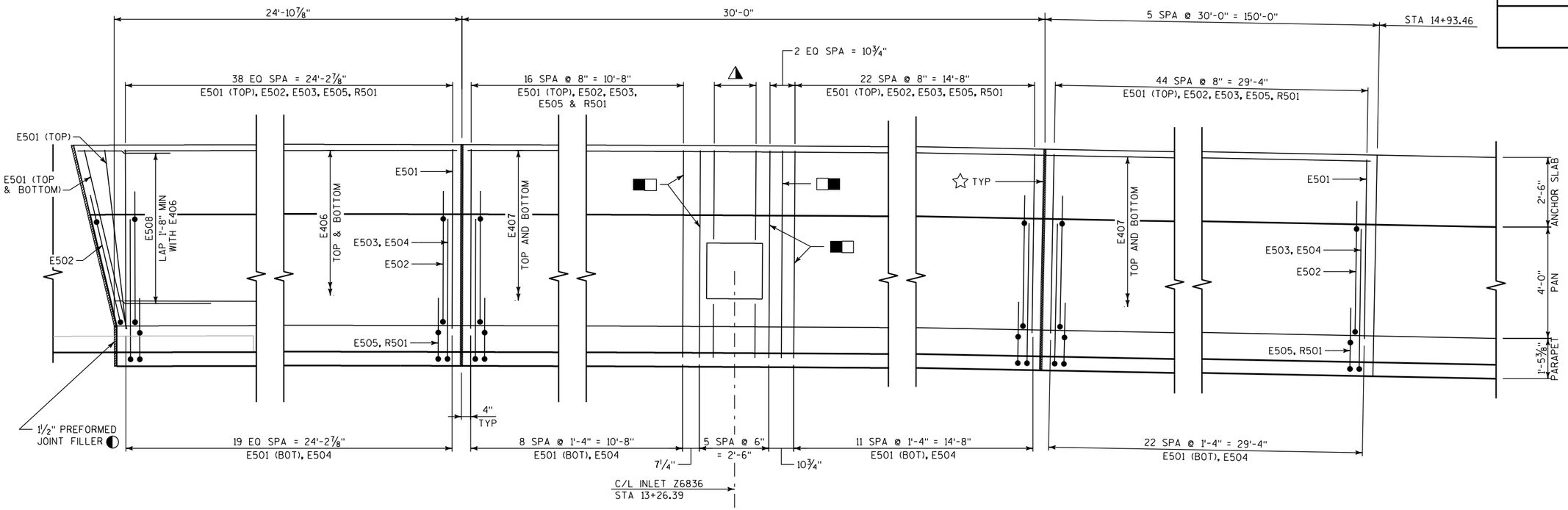
STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT C REINFORCEMENT DETAILS

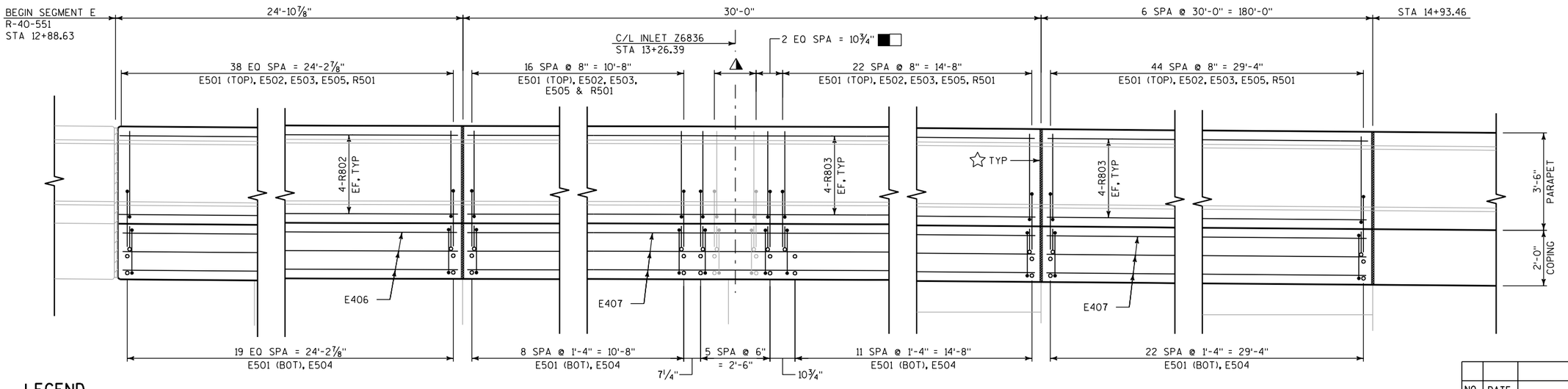
SHEET 10 OF 19

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT E

DIMENSIONS ARE ALONG R/L R-40-551



ELEVATION - SEGMENT E

LOOKING SOUTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-551

LEGEND

- ☆ 1" CORK FILLER
- E501 (TOP), E502, E503, E505, R501
- E501 (TOP & BOTTOM), E502, E503, E504, E505, R501
- ⚠ SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING
- ◐ NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

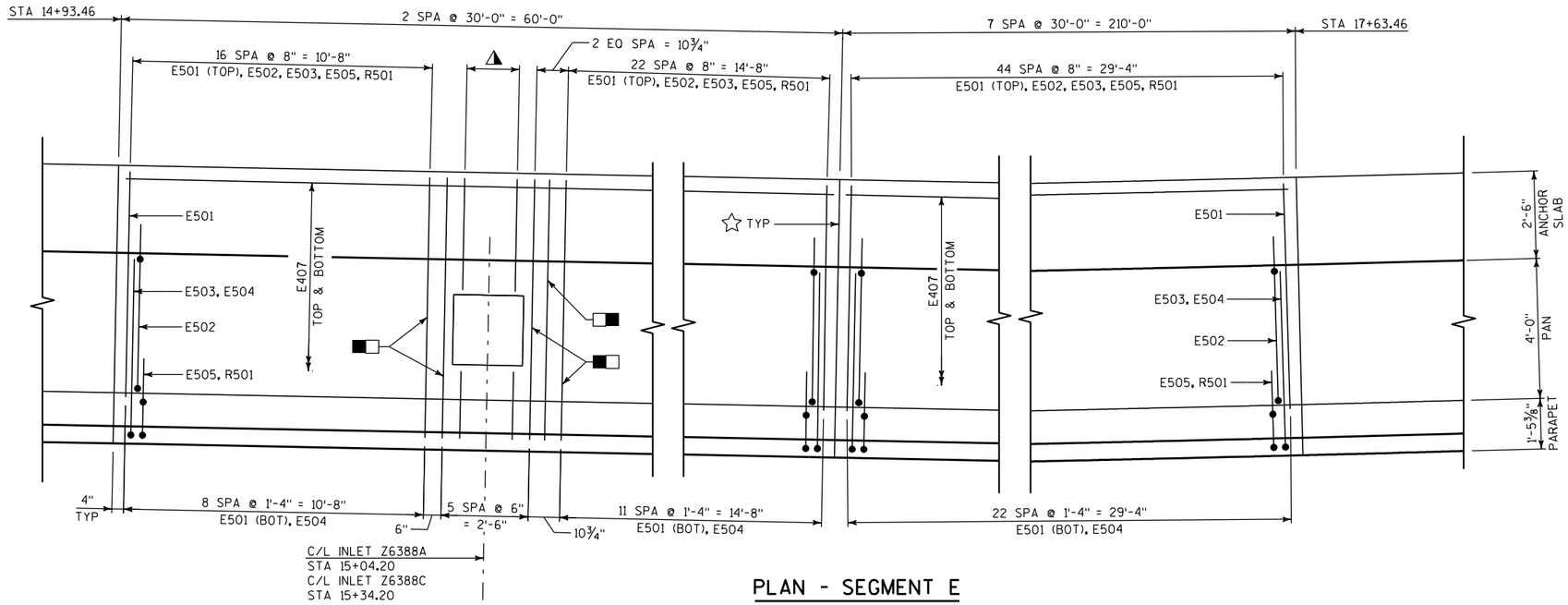
STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT E REINFORCEMENT DETAILS (1 OF 3)

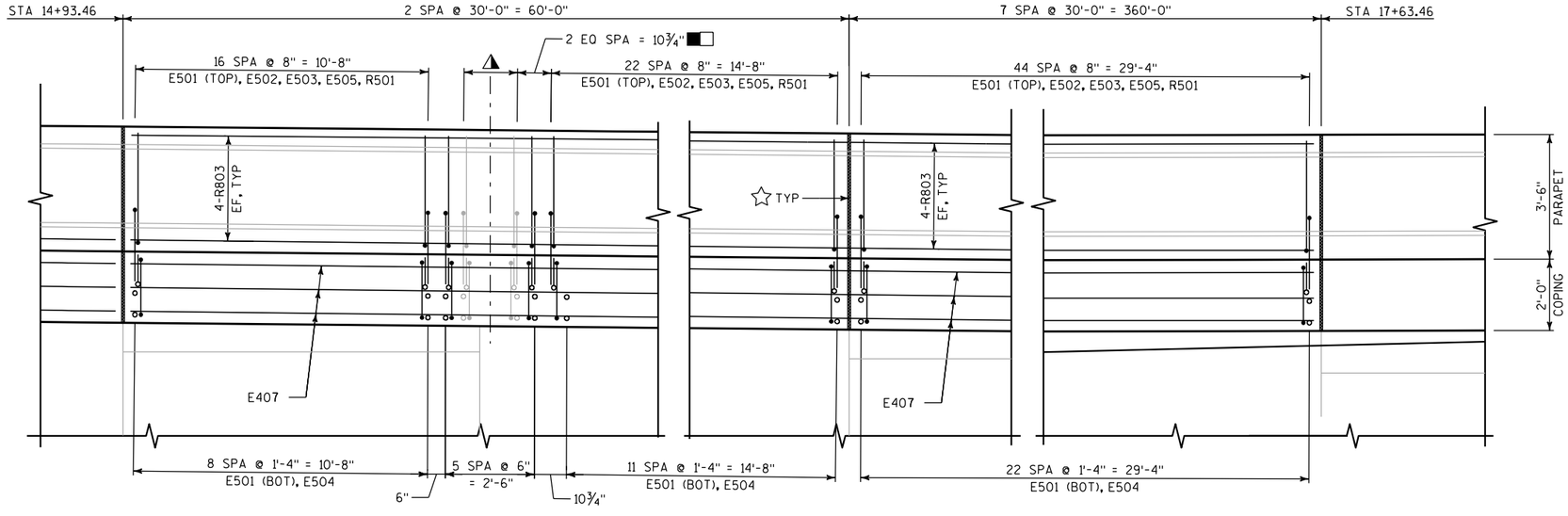
SHEET 11 OF 19

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT E

DIMENSIONS ARE ALONG R/L R-40-551



ELEVATION - SEGMENT E

LOOKING SOUTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-551

LEGEND

- ☆ 1" CORK FILLER
- E501 (TOP), E502, E503, E505, R501
- E501 (TOP & BOTTOM), E502, E503, E504, E505, R501
- SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

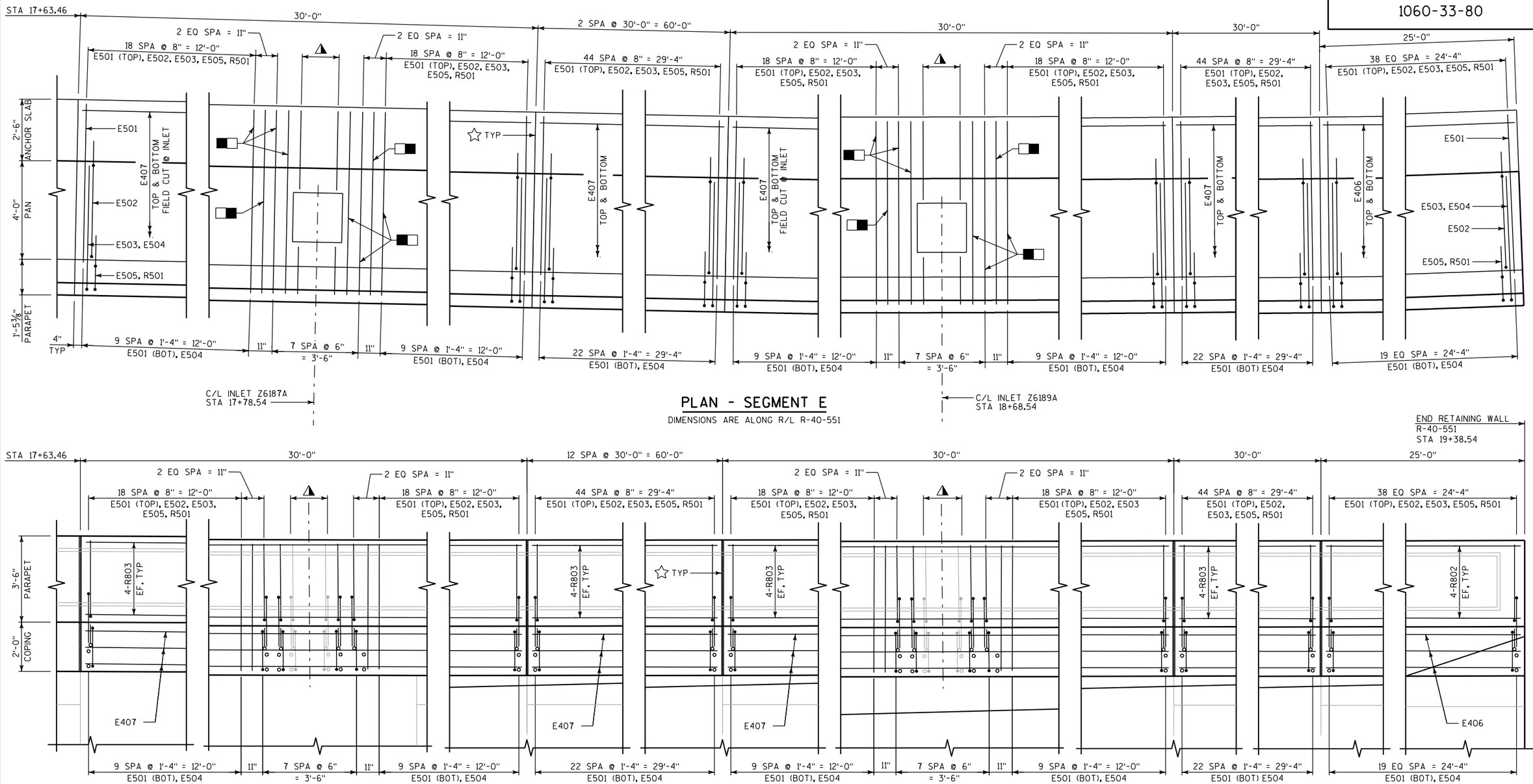
STRUCTURE R-40-551

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT E REINFORCEMENT DETAILS (2 OF 3)

SHEET 12 OF 19

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT E

DIMENSIONS ARE ALONG R/L R-40-551

ELEVATION - SEGMENT E

LOOKING SOUTH AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-551

LEGEND

- ☆ 1" CORK FILLER
- E501 (TOP), E502, E503, E505, R501
- E501 (TOP & BOTTOM), E502, E503, E504, E505, R501
- ◭ SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

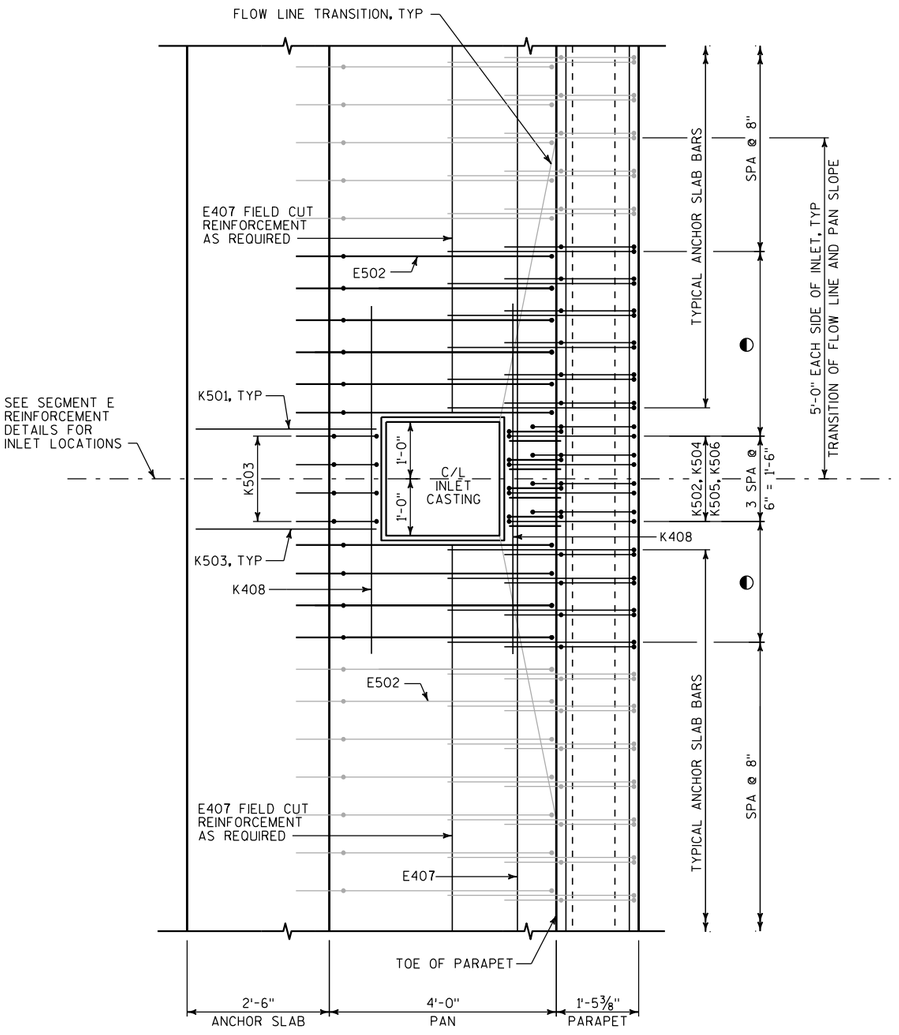
DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT E REINFORCEMENT DETAILS (3 OF 3)

SHEET 13 OF 19

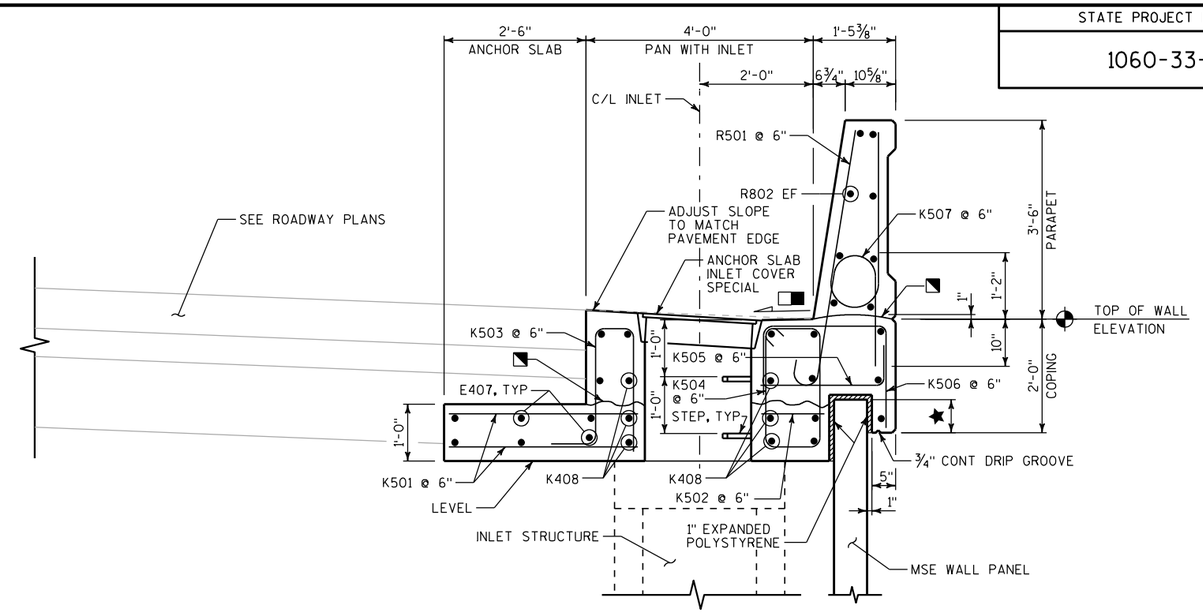
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STATE PROJECT NUMBER
1060-33-80



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED



SECTION AT INLET

INLET BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
K501	X	8	3'-2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	4	1'-0"			ANCHOR SLAB - HORIZONTAL TOP
K503	X	4	5'-4"	X		COPING VERTICAL TIE
K504	X	4	6'-7"	X		COPING - VERTICAL STIRRUP
K505	X	4	2'-6"	X		COPING VERTICAL TIE
K506	X	4	4'-8"	X		COPING VERTICAL TIE
K507	X	4	5'-5"	X		COPING VERTICAL TIE
K408	X	6	6'-6"			ANCHOR SLAB & COPING - LONGITUDINAL

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

BAR SCHEDULE FOR ONE INLET ONLY. SEE ELEVATION TABLES & REINFORCEMENT SCHEDULE SHEETS FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.

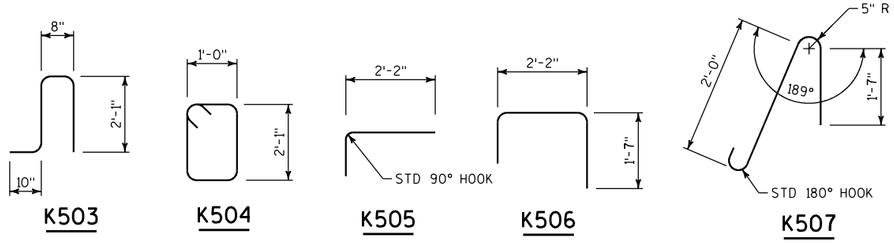
STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

LEGEND

- 2.00%
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT STRIKE OFF AS SHOWN AND LEAVE ROUGH
- SEE SEGMENT E REINFORCEMENT DETAILS SHEETS FOR SPACING



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

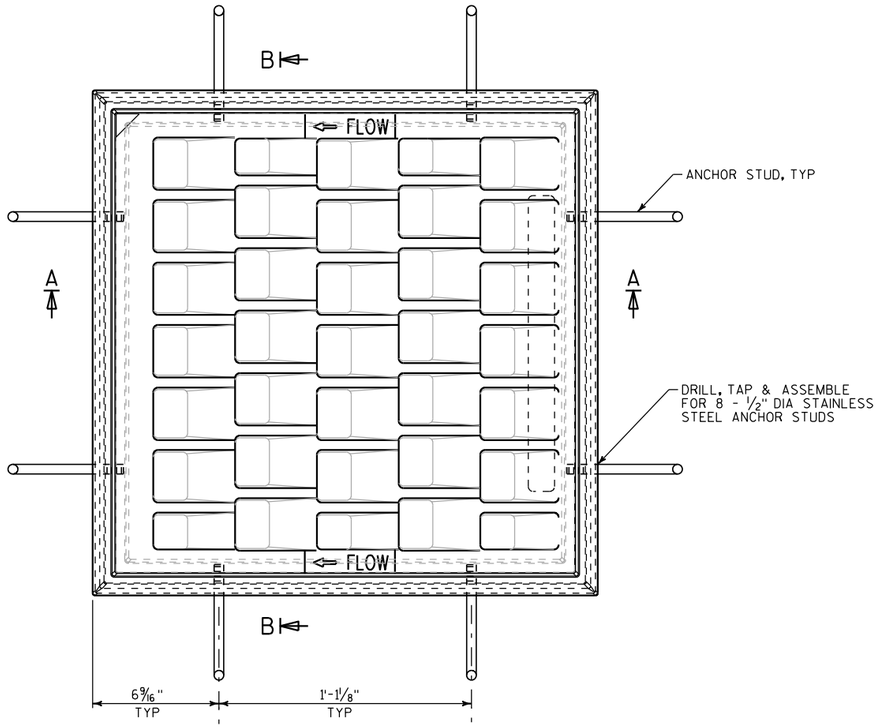
DRAWN BY BHI | PLANS CK'D. EKM

INLET DETAILS

SHEET 14 OF 19

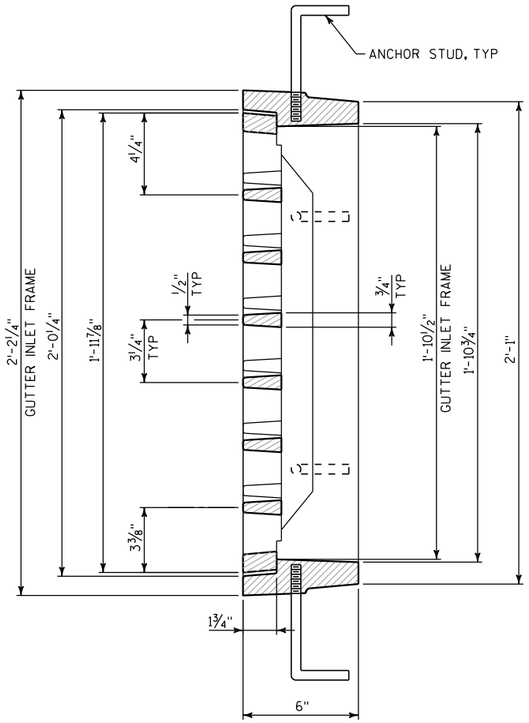
STATE PROJECT NUMBER

1060-33-80

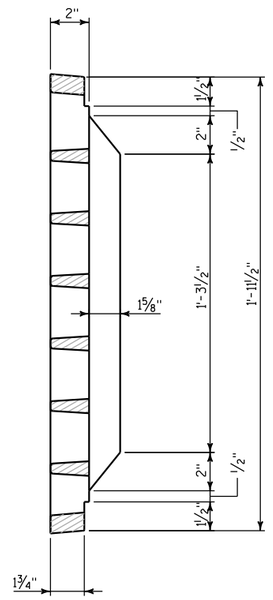


GUTTER INLET FRAME & GRATE TOP

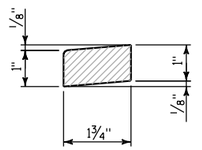
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



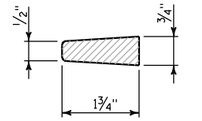
SECTION B-B



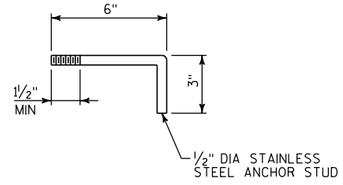
INLET GRATE



SIDE RIB DETAIL

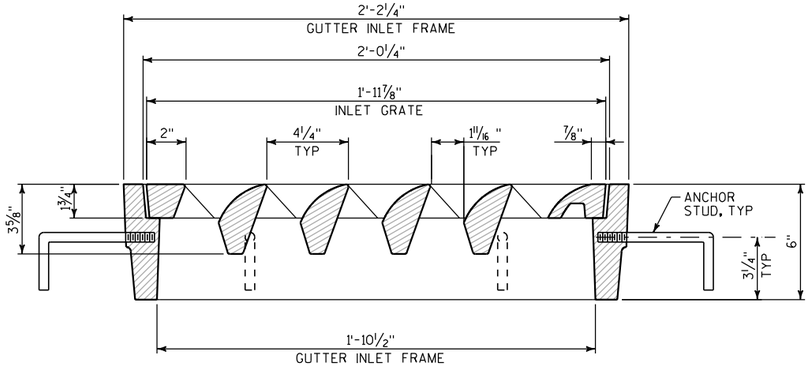


MIDDLE RIB DETAIL

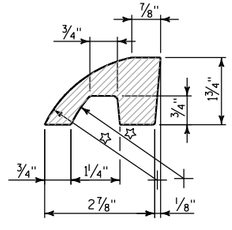


ANCHOR STUD DETAIL

(8 - 1/2" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

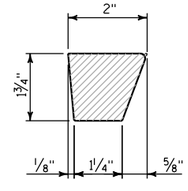


SECTION A-A

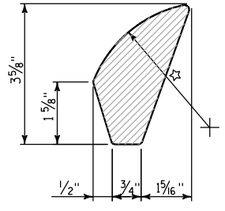


FRONT VANE DETAIL

☆ 3 1/4" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3 1/4" RADIUS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY TEK | PLANS CK'D. EKM

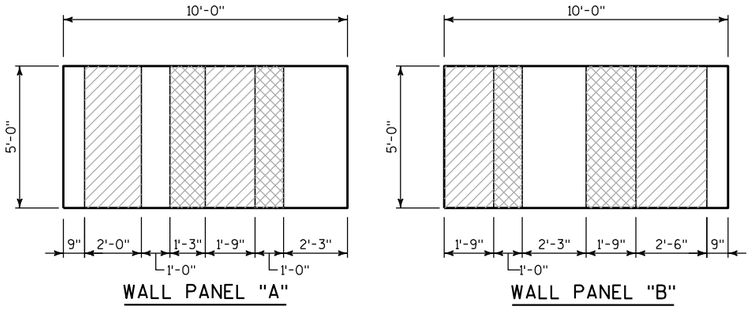
ANCHOR SLAB INLET COVER SPECIAL

SHEET 15 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-551\cds\R551_080309_de.dgn PLOT DATE : 01-MAY-2014 14:01 PLOT BY : MSCTEK PLOT NAME : R551_080309_de PLOT SCALE : 2:1

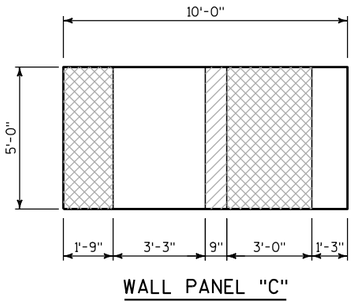
STATE PROJECT NUMBER

1060-33-80

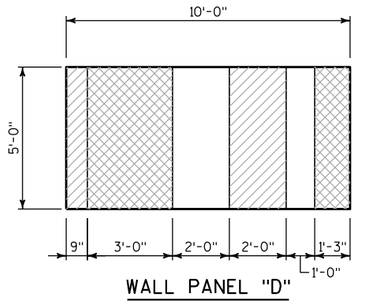


WALL PANEL "A"

WALL PANEL "B"

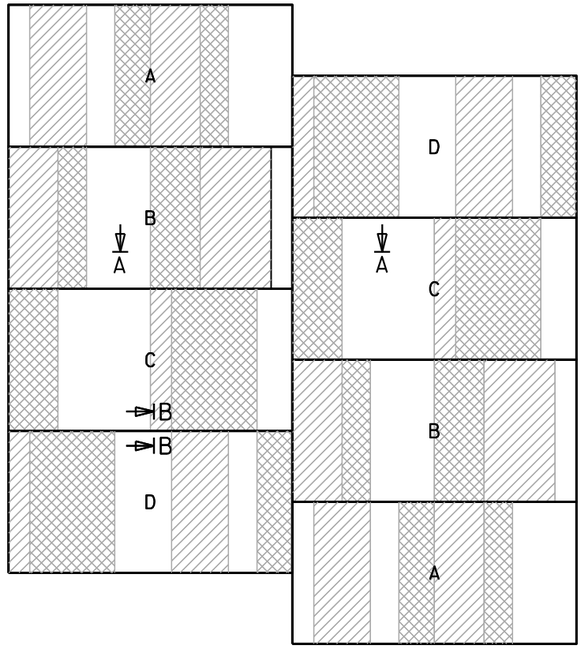


WALL PANEL "C"



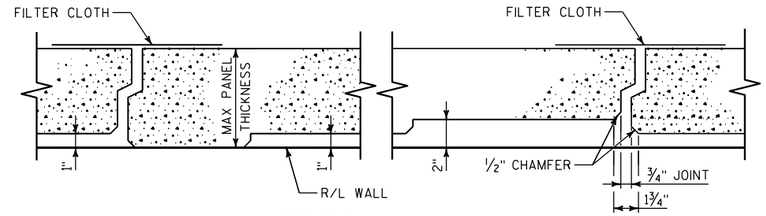
WALL PANEL "D"

5'-0" X 10'-0" MSE CONCRETE
PANEL RAISED SURFACE DETAILS



TYPICAL 5'-0" X 10'-0" MSE
CONCRETE PANEL PATTERN

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION A-A

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"

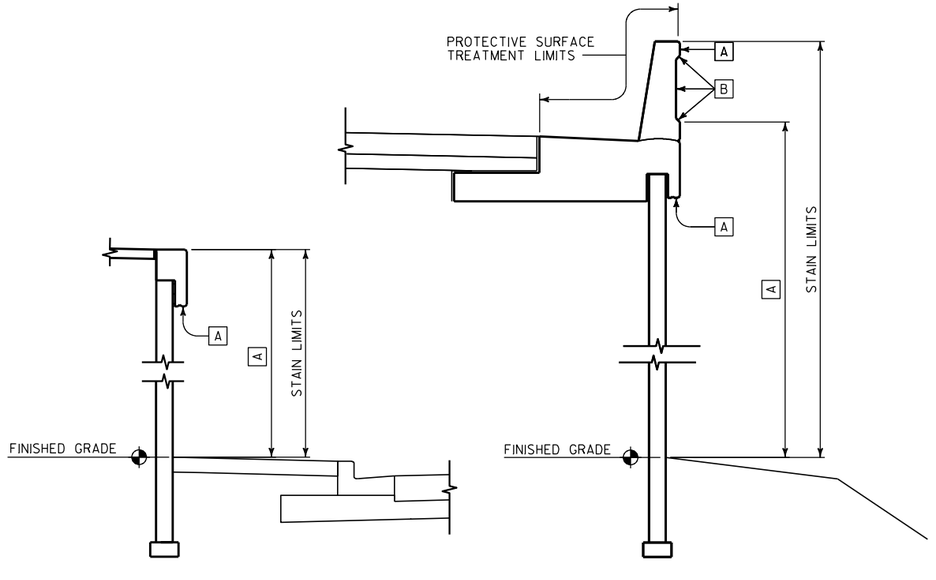
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS
F	ACCENT COLOR 5	WALLS	WALL PANEL ARTWORK DETAILS

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

BASE COLOR - 33564
ACCENT COLOR 1 - 33448
ACCENT COLOR 5 - SHERWIN WILLIAMS SW 6523



MSE WALL STAINING DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

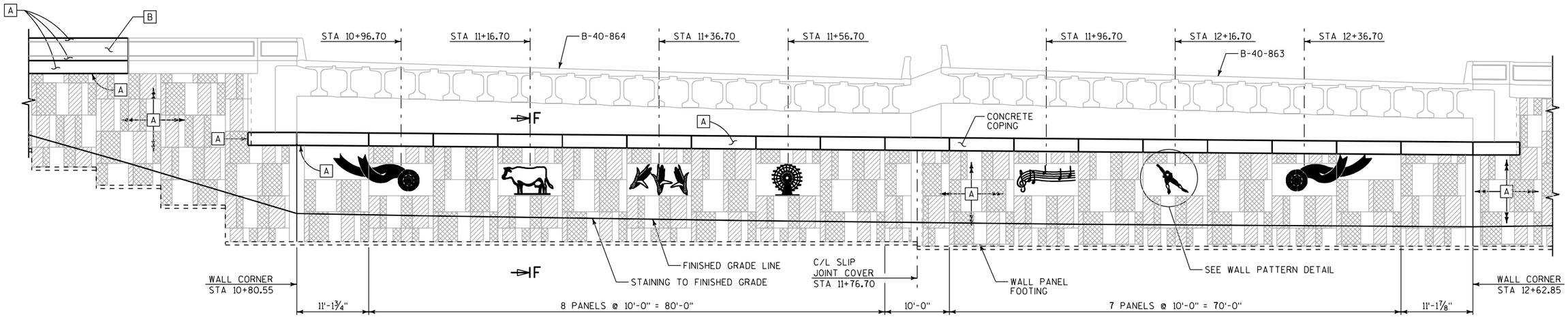
STRUCTURE R-40-551

DRAWN BY MS | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS (1 OF 2)

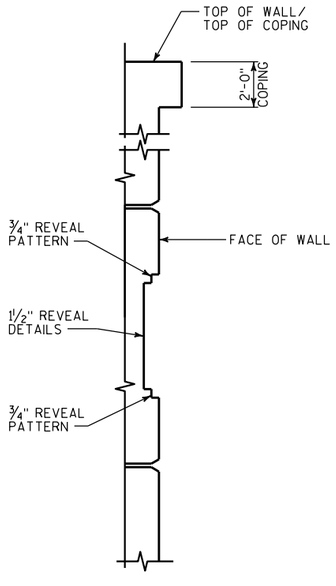
SHEET 16 OF 19

STATE PROJECT NUMBER
1060-33-80



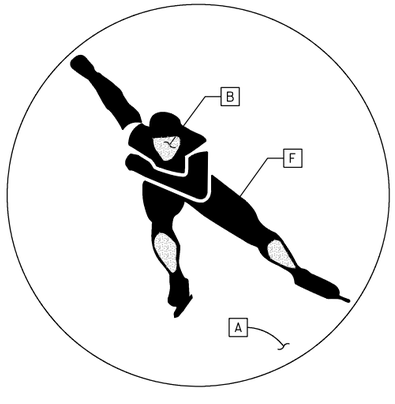
ELEVATION

(LOOKING WEST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG FRONT FACE OF WALL)



SECTION F-F

RELIEF PATTERN DETAIL



WALL PATTERN DETAIL

LEGEND

- PANEL THICKNESS - 1½"
- PANEL THICKNESS - ¾"
- PANEL THICKNESS - 0"

NOTES

ELECTRONIC FILES OF THE DECORATIVE PATTERNS ARE AVAILABLE FROM:
WISCONSIN DEPARTMENT OF TRANSPORTATION
JAMES KEEGAN P.E., 141 NW BARSTOW STREET, WAUKESHA, WISCONSIN 53187, (414) 750-3311

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-551".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS (2 OF 2)

SHEET 17 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-551\cds\R551_080402_ae.dgn
PLOT DATE : 01-MAY-2014 14:01
PLOT BY : MSCTEK
PLOT NAME : R551_080402_ae
PLOT SCALE : 16:1

NOTES

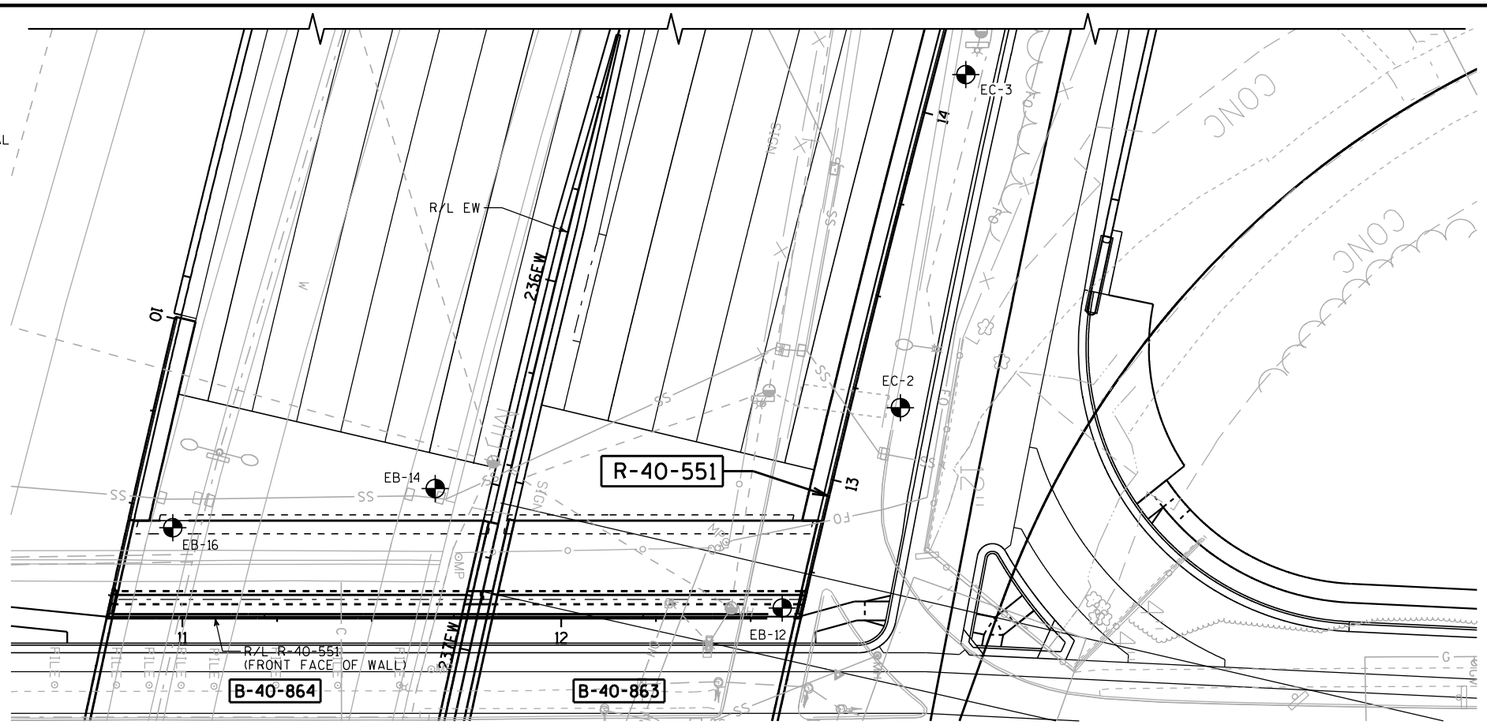
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-551.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 15, 2011 - BORING EB-12
OCT. 25, 2011 - BORING EB-14
SEPT. 8, 2011 - BORING EB-16
JAN. 30, 2012 - BORING EC-2
JULY 23, 2012 - BORING EC-3



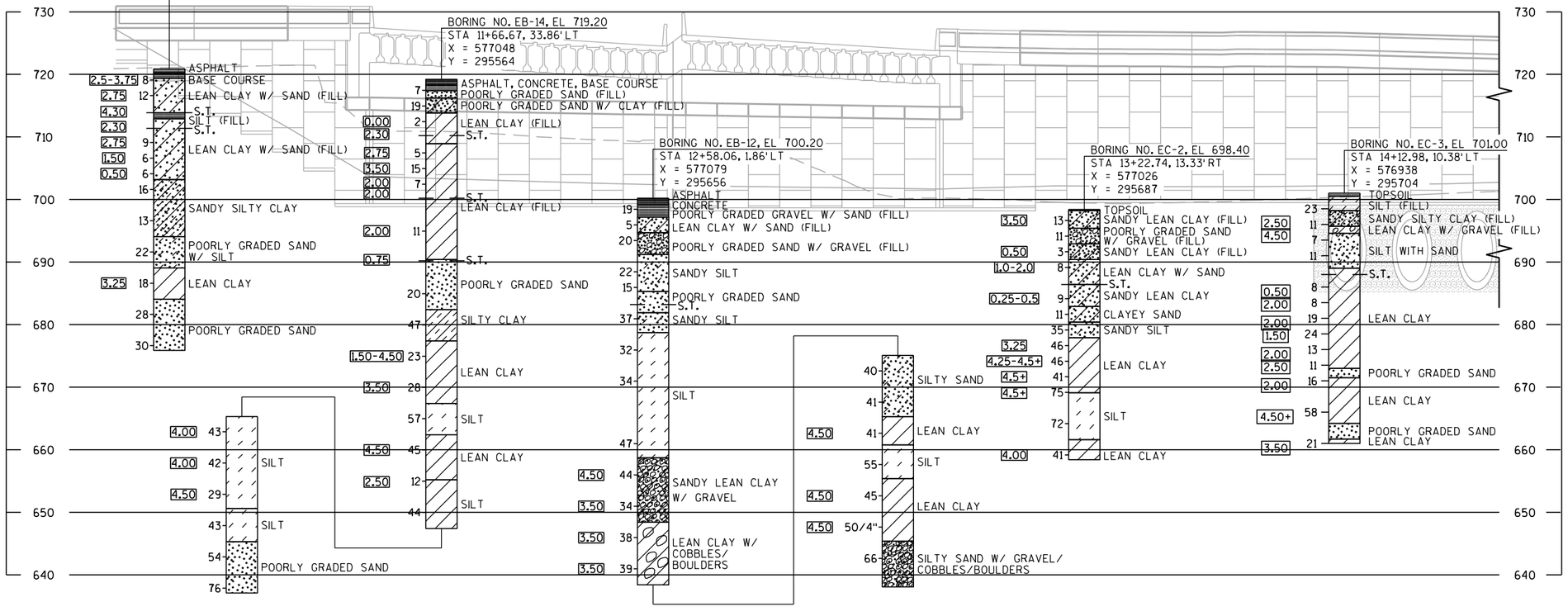
BORING NO. EB-16, EL 720.87
STA 10+54.01, 11.40' LT
X = 577058
Y = 295495

BORING NO. EB-14, EL 719.20
STA 11+66.67, 33.86' LT
X = 577048
Y = 295564

BORING NO. EB-12, EL 700.20
STA 12+58.06, 1.86' LT
X = 577079
Y = 295656

BORING NO. EC-2, EL 698.40
STA 13+22.74, 13.33' RT
X = 577026
Y = 295687

BORING NO. EC-3, EL 701.00
STA 14+12.98, 10.38' LT
X = 576938
Y = 295704



8

8

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 18 OF 19

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-551\cds\R551_080501_se.dgn
PLOT DATE : 01-MAY-2014 14:01
PLOT BY : MSCTEK
PLOT NAME : R551_080501_se
PLOT SCALE : 40:1

NOTES

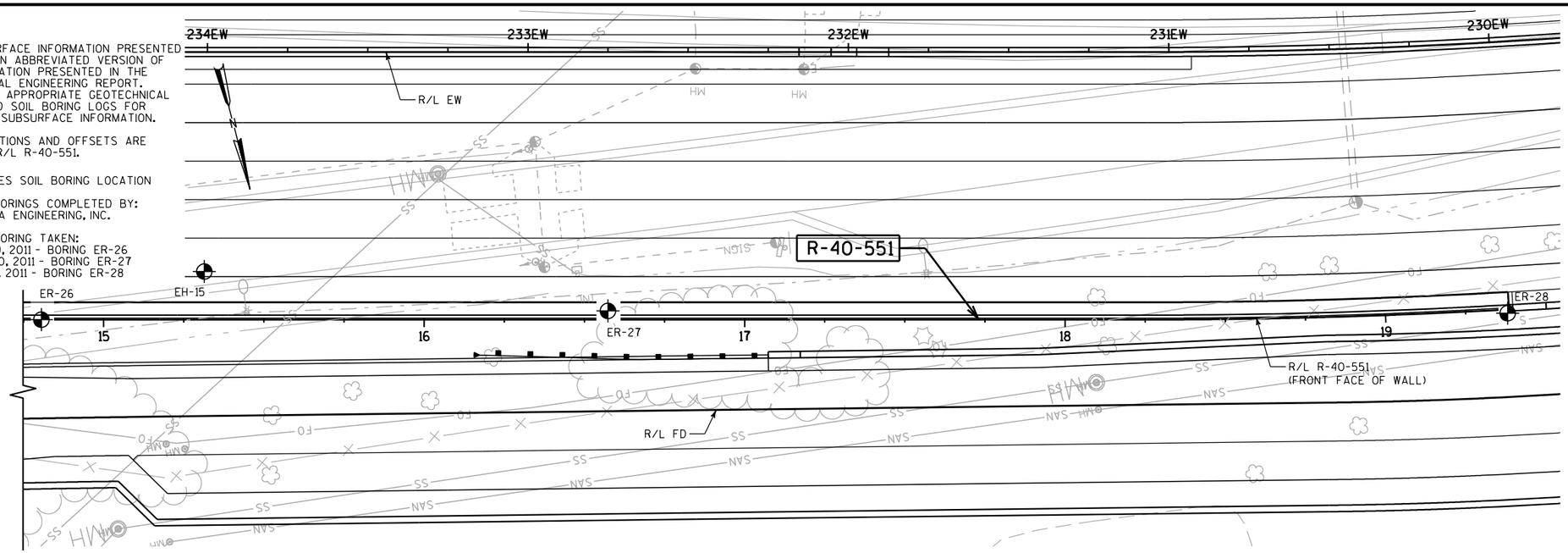
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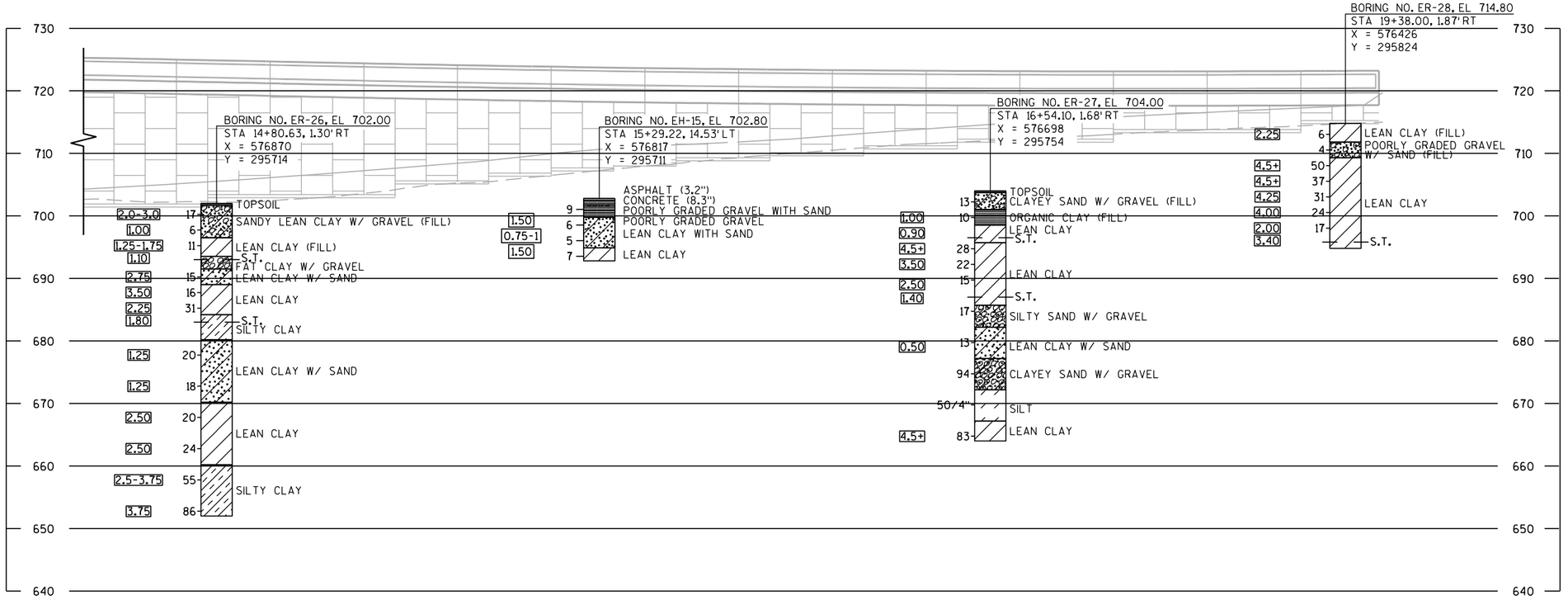
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-551.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
DEC. 19, 2011 - BORING ER-26
DEC. 20, 2011 - BORING ER-27
DEC. 8, 2011 - BORING ER-28





STATE PROJECT NUMBER

1060-33-80

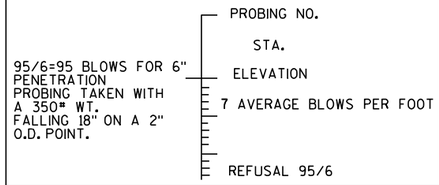
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

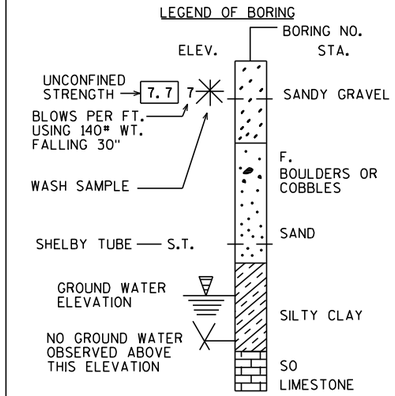
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-551

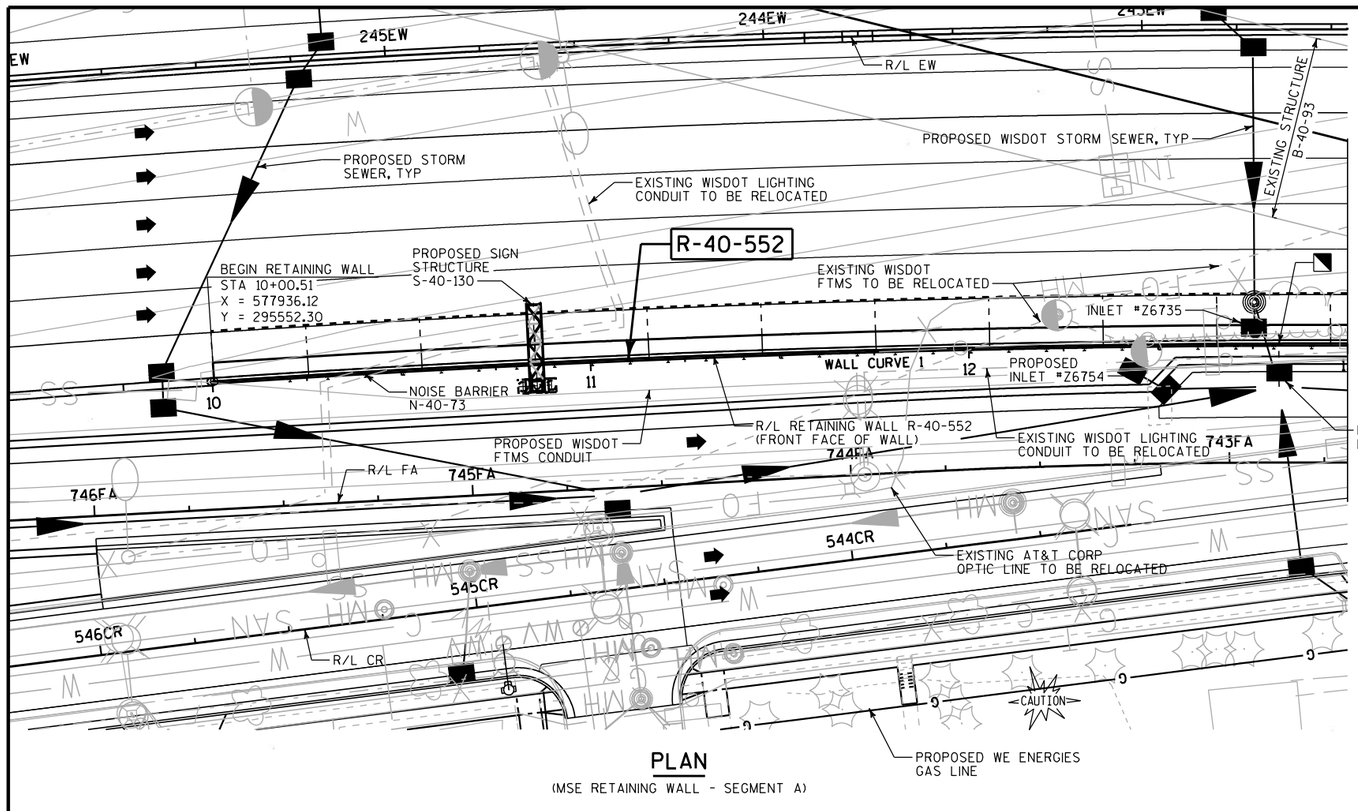
DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 2)

SHEET 19 OF 19

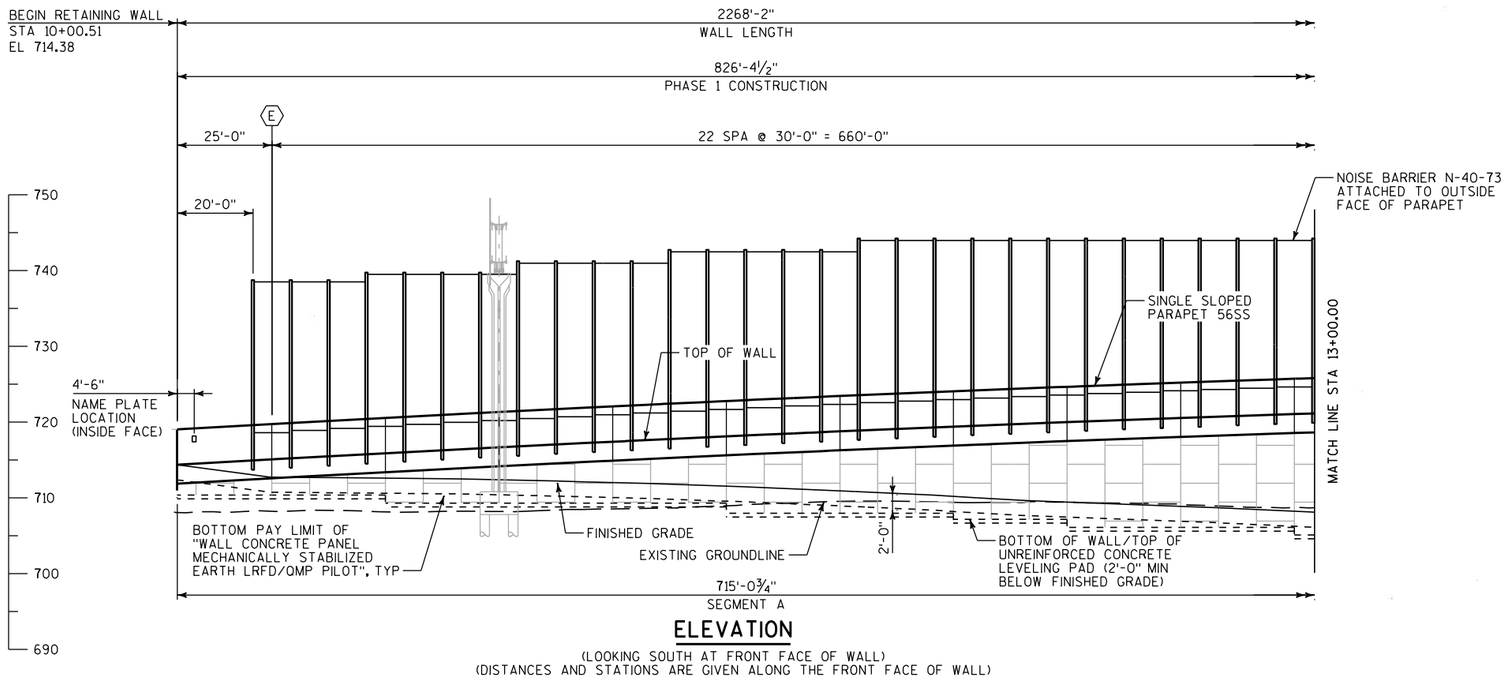
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8



PLAN

(MSE RETAINING WALL - SEGMENT A)



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY) ___ 240 PSF

NOISE BARRIER:
CASE 1 - MAX HEIGHT ABOVE ROADWAY BARRIER - 18 FEET
MAX. POST SPACING - 10 FEET
CASE 2 - MAX HEIGHT ABOVE ROADWAY BARRIER - 20 FEET
MAX. POST SPACING - 10 FEET
NOISE BARRIER DEAD LOAD _____ 40 PSF
WIND PRESSURE ON NOISE BARRIER _____ 37.5
(NORMAL TO BARRIER, EITHER DIRECTION)

MATERIAL PROPERTIES:
CONCRETE MASONRY RETAINING WALL ___ f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS ___ f'c = 4,000 PSI
BAR STEEL REINFORCEMENT _____ Fy = 60,000 PSI

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY (SEGMENT C) TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS INCLUDING THE VERTICAL EARTH SURCHARGE LOAD ABOVE THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL OUTSIDE THE WEST ABUTMENT LIMITS OF BRIDGES B-40-863 AND B-40-864 FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 5)
2. GENERAL PLAN & ELEVATION (2 OF 5)
3. GENERAL PLAN & ELEVATION (3 OF 5)
4. GENERAL PLAN & ELEVATION (4 OF 5)
5. GENERAL PLAN & ELEVATION (5 OF 5)
6. GENERAL NOTES, QUANTITIES, & PROFILE GRADE LINES
7. TYPICAL WALL SECTIONS (1 OF 3)
8. TYPICAL WALL SECTIONS (2 OF 3)
9. TYPICAL WALL SECTIONS (3 OF 3)
10. ELEVATION TABLES & REINFORCEMENT SCHEDULE
11. PARAPET, COPING & ANCHOR SLAB DETAILS (1 OF 2)
12. PARAPET, COPING & ANCHOR SLAB DETAILS (2 OF 2)
13. SEGMENT A REINFORCEMENT DETAILS (1 OF 2)
14. SEGMENT A REINFORCEMENT DETAILS (2 OF 2)
15. SEGMENT C REINFORCEMENT DETAILS
16. SEGMENT E REINFORCEMENT DETAILS
17. SEGMENT A INLET DETAILS
18. SEGMENT E INLET DETAILS
19. ANCHOR SLAB INLET COVER SPECIAL
20. NOISE BARRIER POST CONNECTION DETAILS
21. AESTHETIC WALL TREATMENT DETAILS (1 OF 2)
22. AESTHETIC WALL TREATMENT DETAILS (2 OF 2)
23. SUBSURFACE EXPLORATION (1 OF 5)
24. SUBSURFACE EXPLORATION (2 OF 5)
25. SUBSURFACE EXPLORATION (3 OF 5)
26. SUBSURFACE EXPLORATION (4 OF 5)
27. SUBSURFACE EXPLORATION (5 OF 5)

LEGEND

(E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET

TRAFFIC DIRECTION

PIPE UNDERDRAIN UNPERFORATED 6-INCH, CONNECT TO INLET



STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/09/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-552

RETAINING WALL EAST OF 84TH ST. UNDER IH-94

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	AAG	TEK	EKM

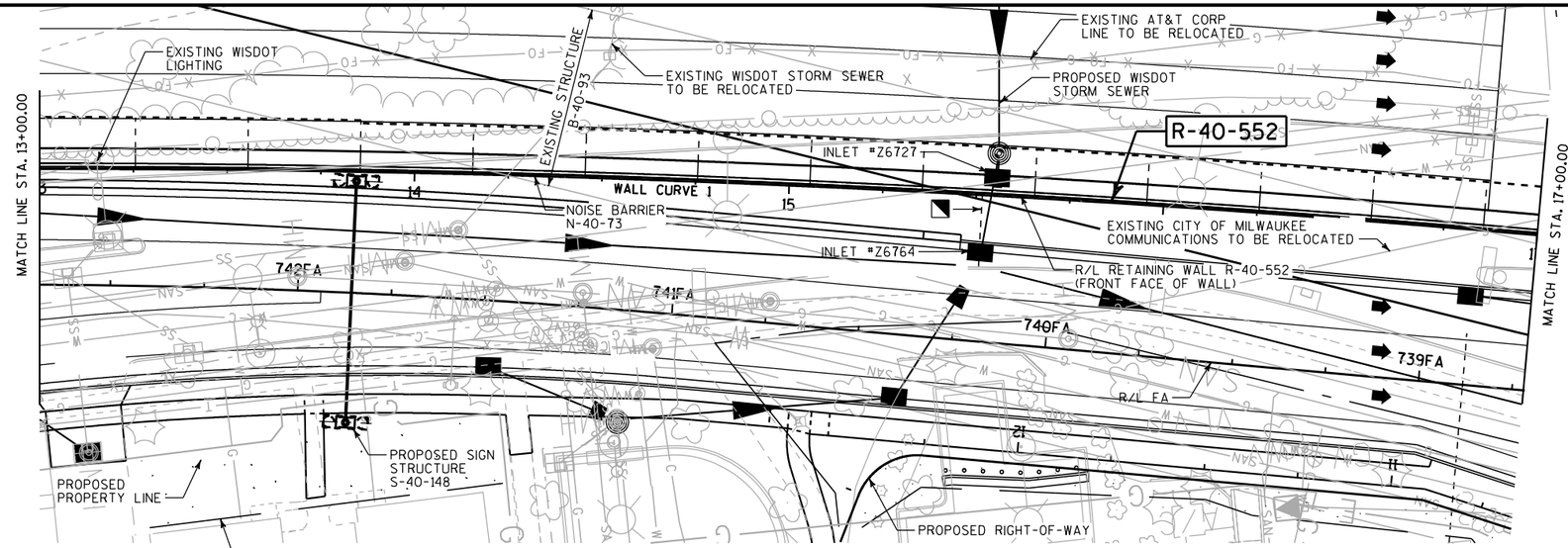
GENERAL PLAN & ELEVATION (1 OF 5)

SHEET 1 OF 27

8

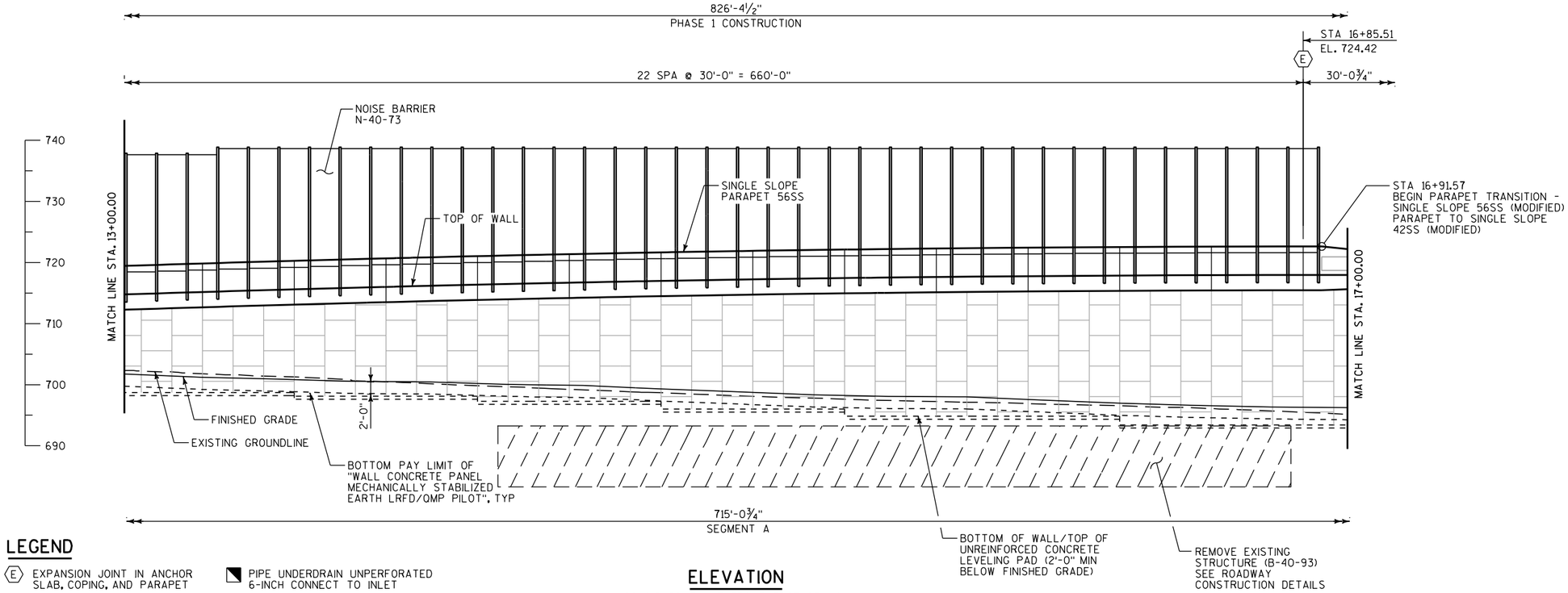
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STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL - SEGMENT A)



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG FRONT FACE OF WALL)

LEGEND

- Ⓔ EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO INLET
- TRAFFIC DIRECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 5)

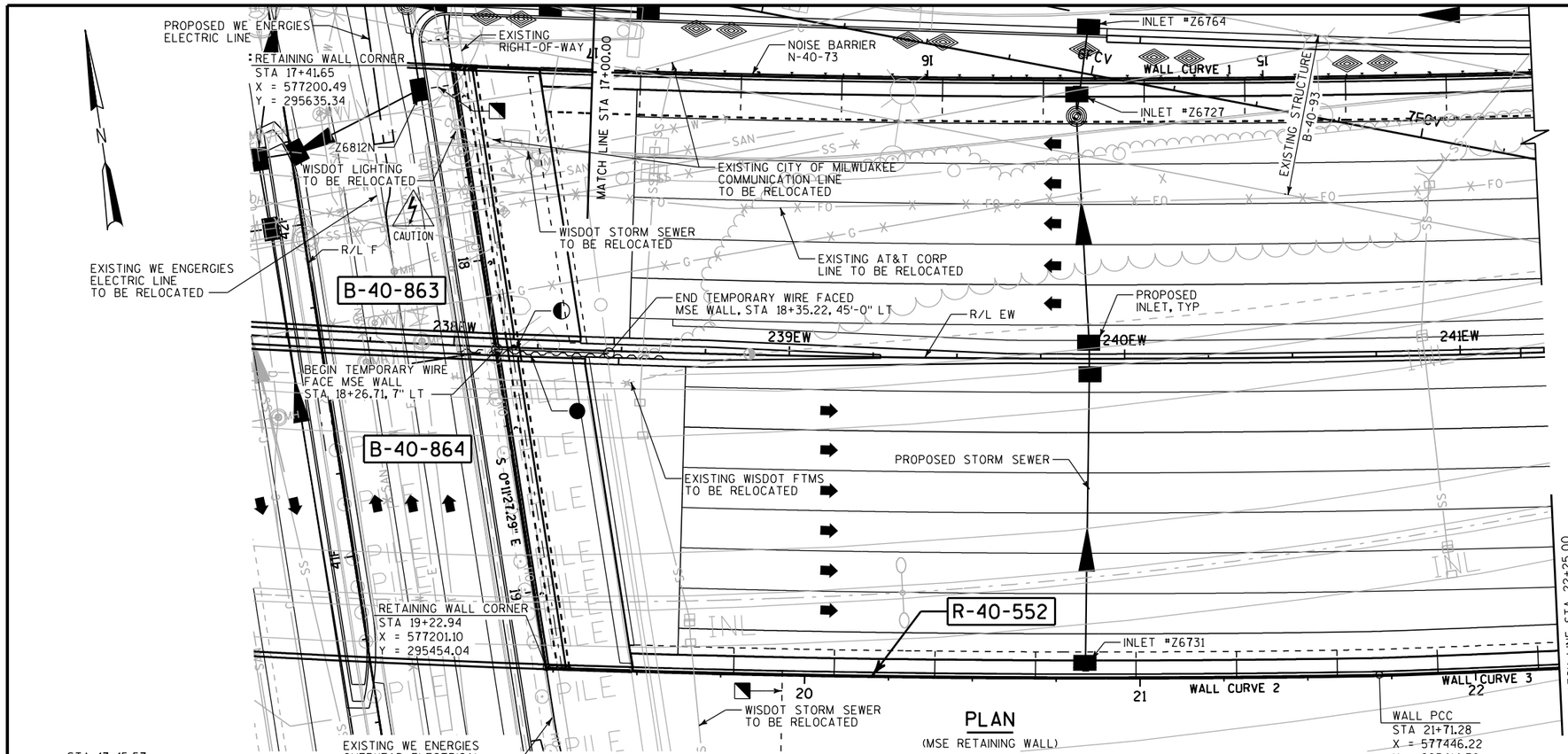
SHEET 2 OF 27

8

8

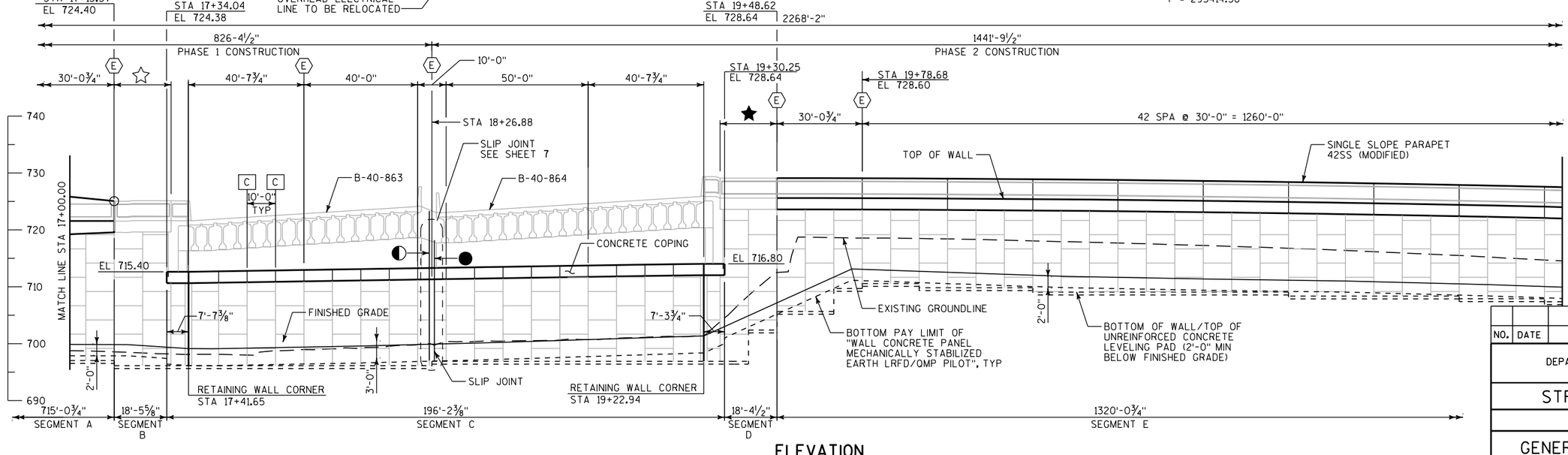
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PLOT BY : MSCTEK
PLOT NAME : R552_080102_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- (E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- [C] CONTRACTION JOINT IN COPING
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO INLET
- TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH, SEE TYPICAL WALL SECTIONS (1 OF 3) SHEET FOR DETAILS
- TEMPORARY SHORING SEE DETAIL ON TYPICAL WALL SECTIONS (1 OF 3) SHEET
- STRUCTURAL APPROACH SLAB SEE STRUCTURE B-40-863 PLANS FOR DETAILS
- STRUCTURAL APPROACH SLAB SEE STRUCTURE B-40-864 PLANS FOR DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

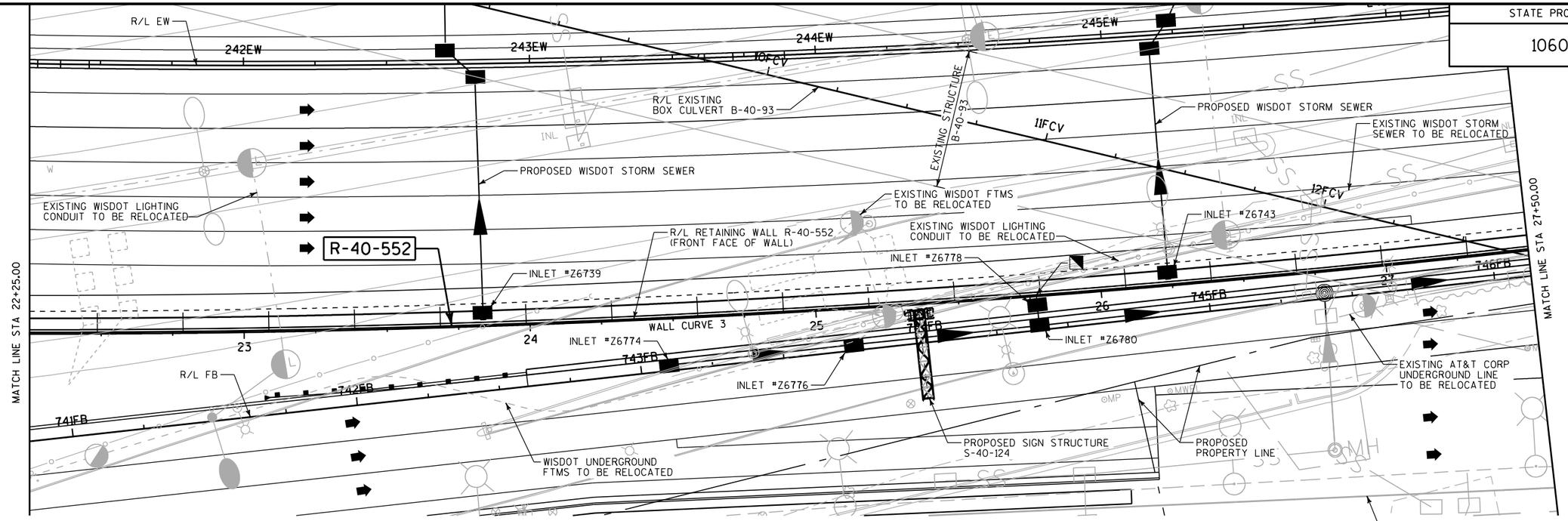
DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (3 OF 5)

SHEET 3 OF 27

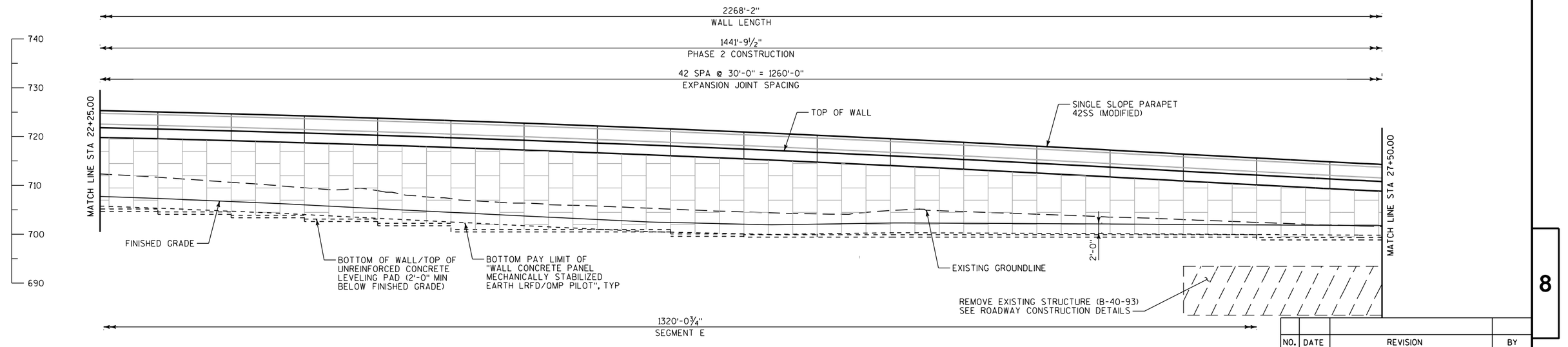
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PLOT NAME : R552_080103_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80



PLAN

SEGMENT E - MSE RETAINING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL

LEGEND

- (E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO INLET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

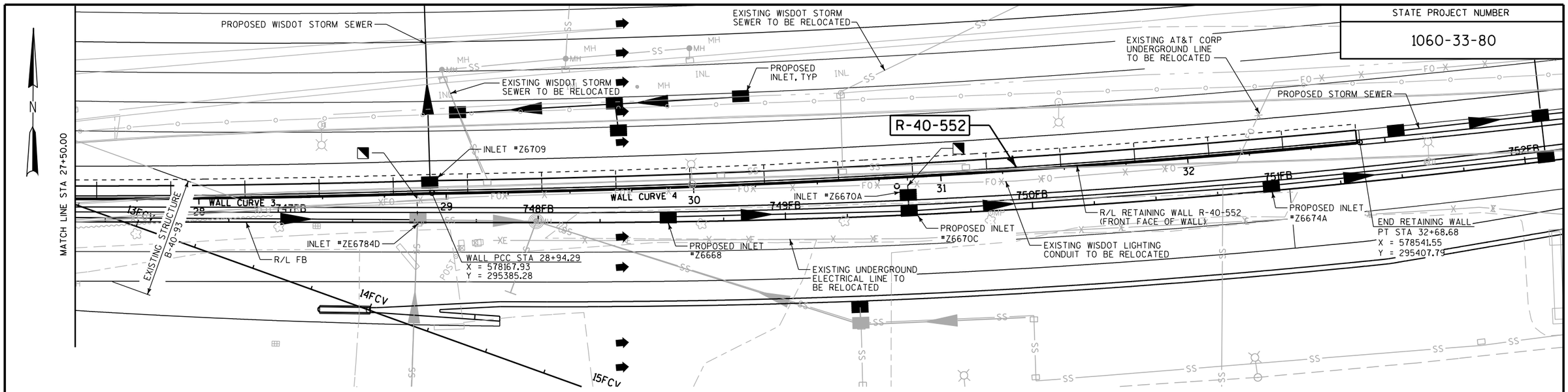
STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (4 OF 5)

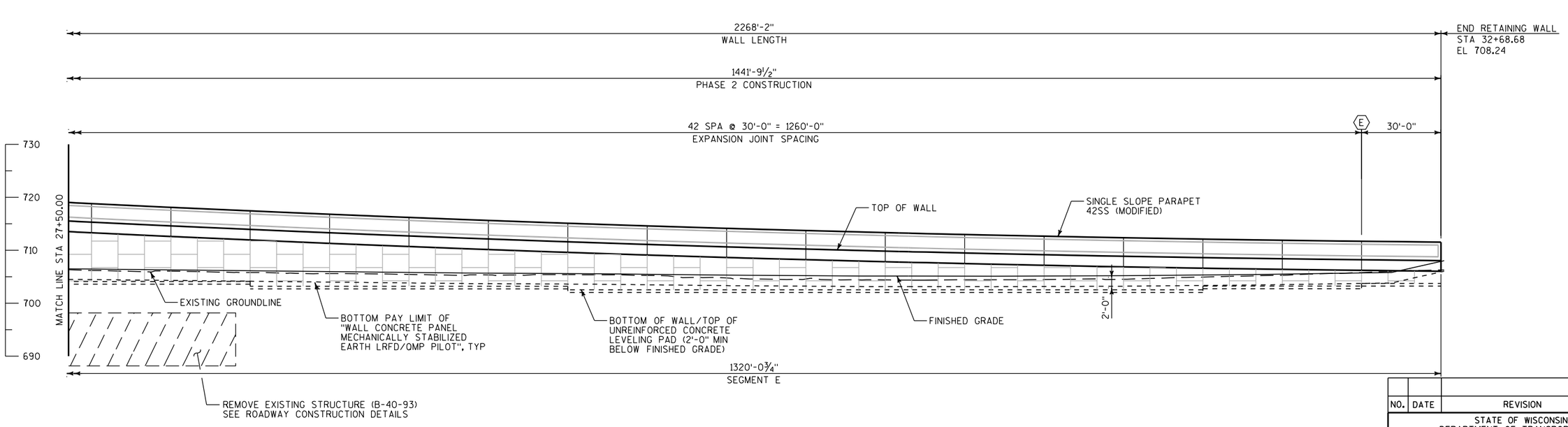
SHEET 4 OF 27

STATE PROJECT NUMBER
1060-33-80



PLAN

SEGMENT E - MSE RETAINING WALL



LEGEND

- (E) EXPANSION JOINT IN ANCHOR SLAB, COPING, AND PARAPET
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED 6-INCH CONNECT TO INLET

ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY	TEK	PLANS CK'D.	EKM

GENERAL PLAN & ELEVATION (5 OF 5)

SHEET 5 OF 27

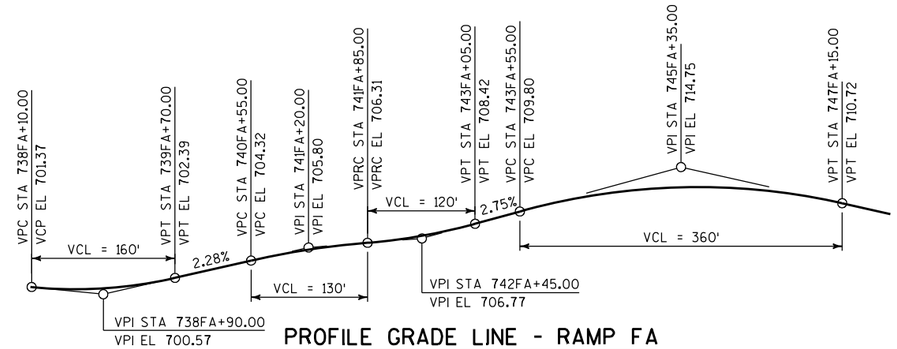
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8

ESTIMATED QUANTITIES

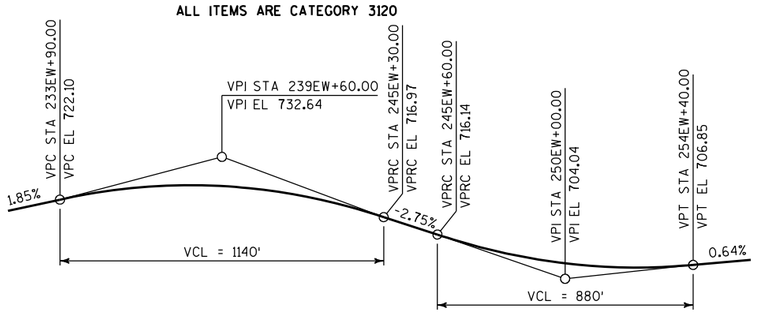
ITEM NO.	BID ITEM	UNIT	SEG. A	SEG. B	SEG. C	SEG. D	SEG. E	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	750	---	---	---	1,235	1,985
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	870	---	---	---	935	1,805
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	83,505	---	---	---	101,890	185,395
511.1200.0004	TEMPORARY SHORING R-40-552	SF	---	---	605	---	---	605
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	164	---	1	---	258	423
517.1050.S.0013	ARCHITECTURAL SURFACE TREATMENT R-40-552	SF	9,270	370	2,795	375	13,675	26,485
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	31	---	11	---	71	113
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	716	19	197	19	1,321	2,272
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	---	---	---	---	6
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	---	---	9	---	---	9
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,425	---	---	---	---	1,425
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	---	---	105	---	---	105
653.0105	PULL BOXES 24X12-INCH	EACH	---	---	4	---	---	4
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	---	---	2	---	---	2
SPV.0060.4105	ANCHOR ASSEMBLIES NOISE BARRIER STRUCTURES	EACH	68	---	---	---	---	68
SPV.0060.4140	ANCHOR SLAB INLET COVER SPECIAL	EACH	2	---	---	---	4	6
SPV.0060.4190	CONCRETE POLYMER PULL BOX	EACH	---	---	4	---	---	4
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	11,055	405	3,190	415	16,315	31,380
SPV.0165.4740	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT	SF	---	---	930	---	---	930
	NON-BID ITEMS							
	NAME PLATE	EACH						1
	JOINT FILLER	SIZE						¾", 1½", 2"
	CORK FILLER	SIZE						1"
	EXPANDED POLYSTYRENE	SIZE						1"
	NONBITUMINOUS JOINT FILLER	SIZE						¾", 1", 1½", 2"

ALL ITEMS ARE CATEGORY 3120



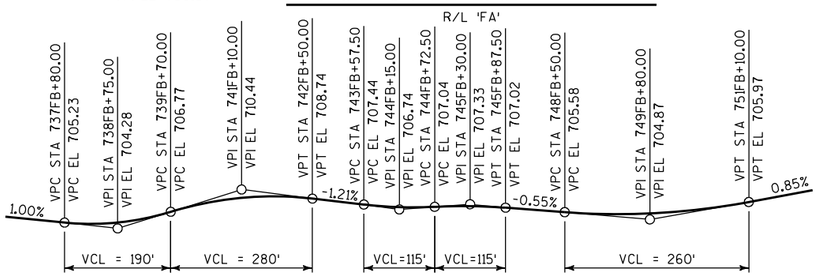
PROFILE GRADE LINE - RAMP FA

R/L 'FA'



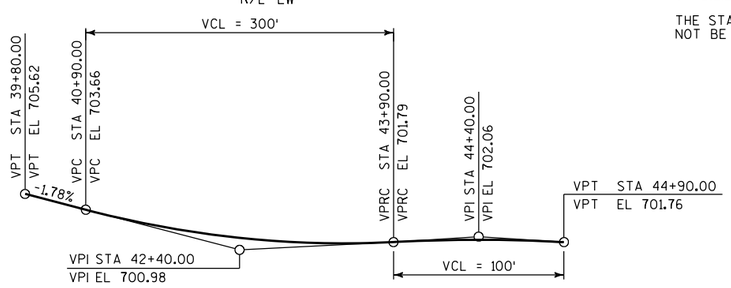
PROFILE GRADE LINE - IH 94 EB/WB

R/L 'EW'



PROFILE GRADE LINE - RAMP FB

R/L 'FB'



PROFILE GRADE LINE - 84TH ST

R/L 'F'

HORIZONTAL CURVE DATA

WALL CURVE 1

P.I. = 13+71.50
X = 577565.30
Y = 295563.50
Δ = 9°24'40" RIGHT
D = 1°16'06"
T = 371.82'
L = 741.96'
R = 4517.05'
P.C. = 9+99.69
X = 577936.95
Y = 295552.27
P.T. = 17+41.65
X = 577200.49
Y = 295635.34

WALL CURVE 2

P.I. = 20+47.14
X = 577323.13
Y = 295430.97
Δ = 3°01'50" LEFT
D = 1°13'13"
T = 124.20'
L = 248.33'
R = 4694.95'
P.C. = 19+22.94
X = 577201.10
Y = 295454.04
P.C.C. = 21+71.28
X = 577446.22
Y = 295414.38

WALL CURVE 3

P.I. = 25+33.49
X = 577805.95
Y = 295372.10
Δ = 8°47'23" LEFT
D = 1°12'57"
T = 362.22'
L = 723.01'
R = 4712.95'
P.C.C. = 21+71.28
X = 577446.22
Y = 295414.38
P.C.C. = 28+94.29
X = 578167.93
Y = 295385.28

WALL CURVE 4

P.I. = 30+82.19
X = 578355.79
Y = 295389.07
Δ = 4°35'44" LEFT
D = 1°13'25"
T = 187.90'
L = 375.60'
R = 4682.95'
P.C.C. = 28+94.29
X = 578167.93
Y = 295385.28
P.T. = 32+69.89
X = 578542.75
Y = 295407.91

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS AND DIMENSIONS ALONG THE R/L FOR R-40-552 ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

PLAN DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED MAXIMUM CONCRETE WALL PANEL THICKNESS OF 7½ INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½ INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

WALL PHASE AND SEGMENT DESIGNATIONS DO NOT CORRESPOND TO ROADWAY STAGING DESIGNATIONS.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-552 WITH THE EAST ABUTMENTS OF B-40-863 AND B-40-864.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES WITH THE CONSTRUCTION OF THE MSE WALL.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF THE LEVELING PAD IS ASSUMED TO BE AT LEAST 2'-0" BELOW FINISHED GRADE FOR SEGMENTS A, B, D & E AND 3'-0" BELOW FINISHED GRADE FOR SEGMENT C.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE SHALL BE EPOXY COATED.

REFER TO S.D.D. 12A3-10 FOR NAMEPLATE DETAILS.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/OMP PILOT".

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENTS A, E & F CAST-IN-PLACE ANCHOR SLAB, COPING AND PARAPET ARE PAID FOR UNDER THE ITEMS "CONCRETE MASONRY RETAINING WALLS" AND "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS", RESPECTIVELY.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT C CAST-IN-PLACE COPING ARE INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LRFD/OMP PILOT".

THE STANDARD PANEL SIZE SHALL BE 5' HIGH X 10' WIDE. 5' HIGH X 5' WIDE PANELS WILL NOT BE ALLOWED.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

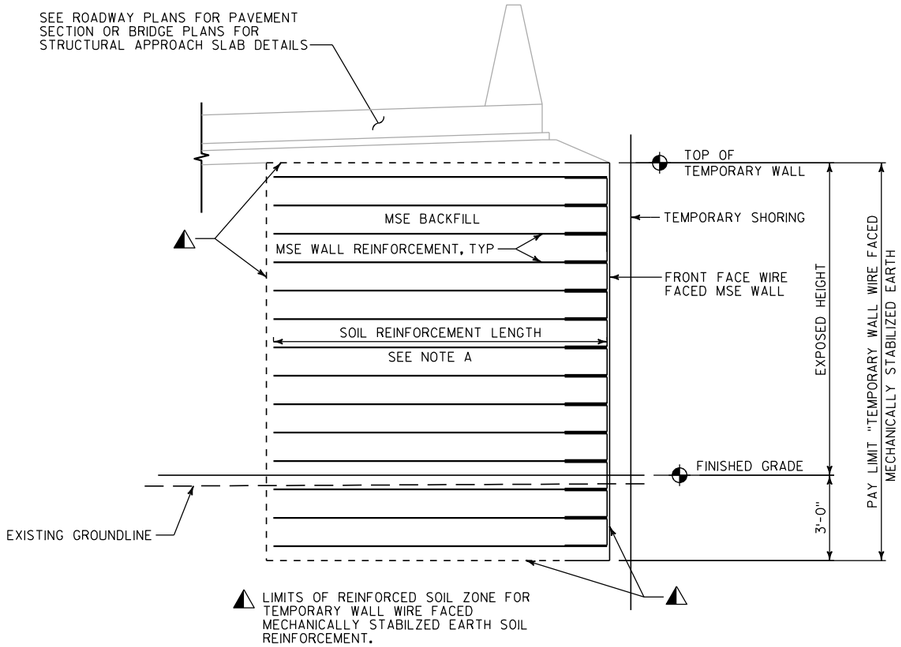
DRAWN BY TEK | PLANS CK'D. EKM

GENERAL NOTES, QUANTITIES, & PROFILE GRADE LINES

SHEET 6 OF 27

8

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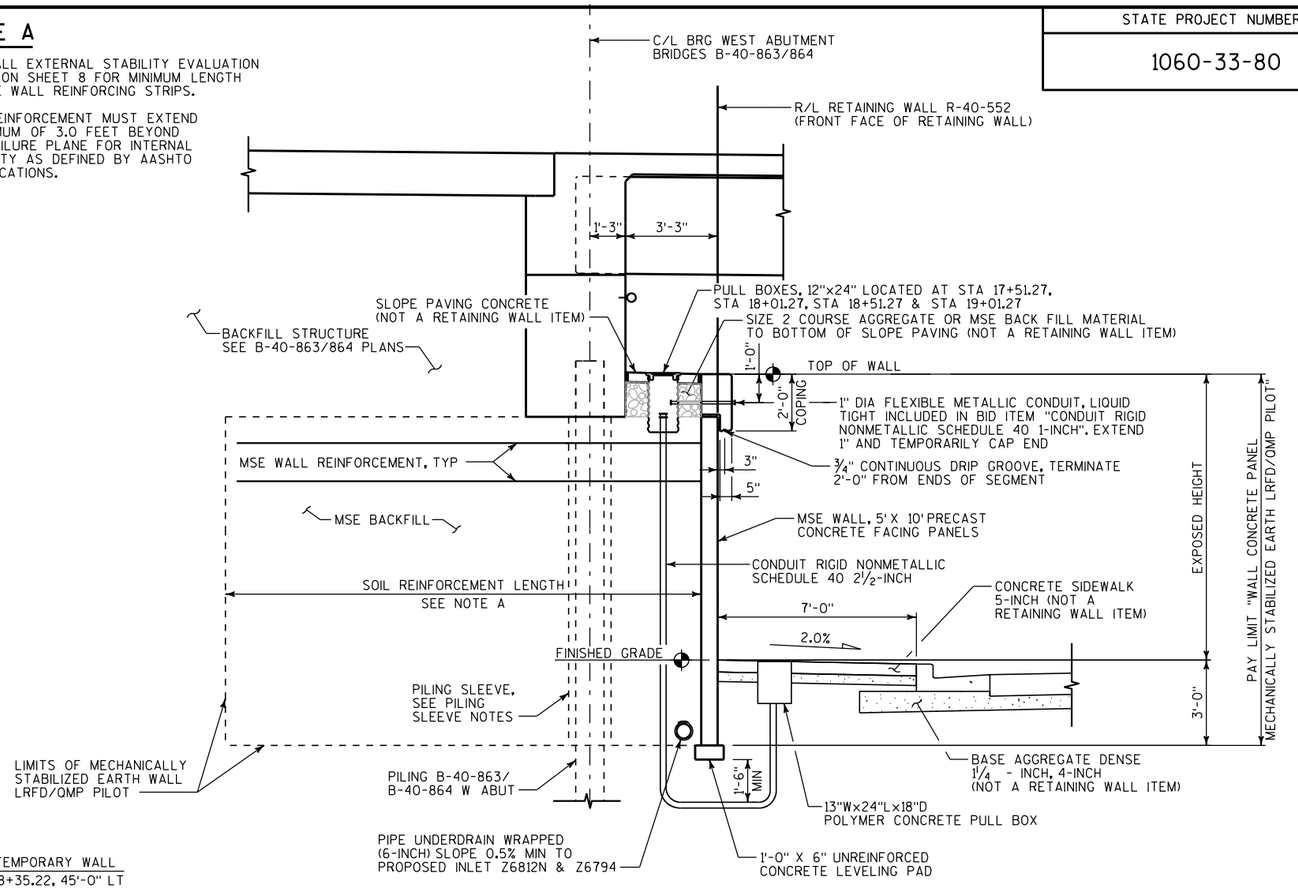
WIRE FACED WALL - TYPICAL SECTION

LOOKING EAST - STA 18+26.71, 7" LT TO STA 18+35.22, 45'-0" LT

NOTE A

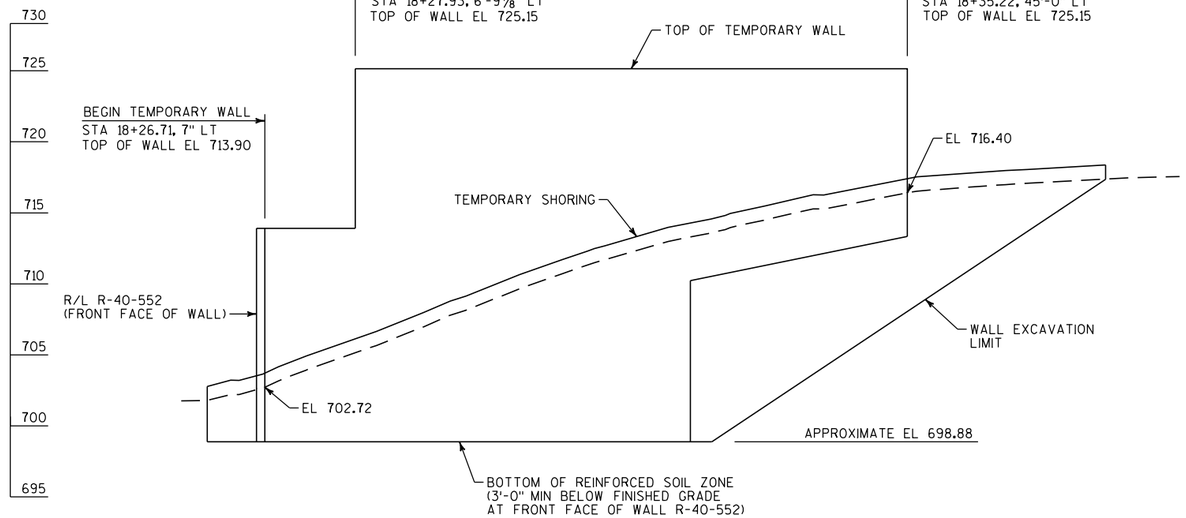
SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 8 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.



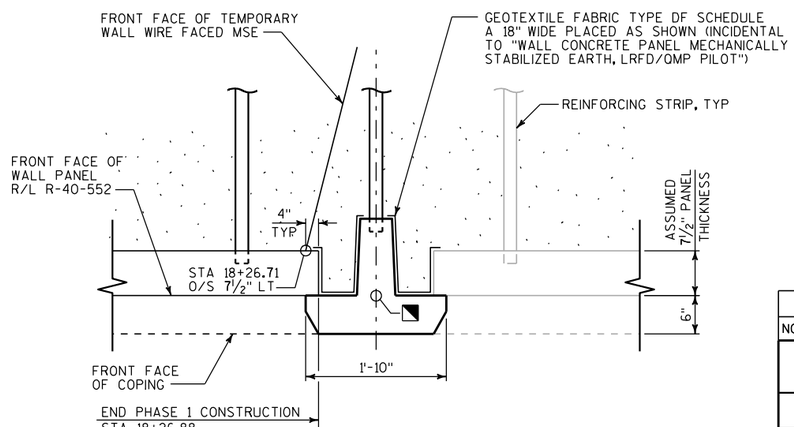
TYPICAL SECTION AT B-40-863/864 EAST ABUTMENT

(LOOKING SOUTH - SEGMENT C STA 17+34.04 TO STA 19+30.25)



ELEVATION AT TEMPORARY WALL

LOOKING NORTH



SLIP JOINT COVER DETAIL

(SLIP JOINT COVER INCIDENTAL TO "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LRFD / OMP PILOT")

C/L SLIP JOINT COVER STA 18+27.63

PILING SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-863 & B-40-864 PLANS.
2. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.
3. SLEEVES SHALL BE PLACED BEFORE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.

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STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

TYPICAL WALL SECTIONS (1 OF 3)

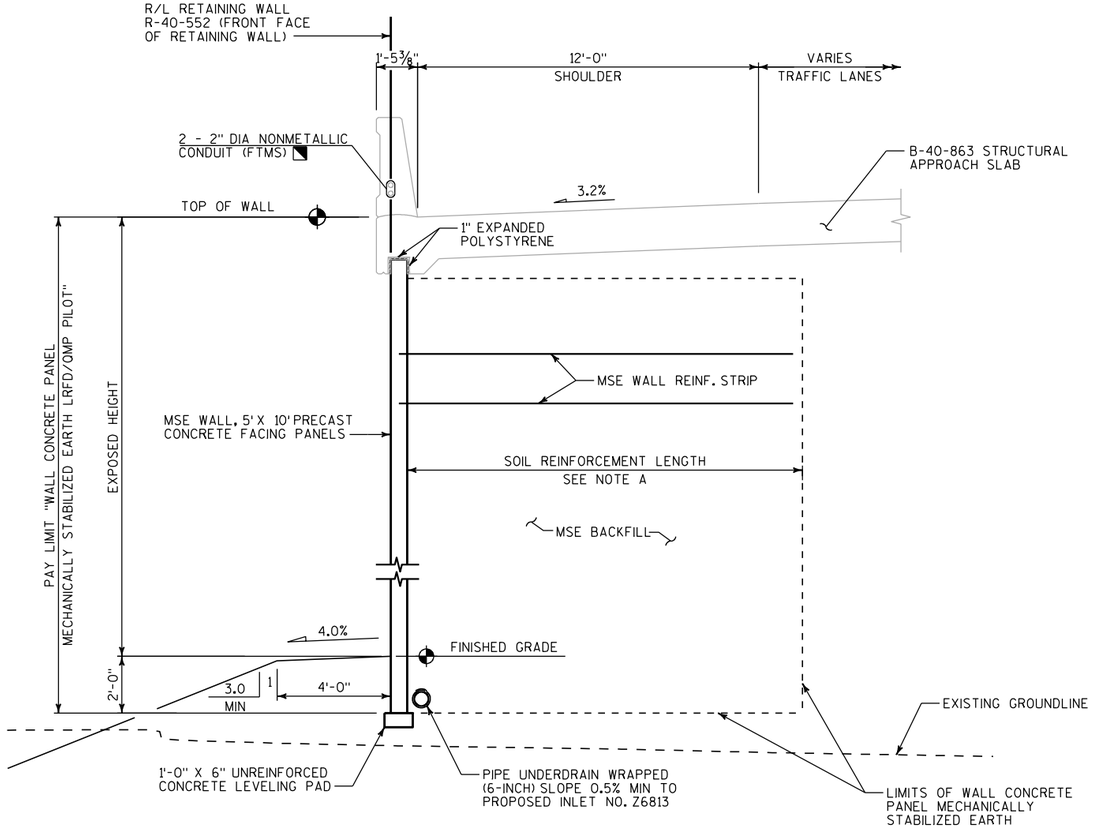
SHEET 7 OF 27

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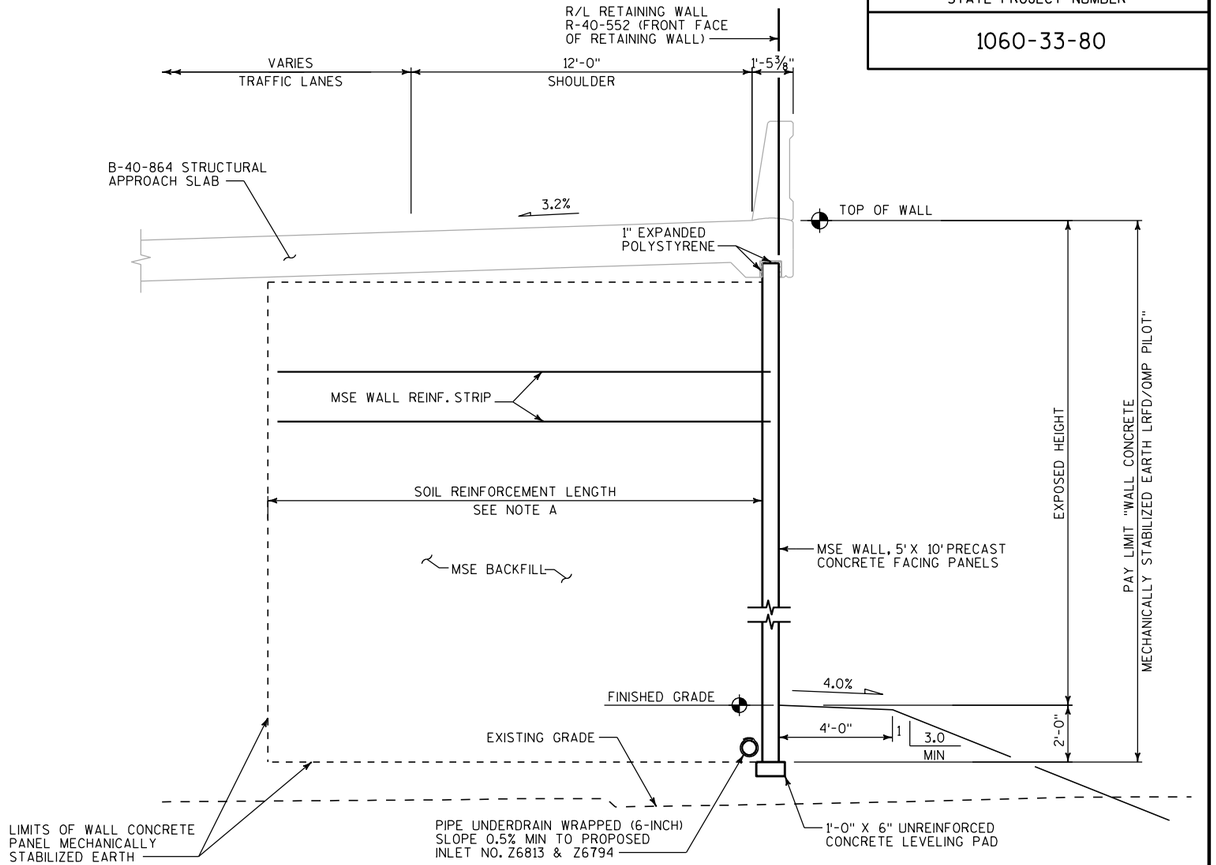
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TYPICAL WALL SECTION - SEGMENT B

LOOKING EAST - STA 17+15.57 TO STA 17+34.04



TYPICAL WALL SECTION - SEGMENT D

LOOKING EAST - STA 19+30.25 TO STA 19+48.62

LEGEND

◥ NOT A RETAINING WALL ITEM

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	SHORT-TERM (UNDRAINED)		LONG-TERM (DRAINED)	
		UNDRAINED SHEAR STRENGTH (PSF)	FRICTION ANGLE (DEGREES)	EFFECTIVE COHESION (PSF)	EFFECTIVE FRICTION ANGLE (DEGREES)
MSE BACKFILL ✳	120	0	30	0	30
PROPOSED FILL ✳	130	0	30	0	30
EXISTING FILL	128-133	0-2500	30	0-100	30
NATIVE COHESIVE CLAY (FIRM TO STIFF)	125	1000	0	0	29
NATIVE COHESIVE CLAY (STIFF TO VERY STIFF)	125-133	1500-2000	0	0-75	30-32
NATIVE COHESIVE CLAY (VERY STIFF)	135-138	2000-3500	0	100-175	33-34
LOOSE TO MEDIUM DENSE NATIVE GRANULAR	128-130	0	30-33	0	30-33
DENSE TO VERY DENSE NATIVE GRANULAR	140	0	36	0	36

✳ DESIGN WALL FOR THESE VALUES

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS								
WALL HEIGHT (FEET)	15.0	20.0	54.5	15.0	16.8	28.0	17.0	18.0	11.0
EXPOSED WALL HEIGHT (FEET)	13.0	18.0	22.5	12.0	13.8	26.0	15.0	16.0	9.0
MINIMUM LENGTH OF REINFORCEMENT (FEET) ✳	10.5	14	17.2	19.6	20	24	11.9	12.6	7.7
WALL STATION	12+75	14+43	16+84	18+00	19+00	19+30	22+00	25+00	28+08
BORING USED	ER-15	ER-14, ER-15	EB-13, ER-14	EB-15	EB-17	EB-17	ER-56	ER-17	ER-18, ER-19
CAPACITY TO DEMAND RATIO (CDR)									
SLIDING (CDR > 1.0)	1.1	1.1	1.1	1.4	1.4	1.4	1.1	1.2	1.0
ECCENTRICITY (CDR > 1.0)	1.0	1.3	1.3	1.7	2.9	2.2	1.3	1.3	1.1
BEARING (CDR > 1.0)	1.8	2.4	3.0	4.9	1.4	1.0	1.3	2.5	1.7
GLOBAL STABILITY (CDR > 1.0)	1.2	1.2	1.2	1.0	1.1	1.2	1.1	1.4	1.6

✳ MINIMUM LENGTH APPLIES ONLT AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

NOTE A

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON THIS SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

STATE PROJECT NUMBER

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

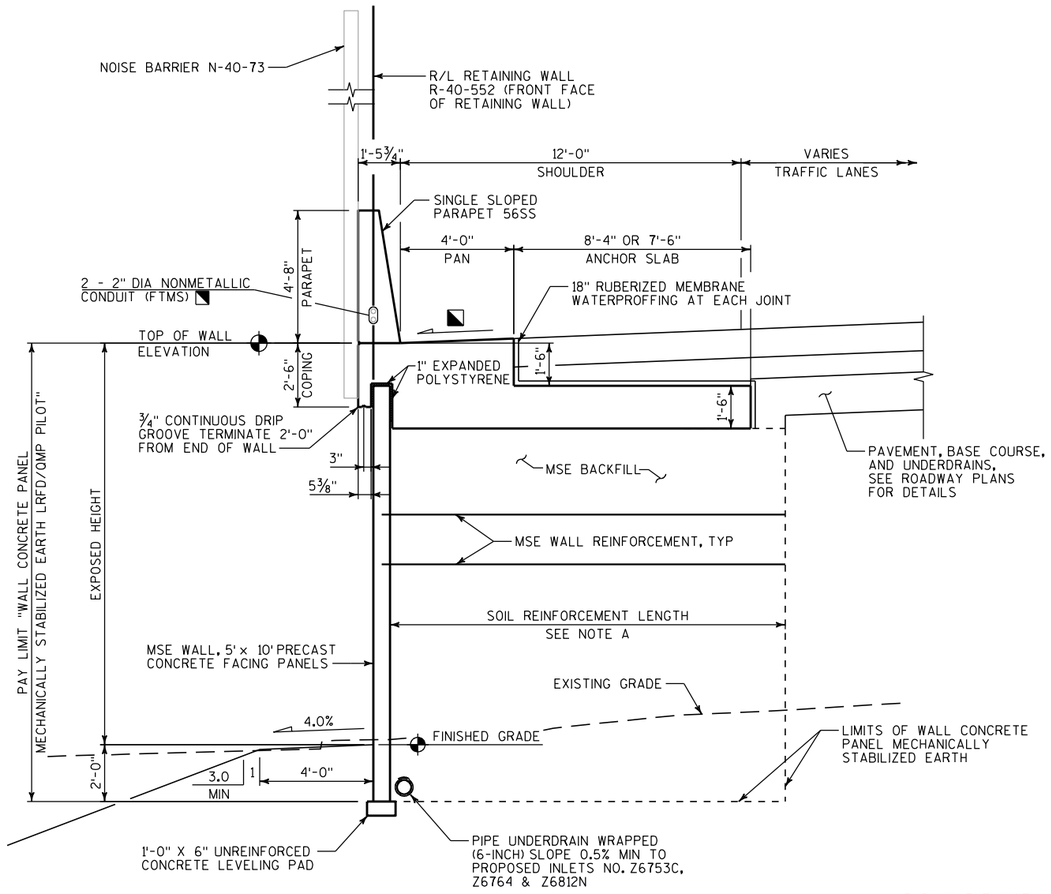
TYPICAL WALL SECTIONS (2 OF 3)

SHEET 8 OF 27

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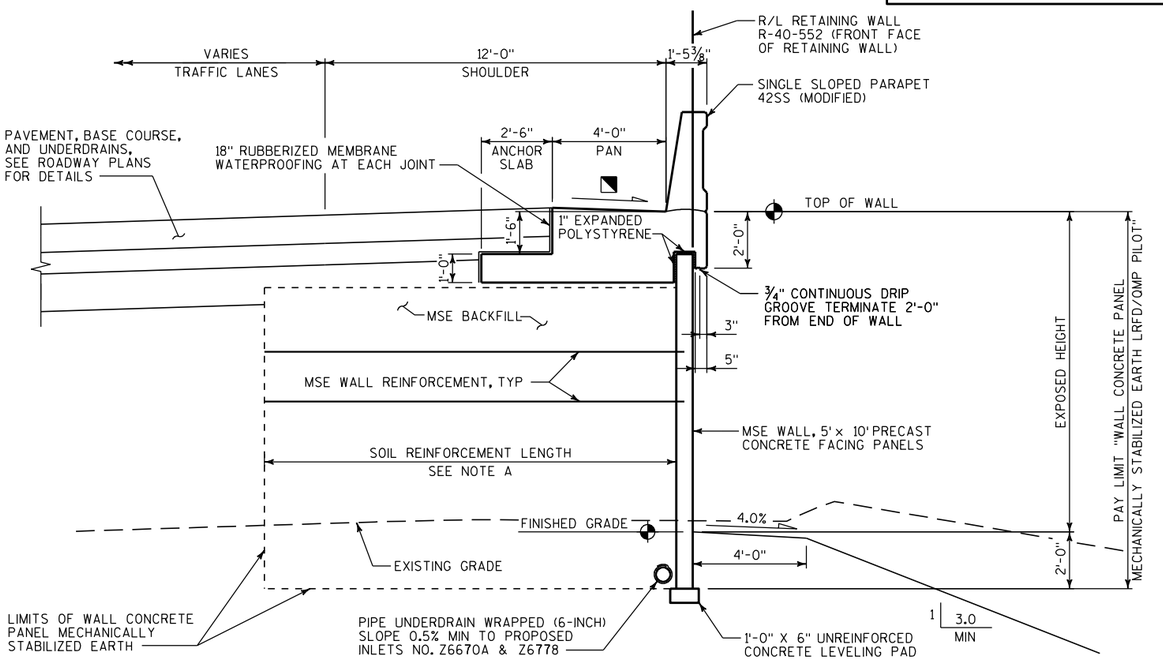
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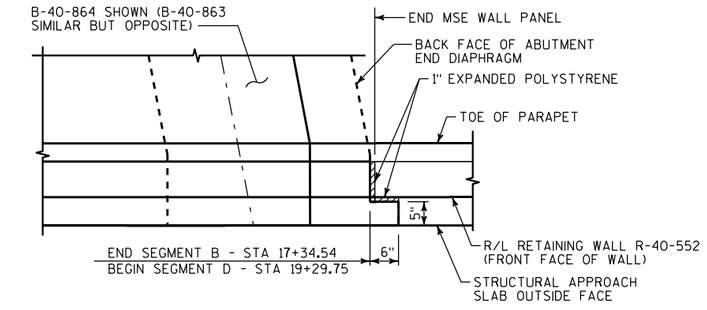
TYPICAL WALL SECTION - SEGMENT A

LOOKING EAST - STA 10+00.51 TO STA 17+15.57
(8'-4" ANCHOR SLAB - STA 10+00.51 TO STA 13+85.51)
(7'-6" ANCHOR SLAB - STA 13+85.51 TO STA 17+15.57)



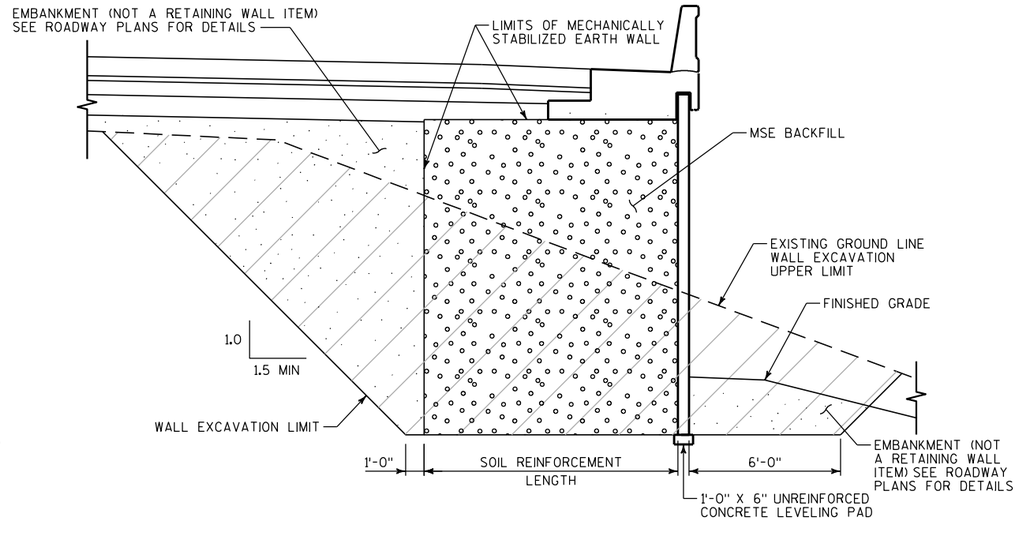
TYPICAL WALL SECTION - SEGMENT E

LOOKING EAST - STA 19+48.62 TO STA 32+68.68



END SEGMENT B / BEGIN SEGMENT D DETAIL

(SEE B-40-863 AND B-40-864 PLANS FOR ADDITIONAL DETAILS)



WALL EXCAVATION LIMITS DIAGRAM

NOTES

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 8 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NOTE B:

REFER TO THE EARTHWORK SUMMARY OF THE MISCELLANEOUS QUANTITIES IN THE ROADWAY PLANS FOR THE CALCULATED WALL EXCAVATION VOLUME.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

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TYPICAL WALL SECTIONS (3 OF 3)

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8

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SEGMENT A WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
10+00.51	714.38	714.38	708.95
10+13.01	714.73	713.54	708.46
10+25.51	715.08	712.74	708.19
10+40.51	715.50	712.69	708.31
10+55.51	715.90	712.61	708.22
10+70.51	716.29	712.52	708.15
10+85.51	716.68	712.38	708.31
11+00.51	717.05	712.22	708.21
11+15.51	717.42	712.02	708.43
11+30.51	717.77	711.80	708.65
11+45.51	718.12	711.54	708.76
11+60.51	718.46	711.25	708.92
11+75.51	718.78	710.94	709.44
11+90.51	719.10	710.58	709.53
12+05.51	719.41	710.20	709.41
12+20.51	719.71	709.76	709.40
12+35.51	720.00	709.44	709.45
12+50.51	720.28	709.17	709.31
12+65.51	720.55	708.89	709.14
12+80.51	720.81	708.58	708.81
12+95.51	721.07	708.23	708.74
13+10.51	721.31	707.90	708.50
13+25.51	721.54	707.58	708.14
13+40.51	721.77	707.41	707.87
13+55.51	721.98	707.22	707.63
13+70.51	722.19	706.99	707.25
13+85.51	722.38	706.89	706.83
14+00.51	722.57	706.83	706.50
14+15.51	722.75	706.59	706.20
14+30.51	722.91	706.40	705.94
14+45.51	723.07	706.28	705.62
14+60.51	723.22	706.02	705.31
14+75.51	723.36	705.69	705.05
14+90.51	723.49	705.41	704.74
15+05.51	723.61	705.12	704.44
15+20.51	723.72	704.81	704.22
15+35.51	723.82	704.61	704.00
15+50.51	723.91	704.46	703.77
15+65.51	724.00	704.43	703.61
15+80.51	724.07	704.28	703.46
15+95.51	724.14	703.96	703.28
16+10.51	724.19	703.65	703.08
16+25.51	724.24	703.36	702.93
16+40.51	724.27	703.14	702.68
16+55.51	724.30	702.94	702.45
16+70.51	724.39	702.79	702.15
16+85.51	724.42	702.69	701.86
17+00.54	724.42	702.61	701.51
17+15.57	724.40	702.60	701.30

SEGMENT B WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
17+15.57	724.40	702.60	701.30
17+24.81	724.39	702.45	701.10
17+34.04	724.38	702.14	700.95

LEGEND

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

SEGMENT C WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
17+34.04	715.40	702.14	700.95
17+41.65	715.40	701.88	700.84
17+52.29	715.48	701.88	700.85
17+62.29	715.56	701.97	700.70
17+72.29	715.64	702.06	701.49
17+82.29	715.71	702.15	701.70
17+92.29	715.79	702.24	701.84
18+02.29	715.87	702.34	702.01
18+12.29	715.95	702.47	702.29
18+22.29	716.02	702.59	702.61
18+32.29	716.10	702.72	703.06
18+42.29	716.18	702.85	703.14
18+52.29	716.25	702.98	703.22
18+62.29	716.33	703.14	703.25
18+72.29	716.41	703.29	703.38
18+82.29	716.49	703.45	703.47
18+92.29	716.56	703.61	703.70
19+02.29	716.64	703.77	703.86
19+12.29	716.72	703.93	704.00
19+22.94	716.80	704.10	704.10
19+30.25	716.80	705.75	707.24

SEGMENT D WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
19+30.25	728.64	705.75	707.24
19+39.44	728.64	707.83	711.52
19+48.62	728.64	709.91	715.23

SEGMENT E (1 OF 2) WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
19+48.62	728.64	709.91	715.23
19+63.65	728.63	713.30	721.41
19+78.68	728.60	715.81	721.31
19+93.68	728.54	715.56	721.28
20+08.68	728.47	715.31	721.16
20+23.68	728.39	715.04	720.99
20+38.68	728.30	714.78	720.79
20+53.68	728.21	714.55	720.62
20+68.68	728.10	714.41	720.42
20+83.68	727.99	714.27	720.19
20+98.68	727.87	714.13	719.99
21+13.68	727.78	714.02	719.76
21+28.68	727.67	713.92	719.47
21+43.68	727.56	713.81	719.24
21+58.68	727.44	713.66	718.90
21+73.68	727.30	713.47	718.58
21+88.68	727.16	713.27	718.25
22+03.68	727.00	713.07	717.84
22+18.68	726.83	712.80	717.45
22+33.68	726.66	712.54	717.06
22+48.68	726.48	712.28	716.60
22+63.68	726.29	711.95	716.09
22+78.68	726.09	711.63	715.57
22+93.68	725.88	711.31	715.04
23+08.68	725.66	710.95	714.45
23+23.68	725.43	710.56	714.06
23+38.68	725.20	710.18	713.87

SEGMENT E (2 OF 2) WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
23+53.68	724.96	709.80	712.91
23+68.68	724.70	709.42	712.21
23+83.68	724.44	709.05	711.62
23+98.68	724.17	708.67	711.33
24+13.68	723.89	708.31	710.75
24+28.68	723.61	707.96	710.63
24+43.68	723.31	707.60	710.40
24+58.68	723.01	707.35	710.08
24+73.68	722.69	707.18	709.77
24+88.68	722.37	707.00	709.50
25+03.68	722.04	706.90	709.26
25+18.68	721.70	707.01	709.09
25+33.68	721.35	707.12	709.17
25+48.68	720.99	707.24	709.77
25+63.68	720.62	707.23	709.87
25+78.68	720.25	707.20	709.41
25+93.68	719.87	707.17	709.03
26+08.68	719.47	707.13	708.70
26+23.68	719.06	707.09	708.39
26+38.68	718.66	707.04	708.12
26+53.68	718.25	706.99	707.76
26+68.68	717.84	706.94	707.57
26+83.68	717.43	706.90	707.55
26+98.68	717.03	706.85	707.43
27+13.68	716.64	706.81	707.08
27+28.68	716.26	706.77	706.85
27+43.68	715.88	706.73	706.59
27+58.68	715.52	706.67	706.38
27+73.68	715.16	706.59	706.21
27+88.68	714.81	706.51	706.24
28+03.68	714.47	706.42	706.13
28+18.68	714.14	706.34	705.97
28+33.68	713.81	706.25	705.91
28+48.68	713.50	706.17	705.97
28+63.68	713.19	706.09	705.96
28+78.68	712.89	706.01	705.80
28+93.68	712.60	705.93	705.66
29+08.68	712.33	705.88	705.35
29+23.68	712.06	705.85	705.17
29+38.68	711.80	705.81	705.10
29+53.68	711.55	705.76	705.05
29+68.68	711.31	705.68	704.92
29+83.68	711.08	705.60	704.87
29+98.68	710.85	705.52	704.73
30+13.68	710.64	705.46	704.54
30+28.68	710.43	705.41	704.46
30+43.68	710.23	705.36	704.38
30+58.68	710.04	705.33	704.30
30+73.68	709.86	705.32	704.33
30+88.68	709.68	705.31	704.43
31+03.68	709.52	705.32	704.52
31+18.68	709.36	705.35	704.61
31+33.68	709.21	705.38	704.74
31+48.68	709.07	705.41	704.72
31+63.68	708.94	705.47	704.95
31+78.68	708.81	705.54	705.12
31+93.68	708.70	705.62	705.30
32+08.68	708.59	705.70	705.48
32+23.68	708.49	705.82	705.77
32+38.68	708.40	705.93	706.00
32+53.68	708.32	706.42	706.28
32+68.68	708.24	708.10	706.46

BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	873	12'-3"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	1070	9'-7"	X		ANCHOR SLAB - VERTICAL TIE
A503	X	1034	5'-10"	X		ANCHOR SLAB - VERTICAL TIE
A504	X	1070	5'-10"	X		ANCHOR SLAB - VERTICAL TIE
A505	X	1070	5'-9"	X		ANCHOR SLAB - VERTICAL TIE
A406	X	33	24'-7"			ANCHOR SLAB - LONGITUDINAL
A407	X	712	29'-7"			ANCHOR SLAB - LONGITUDINAL
A508	X	4	10'-1"	X		ANCHOR SLAB - AROUND MANHOLE
A509	X	746	11'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A410	X	1	29'-8"	X		COPING - TRANSITION
A511	X	36	5'-6"	X	◭	ANCHOR SLAB - VERTICAL TIE TRANSITION
A412	X	18	28'-6"		◭	ANCHOR SLAB - LONGITUDINAL
A413	X	4	29'-2"		◭	ANCHOR SLAB - LONGITUDINAL
A414	X	1	29'-3"			ANCHOR SLAB - LONGITUDINAL
A415	X	1	28'-11"			ANCHOR SLAB - LONGITUDINAL
R502	X	10	24'-7"			PARAPET LONGITUDINAL
R503	X	228	29'-7"			PARAPET LONGITUDINAL
R504	X	1042	8'-11"	X		PARAPET TIE
R505	X	2	29'-8"	X		PARAPET TOP - TRANSITION
R506	X	36	7'-9"	X	◭	PARAPET TOP - TRANSITION
R408	X	408	2'-0"			PARAPET - NOISE BARRIER ANCHOR

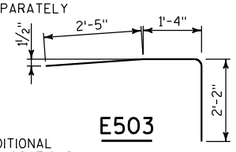
BILL OF BARS - SEGMENT E

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
E501	X	2984	6'-5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
E502	X	117	8'-1"	X		ANCHOR SLAB - VERTICAL TIE
E503	X	117	5'-10"	X		ANCHOR SLAB - VERTICAL TIE
E504	X	1016	5'-10"	X		ANCHOR SLAB - VERTICAL TIE
E505	X	1976	5'-10"	X		ANCHOR SLAB - VERTICAL TIE
E406	X	996	29'-7"			ANCHOR SLAB - LONGITUDINAL
E407	X	10	30'-5"		◭	ANCHOR SLAB - LONGITUDINAL
E408	X	4	30'-1"		◭	ANCHOR SLAB - LONGITUDINAL
E409	X	1	30'-0"			ANCHOR SLAB - LONGITUDINAL
E410	X	1	30'-4"			ANCHOR SLAB - LONGITUDINAL
E511	X	5	6'-6"			ANCHOR SLAB - HORIZONTAL
E512	X	1859	9'-7"	X		ANCHOR SLAB - VERTICAL TIE
E513	X	1859	5'-4"	X		ANCHOR SLAB - VERTICAL TIE
R501	X	1992	6'-7"	X		PARAPET TIE
R807	X	352	29'-7"			PARAPET LONGITUDINAL

BAR SERIES TABLE

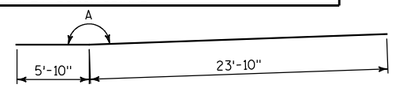
BAR MARK	NO. REQ'D	LENGTH
A511	1 SERIES OF 36	4'-10" TO 5'-4"
A412	2 SERIES OF 9	27'-6" TO 29'-5"
A413	1 SERIES OF 4	28'-0" TO 29'-5"
E407	2 SERIES OF 5	29'-11" TO 30'-10"
E408	1 SERIES OF 4	29'-10" TO 30'-4"
R506	1 SERIES OF 36	6'-7" TO 8'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY



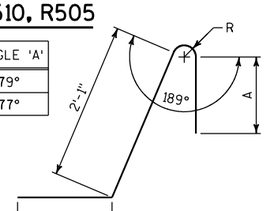
E503

NOTE:
SEE INLET DETAILS SHEETS FOR ADDITIONAL REINFORCEMENT REQUIRED AT INLET LOCATIONS



A510, R505

BAR MARK	ANGLE 'A'
A510	179°
R505	177°

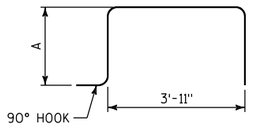


A505, E505

BAR MARK	DIM. 'A'	RAD. 'R'
A505	2'-2"	5½"
E505	1'-7"	5"

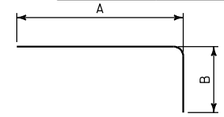
STATE PROJECT NUMBER

1060-33-80



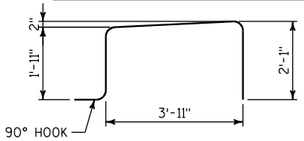
A502, E512

BAR MARK	DIM. 'A'
A502	2'-7"
E502	2'-1"

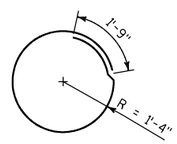


A503, A504, A511 SERIES, E504, E513

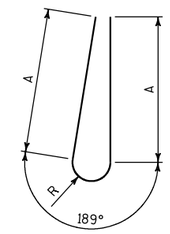
BAR MARK	DIM. 'A'	DIM. 'B'
A503	3'-9"	2'-2"
A504	5'-1"	10"
A511	3'-9"	VARIES 2'-2" TO 1'-8"
E504	5'-1"	10"
E513	3'-9"	1'-8"



E502



A508



R501, R504, R506 SERIES

BAR MARK	DIM. 'A'	RAD. 'R'
R501	2'-8"	5"
R504	3'-10"	5½"
R506	VARIES 2'-8" TO 3'-10"	5½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

ELEVATION TABLES & REINFORCEMENT SCHEDULE

SHEET 10 OF 27

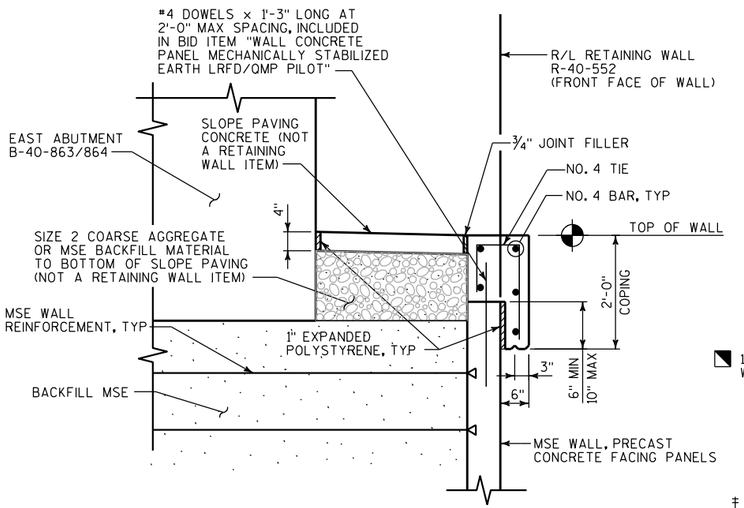
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STATE PROJECT NUMBER
1060-33-80

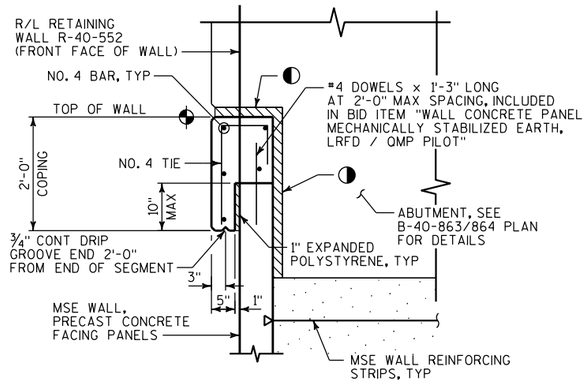
LEGEND

- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.
- 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- 2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.



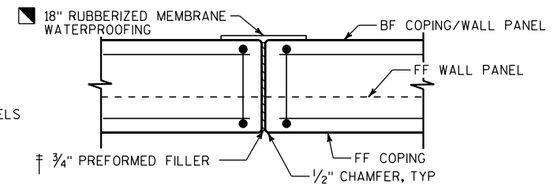
COPING DETAIL AT SEGMENT C

STA 19+49.75 TO STA 19+99.15



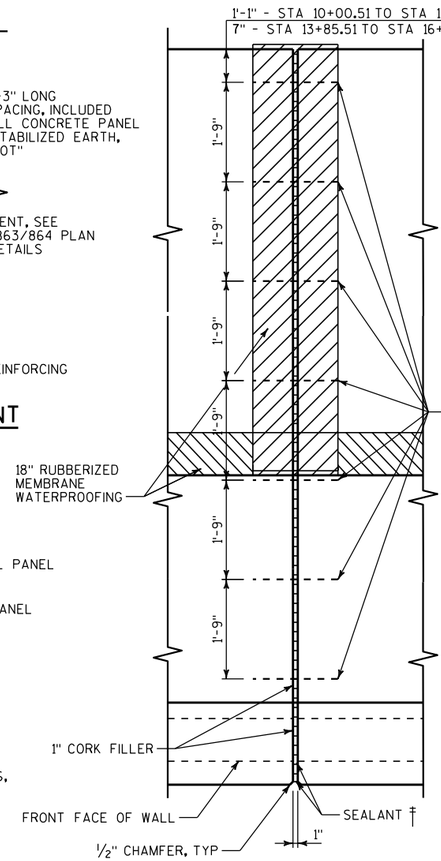
COPING DETAIL THRU ABUTMENT

(SEGMENT C)



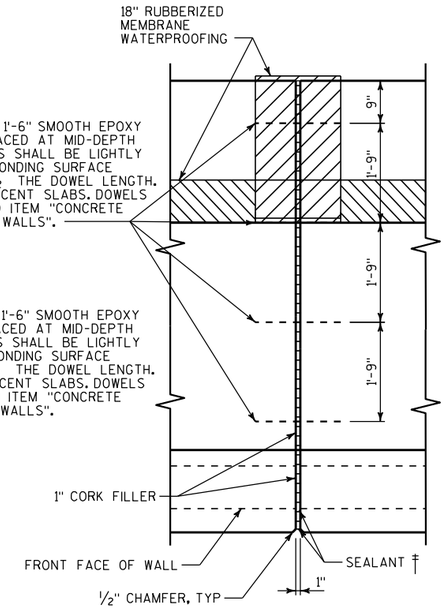
COPING EXPANSION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.



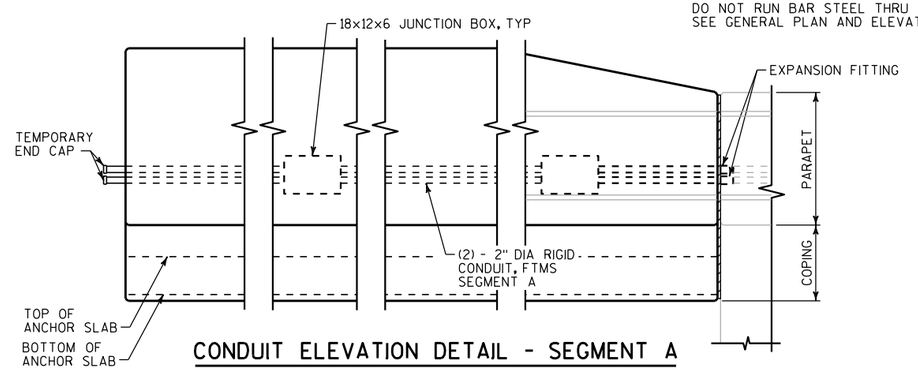
ANCHOR SLAB EXPANSION JOINT SEGMENT A

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN. FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS



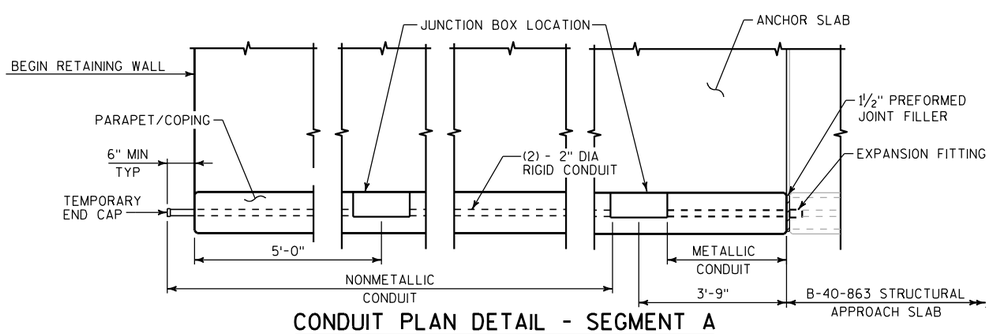
ANCHOR SLAB EXPANSION JOINT SEGMENT E

DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS AS SHOWN. FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS

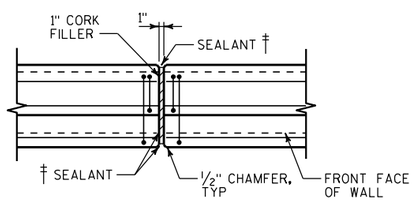


CONDUIT ELEVATION DETAIL - SEGMENT A

OUTSIDE FACE OF PARAPET (LOOKING SOUTH)

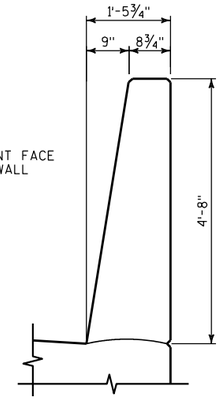


CONDUIT PLAN DETAIL - SEGMENT A



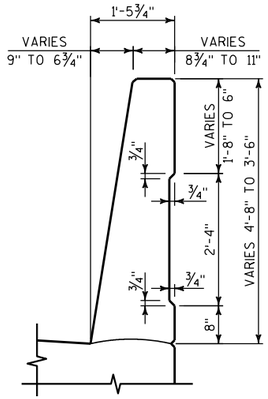
PARAPET EXPANSION JOINT

NO NOT RUN BARS THRU JOINT



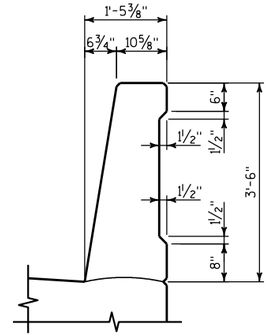
SINGLE SLOPED PARAPET 56SS DIMINSIONS

SEGMENT A



PARAPET TRANSITION

SEGMENT A
(STA 16+91.75 TO STA 17+15.57)



SINGLE SLOPED PARAPET 42SS (MODIFIED) DIMINSIONS

SEGMENT E

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY: TEK | PLANS CK'D.: EKM

PARAPET, COPING, & ANCHOR SLAB DETAILS

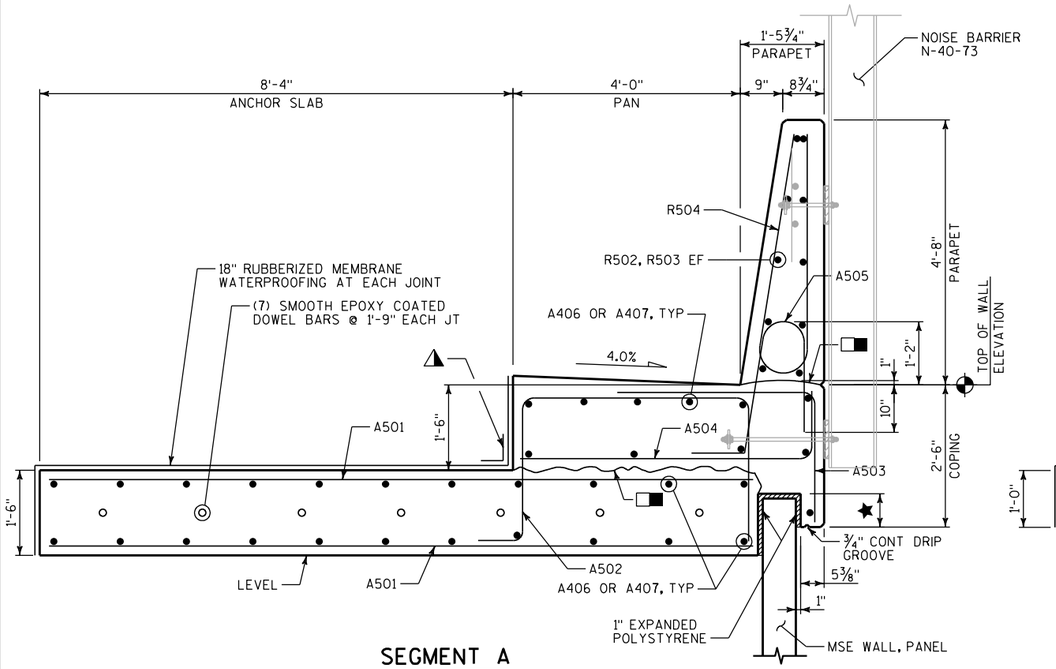
SHEET 11 OF 27

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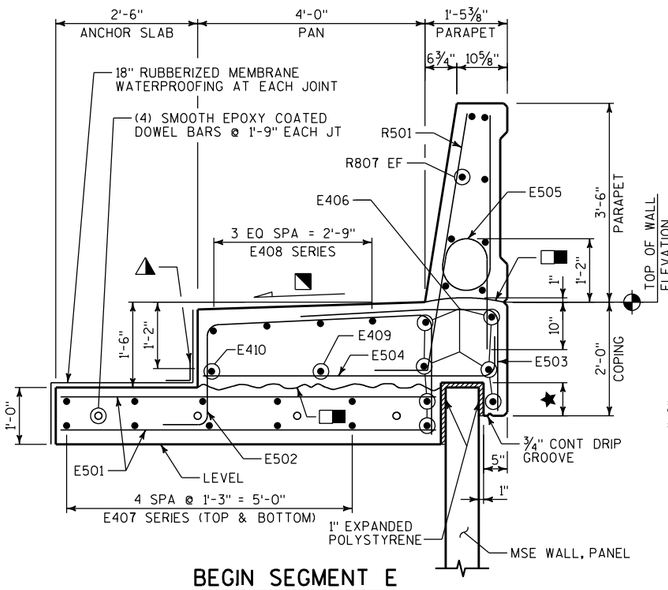
STATE PROJECT NUMBER

1060-33-80



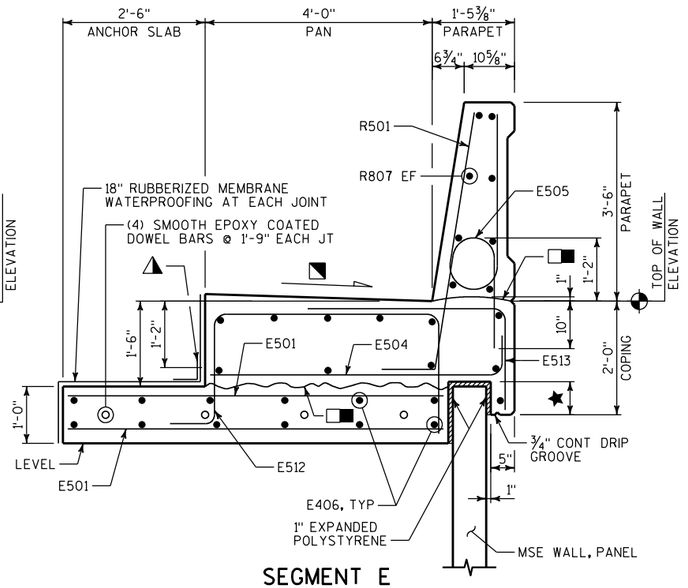
SEGMENT A

STA 10+00.51 TO STA 13+85.51



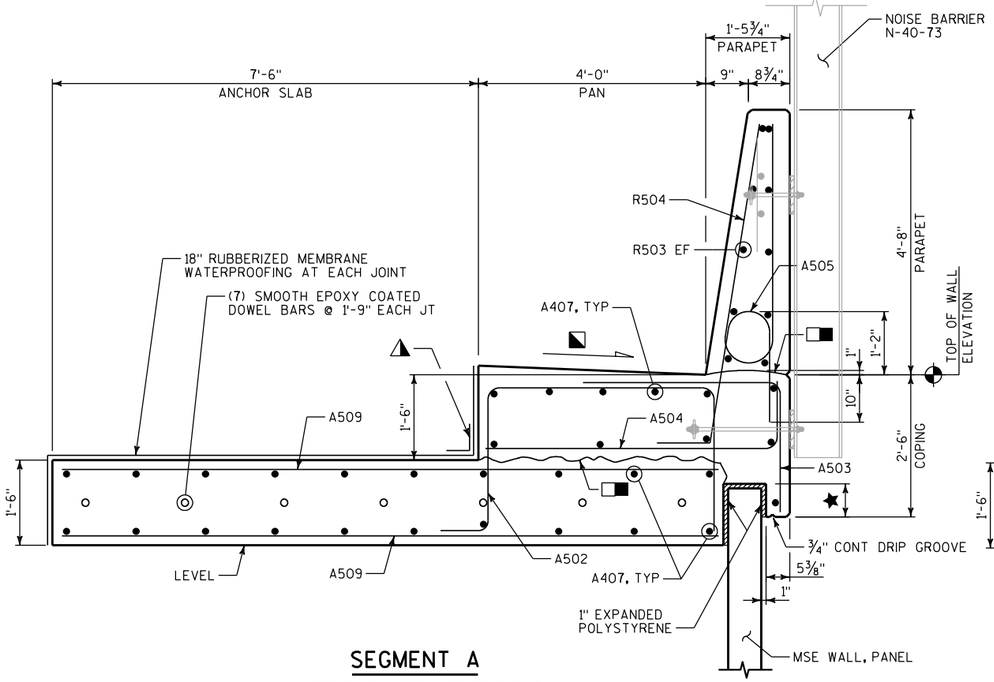
BEGIN SEGMENT E

(TYPICAL SECTION)
STA 19+48.62 TO STA 19+78.68



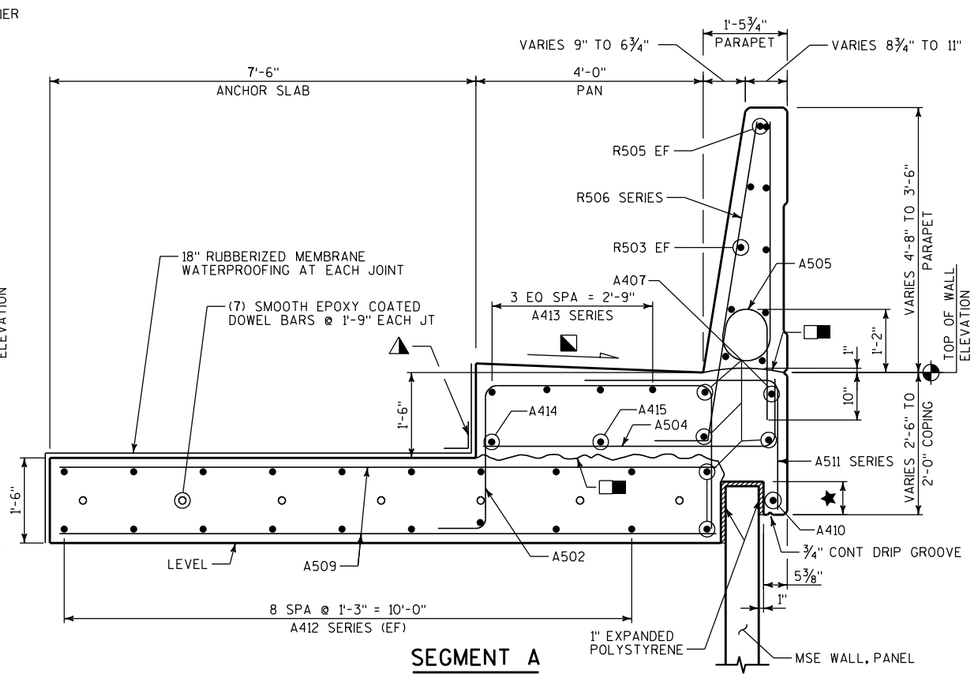
SEGMENT E

(TYPICAL SECTION)
STA 19+78.68 TO STA 32+68.68



SEGMENT A

(TYPICAL SECTION - 30'-0" PANEL)
STA 13+85.51 TO STA 16+91.57



SEGMENT A

(TRANSITION SECTION)
STA 16+91.57 TO STA 17+15.57

LEGEND

- 4.0% STA 10+00.51 TO STA 16+60.12
  VARIES 4.0% TO 3.2% STA 16+60.12 TO STA 16+73.82
  3.2% STA 16+73.82 TO STA 17+15.57
- -3.2% STA 19+48.62 TO STA 19+73.07
  VARIES -3.2% TO 4.0% STA 19+73.07 TO STA 19+95.55
  4.0% STA 19+95.55 TO STA 32+68.68
- CONSTRUCTION JOINT, STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.
- ★ 3" MIN, 6" MAX.
- △ 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZONTAL CONSTRUCTION JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

PARAPET, COPING, & ANCHOR SLAB DETAILS (2 OF 2)

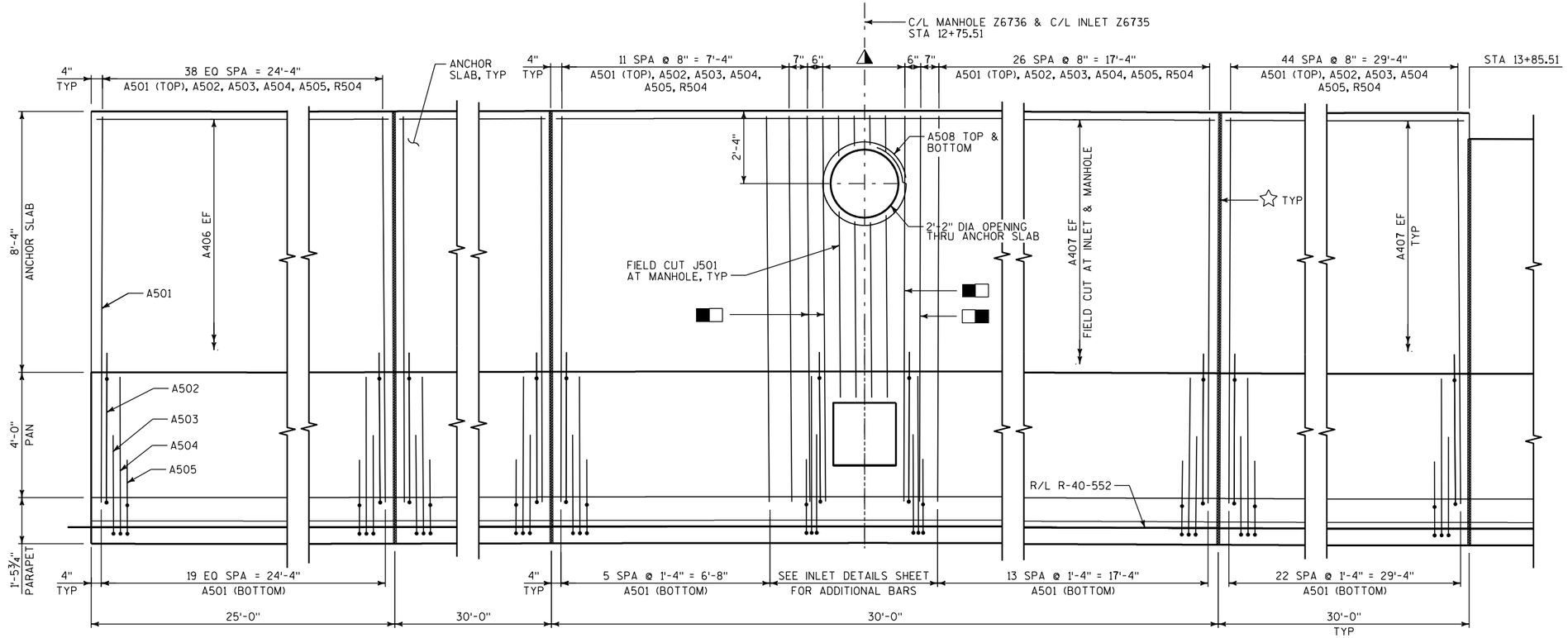
SHEET 12 OF 27

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-552\cds\R552_080312_de.dgn
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PLOT BY : MSCTEK
PLOT NAME : R552_080312_de
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-80



25'-0" PLAN

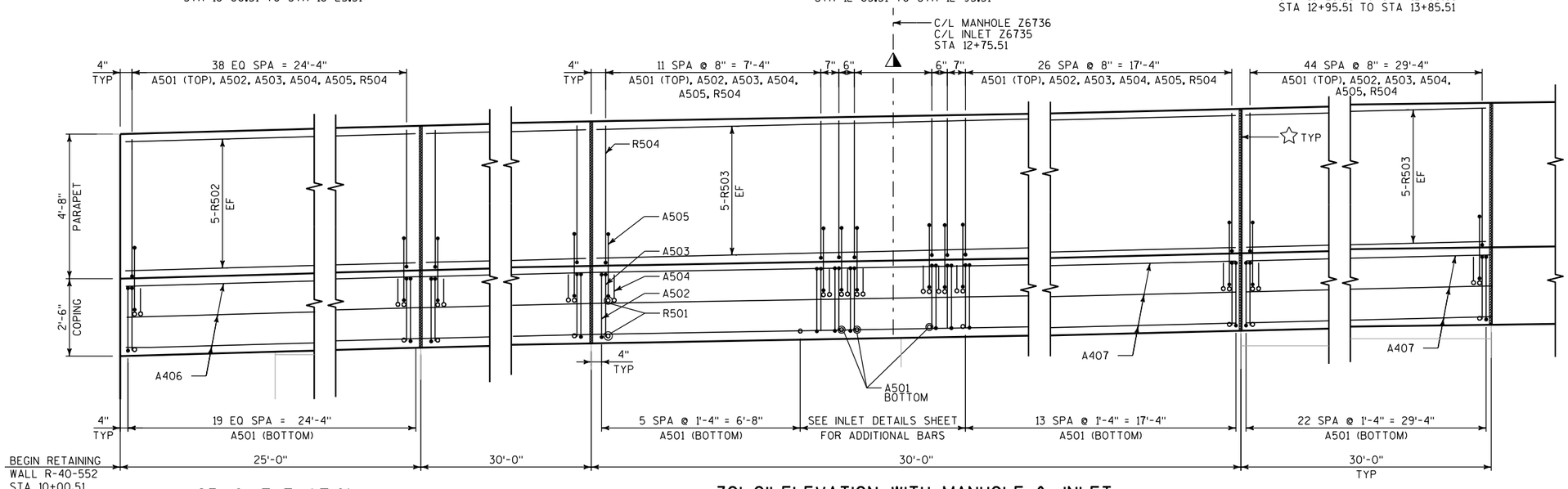
STA 10+00.51 TO STA 10+25.51

30'-0" PLAN WITH MANHOLE & INLET

STA 12+65.51 TO STA 12+95.51

TYPICAL 30'-0" PLAN

STA 10+25.51 TO STA 12+65.51
STA 12+95.51 TO STA 13+85.51



25'-0" ELEVATION

STA 10+00.51 TO STA 10+25.51

30'-0" ELEVATION WITH MANHOLE & INLET

STA 12+65.51 TO STA 12+95.51

TYPICAL 30'-0" ELEVATION

STA 10+25.51 TO STA 12+65.51
STA 12+95.51 TO STA 13+85.51

LEGEND

- 1" CORK FILLER
- A501 (TOP), A502, A503, A505, R504
- A501 (TOP & BOTTOM), A502, A503, A504, A505, R504
- SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING
- NOT A RETAINING WALL ITEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

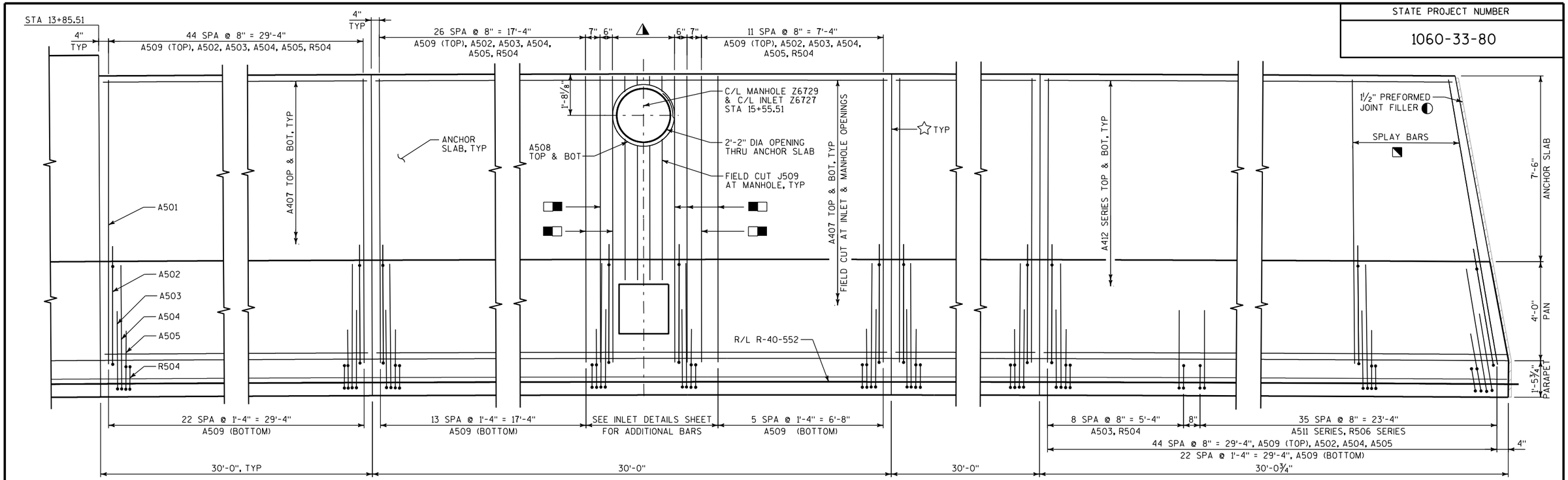
STRUCTURE R-40-552

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT A REINFORCEMENT DETAILS (1 OF 2)

SHEET 13 OF 27

STATE PROJECT NUMBER
1060-33-80



TYPICAL 30'-0" PLAN

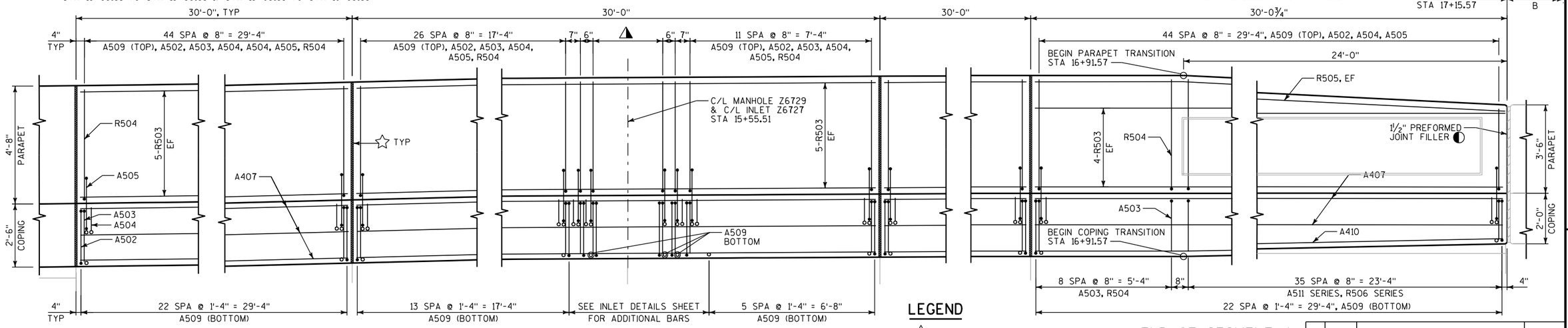
STA 13+85.51 TO STA 15+35.51 & STA 15+65.51 TO STA 16+85.51

30'-0" PLAN WITH MANHOLE & INLET

STA 15+35.51 TO STA 15+65.51

END OF SEGMENT A PLAN

STA 16+85.51 TO STA 17+15.57



TYPICAL 30'-0" ELEVATION

STA 13+85.51 TO STA 15+35.51
STA 15+65.51 TO STA 16+85.51

30'-0" ELEVATION WITH MANHOLE & INLET

STA 15+35.51 TO STA 15+65.51

LEGEND

- ☆ 1" CORK FILLER
- ■ A509 (TOP), A502, A503, A505, R504
- ■ A509 (TOP & BOTTOM), A502, A503, A504, A505, R504
- ◭ SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING
- ◐ NOT A RETAINING WALL ITEM
- ◥ 19 - A509 TOP, 10 - A509 BOTTOM

END OF SEGMENT A ELEVATION

STA 16+85.51 TO STA 17+15.57

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY	BHI	PLANS CK'D.	EKM

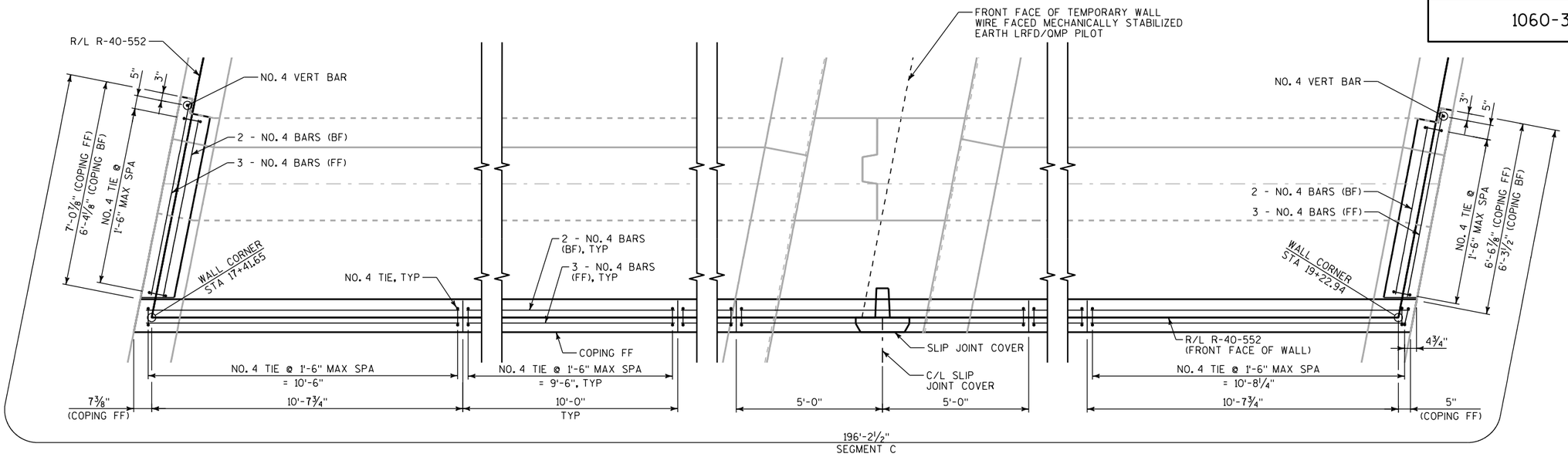
SEGMENT A REINFORCEMENT DETAILS (2 OF 2)

SHEET 14 OF 27

8

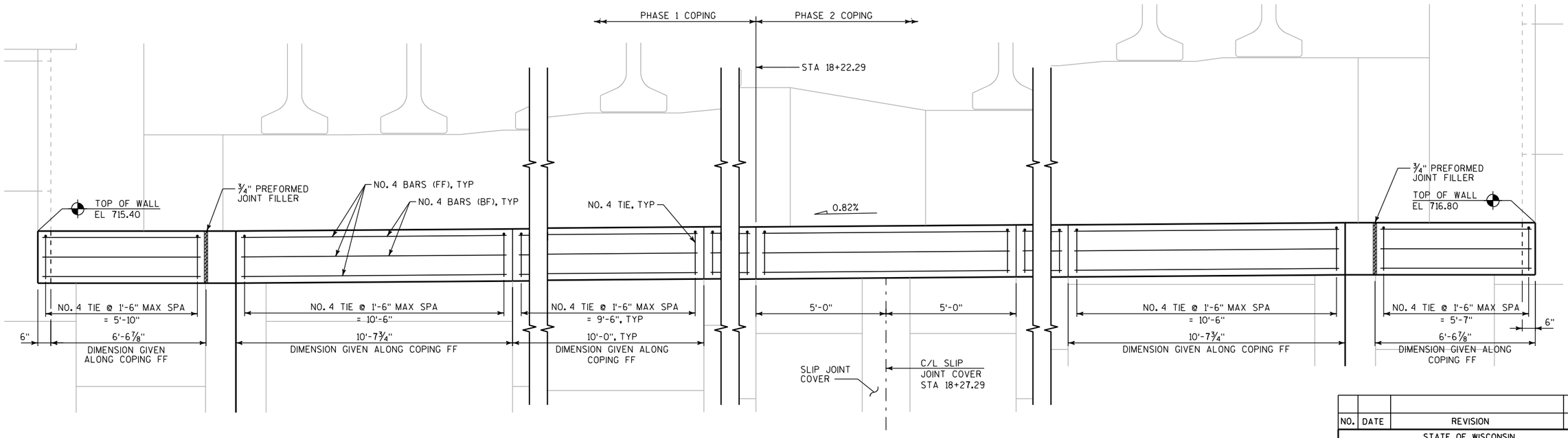
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STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-552



ELEVATION - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-552

NOTE

FOR LOCATIONS OF EXPANSION & CONTRACTION JOINTS, SEE GENERAL PLAN & ELEVATION SHEETS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

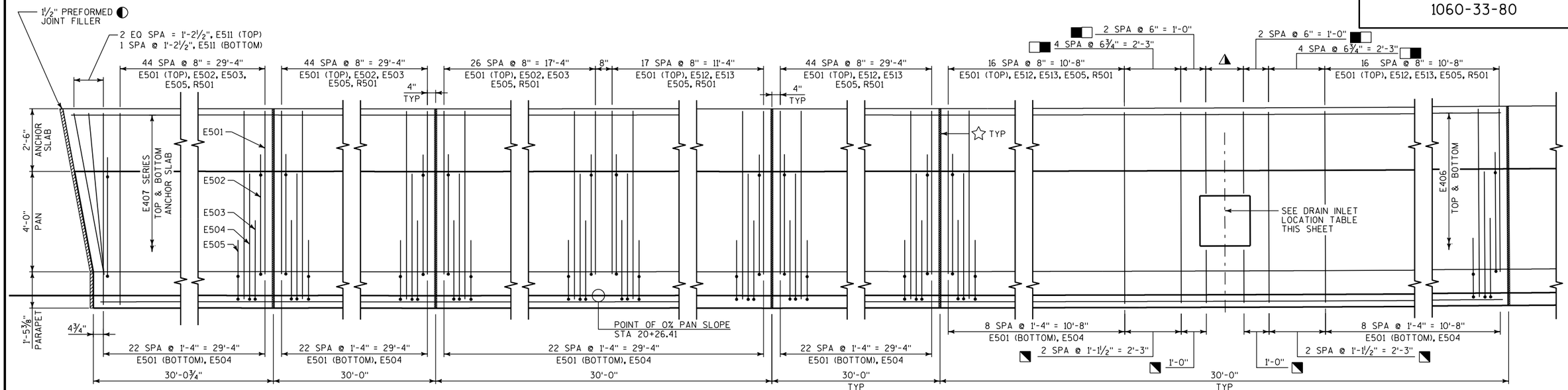
SEGMENT C REINFORCEMENT DETAILS

SHEET 15 OF 27

8

8

STATE PROJECT NUMBER
1060-33-80



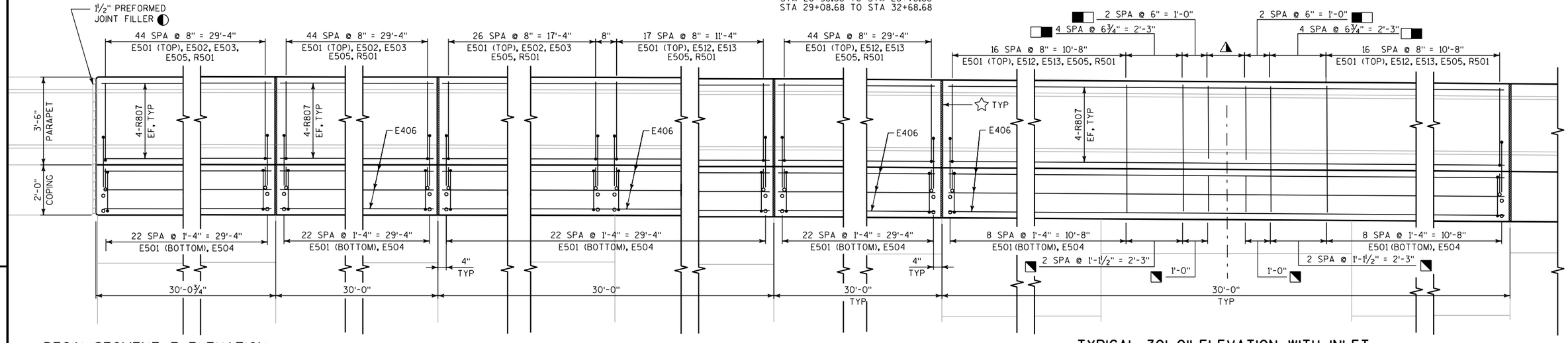
BEGIN SEGMENT E PLAN
STA 19+48.62 TO STA 19+78.68

SEGMENT E PLAN
STA 19+78.68 TO STA 20+08.68

SEGMENT E TRANSITION PLAN
STA 20+08.68 TO STA 20+38.68

TYPICAL 30'-0" PLAN
STA 20+38.68 TO STA 20+68.68
STA 20+98.68 TO STA 23+68.62
STA 23+98.68 TO STA 26+08.68
STA 26+38.68 TO STA 28+78.68
STA 29+08.68 TO STA 32+68.68

TYPICAL 30'-0" PLAN WITH INLET
STA 20+68.68 TO STA 20+98.68
STA 23+68.68 TO STA 23+98.68
STA 26+08.68 TO STA 26+38.68
STA 28+78.68 TO STA 29+08.68



BEGIN SEGMENT E ELEVATION
STA 19+48.62 TO STA 19+78.68

SEGMENT E ELEVATION
STA 19+78.68 TO STA 20+08.68

SEGMENT E TRANSITION ELEVATION
STA 20+08.68 TO STA 20+38.68

TYPICAL 30'-0" ELEVATION
STA 20+38.68 TO STA 20+68.68
STA 20+98.68 TO STA 23+68.62
STA 23+98.68 TO STA 26+08.68
STA 26+38.68 TO STA 28+78.68
STA 29+08.68 TO STA 32+68.68

TYPICAL 30'-0" ELEVATION WITH INLET
STA 20+68.68 TO STA 20+98.68
STA 23+68.68 TO STA 23+98.68
STA 26+08.68 TO STA 26+38.68
STA 28+78.68 TO STA 29+08.68

LEGEND
- ☆ 1" CORK FILLER
- E501 (TOP), E512, E513, E505, R501
- E501 (TOP & BOTTOM), E512, E513, E504, E505, R501
- E501 (BOT), E504
- SEE INLET DETAILS SHEET FOR BAR MARK AND SPACING
- NOT A RETAINING WALL ITEM

DRAIN INLET STATION TABLE

INLET NO.	C/L STATION
Z6731	20+84.80
Z6739	23+83.68
Z6743	26+23.68
Z6709	28+93.68

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

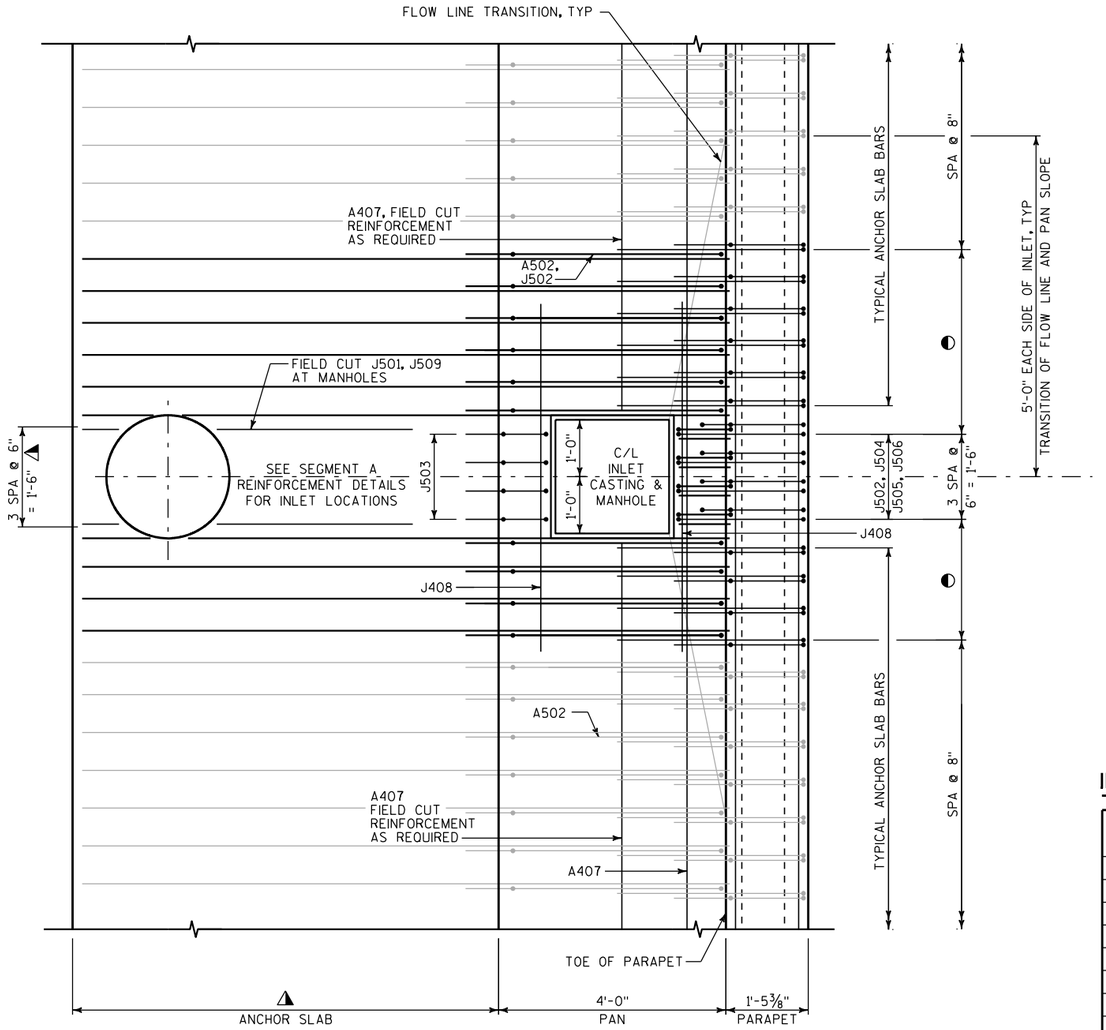
STRUCTURE R-40-552

DRAWN BY BHI | PLANS CK'D. EKM

SEGMENT E REINFORCEMENT DETAILS

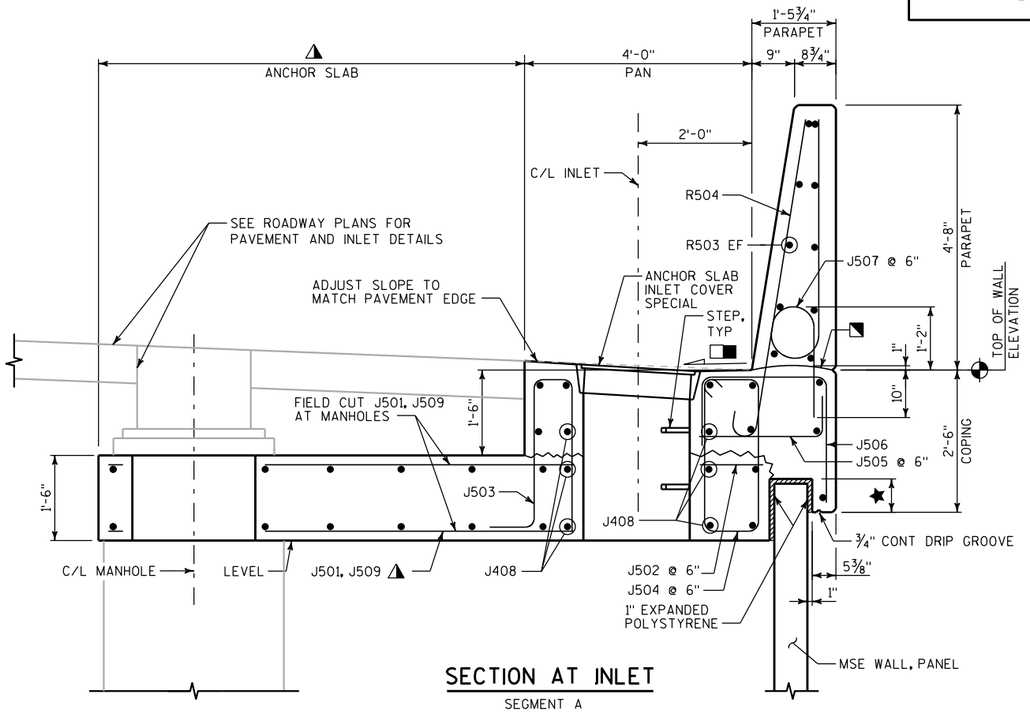
SHEET 16 OF 27

STATE PROJECT NUMBER
1060-33-80



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED



SECTION AT INLET

SEGMENT A

INLET BILL OF BARS - SEGMENT A

BAR MARK	COAT	NO. REQ'D Z6735	NO. REQ'D Z6727	LENGTH	BENT	LOCATION
J501	X	8	-	8'-10"		ANCHOR SLAB - HORIZANTAL TOP & BOTTOM
J502	X	4	4	1'-0"		ANCHOR SLAB - HORIZANTAL TOP
J503	X	4	4	6'-4"	X	ANCHOR SLAB - VERTICAL TIE
J504	X	4	4	7'-9"	X	ANCHOR SLAB - VERTICAL TIE
J505	X	4	4	2'-7"	X	ANCHOR SLAB - VERTICAL TIE
J506	X	4	4	5'-2"	X	ANCHOR SLAB - VERTICAL TIE
J507	X	4	4	5'-6"	X	PARAPET TIE
J408	X	6	6	6'-6"		ANCHOR SLAB - LONGITUDINAL
J509	X	-	8	8'-0"		ANCHOR SLAB - HORIZANTAL TOP & BOTTOM

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

LEGEND

- 2.00%
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT STRIKE OFF AS SHOWN AND LEAVE ROUGH
- SEE SEGMENT A REINFORCEMENT DETAILS SHEETS FOR SPACING
- SEE INLET DIMENSION TABLE, THIS SHEET

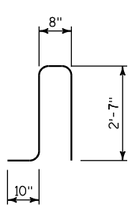
INLET DIMENSION TABLE

INLET	STATION	ANCHOR SLAB WIDTH	BAR MARK
Z6735	12+75.51	8'-3"	J501
Z6727	15+56.51	7'-5"	J509

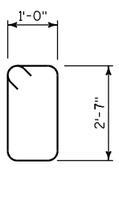
STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

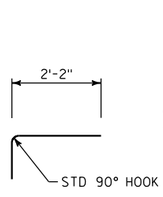
THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".



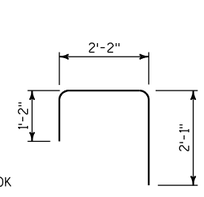
J503



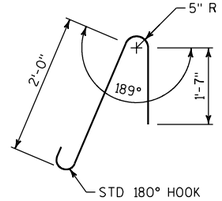
J504



J505



J506



J507

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

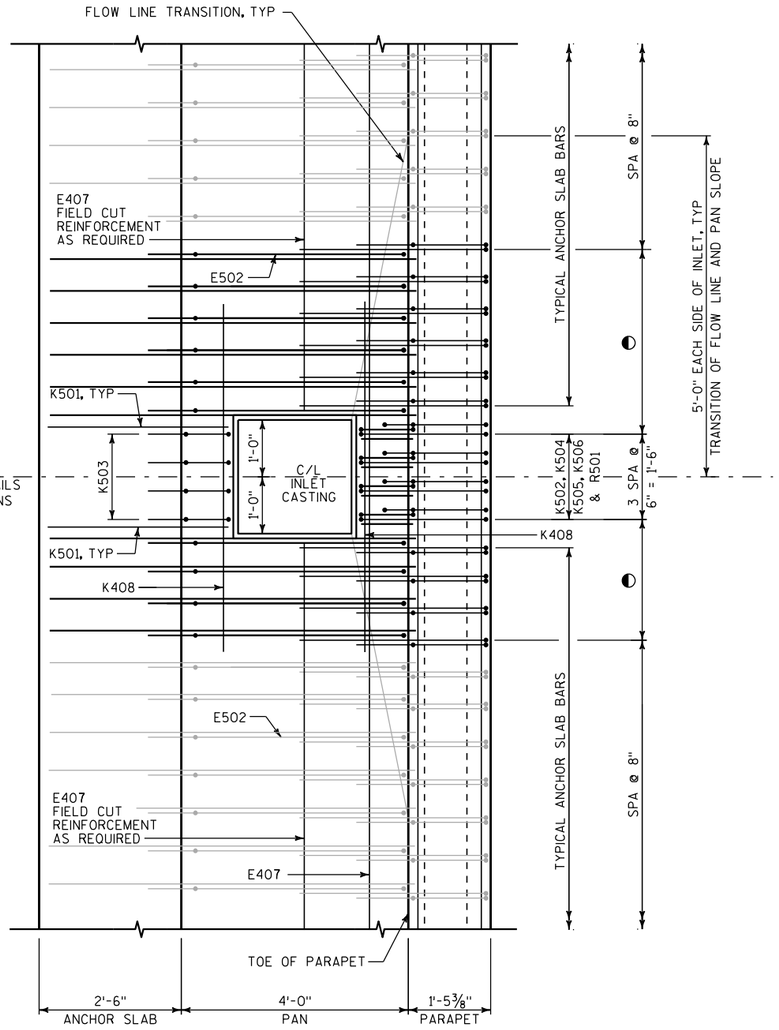
STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

SEGMENT A INLET DETAILS

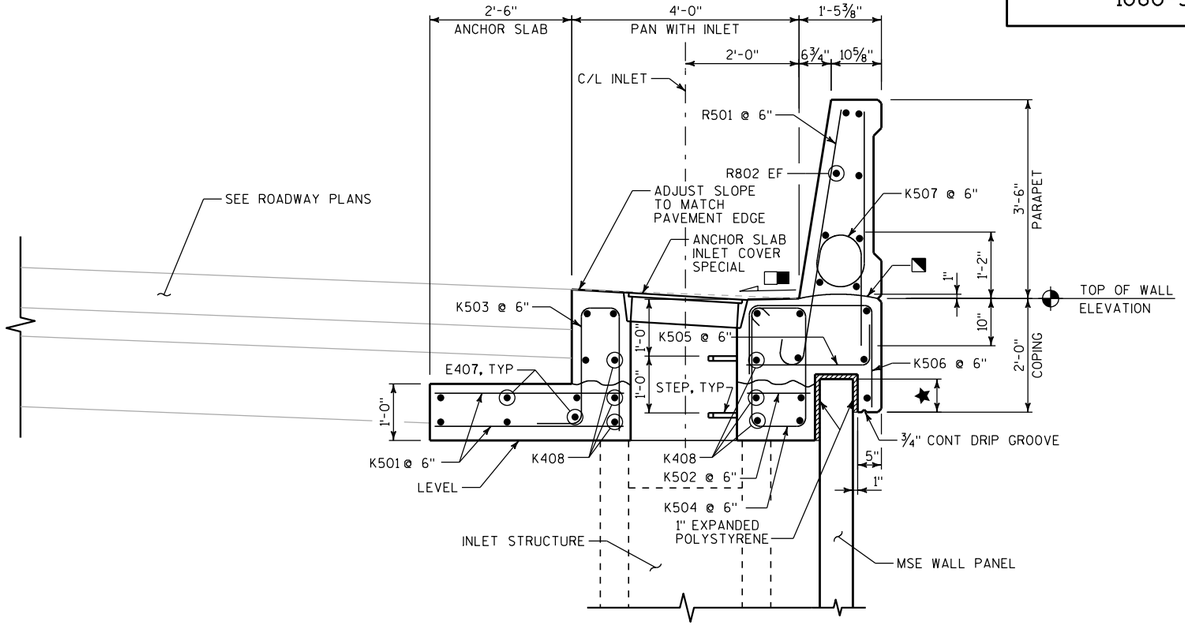
SHEET 17 OF 27

STATE PROJECT NUMBER
1060-33-80



TYPICAL PARAPET AND ANCHOR SLAB PLAN AT INLET STRUCTURE

NOTE: CUT, BEND, OR DISPLACE REINFORCEMENT 2" CLEAR OF INLET STRUCTURE AS REQUIRED



SECTION AT INLET

SEGMENT E

INLET BILL OF BARS - SEGMENT E

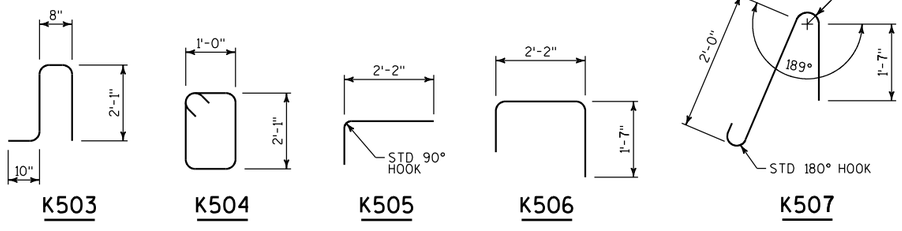
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
K501	X	32	3'-2"		ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
K502	X	16	1'-0"		ANCHOR SLAB - HORIZONTAL TOP
K503	X	16	5'-4"	X	ANCHOR SLAB - VERTICAL TIE
K504	X	16	6'-9"	X	ANCHOR SLAB - VERTICAL TIE
K505	X	16	2'-7"	X	ANCHOR SLAB - VERTICAL TIE
K506	X	16	4'-8"	X	ANCHOR SLAB - VERTICAL TIE
K507	X	16	5'-6"	X	PARAPET TIE
K408	X	24	6'-6"		ANCHOR SLAB - LONGITUDINAL

NOTES

BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

LEGEND

- 2.00%
- 3" MIN, 6" MAX
- CONSTRUCTION JOINT
  STRIKE OFF AS SHOWN AND LEAVE ROUGH
- SEE SEGMENT E REINFORCEMENT DETAILS SHEETS FOR SPACING



STEP NOTES

INLET STEPS SHALL MEET AASHTO M199 AND THE FOLLOWING REQUIREMENTS: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT: MINIMUM LENGTH OF 10 INCHES: MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST COROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

THE COST OF FURNISHING AND INSTALLING INLET MANHOLE STEPS IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

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SEGMENT E
INLET DETAILS

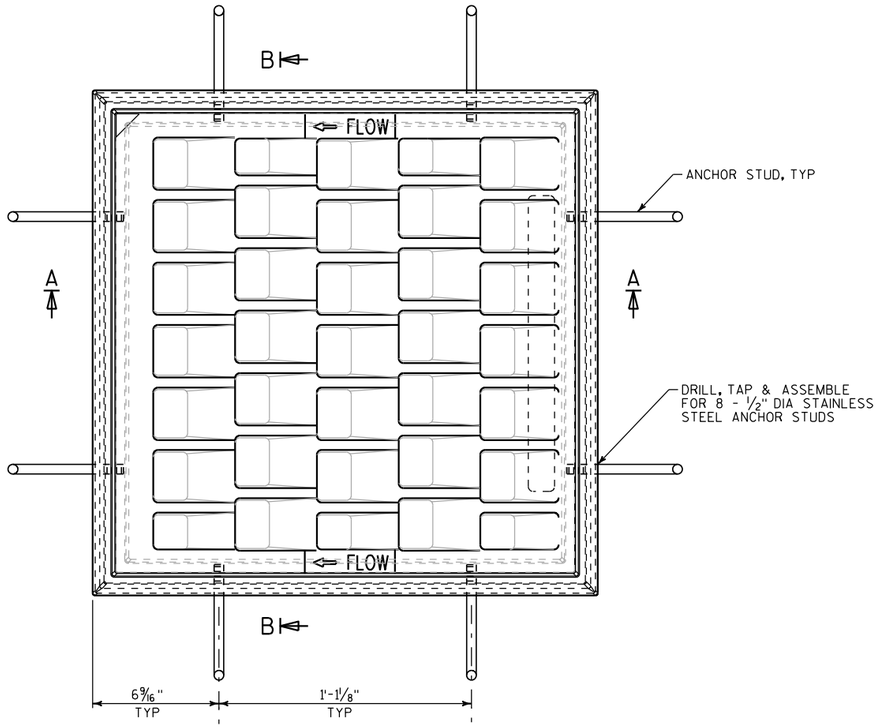
SHEET 18 OF 27

8

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PLOT BY : MSCTEK
PLOT NAME : R552_080318_de
PLOT SCALE : 2.666667:1

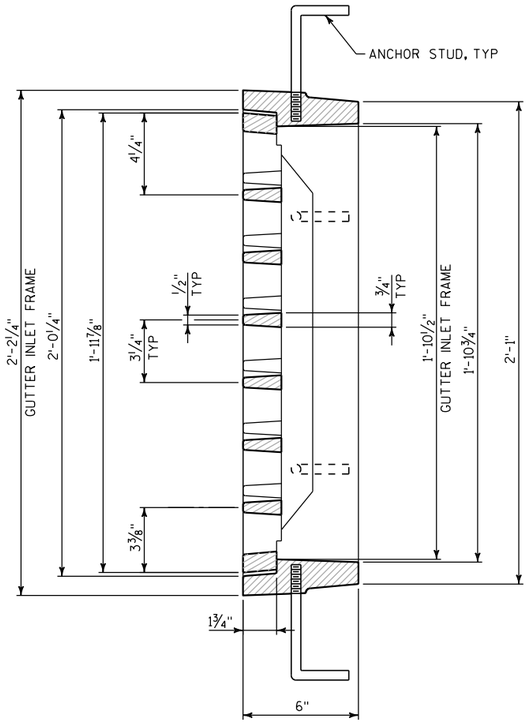
STATE PROJECT NUMBER

1060-33-80

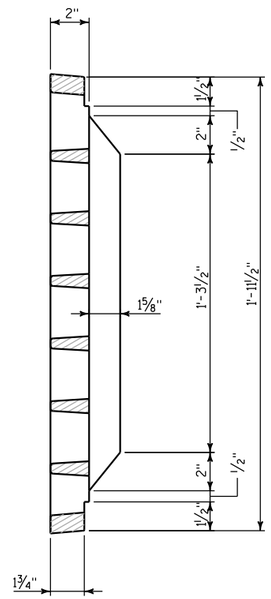


GUTTER INLET FRAME & GRATE TOP

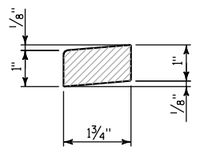
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



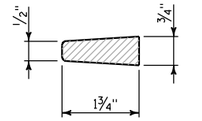
SECTION B-B



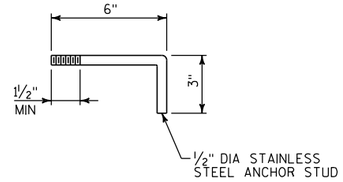
INLET GRATE



SIDE RIB DETAIL

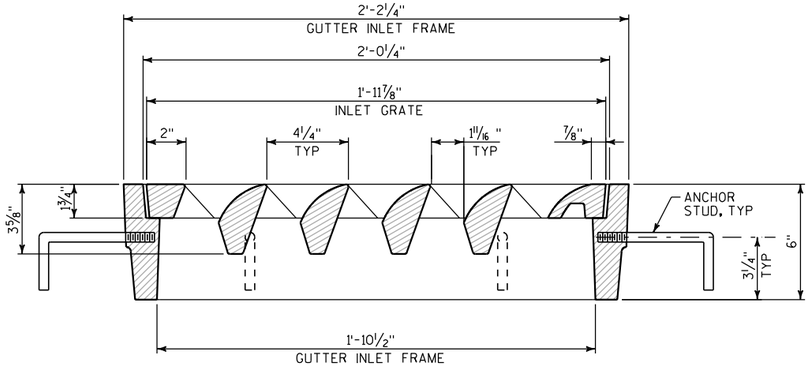


MIDDLE RIB DETAIL

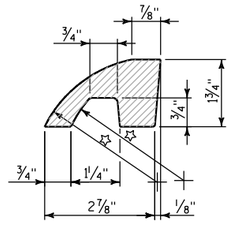


ANCHOR STUD DETAIL

(8 - ½" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

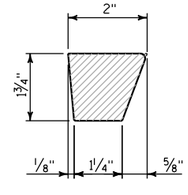


SECTION A-A

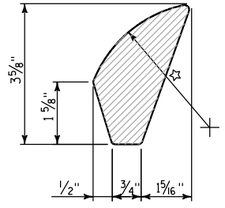


FRONT VANE DETAIL

☆ 3¼" RADIUS



BACK VANE DETAIL



VANE DETAIL

☆ 3¼" RADIUS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

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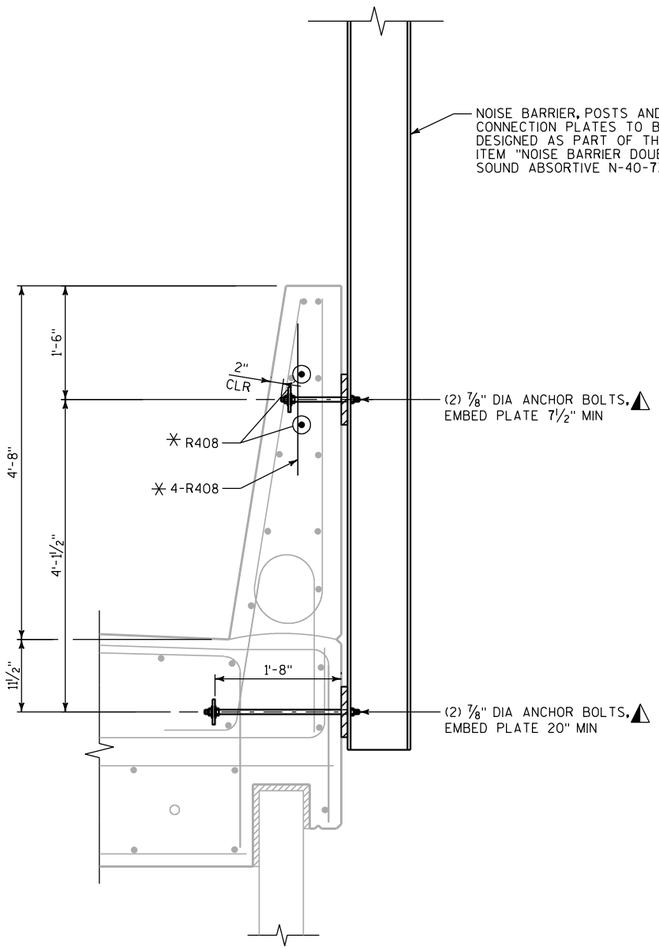
ANCHOR SLAB
INLET COVER
SPECIAL

SHEET 19 OF 27

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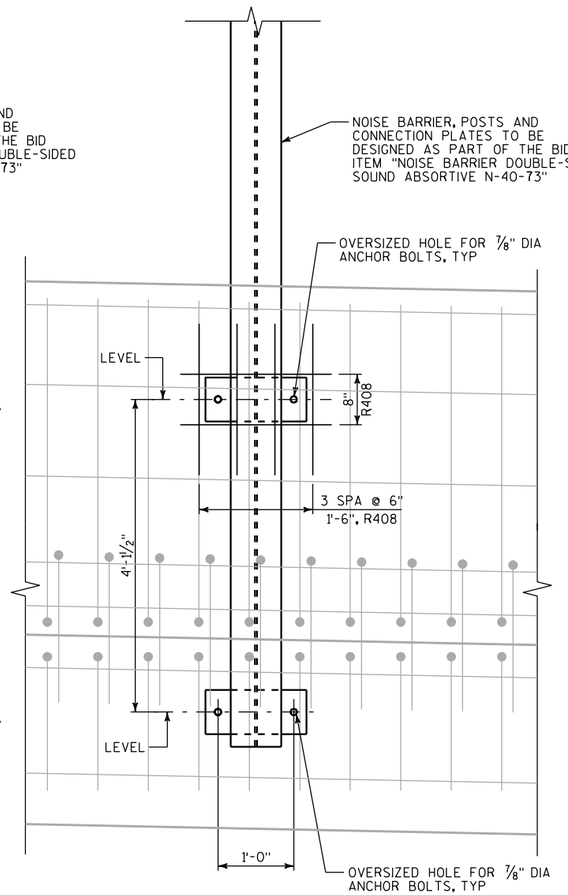
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STATE PROJECT NUMBER
1060-33-80



SECTION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION



ELEVATION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION

ANCHOR ASSEMBLY LOCATION TABLES

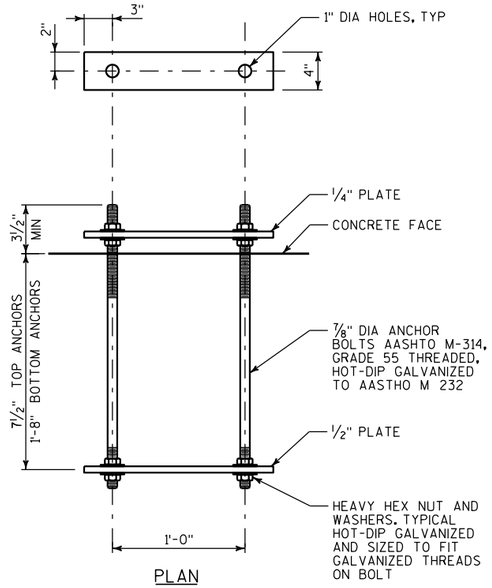
ANCHOR NO.	WALL R/L STA	TOP OF PARAPET EL
1	10+20.51	719.61
2	10+30.51	719.89
3	10+40.51	720.16
4	10+50.51	720.43
5	10+60.51	720.70
6	10+70.51	720.96
7	10+80.51	721.22
8	10+90.51	721.47
9	11+00.51	721.72
10	11+10.51	721.96
11	11+20.51	722.20
12	11+30.51	722.44
13	11+40.51	722.67
14	11+50.51	722.90
15	11+60.51	723.12
16	11+70.51	723.34
17	11+80.51	723.56
18	11+90.51	723.77
19	12+00.51	723.98
20	12+10.51	724.18
21	12+20.51	724.38
22	12+30.51	724.57
23	12+40.51	724.76
24	12+50.51	724.95
25	12+60.51	725.13
26	12+70.51	725.31
27	12+80.51	725.48
28	12+90.51	725.65
29	13+00.51	725.81
30	13+10.51	725.98
31	13+20.51	726.13
32	13+30.51	726.28
33	13+40.51	726.43
34	13+50.51	726.58

ANCHOR NO.	WALL R/L STA	TOP OF PARAPET EL
35	13+60.51	726.72
36	13+70.51	726.85
37	13+80.51	726.98
38	13+90.51	727.11
39	14+00.51	727.23
40	14+10.51	727.35
41	14+20.51	727.47
42	14+30.51	727.58
43	14+40.51	727.69
44	14+50.51	727.79
45	14+60.51	727.89
46	14+70.51	727.98
47	14+80.51	728.07
48	14+90.51	728.16
49	15+00.51	728.24
50	15+10.51	728.31
51	15+20.51	728.39
52	15+30.51	728.46
53	15+40.51	728.52
54	15+50.51	728.58
55	15+60.51	728.64
56	15+70.51	728.69
57	15+80.51	728.74
58	15+90.51	728.78
59	16+00.51	728.82
60	16+10.51	728.86
61	16+20.51	728.89
62	16+30.51	728.91
63	16+40.51	728.94
64	16+50.51	728.96
65	16+60.51	728.97
66	16+70.51	729.05
67	16+80.51	729.08
68	16+90.51	729.09

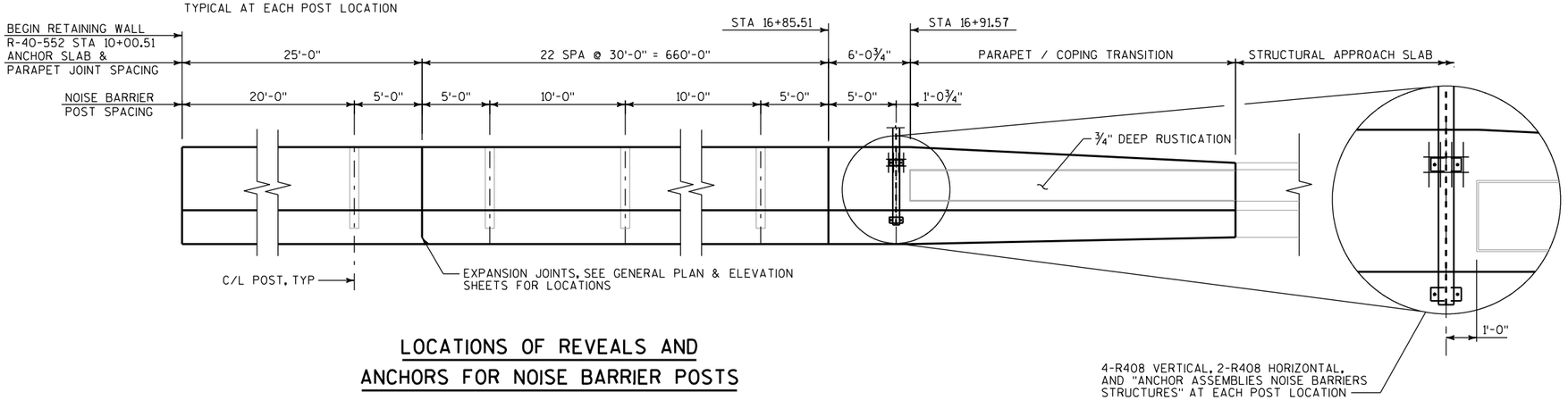
LEGEND

⚠ EXACT LOCATION AND SPACING OF EMBEDDED ANCHOR ASSEMBLY NOISE BARRIER TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.

✳ EXACT LOCATION AND SPACING OF R408 BARS TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.



PLAN



LOCATIONS OF REVEALS AND ANCHORS FOR NOISE BARRIER POSTS

ANCHOR ASSEMBLY NOISE BARRIER STRUCTURES

MAXIMUM PULLOUT FACTORED DESIGN LOADING FOR ANCHOR ASSEMBLY NOISE BARRIER = 55 KIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

NOISE BARRIER POST CONNECTION DETAILS

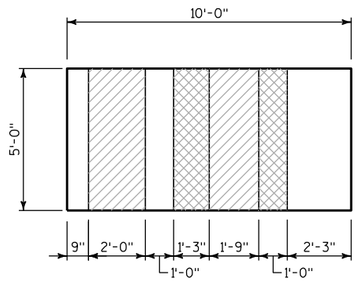
SHEET 20 OF 27

8

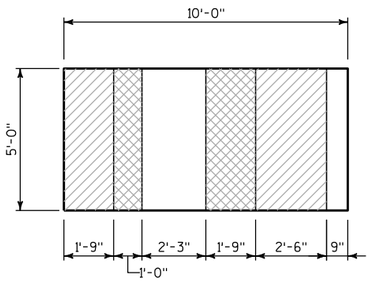
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STATE PROJECT NUMBER

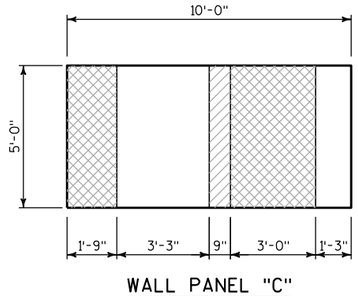
1060-33-80



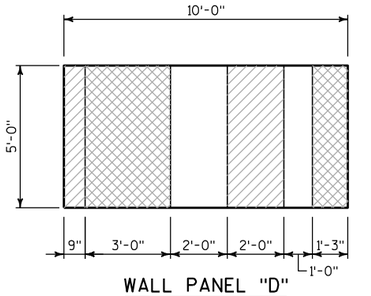
WALL PANEL "A"



WALL PANEL "B"

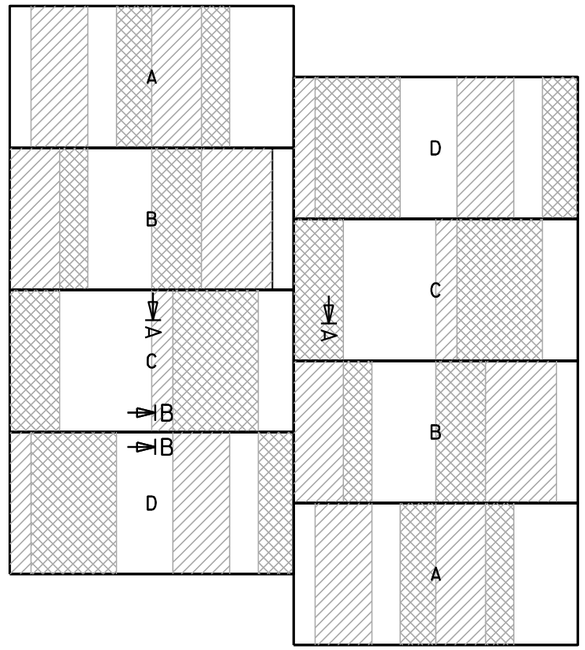


WALL PANEL "C"

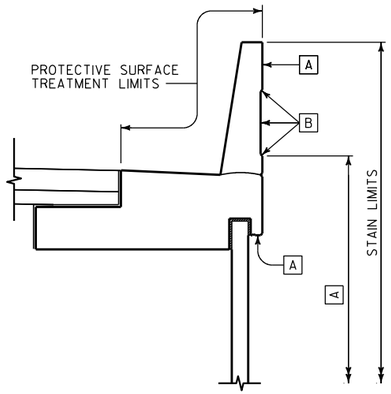


WALL PANEL "D"

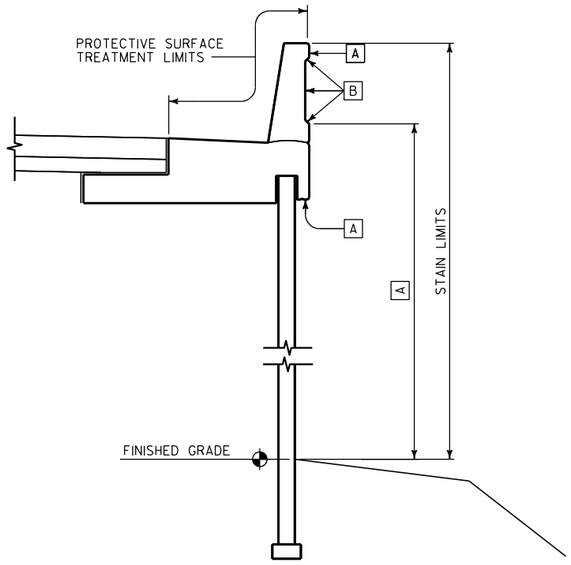
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



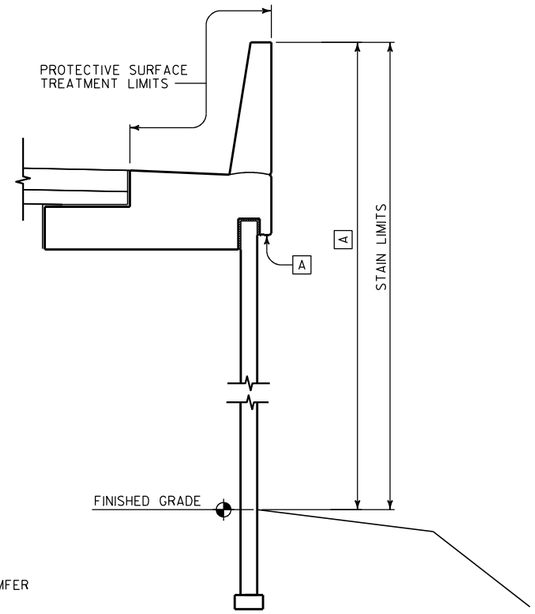
TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN



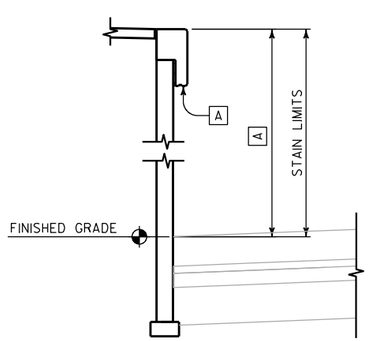
SEGMENT A
(PARAPET / COPING TRANSITION AREA)



SEGMENT E



SEGMENT A

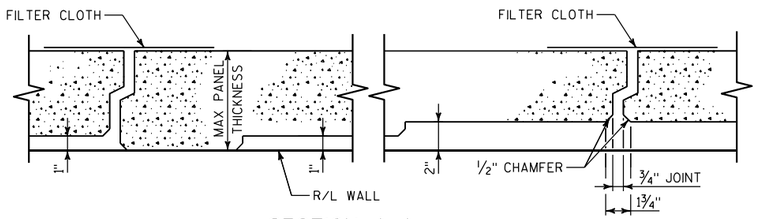


SEGMENT C

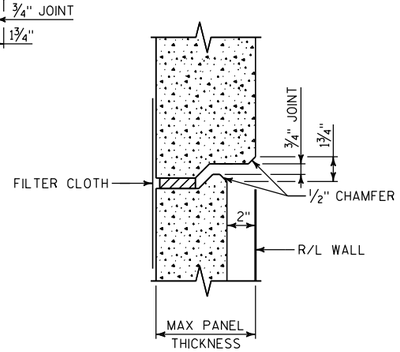
MSE WALL STAINING DIAGRAMS

LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"



SECTION A-A



SECTION B-B

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS
F	ACCENT COLOR 5	WALLS	WALL PANEL ARTWORK DETAILS

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.

BASE COLOR - 33564
ACCENT COLOR 1 - 33448
ACCENT COLOR 5 - SHERWIN WILLIAMS SW 6523

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

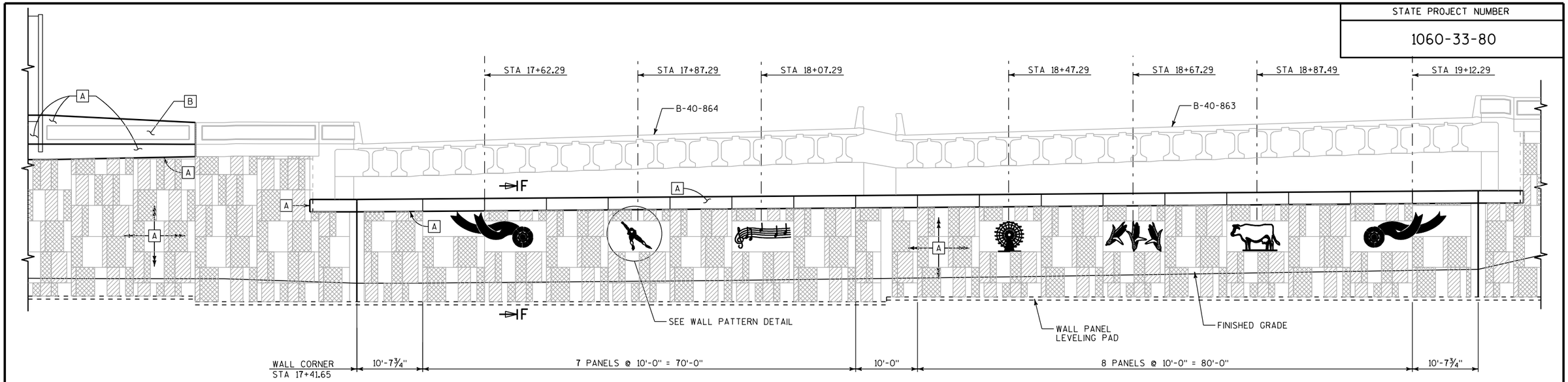
AESTHETIC WALL TREATMENT DETAILS (1 OF 2)

SHEET 21 OF 27

8

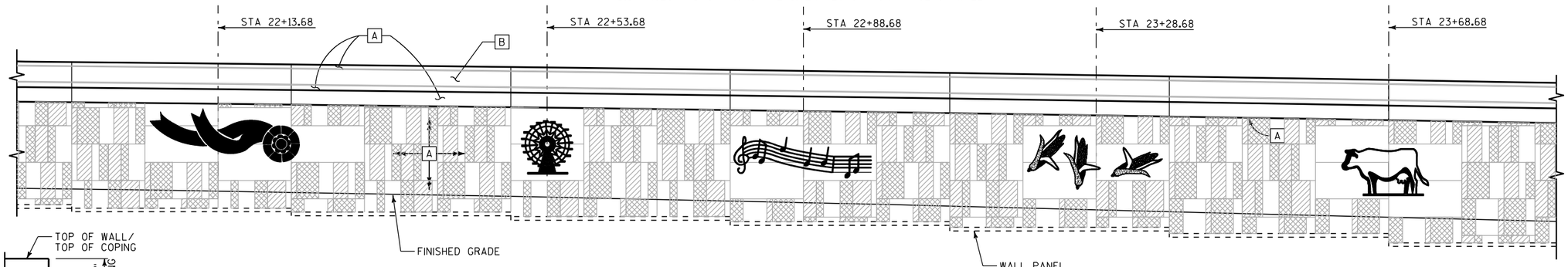
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STATE PROJECT NUMBER
1060-33-80



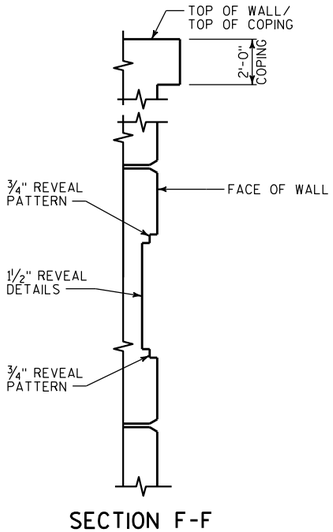
ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG FRONT FACE OF WALL)



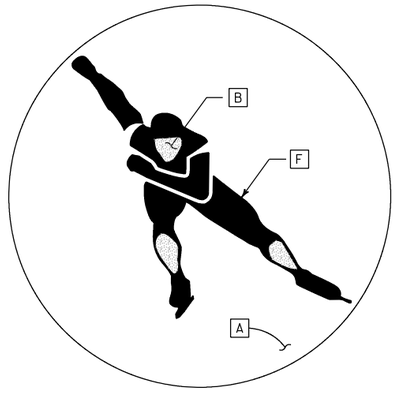
ELEVATION

(LOOKING NORTH AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG FRONT FACE OF WALL)



SECTION F-F

RELIEF PATTERN DETAIL



WALL PATTERN DETAIL

LEGEND

- PANEL THICKNESS - 1½"
- PANEL THICKNESS - ¾"
- PANEL THICKNESS - 0"

NOTES

ELECTRONIC FILES OF THE DECORATIVE PATTERNS ARE AVAILABLE FROM:
WISCONSIN DEPARTMENT OF TRANSPORTATION
JAMES KEEGAN P.E., 141 NW BARSTOW STREET, WAUKESHA, WISCONSIN 53187, (414) 750-3311

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-552".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS (2 OF 2)

SHEET 22 OF 27

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PLOT BY : MSCTEK
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PLOT SCALE : 16:1

NOTE

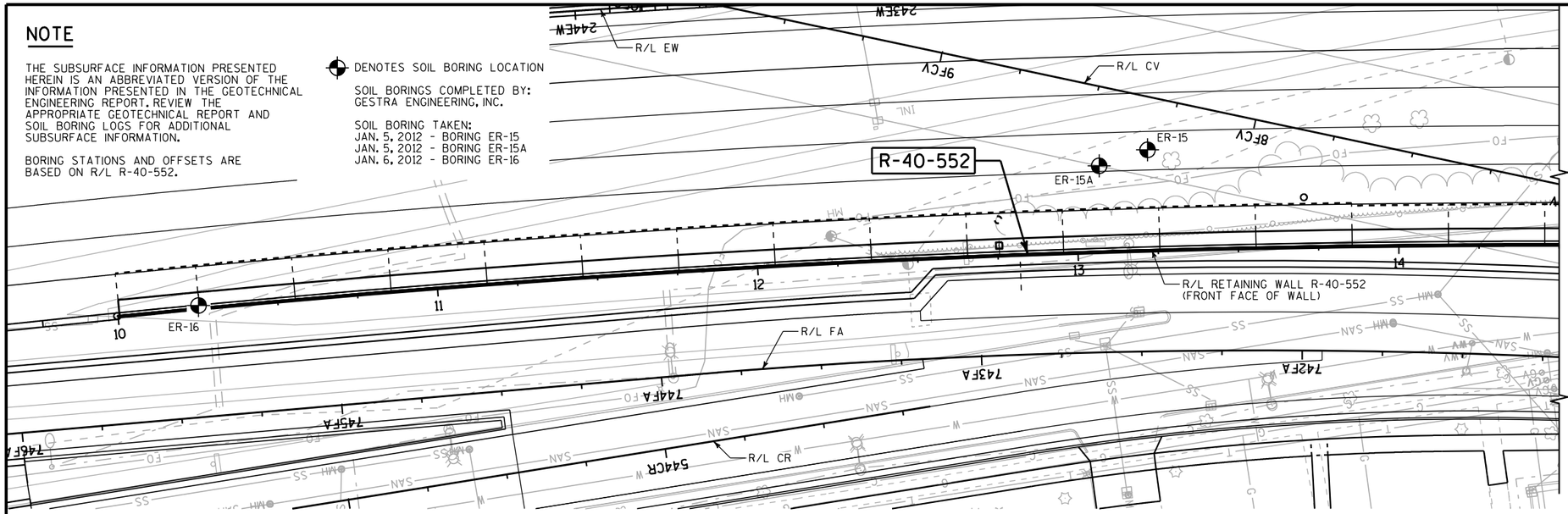
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

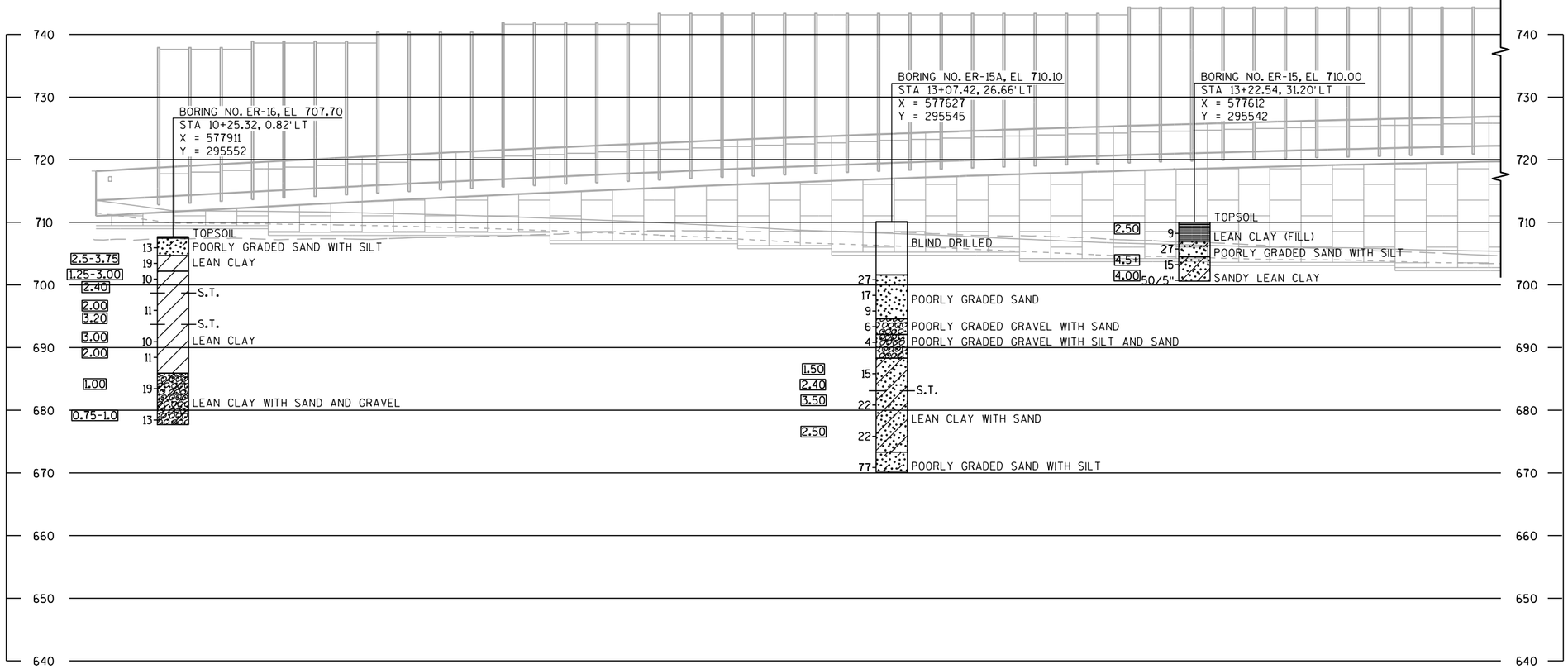
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-552.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 5, 2012 - BORING ER-15
JAN. 5, 2012 - BORING ER-15A
JAN. 6, 2012 - BORING ER-16





STATE PROJECT NUMBER

1060-33-80

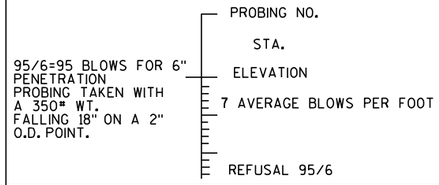
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

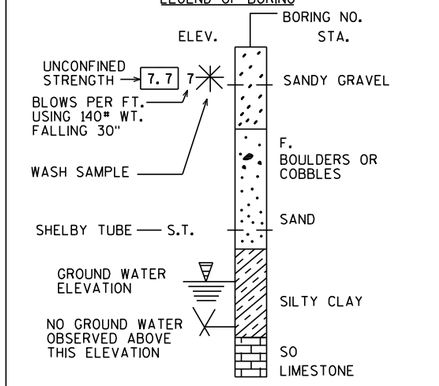
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

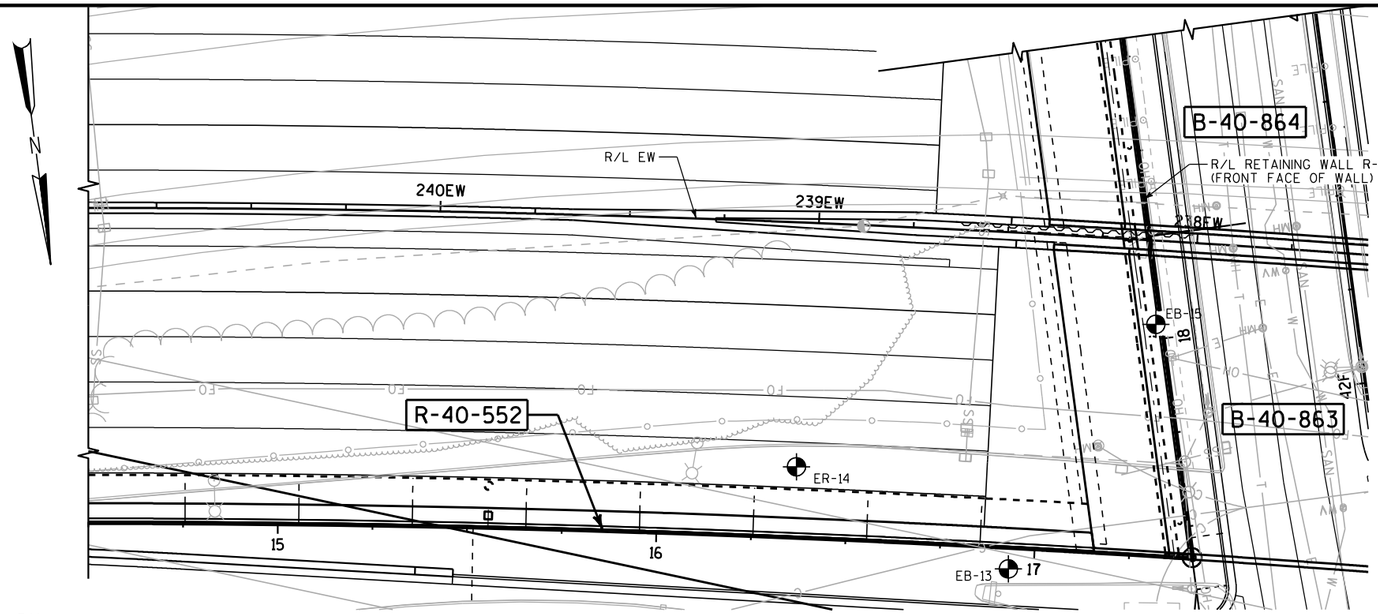
DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (1 OF 5)

SHEET 23 OF 27

8

8



NOTE

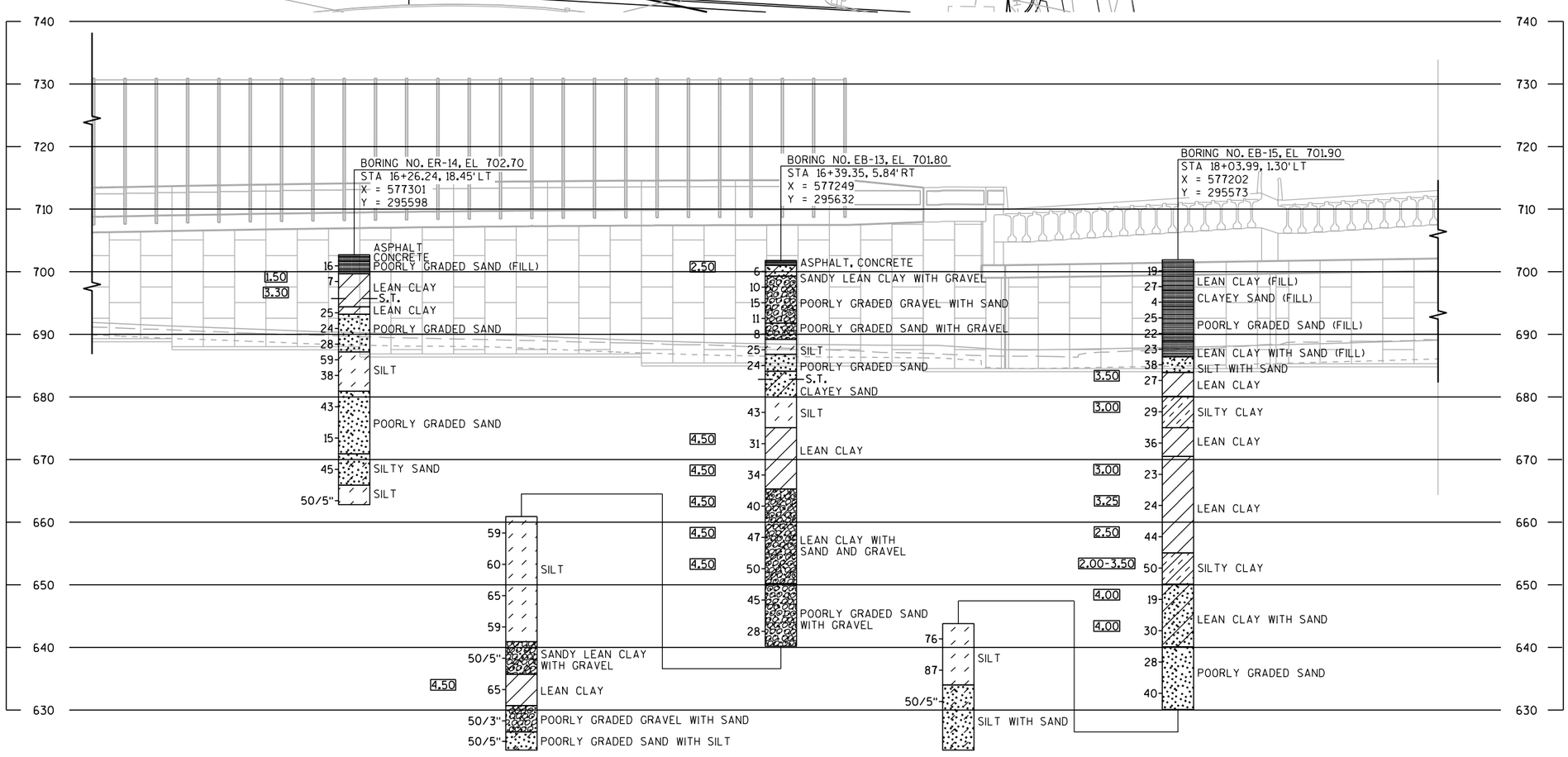
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-552.

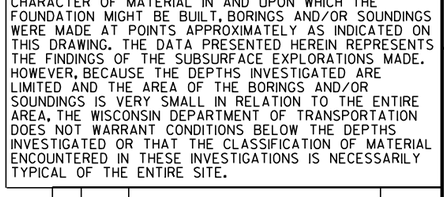
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

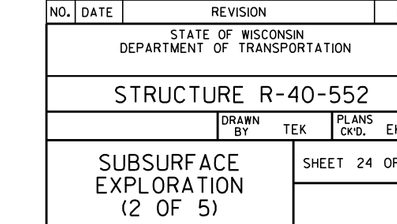
SOIL BORING TAKEN:
NOV. 16, 2011 - BORING EB-13
OCT. 5, 2011 - BORING EB-15
JAN. 10, 2012 - BORING ER-14



LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

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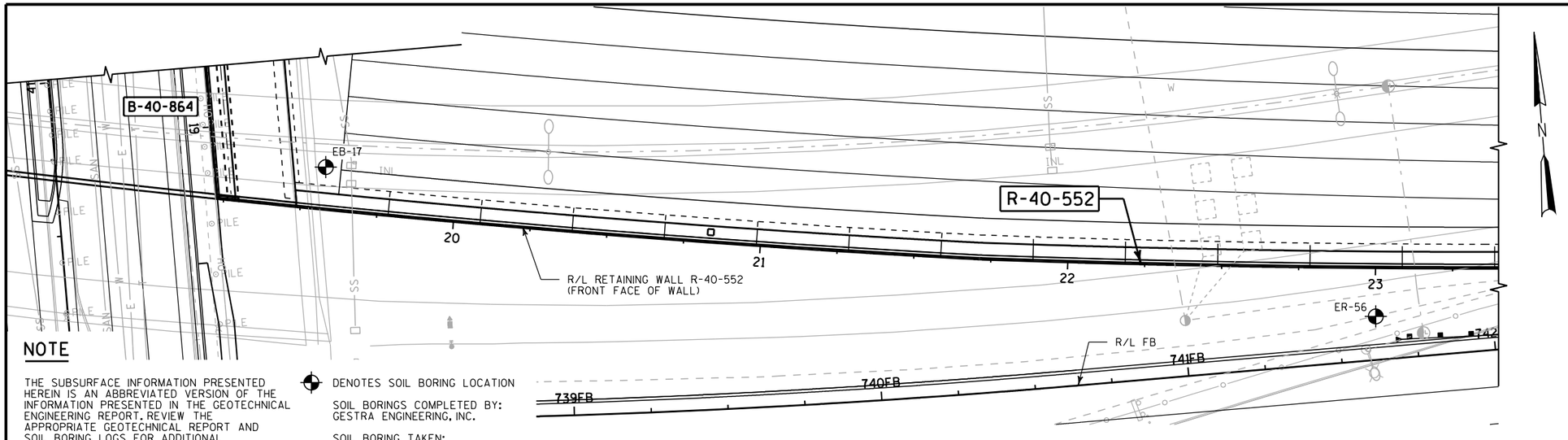
SUBSURFACE EXPLORATION (2 OF 5)

SHEET 24 OF 27

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NOTE

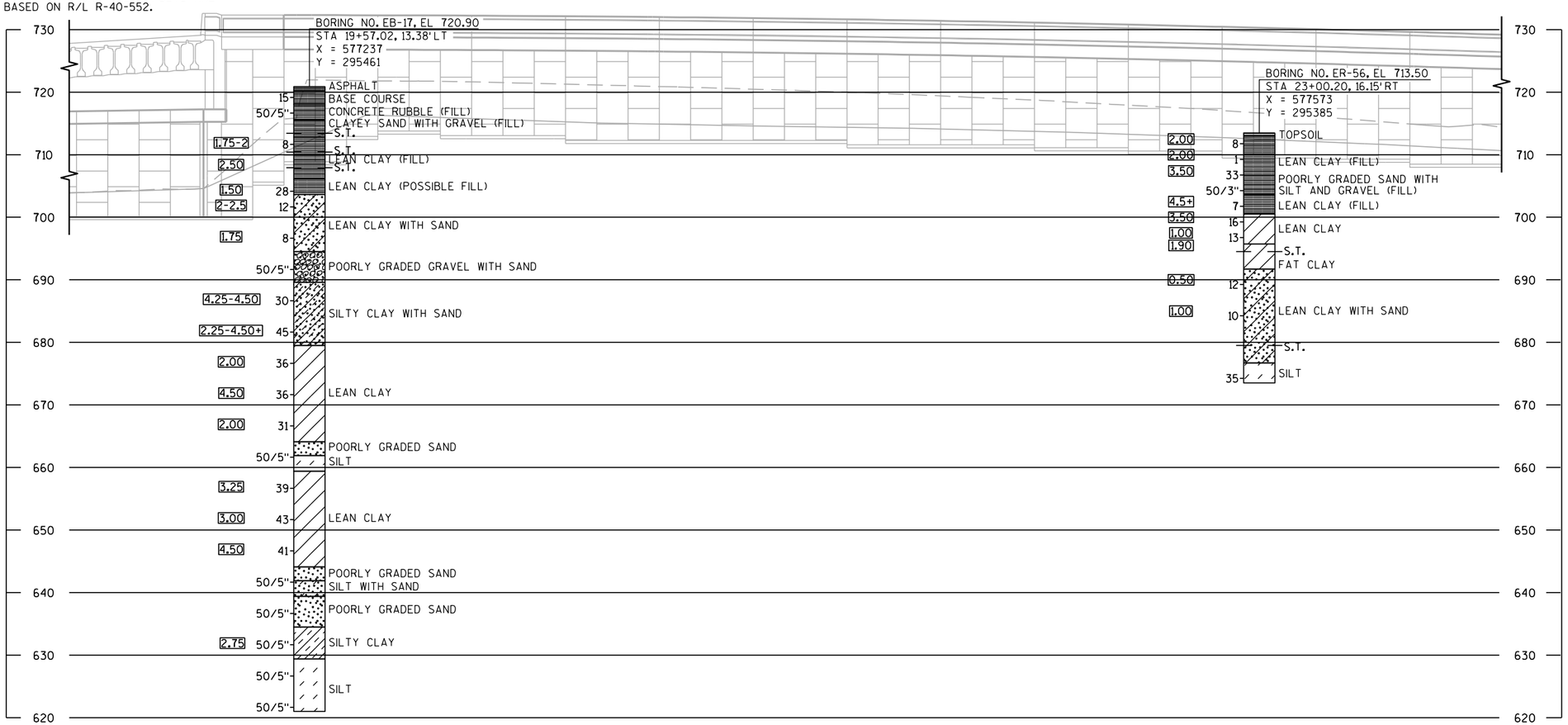
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BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-552.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 7, 2011 - BORING EB-17
FEB. 10, 2012 - BORING ER-56



STATE PROJECT NUMBER

1060-33-80

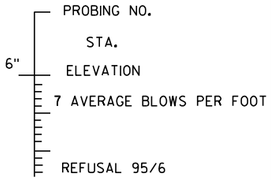
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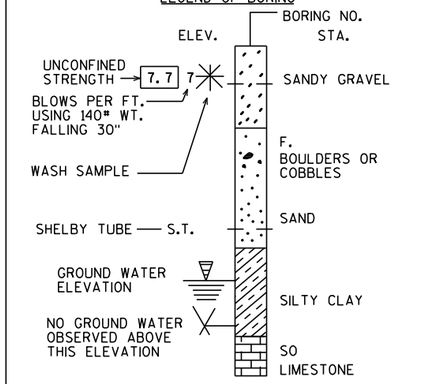
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (3 OF 5)

SHEET 25 OF 27

8

8

NOTE

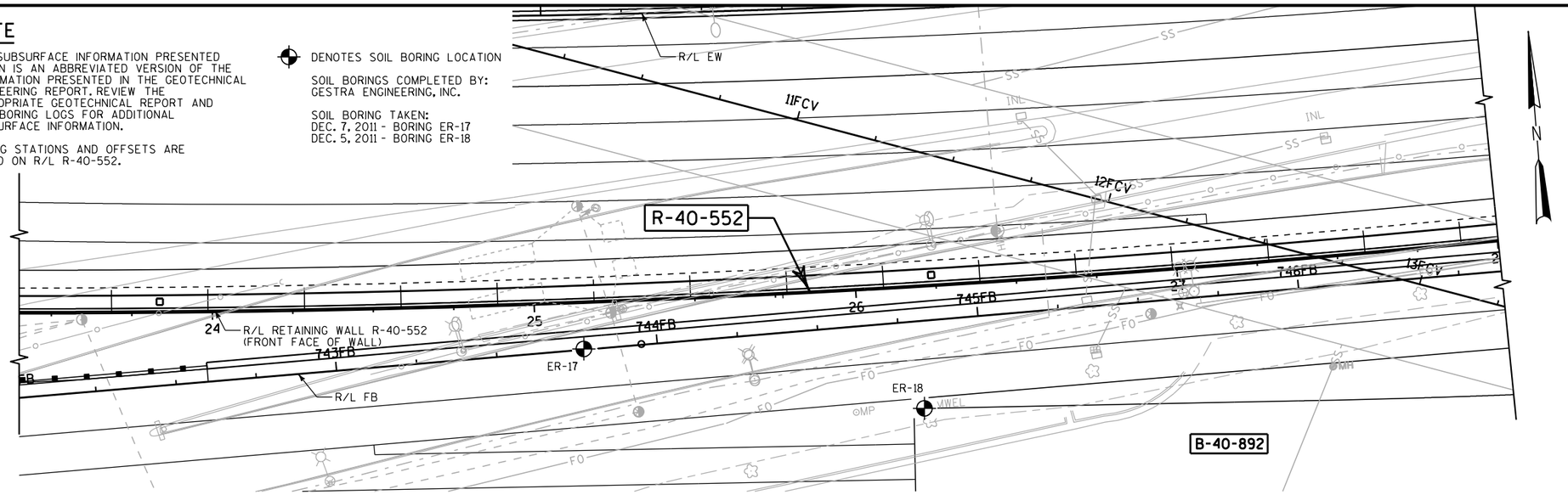
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

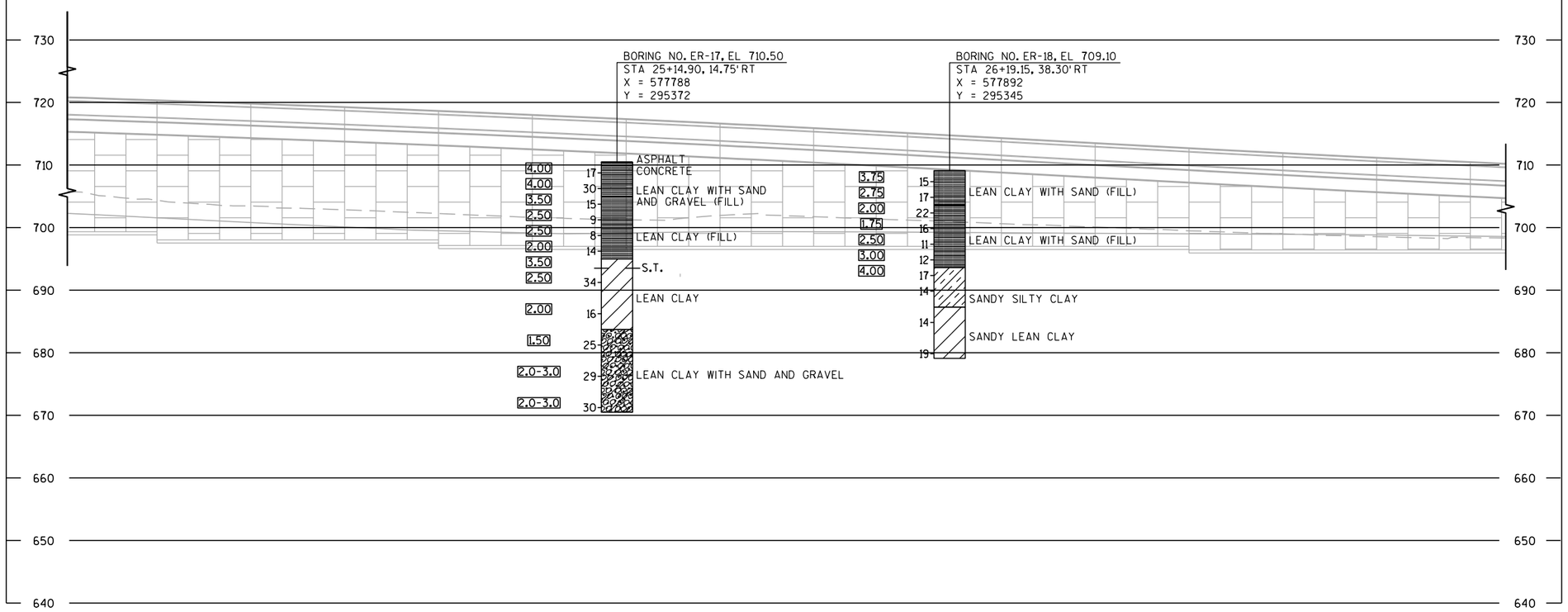
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-552.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
DEC. 7, 2011 - BORING ER-17
DEC. 5, 2011 - BORING ER-18





8

8

STATE PROJECT NUMBER

1060-33-80

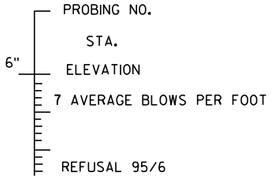
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

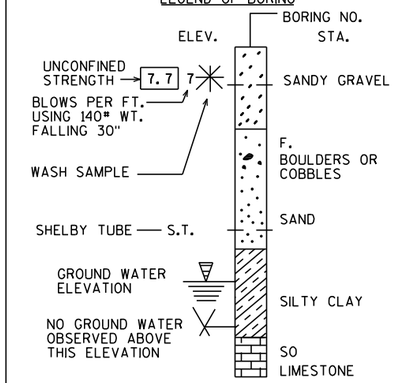
MATERIAL SYMBOLS

TOPSOIL / FILL
SILT
SANDSTONE
SAND
PEAT
LIMESTONE
GRAVEL
CLAY
IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

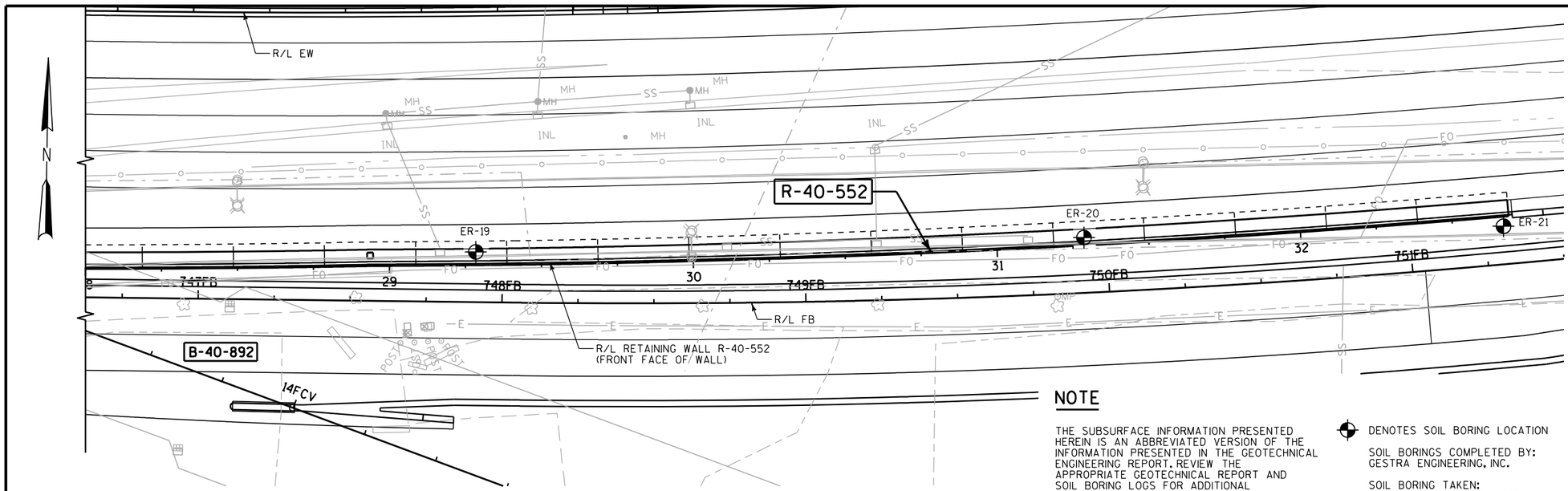
STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (4 OF 5)

SHEET 26 OF 27

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-552\cds\R552_080526_se.dgn
PLOT DATE : 01-MAY-2014 14:15
PLOT BY : MSCTEK
PLOT NAME : R552_080526_se
PLOT SCALE : 40:1



NOTE

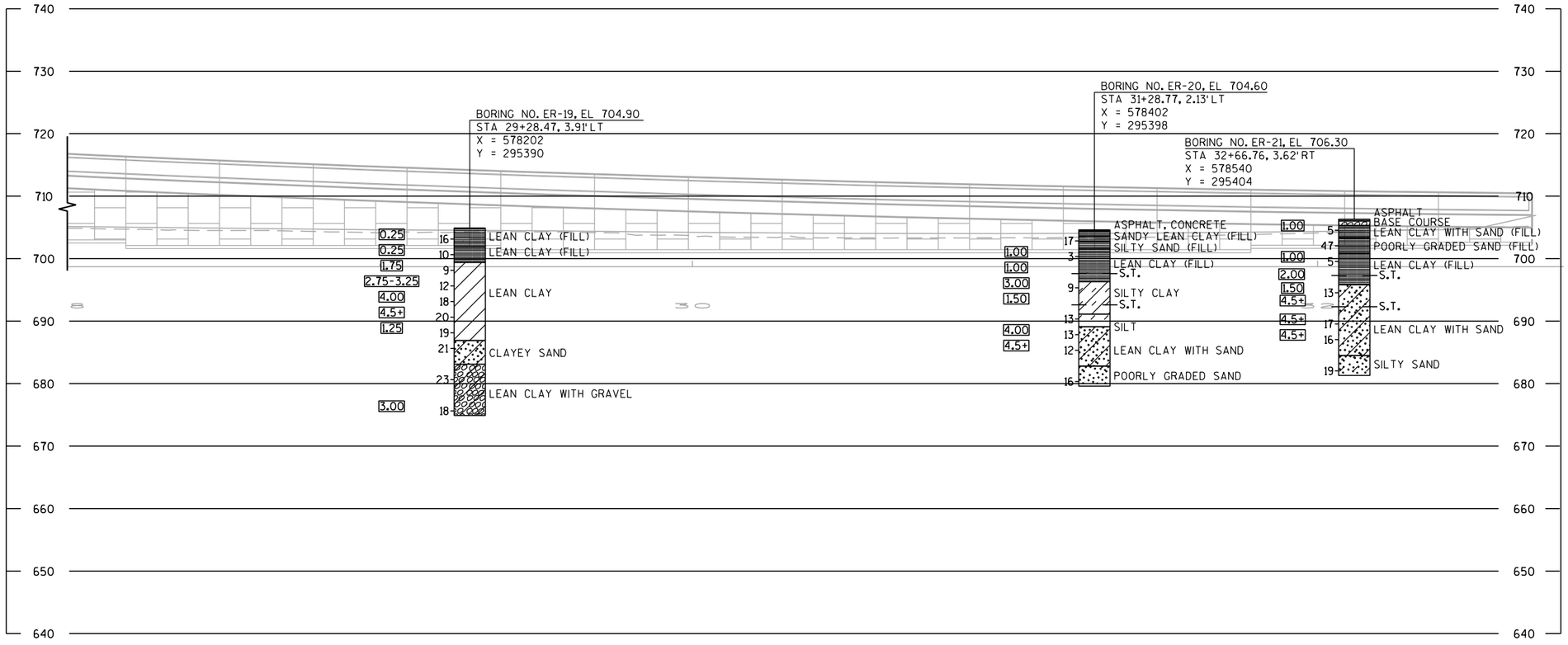
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-552.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
DEC. 5, 2011 - BORING ER-19
DEC. 13, 2011 - BORING ER-20
DEC. 13, 2011 - BORING ER-21



STATE PROJECT NUMBER

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ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-552

DRAWN BY TEK | PLANS CK'D. EKM

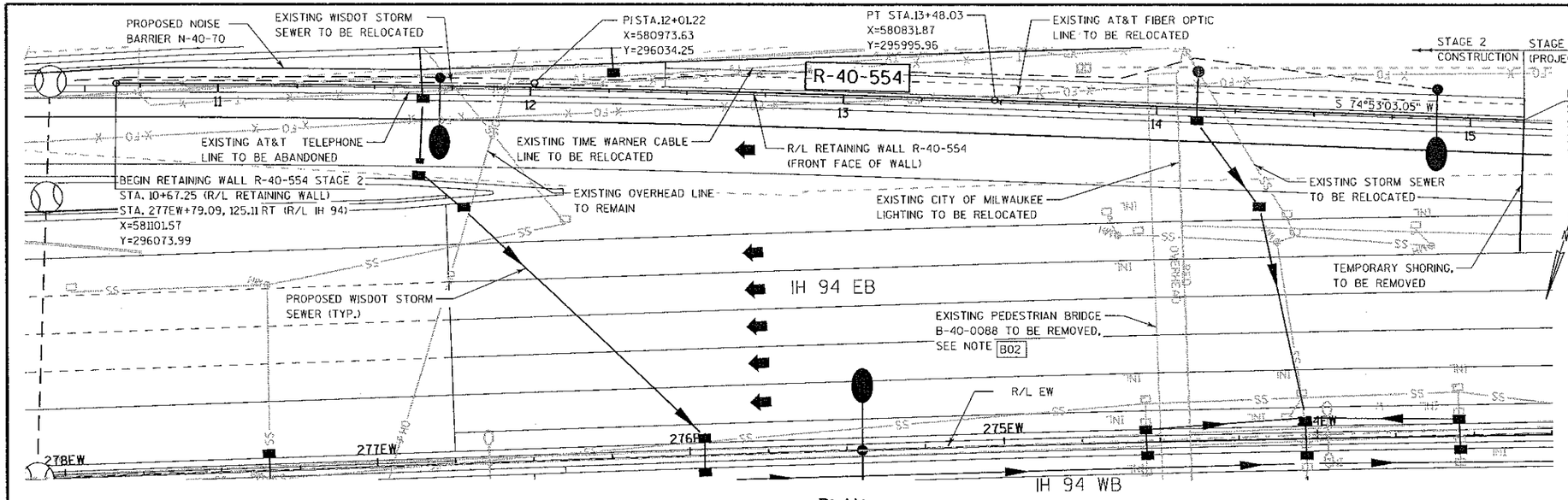
SUBSURFACE EXPLORATION (5 OF 5)

SHEET 27 OF 27

8

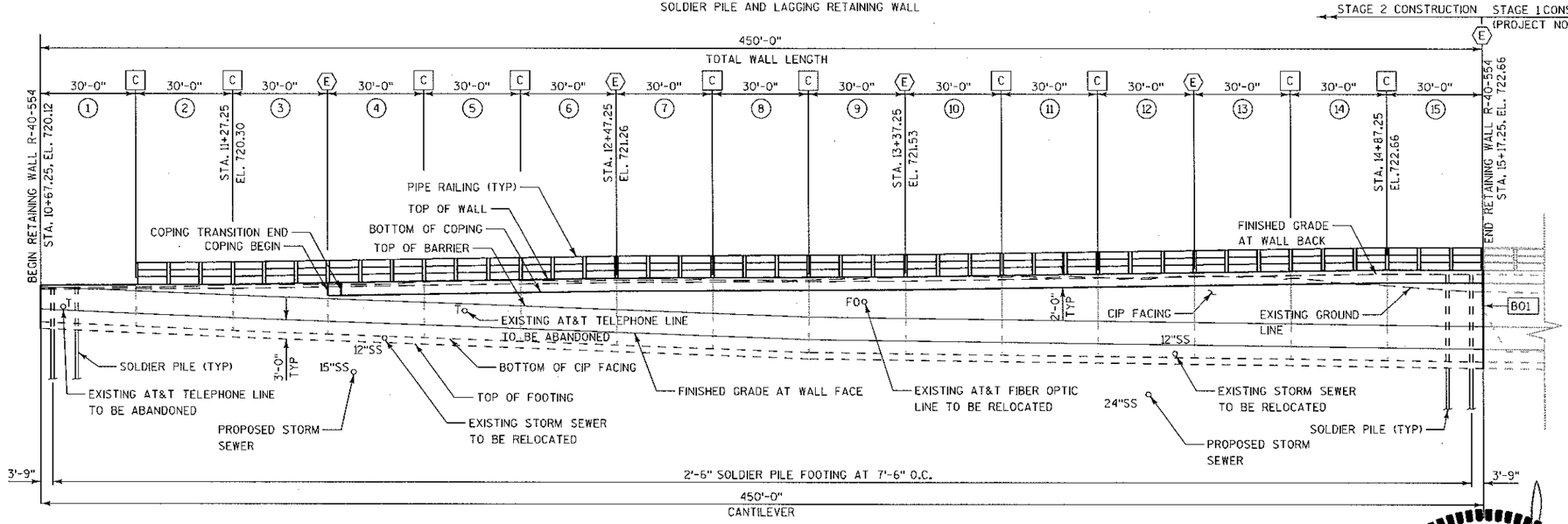
8

STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE AND LAGGING RETAINING WALL



ELEVATION

LOOKING SOUTH FRONT FACE OF WALL SHOWN

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CIP WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
STRUCTURAL STEEL CARBON (ASTM A709 GRADE 50)	Fy = 50,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c = 3,500 PSI
* TIMBER LAGGING	Fb = 1,150 PSI E = 1,800,000 PSI

*MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK.

HORIZONTAL CURVE DATA

CURVE 1

PC STA. 10+54.38
X = 581113.87
Y = 296077.80
PI STA. 12+01.22
X = 580973.63
Y = 296034.25
PT STA. 13+48.03
X = 580831.87
Y = 295995.96
R = 7880.75
DELTA = 2°08'05.87"
D = 0°43'37.32"
L = 293.65'
T = 146.84'
BK = S72°44'57.19"W
AH = S74°53'03.05"W

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. GENERAL NOTES, QUANTITIES AND PROFILES
3. TYPICAL WALL SECTIONS
4. WALL DETAILS 1 OF 2
5. WALL DETAILS 2 OF 2
6. WALL AND PILE DATA TABLES
7. BILL OF BARS/BAR SERIES TABLE
8. PIPE RAILING DETAILS
9. AESTHETIC WALL TREATMENT DETAILS
10. SUBSURFACE EXPLORATION

NOTES:

B01 SEE SHEET 5 FOR END OF WALL SECTION

B02 PEDESTRIAN BRIDGE B-40-088 REMOVAL IS INCLUDED IN QUANTITIES OF WALL R-40-555-STAGE 2

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAFFIC
- C CONTRACTION JOINT IN COPING AND CONCRETE FACING
- E EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PANEL NUMBER

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/16/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN MOHAMMED H. ZAGLOUL E-26970 MILWAUKEE WISCONSIN PROFESSIONAL ENGINEER
Mohammed H. Zagloul
5/9/2014

STRUCTURE R-40-554-STAGE 2

RETAINING WALL ALONG IH 94 EB

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

GENERAL PLAN AND ELEVATION

SHEET 1 OF 10

8

8

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

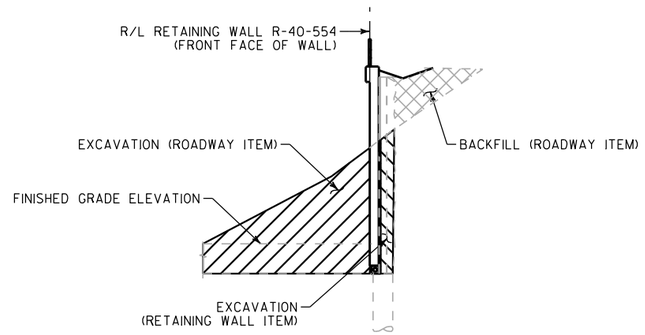
ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000.0004	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554 *	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	199
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	35,576
506.0605	STRUCTURAL STEEL HS	LB	99,732
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	595
513.2000.0008	RAILING PIPE R-40-554	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
517.0600.0005	PAINTING EPOXY SYSTEM R-40-554	LS	1
517.1050.S.0014	ARCHITECTURAL SURFACE TREATMENT R-40-554	SF	3,569
517.1010.S.0002	CONCRETE STAINING R-40-554	SF	15,998
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	159
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	8
SPV.0090.4440	FOUNDATION DRILLING	LF	1,510
SPV.0110.4600	TIMBER LAGGING	MBM	15.0
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	4,783
	NON- BID ITEMS		
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	3/4

WALL ITEMS ARE CATEGORY 3130

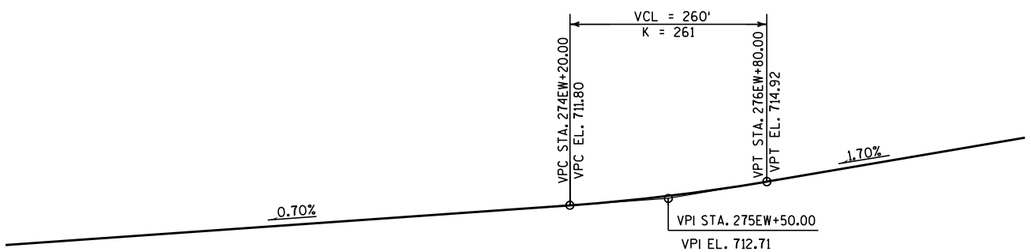
* BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554" INCLUDES REMOVAL OF TEMPORARY SHORING INSTALLED IN PROJECT NO. 1060-33-78 (STA. 15+17.25 R/L WALL R-40-554)

RETAINING WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, ϕ, DEG	COHESION C', PSF	FRICTION ANGLE, ϕ, DEG
NEW FILL	130	0	32	0	32
CLAY FILL	130	1500-2000	0	50	30-31
STIFF TO VERY STIFF CLAY	135	1750	0	50	31-32
MEDIUM DENSE SAND/ SILTY SAND	125	0	31-33	0	31-33
DENSE TO VERY DENSE SAND/ SILTY SAND	125	0	36	0	36



EXCAVATION/BACKFILL LIMITS



PROFILE GRADE LINE

IH 94 EB

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ALL STATIONS ARE ALONG R/L OF R-40-554 (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

ALL STEEL REINFORCEMENT SHALL BE EPOXY COATED.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554".

HIGH STRENGTH BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RETAINING WALL R-40-554 IS A SOLDIER PILE RETAINING WALL AND INCLUDES THE INSTALLATION OF NON-OVERLAPPING, INDEPENDENT CONCRETE DRILLED FOOTINGS BETWEEN THE STATIONS INDICATED. THE RETAINING WALL WILL BE FINISHED WITH A FULL HEIGHT CIP CONCRETE FACING AND A CIP CONCRETE COPING.

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE COPING AND CONCRETE FACING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO INSTALL WALL LAGGING IS INCLUDED IN ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554"

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600.0005 "PAINTING EPOXY SYSTEM R-40-554".

"CONCRETE STAINING R-40-554" INCUDES R-40-554-STAGE 1 (PROJECT NO. 1060-33-78) AND R-40-554-STAGE 2 CONCRETE STAINING.

CONTRACTOR MUST COORDINATE CONSTRUCTION OF WALL R-40-554 STAGE 2 WITH WALL R-40-554 STAGE 1 (PROJECT NO. 1060-33-78).

TEMPORARY SHORING SHALL BE REMOVED, TEMPORARY SHORING REMOVAL IS INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554"

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

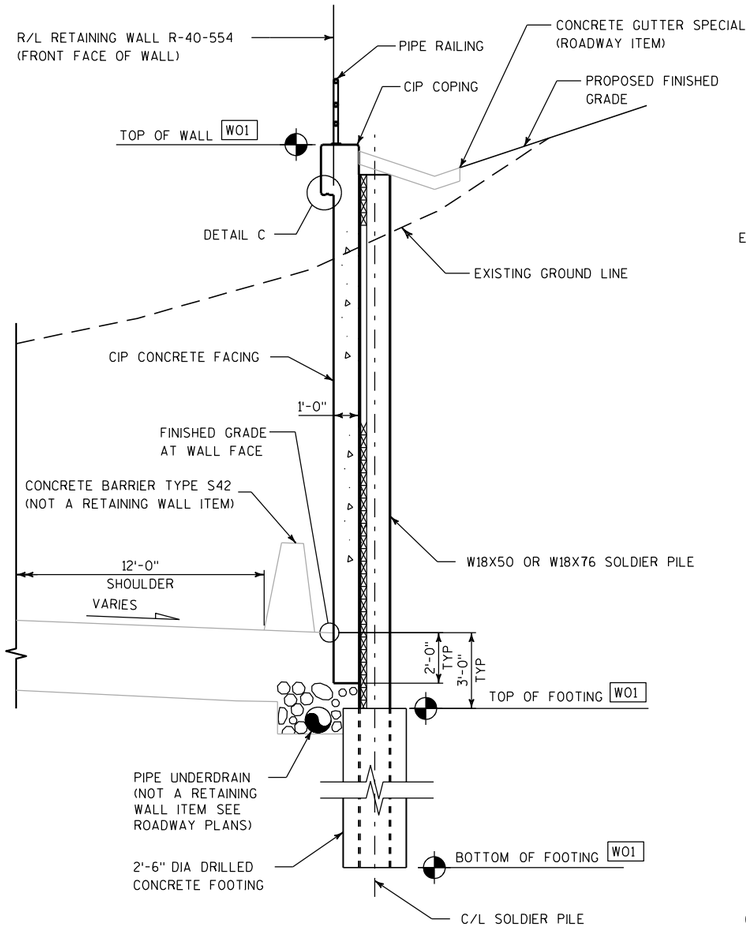
DRAWN BY	MR	PLANS CK'D.	MHZ

GENERAL NOTES, QUANTITIES AND PROFILES

SHEET 2 OF 10

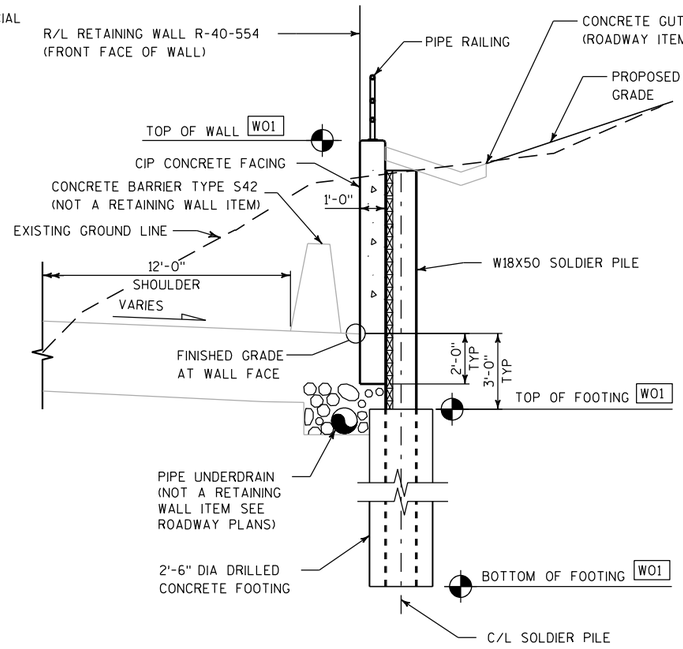
STATE PROJECT NUMBER

1060-33-80



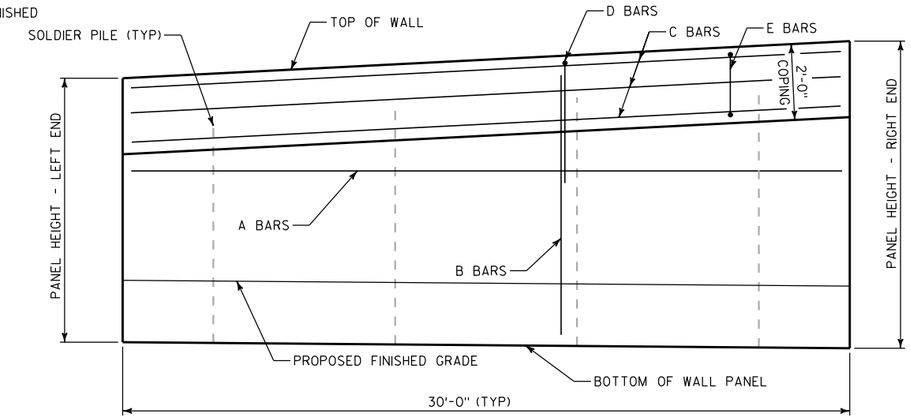
TYPICAL SECTION

STA.11+57.25 TO STA.15+17.25



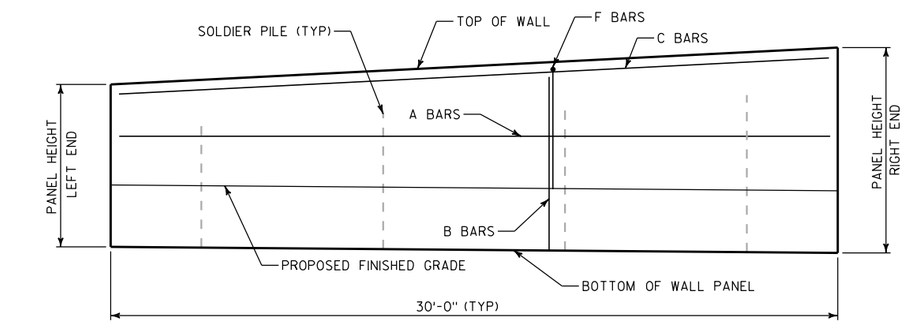
TYPICAL SECTION

STA.10+67.25 TO STA.11+57.25



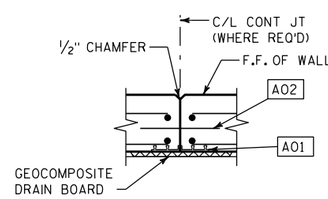
TYPICAL PANEL ELEVATION - PANELS 5 THRU 15

STA.11+87.25 TO STA.15+17.25
SEE SHEET 7 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES

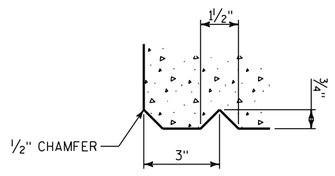


TYPICAL PANEL ELEVATION - PANELS 1, 2 AND 3

STA.10+67.25 TO STA.11+57.25
SEE SHEET 7 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES



CONTRACTION JOINT



DETAIL C
¾" CONTINUOUS DRIP GROOVE

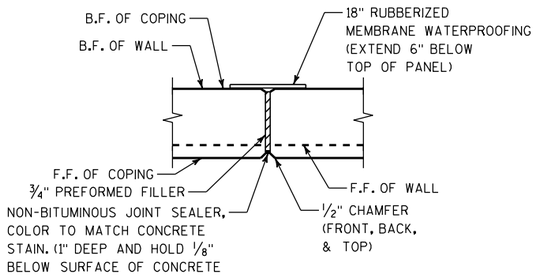
TERMINATE 2'-0" FROM COPING TRANSITION

NOTES:

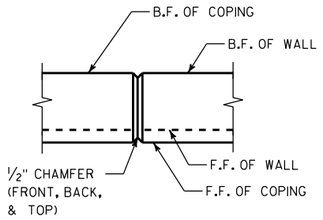
W01 SEE SHEET 6 FOR ELEVATIONS

A01 POLYVINYL CHLORIDE WATERSTOP, INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON B.F. OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 ¾"DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER ½ THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

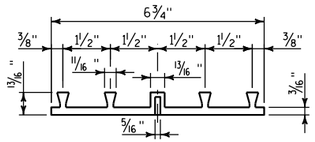


COPING
EXPANSION JOINT



COPING
CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)



P.C.W. "TYPE B" DETAIL A01

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

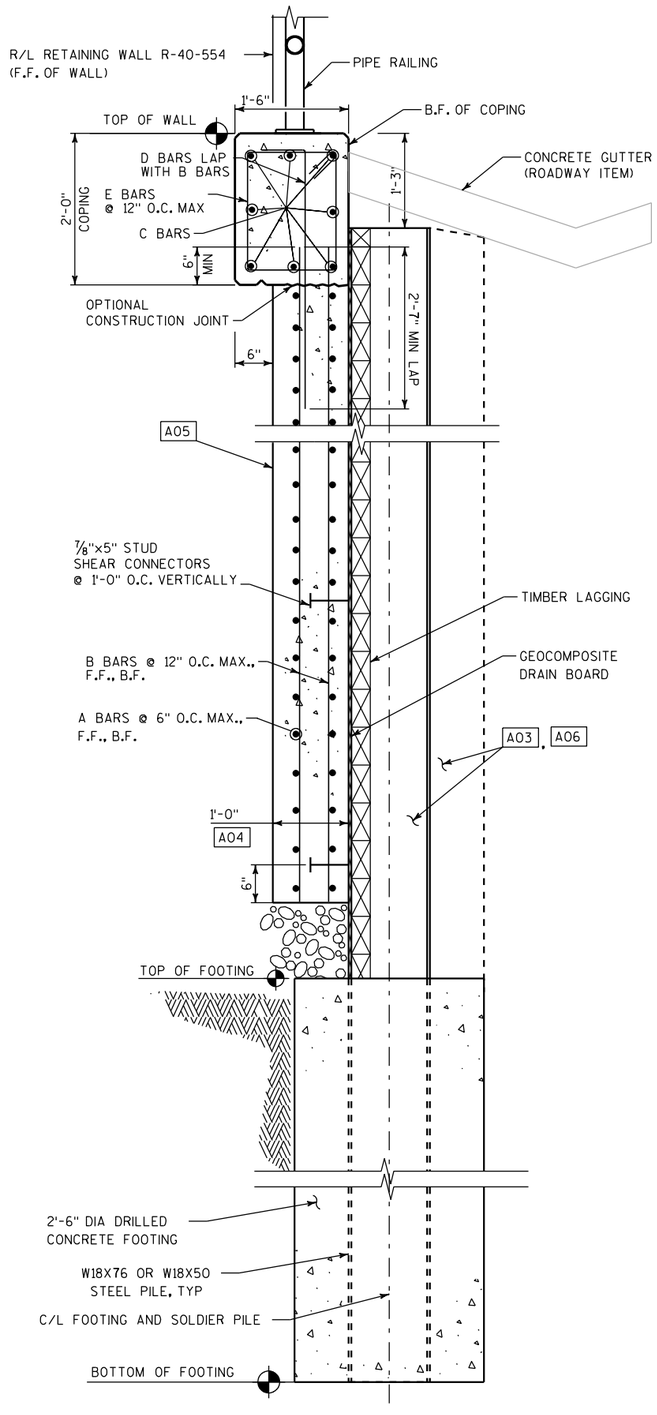
TYPICAL WALL SECTIONS

SHEET 3 OF 10

8

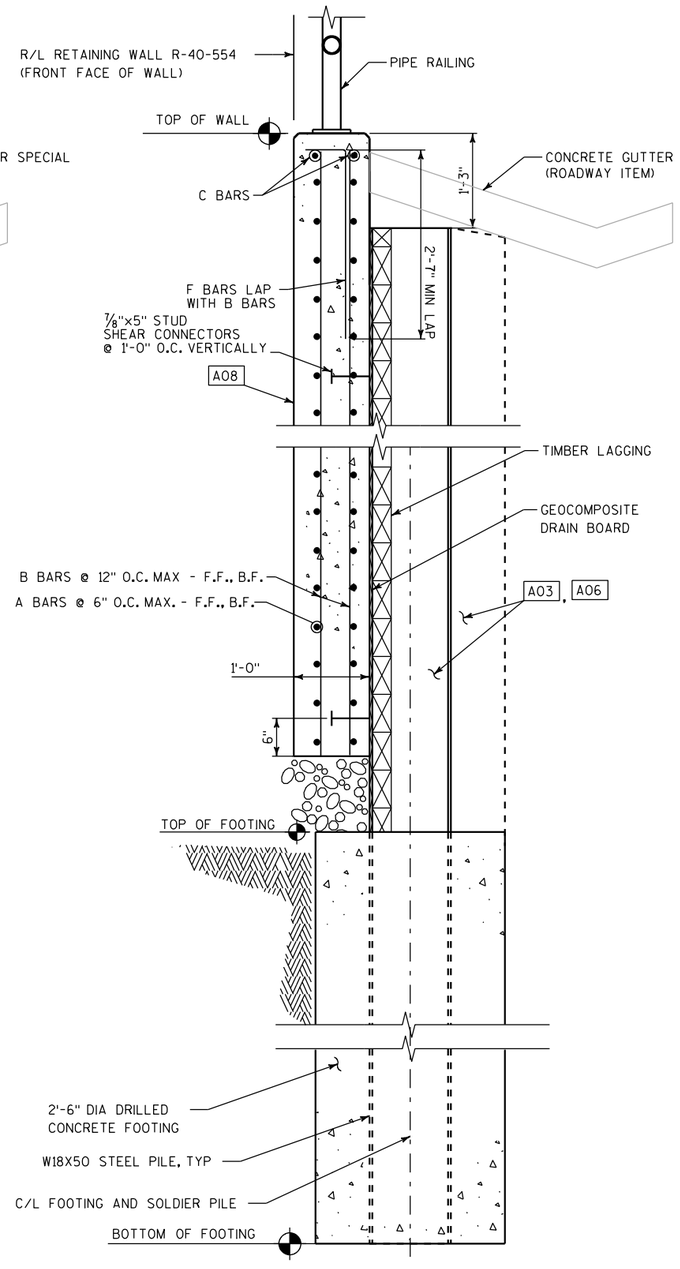
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STATE PROJECT NUMBER
1060-33-80



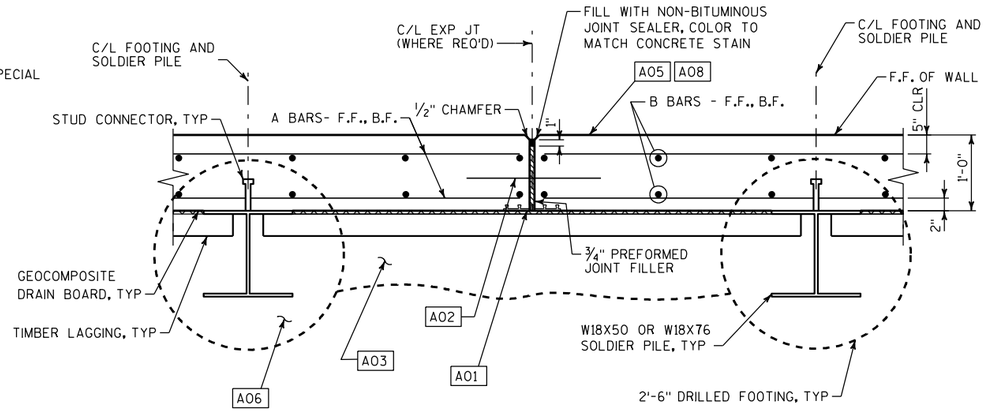
TYPICAL SOLDIER PILE AND PANEL WALL SECTION
PANEL 5 THRU 15 A09 A10

STA.11+87.75 TO STA.15+17.25



TYPICAL SOLDIER PILE AND PANEL WALL SECTION
PANEL 1, 2 AND 3 A09

STA.10+67.25 TO STA.11+57.25



TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)

NOTES

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON B.F. OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 3/4" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-554". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A04 1'-0" PANEL WITH VERTICAL RUSTICATION - PANELS 4 TO 15

A05 FOR ARCHITECTURAL TREATMENT OF WALL SEE SHEET 9

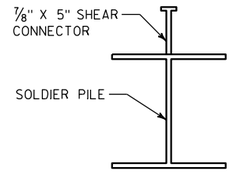
A06 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-554"

A07 BENTONITE WATER STOP STRIP IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY RETAINING WALLS"

A08 NO ARCHITECTURAL TREATMENT FOR WALL PANELS 1, 2, 3.

A09 SEE SHEET 7 FOR BILL OF BARS

A10 SEE SHEET 5 FOR PANEL 4 REINFORCEMENT



STUD CONNECTOR DETAIL

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS
1 OF 2

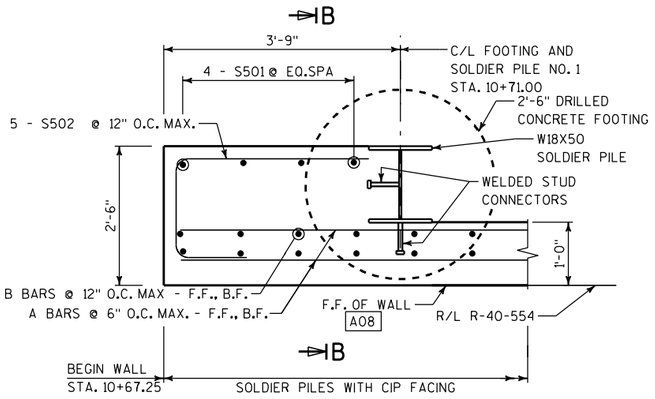
SHEET 4 OF 10

8

8

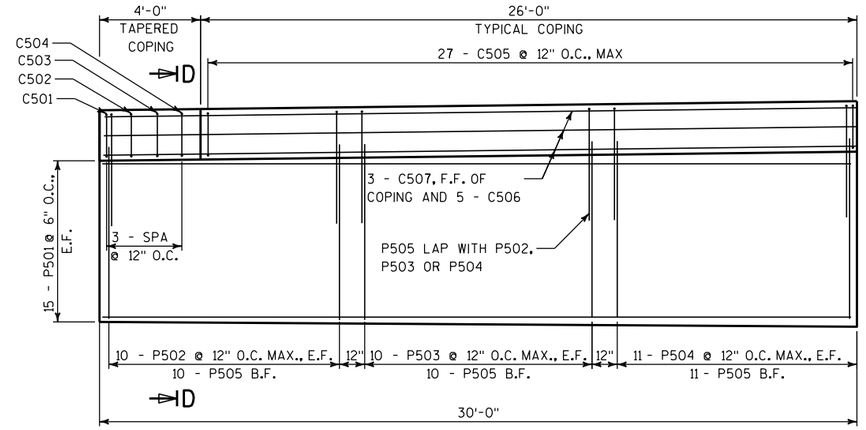
STATE PROJECT NUMBER

1060-33-80

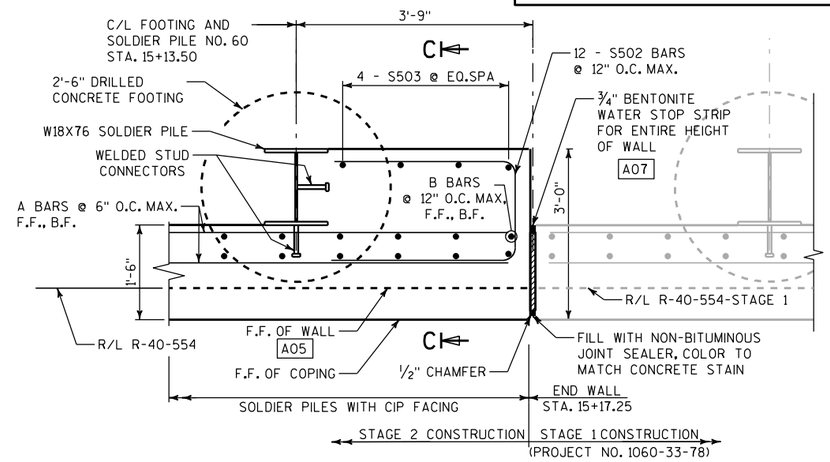


PLAN OF WALL AT BEGINNING OF WALL

(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

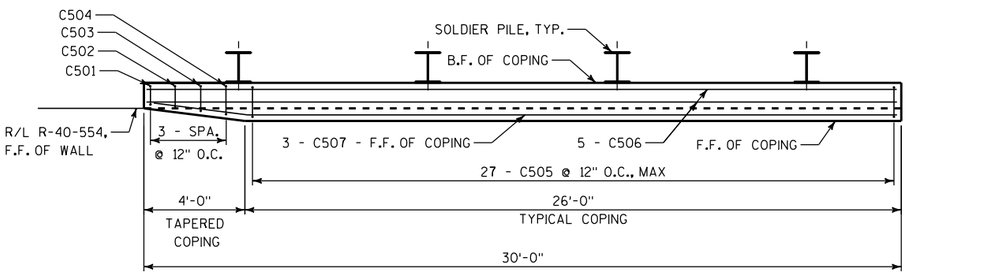


PANEL 4 ELEVATION



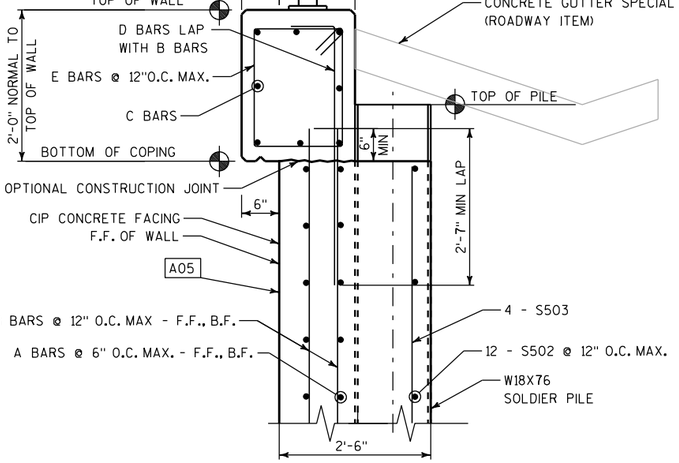
PLAN OF WALL AT END OF WALL

(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

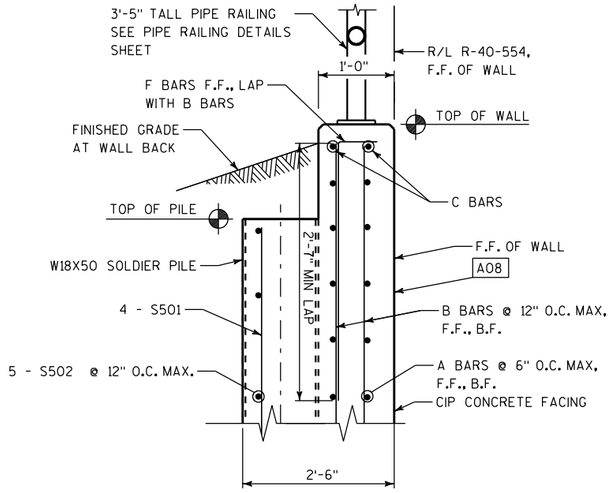


PANEL 4 PLAN

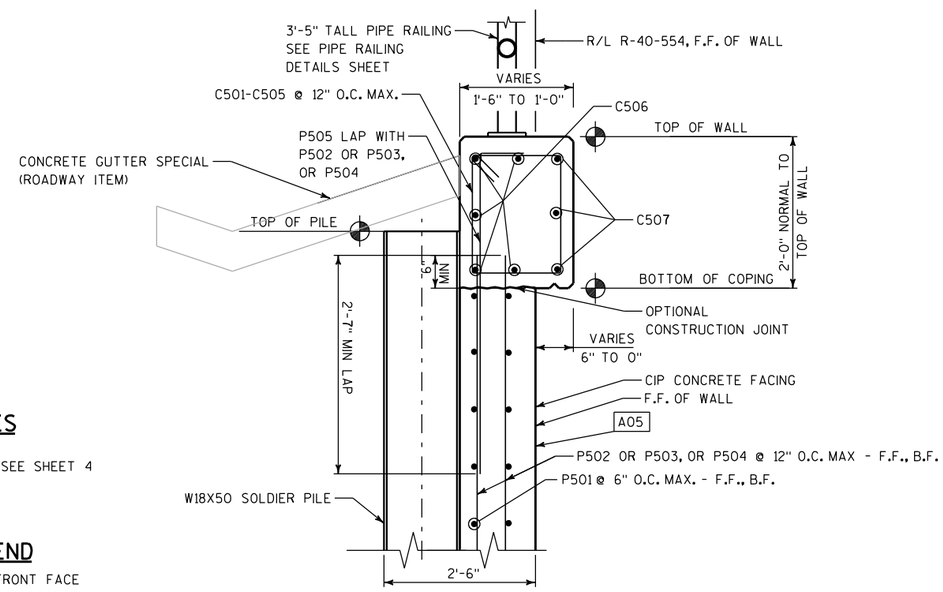
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)



WALL SECTION C-C



WALL SECTION B-B



WALL SECTION D-D

NOTES

AOX SEE SHEET 4

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS 2 OF 2

SHEET 5 OF 10

8

8

STATE PROJECT NUMBER

1060-33-80

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT (FT)	WALL THICKNESS, INCH	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FIN. GRADE ELEV. AT WALL FACE	TOP OF FTG. BORING EL	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH (FT)	PILE LENGTH FT	PILE SECTION
5.62		EXP JT	10+67.25	720.12		716.50					
		1	10+71.00	720.13	718.88	716.42	713.42	702.88	10.54	16	W18X50
		2	10+78.50	720.15	718.90	716.26	713.26	702.90	10.35	16	W18X50
1	12										
		3	10+86.00	720.18	718.93	716.09	713.09	702.93	10.17	16	W18X50
		4	10+93.50	720.20	718.95	715.93	712.93	702.95	9.98	16	W18X50
6.36		CONT JT.	10+97.25	720.21		715.85					
		5	11+01.00	720.22	718.97	715.76	712.76	701.97	10.78	17	W18X50
		6	11+08.50	720.24	718.99	715.57	712.57	700.99	11.57	18	W18X50
2	12										
		7	11+16.00	720.27	719.02	715.38	712.38	701.02	11.36	18	W18X50
		8	11+23.50	720.29	719.04	715.19	712.19	701.04	11.15	18	W18X50
7.21		CONT JT.	11+27.25	720.30		715.09					
		9	11+31.00	720.33	719.08	714.99	711.99	700.08	11.91	19	W18X50
		10	11+38.50	720.39	719.14	714.80	711.80	700.14	11.66	19	W18X50
3	12										
		11	11+46.00	720.45	719.20	714.60	711.60	700.20	11.40	19	W18X50
		12	11+53.50	720.51	719.26	714.41	711.41	699.26	12.15	20	W18X50
8.23		EXP JT	11+57.25	720.54		714.31					
		13	11+61.00	720.57	719.32	714.22	711.22	699.32	11.90	20	W18X50
		14	11+68.50	720.63	719.38	714.05	711.05	698.38	12.67	21	W18X50
4	12										
		15	11+76.00	720.69	719.44	713.88	710.88	698.44	12.44	21	W18X50
		16	11+83.50	720.75	719.50	713.71	710.71	698.50	12.21	21	W18X50
9.16		CONT JT.	11+87.25	720.78		713.62					
		17	11+91.00	720.81	719.56	713.56	710.56	697.56	13.00	22	W18X50
		18	11+98.50	720.87	719.62	713.43	710.43	697.62	12.81	22	W18X50
5	12										
		19	12+06.00	720.93	719.68	713.30	710.30	697.68	12.62	22	W18X50
		20	12+13.50	720.99	719.74	713.17	710.17	697.74	12.43	22	W18X50
9.91		CONT JT.	12+17.25	721.02		713.11					
		21	12+21.00	721.05	719.80	713.03	710.03	696.80	13.23	23	W18X50
		22	12+28.50	721.11	719.86	712.88	709.88	695.86	14.02	24	W18X50
6	12										
		23	12+36.00	721.17	719.92	712.72	709.72	695.92	13.80	24	W18X50
		24	12+43.50	721.23	719.98	712.57	709.57	695.98	13.59	24	W18X50
10.77		EXP JT	12+47.25	721.26		712.49					
		25	12+51.00	721.27	720.02	712.44	709.44	695.02	14.42	25	W18X50
		26	12+58.50	721.29	720.04	712.36	709.36	695.04	14.32	25	W18X50
7	12										
		27	12+66.00	721.32	720.07	712.27	709.27	695.07	14.21	25	W18X50
		28	12+73.50	721.34	720.09	712.19	709.19	695.09	14.10	25	W18X50
11.29		CONT JT.	12+77.25	721.35		712.06					
		29	12+81.00	721.36	720.11	712.02	709.02	694.11	14.91	26	W18X76
		30	12+88.50	721.38	720.13	711.93	708.93	694.13	14.80	26	W18X76
8	12										
		31	12+96.00	721.41	720.16	711.85	708.85	694.16	14.69	26	W18X76
		32	13+03.50	721.43	720.18	711.76	708.76	694.18	14.58	26	W18X76
11.72		CONT JT.	13+07.25	721.44		711.72					

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT (FT)	WALL THICKNESS, INCH	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FIN. GRADE ELEV. AT WALL FACE	TOP OF FTG. BORING EL	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH (FT)	PILE LENGTH FT	PILE SECTION
11.72		CONT JT.	13+07.25	721.44		711.72					
		33	13+11.00	721.45	720.20	711.69	708.69	693.20	15.49	27	W18X76
		34	13+18.50	721.47	720.22	711.62	708.62	693.22	15.40	27	W18X76
9	12										
		35	13+26.00	721.50	720.25	711.55	708.55	693.25	15.31	27	W18X76
		36	13+33.50	721.52	720.27	711.48	708.48	693.27	15.22	27	W18X76
12.08		EXP JT	13+37.25	721.53		711.45					
		37	13+41.00	721.56	720.31	711.43	708.43	692.31	16.12	28	W18X76
		38	13+48.50	721.61	720.36	711.38	708.38	692.36	16.02	28	W18X76
10	12										
		39	13+56.00	721.67	720.42	711.34	708.34	692.42	15.92	28	W18X76
		40	13+63.50	721.73	720.48	711.29	708.29	692.48	15.81	28	W18X76
12.49		CONT JT.	13+67.25	721.76		711.27					
		41	13+71.00	721.78	720.53	711.25	708.25	692.53	15.71	28	W18X76
		42	13+78.50	721.84	720.59	711.20	708.20	691.59	16.61	29	W18X76
11	12										
		43	13+86.00	721.90	720.65	711.15	708.15	691.65	16.50	29	W18X76
		44	13+93.50	721.95	720.70	711.10	708.10	691.70	16.40	29	W18X76
12.90		CONT JT.	13+97.25	721.98		711.08					
		45	14+01.00	722.01	720.76	711.06	708.06	691.76	16.30	29	W18X76
		46	14+08.50	722.07	720.82	711.01	708.01	690.82	17.20	30	W18X76
12	12										
		47	14+16.00	722.12	720.87	710.97	707.97	690.87	17.09	30	W18X76
		48	14+23.50	722.18	720.93	710.92	707.92	690.93	16.99	30	W18X76
13.31		EXP JT	14+27.25	722.21		710.90					
		49	14+31.00	722.24	720.99	710.88	707.88	690.99	16.89	30	W18X76
		50	14+38.50	722.29	721.04	710.83	707.83	691.04	16.79	30	W18X76
13	12										
		51	14+46.00	722.35	721.10	710.79	707.79	690.10	17.69	31	W18X76
		52	14+53.50	722.41	721.16	710.74	707.74	690.16	17.59	31	W18X76
13.94		CONT JT.	14+57.25	722.43		710.72					
		53	14+61.00	722.46	721.21	710.70	707.70	690.21	17.49	31	W18X76
		54	14+68.50	722.52	721.27	710.66	707.66	690.27	17.39	31	W18X76
14	12										
		55	14+76.00	722.58	721.33	710.61	707.61	690.33	17.29	31	W18X76
		56	14+83.50	722.63	721.38	710.57	707.57	690.38	17.19	31	W18X76
14.11		CONT JT.	14+87.25	722.66		710.55					
		57	14+91.00	722.66	721.41	710.53	707.53	689.41	18.12	32	W18X76
		58	14+98.50	722.66	721.41	710.48	707.48	689.41	18.07	32	W18X76
15	12										
		59	15+06.00	722.66	721.41	710.44	707.44	689.41	18.03	32	W18X76
		60	15+13.50	722.66	721.41	710.39	707.39	689.41	17.98	32	W18X76
14.29		EOWall	15+17.25	722.66		710.37					

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLES

SHEET 6 OF 10

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-554_Stage 2\cds\R-40-554_080106_de.dgn
PLOT DATE : 29-APR-2014 10:30
PLOT BY : MSCM1M
PLOT NAME : R-40-554_080106_de
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

BILL OF BARS/BAR SERIES TABLE

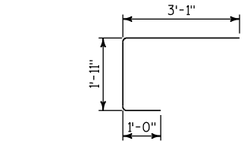
PANEL NUMBER	WALL THICKNESS, INCH	PANEL HEIGHT LEFT END FT	PANEL HEIGHT RIGHT END Ft	PANEL WIDTH FT	QUAN. HORIZ A BARS	LENGTH OF A BAR FT - inch	QUAN. VERT. B BARS	LENGTH VARY SERIES B BAR FT.		LENGTH B BARS FT-inch	QUAN. HORIZ C BARS	LENGTH C BARS FT-inch	QUAN. VERT. D BARS	LENGTH OF D BAR FT.	QUAN. COPING. E BARS	LENGTH OF E BAR FT.	QUAN. VERT. F BARS	LENGTH OF F BAR FT.
							⚠											
1	12	5.62	6.36	30	26	29'-8"	62	5'- 3"	6'- 0"		2	29'-8"					31	4'-0"
							⚠											
2	12	6.36	7.21	30	28	29'-8"	62	6'- 0"	6'- 11"		2	29'-8"					31	4'-0"
							⚠											
3	12	7.21	8.23	30	32	29'-8"	62	6'- 11"	7'- 11"		2	29'-8"					31	4'-0"
4	SEE SHEET 5 FOR PANEL REINFORCEMENT																	
							⚠											
5	12	9.16	9.91	30	34	29'-8"	62	7'- 6"	8'- 3"		8	29'-8"	31	4'-8"	31	6'-3"		
							⚠											
6	12	9.91	10.77	30	36	29'-8"	62	8'- 3"	9'- 1"		8	29'-8"	31	4'-8"	31	6'-3"		
							⚠											
7	12	10.77	11.29	30	38	29'-8"	62	9'- 1"	9'- 7"		8	29'-8"	31	4'-8"	31	6'-3"		
							⚠											
8	12	11.29	11.72	30	40	29'-8"	62	9'- 7"	10'- 1"		8	29'-8"	31	4'-8"	31	6'-3"		
							⚠											
9	12	11.72	12.08	30	42	29'-8"	62	10'- 1"	10'- 5"		8	29'-8"	31	4'-8"	31	6'-3"		
10	12	12.08	12.49	30	44	29'-8"	62			10'- 10"	8	29'-8"	31	4'-8"	31	6'-3"		
11	12	12.49	12.90	30	46	29'-8"	62			11'- 3"	8	29'-8"	31	4'-8"	31	6'-3"		
12	12	12.90	13.31	30	46	29'-8"	62			11'- 8"	8	29'-8"	31	4'-8"	31	6'-3"		
							⚠											
13	12	13.31	13.94	30	50	29'-8"	62	11'- 8"	12'- 3"		8	29'-8"	31	4'-8"	31	6'-3"		
14	12	13.94	14.11	30	50	29'-8"	62			12'- 5"	8	29'-8"	31	4'-8"	31	6'-3"		

QUANTITIES OF BARS SHOWN ARE FOR BOTH WALL FACES

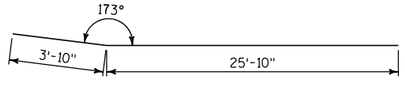
⚠ BUNDLE SETS OF BARS. BARS IN A SET SHALL HAVE SAME LENGTH. SEE B BARS SETS TABLE.

WALL FACING BILL OF BARS

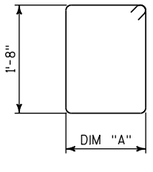
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	4	4'-1"	-	-	PANEL 1 BEGIN. VERTICAL
S502	X	17	5'-9"	X	-	PANEL 1 BEGIN., PANEL 15 END HORIZ.
S503	X	4	11'-11"	-	-	PANEL 15 END VERTICAL
					-	
C501	X	1	5'-3"	X	-	PANEL 4 COPING VERTICAL
C502	X	1	5'-5"	X	-	PANEL 4 COPING VERTICAL
C503	X	1	5'-9"	X	-	PANEL 4 COPING VERTICAL
C504	X	1	5'-11"	X		PANEL 4 COPING VERTICAL
C505	X	27	6'-3"	X	-	PANEL 4 COPING VERTICAL
C506	X	5	29'-8"	-	-	PANEL 4 COPING HORIZONTAL
C507	X	3	29'-8"	X	-	PANEL 4 COPING HORIZONTAL
P501	X	30	29'-8"	-		PANEL 4 HORIZONTAL
P502	X	20	6'-10"	-	-	PANEL 4 VERTICAL
P503	X	20	7'-2"	-	-	PANEL 4 VERTICAL
P504	X	22	7'-6"	-	-	PANEL 4 VERTICAL
P505	X	31	4'-8"	X	-	PANEL 4 VERTICAL



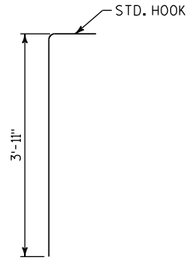
S502



C507



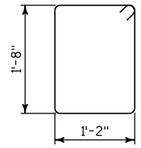
BAR MARK	DIM. "A"
C501	0'-8"
C502	0'-9"
C503	0'-11"
C504	1'-0"
C505	1'-2"



P505

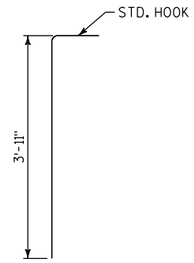
B BARS SETS TABLE

LOCATION	TOTAL NO.REQ'D	NO. REQ'D PER SET	SET LOCATION	LENGTH	AVE. LENGTH
PANEL 1, VERTICAL	62	10	F.F.	5'-3"	5'-7"
		10	B.F.	5'-3"	
		10	F.F.	5'-6"	
		10	B.F.	5'-6"	
		11	F.F.	5'-9"	
		11	B.F.	5'-9"	
PANEL 2, VERTICAL	62	10	F.F.	6'-0"	6'-4"
		10	B.F.	6'-0"	
		10	F.F.	6'-3"	
		10	B.F.	6'-3"	
		11	F.F.	6'-6"	
		11	B.F.	6'-6"	
PANEL 3, VERTICAL	62	10	F.F.	6'-11"	7'-3"
		10	B.F.	6'-11"	
		10	F.F.	7'-2"	
		10	B.F.	7'-2"	
		11	F.F.	7'-5"	
		11	B.F.	7'-5"	
PANEL 5, VERTICAL	62	10	F.F.	7'-9"	8'-1"
		10	B.F.	7'-9"	
		10	F.F.	8'-0"	
		10	B.F.	8'-0"	
		11	F.F.	8'-3"	
		11	B.F.	8'-3"	
PANEL 6, VERTICAL	62	10	F.F.	8'-7"	8'-10"
		10	B.F.	8'-7"	
		10	F.F.	8'-10"	
		10	B.F.	8'-10"	
		11	F.F.	9'-1"	
		11	B.F.	9'-1"	
PANEL 7, VERTICAL	62	15	F.F.	9'-4"	9'-6"
		15	B.F.	9'-4"	
		16	F.F.	9'-7"	
		16	B.F.	9'-7"	
PANEL 8, VERTICAL	62	15	F.F.	9'-10"	10'-0"
		15	B.F.	9'-10"	
		16	F.F.	10'-1"	
		16	B.F.	10'-1"	
PANEL 9, VERTICAL	62	15	F.F.	10'-3"	10'-4"
		15	B.F.	10'-3"	
		16	F.F.	10'-5"	
		16	B.F.	10'-5"	
PANEL 13, VERTICAL	62	15	F.F.	12'-0"	12'-2"
		15	B.F.	12'-0"	
		16	F.F.	12'-3"	
		16	B.F.	12'-3"	

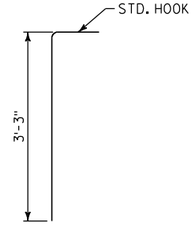


E BAR

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
E	5
F	5



D BAR



F BAR

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

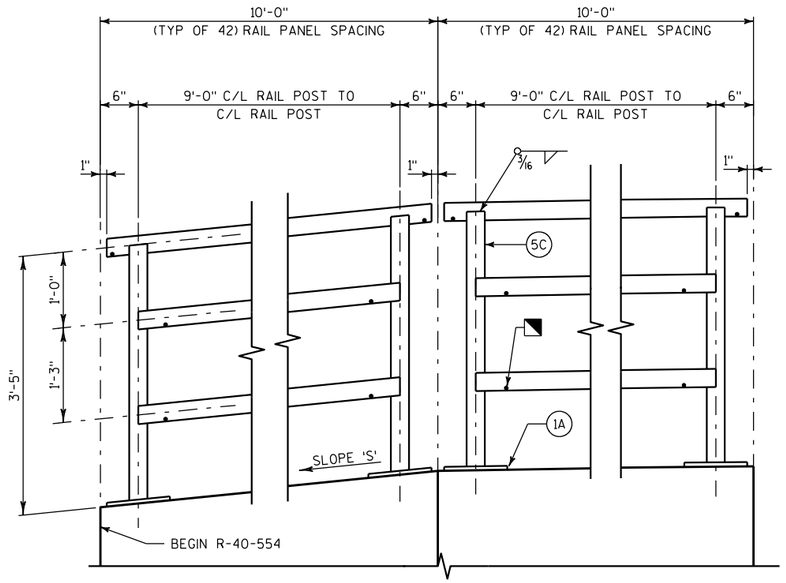
STRUCTURE R-40-554-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS/ BAR SERIES TABLE

SHEET 7 OF 10

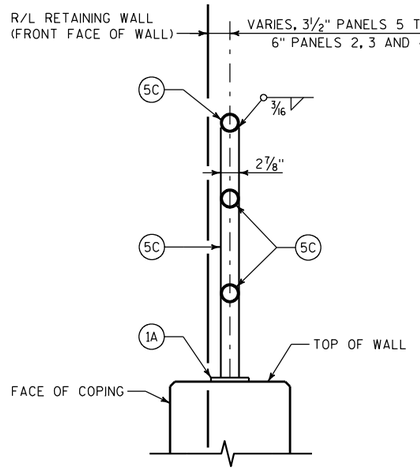
STATE PROJECT NUMBER
1060-33-80



WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING)

STATION FROM	STATION TO	SLOPE S, %
10+67.25	11+27.25	0.30
11+27.25	12+47.25	0.80
12+47.25	13+37.25	0.30
13+37.25	14+87.25	0.75
14+87.25	15+17.25	0.00



WALL RAILING SECTION

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-554", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGE SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

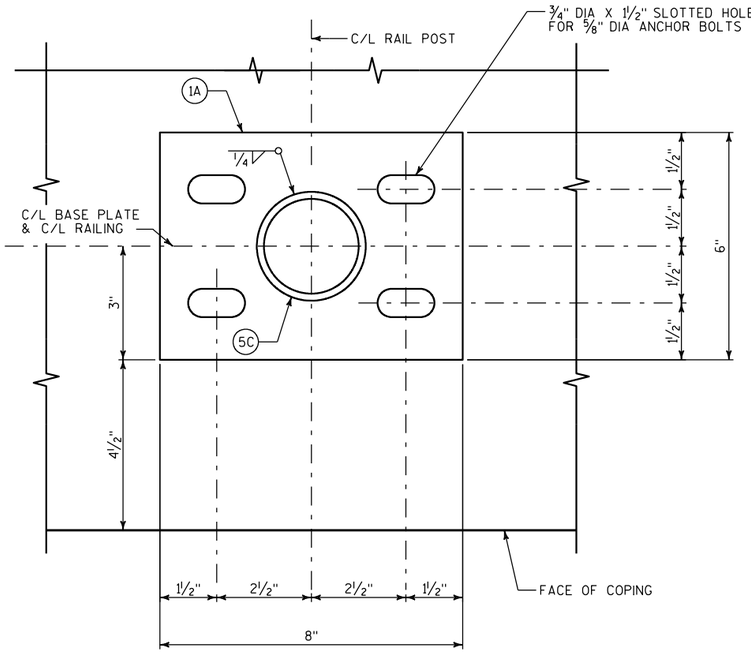
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

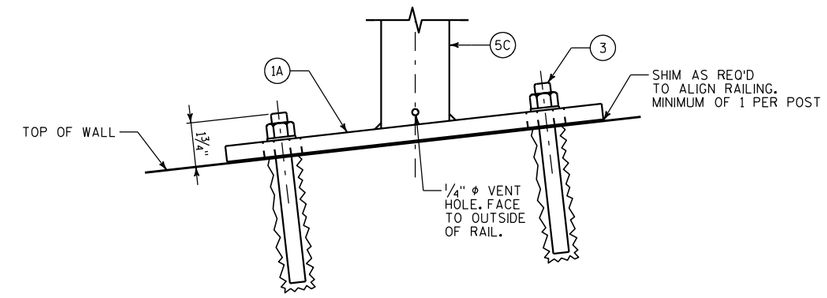
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

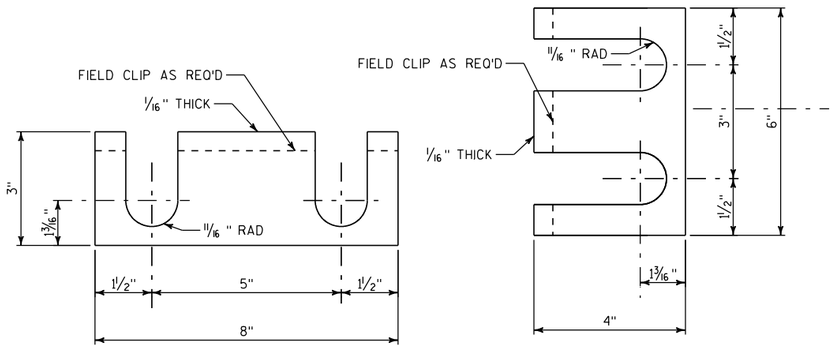
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

LEGEND

(1A) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".

(5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.

◥ ½" ϕ DRAIN HOLE @ BOTTOM OF EACH RAIL END.

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STRUCTURE R-40-554-STAGE 2

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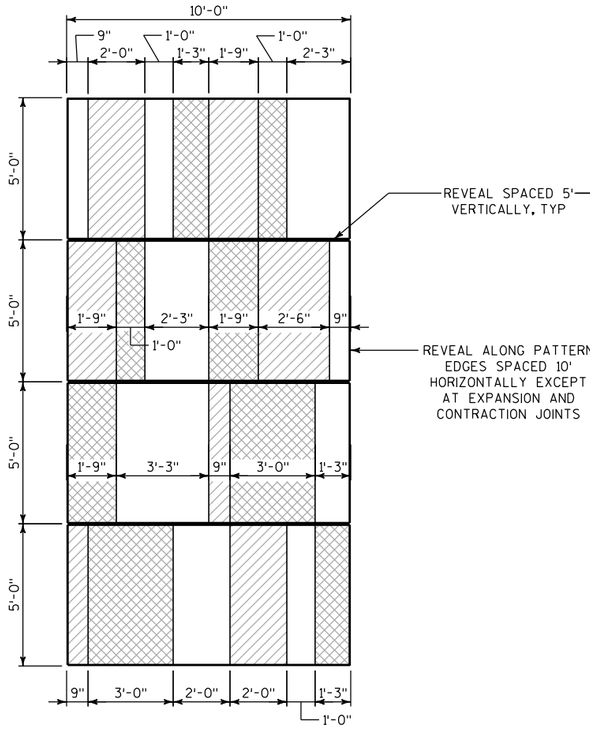
PIPE RAILING DETAILS

SHEET 8 OF 10

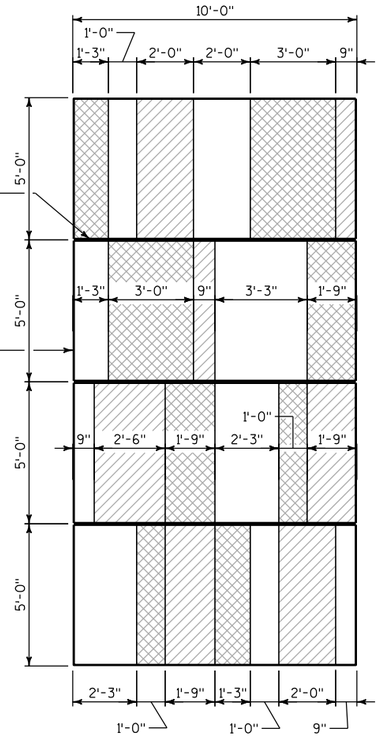
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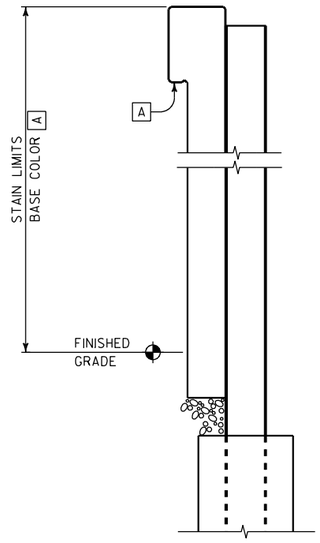


CAST-IN-PLACE 'A' PATTERN



CAST-IN-PLACE 'B' PATTERN

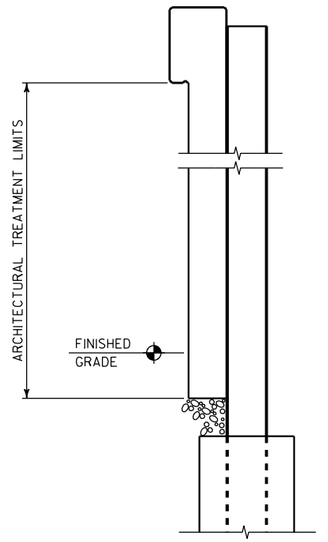
'A' PATTERN ROTATED 180°



WALL STAINING DIAGRAM*

A BASE COLOR: FEDERAL COLOR - 33564

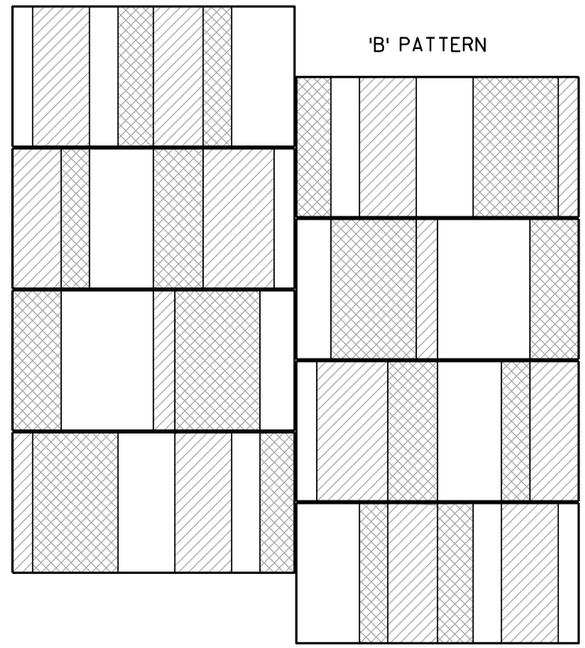
* ITEM "CONCRETE STAINING R-40-554" INCLUDES R-40-554-STAGE 1 (PROJECT NO. 1060-33-78) AND R-40-554-STAGE 2 CONCRETE STAINING.



WALL ARCHITECTURAL TREATMENT DIAGRAM

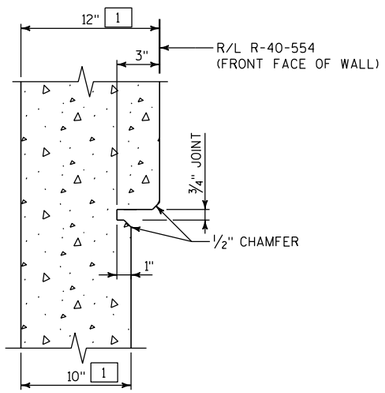
'A' PATTERN

'B' PATTERN



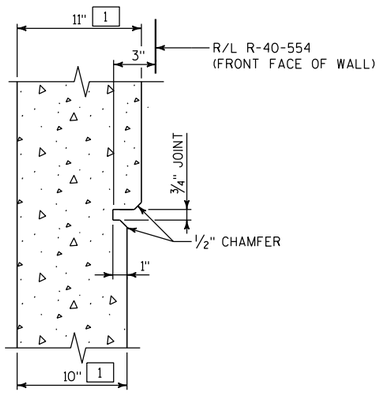
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED



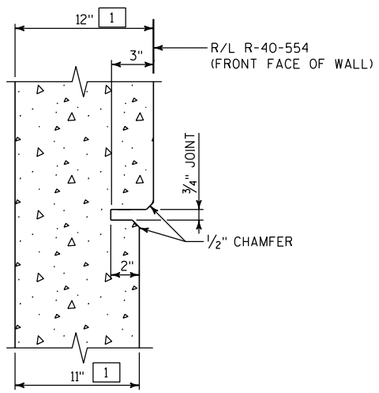
REVEAL DETAIL A

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 2"



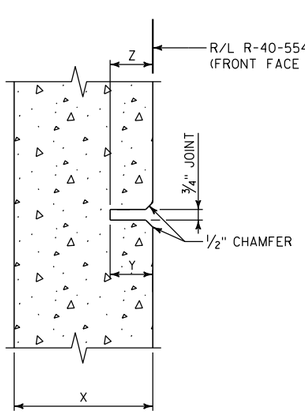
REVEAL DETAIL B

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 1"



REVEAL DETAIL C

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 1"



REVEAL DETAIL D

CONC FACING WIDTHS ADJACENT TO REVEAL ARE EQUAL

LEGEND

1 1'-0" THICK WALL

FACING THICKNESS	1
	10"
	11"
	12"

DIMENSIONS 1

X	Y	Z
12"	3"	3"
11"	2"	3"
10"	1"	3"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554-STAGE 2

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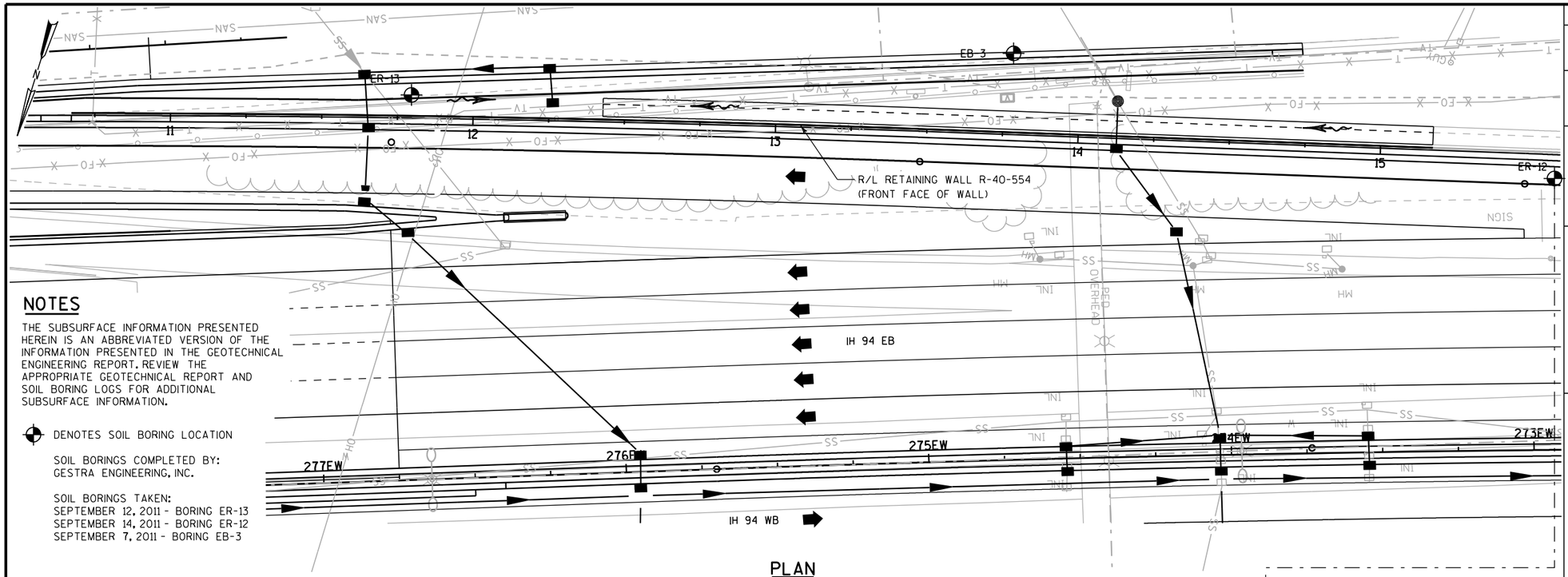
AESTHETIC WALL TREATMENT DETAILS

SHEET 9 OF 10

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-554_Stage 2\cds\R-40-554_080109_ae.dgn PLOT DATE : 29-APR-2014 10:31 PLOT BY : MSCM1M PLOT NAME : R-40-554_080109_ae PLOT SCALE : 6.000012:1



PLAN

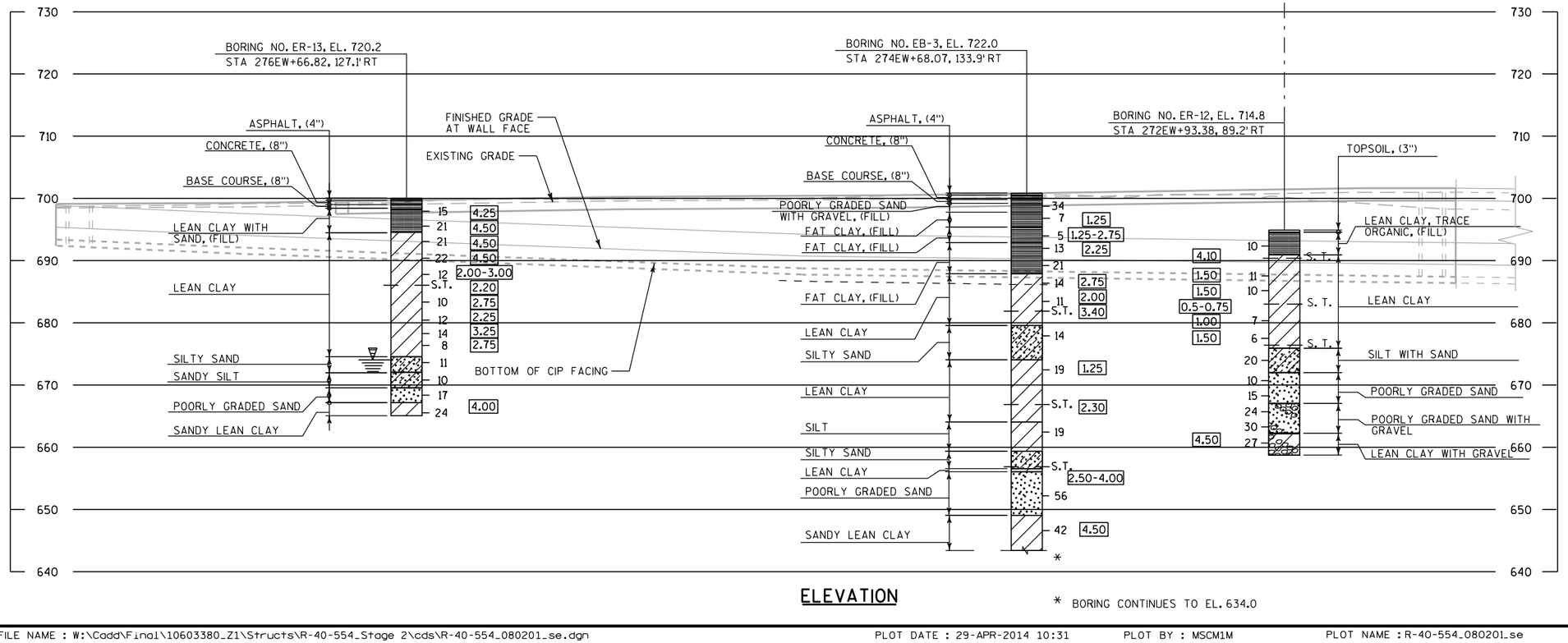
NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPTEMBER 12, 2011 - BORING ER-13
SEPTEMBER 14, 2011 - BORING ER-12
SEPTEMBER 7, 2011 - BORING EB-3



ELEVATION

* BORING CONTINUES TO EL. 634.0

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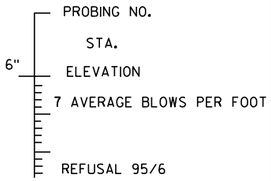
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554 STAGE 2

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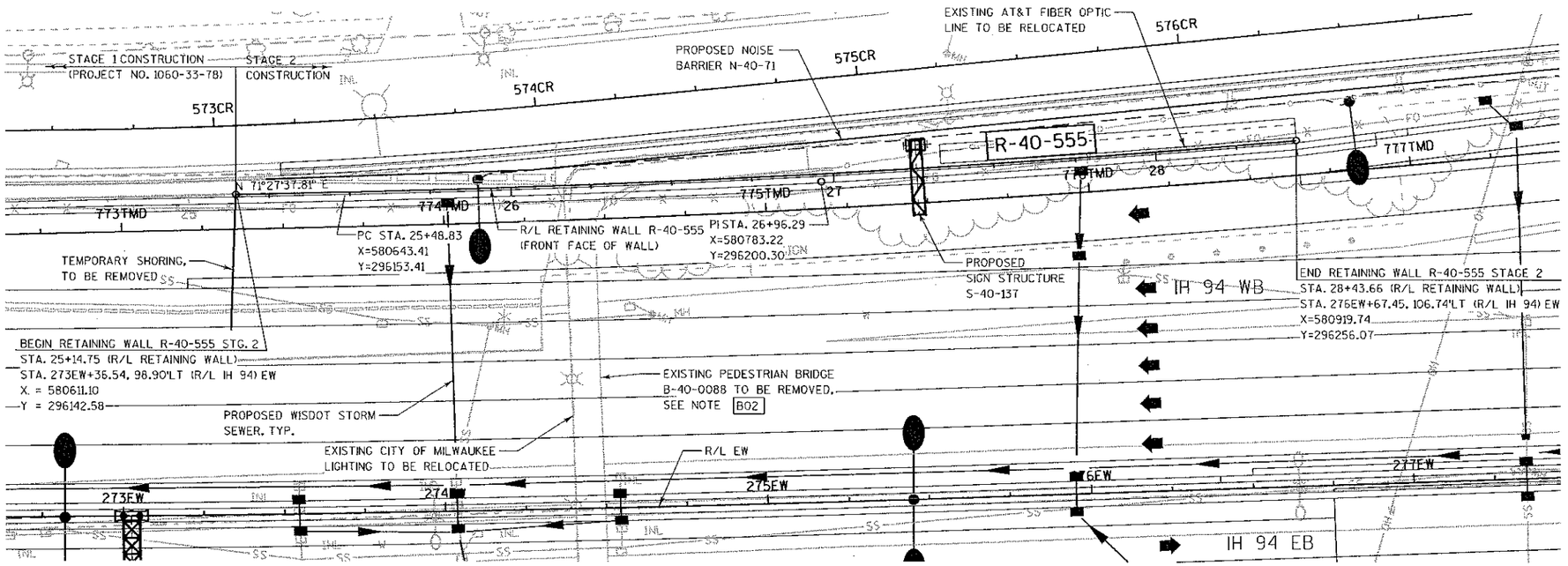
SUBSURFACE EXPLORATION

SHEET 10 OF 10

8

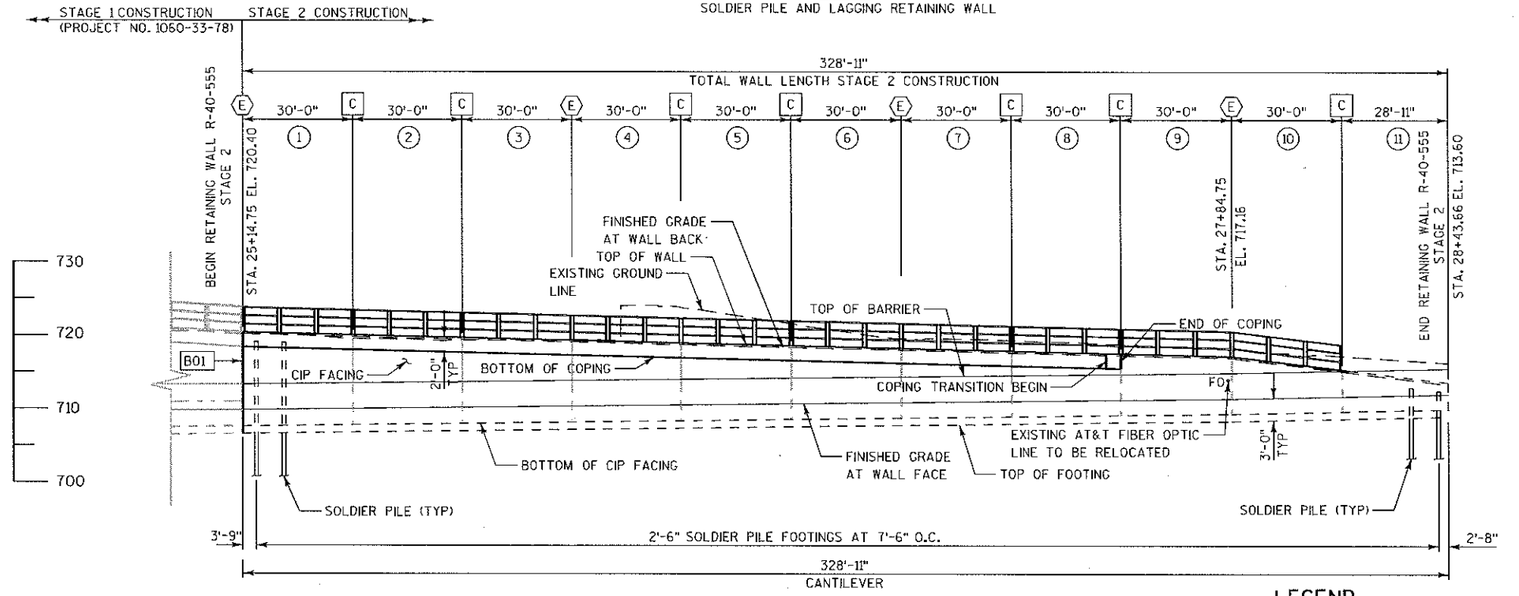
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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-554_Stage 2\cds\R-40-554_080201_se.dgn
PLOT DATE : 29-APR-2014 10:31 PLOT BY : MSCM1M PLOT NAME : R-40-554_080201_se PLOT SCALE : 40:1



PLAN

SOLDIER PILE AND LAGGING RETAINING WALL



ELEVATION

LOOKING NORTH FRONT FACE OF WALL SHOWN

NOTES:

B01 SEE SHEET 5 FOR BEGINNING OF WALL SECTION

B02 PEDESTRIAN BRIDGE B-40-088 REMOVAL IS INCLUDED IN WALL R-40-555 BID ITEM "REMOVING OLD STRUCTURE STA.26+25.00"

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAFFIC
- C — CONTRACTION JOINT IN COPING AND CONCRETE FACING
- E — EXPANSION JOINT IN COPING AND CONCRETE FACING
- X — PANEL NUMBER

STATE PROJECT NUMBER

1060-33-80

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY):240 PSF

MATERIAL PROPERTIES:

CIP WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
STRUCTURAL STEEL CARBON (ASTM A709 GRADE 50)	Fy = 50,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c = 3,500 PSI
* TIMBER LAGGING	Fb = 1,150 PSI
	E = 1,800,000 PSI

*MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK.

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. GENERAL NOTES, QUANTITIES AND PROFILES
3. TYPICAL WALL SECTIONS
4. WALL DETAILS 1 OF 2
5. WALL DETAILS 2 OF 2
6. WALL AND PILE DATA TABLES
7. BILL OF BARS/BAR SERIES TABLE
8. PIPE RAILING DETAILS
9. AESTHETIC WALL TREATMENT DETAILS
10. SUBSURFACE EXPLORATION

HORIZONTAL CURVE DATA

CURVE 1

PC STA. 25+48.83
X = 580643.41
Y = 296153.41
PI STA. 26+96.29
X = 580783.22
Y = 296200.30
PT STA. 28+43.66
X = 580919.74
Y = 296256.07
R = 4589.25
DELTA = 3°40'51.20"
D = 1°14'54.52"
L = 294.83'
T = 147.47'
BK = N71°27'37.81"E
AH = N67°37'12.21"E

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/16/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
Mohammed Zagloul
5/9/2014

STRUCTURE R-40-555-STAGE 2

RETAINING WALL ALONG IH 94 WB

COUNTY MILWAUKEE | CITY MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

GENERAL PLAN AND ELEVATION

SHEET 1 OF 10

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-555_Stage 2\cds\R-40-555_080101_gp.dgn PLOT DATE : 09-MAY-2014 12:05 PLOT BY : MSCM1M PLOT NAME : R-40-555_080101_gp PLOT SCALE : 40:1

STATE PROJECT NUMBER
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TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
203.0200.0013	REMOVING OLD STRUCTURE STA. 26+25.00	LS	1
203.0210.S.0001	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-88	LS	1
206.3000.0005	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555 *	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	129
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	23,009
506.0605	STRUCTURAL STEEL HS	LB	60,378
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	382
513.2000.0009	RAILING PIPE R-40-555	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
517.0600.0006	PAINTING EPOXY SYSTEM R-40-555	LS	1
517.1050.S.0015	ARCHITECTURAL SURFACE TREATMENT R-40-555	SF	2,089
517.1010.S.0003	CONCRETE STAINING R-40-555	SF	25,452
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	5
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTING	CY	105
SPV.0090.4440	FOUNDATION DRILLING	LF	985
SPV.0110.4600	TIMBER LAGGING	MBM	10
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	3,072
	NON- BID ITEMS		
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	3/4

WALL ITEMS ARE CATEGORY 3140

* BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555" INCLUDES REMOVAL OF TEMPORARY SHORING INSTALLED IN PROJECT NO. 1060-33-78 (STA. 25+14.75 R/L WALL R-40-555)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ALL STATIONS ARE ALONG R/L OF R-40-555 (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

ALL STEEL REINFORCEMENT SHALL BE EPOXY COATED.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555".

HIGH STRENGTH BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RETAINING WALL R-40-555 IS A SOLDIER PILE RETAINING WALL AND INCLUDES THE INSTALLATION OF NON-OVERLAPPING, INDEPENDENT CONCRETE DRILLED FOOTINGS BETWEEN THE STATIONS INDICATED. THE RETAINING WALL WILL BE FINISHED WITH A FULL HEIGHT CIP CONCRETE FACING AND A CIP CONCRETE COPING.

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE COPING AND CONCRETE FACING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO INSTALL WALL LAGGING IS INCLUDED IN ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555"

GENERAL NOTES

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600.0006 "PAINTING EPOXY SYSTEM R-40-555".

"CONCRETE STAINING R-40-555" INCLUDES R-40-555-STAGE 1 (PROJECT NO. 1060-33-78) AND R-40-555-STAGE 2 CONCRETE STAINING.

CONTRACTOR MUST COORDINATE CONSTRUCTION OF WALL R-40-555 STAGE 2 WITH WALL R-40-555 STAGE 1 (PROJECT NO. 1060-33-78).

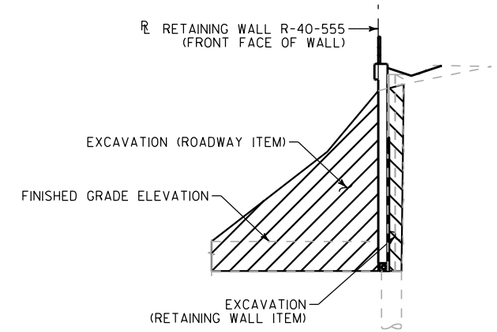
CONTRACTOR MUST COORDINATE CONSTRUCTION OF SIGN STRUCTURE S-40-137 WITH CONSTRUCTION OF WALL R-40-555

TEMPORARY SHORING SHALL BE REMOVED, TEMPORARY SHORING REMOVAL IS INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555"

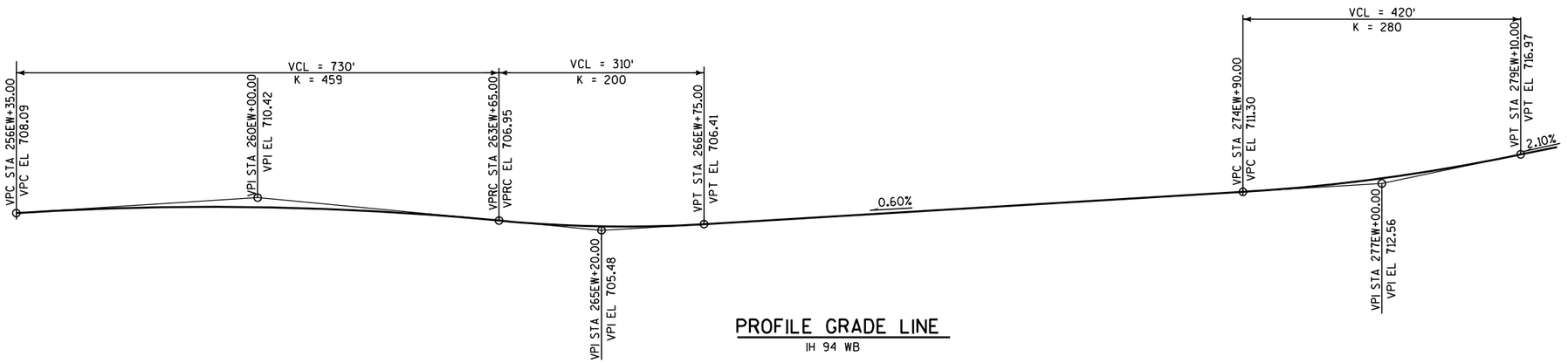
THE EXISTING BRIDGE B-40-0088 IS FOUR SPAN CONTINUOUS HOLLOW SLAB PEDESTRIAN STRUCTURE. THE ENTIRE STRUCTURE SHALL BE REMOVED, EXCEPT EXISTING TIMBER PILES. TIMBER PILES SHALL BE REMOVED TO THE EXTENT REQUIRED FOR ROADWAY AND WALL CONSTRUCTION.

RETAINING WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, ϕ, DEG	COHESION C', PSF	FRICTION ANGLE, ϕ, DEG
NEW FILL	130	0	32	0	32
SAND WITH SILT	125	0	32	0	32
STIFF TO VERY STIFF CLAY	135	2000-2500	0	75	31
VERY STIFF TO HARD CLAY	135	3500	0	150	33



EXCAVATION LIMITS



PROFILE GRADE LINE
IH 94 WB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

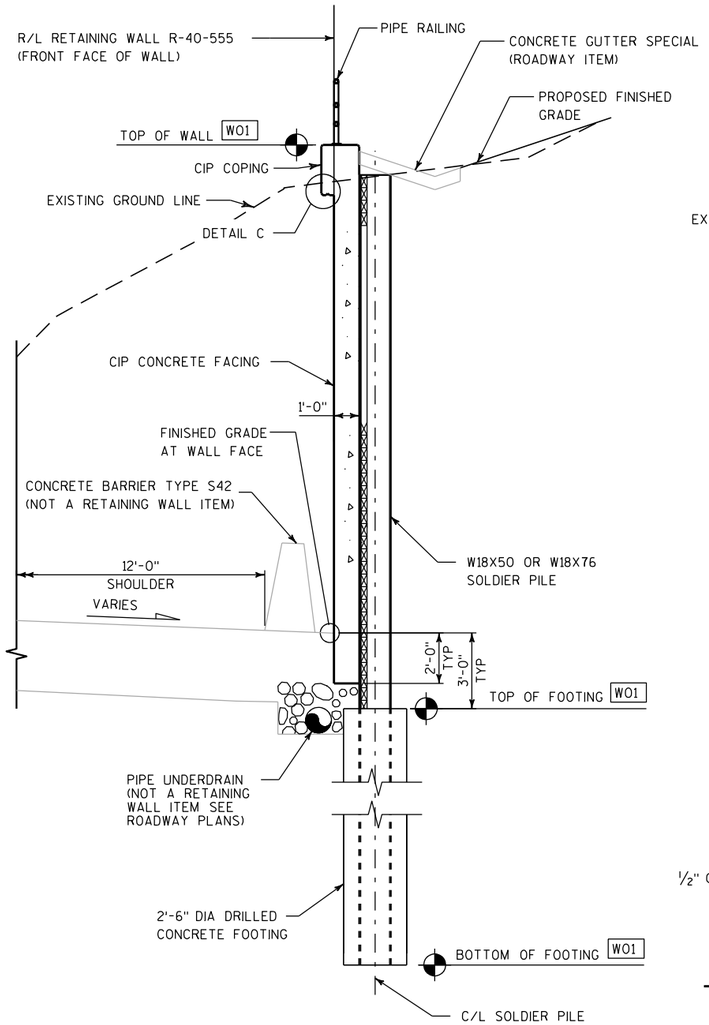
DRAWN BY MR | PLANS CK'D. MHZ

GENERAL NOTES, QUANTITIES AND PROFILES

SHEET 2 OF 10

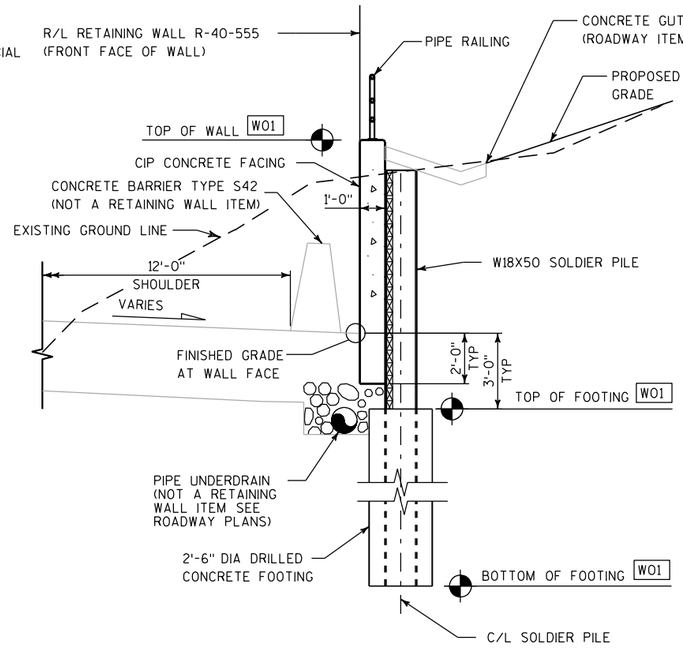
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STATE PROJECT NUMBER
1060-33-80



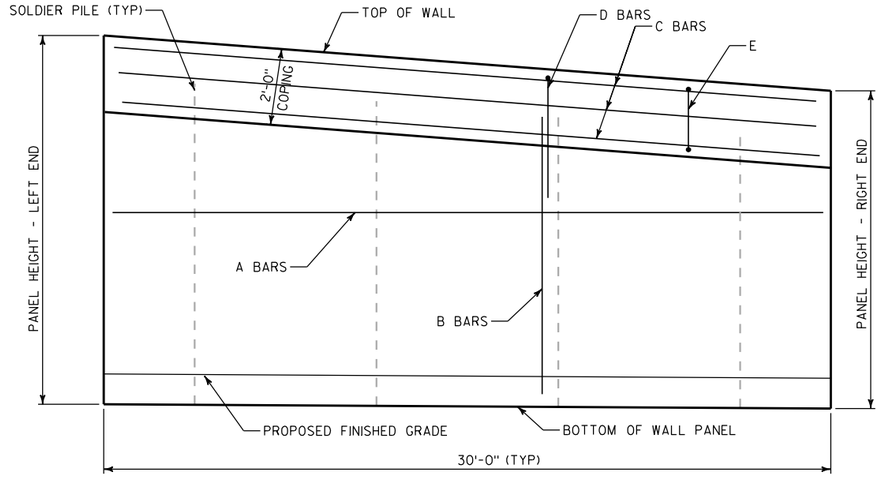
TYPICAL SECTION

STA.25+14.75 TO STA.27+54.75



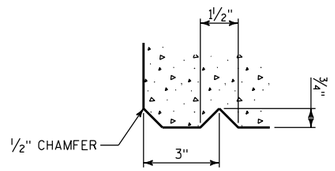
TYPICAL SECTION

STA.27+54.75 TO STA.28+66.36



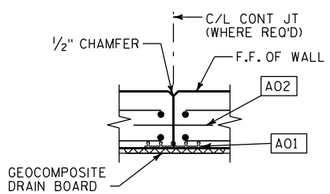
TYPICAL PANEL ELEVATION - PANELS 1 THRU 7

STA.25+14.75 TO STA.27+24.75
SEE SHEET 7 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES

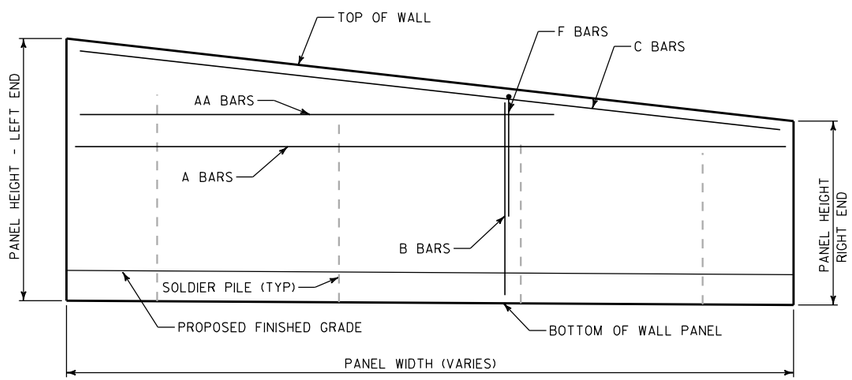


DETAIL C
¾" CONTINUOUS DRIP GROOVE

TERMINATE 2'-0" BEFORE COPING TRANSITION



PANEL
CONTRACTION JOINT



TYPICAL PANEL ELEVATION - PANELS 9, 10 AND 11

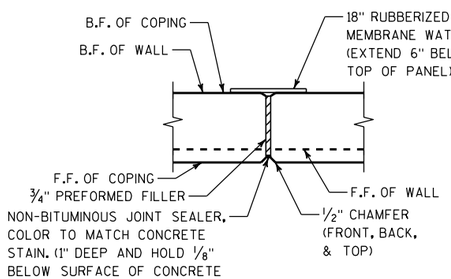
STA.27+54.75 TO STA.28+43.66
SEE SHEET 7 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES

NOTES:

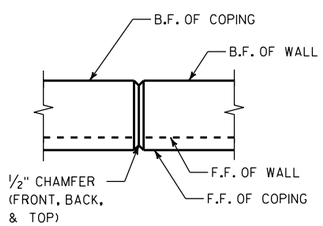
W01 SEE SHEET 6 FOR ELEVATIONS

A01 POLYVINYL CHLORIDE WATERSTOP, INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON B.F. OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 ¾"DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER ½ THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

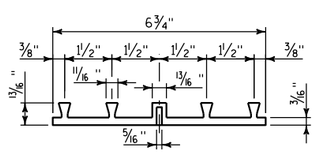


COPING
EXPANSION JOINT



COPING
CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)



P.C.W. "TYPE B" DETAIL A01

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

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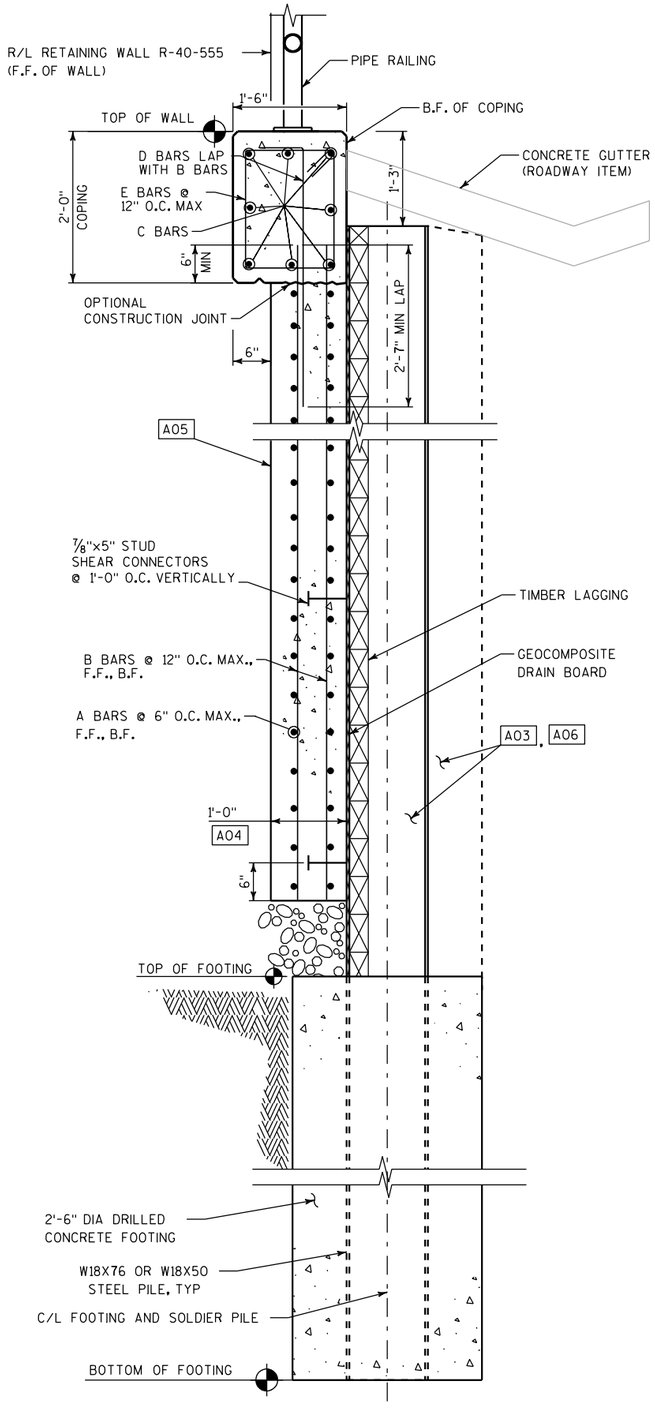
TYPICAL WALL SECTIONS

SHEET 3 OF 10

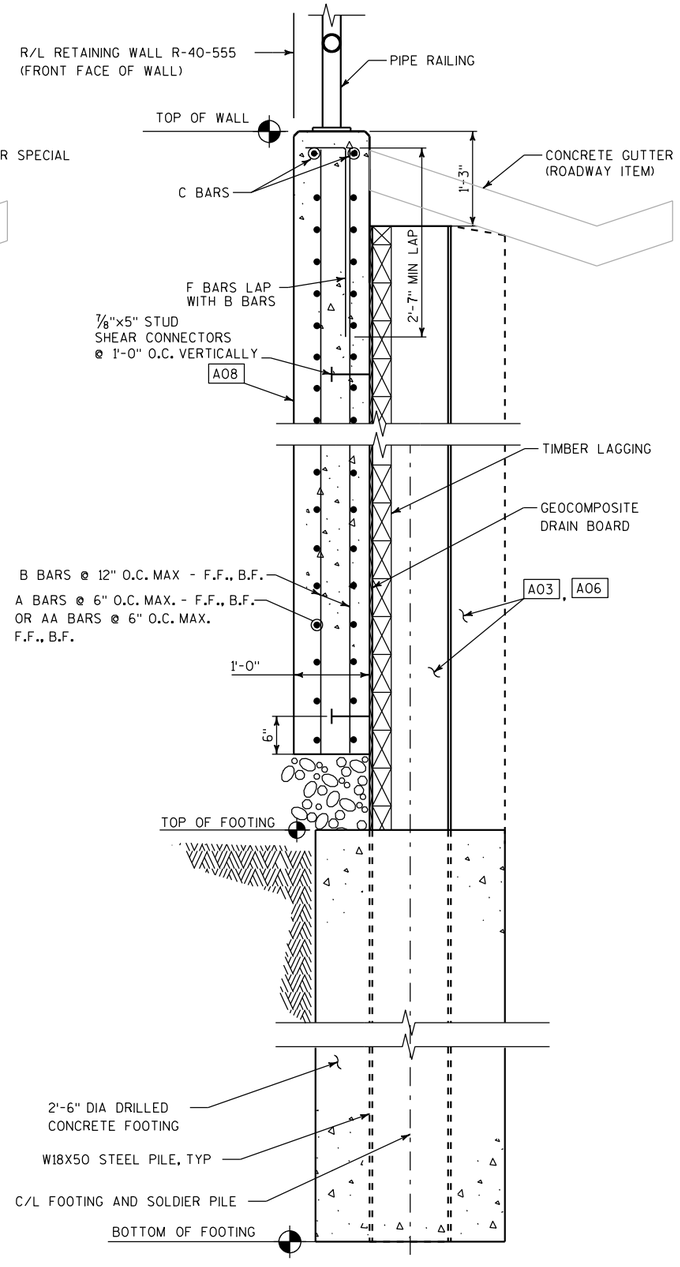
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8

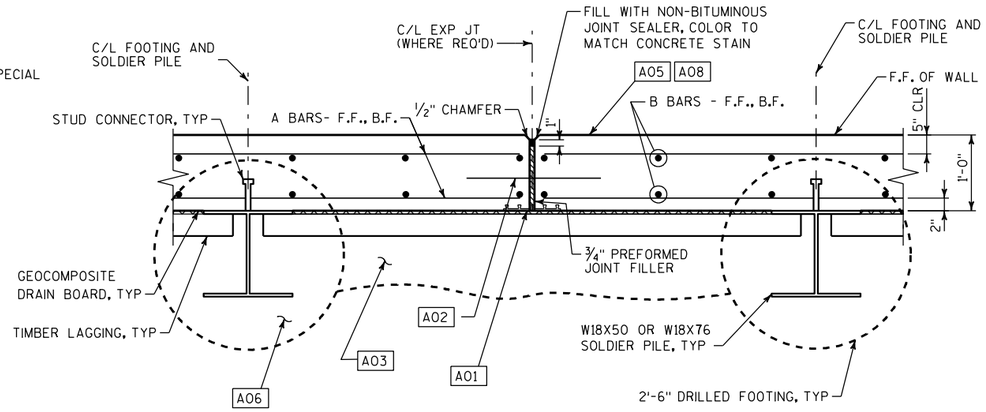
STATE PROJECT NUMBER
1060-33-80



TYPICAL SOLDIER PILE AND PANEL WALL SECTION
PANEL 1 THRU 7 A09 A10
STA.25+14.75 TO STA.27+24.75



TYPICAL SOLDIER PILE AND PANEL WALL SECTION
PANEL 9, 10 AND 11 A09
STA.27+54.75 TO STA.28+66.36



TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)

NOTES

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON B.F. OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 3/4" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-555". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A04 1'-0" PANEL WITH VERTICAL RUSTICATION - PANELS 1 TO 8

A05 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 9

A06 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-555"

A07 BENTONITE WATER STOP STRIP IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY RETAINING WALLS"

A08 NO ARCHITECTURAL TREATMENT FOR WALL PANELS 9, 10, 11.

A09 SEE SHEET 7 FOR BILL OF BARS

A10 SEE SHEET 5 FOR PANEL 8 REINFORCEMENT

STUD CONNECTOR DETAIL

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

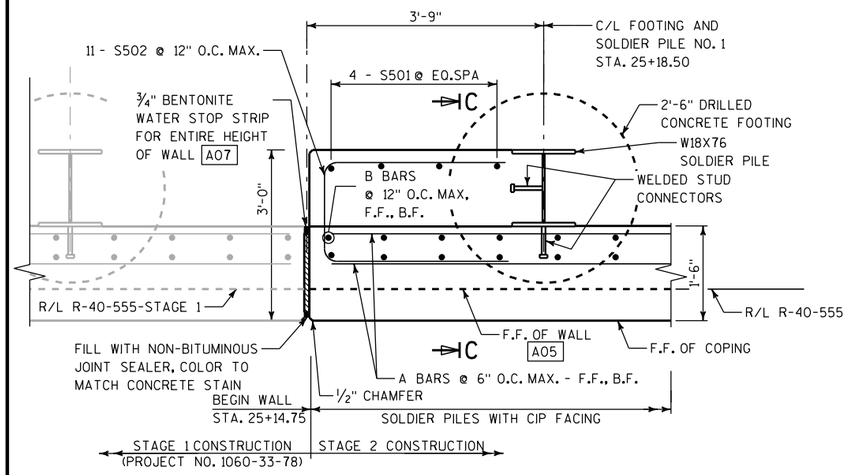
DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS
1 OF 2

SHEET 4 OF 10

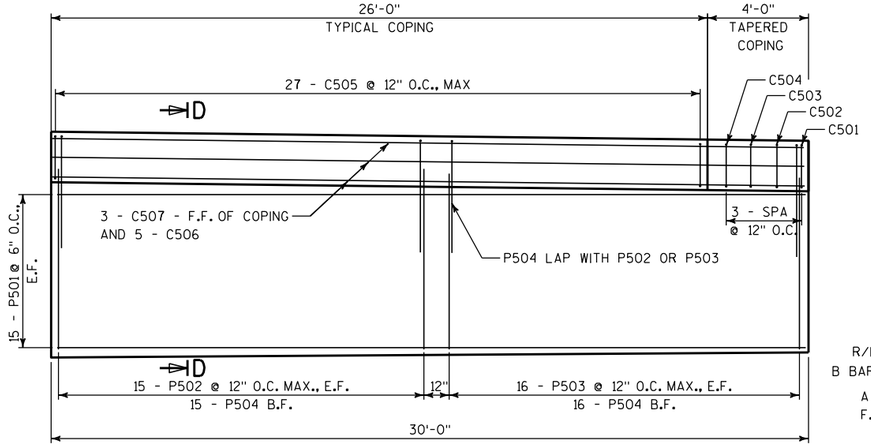
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STATE PROJECT NUMBER
1060-33-80

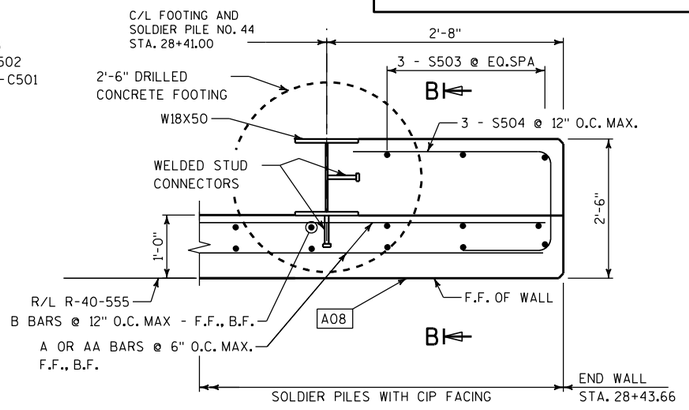


PLAN OF WALL AT BEGINNING OF WALL

(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

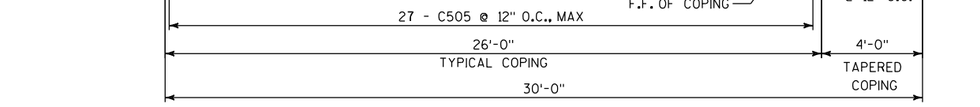


PANEL 8 ELEVATION



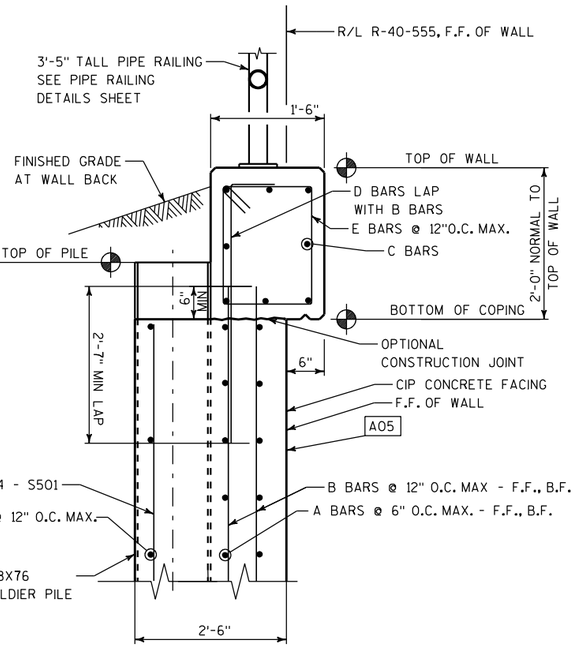
PLAN OF WALL AT END OF WALL

(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

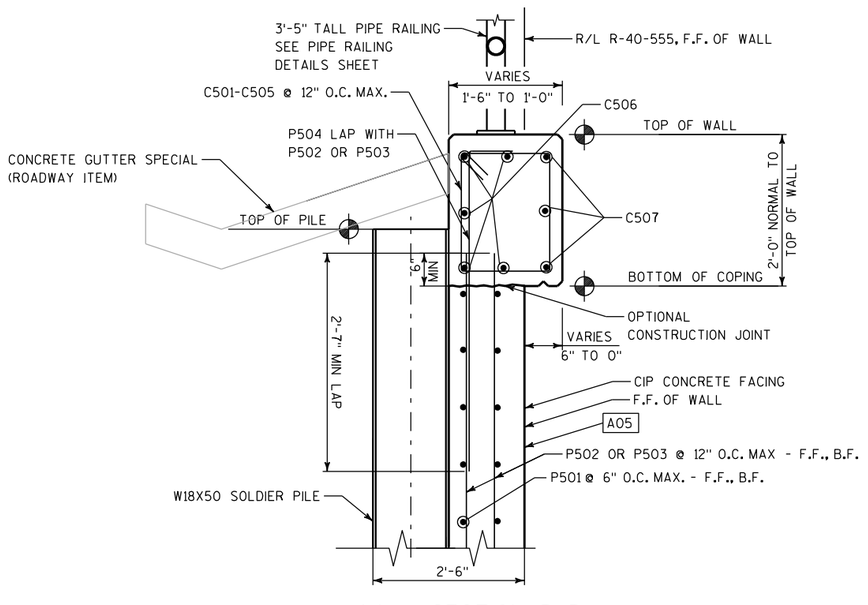


PANEL 8 PLAN

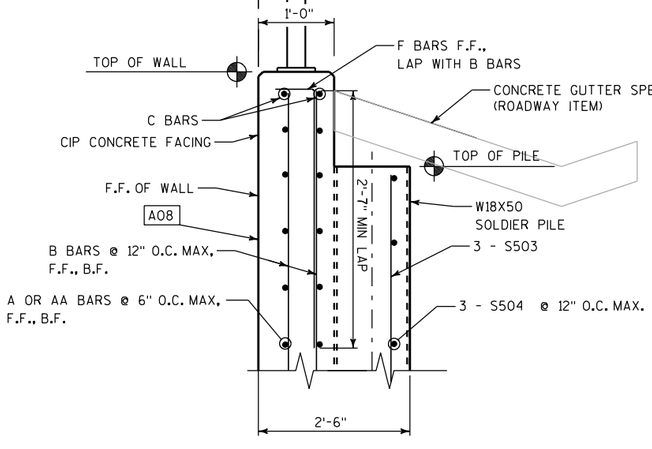
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)



WALL SECTION C-C



WALL SECTION D-D



WALL SECTION B-B

NOTES

AOX SEE SHEET 4

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS 2 OF 2

SHEET 5 OF 10

8

8

STATE PROJECT NUMBER

1060-33-80

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT, FT	WALL THICKNESS, INCH	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FINISHED GRADE AT WALL FACE ELEV.	TOP OF FTG. BORING ELEV.	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH, FT	PILE LENGTH, FT	PILE SECTION
12.81		BEGIN WALL	25+14.75	720.40		709.59					
		1	25+18.50	720.36	719.11	709.61	706.61	690.11	16.51	29	W18X76
		2	25+26.00	720.27	719.02	709.65	706.65	690.02	16.64	29	W18X76
1	12										
		3	25+33.50	720.18	718.93	709.70	706.70	690.93	15.77	28	W18X76
		4	25+41.00	720.09	718.84	709.74	706.74	690.84	15.90	28	W18X76
12.28		CONT JT.	25+44.75	720.04		709.76					
		5	25+48.50	720.00	718.75	709.78	706.78	690.75	16.03	28	W18X76
		6	25+56.00	719.91	718.66	709.81	706.81	690.66	16.15	28	W18X76
2	12										
		7	25+63.50	719.82	718.57	709.84	706.84	691.57	15.28	27	W18X76
		8	25+71.00	719.73	718.48	709.87	706.87	691.48	15.40	27	W18X76
11.79		CONT JT.	25+74.75	719.68		709.89					
		9	25+78.50	719.64	718.39	709.91	706.91	692.39	14.53	26	W18X76
		10	25+86.00	719.55	718.30	709.95	706.95	692.30	14.66	26	W18X76
3	12										
		11	25+93.50	719.46	718.21	709.99	706.99	692.21	14.79	26	W18X76
		12	26+01.00	719.37	718.12	710.03	707.03	692.12	14.92	26	W18X76
11.27		EXP JT.	26+04.75	719.32		710.05					
		13	26+08.50	719.28	718.03	710.07	707.07	693.03	14.05	25	W18X76
		14	26+16.00	719.19	717.94	710.12	707.12	692.94	14.18	25	W18X76
4	12										
		15	26+23.50	719.10	717.85	710.16	707.16	692.85	14.32	25	W18X76
		16	26+31.00	719.01	717.76	710.21	707.21	692.76	14.45	25	W18X76
10.73		CONT JT	26+34.75	718.96		710.23					
		17	26+38.50	718.92	717.67	710.25	707.25	693.67	13.59	24	W18X50
		18	26+46.00	718.83	717.58	710.29	707.29	693.58	13.72	24	W18X50
5	12										
		19	26+53.50	718.74	717.49	710.34	707.34	693.49	13.85	24	W18X50
		20	26+61.00	718.65	717.40	710.38	707.38	693.40	13.98	24	W18X50
10.20		CONT JT	26+64.75	718.60		710.40					
		21	26+68.50	718.56	717.31	710.43	707.43	694.31	13.12	23	W18X50
		22	26+76.00	718.47	717.22	710.48	707.48	694.22	13.26	23	W18X50
6	12										
		23	26+83.50	718.38	717.13	710.53	707.53	694.13	13.40	23	W18X50
		24	26+91.00	718.29	717.04	710.58	707.58	694.04	13.54	23	W18X50
9.64		EXP JT	26+94.75	718.24		710.60					

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT, FT	WALL THICKNESS, INCH	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FINISHED GRADE AT WALL FACE ELEV.	TOP OF FTG. BORING ELEV.	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH, FT	PILE LENGTH, FT	PILE SECTION
9.64		EXP JT	26+94.75	718.24		710.60					
		25	26+98.50	718.20	716.95	710.63	707.63	694.95	12.68	22	W18X50
		26	27+06.00	718.11	716.86	710.68	707.68	694.86	12.82	22	W18X50
7	12										
		27	27+13.50	718.02	716.77	710.73	707.73	694.77	12.97	22	W18X50
		28	27+21.00	717.93	716.68	710.78	707.78	694.68	13.11	22	W18X50
9.07		CONT JT.	27+24.75	717.88		710.81					
		29	27+28.50	717.84	716.59	710.84	707.84	695.59	12.25	21	W18X50
		30	27+36.00	717.75	716.50	710.89	707.89	695.50	12.40	21	W18X50
8	12										
		31	27+43.50	717.66	716.41	710.95	707.95	695.41	12.54	21	W18X50
		32	27+51.00	717.57	716.32	711.00	708.00	695.32	12.69	21	W18X50
8.49		CONT JT.	27+54.75	717.52		711.03					
		33	27+58.50	717.48	716.23	711.06	708.06	696.23	11.83	20	W18X50
		34	27+66.00	717.39	716.14	711.12	708.12	696.14	11.99	20	W18X50
9	12										
		35	27+73.50	717.30	716.05	711.18	708.18	696.05	12.14	20	W18X50
		36	27+81.00	717.21	715.96	711.24	708.24	696.96	11.29	19	W18X50
7.89		EXP JT	27+84.75	717.16		711.27					
		37	27+88.50	716.93	715.68	711.30	708.30	697.68	10.62	18	W18X50
		38	27+96.00	716.48	715.23	711.36	708.36	697.23	11.13	18	W18X50
10	12										
		39	28+03.50	716.03	714.78	711.42	708.42	698.78	9.64	16	W18X50
		40	28+11.00	715.57	714.32	711.48	708.48	699.32	9.16	15	W18X50
5.84		CONT JT.	28+14.75	715.35		711.51					
		41	28+18.50	715.12	713.87	711.55	708.55	698.87	9.68	15	W18X50
		42	28+26.00	714.67	713.42	711.62	708.62	700.42	8.20	13	W18X50
11	12										
		43	28+33.50	714.21	712.96	711.69	708.69	700.96	7.73	12	W18X50
		44	28+41.00	713.76	712.51	711.76	708.76	701.51	7.25	11	W18X50
3.81		End wall	28+43.66	713.60		711.79					

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE

SHEET 6 OF 10

STATE PROJECT NUMBER
1060-33-80

WALL FACING BILL OF BARS, TYPICAL PANELS

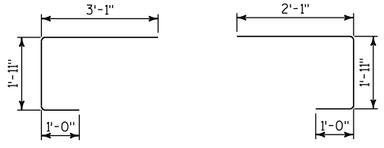
PANEL Number	PANEL WALL THICKNESS, INCH	PANEL HEIGHT LEFT END FT	PANEL HEIGHT RIGHT END Ft	PANEL WIDTH FT	QUAN. HORIZ A BARS	LENGTH OF A BAR- FT-INCH	QUAN. VERT. B BARS	LENGTH VARY SERIES B BAR, FT-INCH		QUAN. HORIZ. C BARS	LENGTH OF C BAR, FT-INCH	QUAN. VERT. D BARS	LENGTH OF D BAR, FT-INCH	QUAN. COPING. E BARS	LENGTH OF E BAR FT.	QUAN. VERT. F BARS	LENGTH OF F BAR, FT-INCH	QUAN. HORIZ. AA BARS	LENGTH VARY SERIES AA BAR FT.	
1	12	12.81	12.28	30	44	29'-8"	62 ⚠	11'- 2"	10'- 7"	8	29'-8"	31	4'-8"	31	6'-3"					
2	12	12.28	11.79	30	42	29'-8"	62 ⚠	10'- 7"	10'- 1"	8	29'-8"	31	4'-8"	31	6'-3"					
3	12	11.79	11.27	30	40	29'-8"	62 ⚠	10'- 1"	9'- 7"	8	29'-8"	31	4'-8"	31	6'-3"					
4	12	11.27	10.73	30	38	29'-8"	62 ⚠	9'- 7"	9'- 1"	8	29'-8"	31	4'-8"	31	6'-3"					
5	12	10.73	10.20	30	36	29'-8"	62 ⚠	9'- 1"	8'- 6"	8	29'-8"	31	4'-8"	31	6'-3"					
6	12	10.20	9.64	30	34	29'-8"	62 ⚠	8'- 6"	8'- 0"	8	29'-8"	31	4'-8"	31	6'-3"					
7	12	9.64	9.07	30	32	29'-8"	62 ⚠	8'- 0"	7'- 5"	8	29'-8"	31	4'-8"	31	6'-3"					
8	SEE SHEET 5 FOR PANEL REINFORCEMENT																			
9	12	8.49	7.90	30	34	29'-8"	62 ⚠	8'- 2"	7'- 7"	2	29'-8"					31	4'-0"			
10	12	7.90	5.84	30	24	29'-8"	62 ⚠	7'- 7"	5'- 6"	2	29'-9"					31	4'-0"	8	2'-0"	21'-8"
11	12	5.84	3.81	28.92	14	28'-7"	60 ⚠	5'- 6"	3'- 6"	2	28'-8"					30	4'-0"	8	2'-0"	20'-8"

QUANTITIES OF BARS SHOWN ARE FOR BOTH WALL FACES.

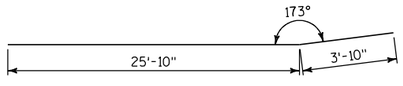
⚠ BUNDLE SETS OF BARS. BARS IN A SET SHALL HAVE SAME LENGTH. SEE B BARS SETS TABLE.

WALL FACING BILL OF BARS

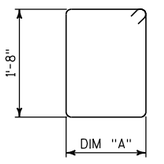
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	4	10'-5"	-	-	PANEL 1 BEGIN. VERTICAL
S502	X	11	5'-9"	X	-	PANEL 1 BEGIN. HORIZONTAL
S503	X	3	2'-4"	-	-	PANEL 11 END VERTICAL
S504	X	3	4'-9"	X	-	PANEL 11 END HORIZONTAL
					-	
C501	X	1	5'-3"	X	-	PANEL 8 COPING VERTICAL
C502	X	1	5'-5"	X	-	PANEL 8 COPING VERTICAL
C503	X	1	5'-9"	X	-	PANEL 8 COPING VERTICAL
C504	X	1	5'-11"	X		PANEL 8 COPING VERTICAL
C505	X	27	6'-3"	X	-	PANEL 8 COPING VERTICAL
C506	X	5	29'-8"	-	-	PANEL 8 COPING HORIZONTAL
C507	X	3	29'-8"	X	-	PANEL 8 COPING HORIZONTAL
P501	X	30	29'-8"	-		PANEL 8 HORIZONTAL
P502	X	30	7'-5"	-	-	PANEL 8 VERTICAL
P503	X	32	7'-2"	-	-	PANEL 8 VERTICAL
P504	X	31	4'-8"	X	-	PANEL 8 VERTICAL



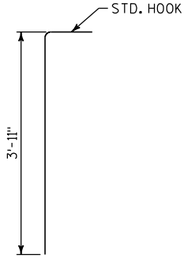
S502 S504



C507



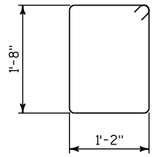
BAR MARK	DIM. "A"
C501	0'-8"
C502	0'-9"
C503	0'-11"
C504	1'-0"
C505	1'-2"



P504

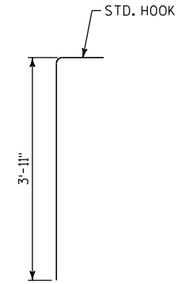
B BARS SETS TABLE

LOCATION	TOTAL NO. REQ'D	NO. REQ'D PER SET	SET LOCATION	LENGTH	AVE. LENGTH OF B BARS
PANEL 1, VERTICAL	62	15	F.F.	11'-2"	11'-0"
		15	B.F.	11'-2"	
		16	F.F.	10'-11"	
		16	B.F.	10'-11"	
PANEL 2, VERTICAL	62	15	F.F.	10'-7"	10'-6"
		15	B.F.	10'-7"	
		16	F.F.	10'-4"	
		16	B.F.	10'-4"	
PANEL 3, VERTICAL	62	15	F.F.	10'-1"	9'-11"
		15	B.F.	10'-1"	
		16	F.F.	9'-9"	
		16	B.F.	9'-9"	
PANEL 4, VERTICAL	62	15	F.F.	9'-7"	9'-6"
		15	B.F.	9'-7"	
		16	F.F.	9'-4"	
		16	B.F.	9'-4"	
PANEL 5, VERTICAL	62	15	F.F.	9'-1"	9'-0"
		15	B.F.	9'-1"	
		16	F.F.	8'-10"	
		16	B.F.	8'-10"	
PANEL 6, VERTICAL	62	15	F.F.	8'-6"	8'-5"
		15	B.F.	8'-6"	
		16	F.F.	8'-4"	
		16	B.F.	8'-4"	
PANEL 7, VERTICAL	62	15	F.F.	8'-0"	7'-11"
		15	B.F.	8'-0"	
		16	F.F.	7'-9"	
		16	B.F.	7'-9"	
PANEL 9, VERTICAL	62	15	F.F.	7'-10"	7'-9"
		15	B.F.	7'-10"	
		16	F.F.	7'-7"	
		16	B.F.	7'-7"	
PANEL 10, VERTICAL	62	5	F.F.	7'-3"	6'-5"
		5	B.F.	7'-3"	
		5	F.F.	6'-11"	
		5	B.F.	6'-11"	
		5	F.F.	6'-7"	
		5	B.F.	6'-7"	
		5	F.F.	6'-3"	
		5	B.F.	6'-3"	
		5	F.F.	5'-11"	
		5	B.F.	5'-11"	
		6	F.F.	5'-6"	
		6	B.F.	5'-6"	
PANEL 11, VERTICAL	60	5	F.F.	5'-2"	4'-4"
		5	B.F.	5'-2"	
		5	F.F.	4'-10"	
		5	B.F.	4'-10"	
		5	F.F.	4'-6"	
		5	B.F.	4'-6"	
		5	F.F.	4'-2"	
		5	B.F.	4'-2"	
		5	F.F.	3'-10"	
		5	B.F.	3'-10"	
		5	F.F.	3'-6"	
		5	B.F.	3'-6"	

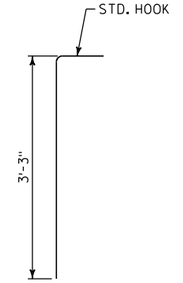


E BAR

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
E	5
F	5
AA	5



D BAR



F BAR

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

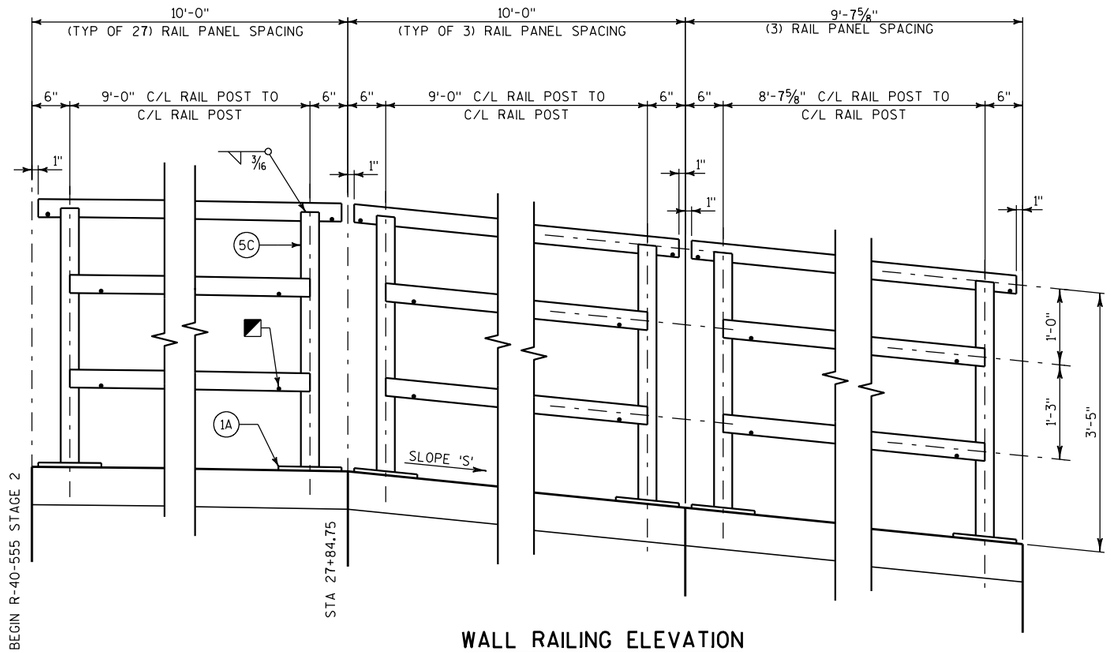
STRUCTURE R-40-555-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS/ BAR SERIES TABLE

SHEET 7 OF 10

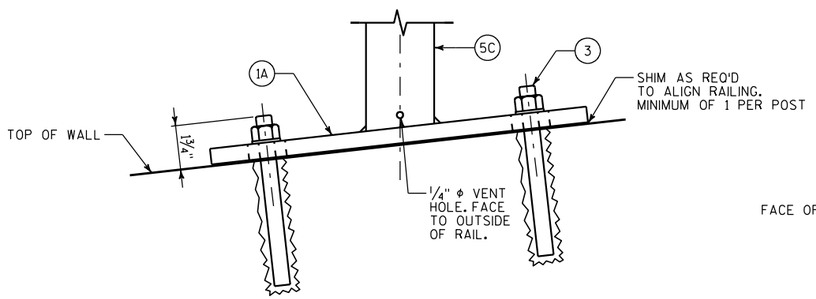
STATE PROJECT NUMBER
1060-33-80



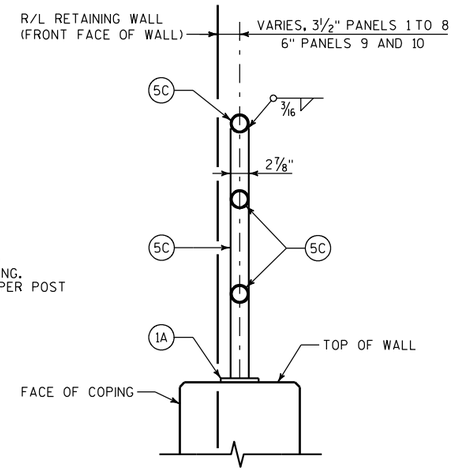
WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING)

STATION FROM	STATION TO	SLOPE S, %
25+14.75	27+84.75	-1.2
27+84.75	28+43.66	-6.04



ANCHOR BOLTS FOR RAIL POST



WALL RAILING SECTION

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-555", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGE SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

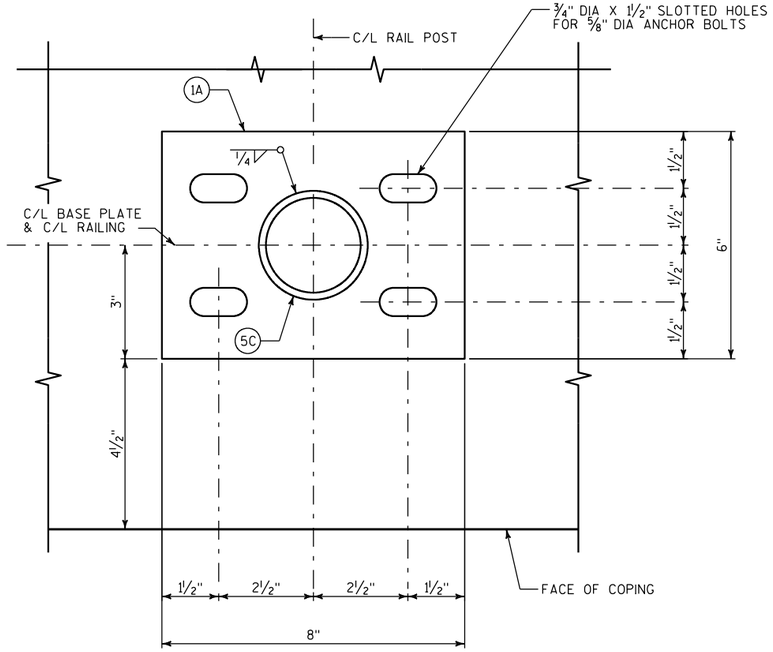
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

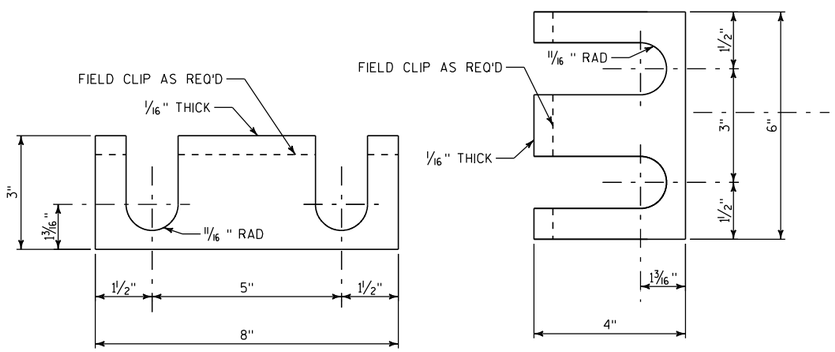
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE



RAIL POST SHIM DETAIL

(2 SETS PER POST)

LEGEND

- (1A) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".
- (5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.
- ◥ ½" ϕ DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

DRAWN BY	MR	PLANS CK'D.	MHZ

PIPE RAILING DETAILS

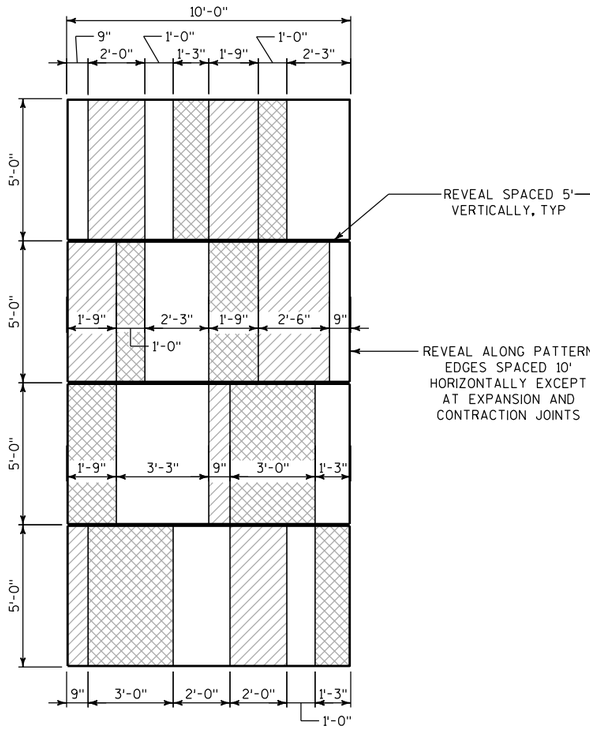
SHEET 8 OF 10

8

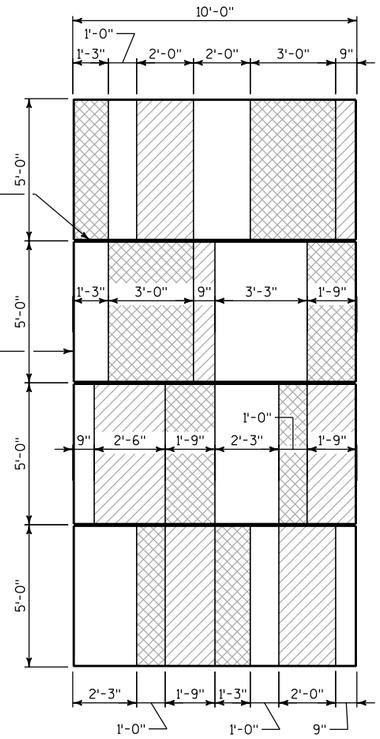
8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-555_Stage 2\cds\R-40-555_080108_rp.dgn PLOT DATE : 09-MAY-2014 12:03 PLOT BY : MSCM1M PLOT NAME : R-40-555_080108_rp PLOT SCALE : 2.000004:1

STATE PROJECT NUMBER
1060-33-80

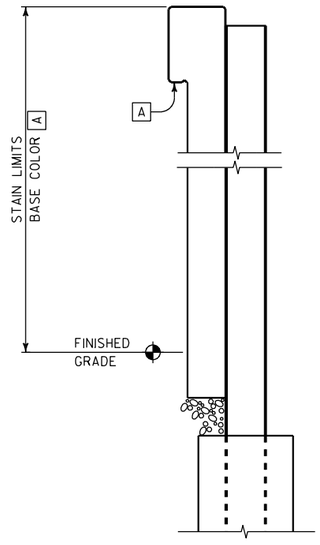


CAST-IN-PLACE 'A' PATTERN



CAST-IN-PLACE 'B' PATTERN

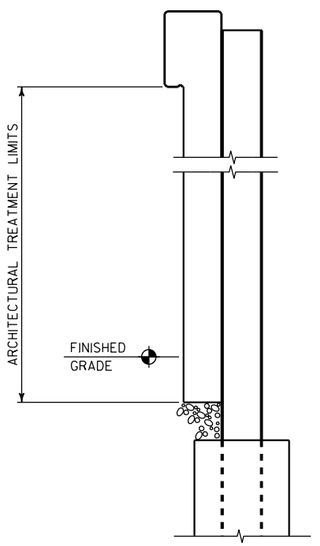
'A' PATTERN ROTATED 180°



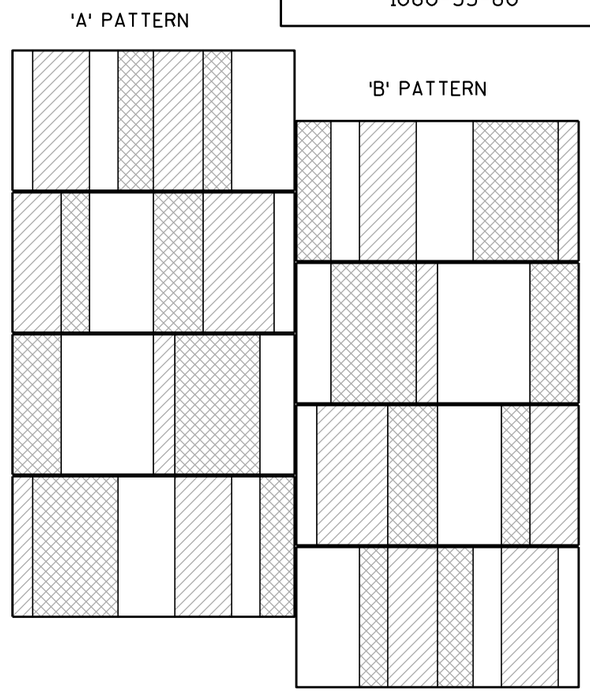
WALL STAINING DIAGRAM *

A BASE COLOR: FEDERAL COLOR - 33564

* "CONCRETE STAINING R-40-555" INCLUDES R-40-555-STAGE 1 (PROJECT NO. 1060-33-78) AND R-40-555-STAGE 2 CONCRETE STAINING.

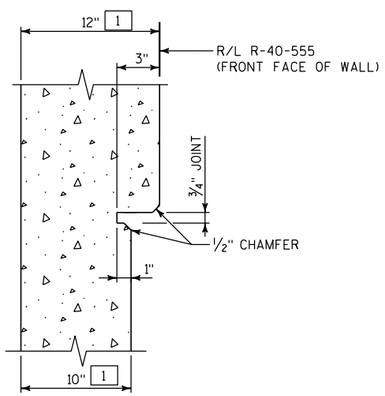


WALL ARCHITECTURAL TREATMENT DIAGRAM



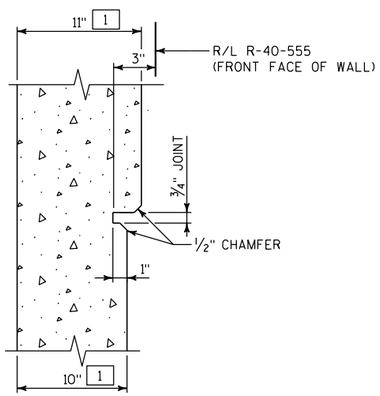
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED



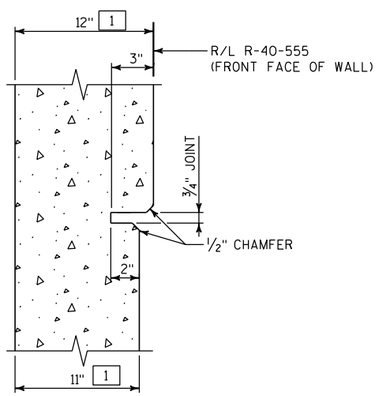
REVEAL DETAIL A

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 2"



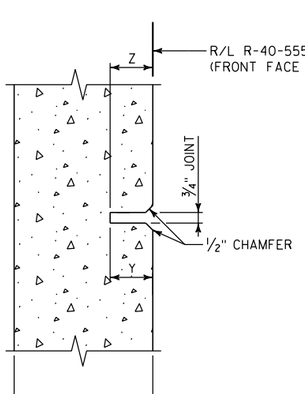
REVEAL DETAIL B

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 1"



REVEAL DETAIL C

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 1"



REVEAL DETAIL D

CONC FACING WIDTHS ADJACENT TO REVEAL ARE EQUAL

LEGEND

1 1'-0" THICK WALL

FACING THICKNESS	
	1
	10"
	11"
	12"

DIMENSIONS 1

X	Y	Z
12"	3"	3"
11"	2"	3"
10"	1"	3"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

DRAWN BY MR | PLANS CK'D. MHZ

AESTHETIC WALL TREATMENT DETAILS

SHEET 9 OF 10

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8

NOTES

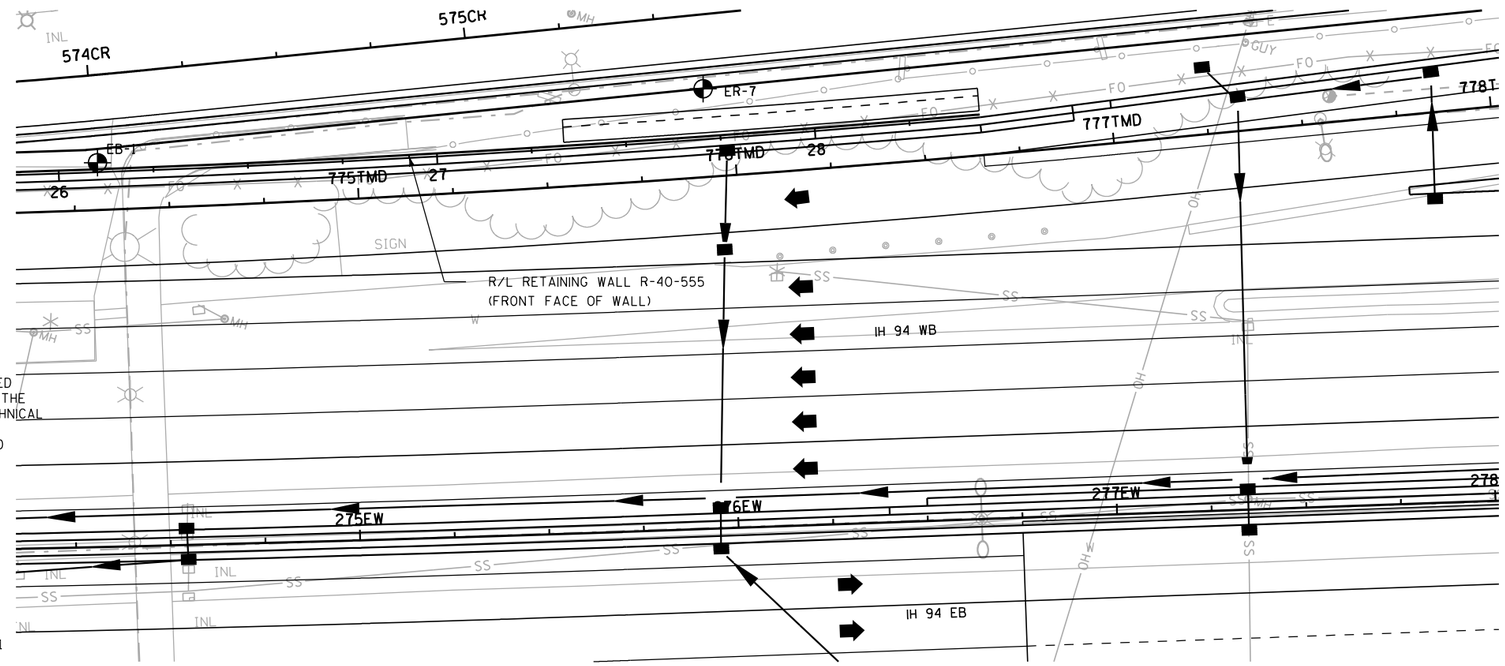
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

⊕ DENOTES SOIL BORING LOCATION

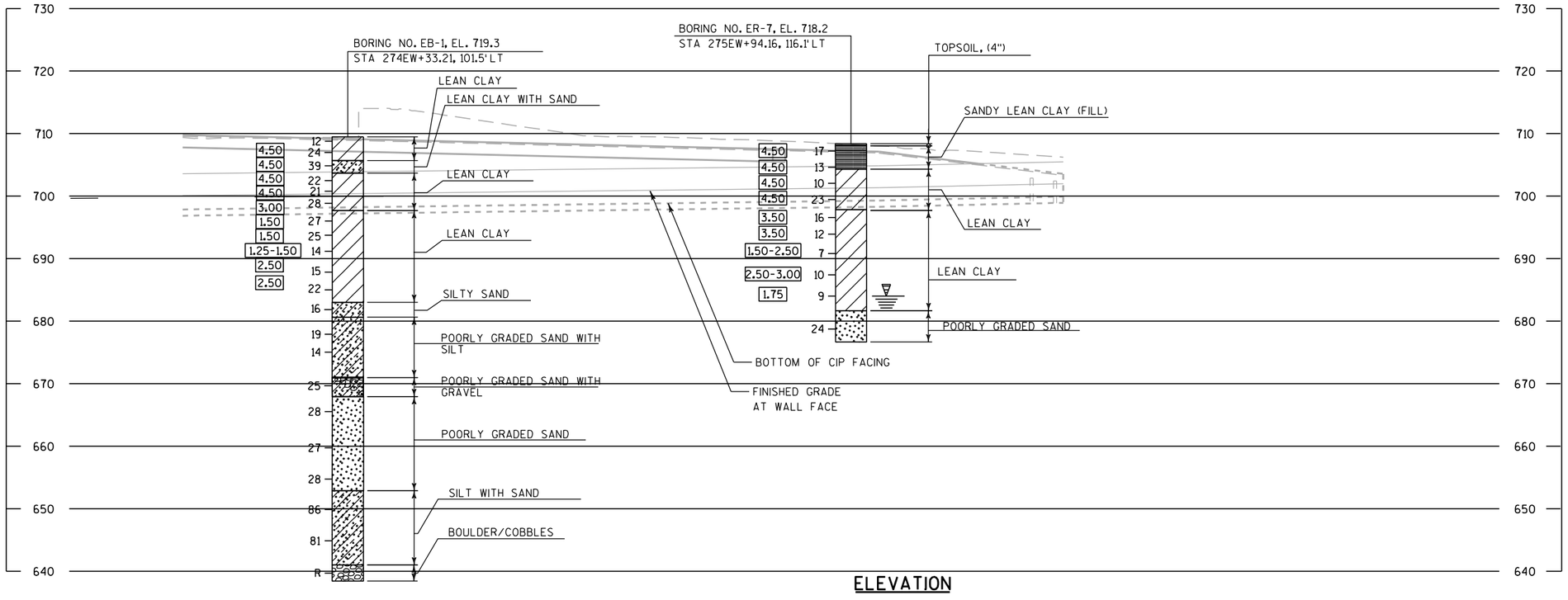
SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 26 2011 - BORING ER-7

SEPTEMBER 7-8 2011 - BORING EB-1



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-80

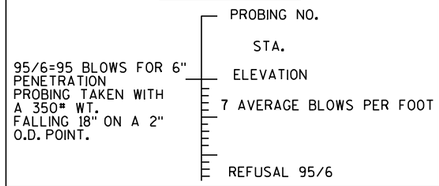
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

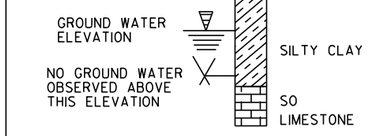
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555-STAGE 2

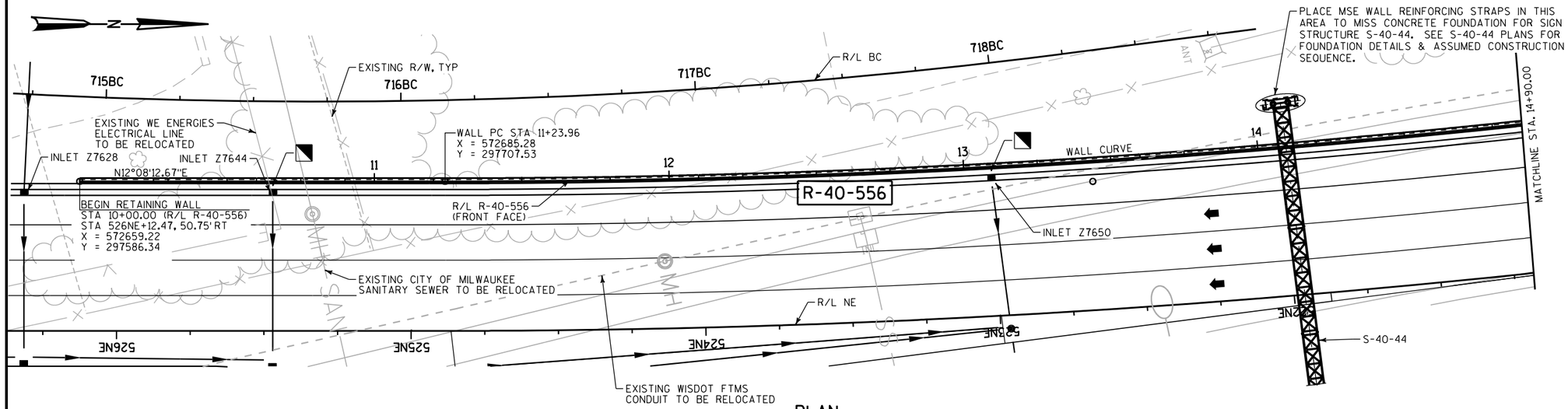
DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION

SHEET 10 OF 10

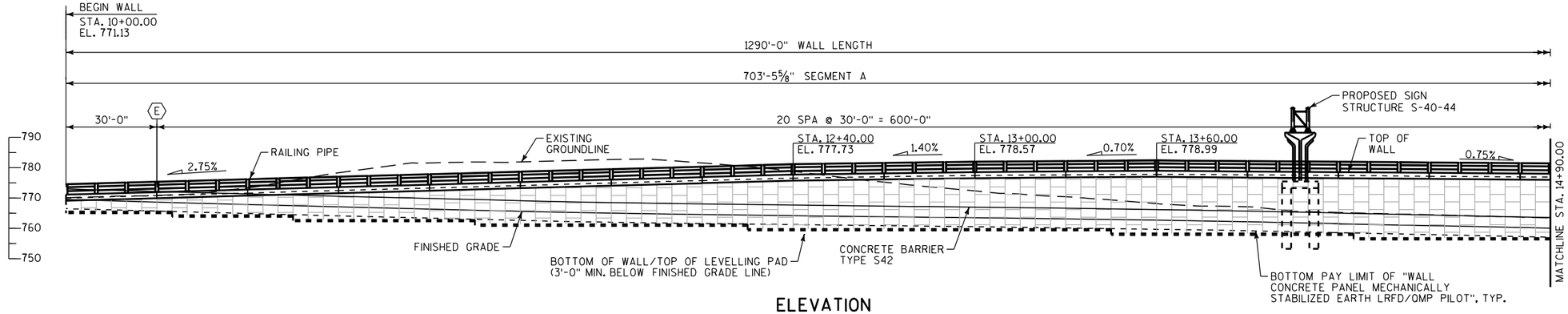
8

STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING WEST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012.

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY) 240 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY f'c = 4,000
PRECAST CONCRETE WALL PANELS f'c = 4,000
BAR STEEL REINFORCEMENT fy = 60,000 PSI

DESIGN RETAINING WALL TO IN FRONT OF THE BRIDGE B-40-866 WEST ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL ADJACENT TO THE ABUTMENT FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 3)
2. GENERAL PLAN & ELEVATION (2 OF 3)
3. GENERAL PLAN & ELEVATION (3 OF 3)
4. GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES
5. TYPICAL SECTIONS
6. COPING DETAILS
7. WALL ELEVATION TABLES
8. SEGMENT A COPING PLAN & ELEVATION
9. SEGMENT B COPING PLAN & ELEVATION
10. SEGMENT C COPING PLAN & ELEVATION
11. RAILING PIPE DETAILS
12. AESTHETIC WALL TREATMENT DETAILS
13. SUBSURFACE EXPLORATION (1 OF 3)
14. SUBSURFACE EXPLORATION (2 OF 3)
15. SUBSURFACE EXPLORATION (3 OF 3)

LEGEND

- (E) EXPANSION JOINT
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO PROPOSED INLET

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/16/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN KARL E. SCHMID E-30812 MILWAUKEE, WI PROFESSIONAL ENGINEER
5/9/2014

STRUCTURE R-40-556

RETAINING WALL W. OF U.S.H 45 UNDER BLUEMOUND RD.

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WAUWATOSA

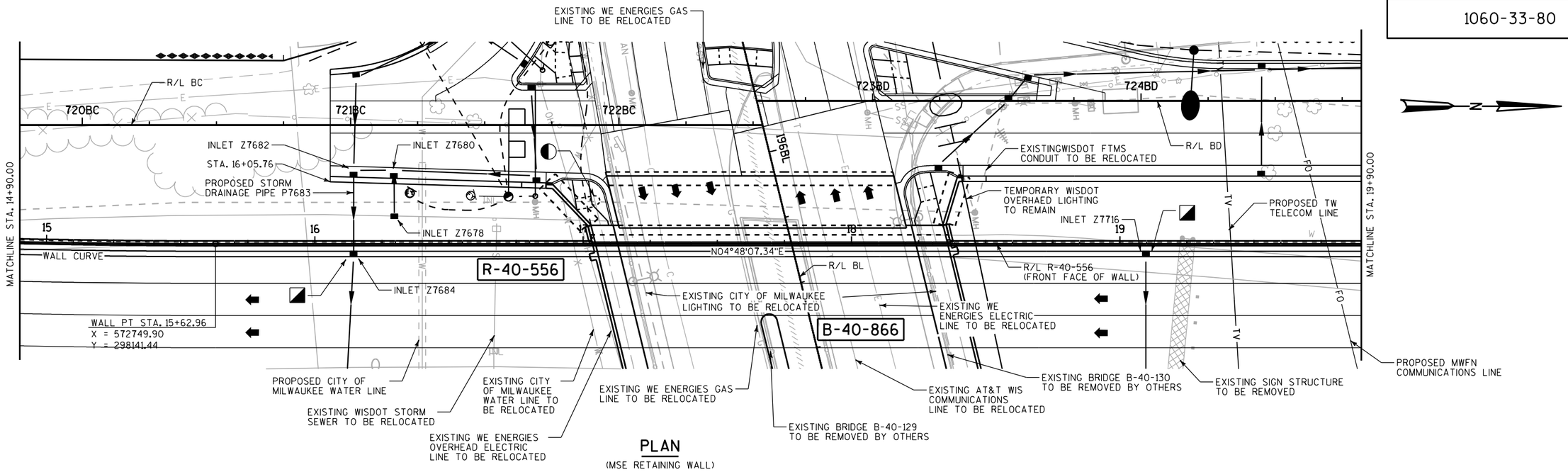
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	EKM	MS	EKM

GENERAL PLAN & ELEVATION (1 OF 3)

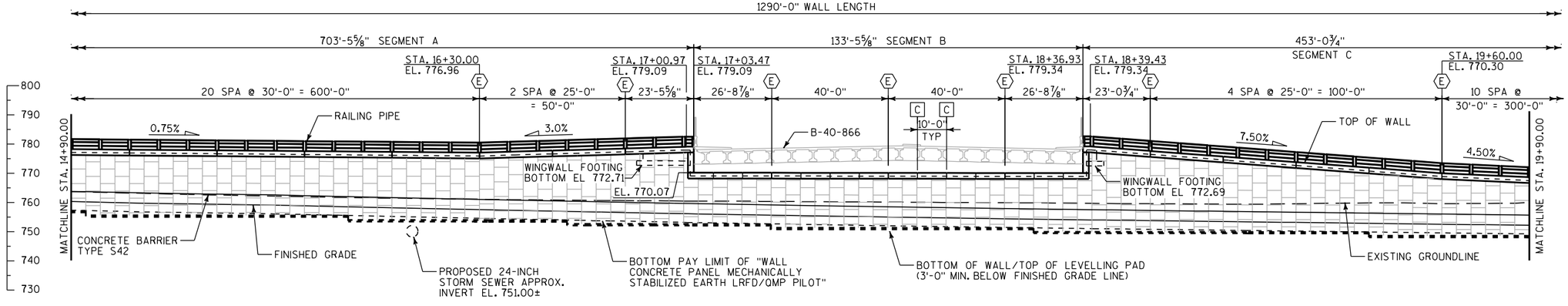
SHEET 1 OF 15

STATE PROJECT NUMBER
1060-33-80



PLAN

(MSE RETAINING WALL)



ELEVATION

(LOOKING WEST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO PROPOSED INLET
- CONCRETE BASE SLEEVE FOR TYPE 13 CONCRETE BASE. CENTER @ X = 572746.02, Y = 298284.66 SLEEVE BOTTOM EL = 764.3±, DIAM = 42"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

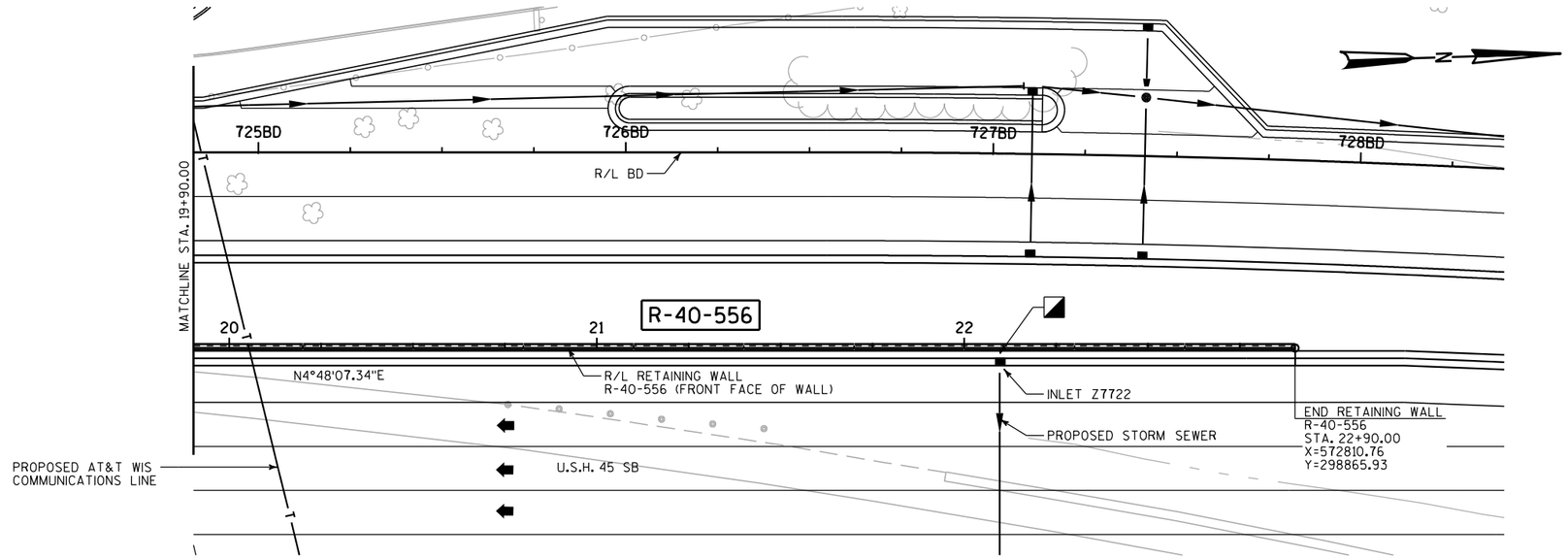
STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 3)

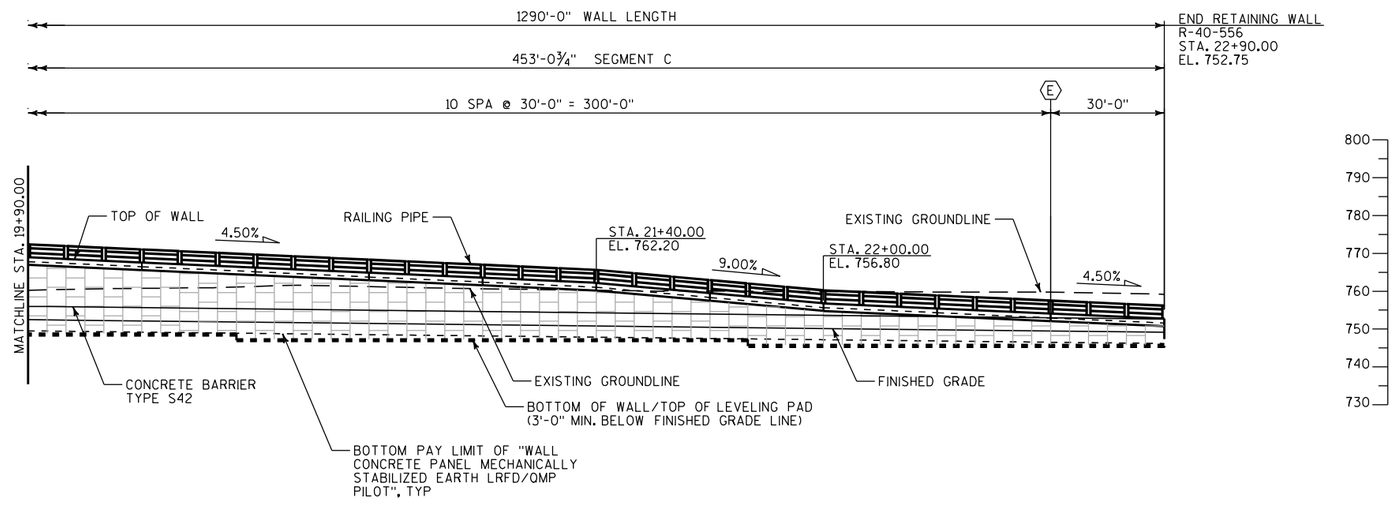
SHEET 2 OF 15

STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL



ELEVATION

LOOKING WEST AT FRONT FACE OF WALL

LEGEND

- (E) EXPANSION JOINT
- TRAFFIC DIRECTION
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO PROPOSED INLET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (3 OF 3)

SHEET 3 OF 15

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID - ITEM	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	TOTAL
513.2000	RAILING PIPE R-40-556	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	5	5	20
517.1050.S	ARCHITECTURAL SURFACE TREATRMENT R-40-556	SF	9,360	1,940	5,735	17,035
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20	---	10	30
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	705	135	455	1,295
SPV.0060.4195	CONCRETE BASE SLEEVES	EACH	---	1	---	1
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	12,215	2,420	7,595	22,230
	NON BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				1"
	NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"
	CORK FILLER	SIZE				1"

ALL ITEMS ARE CATEGORY 3150

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS						
WALL HEIGHT (FEET)	22.30	25.5	27.9	27.6	21.2	9.74
EXPOSED WALL HEIGHT (FEET)	20.30	23.50	16.60	25.60	20.40	6.74
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	17.8	20.4	19.4	19.3	17.00	7.8
WALL STATION	16+00	17+00	18+00	18+50	19+50	22+00
BORING USED	NR-34	NB-40	NB-37	NB-37	NR-33	NR-32
CAPACITY TO DEMAND RATIO (CDR)						
SLIDING	1.36	1.32	1.34	1.38	1.26	1.06
ECCENTRICITY	1.26	1.44	1.12	1.11	1.34	1.20
BEARING	1.47	1.08	1.50	1.31	1.04	1.85
GLOBAL STABILITY	1.21	1.09	> 1.00	1.05	1.03	> 1.00

⚹ MINIMUM LENGTH APPLIES ONLY AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

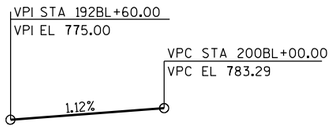
MSE WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
GRANULAR BACKFILL (REINGFORCING ZONE OR BACKFILL) ⚹	120	30	0	30	0
LEAN CLAY TO SANDY CLAY (RETAINED SOIL)	130	0	1250-3000	28	0
LEAN CLAY (FOUNDATION SOIL)	120-130	0	1750-2500	30-32	0
SAND WITH SILT (FOUNDATION SOIL)	125-133	28-34	0	28-34	0

⚹ DESIGN WALL FOR THESE VALUES

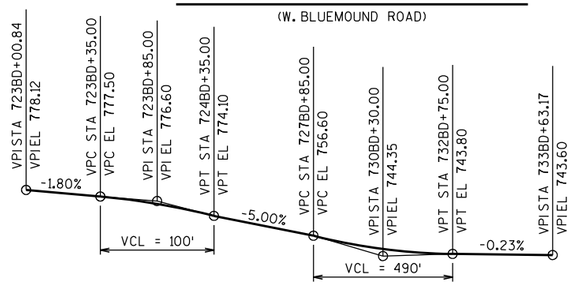
HORIZONTAL CURVE DATA

PI = STA. 13+43.76
X = 572731.50
Y = 297922.41
DELTA = 7°20'05.33" LT
D = 1°40'14.87"
R = 3429.25'
T = 219.80
L = 439.00
E = 7.04
PC = STA. 11+23.96
X = 572685.28
Y = 297707.53
PT = STA. 15+62.96
X = 572749.90
Y = 298141.44



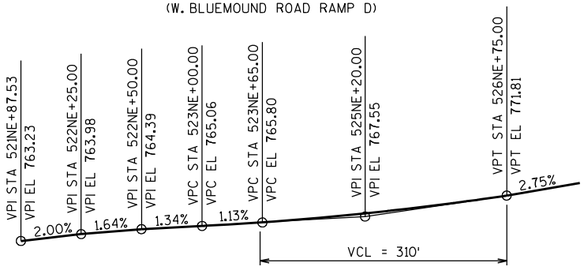
PROFILE GRADE LINE - R/L BL

(W. BLUEMOUND ROAD)



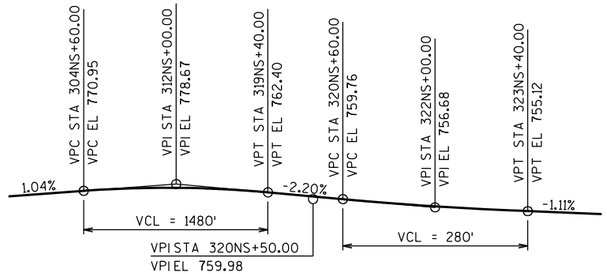
PROFILE GRADE LINE - R/L BD

(W. BLUEMOUND ROAD RAMP D)



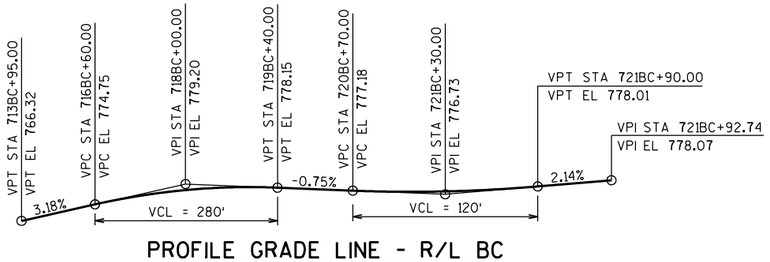
PROFILE GRADE LINE - R/L NE

(NORTH TO EAST RAMP)



PROFILE GRADE LINE - R/L NS

(USH 45 NB & SB)



PROFILE GRADE LINE - R/L BC

(W. BLUEMOUND ROAD RAMP C)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET, ELEVATIONS ARE REFERENCED TO THE NAVD 88 DATUM.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE REMOVAL OF EXISTING STRUCTURES B-40-129 AND B-40-130 IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF B-40-866 BRIDGE QUANTITIES.

COORDINATE THE CONSTRUCTION OF WALL R-40-556 WITH WEST ABUTMENT OF BRIDGE B-40-866.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

COORDINATE THE CONSTRUCTION OF THE STORM SEWER COMPONENTS, INCLUDING INLETS, LATERALS AND STRUCTURES, WITH THE CONSTRUCTION OF THE WALL.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELLED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

PLANS, DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½ INCHES. FOR PANEL THICKNESSES OTHER THAN 7½ INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE 3'-0" BELOW FINISHED GRADE.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

THE QUANTITIES OF CONCRETE MASONRY & BAR STEEL REINFORCEMENT FOR THE CAST-IN-PLACE COPING ARE INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH, LFRD / QMP PILOT".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES

SHEET 4 OF 15

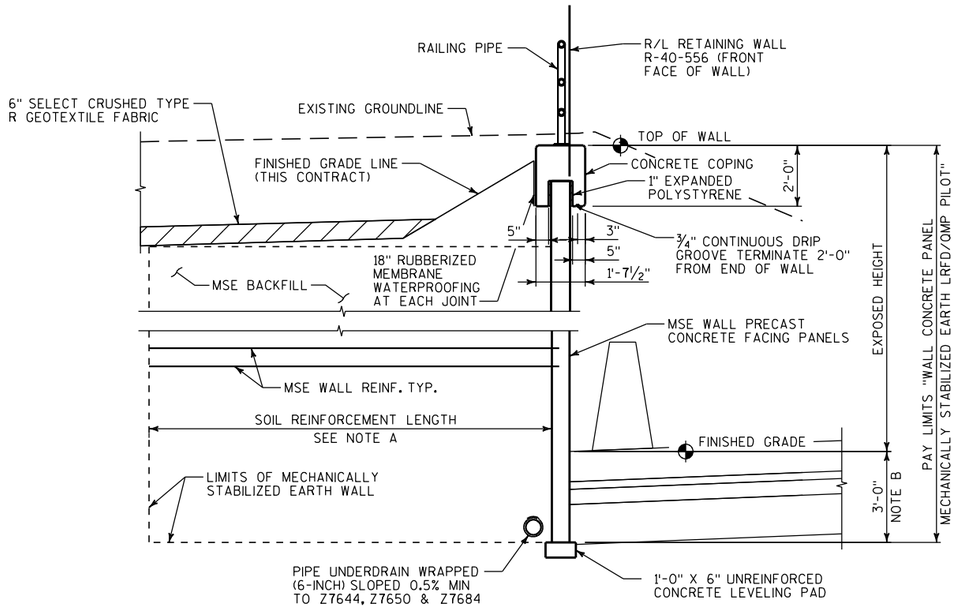
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8

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PLOT DATE : 02-MAY-2014 09:39
PLOT BY : MSCEKM
PLOT NAME : R-40-556_080201_qu
PLOT SCALE : 8:1

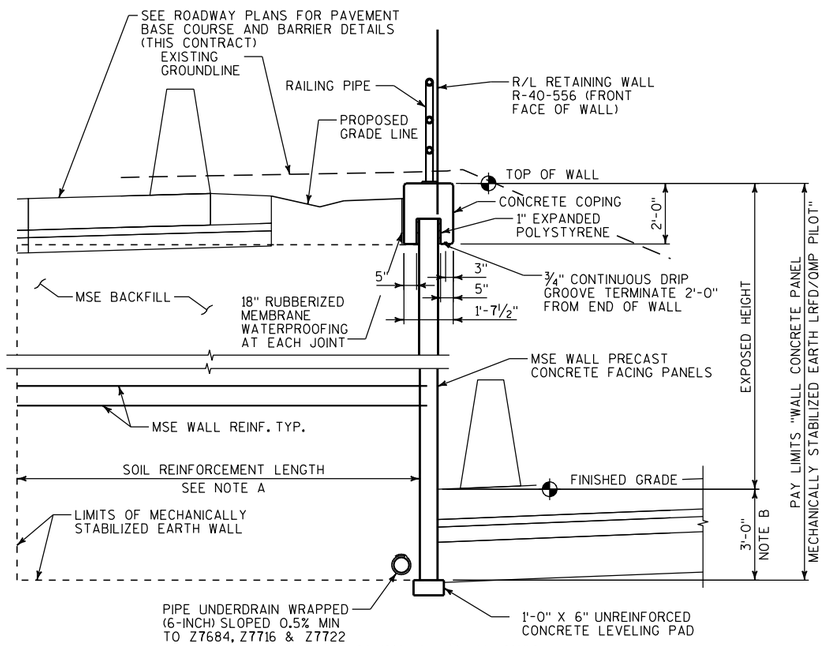
STATE PROJECT NUMBER

1060-33-80



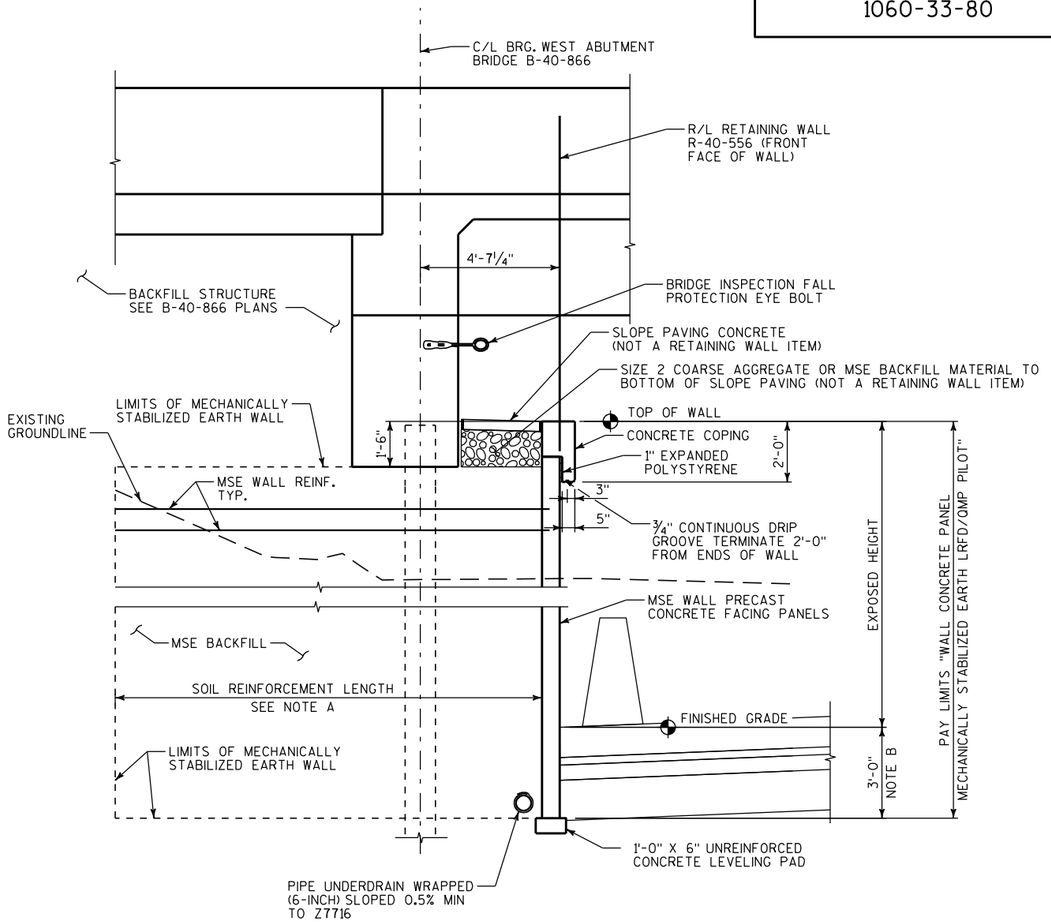
TYPICAL SECTION

LOOKING NORTH - STA. 10+00.00 TO STA. 16+05.76 - SEGMENT A



TYPICAL SECTION

LOOKING NORTH - STA. 16+05.76 TO STA. 17+03.47 - SEGMENT A
LOOKING NORTH - STA. 18+36.93 TO STA. 22+90.00 - SEGMENT C



TYPICAL SECTION

LOOKING NORTH - STA. 17+03.47 TO STA. 18+36.93 - SEGMENT B

NOTES

BRIDGE B-40-866, ROADWAY PAVEMENTS, AND ROADWAY BARRIERS ARE NOT RETAINING WALL ITEMS.

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 4 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NOTE B:

MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE FABRICATOR OF THE WALL PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

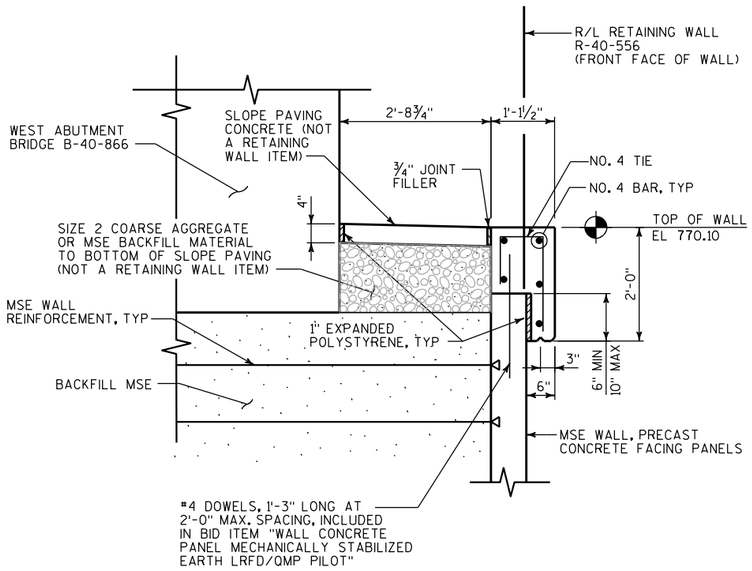
TYPICAL SECTIONS

SHEET 5 OF 15

8

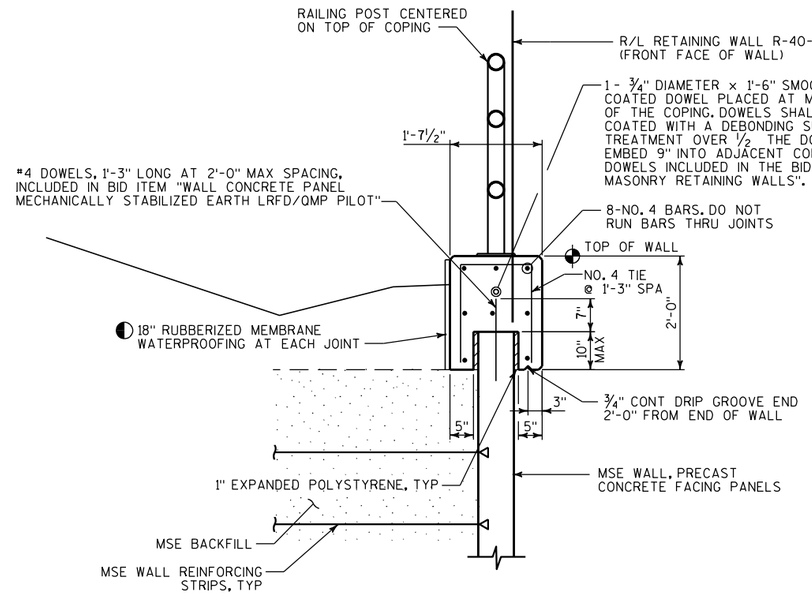
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COPING DETAIL AT SEGMENT B

STA 17+03.47 TO STA 18+36.93



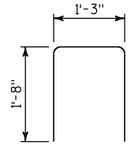
SEGMENTS A & C COPING DETAIL TYP.

SEGMENT A STA 10+00.00 TO STA 17+03.47
SEGMENT C STA 18+36.93 TO STA 22+90.00

LEGEND

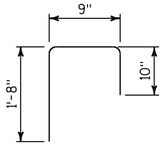
† NON-BITUMINOUS JOINT SEALER, COLOR TO MATCH CONCRETE STAIN. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER OR CORK FILLER.

MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.



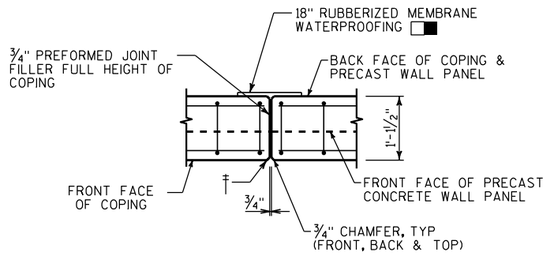
SEGMENT A & C

(NO. 4 TIE)



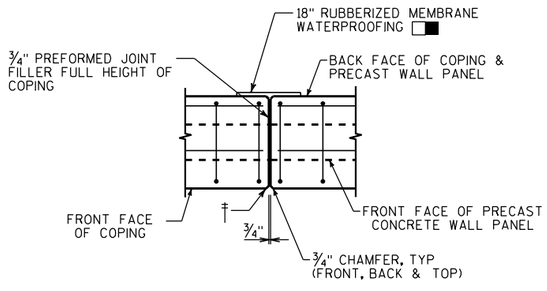
SEGMENT B

(NO. 4 VERT TIE)



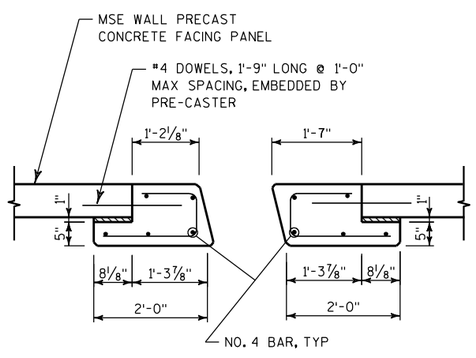
COPING EXPANSION JOINT AT SEGMENT B

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER



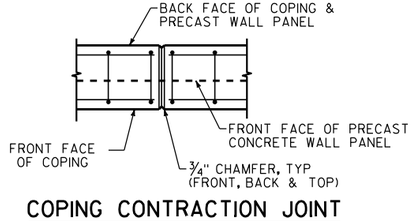
COPING EXPANSION JOINT SEGMENTS A & C

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER



SECTION A-A

(VERTICAL COPING SEGMENT B)
(SEE SHEET 9)



COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATIONS OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

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COPING DETAILS

SHEET 6 OF 15

8

8

STATE PROJECT NUMBER
1060-33-80

SEGMENT A WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
10+00.00	771.13	770.07	769.50
10+30.00	771.96	770.86	768.65
10+60.00	772.78	773.37	767.85
10+90.00	773.61	778.36	767.09
11+20.00	774.43	781.53	766.37
11+50.00	775.26	781.86	765.63
11+80.00	776.08	782.63	765.00
12+10.00	776.91	781.52	764.58
12+40.00	777.73	778.81	764.20
12+70.00	778.15	775.19	763.85
13+00.00	778.57	772.25	763.50
13+30.00	778.78	770.35	763.11
13+60.00	778.99	768.14	762.68
13+90.00	778.76	767.08	762.17
14+20.00	778.54	765.21	761.58
14+50.00	778.31	764.43	760.91
14+80.00	778.09	763.66	760.27
15+10.00	777.86	762.94	759.63
15+40.00	777.64	762.34	759.17
15+70.00	777.41	761.78	758.68
16+00.00	777.19	761.33	758.04
16+30.00	776.96	760.96	757.44
16+55.00	777.71	760.73	756.96
16+80.00	778.46	760.56	756.50
17+00.97	779.09	760.46	756.13
17+03.47	779.09	760.45	756.09

◣ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

SEGMENT B WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
17+03.47	770.07	760.45	756.09
17+10.20	770.07	760.43	755.99
17+30.20	770.07	760.35	755.66
17+70.20	770.07	760.17	755.06
18+10.20	770.07	759.99	754.53
18+30.20	770.07	759.89	754.28
18+36.93	770.07	759.84	754.20

◣ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

SEGMENT C WALL ELEVATIONS ◣

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
18+36.93	779.34	759.84	754.20
18+39.43	779.34	759.82	754.17
18+60.00	777.80	759.70	753.94
18+85.00	775.92	759.62	753.65
19+10.00	774.05	759.76	753.38
19+35.00	772.17	760.04	753.10
19+60.00	770.30	759.78	752.82
19+90.00	768.95	760.23	752.49
20+20.00	767.60	760.68	752.15
20+50.00	766.25	761.24	751.82
20+80.00	764.90	761.18	751.48
21+10.00	763.55	760.61	751.15
21+40.00	762.20	760.19	750.82
21+70.00	759.50	759.97	750.48
22+00.00	756.80	759.88	750.15
22+30.00	755.45	759.78	749.81
22+60.00	754.10	759.70	749.48
22+90.00	752.75	759.16	749.15

◣ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

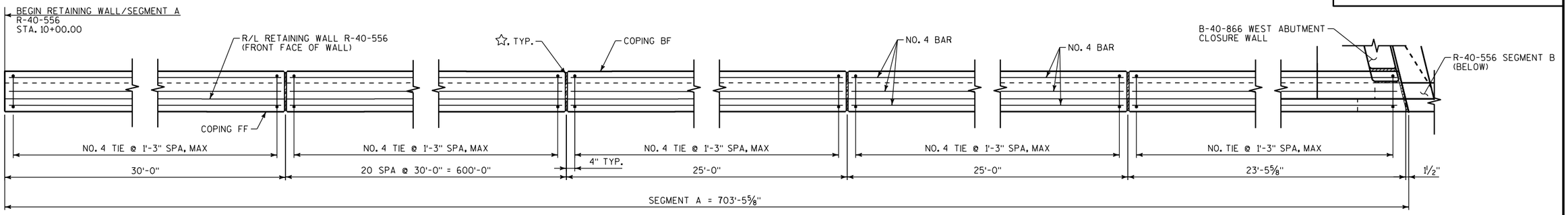
DRAWN BY MS | PLANS CK'D. EKM

WALL ELEVATION TABLES

SHEET 7 OF 15

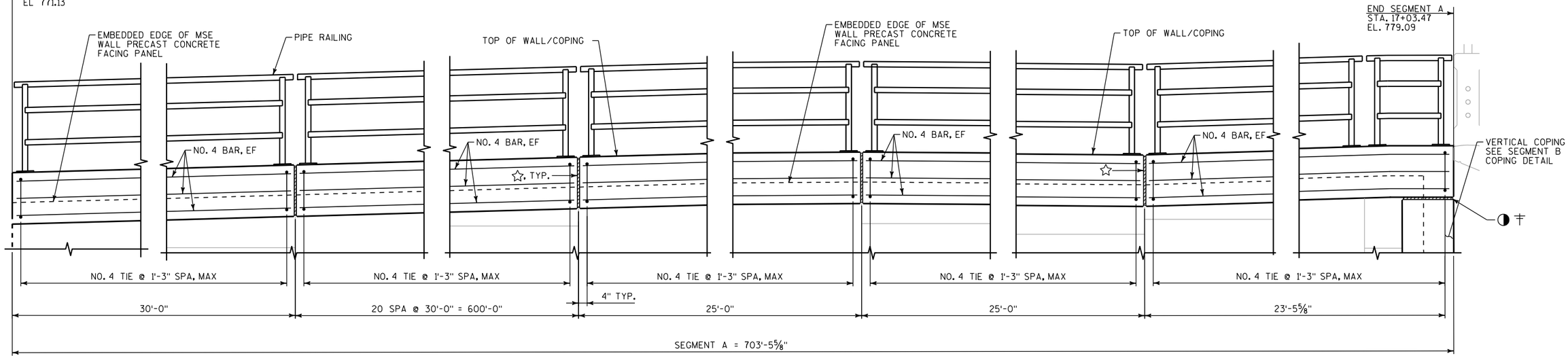
3200

STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT A

DIMENSIONS ARE ALONG R/L R-40-556



ELEVATION - SEGMENT A

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-556

LEGEND

☆ 1" CORK FILLER

◑ 1" PREFORMED JOINT FILLER

⊤ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

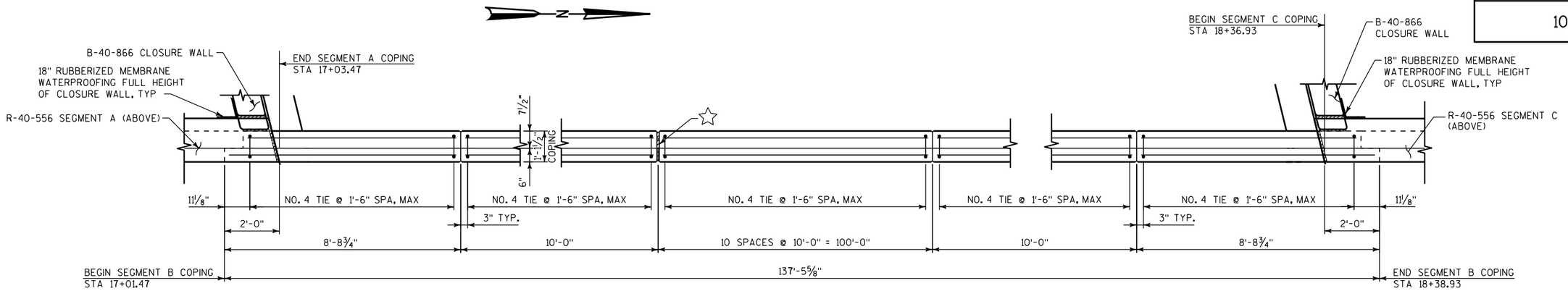
DRAWN BY	MS	PLANS CK'D.	EKM

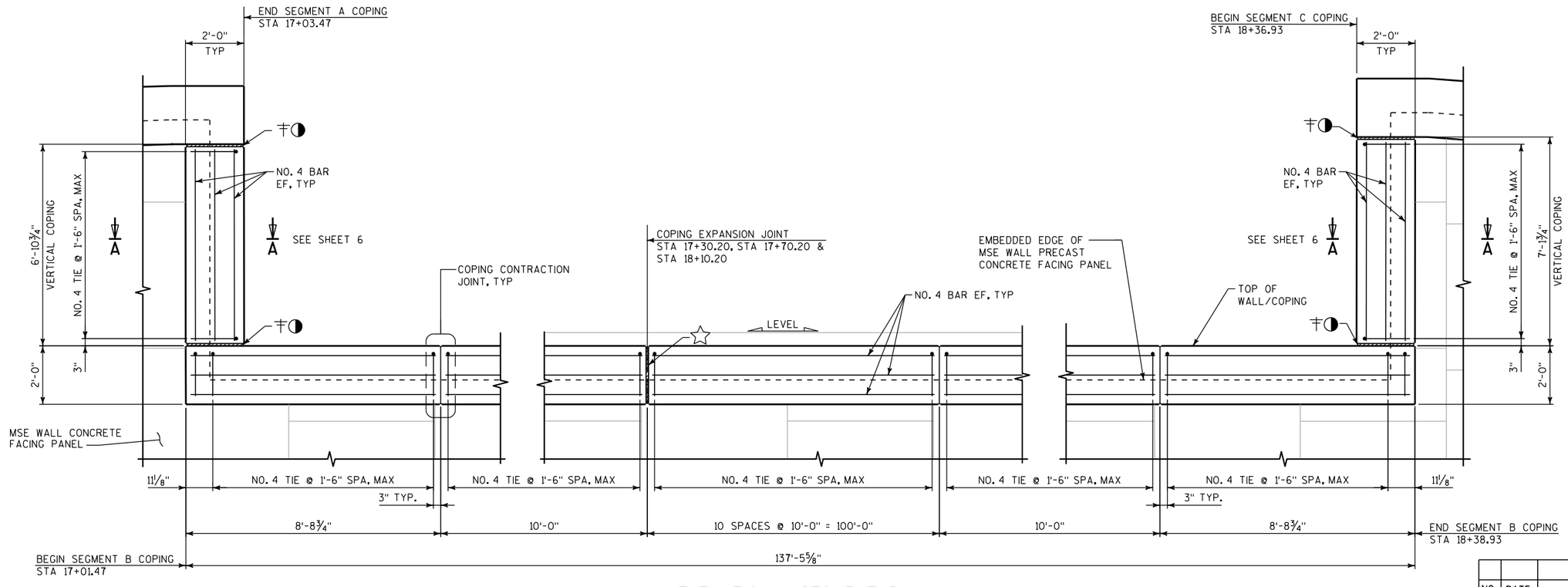
SEGMENT A
COPING PLAN
& ELEVATION

SHEET 8 OF 15

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-556\cds\R-40-556_080303_de.dgn
PLOT DATE : 02-MAY-2014 09:39
PLOT BY : MSCEKM
PLOT NAME : R-40-556_080303_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80





ELEVATION - SEGMENT B

LOOKING WEST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-556

LEGEND

☆ 1" CORK FILLER

◑ 1" PREFORMED JOINT FILLER

⊣ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

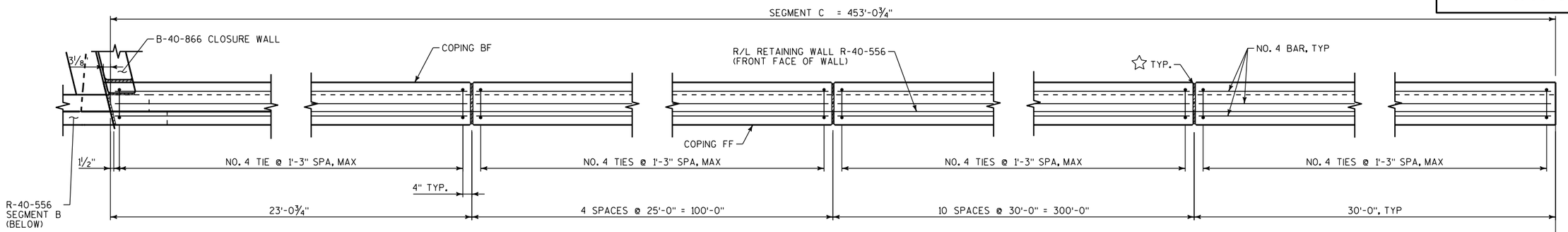
SEGMENT B
COPING PLAN
& ELEVATION

SHEET 9 OF 15

8

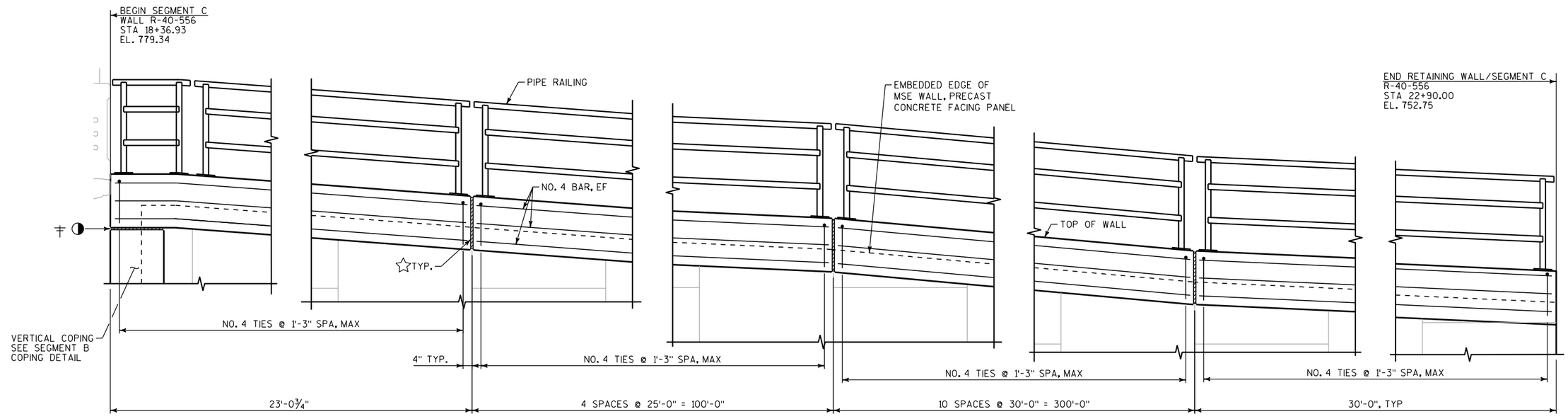
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STATE PROJECT NUMBER
1060-33-80



PLAN - SEGMENT C

DIMENSIONS ARE GIVEN ALONG R/L R-40-556



ELEVATION - SEGMENT C

(LOOKING WEST AT FRONT FACE OF WALL)
(DIMENSIONS ARE ALONG R/L R-40-556)

LEGEND

- ☆ 1" CORK FILLER
- ◑ 1" PREFORMED JOINT FILLER
- ⫩ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

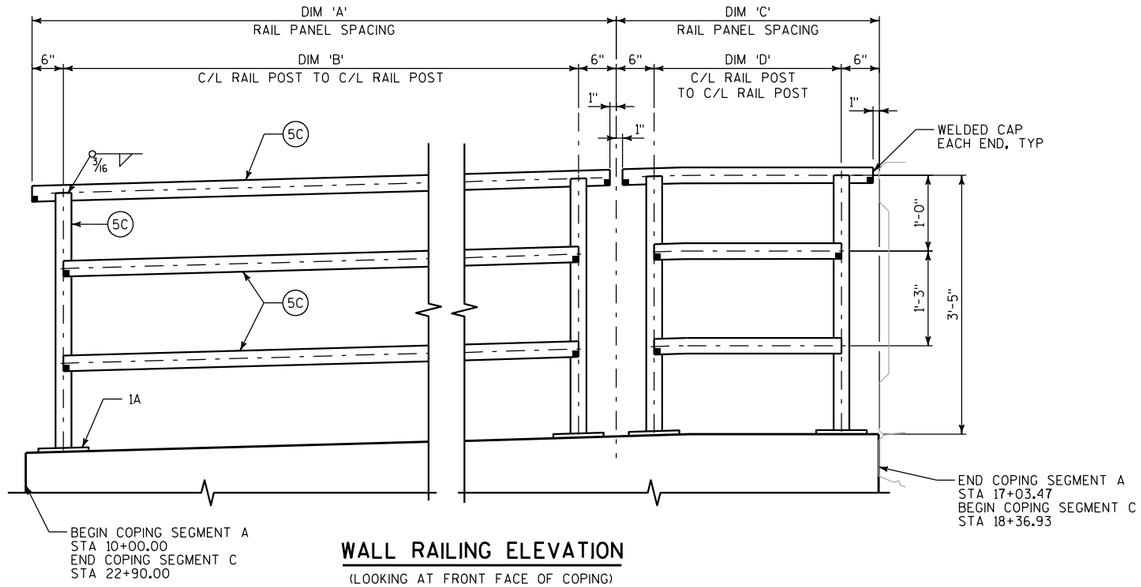
DRAWN BY	MS	PLANS CK'D.	EKM

SECTION C
COPING PLAN
& ELEVATION

SHEET 10 OF 15

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PLOT DATE : 02-MAY-2014 09:39
PLOT BY : MSCEKM
PLOT NAME : R-40-556_080305_de
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING)

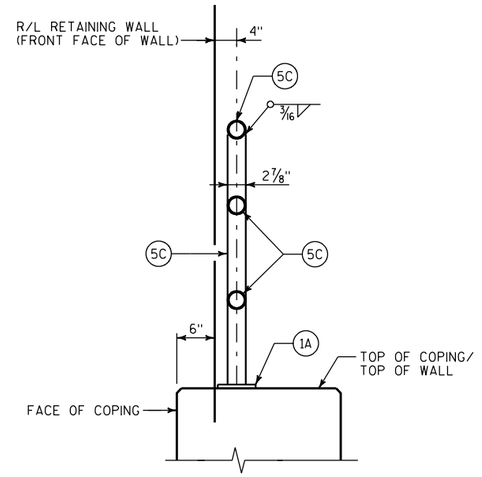
WALL RAILING DIMENSIONS TABLE

DIM	SEGMENT A	SEGMENT C
'A'	70 SPACES @ 10'-0"	45 SPACES @ 10'-0"
'B'	9'-0" EACH PANEL	9'-0" EACH PANEL
'C'	1 SPACE @ 3'-5⅝"	1 SPACE @ 3'-0¾"
'D'	2'-5⅝"	2'-0¾"

WALL RAILING SLOPE TABLES

SEGMENT A	
STATION	SLOPE
10+00 - 12+40.00	2.75%
12+40 - 13+00.00	1.40%
13+00.00 - 13+60.00	0.70%
13+60.00 - 16+30.00	-0.75%
16+30.00 - 17+00.97	3.00%
17+00.97 - 17+03.47	0.00%

SEGMENT C	
STATION	SLOPE
18+36.93 - 18+39.43	0.00%
19+39.43 - 19+60.00	-7.50%
19+60.00 - 21+40.00	-4.50%
21+40.00 - 22+00.00	-9.00%
22+00.00 - 22+90.00	-4.50%



WALL RAILING SECTION

NOTES

BID ITEM "RAILING PIPE R-40-556" INCLUDES ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

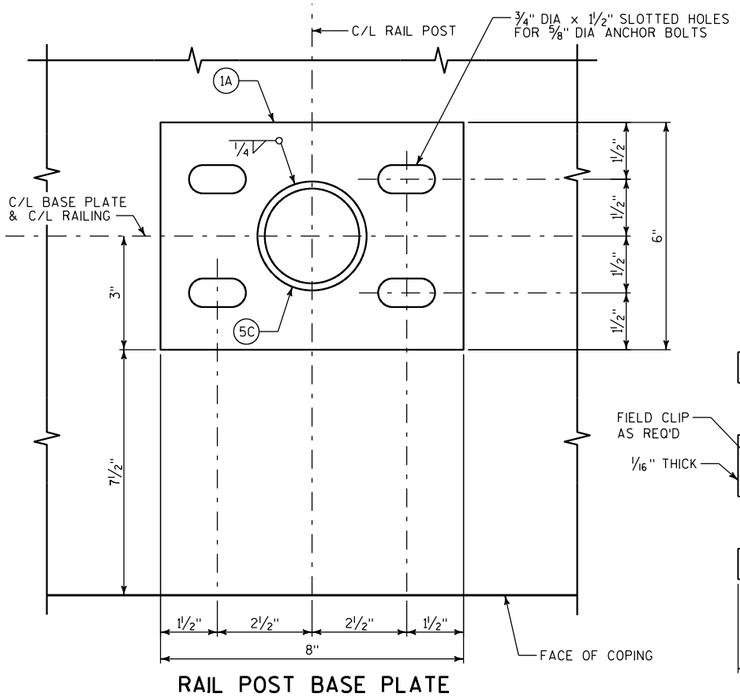
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

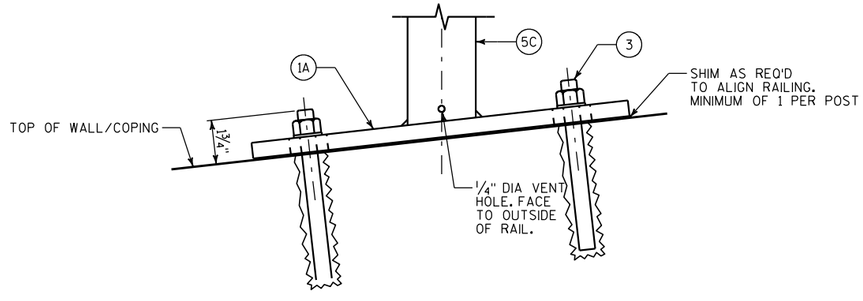
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

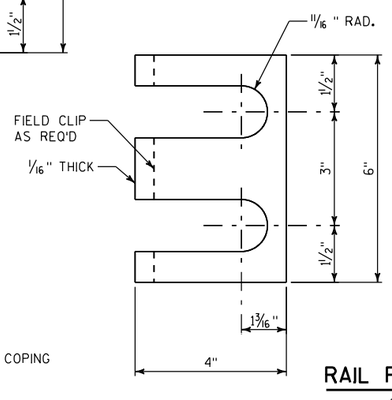
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE

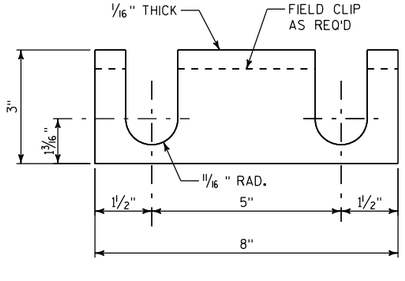


ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)



LEGEND

(1A) PLATE 5/8" x 6" x 8" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA. EMBED A MINIMUM OF 7" INTO CONCRETE.

(5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING/ TOP OF WALL. WELD TO 5C.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

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RAILING PIPE DETAILS

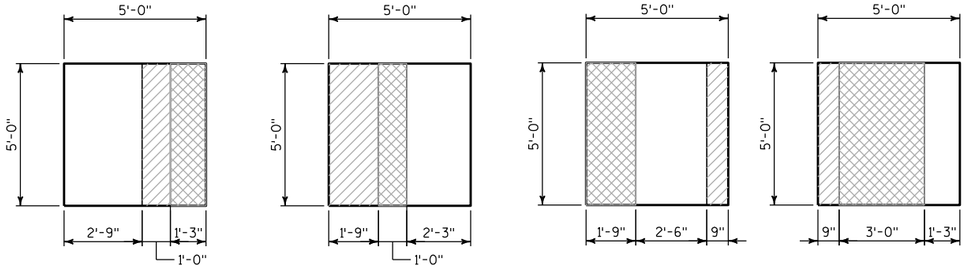
SHEET 11 OF 15

8

8

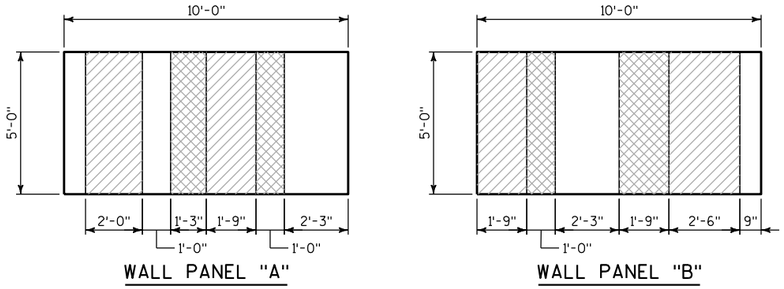
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PLOT BY : MSCKES
PLOT NAME : R-40-556_080306_de
PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



WALL PANEL "A" WALL PANEL "B" WALL PANEL "C" WALL PANEL "D"

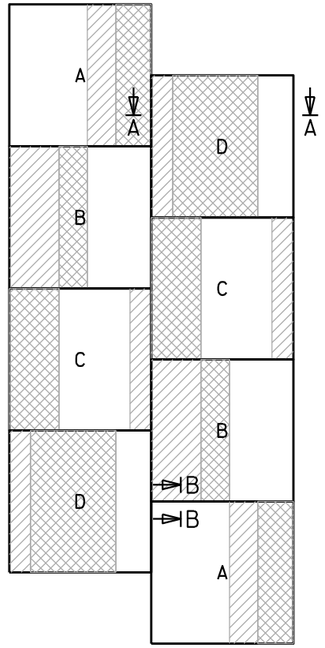
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



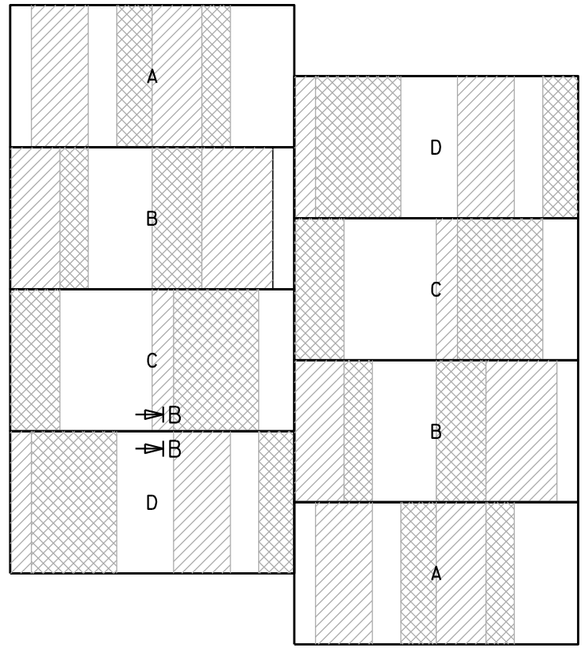
WALL PANEL "A" WALL PANEL "B"

LEGEND

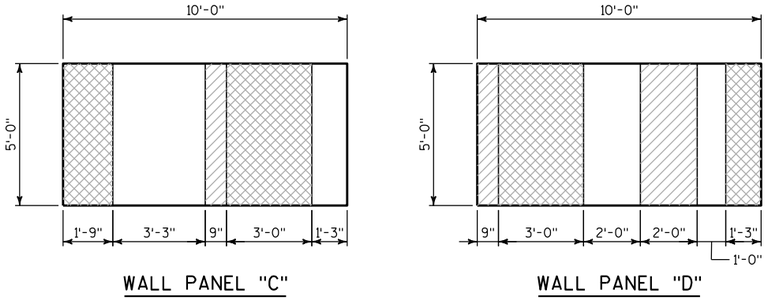
- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS + 0"



TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN



TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN



WALL PANEL "C" WALL PANEL "D"

5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

CONCRETE STAINING SCHEDULE

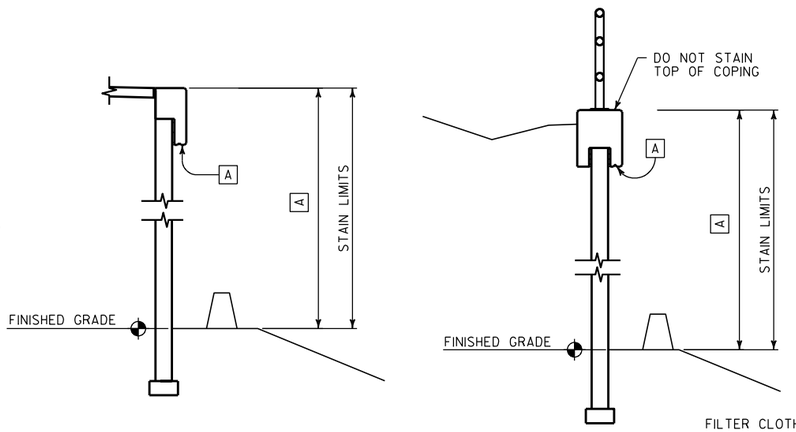
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

STAIN COLORS

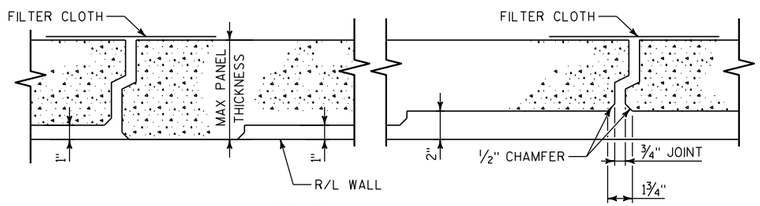
THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR : 33564

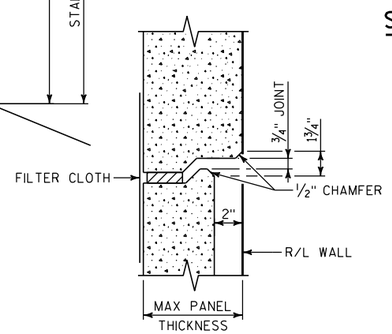
CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



MSE WALL STAINING DIAGRAMS



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

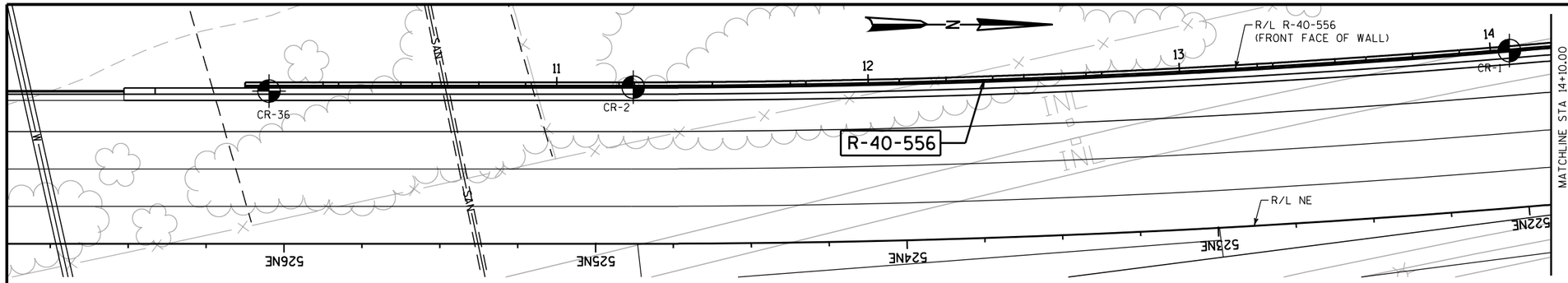
AESTHETIC WALL TREATMENT DETAILS

SHEET 12 OF 15

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-556\cds\R-40-556_080401_ae.dgn PLOT DATE : 02-MAY-2014 09:39 PLOT BY : MSCEKM PLOT NAME : R-40-556_080401_ae PLOT SCALE : 5.333333:1



NOTE:

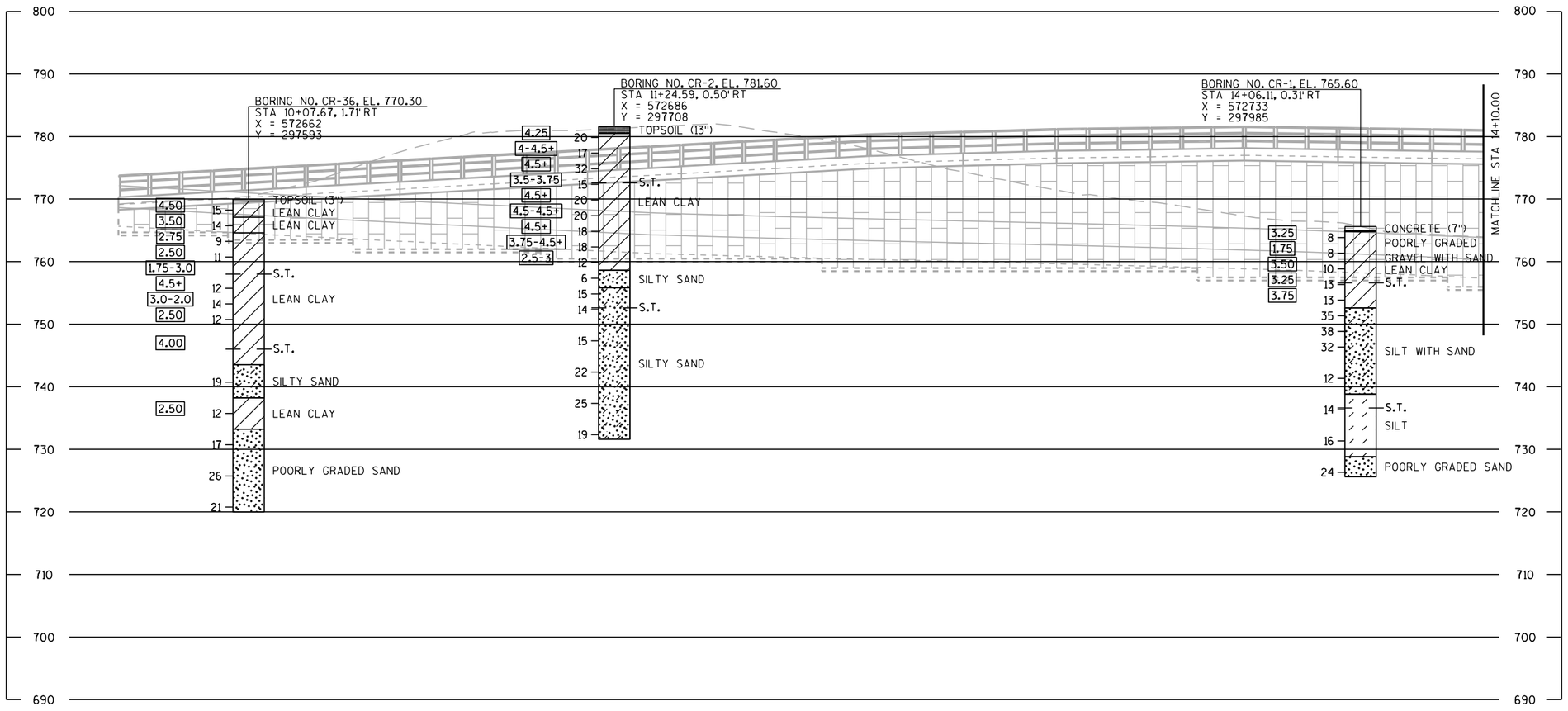
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-556.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 06, 2011 - BORING CR-1
NOV. 11, 2011 - BORING CR-2
APR. 08, 2012 - BORING CR-36



STATE PROJECT NUMBER

1060-33-80

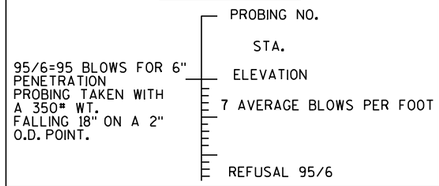
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

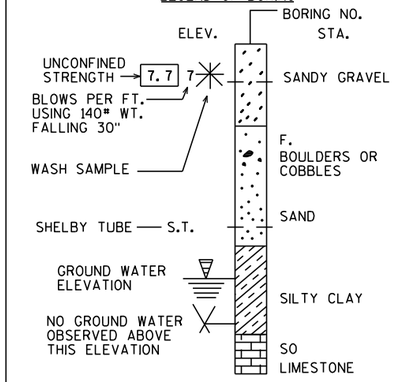
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY	MS	PLANS CK'D.	EKM

SUBSURFACE EXPLORATION (1 OF 3)

SHEET 13 OF 15

8

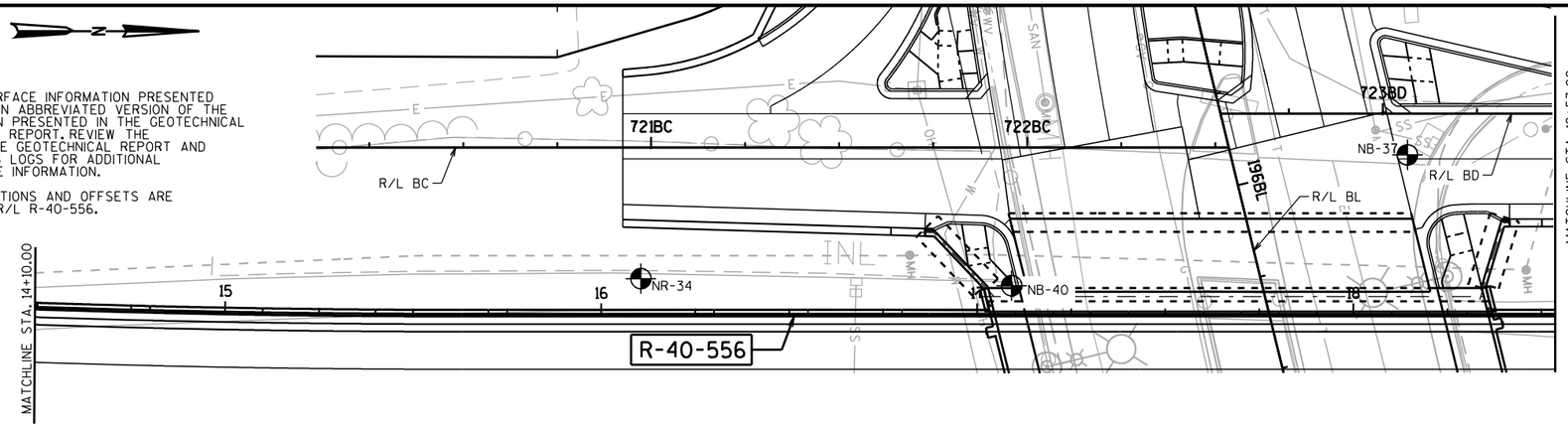
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NOTE:

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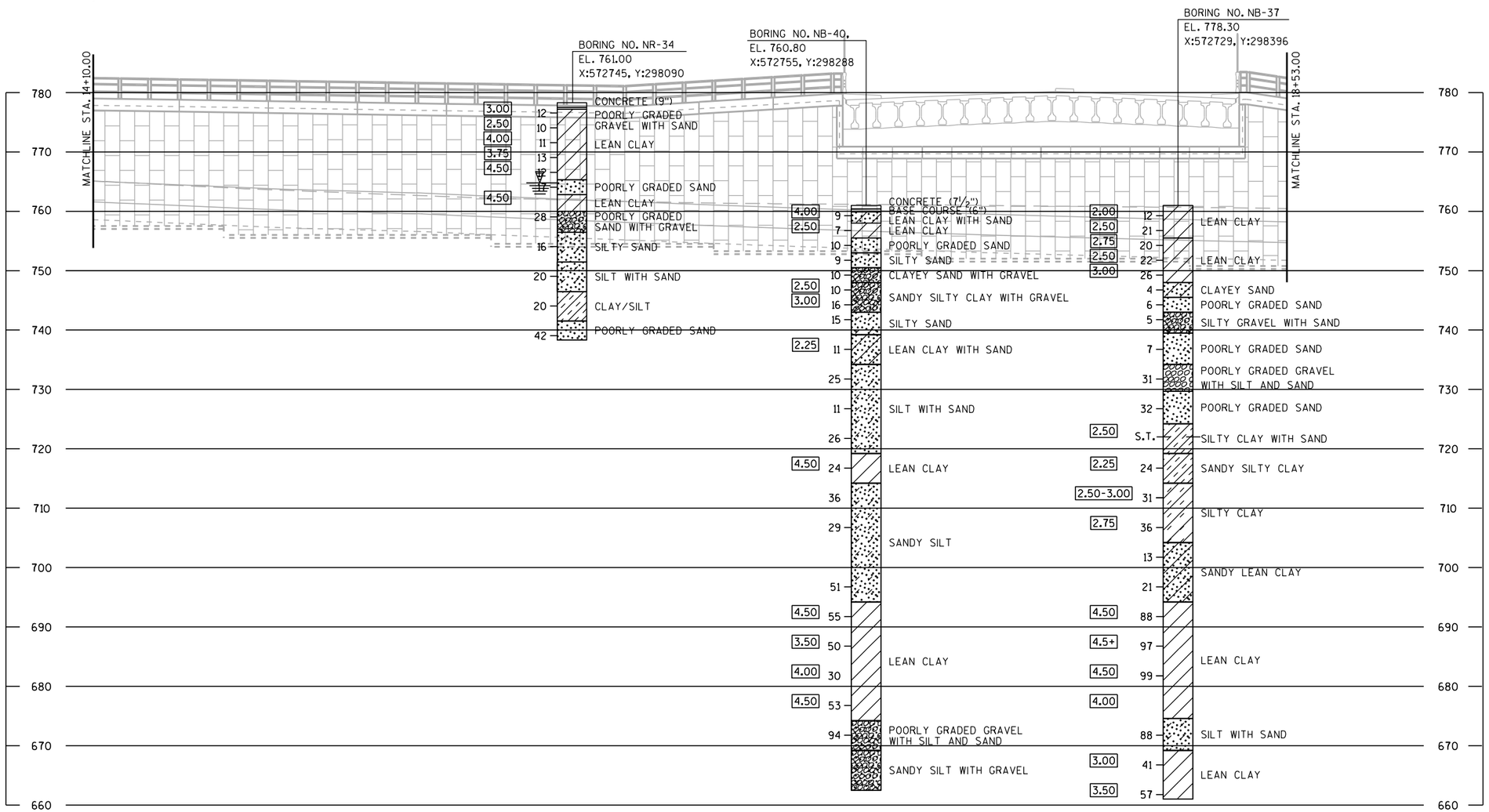
BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-556.



DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 06, 2011 - BORING NR-34
SEP. 29, 2011 - BORING NB-37
NOV. 06, 2011 - BORING NB 40



STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

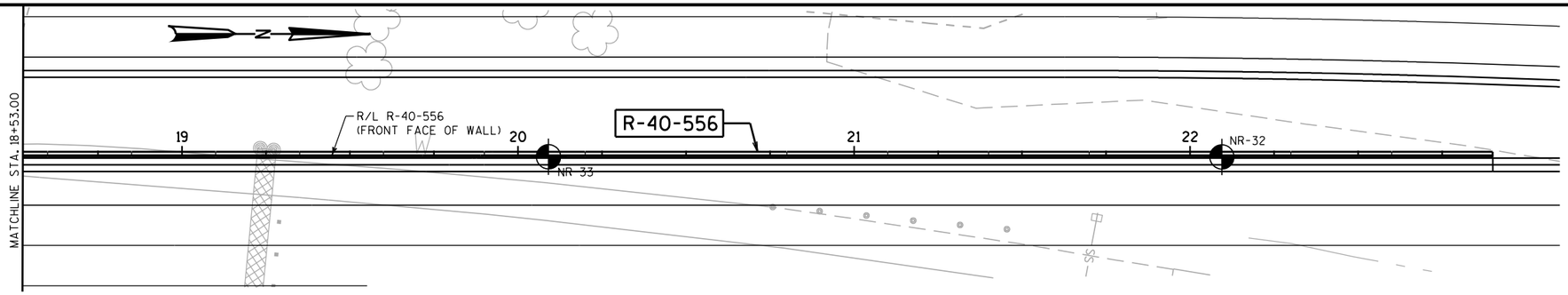
STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 3)

SHEET 14 OF 15

8



NOTE:

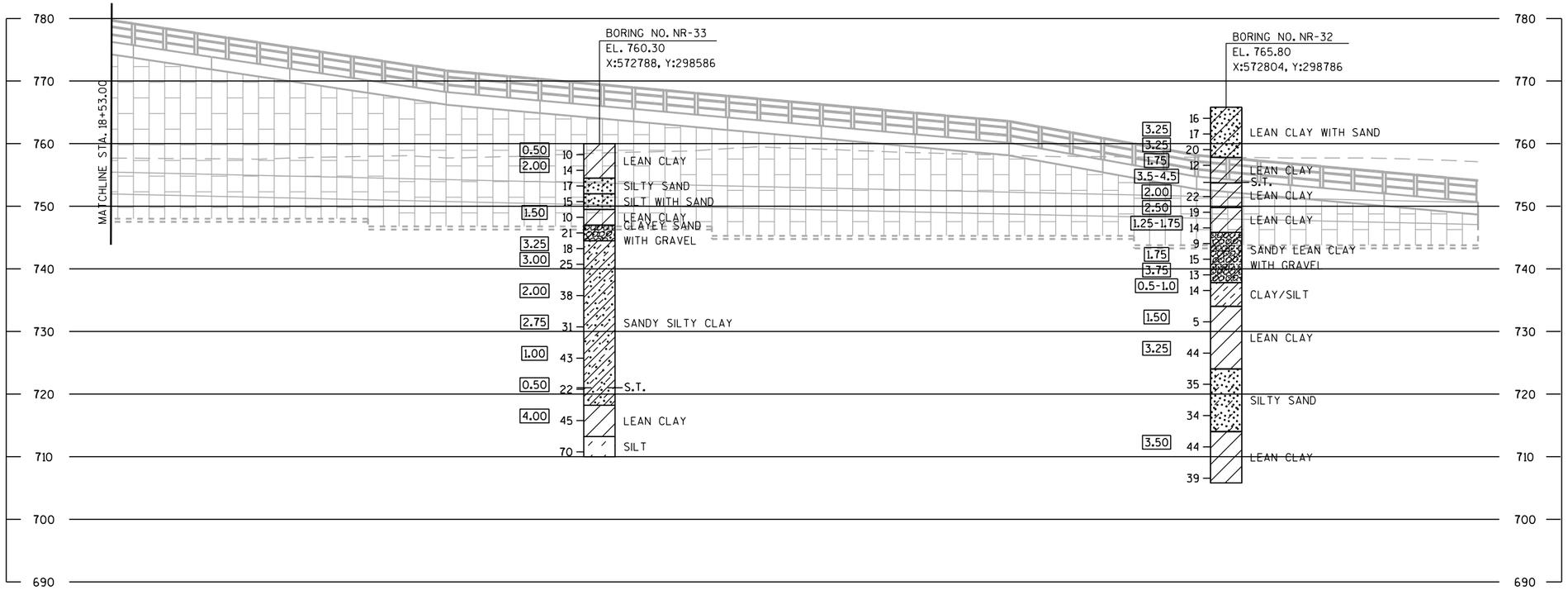
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BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-556.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
DEC. 02, 2011 - BORING NR-32
DEC. 01, 2011 - BORING NR-33



STATE PROJECT NUMBER

1060-33-80

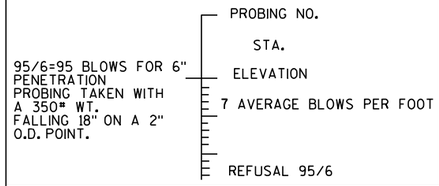
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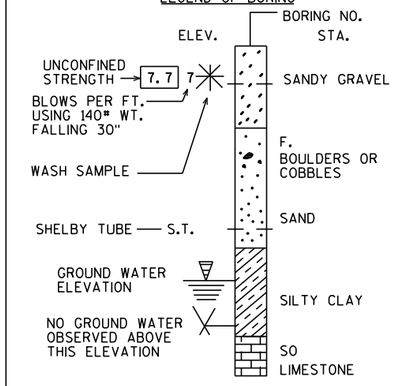
MATERIAL SYMBOLS

TOPSOIL / FILL
SILT
SANDSTONE
SAND
PEAT
LIMESTONE
GRAVEL
CLAY
IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-556

DRAWN BY MS | PLANS CK'D. EKM

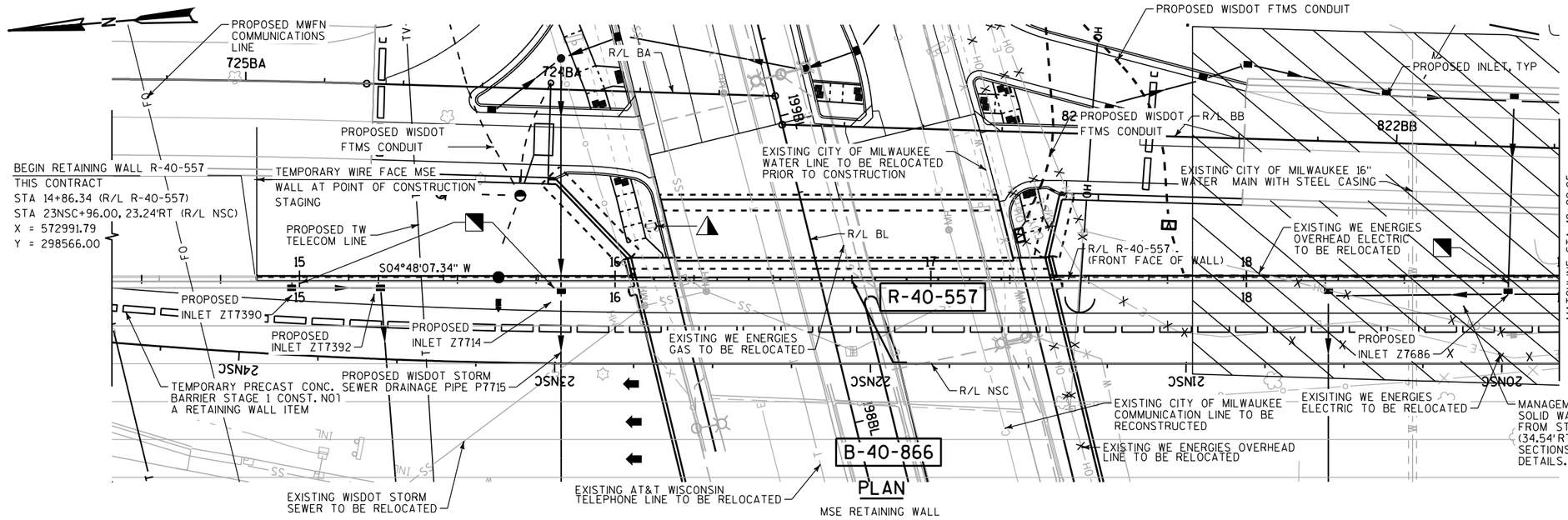
SUBSURFACE EXPLORATION (3 OF 3)

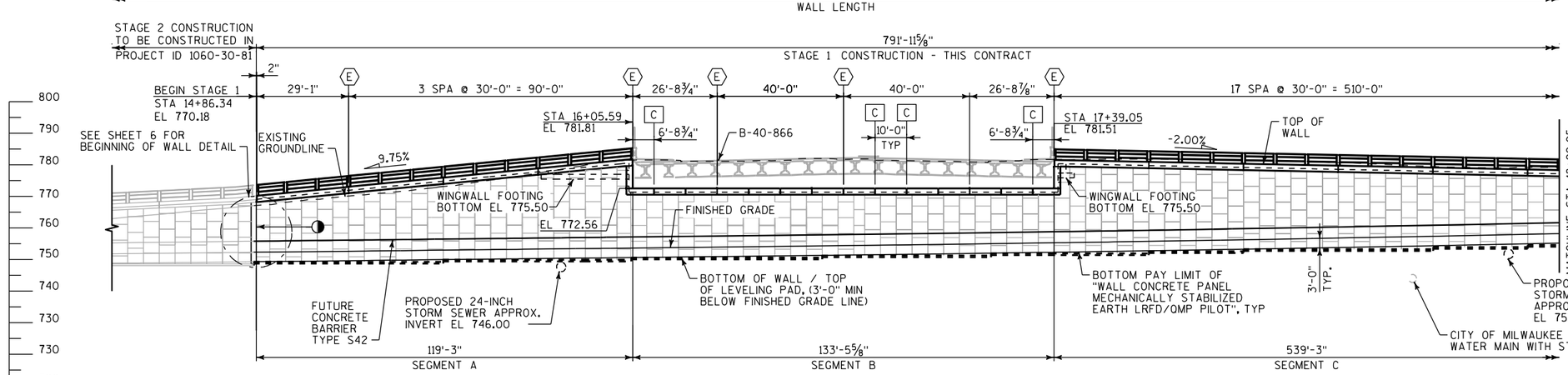
SHEET 15 OF 15

8

8

STATE PROJECT NUMBER
1060-33-80





ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012.

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL ADJACENT TO THE ABUTMENT FOR A HORIZONTAL BACKSLOPE BEHIND THE WALL AND A LIVE LOAD VERTICAL SURCHARGE OF 240 PSF.

MATERIAL PROPERTIES:
CONC MASONRY RETAINING WALL.....f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS....f'c = 4,000 PSI
BAR STEEL REINFORCEMENT.....fy = 60,000 PSI

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. PROFILE GRADE LINES
4. QUANTITIES, GENERAL NOTES & ELEVATION TABLES
5. TYPICAL SECTIONS
6. COPING DETAILS
7. SEGMENT A COPING PLAN & ELEVATION
8. SEGMENT B COPING PLAN & ELEVATION
9. SEGMENT C COPING PLAN & ELEVATION
10. TEMPORARY WALL DETAILS & EXCAVATION LIMTS
11. RAILING PIPE DETAILS
12. AESTHETIC WALL TREATMENT DETAILS
13. SUBSURFACE EXPLORATION (1 OF 2)
14. SUBSURFACE EXPLORATION (2 OF 2)

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2246

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- TEMPORARY WALL WIRE FACED MSE
- PIPE UNDERDRAIN UNPERFORATED (6-INCH) CONNECT TO PROPOSED INLET
- CONCRETE BASE SLEEVE FOR TYPE 13 CONCRETE BASE: CENTER @ X = 572998.13, Y=298440.05 SLEEVE BOTTOM EL = 767.3±, DIAM = 42"

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER
6/11/2014

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher DVR — CHIEF STRUCTURES DESIGN ENGINEER — DATE 6/12/14

STRUCTURE R-40-557

RETAINING WALL ALONG USH 45 NB @ BLUEMOUND RD

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WAUWATOSA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MS	KES	MS	EKM

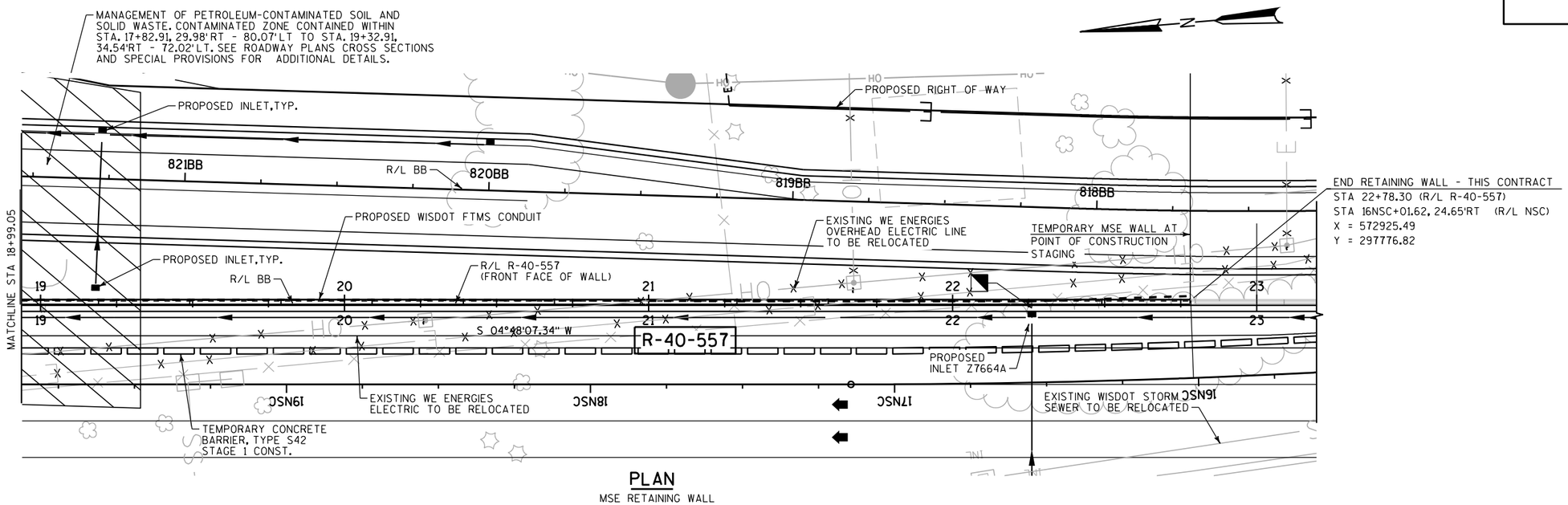
GENERAL PLAN & ELEVATION (1 OF 2)

SHEET 1 OF 14

8

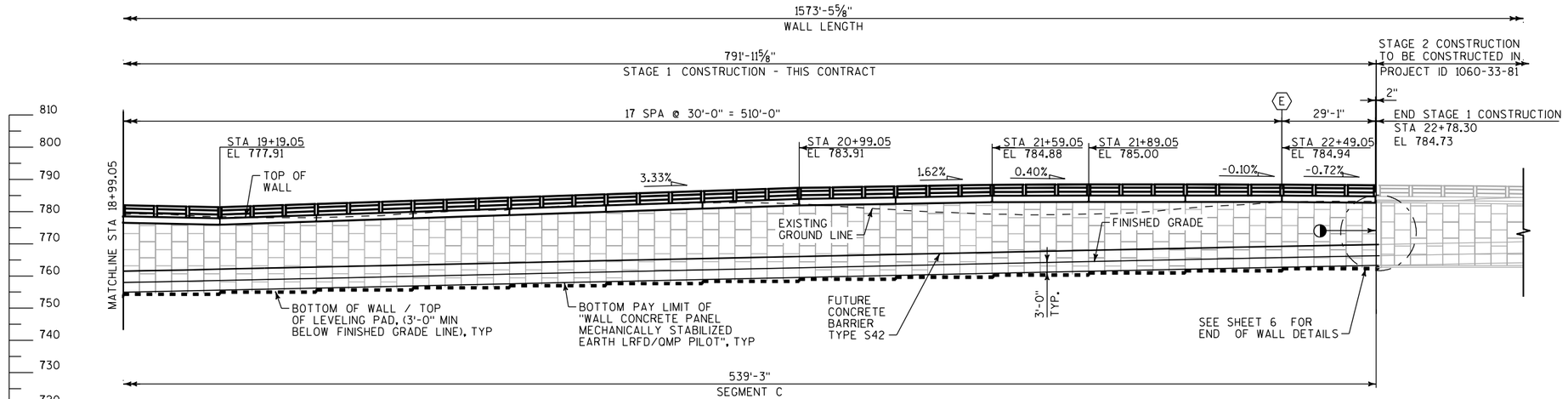
8

STATE PROJECT NUMBER
1060-33-80



PLAN

MSE RETAINING WALL



ELEVATION

(LOOKING EAST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- TEMPORARY WALL WIRE FACED MSE
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- CONCRETE BASE SLEEVE FOR TYPE 13 CONCRETE BASE; CENTER @ X = 572998.13, Y=298440.05 SLEEVE BOTTOM EL = 767.3±, DIAM = 42"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

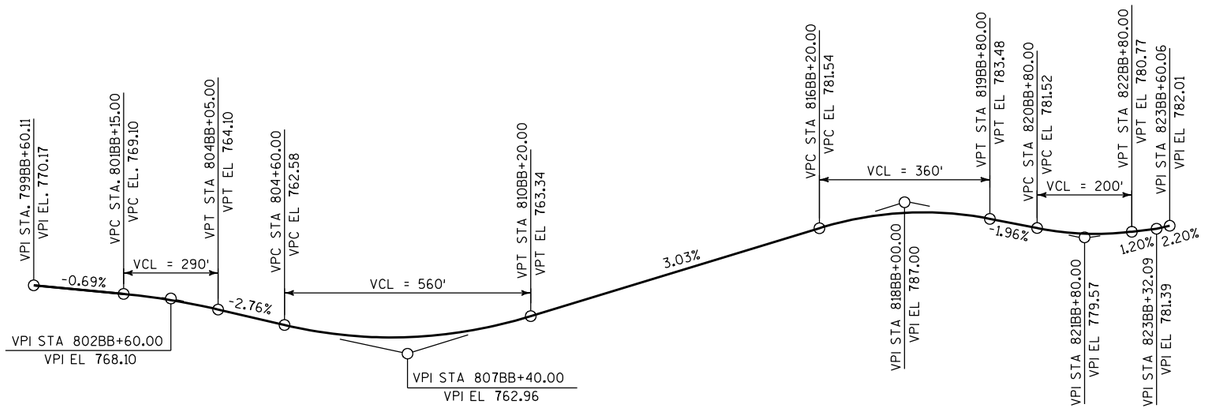
DRAWN BY: MS | PLANS CK'D.: EKM

GENERAL PLAN & ELEVATION (2 OF 2)

SHEET 2 OF 14

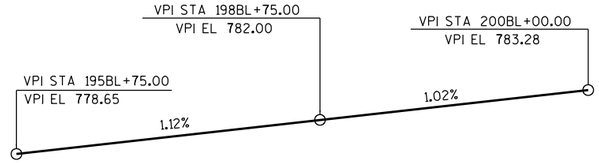
STATE PROJECT NUMBER

1060-33-80



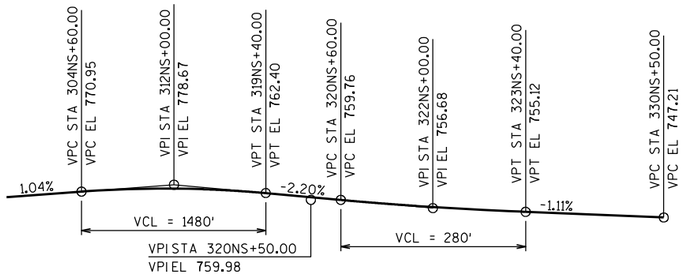
PROFILE GRADE LINE - R/L BB

(BLUEMOUND ROAD RAMP B)



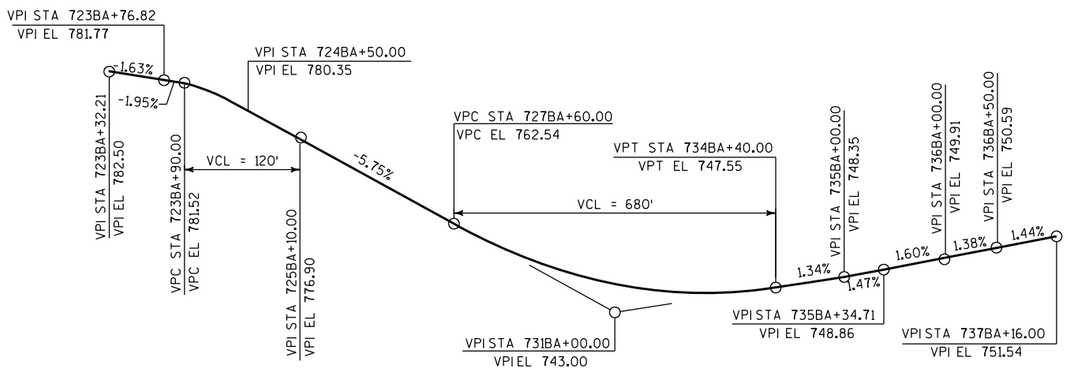
PROFILE GRADE LINE - R/L BL

(BLUEMOUND ROAD)



PROFILE GRADE LINE - R/L NS

(USH 45 NB & SB)



PROFILE GRADE LINE - R/L BA

(BLUEMOUND ROAD RAMP A)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

PROFILE GRADE LINES

SHEET 3 OF 14

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNITS	SEGMENT A	SEGMENT B	SEGMENT C	TOTAL QUANTITY
513.2000	RAILING PIPE R-40-557	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5	5	10	20
517.1050.S	ARCHITECTURAL SURFACE TREATRMENT R-40-557	SF	2,640	2,285	10,890	15,815
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	6	---	14	20
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	120	135	540	795
SPV.0060.4195	CONCRETE BASE SLEEVES	EACH	---	1	---	1
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	3,120	2,820	13,050	18,990
SPV.0165.4740	TEMPORARY WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	1,005	---	1,210	2,215
	NON BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				1"
	NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"

ALL ITEMS ARE CATEGORY 3160

RETAINING WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
⚹ GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0	30	0
LEAN CLAY TO SANDY CLAY (RETAINED SOIL)	130	0	2000-2750	30	0
LEAN CLAY (FOUNDATION SOIL)	130	0	2000-2750	30	0
SAND WITH SILT (FOUNDATION SOIL)	125	30	0	30	0

⚹ DESIGN MSE WALL FOR THESE VALUES

MSE WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS						
WALL HEIGHT (FEET)	18	21	30	31	24	13.5
EXPOSED WALL HEIGHT (FEET)	15	18	27	19	21	10.5
MINIMUM LENGTH OF REINFORCEMENT (FEET) ⚹	13.5	15.75	22.5	23.25	18	10.1
WALL STATION	14+33	14+85	16+05	16+79	21+83	24+89
BORING USED	NR-38	NR-38	NB-39	NB-42	CR-4	CR-4
CAPACITY TO DEMAND RATION (CDR)						
SLIDING	1.09	1.10	1.30	1.23	1.26	1.35
ECCENTRICITY	1.19	1.22	1.23	1.39	1.19	1.42
BEARING	1.41	1.07	1.08	1.05	1.05	2.06
GLOBAL STABILITY	1.08	1.10	1.01	> 1.00	1.27	1.25

⚹ MINIMUM LENGTH APPLIES ONLY AT CORRESPONDING WALL STATIONS. FINAL DESIGN FOR INTERNAL STABILITY AND EXTERNAL SLIDING AND ECCENTRICITY AT OTHER WALL STATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.

SEGMENT A WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
14+86.51	770.20	767.10	752.31
15+15.59	773.04	770.10	752.63
15+45.59	775.96	773.09	752.97
15+75.59	778.89	777.34	753.30
16+05.59	781.81	781.51	753.64

SEGMENT B WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
16+05.59	772.56	781.51	753.64
16+12.32	772.56	781.54	753.72
16+32.32	772.56	781.08	753.94
16+72.32	772.56	781.78	754.40
17+12.32	772.56	780.87	754.92
17+32.32	772.56	781.59	755.20
17+39.05	772.56	781.65	755.31

SEGMENT C WALL ELEVATIONS ◥

STATION	TOP OF WALL EL	EXISTING GROUND EL	FINISHED GRADE EL
17+39.05	781.51	781.65	755.30
17+69.05	780.91	781.76	755.77
17+99.05	780.31	781.48	756.26
18+29.05	779.71	780.67	756.80
18+59.05	779.11	779.46	757.37
18+89.05	778.51	779.13	757.97
19+19.05	777.91	778.35	758.61
19+49.05	778.91	778.10	759.27
19+79.05	779.91	779.32	759.93
20+09.05	780.91	780.62	760.58
20+39.05	781.91	782.04	761.24
20+69.05	782.91	782.62	761.90
20+99.05	783.91	782.30	762.53
21+29.05	784.40	780.50	763.14
21+59.05	784.88	779.21	763.73
21+89.05	785.00	779.20	764.31
22+19.05	784.97	780.96	764.90
22+49.05	784.94	782.86	765.57
22+78.13	784.72	783.16	766.20

◥ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET, ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 88 (2007).

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE ALONG THE FRONT FACE OF WALL UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELLED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THESE PLANS ARE FOR A PRECAST PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7½ INCHES. FOR PANEL THICKNESSES DIFFERENT THAN 7½ INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALL R-40-557 WITH THE CONSTRUCTION OF THE EAST ABUTMENT OF BRIDGE B-40-866

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD"/QMP PILOT.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD"/QMP PILOT.

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE UNREINFORCED CONCRETE LEVELING PAD, MSE PRECAST WALL PANELS, MSE BACKFILL AND REINFORCING STRIPS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD"/QMP PILOT.

ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE IS TO BE EPOXY COATED.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD"/QMP PILOT IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS ASSUMED TO BE 3'-0" BELOW FINISHED GRADE. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-557".

STRUCTURE STAGES DO NOT CORRESPOND TO ROADWAY STAGES, SEE ROADWAY PLANS FOR COMPLETE STAGING INFORMATION.

ONLY WALL CONCRETE PANEL MSE WALL SYSTEMS THAT USE STRIP TYPE SOIL REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THE PROJECT.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR THE CAST IN PLACE COPING ARE INCIDENTAL TO BID ITEM " WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/ QMP PILOT."

THE COST OF EXCAVATING TO THE WALL EXCAVTION LIMITS IS TO BE INCLUDED IN THE ROADWAY BID ITEMS " MANAGEMENT OF PETROLEUM-CONTAMINATED SOIL AND SOLID WASTE". FOR ADDITIONAL INFORMATION, SEE ROADWAY PLANS, CROSS SECTIONS AND SPECIAL PROVISIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

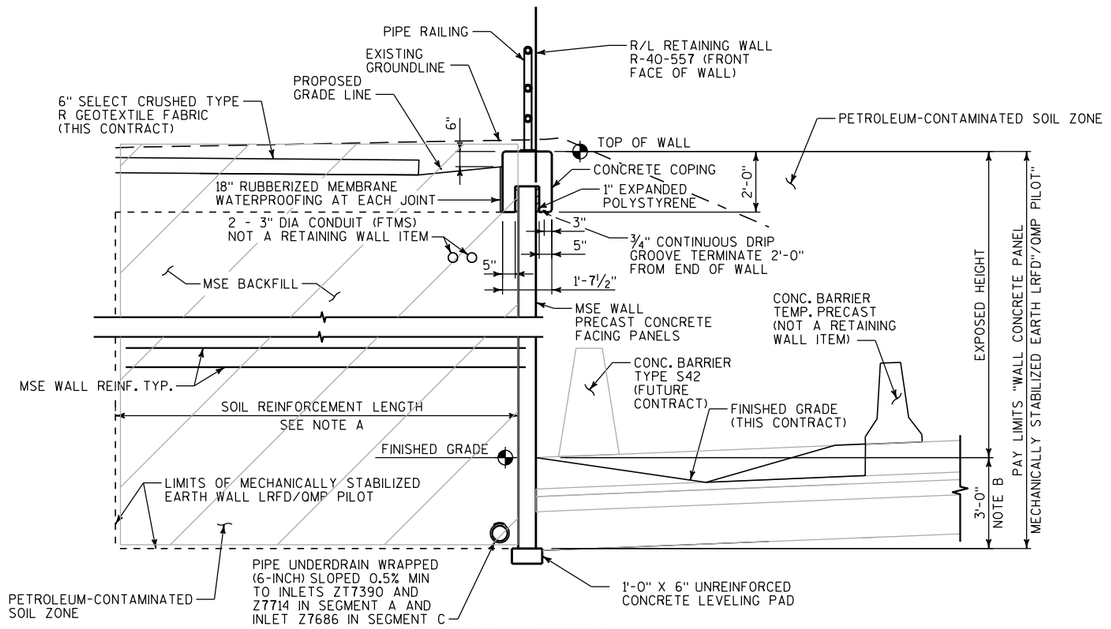
QUANTITIES, GENERAL NOTES & ELEVATION TABLES

SHEET 4 OF 14

8

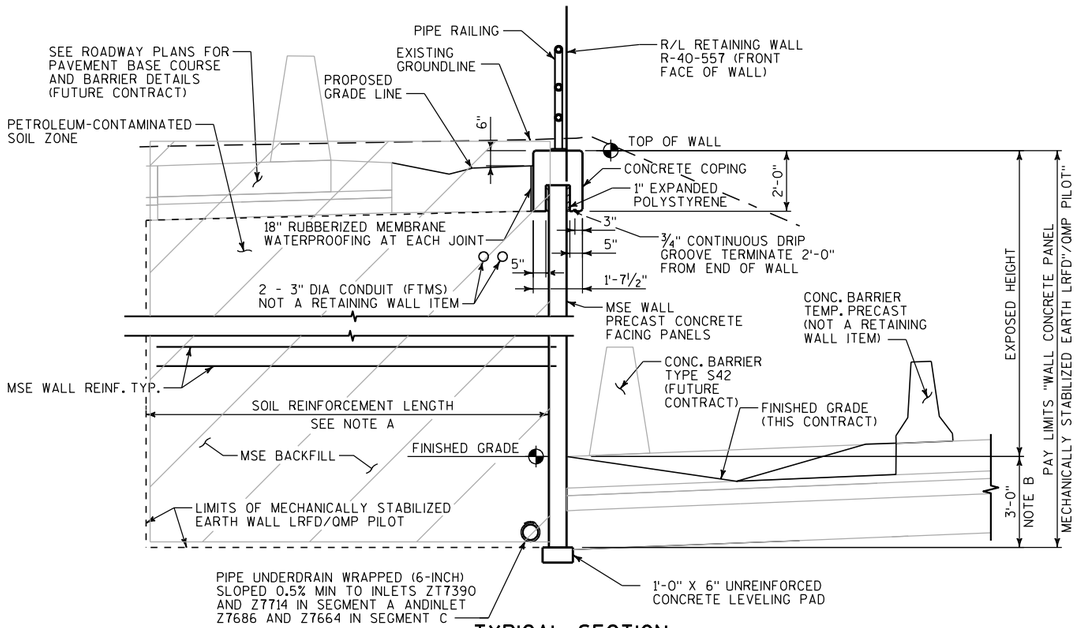
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STATE PROJECT NUMBER
1060-33-80



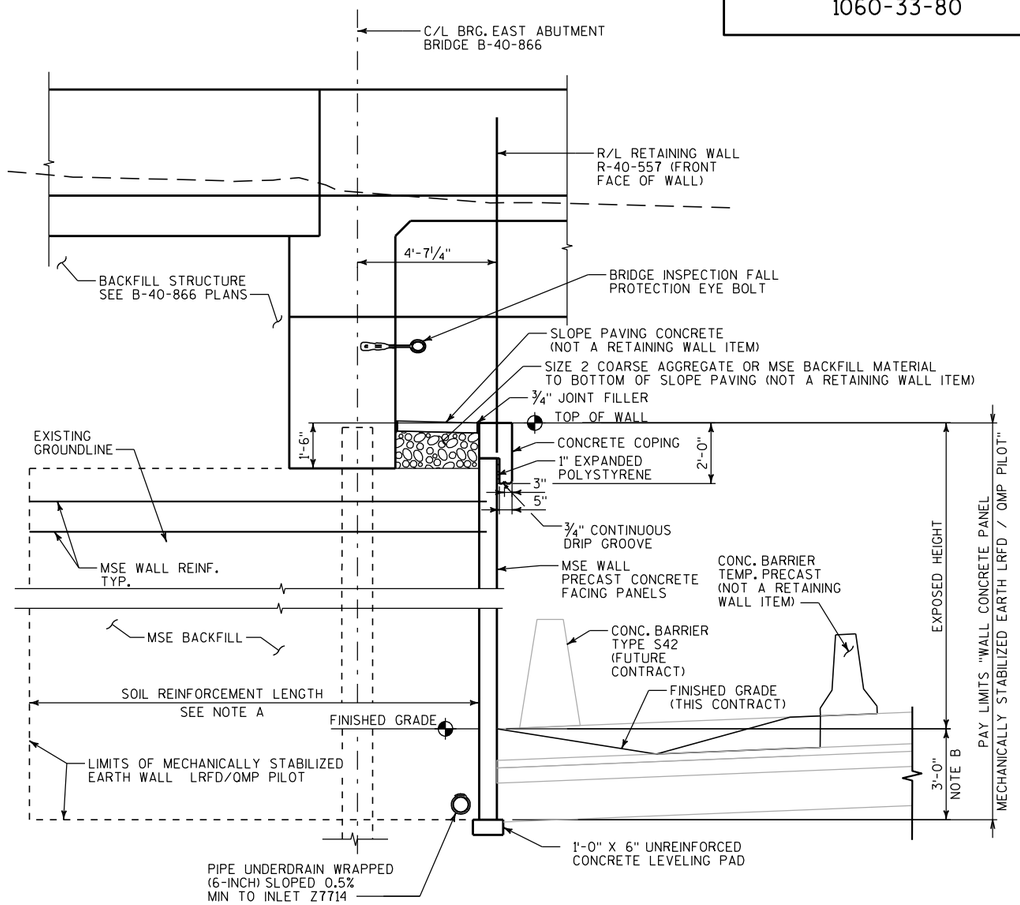
TYPICAL SECTION

LOOKING SOUTH - SEGMENT A STA. 14+86.34 TO STA. 15+22.65
LOOKING SOUTH - SEGMENT C STA. 17+98.72 TO STA. 22+78.30
PETROLEUM-CONTAMINATED SOIL CONTAIINED WITHIN - STA 17+82.91 - STA 19+32.91



TYPICAL SECTION

LOOKING SOUTH - SEGMENT A STA. 15+22.65 TO STA. 16+05.59
LOOKING SOUTH - SEGMENT C STA. 17+39.05 TO STA. 17+98.72
PETROLEUM-CONTAMINATED SOIL CONTAINED WITHIN STA 17+82.91 - STA 19+32.91



TYPICAL SECTION

LOOKING SOUTH - SEGMENT B - STA. 16+05.59 TO STA. 17+39.05

NOTES

BRIDGE B-40-866, ROADWAY PAVEMENTS, AND ROADWAY BARRIERS ARE NOT RETAINING WALL ITEMS.

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 4 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

NOTE B:

MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE FABRICATOR OF THE WALL PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

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TYPICAL SECTIONS

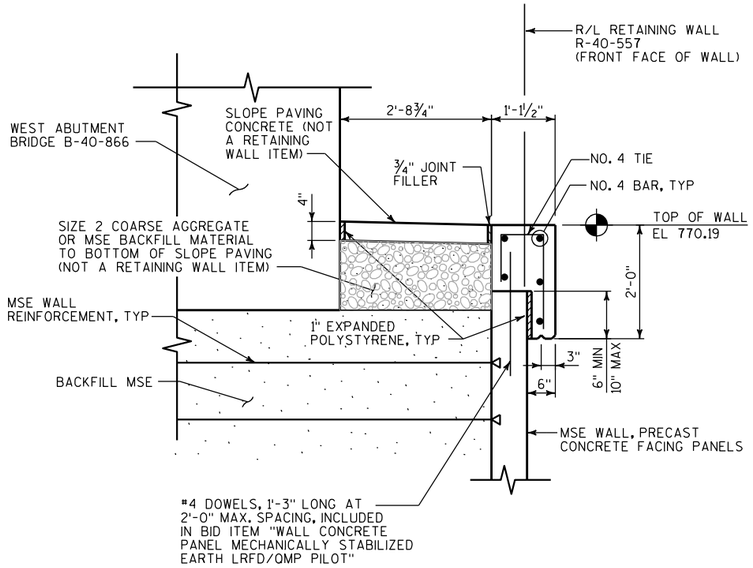
SHEET 5 OF 14

8

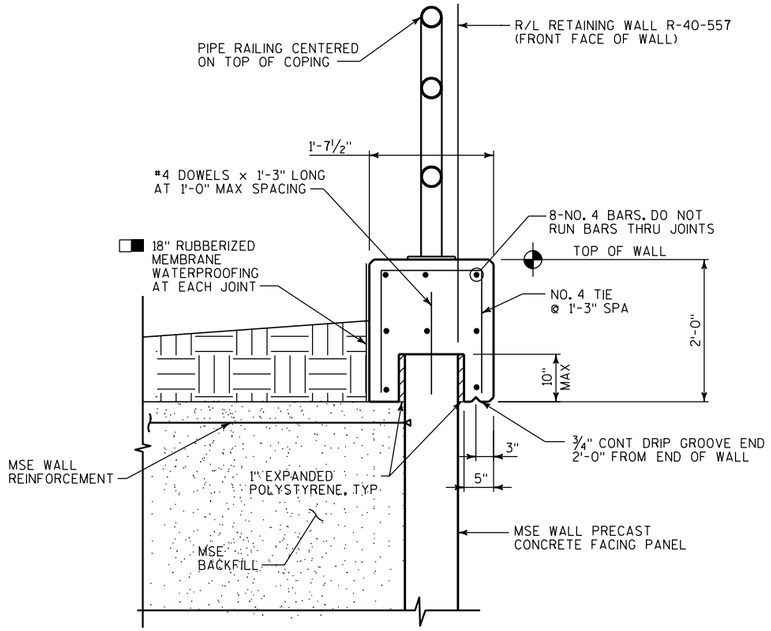
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STATE PROJECT NUMBER

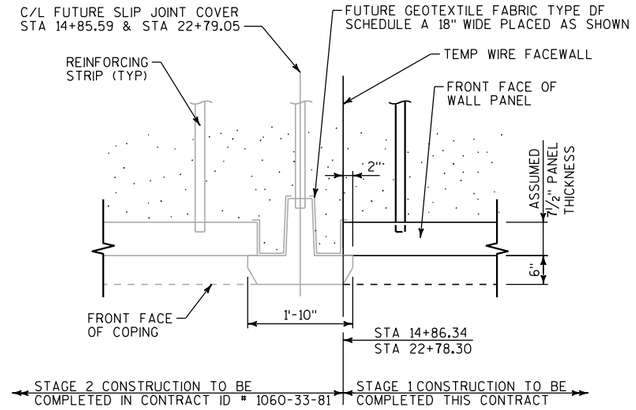
1060-33-80



COPING SECTION AT SEGMENT B

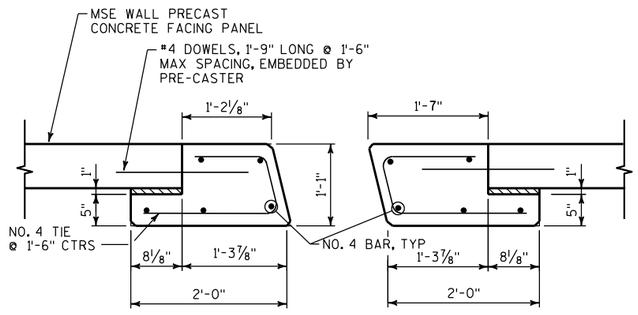


COPING SECTION AT SEGMENTS A & C



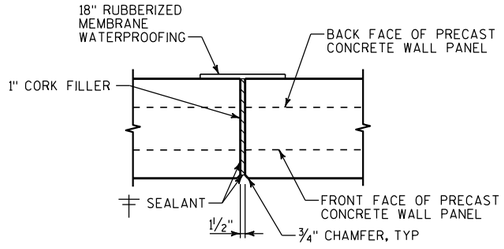
STAGE 1 BEGINNING/END OF WALL DETAILS

(STA 14+85.59 SHOWN, STA 22+79.05 SIMILAR BOT OPPOSITE)



SECTION A-A OF SEGMENT B

(VERTICAL COPING SEGMENT B)
(SEE PAGE 9)



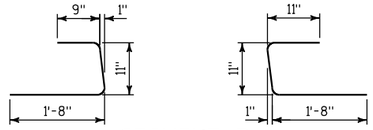
COPING EXPANSION JOINT - SEGMENTS A & C

SEGMENT A & C

(NO. 4 TIE)

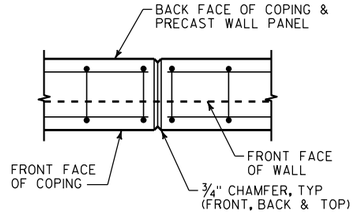
SEGMENT B

(NO. 4 VERT TIE)



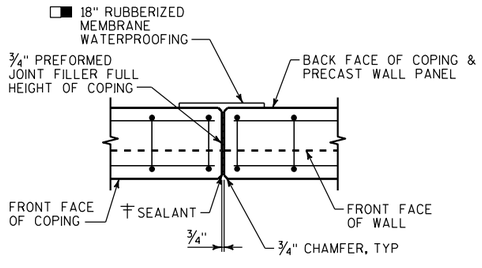
SEGMENT B

(NO. 4 HORIZ TIE)



COPING CONTRACTION JOINT AT SEGMENT B

DO NOT RUN BAR STEEL THRU JOINT. FOR LOCATIONS
OF JOINT, SEE GENERAL PLAN & ELEVATION SHEET.



COPING EXPANSION JOINT AT SEGMENT B

SEAL ALL EXPOSED SURFACES OF PREFORMED JOINT FILLER.

LEGEND

- MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS
- ⫟ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SUFACE OF CONCRETE. COLOR TO MATCH CONCRETE STAIN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

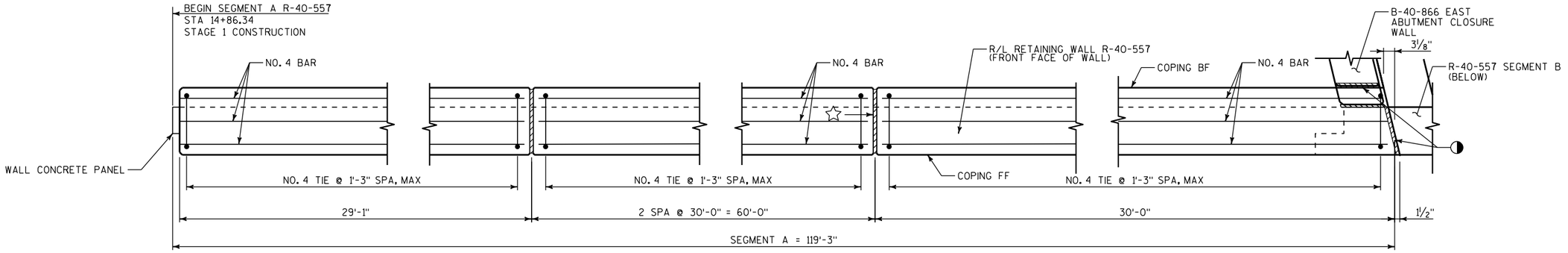
COPING DETAILS

SHEET 6 OF 14

8

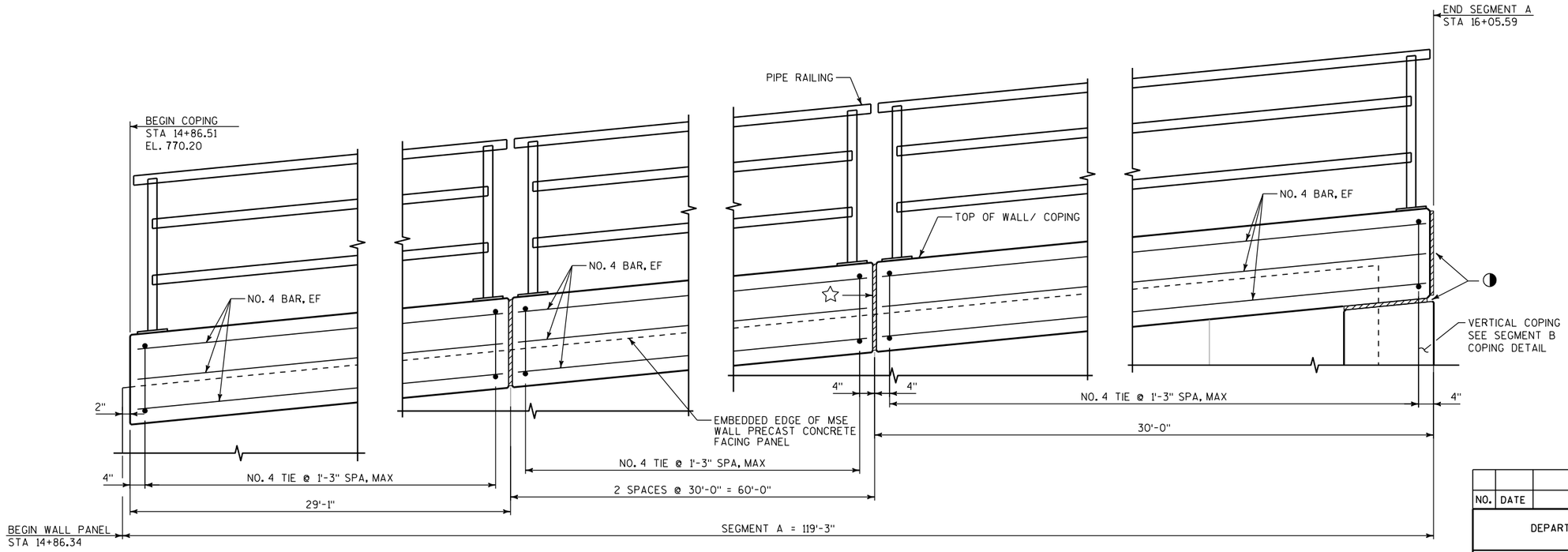
8

STATE PROJECT NUMBER
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PLAN - SEGMENT A

DIMENSIONS ARE ALONG R/L R-40-557



ELEVATION - SEGMENT A

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-557

LEGEND

☆ 1" CORK FILLER

◑ 1" PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

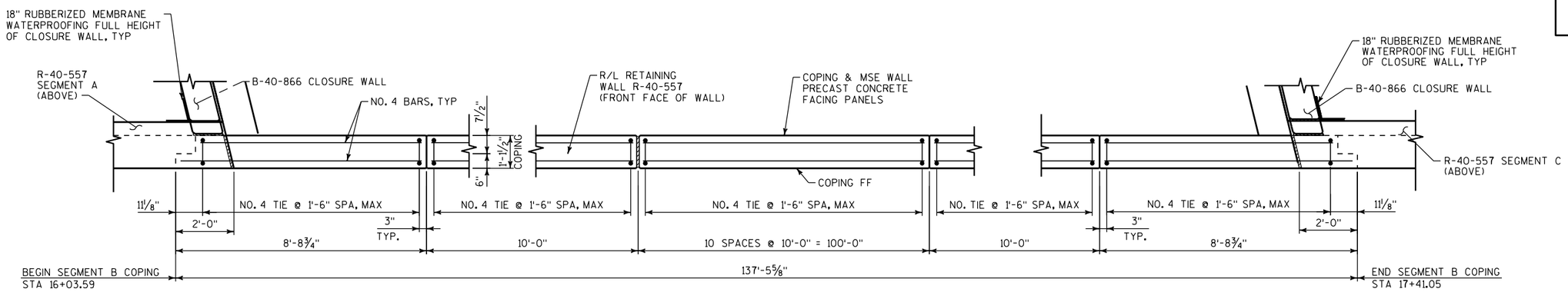
SEGMENT A
COPING PLAN
& ELEVATION

SHEET 7 OF 14

8

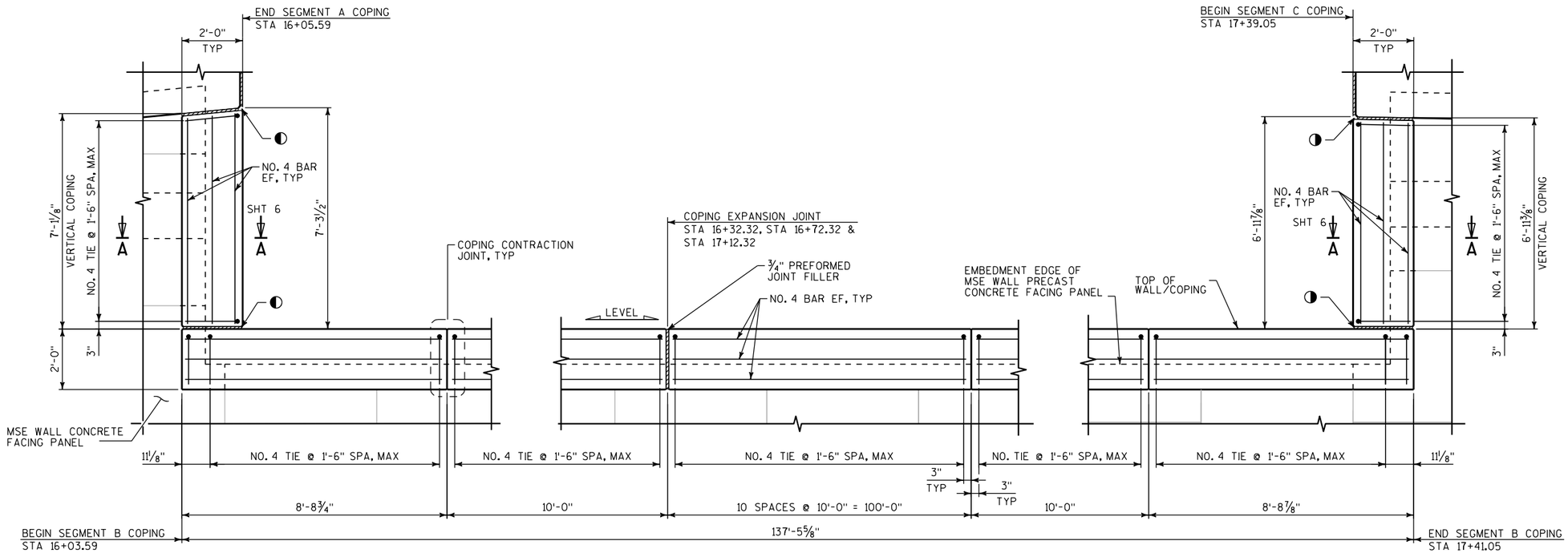
8

STATE PROJECT NUMBER
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PLAN - SEGMENT B

DIMENSIONS ARE ALONG R/L R-40-557



ELEVATION - SEGMENT B

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-557

LEGEND

◑ 1" PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

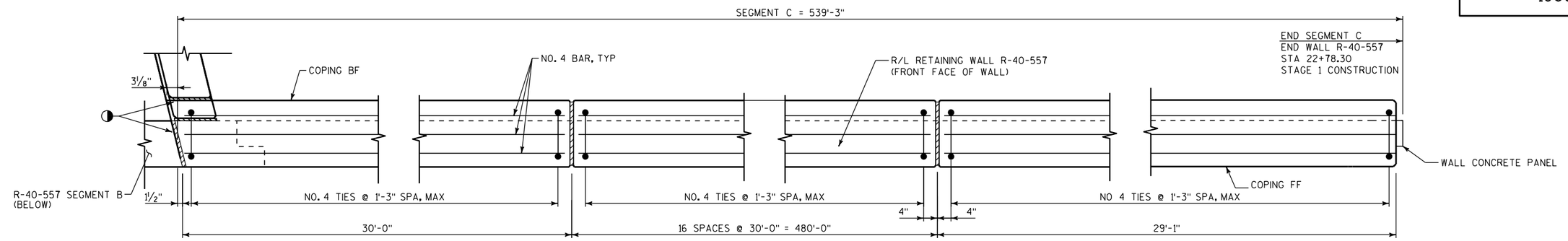
STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

SEGMENT B COPING PLAN & ELEVATION

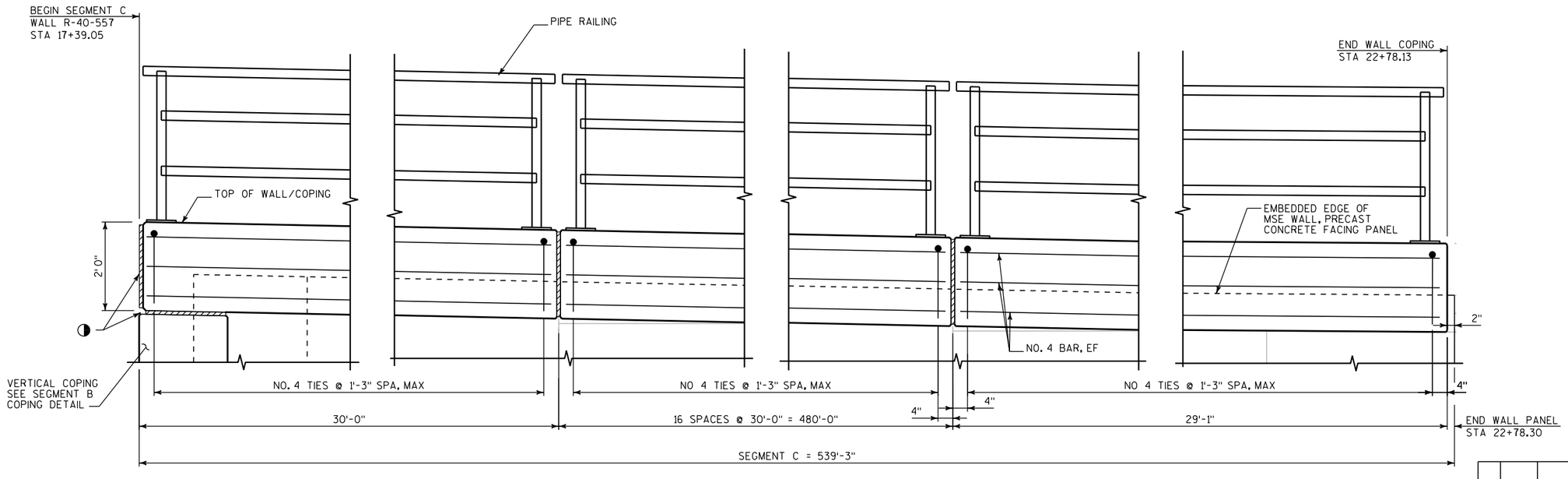
SHEET 8 OF 14

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PLAN - SEGMENT C

DIMENSIONS ARE ALONG R/L R-40-557



ELEVATION - SEGMENT C

LOOKING EAST AT FRONT FACE OF WALL
DIMENSIONS ARE ALONG R/L R-40-557

LEGEND

☆ 1" CORK FILLER

◑ 1" PREFORMED JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

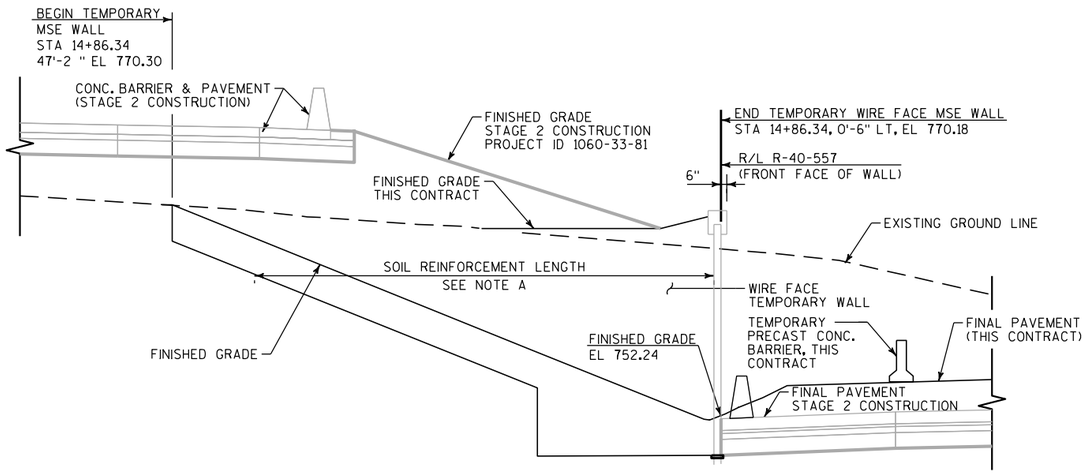
STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

SEGMENT C
COPING PLAN
& ELEVATION

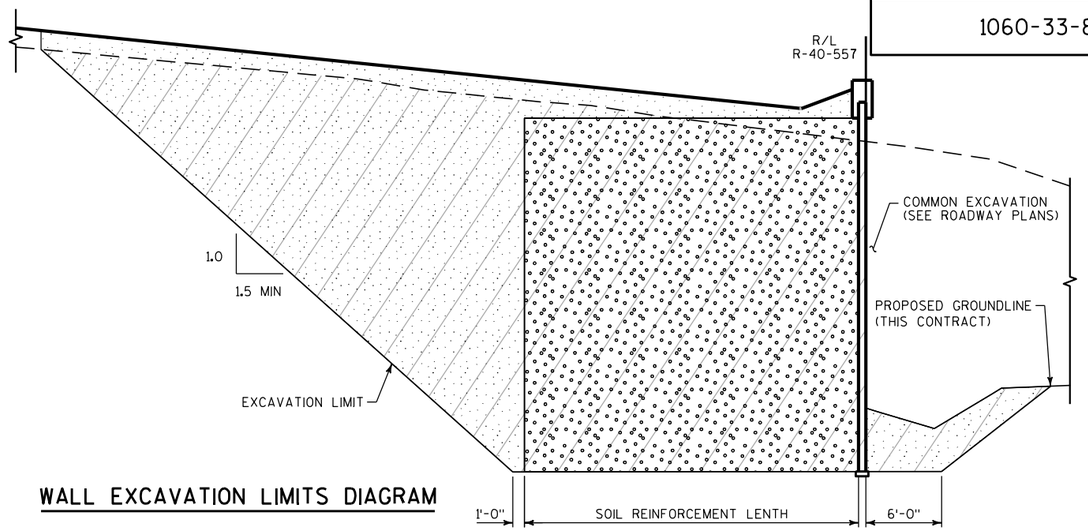
SHEET 9 OF 14

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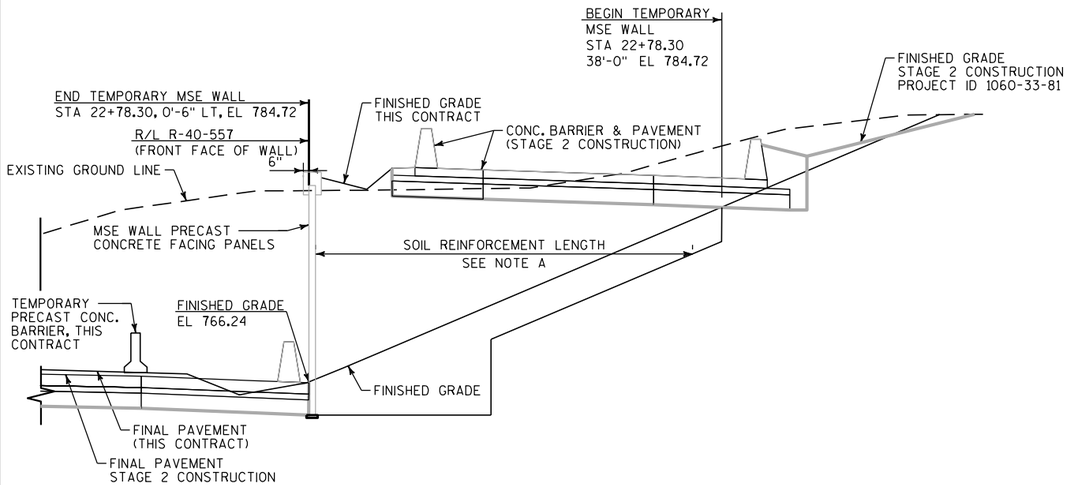


ELEVATION AT TEMPORARY WALL

(STA 14+86.34 - LOOKING SOUTH)

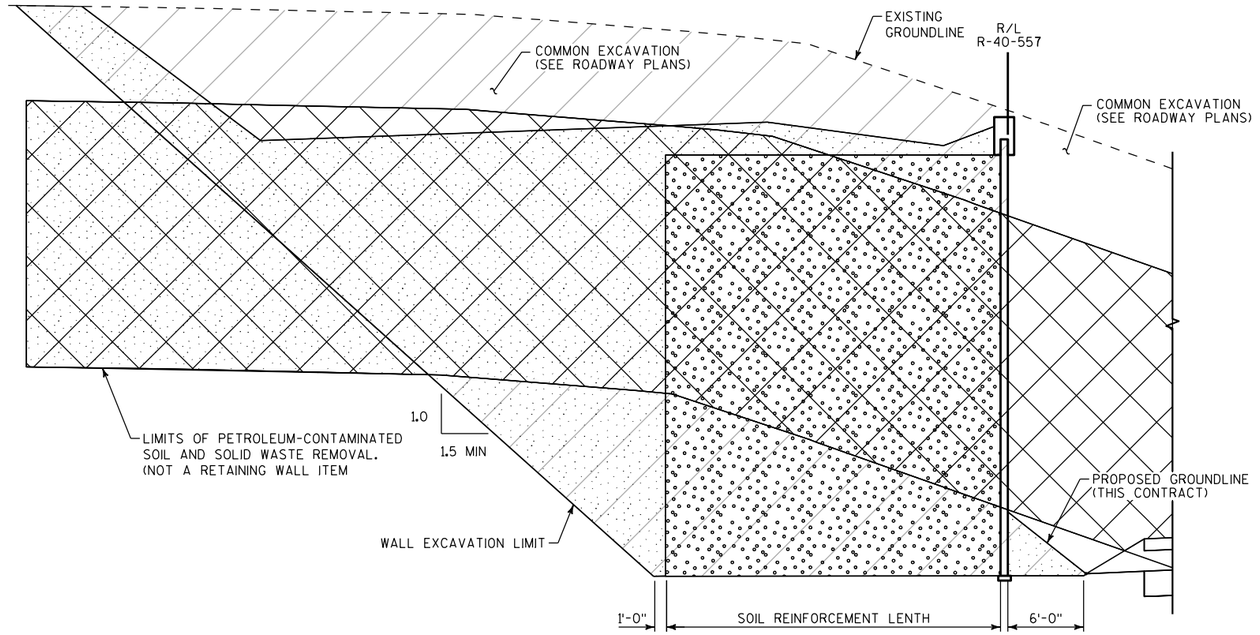


WALL EXCAVATION LIMITS DIAGRAM



ELEVATION AT TEMPORARY WALL

(STA 22+78.30 - LOOKING NORTH)



WALL EXCAVATION LIMITS DIAGRAM AT PETROLEUM-CONTAMINATED SOIL

(STA 17+82.91, 29.98'RT & 80.07'LT - STA 19+32.91, 34.54'RT & 72.02'LT)

NOTES

NOTE A:

SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON SHEET 3 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS.

SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

LEGEND

- MSE BACKFILL - INCLUDED IN THE BID ITEM WALL CONCRETE PANEL MECHANILCALLY STABILIZED EARTH LRFD
- WALL EXCAVATION - INCLUDED IN THE BID ITEM CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD
- EMBANKMENT - NOT A RETAINING WALL ITEM
- MANAGEMENT OF PETROLEUM CONTAMINATED SOIL AND SOLID WASTE. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

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STRUCTURE R-40-557

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TEMP WALL DETAILS & EXCAVATION LIMITS

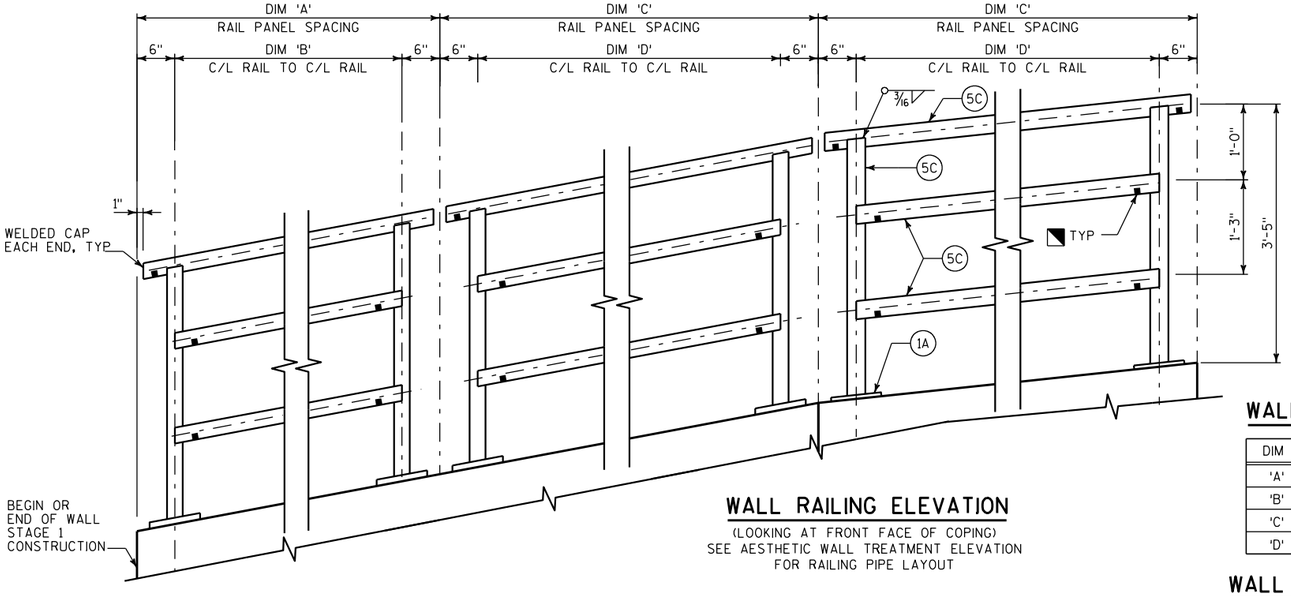
SHEET 10 OF 14

8

8

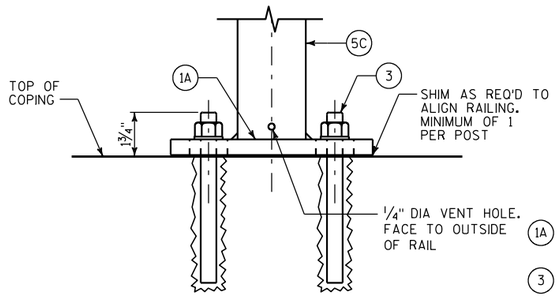
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WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING)
SEE AESTHETIC WALL TREATMENT ELEVATION
FOR RAILING PIPE LAYOUT



ANCHOR BOLTS FOR RAIL POST

LEGEND

- (1A) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".
- (5C) 2½" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO POSTS.
- ½" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.

WALL RAILING DIMENSIONS TABLE

DIM	SEGMENT A	SEGMENT C
'A'	1 SPACE @ 9'-1"	1 SPACE @ 9'-1"
'B'	8'-1" EACH PANEL	8'-1" EACH PANEL
'C'	11 SPACES @ 10'-0 "	53 SPACES @ 10'-0"
'D'	9'-0" EACH PANEL	9'-0" EACH PANEL

WALL RAILING SLOPE TABLES

SEGMENT A	
STATION	SLOPE
14+86.34 - 16+05.59	9.75%

SEGMENT C	
STATION	SLOPE
17+39.05 - 19+19.05	-2.00%
19+19.05 - 20+99.05	3.33%
20+99.05 - 21+59.05	1.62%
21+59.05 - 21+89.05	0.40%
21+89.05 - 22+49.05	-1.00%
22+49.05 - 23+09.05	-0.72%

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-557", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

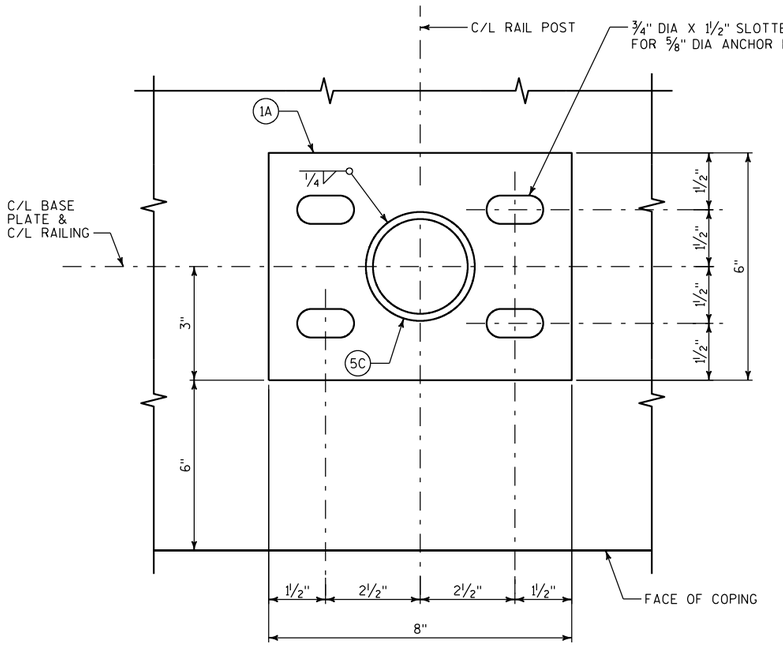
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

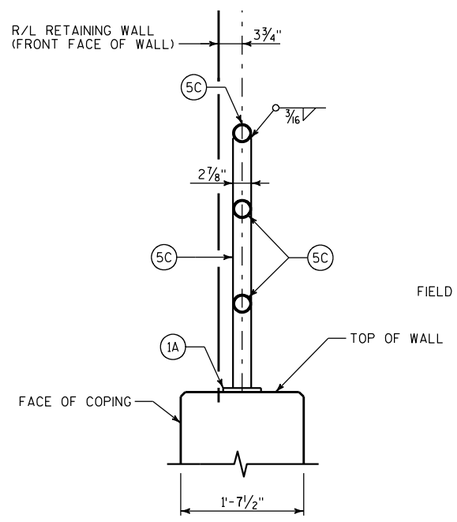
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM A123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

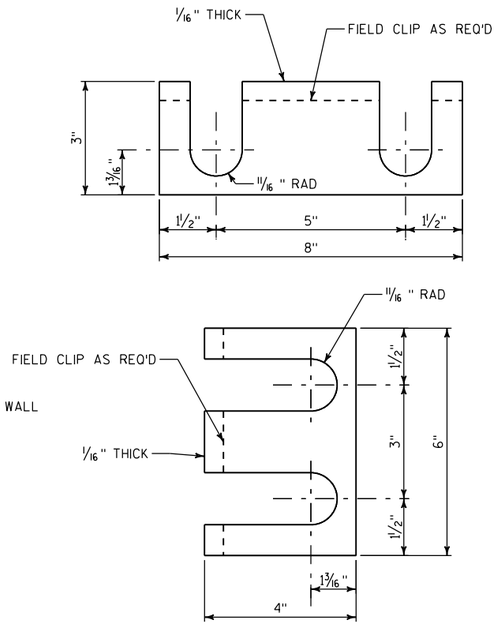
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



RAIL POST BASE PLATE



WALL RAILING SECTION



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY: MS | PLANS CK'D.: EKM

RAILING PIPE DETAILS

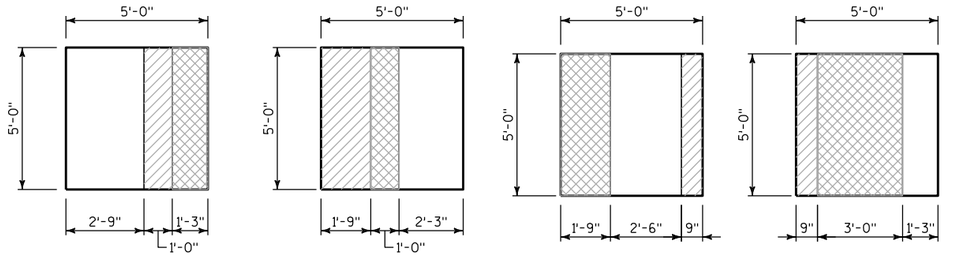
SHEET 11 OF 14

8

8

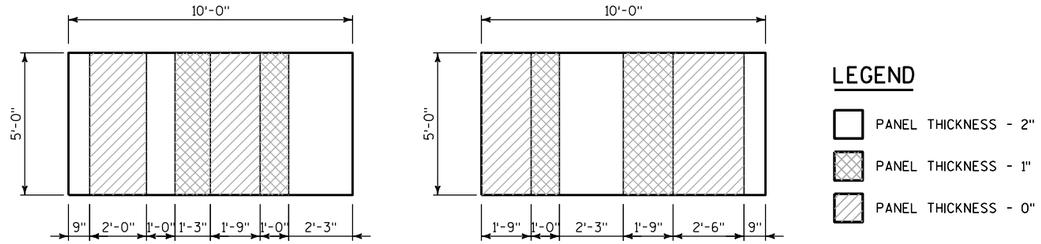
STATE PROJECT NUMBER

1060-33-80



WALL PANEL "A" WALL PANEL "B" WALL PANEL "C" WALL PANEL "D"

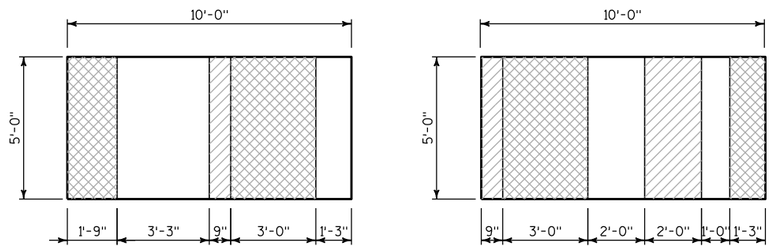
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



WALL PANEL "A" WALL PANEL "B"

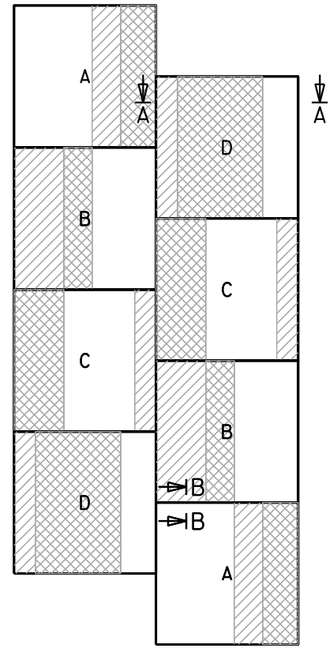
LEGEND

- PANEL THICKNESS - 2"
- PANEL THICKNESS - 1"
- PANEL THICKNESS - 0"

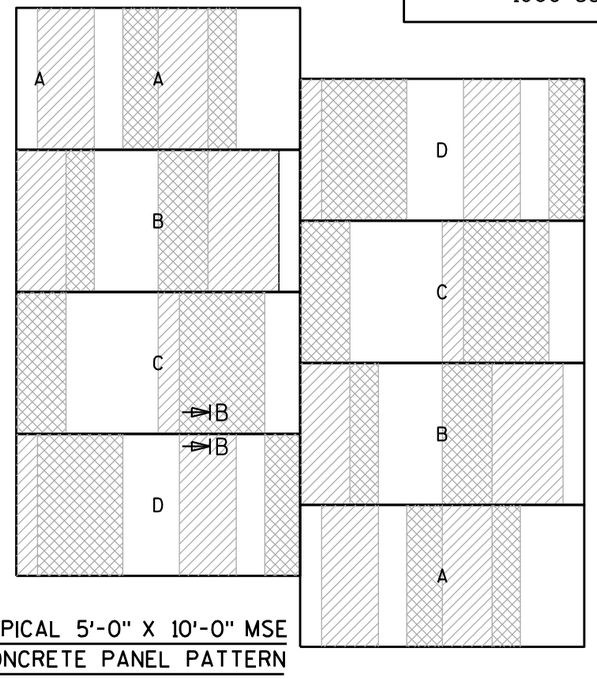


WALL PANEL "C" WALL PANEL "D"

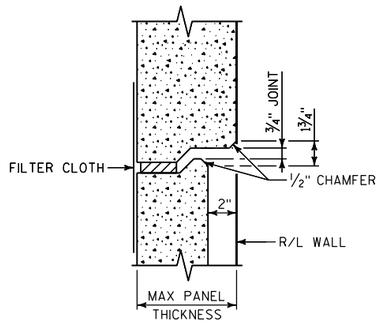
5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS



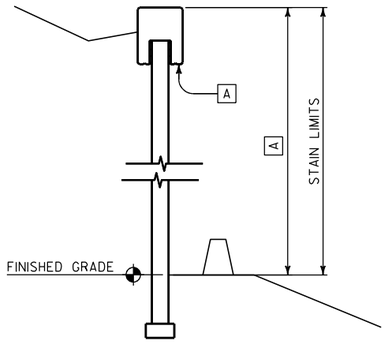
TYPICAL 5'-0" X 5'-0" MSE CONCRETE PANEL PATTERN

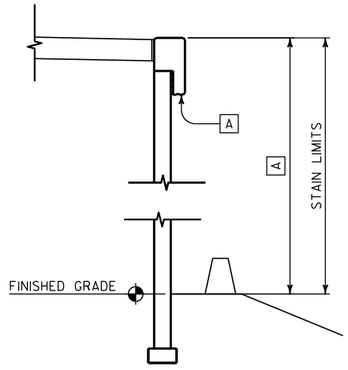


TYPICAL 5'-0" X 10'-0" MSE CONCRETE PANEL PATTERN



SECTION B-B





MSE WALL STAINING DIAGRAM

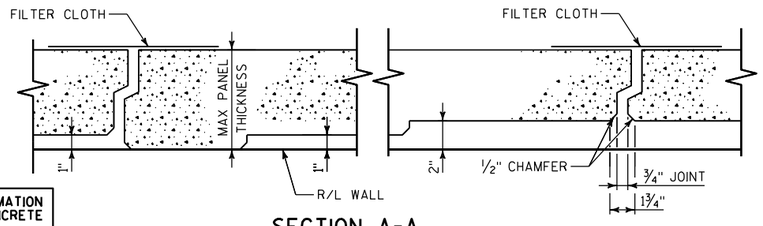
CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.
BASE COLOR - 33564

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 12 OF 14

8

8

NOTES

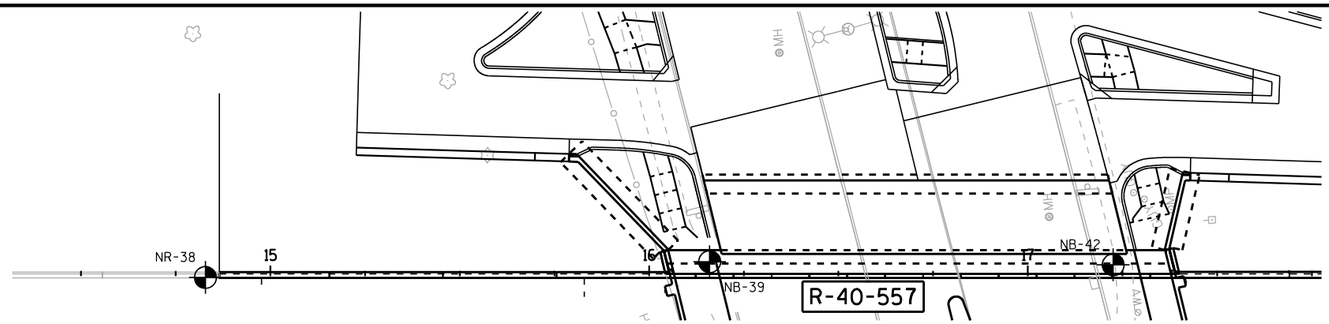
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

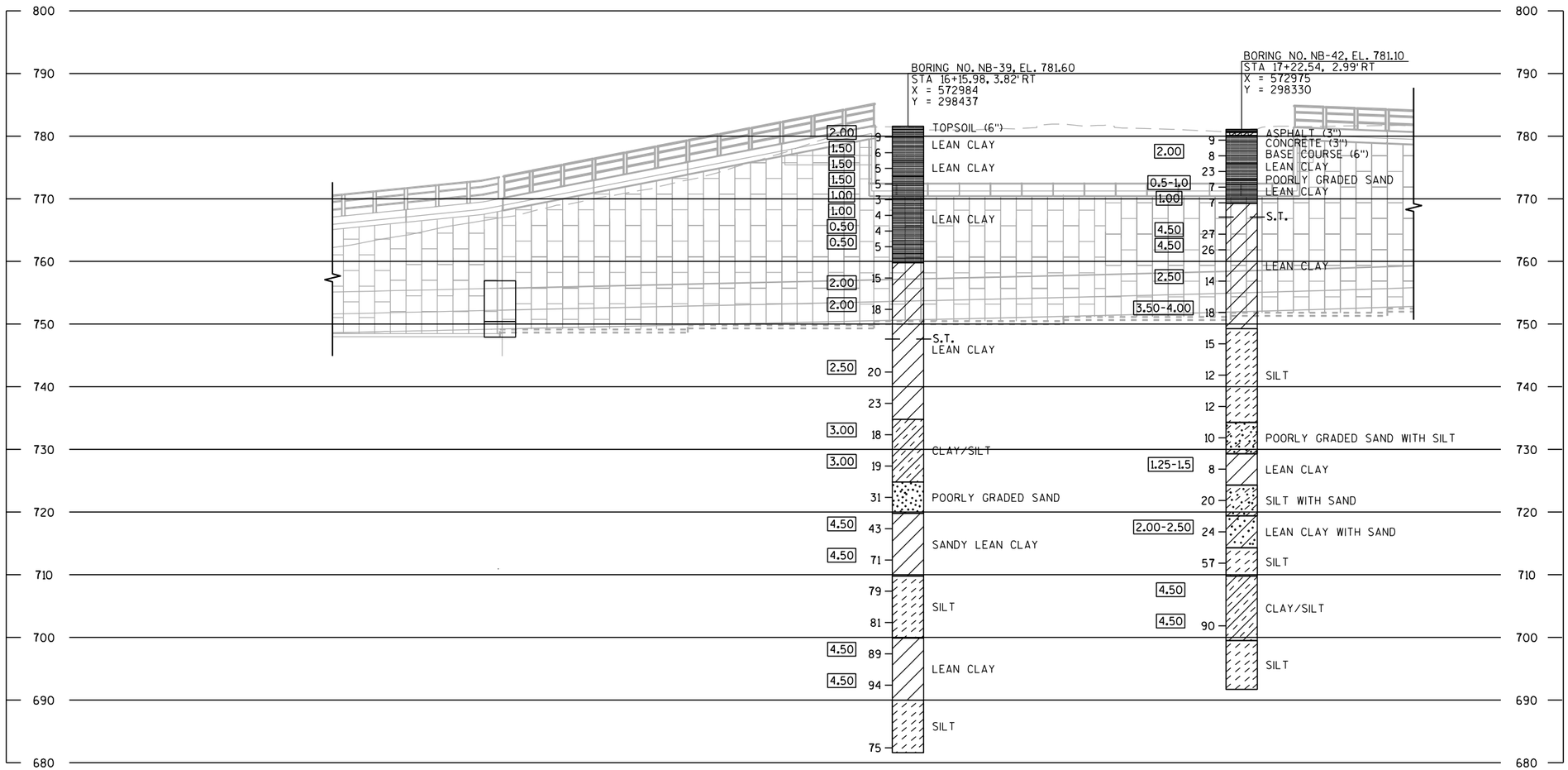
BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-557.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
OCTOBER 18, 2011 - BORING NR-38
SEPTEMBER 28, 2011 - BORING NB-39
SEPTEMBER 28, 2011 - BORING NB-42





8

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STATE PROJECT NUMBER

1060-33-80

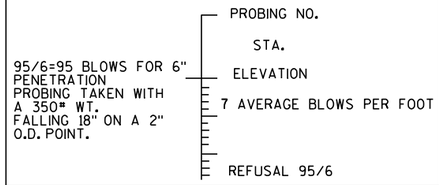
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

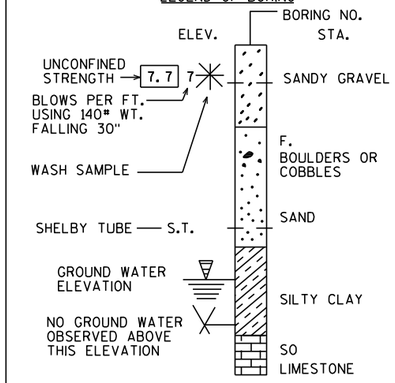
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

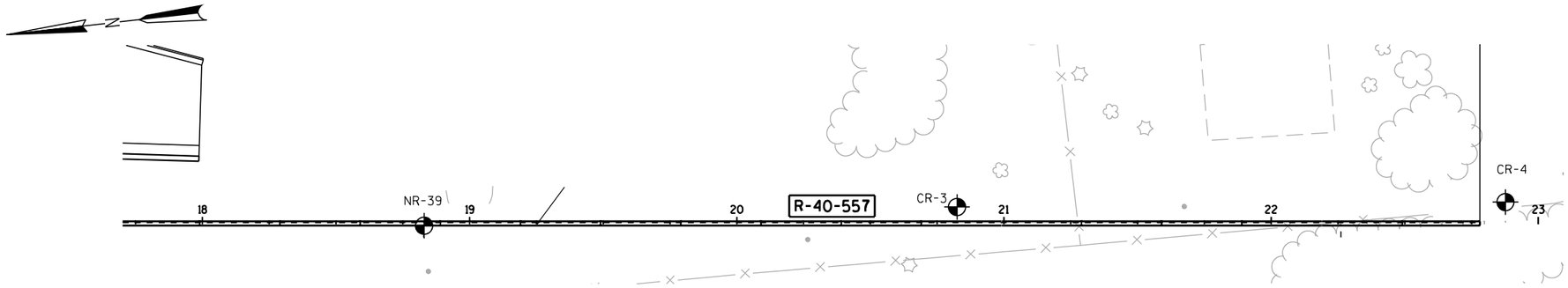
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 13 OF 14



NOTES

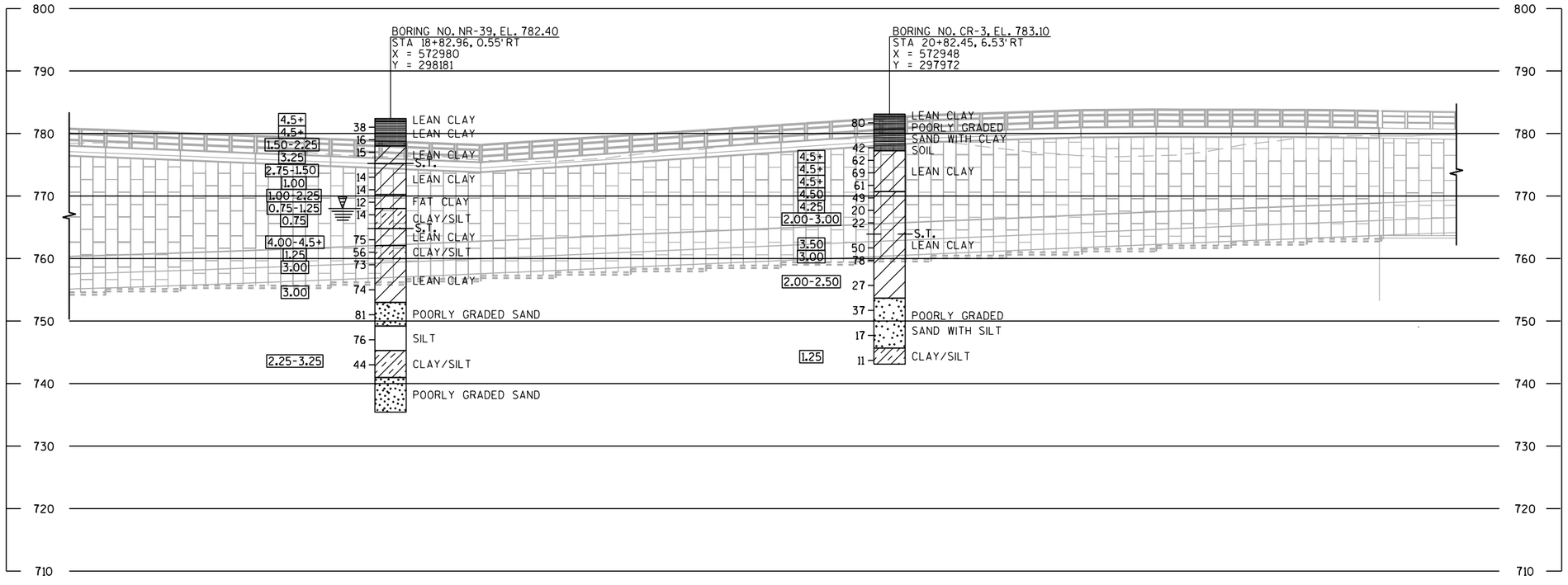
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BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-557.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
OCTOBER 17, 2011 - BORING NR-39
OCTOBER 17, 2011 - BORING CR-3
OCTOBER 20, 2011 - BORING CR-4



8

8

STATE PROJECT NUMBER

1060-33-80

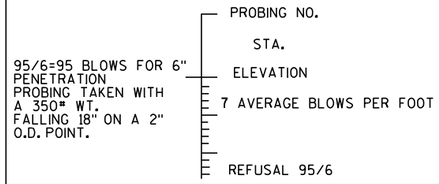
ABBREVIATIONS

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WS — WEATHERED SO — SOUND

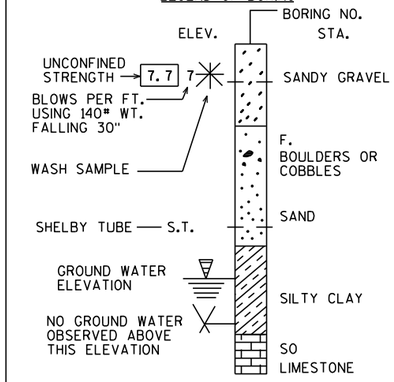
MATERIAL SYMBOLS

TOPSOIL / FILL
SAND
GRAVEL
SILT
PEAT
CLAY
SANDSTONE
LIMESTONE
IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

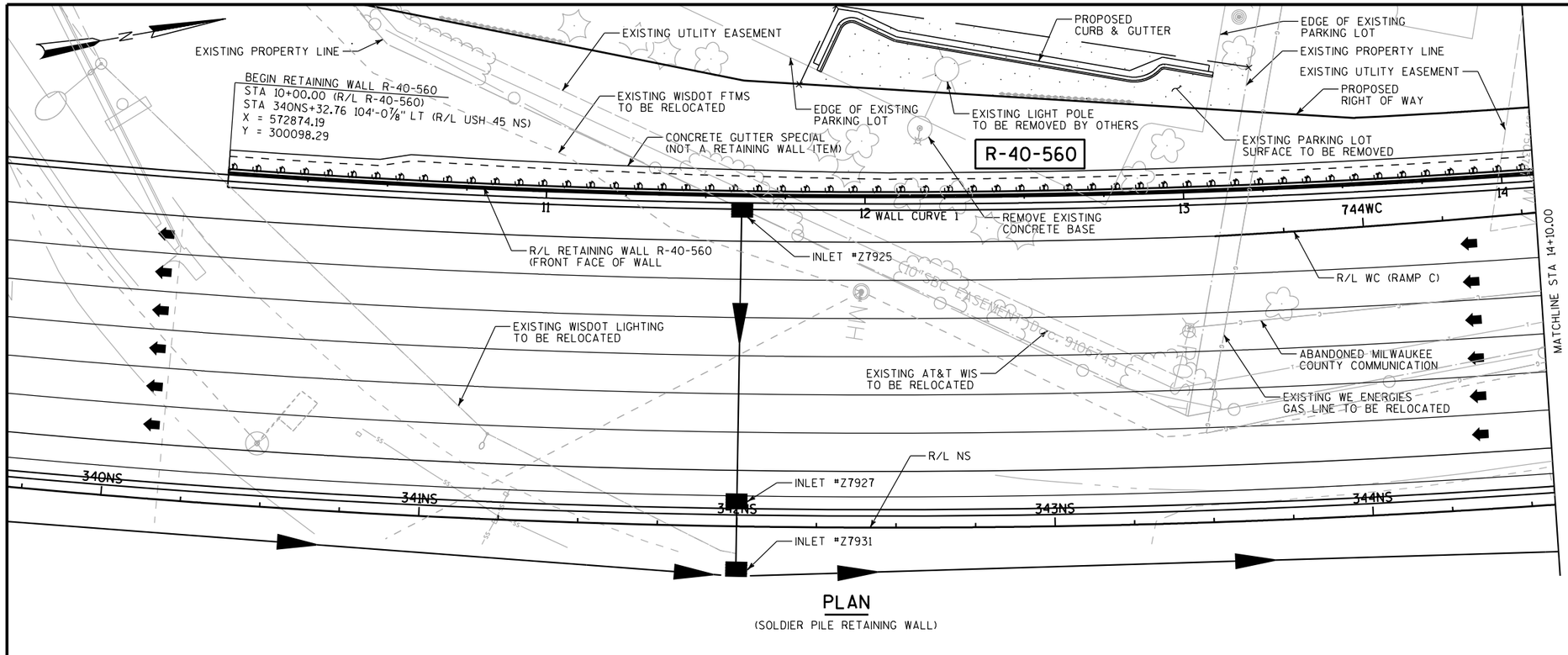
STRUCTURE R-40-557

DRAWN BY MS | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 2)

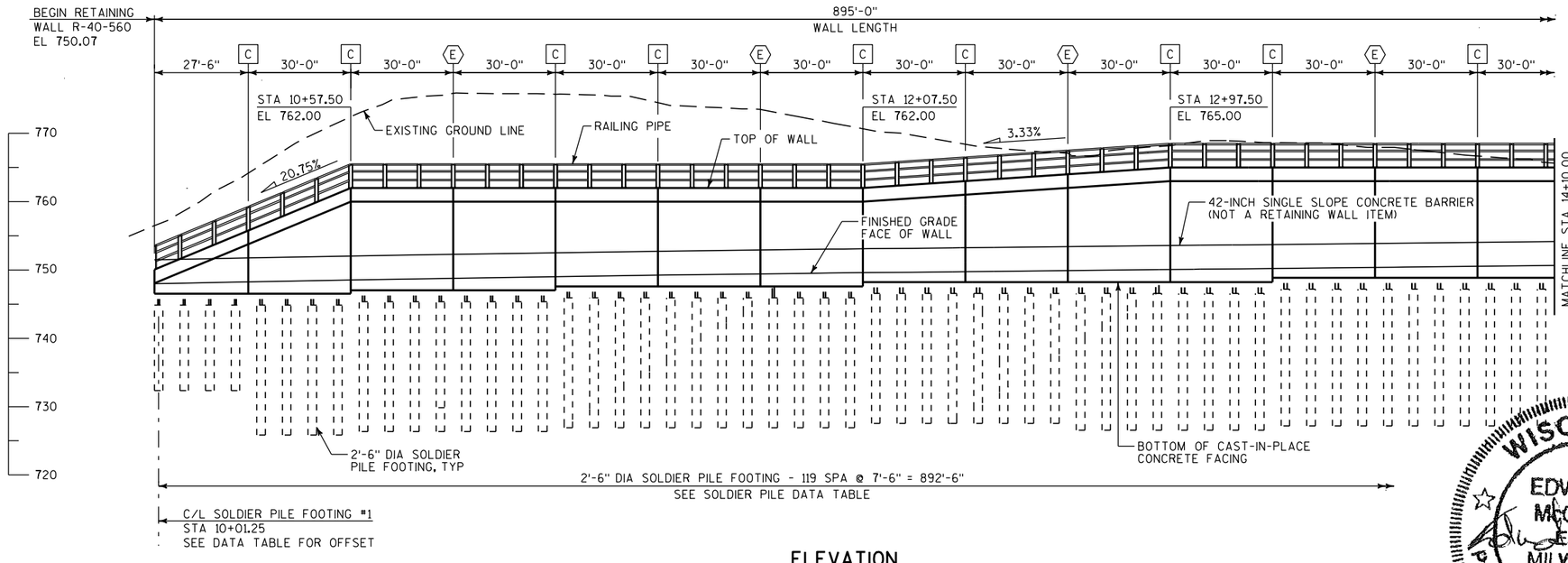
SHEET 14 OF 14

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PLOT DATE : 11-JUN-2014 14:29
PLOT BY : MSCKES
PLOT NAME : R40557_080502_se
PLOT SCALE : 50:1



PLAN

(SOLDIER PILE RETAINING WALL)



ELEVATION

(LOOKING WEST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
LIVE LOAD SURCHARGE (CONSTRUCTION): 100 PSF

MATERIAL PROPERTIES

CONCRETE MASONRY RETAINING WALL	f'c	= 4,000 PSI
BAR STEEL REINFORCEMENT	fy	= 60,000 PSI
STRUCTURAL STEEL HS	fy	= 50,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c	= 3,500 PSI
* TIMBER LAGGING	fbo	= 1,000 PSI
	E	= 1,700,000 PSI

* MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK, REFERENCE AASHTO LRFD SPECIFICATIONS TABLE 8.4.1.1.4-1.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES
4. TYPICAL WALL SECTION
5. SOLDIER PILE DATA TABLE (1 OF 2)
6. SOLDIER PILE DATA TABLE (2 OF 2)
7. COPING & WALL ELEVATION (1 OF 2)
8. COPING & WALL ELEVATION (2 OF 2)
9. COPING & WALL DETAILS
10. REINFORCING SCHEDULE
11. RAILING PIPE DETAILS
12. AESTHETIC WALL TREATMENT ELEVATION
13. AESTHETIC WALL TREATMENT DETAILS
14. SUBSURFACE EXPLORATION (1 OF 2)
15. SUBSURFACE EXPLORATION (2 OF 2)

LEGEND

- INDICATES FINAL ROADWAY LANE LOCATIONS AND DIRECTION OF TRAVEL
- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Duchac 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-560

WEST RETAINING WALL ALONG USH 45 SB

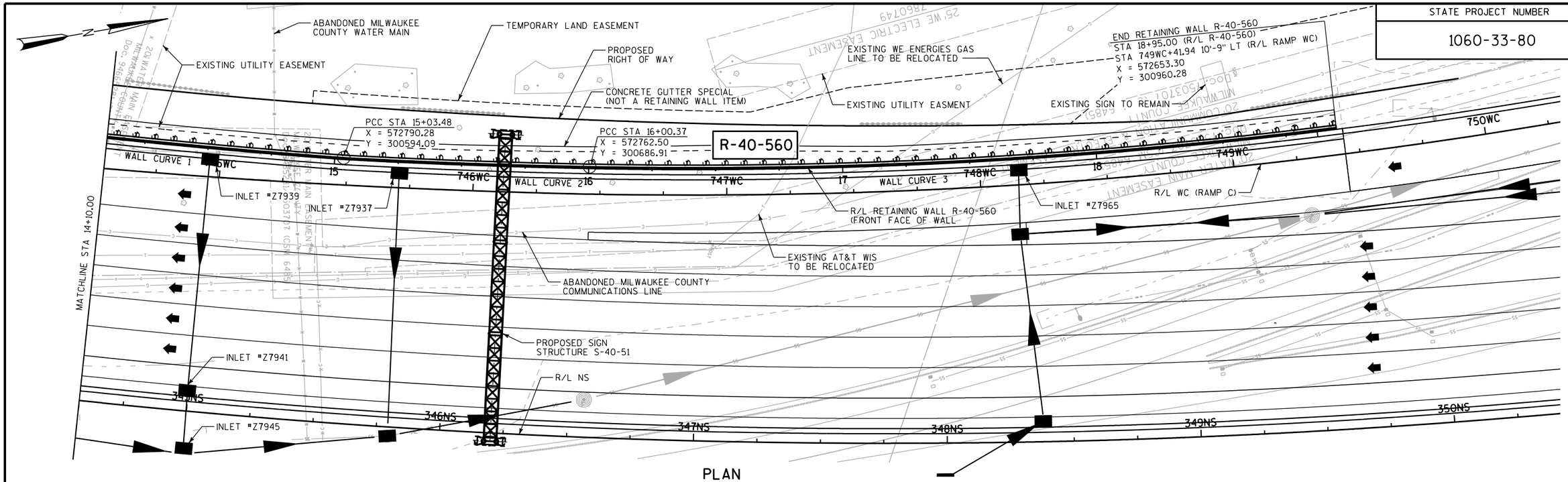
COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~: MILWAUKEE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY: EKM	DESIGN CK'D.: PRK
DRAWN BY: TEK	PLANS CK'D.: EKM

GENERAL PLAN & ELEVATION (1 OF 2)

SHEET 1 OF 15

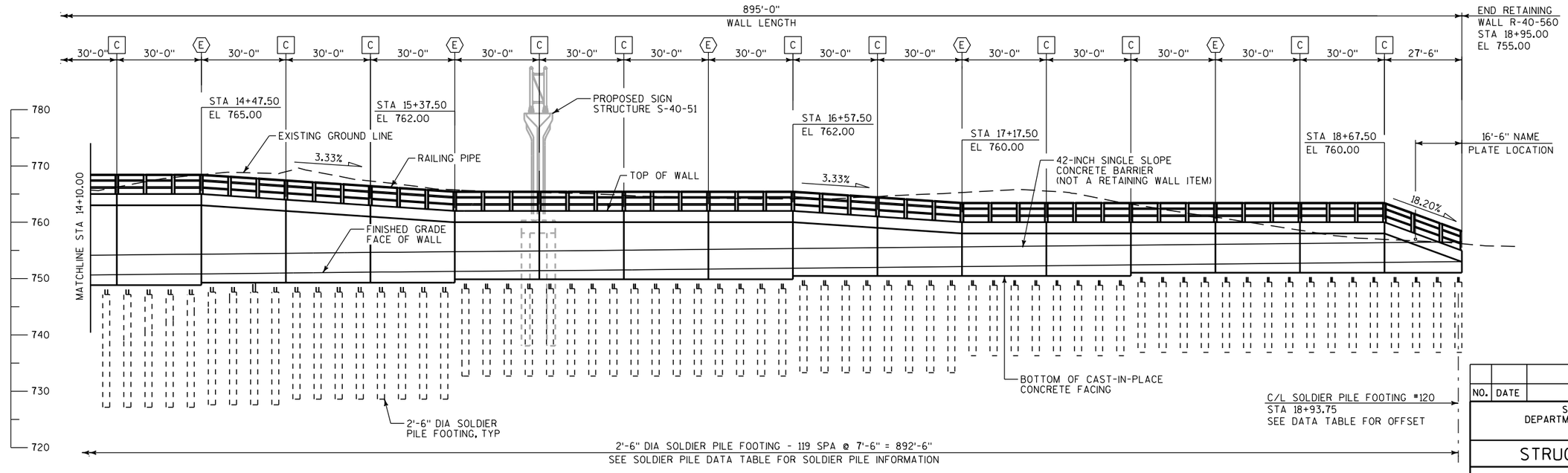
WISCONSIN
EDWARD K. MCCRIGHT
E-37422
MILWAUKEE
WI
5/19/14
PROFESSIONAL ENGINEER

STATE PROJECT NUMBER
1060-33-80



PLAN

(SOLDIER PILE RETAINING WALL)



ELEVATION

(LOOKING WEST AT FRONT FACE OF WALL)
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

GENERAL PLAN & ELEVATION (2 OF 2)

SHEET 2 OF 15

8

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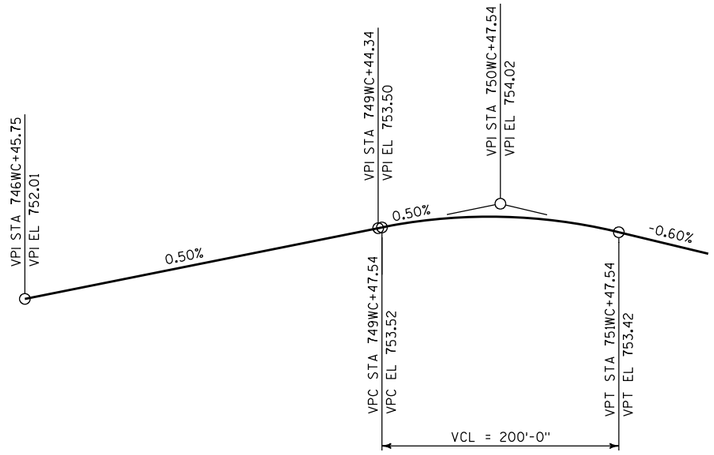
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PLOT BY : MSCEKM
PLOT NAME : R560_080102_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO	BID ITEMS	UNITS	TOTAL QUANTITY
206.3000.0006	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-560	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	429
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	35,030
506.0605	STRUCTURAL STEEL HS	LB	394,765
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	2,277
513.2000.0013	RAILING PIPE R-40-560	LS	1
517.0600.0007	PAINTING EPOXY SYSTEM R-40-560	LS	1
517.1010.S.0004	CONCRETE STAINING R-40-560	SF	10,480
517.1050.S.0018	ARCHITECTURAL SURFACE TREATMENT R-40-560	SF	9,690
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	371
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	15
SPV.0090.4440	FOUNDATION DRILLING	LF	4,360
SPV.0110.4600	TIMBER LAGGING	MBM	35
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	11,630
	NON-BID ITEM		
	PREFORMED JOINT FILLER	SIZE	¾"
	NON-BITUMINOUS JOINT FILLER	SIZE	¾"
	POLYVINYL CHLORIDE WATERSTOP	TYPE	B
	NAME PLATE	EACH	1

ALL ITEMS ARE CATEGORY 3170



PROFILE GRADE LINE - WC
(WATERTOWN PLANK ROAD - RAMP WC)

RETAINING WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, ϕ, DEG	COHESION C', PSF	FRICTION ANGLE, ϕ, DEG
STIFF TO VERY STIFF NATURAL LEAN CLAY	130	1,750 - 2,000	0	50	31
VERY STIFF NATURAL LEAN CLAY	130	2,500 - 3,000	0	75 - 100	32
HARD NATURAL LEAN CLAY	135	4,000	0	150	33

HORIZONTAL CURVE DATA

WALL CURVE 1

PI = STA 12+52.36
X = 572853.62
Y = 300349.81
DELTA = 9°51'29.15" LT
D = 1°57'28.78"
R = 2926.25'
T = 252.36'
L = 503.48'
E = 10.86
PC = STA 10+00.00
X = 572874.19
Y = 300098.29
PCC = STA 15+03.48
X = 572790.28
Y = 300594.09

WALL CURVE 2

PI = STA 15+51.93
X = 572777.16
Y = 300640.73
DELTA = 1°53'54.09" LT
D = 1°57'33.60"
R = 2924.25'
T = 48.45'
L = 96.89'
E = 0.40
PCC = STA 15+03.48
X = 572790.28
Y = 300594.09
PCC = STA 16+00.37
X = 572762.50
Y = 300686.91

WALL CURVE 3

PI = STA 17+47.94
X = 572717.84
Y = 300827.57
DELTA = 8°19'08.15" LT
D = 2°49'24.58"
R = 2029.25'
T = 147.58'
L = 294.63'
E = 5.36
PCC = STA 16+00.37
X = 572762.50
Y = 300686.91
PT = STA 18+95.00
X = 572653.30
Y = 300960.28

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL STATIONS ARE ALONG R/L OF R-40-560 (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

ALL BAR STEEL REINFORCEMENT TO BE EPOXY COATED.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-560".

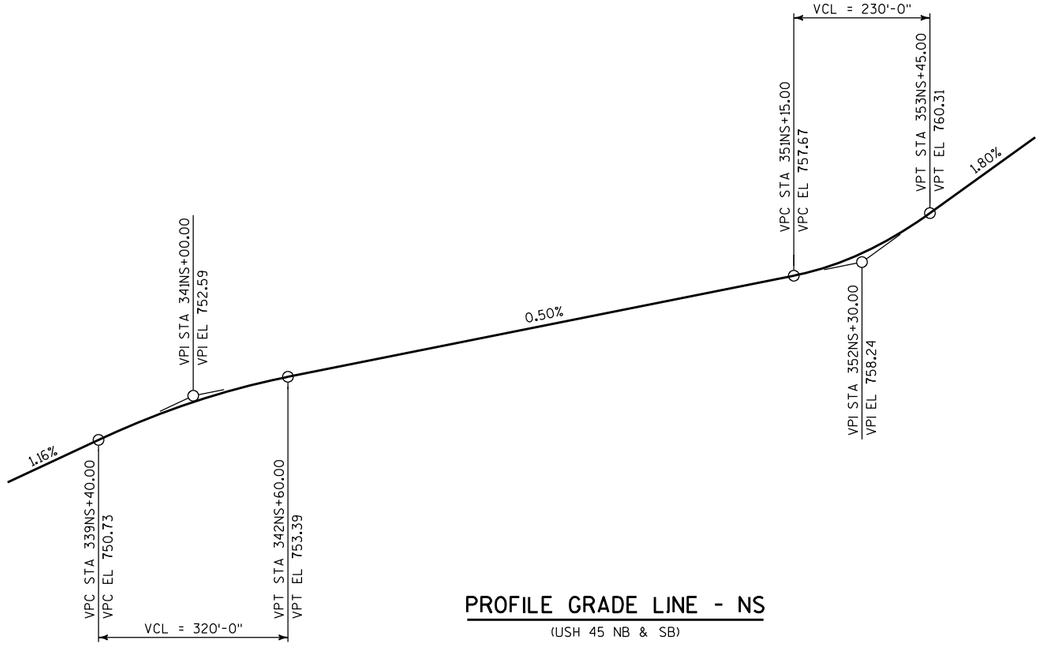
FLOWABLE BACKFILL AND CLSM ARE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-560". SEE SPECIAL PROVISIONS FOR DESCRIPTION OF FLOWABLE BACKFILL AND CLSM.

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600, PAINTING EPOXY SYSTEM R-40-560.

THESE PLANS ARE FOR A SOLDIER PILE RETAINING WALL.

THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE SOLDIER PILES AND FOOTINGS IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-560". AFTER WALL CONSTRUCTION HAS BEEN COMPLETED ALL EARTHWORK IN FRONT OF THE RETAINING WALL IS INCLUDED IN THE ROADWAY BID ITEM "COMMON EXCAVATION". SEE ROADWAY PLANS FOR EXCAVATION LIMITS.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO ITEM 504.0500 "CONCRETE MASONRY RETAINING WALLS". FABRICATE IN ACCORDANCE TO SDD.12 A 3-10.



PROFILE GRADE LINE - NS
(USH 45 NB & SB)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

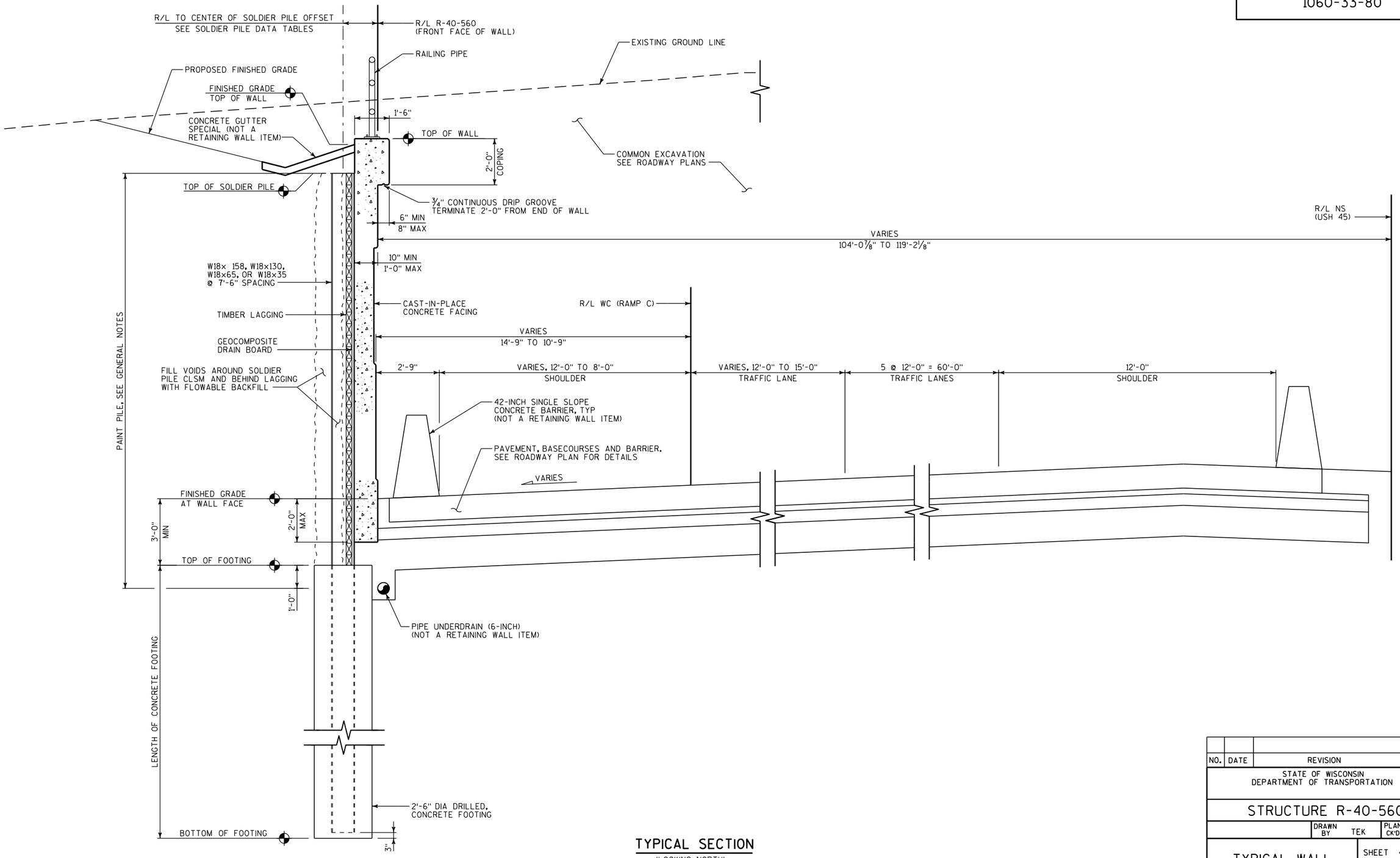
GENERAL NOTES, QUANTITIES & PROFILE GRADE LINES

SHEET 3 OF 15

8

8

STATE PROJECT NUMBER
1060-33-80



TYPICAL SECTION

(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY	TEK	PLANS CK'D.	EKM

TYPICAL WALL SECTION

SHEET 4 OF 15

8

8

STATE PROJECT NUMBER
1060-33-80

SOLDIER PILE DATA TABLE (1 OF 2)

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FINISHED GRADE TOP OF WALL	FOUNDATION DRILLING LENGTH	◥ TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	POSSIBLE OBSTRUCTIONS
1	10+01.25	1'-8⅞"	756.69	748.00	750.08	24.33	750.33	748.86	744.86	732.36	12'-6"	W18x35	16'-6"	
2	10+08.75	1'-8⅞"	758.67	748.08	751.64	26.30	751.88	750.45	744.86	732.36	12'-6"	W18x35	18'-1"	
3	10+16.25	1'-8⅞"	761.01	748.15	753.19	28.65	753.44	751.95	744.86	732.36	12'-6"	W18x35	19'-7"	
4	10+23.75	1'-8⅞"	763.06	748.22	754.74	30.70	755.00	753.53	744.86	732.36	12'-6"	W18x35	21'-2"	
5	10+31.25	1'-9⅝"	765.33	748.29	756.31	35.97	756.55	755.11	744.86	725.86	19'-0"	W18x130	29'-3"	
6	10+38.75	1'-9⅝"	767.71	748.36	757.86	38.35	758.11	756.61	744.86	725.86	19'-0"	W18x130	30'-9"	
7	10+46.25	1'-9⅝"	769.78	748.43	759.41	40.41	759.67	758.2	744.86	725.86	19'-0"	W18x130	32'-4"	
8	10+53.75	1'-9⅝"	771.52	748.50	760.97	42.16	761.22	759.78	744.86	725.86	19'-0"	W18x130	33'-11"	
9	10+61.25	1'-9⅝"	773.23	748.56	761.75	43.38	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
10	10+68.75	1'-9⅝"	774.67	748.63	761.75	44.82	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
11	10+76.25	1'-9⅝"	775.21	748.69	761.75	45.36	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
12	10+83.75	1'-9⅝"	775.55	748.76	761.75	45.70	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
13	10+91.25	1'-9⅝"	775.84	748.82	761.75	45.99	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
14	10+98.75	1'-9⅝"	775.78	748.87	761.75	45.93	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
15	11+06.25	1'-9⅝"	775.80	748.93	761.75	45.95	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
16	11+13.75	1'-9⅝"	775.77	748.98	761.75	45.92	762.00	760.52	745.35	726.35	19'-0"	W18x130	34'-2"	
17	11+21.25	1'-9⅝"	775.71	749.04	761.75	45.28	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
18	11+28.75	1'-9⅝"	775.58	749.10	761.75	45.15	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
19	11+36.25	1'-9⅝"	775.42	749.15	761.75	45.00	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
20	11+43.75	1'-9⅝"	774.90	749.20	761.75	44.47	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
21	11+51.25	1'-9⅝"	774.07	749.25	761.75	43.64	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
22	11+58.75	1'-9⅝"	773.89	749.30	761.75	43.46	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
23	11+66.25	1'-9⅝"	773.71	749.35	761.75	43.28	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
24	11+73.75	1'-9⅝"	773.56	749.40	761.75	43.13	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
25	11+81.25	1'-9⅝"	773.12	749.45	761.75	42.69	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
26	11+88.75	1'-9⅝"	772.42	749.49	761.75	41.99	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
27	11+96.25	1'-9⅝"	771.70	749.53	761.75	41.27	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
28	12+03.75	1'-9⅝"	770.99	749.58	761.75	40.56	762.00	760.51	745.93	726.93	19'-0"	W18x130	33'-7"	
29	12+11.25	1'-9⅝"	770.28	749.62	761.87	42.73	762.13	760.64	746.55	727.55	19'-0"	W18x130	33'-1"	
30	12+18.75	1'-9⅝"	769.99	749.66	762.12	42.44	762.38	760.89	746.55	727.55	19'-0"	W18x130	33'-4"	
31	12+26.25	1'-9⅝"	769.34	749.69	762.38	41.79	762.63	761.14	746.55	727.55	19'-0"	W18x130	33'-7"	
32	12+33.75	1'-9⅝"	768.69	749.73	762.63	41.14	762.88	761.39	746.55	727.55	19'-0"	W18x130	33'-10"	
33	12+41.25	1'-9⅝"	768.05	749.77	762.88	40.49	763.13	761.64	746.55	727.55	19'-0"	W18x130	34'-1"	
34	12+48.75	1'-9⅝"	767.73	749.81	763.12	40.17	763.38	761.89	746.55	727.55	19'-0"	W18x130	34'-4"	
35	12+56.25	1'-9⅝"	767.40	749.85	763.37	39.85	763.63	762.14	746.55	727.55	19'-0"	W18x130	34'-7"	
36	12+63.75	1'-9⅝"	767.16	749.89	763.62	39.61	763.88	762.39	746.55	727.55	19'-0"	W18x130	34'-10"	
37	12+71.25	1'-9⅞"	766.65	749.93	763.87	39.10	764.13	762.64	746.55	726.55	20'-0"	W18x158	36'-1"	
38	12+78.75	1'-9⅞"	767.39	749.96	764.12	39.84	764.38	762.89	746.55	726.55	20'-0"	W18x158	36'-4"	
39	12+86.25	1'-9⅞"	767.76	750.00	764.38	40.21	764.63	763.14	746.55	726.55	20'-0"	W18x158	36'-7"	
40	12+93.75	1'-9⅞"	768.05	750.05	764.63	40.50	764.88	763.39	746.55	726.55	20'-0"	W18x158	36'-10"	
41	13+01.25	1'-9⅞"	768.45	750.09	764.75	40.90	765.00	763.55	746.55	726.55	20'-0"	W18x158	37'-0"	
42	13+08.75	1'-9⅞"	768.91	750.12	764.75	41.36	765.00	763.55	746.55	726.55	20'-0"	W18x158	37'-0"	
43	13+16.25	1'-9⅞"	768.90	750.16	764.75	41.35	765.00	763.55	746.55	726.55	20'-0"	W18x158	37'-0"	
44	13+23.75	1'-9⅞"	768.66	750.20	764.75	41.11	765.00	763.55	746.55	726.55	20'-0"	W18x158	37'-0"	EXISTING WE ENERGIES GAS LINE
45	13+31.25	1'-9⅞"	768.62	750.24	764.75	40.44	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
46	13+38.75	1'-9⅞"	768.59	750.28	764.75	40.42	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
47	13+46.25	1'-9⅞"	768.39	750.32	764.75	40.21	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
48	13+53.75	1'-9⅞"	768.00	750.36	764.75	39.82	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
49	13+61.25	1'-9⅞"	767.92	750.39	764.75	39.74	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
50	13+68.75	1'-9⅞"	767.61	750.43	764.75	39.44	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
51	13+76.25	1'-9⅞"	767.20	750.47	764.75	39.03	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
52	13+83.75	1'-9⅞"	766.79	750.51	764.75	38.61	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
53	13+91.25	1'-9⅞"	766.52	750.55	764.75	38.34	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
54	13+98.75	1'-9⅞"	766.25	750.59	764.75	38.07	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
55	14+06.25	1'-9⅞"	765.79	750.63	764.75	37.61	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
56	14+13.75	1'-9⅞"	765.86	750.66	764.75	37.69	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	EXISTING WATER MAIN
57	14+21.25	1'-9⅞"	766.57	750.70	764.75	38.40	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
58	14+28.75	1'-9⅞"	767.27	750.74	764.75	39.10	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
59	14+36.25	1'-9⅞"	767.86	750.78	764.75	39.69	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	
60	14+43.75	1'-9⅞"	768.24	750.82	764.75	40.06	765.00	763.51	747.18	727.18	20'-0"	W18x158	36'-4"	

◥ SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

SOLDIER PILE DATA TABLE (1 OF 2)

SHEET 5 OF 15

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-560\cds\R560_080201_de.dgn PLOT DATE : 30-APR-2014 14:46 PLOT BY : MSCTEK PLOT NAME : R560_080201_de PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

SOLDIER PILE DATA TABLE (2 OF 2)

PILE NO.	WALL R/L STA.	OFFSET LT	APPROX. EXISTING GRADE	FINISHED GRADE AT WALL FACE	FINISHED GRADE TOP OF WALL	FOUNDATION DRILLING LENGTH	◥ TOP OF WALL	TOP OF SOLDIER PILE	TOP OF FOOTING	BOTTOM OF FOOTING	FOOTING LENGTH	SOLDIER PILE SECTION	SOLDIER PILE LENGTH	POSSIBLE OBSTRUCTIONS
61	14+51.25	1'-9 7/8"	768.61	750.86	764.62	40.00	764.88	763.44	747.61	727.61	20'-0"	W18x158	35'-10"	
62	14+58.75	1'-9 7/8"	768.86	750.90	764.37	40.25	764.63	763.19	747.61	727.61	20'-0"	W18x158	35'-7"	
63	14+66.25	1'-9 7/8"	768.75	750.94	764.12	40.14	764.38	762.94	747.61	727.61	20'-0"	W18x158	35'-4"	
64	14+73.75	1'-9 7/8"	768.64	750.97	763.87	40.03	764.13	762.69	747.61	727.61	20'-0"	W18x158	35'-1"	EXISTING WATER MAIN
65	14+81.25	1'-9 5/8"	769.49	751.02	763.63	40.88	763.88	762.44	747.61	728.61	19'-0"	W18x130	33'-10"	
66	14+88.75	1'-9 5/8"	768.89	751.06	763.38	40.28	763.63	762.19	747.61	728.61	19'-0"	W18x130	33'-7"	
67	14+96.25	1'-9 5/8"	768.20	751.10	763.13	39.59	763.38	761.94	747.61	728.61	19'-0"	W18x130	33'-4"	
68	15+03.75	1'-9 5/8"	767.53	751.13	762.88	38.91	763.13	761.69	747.61	728.61	19'-0"	W18x130	33'-1"	
69	15+11.25	1'-9 5/8"	767.12	751.17	762.62	38.51	762.88	761.44	747.61	728.61	19'-0"	W18x130	32'-10"	
70	15+18.75	1'-9 5/8"	766.70	751.20	762.37	38.09	762.63	761.19	747.61	728.61	19'-0"	W18x130	32'-7"	
71	15+26.25	1'-9 5/8"	766.20	751.23	762.12	37.59	762.38	760.94	747.61	728.61	19'-0"	W18x130	32'-4"	
72	15+33.75	1'-9 5/8"	765.84	751.26	761.88	37.23	762.13	760.69	747.61	728.61	19'-0"	W18x130	32'-1"	
73	15+41.25	1'-9 3/16"	765.67	751.29	761.75	32.97	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
74	15+48.75	1'-9 3/16"	765.49	751.33	761.75	32.79	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
75	15+56.25	1'-9 3/16"	765.38	751.36	761.75	32.68	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
76	15+63.75	1'-9 3/16"	765.32	751.39	761.75	32.62	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
77	15+71.25	1'-9 3/16"	765.23	751.42	761.75	32.53	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
78	15+78.75	1'-9 3/16"	765.14	751.45	761.75	32.44	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
79	15+86.25	1'-9 3/16"	765.03	751.49	761.75	32.33	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
80	15+93.75	1'-9 3/16"	764.85	751.52	761.75	32.15	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
81	16+01.25	1'-9 3/16"	764.68	751.55	761.75	31.98	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
82	16+08.75	1'-9 3/16"	764.56	751.59	761.75	31.86	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
83	16+16.25	1'-9 3/16"	764.48	751.63	761.75	31.78	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
84	16+23.75	1'-9 3/16"	764.36	751.67	761.75	31.66	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
85	16+31.25	1'-9 3/16"	764.25	751.70	761.75	31.55	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
86	16+38.75	1'-9 3/16"	764.20	751.74	761.75	31.50	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
87	16+46.25	1'-9 3/16"	764.15	751.78	761.75	31.45	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
88	16+53.75	1'-9 3/16"	764.15	751.82	761.75	31.45	762.00	760.53	748.20	732.70	15'-6"	W18x65	27'-10"	
89	16+61.25	1'-9 3/16"	764.15	751.85	761.63	30.85	761.88	760.39	748.80	733.30	15'-6"	W18x65	27'-1"	
90	16+68.75	1'-9 3/16"	764.14	751.89	761.37	30.84	761.63	760.14	748.80	733.30	15'-6"	W18x65	26'-10"	
91	16+76.25	1'-9 3/16"	764.27	751.93	761.12	30.96	761.38	759.89	748.80	733.30	15'-6"	W18x65	26'-7"	
92	16+83.75	1'-9 3/16"	764.49	751.97	760.88	31.18	761.13	759.64	748.80	733.30	15'-6"	W18x65	26'-4"	
93	16+91.25	1'-9 3/16"	764.68	752.00	760.62	31.38	760.88	759.39	748.80	733.30	15'-6"	W18x65	26'-1"	
94	16+98.75	1'-9 3/16"	764.85	752.04	760.38	31.54	760.63	759.14	748.80	733.30	15'-6"	W18x65	25'-10"	
95	17+06.25	1'-9 3/16"	765.01	752.09	760.13	31.70	760.38	758.89	748.80	733.30	15'-6"	W18x65	25'-7"	
96	17+13.75	1'-9 3/16"	765.18	752.12	759.87	31.87	760.13	758.64	748.80	733.30	15'-6"	W18x65	25'-4"	
97	17+21.25	1'-8 7/8"	765.37	752.15	759.74	29.07	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	EXISTING WE ENERGIES GAS LINE
98	17+28.75	1'-8 7/8"	765.57	752.19	759.72	29.26	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
99	17+36.25	1'-8 7/8"	765.76	752.23	759.69	29.46	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
100	17+43.75	1'-8 7/8"	765.68	752.27	759.68	29.37	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
101	17+51.25	1'-8 7/8"	765.43	752.30	759.65	29.13	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
102	17+58.75	1'-8 7/8"	764.97	752.34	759.63	28.67	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
103	17+66.25	1'-8 7/8"	764.25	752.38	759.60	27.94	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
104	17+73.75	1'-8 7/8"	763.52	752.42	759.58	27.21	760.00	758.55	748.80	736.30	12'-6"	W18x35	22'-3"	
105	17+81.25	1'-8 7/8"	762.91	752.46	759.56	26.01	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	EXISTING ?? CABLE LINE
106	17+88.75	1'-8 7/8"	762.32	752.49	759.54	25.42	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
107	17+96.25	1'-8 7/8"	761.73	752.59	759.51	24.84	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
108	18+03.75	1'-8 7/8"	761.16	752.59	759.49	24.26	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
109	18+11.25	1'-8 7/8"	760.62	752.61	759.47	23.72	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
110	18+18.75	1'-8 7/8"	760.05	752.64	759.45	23.15	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
111	18+26.25	1'-8 7/8"	759.47	752.68	759.42	22.58	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
112	18+33.75	1'-8 7/8"	758.88	752.72	759.40	21.98	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
113	18+41.25	1'-8 7/8"	758.29	752.76	759.38	21.39	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
114	18+48.75	1'-8 7/8"	757.71	752.79	759.36	20.81	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
115	18+56.25	1'-8 7/8"	757.28	752.83	759.33	20.39	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
116	18+63.75	1'-8 7/8"	757.05	752.87	759.31	20.16	760.00	758.56	749.39	736.89	12'-6"	W18x35	21'-8"	
117	18+71.25	1'-8 7/8"	756.87	752.91	758.62	19.97	759.32	757.89	749.39	736.89	12'-6"	W18x35	21'-0"	
118	18+78.75	1'-8 7/8"	756.69	752.94	757.25	19.79	757.95	756.48	749.39	736.89	12'-6"	W18x35	19'-7"	
119	18+86.25	1'-8 7/8"	756.50	752.98	755.89	19.60	756.59	755.14	749.39	736.89	12'-6"	W18x35	18'-3"	
120	18+93.75	1'-8 7/8"	756.24	753.02	754.53	19.35	755.22	753.73	749.39	736.89	12'-6"	W18x35	16'-10"	

◥ SEE GENERAL PLAN & ELEVATION SHEETS FOR TOP OF WALL POINTS OF INTERSECTION AND SLOPES.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

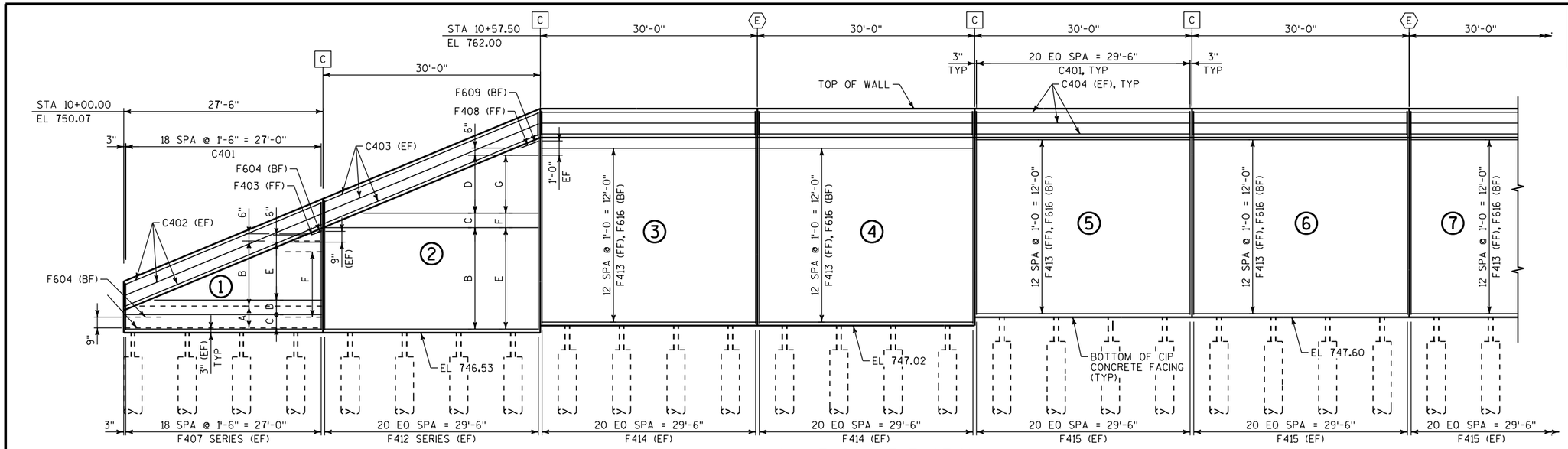
DRAWN BY TEK | PLANS CK'D. EKM

SOLDIER PILE DATA TABLE (2 OF 2)

SHEET 6 OF 15

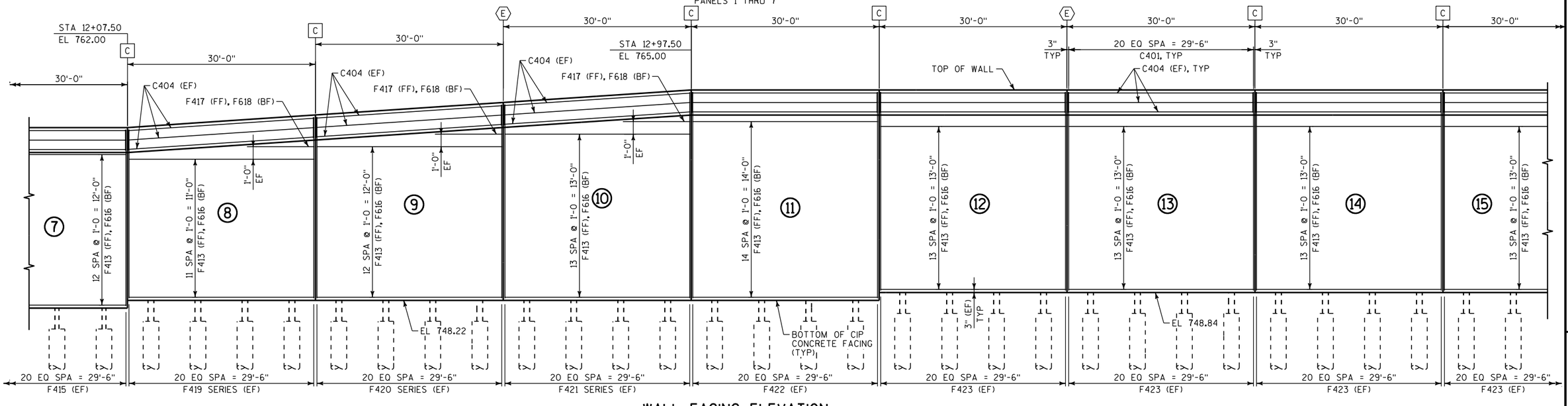
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANELS 1 THRU 7



WALL FACING ELEVATION

PANELS 7 THRU 15

LEGEND

- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- (X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

DIM	FACING PANEL 1	FACING PANEL 2
A	1'-6"	---
B	3 SPA @ 1'-6" = 4'-6", F606 SERIES (BF)	7 SPA @ 1'-0" = 7'-0", F616 (BF)
C	1 SPA @ 1'-0" = 1'-0", F401 (FF)	1'-0"
D	1'-0"	4 SPA @ 1'-0" = 4'-0", F611 SERIES (BF)
E	4 SPA @ 1'-0" = 4'-0", F405 SERIES (FF)	7 SPA @ 1'-0" = 7'-0", F413 (FF)
F	3 SPA @ 1'-6" = 4'-6", F602 (BF)	1'-0"
G	---	4 SPA @ 1'-0" = 4'-0", F410 SERIES (FF)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

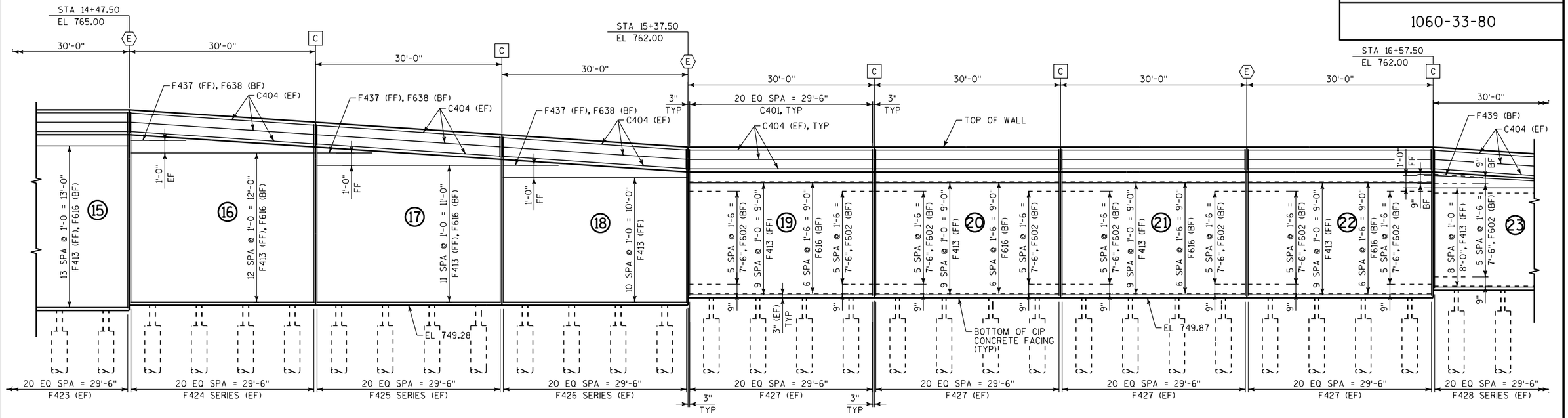
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COPING & WALL ELEVATION (1 OF 2)

SHEET 7 OF 15

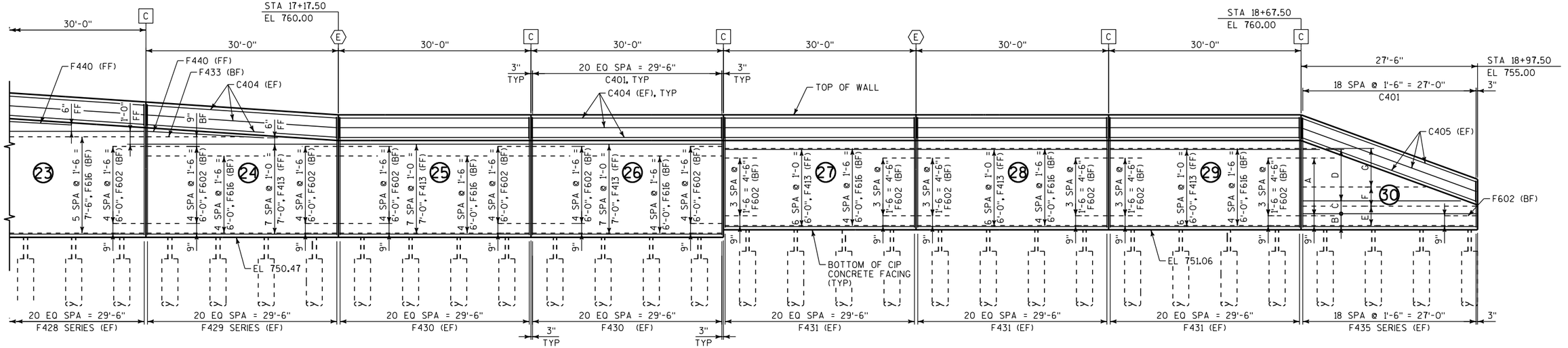
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STATE PROJECT NUMBER
1060-33-80



WALL FACING ELEVATION

PANELS 15 THRU 23



WALL FACING ELEVATION

PANELS 23 THRU 30

LEGEND

- (E) EXPANSION JOINT
- [C] CONTRACTION JOINT
- (X) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

DIM	FACING PANEL 30
A	3 SPA @ 1'-6" = 4'-6", F602 (BF)
B	1 SPA @ 1'-0" = 1'-0", F401 (FF)
C	1'-0"
D	4 SPA @ 1'-0" = 4'-0", F432 SERIES (FF)
E	1 SPA @ 1'-6" = 1'-6", F636 (BF)
F	1'-6"
G	2 SPA @ 1'-6" = 3'-0", F634 SERIES (BF)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

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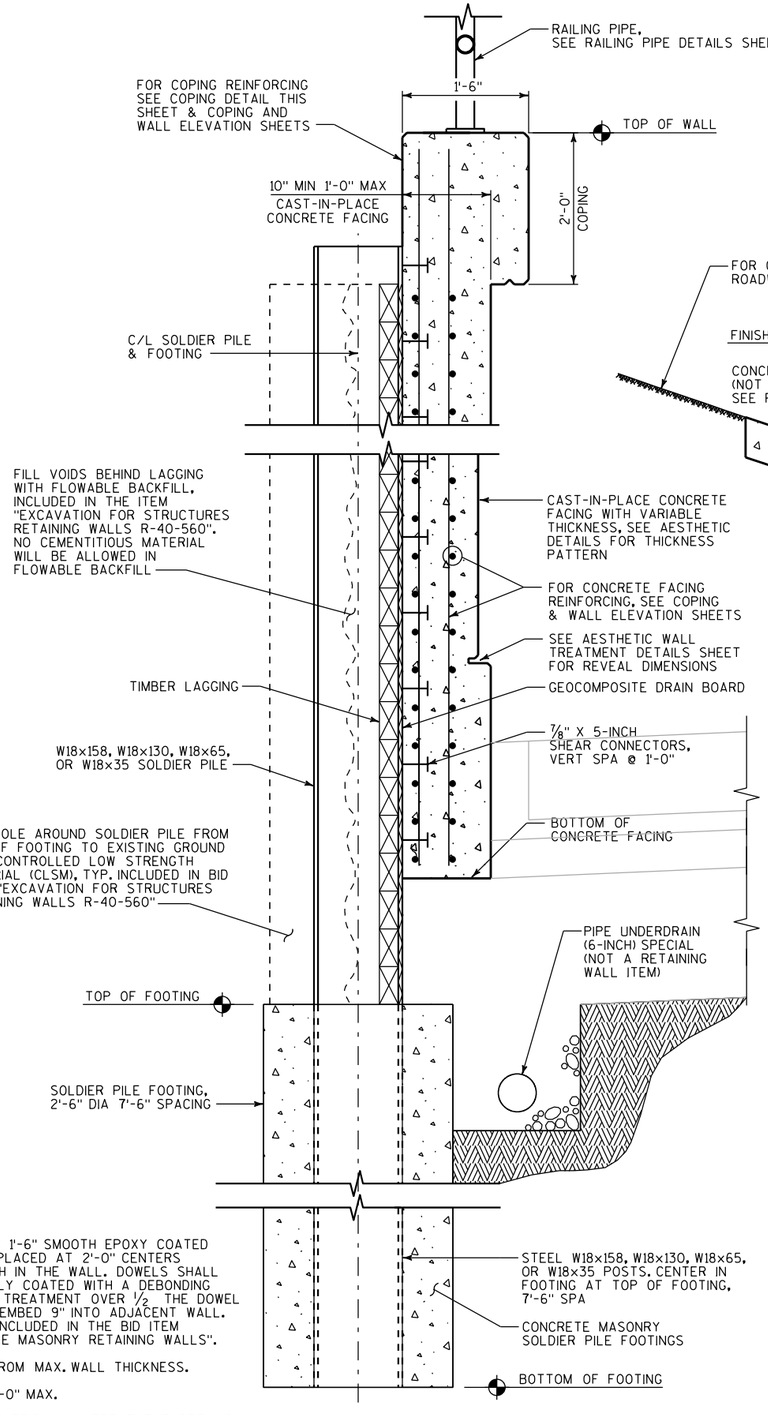
COPING & WALL ELEVATION (2 OF 2)

SHEET 8 OF 15

8

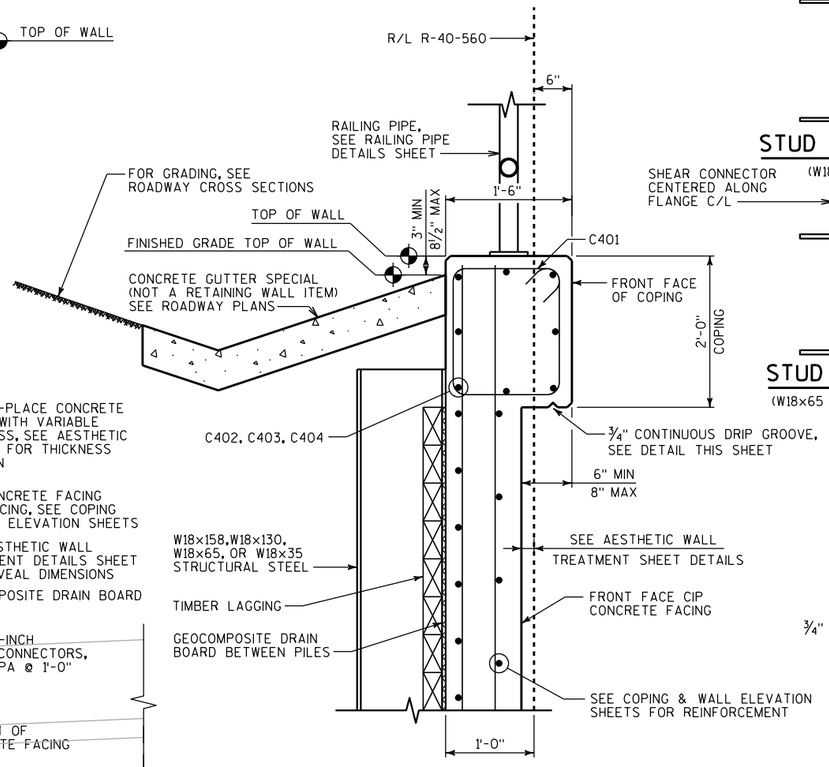
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STATE PROJECT NUMBER
1060-33-80



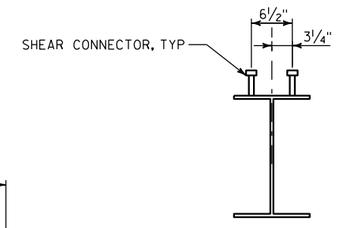
SOLDIER PILE AND WALL SECTION

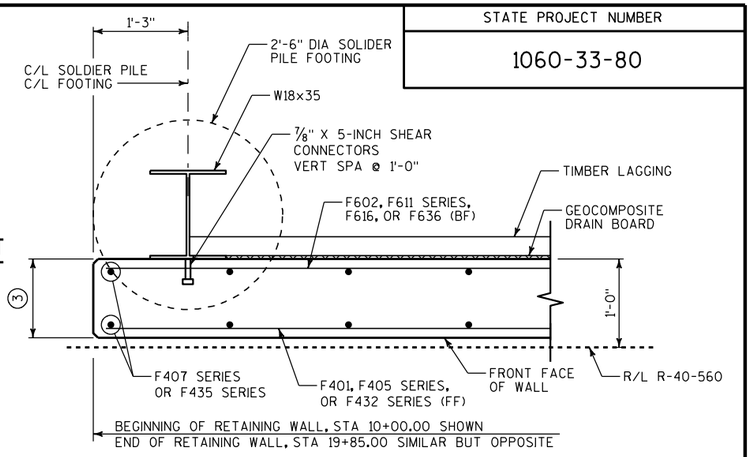
(COPING REINFORCEMENT NOT SHOWN)
(LOOKING NORTH)



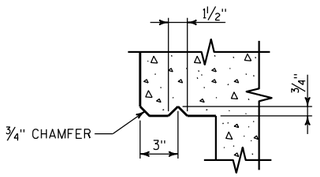
COPING DETAIL

(LOOKING NORTH)
(WELDED STUD CONNECTORS NOT SHOWN)



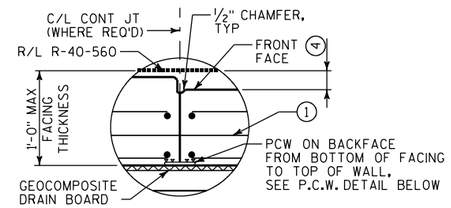


SECTION AT END OF WALL

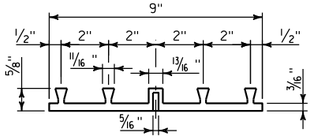


3/4" CONTINUOUS DRIP GROOVE DETAIL

TERMINATE 2'-0" FROM ENDS OF WALL

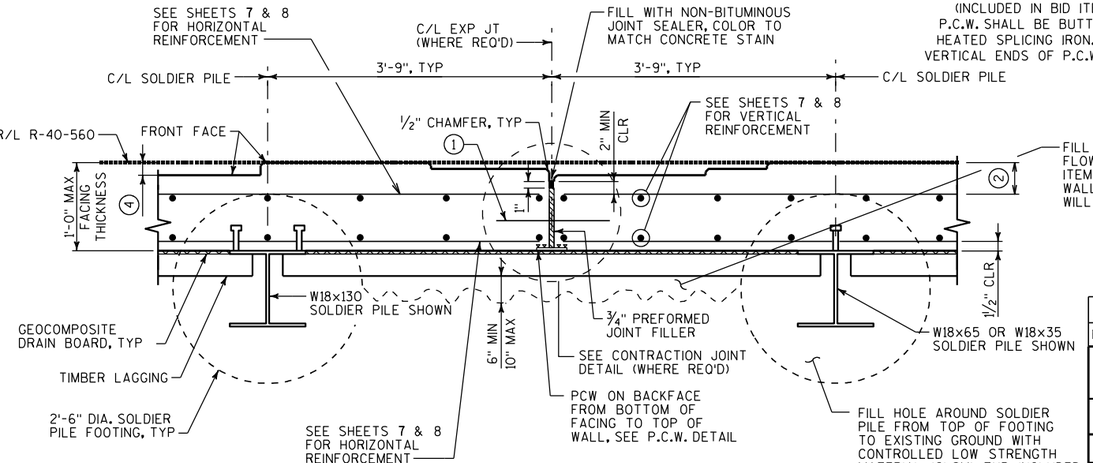


CONTRACTION JOINT DETAIL



P.C.W. "TYPE B" DETAIL

(POLYVINYL CHLORIDE WATERSTOP)
(INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS")
P.C.W. SHALL BE BUTT SPLICED AT ANY INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.



SOLDIER PILE & WALL SECTION PLAN

(SEE GENERAL PLAN & ELEVATION SHEETS FOR LOCATION OF CONTRACTION & EXPANSION JOINTS)

NOTES

1. 3/4" DIA X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED AT 2'-0" CENTERS MID-DEPTH IN THE WALL. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALL. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".
2. 5" CLR. FROM MAX. WALL THICKNESS.
3. 10" MIN, 1'-0" MAX.
4. SEE AESTHETIC WALL TREATMENT DETAILS SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

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COPING & WALL DETAILS

SHEET 9 OF 15

STATE PROJECT NUMBER
1060-33-80

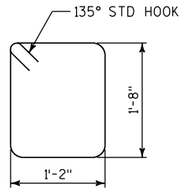
BILL OF BARS - WALL FACING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
F401	X	4	27'-2"			LONGITUDINAL FF (PANELS 1 AND 30)
F602	X	111	5'-8"			LONGITUDINAL BF CANT (PANELS 1 AND 19 THRU 30)
F403	X	1	1'-6"			LONGITUDINAL FF (PANEL 1)
F604	X	1	1'-1"			LONGITUDINAL BF (PANEL 1)
F405	X	5	13'-6"		⚠	LONGITUDINAL FF (PANEL 1)
F606	X	4	14'-6"		⚠	LONGITUDINAL BF (PANEL 1)
F407	X	38	6'-1"		⚠	VERTICAL EF (PANEL 1)
F408	X	1	2'-7"			LONGITUDINAL FF (PANEL 2)
F609	X	1	2'-7"			LONGITUDINAL BF (PANEL 2)
F410	X	5	14'-7"		⚠	LONGITUDINAL FF (PANEL 2)
F611	X	5	14'-7"		⚠	LONGITUDINAL BF (PANEL 2)
F412	X	42	12'-0"		⚠	VERTICAL EF (PANEL 2)
F413	X	313	29'-7"			LONGITUDINAL FF (PANELS 2 THRU 29)
F414	X	84	14'-7"			VERTICAL EF (PANELS 3 AND 4)
F415	X	126	14'-0"			VERTICAL EF (PANELS 5 THRU 7)
F616	X	215	29'-7"			LONGITUDINAL BF (PANELS 2 THRU 29)
F417	X	3	10'-9"			LONGITUDINAL FF (PANELS 8 THRU 10)
F618	X	3	10'-9"			LONGITUDINAL BF (PANEL 8 THRU 10)
F419	X	42	13'-11"		⚠	VERTICAL EF (PANEL 8)
F420	X	42	14'-11"		⚠	VERTICAL EF (PANEL 9)
F421	X	42	15'-11"		⚠	VERTICAL EF (PANEL 10)
F422	X	42	16'-5"			VERTICAL EF (PANEL 11)
F423	X	168	15'-9"			VERTICAL EF (PANELS 12 THRU 15)
F424	X	42	14'-10"		⚠	VERTICAL EF (PANEL 16)
F425	X	42	13'-10"		⚠	VERTICAL EF (PANEL 17)
F426	X	42	12'-10"		⚠	VERTICAL EF (PANEL 18)
F427	X	168	11'-9"			VERTICAL EF (PANELS 19 THRU 22)
F428	X	42	10'-8"		⚠	VERTICAL EF (PANEL 23)
F429	X	42	9'-8"		⚠	VERTICAL EF (PANEL 24)
F430	X	84	9'-2"			VERTICAL EF (PANELS 25 AND 26)
F431	X	126	8'-7"			VERTICAL EF (PANELS 27 THRU 29)
F432	X	5	13'-9"		⚠	LONGITUDINAL FF (PANEL 30)
F433	X	1	15'-9"			LONGITUDINAL BF (PANEL 24)
F634	X	3	11'-0"		⚠	LONGITUDINAL BF (PANEL 30)
F435	X	38	6'-1"		⚠	VERTICAL EF (PANEL 30)
F636	X	3	27'-2"			LONGITUDINAL BF (PANELS 1 & 30)
F437	X	3	9'-0"			LONGITUDINAL FF (PANELS 16 THRU 18)
F638	X	3	9'-0"			LONGITUDINAL BF (PANELS 16 THRU 18)
F439	X	1	8'-3"			LONGITUDINAL BF (PANEL 23)
F440	X	2	18'-3"			LONGITUDINAL FF (PANELS 23 AND 24)

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
F405	1 SERIES OF 5	23'-2" TO 3'-10"
F606	1 SERIES OF 4	25'-2" TO 3'-10"
F407	2 SERIES OF 19	3'-3" TO 8'-10"
F410	1 SERIES OF 5	24'-3" TO 4'-11"
F611	1 SERIES OF 5	24'-3" TO 4'-11"
F412	2 SERIES OF 21	8'-11" TO 15'-1"
F419	2 SERIES OF 21	13'-5" TO 14'-5"
F420	2 SERIES OF 21	14'-5" TO 15'-5"
F421	2 SERIES OF 21	15'-5" TO 16'-5"
F424	2 SERIES OF 21	15'-4" TO 14'-4"
F425	2 SERIES OF 21	14'-4" TO 13'-4"
F426	2 SERIES OF 21	13'-4" TO 12'-4"
F428	2 SERIES OF 21	11'-2" TO 10'-2"
F429	2 SERIES OF 21	10'-2" TO 9'-2"
F432	1 SERIES OF 5	24'-9" TO 2'-9"
F634	1 SERIES OF 3	19'-3" TO 2'-9"
F435	2 SERIES OF 19	8'-6" TO 3'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY



C401

BILL OF BARS - COPING

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
C401	X	626	6'-2"	X		STIRRUP (PANELS 1 THRU 30)
C402	X	8	27'-9"			LONGITUDINAL EF (PANEL 1)
C403	X	8	30'-3"			LONGITUDINAL EF (PANEL 2)
C404	X	216	29'-7"			LONGITUDINAL EF (PANELS 3 THRU 29)
C405	X	8	27'-7"			LONGITUDINAL EF (PANEL 30)

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

8

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NO.	DATE	REVISION	BY

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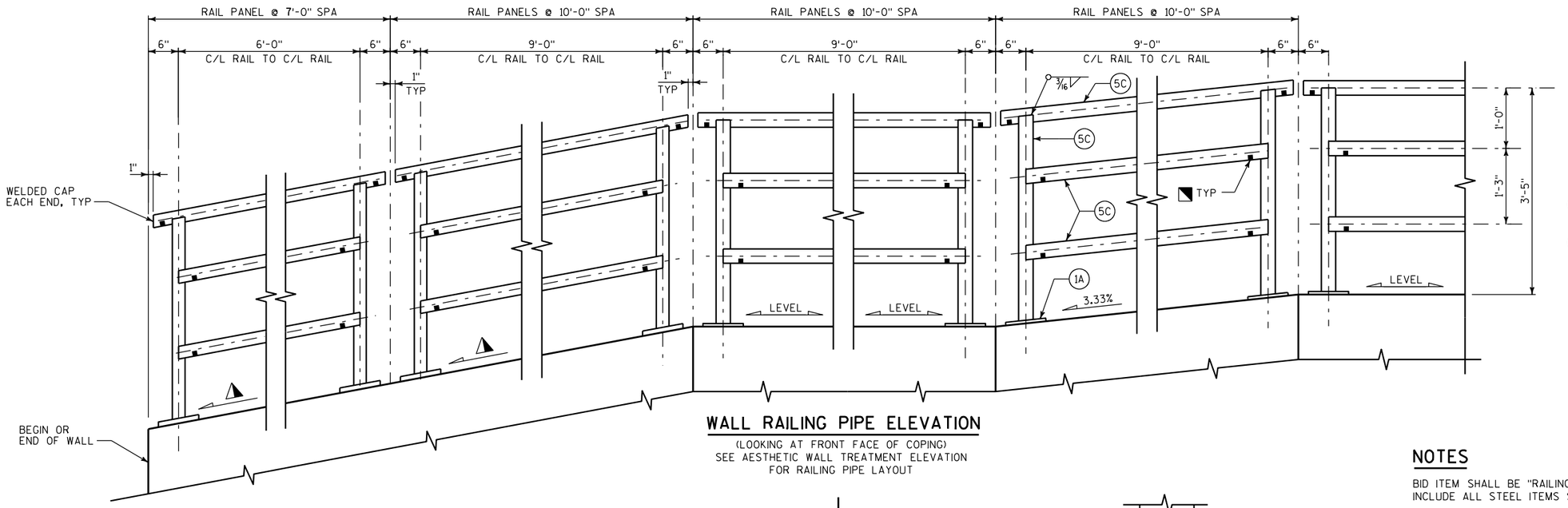
STRUCTURE R-40-560

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REINFORCING SCHEDULE

SHEET 10 OF 15

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1060-33-80



WALL RAILING PIPE ELEVATION

(LOOKING AT FRONT FACE OF COPING)
SEE AESTHETIC WALL TREATMENT ELEVATION FOR RAILING PIPE LAYOUT

LEGEND

- (1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.
- (3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA. EMBED A MIN OF 7".
- (5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO POSTS.
- 1/2" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.
- 20.75% BEGIN WALL. 18.20% END WALL.

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-560", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO. 1A SHALL CONFORM TO A.S.T.M. A709 GRADE 36. STANDARD PIPE RAIL SHALL CONFORM TO A.S.T.M. A500 GRADE B (NO. 5C).

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

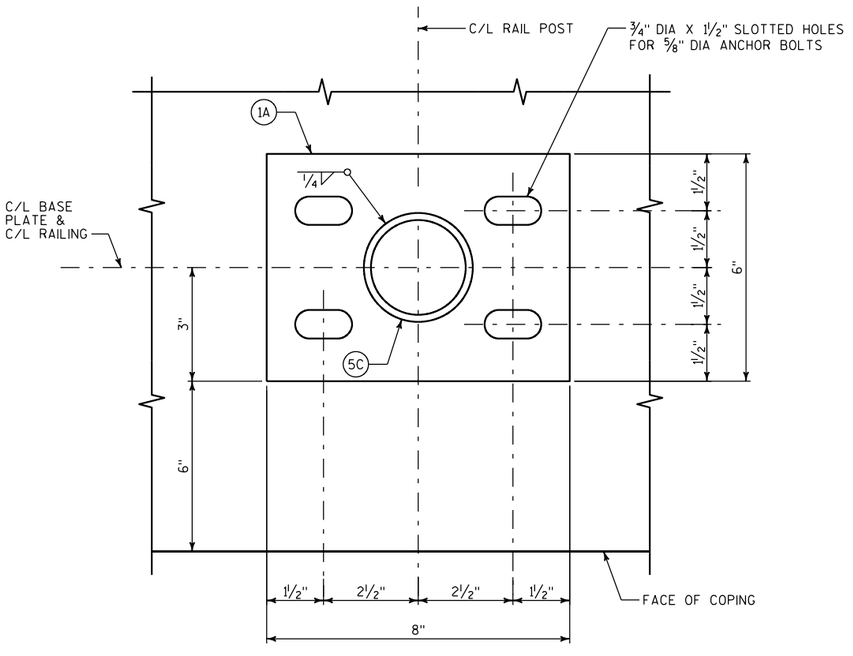
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1A AND CAULK AROUND PERIMETER OF PLATE NO. 1A WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

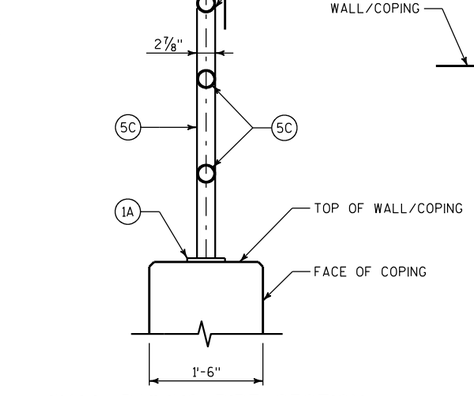
GALVANIZE AFTER FABRICATION AND THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM A123. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

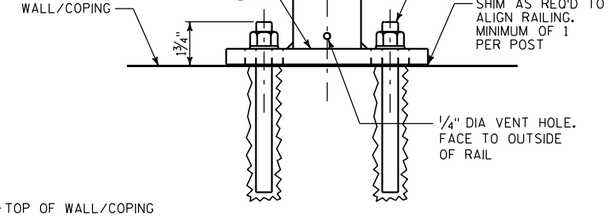
PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



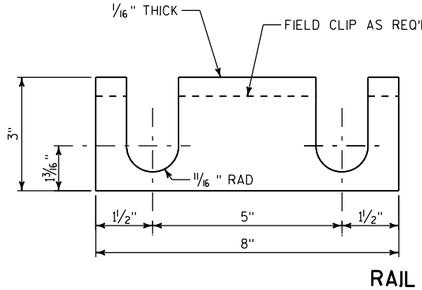
RAIL POST BASE PLATE

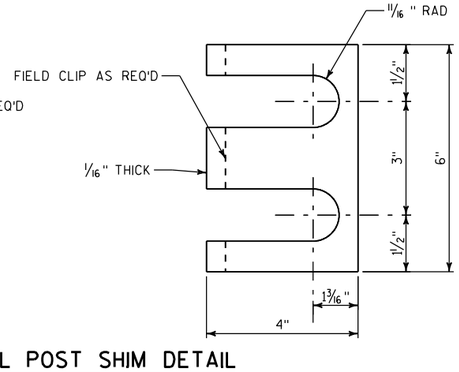


WALL RAILING PIPE SECTION



ANCHOR BOLTS FOR RAIL POST





RAIL POST SHIM DETAIL

(2 SETS PER POST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

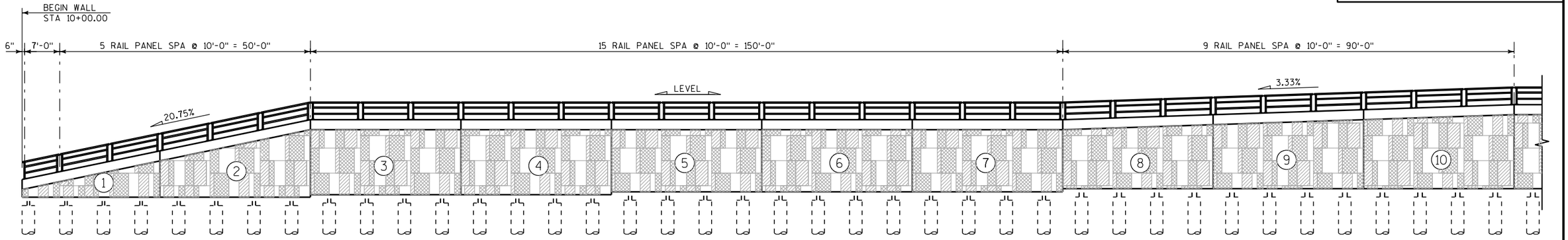
RAILING PIPE DETAILS

SHEET 11 OF 15

8

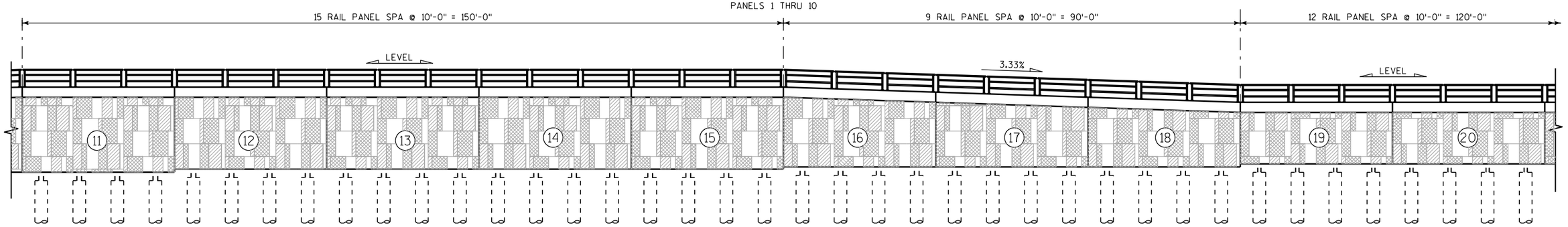
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STATE PROJECT NUMBER
1060-33-80



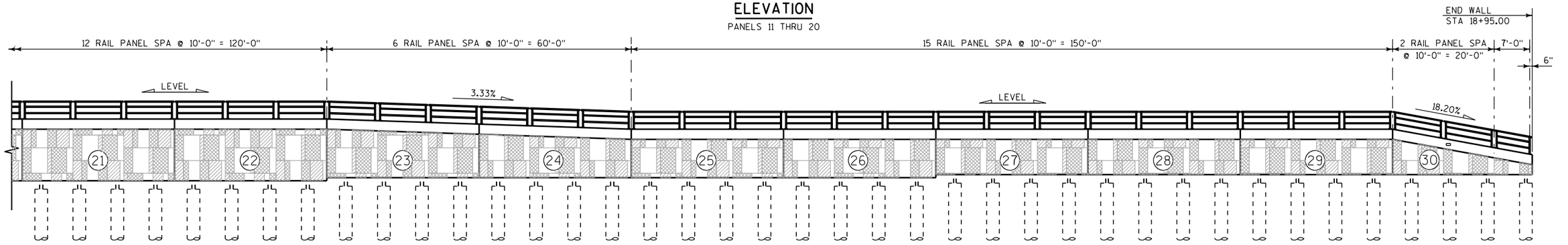
ELEVATION

PANELS 1 THRU 10



ELEVATION

PANELS 11 THRU 20



ELEVATION

PANELS 21 THRU 30

LEGEND

(XX) CAST-IN-PLACE CONCRETE FACING PANEL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT ELEVATION

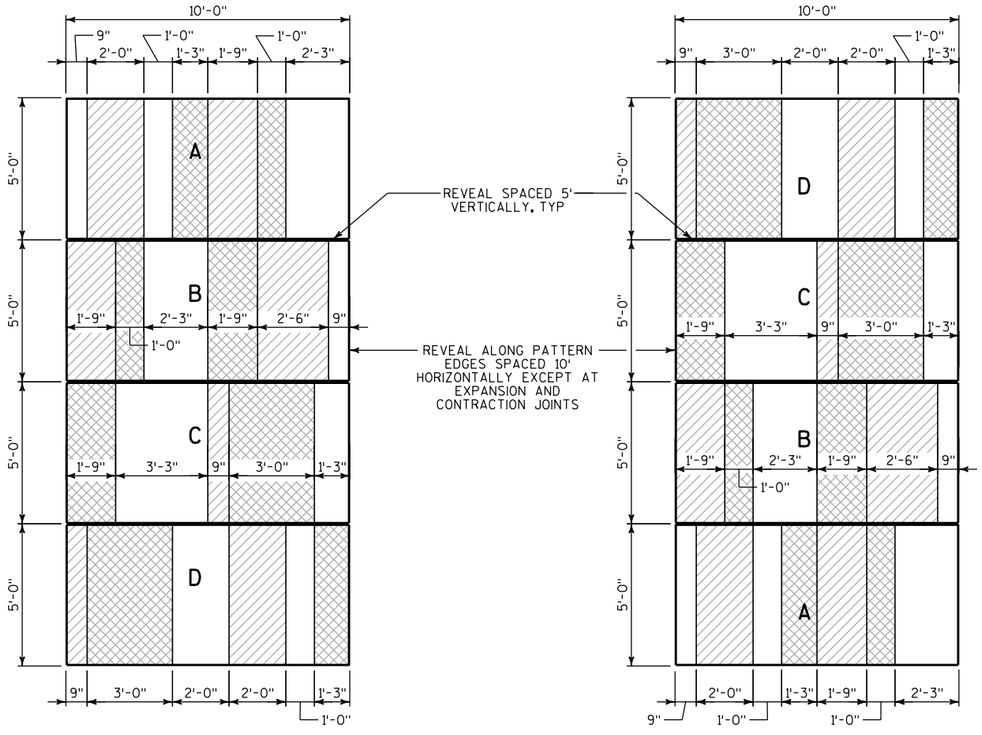
SHEET 12 OF 15

3234

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-560\cds\R560_080401_ae.dgn PLOT DATE : 30-APR-2014 14:46 PLOT BY : MSCTEK PLOT NAME : R560_080401_ae PLOT SCALE : 20:1

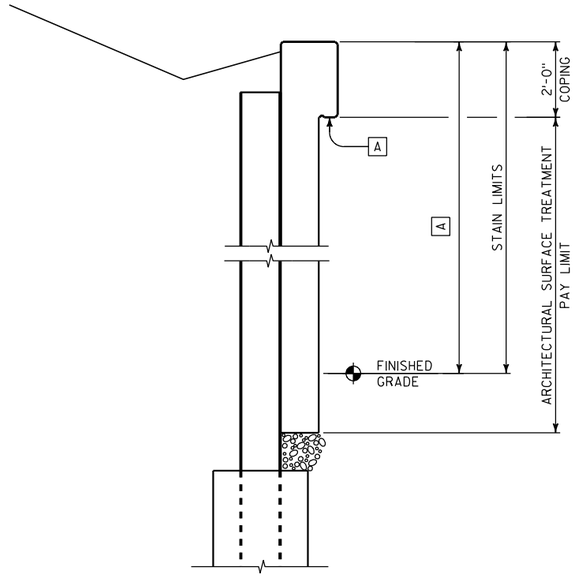
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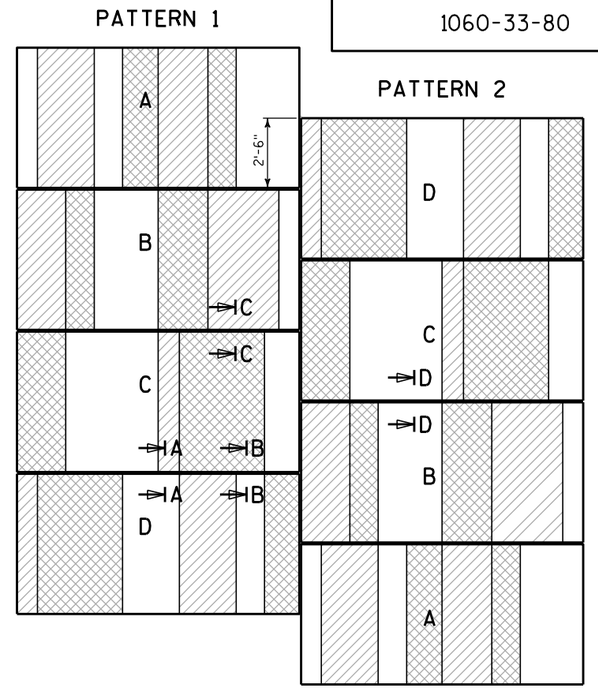


CAST-IN-PLACE PATTERN 1

CAST-IN-PLACE PATTERN 2



WALL STAINING DIAGRAM



TYPICAL CAST-IN-PLACE PATTERN

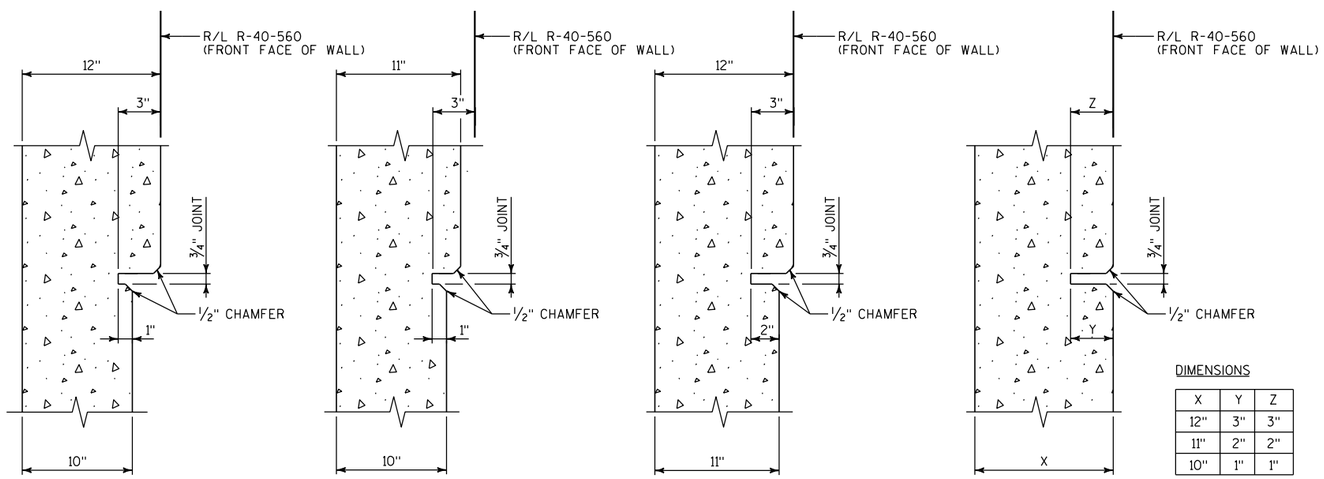
PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 2'-6" VERTICALLY REPEAT VERTICALLY AS REQUIRED

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		VERTICAL FACE PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO 1'-0" BELOW FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

STAIN COLORS

THE FINAL COLORING OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW.
BASE COLOR - 33564
ACCENT COLOR #1 - 33448



DIMENSIONS

X	Y	Z
12"	3"	3"
11"	2"	2"
10"	1"	1"

REVEAL SECTION A-A
CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 2"

REVEAL SECTION B-B
CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION C-C
CONCRETE FACING THICKNESS ADJACENT TO REVEAL VARIES BY 1"

REVEAL SECTION D-D
CONCRETE FACING THICKNESS ADJACENT TO REVEAL IS EQUAL

LEGEND

FACING THICKNESS	
	10"
	11"
	12"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

DRAWN BY TEK | PLANS CK'D. EKM

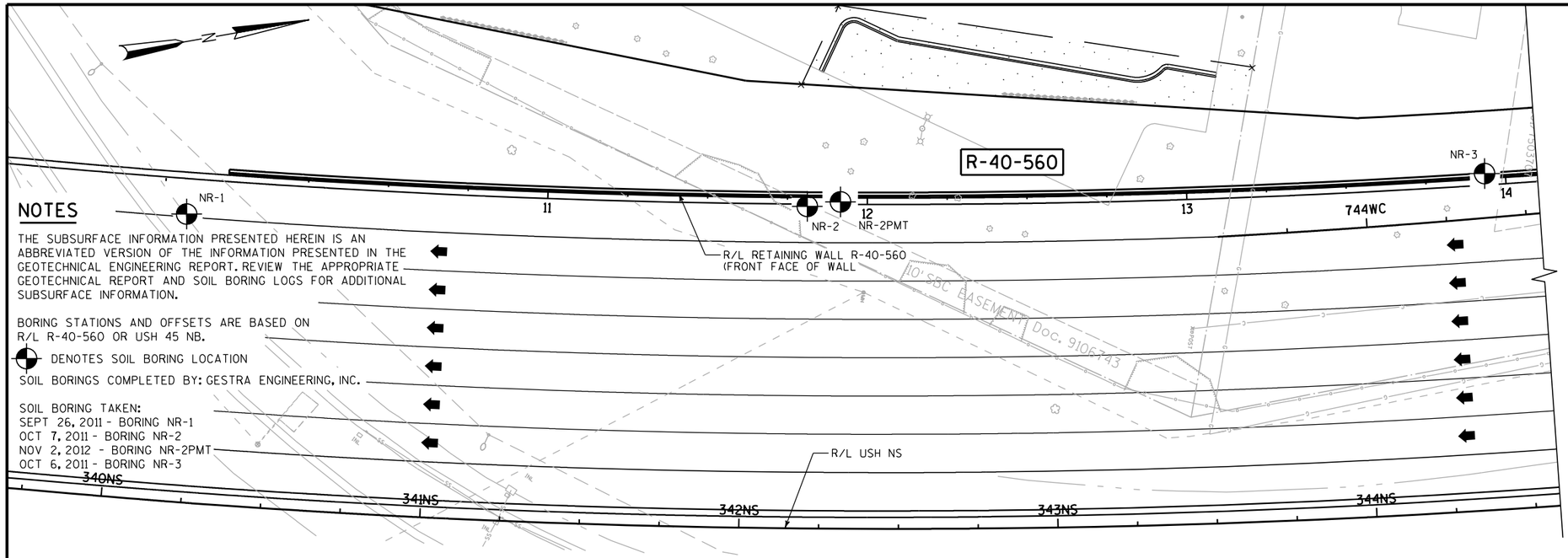
AESTHETIC WALL TREATMENT DETAILS

SHEET 13 OF 15

STATE PROJECT NUMBER
1060-33-80

8

8



NOTES

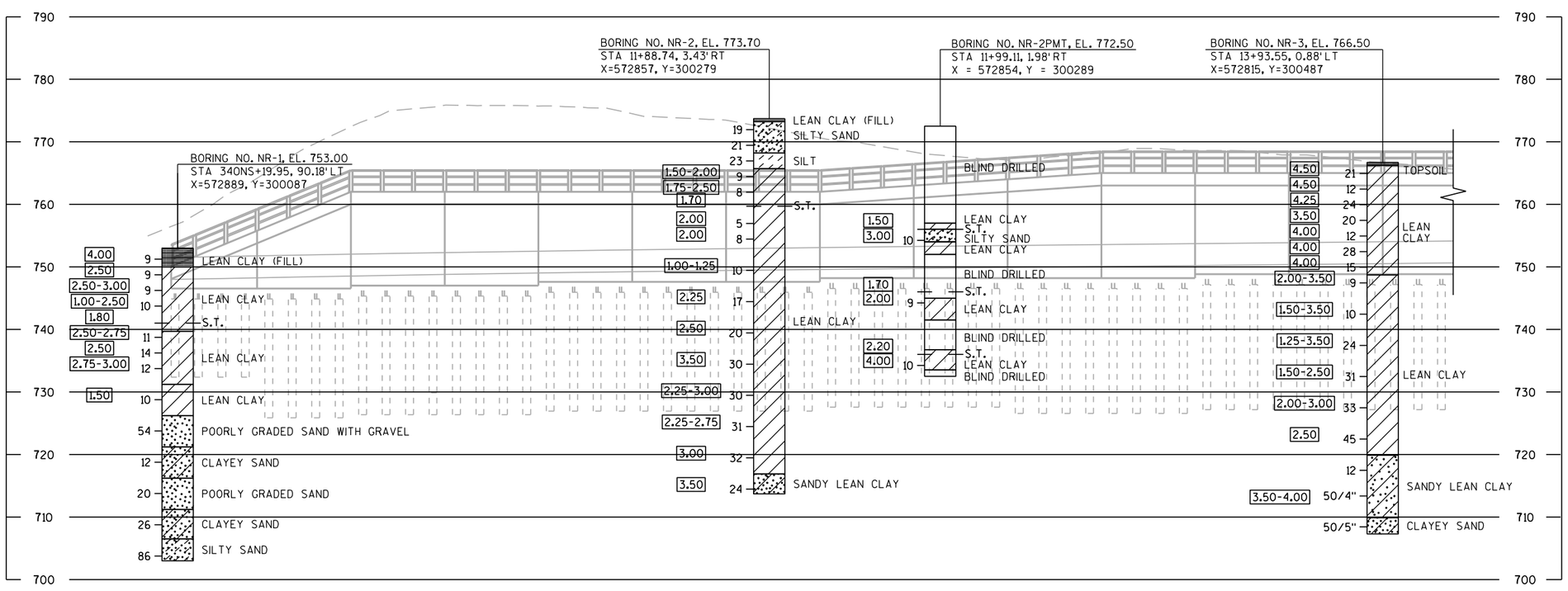
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-560 OR USH 45 NB.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEPT 26, 2011 - BORING NR-1
OCT 7, 2011 - BORING NR-2
NOV 2, 2012 - BORING NR-2PMT
OCT 6, 2011 - BORING NR-3



8

STATE PROJECT NUMBER

1060-33-80

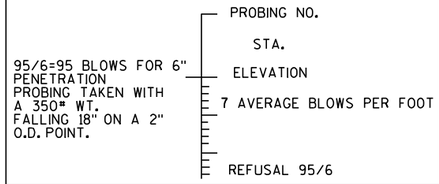
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

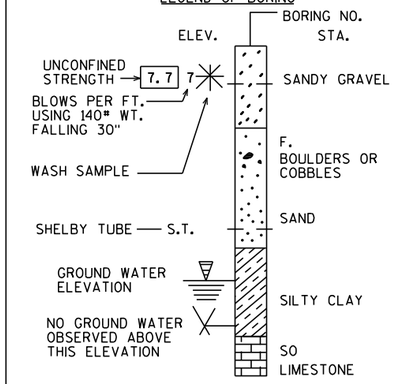
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

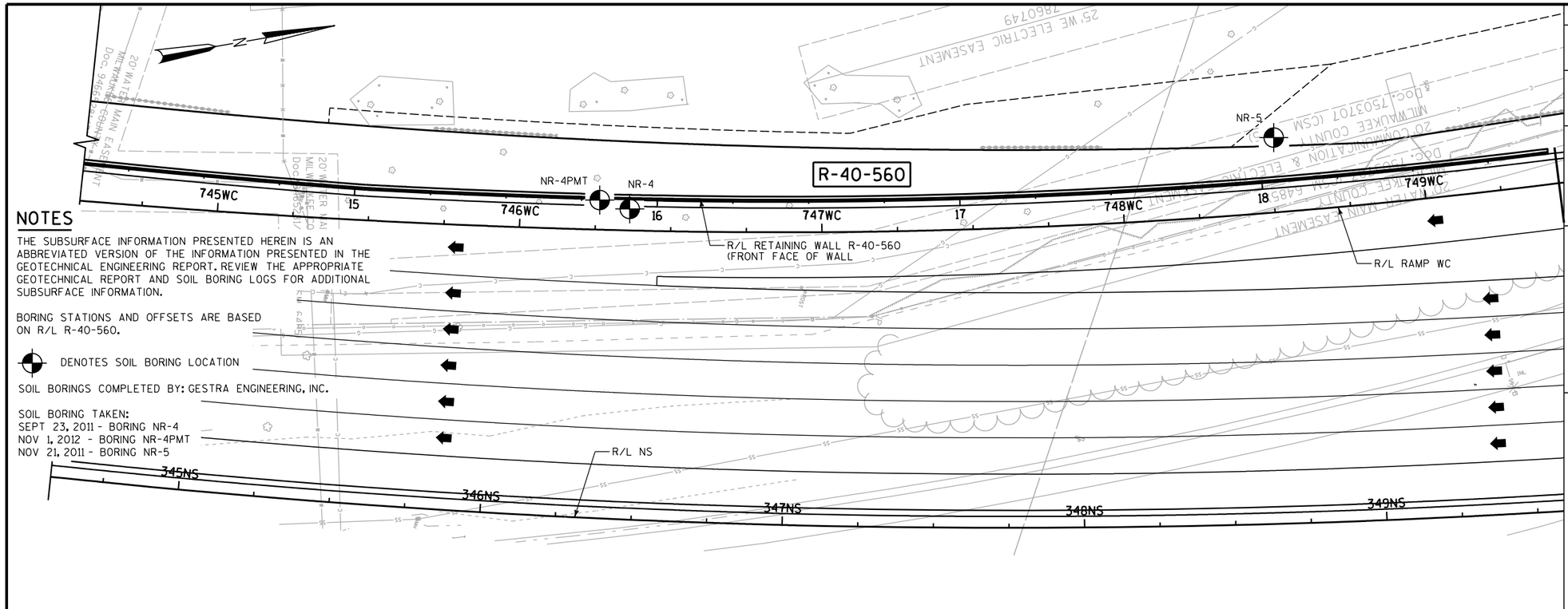
STRUCTURE R-40-560

DRAWN BY	TEK	PLANS CK'D.	EKM

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 14 OF 15

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-560\cds\R560_080501_se.dgn PLOT DATE : 30-APR-2014 14:47 PLOT BY : MSCTEK PLOT NAME : R560_080501_se PLOT SCALE : 40:1



NOTES

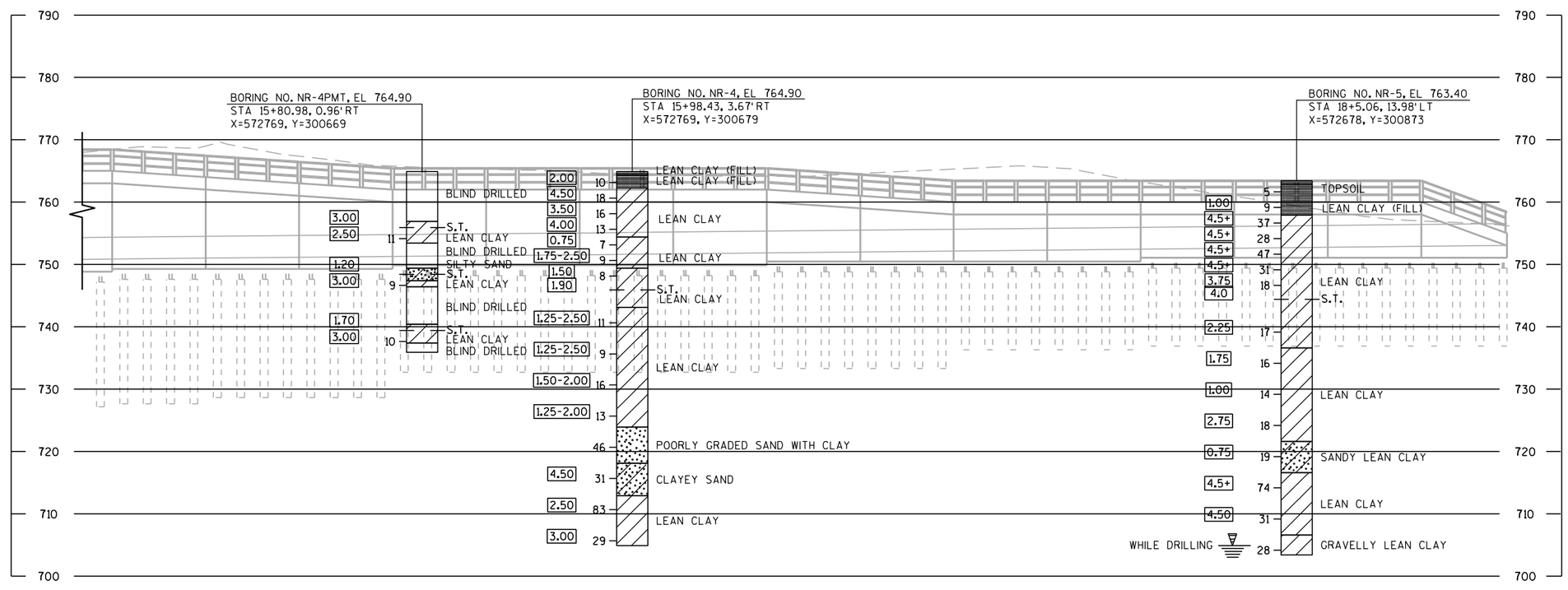
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L R-40-560.

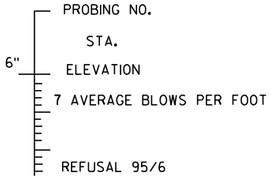
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

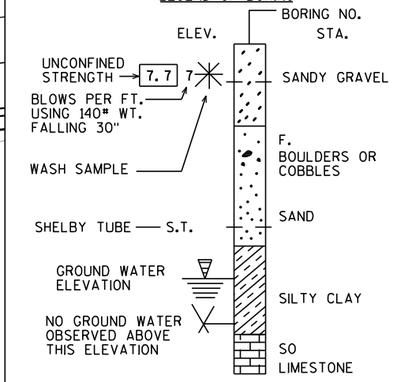
SOIL BORING TAKEN:
SEPT 23, 2011 - BORING NR-4
NOV 1, 2012 - BORING NR-4PMT
NOV 21, 2011 - BORING NR-5



LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-560

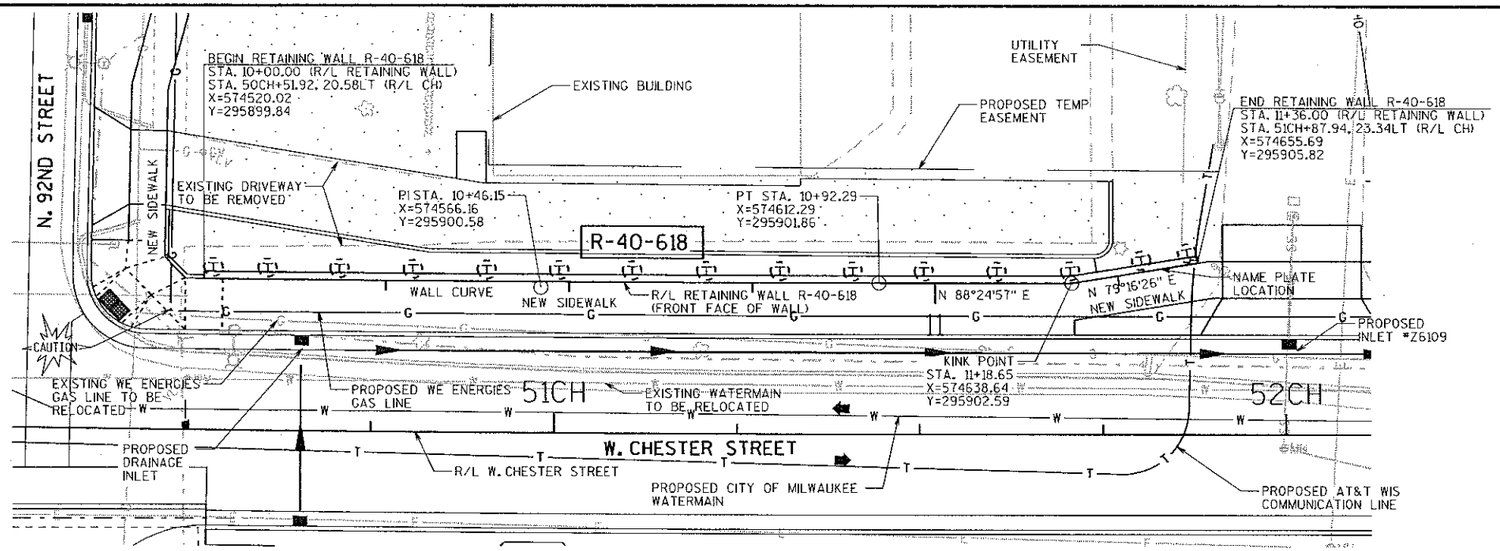
DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION (2 OF 2)

SHEET 15 OF 15

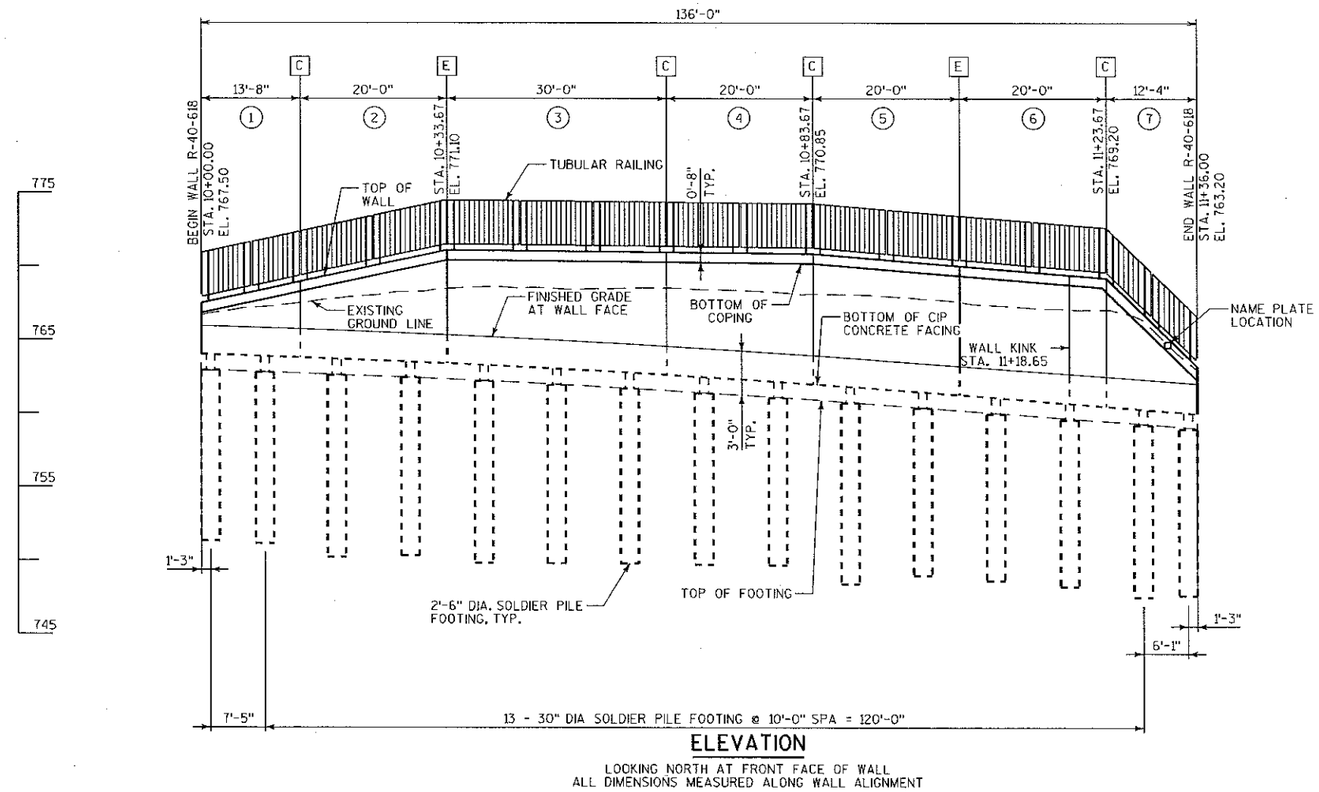
8

STATE PROJECT NUMBER
1060-33-80



PLAN

SOLDIER PILE & LAGGING WALL



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ALL DIMENSIONS MEASURED ALONG WALL ALIGNMENT

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES:

CIP WALL PANEL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
STRUCTURAL STEEL CARBON (ASTM A709 GRADE 50)	Fy = 50,000 PSI
CONCRETE MASONRY SOLDIER PILE FOOTINGS	f'c = 3,500 PSI
* TIMBER LAGGING	Fb = 1,150 PSI
	E = 1,800,000 PSI

*MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK.

HORIZONTAL CURVE DATA

WALL CURVE

PI = 10+46.15
X = 574566.16
Y = 295900.58
Δ = 0°39'46.31" LEFT
D = 0°43'05.61"
T = 46.15'
L = 92.29'
R = 7977.42'
PC = 10+00.00
X = 574520.02
Y = 295899.84
PT = 10+92.29
X = 574612.29
Y = 295901.86

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, DESIGN DATA & GENERAL NOTES
3. TYPICAL SECTION
4. WALL DETAILS
5. DATA TABLES
6. TUBULAR RAILING DETAILS
7. AESTHETIC WALL TREATMENT DETAILS
8. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- TRAFFIC DIRECTION
- X — PANEL NUMBER

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
Mohammed H. Zagloul
5/9/2014

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/14/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-618

WALL AT NE OF 92 ND ST. & CHESTER ST.

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 8

8

8

STATE PROJECT NUMBER
1060-33-80

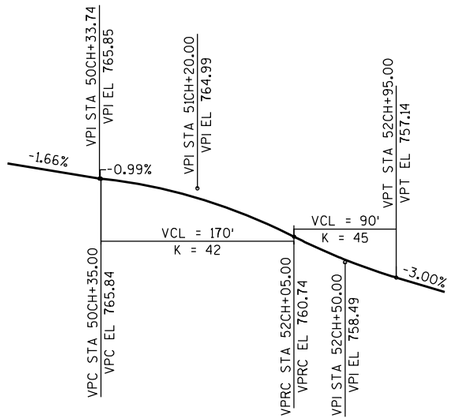
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000.0007	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-618	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	40
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	7,227
506.0605	STRUCTURAL STEEL HS	LB	20,805
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	96
513.4080	RAILING TUBULAR SPECIAL R-40-618	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	1
517.0600.0008	PAINTING EPOXY SYSTEM R-40-618	LS	1
517.1050.S.0019	ARCHITECTURAL SURFACE TREATMENT R-40-618	SF	809
612.0106	PIPE UNDERDRAIN 6-INCH	LF	150
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	33
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	2
SPV.0090.4440	FOUNDATION DRILLING	LF	285
SPV.0110.4600	TIMBER LAGGING	MBM	3
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	953
	NON- BID ITEMS		
	NAME PLATE	EACH	1
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	3/4

ALL ITEMS ARE CATEGORY 3180

SOLIDIER PILE WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, φ, DEG	COHESION C', PSF	FRICTION ANGLE, φ, DEG
HARD COHESIVE SOIL	140	4,000	0	200	34
VERY STIFF COHESIVE SOIL	135	2,500	0	100	32



PROFILE GRADE LINE

CHESTER STREET

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ALL STATIONS ARE ALONG R/L OF R-40-618 (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

ALL STEEL REINFORCEMENT SHALL BE EPOXY COATED.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-618".

COMMON EXCAVATION IN FRONT OF THE RETAINING WALL MAY NOT BEGIN UNTIL THE SOLDIER PILE TIMBER LAGGING IS IN PLACE.

HIGH STRENGTH BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RETAINING WALL R-40-618 IS A SOLDIER PILE RETAINING WALL AND INCLUDES THE INSTALLATION OF NON-OVERLAPPING, INDEPENDENT CONCRETE DRILLED FOOTINGS BETWEEN THE STATIONS INDICATED. THE RETAINING WALL WILL BE FINISHED WITH A FULL HEIGHT CIP CONCRETE FACING AND A CIP CONCRETE COPING.

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE COPING AND CONCRETE FACING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO INSTALL WALL LAGGING IS INCLUDED IN ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-618"

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM NUMBER 517.0600.0008 "PAINTING EPOXY SYSTEM R-40-618".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

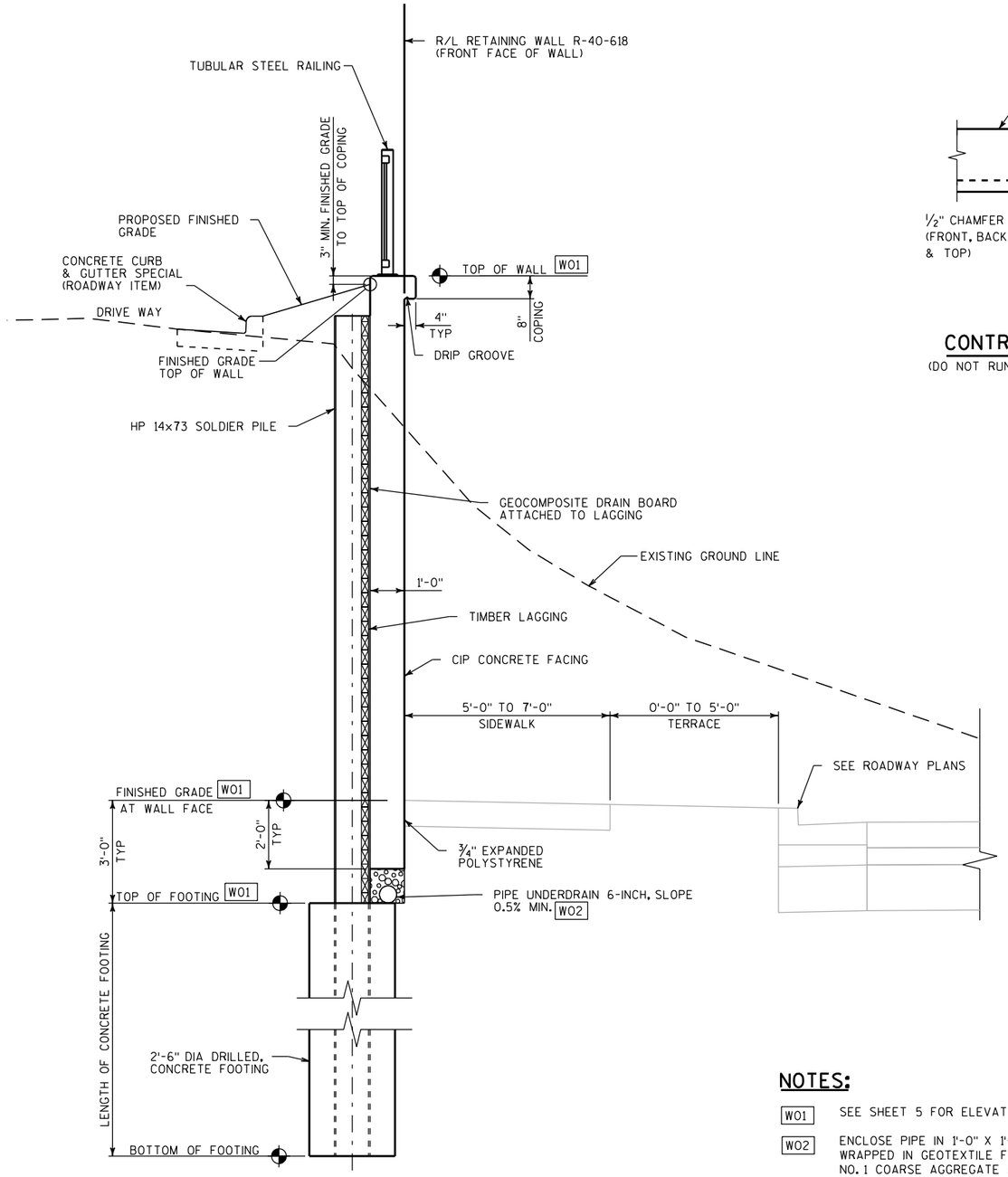
DRAWN BY MR | PLANS CK'D. MHZ

QUANTITIES, DESIGN DATA & GENERAL NOTES

SHEET 2 OF 8

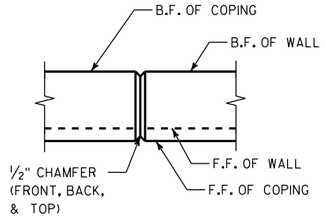
FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-618\cds\R-40-618_080102_gq.dgn PLOT DATE : 06-MAY-2014 10:48 PLOT BY : MSCM1M PLOT NAME : R-40-618_080102_gq PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-80



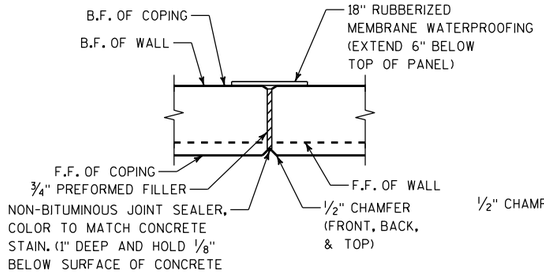
TYPICAL SECTION

LOOKING EAST

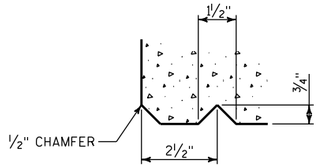


COPING CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)

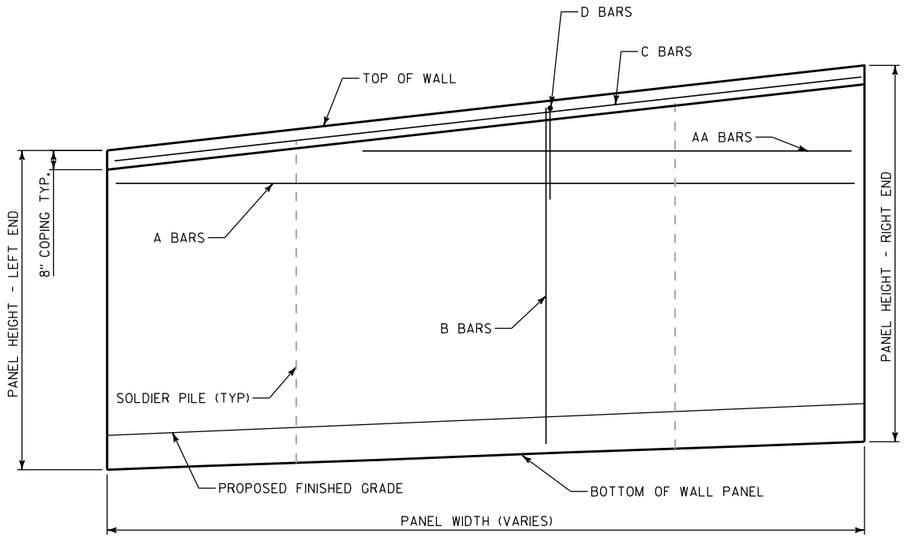


COPING EXPANSION JOINT



DETAIL C
¾" CONTINUOUS DRIP GROOVE

TERMINATE 2'-0" FROM END OF WALL



TYPICAL PANEL ELEVATION

SEE SHEET 5 FOR WALL PANEL DIMENSIONS, BAR SIZES AND QUANTITIES

NOTES:

W01 SEE SHEET 5 FOR ELEVATIONS

W02 ENCLOSE PIPE IN 1'-0" X 1'-0" AREA OF NO. 1 COARSE AGGREGATE WRAPPED IN GEOTEXTILE FABRIC TYPE DF.
NO. 1 COARSE AGGREGATE AND GEOTEXTILE FABRIC TYPE DF INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN 6-INCH"
CONNECT PIPE UNDERDRAIN TO INLET #Z6109 USING PIPE UNDERDRAIN
UNPERFORATED PAID FOR UNDER "PIPE UNDERDRAIN UNPERFORATED 6-INCH"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

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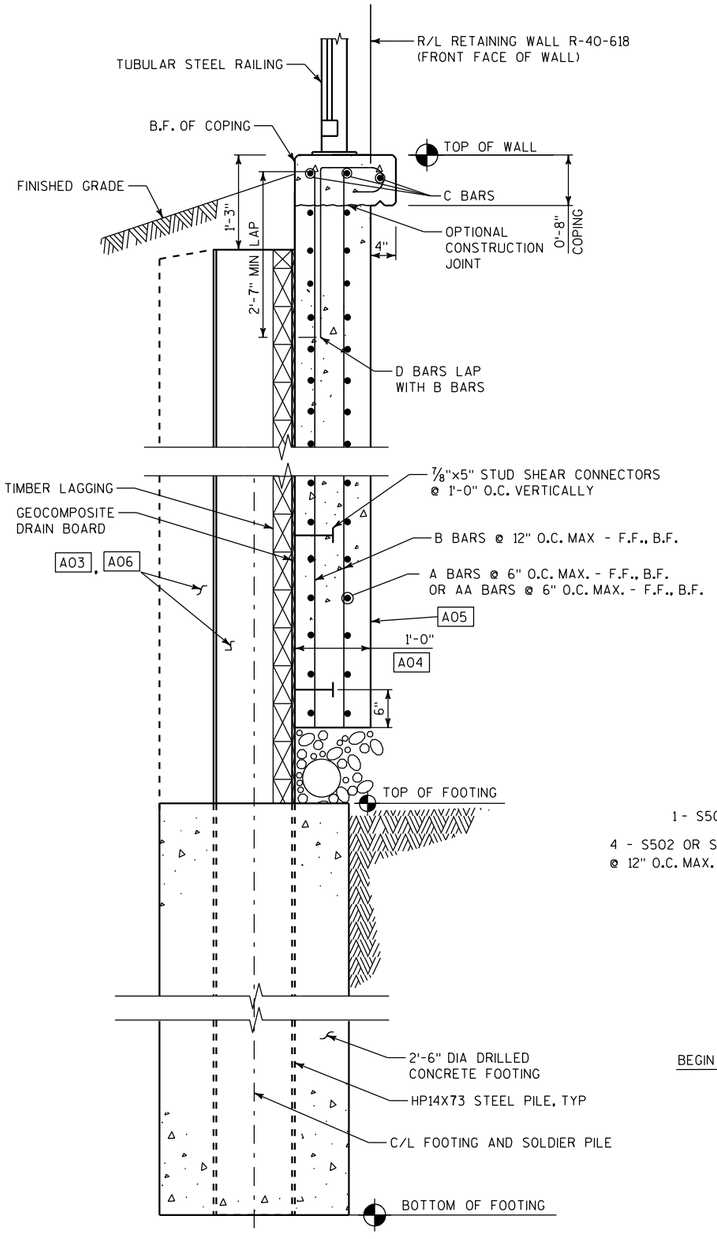
TYPICAL SECTION

SHEET 3 OF 8

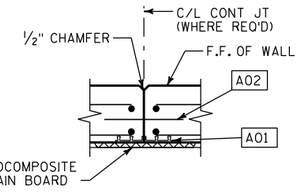
8

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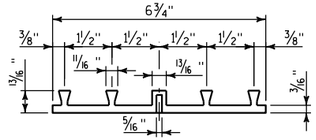
STATE PROJECT NUMBER
1060-33-80



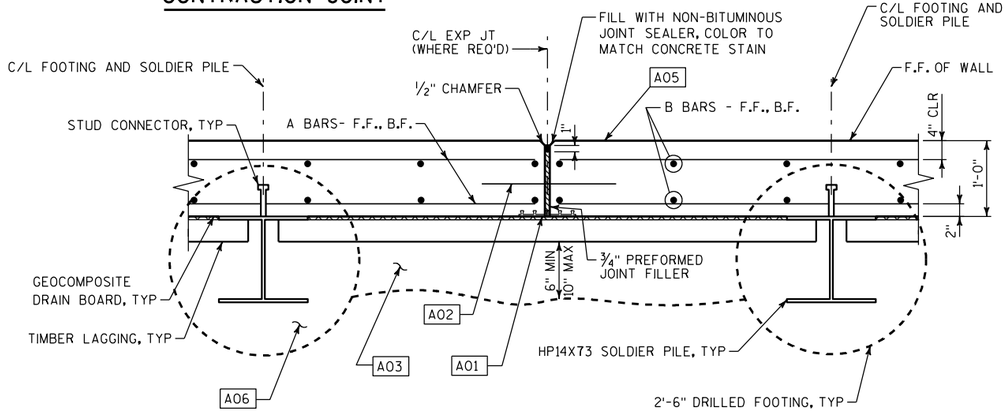
TYPICAL SOLDIER PILE AND PANEL WALL SECTION



CONTRACTION JOINT

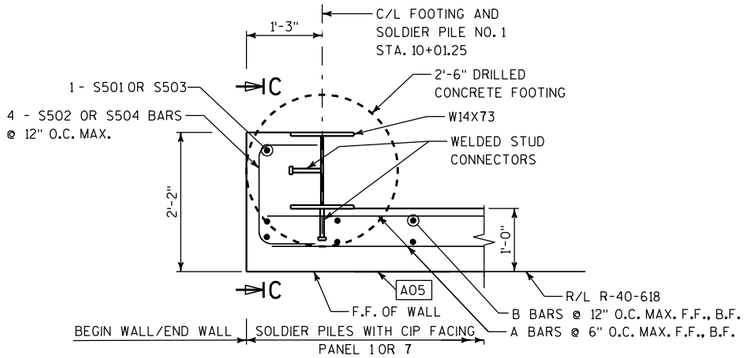


P.C.W. "TYPE B" DETAIL A01



TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)

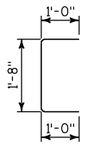


PLAN OF WALL AT BEGINNING/END OF WALL

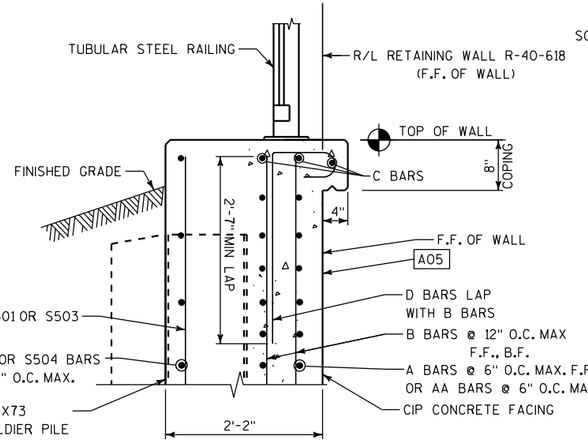
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)
(BEGINNING OF WALL SHOWN, END OF WALL IS MIRROR IMAGE)

WALL FACING BILL OF BARS

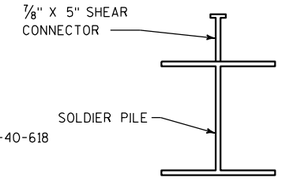
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S501	X	1	3'-3"			PANEL 1 BEGINNING VERTICAL
S502	X	4	3'-5"	X		PANEL 1 BEGINNING HORIZONTAL
S503	X	1	2'-10"			PANEL 7 END VERTICAL
S504	X	4	3'-5"	X		PANEL 7 END HORIZONTAL



S502
S504



WALL SECTION C-C



STUD CONNECTOR DETAIL

LEGEND

F.F.- FRONT FACE
B.F.- BACK FACE
E.F.- EACH FACE

NOTES:

A01 POLYVINYL CHLORIDE WATERSTOP, INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON B.F. OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 3/4"DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-618". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A05 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 7

A06 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-618"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS

SHEET 4 OF 8

8

8

FILE NAME : $$....design file....$$ PLOT DATE : 30-APR-2014 08:58 PLOT BY : MSCM1M PLOT NAME : R-40-618_080104_ts PLOT SCALE : 6:1

STATE PROJECT NUMBER
1060-33-80

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT, FT	WALL THICKNESS, INCH	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FIN. GRADE ELEV. AT WALL FACE	TOP OF FTG. BORING ELEV.	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH, FT	PILE LENGTH, FT	PILE SECTION
3.60		BOWALL	10+00.00	767.50		765.90					
		1	10+01.25	767.63	766.38	765.88	762.88	751.38	11.50	15	HP14X73
1	12										
		2	10+08.67	768.43	767.18	765.77	762.77	751.18	11.59	16	HP14X73
5.27		CONT JT	10+13.67	768.96		765.69					
		3	10+18.67	769.50	768.25	765.59	762.59	750.25	12.34	18	HP14X73
2	12										
		4	10+28.67	770.57	769.32	765.39	762.39	750.32	12.07	19	HP14X73
7.81		EXP JT.	10+33.67	771.10		765.29					
		5	10+38.67	771.08	769.83	765.16	762.16	749.83	12.34	20	HP14X73
3	12	6	10+48.67	771.03	769.78	764.91	761.91	749.78	12.14	20	HP14X73
		7	10+58.67	770.98	769.73	764.66	761.66	749.73	11.93	20	HP14X73
8.42		CONT JT.	10+63.67	770.95		764.53					
		8	10+68.67	770.93	769.68	764.37	761.37	749.68	11.70	20	HP14X73
4	12										
		9	10+78.67	770.88	769.63	764.06	761.06	748.63	12.43	21	HP14X73
8.95		CONT JT	10+83.67	770.85		763.90					
		10	10+88.67	770.64	769.39	763.72	760.72	748.39	12.33	21	HP14X73
5	12										
		11	10+98.67	770.23	768.98	763.36	760.36	747.98	12.38	21	HP14X73
8.85		EXP JT.	11+03.67	770.03		763.18					
		12	11+08.67	769.82	768.57	763.01	760.01	747.57	12.44	21	HP14X73
6	12										
		13	11+18.67	769.41	768.16	762.66	759.66	748.16	11.51	20	HP14X73
8.71		CONT JT.	11+23.67	769.20		762.49					
		14	11+28.67	766.77	765.52	762.30	759.30	747.52	11.78	18	HP14X73
7	12										
		15	11+34.75	763.81	762.56	762.07	759.07	747.56	11.51	15	HP14X73
3.18		EOWALL	11+36.00	763.20		762.02					

BILL OF BARS/BAR SERIES TABLE *

PANEL NUMBER	WALL THICKNESS, INCH	PANEL HEIGHT LEFT END, FT.	PANEL HEIGHT RIGHT END, FT.	PANEL WIDTH, FT.	QUAN. HORIZ A BARS	LENGTH OF A BAR	QUAN. VERT. B BARS	LENGTH VARY SERIES B BAR		AVE. LENGTH B BARS	QUAN. HORIZ. C BARS	LENGTH C BARS	QUAN. VERT. D BARS	LENGTH OF D BAR	QUAN. HORIZ. AA BARS	LENGTH VARY SERIES AA BAR		AVE. LENGTH AA BARS
1	12	3.60	5.27	13.67	14	13'-4"	30 ◭	3'-3"	4'-11"		3	13'-5"	15	4'-8"	6 ◑	2'-0"	8'-7"	5'-4"
2	12	5.27	7.81	20	20	19'-8"	42 ◭	4'-11"	7'-6"		3	19'-9"	21	4'-8"	10 ◑	2'-0"	15'-0"	8'-6"
3	12	7.81	8.42	30	34	29'-8"	62 ◭	7'-6"	8'-1"		3	29'-8"	31	4'-8"				
4	12	8.42	8.95	20	36	19'-8"	42 ◭	8'-1"	8'-7"		3	19'-8"	21	4'-8"				
5	12	8.95	8.85	20	36	19'-8"	42			8'-6"	3	19'-8"	21	4'-8"				
6	12	8.85	8.71	20	36 **	19'-8"	42			8'-5"	3 **	19'-8"	21	4'-8"				
7	12	8.71	3.18	12.33	12	12'-0"	26 ◑	8'-5"	2'-10"	5'-8"	3	13'-5"	13	4'-8"	22 ◑	1'-0"	11'-4"	6'-2"

* QUANTITIES OF BARS SHOWN ARE FOR BOTH WALL FACES.

◭ BUNDLE SETS OF BARS. BARS IN A SET SHALL HAVE SAME LENGTH. SEE B BARS SETS TABLE.

◑ BAR SERIES, SEE BAR SERIES TABLE.

** BEND A BARS AND C BARS FOR PANEL 6 KINK. SEE BENDING DIAGRAM.

B BARS SETS TABLE

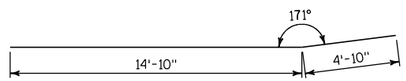
LOCATION	TOTAL NO. REQ'D	NO. REQ'D PER SET	SET LOCATION	LENGTH	AVE. LENGTH OF B BARS
PANEL 1, VERTICAL	30	5	F.F.	3'-3"	3'-10"
		5	B.F.	3'-3"	
		5	F.F.	3'-10"	
		5	B.F.	3'-10"	
		5	F.F.	4'-6"	
		5	B.F.	4'-6"	
PANEL 2, VERTICAL	42	5	F.F.	4'-11"	5'-11"
		5	B.F.	4'-11"	
		5	F.F.	5'-5"	
		5	B.F.	5'-5"	
		5	F.F.	6'-2"	
		5	B.F.	6'-2"	
		6	F.F.	6'-9"	
		6	B.F.	6'-9"	
PANEL 3, VERTICAL	62	15	F.F.	7'-5"	7'-7"
		15	B.F.	7'-5"	
		16	F.F.	7'-9"	
		16	B.F.	7'-9"	
PANEL 4, VERTICAL	42	10	F.F.	8'-1"	8'-3"
		10	B.F.	8'-1"	
		11	F.F.	8'-4"	
		11	B.F.	8'-4"	

B BAR SERIES TABLE

PANEL NUMBER	NO. REQ'D	LENGTH
7	2 SERIES OF 13	2'-10" TO 8'-5"

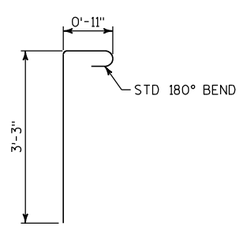
AA BAR SERIES TABLE

PANEL NUMBER	NO. REQ'D	LENGTH
1	2 SERIES OF 3	2'-0" TO 8'-7"
2	2 SERIES OF 5	2'-0" TO 15'-0"
7	2 SERIES OF 11	1'-0" TO 11'-4"



A AND C BARS PANEL 6

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
AA	5



D BAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

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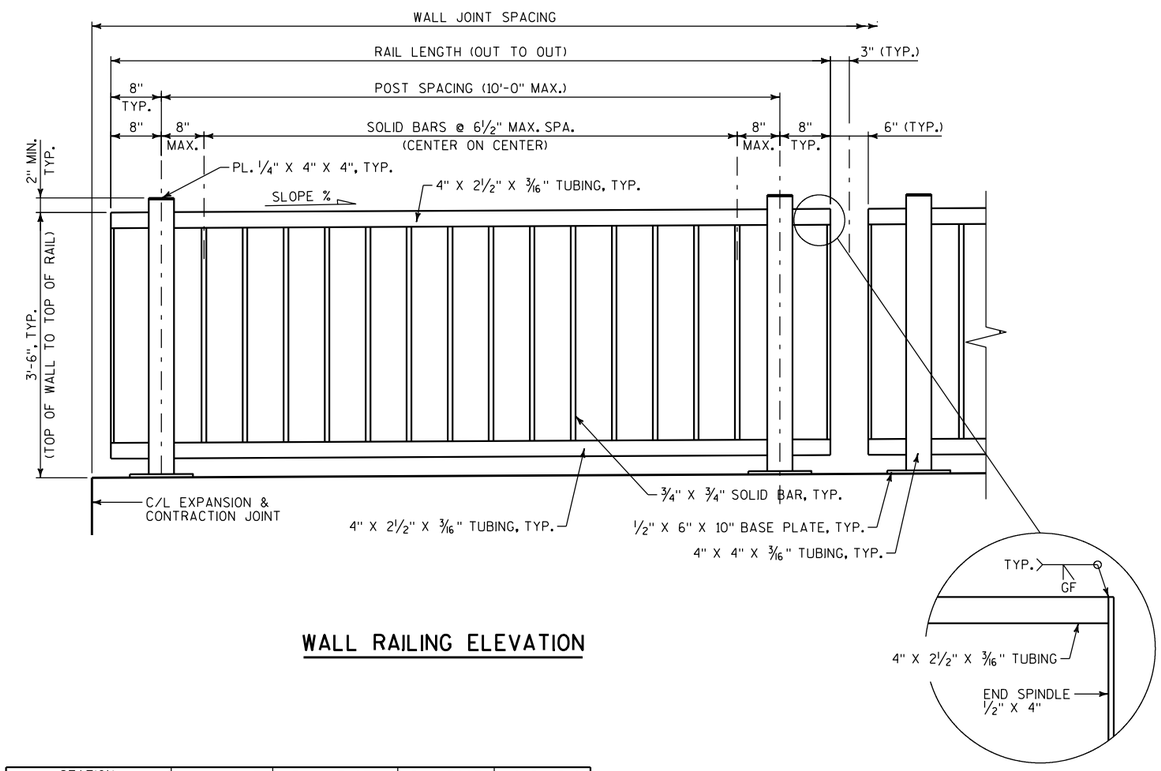
DATA TABLES

SHEET 5 OF 8

8

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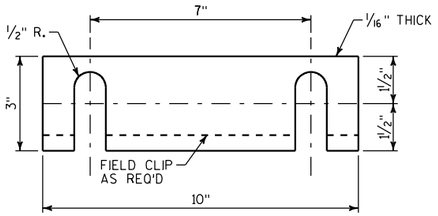
STATE PROJECT NUMBER
1060-33-80

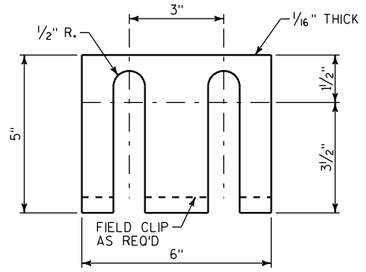


WALL RAILING ELEVATION

STATION		WALL JOINT SPACING	RAIL LENGTH (OUT TO OUT)	RAIL POST SPACING	NO. PANELS REQ'D
FROM	TO				
10+00.00	10+13.67	13'-8"	13'-2"	5'-0"	2
10+13.67	10+33.67	20'-0"	19'-6"	8'-2"	2
10+33.67	10+63.67	30'-0"	29'-6"	8'-2"	3
10+63.67	10+83.67	20'-0"	19'-6"	8'-2"	2
10+83.67	11+03.67	20'-0"	19'-6"	8'-2"	2
11+03.67	11+23.67	20'-0"	19'-6"	8'-2"	2
11+23.67	11+36.00	12'-4"	11'-10"	4'-4"	2

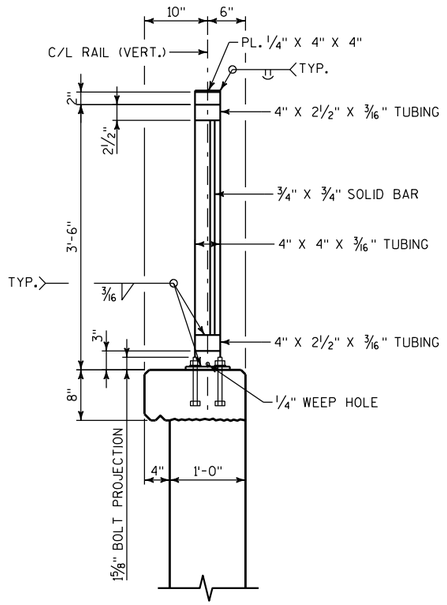
STATION		SLOPE %
FROM	TO	
10+00.00	10+33.67	10.7
10+33.67	10+83.67	-0.5
10+83.67	11+23.67	-4.12
11+23.67	11+36.00	-48.54



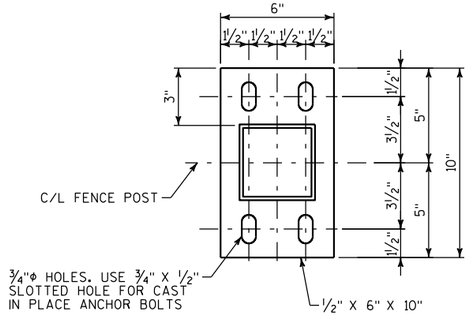


SHIM PLATE DETAILS

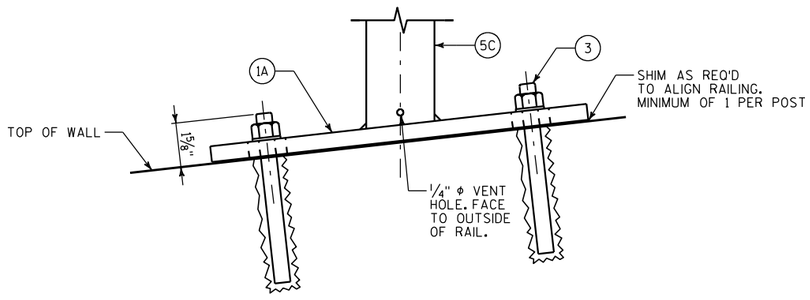
TWO SHIMS OF EACH SIZE REQUIRED PER POST



WALL RAILING SECTION



BASE PLATE



ANCHOR BOLTS FOR RAIL POST

NOTES

BID ITEM SHALL BE "RAILING PIPE R-40-618 SPECIAL", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE AND LONGITUDINAL DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE ½" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".

(5C) 4" X 4" X 3/16" STRUCTURAL TUBE. PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

DRAWN BY MR | PLANS CK'D. MHZ

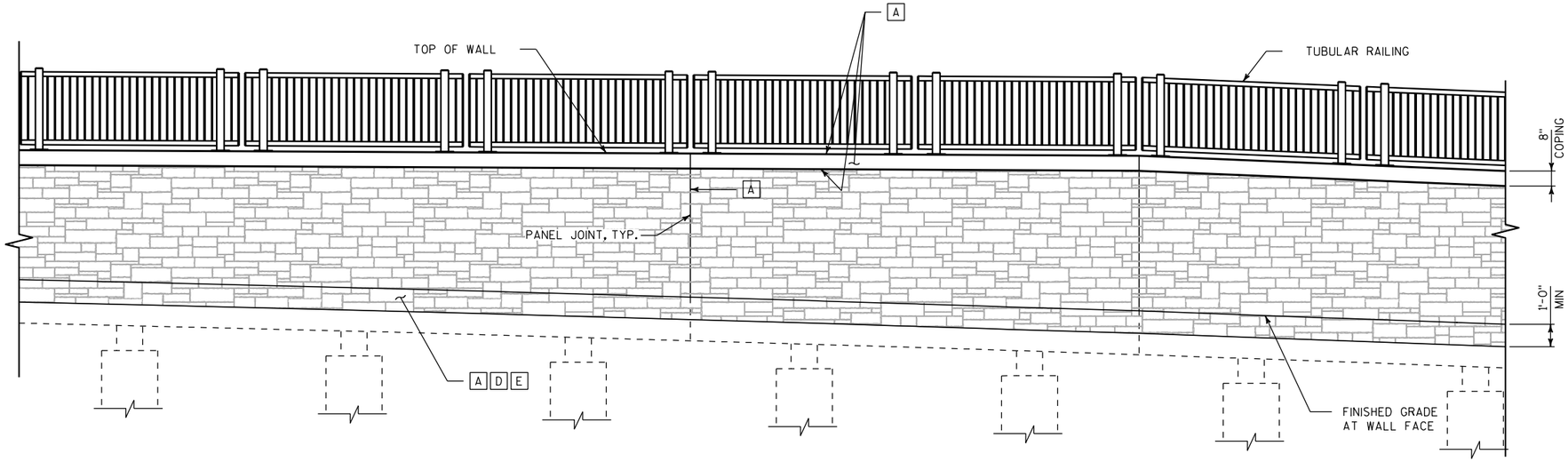
TUBULAR RAILING DETAILS

SHEET 6 OF 8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-618\cds\R-40-618_080106_rp.dgn PLOT DATE : 09-MAY-2014 12:06 PLOT BY : MSCM1M PLOT NAME : R-40-618_080106_rp PLOT SCALE : 2.000004:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION

STAIN COLORS

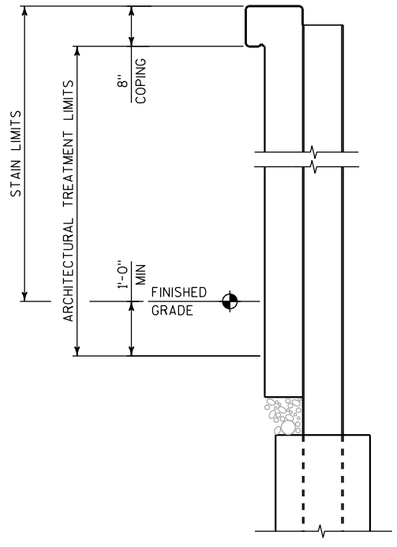
THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #3 - 33522
ACCENT COLOR #4 - 36424

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	COPING	FACE AND UNDERSIDE
		JOINTS	SEE SHEET 3 FOR JOINTS SECTIONS
		WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
D	ACCENT COLOR #3	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
E	ACCENT COLOR #4	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



WALL STAINING AND ARCHITECTURAL TREATMENT DIAGRAM

ARCHITECTURAL SURFACE TREATMENT NOTES

ARCHITECTURAL SURFACE TREATMENT SHALL EXTEND 1'-0" MINIMUM BELOW FUTURE FINISHED GRADE.

PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF OF 1½".

SUPPLY TO THE ENGINEER A MINIMUM OF TWO NON-PRODUCTION TEST PANELS WITH THE DECORATIVE DETAILS AS SHOWN. SAMPLE PANELS SHALL BE AT NOMINALLY 5 FEET BY 5 FEET OR LARGER IN SIZE TO SUFFICIENTLY DEMONSTRATE THE FINISHED APPEARANCE OF THE DECORATIVE RELIEF PATTERN SHOWN. THE SUBMITTED TEST PANELS SHALL FIT TOGETHER TO DEMONSTRATE THE CONTINUATION OF THE DECORATIVE RELIEF PATTERNS, FORM LINER TREATMENTS, AND TEXTURED SURFACE FINISHES ACROSS VERTICAL PANEL JOINTS. OBTAIN THE ENGINEER'S ACCEPTANCE OF THE DECORATIVE PATTERNED SAMPLE PANELS PRIOR TO PRODUCTION OF THE DECORATIVE RELIEF PATTERNED PANELS REQUIRED FOR THE CONTRACT. SAMPLE PANELS INCLUDED IN THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT R-40-618".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

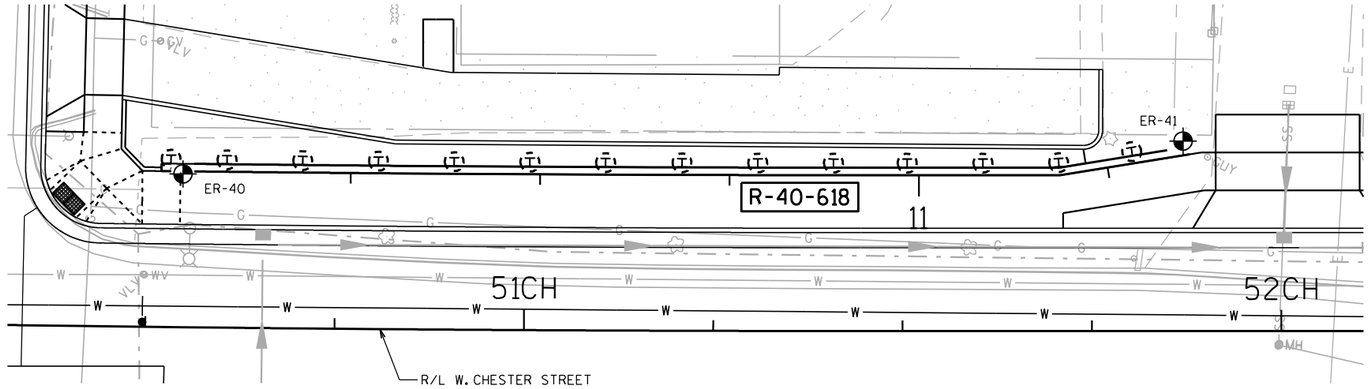
STRUCTURE R-40-618

DRAWN BY MR | PLANS CK'D. MHZ

AESTHETIC WALL TREATMENT DETAILS

SHEET 7 OF 8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-618\cds\R-40-618_080107_ae.dgn PLOT DATE : 30-APR-2014 10:51 PLOT BY : MSCM1M PLOT NAME : R-40-618_080107_ae PLOT SCALE : 6.000012:1



PLAN

NOTES

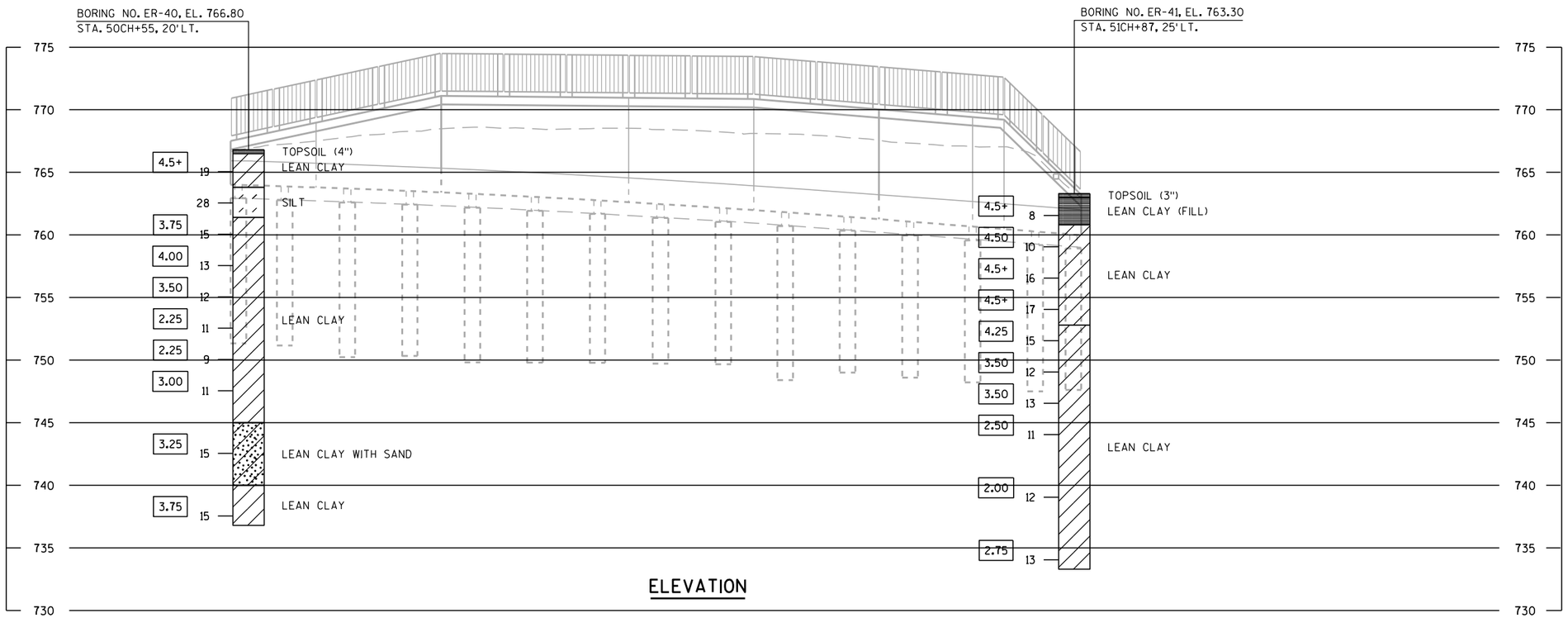
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-618.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPT 17, 2012 - BORING ER-40
SEPT 17, 2012 - BORING ER-41



ELEVATION

STATE PROJECT NUMBER

1060-33-80

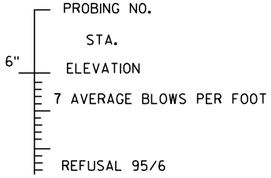
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

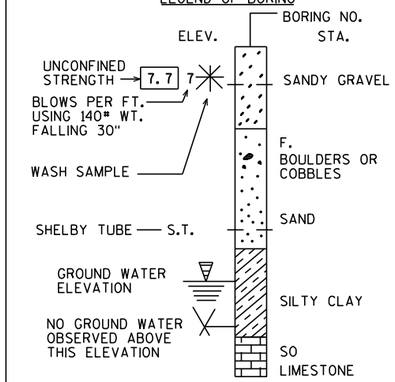
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-618

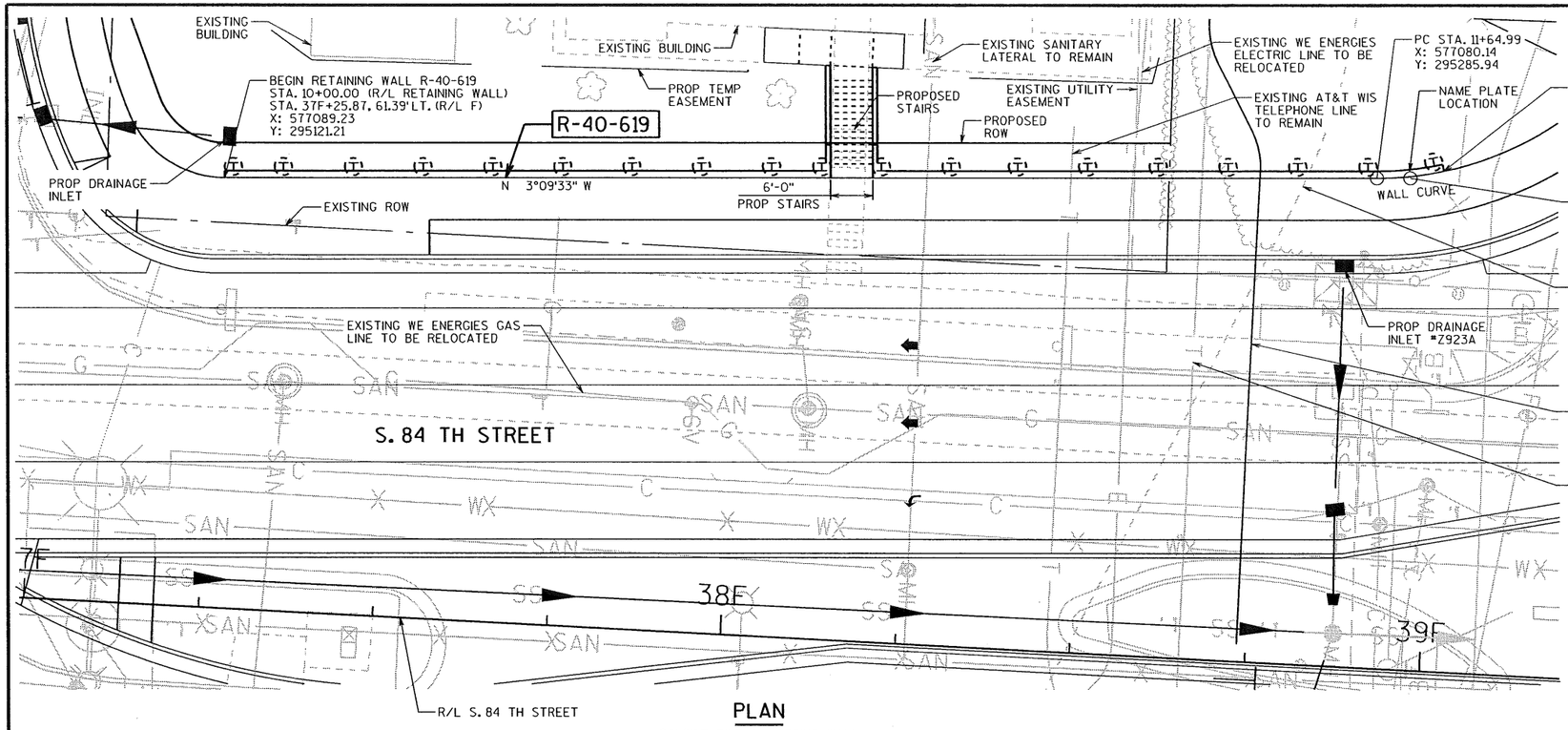
DRAWN BY MM | PLANS CK'D. MR

SUBSURFACE EXPLORATION

SHEET 8 OF 8

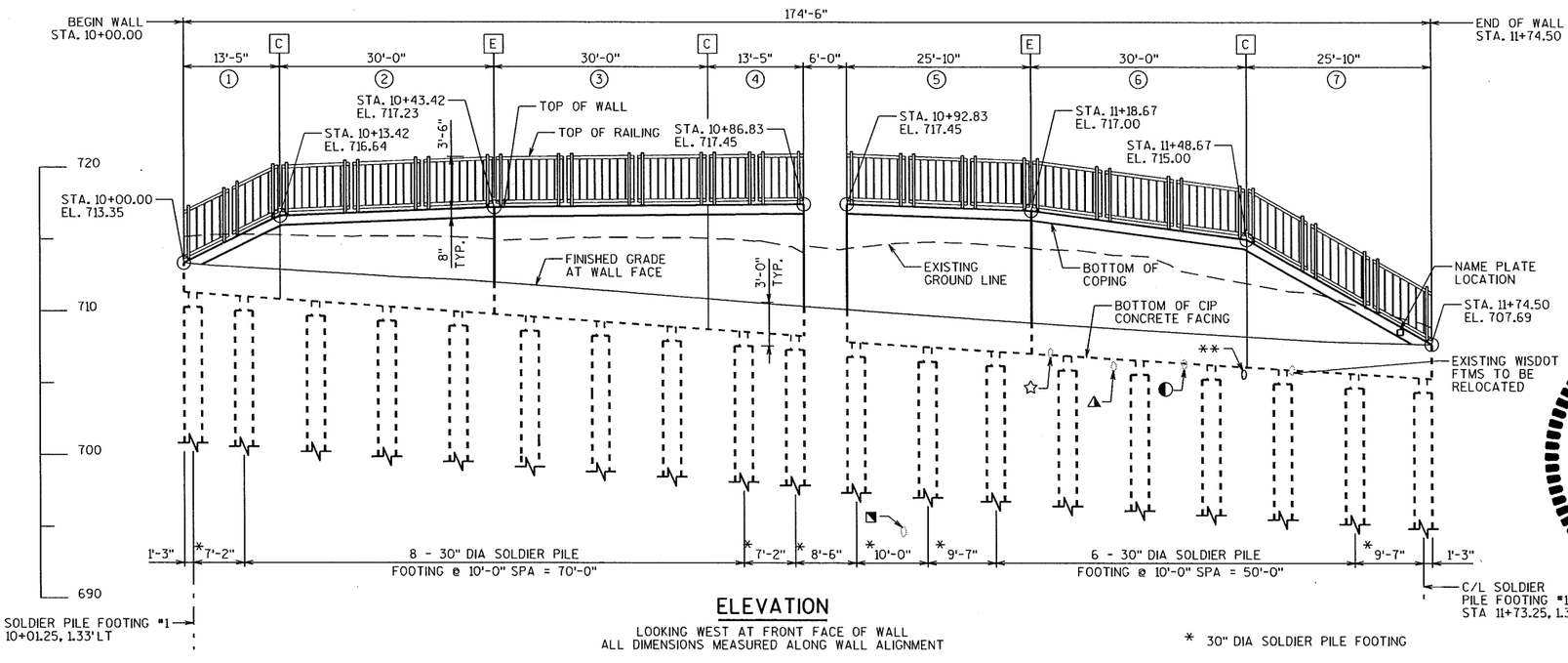
8

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PLAN

SOLDIER PILE & LAGGING WALL



ELEVATION

LOOKING WEST AT FRONT FACE OF WALL
ALL DIMENSIONS MEASURED ALONG WALL ALIGNMENT

* 30" DIA SOLDIER PILE FOOTING

STATE PROJECT NUMBER
1060-33-80

DESIGN DATA

LIVE LOAD:
CANTILEVER LIVE LOAD SURCHARGE: 100 PSF

MATERIAL PROPERTIES

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
PILE FOOTING	f'c = 3,500 PSI
STRUCTURAL STEEL CARBON	Fy = 50,000 PSI
* TIMBER LAGGING	F_b = 1,150 PSI
	E = 1,800,00 PSI

* MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK

LEGEND

- (C) CONTRACTION JOINT
- (E) EXPANSION JOINT
- TRAFFIC DIRECTION
- ☆ EXISTING AT&T WIS TELEPHONE LINE TO REMAIN
- ◐ EXISTING AT&T WIS TELEPHONE LINE TO BE REMOVED
- ** PROPOSED AT&T WIS COMMUNICATION LINE
- ◹ EXISTING SANITARY LATERAL TO REMAIN
- ◭ EXISTING WE ENERGIES ELECTRICAL LINE TO REMAIN
- (X) PANEL NUMBER

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, DESIGN DATA & GENERAL NOTES
3. TYPICAL WALL SECTIONS (1 OF 3)
4. TYPICAL WALL SECTIONS (2 OF 3)
5. TYPICAL WALL SECTIONS (3 OF 3)
6. WALL AND PILE DATA TABLE
7. TUBULAR RAILING DETAILS
8. PIPE RAILING DETAILS
9. AESTHETIC WALL TREATMENT DETAILS
10. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN
STEVEN W. SCHMITT
E-37333
FRANKLIN
WISCONSIN
PROFESSIONAL ENGINEER
5/19/14

STRUCTURE R-40-619

WALL AT SW CORNER OF THE 84 TH ST. INTERCHANGE

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SWS	MHZ	SWS	MHZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 10

8

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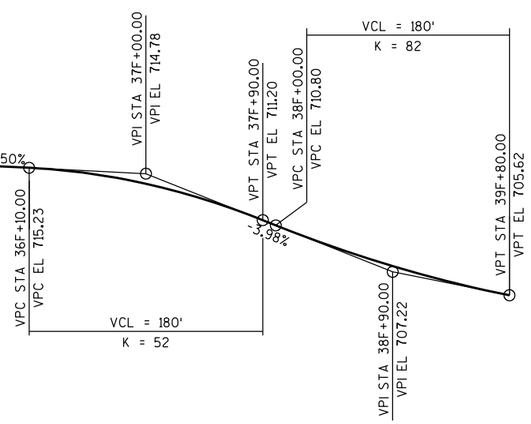
STATE PROJECT NUMBER
1060-33-80

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000.0008	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-619 *	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	61
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	10,390
506.0605	STRUCTURAL STEEL HS	LB	22,557
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	133
513.4080	RAILING TUBULAR SPECIAL R-40-619	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3
517.0600.0009	PAINTING EPOXY SYSTEM R-40-619	LS	1
517.1050.S.0020	ARCHITECTURAL SURFACE TREATMENT R-40-619	SF	1,061
612.0106	PIPE UNDERDRAIN 6-INCH	LF	175
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	32
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	3
SPV.0090.4440	FOUNDATION DRILLING	LF	309
SPV.0110.4600	TIMBER LAGGING	MBM	3.6
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	1,189
	NON-BID ITEMS		
	NAME PLATE	EACH	1
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4"
	PREFORMED JOINT FILLER	SIZE	3/4"

ALL ITEMS ARE CATEGORY 3190

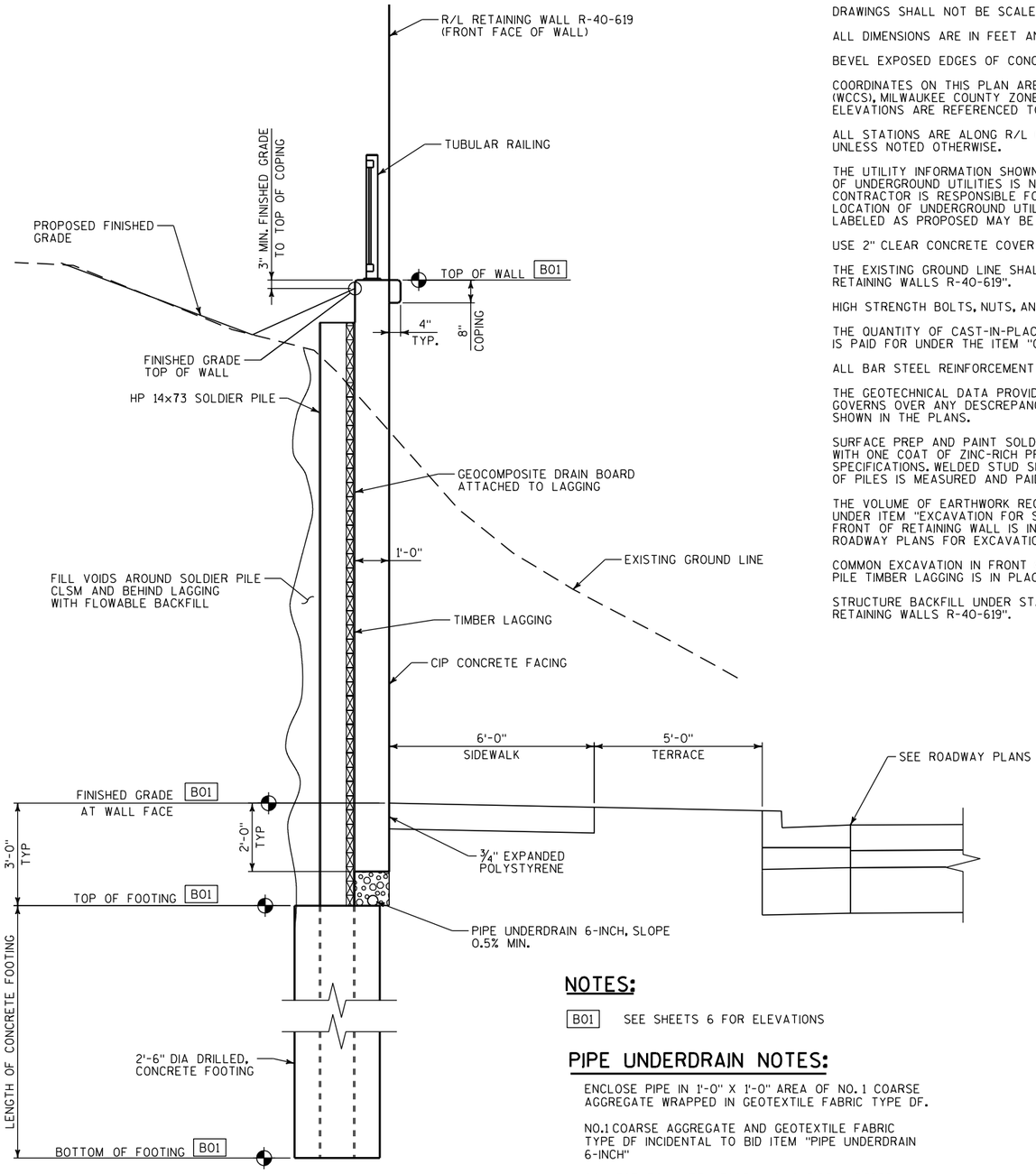
*INCLUDES STRUCTURE BACKFILL UNDER STAIRCASE



PROFILE GRADE LINE S. 84 TH STREET

SOLDIER PILE WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, ϕ, DEG	COHESION C', PSF	FRICTION ANGLE, ϕ, DEG
HARD COHESIVE SOIL	140	4,000	0	200	34
VERY STIFF COHESIVE SOIL	135	2,500	0	100	32



TYPICAL SECTION

LOOKING EAST
STA 37F+25.87 TO STA 39F+00.17

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ALL STATIONS ARE ALONG R/L OF R-40-619 RETAINING WALL (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-619".

HIGH STRENGTH BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE COPING AND CONCRETE FACING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

ALL BAR STEEL REINFORCEMENT IS TO BE EPOXY COATED.

THE GEOTECHNICAL DATA PROVIDED FOR THIS STRUCTURE IN THE GEOTECHINCAL DATA REPORT GOVERNS OVER ANY DESCREPANCY WITH THE SUBSURFACE EXPLORATION AND GEOTECHNICAL DATA SHOWN IN THE PLANS.

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM 517.0600, "PAINTING EPOXY SYSTEM R-40-619".

THE VOLUME OF EARTHWORK REQUIRED FOR THE LAGGING AND THE UNDERDRAIN IS PAID FOR UNDER ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-619." ALL EARTHWORK IN FRONT OF RETAINING WALL IS INCLUDED IN THE ROADWAY BID ITEM "COMMON EXCAVATION." SEE ROADWAY PLANS FOR EXCAVATION LIMITS.

COMMON EXCAVATION IN FRONT OF THE RETAINING WALL MAY NOT BEGIN UNTIL THE SOLDIER PILE TIMBER LAGGING IS IN PLACE.

STRUCTURE BACKFILL UNDER STAIRCASE IS INCLUDED IN BID ITEM "EXCAVATED FOR STRUCTURES RETAINING WALLS R-40-619".

NOTES:

B01 SEE SHEETS 6 FOR ELEVATIONS

PIPE UNDERDRAIN NOTES:

ENCLOSE PIPE IN 1'-0" X 1'-0" AREA OF NO. 1 COARSE AGGREGATE WRAPPED IN GEOTEXTILE FABRIC TYPE DF.

NO.1 COARSE AGGREGATE AND GEOTEXTILE FABRIC TYPE DF INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN 6-INCH"

CONNECT TO INLET #Z923A USING PIPE UNDERDRAIN UNPERFORATED PAID FOR UNDER "PIPE UNDERDRAIN UNPERFORATED 6-INCH".

HORIZONTAL CURVE DATA

WALL CURVE

P.I. = 11+69.75
X: 577079.88
Y: 295290.70
Δ = 11°43'04.06" LEFT
D = 123°25'44.69"
T = 4.8'
L = 9.5'
R = 46.4'
P.C. = 11+64.99
X: 577080.14
Y: 295285.94
P.T. = 11+74.50
X: 577078.65
Y: 295295.30

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

DRAWN BY SWS | PLANS CK'D. MHZ

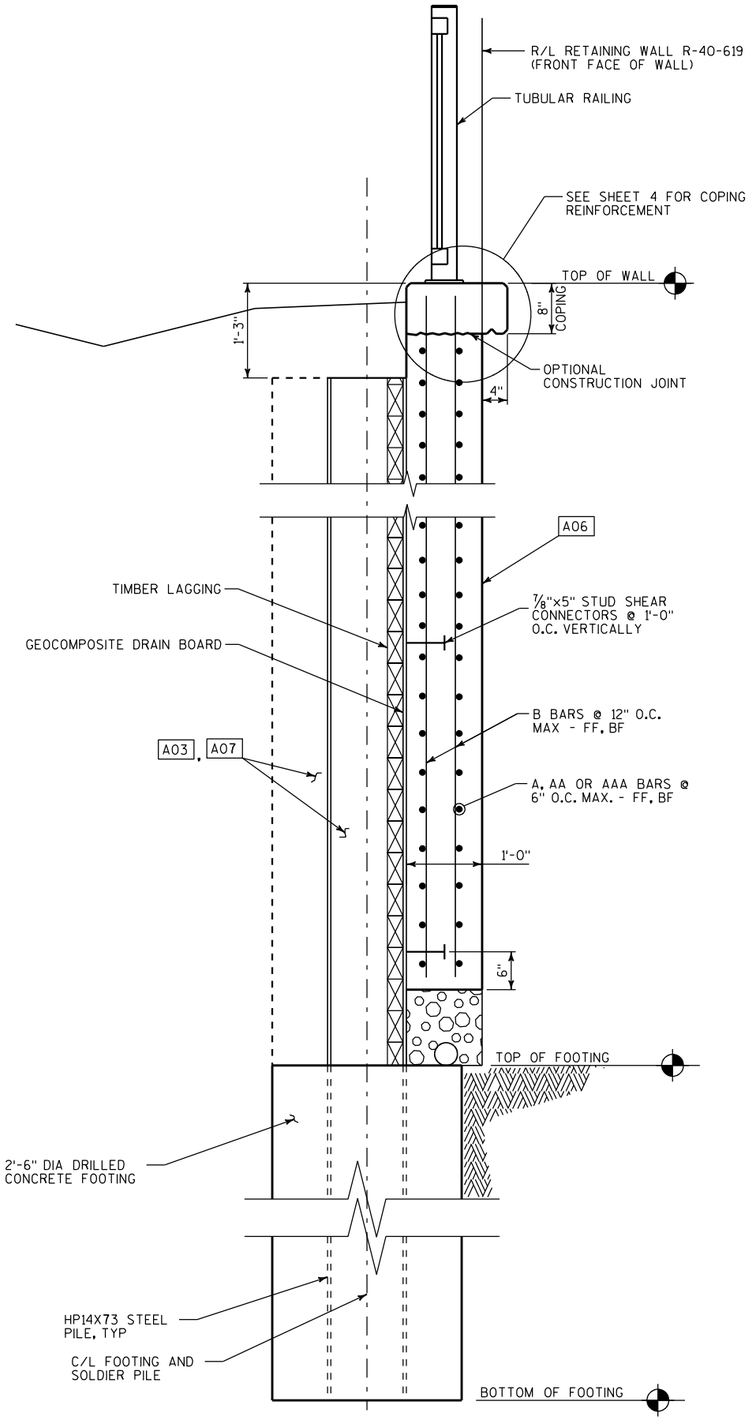
QUANTITIES, DESIGN DATA & GENERAL NOTES

SHEET 2 OF 10

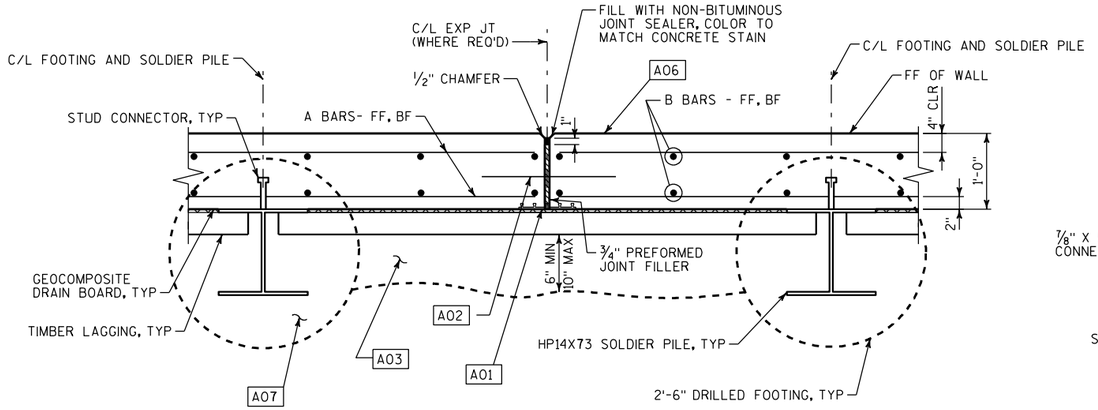
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STATE PROJECT NUMBER
1060-33-80

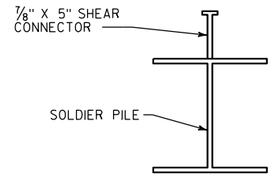


TYPICAL SOLDIER PILE AND PANEL WALL SECTION

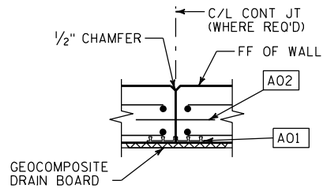


TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

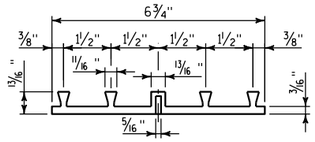
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATION OF CONTRACTION & EXPANSION JOINTS)



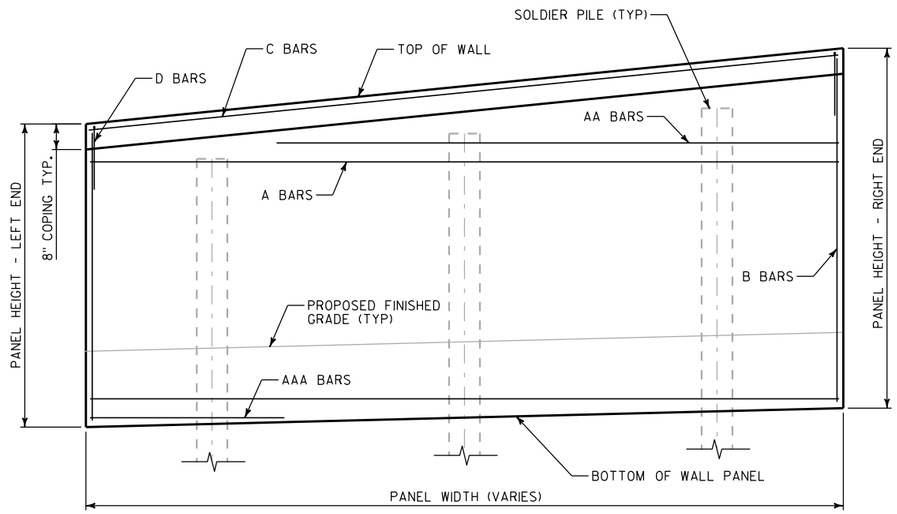
STUD CONNECTOR DETAIL



CONTRACTION JOINT



P.C.W. "TYPE B" DETAIL A01



TYPICAL PANEL ELEVATION

SEE SHT 6 FOR WALL PANEL DIMENSIONS, BAR SIZES AND QUANTITIES

NOTES:

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON BF OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 3/4" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-619". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 9.

A07 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-619"

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

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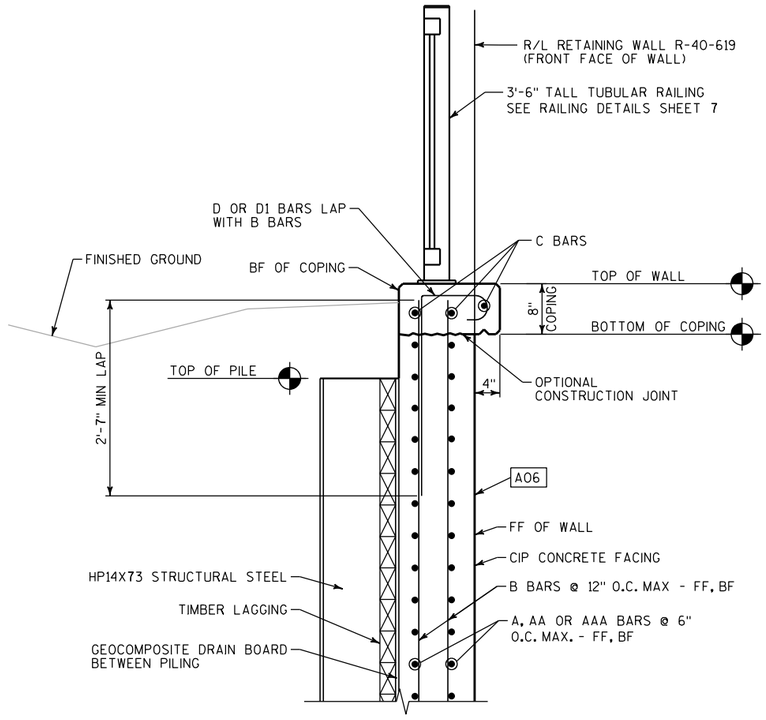
TYPICAL WALL SECTIONS (1 OF 3)

SHEET 3 OF 10

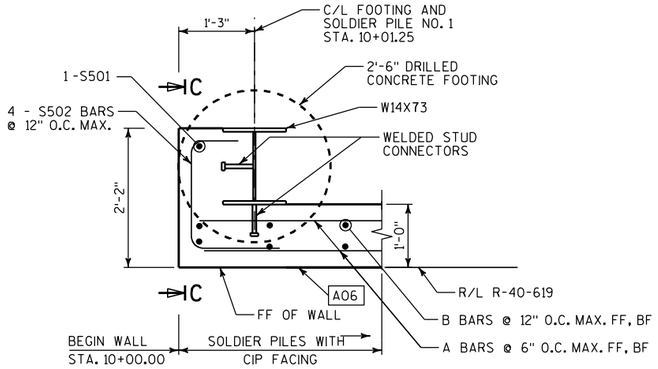
8

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STATE PROJECT NUMBER
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TYPICAL WALL SECTION AT COPING

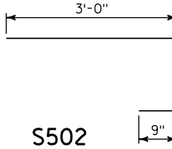


BEGINNING PLAN OF WALL

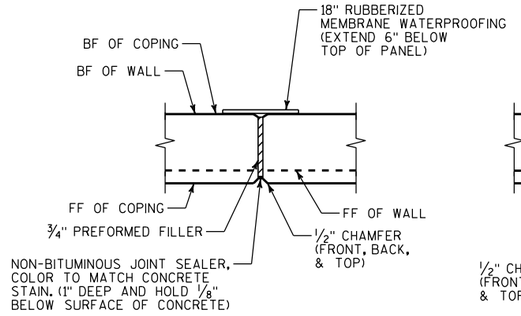
END OF WALL IS SIMILAR
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

WALL FACING BILL OF BARS

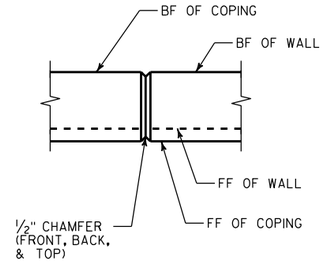
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S501	X	2	1'-8"			PANEL BEGIN & END VERTICAL
S502	X	6	5'-2"	X		PANEL BEGIN & END HORIZONTAL



S502



COPING EXPANSION JOINT



COPING CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)

NOTES:

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON BF OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

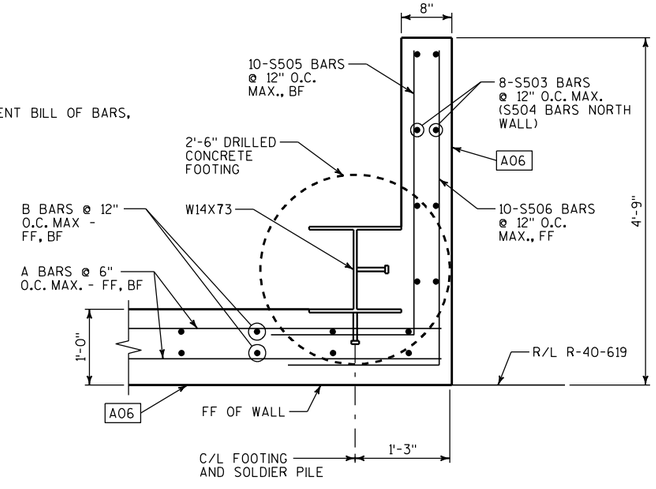
A02 ¾" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER ½ THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-619". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 9.

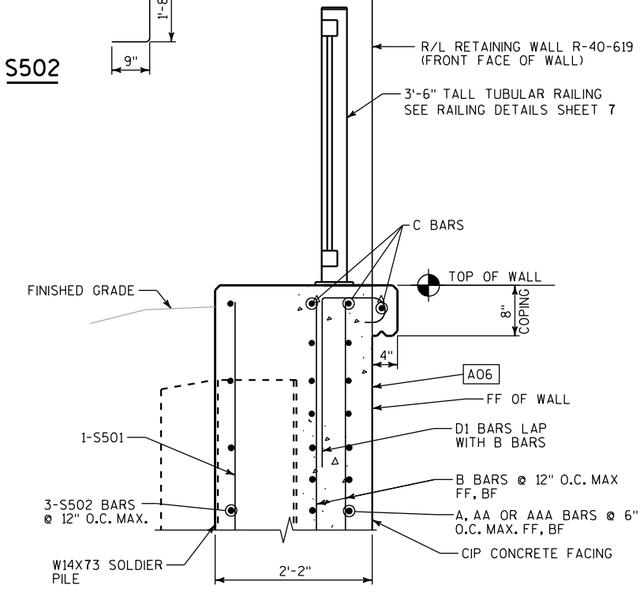
A07 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-619"

NOTE:
FOR REINFORCEMENT BILL OF BARS,
SEE SHEET 6.

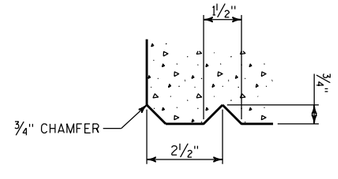


PLAN OF WALL AT STA. 10+86.83

PLAN OF WALL AT 10+92.83 SIMILAR
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)



WALL SECTION C-C



DETAIL C
¾" CONTINUOUS DRIP GROOVE

TERMINATE 2'-0" FROM END OF WALL

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

DRAWN BY SWS | PLANS CK'D. MHZ

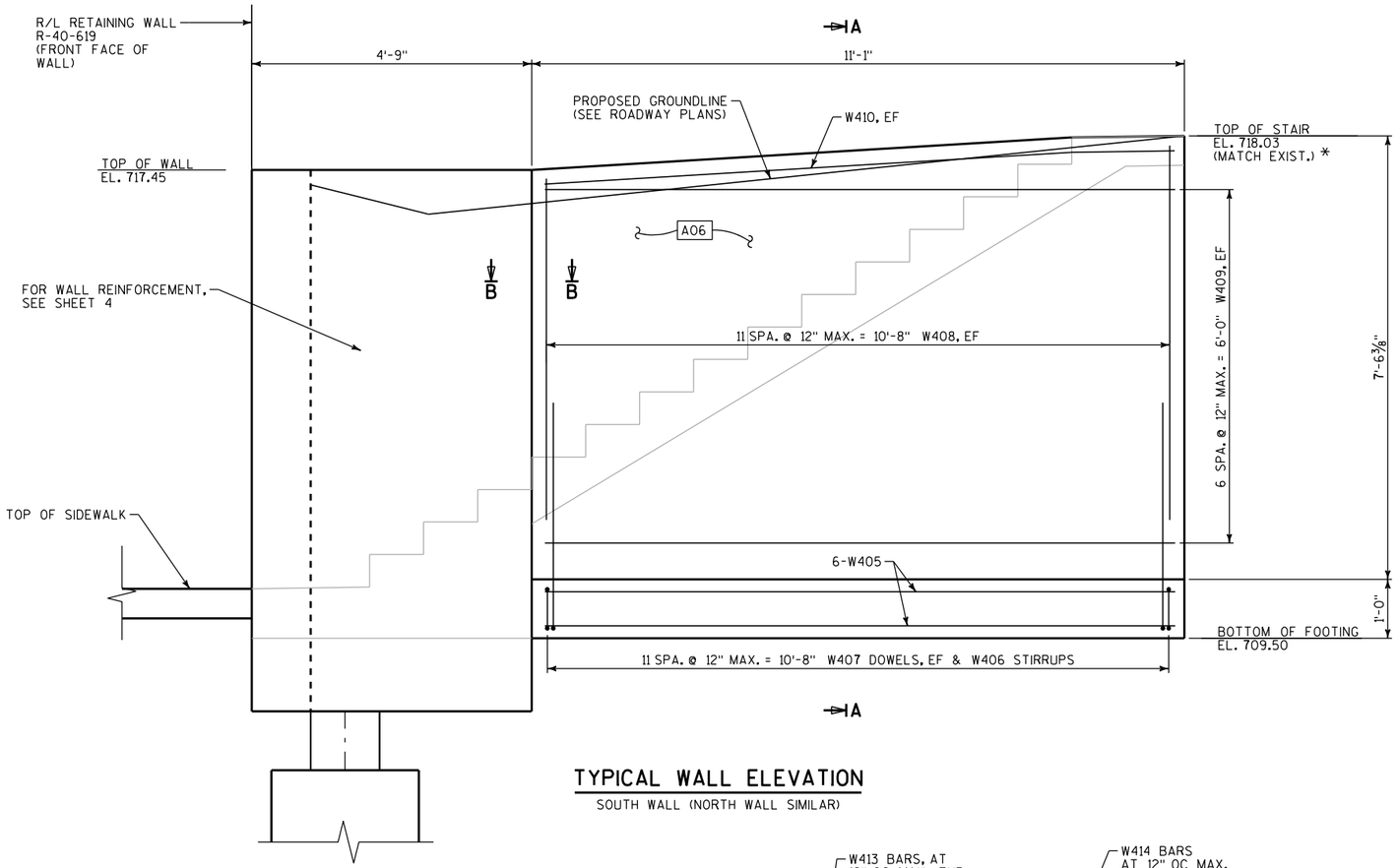
TYPICAL WALL SECTIONS (2 OF 3)

SHEET 4 OF 10

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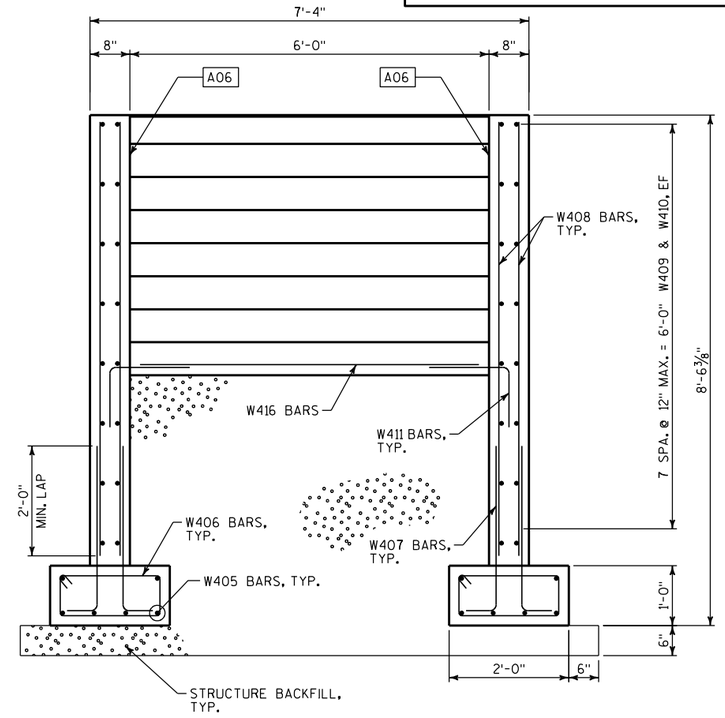
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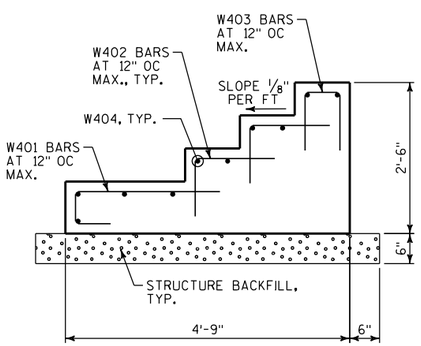


TYPICAL WALL ELEVATION

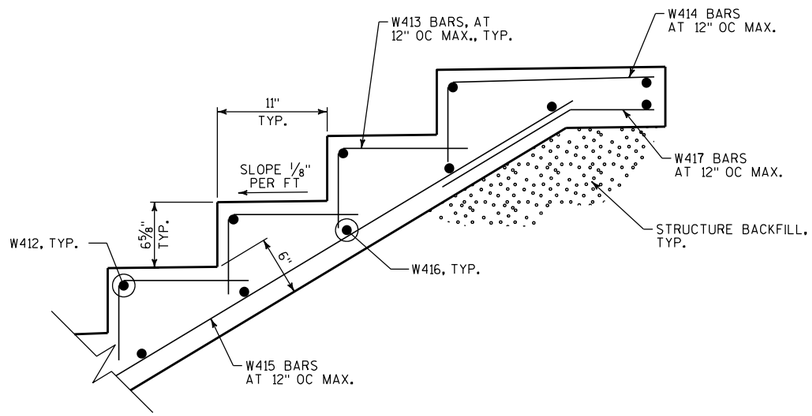
SOUTH WALL (NORTH WALL SIMILAR)



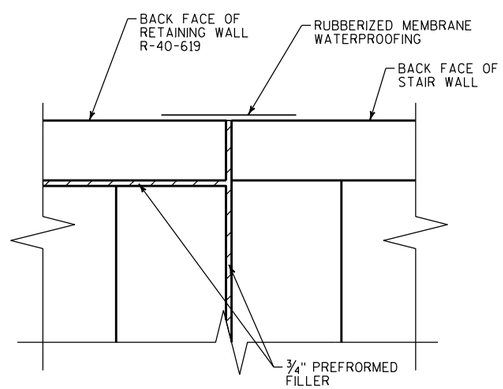
SECTION A-A



TYPICAL STAIR DETAIL



TYPICAL STAIR DETAIL



SECTION B-B

PLAN VIEW

NOTES:

STRUCTURE BACKFILL UNDER STAIRCASE IS INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-619".

FOR REINFORCEMENT BILL OF BARS, SEE SHEET 6.

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 9.

CONTRACTOR TO DRAW A SOFT-BRISTLE BROOM ACROSS STAIR TREADS CONCRETE SURFACE PERPENDICULAR TO THE LINE OF TRAFFIC TO PROVIDE A UNIFORM, FINE-LINE TEXTURE. ENGINEER TO GIVE FINAL APPROVAL ON TEXTURE SELECTION PRIOR TO CONSTRUCTION FOR ALL CONCRETE TREADS SURFACE.

* CONTRACTOR TO FIELD VERIFY ELEVATIONS AND ADJUST RISER HEIGHT TO FIT FIELD CONDITIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

DRAWN BY	SWS	PLANS CK'D.	MHZ

TYPICAL WALL SECTIONS (3 OF 3)

SHEET 5 OF 10

8

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STATE PROJECT NUMBER
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WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT (FT)	WALL THICKNESS (IN)	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FIN. GRADE ELEV. AT WALL FACE	TOP OF FTG. BORING ELEV.	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH (FT)	PILE LENGTH (FT)	PILE SECTION
2.00		BEGIN	10+00.00	713.35		713.35					
1	12	1	10+01.25	713.66	712.41	713.31	710.31	702.41	7.90	10	W14X73
		2	10+08.42	715.41	714.16	713.06	710.06	702.16	7.90	12	W14X73
5.75		CONT JT.	10+13.42	716.64		712.89					
2	12	3	10+18.42	716.74	715.49	712.75	709.75	701.49	8.26	14	W14X73
		4	10+28.42	716.94	715.69	712.41	709.41	701.69	7.73	14	W14X73
		5	10+38.42	717.13	715.88	712.17	709.17	700.88	8.28	15	W14X73
7.21		EXP JT	10+43.42	717.23		712.02					
3	12	6	10+48.42	717.26	716.01	711.83	708.83	701.01	7.82	15	W14X73
		7	10+58.42	717.31	716.06	711.44	708.44	699.06	9.38	17	W14X73
		8	10+68.42	717.36	716.11	711.05	708.05	699.11	8.94	17	W14X73
8.53		CONT JT.	10+73.42	717.38		710.85					
4	12	9	10+78.42	717.41	716.16	710.66	707.66	698.16	9.50	18	W14X73
		10	10+85.58	717.44	716.19	710.39	707.39	698.19	9.19	18	W14X73
9.11/9.61		OPEN JT.	10+86.83	717.45		710.34					
5	12	11	10+94.08	717.43	716.18	710.08	707.08	697.18	9.90	19	W14X73
		12	11+03.67	717.25	716.00	709.72	706.72	697.00	9.72	19	W14X73
		13	11+13.67	717.09	715.84	709.38	706.38	696.84	9.54	19	W14X73
9.80		EXP JT	11+18.67	717.00		709.20					
6	12	14	11+23.67	716.67	715.42	709.04	706.04	696.42	9.62	19	W14X73
		15	11+33.67	716.00	714.75	708.72	705.72	695.75	9.97	19	W14X73
		16	11+43.67	715.33	714.08	708.39	705.39	695.08	10.31	19	W14X73
8.77		CONT JT.	11+48.67	715.00		708.23					
7	12	17	11+53.67	713.59	712.34	708.23	705.08	695.34	9.74	17	W14X73
		18	11+63.67	710.76	709.51	708.08	704.83	694.51	10.32	15	W14X73
		19	11+73.25	708.04	706.79	707.83	704.72	693.79	10.92	13	W14X73
2.00		END	11+74.50	707.69		707.69					

BILL OF BARS (WALL PANELS)

PANEL NUMBER	WALL THICKNESS (IN)	PANEL HEIGHT LEFT END (FT)	PANEL HEIGHT RIGHT END (FT)	PANEL WIDTH (FT)	QUANTITY HORIZ "A" BARS	LENGTH OF "A" BAR	QUANTITY HORIZ "AA" BARS	AVE. LENGTH OF "AA" BAR	QUANTITY HORIZ "AAA" BARS	AVE. LENGTH OF "AAA" BAR	QUANTITY VERT "B" BARS	AVE. LENGTH OF "B" BAR	QUANTITY HORIZ "C" BARS	LENGTH OF "C" BAR	QUANTITY VERT "D" BARS	LENGTH OF "D" BAR
1	12	2.00	5.75	13.42	8	13'-1"	10 ◥	7'-4"	-----	-----	28 ◥	3'-7"	3	13'-6"	8	4'-8"
2	12	5.75	7.21	30	22	29'-8"	-----	-----	2	16'-2"	62 ◭	6'-0"	3	29'-8"	31	4'-8"
3	12	7.21	8.53	30	28	29'-8"	-----	-----	2	16'-2"	62 ◭	7'-5"	3	29'-8"	31	4'-8"
4	12	8.53	9.11	13.42	34	13'-1"	-----	-----	-----	-----	28	8'-4"	3	13'-1"	14	4'-8"
5	12	9.61	9.80	25.83	36	25'-6"	-----	-----	2	11'-4"	54	9'-3"	3	25'-6"	27	4'-8"
6	12	9.80	8.77	30	32	29'-8"	4 ◥	18'-6"	2	14'-4"	62 ◭	9'-0"	3	29'-9"	31	4'-8"
7	12	8.77	2.00	25.83	6 *	25'-6"	26 ◥	13'-2"	2	11'-1"	54 ◥	5'-1"	3	26'-6"	22	4'-8"

QUANTITIES OF BARS SHOWN ARE FOR BOTH WALL FACES.

◭ BUNDLE SETS OF BARS. BARS IN A SET SHALL HAVE LENGTHS SHOWN BELOW.

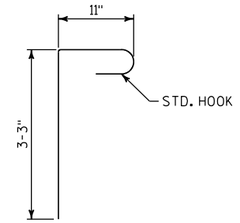
◥ BAR SERIES

* FIELD BEND BARS AS NECESSARY TO MATCH CURVE

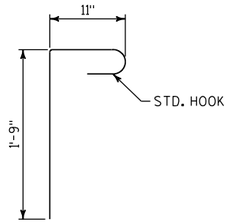
"B" BAR BUNDLE TABLE

PANEL NUMBER	TOTAL NO. REQ'D.	NO. REQ'D. PER SET	SET LOCATION	LENGTH	AVE. LENGTH
2	31	10	FF	5'-6"	6'-0"
		10	BF	5'-6"	
		10	FF	5'-11"	
		10	BF	5'-11"	
		11	FF	6'-6"	
		11	BF	6'-6"	
3	31	10	FF	7'-1"	7'-5"
		10	BF	7'-1"	
		10	FF	7'-4"	
		10	BF	7'-4"	
		11	FF	7'-9"	
		11	BF	7'-9"	
6	31	10	FF	8'-7"	9'-0"
		10	BF	8'-7"	
		10	FF	8'-10"	
		10	BF	8'-10"	
		11	FF	9'-4"	
		11	BF	9'-4"	

BAR MARK	BAR SIZE, NO.
A	5
AA	5
AAA	5
B	5
C	5
D	5
D1	5



D BAR



D1 BAR

LENGTH = 3'-2"
6 BARS (BEGINNING OF PANEL 1)
5 BARS (END OF PANEL 7)

"AA" BAR SERIES TABLE

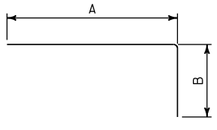
PANEL NUMBER	NO. REQ'D.	LENGTH
1	2 SERIES OF 5	3'-2" TO 11'-6"
2	-----	-----
3	-----	-----
4	-----	-----
5	-----	-----
6	2 SERIES OF 2	14'-10" TO 22'-2"
7	2 SERIES OF 13	2'-6" TO 23'-10"

"B" BAR SERIES TABLE

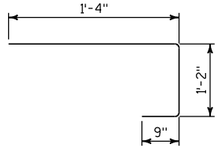
PANEL NUMBER	NO. REQ'D.	LENGTH
1	2 SERIES OF 14	1'-8" TO 5'-6"
7	2 SERIES OF 27	1'-8" TO 8'-6"

BILL OF BARS

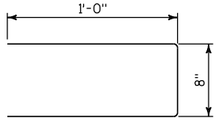
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S503	X	8	8'-8"			WALL RETURN, VERT., EF
S504	X	8	9'-2"			WALL RETURN, VERT., EF
S505	X	21	5'-5"	X		WALL RETURN, HORIZ., BF
S506	X	21	5'-8"	X		WALL RETURN, HORIZ., FF
W401	X	7	3'-7"	X		STAIR BLOCK, VERT.
W402	X	14	2'-3"	X		STAIR BLOCK, VERT., STEP
W403	X	7	2'-6"	X		STAIR BLOCK, VERT., TOP
W404	X	10	5'-8"			STAIR BLOCK, LONG., STEP
W405	X	12	10'-9"			STAIR WALL FTG., LONG.
W406	X	24	5'-4"	X		STAIR WALL FTG., STIRRUP
W407	X	48	4'-2"	X		STAIR WALL FTG., DOWEL
W408	X	48	6'-6"			STAIR WALL, VERT., EF
W409	X	28	10'-9"			STAIR WALL, LONG., EF
W410	X	4	10'-9"	X		STAIR WALL, LONG., TOP
W411	X	20	2'-5"	X		STAIR WALL, DOWEL
W412	X	10	5'-6"			STEP NOSING BAR, LONG.
W413	X	56	1'-8"	X		STEP NOSING, VERT.
W414	X	7	2'-1"	X		STEP NOSING, VERT., TOP
W415	X	7	11'-3"			STAIR SLAB, LONG.
W416	X	16	5'-6"			STAIR SLAB, TRANS.
W417	X	7	2'-0"	X		STAIR SLAB, LONG., TOP



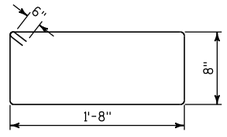
BAR MARK	A	B
S505	4'-0"	1'-6"
S506	4'-3"	1'-6"
W402	1'-4"	1'-0"
W407	3'-9"	6"
W411	1'-6"	1'-0"
W413	1'-1"	8"
W414	1'-6"	8"



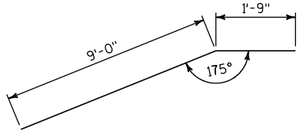
W401



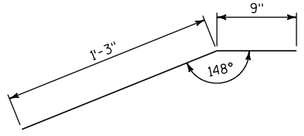
W403



W406



W410



W417

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

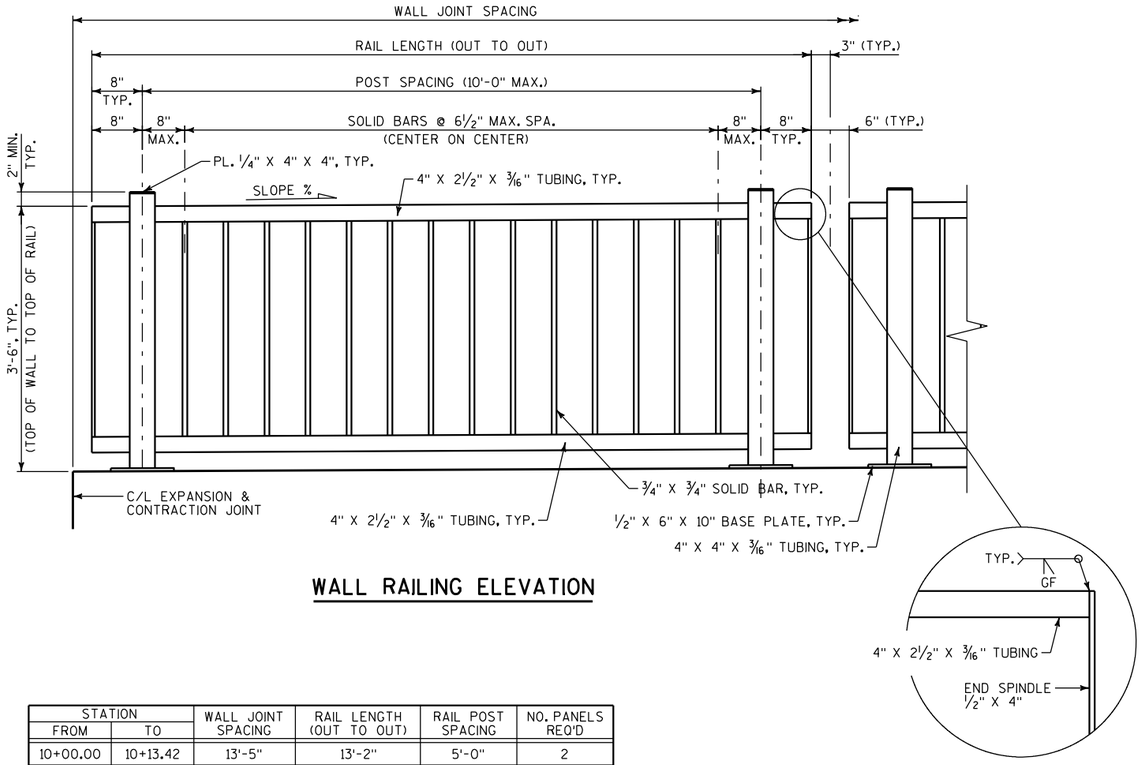
STRUCTURE R-40-619

DRAWN BY SWS | PLANS CK'D. MHZ

WALL AND PILE DATA TABLE

SHEET 6 OF 10

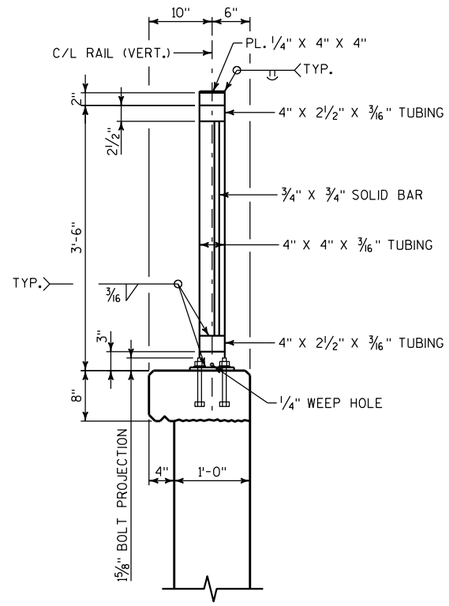
STATE PROJECT NUMBER
1060-33-80



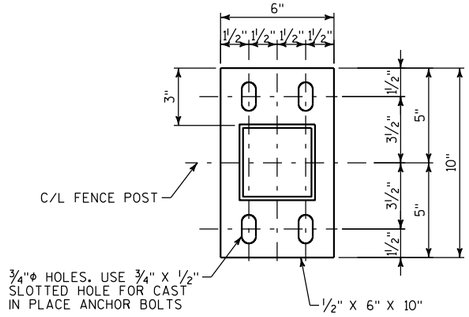
WALL RAILING ELEVATION

STATION		WALL JOINT SPACING	RAIL LENGTH (OUT TO OUT)	RAIL POST SPACING	NO. PANELS REQ'D
FROM	TO				
10+00.00	10+13.42	13'-5"	13'-2"	5'-0"	2
10+13.42	10+43.42	30'-0"	29'-6"	8'-2"	3
10+43.42	10+73.42	30'-0"	29'-6"	8'-2"	3
10+73.42	10+86.83	13'-5"	13'-2"	5'-0"	2
10+86.83	STAIRS	4'-9"	3'-10"	2'-6"	1
STAIRS	SIDEWALK	9'-2"	8'-11"	7'-7"	1
SIDEWALK	STAIRS	9'-2"	8'-11"	7'-7"	1
STAIRS	10+92.83	4'-9"	3'-10"	2'-6"	1
10+92.83	11+18.67	25'-10"	25'-7"	6'-10⅜"	3
11+18.67	11+48.67	30'-0"	29'-6"	8'-2"	3
11+48.67	11+74.50	25'-10"	25'-7"	6'-10⅜"	3

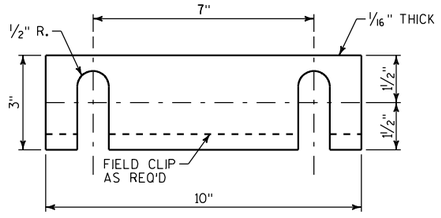
STATION		SLOPE %
FROM	TO	
10+00.00	10+13.42	24.52
10+13.42	10+43.42	1.97
10+43.42	10+73.42	0.51
10+73.42	10+86.83	0.51
10+86.83	STAIRS	LEVEL
STAIRS	SIDEWALK	6.03
SIDEWALK	STAIRS	-6.03
STAIRS	10+92.83	LEVEL
10+92.83	11+18.67	-1.74
11+18.67	11+48.67	-6.67
11+48.67	11+74.50	-28.30

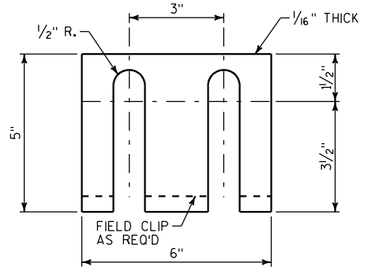


WALL RAILING SECTION



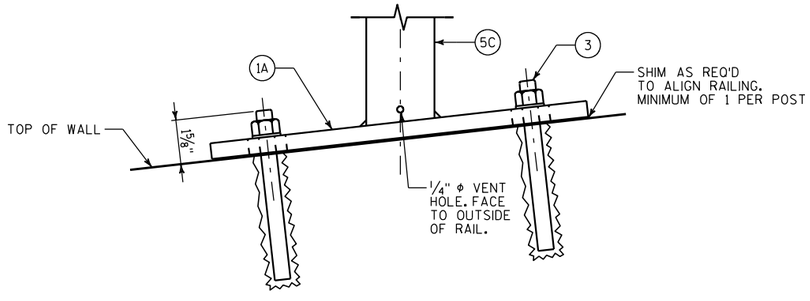
BASE PLATE





SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



ANCHOR BOLTS FOR RAIL POST

NOTES

BID ITEM SHALL BE "RAILING TUBULAR SPECIAL", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CALUK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING BALCK NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE AND LONGITUDINAL DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE ½" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".

(5C) 4" X 4" X 3/16" STRUCTURAL TUBE. PLACE POSTS VERTICAL. WELD TO (1A). PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO (5C).

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STRUCTURE R-40-619

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TUBULAR RAILING DETAILS

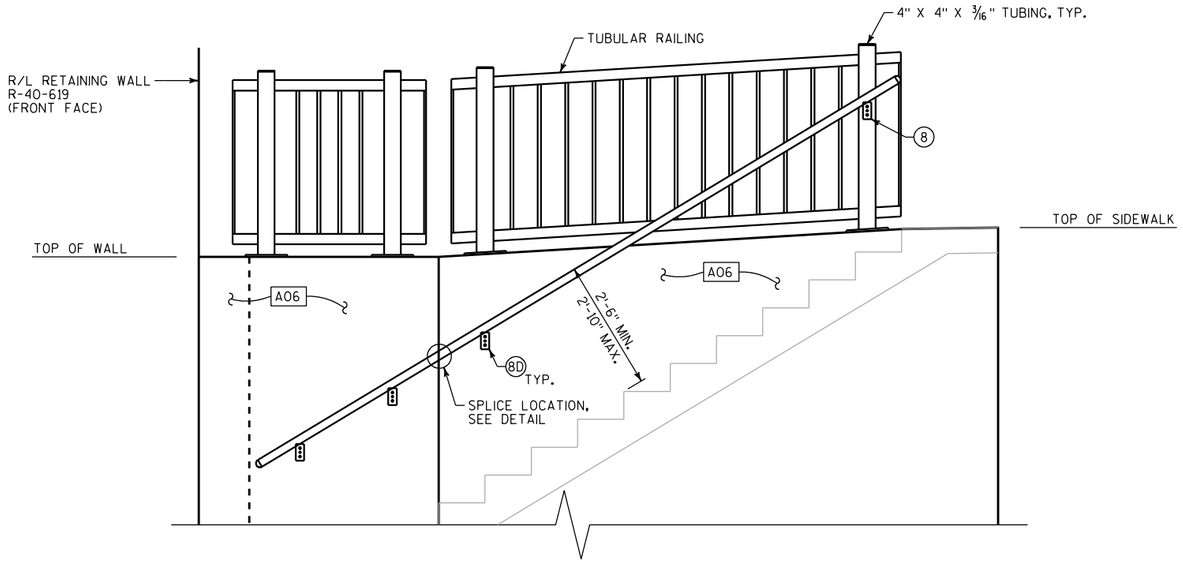
SHEET 7 OF 10

8

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-619\cds\R619_080107_rp.dgn PLOT DATE : 19-MAY-2014 17:02 PLOT BY : MSCS7S PLOT NAME : R619_080107_rp PLOT SCALE : 2.000004:1

STATE PROJECT NUMBER
1060-33-80



WALL RAILING ELEVATION

NOTES

HANDRAIL SHALL BE INCIDENTAL TO BID ITEM "RAILING TUBULAR SPECIAL" WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, GALVANIZING AND PAINTING.

ATTACHMENT BASE PLATES SHALL BE FLAT WITH ALL SURFACES, SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

HSS TUBING SHALL CONFORM TO ASTM A500 GRADE B

STEEL PLATE SHALL CONFORM TO ASTM A709 GRADE 36

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF ATTACHMENT PLATES (8D) TO THE CONCRETE WALL WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELD IS 3/16"

AFTER WELDING FABRICATION, PRIOR TO ASSEMBLING AND BOLTING THE HANDRAIL COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZE ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED AFTER GALVANIZING AS SPECIFIED IN 635.3.4.

AFTER GALVANIZING, PAINT HANDRAIL ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS.

HANDRAIL TO BE PAINTED FEDERAL COLOR NO. 27038 BLACK.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL HANDRAIL INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

HANDRAIL SHALL BE CAPPED AT THE ENDS.

LEGEND

(5) STAINLESS STEEL CONCRETE MASONRY ANCHORS, 3/8" DIA MINIMUM PULLOUT CAPACITY OF 5 KIPS. EMBED A MINIMUM OF 6" UNLESS OTHERWISE NOTED.

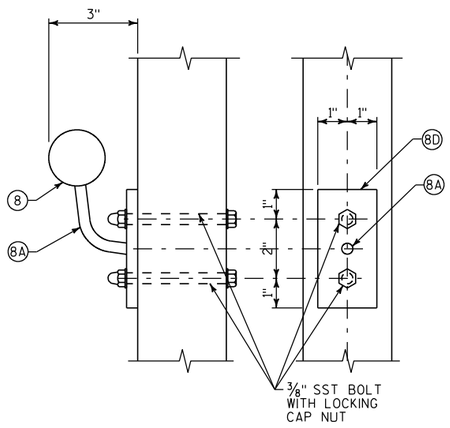
(8) GRAB RAIL STAINLESS STEEL 1.5" DIA SCHEDULE 40 PIPE (1.9" O.D.)

(8A) SST CONNECTION BAR 3/8" DIA WELD TO (8) AND (8D).

(8C) SST 1'-4" LONG CIRCULAR SLEEVE FABRICATED FROM 1 1/2" DIA PIPE (1.05" O.D.)

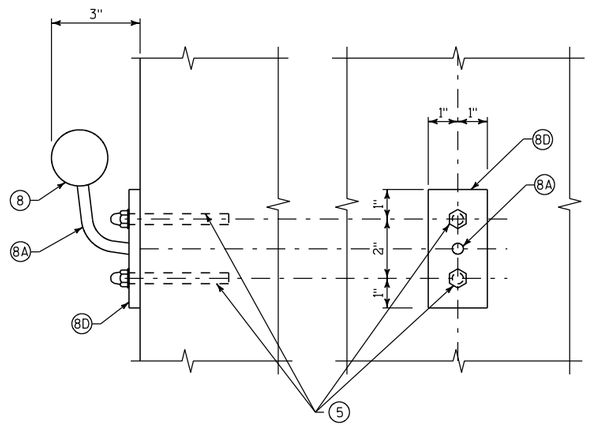
(8D) SST 4" x 2" x 3/8" PLATE BOLTED TO 4" x 4" POST WITH 2 - 3/8" SST BOLTS

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 9.



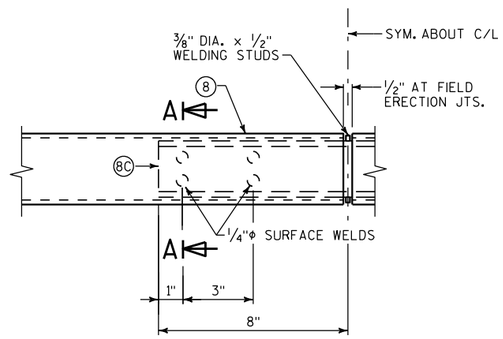
GRAB RAIL ATTACHMENT DETAIL

AT STEEL POST



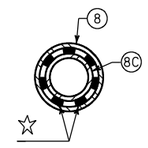
GRAB RAIL ATTACHMENT DETAIL

AT CONCRETE WALL



SPLICE DETAIL

☆ MIN 5/8" FLAT SURFACE DIA PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



SECTION A-A

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

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PIPE RAILING DETAILS

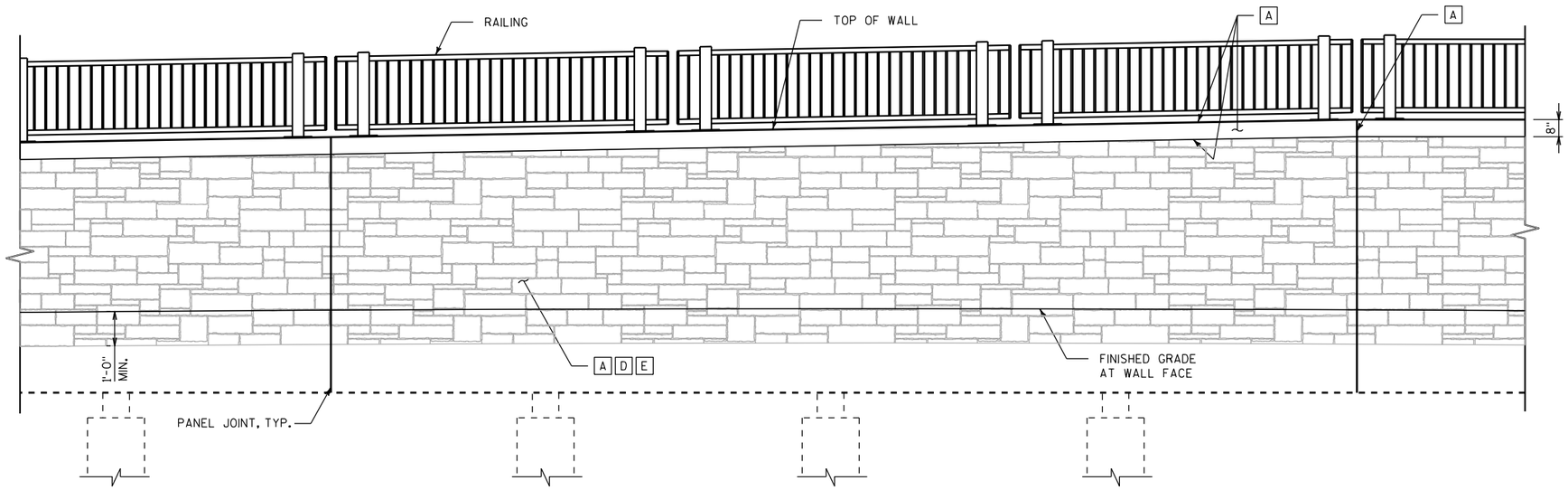
SHEET 8 OF 10

8

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-619\cds\R619_080108_rp.dgn PLOT DATE : 19-MAY-2014 17:02 PLOT BY : MSCS7S PLOT NAME : R619_080108_rp PLOT SCALE : 2.000004:1

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ELEVATION

ARCHITECTURAL SURFACE TREATMENT NOTES:

ARCHITECTURAL SURFACE TREATMENT SHALL EXTEND 1'-0" MINIMUM BELOW FUTURE FINISHED GRADE.

PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF OF 1½".

BRICK PATTERN SHALL MATCH THE NON-PRODUCTION TEST PANELS DEVELOPED FOR WALL R-40-618.

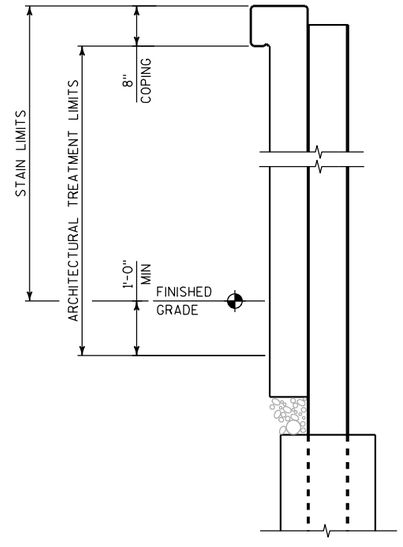
STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #3 - 33522
ACCENT COLOR #4 - 36424

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	JOINTS	SEE SECTIONS ON SHEET 4
		WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
D	ACCENT COLOR #3	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
E	ACCENT COLOR #4	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE



WALL STAINING AND ARCHITECTURAL TREATMENT DIAGRAM

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

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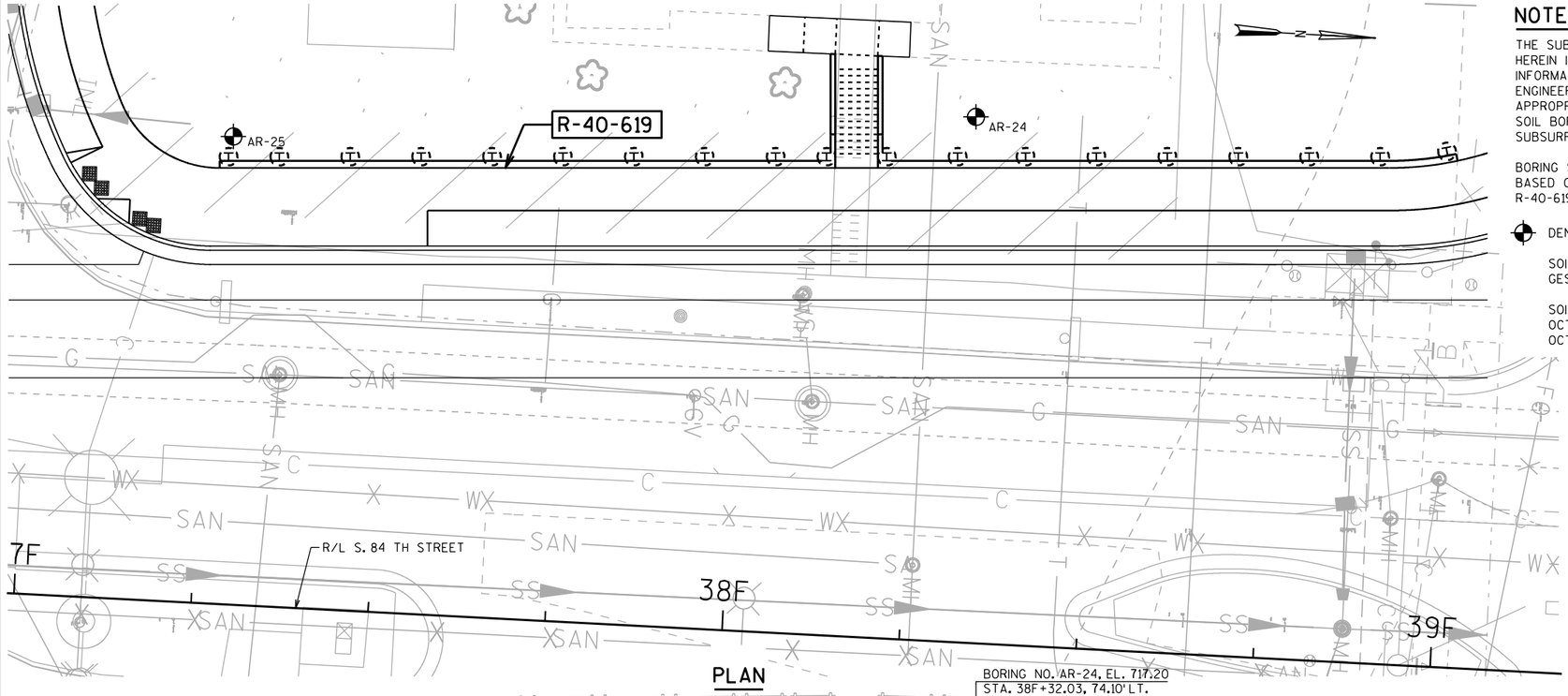
AESTHETIC WALL TREATMENT DETAILS

SHEET 9 OF 10

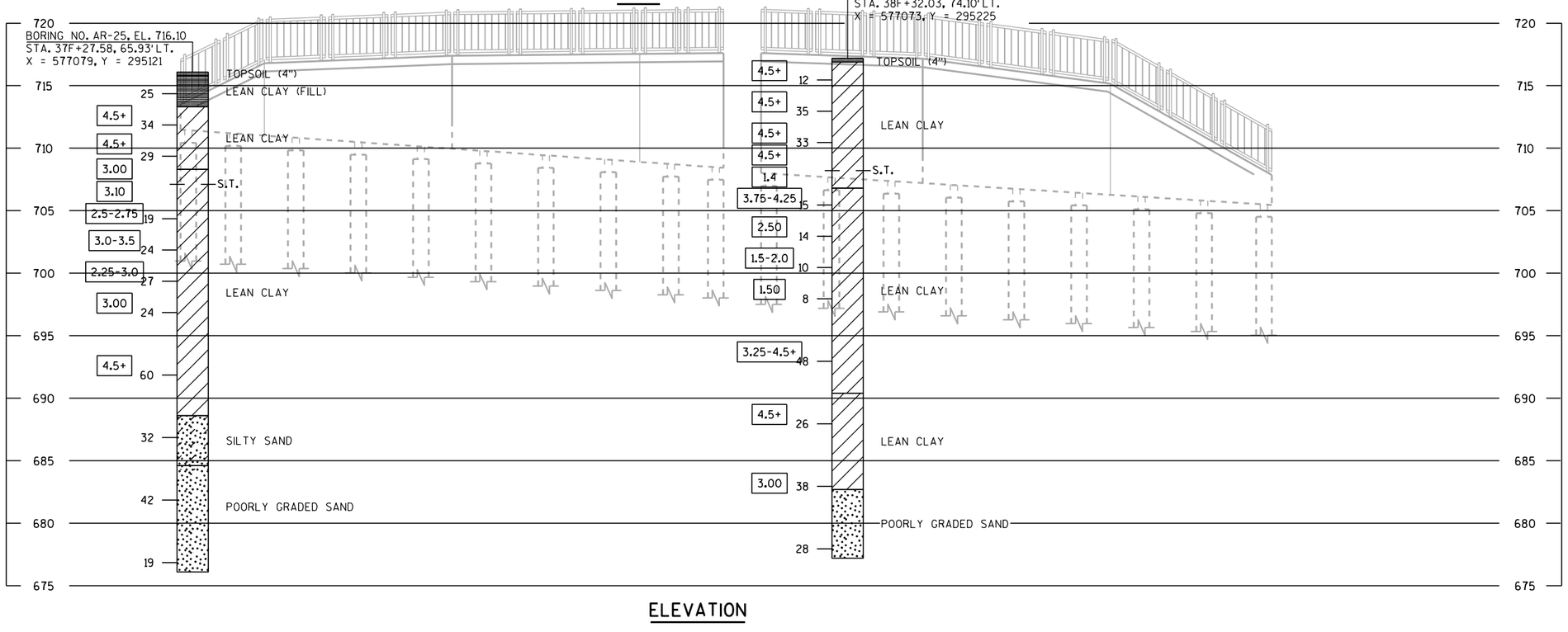
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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\R-40-619\cds\R619_080109_ae.dgn PLOT DATE : 19-MAY-2014 17:02 PLOT BY : MSCS7S PLOT NAME : R619_080109_ae PLOT SCALE : 6.000012:1



PLAN



ELEVATION

NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-619.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
OCT 04, 2012 - BORING AR-24
OCT 05, 2012 - BORING AR-25

STATE PROJECT NUMBER

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ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

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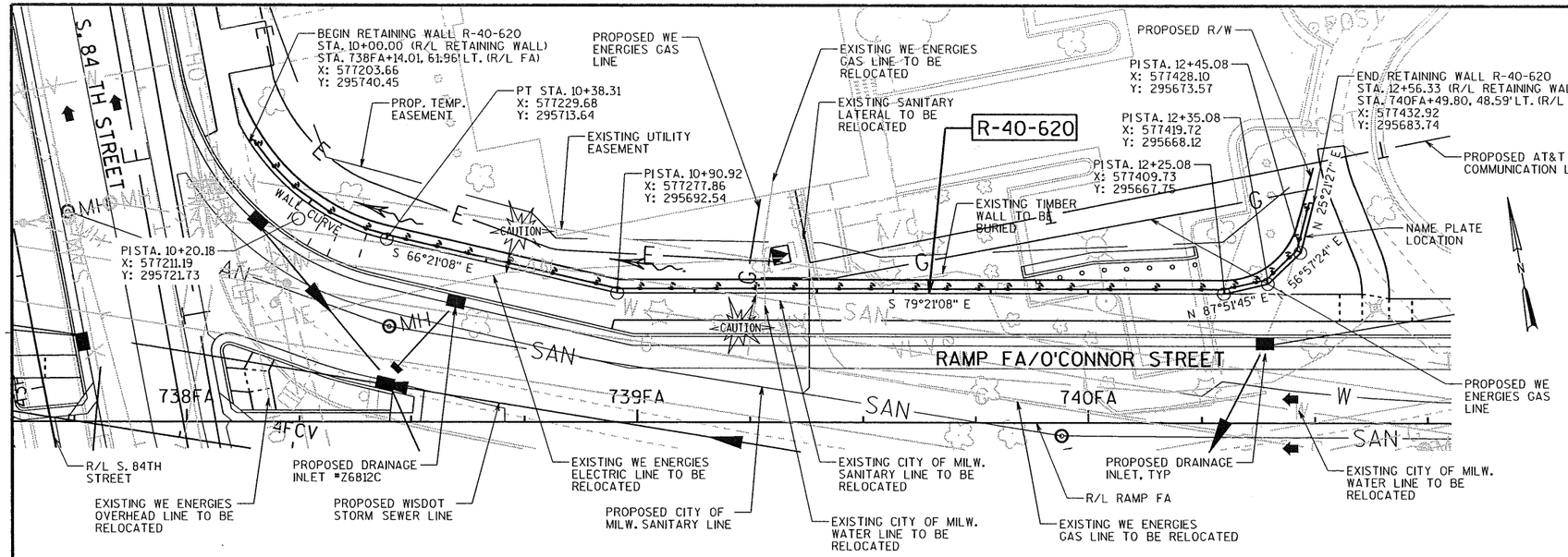
SUBSURFACE EXPLORATION

SHEET 10 OF 10

8

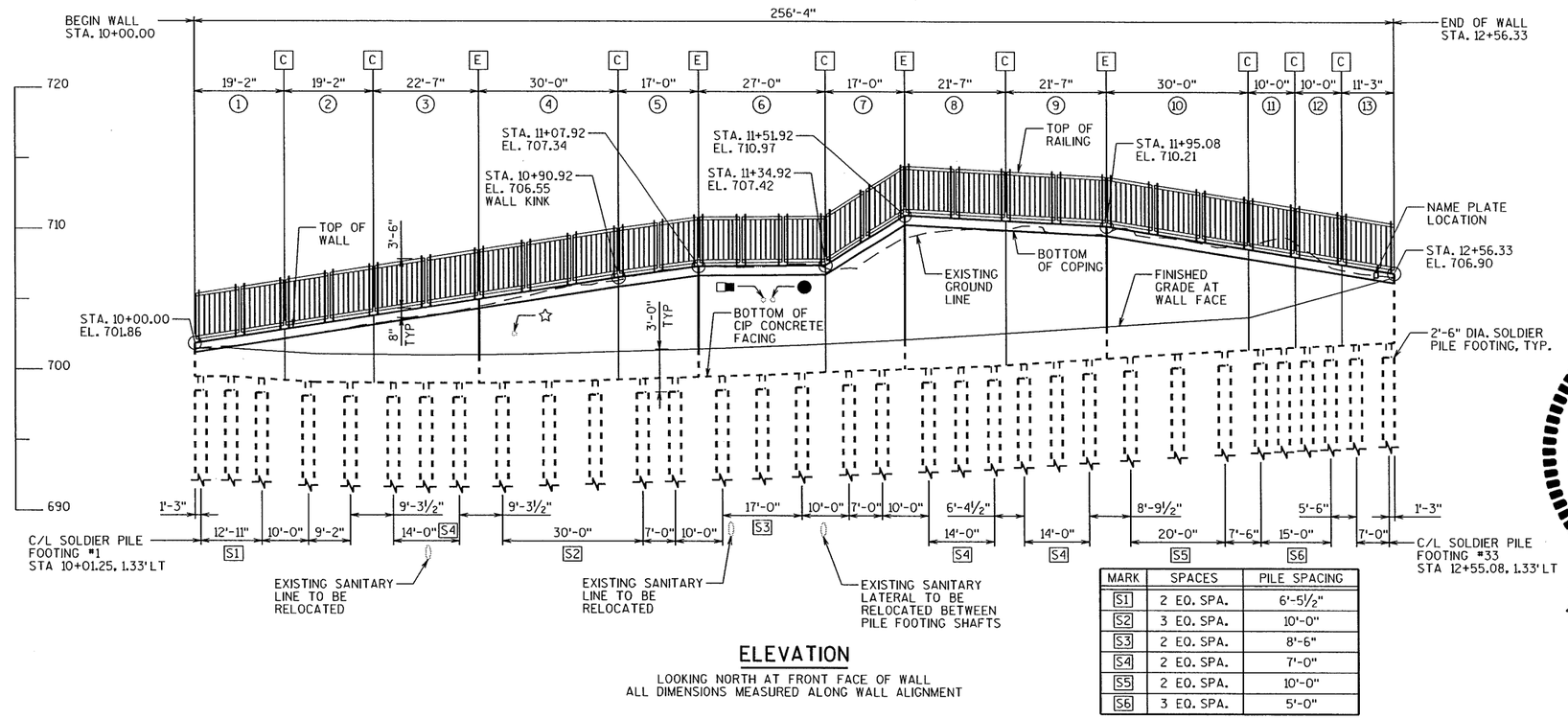
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STATE PROJECT NUMBER
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PLAN

SOLDIER PILE & LAGGING WALL



MARK	SPACES	PILE SPACING
S1	2 EQ. SPA.	6'-5½"
S2	3 EQ. SPA.	10'-0"
S3	2 EQ. SPA.	8'-6"
S4	2 EQ. SPA.	7'-0"
S5	2 EQ. SPA.	10'-0"
S6	3 EQ. SPA.	5'-0"

ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
ALL DIMENSIONS MEASURED ALONG WALL ALIGNMENT

DESIGN DATA

LIVE LOAD:
CANTILEVER LIVE LOAD SURCHARGE: 100 PSF

MATERIAL PROPERTIES

CONCRETE MASONRY RETAINING WALL	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI
PILE FOOTING	f'c = 3,500 PSI
STRUCTURAL STEEL CARBON	Fy = 50,000 PSI
* TIMBER LAGGING	F_b = 1,150 PSI
	E = 1,800,00 PSI

* MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK

LEGEND

- [C] CONTRACTION JOINT
- (E) EXPANSION JOINT
- TRAFFIC DIRECTION
- ☆ EXISTING ELECTRIC LINE TO BE RELOCATED
- EXISTING GAS LINE TO BE RELOCATED
- ● EXISTING WATER LINE TO BE RELOCATED
- (X) PANEL NUMBER

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES, DESIGN DATA & GENERAL NOTES
3. TYPICAL SECTIONS (1 OF 3)
4. TYPICAL SECTIONS (2 OF 3)
5. TYPICAL SECTIONS (3 OF 3)
6. WALL AND PILE DATA TABLE
7. TUBULAR RAILING DETAILS
8. AESTHETIC WALL TREATMENT DETAILS
9. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
STEVEN W. SCHMITT
E-37333
FRANKLIN
WISCONSIN
PROFESSIONAL ENGINEER
5/19/14

STRUCTURE R-40-620

WALL AT NE CORNER OF THE 84 TH ST. INTERCHANGE

COUNTY MILWAUKEE
~~TOWN/CITY/VILLAGE~~ MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	SWS	DESIGN CK'D.	MHZ	DRAWN BY	SWS	PLANS CK'D.	MHZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 9

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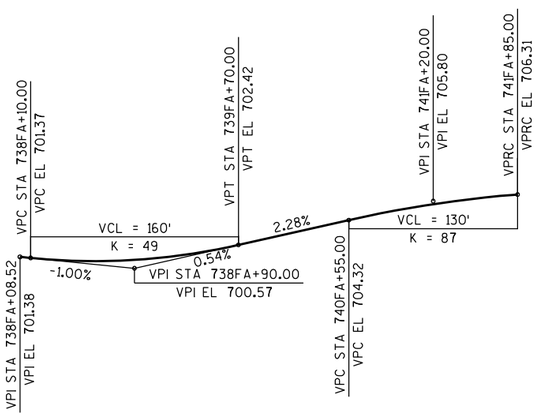
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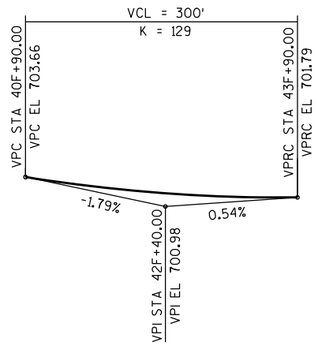
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000.0009	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-620	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	69
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	12,528
506.0605	STRUCTURAL STEEL HS	LB	39,347
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	176
513.4080	RAILING TUBULAR SPECIAL R-40-620	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	1
517.0600	PAINTING EPOXY SYSTEM R-40-620	LS	1
517.1050.S.0021	ARCHITECTURAL SURFACE TREATMENT R-40-620	SF	1,304
612.0106	PIPE UNDERDRAIN 6-INCH	LF	257
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	60
SPV.0075.4210	OBSTRUCTIONS FOUNDATION DRILLING	HRS	4
SPV.0090.4440	FOUNDATION DRILLING	LF	539
SPV.0110.4600	TIMBER LAGGING	MBM	4.8
SPV.0165.4750	GEOCOMPOSITE DRAIN BOARD	SF	1,607
	NON-BID ITEMS		
	NAME PLATE	EACH	1
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4"
	PREFORMED JOINT FILLER	SIZE	3/4"

ALL ITEMS ARE CATEGORY 3200



PROFILE GRADE LINE RAMP FA



PROFILE GRADE LINE S. 84 TH STREET

HORIZONTAL CURVE DATA

WALL CURVE

P.I. = 10+20.18
X: 577211.19
Y: 295721.73
Δ = 43°25'14.81" LEFT
D = 115°56'11.12"
T = 20.18'
L = 37.36'
R = 49.42'
P.C. = 10+00.00
X: 577203.66
Y: 295740.45
P.T. = 10+38.31
X: 577229.68
Y: 295713.64

SOLDIER PILE WALL ANALYSIS SOIL PARAMETERS

SOIL UNIT	TOTAL UNIT WEIGHT, PCF	UNDRAINED		DRAINED	
		UNDRAINED SHEAR STRENGTH, SU, PSF	FRICTION ANGLE, Φ, DEG	COHESION C', PSF	FRICTION ANGLE, Φ, DEG
HARD CLAY FILL / NATIVE	140	4,000	0	200	34
MEDIUM DENSE SAND	125	0	0	0	33
STIFF CLAY	130	2,500	0	100	32
DENSE SAND	130	0	0	0	35

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ALL STATIONS ARE ALONG R/L OF R-40-620 RETAINING WALL (ALONG FINISHED WALL FACE) UNLESS NOTED OTHERWISE.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

USE 2" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE SHOWN.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-620".

HIGH STRENGTH BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR THE COPING AND CONCRETE FACING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

ALL BAR STEEL REINFORCEMENT IS TO BE EPOXY COATED.

THE GEOTECHNICAL DATA PROVIDED FOR THIS STRUCTURE IN THE GEOTECHINCAL DATA REPORT GOVERNS OVER ANY DESCREPANCY WITH THE SUBSURFACE EXPLORATION AND GEOTECHNICAL DATA SHOWN IN THE PLANS.

COMMON EXCAVATION IN FRONT OF THE RETAINING WALL MAY NOT BEGIN UNTIL THE SOLDIER PILE TIMBER LAGGING IS IN PLACE.

SURFACE PREP AND PAINT SOLDIER PILES FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH ONE COAT OF ZINC-RICH PRIMER AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. WELDED STUD SHEAR CONNECTORS ARE NOT REQUIRED TO BE PAINTED. PAINTING OF PILES IS MEASURED AND PAID FOR AS BID ITEM 517.0600, "PAINTING EPOXY SYSTEM R-40-620".

THE VOLUME OF EARTHWORK REQUIRED FOR THE LAGGING AND THE UNDERDRAIN IS PAID FOR UNDER ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-620." ALL EARTHWORK IN FRONT OF RETAINING WALL IS INCLUDED IN THE ROADWAY BID ITEM "COMMON EXCAVATION." SEE ROADWAY PLANS FOR EXCAVATION LIMITS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

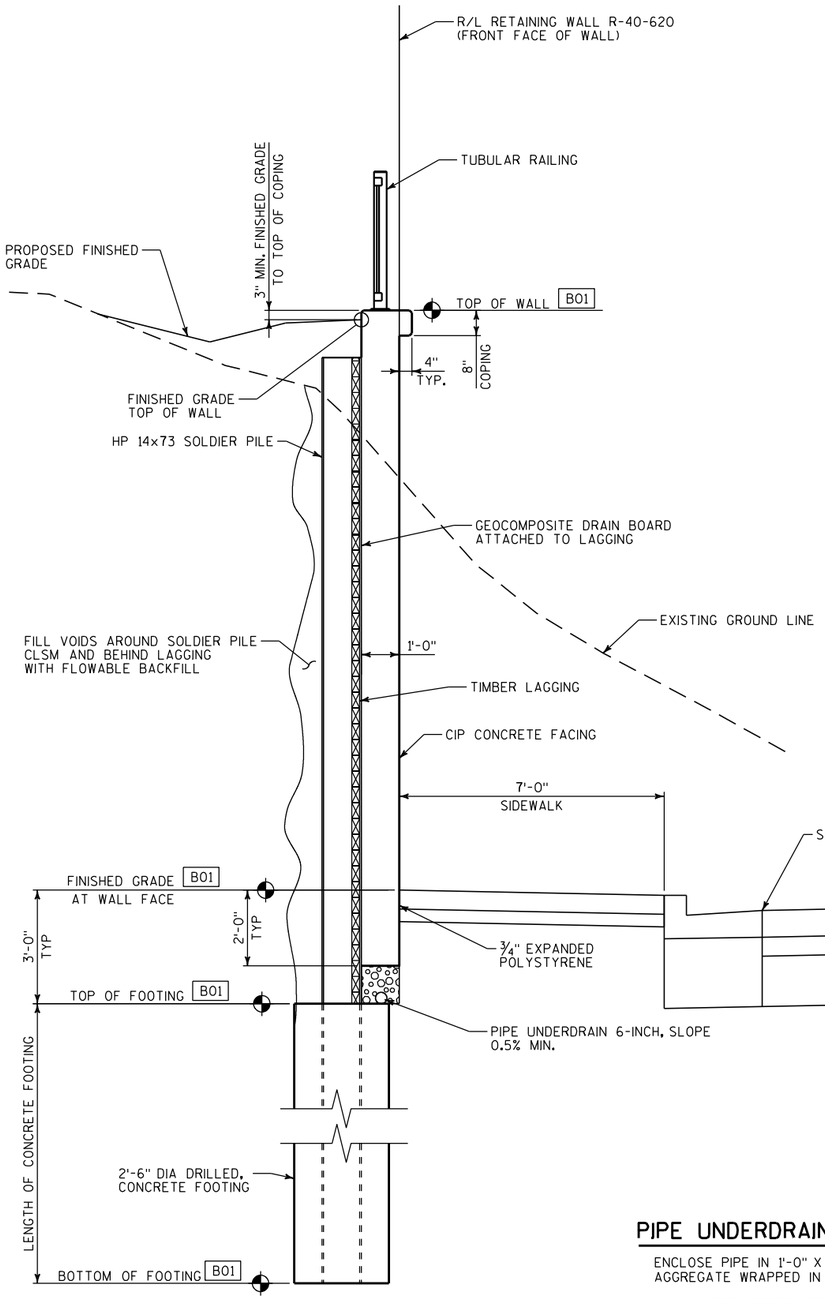
DRAWN BY SWS | PLANS CK'D. MHZ

QUANTITIES, DESIGN DATA & GENERAL NOTES

SHEET 2 OF 9

STATE PROJECT NUMBER

1060-33-80



TYPICAL SECTION

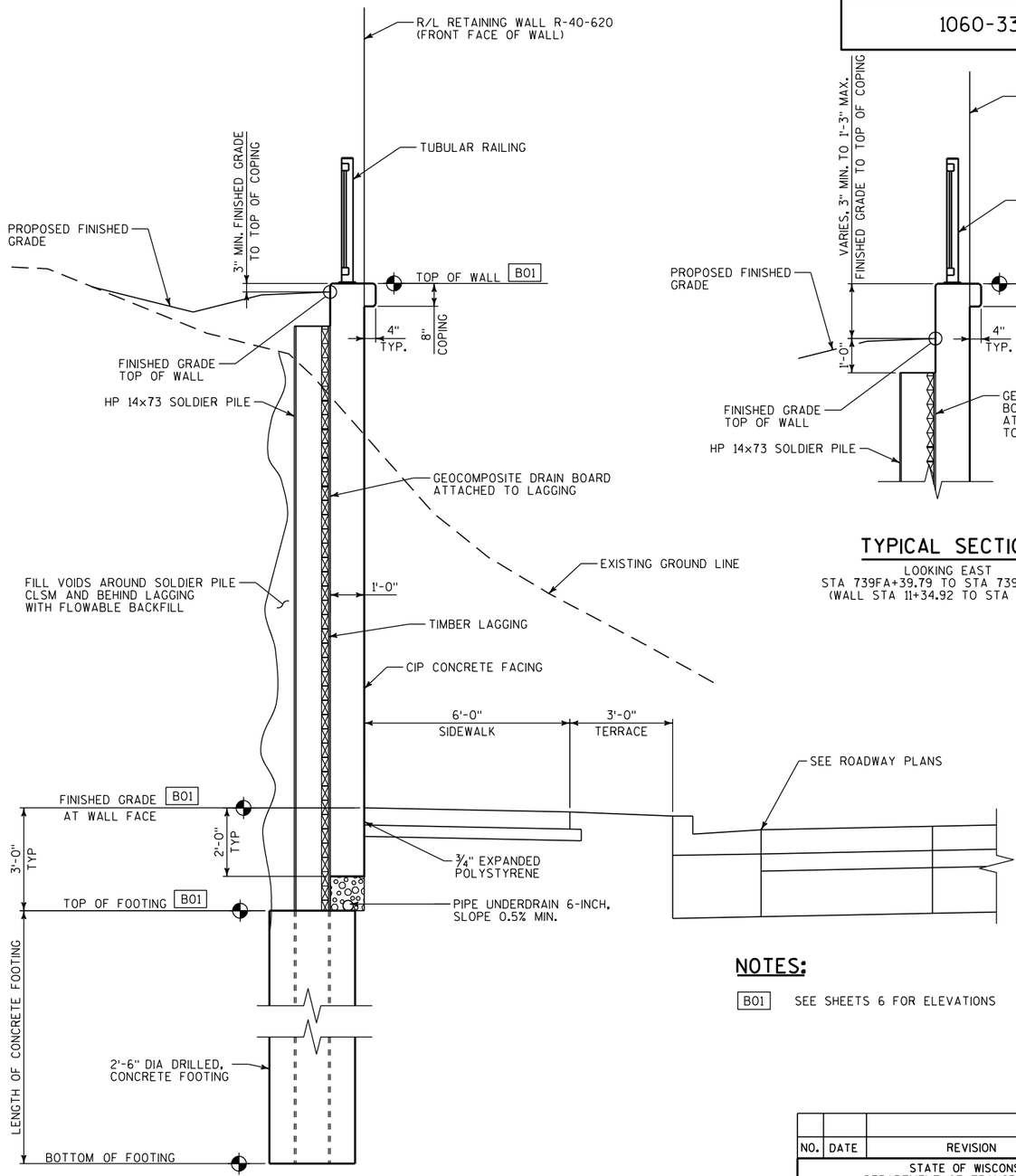
LOOKING EAST
STA 738FA+08.46 TO STA 738FA+52.08

PIPE UNDERDRAIN NOTES:

ENCLOSE PIPE IN 1'-0" X 1'-0" AREA OF NO. 1 COARSE AGGREGATE WRAPPED IN GEOTEXTILE FABRIC TYPE DF.

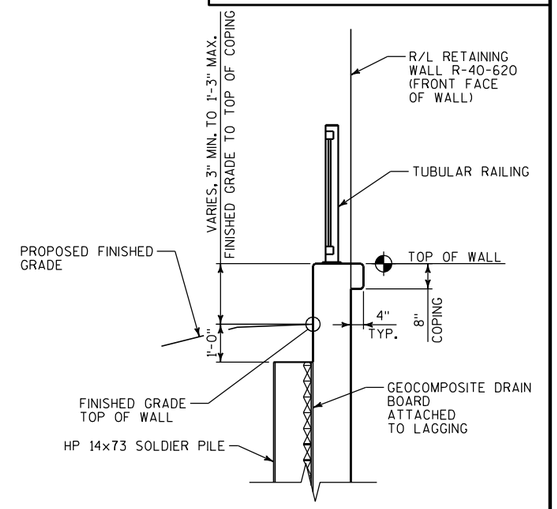
NO.1 COARSE AGGREGATE AND GEOTEXTILE FABRIC TYPE DF INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN 6-INCH"

CONNECT TO INLET #Z6812C USING PIPE UNDERDRAIN UNPERFORATED PAID FOR UNDER "PIPE UNDERDRAIN UNPERFORATED 6-INCH".



TYPICAL SECTION

LOOKING EAST
STA 738FA+52.08 TO STA 740FA+49.65



TYPICAL SECTION

LOOKING EAST
STA 739FA+39.79 TO STA 739FA+56.79
(WALL STA 11+34.92 TO STA 11+51.92)

NOTES:

B01 SEE SHEETS 6 FOR ELEVATIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

DRAWN BY SWS | PLANS CK'D. MHZ

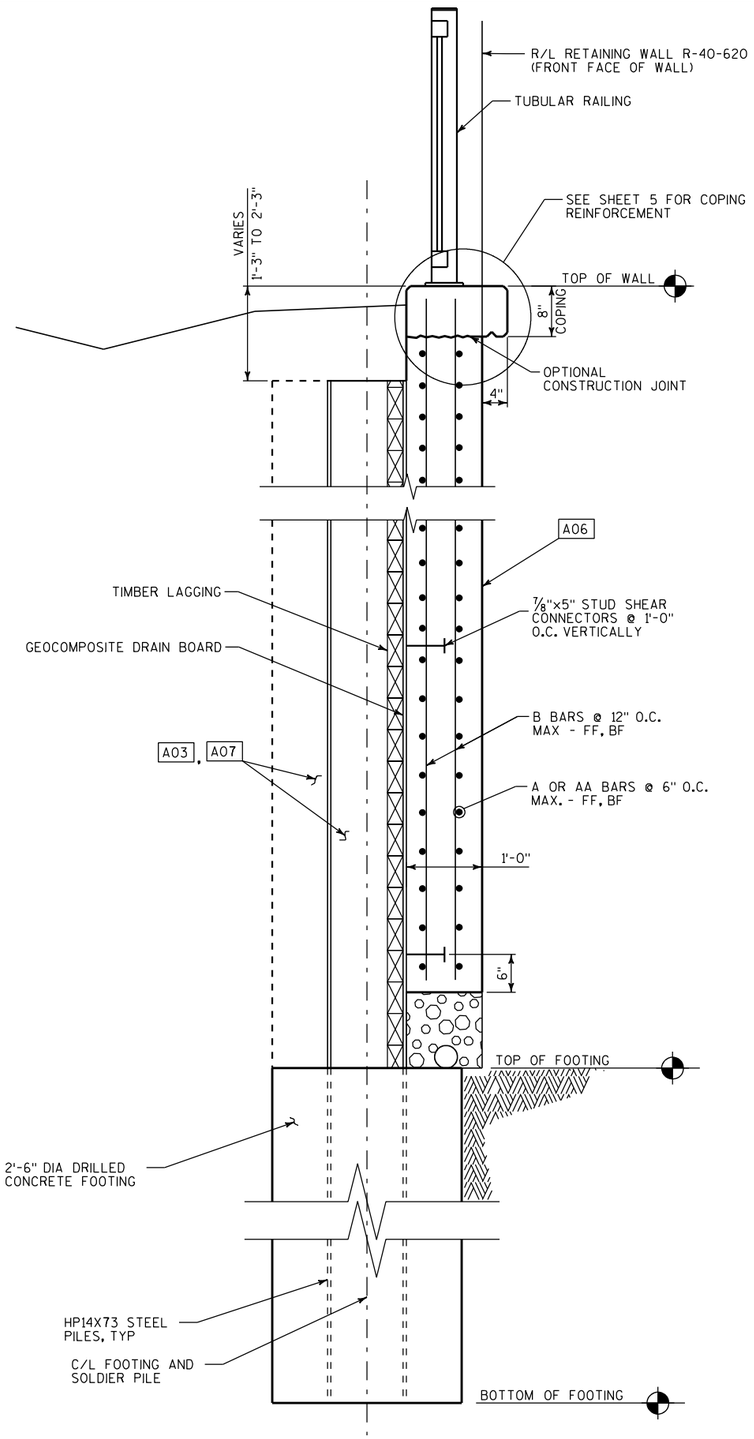
TYPICAL WALL SECTIONS (1 OF 3)

SHEET 3 OF 9

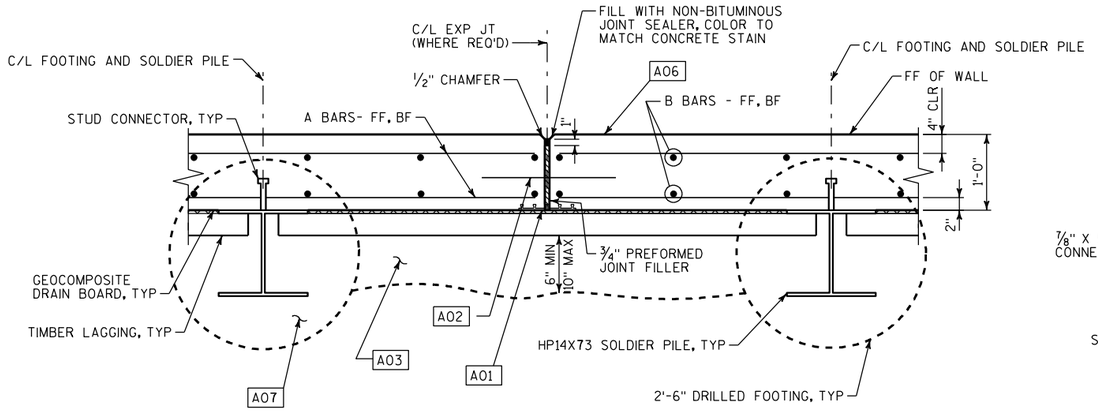
8

8

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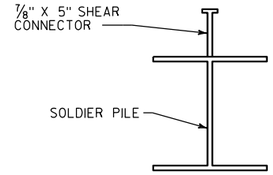


TYPICAL SOLDIER PILE AND PANEL WALL SECTION

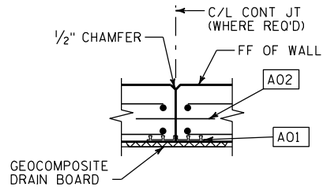


TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

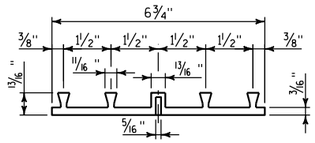
(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)



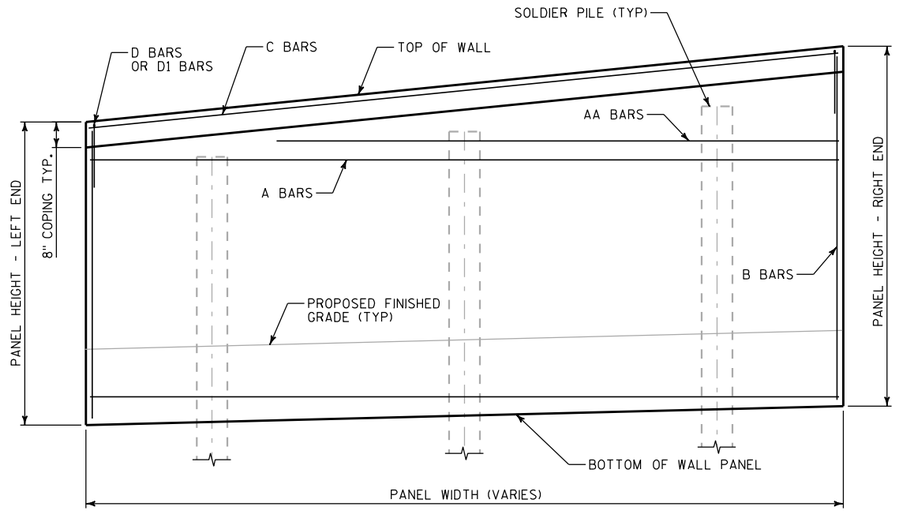
STUD CONNECTOR DETAIL



CONTRACTION JOINT



P.C.W. "TYPE B" DETAIL A01



TYPICAL PANEL ELEVATION

SEE SHT 6 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES

NOTES:

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON BF OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 3/4" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER 1/2 THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-620". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 8.

A07 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-620"

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

DRAWN BY SWS | PLANS CK'D. MHZ

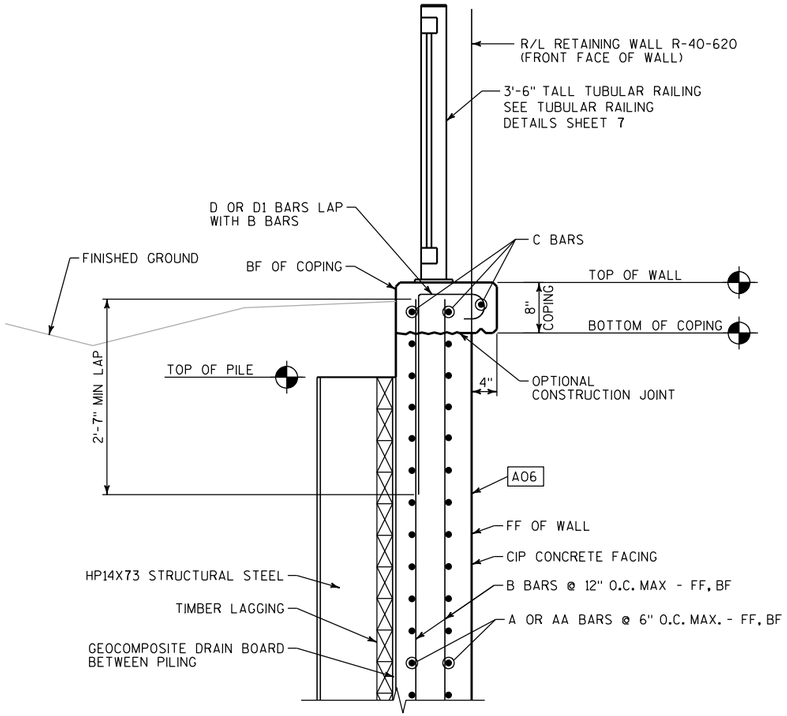
TYPICAL WALL SECTIONS (2 OF 3)

SHEET 4 OF 9

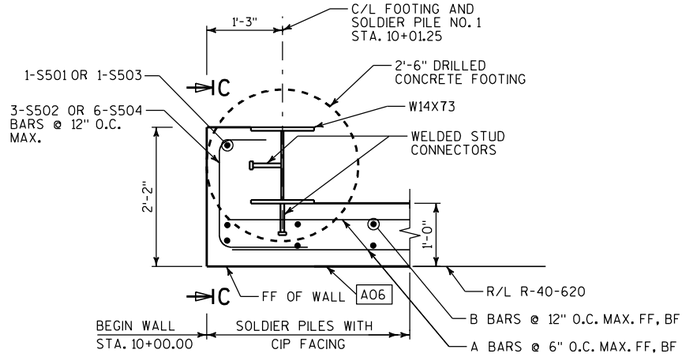
8

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STATE PROJECT NUMBER
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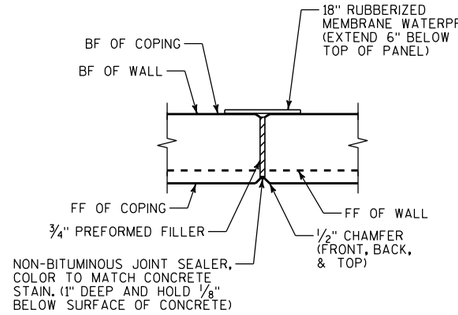


TYPICAL WALL SECTION AT COPING

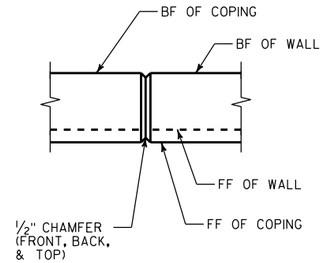


BEGINNING PLAN OF WALL

END OF WALL IS SIMILAR
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)



COPING EXPANSION JOINT



COPING CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)

NOTES:

A01 POLYVINYL CHLORIDE WATERSTOP,INCLUDED IN BID ITEM "CONCRETE MASONRY RETAINING WALLS", ON BF OF CONCRETE FACING FROM BOTTOM TO TOP OF WALL P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

A02 ¾" DIAMETER X 1'-6" SMOOTH EPOXY COATED DOWELS PLACED BETWEEN VERTICAL REINFORCEMENT IN THE FACING AT 2'-0" CENTERS. DOWELS SHALL BE LIGHTLY COATED WITH A DEBONDING SURFACE TREATMENT OVER ½ THE DOWEL LENGTH. EMBED 9" INTO ADJACENT WALLS. DOWELS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

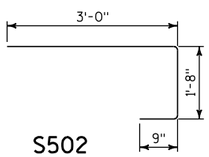
A03 FILL VOIDS BEHIND TIMBER LAGGING WITH FLOWABLE BACKFILL, TYP. INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-620". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A06 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 8.

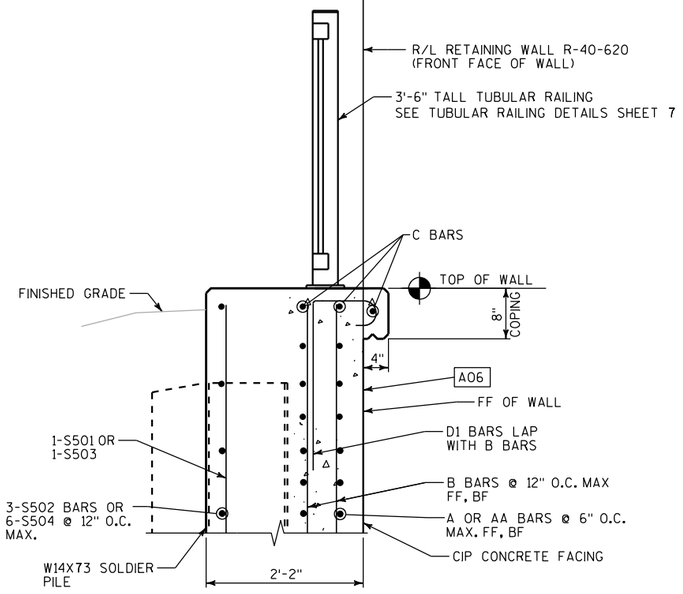
A07 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-620"

WALL FACING BILL OF BARS

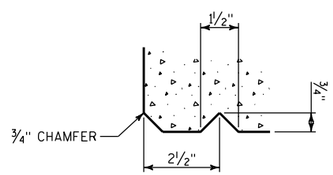
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S501	X	1	2'-0"			PANEL BEGIN VERTICAL
S502	X	3	5'-2"	X		PANEL BEGIN HORIZONTAL
S503	X	1	4'-6"			PANEL END VERTICAL
S504	X	6	5'-2"	X		PANEL END HORIZONTAL



S502



WALL SECTION C-C



DETAIL C
¾" CONTINUOUS DRIP GROOVE

TERMINATE 2'-0" FROM END OF WALL

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

DRAWN BY SWS | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS (3 OF 3)

SHEET 5 OF 9

8

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STATE PROJECT NUMBER

1060-33-80

WALL AND PILE DATA TABLE

PANEL NUMBER & HEIGHT (FT)	WALL THICKNESS (IN)	PILE NO.	STATION	TOP OF WALL CAP ELEV.	TOP OF PILE ELEV.	FIN. GRADE ELEV. AT WALL FACE	TOP OF FTG. BORING ELEV.	BTM. OF FTG. BORING ELEV.	FOOTING BORING LENGTH (FT)	PILE LENGTH (FT)	PILE SECTION
2.37		BEGIN WALL	10+00.00	701.86		701.49					
		1	10+01.25	701.92	700.67	701.47	698.47	690.67	7.79	10	W14X73
1	12										
		2	10+07.71	702.26	701.01	701.36	698.36	691.01	7.35	10	W14X73
		3	10+14.17	702.59	701.34	701.25	698.25	690.34	7.91	11	W14X73
3.68		CONT JT.	10+19.17	702.85		701.17					
		4	10+24.17	703.11	701.86	700.84	697.84	689.86	7.98	12	W14X73
2	12										
		5	10+33.33	703.58	702.33	701.12	698.12	690.33	7.79	12	W14X73
4.72		CONT JT.	10+38.33	703.84		701.12					
		6	10+42.63	704.06	702.81	701.12	698.12	689.81	8.31	13	W14X73
3	12										
		7	10+49.63	704.42	703.17	701.12	698.12	689.17	8.95	14	W14X73
		8	10+56.63	704.78	703.53	701.12	698.12	688.53	9.59	15	W14X73
5.88		EXP JT	10+60.92	705.00		701.12					
		9	10+65.92	705.26	704.01	701.17	698.17	689.01	9.16	15	W14X73
4	12										
		10	10+75.92	705.78	704.53	701.27	698.27	689.53	8.74	15	W14X73
		11	10+85.92	706.29	705.04	701.36	698.36	689.04	9.32	16	W14X73
7.14		CONT JT.	10+90.92	706.55		701.41					
		12	10+95.92	706.78	705.53	701.47	698.47	688.53	9.93	17	W14X73
5	12										
		13	11+02.92	707.11	705.86	701.54	698.54	688.86	9.69	17	W14X73
7.74		EXP JT	11+07.92	707.34		701.60					
		14	11+12.92	707.35	706.10	701.68	698.68	689.10	9.58	17	W14X73
6	12										
		15	11+21.42	707.38	706.13	701.82	698.82	688.13	10.69	18	W14X73
		16	11+29.92	707.41	706.16	701.96	698.96	689.16	9.80	17	W14X73
7.38		CONT JT.	11+34.92	707.42		702.04					
		17	11+39.92	708.46	707.21	702.13	699.13	689.21	9.92	17	W14X73
7	12										
		18	11+46.92	709.93	708.68	702.26	699.26	688.68	10.58	19	W14X73
10.70		EXP JT	11+51.92	710.97		702.35					
		19	11+56.92	710.88	709.63	702.46	699.46	688.63	10.83	21	W14X73
8	12										
		20	11+63.92	710.76	709.51	702.61	699.61	688.51	11.10	21	W14X73
		21	11+70.92	710.64	709.39	702.76	699.76	689.39	10.38	20	W14X73
10.02		CONT JT.	11+73.5	710.59		702.82					
		22	11+77.29	710.52	709.27	702.91	699.91	689.27	10.63	20	W14X73
9	12										
		23	11+84.29	710.40	709.15	703.07	700.07	689.15	10.92	20	W14X73
		24	11+91.29	710.28	709.03	703.22	700.22	689.03	11.20	20	W14X73
9.15		EXP JT	11+95.08	710.21		703.31					
		25	12+00.08	709.94	708.69	703.43	700.43	689.69	10.74	19	W14X73
10	12										
		26	12+10.08	709.40	708.15	703.66	700.66	689.15	11.51	19	W14X73
		27	12+20.08	708.86	707.61	703.89	700.89	689.61	11.28	18	W14X73
6.90		CONT JT.	12+25.08	708.59		704.00					
		28	12+27.58	708.45	707.20	704.18	701.18	689.20	11.98	18	W14X73
11	12										
		29	12+32.58	708.18	706.93	704.55	701.55	689.93	11.61	17	W14X73
6.36		CONT JT.	12+35.08	708.05		704.73					
		30	12+37.58	707.91	706.66	704.95	701.95	690.66	11.28	16	W14X73
12	12										
		31	12+42.58	707.64	706.39	705.38	702.38	690.39	11.99	16	W14X73
5.71		CONT JT.	12+45.08	707.51		705.60					
		32	12+48.08	707.35	706.10	705.87	702.87	691.10	11.77	15	W14X73
13	12										
		33	12+55.08	706.97	705.72	706.49	703.49	691.72	11.77	14	W14X73
4.96		END WALL	12+56.33	706.90		706.60					

BILL OF BARS (WALL PANEL)

PANEL NUMBER	WALL THICKNESS (IN)	PANEL HEIGHT LEFT END (FT)	PANEL HEIGHT RIGHT END (FT)	PANEL WIDTH (FT)	QUANTITY HORIZ "A" BARS	LENGTH OF "A" BAR	QUANTITY HORIZ "AA" BARS	AVE. LENGTH OF "AA" BAR	QUANTITY VERT "B" BARS	AVE. LENGTH OF "B" BAR	QUANTITY HORIZ "C" BARS	LENGTH OF "C" BAR	QUANTITY VERT "D" BARS	LENGTH OF "D" BAR
1	12	2.37	3.68	19.17	10	18'-10"	-----	-----	40 ▲	2'-5"	3	18'-10"	20	3'-5"**
2	12	3.68	4.72	19.17	14	18'-10"	-----	-----	40 ▲	3'-7"	3	18'-10"	20	4'-8"
3	12	4.72	5.88	22.59	18	22'-3"	2	12'-10"	48 ▲	4'-8"	3	22'-3"	24	4'-8"
4	12	5.88	7.14	30.00	22	29'-8"	4 ◥	14'-9"	62 ▲	5'-11"	3	29'-8"	31	4'-8"
5	12	7.14	7.74	17.00	28	16'-8"	-----	-----	36 ▲	6'-11"	3	16'-8"	18	4'-8"
6	12	7.74	7.38	27.00	28	26'-8"	-----	-----	56	7'-0"	3	26'-8"	28	4'-8"
7	12	7.38	10.70	17.00	28	16'-8"	10 ◥	8'-6"	36 ◥	8'-7"	3	17'-0"	18	4'-8"
8	12	10.70	10.02	21.58	40	21'-3"	-----	-----	46 ▲	9'-9"	3	21'-3"	23	4'-8"
9	12	10.02	9.15	21.58	38	21'-3"	-----	-----	46 ▲	9'-0"	3	21'-3"	23	4'-8"
10	12	9.15	6.90	30.00	26	29'-8"	4 ◥	14'-6"	62 ▲	7'-4"	3	29'-9"	31	4'-8"
11	12	6.90	6.36	10.00	24	9'-8"	-----	-----	22 ▲	6'-1"	3	9'-8"	11	4'-8"
12	12	6.36	5.71	10.00	22	9'-8"	-----	-----	22 ▲	5'-5"	3	9'-8"	11	4'-8"
13	12	5.71	4.96	11.25	20	10'-11"	-----	-----	24 ▲	4'-8"	3	10'-11"	12	4'-8"

QUANTITIES OF BARS SHOWN ARE FOR BOTH WALL FACES.

▲ BUNDLE SETS OF BARS. BARS IN A SET SHALL HAVE LENGTHS SHOWN BELOW.

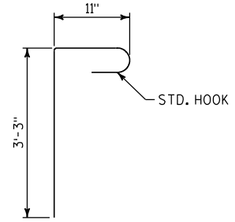
◥ BAR SERIES

** REPLACE "D" BARS WITH "D1" BARS

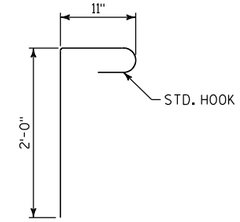
"B" BAR BUNDLE TABLE

PANEL NUMBER	TOTAL NO. REQ'D.	NO. REQ'D. PER SET	SET LOCATION	LENGTH	AVE. LENGTH
1	40	6	FF	2'-0"	2'-5"
		6	BF	2'-0"	
		7	FF	2'-4"	
		7	BF	2'-4"	
		7	FF	2'-9"	
		7	BF	2'-9"	
2	40	6	FF	3'-2"	3'-7"
		6	BF	3'-2"	
		7	FF	3'-6"	
		7	BF	3'-6"	
		7	FF	3'-11"	
		7	BF	3'-11"	
3	48	8	FF	4'-3"	4'-8"
		8	BF	4'-3"	
		8	FF	4'-8"	
		8	BF	4'-8"	
		8	FF	5'-1"	
		8	BF	5'-1"	
4	62	10	FF	5'-6"	5'-11"
		10	BF	5'-6"	
		10	FF	5'-11"	
		10	BF	5'-11"	
		11	FF	6'-4"	
		11	BF	6'-4"	
5	36	9	FF	6'-8"	6'-11"
		9	BF	6'-8"	
		9	FF	7'-2"	
		9	BF	7'-2"	
8	46	11	FF	9'-6"	9'-9"
		11	BF	9'-6"	
		12	FF	10'-0"	
		12	BF	10'-0"	
9	46	11	FF	8'-9"	9'-0"
		11	BF	8'-9"	
		12	FF	9'-3"	
		12	BF	9'-3"	
10	62	10	FF	6'-6"	7'-4"
		10	BF	6'-6"	
		10	FF	7'-4"	
		10	BF	7'-4"	
		11	FF	8'-2"	
		11	BF	8'-2"	
11	22	5	FF	5'-11"	6'-1"
		5	BF	5'-11"	
		6	FF	6'-3"	
		6	BF	6'-3"	
12	22	5	FF	5'-3"	5'-5"
		5	BF	5'-3"	
		6	FF	5'-7"	
		6	BF	5'-7"	
13	24	6	FF	4'-6"	4'-8"
		6	BF	4'-6"	
		6	FF	4'-10"	
		6	BF	4'-10"	

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
D1	5
AA	5



D BAR



D1 BAR

"AA" BAR SERIES TABLE

PANEL NUMBER	NO. REQ'D.	LENGTH
1	-----	-----
2	-----	-----
3	-----	-----
4	2 SERIES OF 2	9'-9" TO 19'-9"
5	-----	-----
6	-----	-----
7	2 SERIES OF 5	3'-8" TO 13'-4"
8	-----	-----
9	-----	-----
10	2 SERIES OF 2	10'-9" TO 18'-3"
11	-----	-----
12	-----	-----
13	-----	-----

"B" BAR SERIES TABLE

PANEL NUMBER	NO. REQ'D.	LENGTH
7	2 SERIES OF 18	7'-0" TO 10'-2"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

DRAWN BY SWS | PLANS CK'D. MHZ

WALL AND PILE DATA TABLE

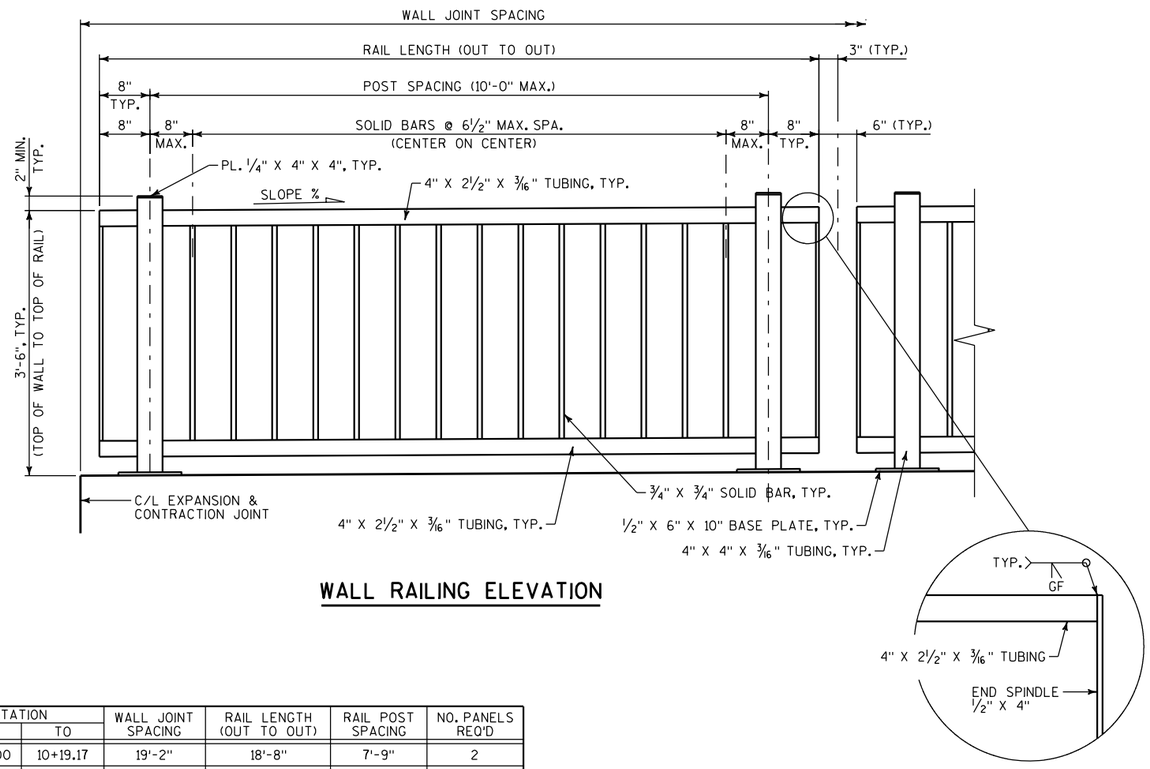
SHEET 6 OF 9

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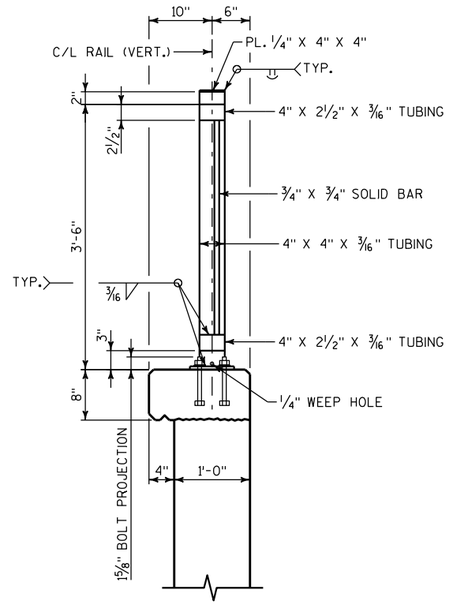
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STATE PROJECT NUMBER

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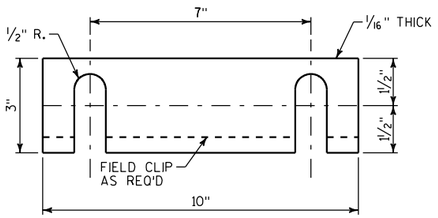
WALL RAILING ELEVATION

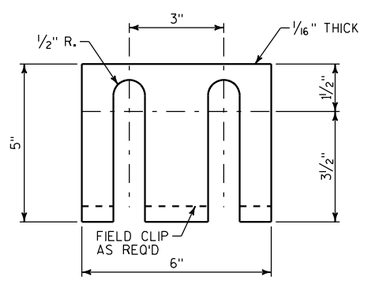


WALL RAILING SECTION

STATION FROM	STATION TO	WALL JOINT SPACING	RAIL LENGTH (OUT TO OUT)	RAIL POST SPACING	NO. PANELS REQ'D
10+00.00	10+19.17	19'-2"	18'-8"	7'-9"	2
10+19.17	10+38.33	19'-2"	18'-8"	7'-9"	2
10+38.33	10+60.92	22'-7"	22'-1"	9'-5½"	2
10+60.92	10+90.92	30'-0"	29'-6"	8'-2"	3
10+90.92	11+07.92	17'-0"	16'-6"	6'-8"	2
11+07.92	11+34.92	27'-0"	26'-6"	7'-2"	3
11+34.92	11+51.92	17'-0"	16'-9"	6'-8"	2
11+51.92	11+73.50	21'-7"	21'-1"	8'-11½"	2
11+73.50	11+95.08	21'-7"	21'-1"	8'-11½"	2
11+95.08	12+25.08	30'-0"	29'-6"	8'-2"	3
12+25.08	12+35.08	10'-0"	9'-6"	8'-2"	1
12+35.08	12+45.08	10'-0"	9'-6"	8'-2"	1
12+45.08	12+56.33	11'-3"	11'-0"	9'-8"	1

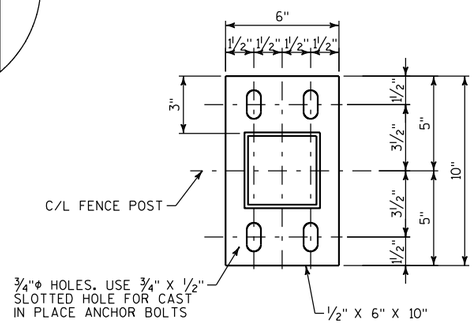
STATION FROM	STATION TO	SLOPE %
10+00.00	10+19.17	5.16
10+19.17	10+38.33	5.16
10+38.33	10+60.92	5.16
10+60.92	10+90.92	5.16
10+90.92	11+07.92	4.65
11+07.92	11+34.92	0.30
11+34.92	11+51.92	20.88
11+51.92	11+73.50	-1.76
11+73.50	11+95.08	-1.76
11+95.08	12+25.08	-5.40
12+25.08	12+35.08	-5.40
12+35.08	12+45.08	-5.40
12+45.08	12+56.33	-5.40



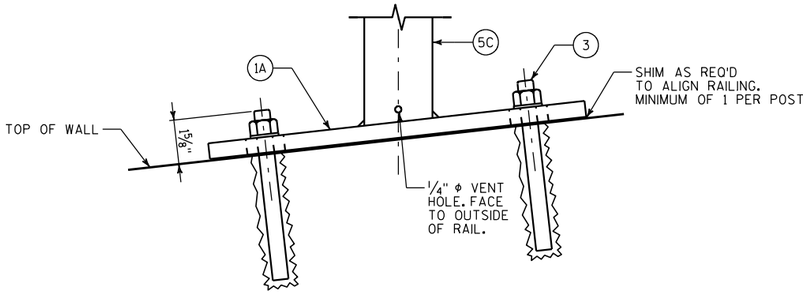


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



BASE PLATE



ANCHOR BOLTS FOR RAIL POST

NOTES

BID ITEM SHALL BE "RAILING TUBULAR SPECIAL", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, CONCRETE MASONRY ANCHORS, AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CALUK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING BALCK NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE AND LONGITUDINAL DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED FEDERAL COLOR NO. 27038 BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 2 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. THEN PAINT GALVANIZED RAILING ASSEMBLIES WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. SHIMS SHALL BE GALVANIZED PER ASTM 123.

PAINT TOUCH-UP TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE ½" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA. EMBED A MIN OF 7".

(5C) 4" X 4" X 3/16" STRUCTURAL TUBE. PLACE POSTS VERTICAL. WELD TO (1A). PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO (5C).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

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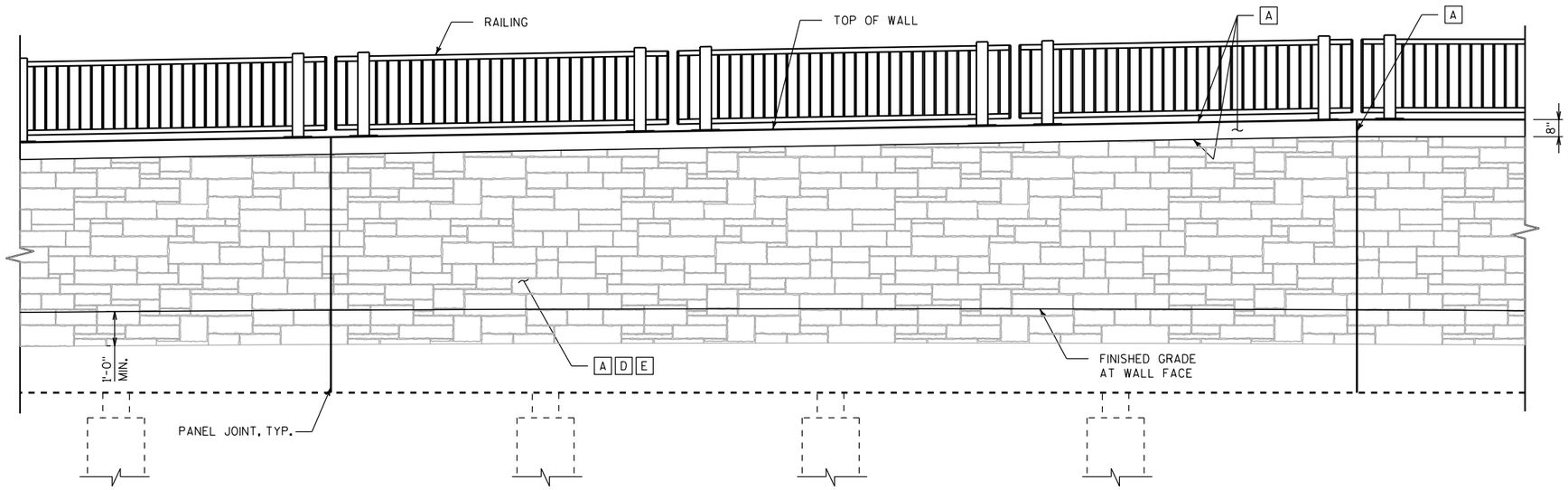
TUBULAR RAILING DETAILS

SHEET 7 OF 9

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ELEVATION

ARCHITECTURAL SURFACE TREATMENT NOTES:

ARCHITECTURAL SURFACE TREATMENT SHALL EXTEND 1'-0" MINIMUM BELOW FUTURE FINISHED GRADE.

PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF OF 1½".

BRICK PATTERN SHALL MATCH THE NON-PRODUCTION TEST PANELS DEVELOPED FOR WALL R-40-618.

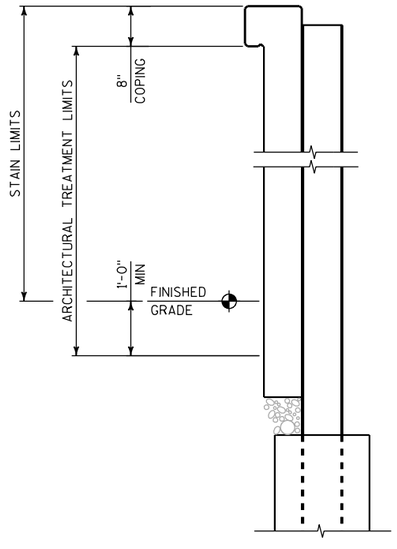
STAIN COLORS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #3 - 33522
ACCENT COLOR #4 - 36424

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	JOINTS	SEE SECTIONS ON SHEET 5
		WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
D	ACCENT COLOR #3	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE
E	ACCENT COLOR #4	WALL FACING	"RANDOM SPLIT EDGE ASHLAR" PATTERN, EXPOSED FACE TO FINISHED GRADE



WALL STAINING AND ARCHITECTURAL TREATMENT DIAGRAM

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-619

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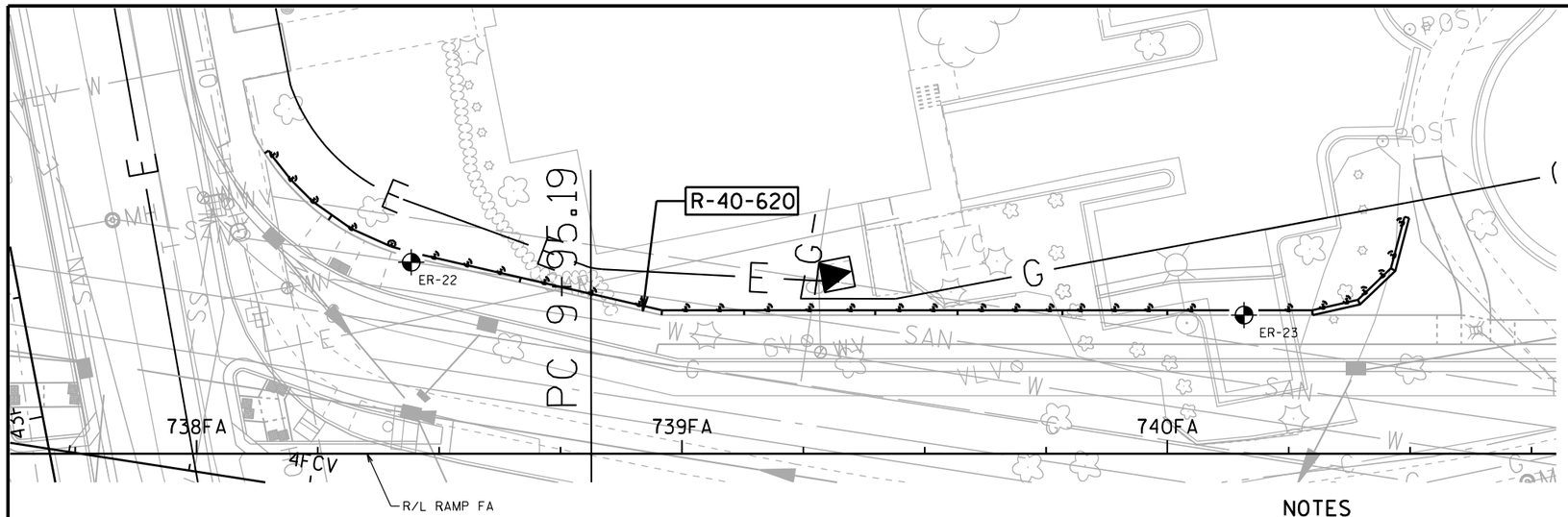
AESTHETIC WALL TREATMENT DETAILS

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PLAN

NOTES

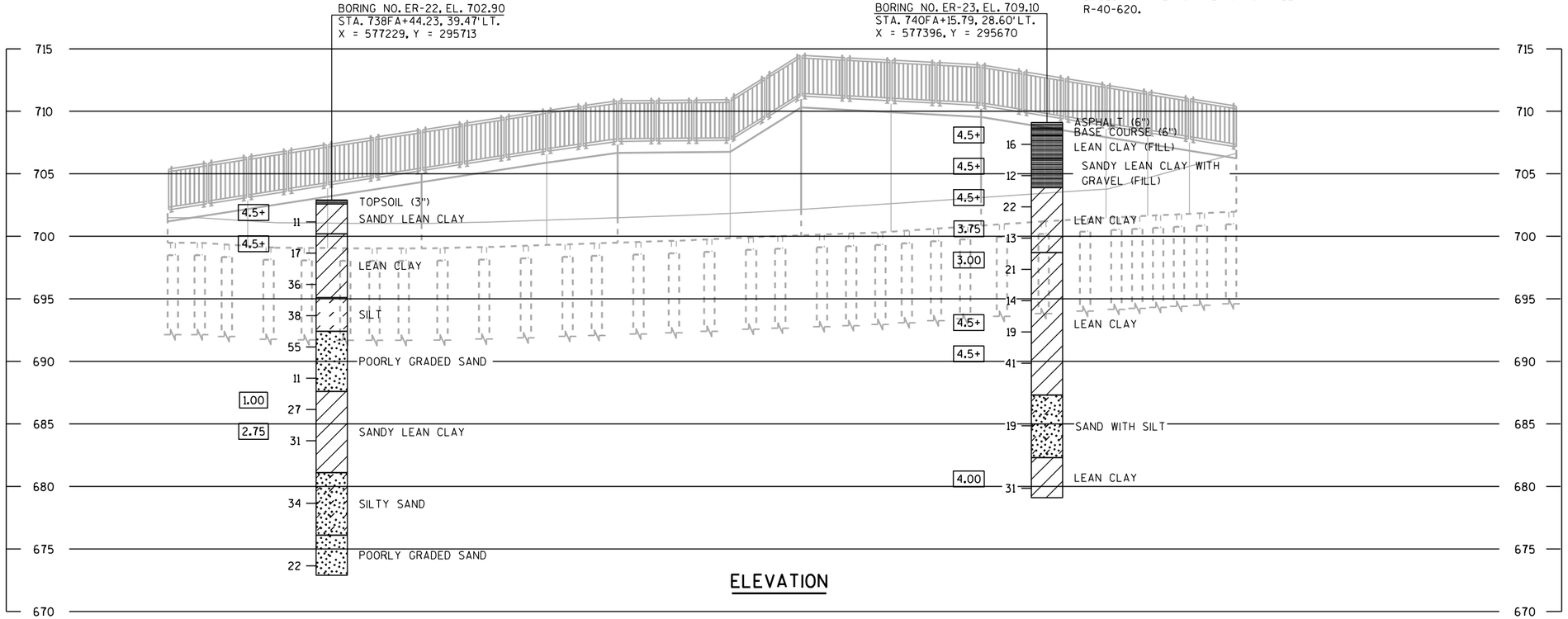
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L FOR RETAINING WALL R-40-620.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPT 18, 2012 - BORING ER-22
SEPT 18, 2012 - BORING ER-23



ELEVATION

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-620

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SUBSURFACE EXPLORATION

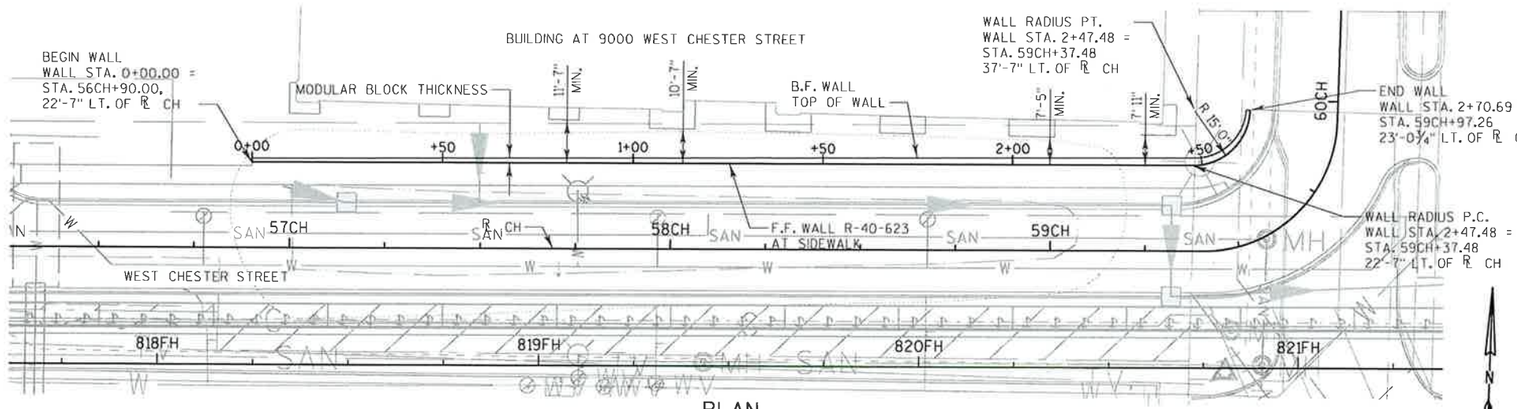
SHEET 9 OF 9

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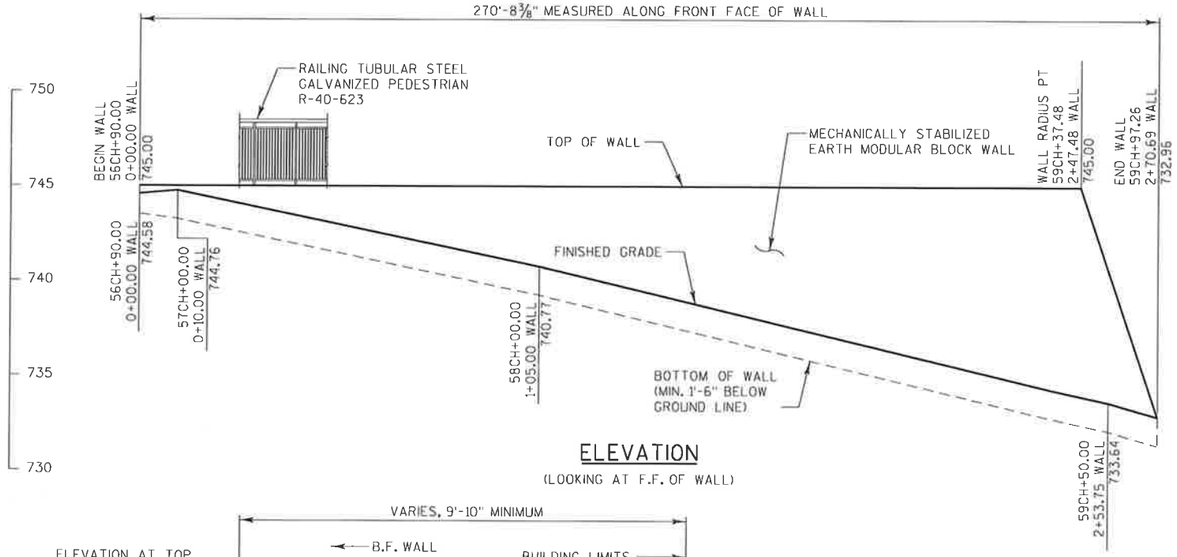
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1060-33-80



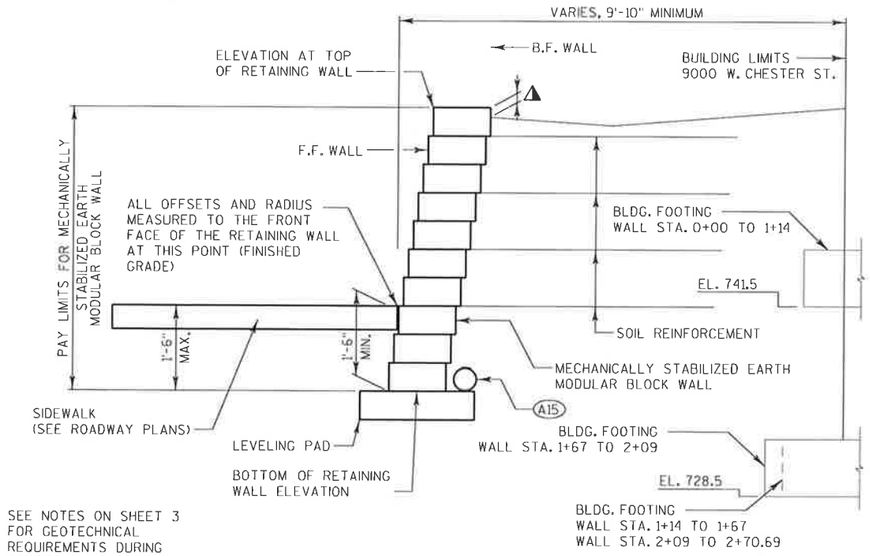
PLAN

(MODULAR BLOCK MECHANICALLY STABILIZED EARTH WALL)



ELEVATION

(LOOKING AT F.F. OF WALL)



SEE NOTES ON SHEET 3
FOR GEOTECHNICAL
REQUIREMENTS DURING
CONSTRUCTION.

TYPICAL SECTION THRU MSE WALL

LOOKING WEST

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH LRFD".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.

DESIGN RETAINING WALL FOR AN ADDITIONAL NON-FACTORED LONGITUDINAL LOAD OF 0.05K/LF AT THE TOP OF THE WALL. THIS FORCE MUST BE INCLUDED FOR THE DESIGN OF THE REINFORCING STRIPS ATTACHED TO THE WALL.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH LRFD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE COLOR AND SURFACE TEXTURE OF THE BLOCK SHALL MATCH THE MODULAR BLOCK RETAINING WALL TO THE EAST OF THE BUILDING AT 9000 W. CHESTER ST.

ALL OFFSETS AND RADIUS ARE TO BE MEASURED TO THE FRONT FACE OF THE MODULAR BLOCK WALL AT THE ELEVATION OF THE SIDEWALK.

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO FF OF WALL	TOP OF WALL EL	FINISHED GRADE FF EL	DESCRIPTION
0+00.00	56CH+90.00	22'-7"	745.00	744.58	START WALL
0+10.00	57CH+00.00	22'-7"	745.00	744.76	KINK POINT WALL
1+05.00	58CH+00.00	22'-7"	745.00	740.77	KINK POINT FINISHED GRADE
2+47.48	59CH+37.48	22'-7"	745.00	734.19	KINK POINT WALL / RADIUS P.C.
2+53.75	59CH+50.00	23'-11"	741.73	733.64	KINK POINT FINISHED GRADE
2+70.69	59CH+97.26	23'-0¾"	732.96	732.96	END WALL

◥ = LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	291
SPV.0105.0905	RAILING TUBULAR STEEL GALVANIZED PEDESTRIAN R-40-623	LS	1
SPV.0165.0900	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH LRFD	SF	1825

LIST OF DRAWINGS

1. M.S.E. MODULAR BLOCK WALL
2. DETAILS
3. SUBSURFACE EXPLORATION

LEGEND

▲ 2" MINIMUM, 2" PLUS BLOCK THICKNESS MAXIMUM

(A15) PIPE UNDERDRAIN SPECIAL WRAPPED 6-INCH, SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
ALBERT M. LINDNER, P.E. (414) 259-1500

WISCONSIN
ALBERT M. LINDNER
E-18992
BROOKFIELD, WIS.
PROFESSIONAL ENGINEER
April 16, 2014

NO.	DATE	REVISION	BY

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/02/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-623

RETAINING WALL ALONG CHESTER STREET

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD DESIGN SPEC. 5th EDITION

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DMS	AML	RBH	AML

M.S.E. MODULAR BLOCK WALL

SHEET 1 OF 3
3265

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STATE PROJECT NUMBER
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LEGEND

1. PLATE 5/8" X 6" X 10" WITH 3/4" X 1 1/2" SLOTTED HOLES
2. 1/4" X 5" X 9" ANCHOR PLATE WITH 11/16 " Φ HOLES FOR ANCHOR BOLTS NO. 3.
3. 5/8" DIA. X 9" LONG TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF THE SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY) 5/8" DIA. MINIMUM PULLOUT CAPACITY OF 13 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.
4. SLEEVES TO BE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

NOTES

BID ITEM SHALL BE "RAILING TUBULAR STEEL GALVANIZED PEDESTRIAN R-40-623", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, GALVANIZING AND PAINTING.

POST OF BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTHED AND STRAIGHTENED VERTICALLY. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ITEMS 1,2,3,4, AND THE 1/2 INCH SQUARE "PICKET" RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE A500 GRADE B.

FIELD JOINTS TO BE PLACED AT 50 FOOT MAXIMUM SPACING.

DRAIN HOLES ARE ALLOWED IN THE BOTTOM OF MEMBERS TO FACILITATE GALVANIZING.

RAILING POSTS ARE TO BE VERTICAL.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

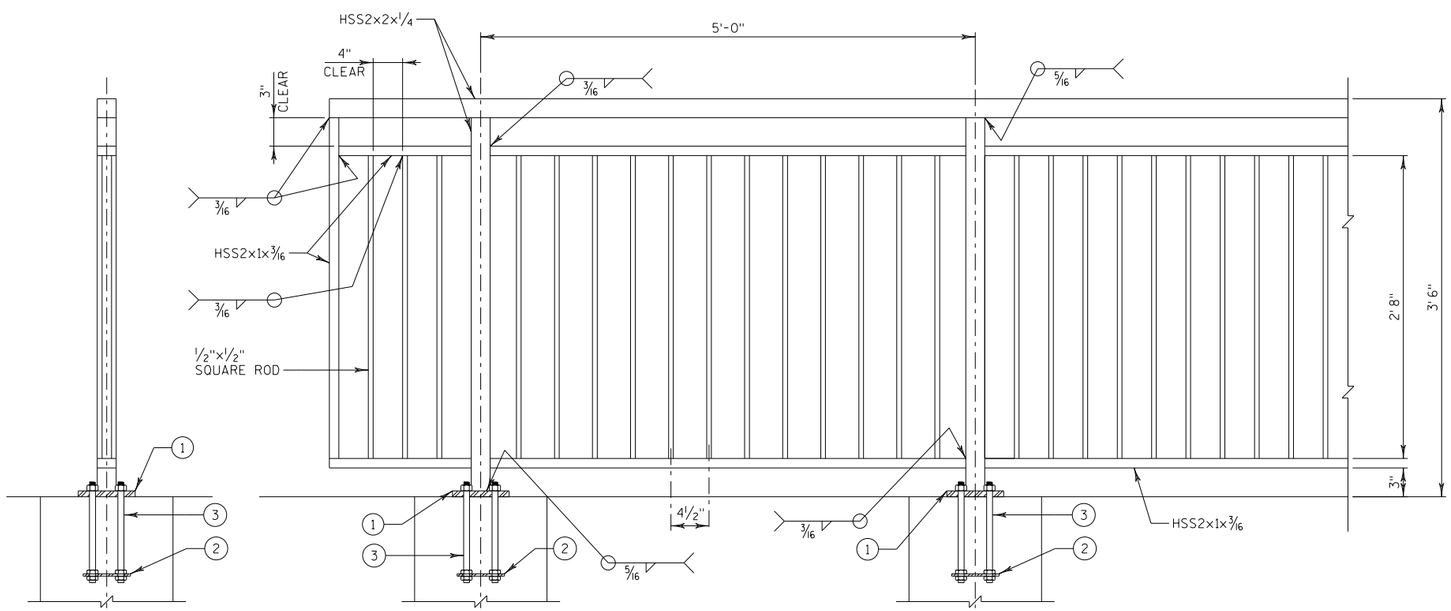
STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE STAINLESS STEEL.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1 AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NONN-BITUMINOUS JOINT SEALER.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED BLACK (FEDERAL COLOR 27038).

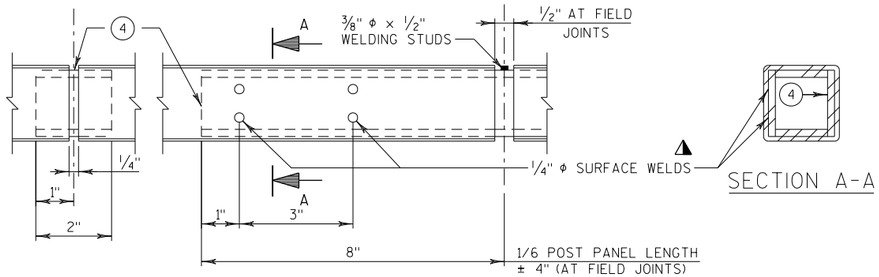
1/4" Φ VENT HOLES LOCATED AT LOW END OF RAILS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATIONN TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



SECTION OF RAILING

PART ELEVATION OF RAILING

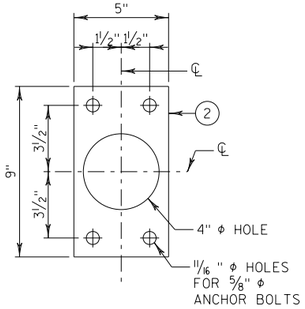


SHOP RAIL SPLICE DETAIL

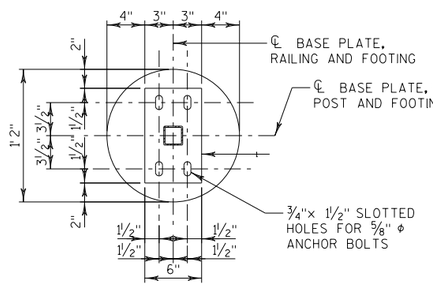
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

FIELD ERECTION JOINT DETAIL

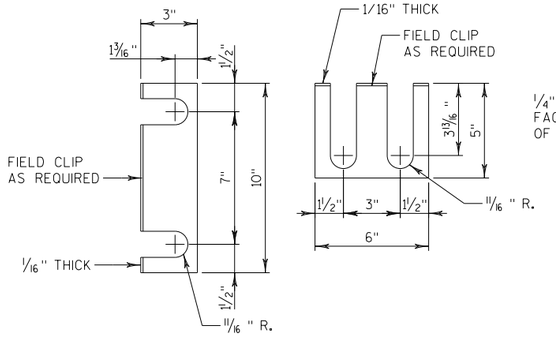
▲ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE



ANCHOR PLATE

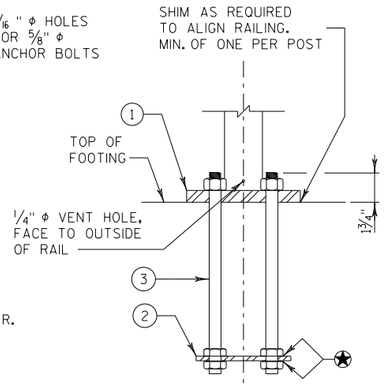


TYPICAL RAIL POST BASE PLATE



RAIL POST SHIM DETAIL

STAINLESS STEEL
(2 SETS PER POST)

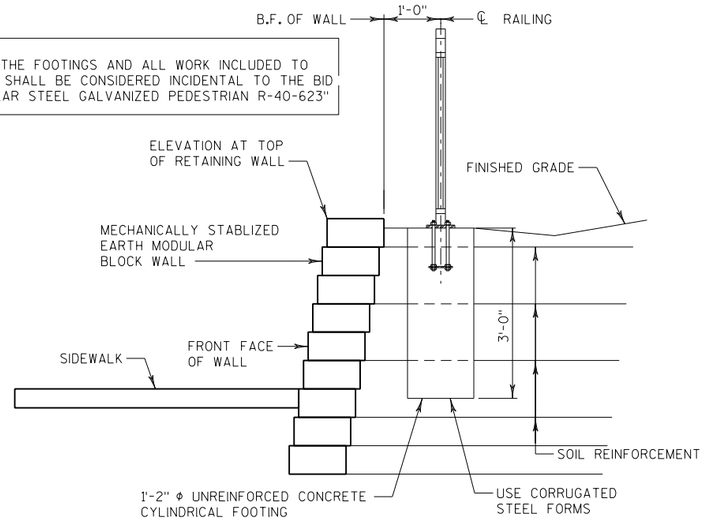


ANCHOR BOLTS FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

★ PLASTIC WASHERS USED TO SEPARATE STAINLESS STEEL WASHER AND GALVANIZED STEEL ANCHOR PLATE

NOTE:
THE CONCRETE FOR THE FOOTINGS AND ALL WORK INCLUDED TO MAKE EACH FOOTING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "RAILING TUBULAR STEEL GALVANIZED PEDESTRIAN R-40-623"



TYPICAL SECTION THRU RAILING

LOOKING WEST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-623

DRAWN BY RBH | PLANS CK'D. DMS

DETAILS

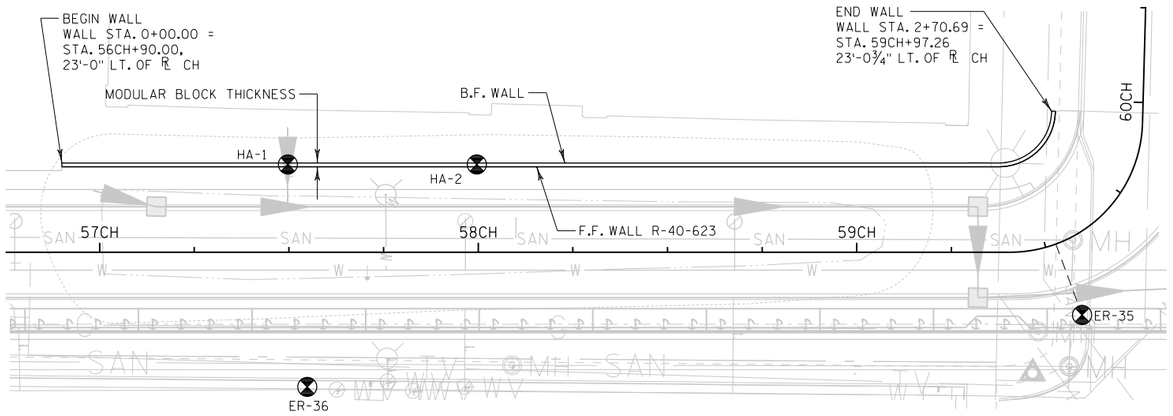
SHEET 2 OF 3
3266

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L:±JOBS2012±20120177±CAD±SITE±DGN±01±S_01_CHESTER RETAINING WALL.DGN 3/24/2014 2:34:37 PM



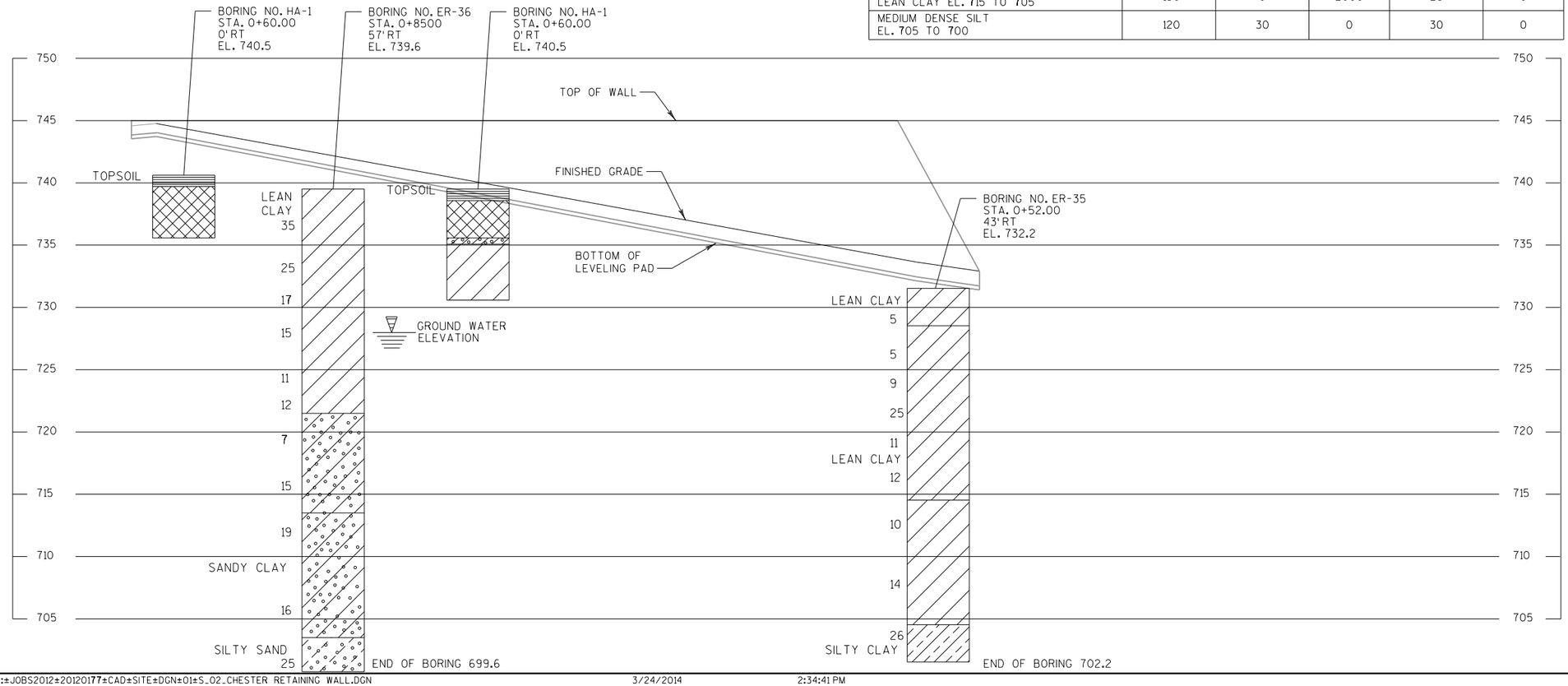
PLAN

NOTES

1. GLOBAL STABILITY ANALYSIS ASSUMES THAT THE EXISTING POND IS FILLED PRIOR TO CONSTRUCTION OF RETAINING WALL R-40-623
2. A 2-FOOT EXCAVATION BELOW SUBGRADE (EBS) BELOW THE ENTIRE REINFORCED AREA SHALL BE PLANNED FOR THE ENTIRE WALL AS INCIDENTAL TO THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH LRFD". THE EXCAVATION SHALL BE LIMITED NEAR EXISTING BUILDING FOUNDATIONS SO THAT NO EXCAVATION IS WITHIN A 2H:1V LINE BELOW THE BOTTOM OF THE FOUNDATION. THE BOTTOM OF THE EXCAVATION SHALL BE SLOPED AT A 4% (6 INCHES IN 10 FEET) ANGLE DOWN TO THE SOUTH, TO PREVENT WATER FROM BEING DIRECTED TOWARD THE BUILDING. IF STIFF NATURAL CLAY IS ENCOUNTERED NO UNDERCUT WOULD BE NEEDED, THIS SHALL BE EVALUATED BY THE ENGINEER DURING CONSTRUCTION.
3. DURING CONSTRUCTION, SURFACE WATER RUNOFF SHOULD BE PROPERLY DIVERTED AWAY FROM THE PROJECT CONSTRUCTION AREAS TO REDUCE POTENTIAL FOR INFILTRATION OF WATER INTO EXCAVATIONS AND THE SUBSOIL.
4. LENGTH OF BOTTOM LAYER OF SOIL REINFORCEMENT MAY BE ONE FOOT SHORTER THAN THE RECOMMENDED LENGTH IN ORDER TO AVOID DISTURBANCE IN THE BUILDING FOUNDATION SOIL.

SOIL EXPLORATION PERFORMED BY:
GESTRA ENGINEERING, INC.
1626 W. FOND DU LAC AVE.
MILWAUKEE, WI 53205
414-933-7444

ER-35 DECEMBER 15, 2011
ER-36 DECEMBER 15, 2011



WALL EXTERNAL & OVERALL STABILITY EVALUATION

ANALYSIS (DOT STANDARD)	MECHANICALLY STABILIZED EARTH WALL WITH MODULAR BLOCK FACING	
DIMENSIONS		
WALL HEIGHT (FEET)	7	13
EXPOSED WALL HEIGHT (FEET)	5.5	11.5
MINIMUM LENGTH OF REINFORCEMENT (FEET)	8	TO BUILDING WALL
WALL STATION	0+00 TO 1+05	1+05 TO 2+70.7
BORING USED	HA-1, HA-2, ER-36	HA-2, ER-36, ER-35
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR > 1.0)	1.04	1.4
ECCENTRICITY (CDR > 1.0)	1.93	1.24
OVERALL STABILITY (CDR > 1.0)	1.1	1.1
BEARING RESISTANCE (CDR > 1.0)	1.48	1.05
FACTORED BEARING RESISTANCE (PSF)	2400 PSF	3000 PSF

THE FOLLOWING ASSUMPTIONS ARE TO BE INCLUDED:

1. THE SLOPE IN FRONT OF THE WALL IS APPROXIMATELY 1.5% (SIDEWALK).
2. THE SLOPE BEHIND THE WALL IS 4:1 (MAX).
3. THE MINIMUM EMBEDMENT DEPTH IS 1.5 FEET.
4. A SURCHARGE LOAD OF 240 PSF IS INCLUDED TO MODEL LIGHTWEIGHT CONSTRUCTION EQUIPMENT.

SOIL PARAMETERS

SOIL DESCRIPTION AND ELEVATION	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL IN REINFORCING ZONE	120	30	0		
FILL GRANULAR BEHIND REINFORCING ZONE	120	30	0		
BORING ER-35 AND BORING ER-36					
		UNDRAINED		DRAINED	
EXIST. CLAY FILL AND MED. STIFF CLAY TO EL. 726	120	0	500	26	0
VERY STIFF TO HARD LEAN CLAY EL. 726 TO 715	130	0	3000	30	0
STIFF TO VERY STIFF LEAN CLAY EL. 715 TO 705	130	0	2000	28	0
MEDIUM DENSE SILT EL. 705 TO 700	120	30	0	30	0

STATE PROJECT NUMBER

1060-33-80

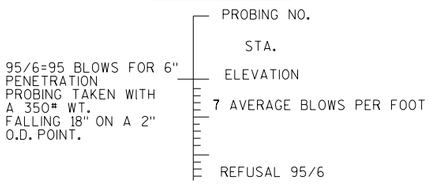
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

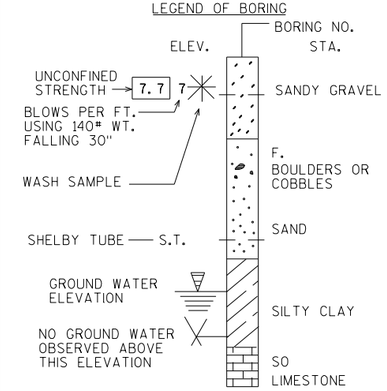
MATERIAL SYMBOLS

TOPSOIL, SILT, FILL, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-623

DRAWN BY RBH PLANS CK'D. DMS

SUBSURFACE EXPLORATION

SHEET 3 OF 3
3267

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STATE PROJECT NUMBER
1060-33-80

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-22 GENERAL PLAN & ELEVATION
3. S-40-27 GENERAL PLAN & ELEVATION
4. S-40-44 GENERAL PLAN & ELEVATION
5. S-40-47 GENERAL PLAN & ELEVATION
6. S-40-50 GENERAL PLAN & ELEVATION
7. S-40-51 GENERAL PLAN & ELEVATION
8. S-40-87 GENERAL PLAN & ELEVATION
9. S-40-116 GENERAL PLAN & ELEVATION
10. S-40-117 GENERAL PLAN & ELEVATION
11. S-40-121 GENERAL PLAN & ELEVATION
12. S-40-122 GENERAL PLAN & ELEVATION
13. S-40-132 GENERAL PLAN & ELEVATION
14. S-40-135 GENERAL PLAN & ELEVATION
15. S-40-136 GENERAL PLAN & ELEVATION
16. FOOTING DETAILS
17. S-40-135 FOOTING DETAILS
18. COLUMN DETAILS - 1
19. COLUMN DETAILS - 2
20. 4-CHORD SIGN BRIDGE
21. 4-CHORD SIGN BRIDGE DETAILS
22. BUTTERFLY SIGN DETAILS
23. HANDHOLE DETAILS
24. CONCRETE COLUMN AESTHETIC DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE NAME PLATES & ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE STRUCTURE S-40-XXX". LOCATE THE NAME PLATE OR ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE NAME PLATE IN ACCORDANCE WITH S.D.D. 12 A 3-10 FOR SIGN BRIDGE WITH CONCRETE COLUMNS. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3 FOR SIGN BRIDGE WITH STEEL COLUMNS.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING PLANS & FTMS PLANS.

ALL BARS CONTAINED ENTIRELY IN BELOW-GRADE FOOTINGS ARE TO BE UNCOATED REINFORCING STEEL. ALL OTHER BARS, INCLUDING BARS THAT ARE PARTIALLY EMBEDDED IN FOOTINGS BUT EXTEND OUTSIDE THE FOOTING INTO VERTICAL SUPPORT ELEMENTS, ARE TO BE EPOXY COATED.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION TOM HEYDEL AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION, WHICH MAY OR MAY NOT BE THE SIGN CONFIGURATION AT THE CONCLUSION OF THIS CONSTRUCTION PROJECT.

ALL ALUMINIUM SUPPORT BEAMS AND HARDWARE FOR SIGN SUPPORTS ARE ALL INCIDENTAL TO THE TEMPORARY SIGNS.

SEE CONSTRUCTION STAGING PLANS IN ROADWAY DRAWINGS FOR CONSTRUCTION SEQUENCES FOR EACH STRUCTURE

CO-ORDINATE RETAINING WALL CONSTRUCTION R-40-556, 560, 548, 551, 554 & 555 AND SIGN STRUCTURES S-40-44, 47, 51, 116, 117, 121, 122, 135 & 136 CONSTRUCTION

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-22	875 SF	12'-0"
S-40-27	600 SF	13'-0"
S-40-44	875 SF*	12'-0"
S-40-47	1025 SF	14'-0"
S-40-50	875 SF	12'-0"
S-40-51	1100 SF	15'-0"
S-40-87	425 SF	12'-0"
S-40-116	1025 SF	12'-0"
S-40-117	1025 SF	12'-0"
S-40-121	1050 SF	12'-6"
S-40-122	875 SF	14'-6"
S-40-132	875 SF	12'-0"
S-40-135	1100 SF	15'-0"
S-40-136	875 SF	12'-0"

*ADDITIONAL BUTTERFLY SIGN AREA = 276 SF

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL.

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF CATWALK.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
SEAN BLACK (262) 548-6407

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/14/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

ZOO INTERCHANGE SIGN BRIDGE STRUCTURES

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	WAUWATOSA/WA/MILWAUKEE

DESIGN SPEC.	LOAD
AASHTO SIGN SPEC. 2013	90 MPH 3 SEC. SP.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AG	STB	AG	STB

GENERAL NOTES & DESIGN DATA

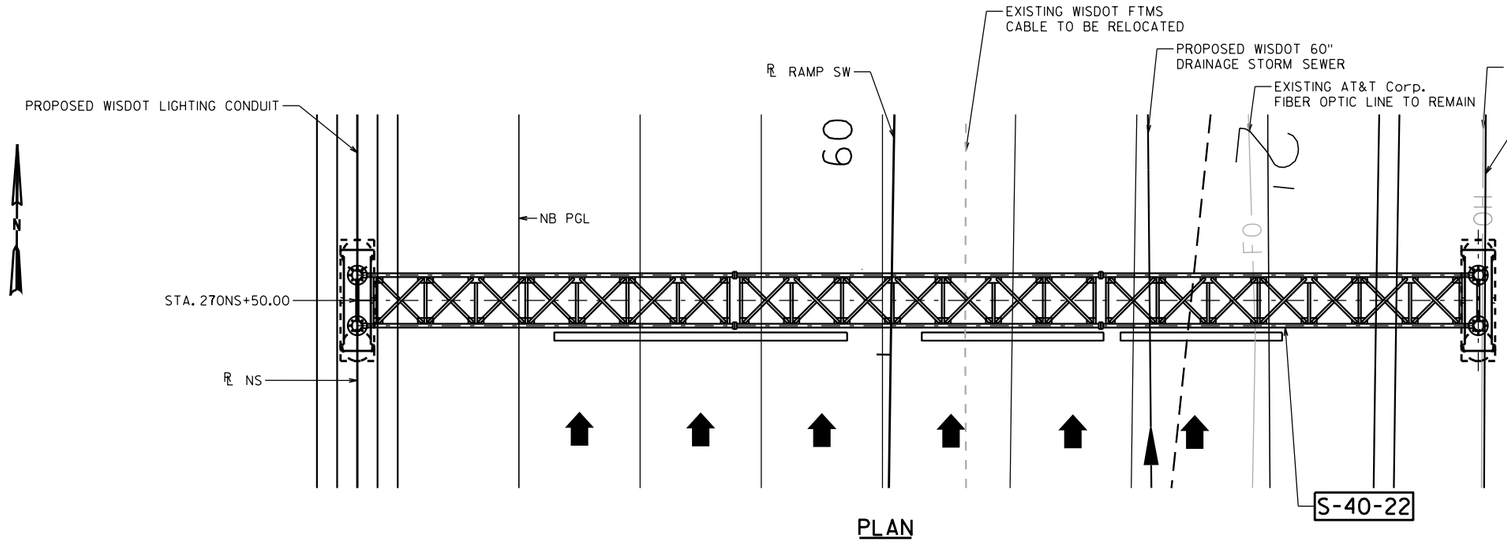
SHEET 1 OF 24

WISCONSIN SEAN T. BLACK E-42904 WAUKESHA, WI PROFESSIONAL ENGINEER 5/14/14

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STATE PROJECT NUMBER
1060-33-80

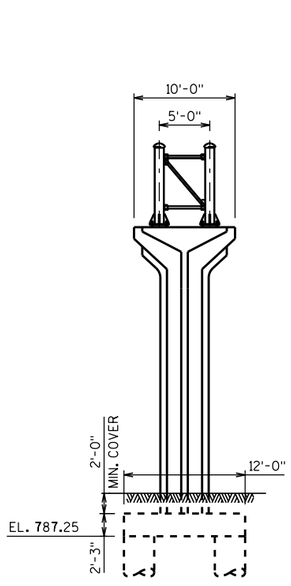


PLAN

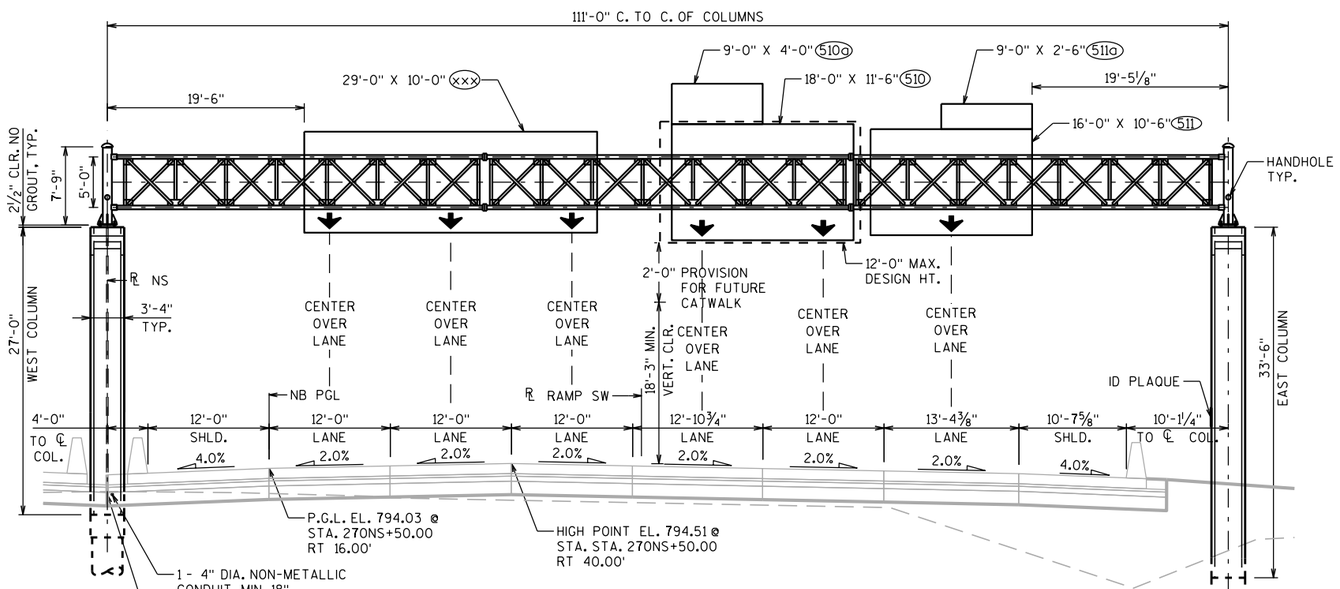
* CONSTRUCTION OF SIGN STRUCTURE S-40-22 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARENCES FROM THESE LINES.



LOCATION MAP



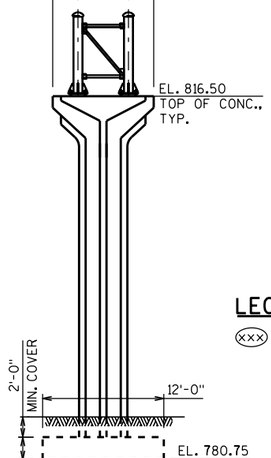
SIDE VIEW
WEST COLUMN



ELEVATION

S-40-22, STA. 270NS+50.00
(LOOKING UP STATION AT FRONT OF SIGNS)
USH 45 / IH 894 NB

ROADWAY WILL BE BUILT IN LATER CONTRACT
SEE ROADWAY PLANS FOR TEMPORARY SHEILDING CONDITIONS



SIDE VIEW
EAST COLUMN

LEGEND

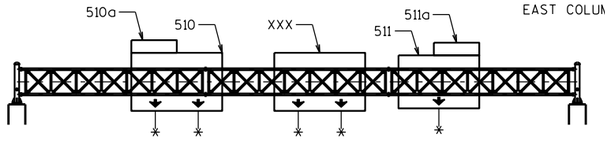
(XXX) FUTURE SIGN TO BE ERECTED IN LATER CONTRACT

PROPOSED CONSTRUCTION STAGING
1. BUILD SIGN STRUCTURE
2. ROADWAY SECTION TO COMPLETE CONSTRUCTION IN CONTRACT 1060-33-81

S-40-22 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	64
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	14,610
641.6600.0001	SIGN BRIDGE STRUCTURE S-40-22	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4000



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

S-40-22
GENERAL PLAN
& ELEVATION

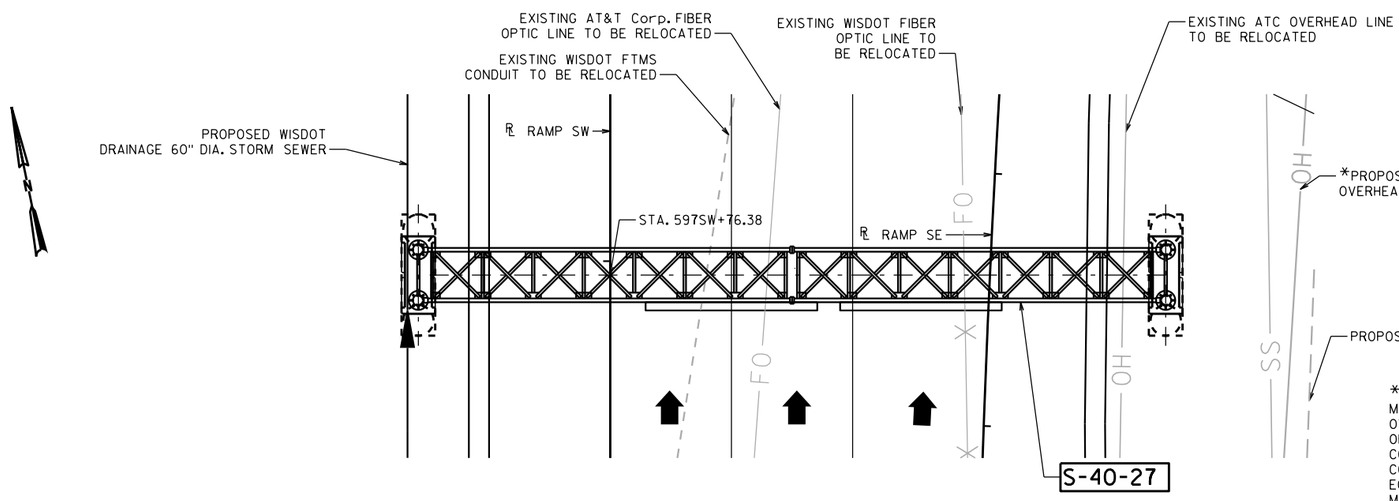
SHEET 2 OF 24

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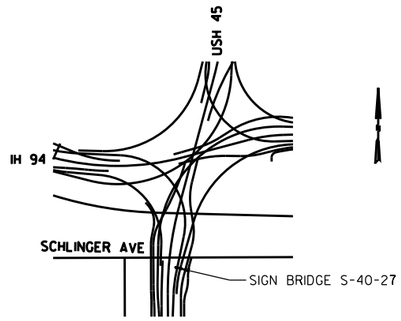
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STATE PROJECT NUMBER
1060-33-80

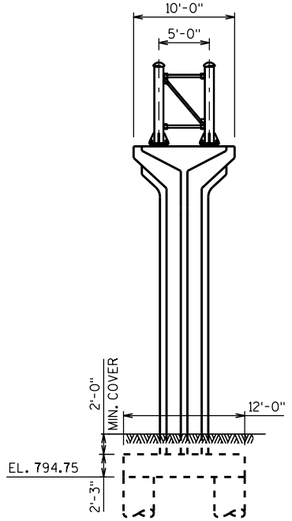


PLAN

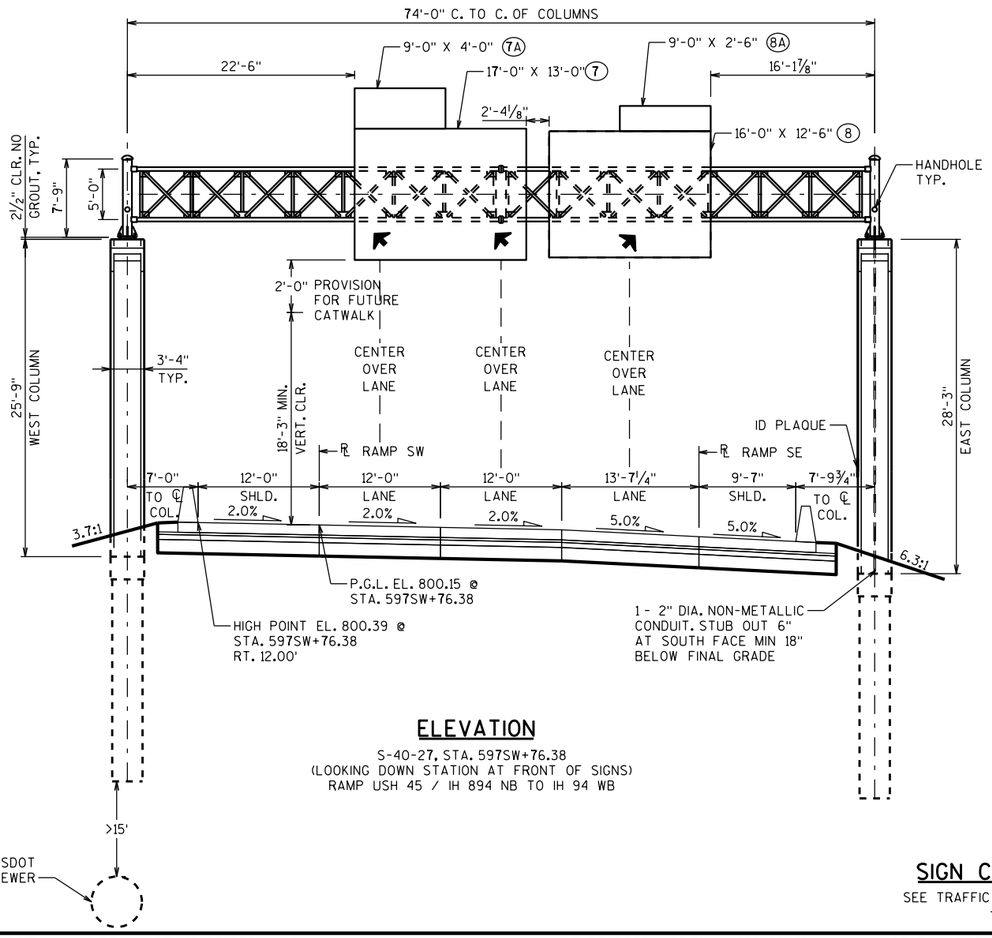
* CONSTRUCTION OF SIGN STRUCTURE S-40-27 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARENCES FROM THESE LINES.



LOCATION MAP

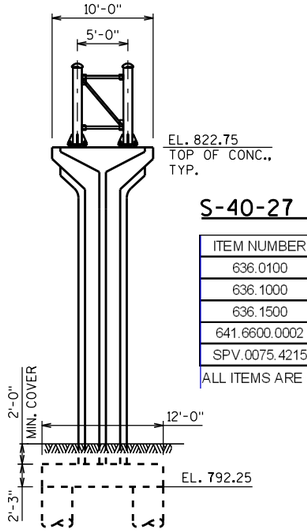


SIDE VIEW
WEST COLUMN



ELEVATION

S-40-27, STA. 597SW+76.38
(LOOKING DOWN STATION AT FRONT OF SIGNS)
RAMP USH 45 / IH 894 NB TO IH 94 WB



SIDE VIEW
EAST COLUMN

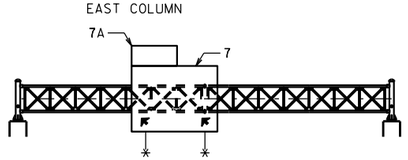
S-40-27 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	60
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,570
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	9,190
641.6600.0002	SIGN BRIDGE STRUCTURE S-40-27	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4010

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

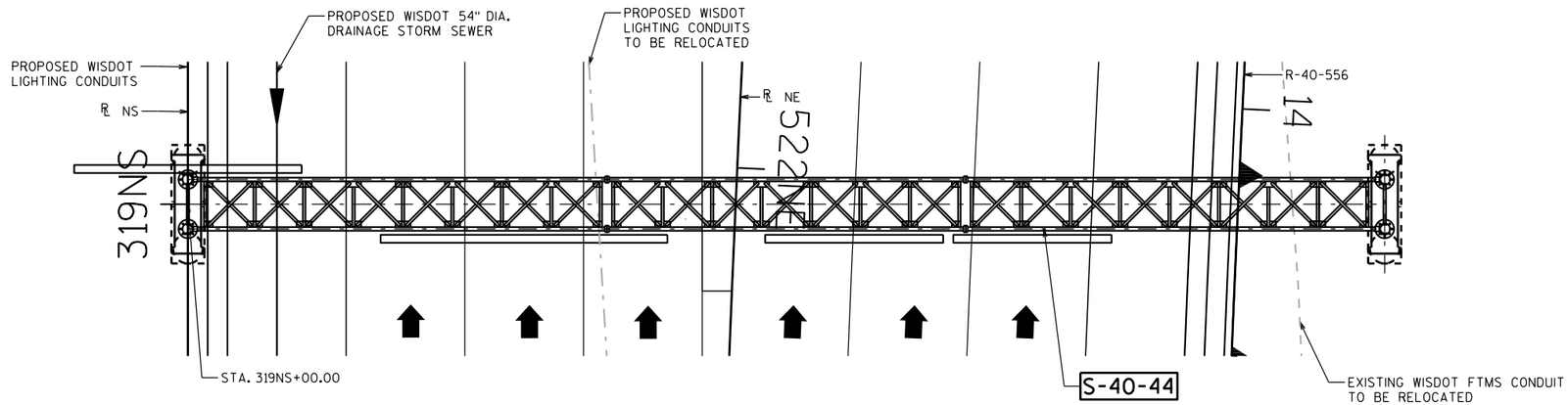
S-40-27
GENERAL PLAN
& ELEVATION

SHEET 3 OF 24

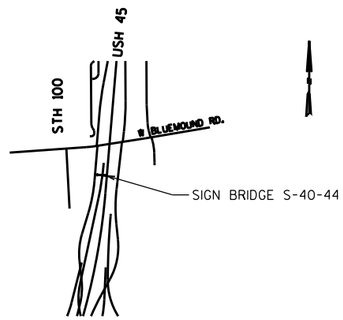
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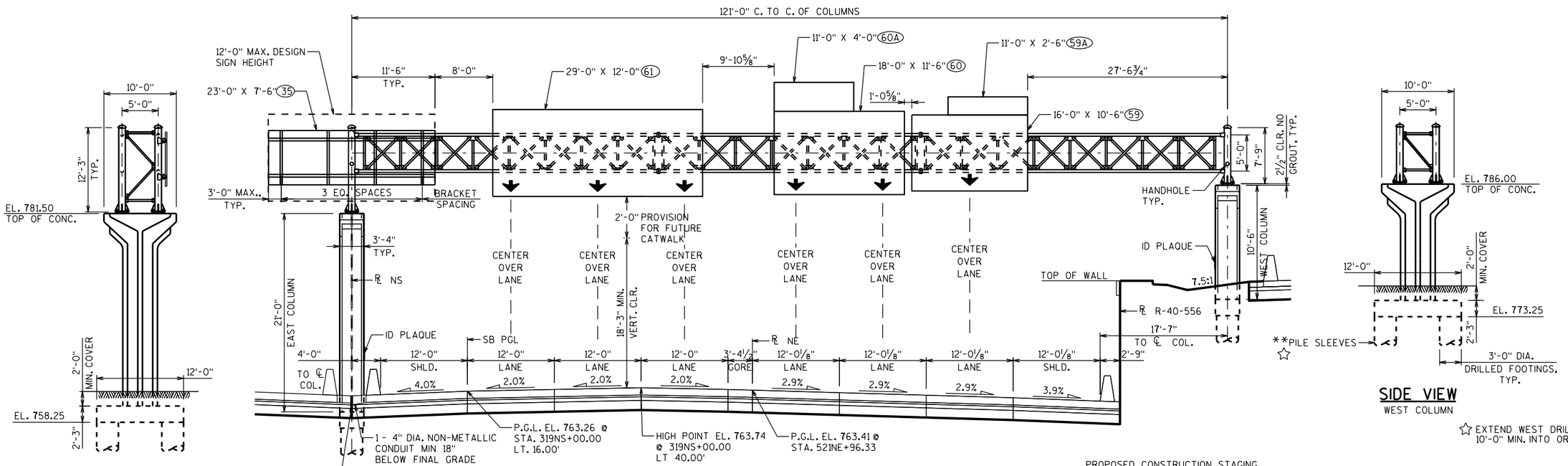
STATE PROJECT NUMBER
1060-33-80



PLAN



LOCATION MAP



** SEE RETAINING WALL R-40-556 FOR PILE SLEEVE DETAIL & COST

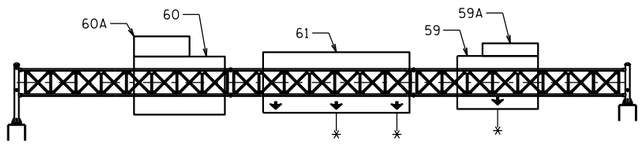
PROPOSED CONSTRUCTION STAGING
1. PLACE PILE SLEEVES **, BUILD DRILLED FOOTINGS & FOUNDATION
2. BUILD WALL TO BOTTOM OF SIGN FOUNDATION
3. BUILD COLUMN
4. FINISH WALL CONSTRUCTION
5. FINISH SIGN BRIDGE CONSTRUCTION

LEGEND
(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-44 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	52
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	6,180
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	8,540
641.6600.0004	SIGN BRIDGE STRUCTURE S-40-44	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4040



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

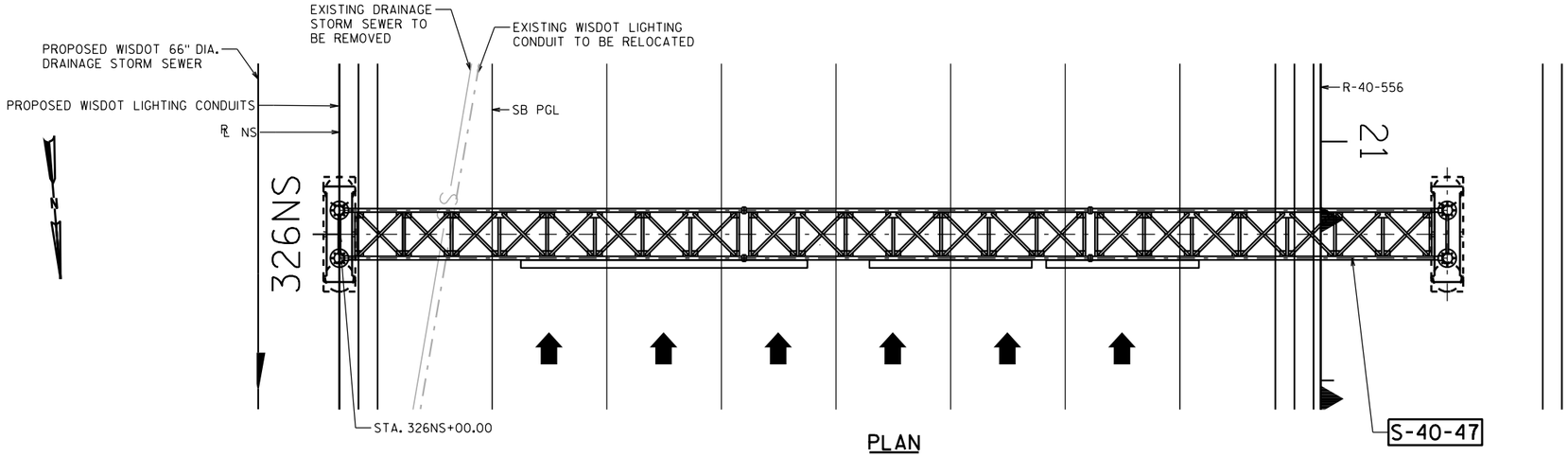
DRAWN BY AG | PLANS CK'D. STB

S-40-44
GENERAL PLAN
& ELEVATION

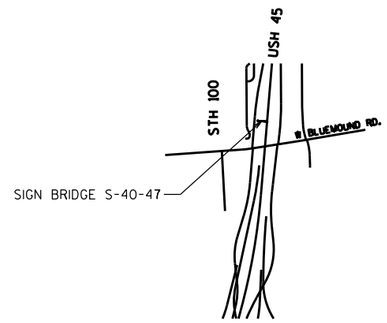
SHEET 4 OF 24

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PLOT DATE : 01-MAY-2014 09:37
PLOT BY : MSCAYG
PLOT NAME : S-40-44_104_gp
PLOT SCALE : 15:1

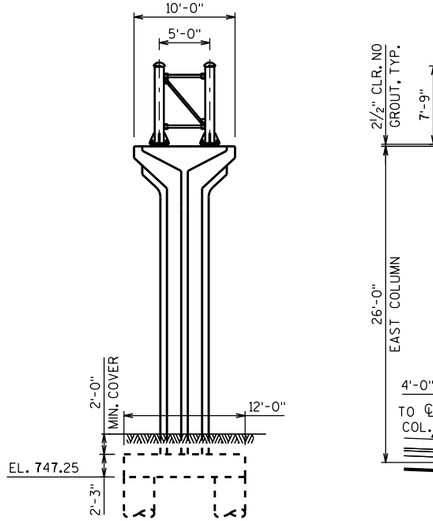
STATE PROJECT NUMBER
1060-33-80



PLAN

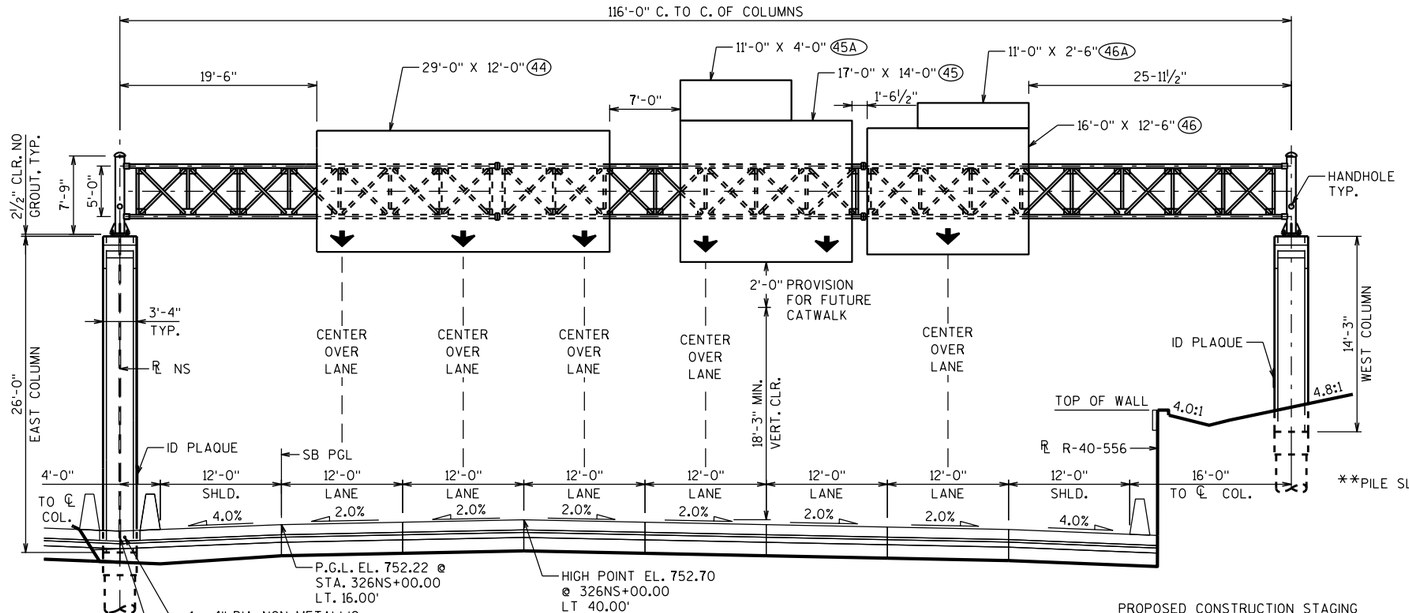


LOCATION MAP



SIDE VIEW
EAST COLUMN

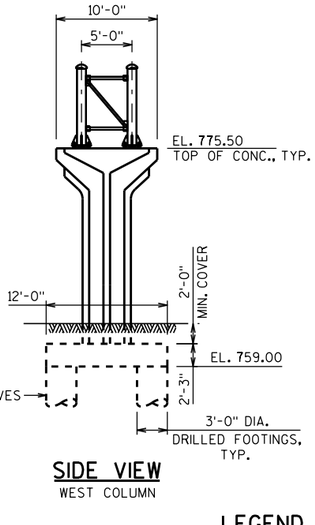
PROPOSED WISDOT 66" DIA. DRAINAGE STORM SEWER



ELEVATION

S-40-47, STA. 326NS+00.00
(LOOKING DOWN STATION AT FRONT OF SIGNS)
USH 45 SB

** SEE RETAINING WALL R-40-556 FOR PILE SLEEVE DETAIL & COST



SIDE VIEW
WEST COLUMN

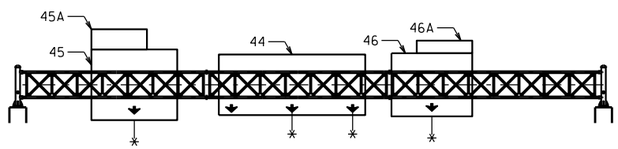
PROPOSED CONSTRUCTION STAGING
1. PLACE PILE SLEEVES **, BUILD DRILLED FOOTINGS & FOUNDATION
2. BUILD WALL TO BOTTOM OF SIGN FOUNDATION
3. BUILD COLUMN
4. FINISH WALL CONSTRUCTION
5. FINISH SIGN BRIDGE CONSTRUCTION

LEGEND
(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-47 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	53
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	9,860
641.6600.0005	SIGN BRIDGE STRUCTURE S-40-47	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4050



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

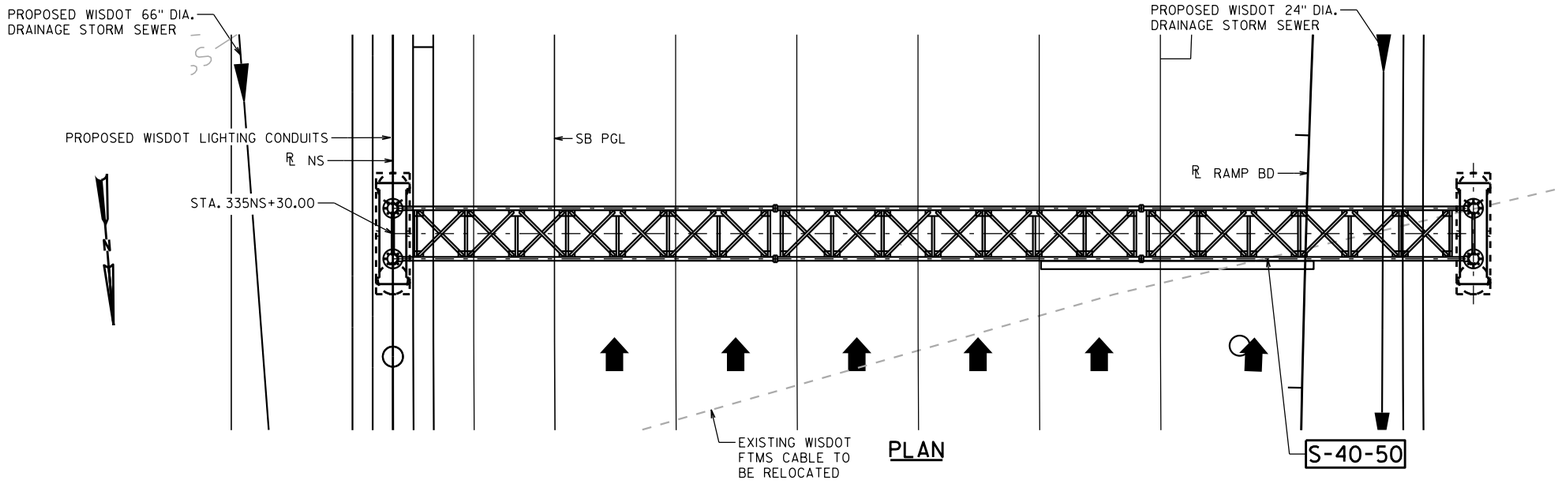
S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

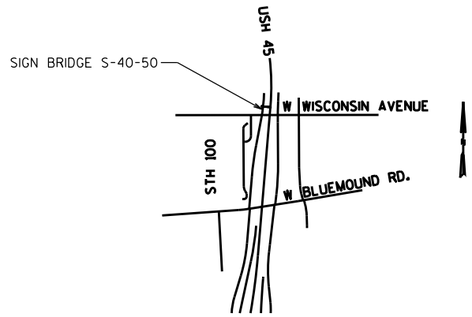
S-40-47
GENERAL PLAN
& ELEVATION

SHEET 5 OF 24

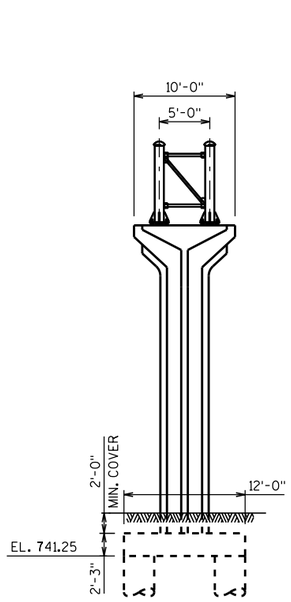
STATE PROJECT NUMBER
1060-33-80



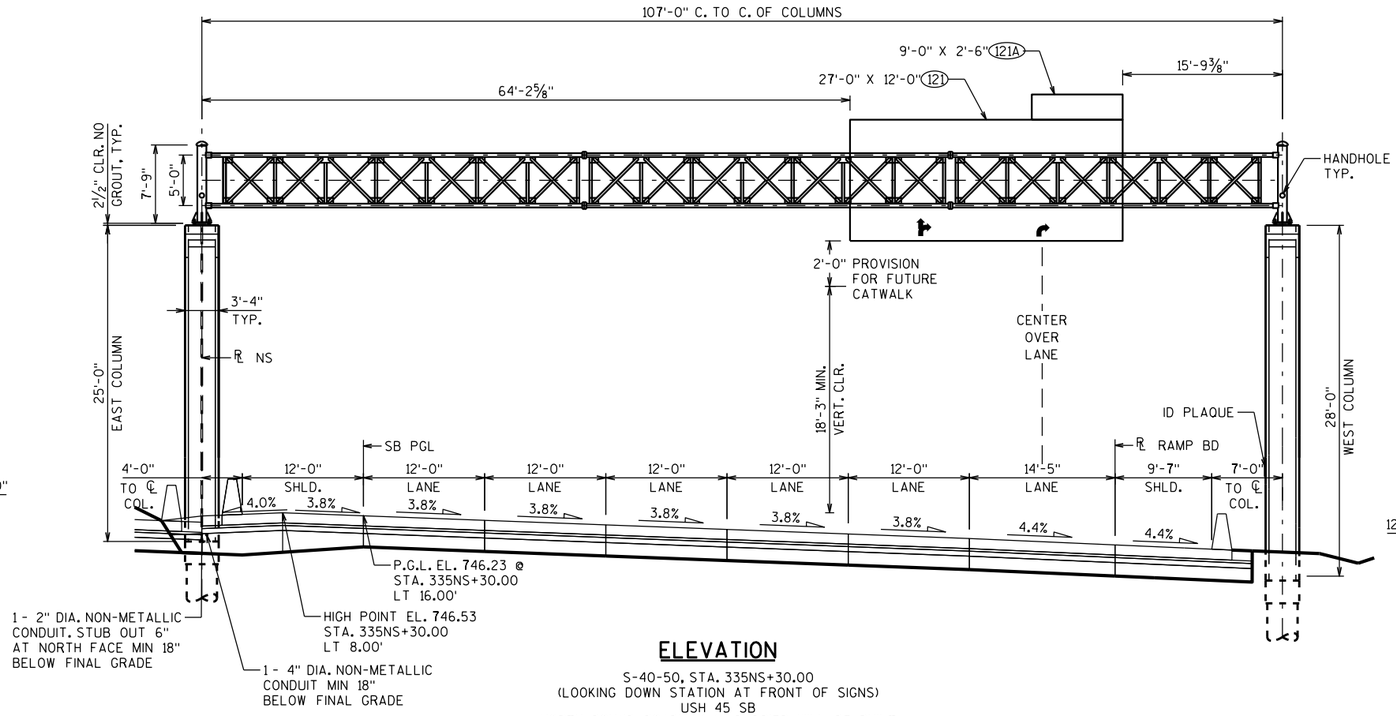
PLAN



LOCATION MAP

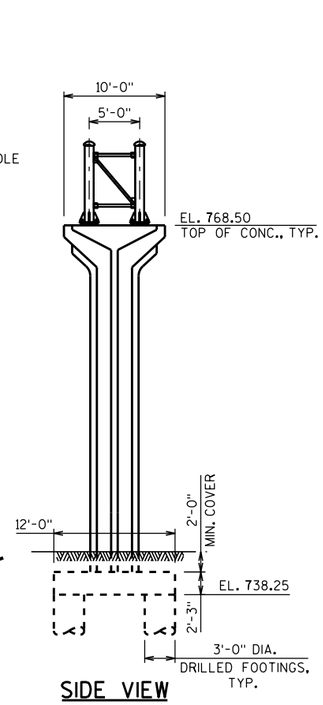


SIDE VIEW
EAST COLUMN



ELEVATION

S-40-50, STA. 335NS+30.00
(LOOKING DOWN STATION AT FRONT OF SIGNS)
USH 45 SB
NORTH BOUND ROADWAY & BARRIER WILL BE BUILT IN LATER CONTRACT - SEE ROADWAY PLANS



SIDE VIEW
WEST COLUMN

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-50 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	60
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	9,090
641.6600.0006	SIGN BRIDGE STRUCTURE S-40-50	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4060

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

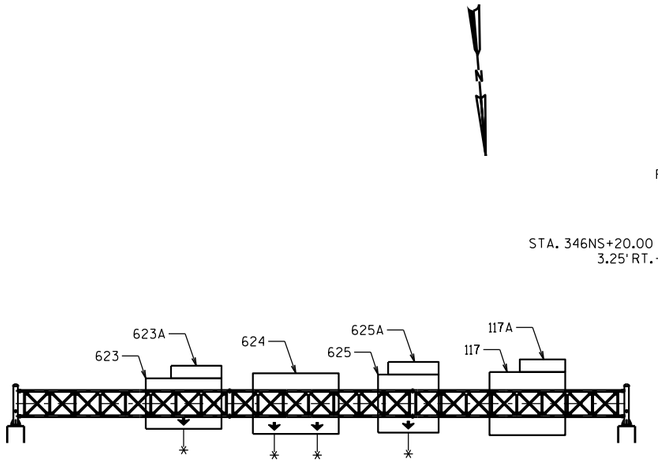
S-40-50
GENERAL PLAN
& ELEVATION

SHEET 6 OF 24

8

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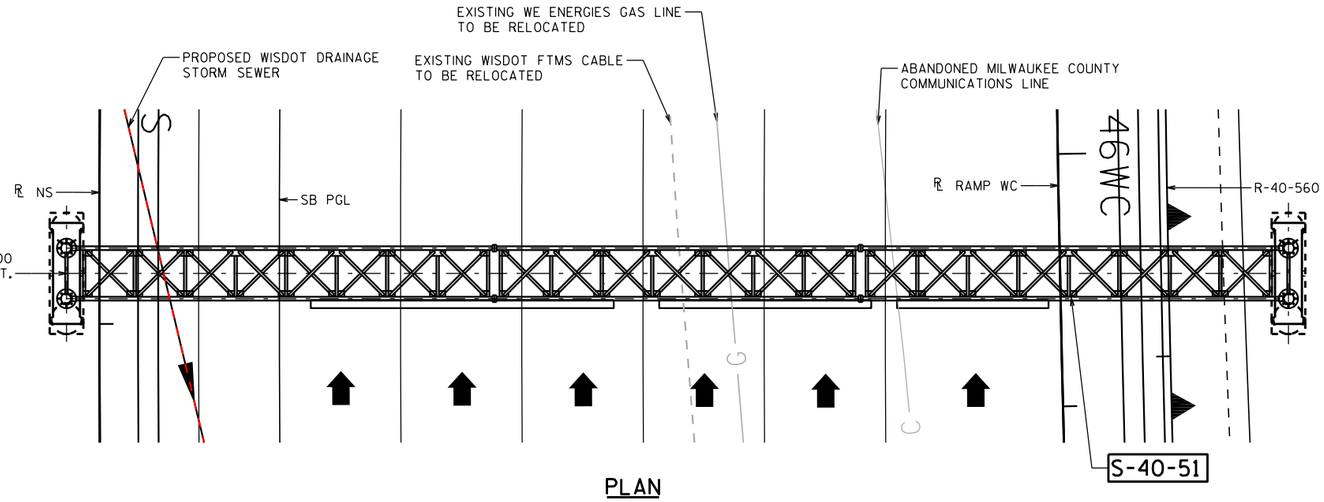
STATE PROJECT NUMBER
1060-33-80



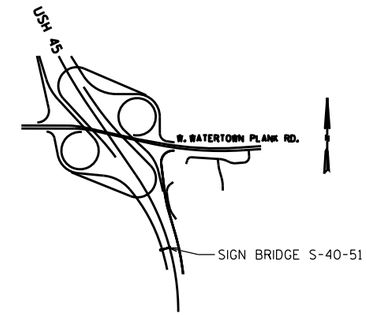
SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT

* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

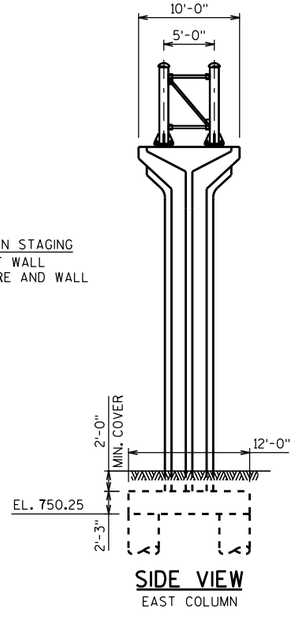


PLAN



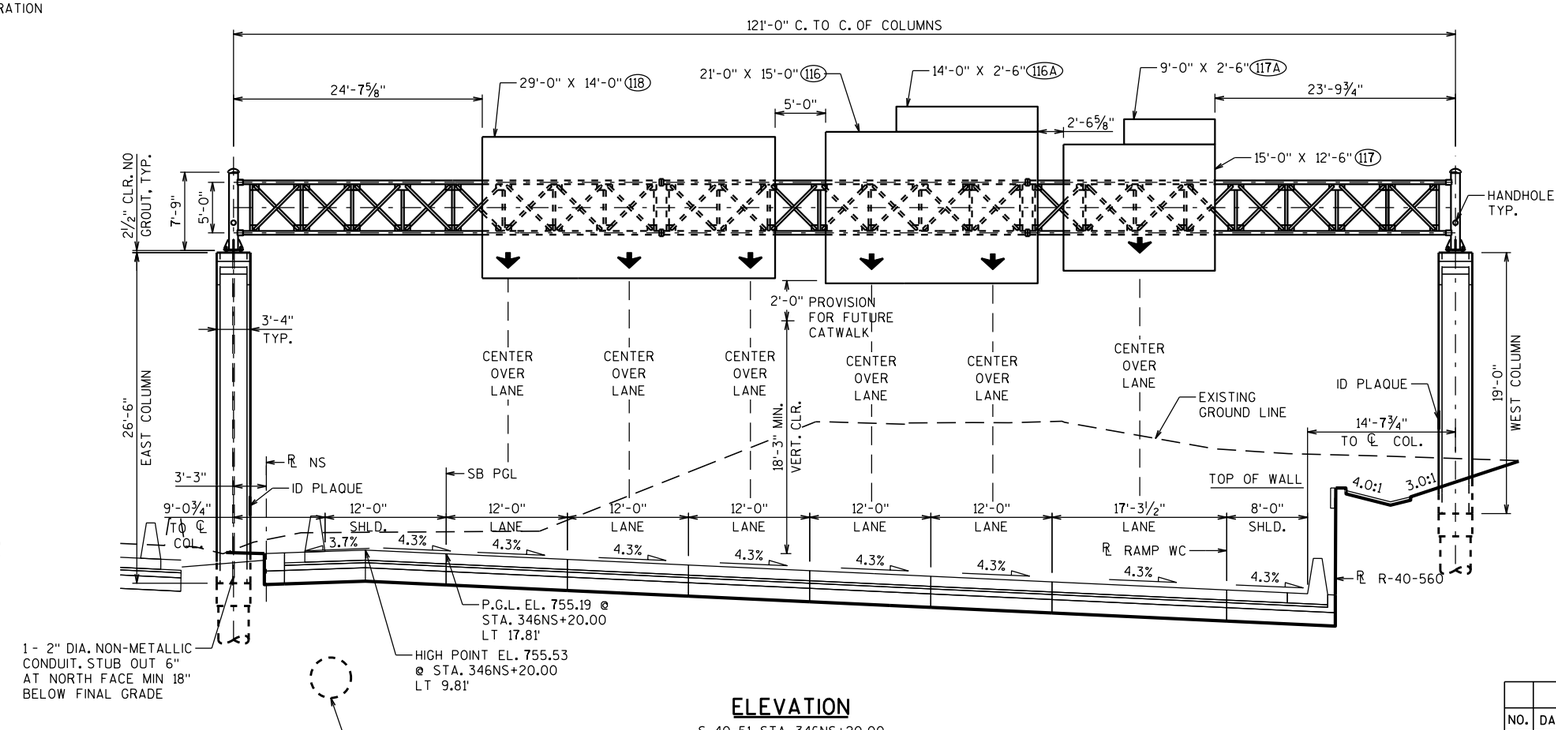
LOCATION MAP

PROPOSED CONSTRUCTION STAGING
1. EXCAVATE TO TOP OF WALL
2. BUILD SIGN STRUCTURE AND WALL



SIDE VIEW

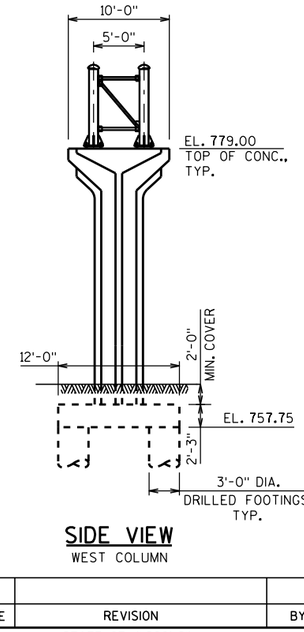
EAST COLUMN



ELEVATION

S-40-51, STA. 346NS+20.00
(LOOKING DOWN STATION AT FRONT OF SIGNS)
USH 45 SB

NORTH BOUND ROADWAY & BARRIER WILL BE BUILT IN LATER CONTRACT - SEE ROADWAY PLANS



SIDE VIEW

WEST COLUMN

S-40-51 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	56
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	10,510
641.6600.0007	SIGN BRIDGE STRUCTURE S-40-51	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4070

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

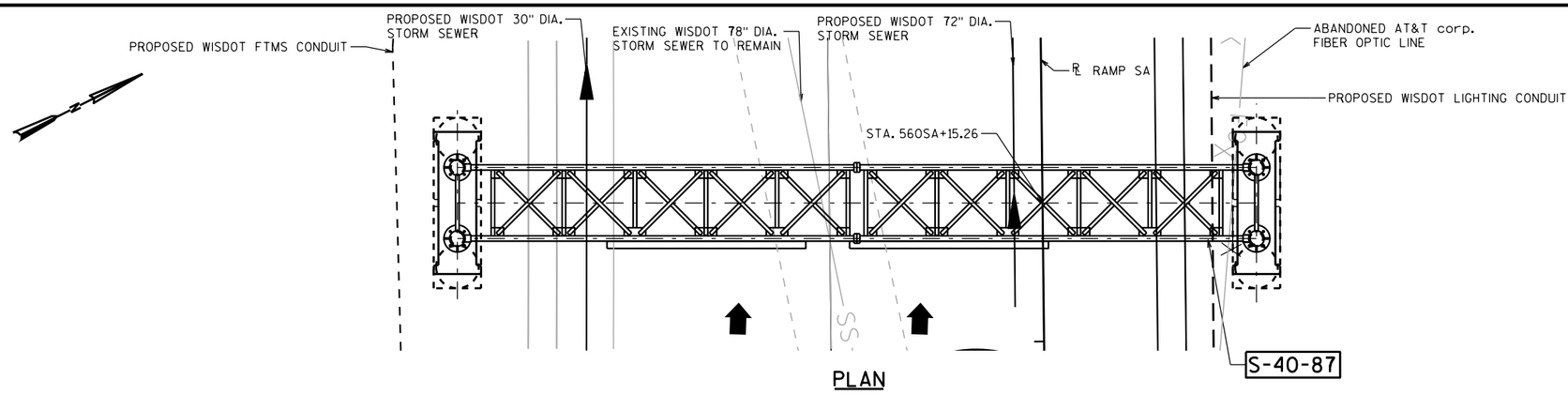
S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

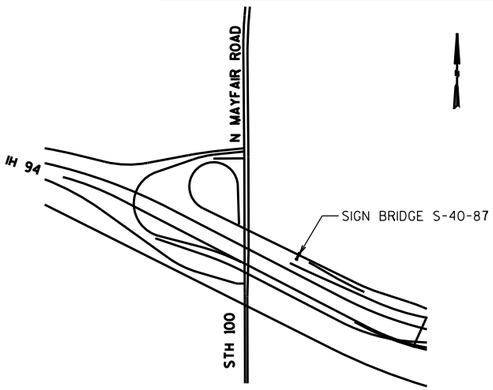
S-40-51
GENERAL PLAN
& ELEVATION

SHEET 7 OF 24

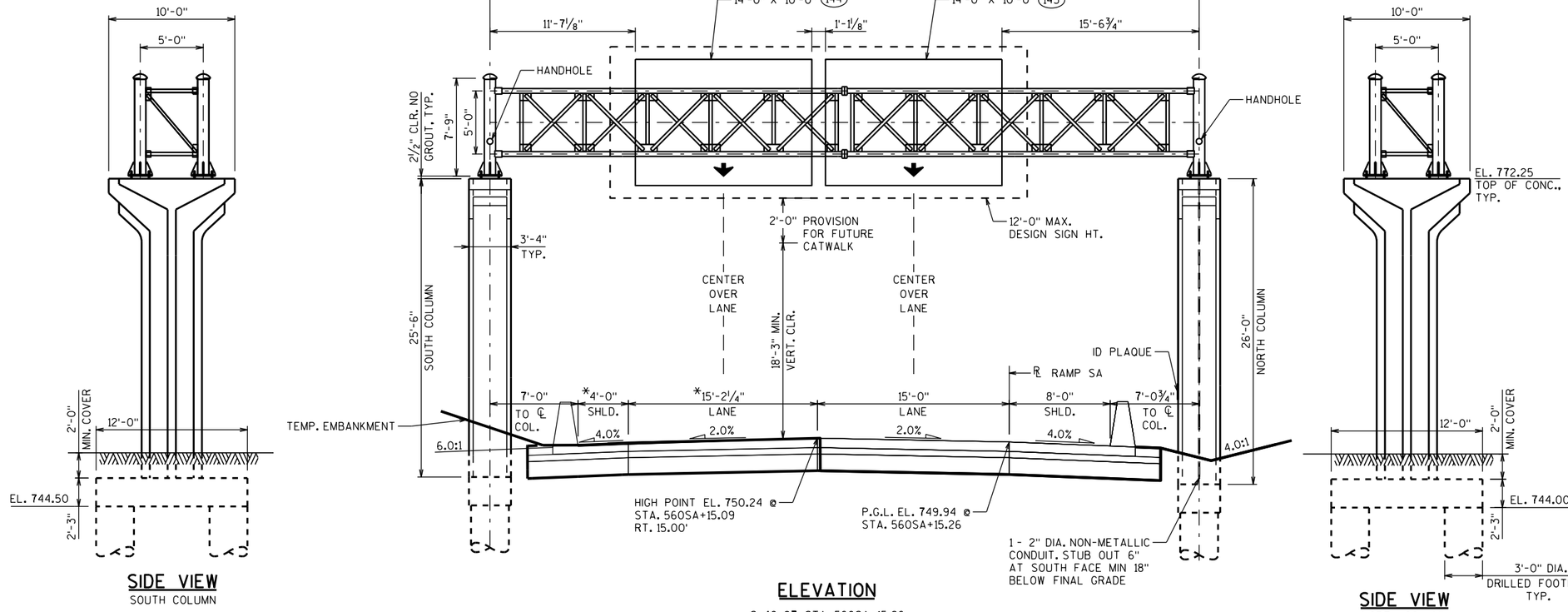
STATE PROJECT NUMBER
1060-33-80



PLAN



LOCATION MAP

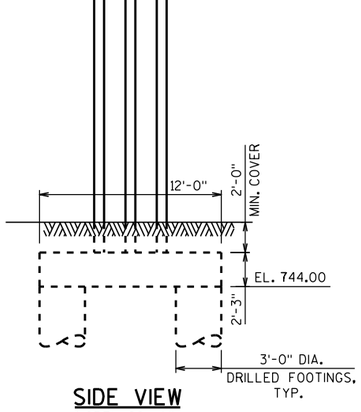


ELEVATION

S-40-87, STA. 560SA+15.26
(LOOKING DOWN STATION AT FRONT OF SIGNS)
RAMP IH 94 WB TO 108TH STREET

* ROADWAY LEFT HALF WITH BARRIER & SLOPE PROTECTION WILL BE BUILT IN LATER CONTRACT - SEE ROADWAY PLANS

SIDE VIEW
SOUTH COLUMN



SIDE VIEW
NORTH COLUMN

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-87 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	59
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	8,930
641.6600.0008	SIGN BRIDGE STRUCTURE S-40-87	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4100

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

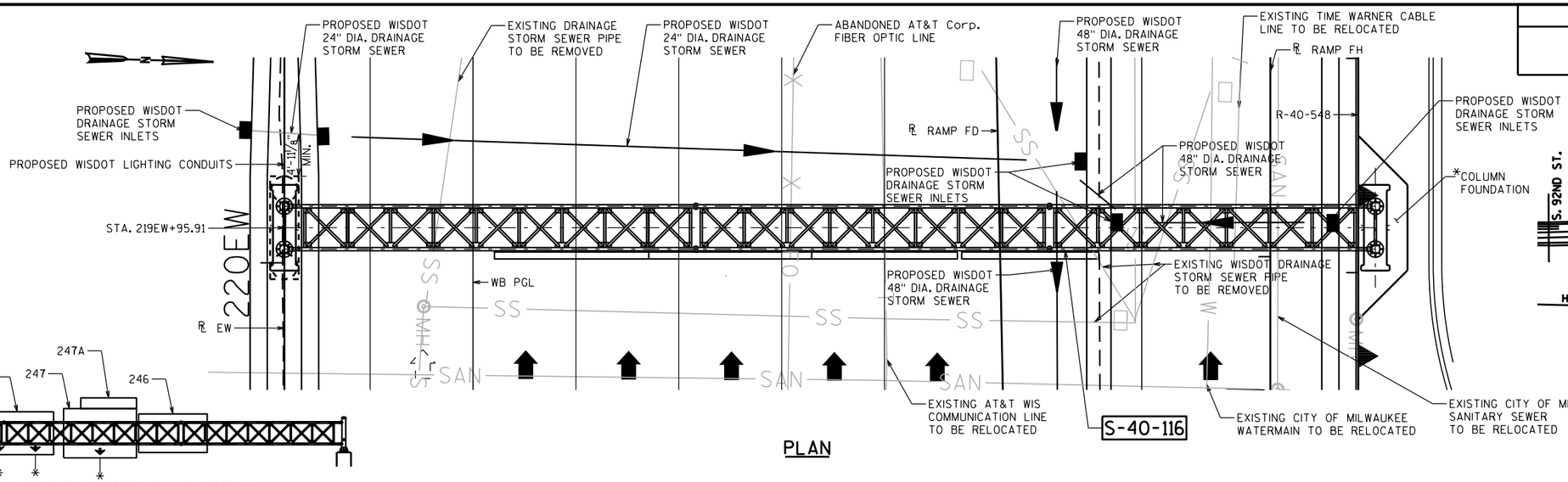
S-40-87
GENERAL PLAN
& ELEVATION

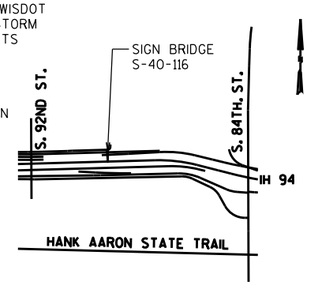
SHEET 8 OF 24

8

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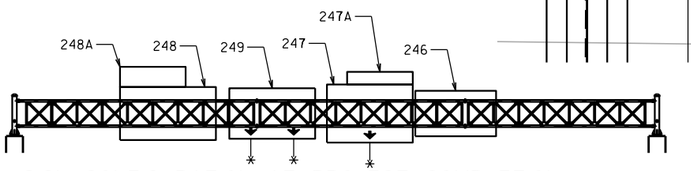
STATE PROJECT NUMBER
1060-33-80





LOCATION MAP

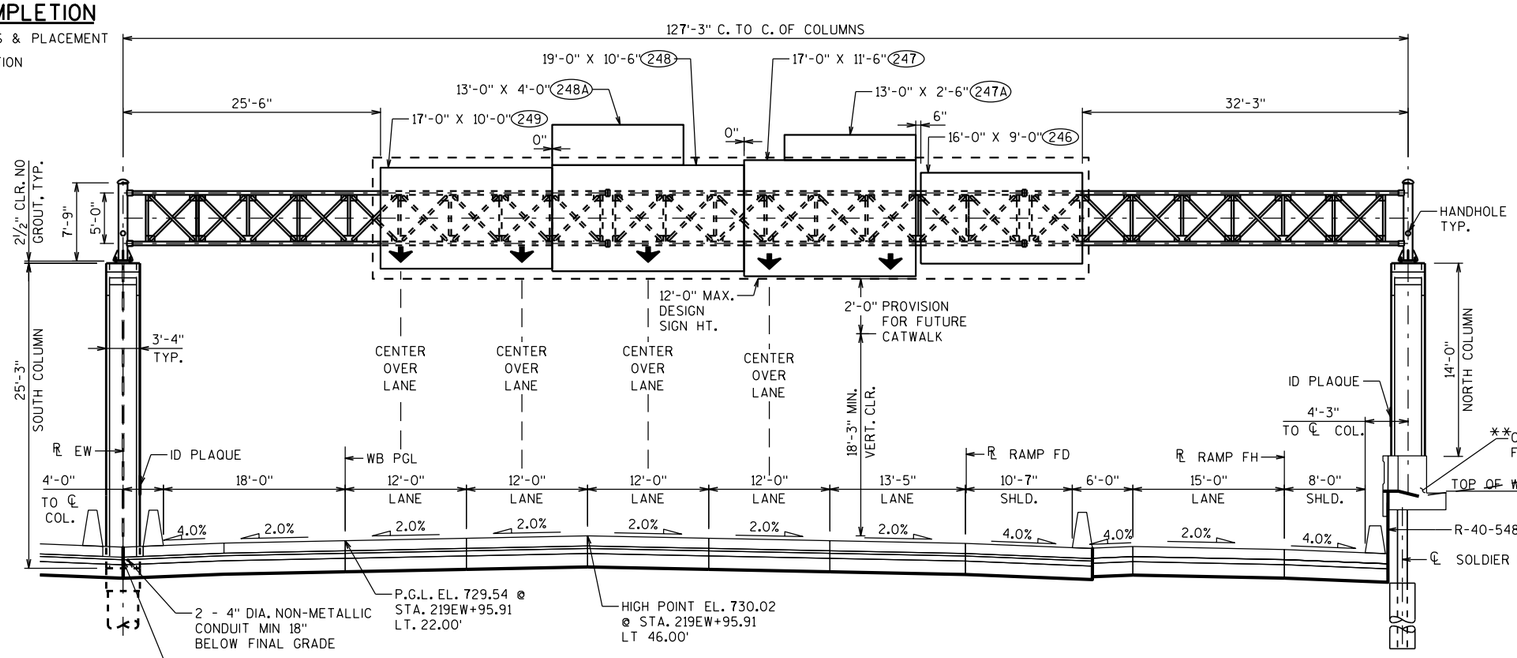
PLAN



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT

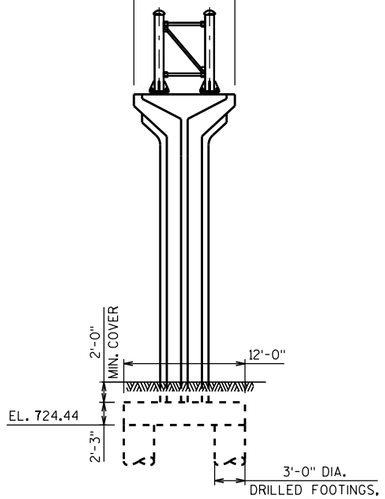
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION



ELEVATION

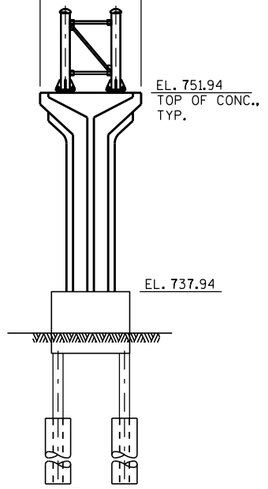
S-40-116, STA. 219EW+95.91
(LOOKING DOWN STATION AT FRONT OF SIGNS)
IH 94 WB

** SEE STRUCTURAL DRAWINGS R-40-548



SIDE VIEW

SOUTH COLUMN



SIDE VIEW

NORTH COLUMN

S-40-116 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	39
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,830
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	9,100
641.6600.0010	SIGN BRIDGE STRUCTURE S-40-116	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4120

PROPOSED CONSTRUCTION STAGING

1. BUILD WALL R-40-548
2. BUILD WALL PARAPET & COLUMN FOUNDATION
3. BUILD NORTH COLUMN
4. BUILD SOUTH COLUMN, MATCH TOP OF COLUMN ELEVATIONS
5. ERECT SIGN TRUSS

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

S-40-116
GENERAL PLAN
& ELEVATION

SHEET 9 OF 24

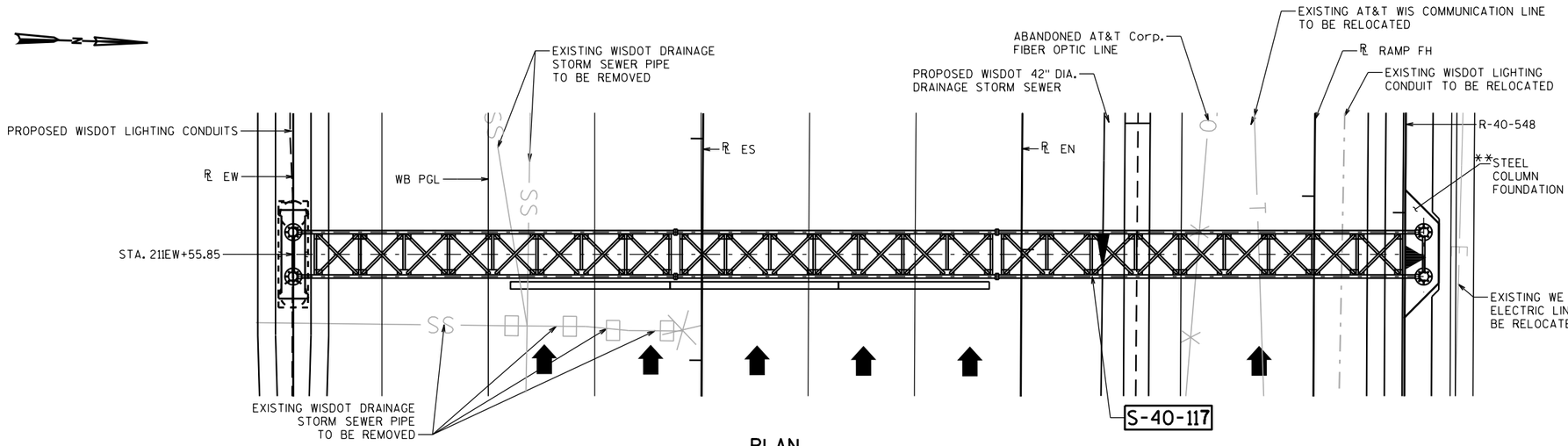
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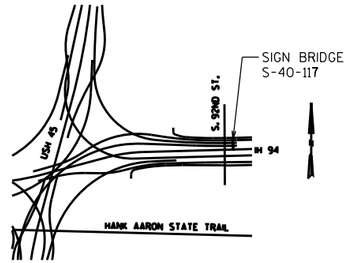
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PLOT DATE : 01-MAY-2014 09:38
PLOT BY : MSCAYG
PLOT NAME : S-40-116_109_gp
PLOT SCALE : 15:1

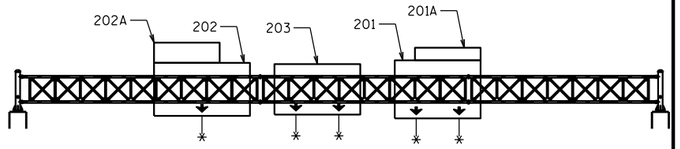
STATE PROJECT NUMBER
1060-33-80



PLAN



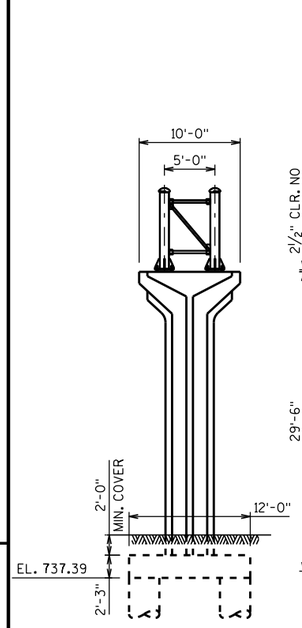
LOCATION MAP



SIGN CONFIGURATION AT PROJECT COMPLETION

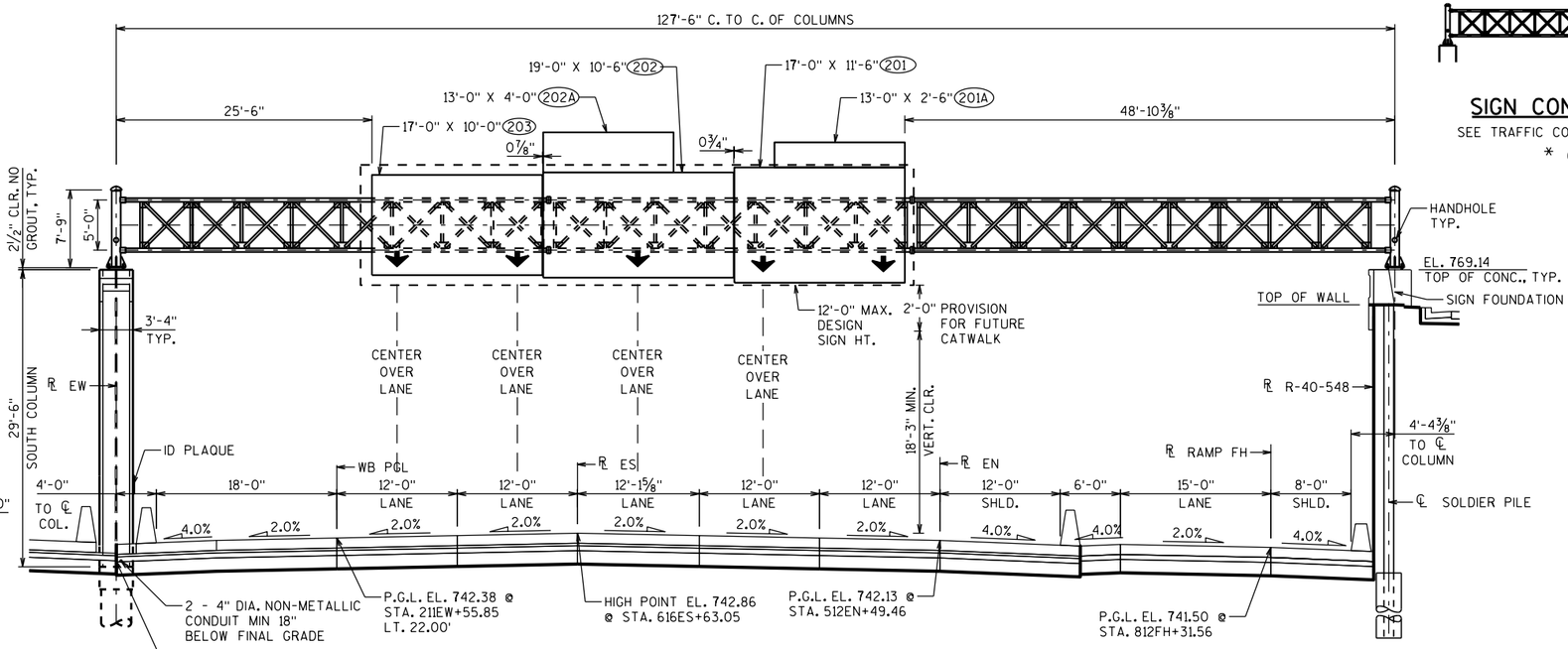
SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT

* CENTER ARROWS OVER INTERIM LANE CONFIGURATION



SIDE VIEW

SOUTH COLUMN



ELEVATION

S-40-117, STA. 211EW+55.85
(LOOKING DOWN STATION AT FRONT OF SIGNS)
IH 94 WB

** SEE STRUCTURAL DRAWINGS R-40-548

PROPOSED CONSTRUCTION STAGING

1. BUILD WALL R-40-548
2. BUILD WALL PARAPET & COLUMN FOUNDATION
3. BUILD NORTH COLUMN
4. BUILD SOUTH COLUMN, MATCH TOP OF COLUMN ELEVATIONS
5. ERECT SIGN TRUSS

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-117 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	32
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,830
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	7,350
641.6600.0011	SIGN BRIDGE STRUCTURE S-40-117	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4130

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

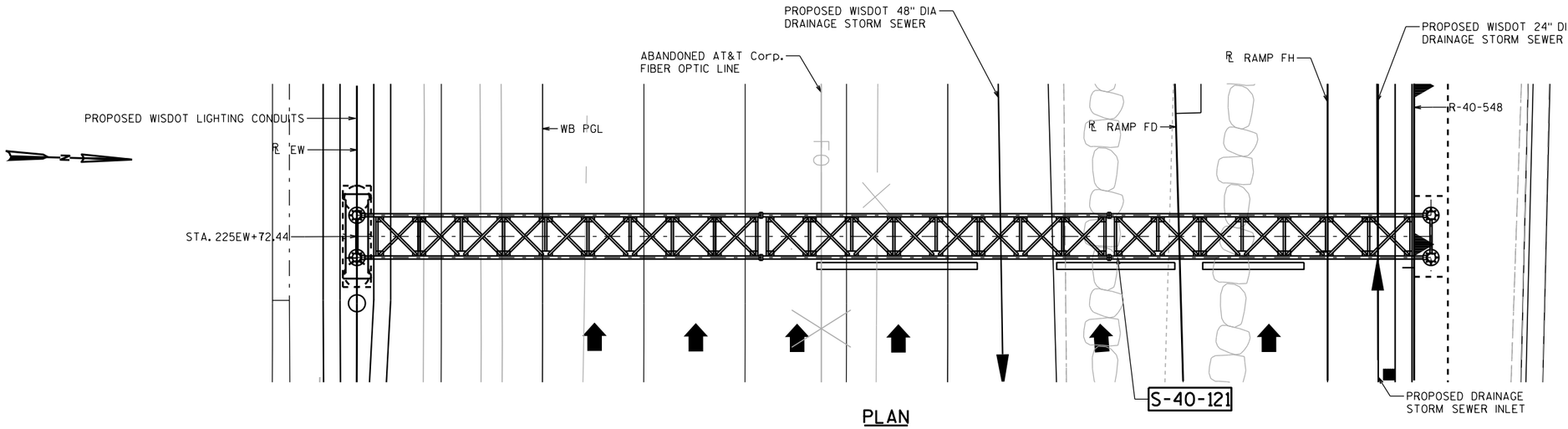
DRAWN BY AG | PLANS CK'D. STB

S-40-117
GENERAL PLAN
& ELEVATION

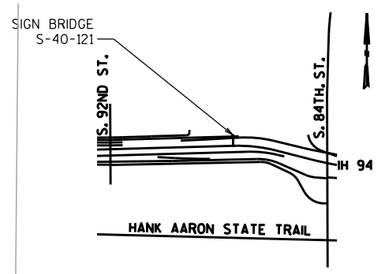
SHEET 10 OF 24

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STATE PROJECT NUMBER
1060-33-80



PLAN

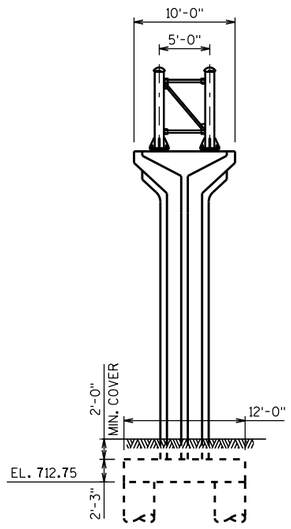


LOCATION MAP

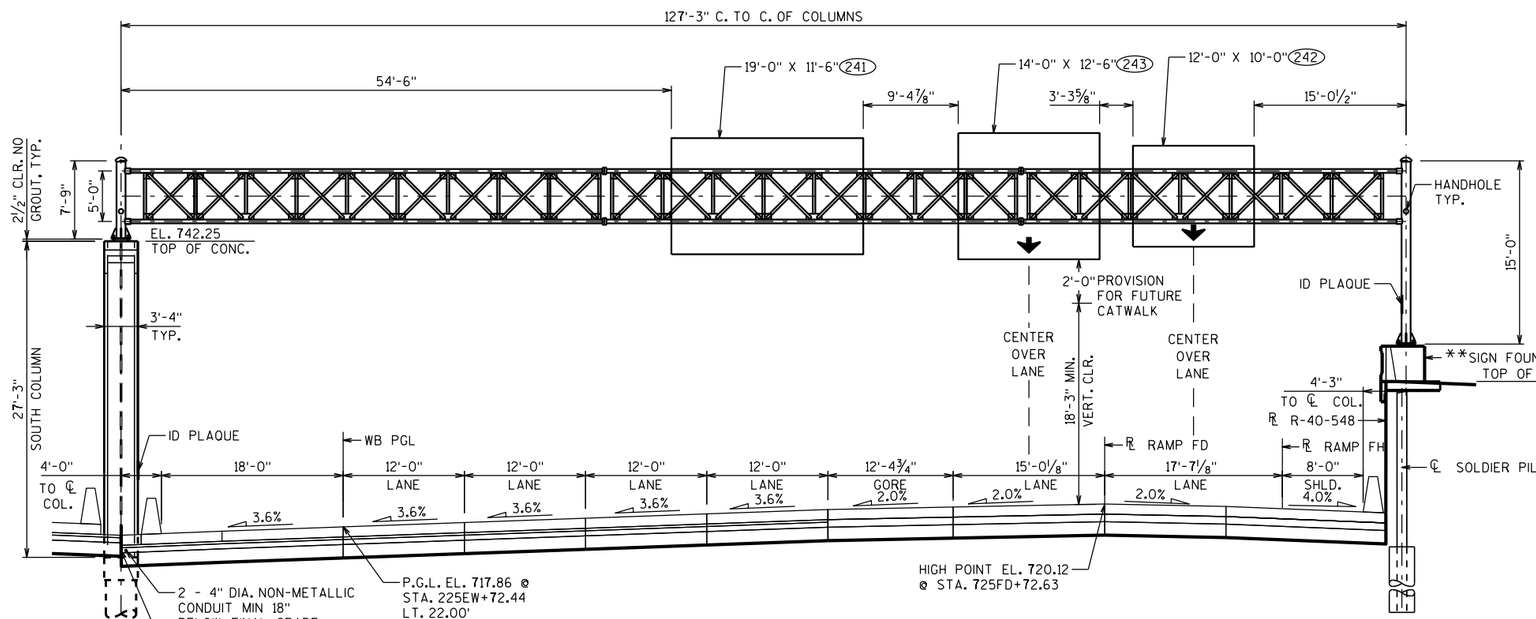
PROPOSED CONSTRUCTION STAGING
1. BUILD WALL R-40-548
2. BUILD WALL PARAPET & SIGN FOUNDATION
3. BUILD SOUTH COLUMN. CO-ORDINATE TOP OF COLUMN ELEVATION & TOP OF SIGN FOUNDATION ELEVATION SO THAT SIGN TRUSS IS HORIZONTAL
4. ERECT SIGN TRUSS

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)



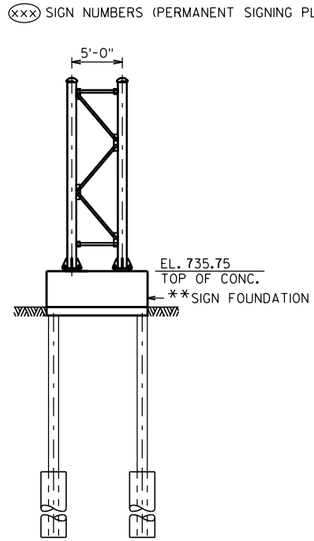
SIDE VIEW
SOUTH COLUMN



ELEVATION

S-40-121, STA. 225EW+72.44
(LOOKING DOWN STATION AT FRONT OF SIGNS)
IH 94 WB

** SEE STRUCTURAL DRAWINGS R-40-548

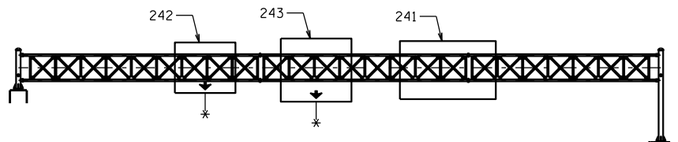


SIDE VIEW
NORTH COLUMN

S-40-121 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	39
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,830
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	6,950
641.6600.0012	SIGN BRIDGE STRUCTURE S-40-121	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4160



SIGN CONFIGURATION AT PROJECT COMPLETION

SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT

* CENTER ARROWS OVER INTERIM LANE CONFIGURATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

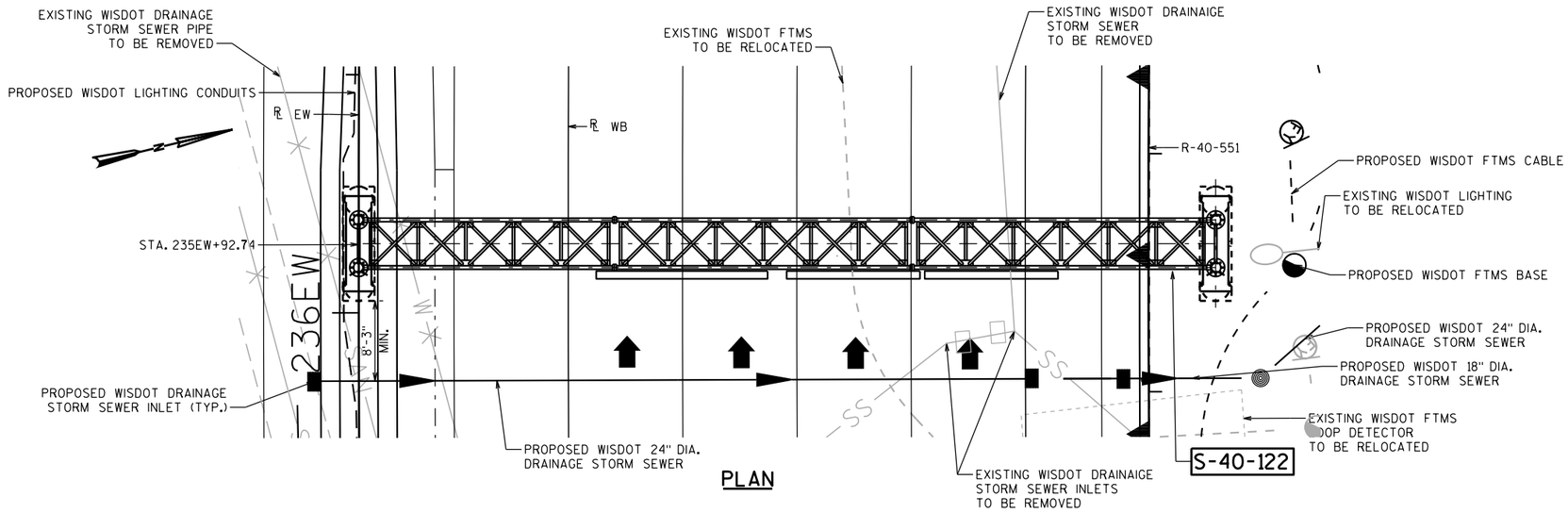
S-40-121
GENERAL PLAN
& ELEVATION

SHEET 11 OF 24

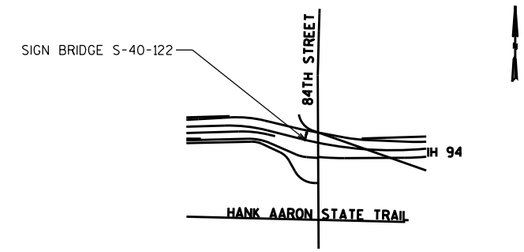
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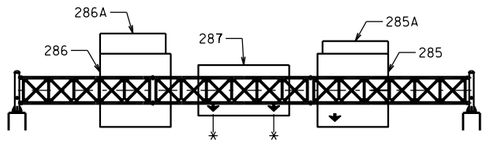
STATE PROJECT NUMBER
1060-33-80



PLAN

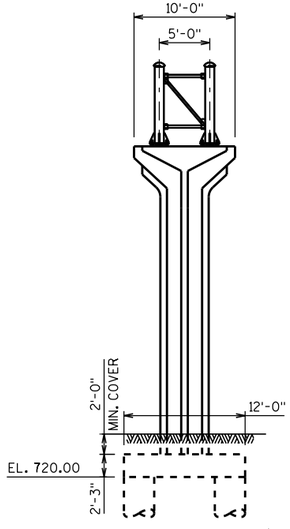


LOCATION MAP

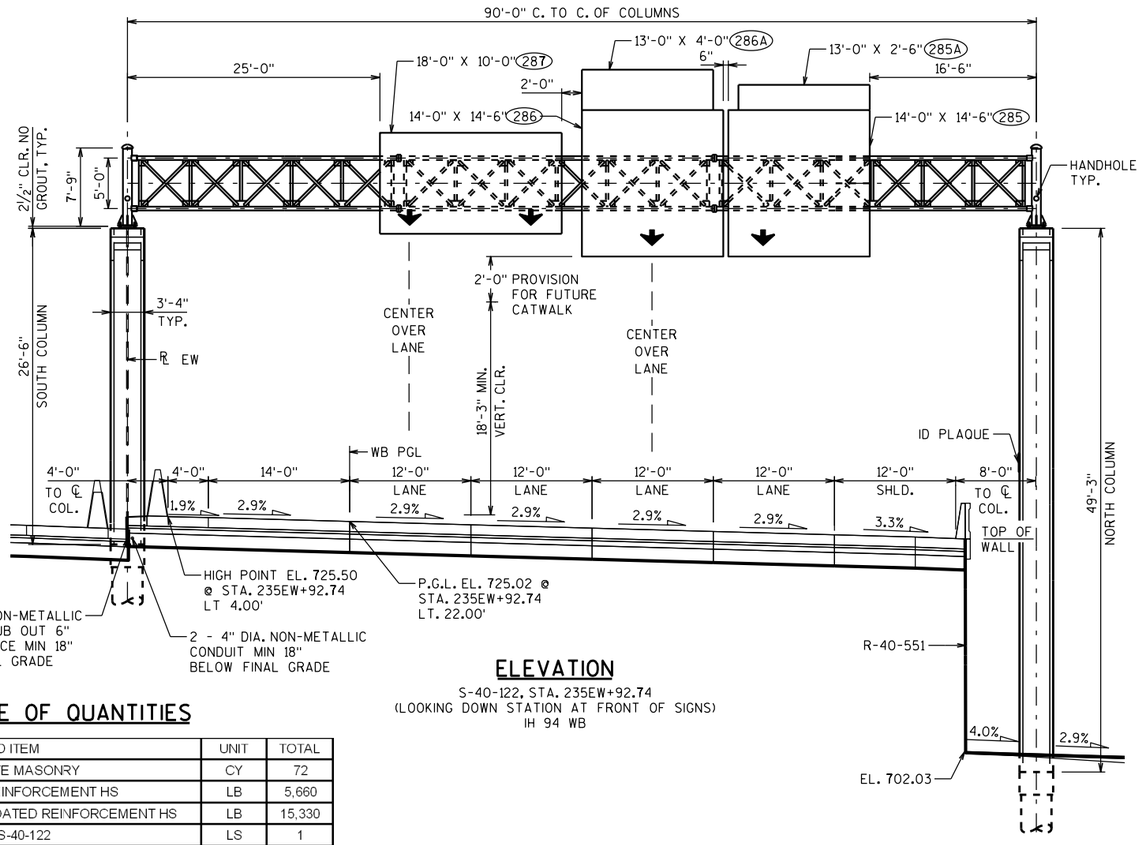


SIGN CONFIGURATION AT PROJECT COMPLETION

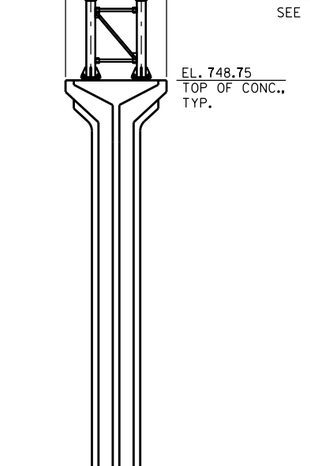
SEE TRAFFIC CONTROL - CONSTRUCTION DETAILS FOR SIGN SIZES & PLACEMENT
* CENTER ARROWS OVER INTERIM LANE CONFIGURATION



SIDE VIEW
SOUTH COLUMN



ELEVATION
S-40-122, STA. 235EW+92.74
(LOOKING DOWN STATION AT FRONT OF SIGNS)
IH 94 WB



SIDE VIEW
NORTH COLUMN

PROPOSED CONSTRUCTION STAGING
1. BUILD NORTH COLUMN FOUNDATION
2. BUILD WALL R-40-551
3. BUILD NORTH COLUMN & BUILD SOUTH FOUNDATION & COLUMN
4. ERECT SIGN TRUSS

LEGEND
(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-122 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	72
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	15,330
641.6600.0013	SIGN BRIDGE STRUCTURE S-40-122	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4170

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

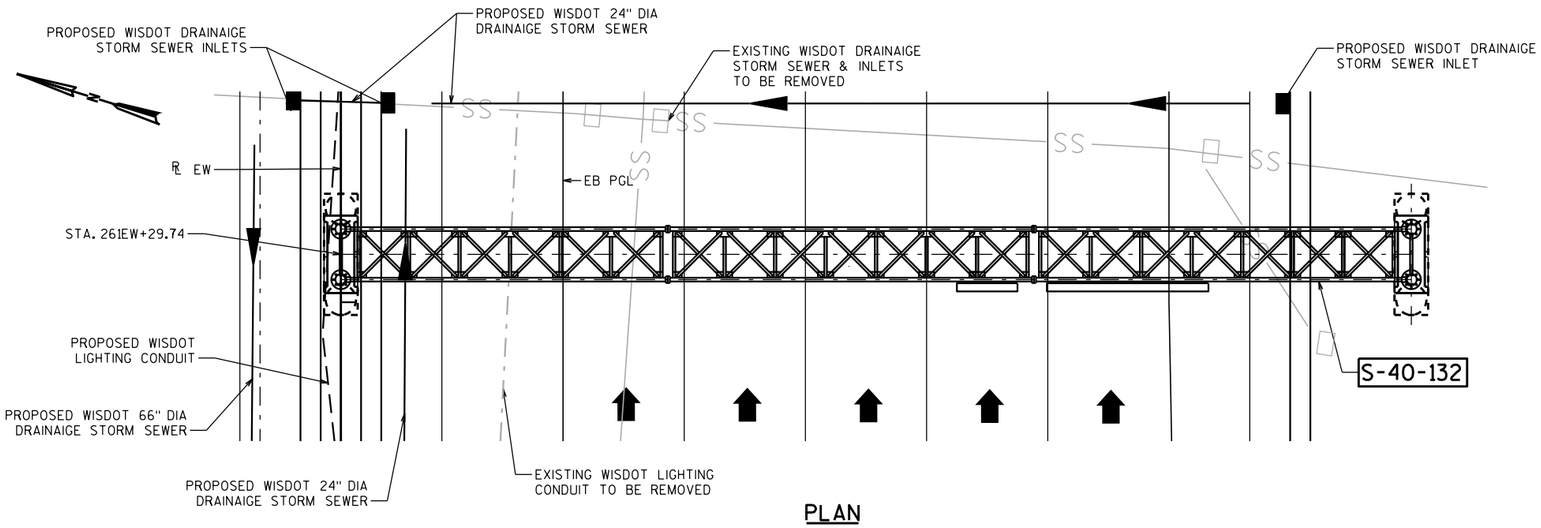
DRAWN BY AG | PLANS CK'D. STB

S-40-122
GENERAL PLAN
& ELEVATION

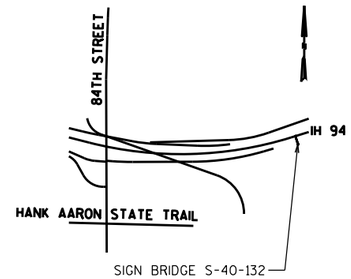
SHEET 12 OF 24

8

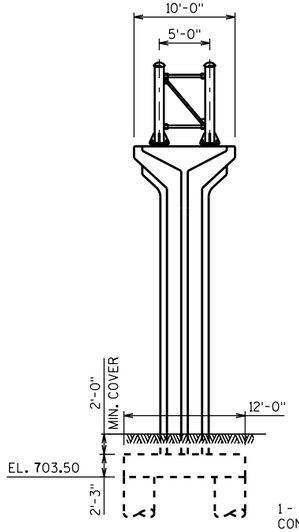
STATE PROJECT NUMBER
1060-33-80



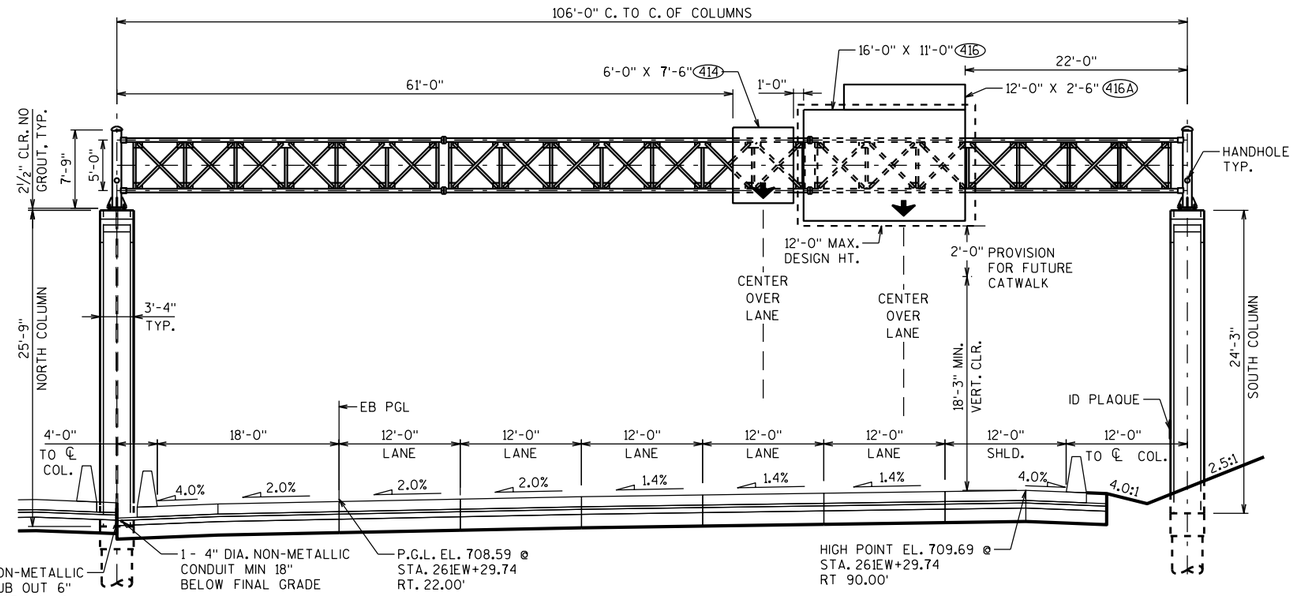
PLAN



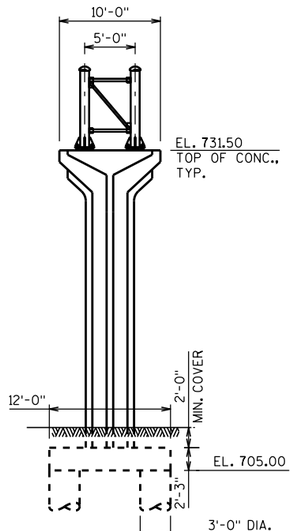
LOCATION MAP



SIDE VIEW
NORTH COLUMN



ELEVATION
S-40-132, STA. 261EW+29.74
(LOOKING UP STATION AT FRONT OF SIGNS)
IH 94 EB



SIDE VIEW
SOUTH COLUMN

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

S-40-132 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	58
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	8,730
641.6600.0014	SIGN BRIDGE STRUCTURE S-40-132	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4220

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

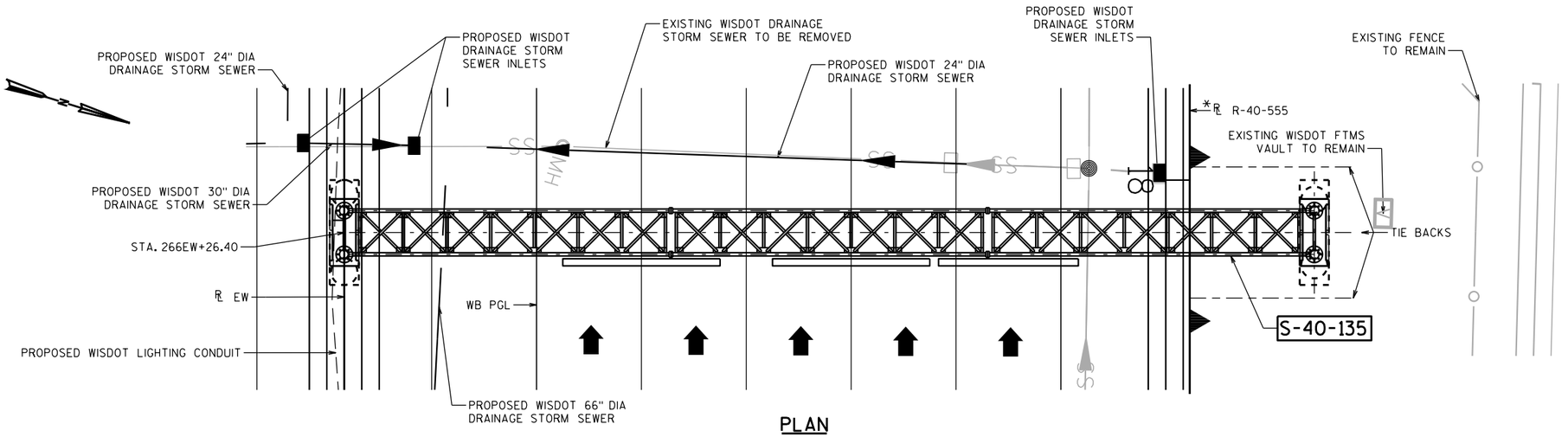
DRAWN BY AG | PLANS CK'D. STB

S-40-132
GENERAL PLAN
& ELEVATION

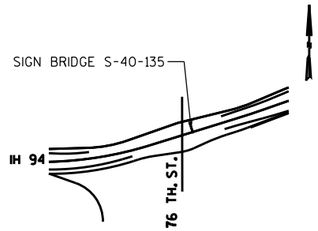
SHEET 13 OF 24

8

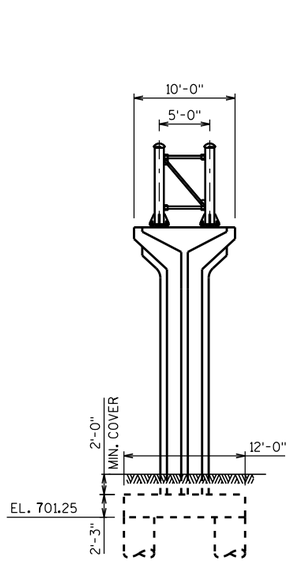
STATE PROJECT NUMBER
1060-33-80



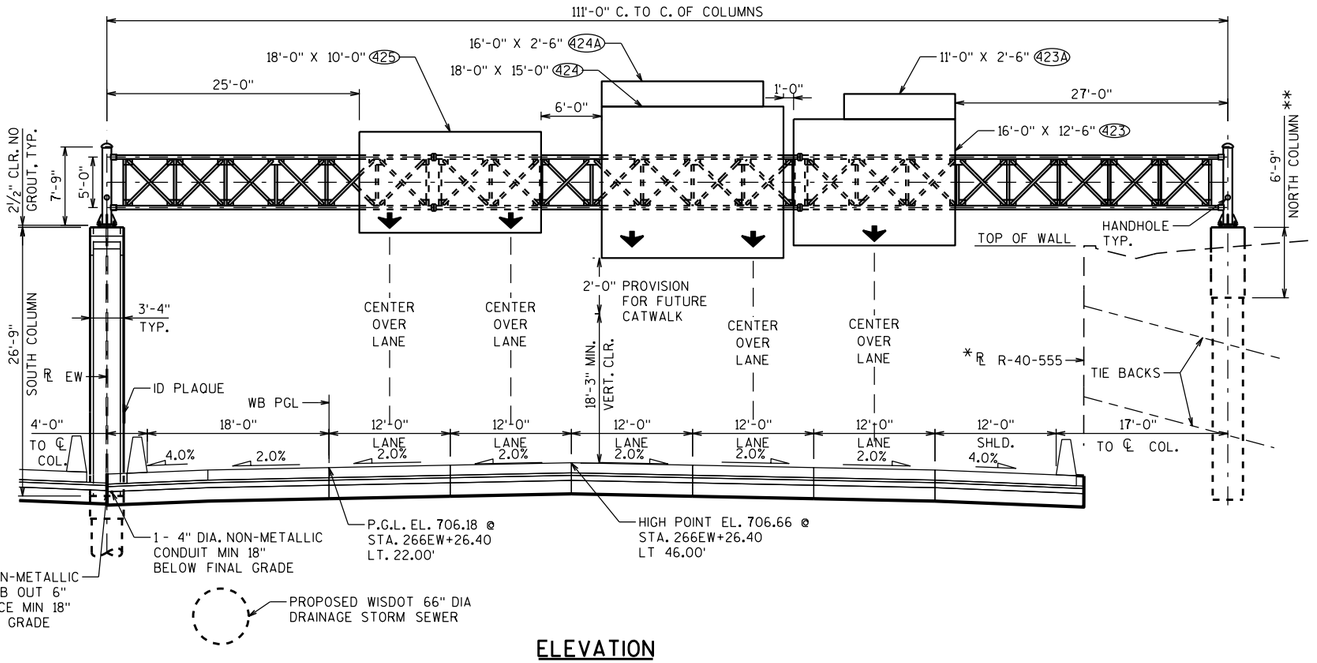
PLAN



LOCATION MAP



SIDE VIEW
SOUTH COLUMN

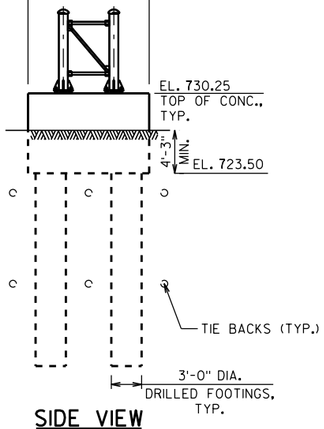


ELEVATION

S-40-135, STA. 266EW+26.40
(LOOKING DOWN STATION AT FRONT OF SIGNS)
IH 94 WB

* SEE R-40-555 PLANS (1060-33-78) FOR TIEBACK LOCATIONS

** CONSTRUCT NORTH COLUMN PRIOR TO SOUTH COLUMN TO ENSURE FOUNDATION ALIGNMENT



SIDE VIEW
** NORTH COLUMN

S-40-135 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	51
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,550
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	6,860
641.6600.0015	SIGN BRIDGE STRUCTURE S-40-135	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4240

PROPOSED CONSTRUCTION STAGING

R-40-555 TO BE BUILT IN PREVIOUS CONTRACT
1. EXPLORE TIE BACK LOCATIONS
2. ADJUST DRILLED FOOTINGS IF NEEDED TO AVOID TIE BACKS
3. BUILD DRILLED FOOTINGS
4. BUILD NORTH FOUNDATION, ADJUST IF NEEDED TO CENTER FOUNDATION UNDER SIGN TRUSS SUPPORTS
5. BUILD SOUTH FOUNDATION & COLUMN, ENSURE NORTH & SOUTH TRUSS SUPPORTS ALIGN
6. ERECT SIGN TRUSS

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

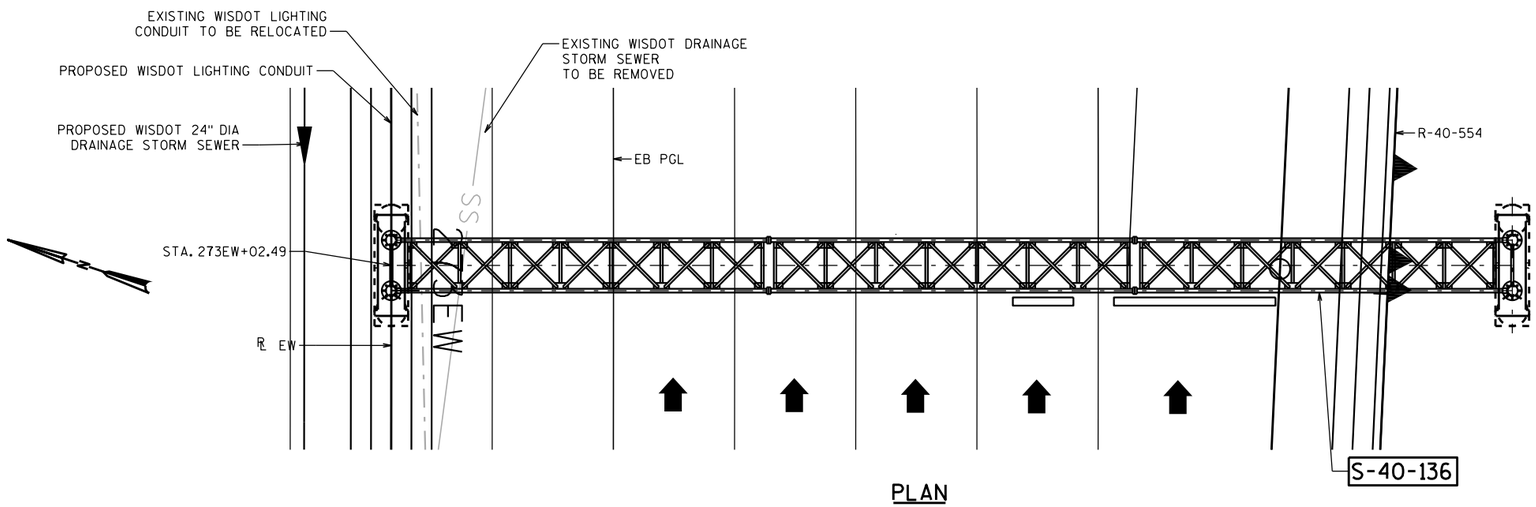
S-40-135
GENERAL PLAN
& ELEVATION

SHEET 14 OF 24

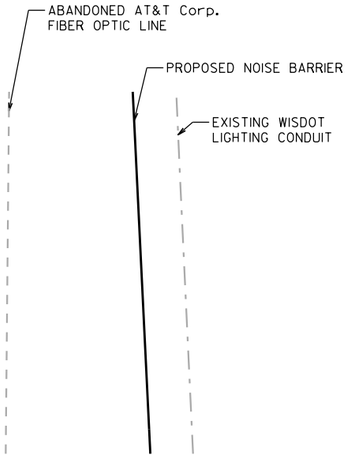
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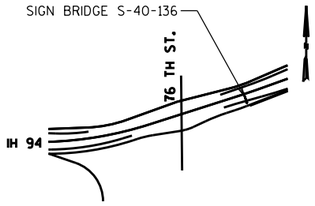
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PLOT NAME : S-40-135_114_gp
PLOT SCALE : 15:1

STATE PROJECT NUMBER
1060-33-80

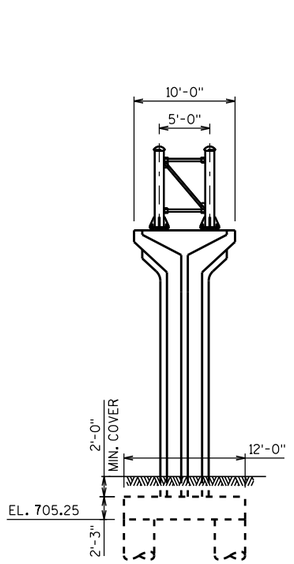


PLAN

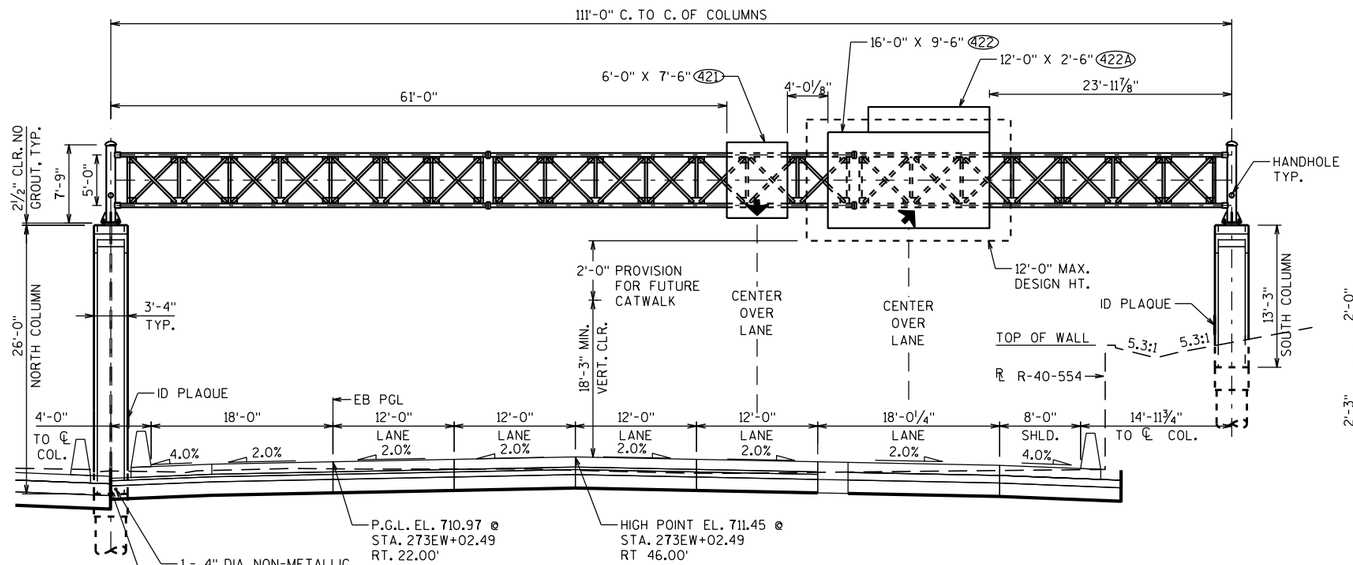




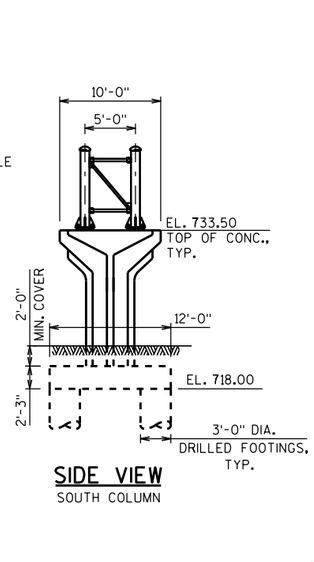
LOCATION MAP



SIDE VIEW
NORTH COLUMN



ELEVATION
S-40-136, STA. 273EW+02.49
(LOOKING UP STATION AT FRONT OF SIGNS)
IH 94 EB



SIDE VIEW
SOUTH COLUMN

S-40-136 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	53
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	5,660
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	9,740
641.6600.0016	SIGN BRIDGE STRUCTURE S-40-136	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4250

LEGEND

(xxx) SIGN NUMBERS (PERMANENT SIGNING PLAN)

PROPOSED CONSTRUCTION STAGING
R-40-554 TO BE BUILT IN PREVIOUS CONTRACT
1. BUILD NORTH & SOUTH FOUNDATIONS
2. ERECT SIGN TRUSS

NO.	DATE	REVISION	BY

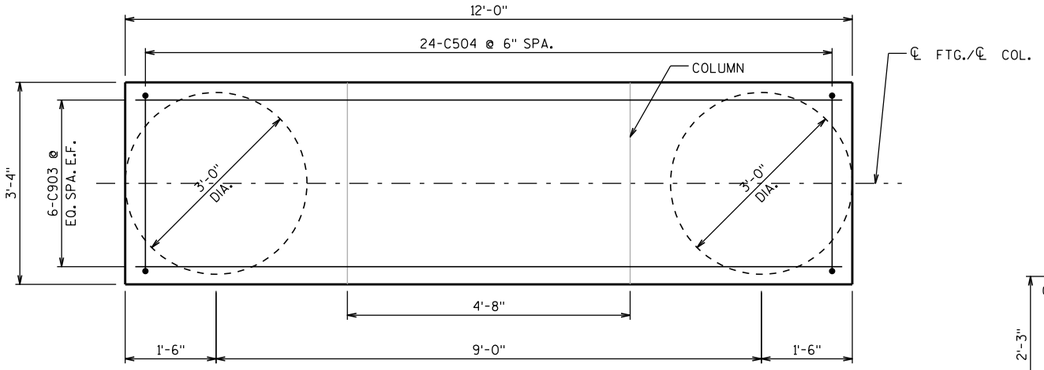
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

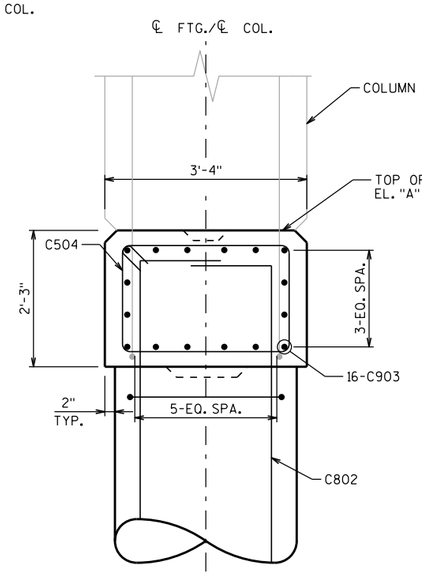
DRAWN BY AG | PLANS CK'D. STB

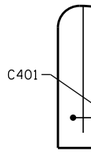
S-40-136
GENERAL PLAN
& ELEVATION

SHEET 15 OF 24

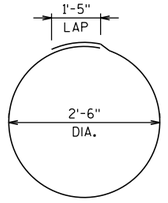


PLAN





END VIEW



C401

TABLE OF ELEVATIONS

STRUCTURE	COLUMN	EL. "A"
S-40-22	WEST	789.50
S-40-22	EAST	783.00
S-40-27	WEST	797.00
S-40-27	EAST	794.50
S-40-44	EAST	760.50
S-40-44	WEST	775.50
S-40-47	EAST	749.50
S-40-47	WEST	761.25
S-40-50	EAST	743.50
S-40-50	WEST	740.50
S-40-51	EAST	752.50
S-40-51	WEST	760.00
S-40-87	SOUTH	746.75
S-40-87	NORTH	746.25
S-40-116	SOUTH	726.69
S-40-117	SOUTH	739.64
S-40-121	SOUTH	715.00
S-40-122	SOUTH	722.25
S-40-122	NORTH	699.50
S-40-132	NORTH	705.75
S-40-132	SOUTH	710.50
S-40-135	SOUTH	703.50
S-40-136	NORTH	707.50
S-40-136	SOUTH	720.25

NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR ONE FOOTING OF ONE SIGN STRUCTURE. APPLIES TO S-40-22, S-40-27, S-40-44 EAST FOOTING, S-40-47, S-40-50, S-40-51, S-40-87, S-40-116, S-40-117, S-40-121, S-40-122, S-40-132, S-40-135 SOUTH FOOTING & S-40-136 FOR ONE OR BOTH FOOTINGS.

SECOND BILL OF BARS SHOWN IS ONLY FOR S-40-44 WEST FOOTING.

ORIENT HORIZONTAL LEGS OF C802 BARS PARALLEL TO C504 STIRRUPS.

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY ——— f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 psi

FOUNDATION DATA

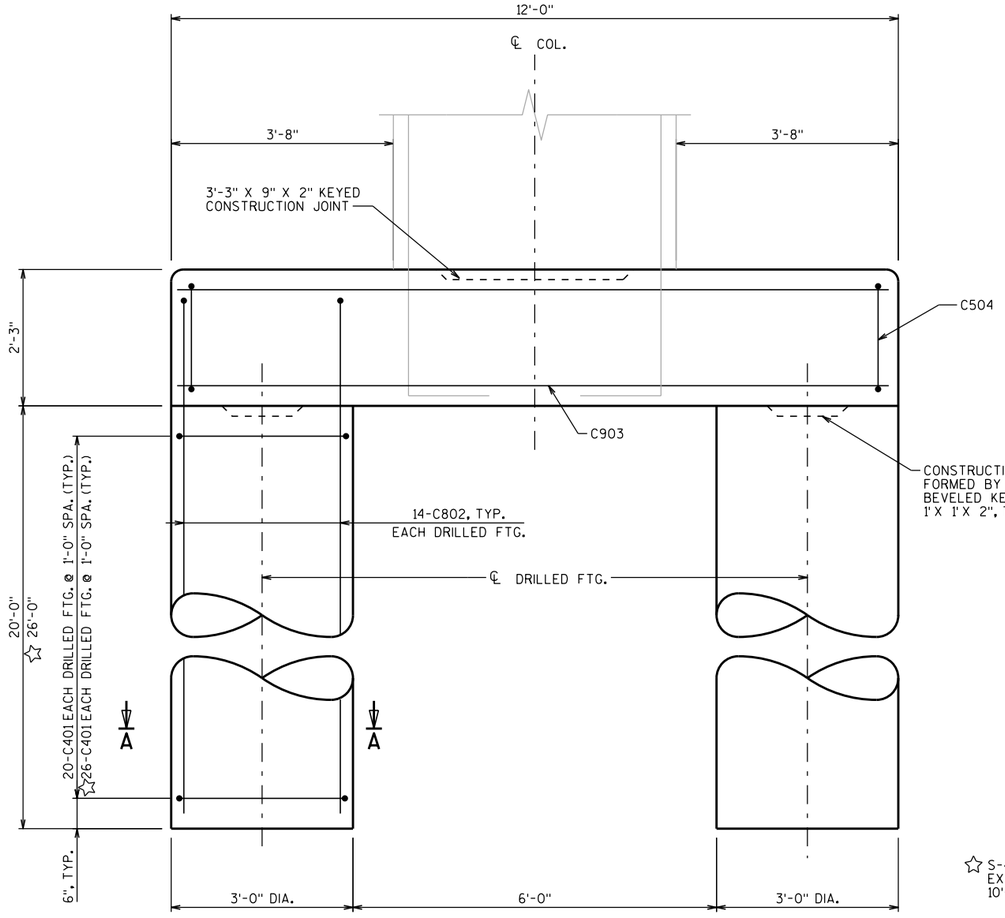
THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF
ALLOWABLE SOIL SKIN FRICTION - 400 PSF
SOIL COHESION - 1,200 PSF
ASSUMED SOIL FRICTION ANGLE - 30 DEGREES

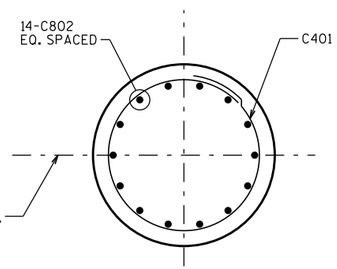
BILL OF BARS

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C401		40	9'- 4"	X		DRILLED FOOTING - HOOPS
C802		28	22'- 10"	X		DRILLED FOOTING - VERTICAL
C903		16	11'- 6"			FOOTING - LONGITUDINAL
C504		24	9'- 10"	X		FOOTING - TIES

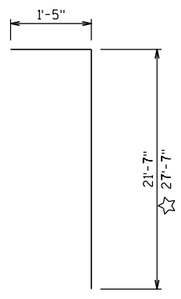


ELEVATION

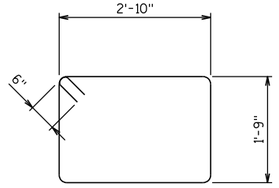


SECTION A-A

☆ S-40-44 WEST FOOTING ONLY
EXTEND S-40-44 DRILLED FOOTINGS
10'-0" MIN. INTO ORIGINAL GRADE.



C802



C504

☆ BILL OF BARS

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C401		52	9'- 4"	X		DRILLED FOOTING - HOOPS
C802		28	28'- 10"	X		DRILLED FOOTING - VERTICAL
C903		16	11'- 6"			FOOTING - LONGITUDINAL
C504		24	9'- 10"	X		FOOTING - TIES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/116/117/121/122/132/135/136

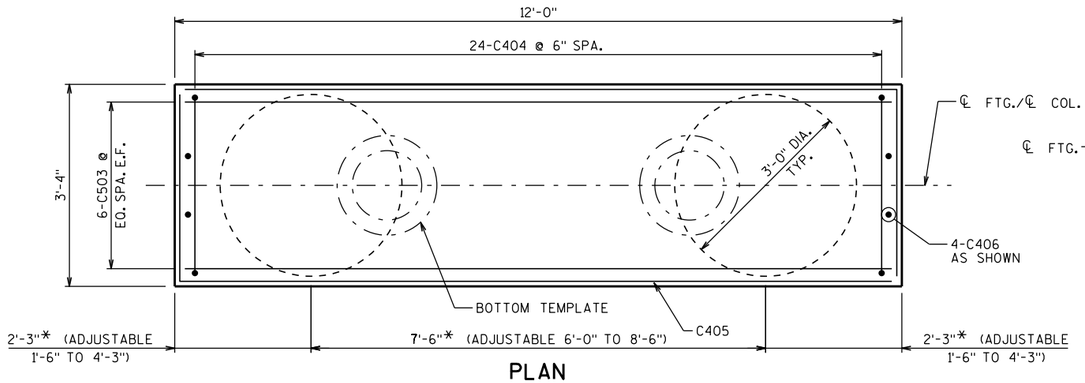
DRAWN BY AG | PLANS CK'D. STB

FOOTING DETAILS

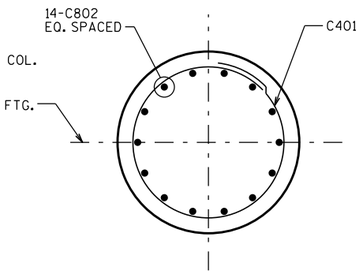
SHEET 16 OF 24

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PLOT BY : MSCAYG
PLOT NAME : S-40-Core1_301_ft1
PLOT SCALE : 2.5:1

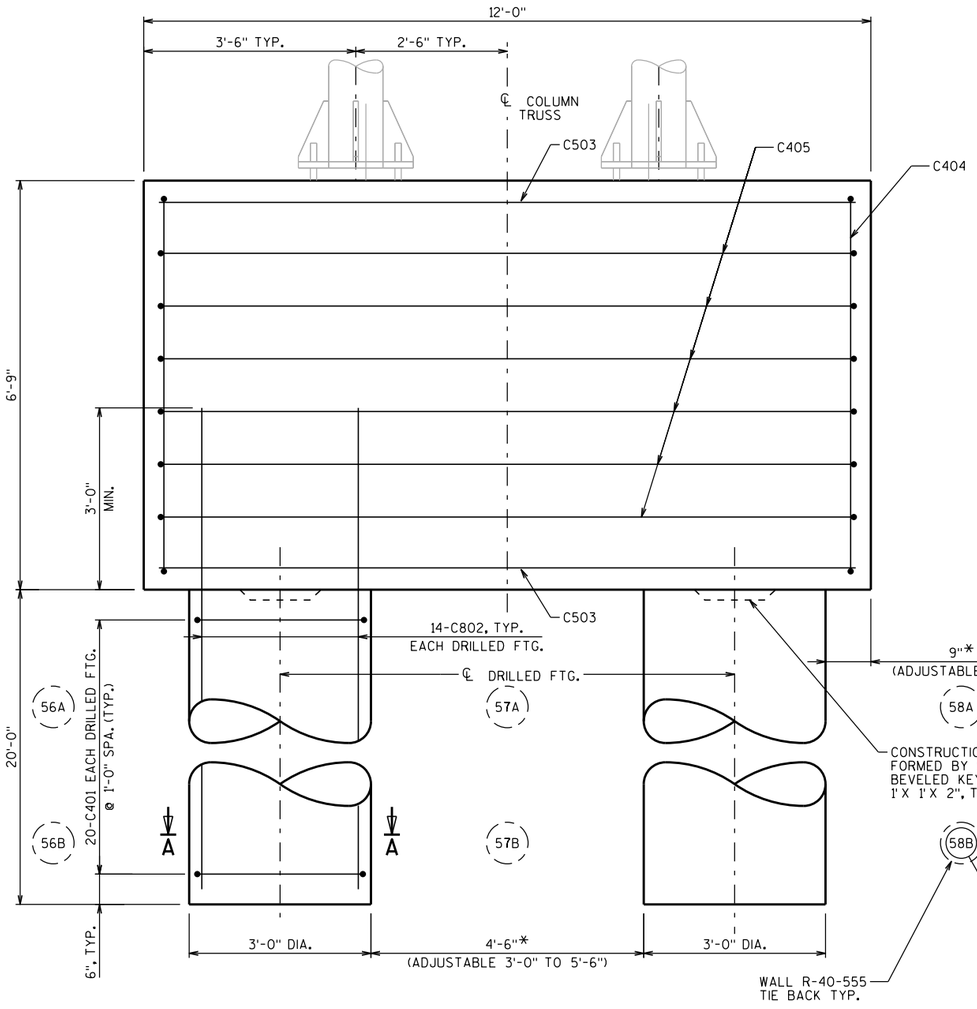
STATE PROJECT NUMBER
1060-33-80



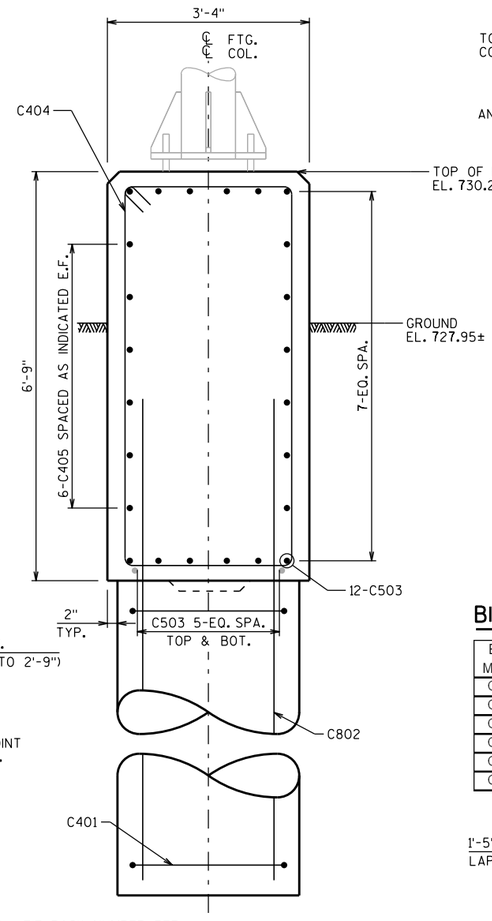
PLAN



SECTION A-A



ELEVATION



END VIEW

NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR S-40-135 NORTH FOOTING.

☆ PRIOR TO DRILLING OR EXCAVATING FOR SIGN SUPPORT FOUNDATION FOR S-40-135, LOCATE THE TIEBACK ANCHORS FOR WALL R-40-555 IN THE VICINTITY OF TEH SIGN SUPPORT FOUNDATION USING THE UTILITY LOCATE ITEM INCLUDED IN THE CONTRACT. CENTER DRILLED FOOTINGS BETWEEN TIE BACKS. MAINTAIN A MINIMUM DRILLED FOOTING SPACING OF 6'-0".

* IDEAL DRILLED SHAFT SPACING AND PLACEMENT SHOWN. DIMENSIONS IN PARENTHESIS SHOW ALLOWABLE ADJUSTMENTS TO AVOID TIE BACKS AND TO CENTER FOOTING UNDER STEEL COLUMNS.

ULTIMATE DESIGN STRESSES

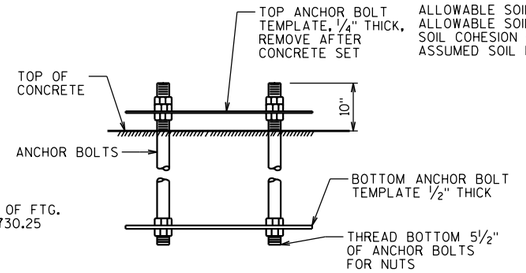
CONCRETE MASONRY ——— f'c=4,000 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 psi

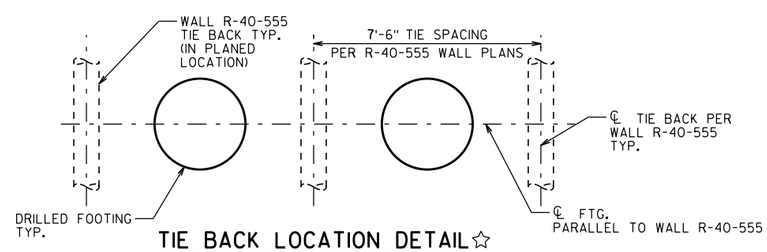
FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF
ALLOWABLE SOIL SKIN FRICTION - 400 PSF
SOIL COHESION - 1,200 PSF
ASSUMED SOIL FRICTION ANGLE - 30 DEGREES



ANCHOR BOLT DETAILS

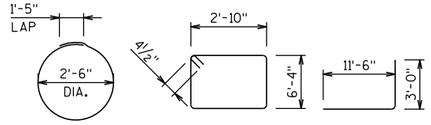


TIE BACK LOCATION DETAIL ☆

BILL OF BARS

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C401		40	9'- 4"	X		DRILLED FOOTING - HOOPS
C802		28	23'- 0"			DRILLED FOOTING - VERTICAL
C503		12	11'- 6"			FOOTING - LONGITUDINAL
C404		24	18'- 10"	X		FOOTING - CROSS TIES
C405		12	14'- 5"	X		FOOTING - LONGITUDINAL TIES
C406		4	6'- 3"			FOOTING - END BARS



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/116/117/121/122/132/135/136

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S-40-135
FOOTING DETAILS

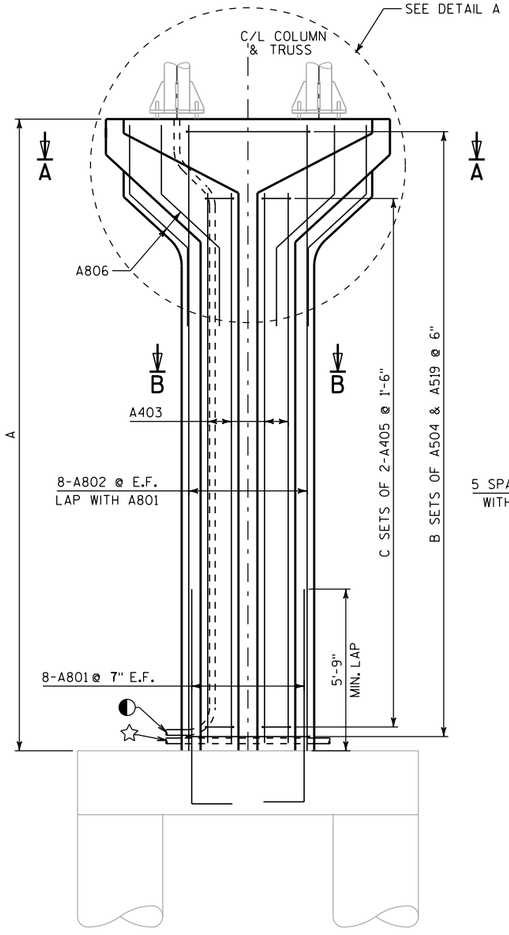
SHEET 17 OF 24

8

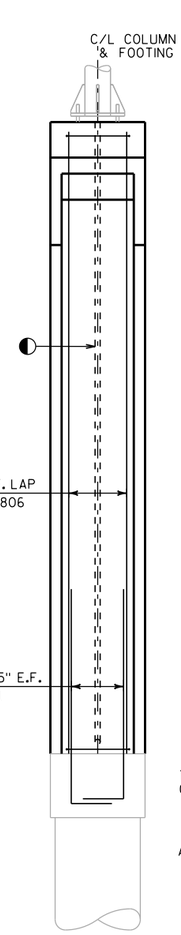
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STATE PROJECT NUMBER

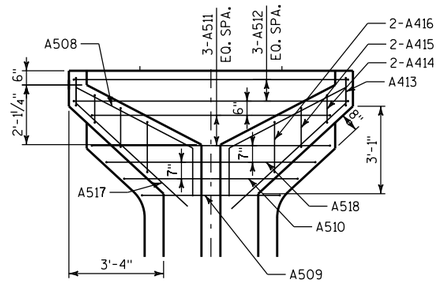
1060-33-80



ELEVATION

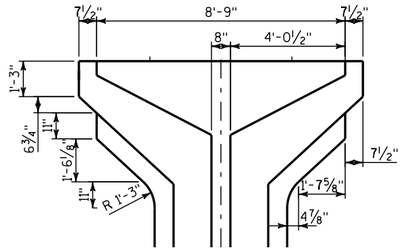


END VIEW

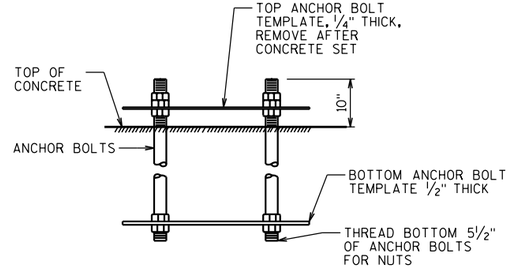


DETAIL A

SECONDARY REINFORCEMENT SHOWN ONLY



DETAIL AT TOP OF COLUMN



ANCHOR BOLT DETAILS

NOTES

THE INFORMATION ON THIS SHEET APPLIES TO S-40-27, S-40-44, S-40-47, S-40-50, S-40-51, S-40-87, S-40-116, S-40-122, S-132 & S-40-136.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR FOOTINGS AND 2" CLEAR FOR CONCRETE COLUMN.

BILL OF BARS SHOWN IS ONLY FOR ONE COLUMN OF ONE SIGN STRUCTURE. THIS SHEETS APPLIES TO COLUMNS INDICATED IN TABLE OF VARIABLES.

◐ 1-2" DIA. NON-METALLIC CONDUIT UNDER COLUMN WITH HANDHOLE (SEE LAYOUT SHEETS FOR LOCATIONS). EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY".

SEE SHEETS 16 & 17 FOR FOOTING AND DRILLED SHAFT DETAILS.

SEE RETAINING WALL R-40-548 FOR FOUNDATION DETAILS OF S-40-116, S-40-117 & S-40-121.

* TRIM OR BEND A802 AS REQUIRED TO PLACE THE BOTTOM TEMPLATE.

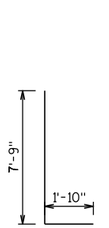
☆ ONE OR TWO 6'-0" LONG 4" DIA. NON-METALLIC CONDUIT IN MEDIAN COLUMNS ONLY. EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY". SEE LAYOUT SHEETS FOR LOCATIONS AND NUMBER OF CONDUITS.

BILL OF BARS

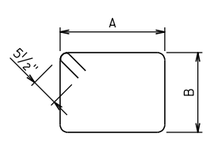
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
◭ A801	X	24	9'- 5"	X		COLUMN - VERTICAL
A802	X	24	A-2"			COLUMN - VERTICAL
A403	X	8	A-(2'-8")			COLUMN - VERTICAL
A504	X	B	14'- 0"	X		COLUMN - TIES
A405	X	4C	2'- 2"	X		COLUMN - TIES
A806	X	16	11'- 3"	X		COLUMN CAP
A507	X	6	18'- 8"	X		COLUMN CAP
A508	X	4	7'- 11"	X		COLUMN CAP
A509	X	1	14'- 6"	X		COLUMN CAP
A510	X	1	17'- 4"	X		COLUMN CAP
A511	X	3	22'- 2"	X		COLUMN CAP
A512	X	3	24'- 8"	X		COLUMN CAP
A413	X	2	8'- 6"	X		COLUMN CAP
A414	X	4	2'- 2"	X		COLUMN CAP
A415	X	4	2'- 7"	X		COLUMN CAP
A416	X	4	3'- 0"	X		COLUMN CAP
A517	X	4	5'- 6"			COLUMN CAP
A518	X	1	19'- 10"	X		COLUMN CAP
A519	X	2B	3'- 2"	X		COLUMN - TIES

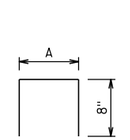
NOTE: REINFORCEMENT SHOWN IS FOR (1) COLUMN
"A" DENOTES COLUMN HEIGHT, "A" MINUS 2" EQUALS TOTAL LENGTH OF BAR.
"4C" DENOTES 4 TIMES "C" NO. OF BARS
SEE TABLE OF VARIABLES FOR "A", "B" & "C".
◭ FOR S-40-116 NORTH COLUMN A801 ARE PROVIDED IN R-40-548 FOR PLACEMENT AND COST.



A801

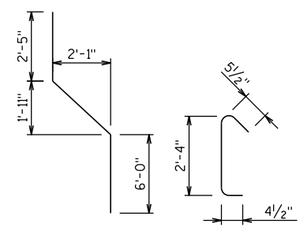


BAR MARK	DIM. 'A'	DIM. 'B'
A504	4'-4"	2'-4"
A509	4'-7"	2'-4"
A510	6'-0"	2'-4"
A511	8'-5"	2'-4"
A512	9'-8"	2'-4"
A413	3'-0"	1'-0"
A518	7'-3"	2'-4"

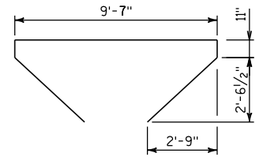


BAR MARK	DIM. 'A'
A405	1'-0"
A414	1'-0"
A415	1'-5"
A416	1'-10"

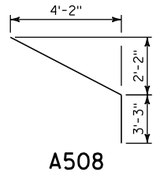
A806



A519

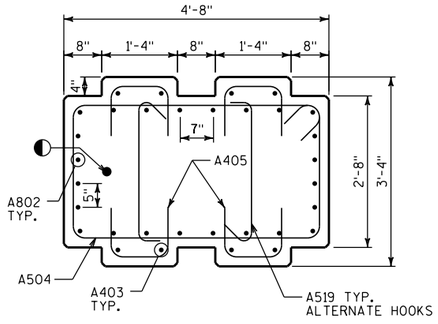


A507

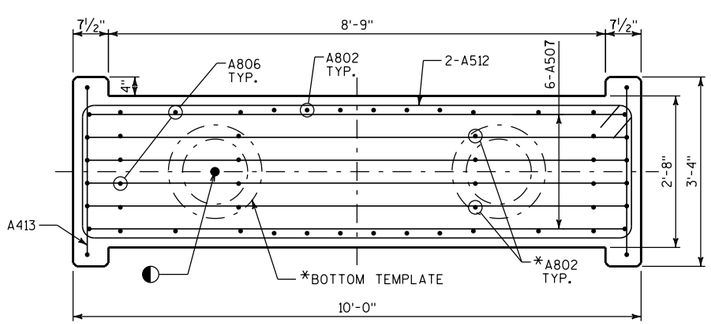


A508

BENDING DIAGRAMS



SECTION B-B



SECTION A-A

TABLE OF VARIABLES

STRUCTURE	COLUMN	A	B	C	CONDUIT LENGTH ◐
S-40-27	WEST	25'-9"	52	17	
S-40-27	EAST	28'-3"	57	18	31'-0"
S-40-44	WEST	10'-6"	21	6	
S-40-47	WEST	14'-3"	29	9	
S-40-50	EAST	25'-0"	51	16	27'-0"
S-40-50	WEST	28'-0"	57	18	
S-40-51	WEST	19'-0"	39	12	
S-40-87	SOUTH	25'-6"	52	17	
S-40-87	NORTH	26'-0"	53	17	28'-0"
S-40-116	NORTH	14'-0"	29	9	
S-40-122	SOUTH	26'-6"	54	17	
S-40-132	NORTH	25'-9"	52	17	28'-0"
S-40-132	SOUTH	24'-3"	49	16	
S-40-136	SOUTH	13'-3"	27	8	

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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S-40-22/27/44/47/50/51/87/ 116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

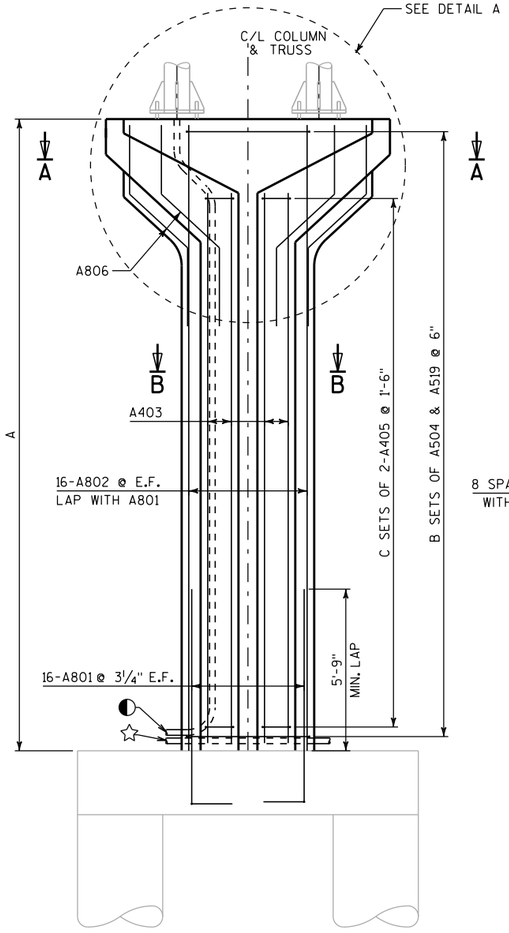
COLUMN DETAILS - 1

SHEET 18 OF 24

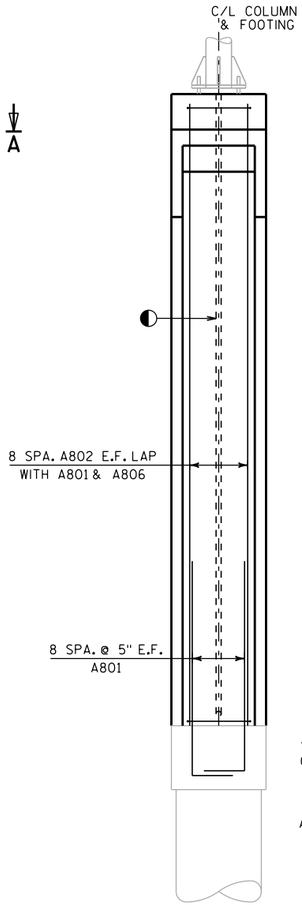
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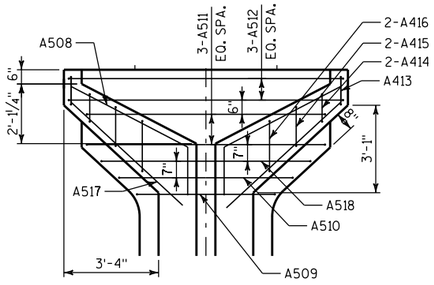
STATE PROJECT NUMBER
1060-33-80



ELEVATION

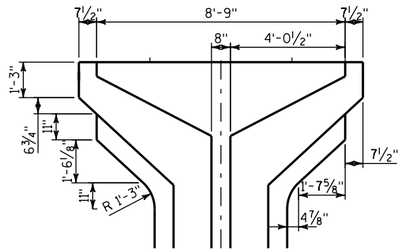


END VIEW

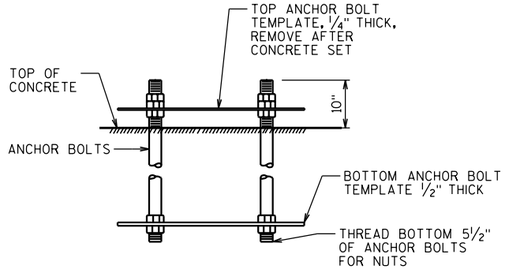


DETAIL A

SECONDARY REINFORCEMENT SHOWN ONLY



DETAIL AT TOP OF COLUMN



ANCHOR BOLT DETAILS

NOTES

THE INFORMATION ON THIS SHEET APPLIES TO S-40-27, S-40-44, S-40-47, S-40-50, S-40-51, S-40-87, S-40-116, S-40-122, S-132 & S-40-136.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR FOOTINGS AND 2" CLEAR FOR CONCRETE COLUMN.

BILL OF BARS SHOWN IS ONLY FOR ONE COLUMN OF ONE SIGN STRUCTURE. THIS SHEETS APPLIES TO COLUMNS INDICATED IN TABLE OF VARIABLES.

◐ 1-2" DIA. NON-METALLIC CONDUIT UNDER COLUMN WITH HANDHOLE (SEE LAYOUT SHEETS FOR LOCATIONS). EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY".

SEE SHEETS 16 & 17 FOR FOOTING AND DRILLED SHAFT DETAILS.

SEE RETAINING WALL R-40-548 FOR FOUNDATION DETAILS OF S-40-116, S-40-117 & S-40-121.

* TRIM OR BEND A802 AS REQUIRED TO PLACE THE BOTTOM TEMPLATE.

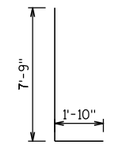
☆ ONE 6'-0" LONG 4" DIA. NON-METALLIC CONDUIT IN MEDIAN COLUMNS ONLY. EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY". SEE LAYOUT SHEETS FOR LOCATIONS.

BILL OF BARS

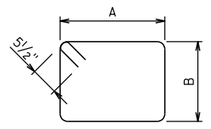
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A801	X	46	9'- 5"	X		COLUMN - VERTICAL
A802	X	46	A-2"			COLUMN - VERTICAL
A403	X	8	A-(2'-8")			COLUMN - VERTICAL
A504	X	B	14'- 0"	X		COLUMN - TIES
A405	X	4C	2'- 2"	X		COLUMN - TIES
A806	X	22	11'- 3"	X		COLUMN CAP
A507	X	6	18'- 8"	X		COLUMN CAP
A508	X	4	7'- 11"	X		COLUMN CAP
A509	X	1	14'- 6"	X		COLUMN CAP
A510	X	1	17'- 4"	X		COLUMN CAP
A511	X	3	22'- 2"	X		COLUMN CAP
A512	X	3	24'- 8"	X		COLUMN CAP
A413	X	2	8'- 6"	X		COLUMN CAP
A414	X	4	2'- 2"	X		COLUMN CAP
A415	X	4	2'- 7"	X		COLUMN CAP
A416	X	4	3'- 0"	X		COLUMN CAP
A517	X	4	5'- 6"			COLUMN CAP
A518	X	1	19'- 10"	X		COLUMN CAP
A519	X	2B	3'- 2"	X		COLUMN - TIES

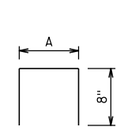
NOTE: REINFORCEMENT SHOWN IS FOR (1) COLUMN
"A" DENOTES COLUMN HEIGHT, "A" MINUS 2" EQUALS TOTAL LENGTH OF BAR.
"4C" DENOTES 4 TIMES "C" NO. OF BARS
SEE TABLE OF VARIABLES FOR "A", "B" & "C".



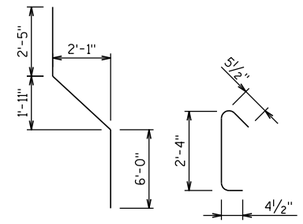
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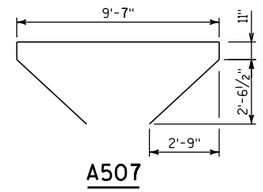
BAR MARK	DIM. 'A'	DIM. 'B'
A504	4'-4"	2'-4"
A509	4'-7"	2'-4"
A510	6'-0"	2'-4"
A511	8'-5"	2'-4"
A512	9'-8"	2'-4"
A413	3'-0"	1'-0"
A518	7'-3"	2'-4"



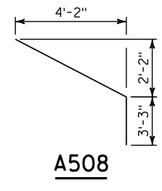
BAR MARK	DIM. 'A'
A405	1'-0"
A414	1'-0"
A415	1'-5"
A416	1'-10"



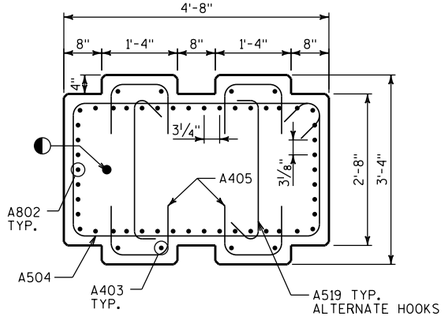
A806 A519



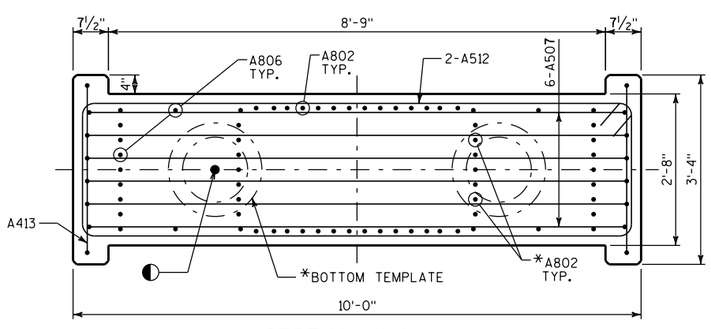
A507



A508



SECTION B-B



SECTION A-A

TABLE OF VARIABLES

STRUCTURE	COLUMN	A	B	C	CONDUIT LENGTH ◐
S-40-22	WEST	27'-0"	55	18	29'-0"
S-40-22	EAST	33'-6"	68	22	
S-40-44	EAST	21'-0"	43	14	23'-0"
S-40-47	EAST	26'-0"	53	17	28'-0"
S-40-51	EAST	26'-6"	54	17	29'-0"
S-40-116	SOUTH	25'-3"	51	16	28'-0"
S-40-117	SOUTH	29'-6"	60	19	32'-0"
S-40-121	SOUTH	27'-3"	55	18	30'-0"
S-40-122	NORTH	49'-3"	99	32	
S-40-135	SOUTH	26'-9"	54	17	29'-0"
S-40-136	NORTH	26'-0"	53	17	28'-0"

BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/ 116/117/121/122/132/135/136

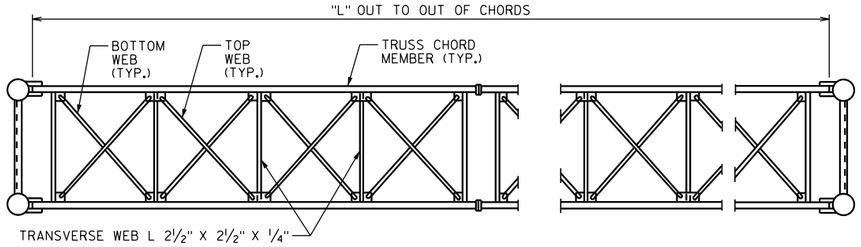
DRAWN BY AG | PLANS CK'D. STB

COLUMN DETAILS - 2

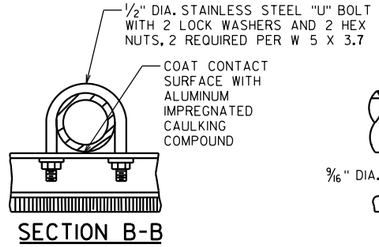
SHEET 19 OF 24

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - full span\S-40-Core1_304_cn2.dgn PLOT DATE : 01-MAY-2014 09:45 PLOT BY : MSCAYG PLOT NAME : S-40-Core1_304_cn2 PLOT SCALE : 5.333333:1

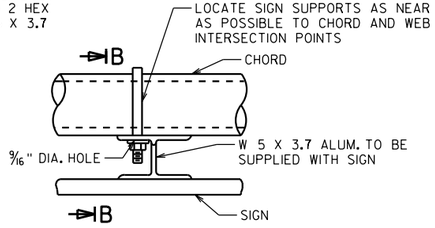
STATE PROJECT NUMBER
1060-33-80



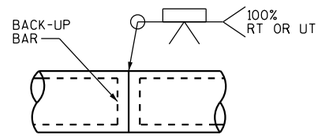
PLAN



SECTION B-B

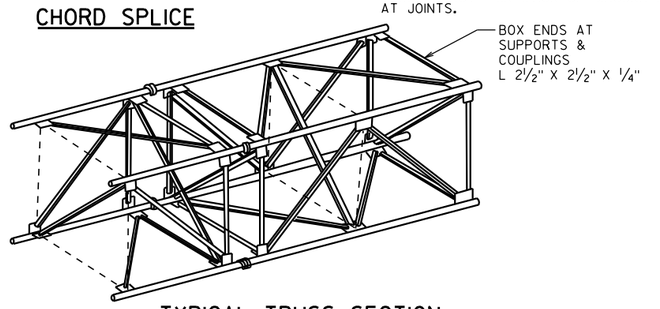


TYPICAL SIGN CONNECTION

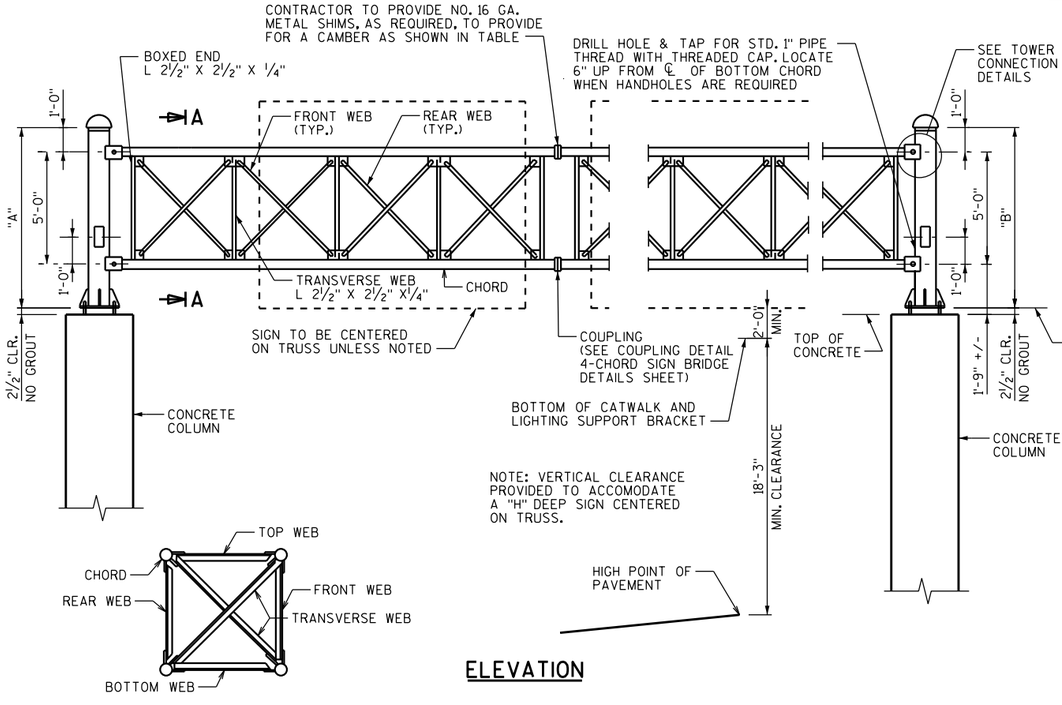


CHORD SPLICE

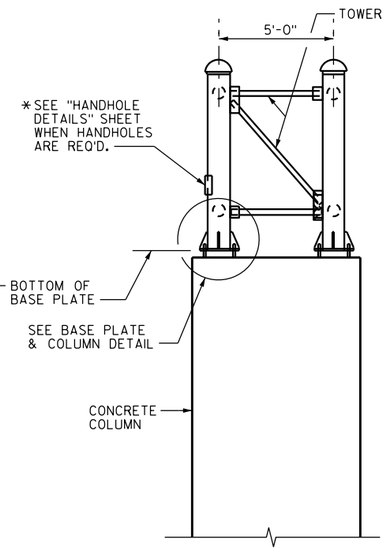
THE GENERAL PATTERN SHOWN BELOW IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.



TYPICAL TRUSS SECTION



ELEVATION



END VIEW

SECTION A-A

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I.

ALL STEEL PIPE MEMBERS OF TRUSS SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I. PLATES, BARS, STRUCTURAL ANGLES SHALL BE A.S.T.M. A709 GRADE 36, Fy = 36,000 P.S.I.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 BOLTS, GALVANIZED A.S.T.M. A153, CLASS C.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

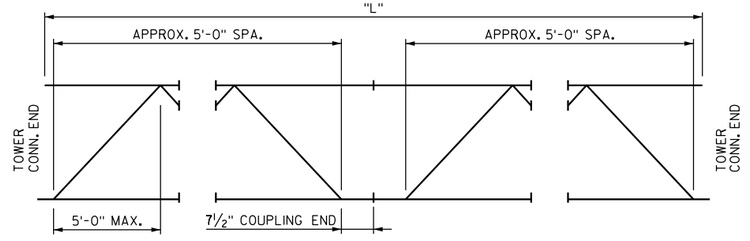
STEEL ANCHOR BOLTS SHALL BE A.A.S.H.T.O. M314-90 GRADE 55, Fy = 55,000 P.S.I.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN CL TO CL OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE A.A.S.H.T.O. SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

SEE 4-CHORD SIGN BRIDGE DETAILS FOR ADDITIONAL DETAILS



TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.

* PLACE ON COLUMN WHERE ELECTRICAL CONDUIT ENTERS.

TABLE

STRUCTURE	A	B	CHORDS O.D. x THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	CAMBER	COLUMN O.D. x THK.	TOWER WEBS	"L"	"H"
S-40-22	7'-9"	7'-9"	6.625" x 0.432"	L 3½" x 3½" x½"	L 3½" x 3½" x½"	3/8"	12.75" O.D. x 0.375"	L 3½" x 3½" x½"	109'-8¼"	12'-0"
S-40-27	7'-9"	7'-9"	5.563" x 0.258"	L 3½" x 3½" x⅜"	L 3½" x 3½" x⅜"	1½"	10.75" O.D. x 0.500"	L 3½" x 3½" x⅜"	72'-10¼"	13'-0"
S-40-44	**12'-3"	7'-9"	6.625" x 0.432"	L 3½" x 3½" x ½"	L 3½" x 3½" x ½"	3/8"	12.75" O.D. x 0.500"	L 4" x 4" x½"	119'-8¼"	12'-0"
S-40-47	7'-9"	7'-9"	6.625" x 0.432"	L 3½" x 3½" x½"	L 3½" x 3½" x½"	3/8"	12.75" O.D. x 0.375"	L 3½" x 3½" x½"	114'-8¼"	14'-0"
S-40-50	7'-9"	7'-9"	5.563" x 0.375"	L 3½" x 3½" x7/16"	L 3½" x 3½" x7/16"	2¾"	10.75" O.D. x 0.500"	L 3½" x 3½" x7/16"	105'-10¼"	12'-0"
S-40-51	7'-9"	7'-9"	6.625" x 0.500"	L 4" x 4" x½"	L 4" x 4" x½"	3⅝"	12.75" O.D. x 0.500"	L 4" x 4" x½"	119'-8¼"	15'-0"
S-40-87	7'-9"	7'-9"	4.000" x 0.250"	L 3" x 3" x⅜"	L 3" x 3" x⅜"	1"	10.75" O.D. x 0.365"	L 3" x 3" x⅜"	55'-1¼"	12'-0"
S-40-116	7'-9"	7'-9"	6.625" x 0.500"	L 4" x 4" x½"	L 4" x 4" x½"	3⅝"	12.75" O.D. x 0.500"	L 4" x 4" x½"	125'-11¼"	12'-0"
S-40-117	7'-9"	7'-9"	6.625" x 0.500"	L 4" x 4" x½"	L 4" x 4" x½"	3⅝"	12.75" O.D. x 0.500"	L 4" x 4" x½"	126'-2¼"	12'-0"
S-40-121	7'-9"	**15'-0"	6.625" x 0.500"	L 4" x 4" x½"	L 4" x 4" x½"	3⅝"	16.00" O.D. x 0.500"	L 4" x 4" x½"	125'-8"	12'-6"
S-40-122	7'-9"	7'-9"	5.563" x 0.375"	L 3½" x 3½" x⅜"	L 3½" x 3½" x⅜"	1¾"	10.75" O.D. x 0.500"	L 3½" x 3½" x⅜"	88'-10¼"	14'-6"
S-40-132	7'-9"	7'-9"	5.563" x 0.375"	L 3½" x 3½" x7/16"	L 3½" x 3½" x7/16"	2¾"	10.75" O.D. x 0.500"	L 3½" x 3½" x7/16"	104'-10¼"	12'-0"
S-40-135	7'-9"	7'-9"	6.625" x 0.432"	L 3½" x 3½" x½"	L 3½" x 3½" x½"	3/8"	12.75" O.D. x 0.375"	L 3½" x 3½" x½"	109'-8¼"	15'-0"
S-40-136	7'-9"	7'-9"	6.625" x 0.432"	L 3½" x 3½" x½"	L 3½" x 3½" x½"	3/8"	12.75" O.D. x 0.375"	L 3½" x 3½" x½"	109'-8¼"	12'-0"

** SEE CORRESPONDING GENERAL PLAN & ELEVATION SHEETS FOR NUMBER AND LOCATION OF TOWER WEBS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

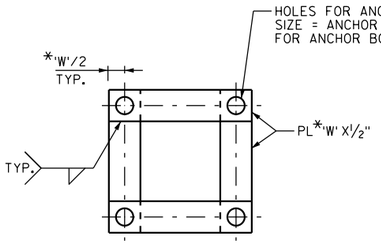
S-40-22/27/44/47/50/51/87/ 116/117/121/122/132/135/136

DRAWN BY AG | PLANS CK'D. STB

4-CHORD SIGN BRIDGE

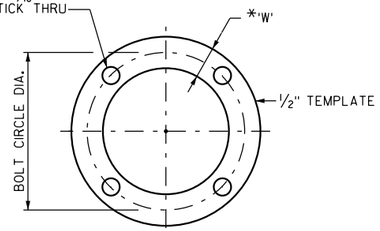
SHEET 20 OF 24

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1060-33-80



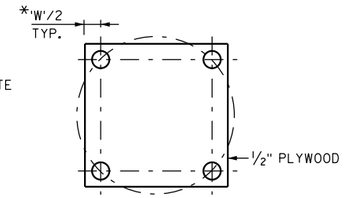
ALTERNATE STEEL ANCHOR PLATE/ TOP TEMPLATE PLAN

*'W' = 2 X (ANCHOR BOLT DIA.)



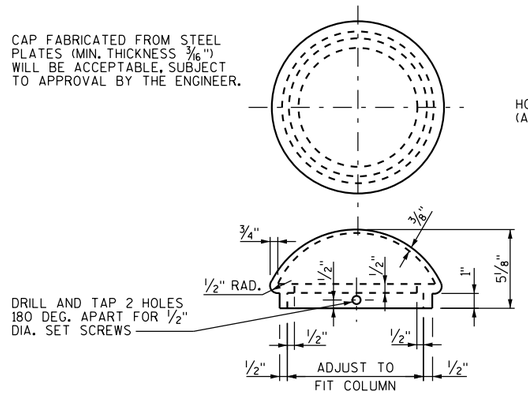
STEEL ANCHOR PLATE/ TOP TEMPLATE PLAN

*'W' = 2 X (ANCHOR BOLT DIA.)

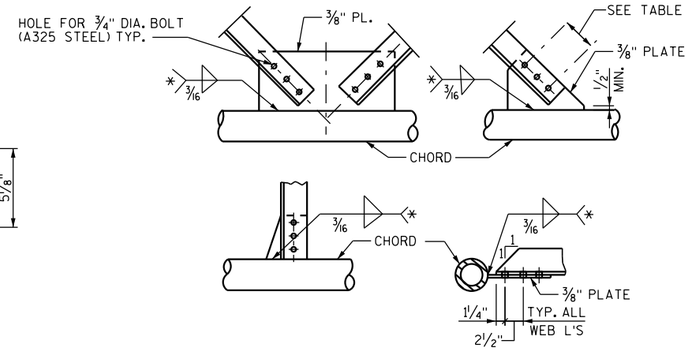


ALTERNATE TOP TEMPLATE PLAN

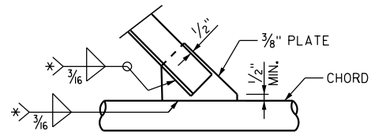
*'W' = 2 X (ANCHOR BOLT DIA.)



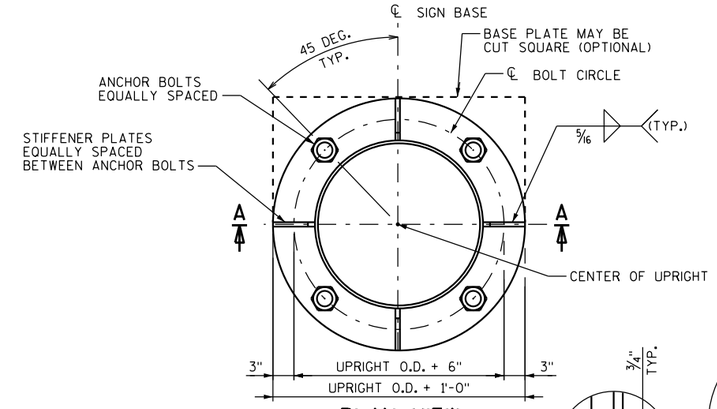
TOWER CAP DETAIL



TYPICAL TRUSS CONNECTION DETAILS

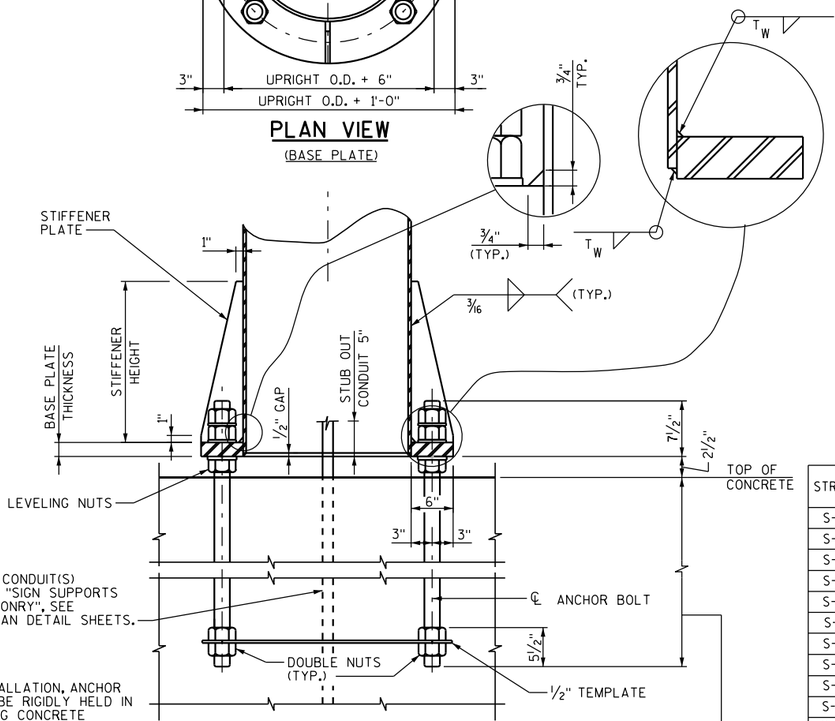


TYPICAL WELDED ALTERNATE

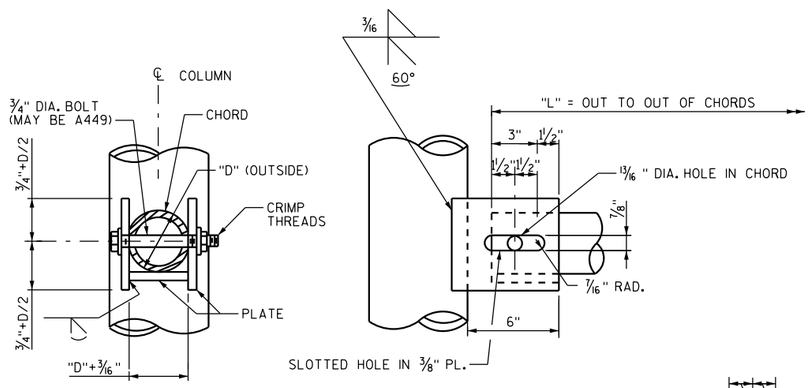


PLAN VIEW

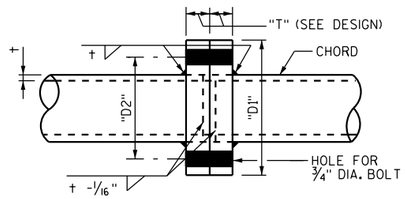
(BASE PLATE)



SECTION A-A



TOWER CONNECTION DETAIL



COUPLING DETAIL

*ANGLE	WELD LENGTH	NO. OF BOLTS
● L2 1/2X2 1/2X1/4	11"	3
L3X3X3/16	10"	3
L3X3X1/4	13"	4
L3X3X5/16	16 1/2"	5
L3X3X3/8	19 1/2"	6
L3 1/2X3 1/2X3/8	22 3/4"	7
L3 1/2X3 1/2X7/16	26"	8
L3 1/2X3 1/2X1/2	30"	9
L4X4X1/4	18"	5
L4X4X5/16	22"	6
L4X4X3/8	26"	8
L4X4X7/16	30"	9
L4X4X1/2	34"	10

● ONLY USED FOR BOXED END AND TRANSVERSE BRACING

BASE PLATE & UPRIGHT COLUMN DETAILS

STRUCTURE	ANCHOR BOLTS	BASE PLATE THICKNESS (IN.)	STIFF. PLATE THICKNESS (IN.)	STIFF. PLATE HEIGHT (IN.)	Tw (IN.)
S-40-22	2"	2"	1/2"	12"	5/16"
S-40-27	1 1/2"	1 1/2"	1/2"	12"	5/16"
S-40-44	2"	2"	1/2"	12"	5/16"
S-40-47	2"	2"	1/2"	12"	5/16"
S-40-50	1 1/2"	1 1/2"	1/2"	12"	5/16"
S-40-51	2"	2"	1/2"	12"	5/16"
S-40-87	1 1/4"	1 1/4"	1/2"	12"	5/16"
S-40-116	2"	2"	1/2"	12"	5/16"
S-40-117	2"	2"	1/2"	12"	5/16"
S-40-121	2"	2"	1/2"	12"	5/16"
S-40-122	1 1/2"	1 1/2"	1/2"	12"	5/16"
S-40-132	1 1/2"	1 1/2"	1/2"	12"	5/16"
S-40-135	2"	2"	1/2"	12"	5/16"
S-40-136	2"	2"	1/2"	12"	5/16"

COUPLING VARIABLES

STRUCTURE	COUPLING PL. "D1" & "T"	BOLT CIRCLE DIA. "D2"	NO. OF BOLTS IN COUPLING
S-40-22	13 1/2" DIA. x 1 3/4"	10 1/2"	11
S-40-27	11" DIA. x 1 1/4"	8"	8
S-40-44	13 1/2" DIA. x 1 3/4"	10 1/2"	11
S-40-47	13 1/2" DIA. x 1 3/4"	10 1/2"	11
S-40-50	11" DIA. x 1 1/4"	8"	8
S-40-51	15" DIA. x 2"	12"	12
S-40-87	9 1/2" DIA. x 1"	6 1/2"	6
S-40-116	15" DIA. x 2"	12"	12
S-40-117	15" DIA. x 2"	12"	12
S-40-121	15" DIA. x 2"	12"	12
S-40-122	11" DIA. x 1 1/4"	8"	8
S-40-132	11" DIA. x 1 1/4"	8"	8
S-40-135	13 1/2" DIA. x 1 3/4"	10 1/2"	11
S-40-136	13 1/2" DIA. x 1 3/4"	10 1/2"	11

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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S-40-22/27/44/47/50/51/87/ 116/117/121/122/132/135/136

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4-CHORD SIGN BRIDGE DETAILS

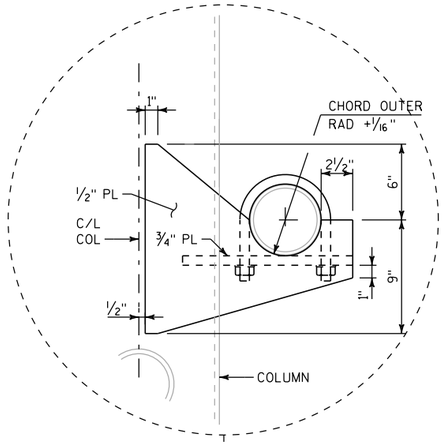
SHEET 21 OF 24

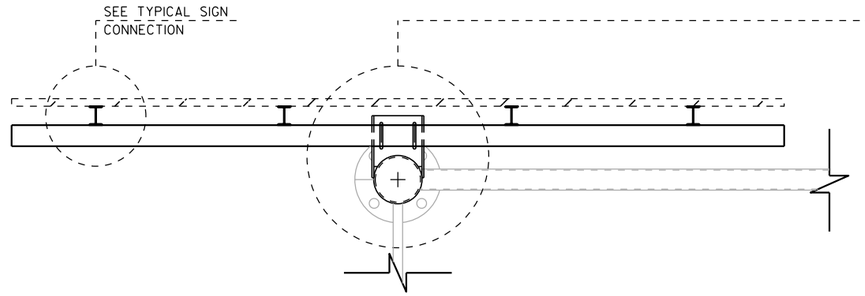
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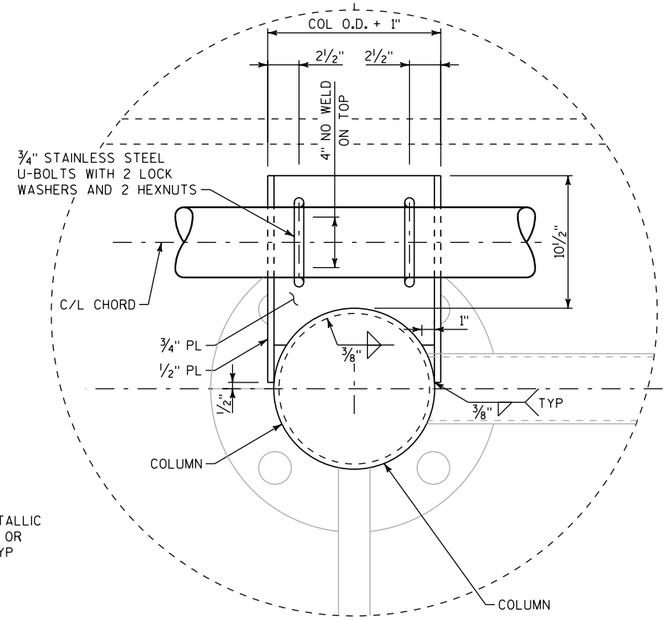
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STATE PROJECT NUMBER
1060-33-80

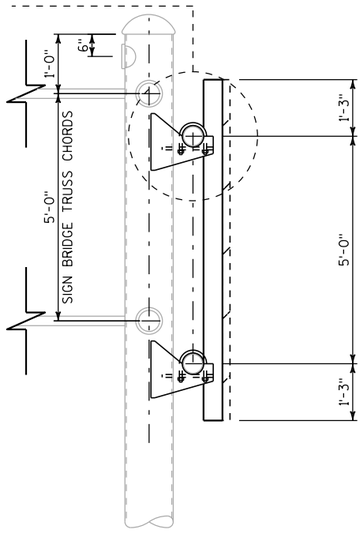




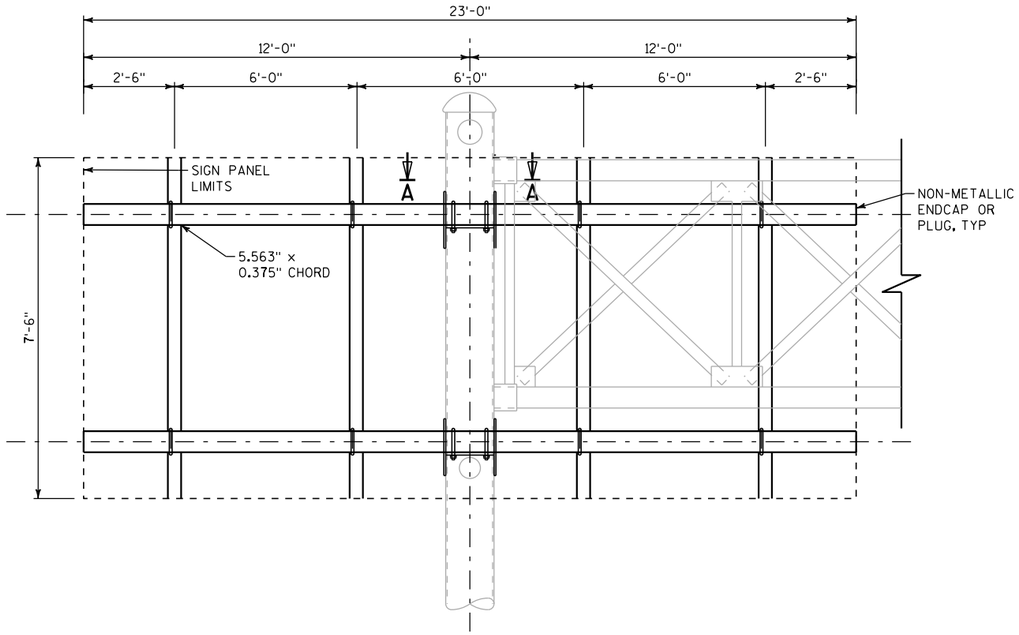
PLAN VIEW



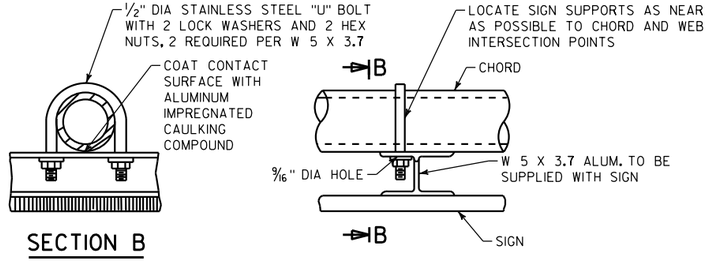
SECTION A-A



END VIEW



ELEVATION VIEW



SECTION B

TYPICAL BUTTERFLY SIGN CONNECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

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BUTTERFLY
SIGN DETAILS

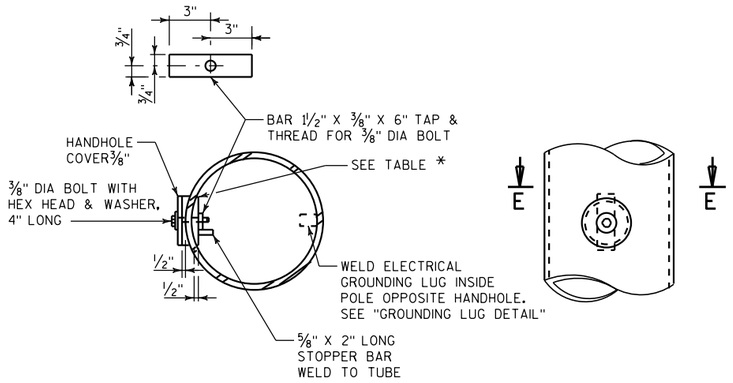
SHEET 22 OF 24

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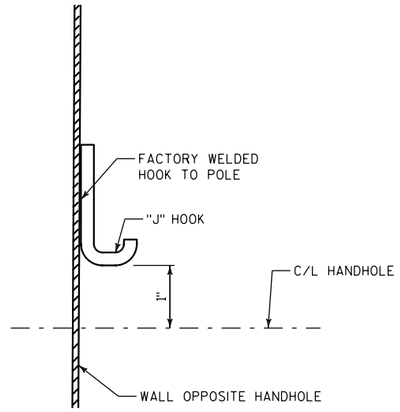
STATE PROJECT NUMBER

1060-33-80



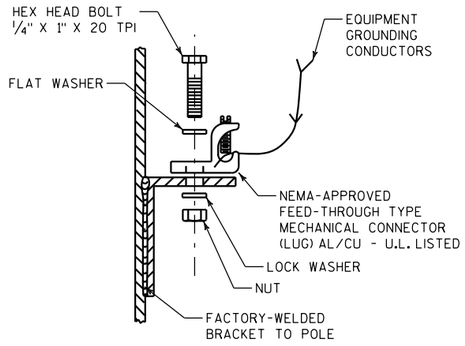
SECTION E-E

HANDHOLE DETAILS



TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

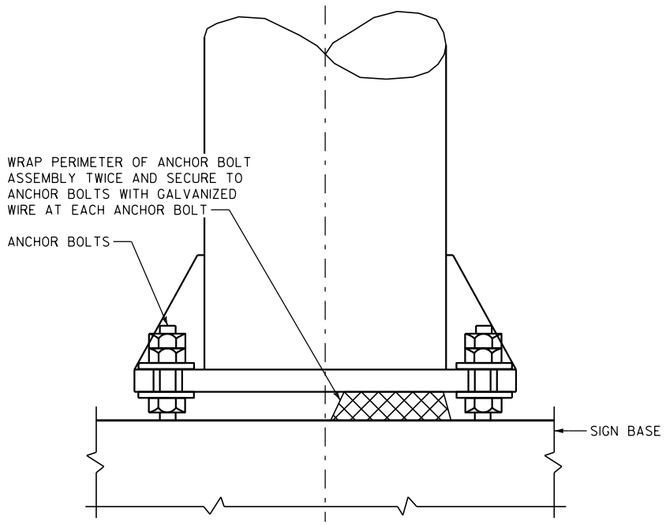
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN BOTH COLUMNS OF THE SIGN BRIDGE STRUCTURE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*

UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/116/117/121/122/132/135/136

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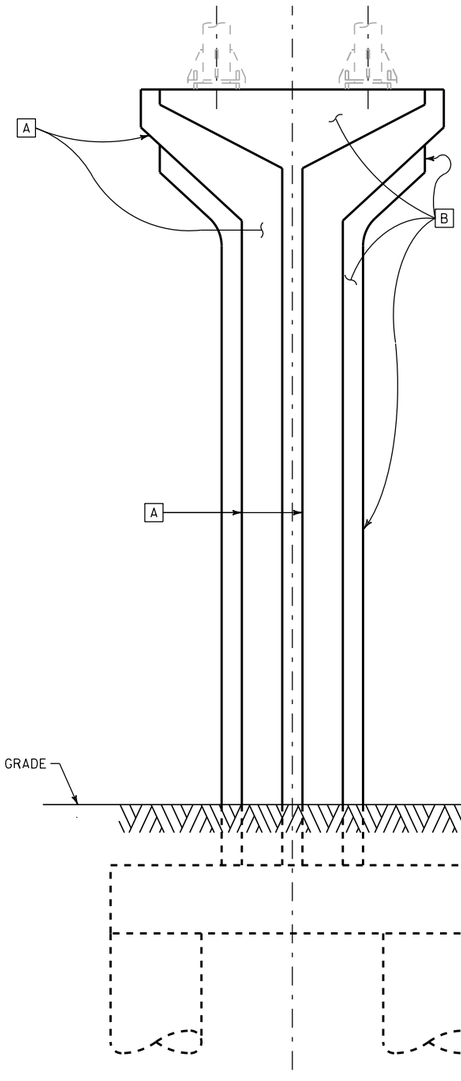
HANDHOLE DETAILS

SHEET 23 OF 24

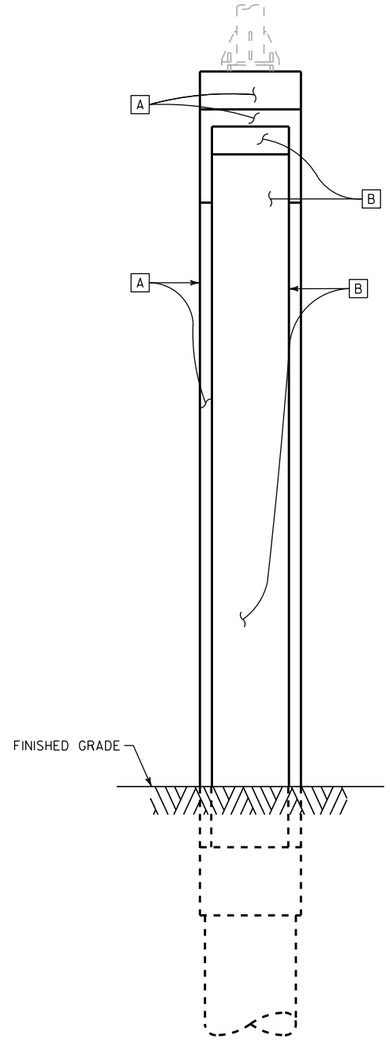
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STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW



END VIEW

CONCRETE STAINING SCHEDULE

MARK	COLOR	NOTES
A	BASE COLOR	SIDES TO FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	REVEALS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:

BASE COLOR : FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

NOTE

THE COST FOR REVEALS AND CONCRETE AESTHETIC DETAILS ARE INCIDENTAL TO BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

8

8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

S-40-22/27/44/47/50/51/87/
116/117/121/122/132/135/136

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CONCRETE COLUMN AESTHETIC DETAILS

SHEET 24 OF 24

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STATE PROJECT NUMBER

1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE CANTILEVER NAME PLATES & ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE CANTILEVERED S-40-XXX". LOCATE THE NAME PLATE OR ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE NAME PLATE IN ACCORDANCE WITH S.D.D. 12 A 3-10 FOR SIGN BRIDGE CANTILEVERS WITH CONCRETE COLUMNS. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3 FOR SIGN BRIDGE CANTILEVERS WITH STEEL COLUMNS.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING PLANS.

ALL BARS CONTAINED ENTIRELY IN BELOW-GRADE FOOTINGS ARE TO BE UNCOATED REINFORCING STEEL. ALL OTHER BARS, INCLUDING BARS THAT ARE PARTIALLY EMBEDDED IN FOOTINGS BUT EXTEND OUTSIDE THE FOOTING INTO VERTICAL SUPPORT ELEMENTS, ARE TO BE EPOXY COATED.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION: MR TOM HEYDEL, WIS DOT, 141 NW BARSTOW ST, WAUKESHA, WI 53187 AND THE PROJECT ENGINEER FOR APPROVAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE SUPPORT BASES. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE.

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY ---------- f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ---------- fy = 60,000 psi

STRUCTURAL ANGLES,
PLATE AND BARS - ASTM A709 GRADE 36 ---- fy = 36,000 psi

CHORDS & COLUMN
(INCLUDING HANDHOLE) - API-5L-X42 ---------- fy = 42,000 psi

HIGH STRENGTH BOLTS - A325 ---------- fy = 92,000 psi

ANCHOR BOLTS - AASHTO M314 GRADE 55------ fy = 55,000 psi

HARDWARE GALVANIZED ---------- ASTM A153 CLASS C

FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SHAFT END BEARING PRESSURE = 3000 PSF

ALLOWABLE SKIN FRICTION = 500 PSF

SOIL COHESION = 1000 PSF

ASSUMED SOIL FRICTION ANGLE = 30°

DESIGN DATA

STRUCTURE NO.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-28	264 SF	12'-0"
S-40-65	264 SF	12'-0"
S-40-85	264 SF	15'-6"
S-40-118	264 SF	16'-6"
S-40-119	264 SF	16'-6"
S-40-124	264 SF	12'-0"
S-40-129	264 SF	12'-0"
S-40-130	264 SF	12'-0"
S-40-131	264 SF	12'-0"
S-40-134	264 SF	12'-0"
S-40-137	264 SF	12'-0"
S-40-146	264 SF	12'-0"
S-40-158	264 SF	14'-6"

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 2013 6TH EDITION.

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS. LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF CATWALK. ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS. WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + 1/2 WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-28 GENERAL PLAN & ELEVATION
3. S-40-65 GENERAL PLAN & ELEVATION
4. S-40-85 GENERAL PLAN & ELEVATION
5. S-40-118 GENERAL PLAN & ELEVATION
6. S-40-119 GENERAL PLAN & ELEVATION
7. S-40-124 GENERAL PLAN & ELEVATION
8. S-40-129 GENERAL PLAN & ELEVATION
9. S-40-130 GENERAL PLAN & ELEVATION
10. S-40-131 GENERAL PLAN & ELEVATION
11. S-40-134 GENERAL PLAN & ELEVATION
12. S-40-137 GENERAL PLAN & ELEVATION
13. S-40-146 GENERAL PLAN & ELEVATION
14. S-40-158 GENERAL PLAN & ELEVATION
15. COLUMN & FOOTING DETAILS (1 OF 2)
16. COLUMN & FOOTING DETAILS (2 OF 2)
17. COLUMN AESTHETIC DETAILS & BILL OF BARS
18. GALVANIZED STEEL CANTILEVER SIGN TRUSS
19. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
20. HANDHOLE & ANCHOR BOLT DETAILS

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/13/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/15/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

ZOO CORE 1 CANTILEVER SIGN STRUCTURES

COUNTY MILWAUKEE | ~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE

DESIGN SPEC. AASHTO STD SPECS FOR HIGHWAY SIGNS 6TH ED

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ASW	AAG	BHI	KES

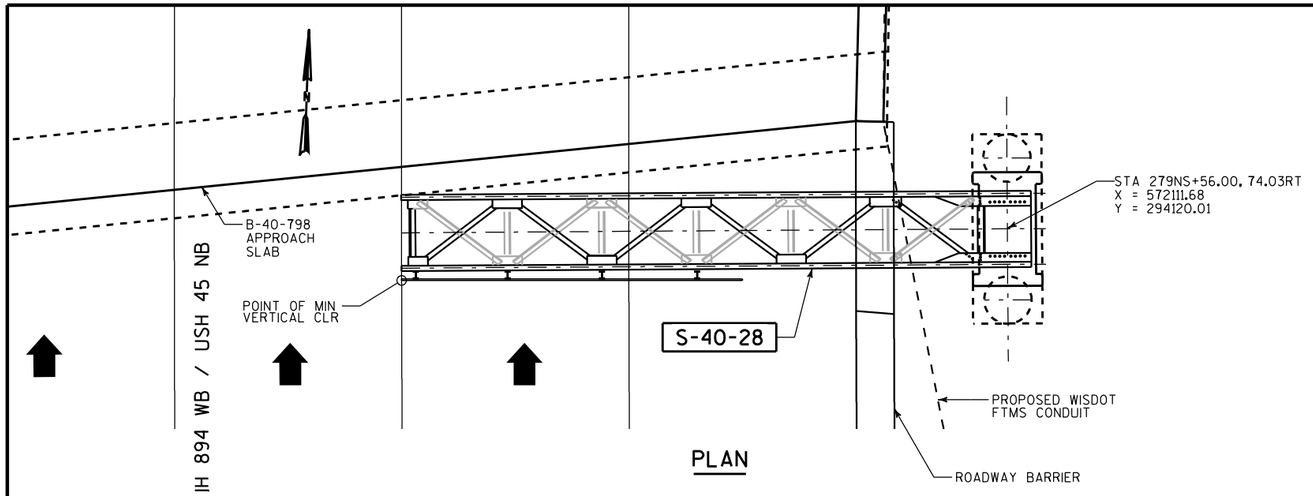
GENERAL NOTES & DESIGN DATA

SHEET 1 OF 20

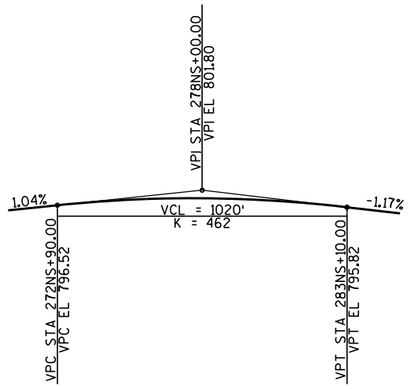
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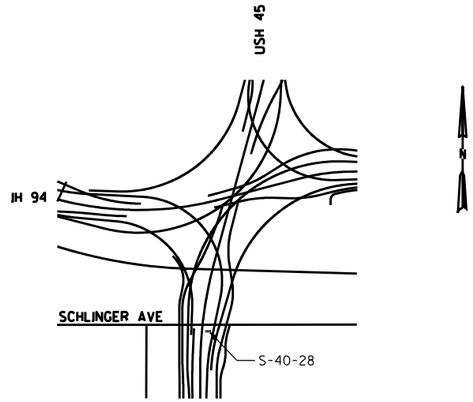
STATE PROJECT NUMBER
1060-33-80



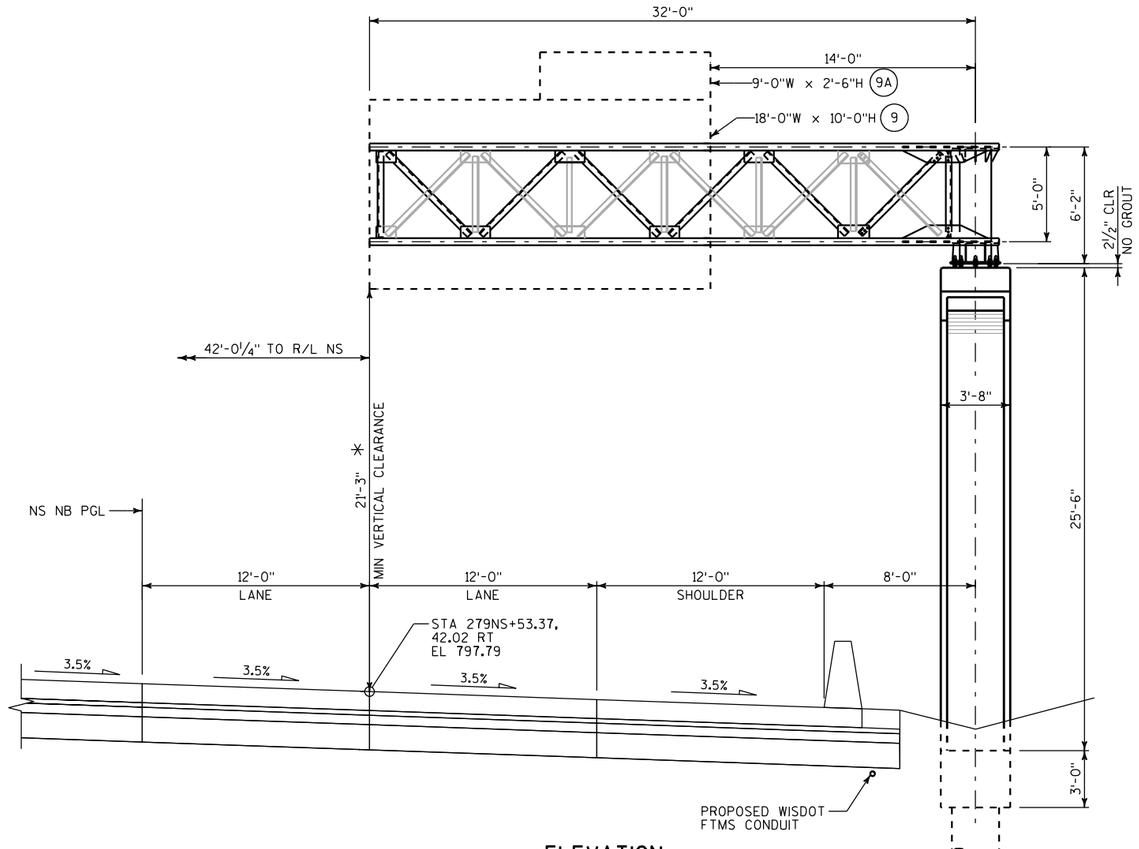
PLAN



PROFILE GRADE LINE NS NB

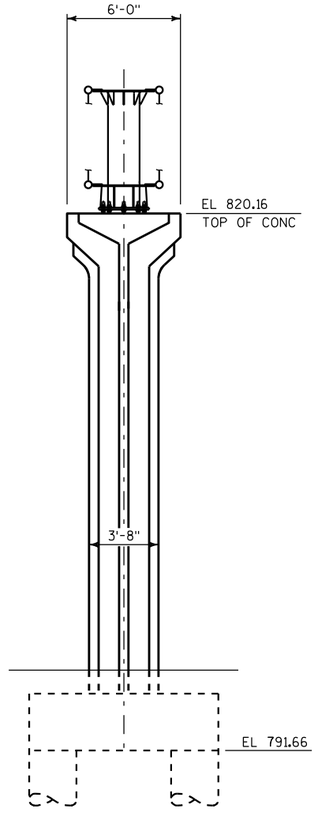


LOCATION MAP



ELEVATION

S-40-28 - STA 279NS+56.00
IH 894 WB / USH 45 NB
(LOOKING UP STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,260
641.1200.0001	SIGN BRIDGE CANTILEVERED S-40-28 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4020

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-28
GENERAL PLAN
& ELEVATION

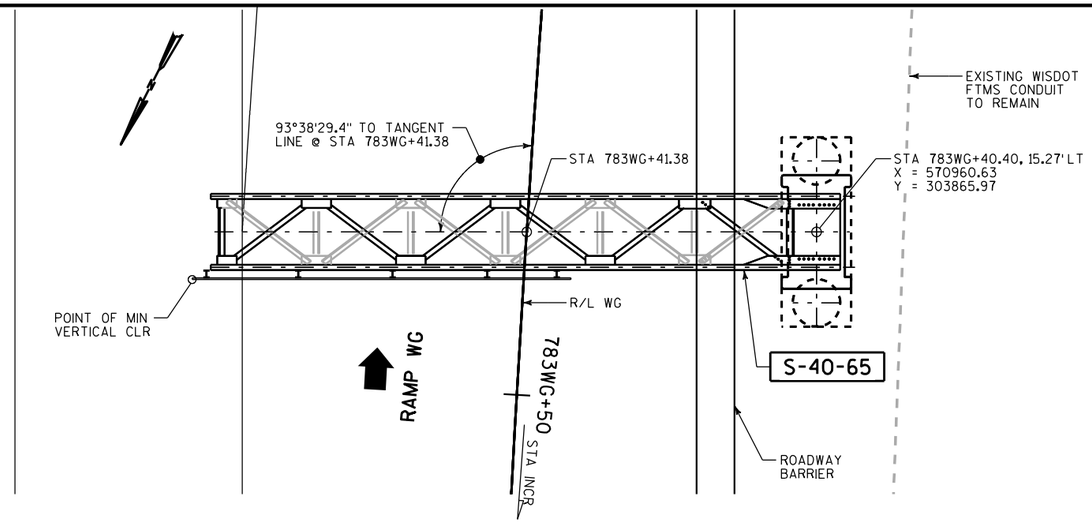
SHEET 2 OF 20

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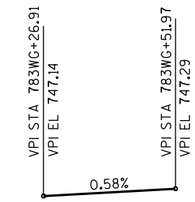
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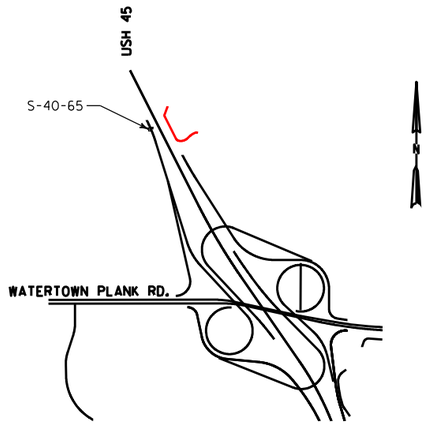
STATE PROJECT NUMBER
1060-33-80



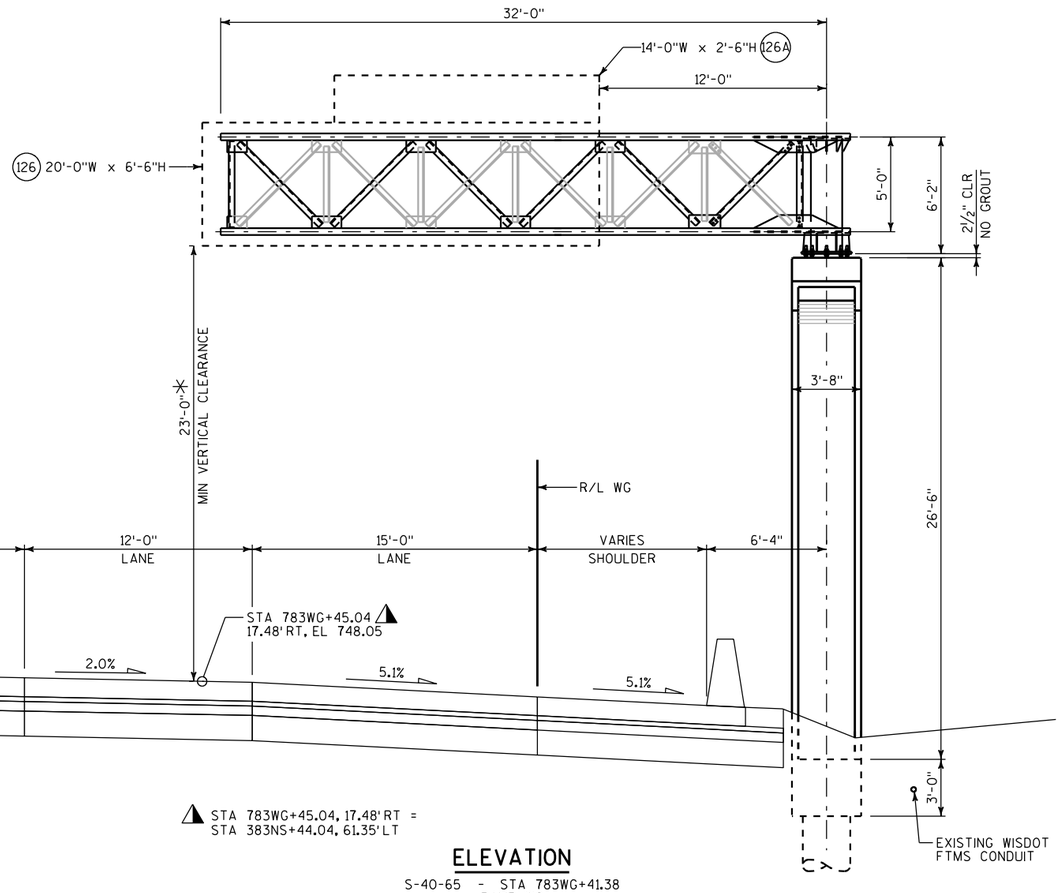
PLAN



PROFILE GRADE LINE WG

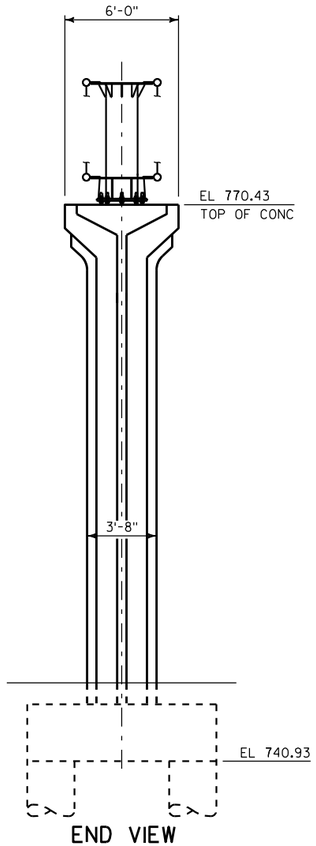


LOCATION MAP



ELEVATION

S-40-65 - STA 783WG+41.38
RAMP WG
(LOOKING DOWNSTATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,355
641.1200.0002	SIGN BRIDGE CANTILEVERED S-40-65 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4080

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

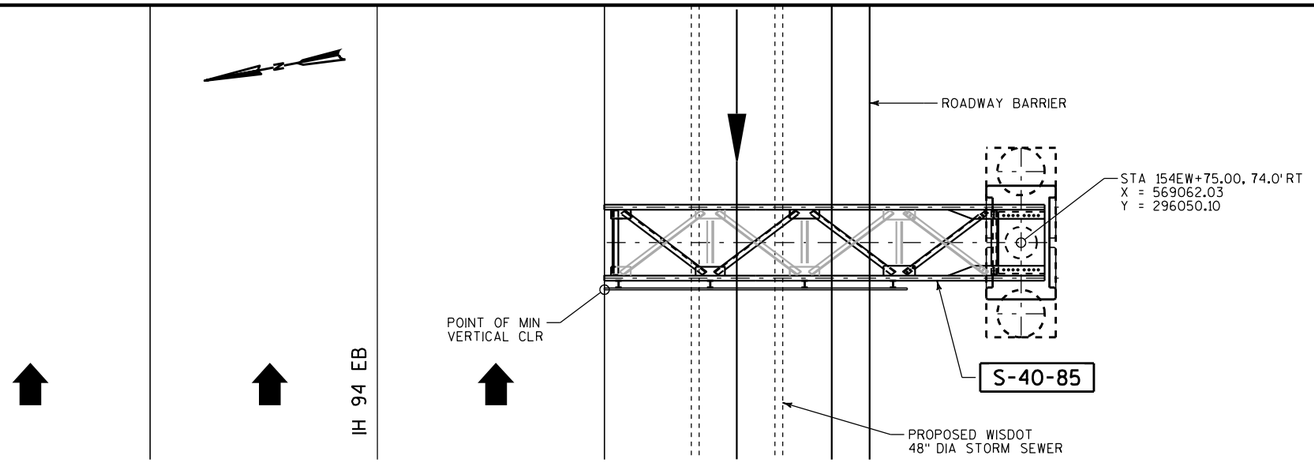
S-40-65
GENERAL PLAN
& ELEVATION

SHEET 3 OF 20

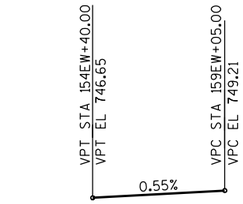
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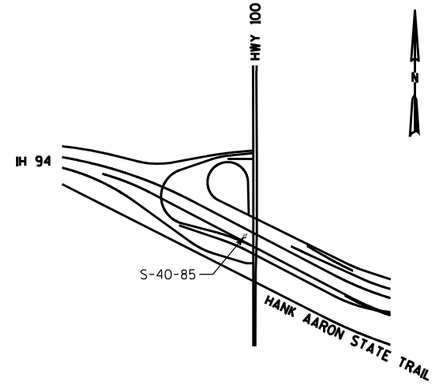
STATE PROJECT NUMBER
1060-33-80



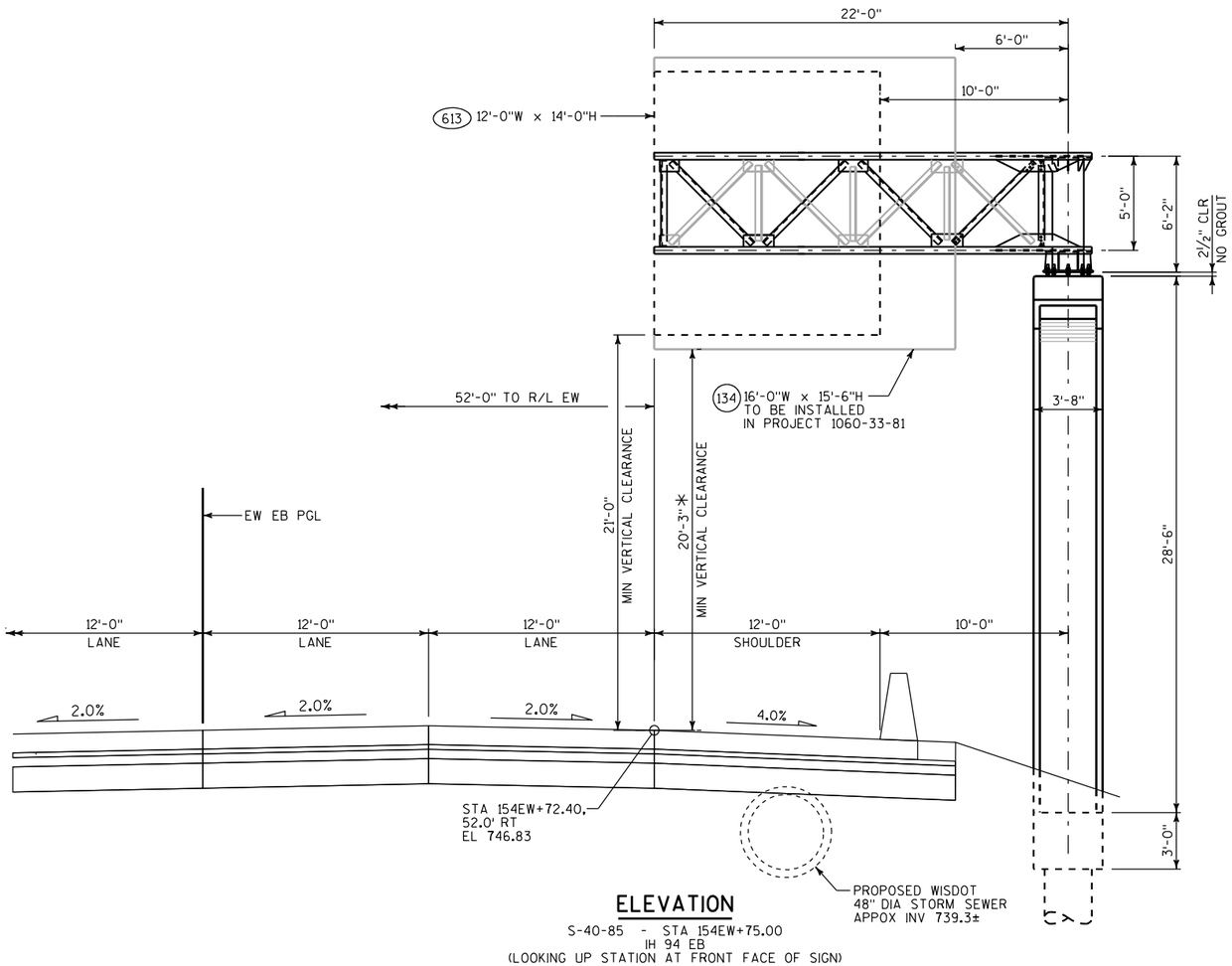
PLAN



PROFILE GRADE LINE EW EB

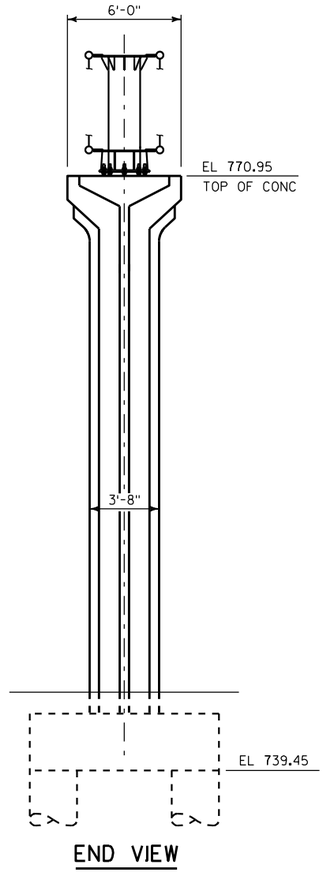


LOCATION MAP



ELEVATION

S-40-85 - STA 154EW+75.00
IH 94 EB
(LOOKING UP STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	25
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,530
641.1200.0003	SIGN BRIDGE CANTILEVERED S-40-85 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4090

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

⬭ SIGN NUMBERS (TEMPORARY - INSTALLED IN STAGE 2B)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

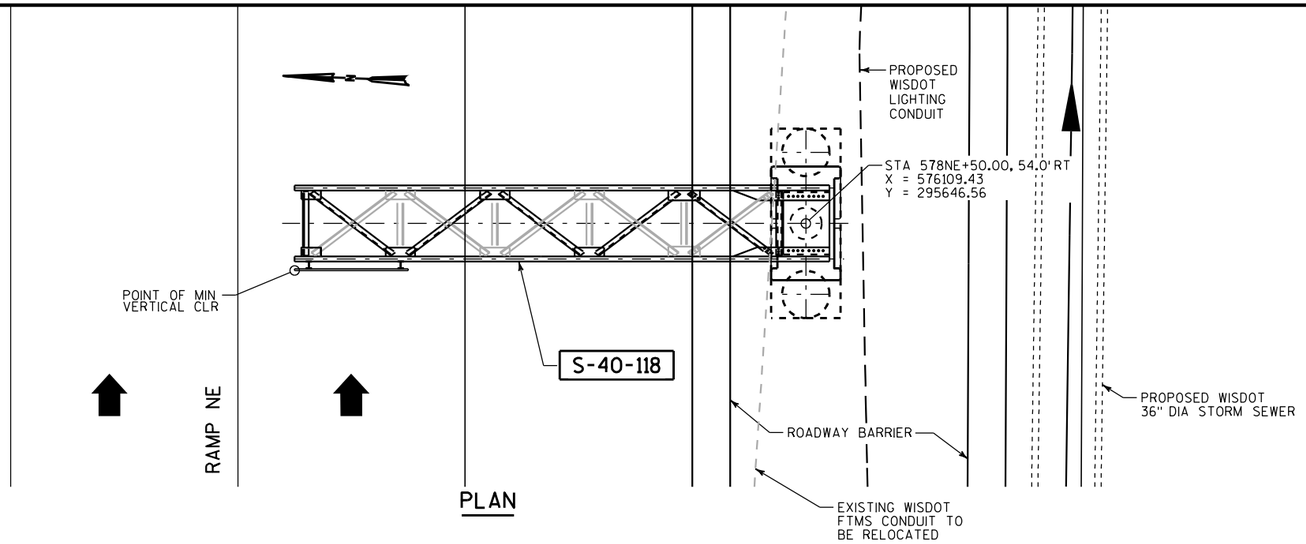
S-40-85
GENERAL PLAN
& ELEVATION

SHEET 4 OF 20

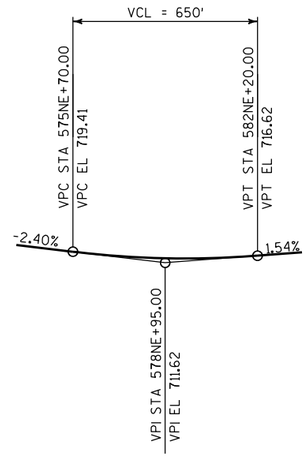
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STATE PROJECT NUMBER
1060-33-80

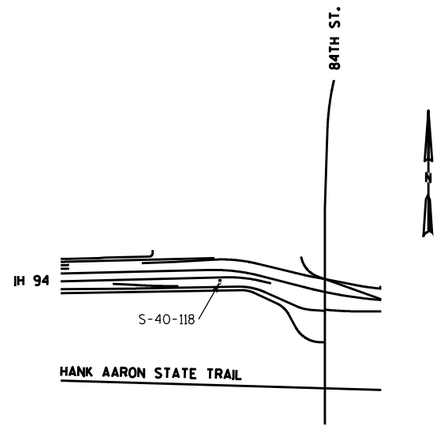


PLAN

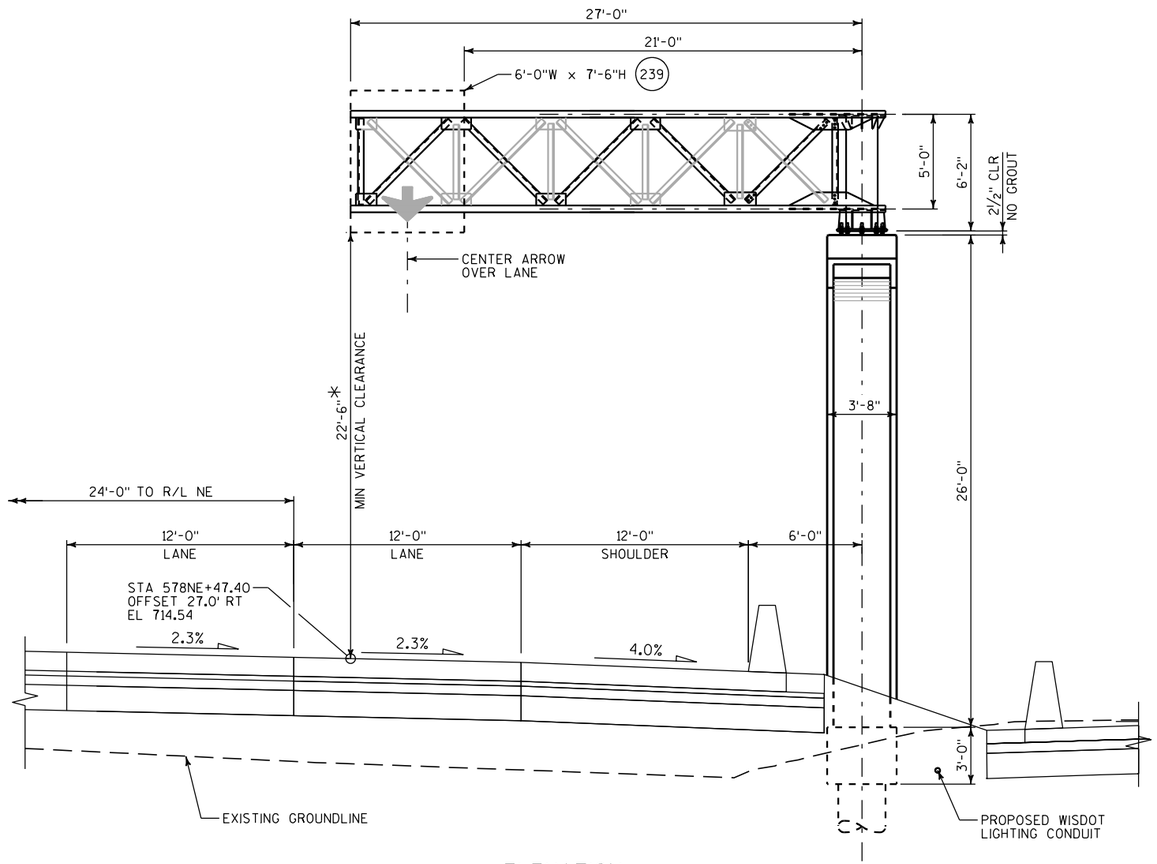


PROFILE GRADE LINE NE

R/L NE

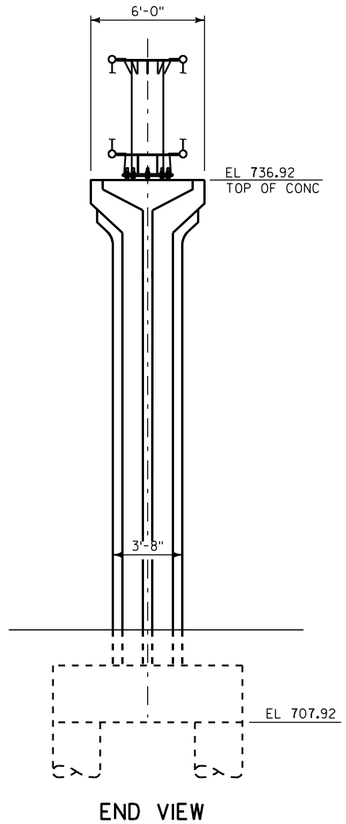


LOCATION MAP



ELEVATION

S-40-118 - STA 578NE+50.00
RAMP NE
(LOOKING UP STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,295
641.1200.0004	SIGN BRIDGE CANTILEVERED S-40-118 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4140

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-118 GENERAL PLAN & ELEVATION

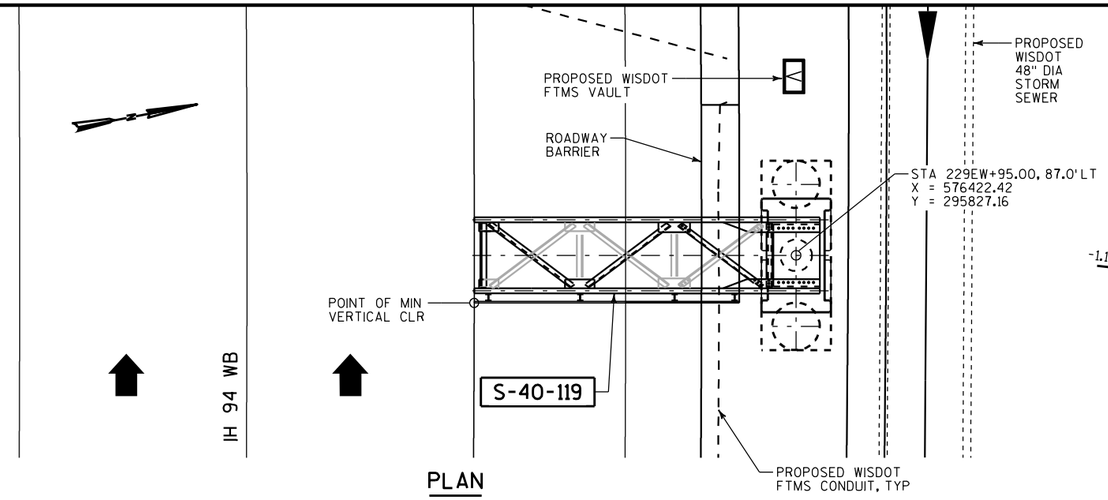
SHEET 5 OF 20

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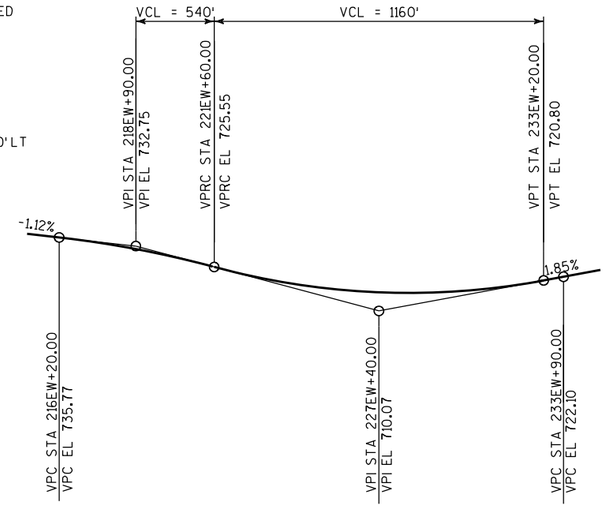
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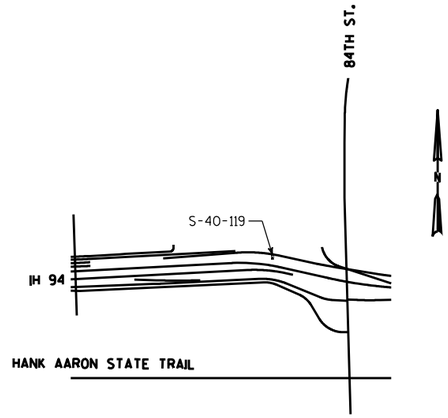
STATE PROJECT NUMBER
1060-33-80



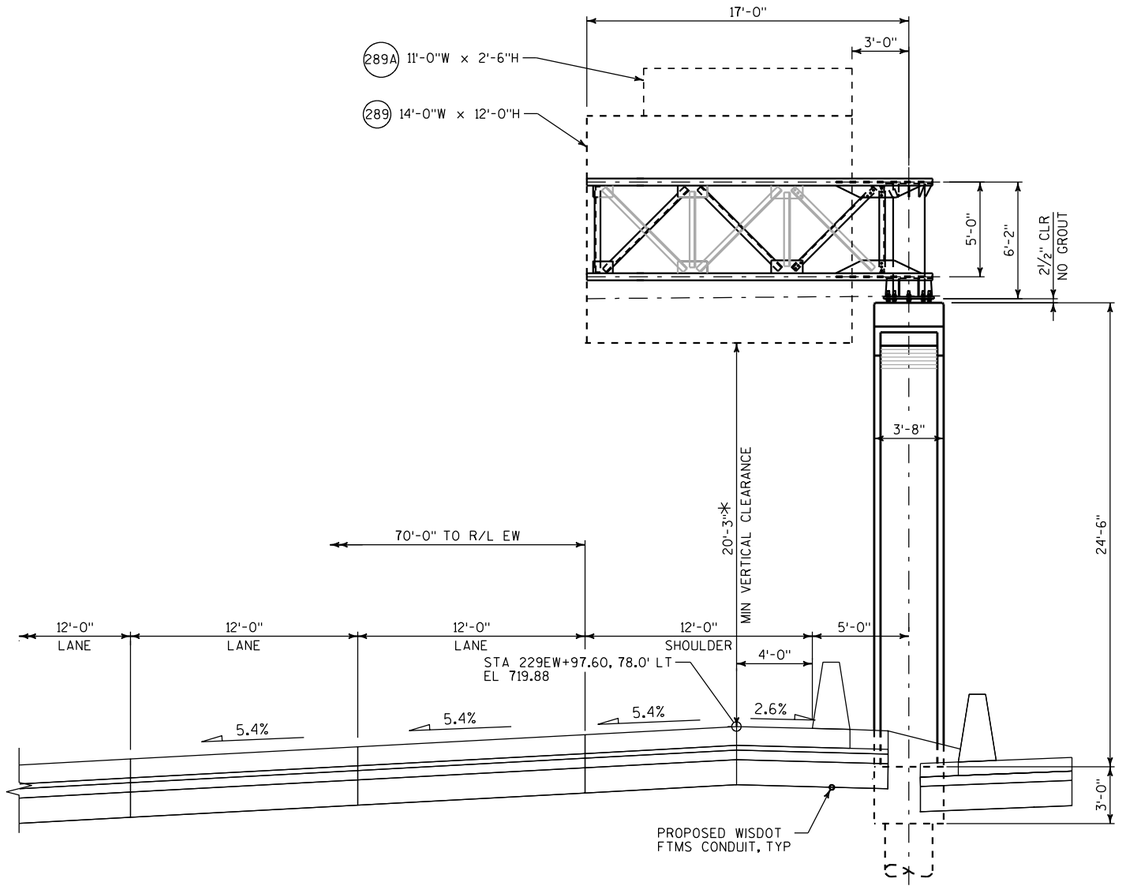
PLAN



PROFILE GRADE LINE EW EB

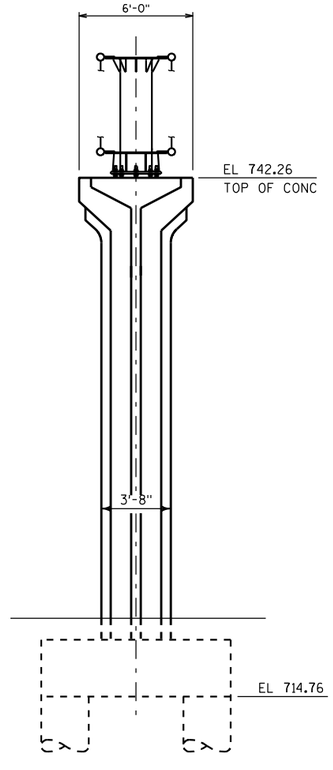


LOCATION MAP



ELEVATION

S-40-119 - STA 229EW+95.00
IH 94 WB
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)



END VIEW

PROPOSED WISDOT 48" DIA STORM SEWER APPROX INV EL 699.7±

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	23
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,295
641.1200.0005	SIGN BRIDGE CANTILEVERED S-40-119 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4150

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-119
GENERAL PLAN
& ELEVATION

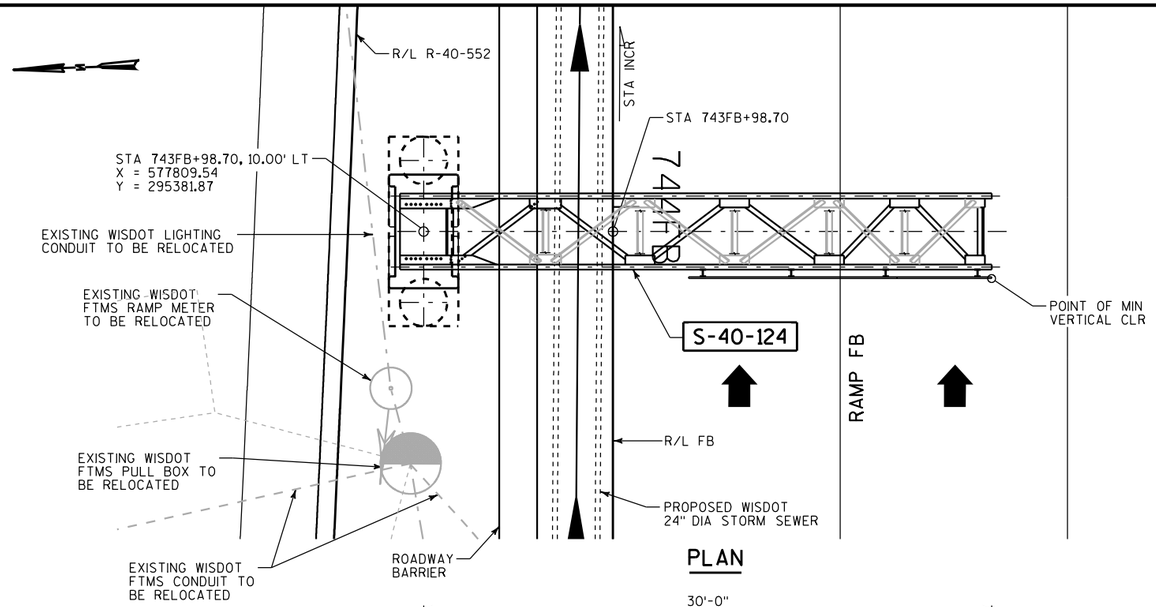
SHEET 6 OF 20

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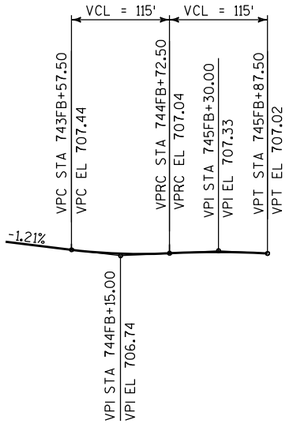
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STATE PROJECT NUMBER

1060-33-80

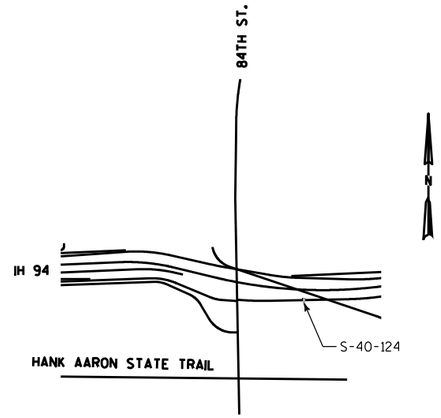


PLAN

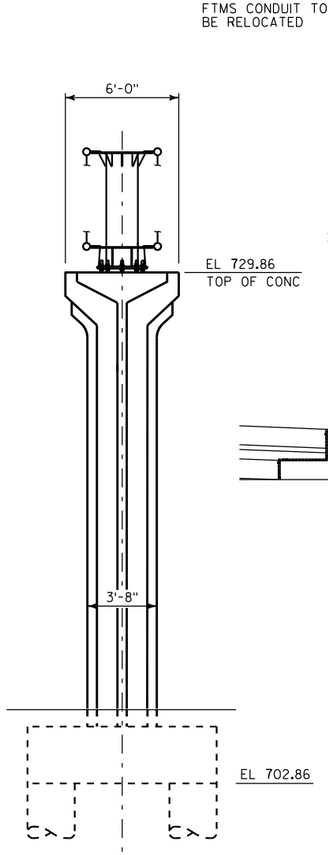


PROFILE GRADE LINE FB

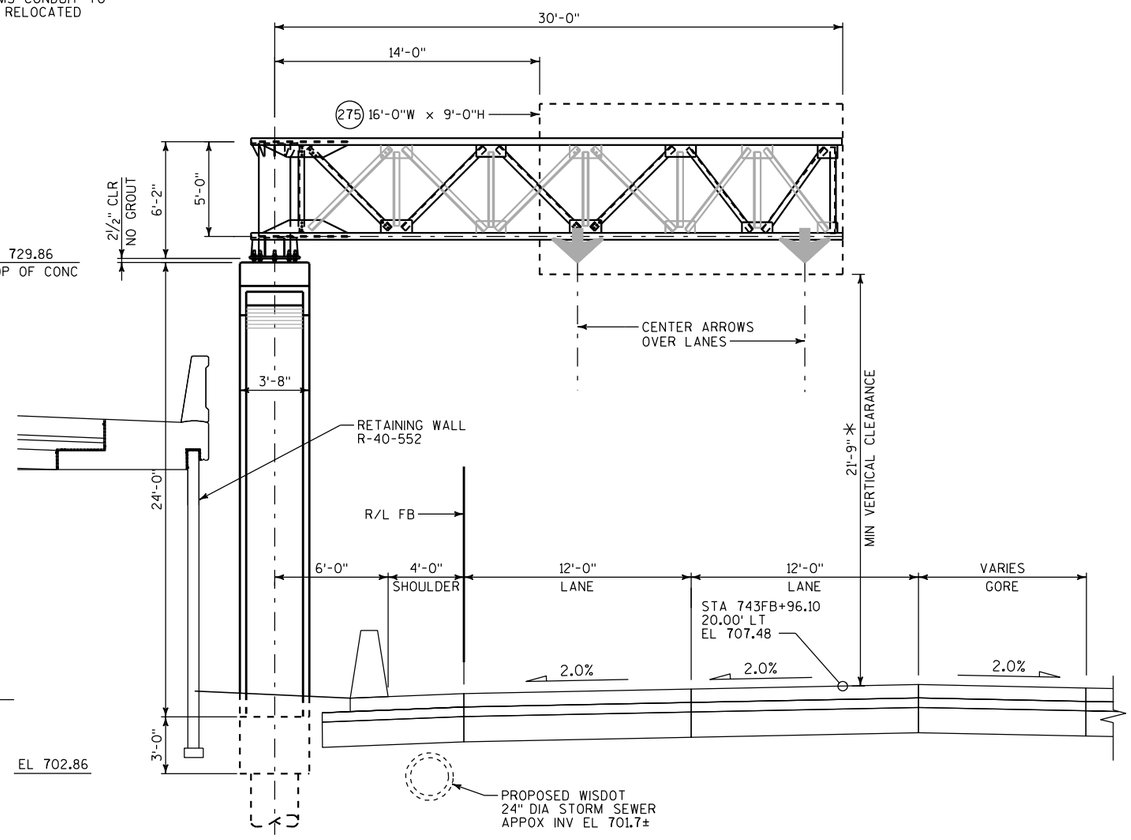
R/L FB



LOCATION MAP



END VIEW



ELEVATION

S-40-124 - STA 743FB+98.70
RAMP FB
(LOOKING UP STATION AT FRONT FACE OF SIGN)

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	23
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,115
641.1200.0006	SIGN BRIDGE CANTILEVERED S-40-124 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4180

LEGEND

* INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

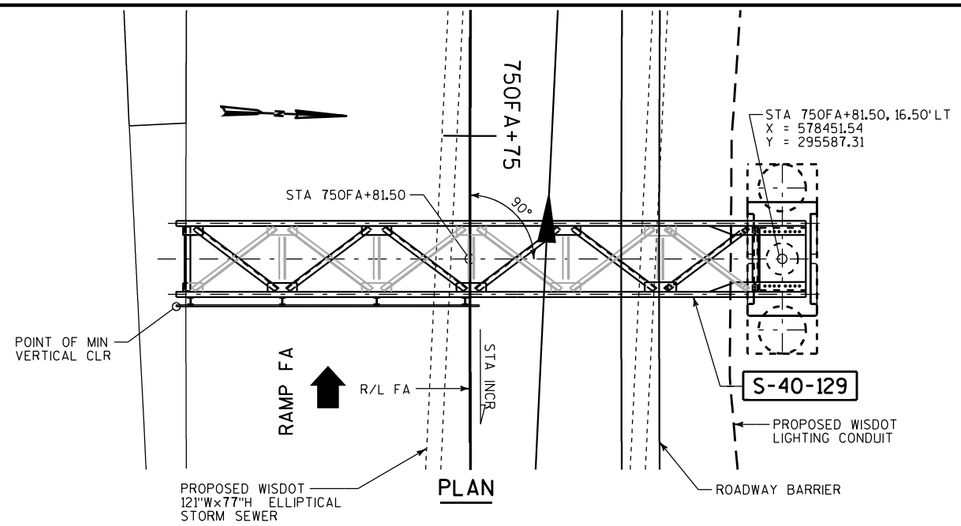
S-40-124
GENERAL PLAN
& ELEVATION

SHEET 7 OF 20

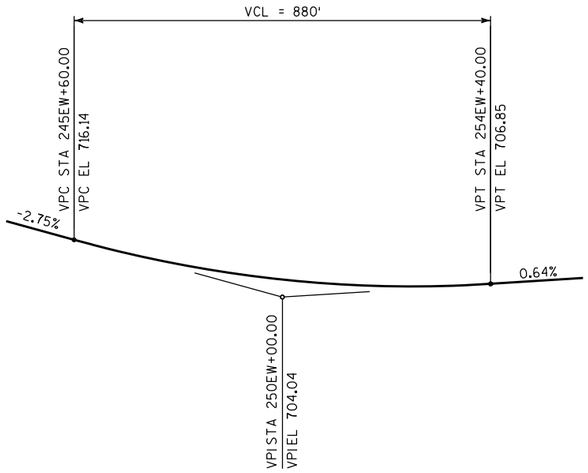
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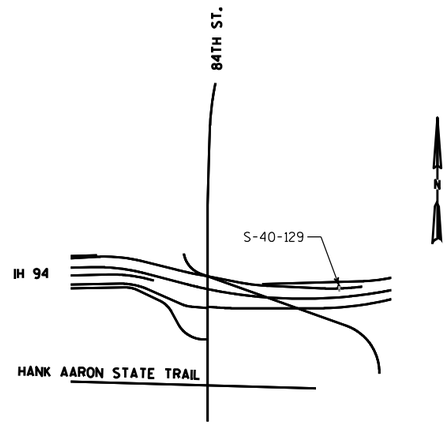
STATE PROJECT NUMBER
1060-33-80



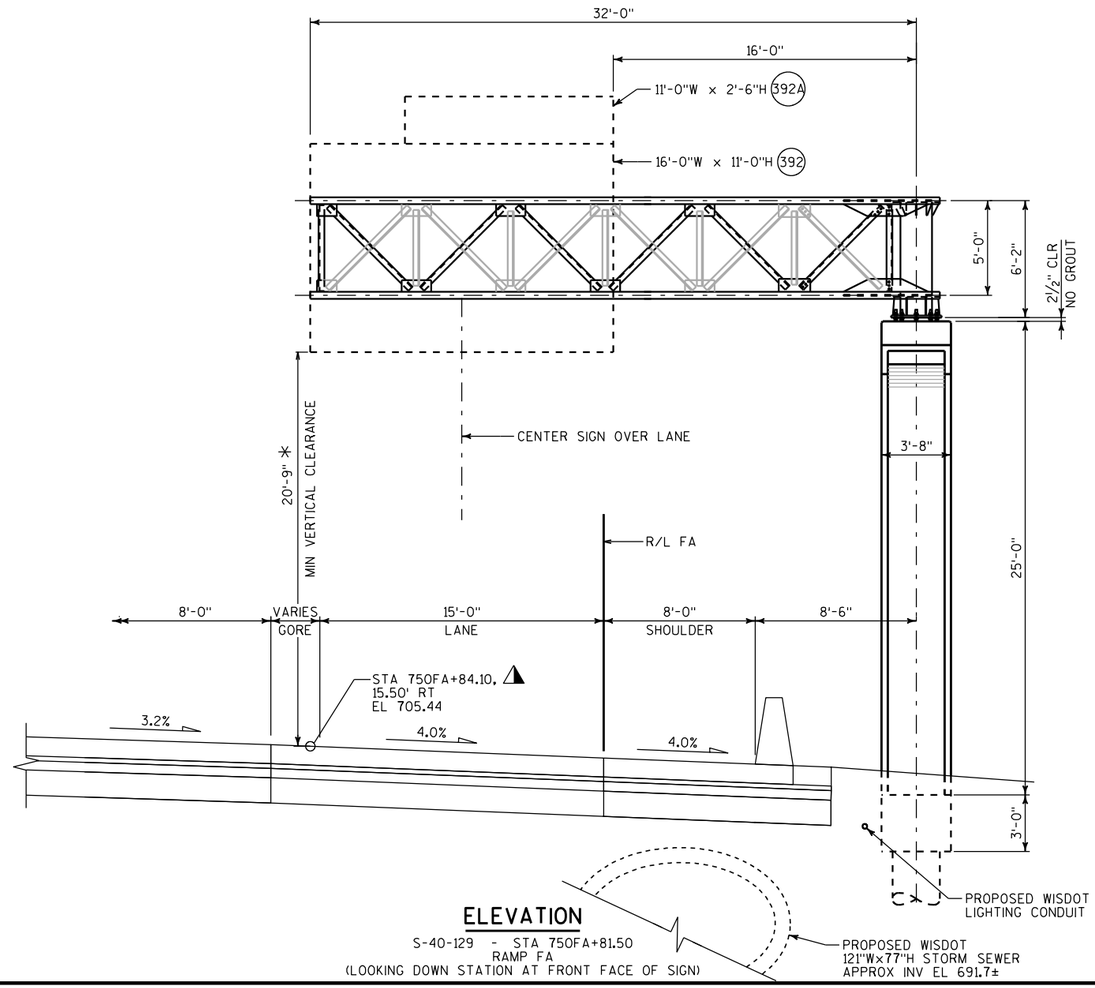
PLAN



PROFILE GRADE LINE EW EB

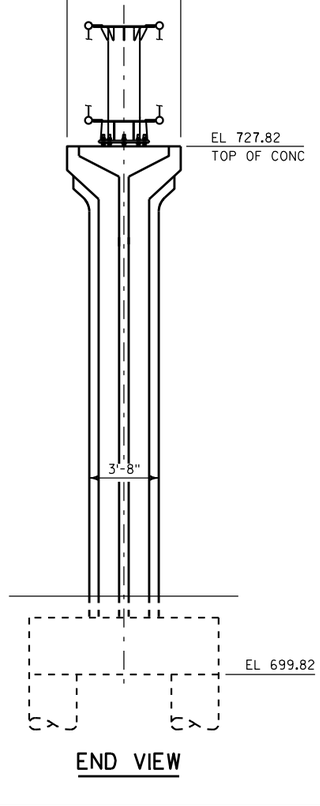


LOCATION MAP



ELEVATION

S-40-129 - STA 750FA+81.50
RAMP FA
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,210
641.1200.0007	SIGN BRIDGE CANTILEVERED S-40-129 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4190

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

⚠ STA 750FA+84.10, 15.50' RT = STA 250EW+78.94, 72.00' LT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-129
GENERAL PLAN
& ELEVATION

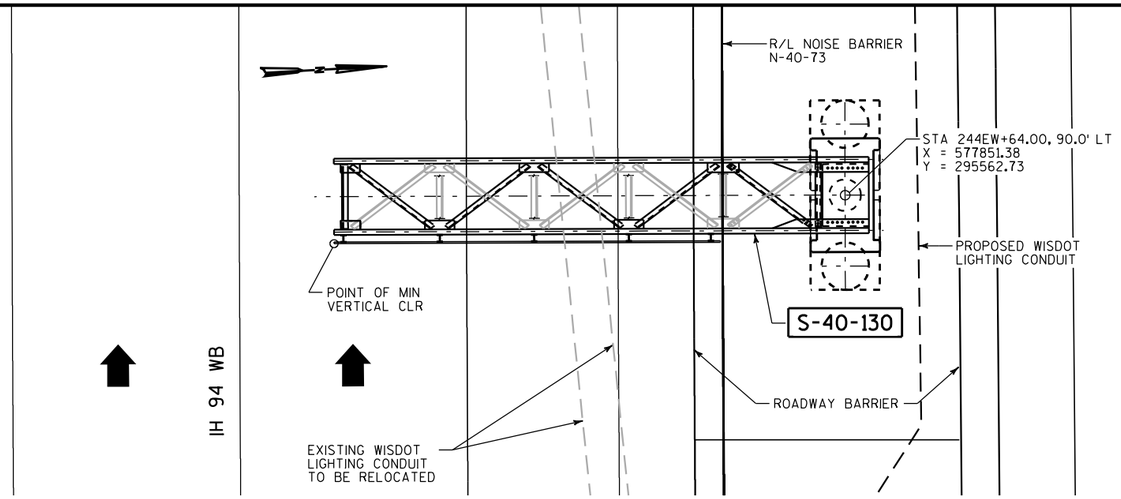
SHEET 8 OF 20

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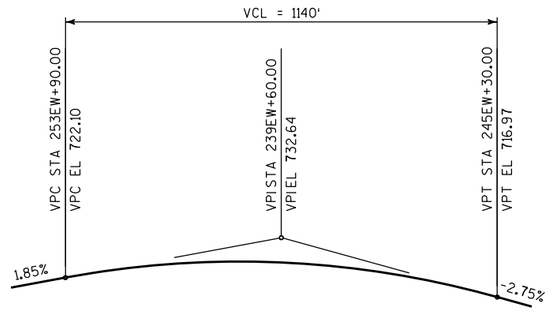
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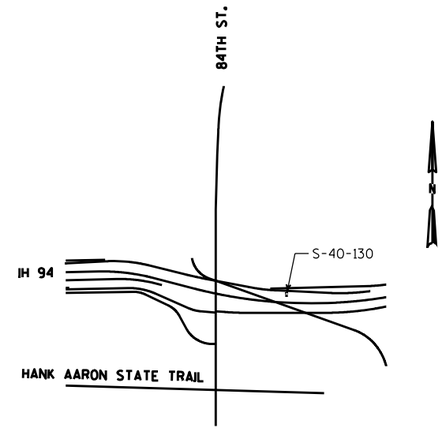
STATE PROJECT NUMBER
1060-33-80



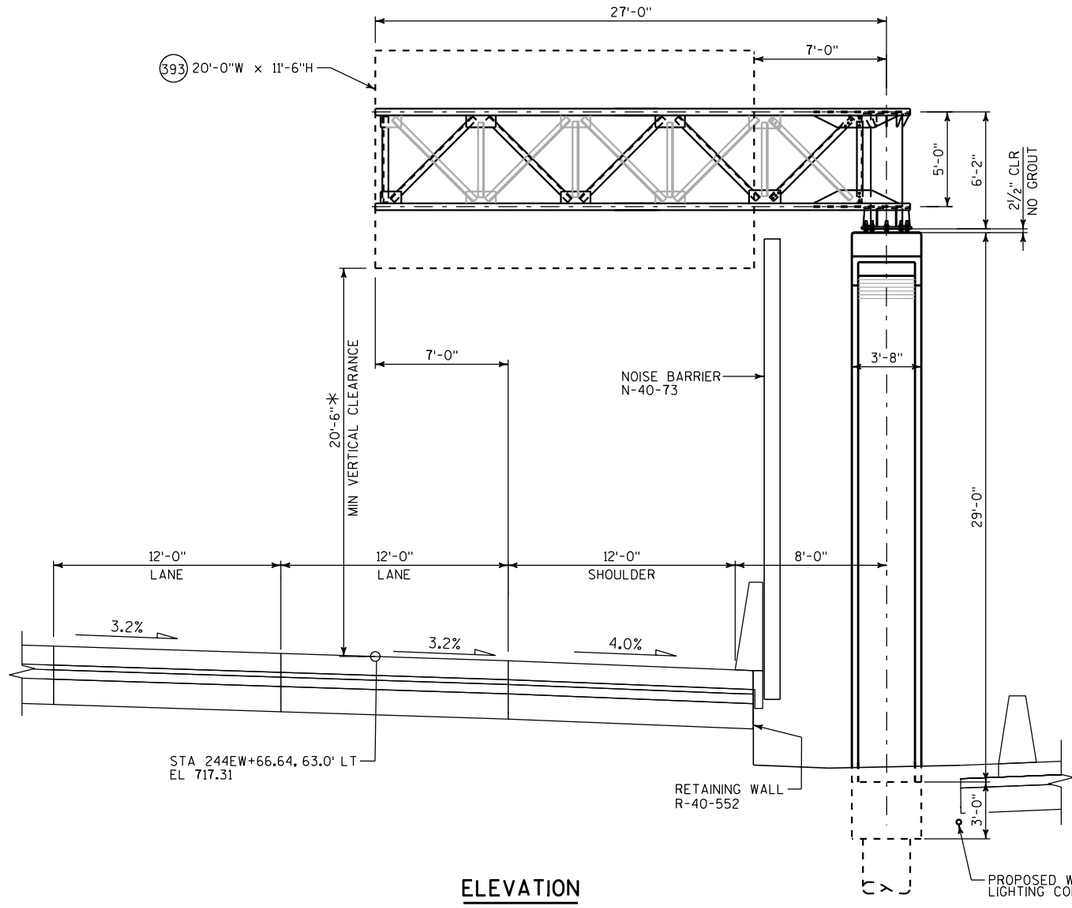
PLAN



PROFILE GRADE LINE EW WB

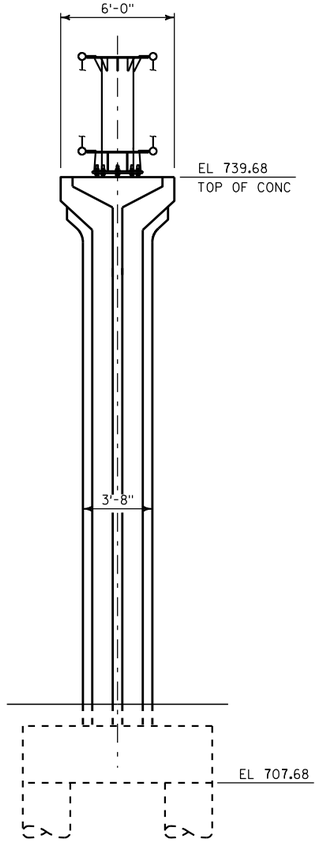


LOCATION MAP



ELEVATION

S-40-130 - STA 244EW+64.00
IH 94 WB
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	26
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,575
641.1200.0008	SIGN BRIDGE CANTILEVERED S-40-130 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4200

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-130
GENERAL PLAN
& ELEVATION

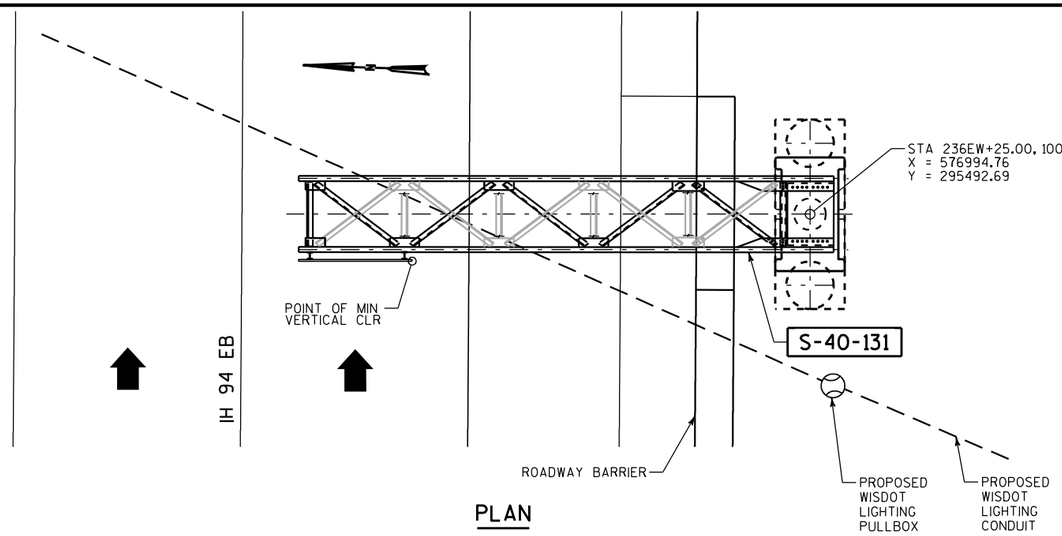
SHEET 9 OF 20

8

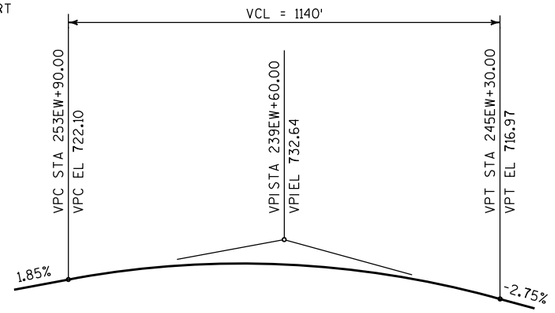
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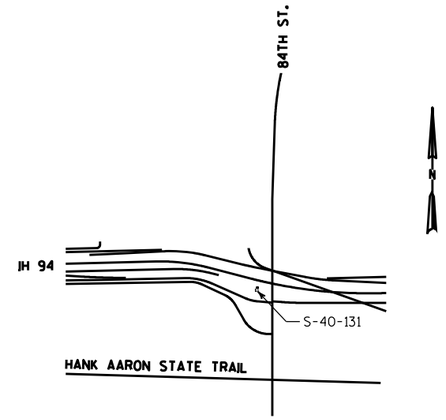
STATE PROJECT NUMBER
1060-33-80



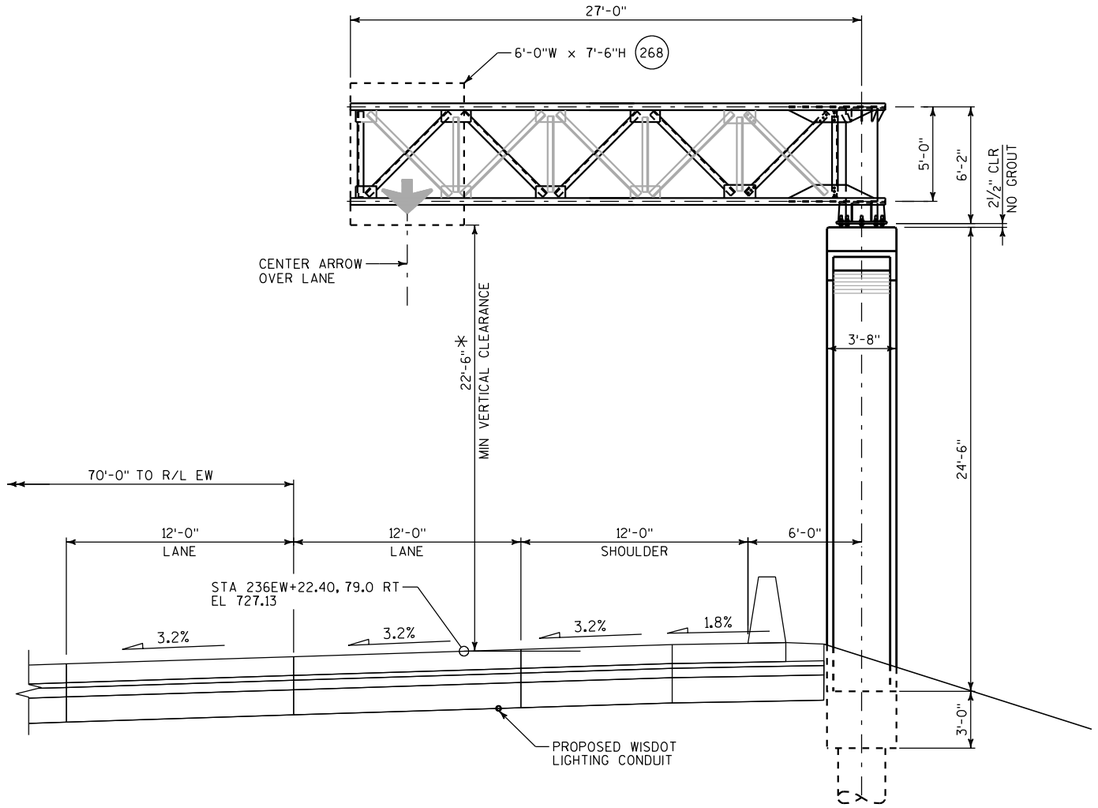
PLAN



PROFILE GRADE LINE EW EB

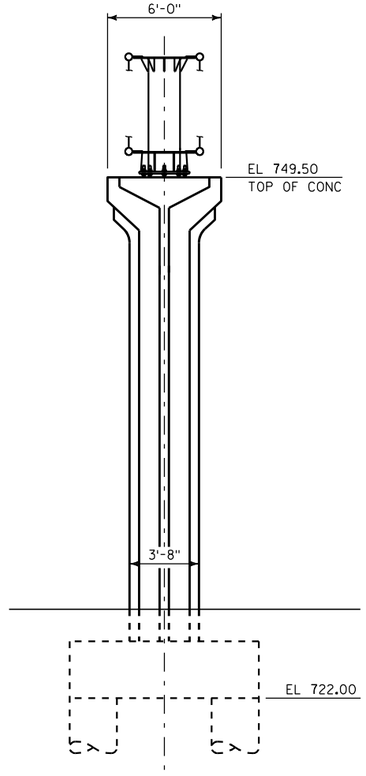


LOCATION MAP



ELEVATION

S-40-131 - STA 236EW+25.00
IH 94 EB
(LOOKING UP STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	23
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,165
641.1200.0009	SIGN BRIDGE CANTILEVERED S-40-131 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4210

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

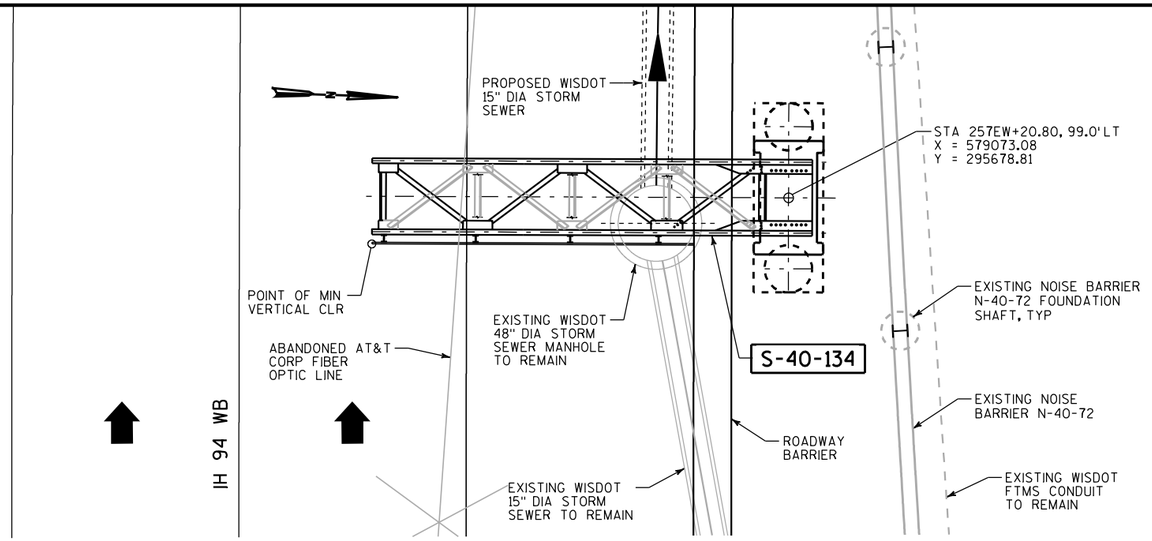
S-40-131
GENERAL PLAN
& ELEVATION

SHEET 10 OF 20

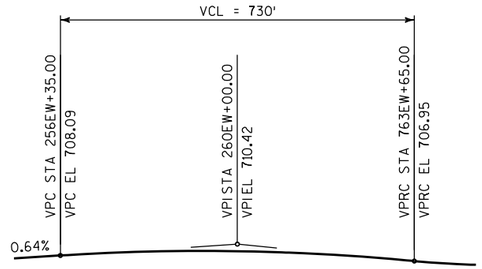
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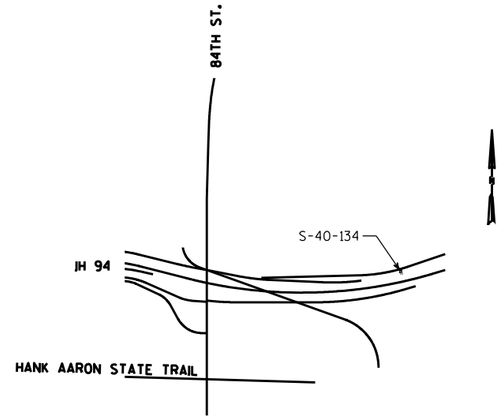
STATE PROJECT NUMBER
1060-33-80



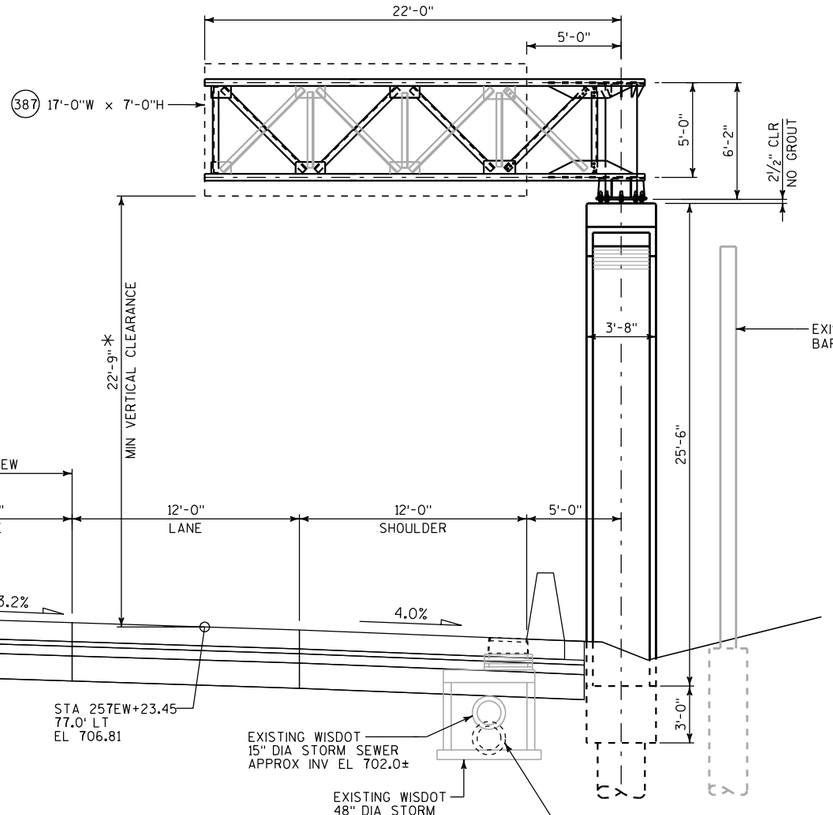
PLAN



PROFILE GRADE LINE EW EB

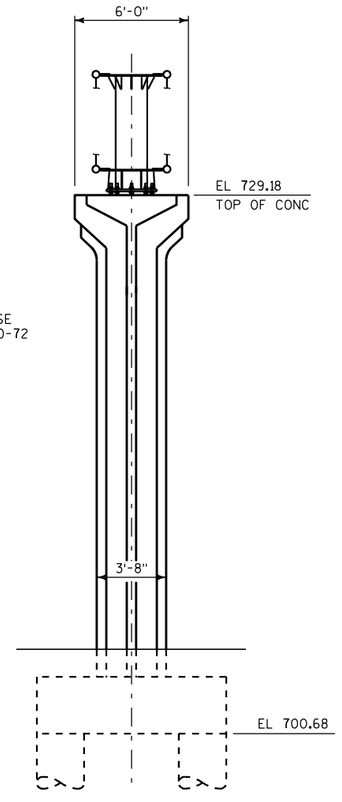


LOCATION MAP



ELEVATION

S-40-134 - STA 257EW+20.80
IH 94 WB
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,260
641.1200.0010	SIGN BRIDGE CANTILEVERED S-40-134 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4230

LEGEND

✳ INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

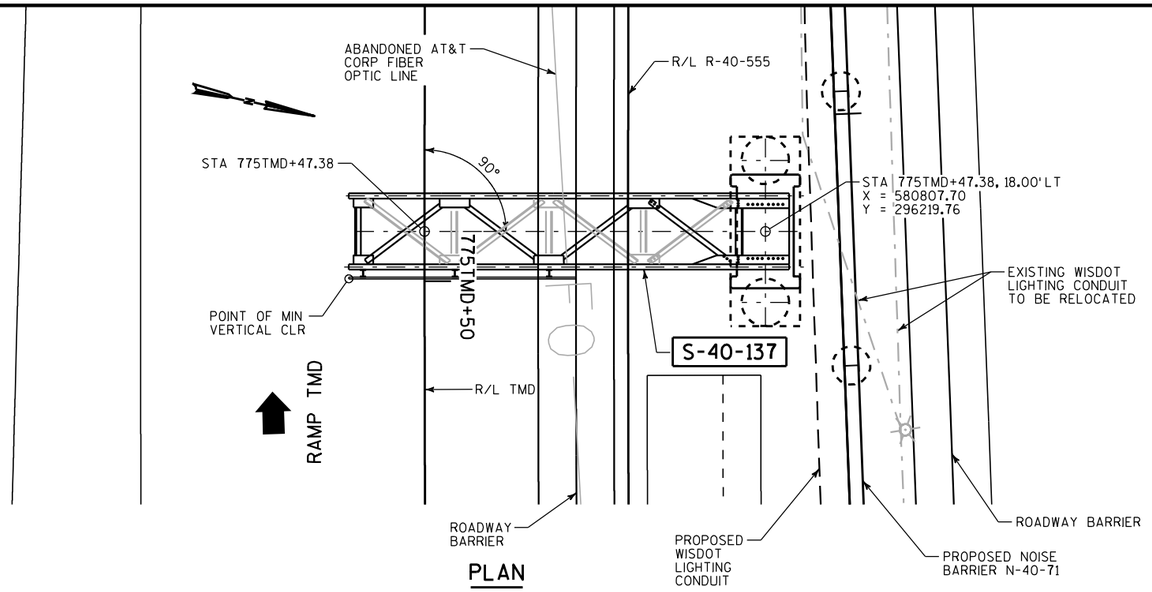
S-40-134
GENERAL PLAN
& ELEVATION

SHEET 11 OF 20

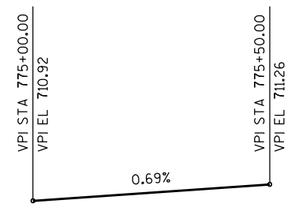
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STATE PROJECT NUMBER
1060-33-80

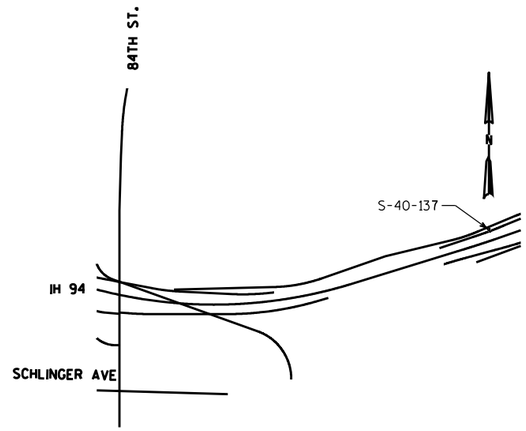


PLAN

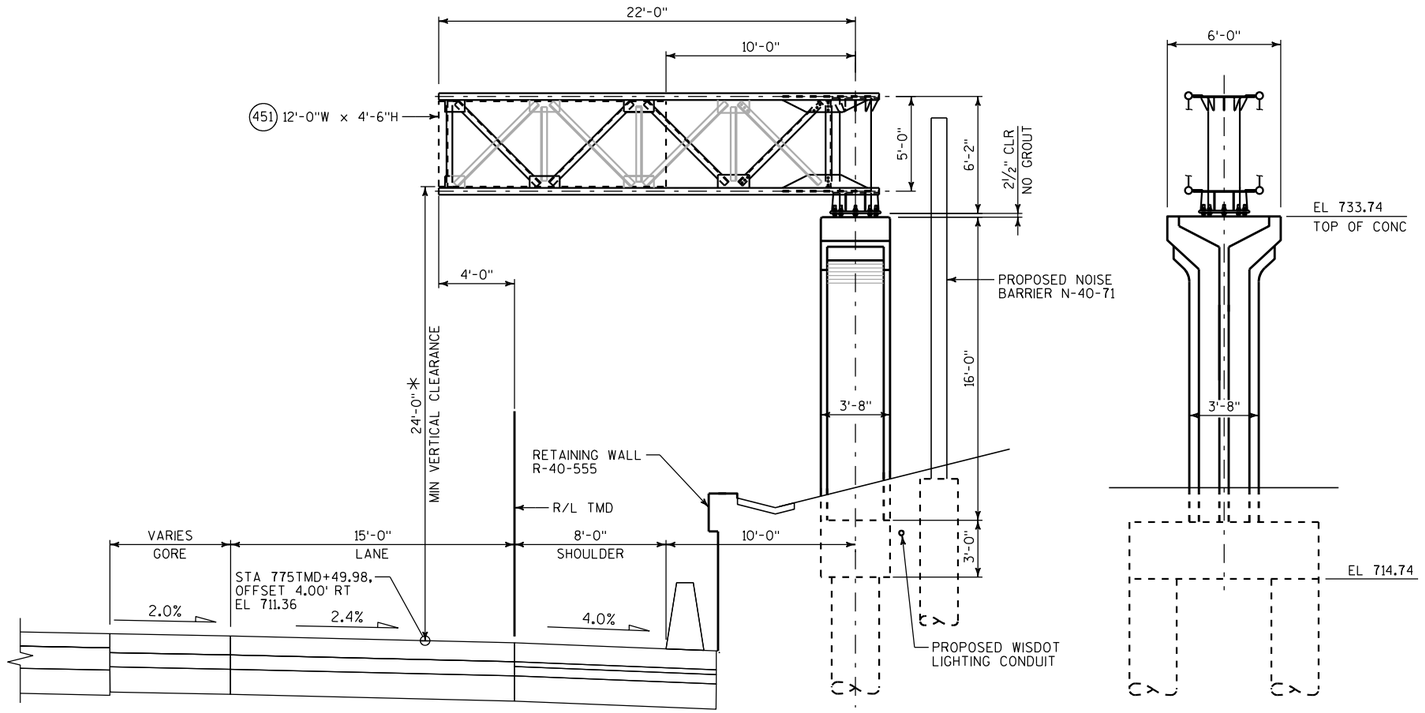


PROFILE GRADE LINE TMD

R/L TMD



LOCATION MAP



ELEVATION

S-40-137 - STA 775TMD+47.38
RAMP TMD
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)

END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	20
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,375
641.1200.0011	SIGN BRIDGE CANTILEVERED S-40-137 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4260

LEGEND

* INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

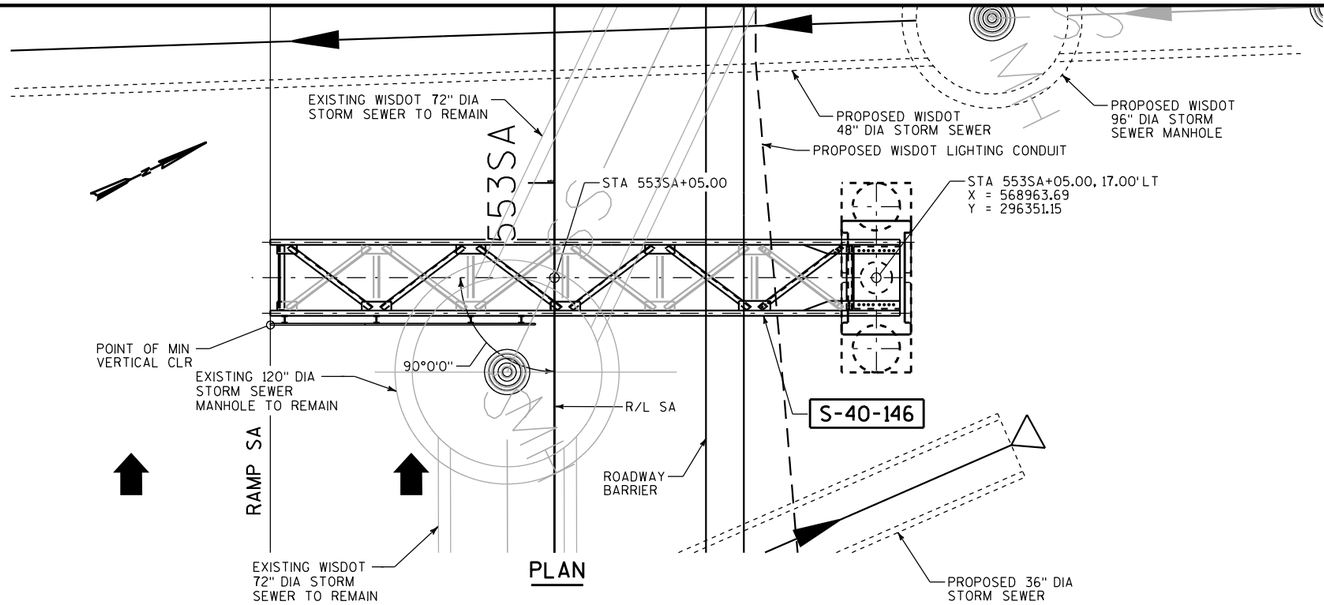
S-40-137
GENERAL PLAN
& ELEVATION

SHEET 12 OF 20

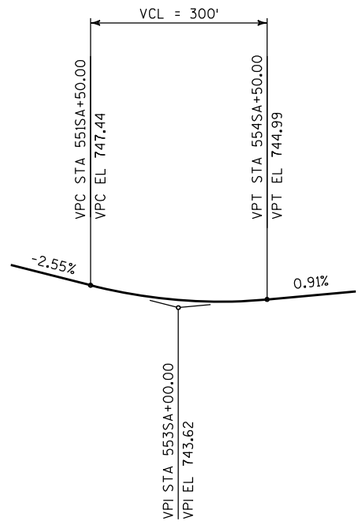
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8

STATE PROJECT NUMBER
1060-33-80

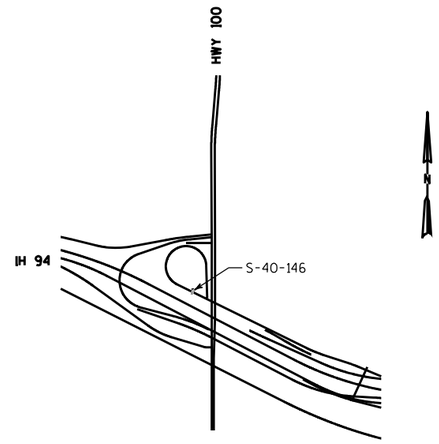


PLAN

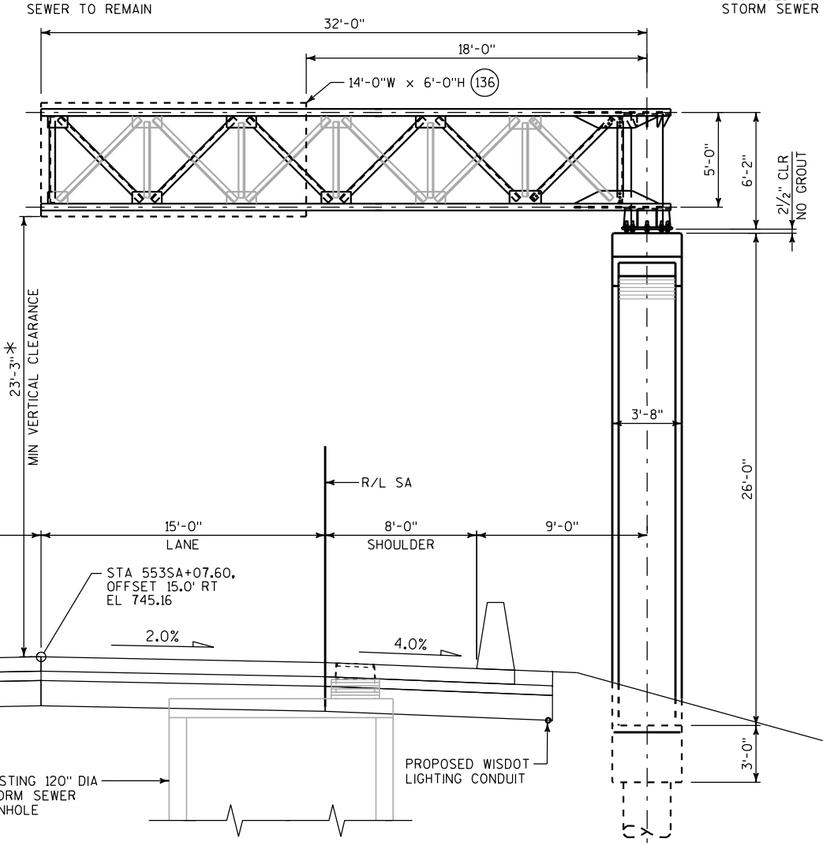


PROFILE GRADE LINE SA

R/L SA

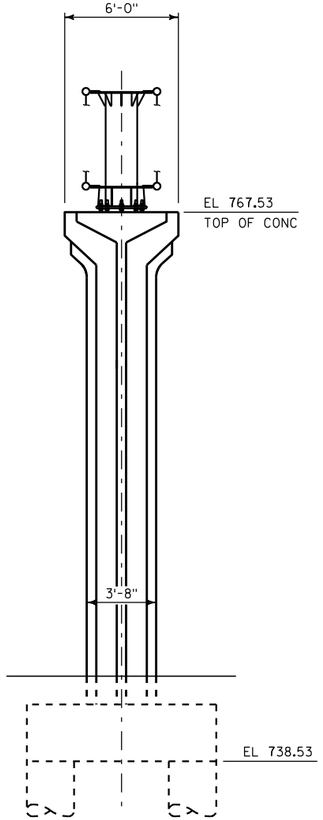


LOCATION MAP



ELEVATION

S-40-146 - STA 553SA+05.00
RAMP SA
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)



END VIEW

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,100
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	3,140
641.1200.0012	SIGN BRIDGE CANTILEVERED S-40-146 ◑	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4270

LEGEND

* INCLUDES 2'-0" FOR FUTURE CATWALK INSTALLATION

◯ SIGN NUMBERS (PERMANENT SIGNING PLANS)

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

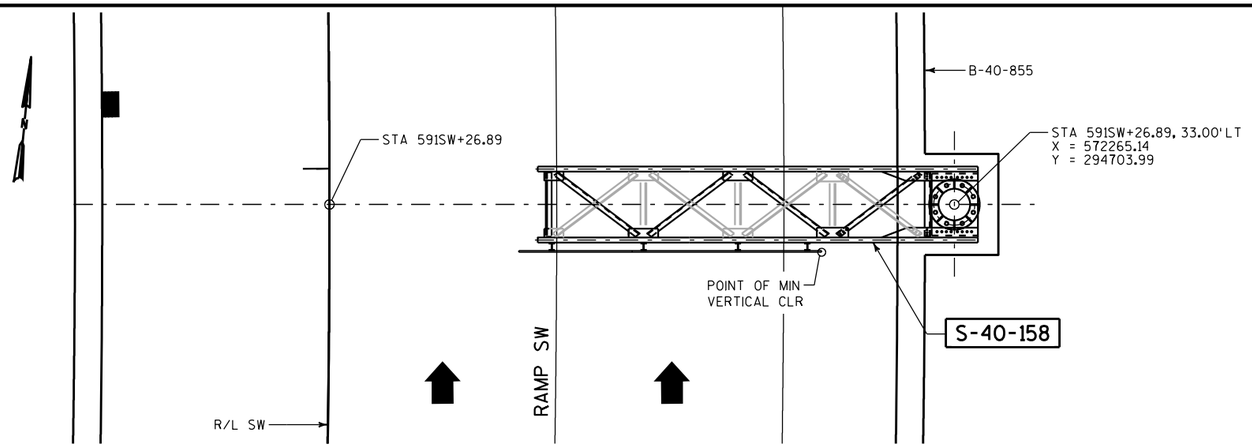
S-40-146
GENERAL PLAN
& ELEVATION

SHEET 13 OF 20

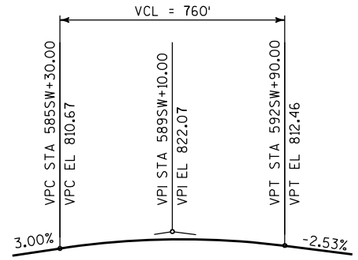
FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\S-40-28\cds\S-40-146_080102_gp.dgn PLOT DATE : 01-MAY-2014 13:44 PLOT BY : MSCKES PLOT NAME : S-40-146_080102_gp PLOT SCALE : 8:1

STATE PROJECT NUMBER

1060-33-80

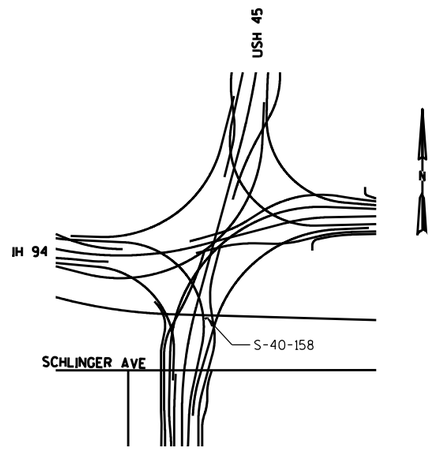


PLAN

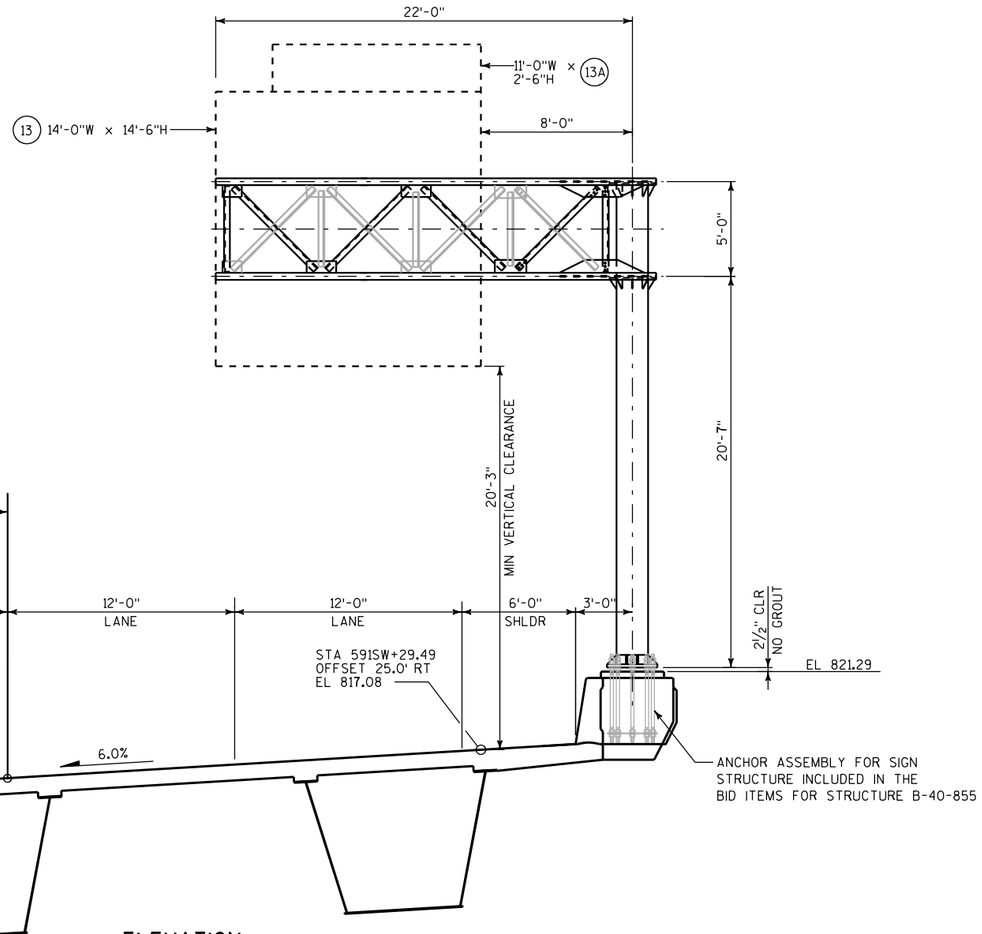


PROFILE GRADE LINE SW

R/L SW



LOCATION MAP



ELEVATION

S-40-158 - STA 591SW+26.89
RAMP SW
(LOOKING DOWN STATION AT FRONT FACE OF SIGN)

TOTAL ESTIMATE OF QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	TOTAL
641.1200.0013	SIGN BRIDGE CANTILEVERED S-40-158 ◑	LS	1

ALL ITEMS ARE CATEGORY 4280

LEGEND

◑ THIS LUMP SUM BID ITEM INCLUDES HORIZONTAL TRUSS AND VERTICAL STEEL COLUMN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY BHI | PLANS CK'D. KES

S-40-158
GENERAL PLAN
& ELEVATION

SHEET 14 OF 20

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\S-40-28\cds\S-40-158_080102_gp.dgn
PLOT DATE : 01-MAY-2014 13:44
PLOT BY : MSCKES
PLOT NAME : S-40-158_080102_gp
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-80

NOTES

DRAWINGS SHALL NOT BE SCALED.

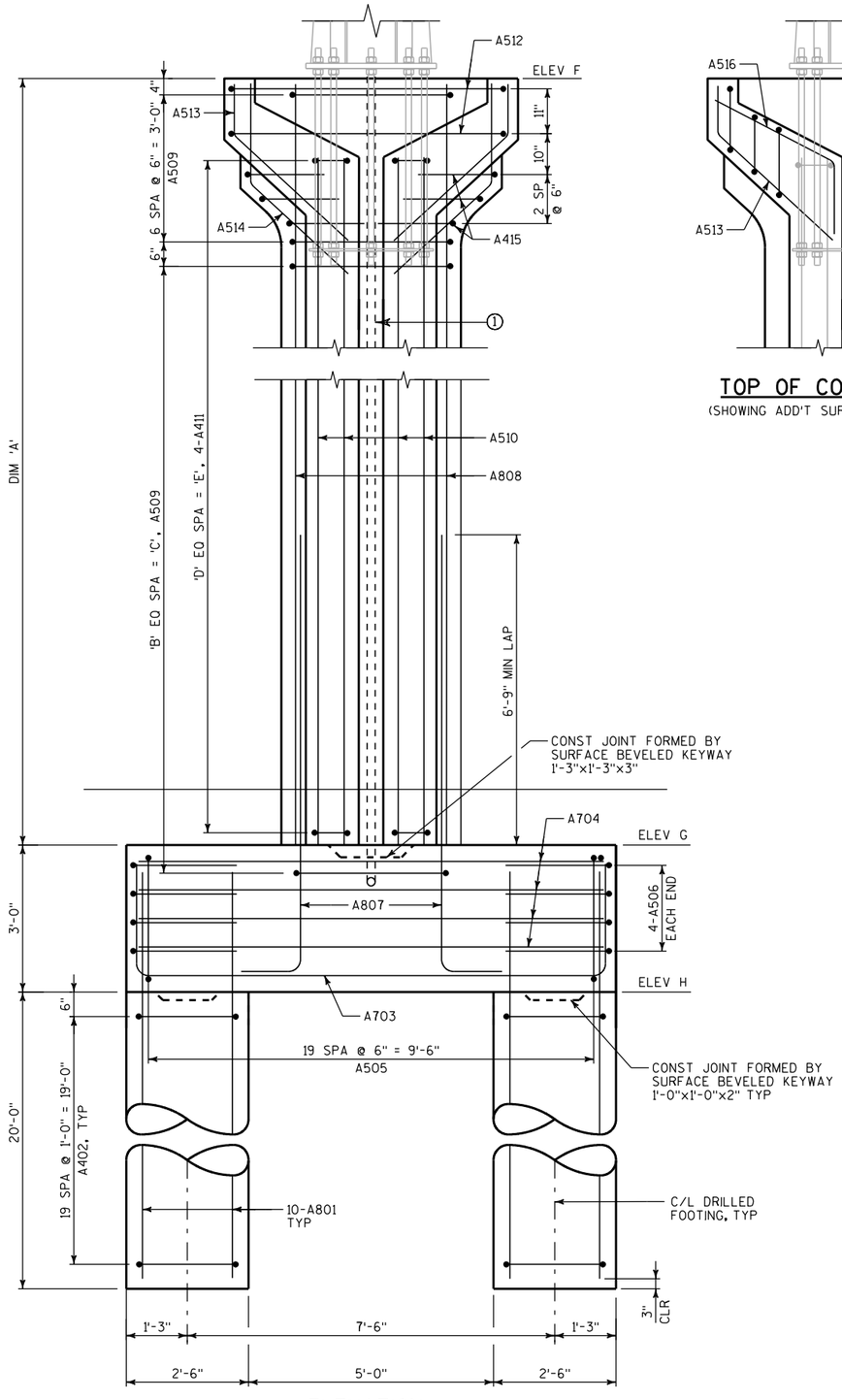
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR FOOTING AND 2" CLEAR FOR CONCRETE COLUMN UNLESS OTHERWISE NOTED.

SEE SHEET 20 FOR ANCHOR BOLT DETAILS.

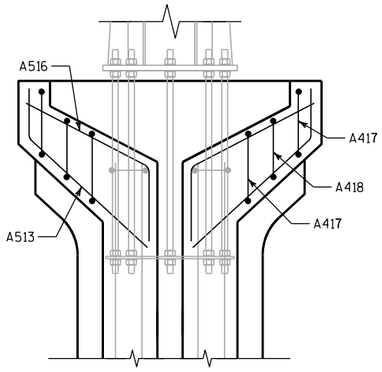
(1) 1-2" DIA. NON-METALLIC CONDUIT. EXTEND CONDUIT 6" BEYOND FACE OF FOOTING AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG, INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

TABLE OF COLUMN DIMENSIONS

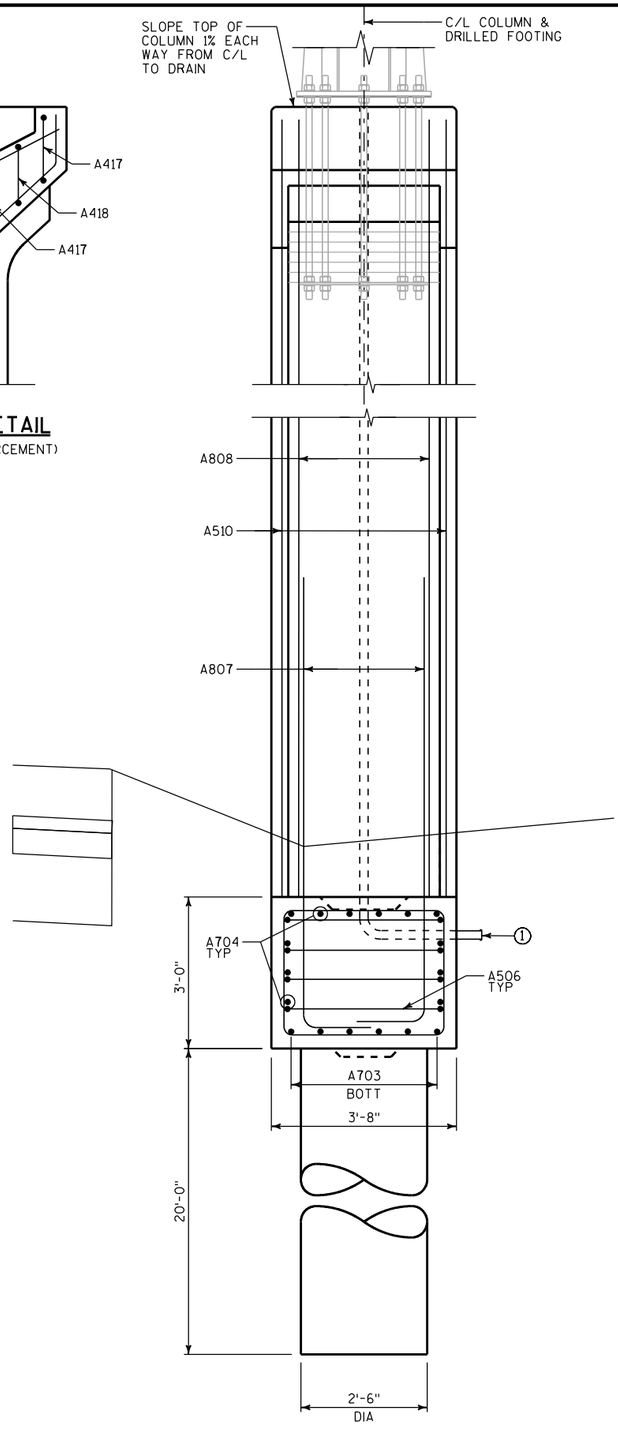
STRUCTURE	DIM 'A'	'B'	'C'	'D'	'E'	ELEV F	ELEV G	ELEV H
S-40-28	25'-6"	23	22'-2"	19	23'-6"	820.16	794.66	791.66
S-40-65	26'-6"	24	23'-2"	20	24'-6"	770.43	743.93	740.93
S-40-85	28'-6"	26	25'-2"	21	26'-6"	770.95	742.45	739.45
S-40-118	26'-0"	23	22'-8"	19	24'-0"	736.92	710.92	707.92
S-40-119	24'-6"	22	21'-2"	18	22'-6"	742.26	717.76	714.76
S-40-124	24'-0"	21	20'-8"	18	22'-0"	729.86	705.96	702.86
S-40-129	25'-0"	22	21'-8"	19	23'-0"	727.82	702.82	699.82
S-40-130	29'-0"	26	25'-8"	22	27'-0"	739.68	710.68	707.68
S-40-131	24'-6"	22	21'-2"	18	22'-6"	749.50	725.00	722.00
S-40-134	25'-6"	23	22'-2"	19	23'-6"	729.18	703.68	700.68
S-40-137	16'-0"	13	12'-8"	11	14'-0"	733.74	717.74	714.74
S-40-146	26'-0"	23	22'-8"	19	24'-0"	767.53	741.53	738.53



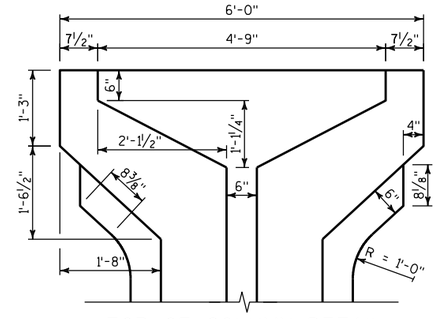
ELEVATION



TOP OF COLUMN DETAIL
(SHOWING ADD'T SURFACE REINFORCEMENT)



END VIEW



TOP OF COLUMN DETAIL
(SHOWING DIMENSIONS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY ASW | PLANS CK'D. KES

COLUMN & FOOTING DETAILS (1 OF 2)

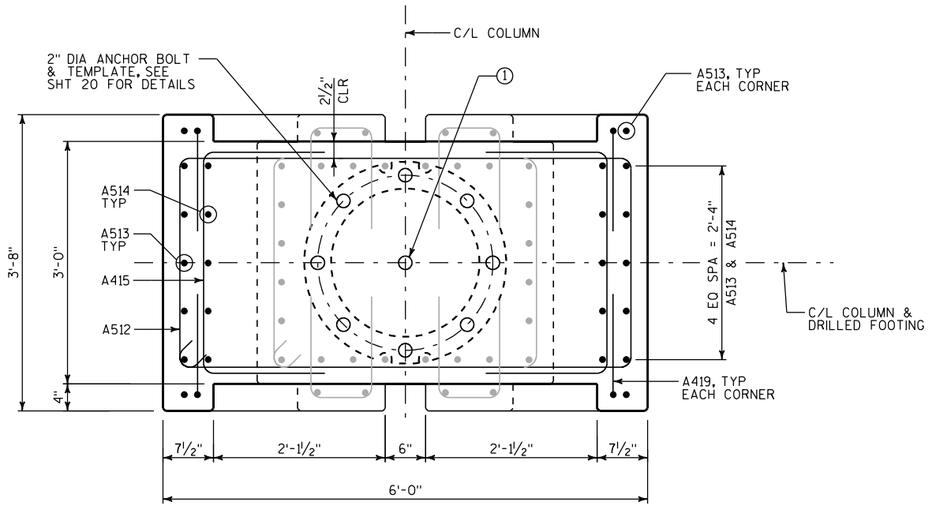
SHEET 15 OF 20

8

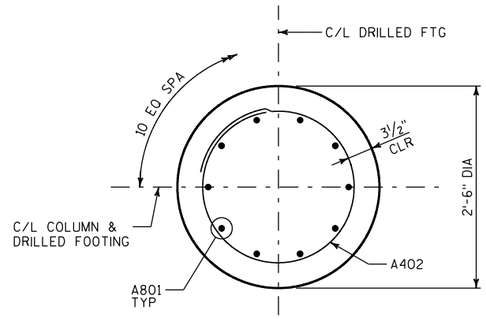
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STATE PROJECT NUMBER
1060-33-80



TOP OF COLUMN PLAN



SECTION THRU DRILLED FOOTING

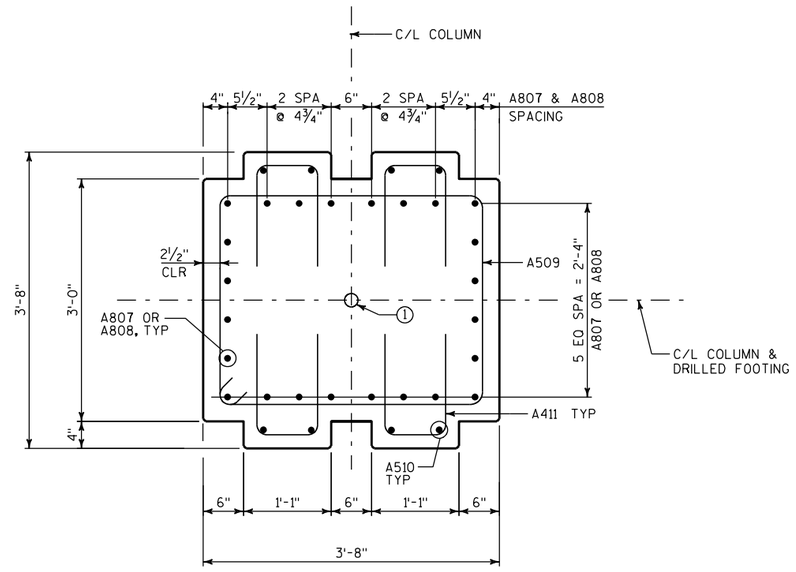
NOTES

DRAWINGS SHALL NOT BE SCALED.

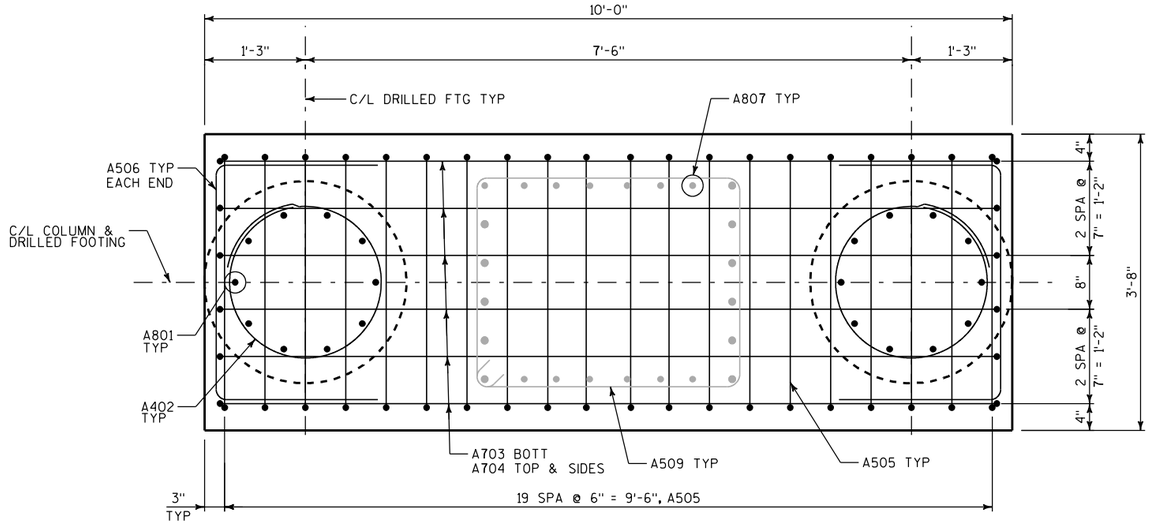
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR FOOTING AND 2" CLEAR FOR CONCRETE COLUMN UNLESS OTHERWISE NOTED.

SEE SHEET 20 FOR ANCHOR BOLT DETAILS.

(1) 1-2" DIA. NON-METALLIC CONDUIT. EXTEND CONDUIT 6" BEYOND FACE OF FOOTING AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG, INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".



COLUMN SECTION



FOOTING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

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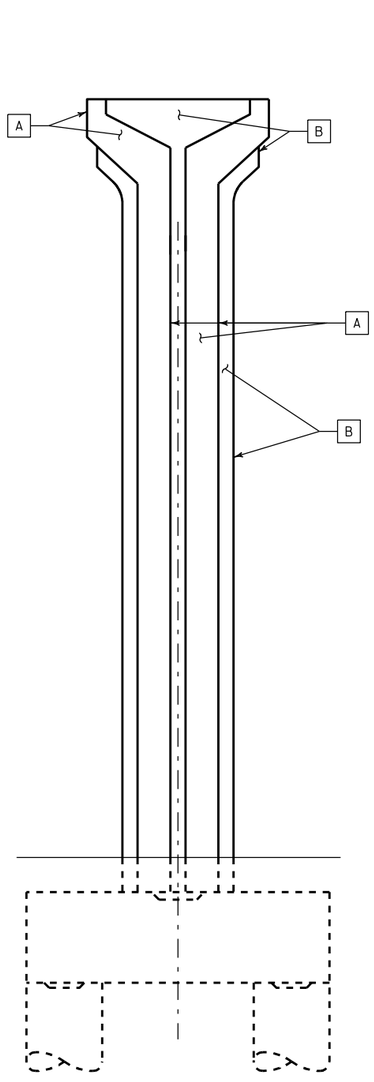
COLUMN & FOOTING DETAILS (2 OF 2)

SHEET 16 OF 20

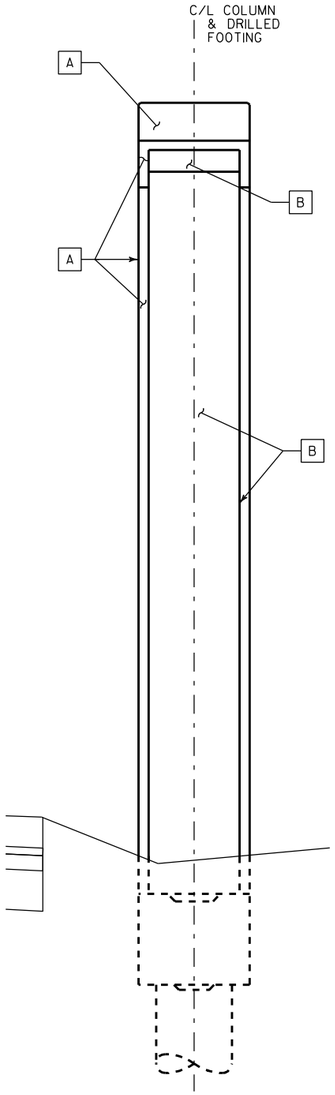
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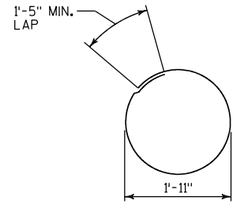
CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



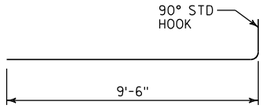
ELEVATION VIEW



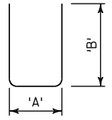
END VIEW



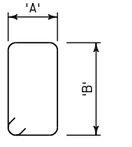
A402



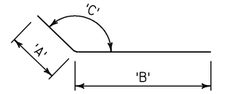
A807



BAR MARK	DIM 'A'	DIM 'B'
A703	9'-6"	2'-3"
A506	3'-0"	1'-6"
A411	9"	1'-3"
A415	2'-7"	1'-6"
A417	1'-3"	1'-3"
A418	1'-0"	1'-3"



BAR MARK	DIM. 'A'	DIM. 'B'
A505	2'-6"	3'-2"
A509	2'-7"	3'-3"
A512	5'-7"	2'-7"



BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C'
A513	1'-0"	3'-2"	133°
A514	1'-11"	2'-5"	133°
A516	1'-6"	2'-8"	117°

BILL OF BARS

BAR DIMENSIONS ARE OUT TO OUT OF BAR

BAR MARK	COAT	NO. REQ'D ◐	LENGTH	BENT	LOCATION
A801	-	20	22'-6"	-	SHAFT VERTICAL
A402	-	40	7'-6"	X	SHAFT TIE
A703	-	6	13'-8"	X	FOOTING BOTTOM
A704	-	12	9'-6"	-	FOOTING SIDE & TOP
A505	-	20	12'-0"	X	FOOTING STIRRUP
A506	-	8	5'-9"	X	FOOTING ENDS HORIZONTAL
A807	X	24	10'-8"	X	FOOTING TO COLUMN DOWELS
A808	X	24	DIM 'A'	-	COLUMN VERTICAL (MAIN)
A509	X	'C'	12'-4"	-	COLUMN STIRRUP
A510	X	8	DIM 'B'	-	COLUMN VERTICAL (SURFACE)
A411	X	'D'	3'-1"	X	COLUMN TIE (SURFACE)
A512	X	2	17'-0"	X	COLUMN TOP (STIRRUP)
A513	X	14	4'-2"	X	COLUMN TOP (SURFACE)
A514	X	10	4'-4"	X	COLUMN TOP (SURFACE)
A415	X	6	5'-5"	X	COLUMN TOP TIE (SURFACE)
A516	X	4	4'-2"	X	COLUMN TOP (SURFACE)
A417	X	8	3'-7"	X	COLUMN TOP TIE (SURFACE)
A418	X	4	3'-4"	X	COLUMN TOP TIE (SURFACE)

◐ BAR NO. REQUIRED QUANTITY SHOWN IS FOR ONLY ONE SIGN STRUCTURE COLUMN AND FOUNDATION

TABLE OF BAR DIMENSIONS

STRUCTURE	DIM 'A'	DIM 'B'	'C'	'D'
S-40-28	25'-3"	23'-9"	30	80
S-40-65	26'-3"	24'-9"	31	84
S-40-85	28'-3"	27'-9"	33	88
S-40-118	25'-9"	24'-3"	30	80
S-40-119	24'-3"	23'-9"	29	76
S-40-124	23'-9"	22'-3"	28	76
S-40-129	24'-9"	23'-3"	29	80
S-40-130	28'-9"	27'-3"	33	92
S-40-131	24'-3"	22'-6"	29	76
S-40-134	25'-3"	23'-9"	30	80
S-40-137	15'-9"	14'-3"	20	48
S-40-146	25'-9"	24'-3"	30	80

CONCRETE STAINING SCHEDULE

MARK	COLOR
A	BASE COLOR
B	ACCENT COLOR #1

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE SHERWIN-WILLIAMS STANDARD COLOR SYSTEM LISTED:

BASE COLOR : WHOLE WHEAT - SW 6121, FN 122
ACCENT COLOR #1: BAGUETTE - SW 6123, FN 124

NO.	DATE	REVISION	BY

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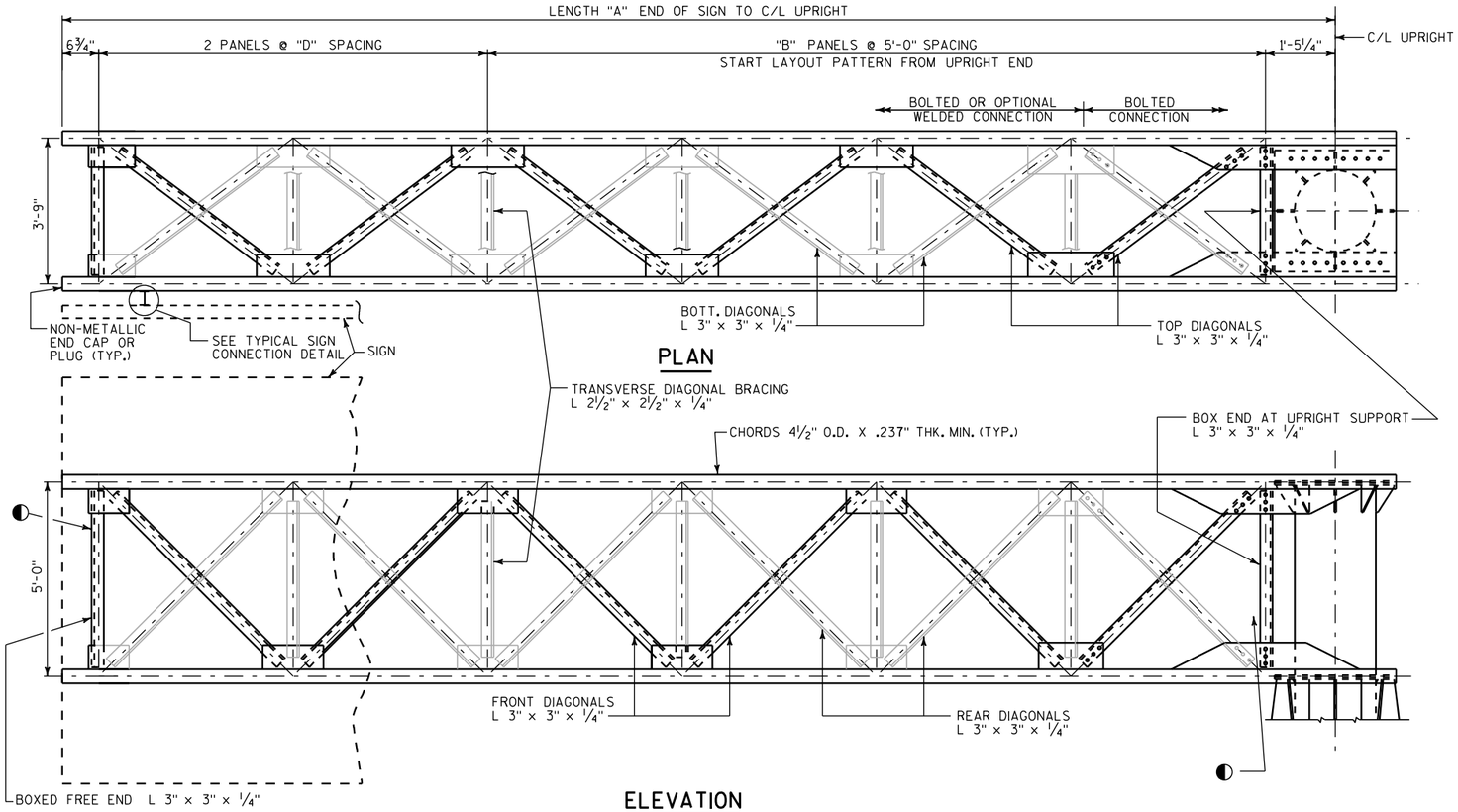
S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

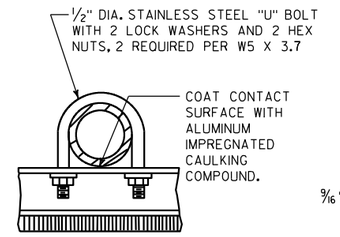
DRAWN BY ASW | PLANS CK'D. KES

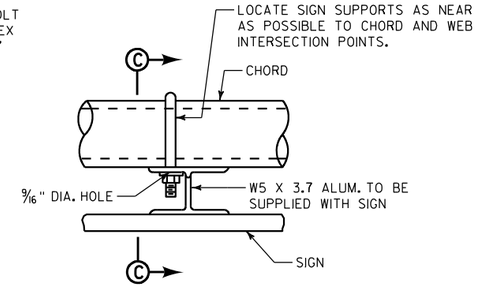
COLUMN AESTHETIC DETAILS & BILL OF BARS

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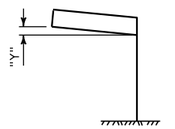
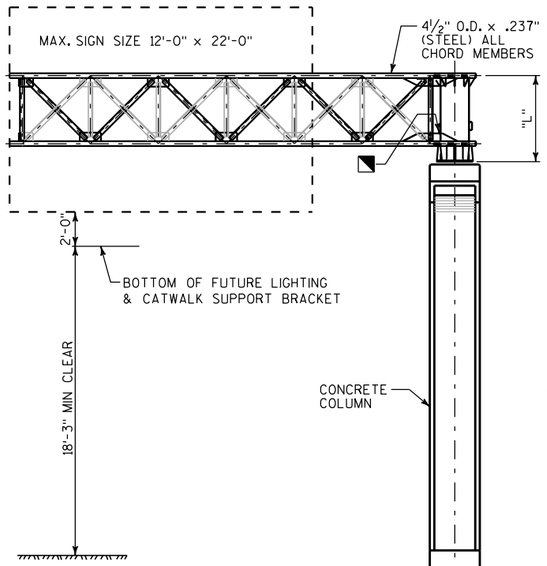
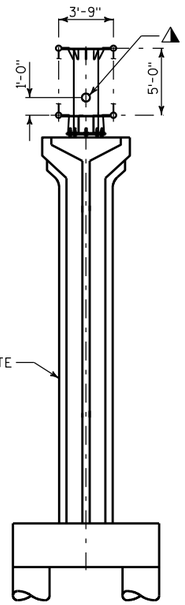
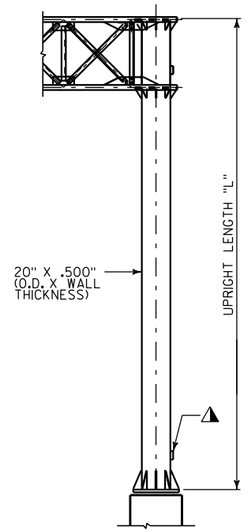


TABLE OF SIGN STRUCTURE DIMENSIONS

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-40-28	32'-0"	6'-2"	4	5'-0"	1"
S-40-65	32'-0"	6'-2"	4	5'-0"	1"
S-40-85	22'-0"	6'-2"	2	5'-0"	¾"
S-40-118	27'-0"	6'-2"	3	5'-0"	⅞"
S-40-119	17'-0"	6'-2"	1	5'-0"	½"
S-40-124	30'-0"	6'-2"	4	4'-0"	1"
S-40-129	32'-0"	6'-2"	4	5'-0"	1"
S-40-130	27'-0"	6'-2"	3	5'-0"	⅞"
S-40-131	27'-0"	6'-2"	3	5'-0"	⅞"
S-40-134	22'-0"	6'-2"	2	5'-0"	¾"
S-40-137	22'-0"	6'-2"	2	5'-0"	¾"
S-40-146	32'-0"	6'-2"	4	5'-0"	1"
S-40-158	22'-0"	25'-7"	2	5'-0"	1⅜"

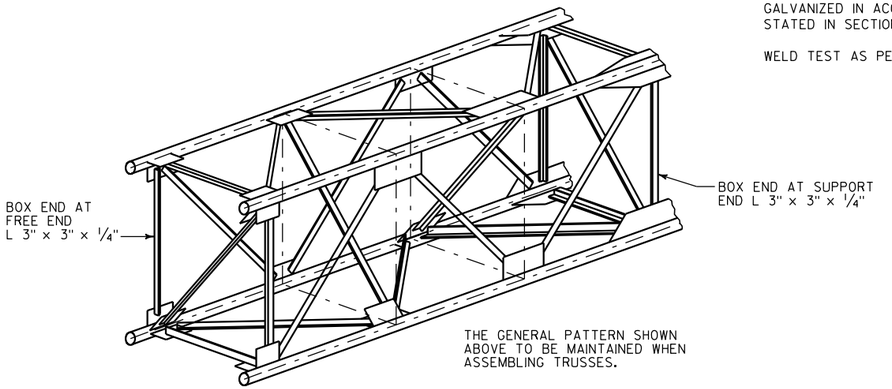






LEGEND

- SEE CANTILEVER SIGN TRUSS DETAILS SHEET FOR CONNECTION OF TRANSVERSE DIAGONAL BRACING AT UPRIGHT SUPPORT AND FREE END
- HANDHOLE, SEE SHT 20 FOR DETAILS
- DRILL HOLE & TAP FOR STD 1" DIA PIPE THREAD, LOCATE 6" UP FROM C/L OF BOTTOM CHORD. FILL TAPPED HOLE WITH SAME SIZE PLUG COATED WITH ANTI-SEIZE COMPOUND



NOTES

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT THE END OF TRUSS SHOWN IN THE "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF THE LEVELING NUTS.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C/L TO C/L OF CHORDS & SHALL BE CENTERED ON THE CANTILEVER. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE A.A.S.H.T.O. SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

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GALVANIZED STEEL CANTILEVER SIGN TRUSS

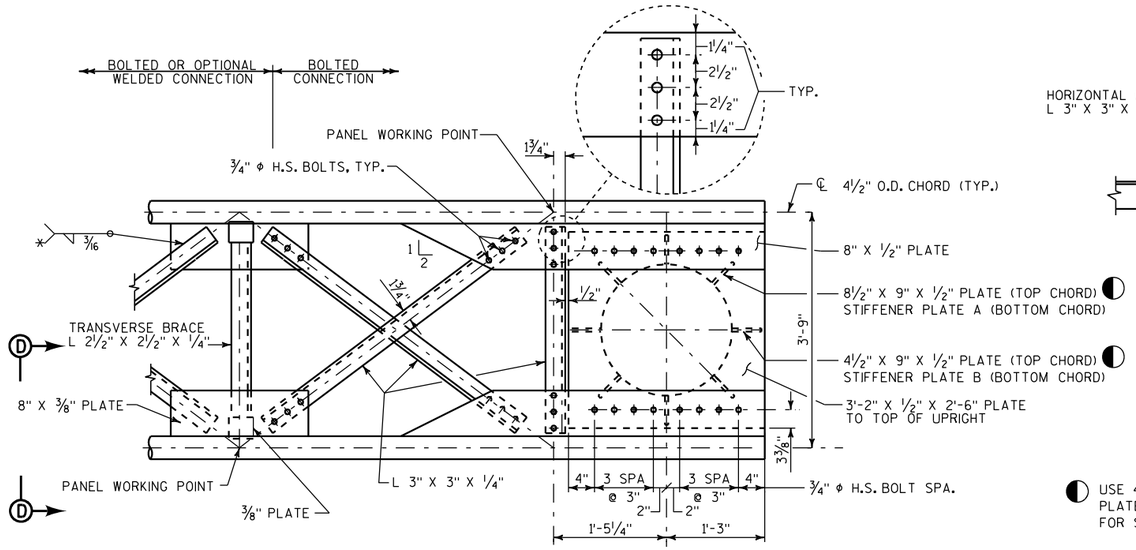
SHEET 18 OF 20

8

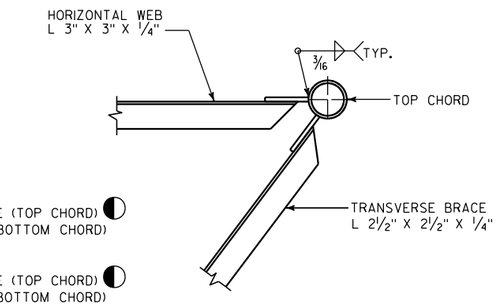
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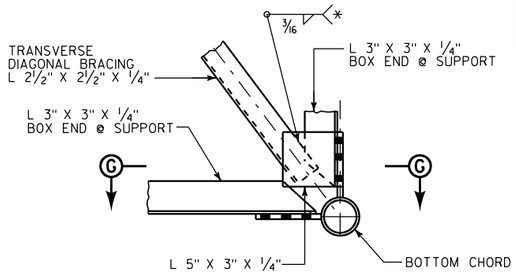


PLAN TRUSS TO UPRIGHT



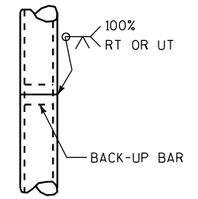
SECTION D-D

◐ USE 4½" X 9" X ½" STIFFENER PLATES ON TOP & BOTTOM CHORDS FOR STRUCTURE S-40-158 ONLY



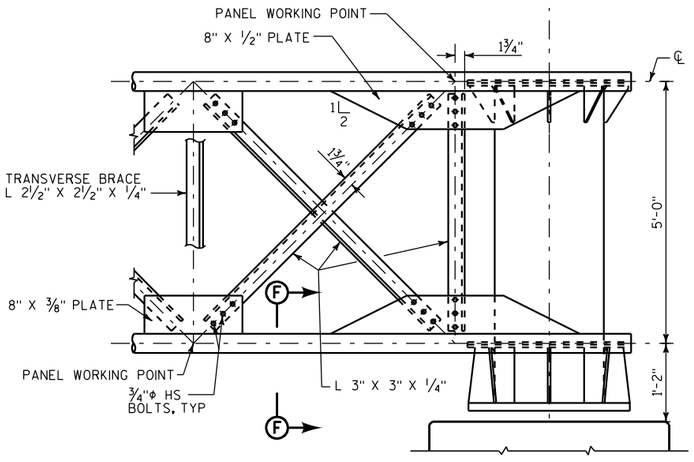
SECTION F-F

* ANGLE	WELD LENGTH (MIN.)
L 2½" X 2½" X ¼"	7"
L 3" X 3" X ¼"	8"

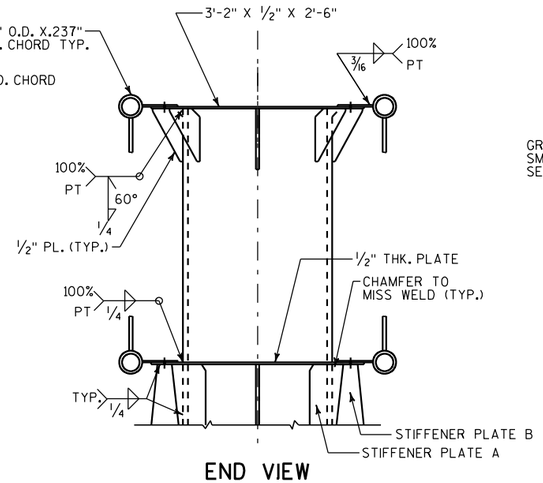


SEPARATE OPTIONAL SPLICE FROM GUSSET PLATES BY 6" MIN.

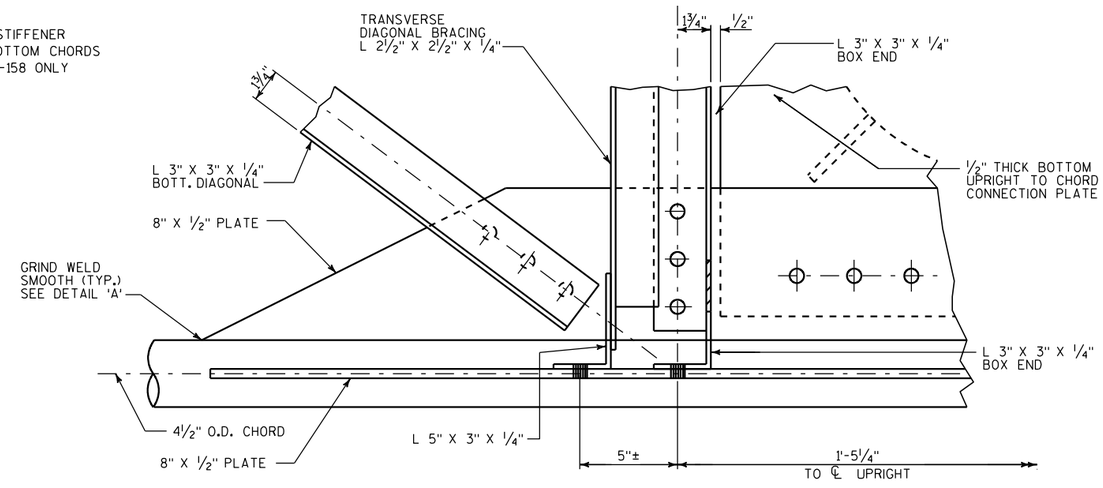
OPTIONAL COLUMN OR CHORD SPLICE DETAIL



ELEVATION TRUSS TO UPRIGHT

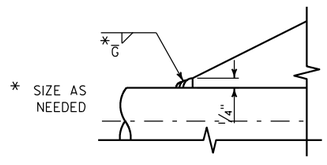


END VIEW TRUSS TO UPRIGHT

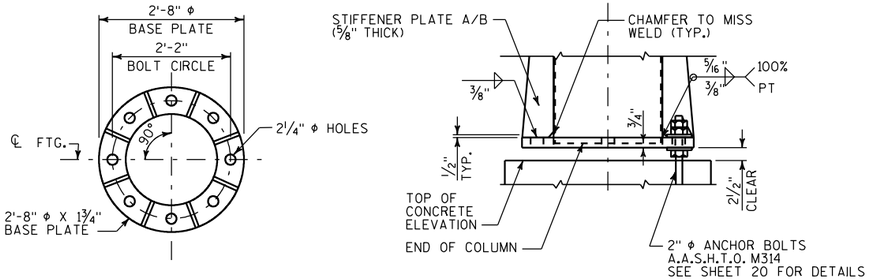


SECTION G-G

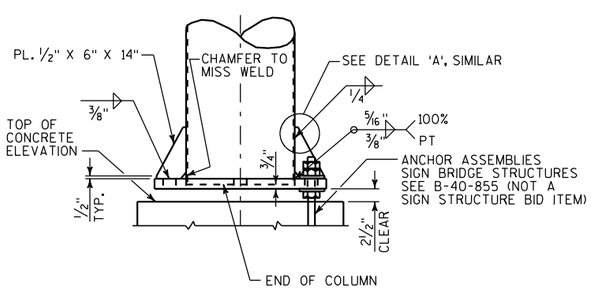
(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)



DETAIL 'A'

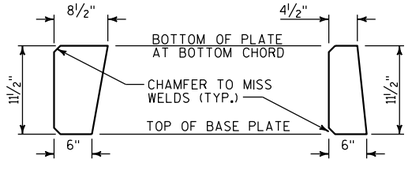


BASE PLATE DETAILS



BASE PLATE DETAILS

(S-40-158 ONLY)



STIFFENER PLATE A

STIFFENER PLATE B

(SEE "PLAN TRUSS TO UPRIGHT" FOR LOCATIONS)

NO.	DATE	REVISION	BY

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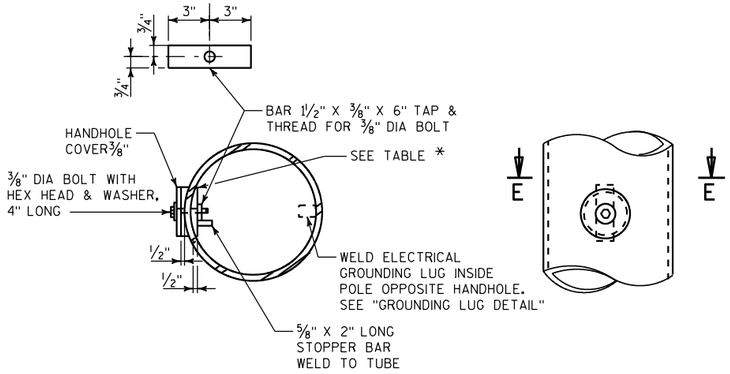
DRAWN BY ASW | PLANS CK'D. KES

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 19 OF 20

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\S-40-28\cds\S-40-Core_502_ss.dgn PLOT DATE : 01-MAY-2014 13:44 PLOT BY : MSCKES PLOT NAME : S-40-Core_502_ss PLOT SCALE : 4:1

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SECTION E-E

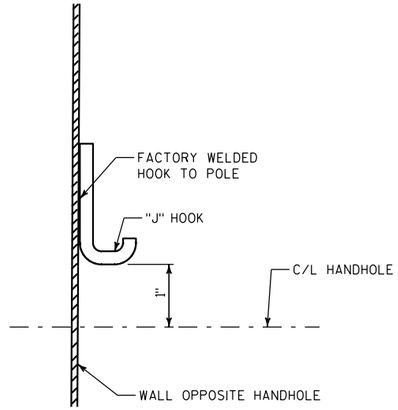
HANDHOLE DETAILS

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN THE COLUMN OF THE CANTILEVERED SIGN BRIDGE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE OR CANTILEVER COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

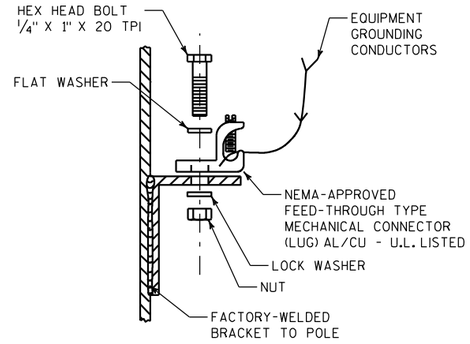
*

UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



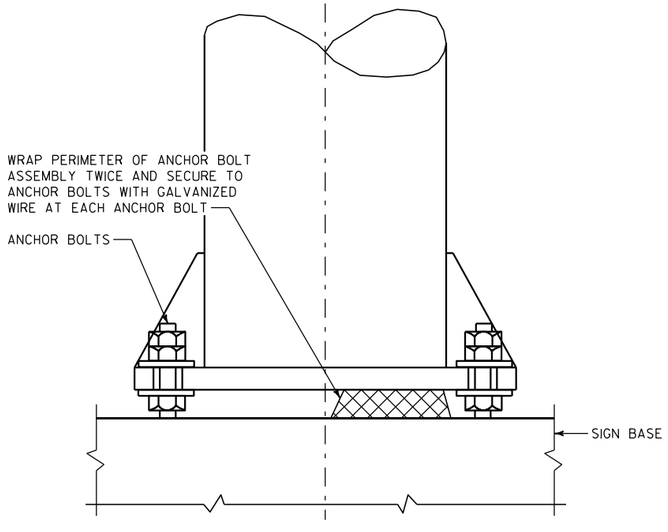
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



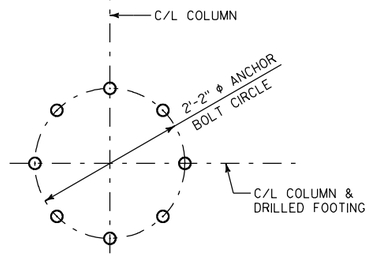
GROUNDING LUG DETAIL

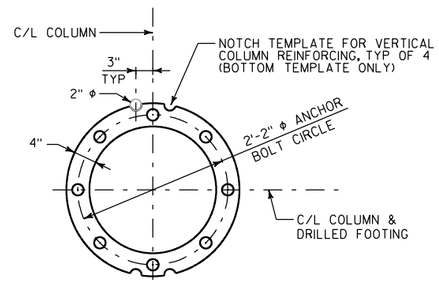
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



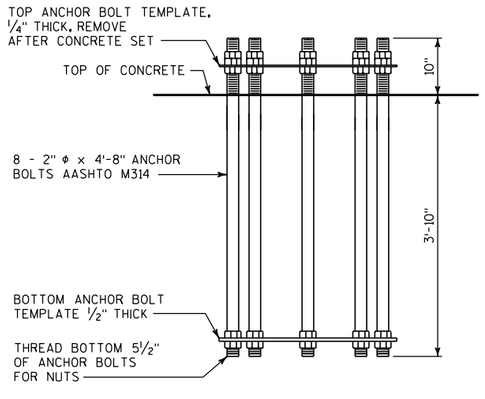
RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)





TOP VIEW OF TOP & BOTTOM TEMPLATES



ANCHOR BOLT DETAILS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-28/65/85/118/119/124/129/130/131/134/137/146/158

DRAWN BY ASW | PLANS CK'D. KES

HANDHOLE & ANCHOR BOLT DETAILS

SHEET 20 OF 20

STATE PROJECT NUMBER

1060-33-80

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-43 LAYOUT & QUANTITIES
3. S-40-104 LAYOUT & QUANTITIES
4. SINGLE POST SIGN TRUSS LAYOUT
5. SIGN PANEL MOUNTING DETAILS FOR SINGLE COLUMN SIGN BRIDGES
6. POST CONNECTION DETAILS FOR SINGLE COLUMN SIGN BRIDGES
7. HANDHOLE DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE FABRICATION OF STEEL COLUMNS.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO "SIGN BRIDGE STRUCTURE S-40-XXX". LOCATE PLAQUE ON FREEWAY SIDE OF THE COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING PLANS & FTMS PLANS.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION TOM HEYDEL AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION, WHICH MAY OR MAY NOT BE THE SIGN CONFIGURATION AT THE CONCLUSION OF THIS CONSTRUCTION PROJECT.

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-43	575 SF	13'-0"
S-40-104	525 SF	12'-6"

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION, WITH 2013 INTERIMS. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF CATWALK.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
SEAN BLACK (262) 548-6407

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/16/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN SEAN T. BLACK E-42904 WAUKESHA, WI 2/27/14 PROFESSIONAL ENGINEER

S-40-43 AND S-40-104

ZOO INTERCHANGE SIGN BRIDGES ON STRUCTURES

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~	
MILWAUKEE/WAUKESHA	MILWAUKEE	
DESIGN SPEC. AASHTO SIGN SPEC. 2013		LOAD 90 MPH 3 SEC. SP.
DESIGNED BY AG	DESIGN CK'D. STB	DRAWN BY AG / PLANS CK'D. STB

GENERAL NOTES & DESIGN DATA

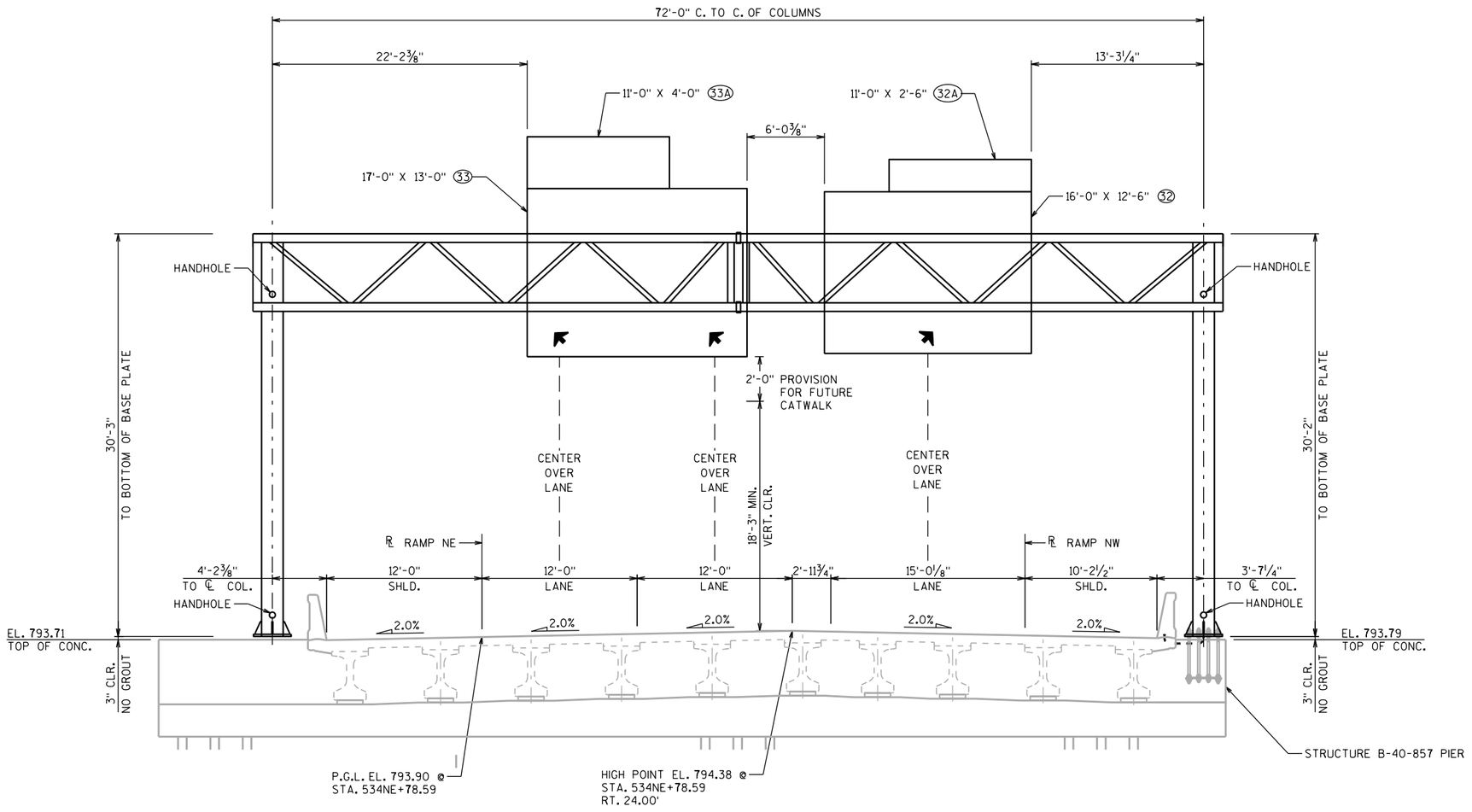
SHEET 1 OF 7

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - full span on bridges\S-40-43&104_101_gn.dgn PLOT DATE : 27-FEB-2014 18:58 PLOT BY : MSCAYG PLOT NAME : S-40-43&104_101_gn PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION

S-40-43, STA. 534NE+78.59
(LOOKING UP STATION AT FRONT OF SIGNS)

SEE B-40-857 PLANS FOR SIGN STRUCTURE ANCHORAGE, SIGN BASE AND CONDUIT DETAILS.

S-40-43 TOTAL ESTIMATE OF QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	TOTAL
*	641.6600	SIGN BRIDGE STRUCTURE S-40-43	LS	1

ITEM CATEGORY 4030

* THIS LUMP SUM PAY ITEM INCLUDE HORIZONTAL TRUSS AND VERTICAL COLUMN SUPPORTS. ANCHORAGE ASSEMBLIES FOR THIS STRUCTURE IS PAID FOR BY SEPARATE BID ITEMS. SEE B-40-857 PLANS FOR QUANTITIES AND DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

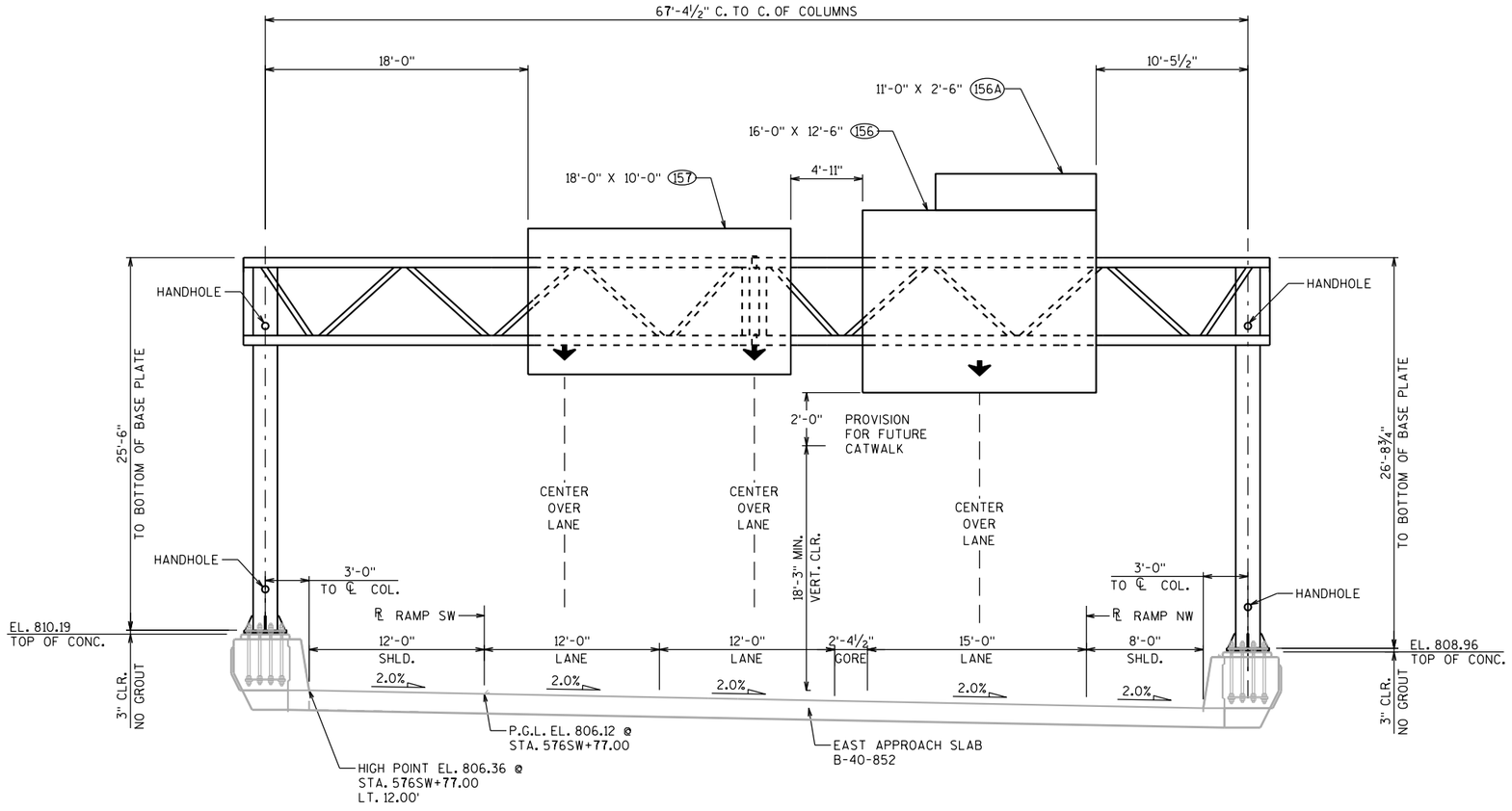
S-40-43 LAYOUT

SHEET 2 OF 7

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION

S-40-104, STA. 576SW+77.00
(LOOKING DOWN STATION AT FRONT OF SIGNS)

SEE B-40-852 PLANS FOR SIGN STRUCTURE ANCHORAGE, SIGN BASE AND CONDUIT DETAILS.

S-40-104 TOTAL ESTIMATE OF QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	TOTAL
*	641.6600	SIGN BRIDGE STRUCTURE S-40-104	LS	1

ITEM CATEGORY 4110

*THIS LUMP SUM PAY ITEM INCLUDE HORIZONTAL TRUSS AND VERTICAL COLUMN SUPPORTS. ANCHORAGE ASSEMBLIES FOR THIS STRUCTURE IS PAID FOR BY SEPARATE BID ITEMS. SEE B-40-852 PLANS FOR QUANTITIES AND DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

S-40-104 LAYOUT

SHEET 3 OF 7

8

8

STATE PROJECT NUMBER
1060-33-80

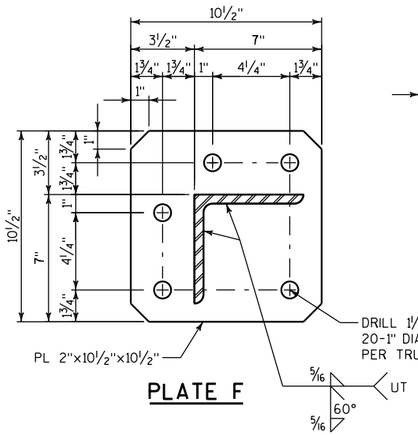
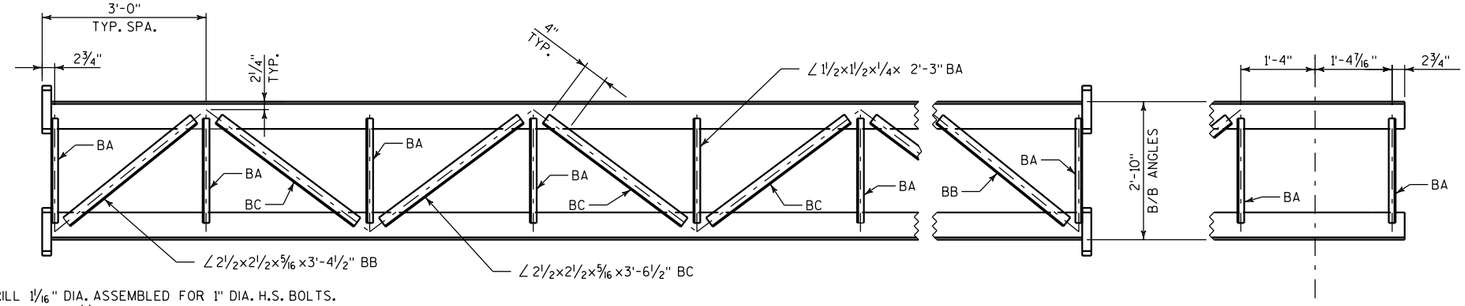


PLATE F



TOP VIEW

NOTES:

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

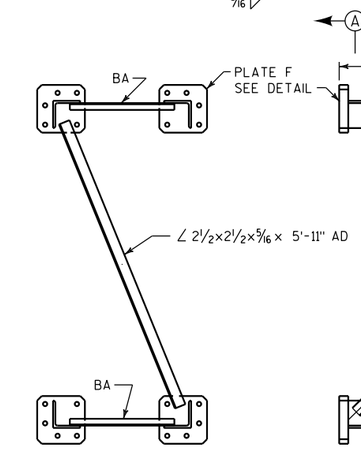
PROVIDE 2- ⁹⁄₁₆" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

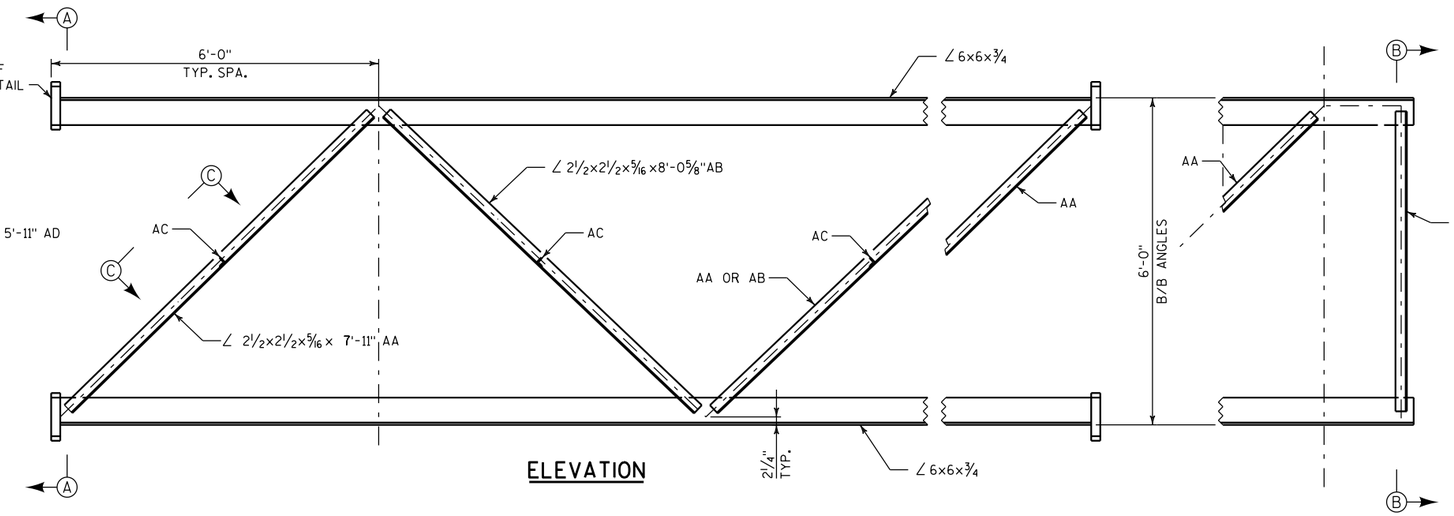
ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE SHEET 5 FOR CAMBER DETAILS.

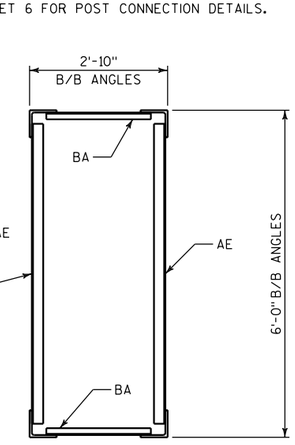
SEE SHEET 6 FOR POST CONNECTION DETAILS.



SECTION A-A



ELEVATION



SECTION B-B

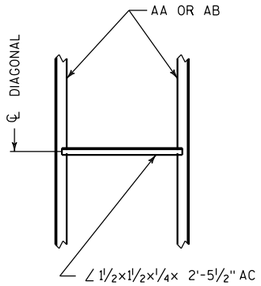
DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE A.P.I. SPEC. 5L GRADE X42 Fy = 42,000 psi.

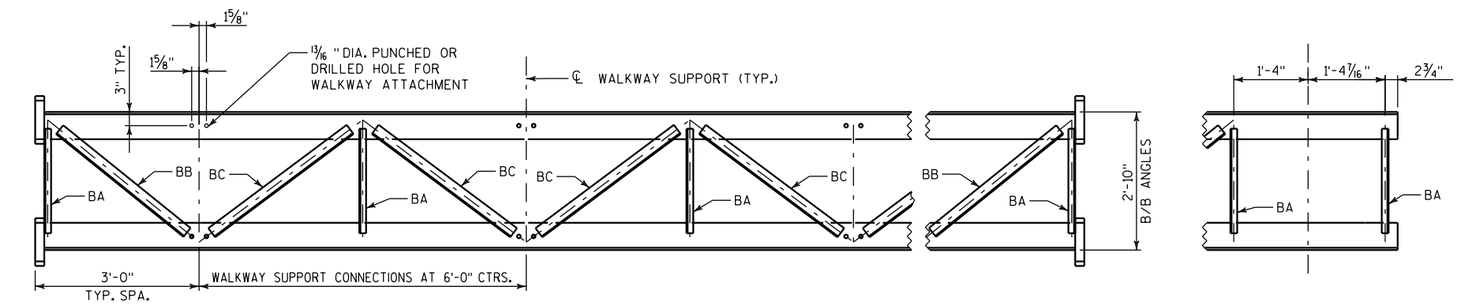
PLATES, BARS, STRUCTURAL ANGLES AND CHANNELS SHALL BE A.S.T.M. A709 GRADE 36 Fy = 36,000 psi.

ALL STRUCTURAL MEMBERS SHALL BE GALVANIZED.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN ℄ TO ℄ OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON PLANS.



SECTION C-C



BOTTOM VIEW

SIMPLE SPAN

NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

SINGLE POST SIGN TRUSS LAYOUT

SHEET 4 OF 7

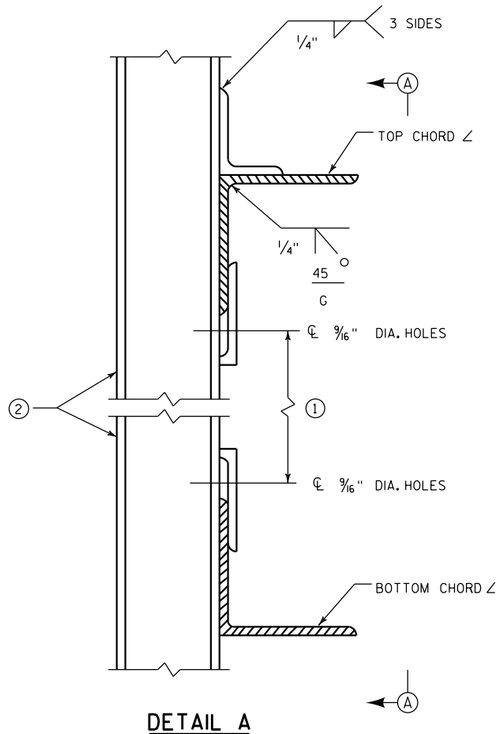
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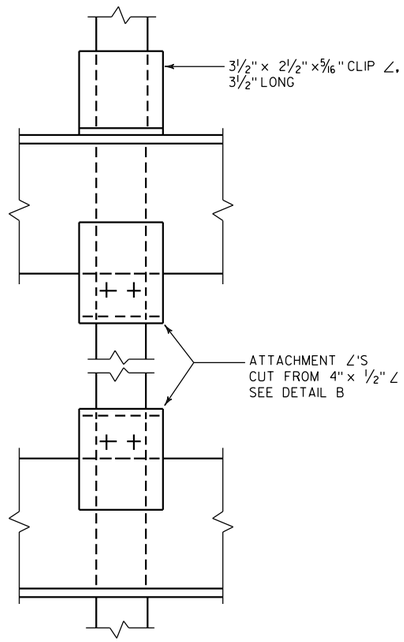
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PLOT DATE : 28-FEB-2014 11:01
PLOT BY : MSCAYG
PLOT NAME : S-40-43&104_501_ss
PLOT SCALE : 10:1

STATE PROJECT NUMBER

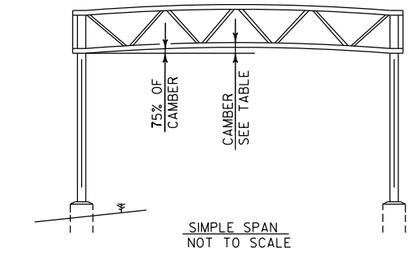
1060-33-80



DETAIL A



VIEW A-A

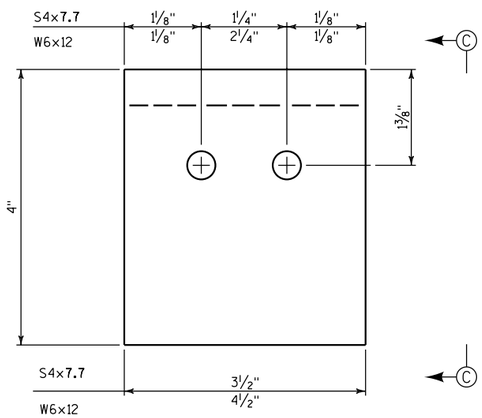


CAMBER DIAGRAM

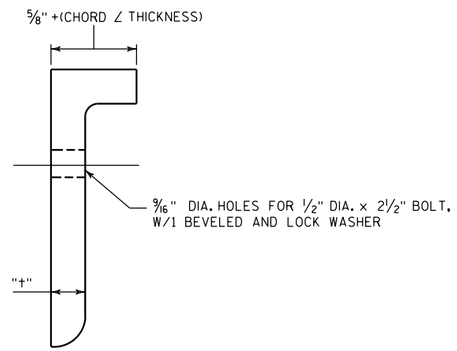
CAMBER TABLE

	S-40-43	S-40-104
SPAN	72'-0"	67'-4 1/2"
CAMBER	7/8"	13/16 "
DL DEFLECTION	3/16 "	1/8"
RESIDUAL CAMBER	11/16 "	11/16 "

NOTE:
CAMBER AND DEFLECTIONS SHOWN ARE AT ℄ SPAN. THE DEFLECTIONS AND CAMBER AT THE QUARTER POINTS SHALL BE APPROXIMATELY 75% OF THESE VALUES.



DETAIL B



VIEW C-C

NOTES:

1. (TRUSS DEPTH)-(TOP & BOTTOM CHORD ∠ LEGS)-1 1/4"
2. S4x7.7 (STEEL) FOR SIGN HEIGHTS ≤ 11'-0"
   W6x12 (STEEL) FOR SIGN HEIGHTS OVER 11'-0"
   SPACE AS SHOWN ON LAYOUT SHEETS. SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.

   THE PANEL MOUNTING POST AND MOUNTING ANGLES SHALL BE SUPPLIED WITH THE SIGN PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

SIGN PANEL MOUNTING DETAILS FOR SINGLE COLUMN SIGN BRIDGES

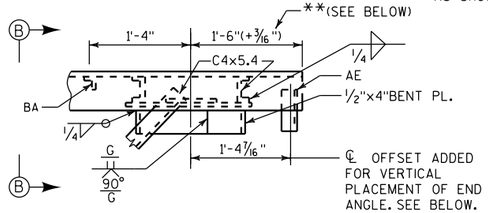
SHEET 5 OF 7

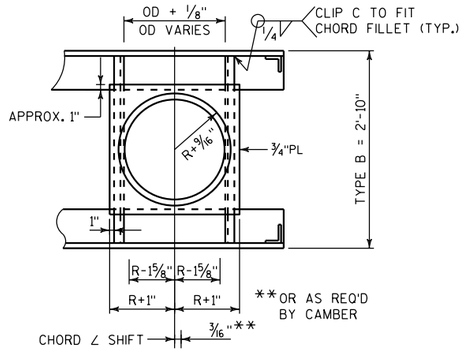
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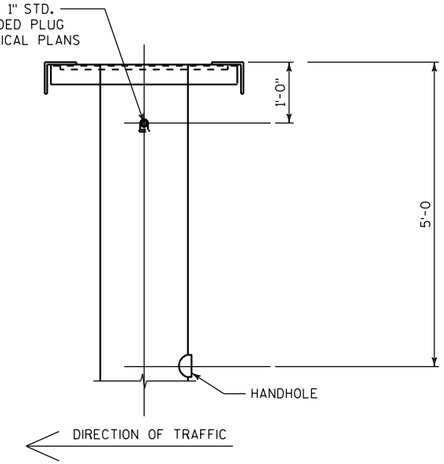
FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - full span on bridges\S-40-43&104_502_ss.dgn PLOT DATE : 28-FEB-2014 11:01 PLOT BY : MSCAYG PLOT NAME : S-40-43&104_502_ss PLOT SCALE : 6.639987:1

STATE PROJECT NUMBER
1060-33-80

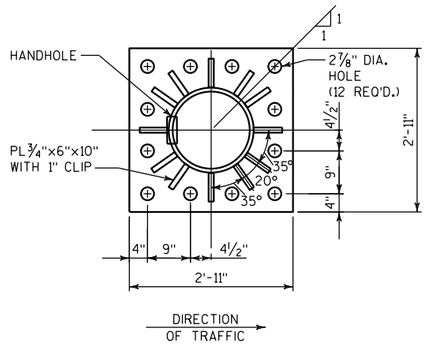




UPPER JUNCTION



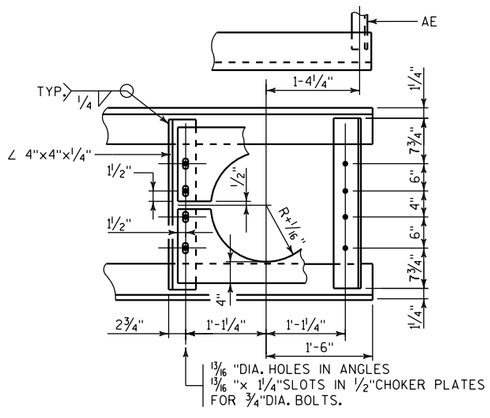
VIEW B-B



PLAN

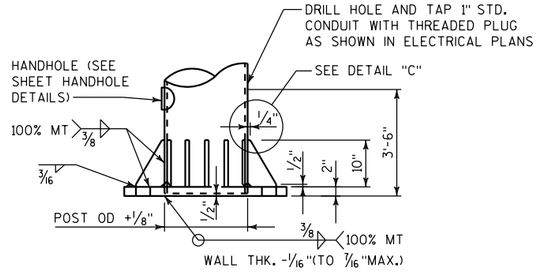
POST SIZES

STRUCTURE	OUTSIDE DIA. X WALL THICKNESS
S-40-43	20" O.D. X 0.5"
S-40-104	20" O.D. X 0.5"

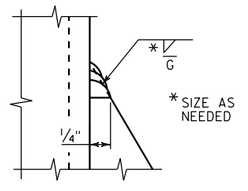


LOWER JUNCTION
SIMPLE TRUSS

NOTE:
CHOKER PLATES AND HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.



ELEVATION



DETAIL "C"

PLAN & ELEVATION - BASEPLATE

NOTE:
SEE CORRESPONDING BRIDGE PLANS FOR ANCHOR ROD DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

POST CONNECTION DETAILS FOR SINGLE COLUMN SIGN BRIDGES

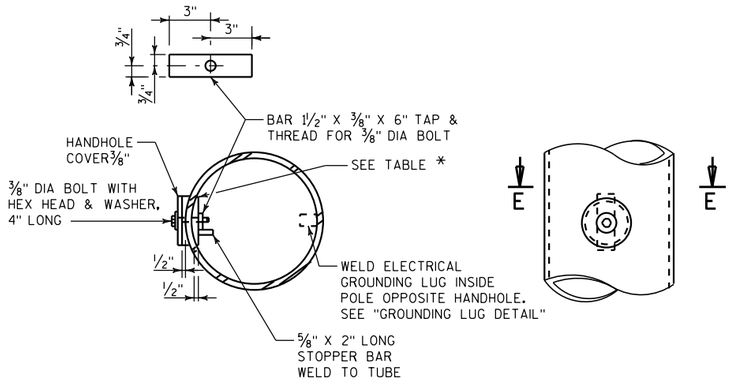
SHEET 6 OF 7

8

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - full span on bridges\S-40-43&104_503_ss.dgn PLOT DATE : 28-FEB-2014 11:01 PLOT BY : MSCAYG PLOT NAME : S-40-43&104_503_ss PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-80



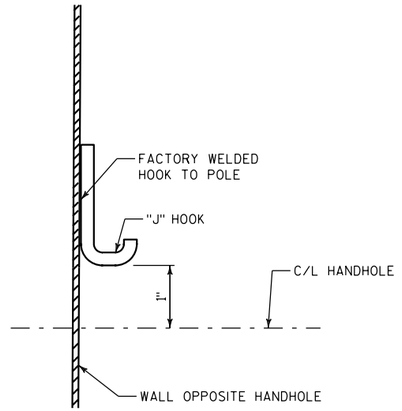
SECTION E-E

HANDHOLE DETAILS

HANDHOLE NOTES

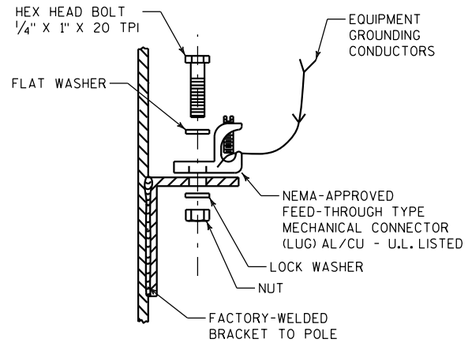
HANDHOLES SHALL BE LOCATED IN BOTH COLUMNS OF THE SIGN BRIDGE STRUCTURE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

* UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



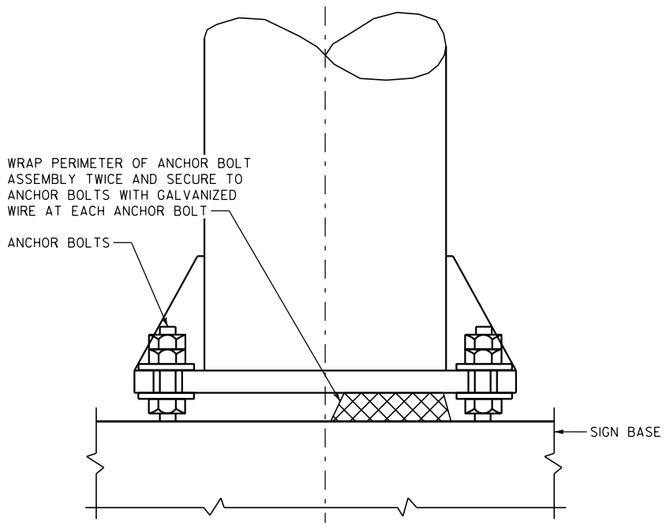
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-43 & S-40-104

DRAWN BY AG | PLANS CK'D. STB

HANDHOLE DETAILS

SHEET 7 OF 7

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - full span on bridges\S-40-43&104_504_ss.dgn
PLOT DATE : 28-FEB-2014 11:01
PLOT BY : MSCAYG
PLOT NAME : S-40-43&104_504_ss
PLOT SCALE : 10:1

STATE PROJECT NUMBER

1060-33-80

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-443 GENERAL PLAN & ELEVATION
3. S-40-444 GENERAL PLAN & ELEVATION
4. MEDIAN FOOTING DETAILS
5. OUTER FOOTING DETAILS
6. 4-CHORD SIGN BRIDGE
7. 4-CHORD SIGN BRIDGE DETAILS
8. BUTTERFLY SIGN DETAILS
9. SIGN BRIDGE CATWALK
10. HANDHOLE DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE INCLUDED IN THE BID ITEM "SIGN BRIDGE STRUCTURE S-40-XXX". LOCATE PLAQUE ON FREEWAY SIDE OF OUTER COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CATWALKS SHALL BE INCLUDED IN THE BID ITEM "SIGN BRIDGE STRUCTURE S-40-XXX".

CENTER DMS VERTICALLY ON TRUSS.

COORDINATES ON THE PLANS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE FTMS PLANS.

PROVIDE AND INSTALL $\frac{5}{8}$" x 10' GROUND ROD, INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY"

ALL BARS CONTAINED ENTIRELY IN BELOW-GRADE FOOTINGS ARE TO BE UNCOATED REINFORCING STEEL. ALL OTHER BARS, INCLUDING BARS THAT ARE PARTIALLY EMBEDDED IN FOOTINGS BUT EXTEND OUTSIDE THE FOOTING INTO VERTICAL SUPPORT ELEMENTS, ARE TO BE EPOXY COATED.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION TOM HEYDEL AND THE PROJECT ENGINEER FOR APPROVAL.

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH	DMS SIZE	DMS WEIGHT
S-40-443	224 SF *	12'-0" *	25'-3" x 8'-10"	4000 LBS
S-40-444	224 SF	8'-10"	25'-3" x 8'-10"	4000 LBS

* ADDITIONAL BUTTERFLY SIGN AREA = 288 SF

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL.

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF CATWALK.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + $\frac{1}{2}$WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
SEAN BLACK (262) 548-6407

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 5/27/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN SEAN T. BLACK E-42904 WAUKESHA, WI PROFESSIONAL ENGINEER 5/28/14

S-40-443 AND S-40-444

IC SIGN BRIDGE STRUCTURES

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.	LOAD
AASHTO SIGN SPEC. 6TH. ED 2013	90 MPH 3 SEC. SP.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AG	STB	AG	STB

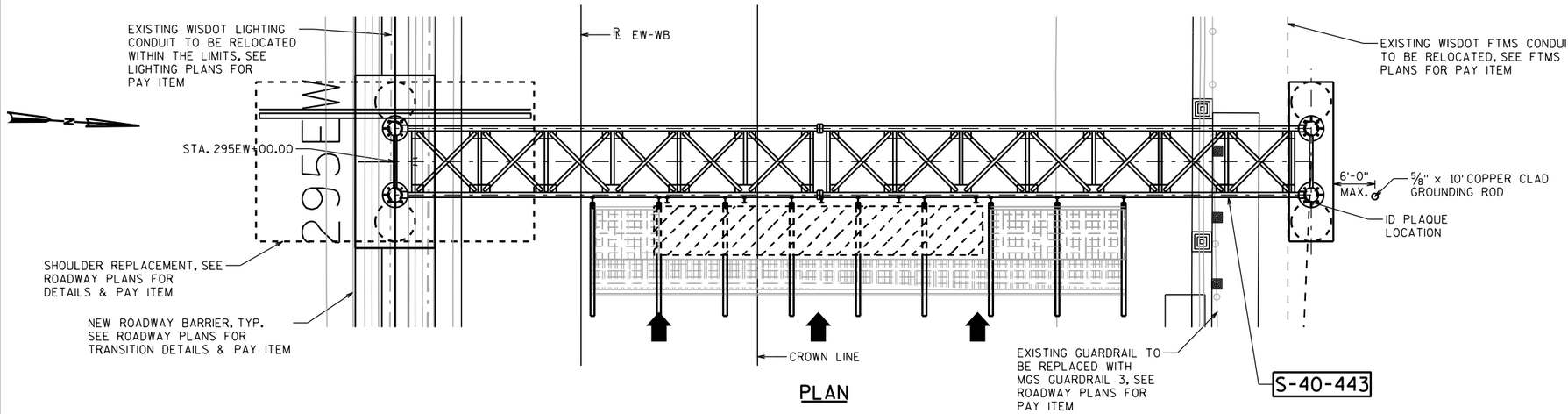
GENERAL NOTES & DESIGN DATA

SHEET 1 OF 10

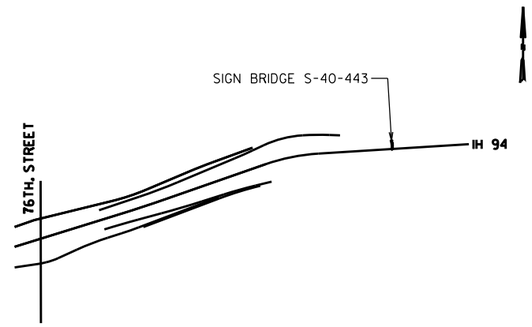
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8

STATE PROJECT NUMBER
1060-33-80



PLAN



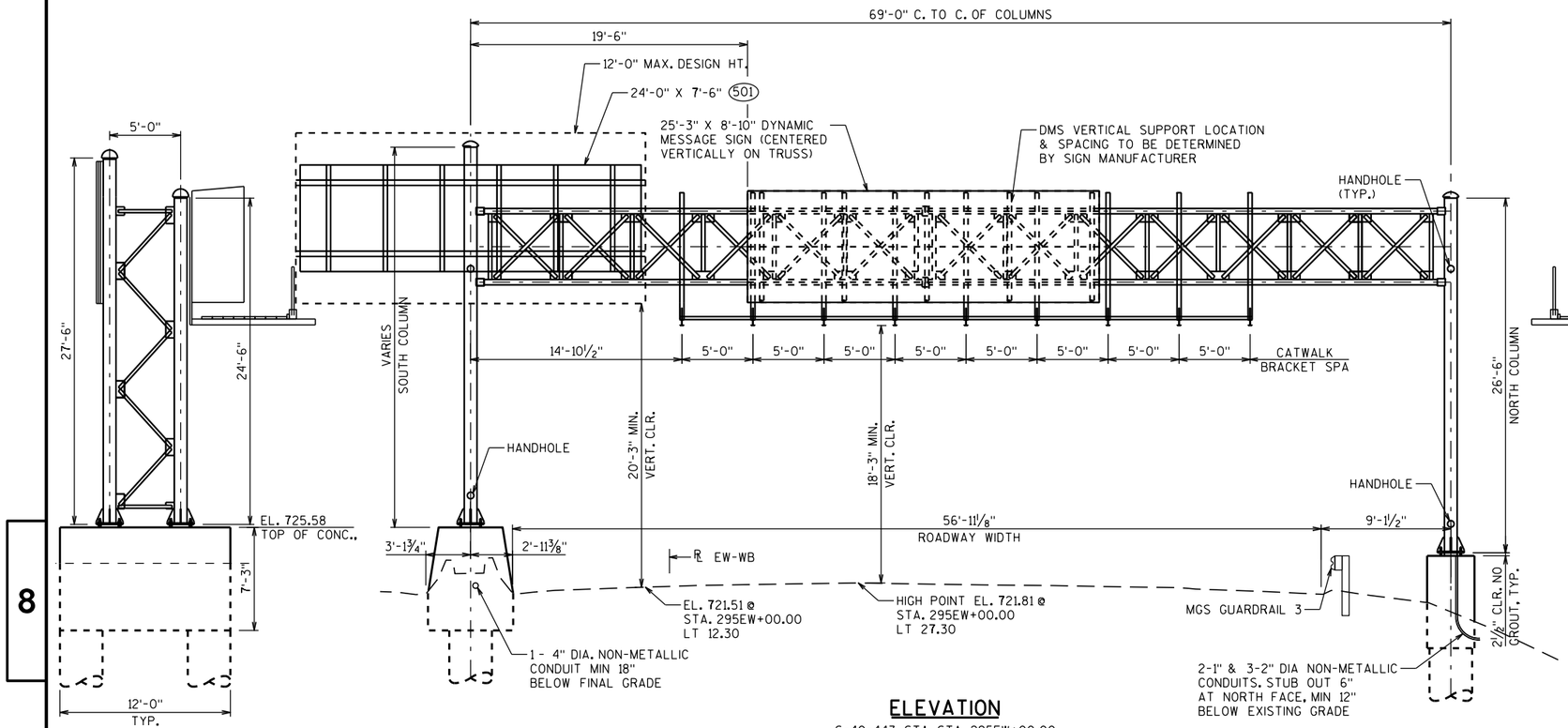
LOCATION MAP

S-40-443 TOTAL ESTIMATE OF QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	TOTAL
	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	45
	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,100
	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1,930
*	641.6600.0017	SIGN BRIDGE STRUCTURE S-40-443	LS	1
	SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4290

* THIS LUMP SUM PAY ITEM INCLUDES STATIC SIGN AND CONNECTION TO SIGN STRUCTURE.



ELEVATION

S-40-443, STA. STA. 295EW+00.00
(LOOKING DOWN STATION AT FRONT OF SIGNS)

SIDE VIEW
SOUTH COLUMN

SIDE VIEW
NORTH COLUMN

LEGEND

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-443 & S-40-444

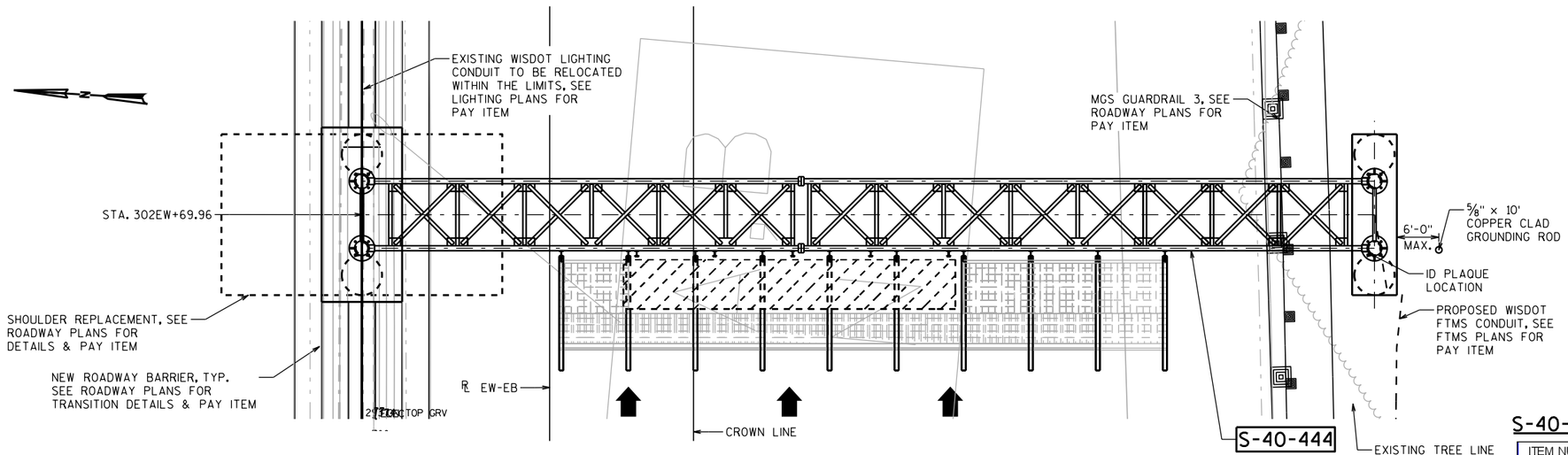
DRAWN BY AG | PLANS CK'D. STB

S-40-443
GENERAL PLAN
& ELEVATION

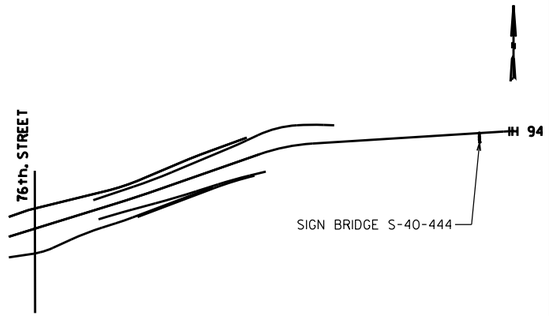
SHEET 2 OF 10

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STATE PROJECT NUMBER
1060-33-80



PLAN



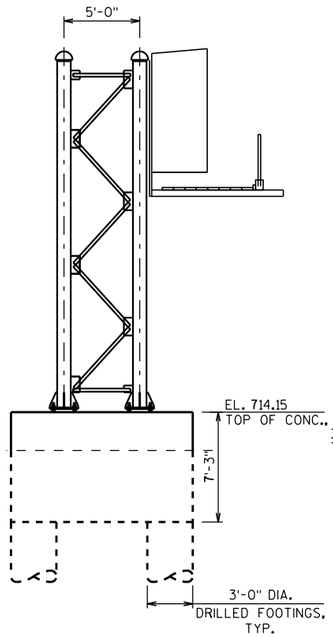
LOCATION MAP

S-40-444 TOTAL ESTIMATE OF QUANTITIES

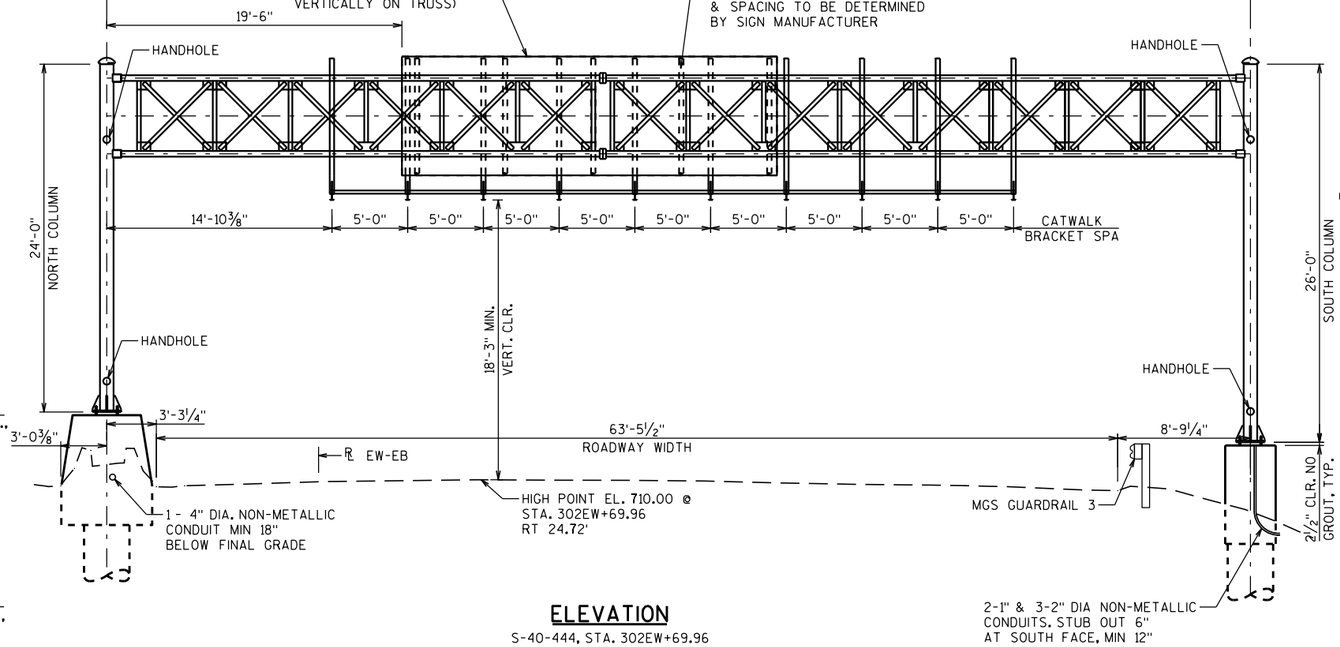
	ITEM NUMBER	BID ITEM	UNIT	TOTAL
	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	45
	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,100
	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1,930
*	641.6600.0018	SIGN BRIDGE STRUCTURE S-40-444	LS	1
	SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4300

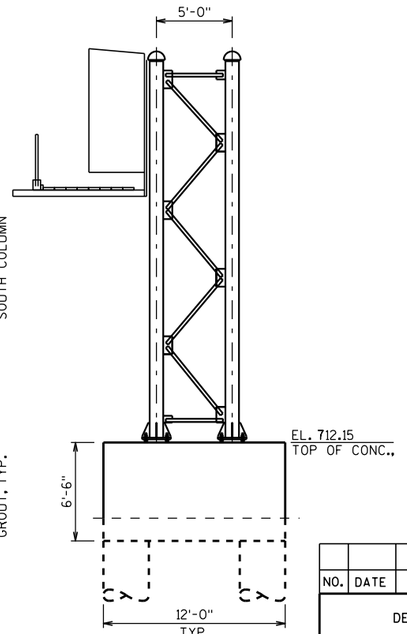
* THIS LUMP SUM PAY ITEM INCLUDES STATIC SIGN AND CONNECTION TO SIGN STRUCTURE.



SIDE VIEW
NORTH COLUMN



ELEVATION
S-40-444, STA. 302EW+69.96
(LOOKING UP STATION AT FRONT OF SIGNS)



SIDE VIEW
SOUTH COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-443 & S-40-444

DRAWN BY AG | PLANS CK'D. STB

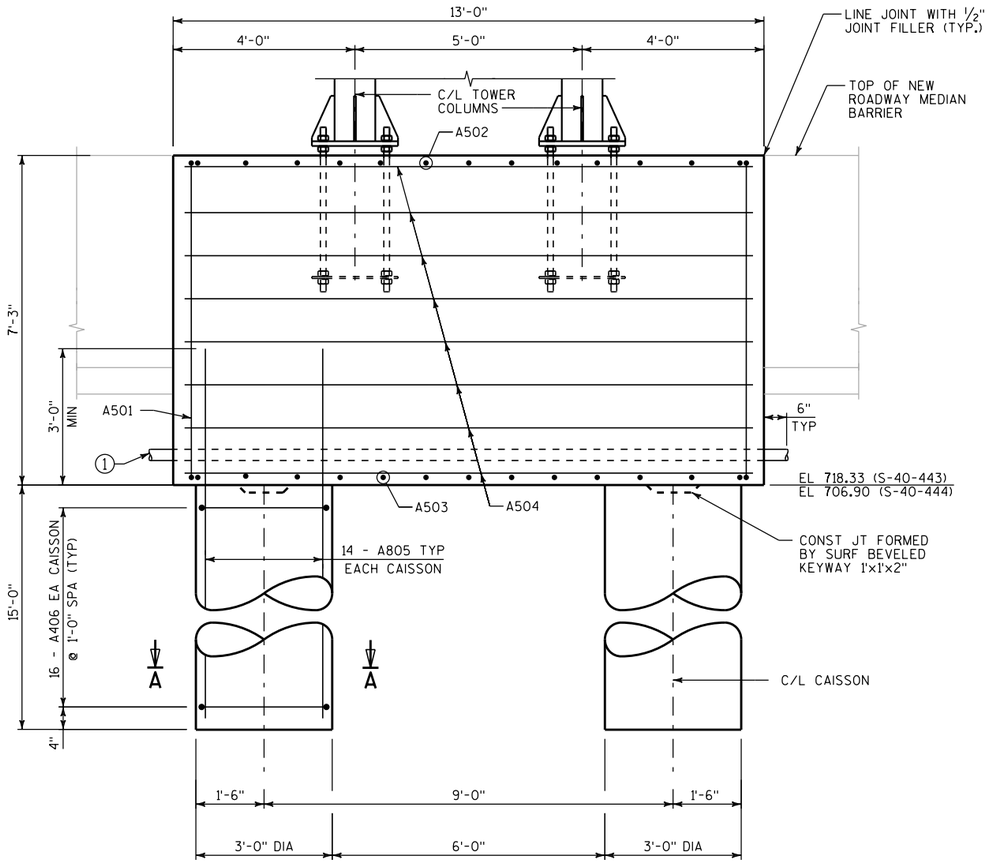
S-40-444
GENERAL PLAN
& ELEVATION

SHEET 3 OF 10

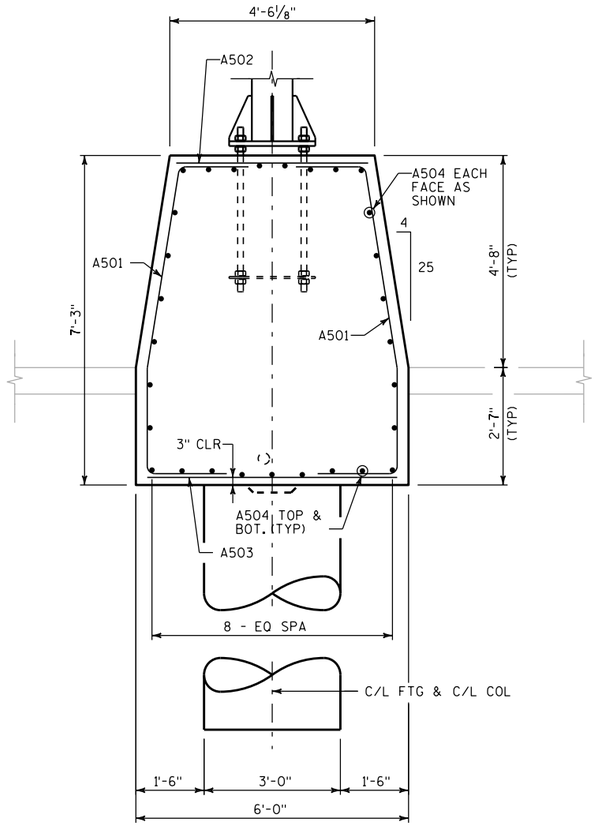
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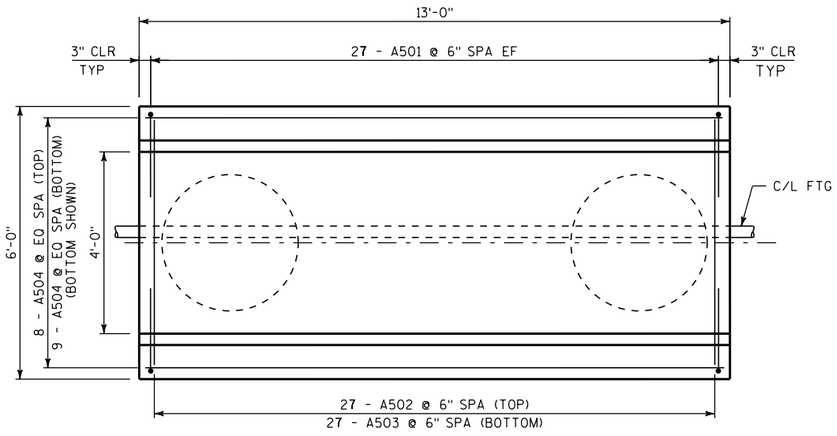
STATE PROJECT NUMBER
1060-33-80



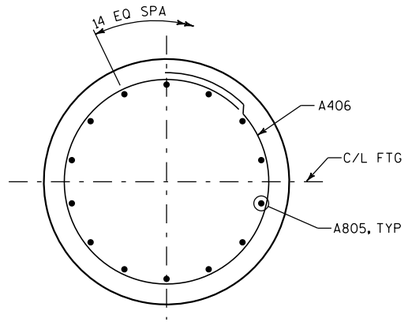
ELEVATION



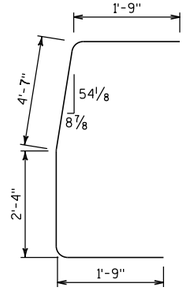
END VIEW



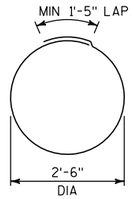
PLAN



SECTION A-A
(OTHER CAISSON SIMILAR)



A501



A406

NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR ONE FOOTING OF ONE SIGN STRUCTURE. APPLIES TO S-40-443 & S-40-444 MEDIAN FOOTINGS.

DUE TO EXPECTED WET, GRANULAR SOIL, TEMPORARY FULL DEPTH STEEL LINERS/CASING AND WET DRILLING METHODS USING SLURRY ARE REQUIRED TO PREVENT CAVING AND LOOSENING OF THE SOIL AROUND THE SHAFT AND AN UNSTABLE EXCAVATION BOTTOM. THE LINERS/CASING SHALL BE REMOVED AS THE CONCRETE IS POURED MAINTAINING SEVERAL FEET OF CONCRETE HEAD ABOVE THE BASE OF THE CASING TO MAINTAIN AN STABLE EXCAVATION AND PREVENT INFLOW OF WATER. THE DRILLING SLURRY CAN BE MINERAL OR POLYMER SLURRY. DUE TO EXPECTED WATER IN THE SHAFT EXCAVATIONS AND USE OF DRILLING SLURRY, TREMIE CONCRETE PLACEMENT FROM THE BASE OF THE SHAFT IS REQUIRED TO DISPLACE SLURRY AND WATER. DISPLACED SLURRY, WATER AND ANY CONTAMINATED CONCRETE SHALL BE COLLECTED AS THE SHAFT CONCRETE IS PLACED AND PROPERLY DISPOSED. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY"

(1) 1 - 4" DIA. NON-METALLIC CONDUIT PASSING THROUGH MEDIAN FOOTING. EXTEND CONDUIT AS SHOWN AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

* ENSURE DOWELS ARE PARRALL TO ROADWAY BARRIER. USE EPOXY CONFORMING TO WIS DOT SPECCIFICATION 416.2.3. DOWEL BAR PLACEMENT AND EPOXY BONDING COSTS ARE INCIDENTIAL TO SIGN SUPPORT CONCRETE MASONARY.

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY ——— f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 psi

FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF
ALLOWABLE SOIL SKIN FRICTION - 400 PSF
SOIL COHESION - 1,000 PSF
ASSUMED SOIL FRICTION ANGLE - 30 DEGREES

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	54	10'-2"	X	FOOTING - TRANSVERSE
A502	X	27	4'-2"	-	FOOTING - TRANSVERSE
A503	X	27	5'-6"	-	FOOTING - TRANSVERSE
A504	X	32	12'-6"	-	FOOTING - LONGITUDINAL
A805	-	28	18'-0"	-	CAISSON - VERTICAL
A406	-	32	9'-4"	X	CAISSON - TRANSVERSE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-443 & S-40-444

DRAWN BY STB | PLANS CK'D. AG

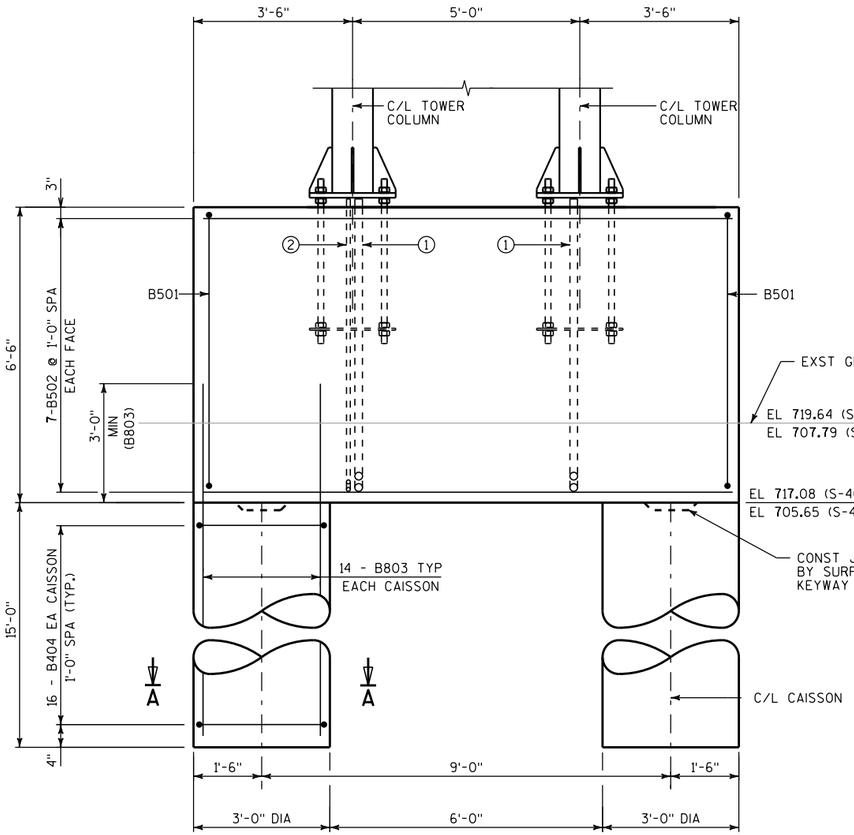
MEDIAN FOOTING DETAILS

SHEET 4 OF 10

8

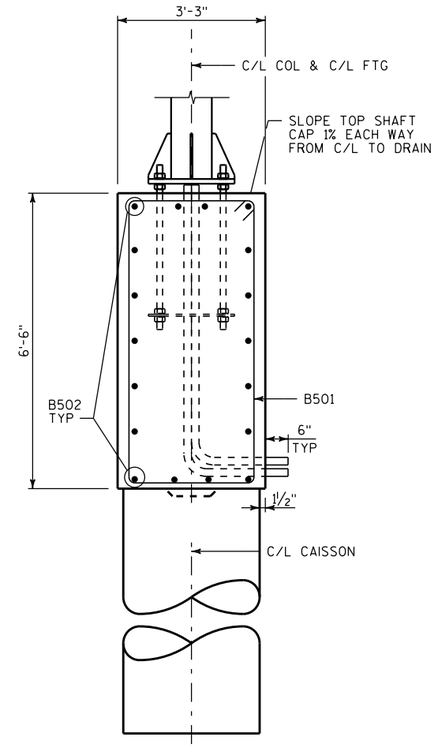
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STATE PROJECT NUMBER
1060-33-80

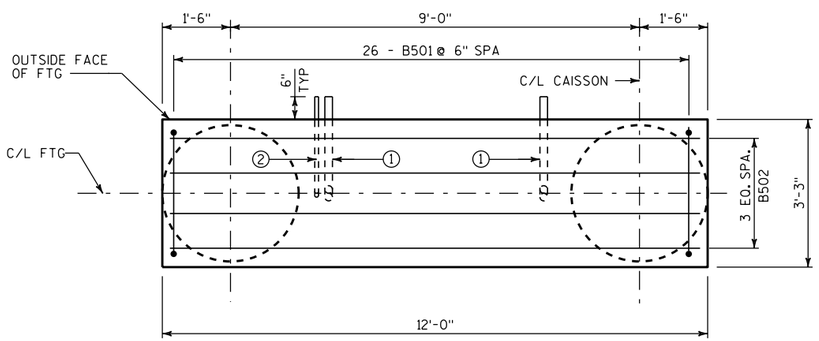


ELEVATION

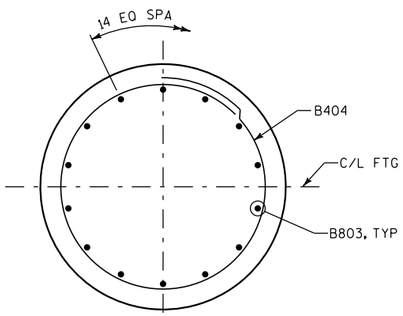
(LOOKING SOUTH _ S-40-443)
(LOOKING NORTH _ S-40-444)



END VIEW



PLAN



SECTION A-A

(OTHER CAISSON SIMILAR)

NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR ONE FOOTING OF ONE SIGN STRUCTURE. APPLIES TO S-40-443 & S-40-444 OUTSIDE FOOTINGS.

DUE TO EXPECTED WET, GRANULAR SOIL, TEMPORARY FULL DEPTH STEEL LINERS/CASING AND WET DRILLING METHODS USING SLURRY ARE REQUIRED TO PREVENT CAVING AND LOOSENING OF THE SOIL AROUND THE SHAFT AND AN UNSTABLE EXCAVATION BOTTOM. THE LINERS/CASING SHALL BE REMOVED AS THE CONCRETE IS POURED MAINTAINING SEVERAL FEET OF CONCRETE HEAD ABOVE THE BASE OF THE CASING TO MAINTAIN AN STABLE EXCAVATION AND PREVENT INFLOW OF WATER. THE DRILLING SLURRY CAN BE MINERAL OR POLYMER SLURRY. DUE TO EXPECTED WATER IN THE SHAFT EXCAVATIONS AND USE OF DRILLING SLURRY, TREMIE CONCRETE PLACEMENT FROM THE BASE OF THE SHAFT IS REQUIRED TO DISPLACE SLURRY AND WATER. DISPLACED SLURRY, WATER AND ANY CONTAMINATED CONCRETE SHALL BE COLLECTED AS THE SHAFT CONCRETE IS PLACED AND PROPERLY DISPOSED. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY"

① 2 - 2" DIA. NONMETALLIC CONDUITS UNDER COLUMNWITH HANDHOLE (SEE SHEET 1 FOR LOCATION). EXTEND CONDUIT FROM WEST VERTICAL FACE. CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. STUB OUT ONE CONDUIT 1'-0" BELOW EXST GRADE AND THE OTHER CONDUIT 1'-3" BELOW EXST GRADE. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

② 2 - 1" DIA. NONMETALLIC CONDUITS UNDER COLUMN WITH HANDHOLE (SEE SHEET 1 FOR LOCATION). EXTEND CONDUIT FROM WEST VERTICAL FACE. CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. STUB OUT ONE CONDUIT 1'-0" BELOW EXST GRADE AND THE OTHER CONDUIT 1'-3" BELOW EXST GRADE. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY ——— f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 psi

FOUNDATION DATA

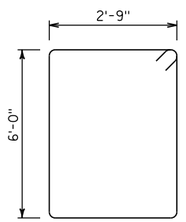
THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF
ALLOWABLE SOIL SKIN FRICTION - 400 PSF
SOIL COHESION - 1,000 PSF
ASSUMED SOIL FRICTION ANGLE - 30 DEGREES

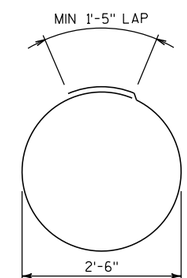
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	26	18'-2"	X	FOOTING - TRANSVERSE
B502	X	18	11'-6"	-	FOOTING - LONGITUDINAL
B803	-	28	18'-0"	-	CAISSON - VERTICAL
B404	-	32	9'-4"	X	CAISSON - TRANSVERSE



B501



B404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-443 & S-40-444

DRAWN BY STB | PLANS CK'D. AG

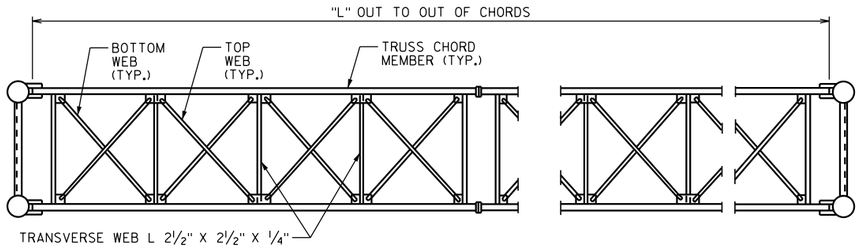
OUTER FOOTING DETAILS

SHEET 5 OF 10

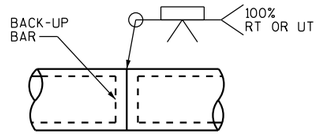
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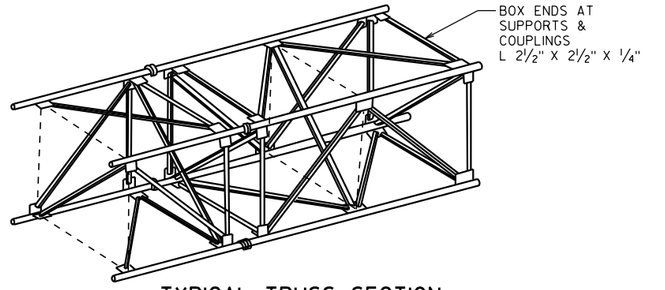


PLAN

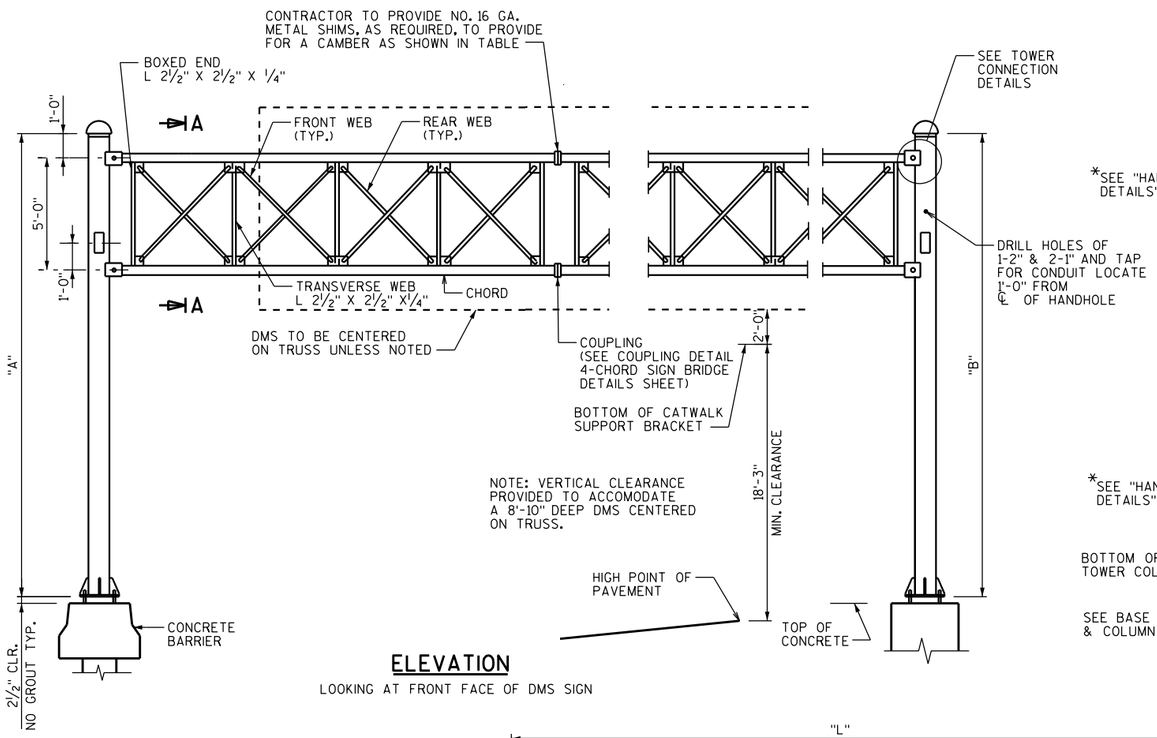


CHORD SPLICE

THE GENERAL PATTERN SHOWN BELOW IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

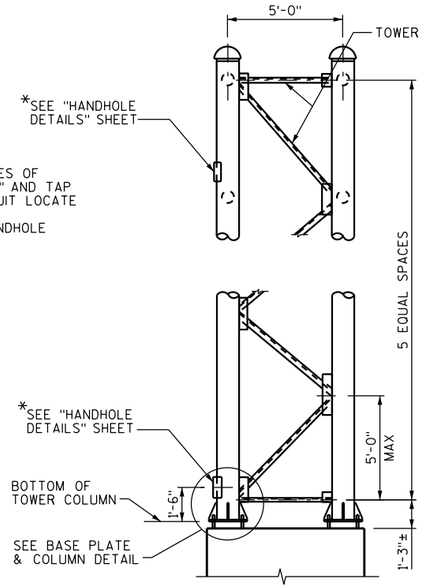


TYPICAL TRUSS SECTION



ELEVATION

LOOKING AT FRONT FACE OF DMS SIGN



END VIEW

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I.

ALL STEEL PIPE MEMBERS OF TRUSS SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I. PLATES, BARS, STRUCTURAL ANGLES SHALL BE A.S.T.M. A709 GRADE 36, Fy = 36,000 P.S.I.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 BOLTS, GALVANIZED A.S.T.M. A153, CLASS C.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

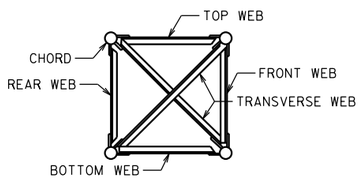
STEEL ANCHOR BOLTS SHALL BE A.A.S.H.T.O. M314-90 GRADE 55, Fy = 55,000 P.S.I.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN CL TO CL OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

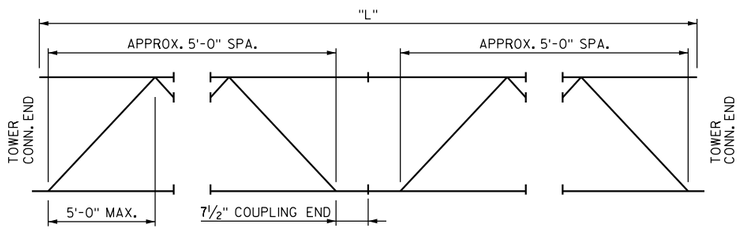
THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE A.A.S.H.T.O. SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

SEE 4-CHORD SIGN BRIDGE DETAILS FOR ADDITIONAL DETAILS



SECTION A-A



TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.

TABLE

STRUCTURE	A	B	CHORDS O.D. x THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	CAMBER	COLUMN O.D. x THK.	TOWER WEBS	"L"
S-40-443	*	26'-6"	5.563" x 0.375"	L 3½" x 3½" x⅜"	L 3½" x 3½" x⅜"	1⅝"	14.00" O.D. x 0.500"	L 4" x 4" x½"	67'-8¼"
S-40-444	24'-0"	26'-0"	5.563" x 0.375"	L 3½" x 3½" x⅜"	L 3½" x 3½" x⅜"	1⅝"	14.00" O.D. x 0.500"	L 4" x 4" x½"	74'-2¼"

* SOUTH EAST STEEL COLUMN = 24'-6", SOUTH WEST STEEL COLUMN = 27'-6" (SEE S-40-443 GP&E)

* PLACE ON COLUMN WHERE ELECTRICAL CONDUIT ENTERS.

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4-CHORD SIGN BRIDGE

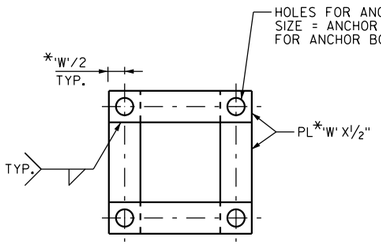
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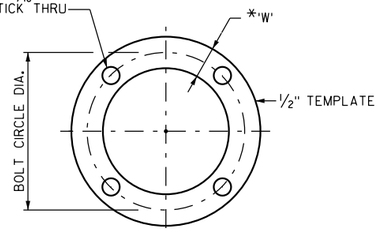
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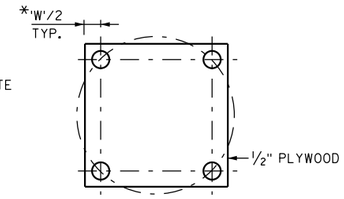
ALTERNATE STEEL ANCHOR PLATE/ TOP TEMPLATE PLAN

*'W' = 2 X (ANCHOR BOLT DIA.)



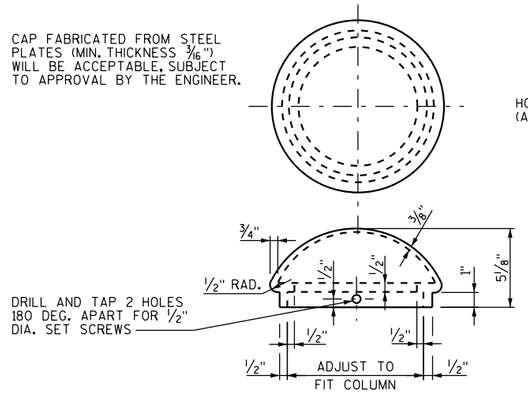
STEEL ANCHOR PLATE/ TOP TEMPLATE PLAN

*'W' = 2 X (ANCHOR BOLT DIA.)

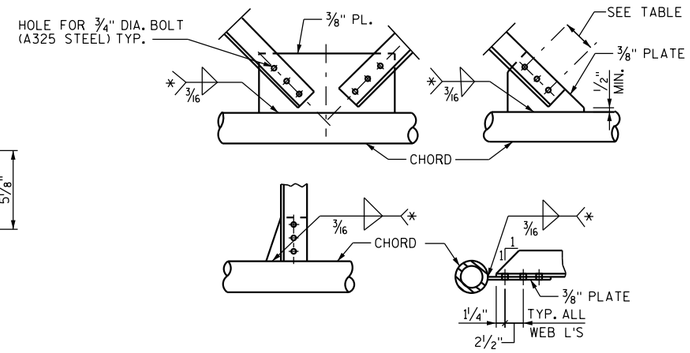


ALTERNATE TOP TEMPLATE PLAN

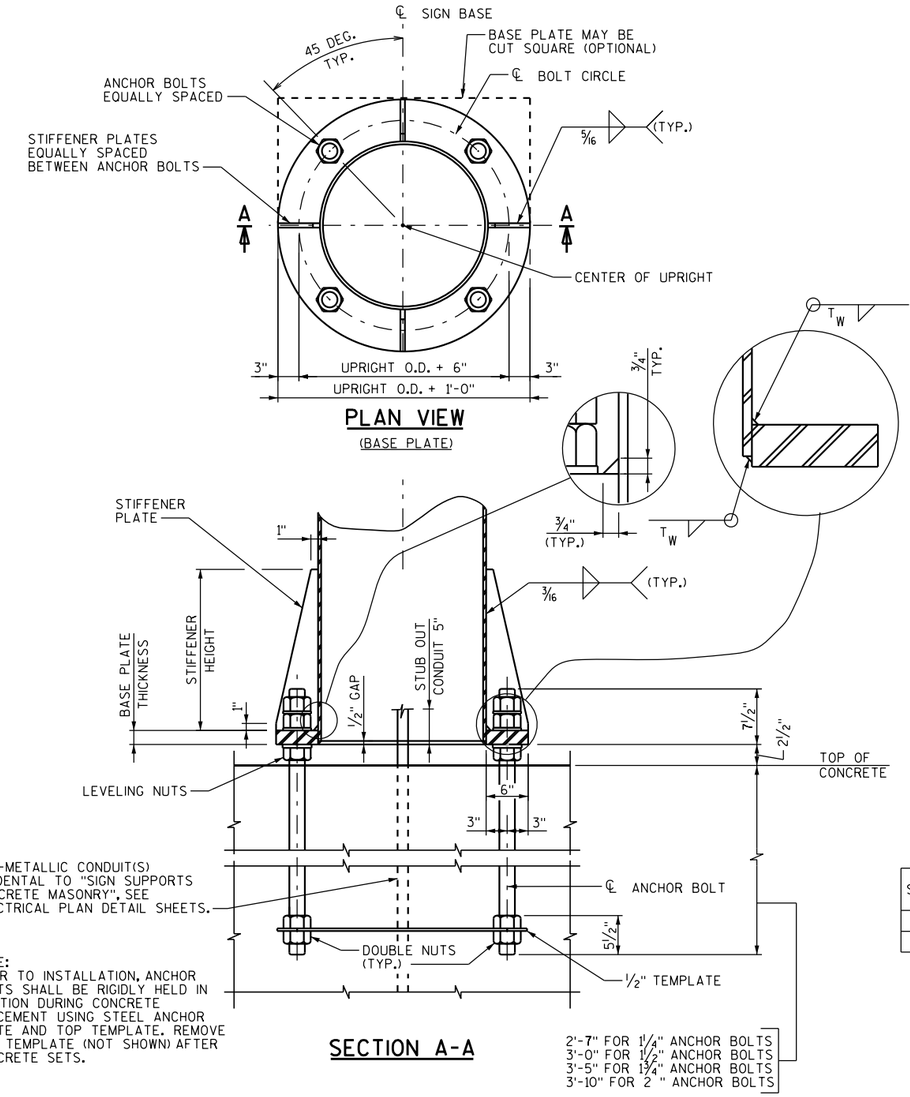
*'W' = 2 X (ANCHOR BOLT DIA.)



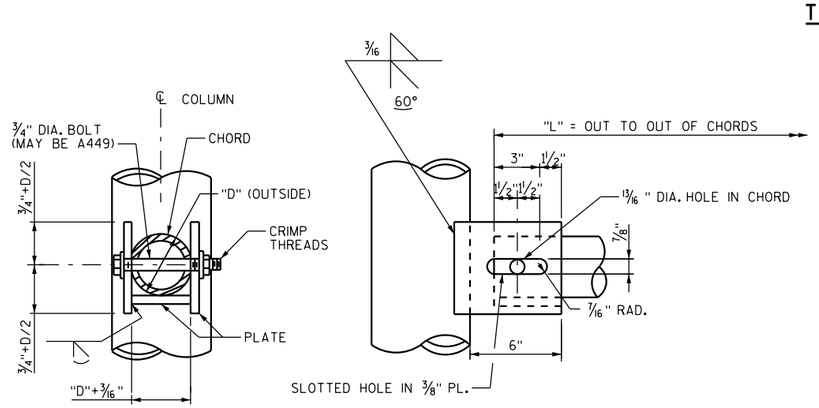
TOWER CAP DETAIL



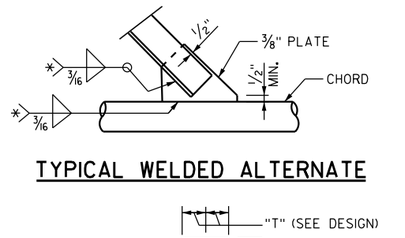
TYPICAL TRUSS CONNECTION DETAILS



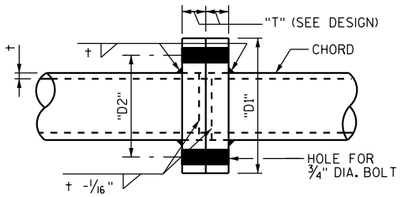
SECTION A-A



TOWER CONNECTION DETAIL



TYPICAL WELDED ALTERNATE



COUPLING DETAIL

COUPLING VARIABLES

STRUCTURE	COUPLING PL. "D1" & "T"	BOLT CIRCLE DIA. "D2"	NO. OF BOLTS IN COUPLING
S-40-443	11" DIA. x 1 1/4"	8"	8
S-40-444	11" DIA. x 1 1/4"	8"	8

BASE PLATE & UPRIGHT COLUMN DETAILS

STRUCTURE	ANCHOR BOLTS	BASE PLATE THICKNESS (IN.)	STIFF. PLATE THICKNESS (IN.)	STIFF. PLATE HEIGHT (IN.)	Tw (IN.)
S-40-443	2"	2 1/4"	1/2"	12"	5/16"
S-40-444	2"	2 1/4"	1/2"	12"	5/16"

*ANGLE	WELD LENGTH	NO. OF BOLTS
L2 1/2X2 1/2X1/4	11"	3
L3X3X3/16	10"	3
L3X3X1/4	13"	4
L3X3X5/16	16 1/2"	5
L3X3X3/8	19 1/2"	6
L3 1/2X3 1/2X3/8	22 3/4"	7
L4X4X1/4	18"	5
L4X4X5/16	22"	6
L4X4X3/8	26"	8
L4X4X7/16	30"	9
L4X4X1/2	34"	10

- ONLY USED FOR BOXED END AND TRANSVERSE BRACING

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4-CHORD SIGN BRIDGE DETAILS

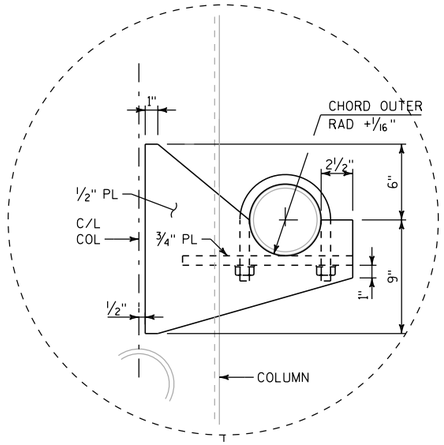
SHEET 7 OF 10

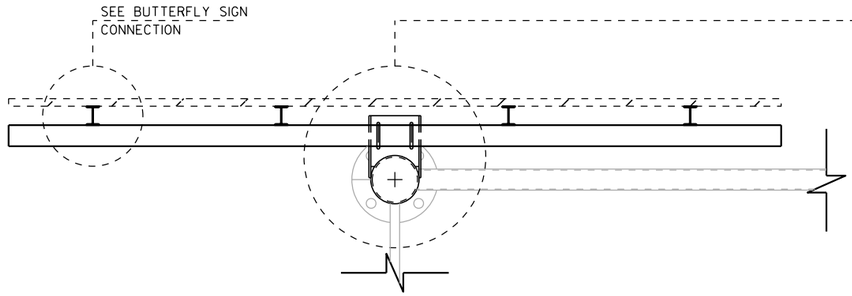
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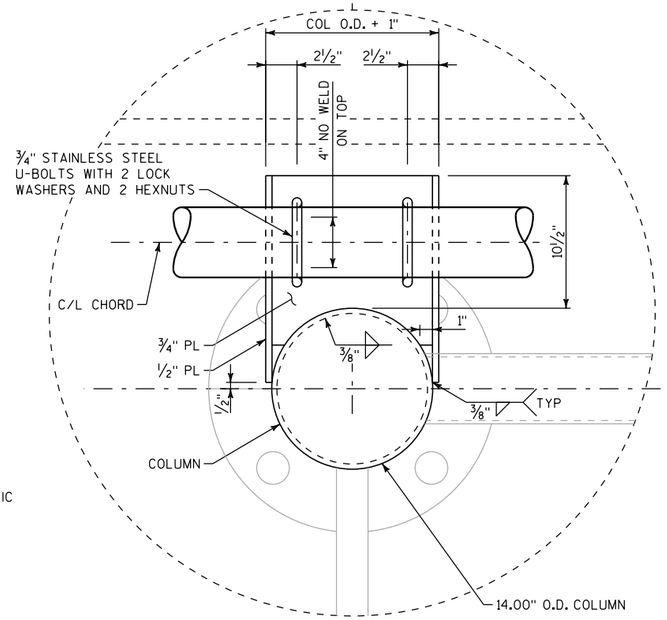
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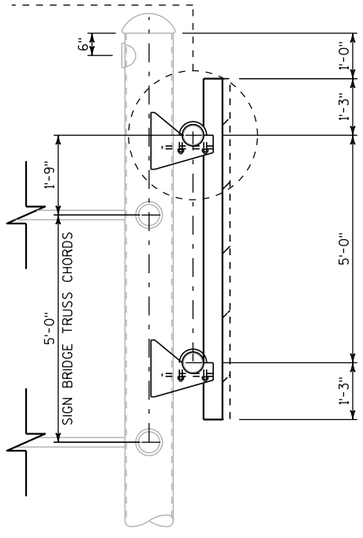




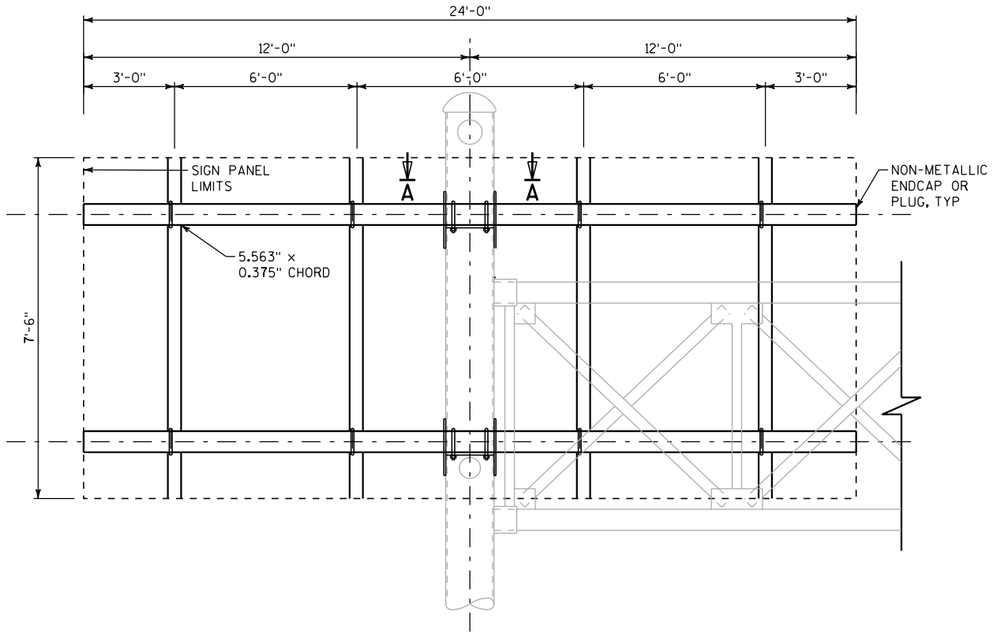
PLAN VIEW



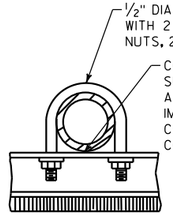
SECTION A-A



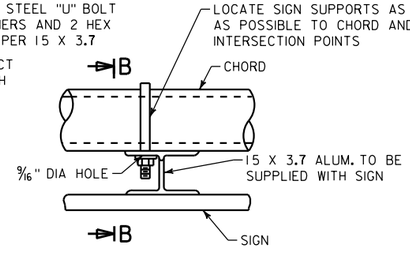
END VIEW



ELEVATION VIEW



SECTION B



BUTTERFLY SIGN CONNECTION

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BUTTERFLY SIGN DETAILS

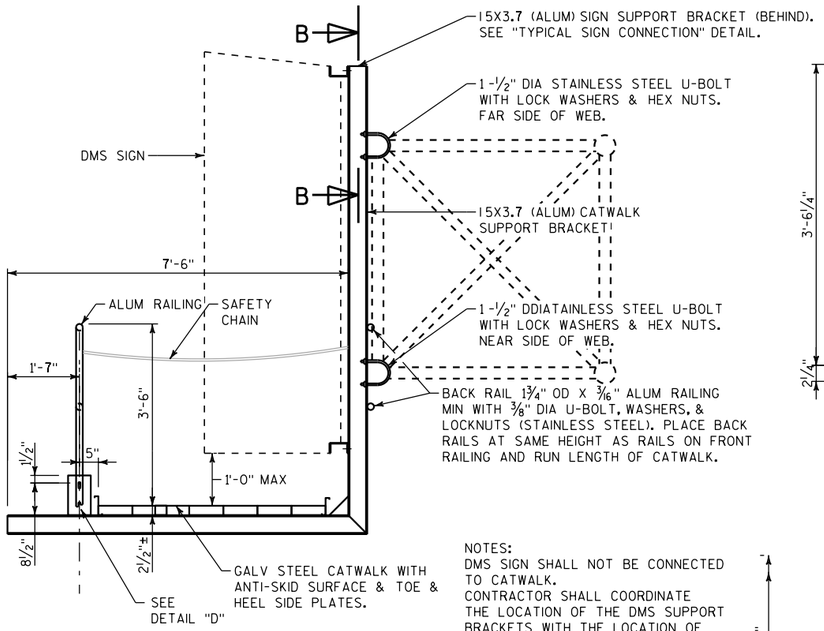
SHEET 8 OF 10

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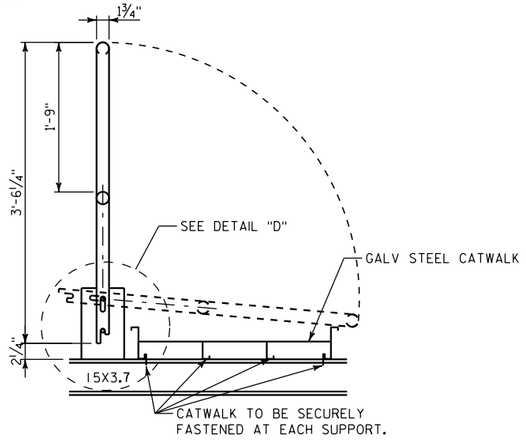
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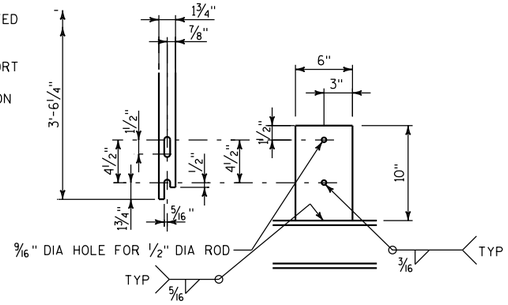


SECTION THRU WALKWAY

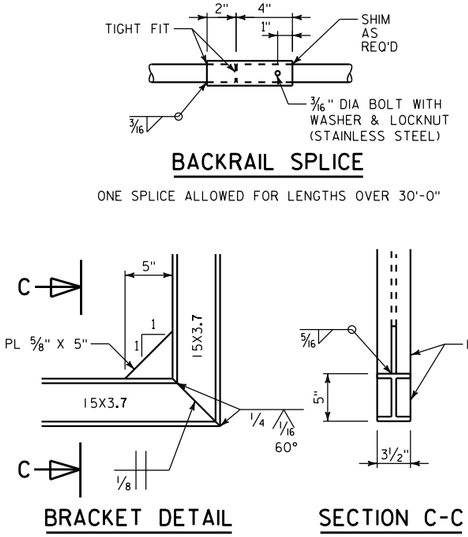


RAIL POST DETAIL

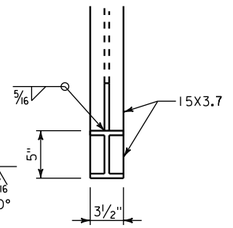
NOTES:
DMS SIGN SHALL NOT BE CONNECTED TO CATWALK.
CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DMS SUPPORT BRACKETS WITH THE LOCATION OF THE CATWALK AND WEB CONNECTION LOCAITONS.



DETAIL "D"



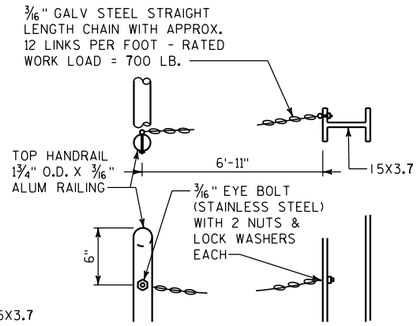
BRACKET DETAIL



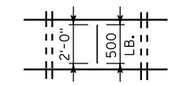
SECTION C-C

BACKRAIL SPLICE

ONE SPLICE ALLOWED FOR LENGTHS OVER 30'-0"



SAFETY CHAIN DETAIL

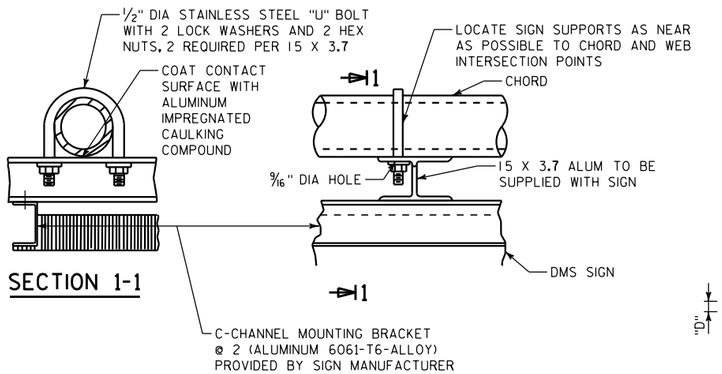


NOTE:
CATWALK SHALL MEET THE 2009 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS". (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY - MAX SPAN IS 8'-0"). CATWALK SHALL ALSO MEET CURRENT OSHA STD'S. FOR WALKING-WORKING SURFACES.



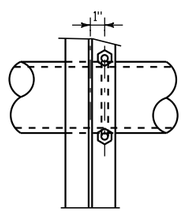
CATWALK TERMINATION DETAIL

CATWALK SPLICE LOCATION DETAIL

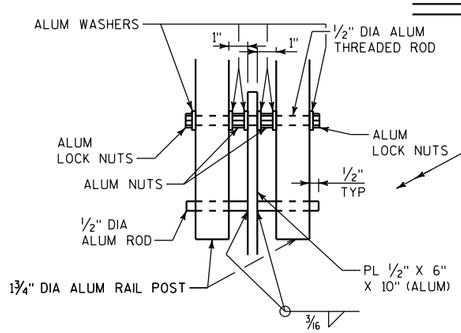


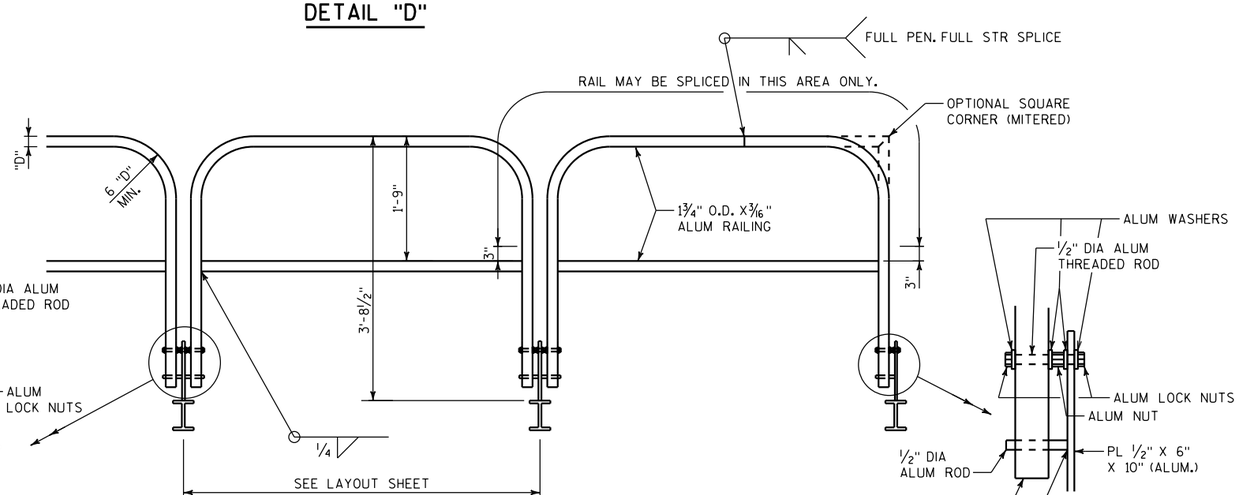
SECTION 1-1

DMS SIGN CONNECTION



SECTION B-B





TYPICAL RAILING DETAILS

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SIGN BRIDGE CATWALK

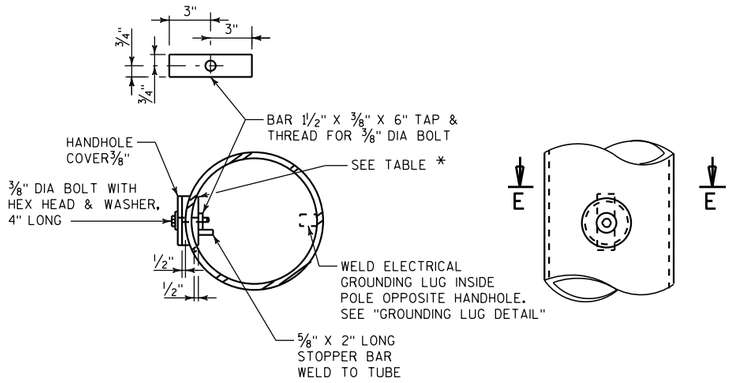
SHEET 9 OF 10

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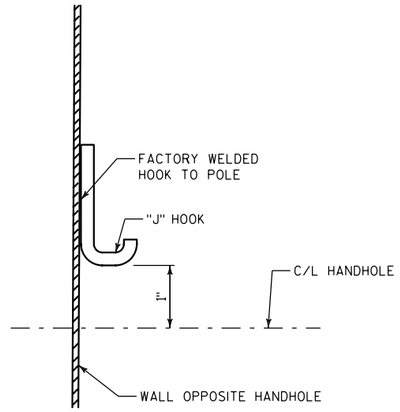
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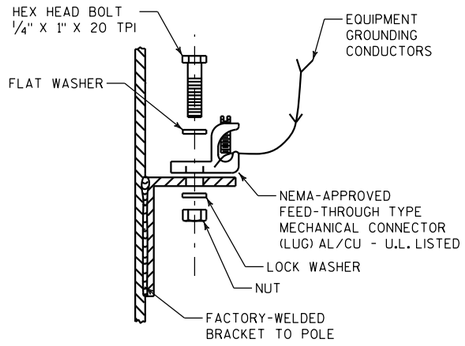
SECTION E-E

HANDHOLE DETAILS



TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

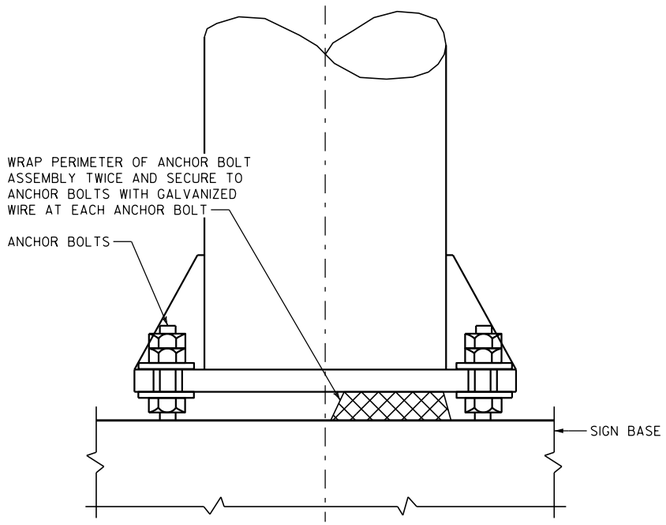
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN BOTH COLUMNS OF THE SIGN BRIDGE STRUCTURE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*

UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

8

8

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DEPARTMENT OF TRANSPORTATION

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HANDHOLE DETAILS

SHEET 10 OF 10

3328

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - DMS\S-40-443&444_505_ss.dgn PLOT DATE : 01-MAY-2014 09:59 PLOT BY : MSCAYG PLOT NAME : S-40-443&444_505_ss PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-80

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-788 GENERAL PLAN & ELEVATION
3. S-40-789 GENERAL PLAN & ELEVATION
4. S-40-790 GENERAL PLAN & ELEVATION
5. FOOTING DETAILS
6. COLUMN DETAILS
7. BUTTERFLY SIGN DETAILS
8. HANDHOLE DETAILS
9. LIGHT POLE DETAILS
10. CONCRETE COLUMN AESTHETIC DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE NAME PLATES & ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN STRUCTURE S-40-XXX" OR "SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS STRUCTURE S-40-XXX". LOCATE THE NAME PLATE OR ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE NAME PLATE IN ACCORDANCE WITH S.D.D. 12 A 3-10 FOR SIGN BRIDGE WITH CONCRETE COLUMNS.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING PLANS & FTMS PLANS.

ALL BARS CONTAINED ENTIRELY IN BELOW-GRADE FOOTINGS ARE TO BE UNCOATED REINFORCING STEEL. ALL OTHER BARS, INCLUDING BARS THAT ARE PARTIALLY EMBEDDED IN FOOTINGS BUT EXTEND OUTSIDE THE FOOTING INTO VERTICAL SUPPORT ELEMENTS, ARE TO BE EPOXY COATED.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION TOM HEYDEL AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION, WHICH MAY OR MAY NOT BE THE SIGN CONFIGURATION AT THE CONCLUSION OF THIS CONSTRUCTION PROJECT.

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-40-788	360 SF	12'-0"
S-40-789	360 SF	12'-0"
S-40-790	360 SF	12'-0"

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL.

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK, LIGHTS AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF CATWALK.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
SEAN BLACK (262) 548-6407

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/27/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN SEAN T. BLACK E-42904 WAUKESHA, WI PROFESSIONAL ENGINEER 5/22/14

S-40-788/S-40-789/S-40-790

ZOO INTERCHANGE BUTTERFLY SIGN STRUCTURES

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	WEST ALLIS/MILWAUKEE

DESIGN SPEC.	LOAD
AASHTO SIGN SPEC. 2013	90 MPH 3 SEC. SP.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AG	STB	AG	STB

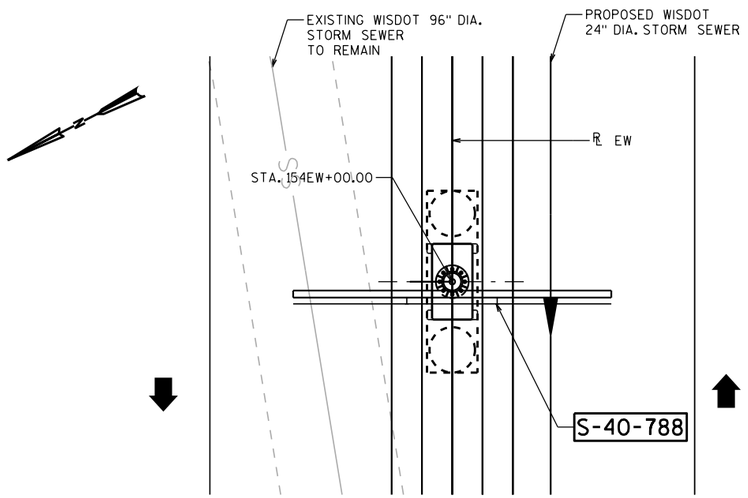
GENERAL NOTES & DESIGN DATA

SHEET 1 OF 10

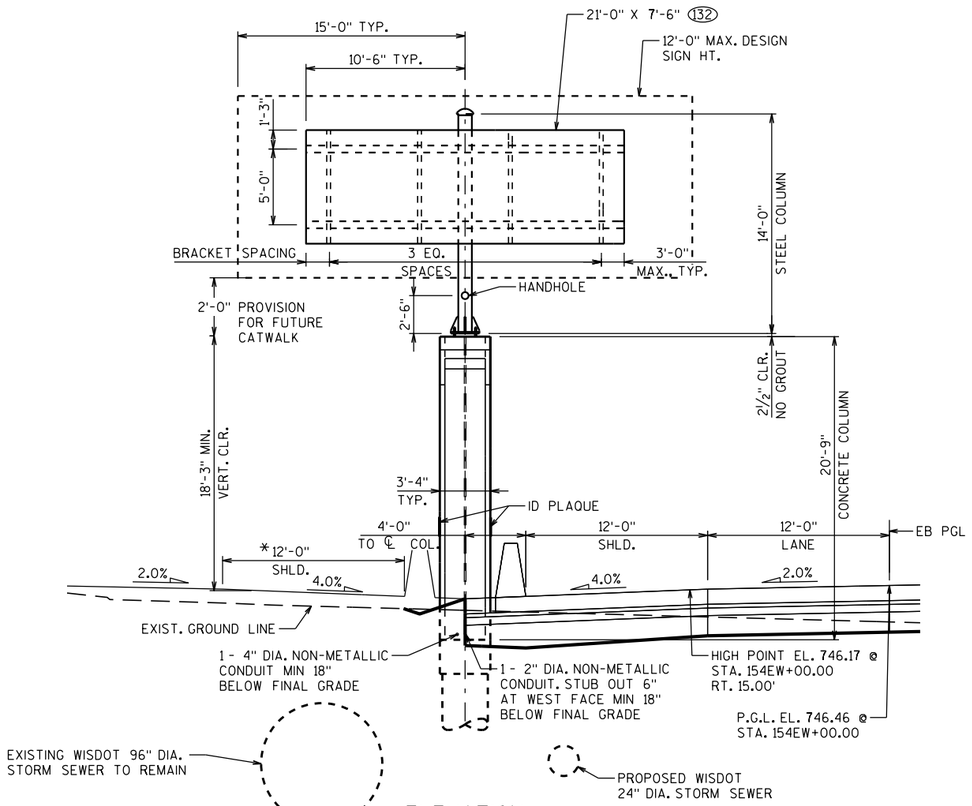
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8

STATE PROJECT NUMBER
1060-33-80



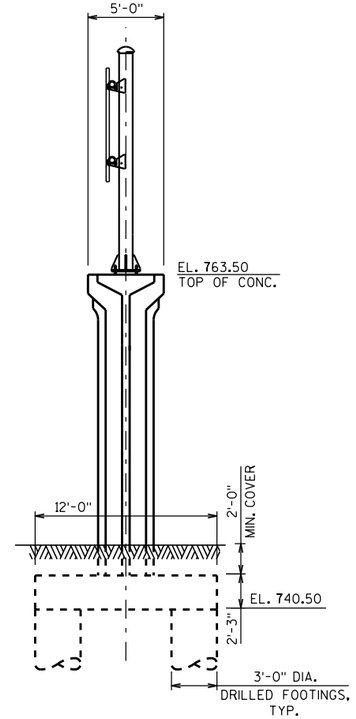
PLAN



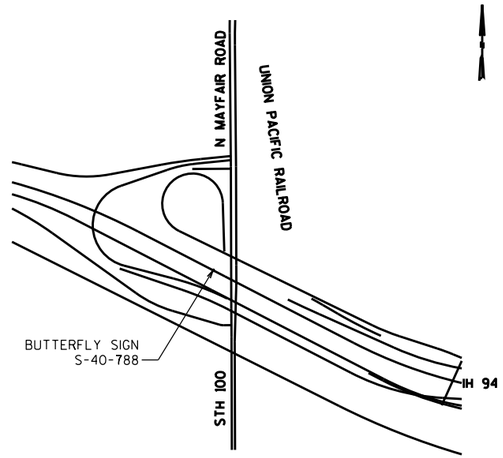
ELEVATION

S-40-788, STA. 154EW+00.00
(LOOKING UP STATION AT FRONT OF SIGNS)

*WEST BOUND ROADWAY AND BARRIER WILL BE
CONSTRUCTED UNDER LATER CONTRACT



SIDE VIEW



LOCATION MAP

S-40-788 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	23
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,580
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,960
641.0100.0001	SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN STRUCTURE S-40-788	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4310

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

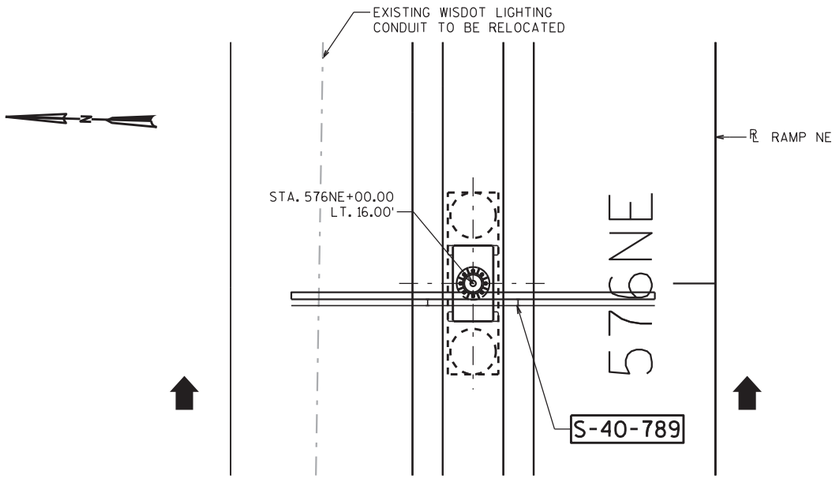
DRAWN BY AG | PLANS CK'D. STB

S-40-788
GENERAL PLAN
& ELEVATION

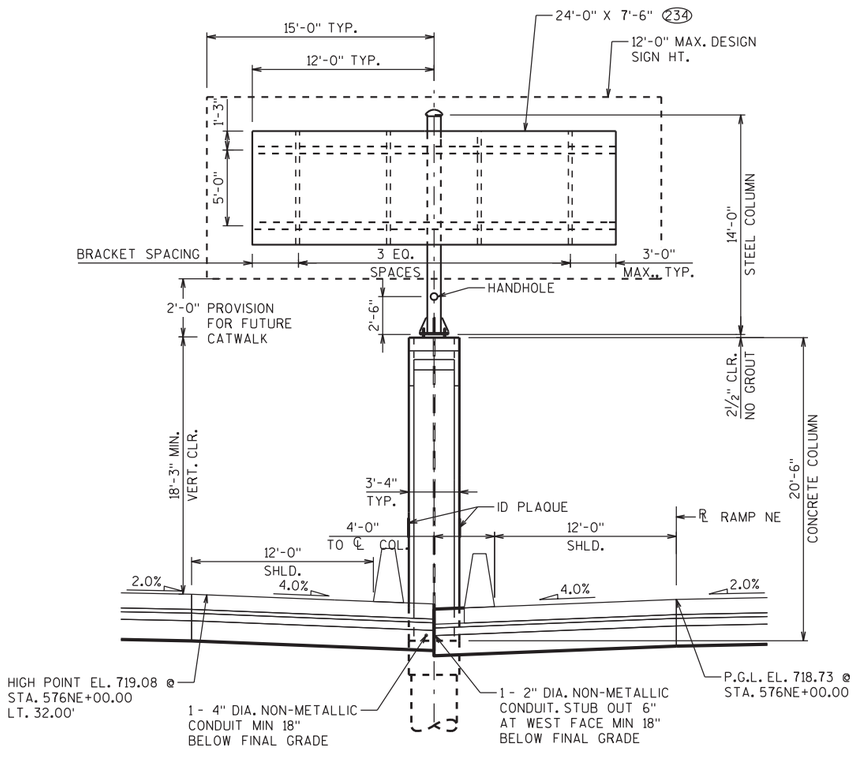
SHEET 2 OF 10

FILE NAME : $$....designfile....$$ PLOT DATE : 01-MAY-2014 09:53 PLOT BY : MSCAYG PLOT NAME : S-40-788_102_gp PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-80

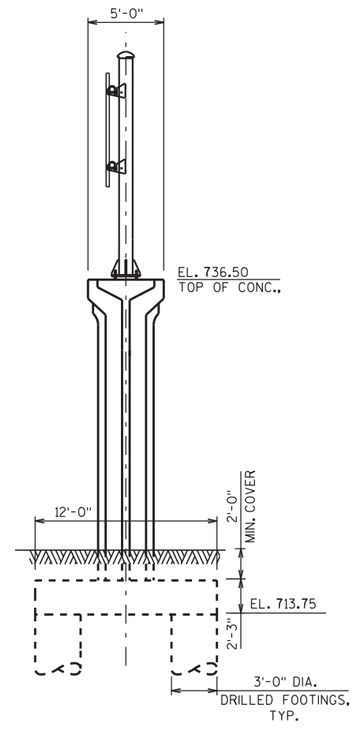


PLAN

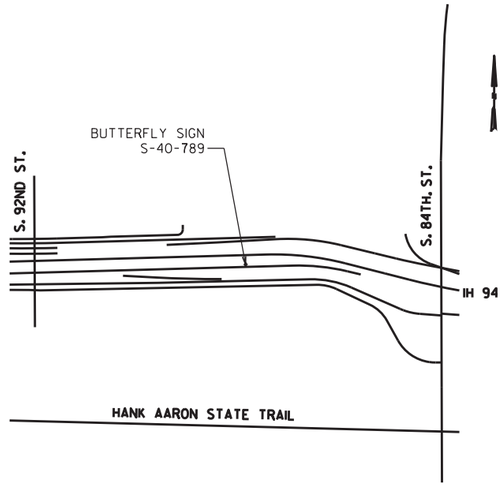


ELEVATION

S-40-789, STA. 576NE+00.00
(LOOKING UP STATION AT FRONT OF SIGNS)



SIDE VIEW



LOCATION MAP

S-40-789 TOTAL ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	22
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,580
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,940
641.0100.0002	SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN STRUCTURE S-40-789	LS	1
SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4320

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

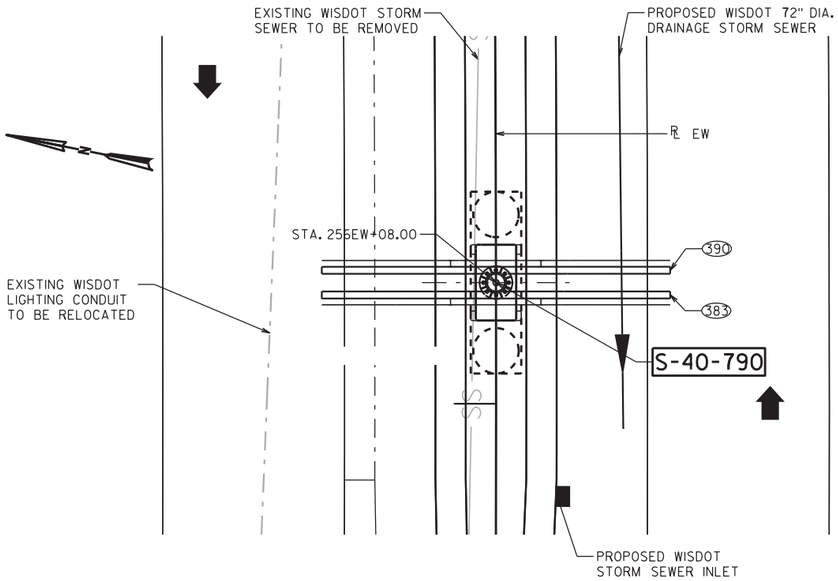
S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

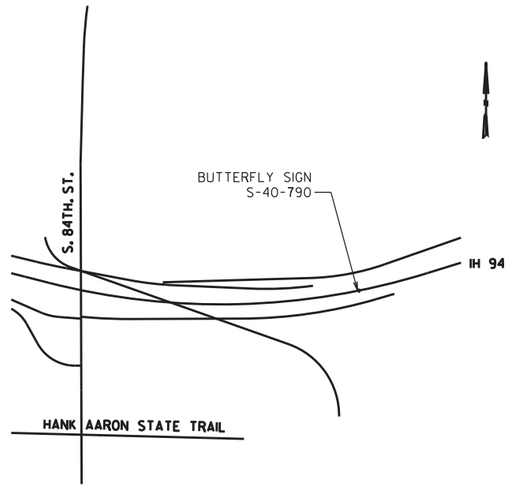
S-40-789
GENERAL PLAN
& ELEVATION

SHEET 3 OF 10

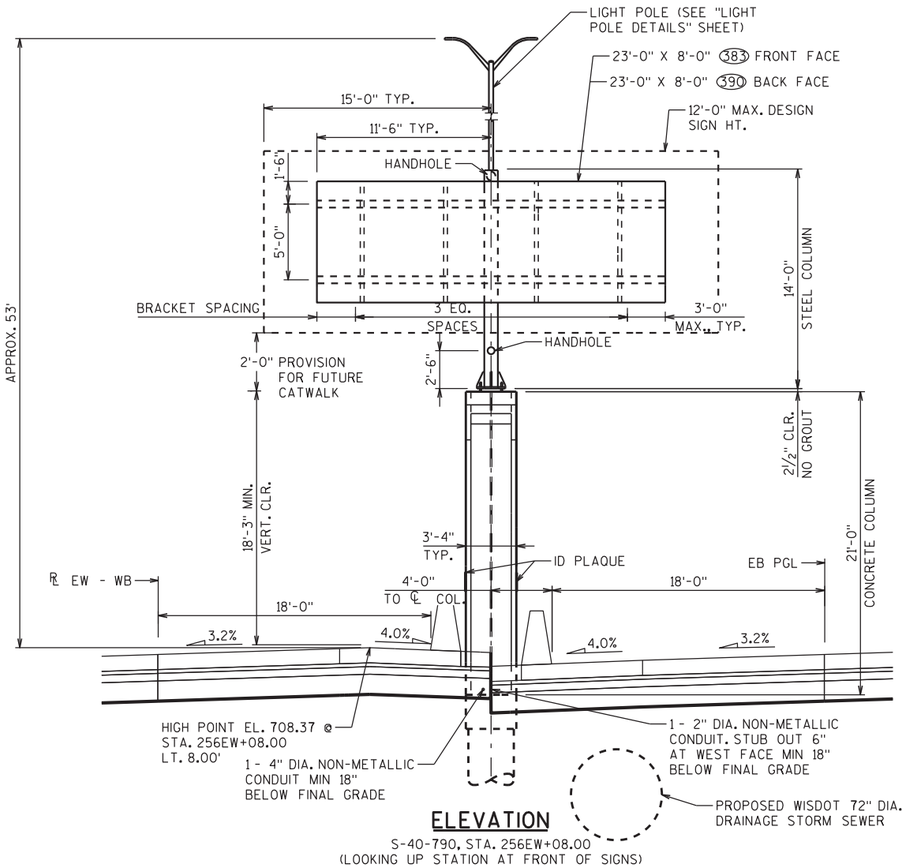
STATE PROJECT NUMBER
1060-33-80



PLAN

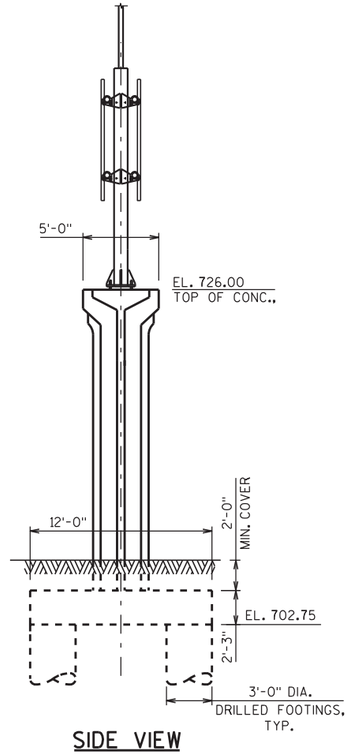


LOCATION MAP



ELEVATION

S-40-790, STA. 256EW+08.00
(LOOKING UP STATION AT FRONT OF SIGNS)



SIDE VIEW

S-40-790 TOTAL ESTIMATE OF QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	TOTAL
	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	23
	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,580
	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2,990
*	641.0600.0001	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS STRUCTURE S-40-790	LS	1
	SPV.0075.4215	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 4330

* THIS LUMP SUM PAY ITEM INCLUDES LIGHT POLE AND CONNECTION TO SIGN STRUCTURE COLUMN. SEE SHEET 9 FOR DETAILS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

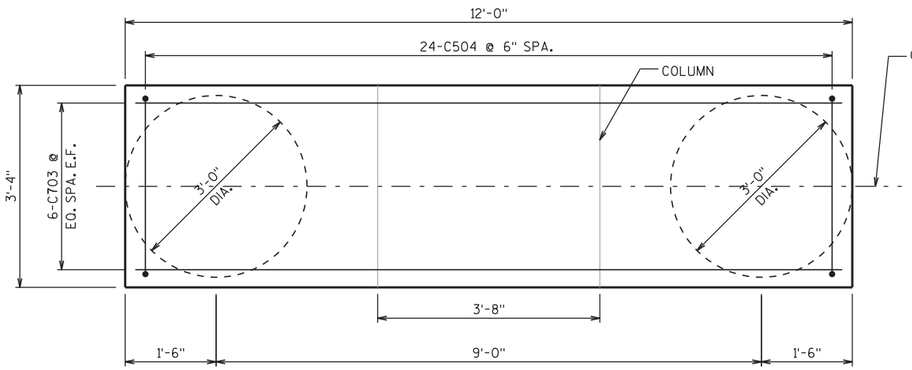
DRAWN BY AG | PLANS CK'D. STB

S-40-790
GENERAL PLAN
& ELEVATION

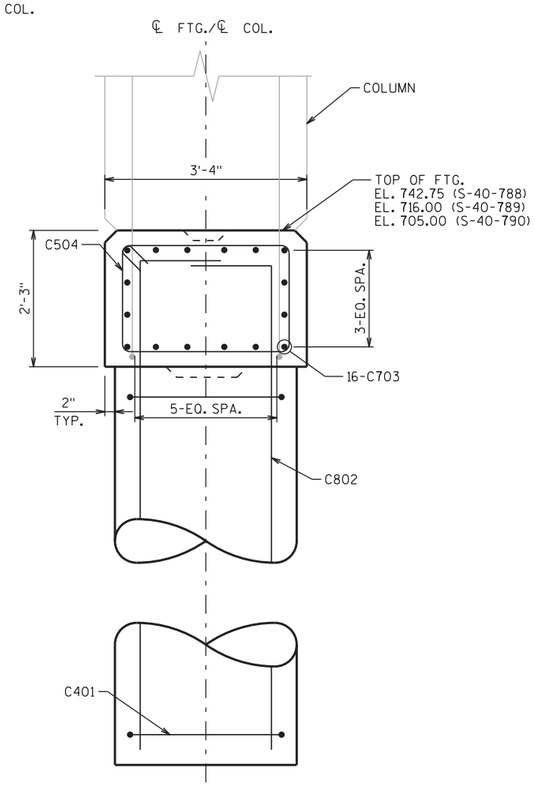
SHEET 4 OF 10

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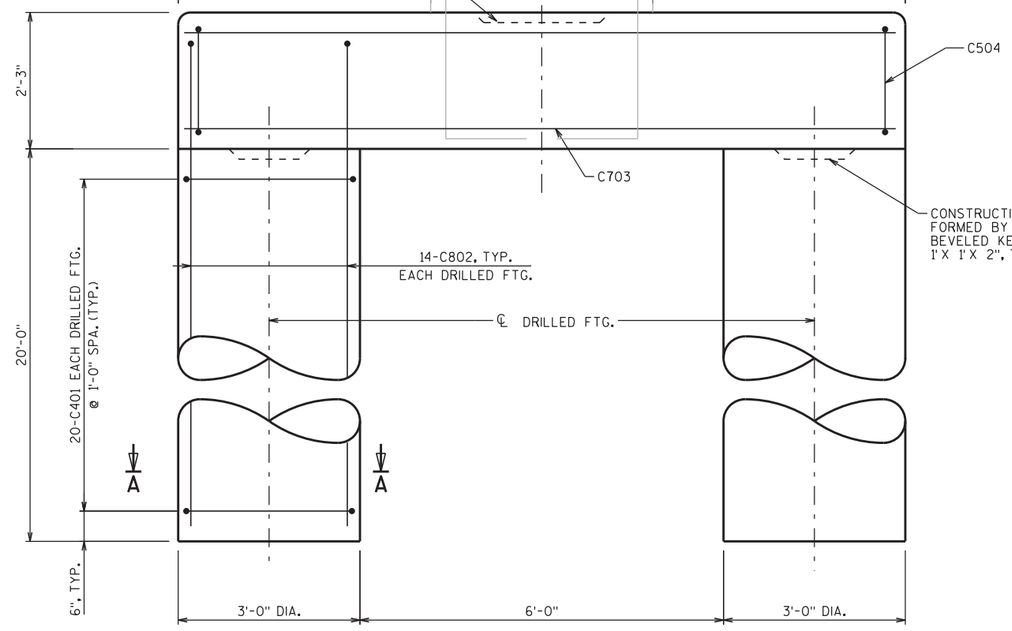
STATE PROJECT NUMBER
1060-33-80



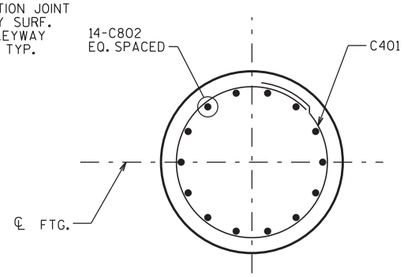
PLAN



END VIEW



ELEVATION



SECTION A-A

NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR ONE FOOTING OF ONE SIGN STRUCTURE. APPLIES TO S-40-788, S-40-789 & S-40-790 COLUMN FOOTINGS.

ORIENT HORIZONTAL LEGS OF C802 BARS PARALLEL TO C504 STIRRUPS.

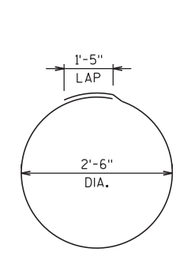
ULTIMATE DESIGN STRESSES

CONCRETE MASONRY ——— f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 psi

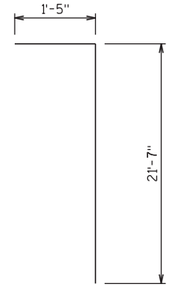
FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

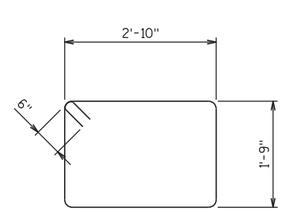
ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF
ALLOWABLE SOIL SKIN FRICTION - 400 PSF
SOIL COHESION - 1,200 PSF
ASSUMED SOIL FRICTION ANGLE - 30 DEGREES



C401



C802



C504

BILL OF BARS

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C401		40	9'- 4"	X		DRILLED FOOTING - HOOPS
C802		28	22'- 10"	X		DRILLED FOOTING - VERTICAL
C703		16	11'- 6"			FOOTING - LONGITUDINAL
C504		24	9'- 10"	X		FOOTING - TIES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

FOOTING DETAILS

SHEET 5 OF 10

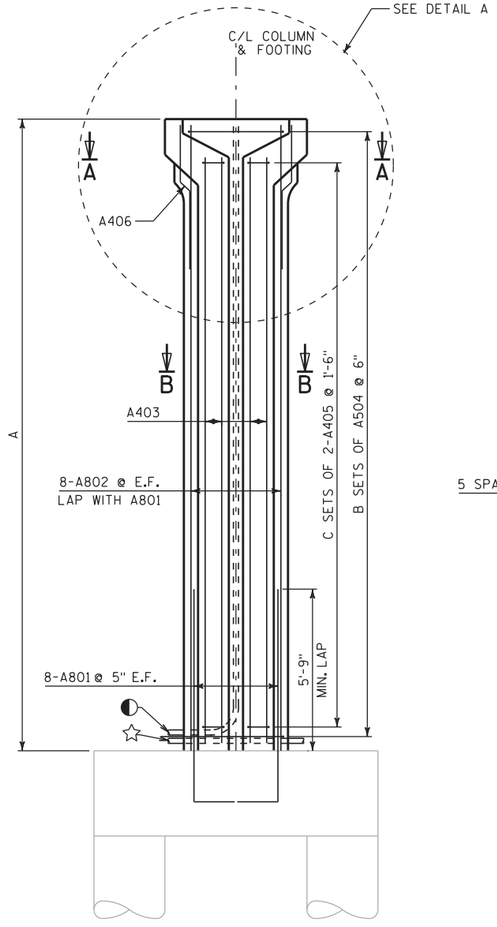
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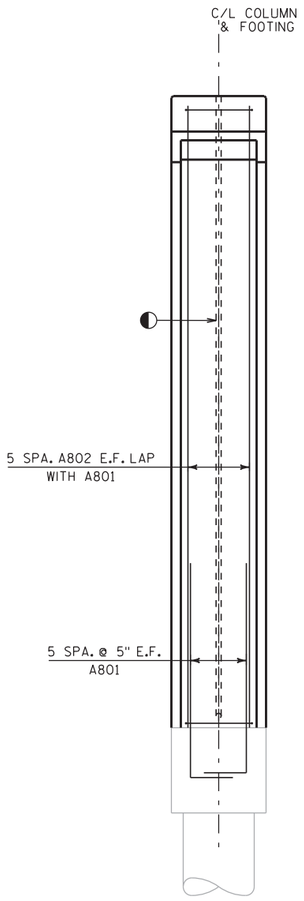
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STATE PROJECT NUMBER

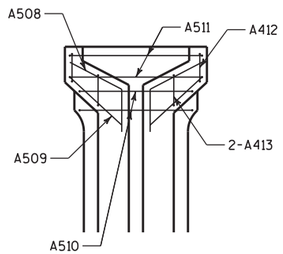
1060-33-80



ELEVATION

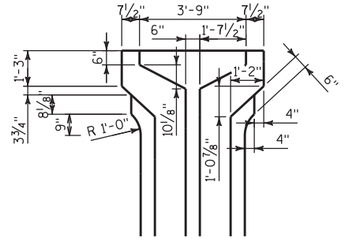


END VIEW

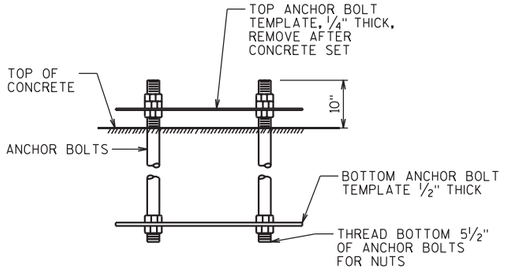


DETAIL A

SECONDARY REINFORCEMENT SHOWN ONLY



DETAIL AT TOP OF COLUMN



ANCHOR BOLT DETAILS

NOTES

THE INFORMATION ON THIS SHEET APPLIES TO S-40-788, S-40-789 & S-40-790.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR FOOTINGS AND 2" CLEAR FOR CONCRETE COLUMN.

BILL OF BARS SHOWN IS ONLY FOR ONE COLUMN OF ONE SIGN STRUCTURE. APPLIES TO S-40-788, S-40-789 & S-40-790 COLUMNS.

◐ 1-2" DIA. NON-METALLIC CONDUIT UNDER COLUMN (SEE LAYOUT SHEETS FOR LOCATIONS). EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY".

SEE SHEET 5 FOR FOOTING AND DRILLED SHAFT DETAILS.

* BEND A802 AS REQUIRED TO PLACE THE BOTTOM TEMPLATE.

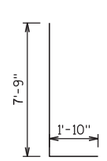
☆ ONE 5'-0" LONG 4" DIA. NON-METALLIC CONDUIT THRU COLUMNS AS NEEDED SEE STRUCTURE LAYOUT SHEETS. EXTEND CONDUIT AS INDICATED AND CAP WITH SUITABLE REMOVABLE PLUG. INCIDENTIAL TO "SIGN SUPPORTS CONCRETE MASONRY".

BILL OF BARS

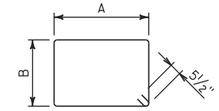
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A801	X	24	9'-5"	X		COLUMN - VERTICAL
A802	X	24	A-2"			COLUMN - VERTICAL
A403	X	8	A-(1'-6")			COLUMN - VERTICAL
A504	X	B	12'-0"	X		COLUMN - TIES
A405	X	4C	1'-11"	X		COLUMN - TIES
A406	X	12	4'-0"	X		COLUMN CAP
A507	X	6	11'-2"	X		COLUMN CAP
A508	X	4	4'-5"	X		COLUMN CAP
A509	X	4	1'-3"			COLUMN CAP
A510	X	2	13'-4"	X		COLUMN CAP
A511	X	2	14'-8"	X		COLUMN CAP
A412	X	2	8'-6"	X		COLUMN CAP
A413	X	4	2'-6"	X		COLUMN CAP
A514	X	B	3'-2"	X		COLUMN - TIES

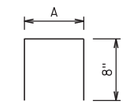
NOTE: REINFORCEMENT SHOWN IS FOR (1) COLUMN
"A" DENOTES COLUMN HEIGHT, "A" MINUS 2" EQUALS TOTAL LENGTH OF BAR.
"4C" DENOTES 4 TIMES "C" NO. OF BARS
SEE TABLE OF VARIABLES FOR "A", "B" & "C".



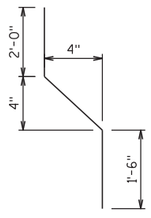
A801



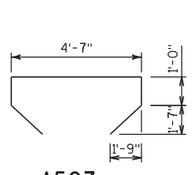
BAR MARK	DIM. 'A'	DIM. 'B'
A504	3'-4"	2'-4"
A510	4'-0"	2'-4"
A511	4'-8"	2'-4"
A412	3'-0"	1'-0"



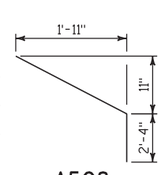
BAR MARK	DIM. 'A'
A405	9"
A413	1'-4"



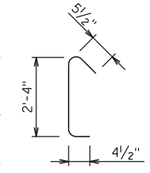
A406



A507

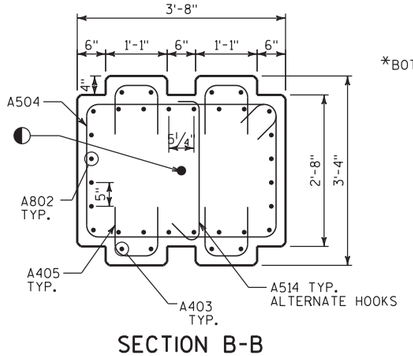


A508

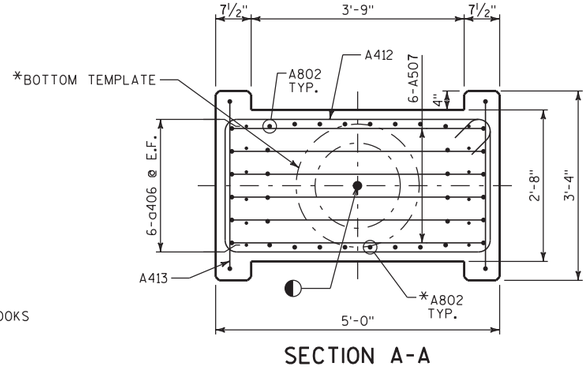


A514

BENDING DIAGRAMS



SECTION B-B



SECTION A-A

TABLE OF VARIABLES

STRUCTURE	A	B	C	CONDUIT LENGTH ◐
S-40-788	20'-9"	42	14	23'-0"
S-40-789	20'-6"	42	13	23'-0"
S-40-790	21'-0"	43	14	23'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

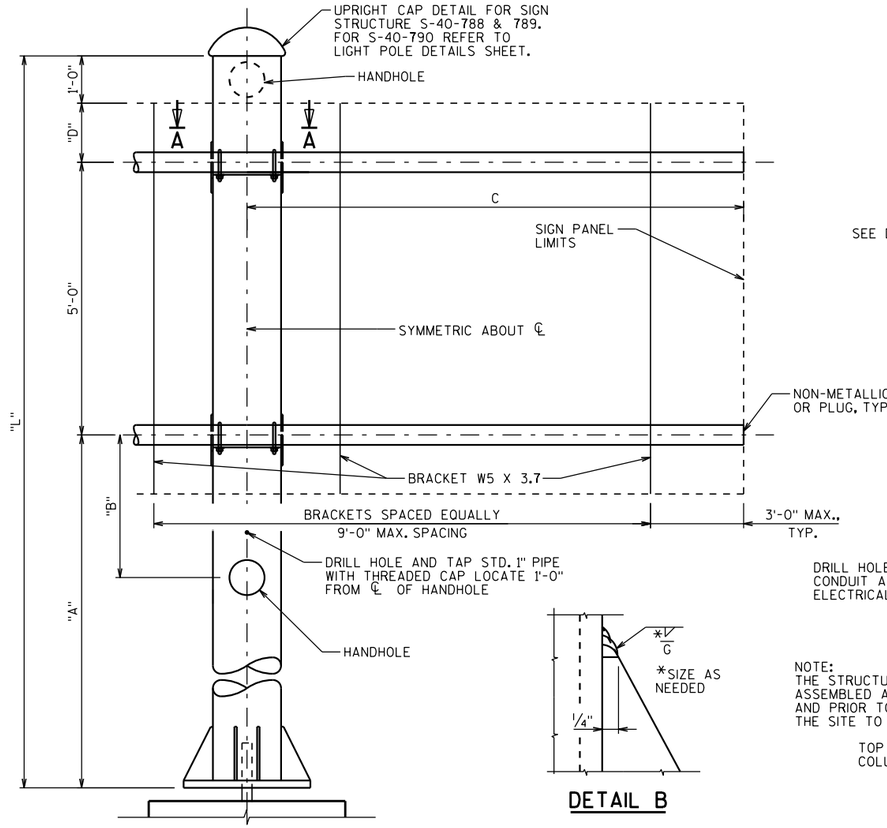
S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

COLUMN DETAILS

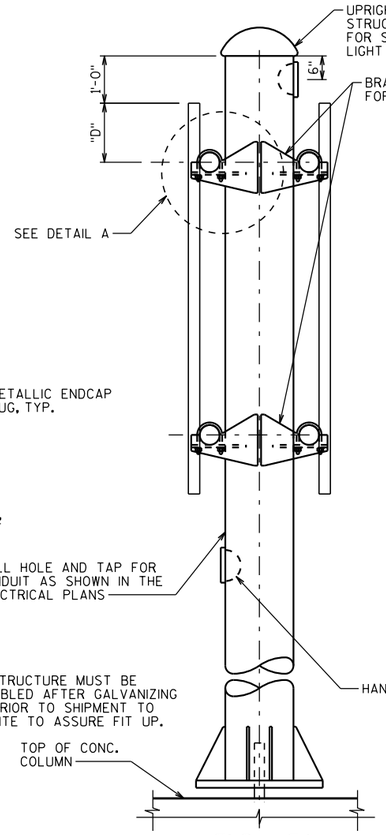
SHEET 6 OF 10

STATE PROJECT NUMBER
1060-33-80

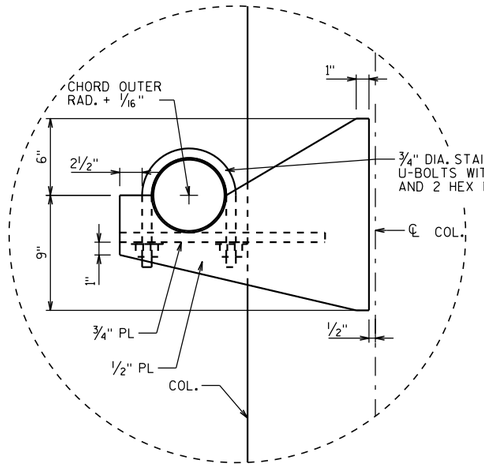


ELEVATION

DETAIL B



END VIEW

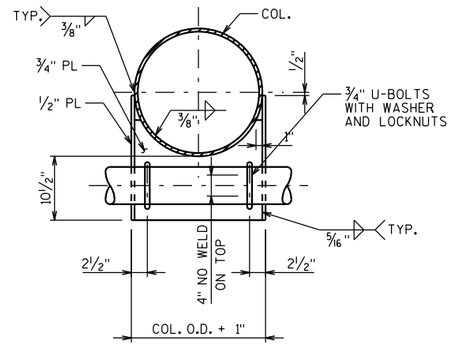


DETAIL A
(BRACKET NOT SHOWN)

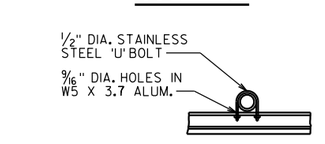
ULTIMATE DESIGN STRESSES

CHORDS & COLUMN (INCLD. HANDHOLE)	API-5L-X42	fy=42,000 P.S.I.
PLATES & BARS	A709	fy=36,000 P.S.I.
ANCHOR BOLTS	A.A.S.H.T.O. M314	fy=55,000 P.S.I.
HIGH STRENGTH BOLTS	A325	fy=92,000 P.S.I.
STRUCTURAL MEMBERS GALVANIZED A123		
HARDWARE GALVANIZED **		A153 CLASS C

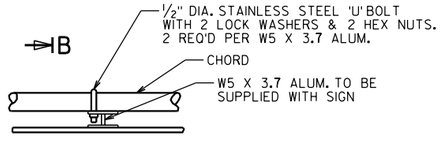
** THE UPPER 12" OF ANCHOR BOLTS, NUTS & WASHER SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.



SECTION A-A

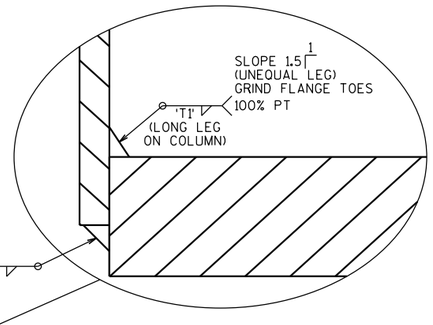


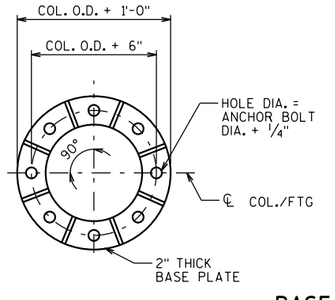
SECTION B-B

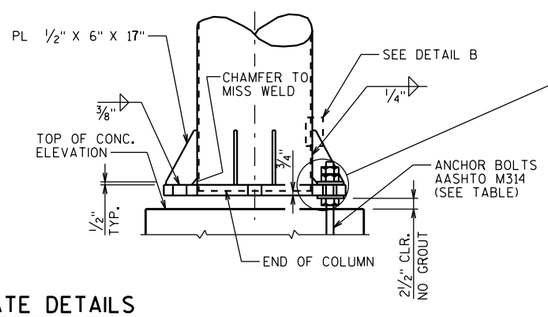


TYPICAL SIGN AND BRACKET CONNECTION

SIGN: W5X3.7 ALUM. TO BE SUPPLIED WITH SIGN







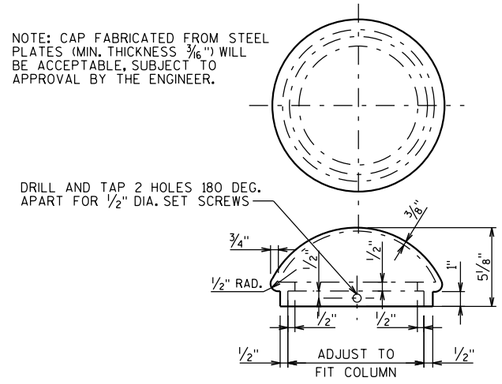
BASE PLATE DETAILS

TABLE

STRUCTURE	CHORDS O.D. x THK.	COLUMN O.D. x THK.	L	A	B	C	D	ANCHOR BOLTS*
S-40-788	5.563" x 0.500"	14.00" O.D. x 0.500"	14'-0"	6'-9"	4'-3"	10'-6"	1'-3"	8-1 1/2" DIA. X 3'-10" LONG
S-40-789	5.563" x 0.500"	14.00" O.D. x 0.500"	14'-0"	6'-9"	4'-3"	12'-0"	1'-3"	8-1 1/2" DIA. X 3'-10" LONG
S-40-790	5.563" x 0.500"	14.00" O.D. x 0.500"	14'-0"	6'-9"	4'-3"	11'-6"	1'-6"	8-1 1/2" DIA. X 3'-10" LONG

* - INCLUDES 10" BOLT STANDOFF FROM TOP OF CONCRETE

NOTE: CAP FABRICATED FROM STEEL PLATES (MIN. THICKNESS 3/16") WILL BE ACCEPTABLE, SUBJECT TO APPROVAL BY THE ENGINEER.



TOWER CAP DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

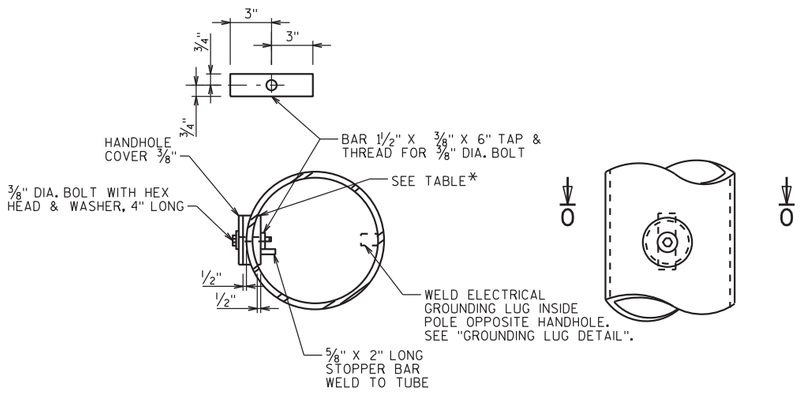
DRAWN BY AG | PLANS CK'D. STB

BUTTERFLY SIGN DETAILS

SHEET 7 OF 10

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - Butterfly\S-40-BF_501_ss.dgn PLOT DATE : 22-MAY-2014 13:16 PLOT BY : MSCAYG PLOT NAME : S-40-BF_501_ss PLOT SCALE : 5:1

STATE PROJECT NUMBER
1060-33-80



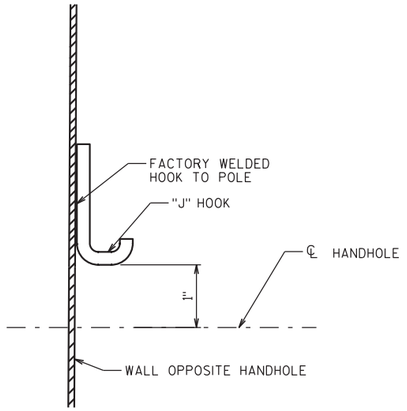
SECTION O-O

HANDHOLE DETAILS

HANDHOLE NOTES

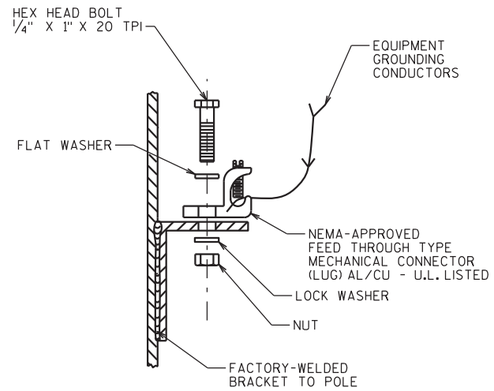
HANDHOLES SHALL BE LOCATED IN THE COLUMN OF THE SIGN BRIDGE STRUCTURE. FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STUCTURE UNDER ID 1030-20.72 OR IN THE FUTURE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMN AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE LIGHTING DETAIL PLAN SHEETS AND WITHIN THIS PLAN SET.

✳ UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



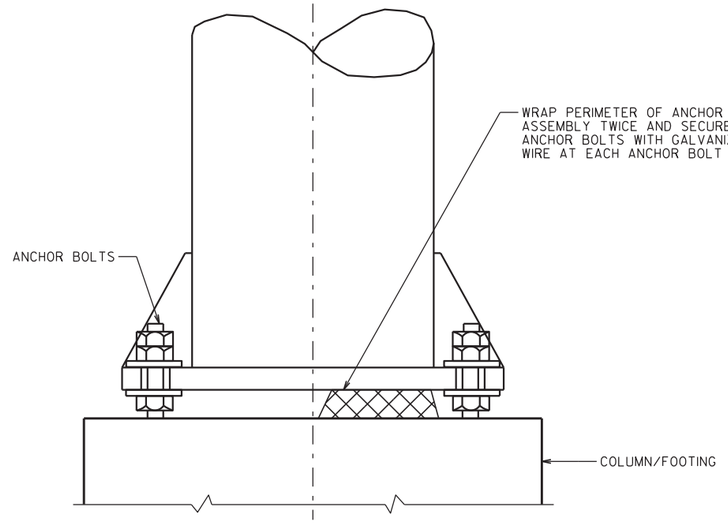
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING KNOWN OR POSSIBLE FUTURE ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RODENT SCREEN

(ONLY REQUIRED WHEN ELECTIRCAL DEVICES ARE INSTALLED)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

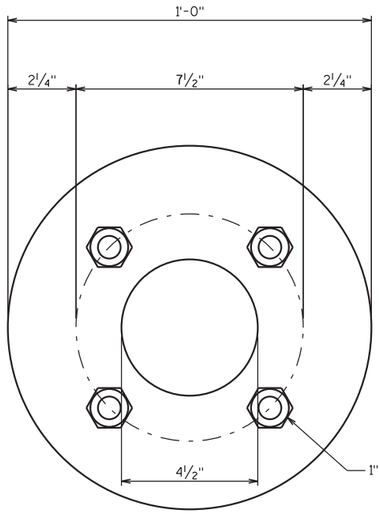
S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

HANDHOLE DETAILS

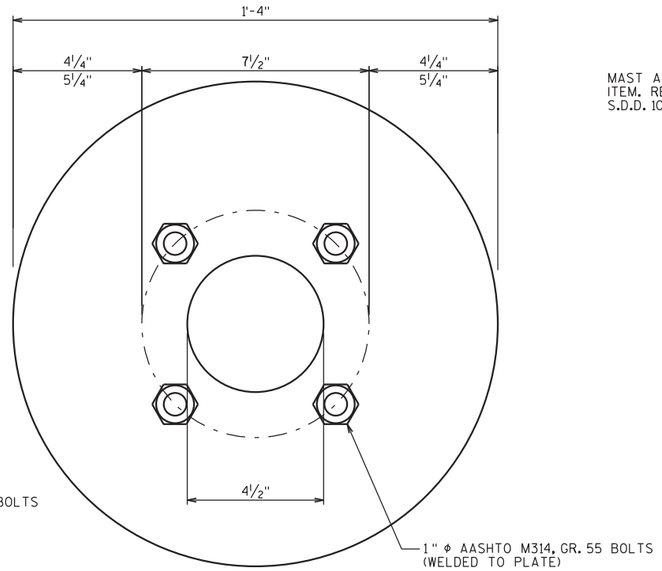
SHEET 8 OF 10

3336



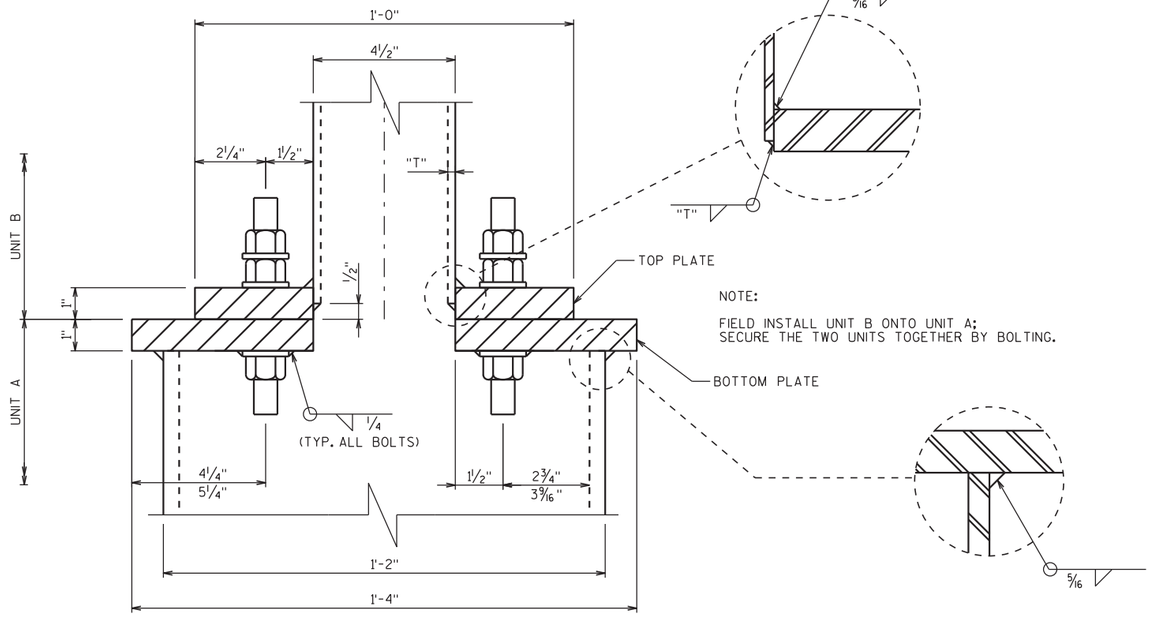
TOP PLATE

WELDED TO 4.5" ϕ LIGHT POLE

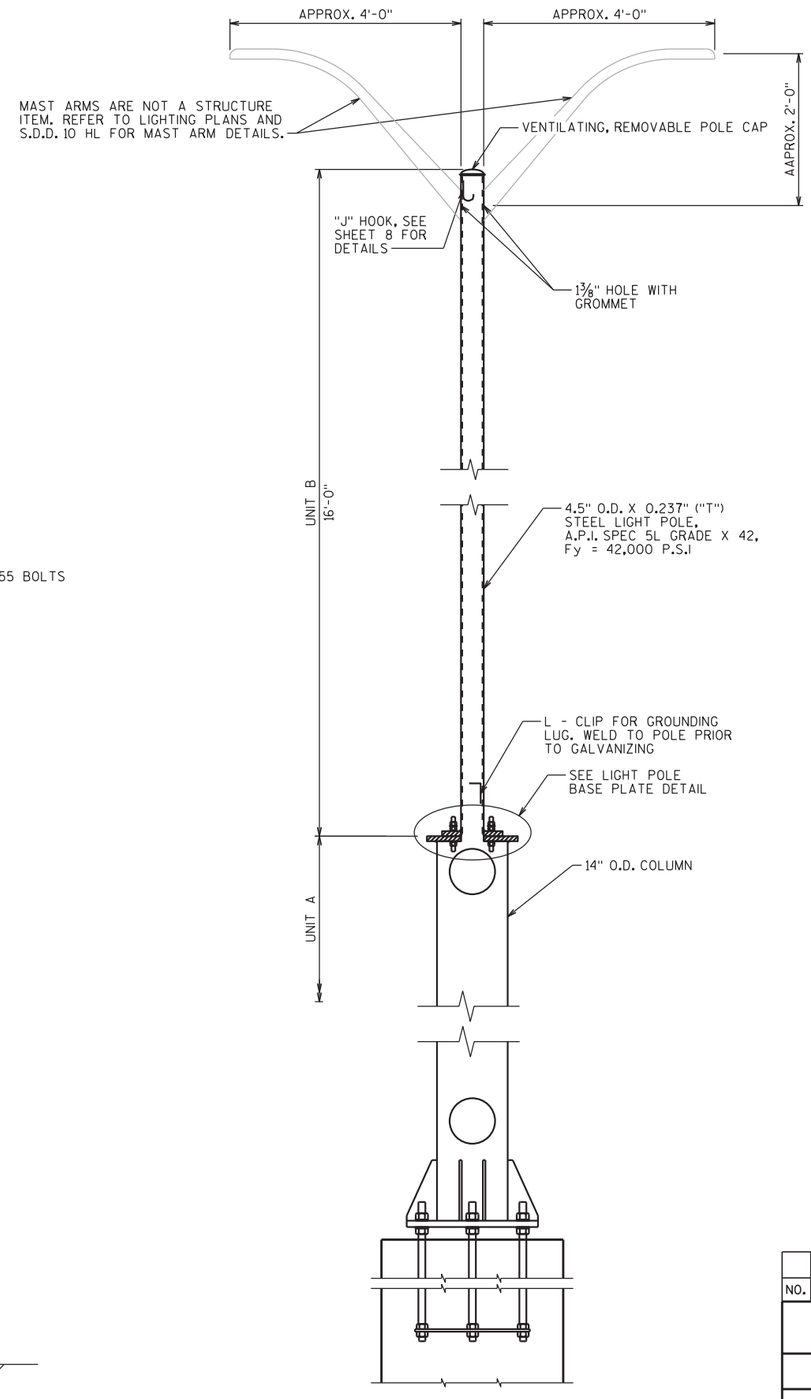


BOTTOM PLATE

WELDED TO 14" ϕ STEEL COLUMN



LIGHT POLE BASE PLATE DETAIL



LIGHT POLE CONNECTION

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

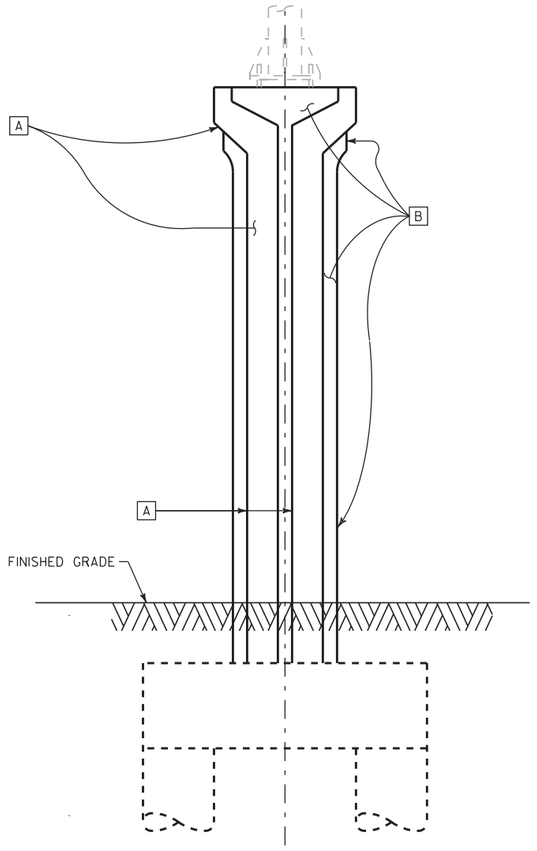
LIGHT POLE DETAILS

SHEET 9 OF 10

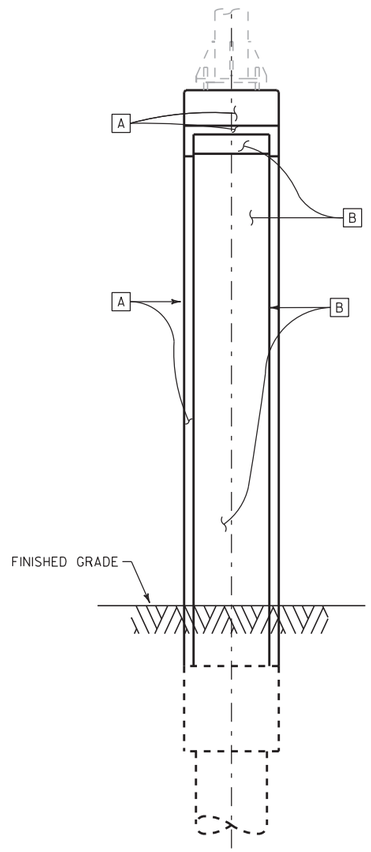
3337

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\Signstructures\cds\Sign - Butterfly\S-40-BF_503_ss.dgn PLOT DATE : 01-MAY-2014 09:53 PLOT BY : MSCAYG PLOT NAME : S-40-BF_503_ss PLOT SCALE : 5:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW



END VIEW

CONCRETE STAINING SCHEDULE

MARK	COLOR	NOTES
A	BASE COLOR	SIDES TO FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	REVEALS

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:

BASE COLOR : FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

NOTE

THE COST FOR REVEALS AND CONCRETE AESTHETIC DETAILS ARE INCIDENTAL TO BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S-40-788/789/790

DRAWN BY AG | PLANS CK'D. STB

CONCRETE COLUMN AESTHETIC DETAILS

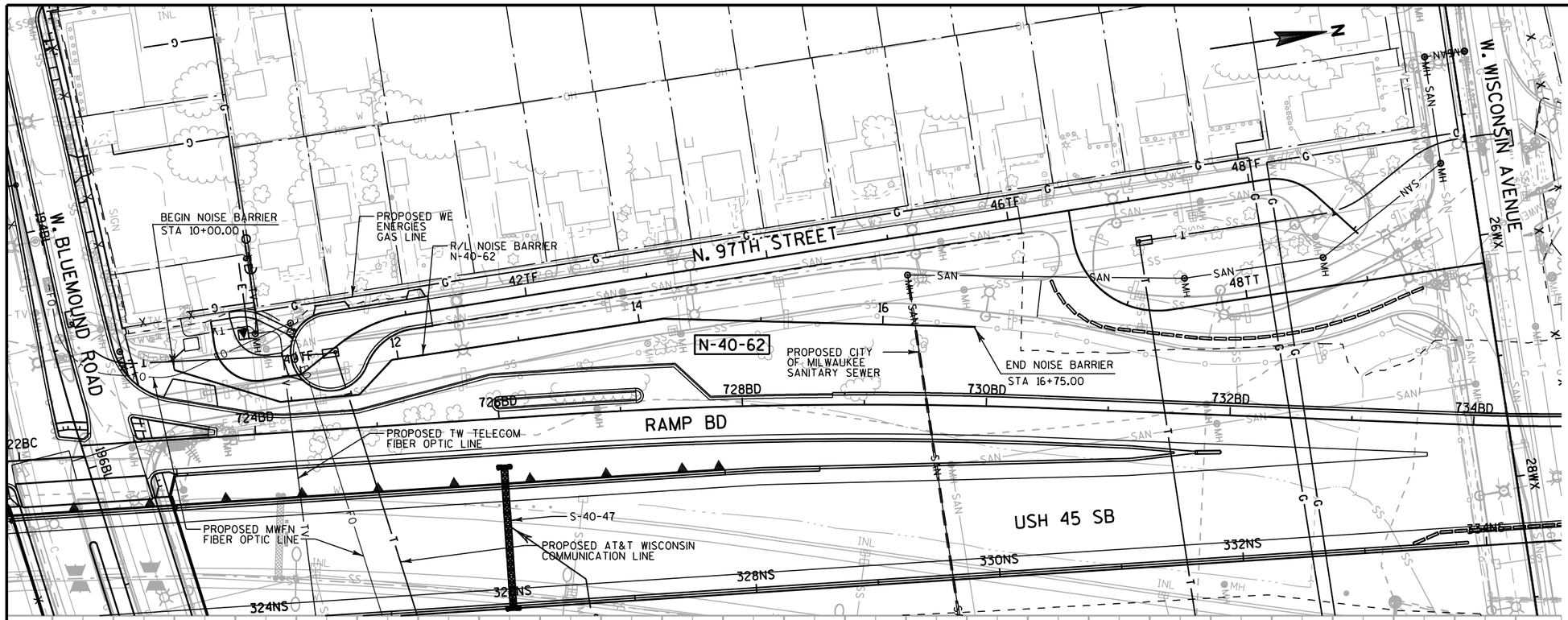
SHEET 10 OF 10

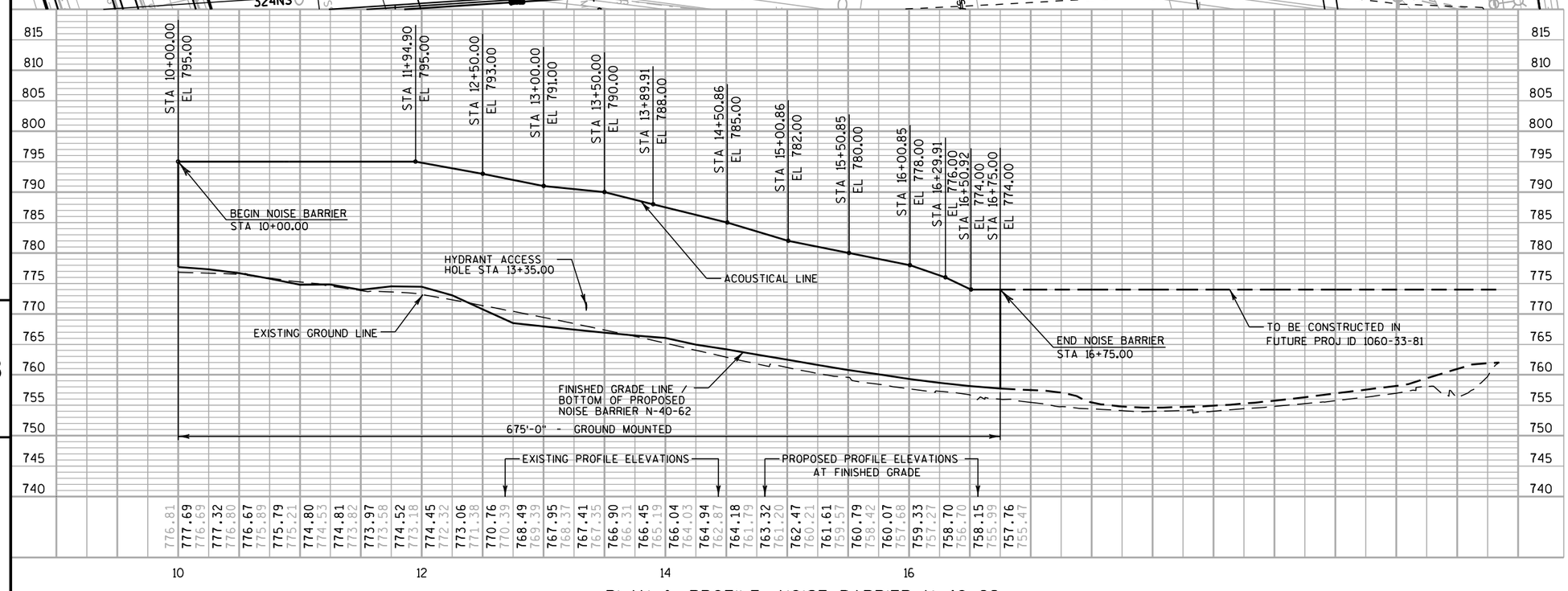
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STATE PROJECT NUMBER
1060-33-80

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
6. SUBSURFACE EXPLORATION





PLAN & PROFILE: NOISE BARRIER N-40-62



5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-62

SOUTH OF WISCONSIN AVE/WEST OF USH 45 SB

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

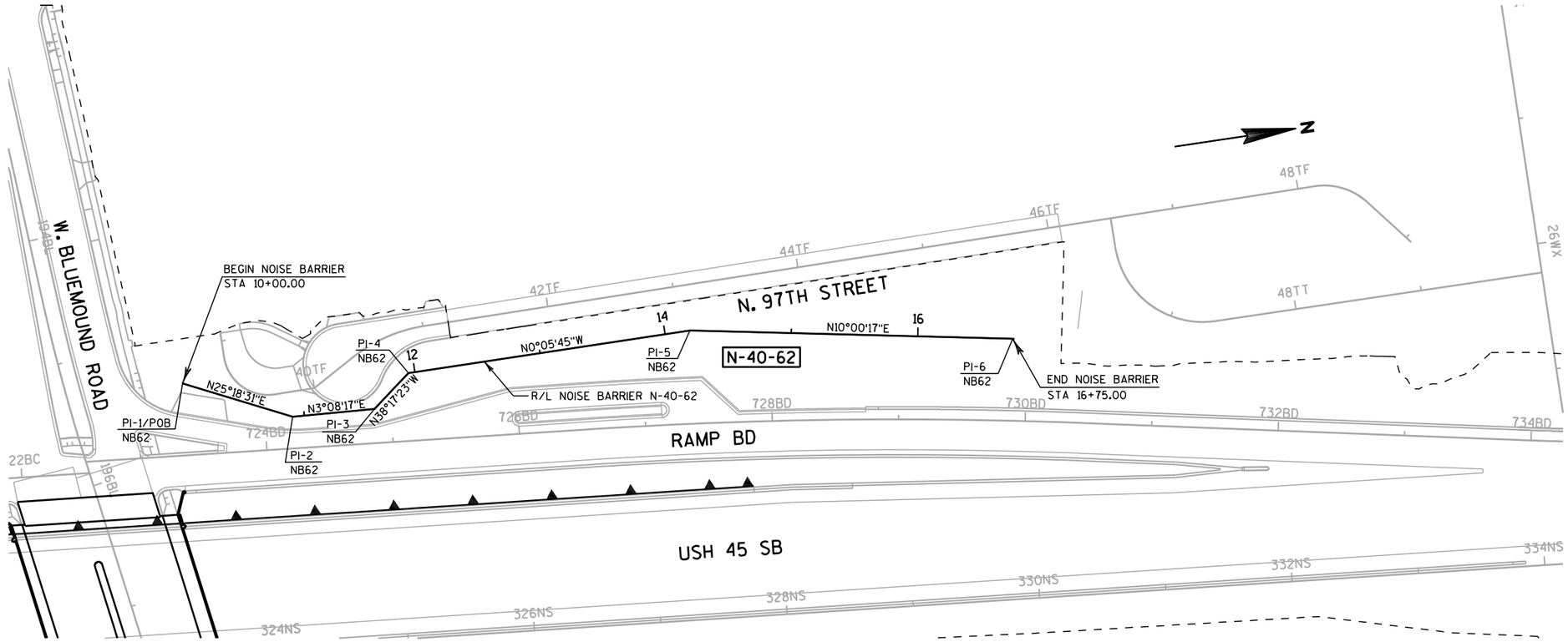
SHEET 1 OF 6

3339

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-62\cds\N62_080101_gp.dgn PLOT DATE : 01-MAY-2014 14:35 PLOT BY : MSCTEK PLOT NAME : N62_080101_gp PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	10+00.00	572663.63	298431.61
PI-2	10+90.89	572702.49	298513.77
PI-3	11+55.89	572706.05	298578.67
PI-4	11+94.89	572681.88	298609.29
PI-5	14+19.89	572681.50	298834.29
PI-6	16+75.00	572725.83	299085.52

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

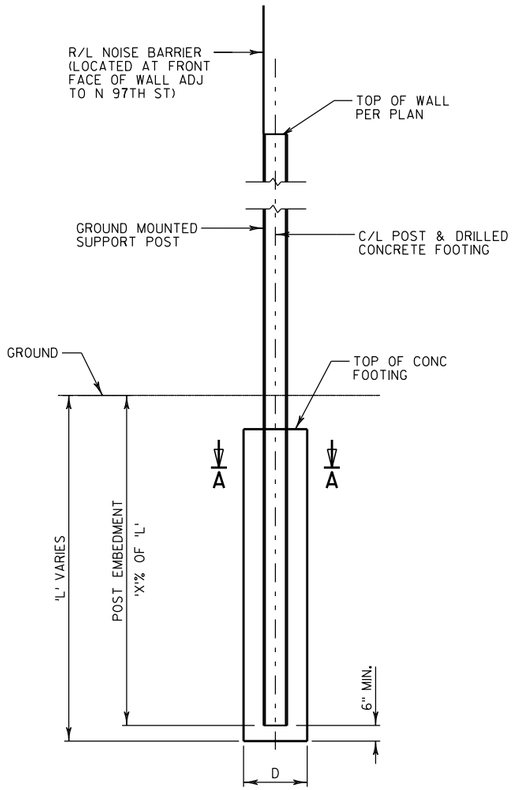
STRUCTURE N-40-62

DRAWN BY PAK | PLANS CK'D. KES

ALIGNMENT PLAN

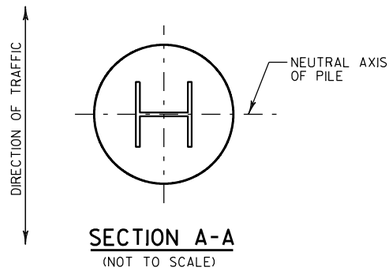
SHEET 2 OF 6

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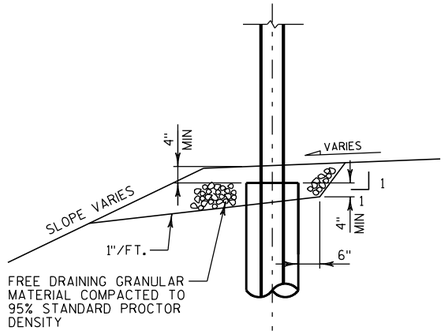
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



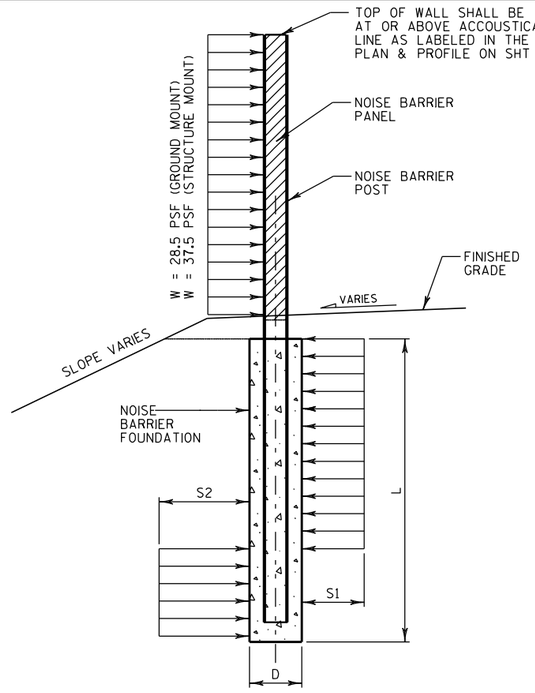
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0001	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-62	SF	13,870

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

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THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-62". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

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28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-62".

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STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-62

DRAWN BY PAK | PLANS CK'D. KES

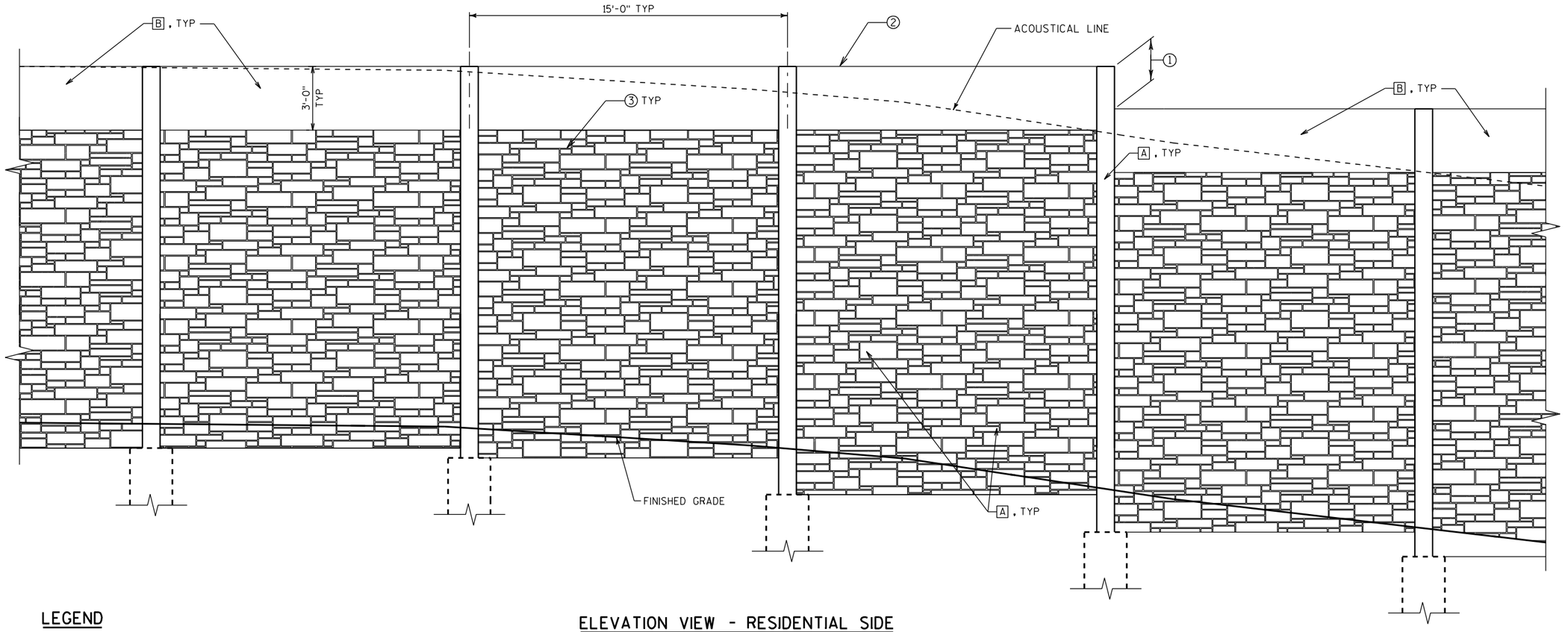
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 6

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-62

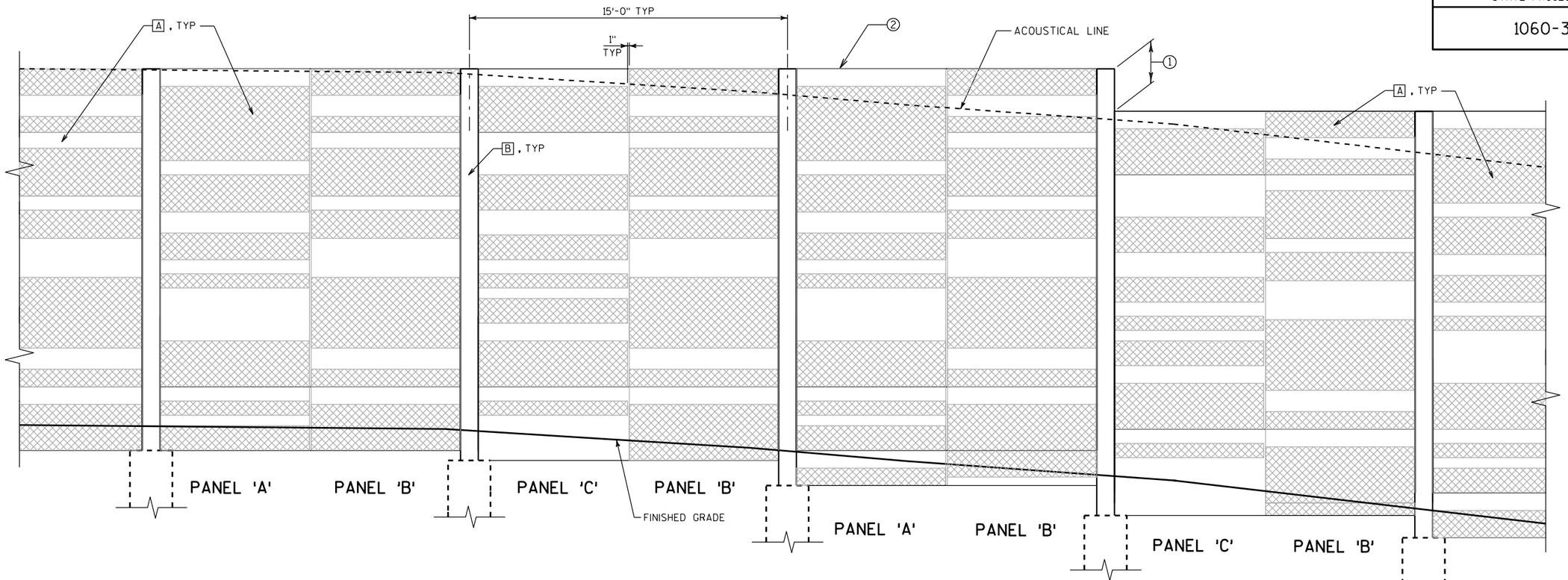
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-62\cds\N62_080104_ae.dgn PLOT DATE : 01-MAY-2014 14:36 PLOT BY : MSCTEK PLOT NAME : N62_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

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(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

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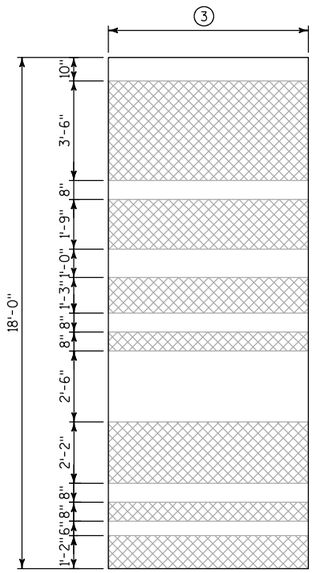
BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

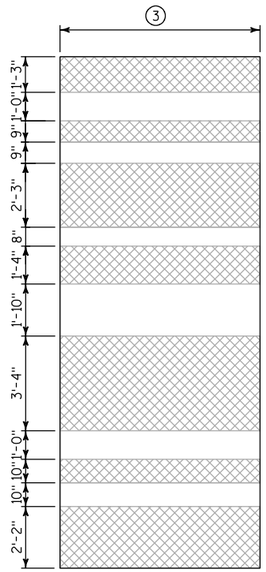
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

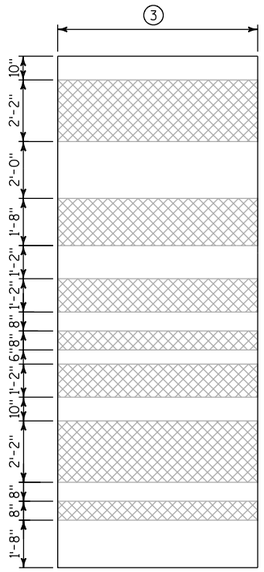
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-62

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-62\cds\N62_080105_ae.dgn PLOT DATE : 01-MAY-2014 14:36 PLOT BY : MSCTEK PLOT NAME : N62_080105_ae PLOT SCALE : 5.333333:1

NOTE

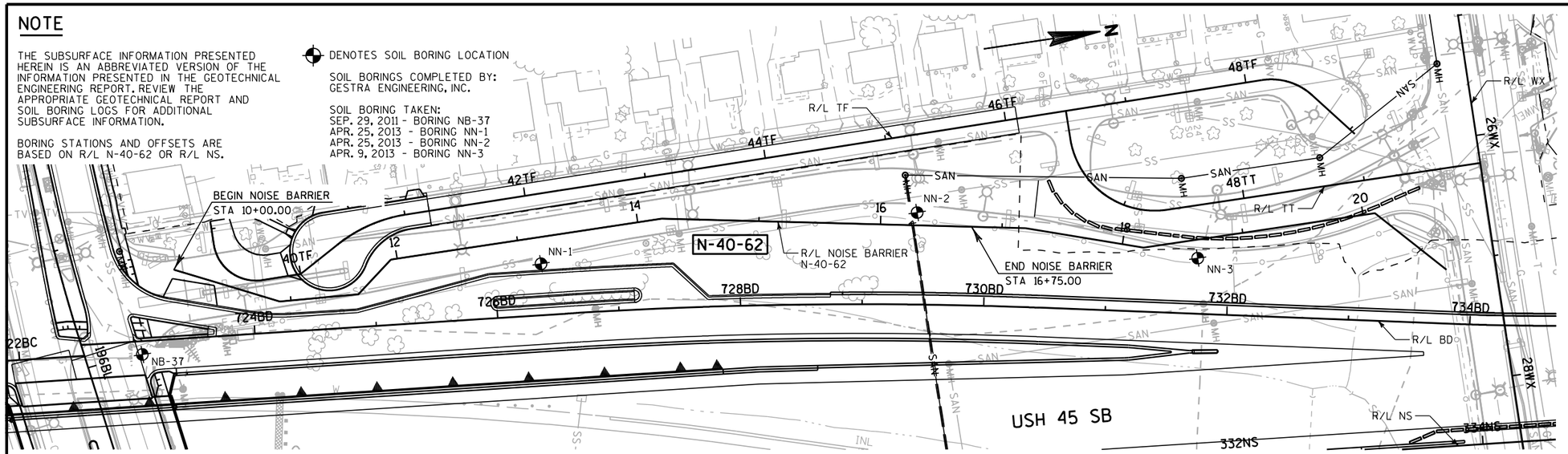
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

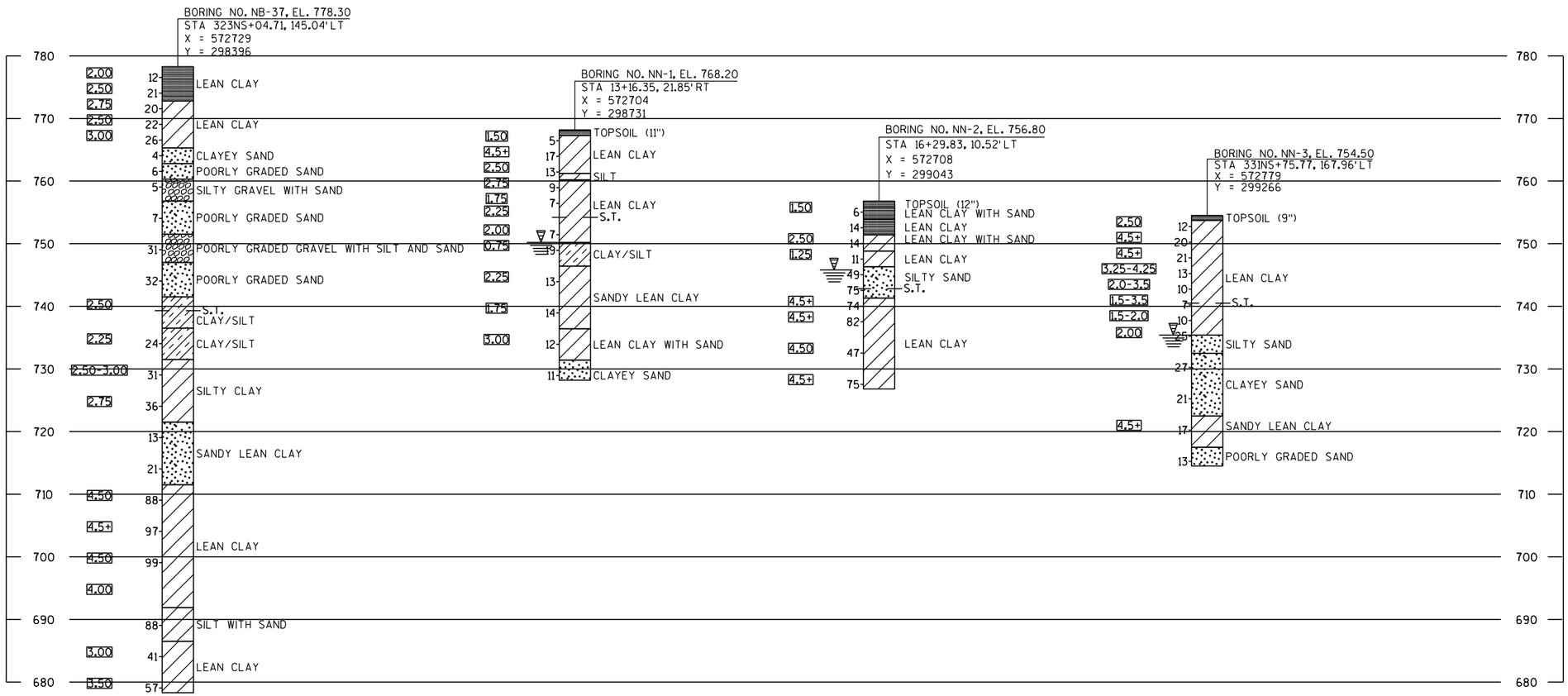
BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-62 OR R/L NS.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEP. 29, 2011 - BORING NB-37
APR. 25, 2013 - BORING NN-1
APR. 25, 2013 - BORING NN-2
APR. 9, 2013 - BORING NN-3





STATE PROJECT NUMBER

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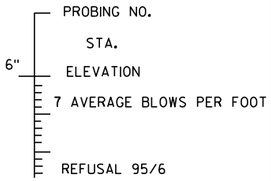
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

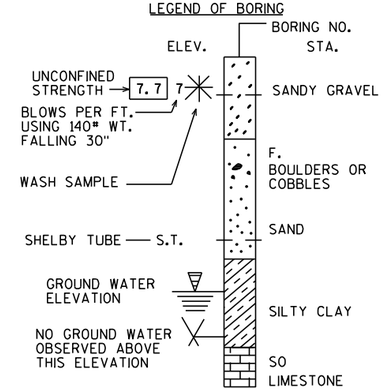
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

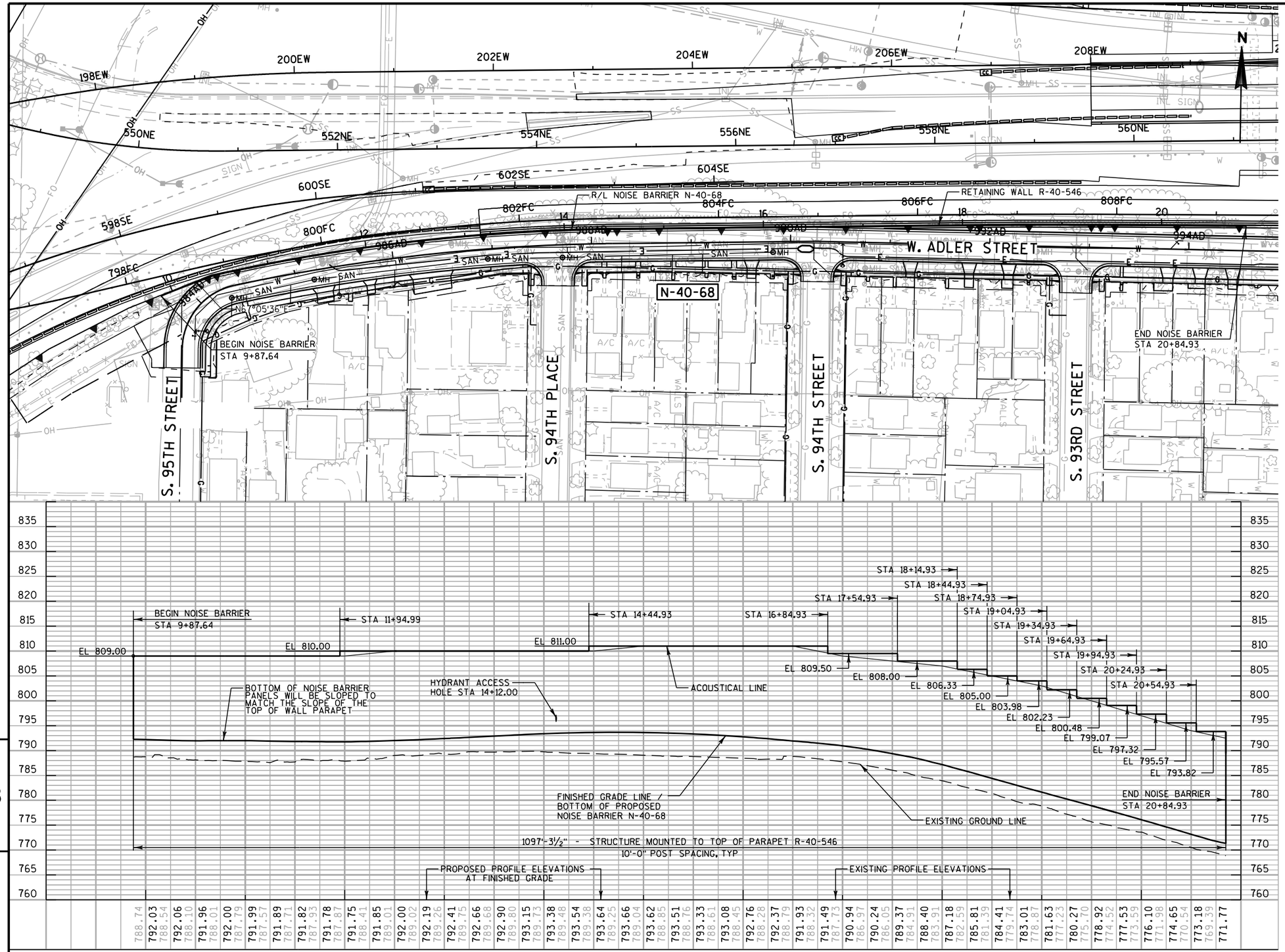
STRUCTURE N-40-62

DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION

SHEET 6 OF 6

STATE PROJECT NUMBER
1060-33-80



PLAN & PROFILE: NOISE BARRIER N-40-68

8

8

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/7/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-68

NOISE BARRIER ALONG W ADLER ST/WEST OF 92ND ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO 2002

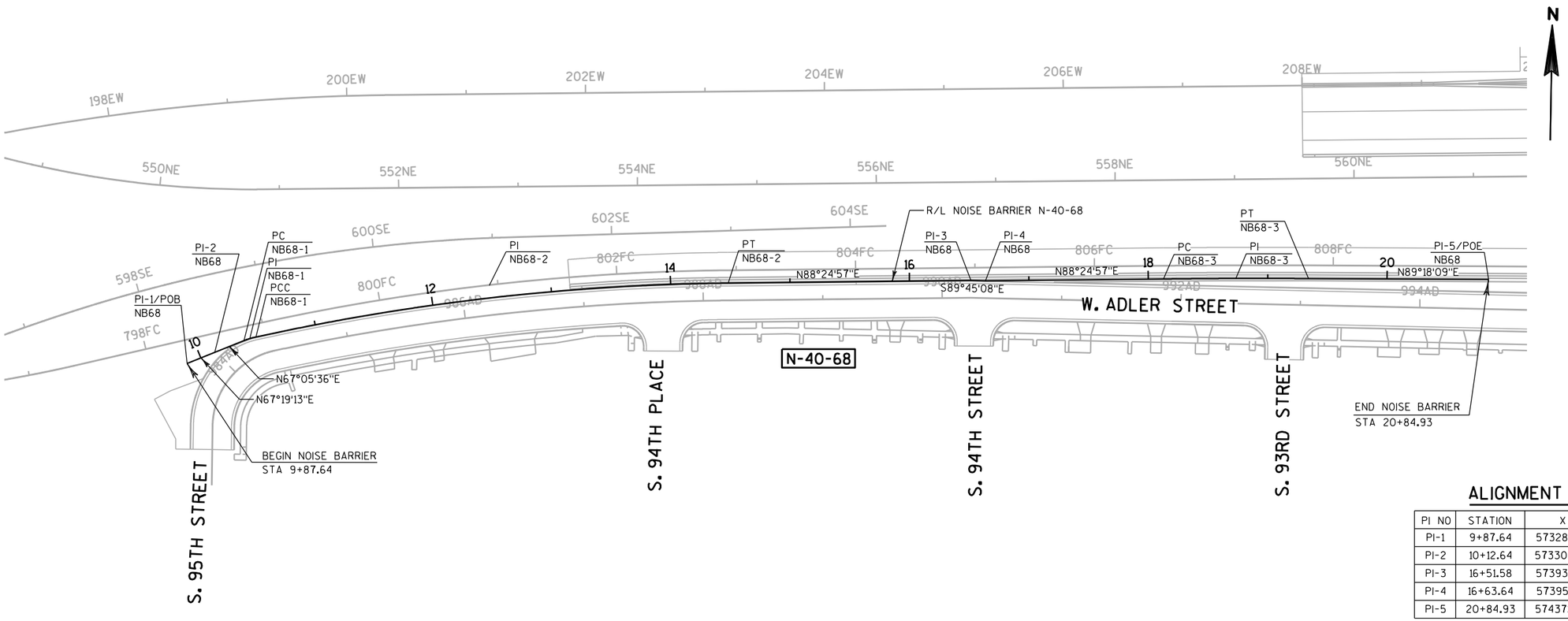
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-68\cds\N68_080101_gp.dgn PLOT DATE : 07-MAY-2014 11:58 PLOT BY : MSCKES PLOT NAME : N68_080101_gp PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	9+87.64	573284.31	295477.32
PI-2	10+12.64	573307.38	295486.96
PI-3	16+51.58	573939.51	295558.10
PI-4	16+63.64	573951.57	295558.04
PI-5	20+84.93	574372.76	295566.42

HORIZONTAL CURVE DATA

CURVE NB68-1

P.I. = 10+44.28
X = 573336.52
Y = 295499.27
Δ = 9°28'47.01"
D = 91°40'23.68"
T = 5.18'
L = 10.34'
R = 62.50'
P.C. = 10+39.10
P.C.C. = 10+49.44

CURVE NB68-2

P.I. = 12+49.55
X = 573536.21
Y = 295546.94
Δ = 11°50'35.90"
D = 2°58'11.16"
T = 200.11'
L = 398.80'
R = 1929.30'
P.C.C. = 10+49.44
P.T. = 14+48.23

CURVE NB68-3

P.I. = 18+73.47
X = 295563.85
Y = 574161.32
Δ = 0°53'11.48"
D = 0°43'44.60"
T = 60.80'
L = 121.60'
R = 7858.92'
P.C. = 18+12.67
P.T. = 19+34.27

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE N-40-68

DRAWN BY PAK | PLANS CK'D. KES

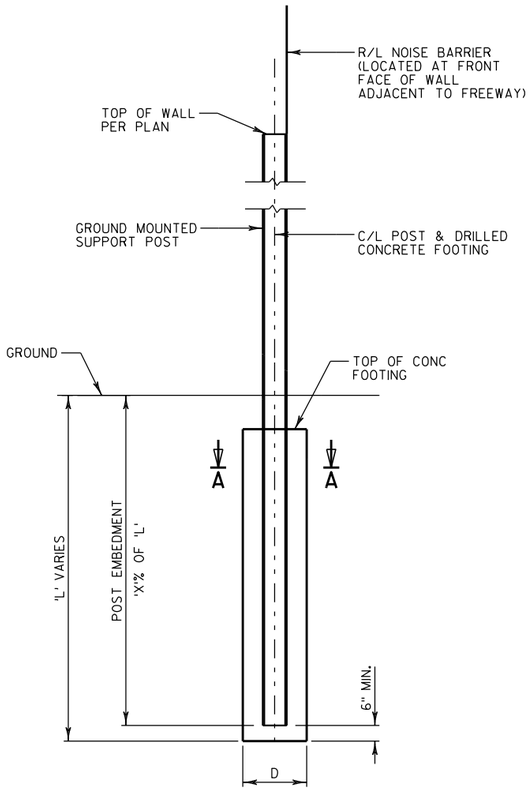
ALIGNMENT PLAN

SHEET 2 OF 5

8

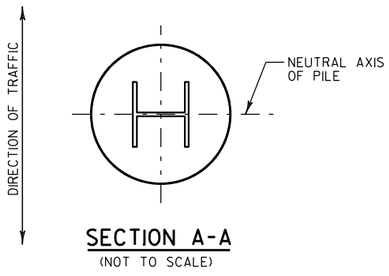
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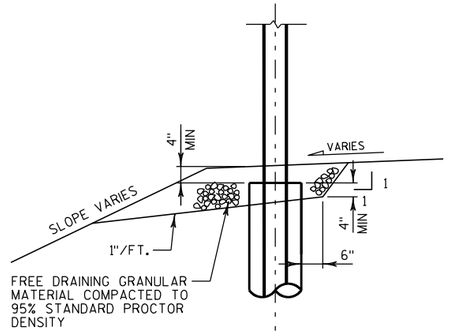
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



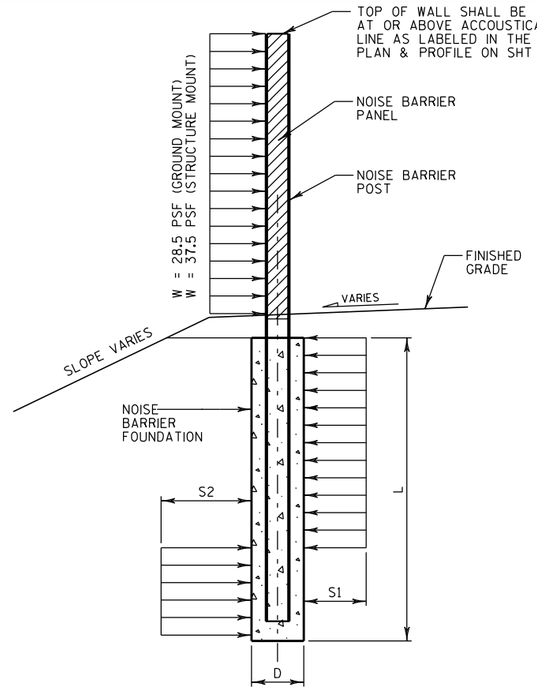
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

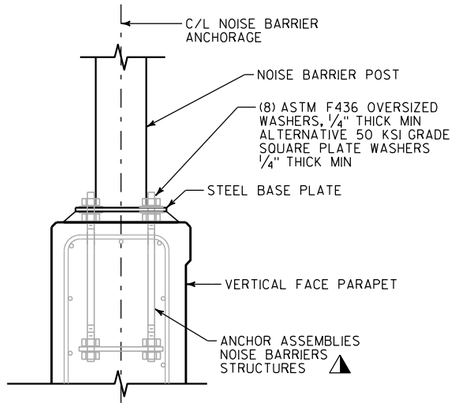
(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

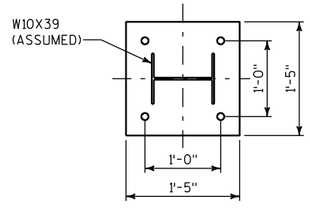
(NOT TO SCALE)



SECTION THRU TOP OF PARAPET

(FOR STRUCTURE MOUNTED NOISE BARRIER)

⚠ NOT A NOISE BARRIER BID ITEM. SEE RETAINING WALL R-40-546 PLANS FOR DETAILS.



BASE PLATE

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0002	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-68	SF	20,600

STATE PROJECT NUMBER

1060-33-80

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-68

DRAWN BY PAK | PLANS CK'D. KES

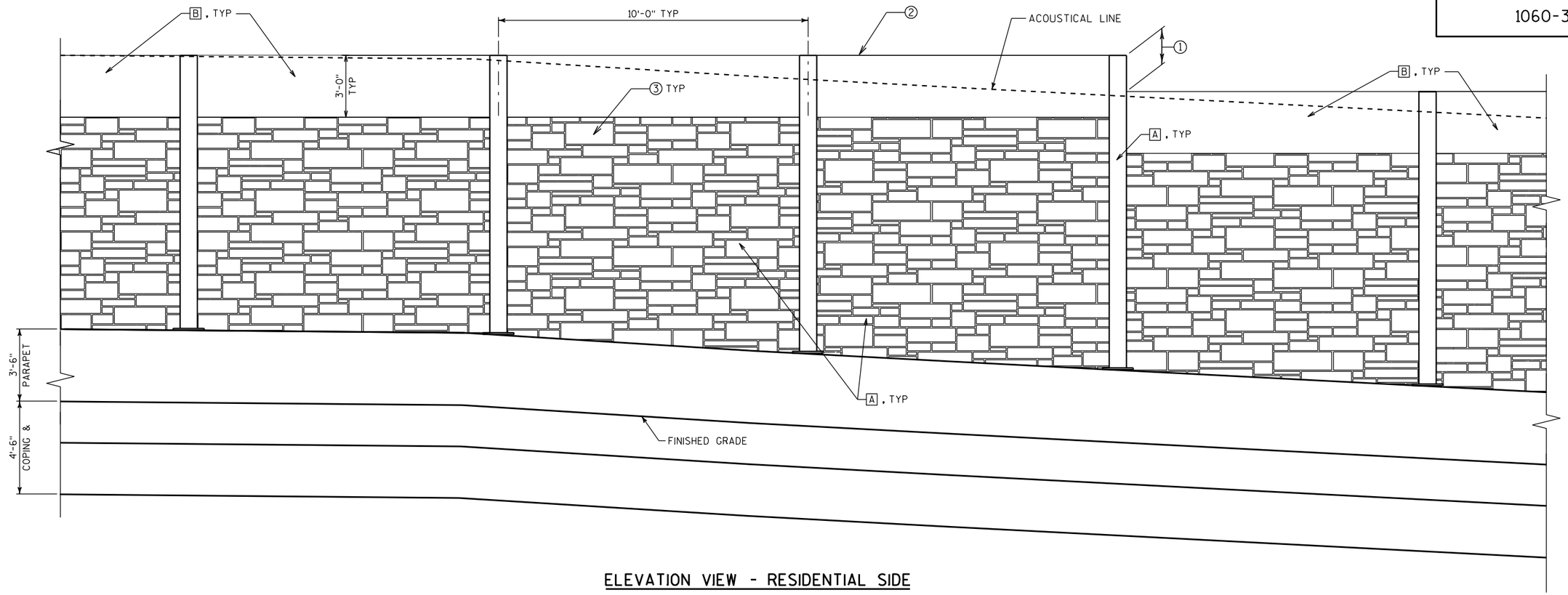
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 5

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

1. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

3. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-68

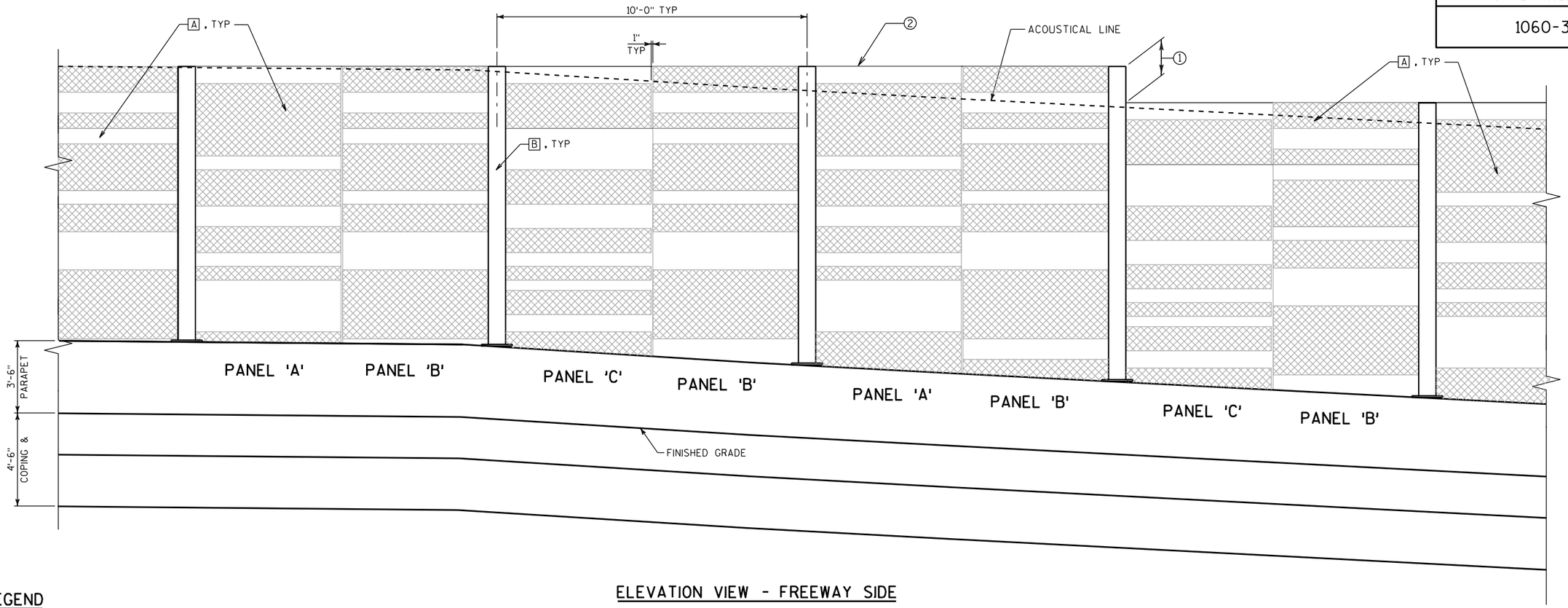
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 5

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-68\cds\N68_080104_ae.dgn PLOT DATE : 07-MAY-2014 11:33 PLOT BY : MSCKES PLOT NAME : N68_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) FOR POST SPA > 8'-0" = 0.5 x (POST SPA - POST FLANGE WIDTH - 1")
FOR POST SPA ≤ 8'-0" = POST SPA - POST FLANGE WIDTH

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

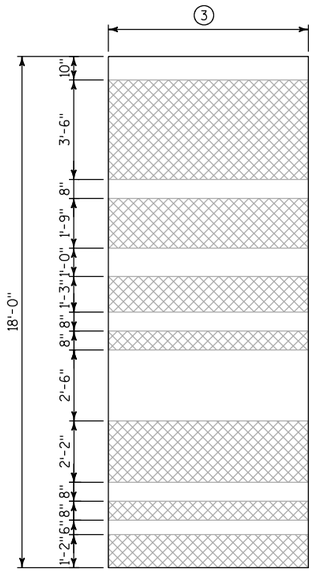
THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR NO. 1 - 33448

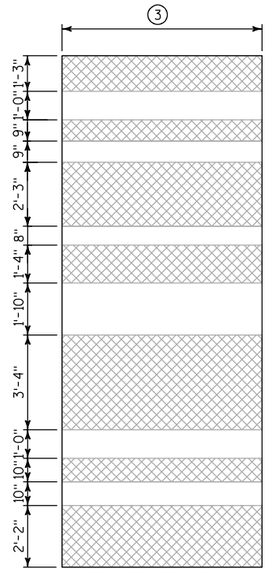
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

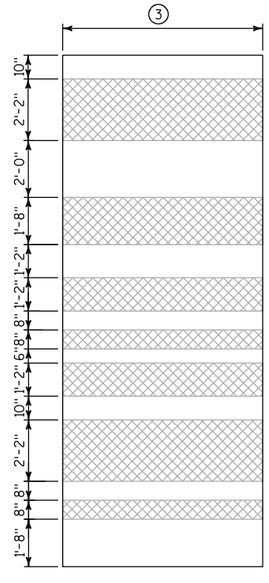
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-68

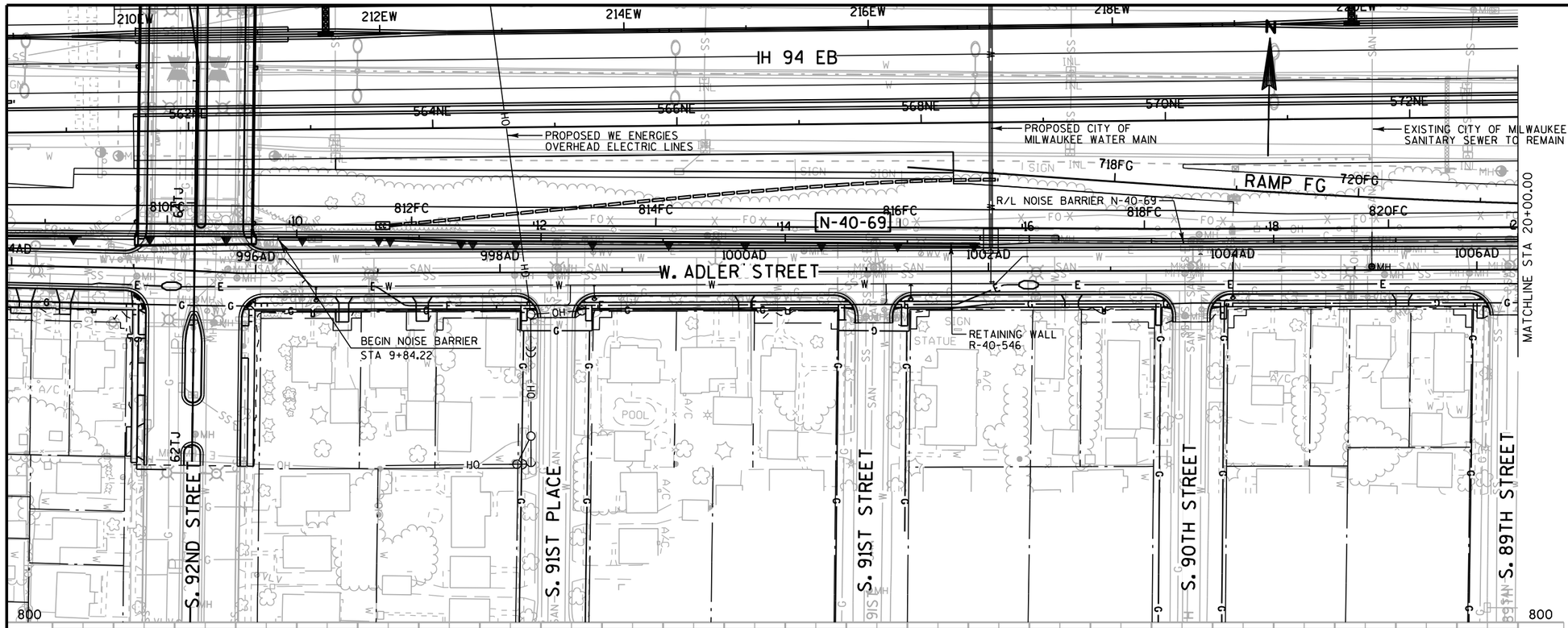
DRAWN BY PAK | PLANS CK'D. EKM

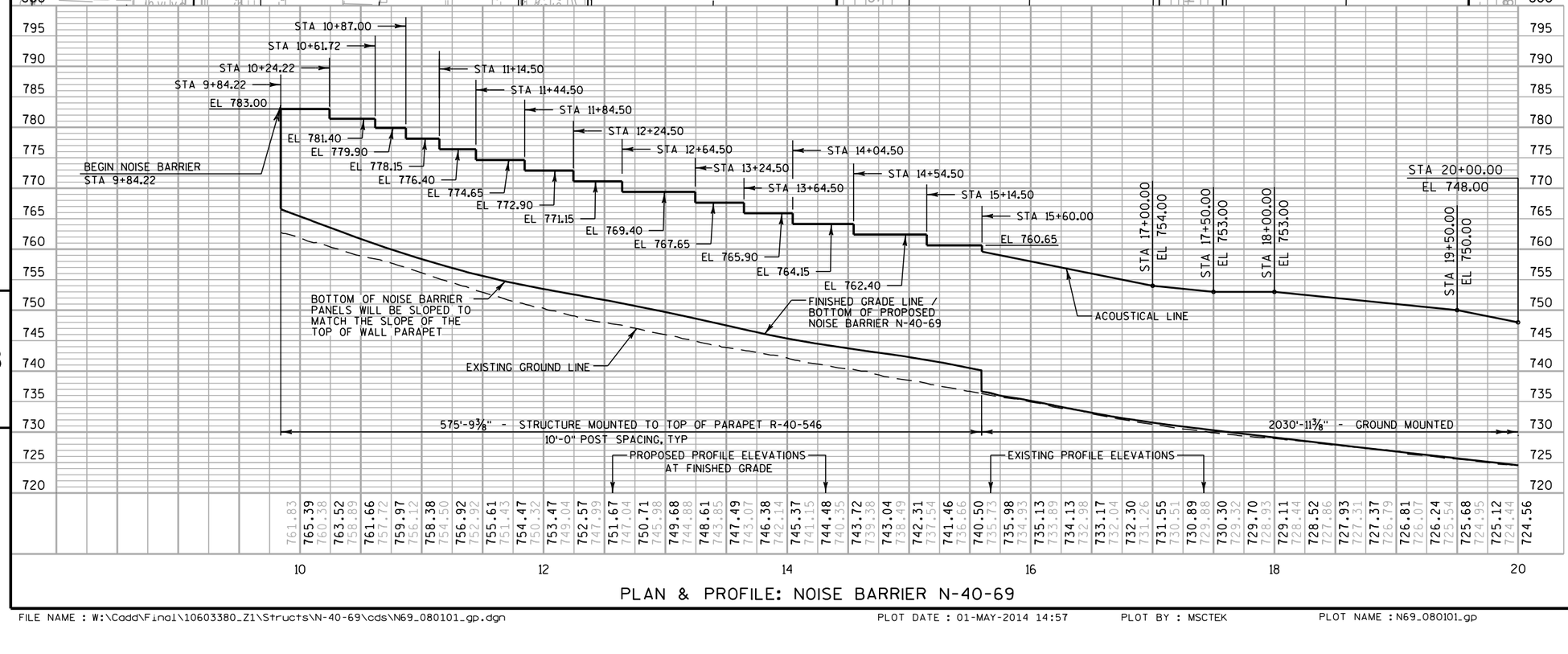
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 5

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-68\cds\N68_080105_ae.dgn
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PLOT BY : MSCKES
PLOT NAME : N68_080105_ae
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80





PLAN & PROFILE: NOISE BARRIER N-40-69

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 3)
2. GENERAL PLAN & ELEVATION (2 OF 3)
3. GENERAL PLAN & ELEVATION (3 OF 3)
4. ALIGNMENT PLAN (1 OF 2)
5. ALIGNMENT PLAN (2 OF 2)
6. QUANTITIES & CONSTRUCTION DETAILS
7. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
8. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
9. SUBSURFACE EXPLORATION (1 OF 3)
10. SUBSURFACE EXPLORATION (2 OF 3)
11. SUBSURFACE EXPLORATION (3 OF 3)

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-69

NOISE BARRIER ALONG W ADLER ST/EAST OF 92ND ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

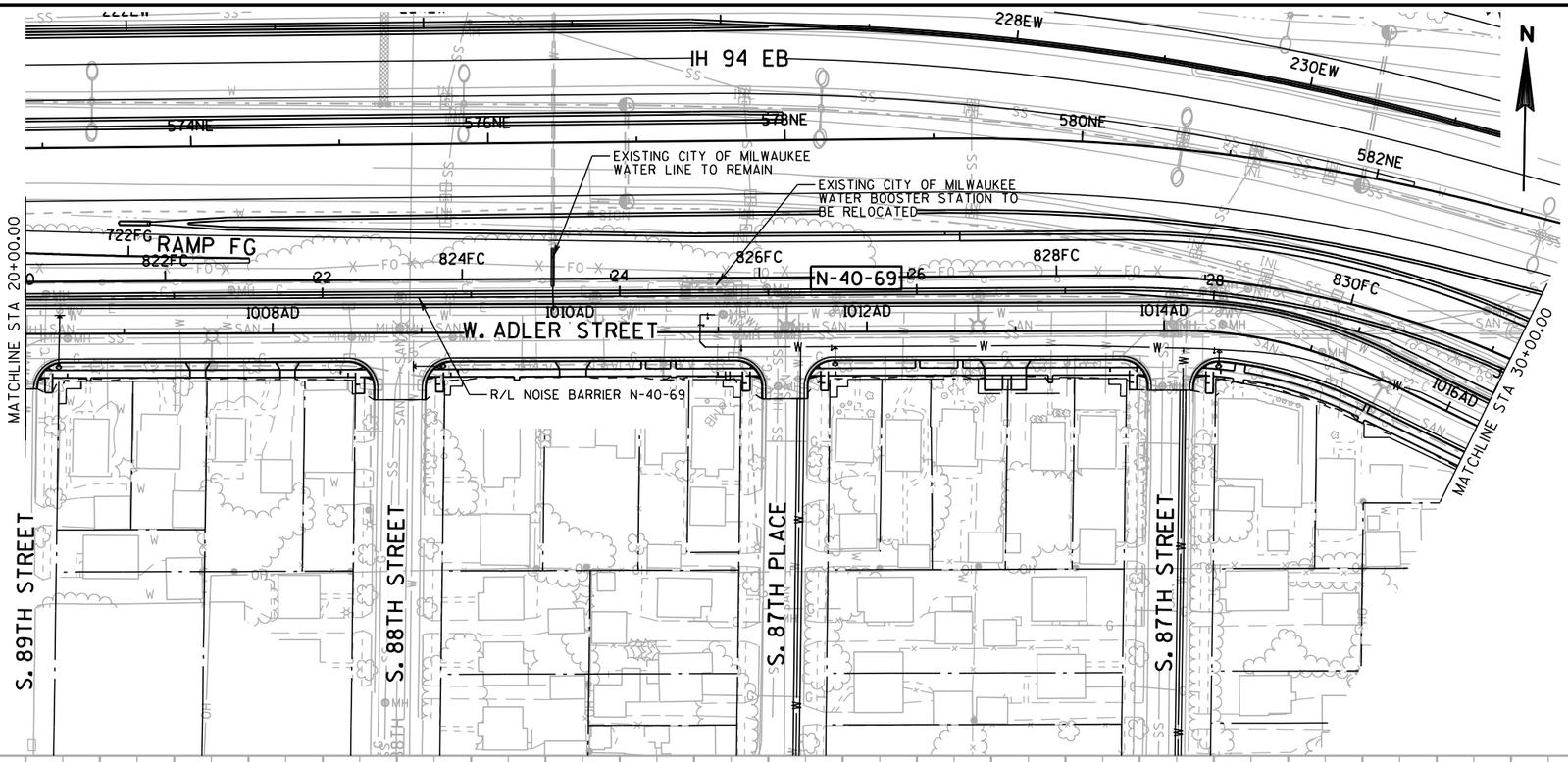
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

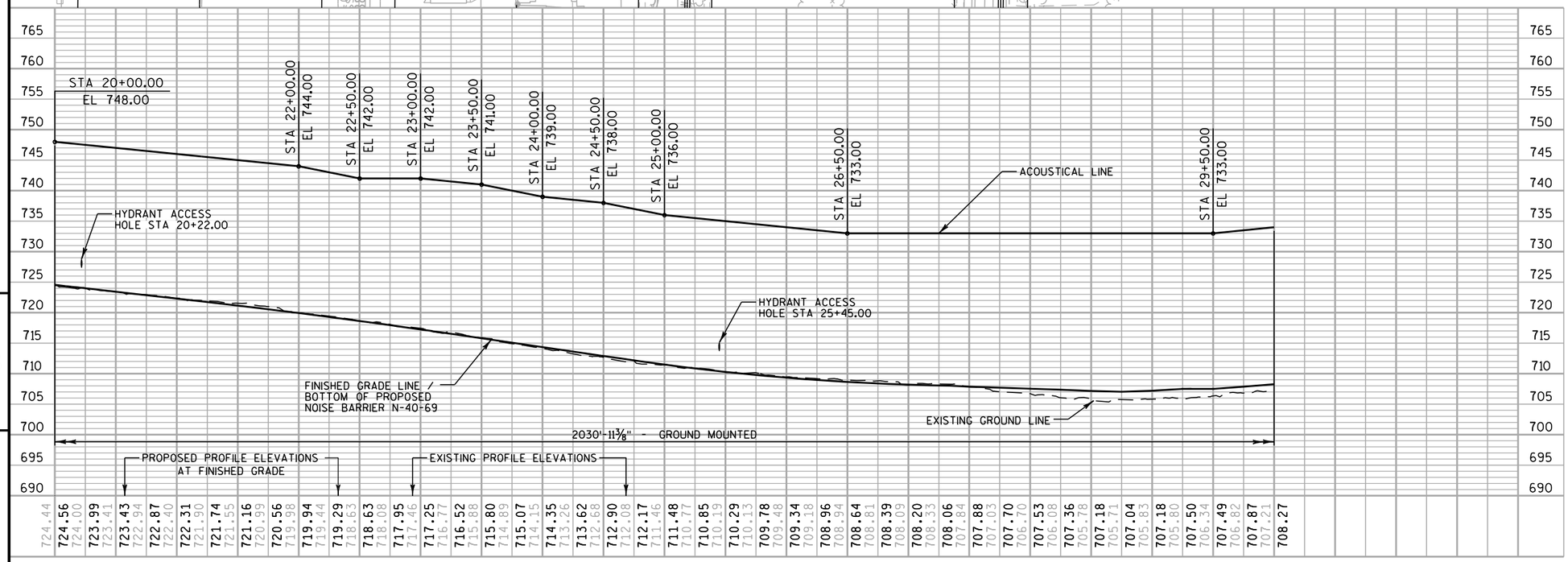
GENERAL PLAN & ELEVATION (1 OF 3)

SHEET 1 OF 11

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STATE PROJECT NUMBER
1060-33-80





PLAN & PROFILE: NOISE BARRIER N-40-69

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY ASW | PLANS CK'D. KES

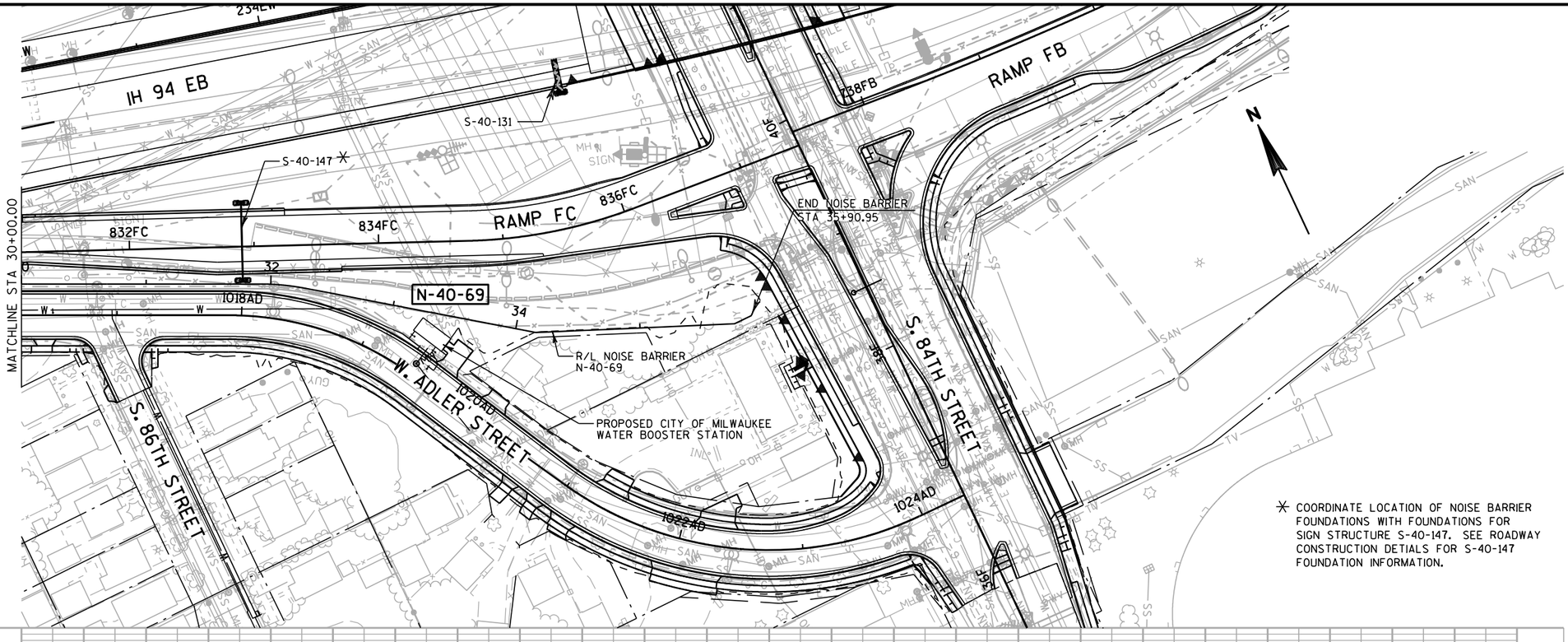
GENERAL PLAN & ELEVATION (2 OF 3)

SHEET 2 OF 11

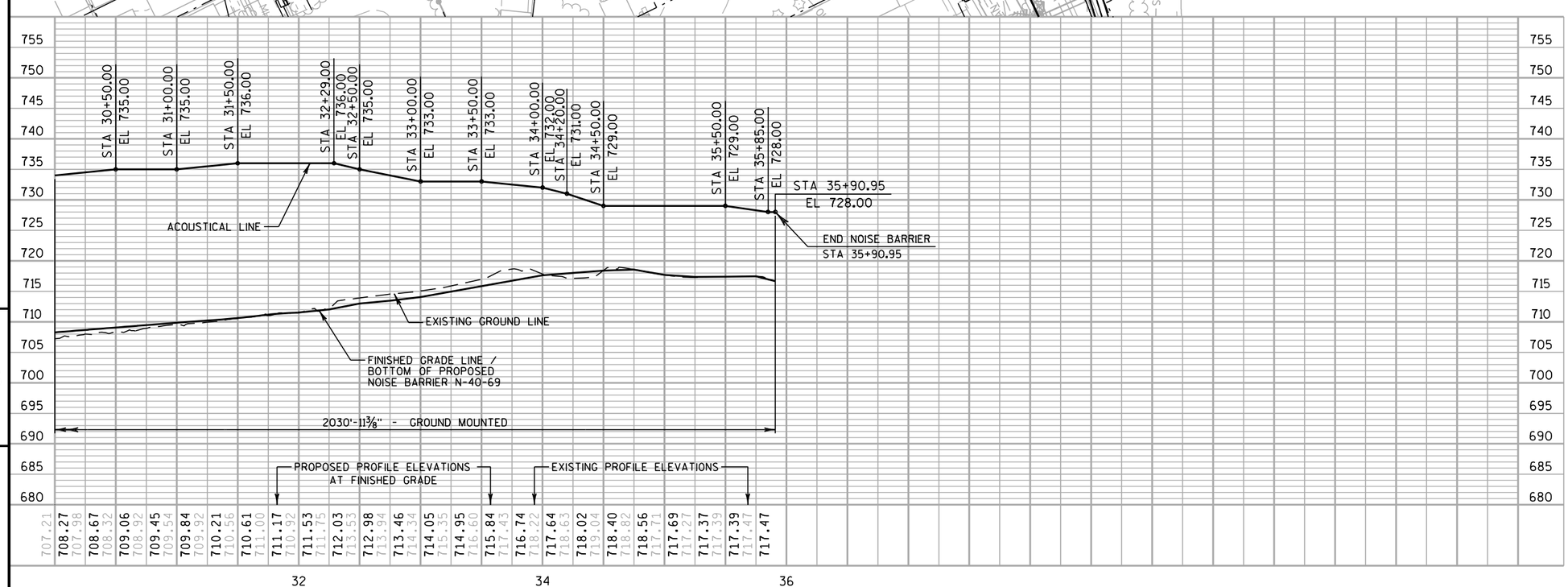
3351

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PLOT DATE : 01-MAY-2014 14:58
PLOT BY : MSCTEK
PLOT NAME : N69_080102_gp
PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



✳ COORDINATE LOCATION OF NOISE BARRIER FOUNDATIONS WITH FOUNDATIONS FOR SIGN STRUCTURE S-40-147. SEE ROADWAY CONSTRUCTION DETIALS FOR S-40-147 FOUNDATION INFORMATION.



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PLAN & PROFILE: NOISE BARRIER N-40-69

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY	ASW	PLANS CK'D.	KES

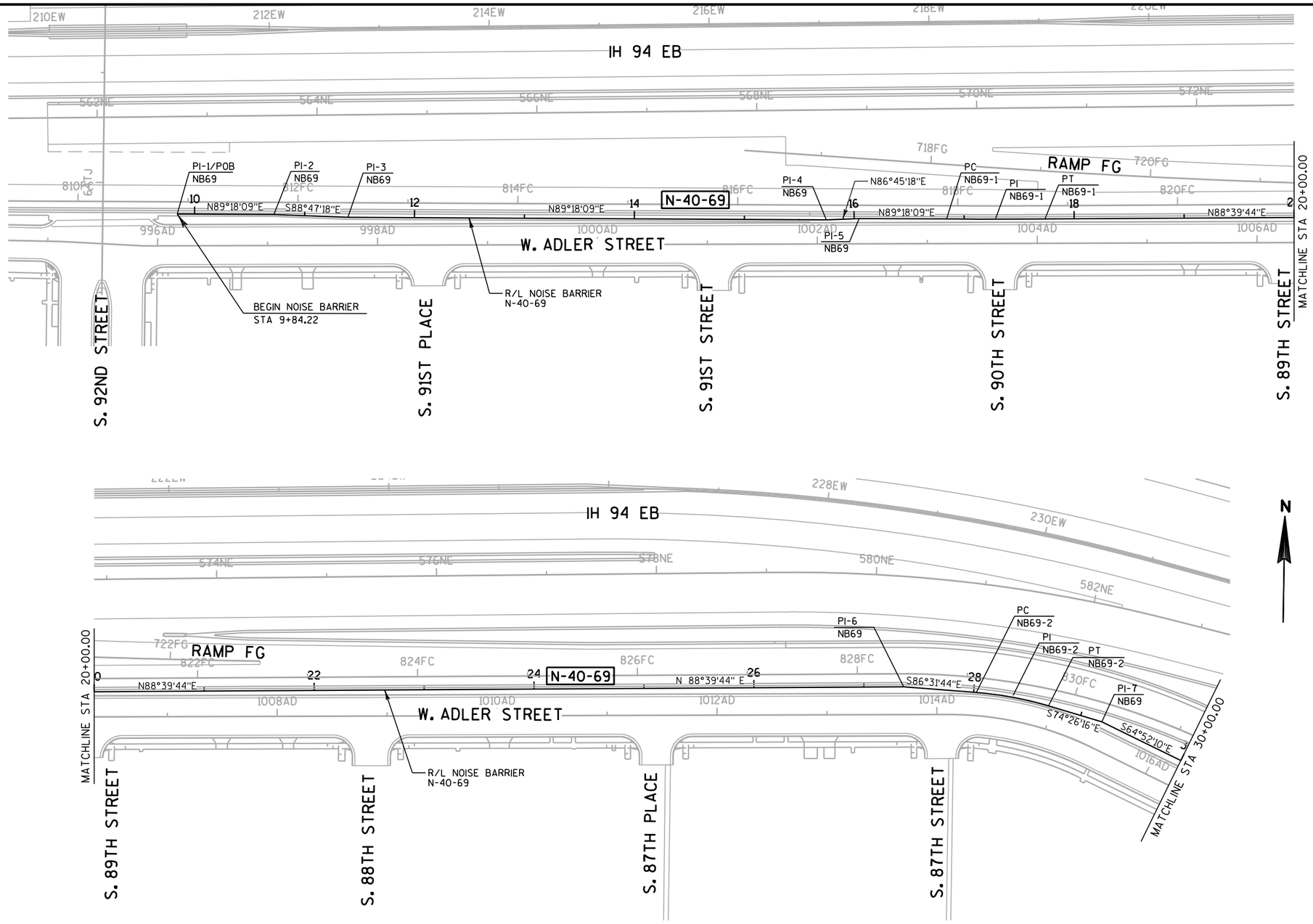
GENERAL PLAN & ELEVATION (3 OF 3)

SHEET 3 OF 11

3352

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-69\cds\N69_080103_gp.dgn
PLOT DATE : 01-MAY-2014 14:58
PLOT BY : MSCTEK
PLOT NAME : N69_080103_gp
PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



HORIZONTAL CURVE DATA

CURVE NB69-1		CURVE NB69-2	
P.I. =	17+28.68	P.I. =	28+36.06
X =	575277.30	X =	576384.23
Y =	295576.52	Y =	295594.00
Δ =	0°38'24.28"	Δ =	12°05'28.47"
D =	0°42'54.45"	D =	18°04'27.76"
T =	44.75'	T =	33.57'
L =	89.51'	L =	66.90'
R =	8012.00'	R =	317.00'
P.C. =	16+83.93	P.C. =	28+02.49
P.T. =	17+73.43	P.T. =	28+69.39

ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	9+84.22	574532.96	295568.37
PI-2	10+71.96	574620.68	295569.44
PI-3	11+39.49	574688.21	295568.01
PI-4	15+74.51	575123.19	295573.31
PI-5	16+04.51	575153.14	295575.01
PI-6	27+36.27	576284.62	295600.04
PI-7	29+19.98	576465.31	295571.42

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN (1 OF 2)

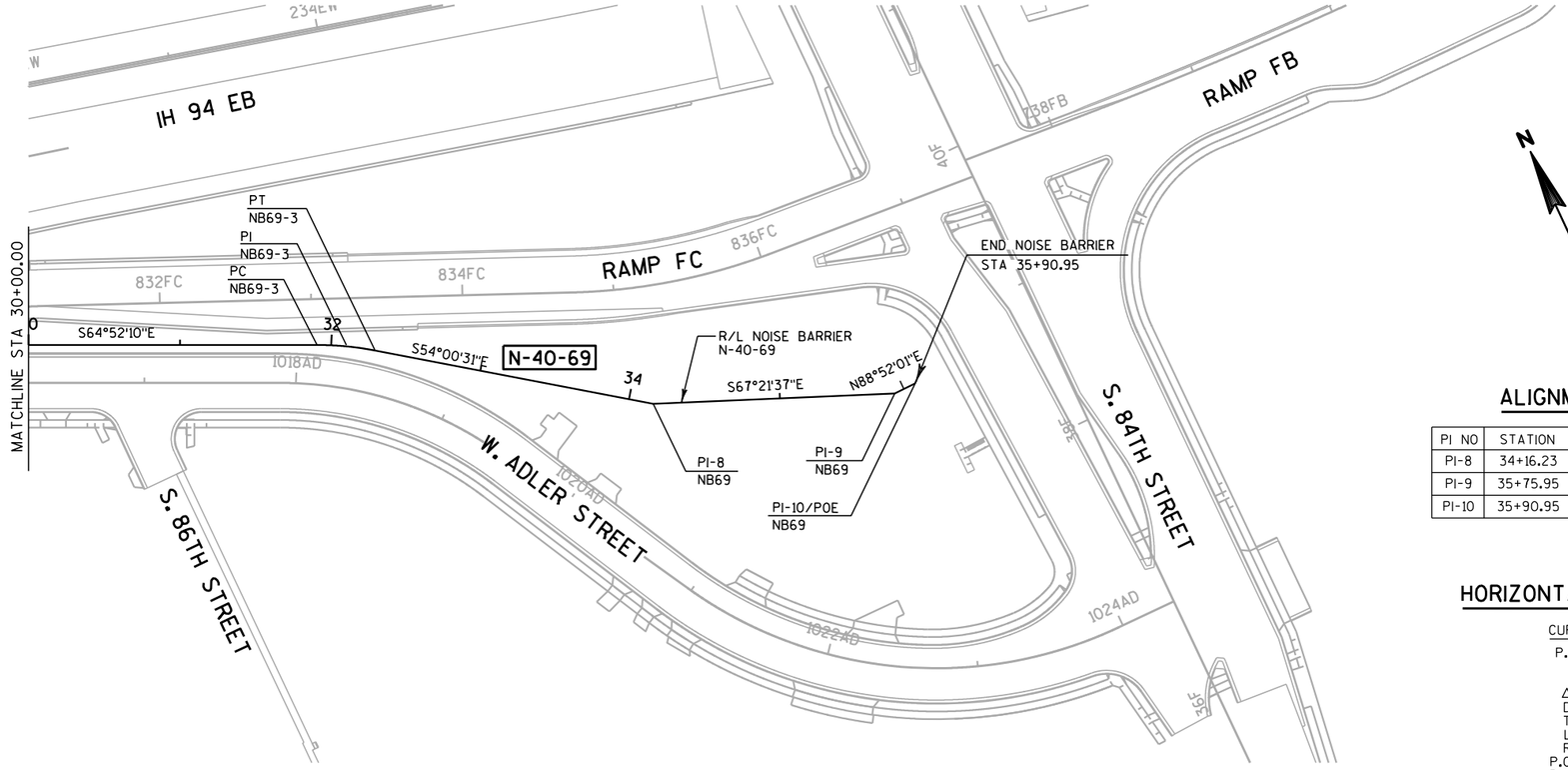
SHEET 4 OF 11

8

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-69\cds\N69_080104_cd.dgn PLOT DATE : 01-MAY-2014 14:58 PLOT BY : MSCTEK PLOT NAME : N69_080104_cd PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-8	34+16.23	576894.83	295326.97
PI-9	35+75.95	577042.24	295265.49
PI-10	35+90.95	577057.24	295265.79

HORIZONTAL CURVE DATA

CURVE NB69-3

P.I. = 32+09.92
X = 576727.80
Y = 295448.29
Δ = 10°51'38.68"
D = 28°05'10.20"
T = 19.39'
L = 38.67'
R = 204.00'
P.C. = 31+90.52
P.T. = 32+29.19

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

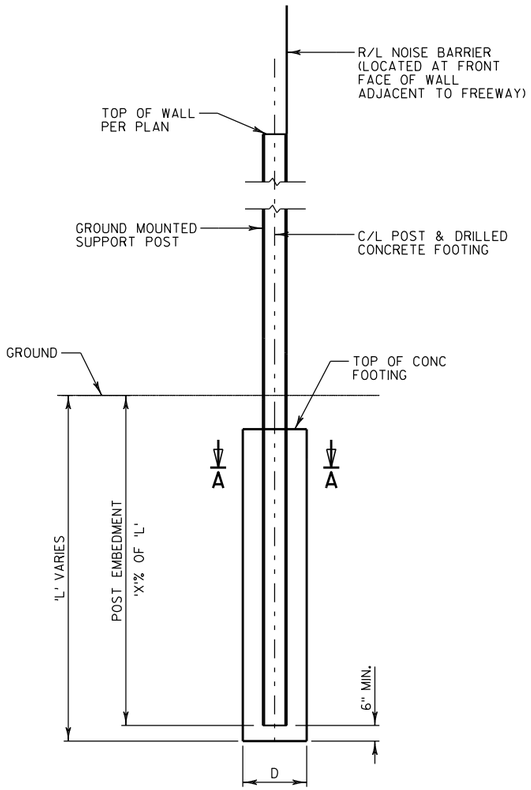
STRUCTURE N-40-69

DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN (2 OF 2)

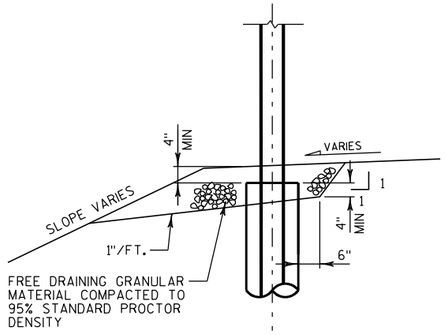
SHEET 5 OF 11

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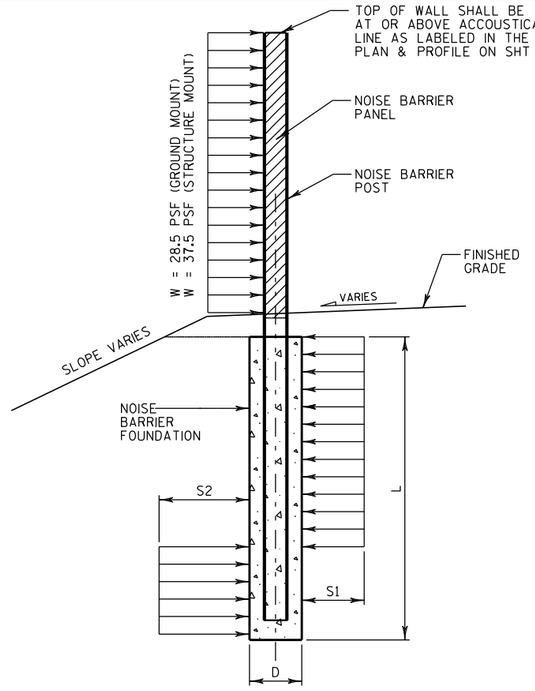
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

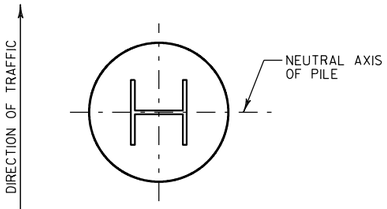
(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

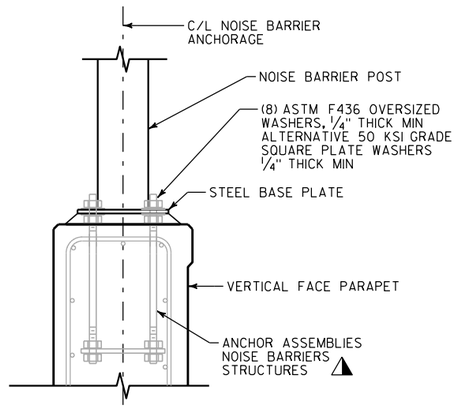
NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)



SECTION A-A

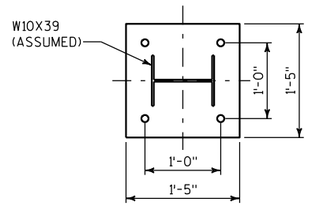
(NOT TO SCALE)



SECTION THRU TOP OF PARAPET

(FOR STRUCTURE MOUNTED NOISE BARRIER)

⚠ NOT A NOISE BARRIER BID ITEM. SEE RETAINING WALL R-40-546 PLANS FOR DETAILS.



BASE PLATE

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0003	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69	SF	58,270

STATE PROJECT NUMBER

1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-69".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY PAK | PLANS CK'D. KES

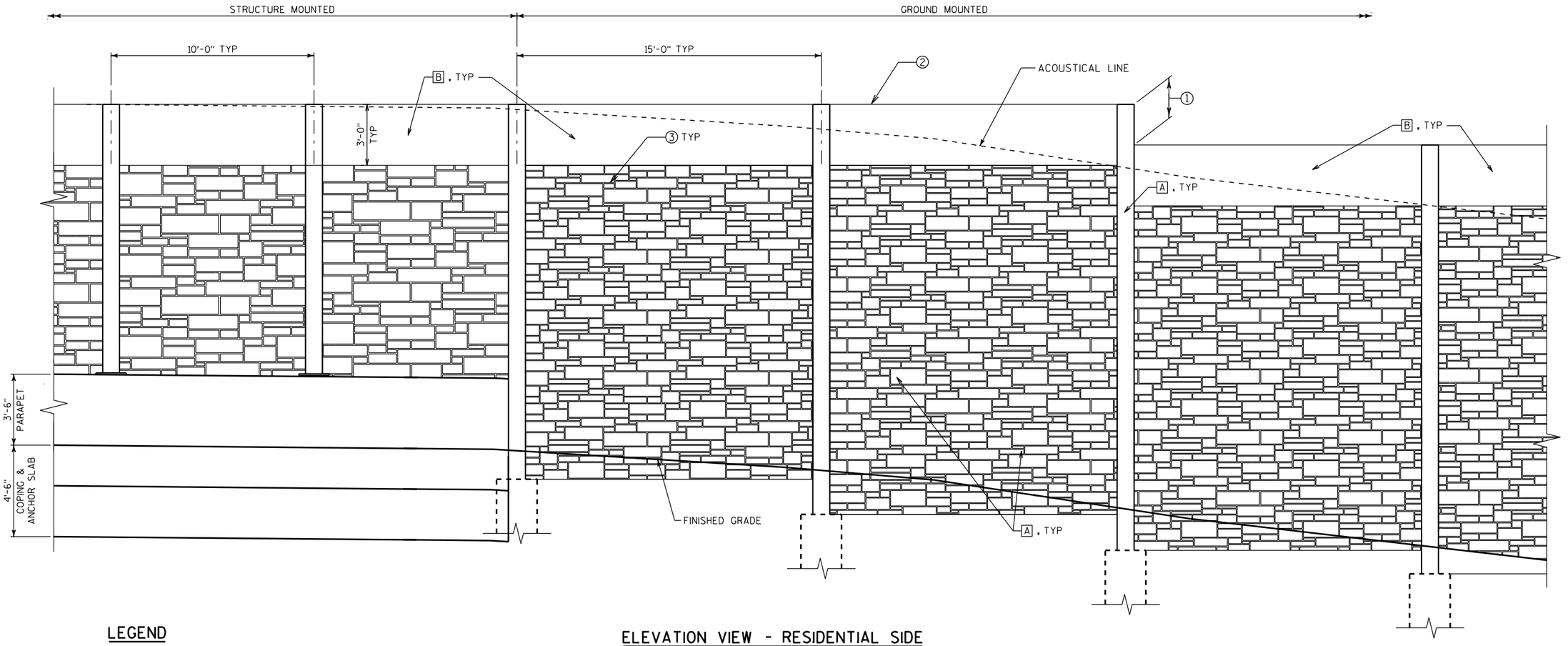
QUANTITIES & CONSTRUCTION DETAILS

SHEET 6 OF 11

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

1. STEP TOP OF PANELS FOR GROUND MOUNTED NOISE BARRIER IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

3. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY PAK | PLANS CK'D. EKM

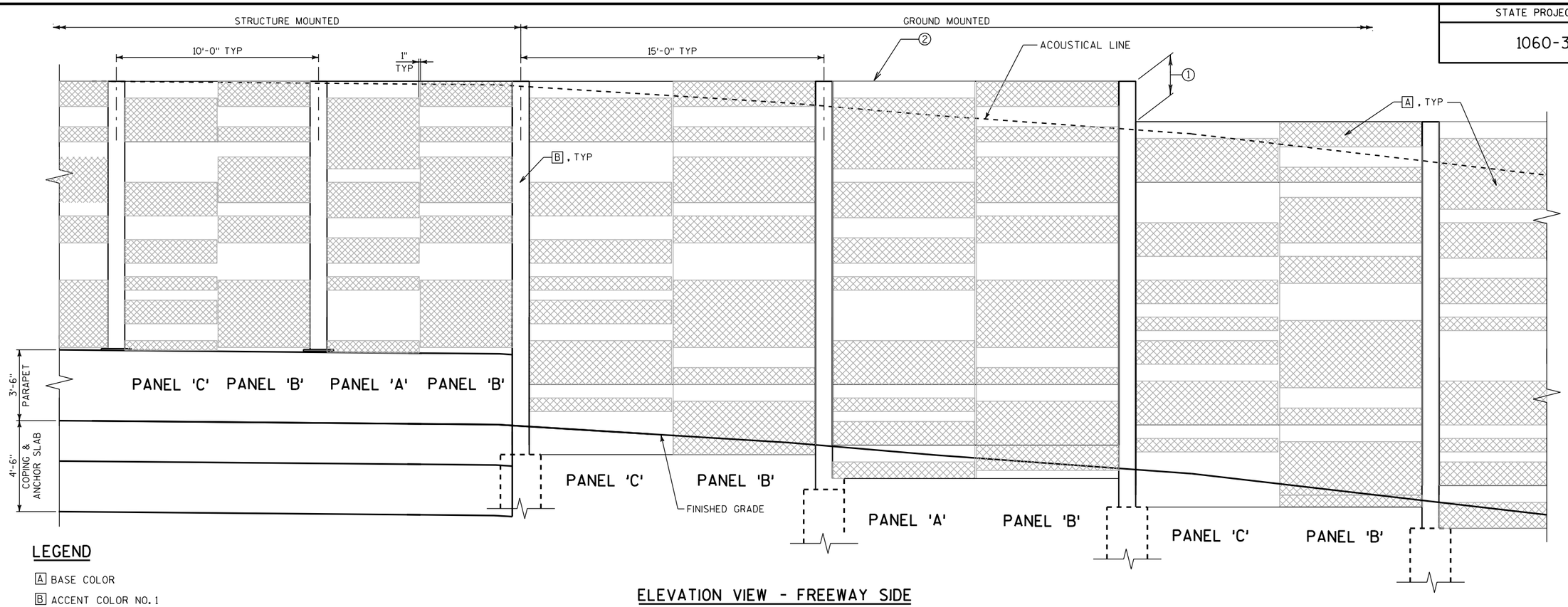
AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 7 OF 11

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-69\cds\N69_080107_ae.dgn PLOT DATE : 01-MAY-2014 14:58 PLOT BY : MSCTEK PLOT NAME : N69_080107_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER

1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

① STEP TOP OF PANELS FOR GROUND MOUNTED NOISE BARRIER IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

② ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

③ FOR POST SPA > 8'-0" = 0.5 X (POST SPA - POST FLANGE WIDTH - 1")
FOR POST SPA ≤ 8'-0" = POST SPA - POST FLANGE WIDTH

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

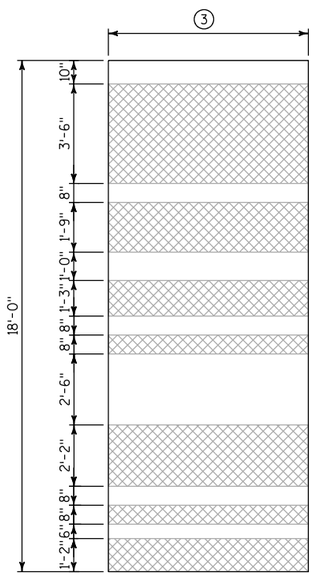
STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:
BASE COLOR - 33564
ACCENT COLOR NO. 1 - 33448

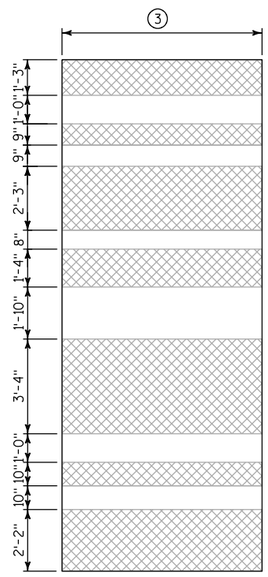
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

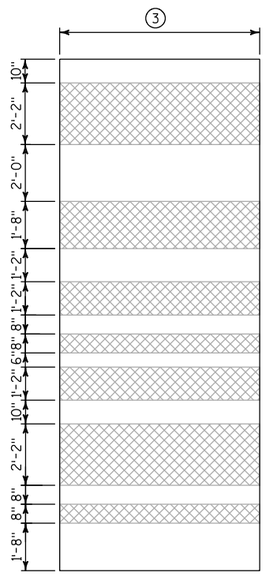
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 8 OF 11

8

8

NOTE

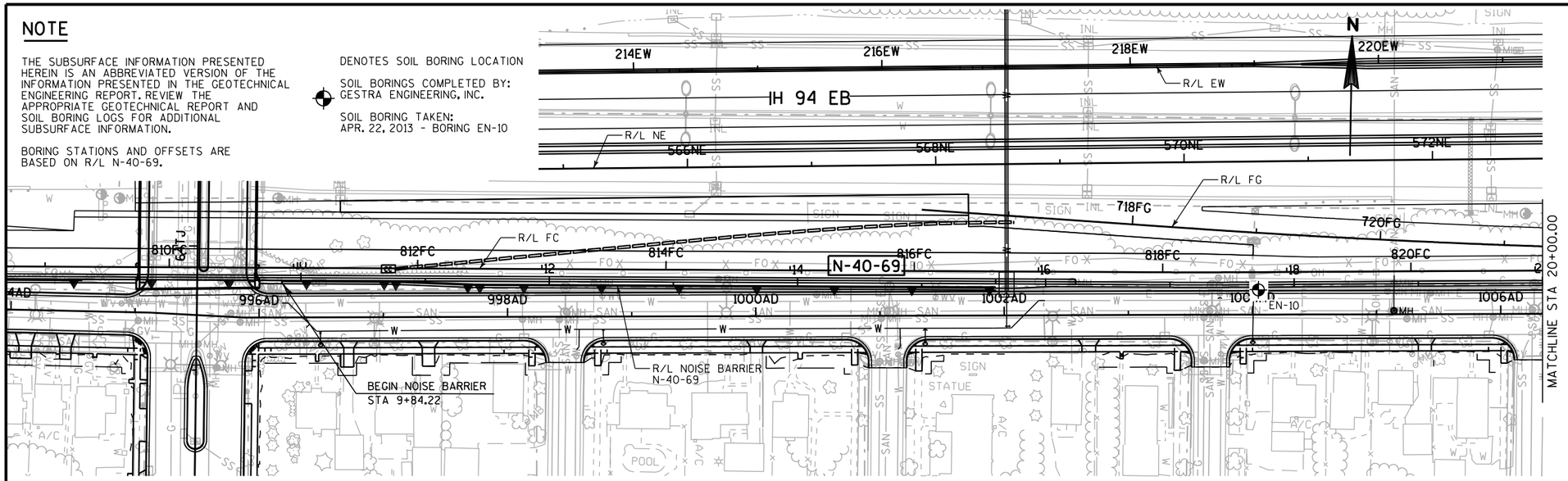
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-69.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APR. 22, 2013 - BORING EN-10





STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

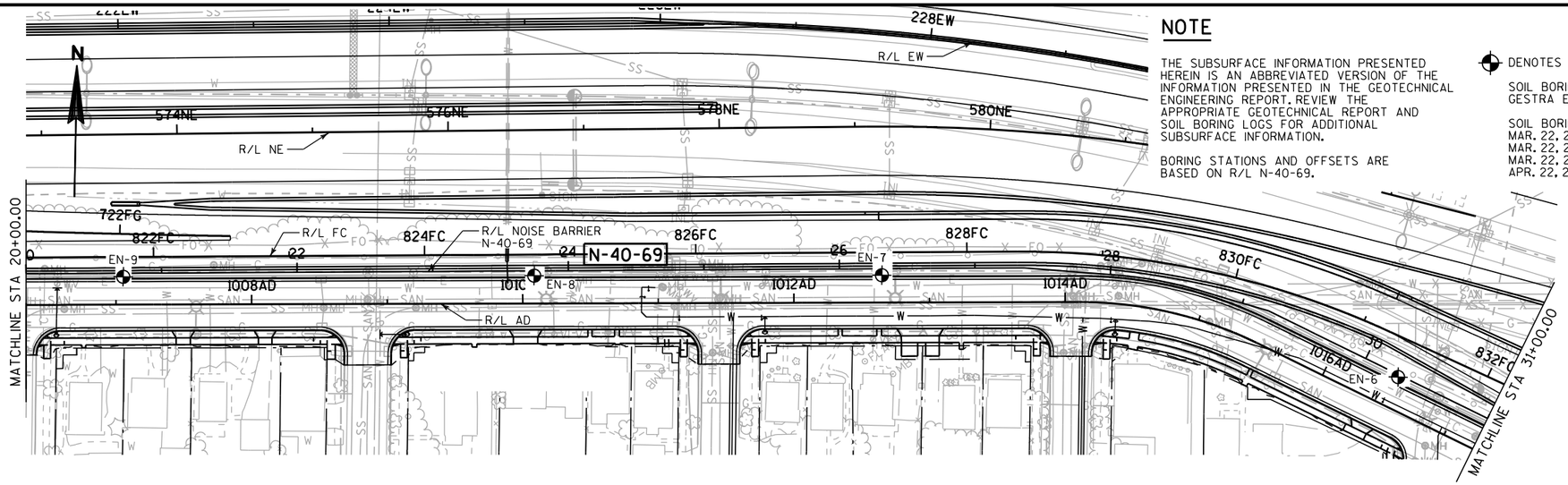
DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (1 OF 3)

SHEET 9 OF 11

8

8



NOTE

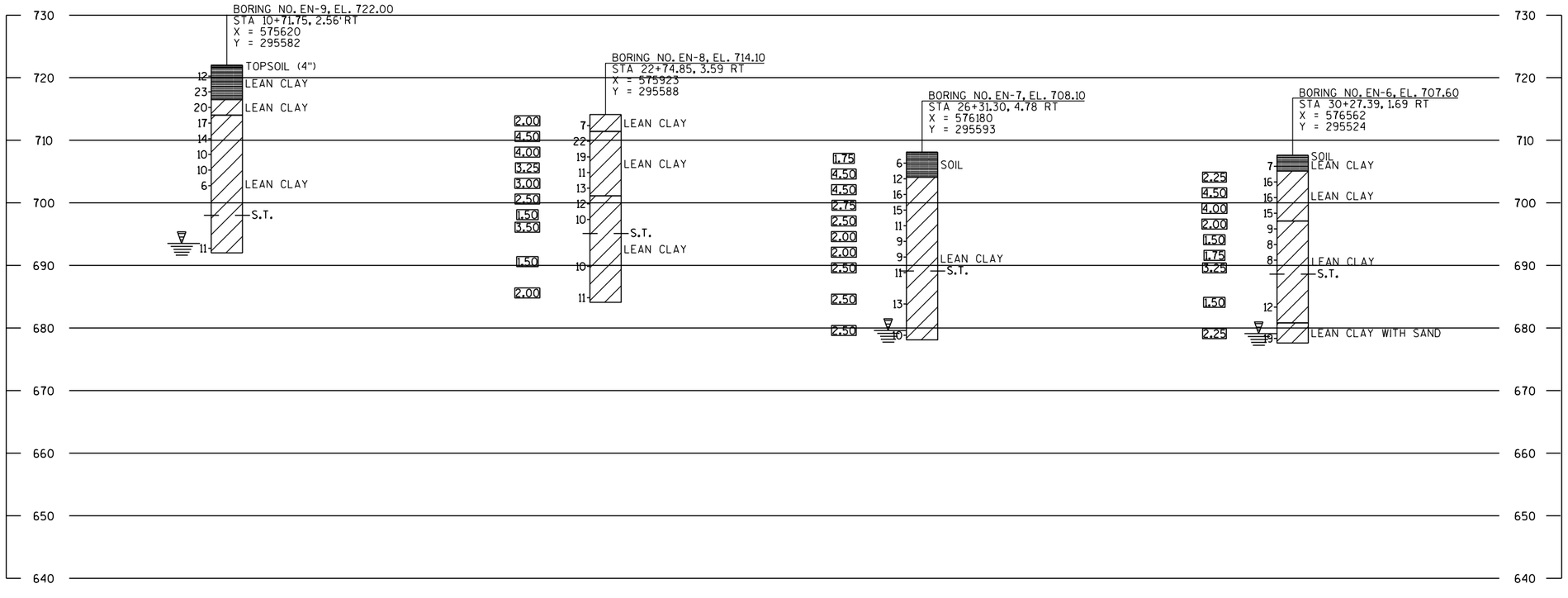
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-69.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAR. 22, 2013 - BORING EN-6
MAR. 22, 2013 - BORING EN-7
MAR. 22, 2013 - BORING EN-8
APR. 22, 2013 - BORING EN-9



LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
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MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

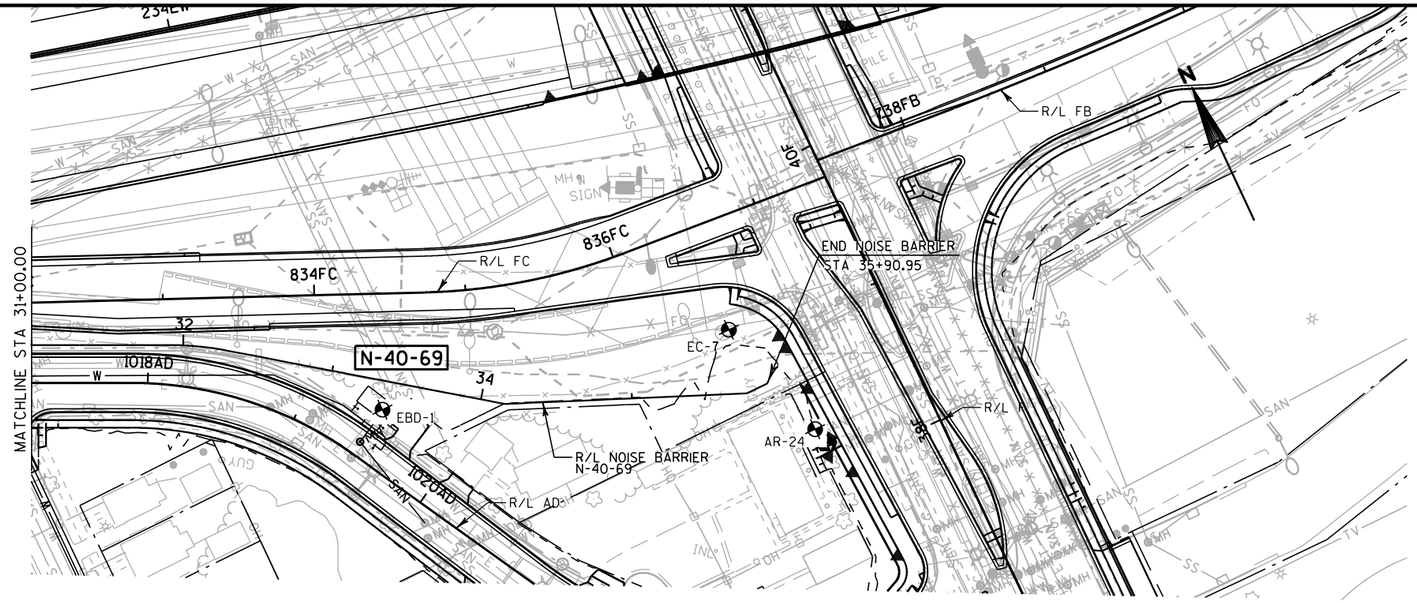
STRUCTURE N-40-69

DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (2 OF 3)

SHEET 10 OF 11

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NOTE

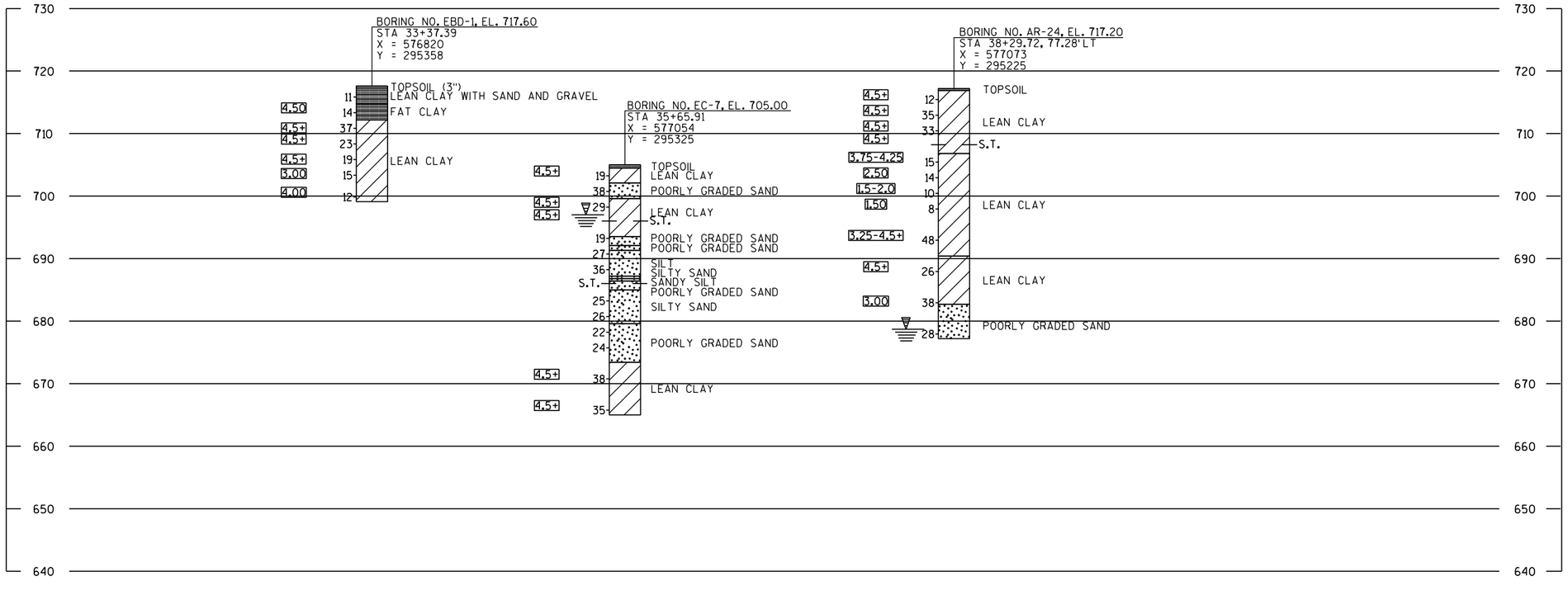
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BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-69 OR R/L FC.

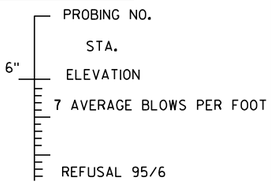
⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

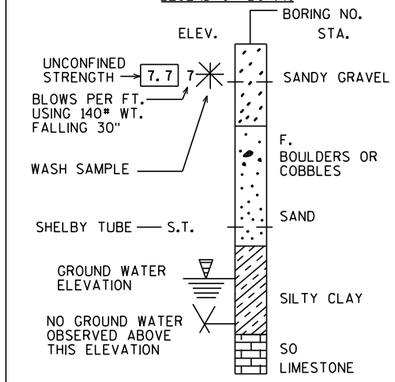
SOIL BORING TAKEN:
MAR. 19, 2013 - BORING EBD-1
JUL. 30, 2012 - BORING EC-7
OCT. 4, 2012 - BORING AR-24



LEGEND OF PROBING



LEGEND OF BORING



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SAND, PEAT, LIMESTONE
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-69

DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION (3 OF 3)

SHEET 11 OF 11

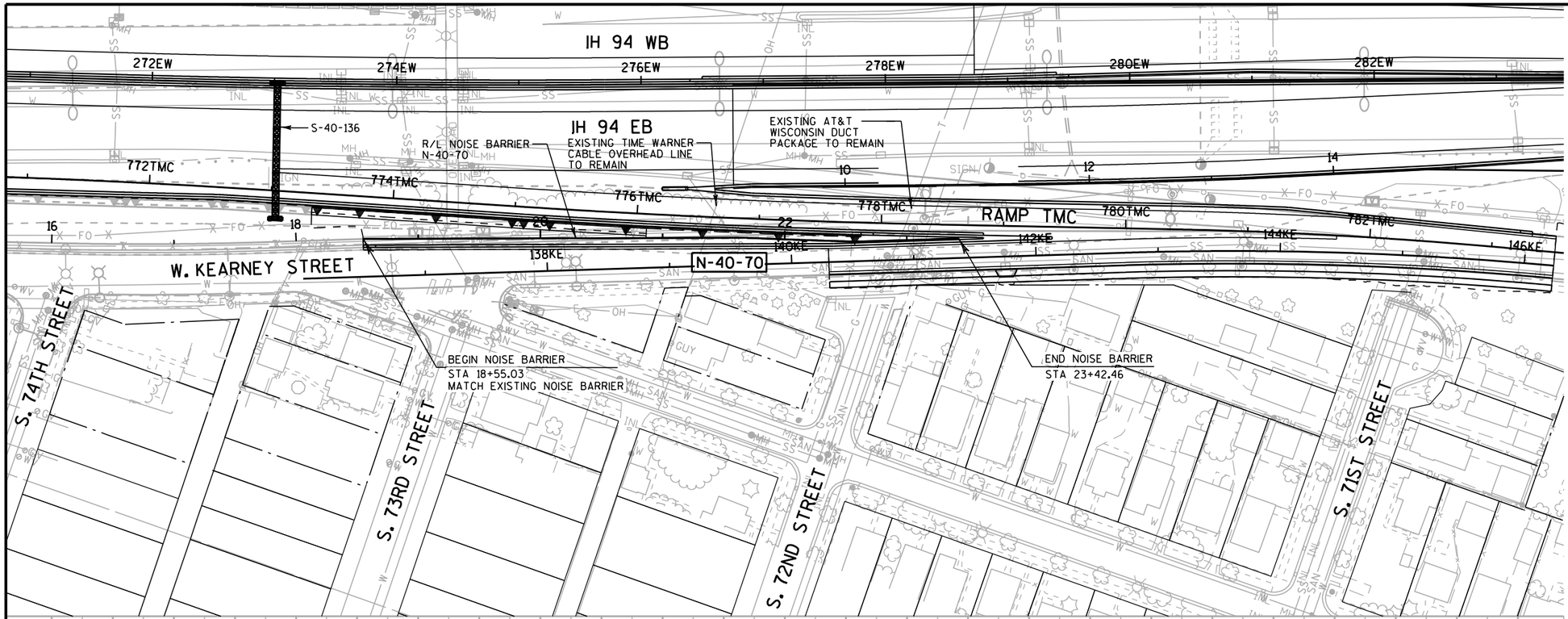
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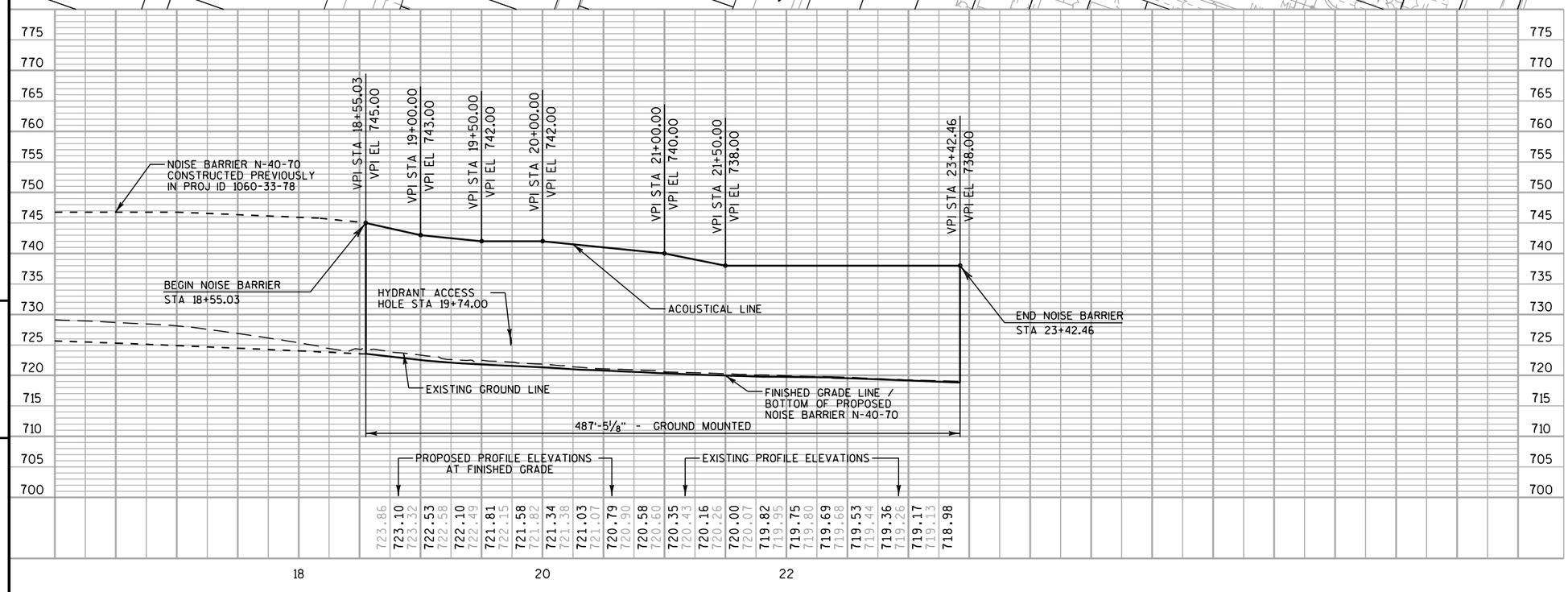
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STATE PROJECT NUMBER
1060-33-80





PLAN & PROFILE: NOISE BARRIER N-40-70

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
6. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-70

NOISE BARRIER ALONG W KEARNEY/EAST OF 76TH ST

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

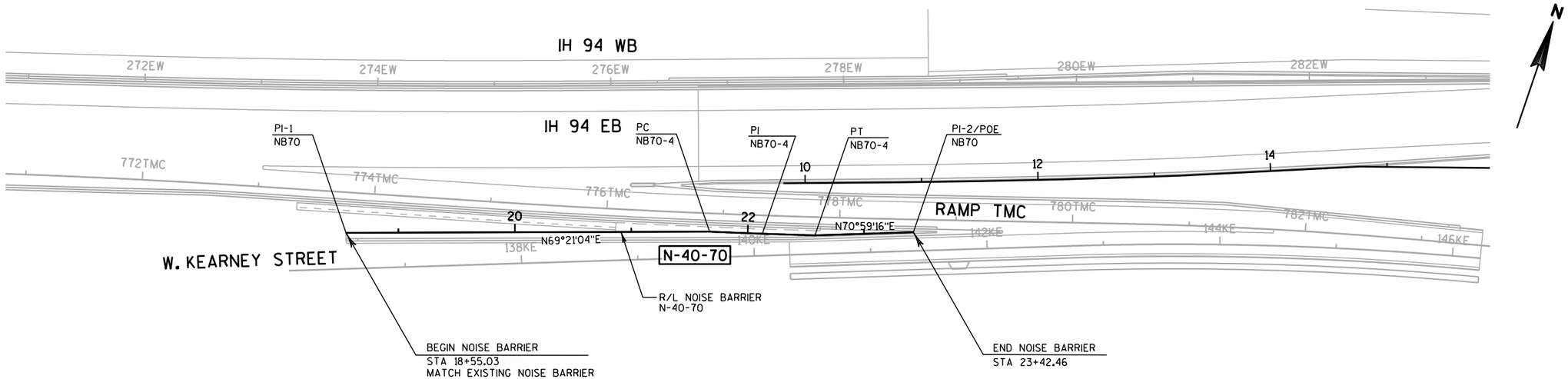
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STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	18+55.03	580716.87	295940.00
PI-2	23+42.46	581177.97	296097.74

HORIZONTAL CURVE DATA

CURVE NB70-4

P.I. = 22+12.58
X = 581055.52
Y = 296054.57
Δ = 0°39'26.99"
D = 0°43'35.67"
T = 45.25'
L = 90.49'
R = 7885.75'
P.C. = 21+67.33
P.T. = 22+57.82

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-70

DRAWN BY PAK | PLANS CK'D. EKM

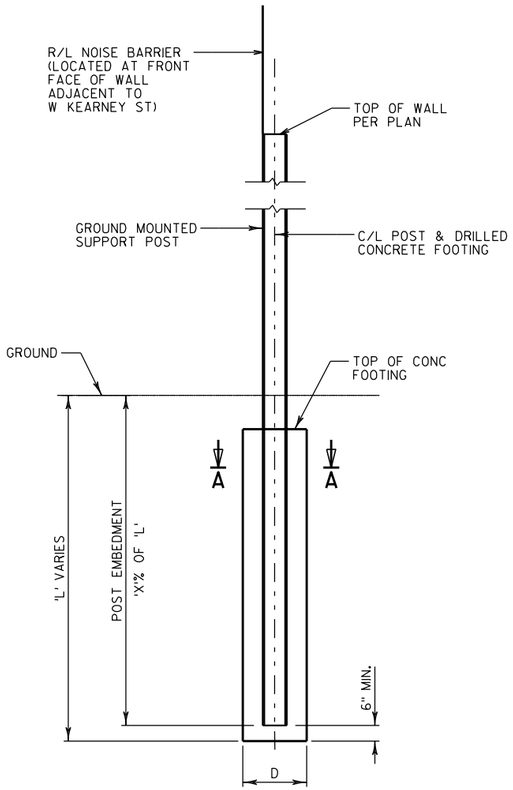
ALIGNMENT PLAN

SHEET 2 OF 6

8

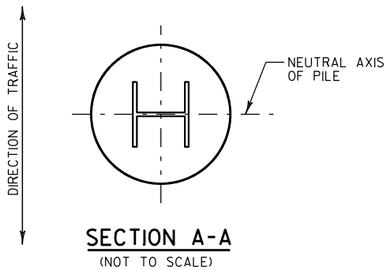
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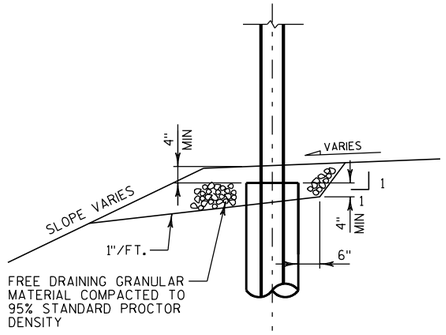
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



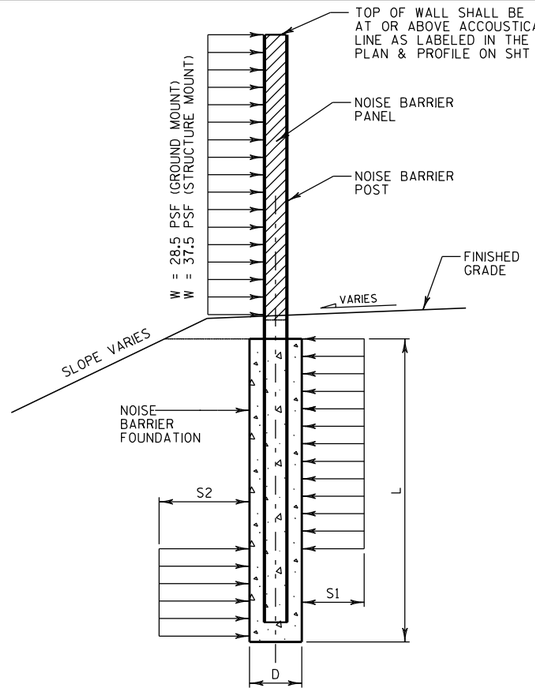
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0004	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70	SF	9,670

STATE PROJECT NUMBER

1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-70

DRAWN BY PAK | PLANS CK'D. KES

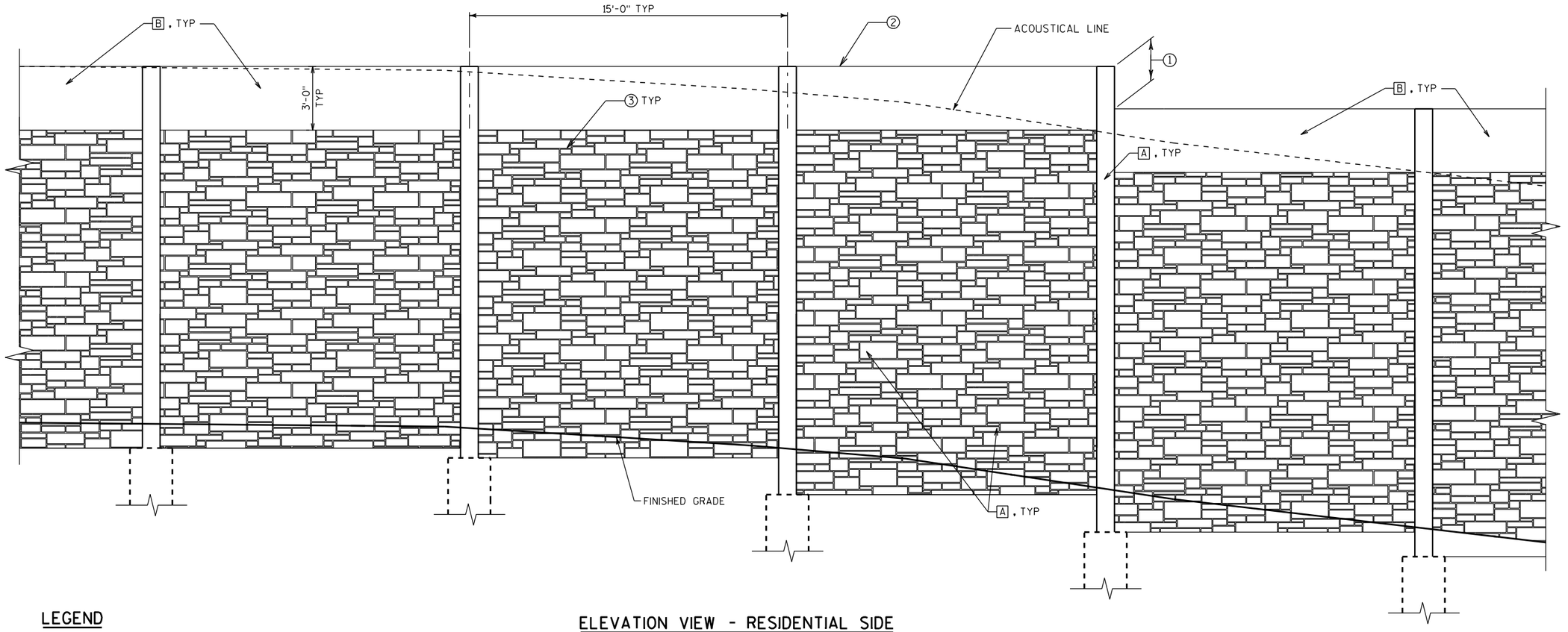
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 6

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-70

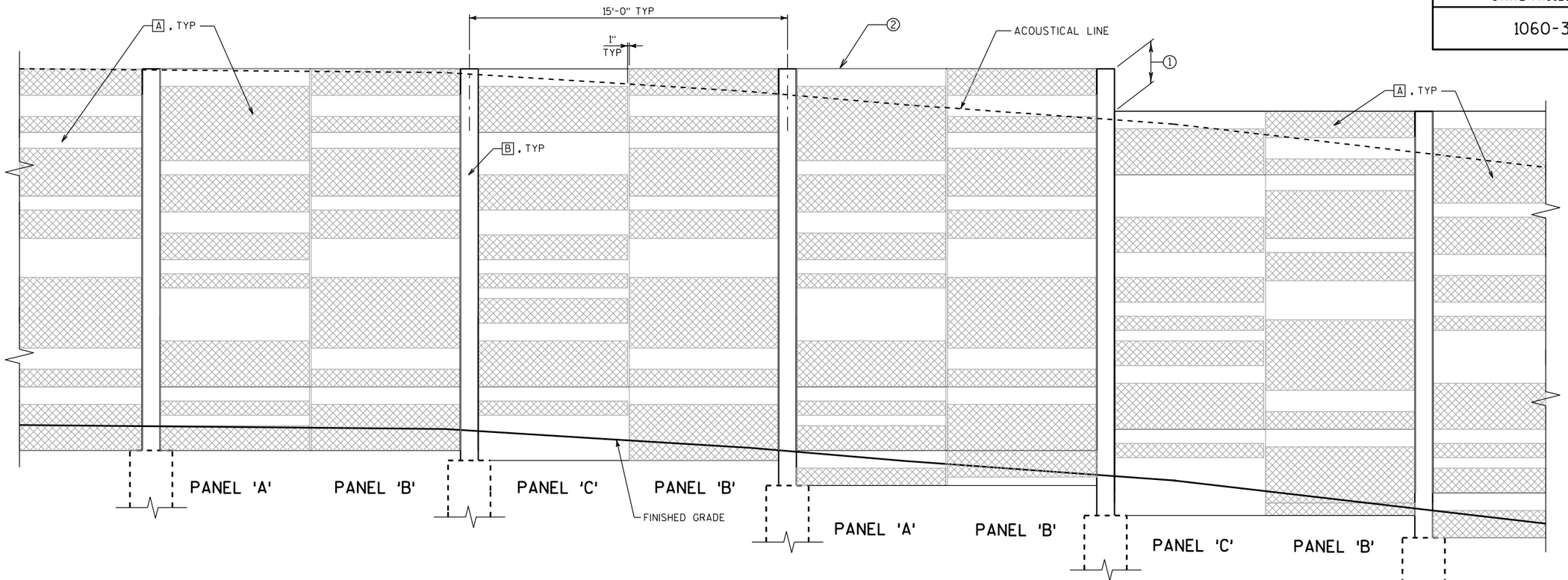
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-70\cds\N70_080104_ae.dgn PLOT DATE : 01-MAY-2014 15:02 PLOT BY : MSCTEK PLOT NAME : N70_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

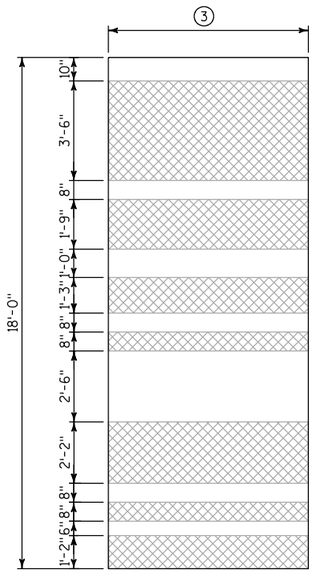
BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

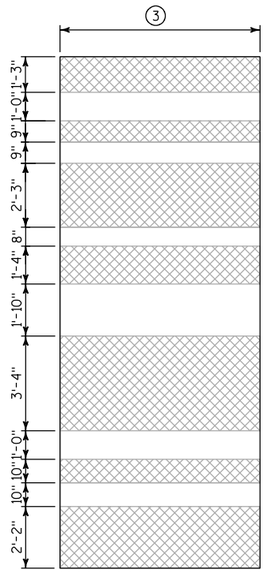
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

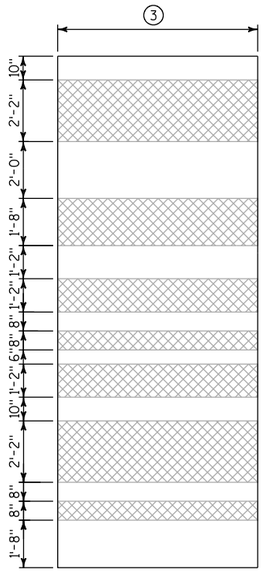
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

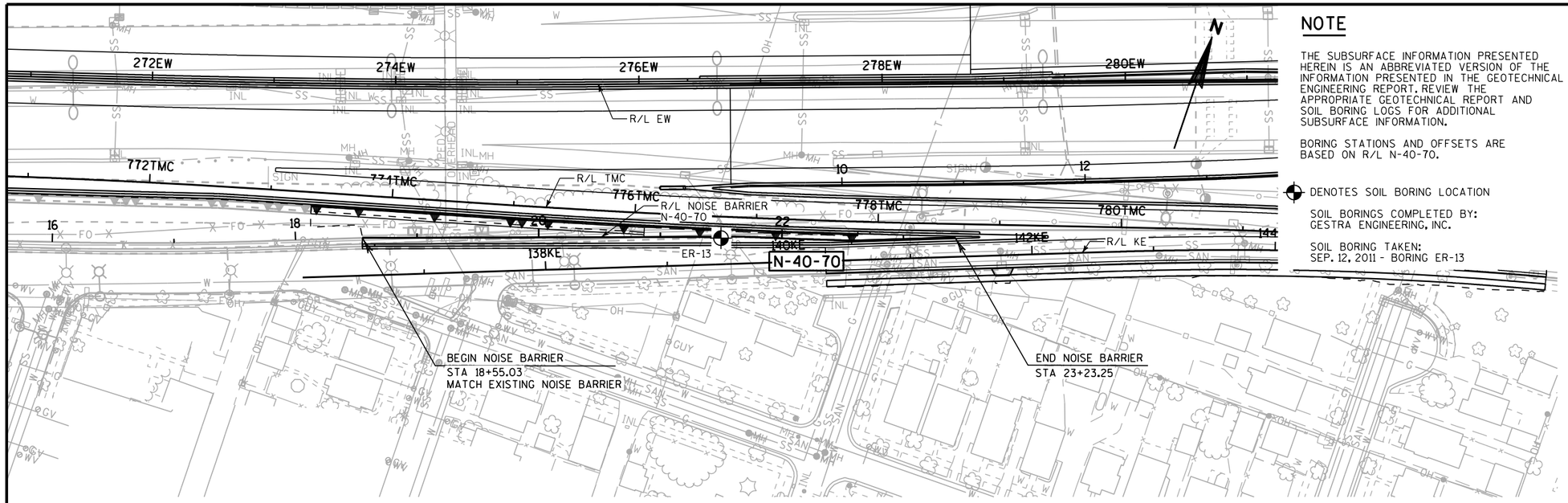
STRUCTURE N-40-70

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-70\cds\N70_080105_ae.dgn PLOT DATE : 01-MAY-2014 15:02 PLOT BY : MSCTEK PLOT NAME : N70_080105_ae PLOT SCALE : 5.333333:1



NOTE

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-70.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEP. 12, 2011 - BORING ER-13

STATE PROJECT NUMBER

1060-33-80

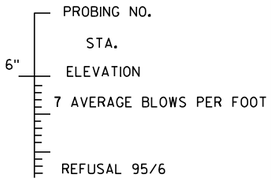
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

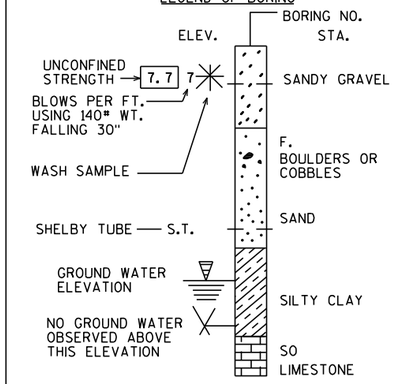
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-70

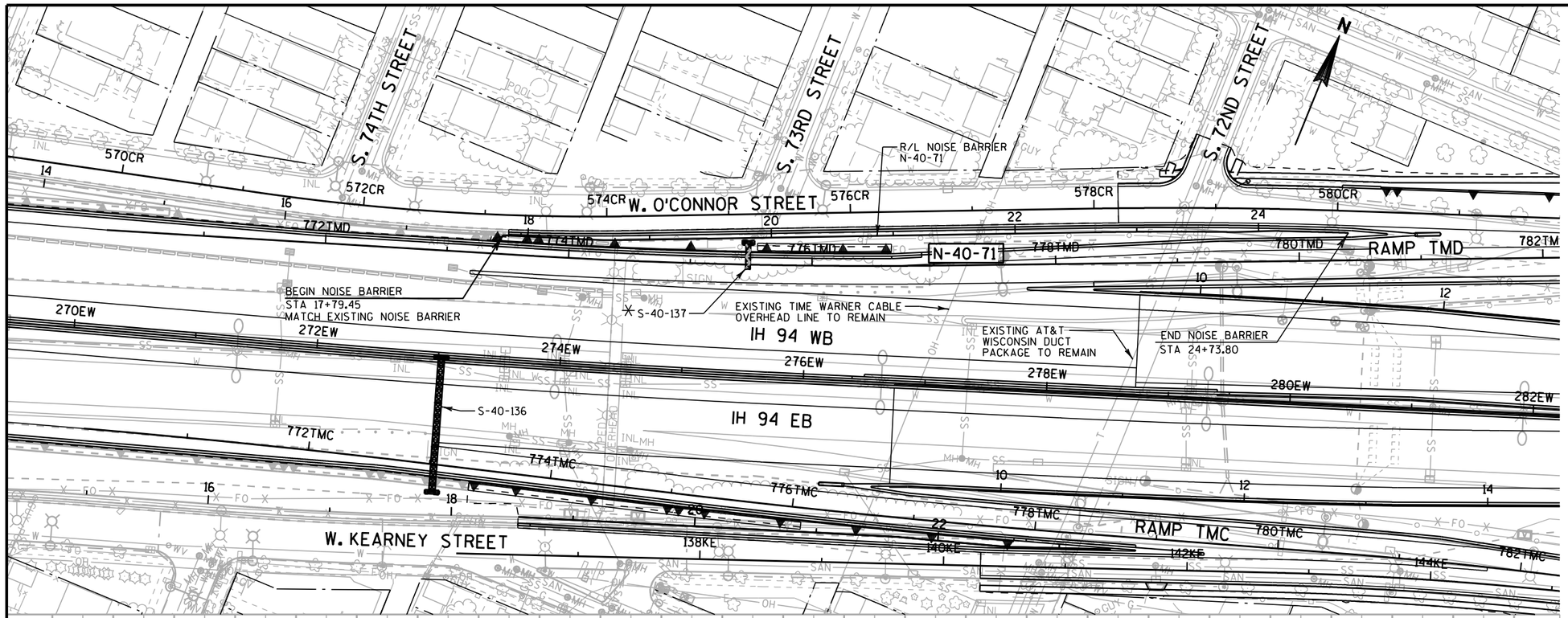
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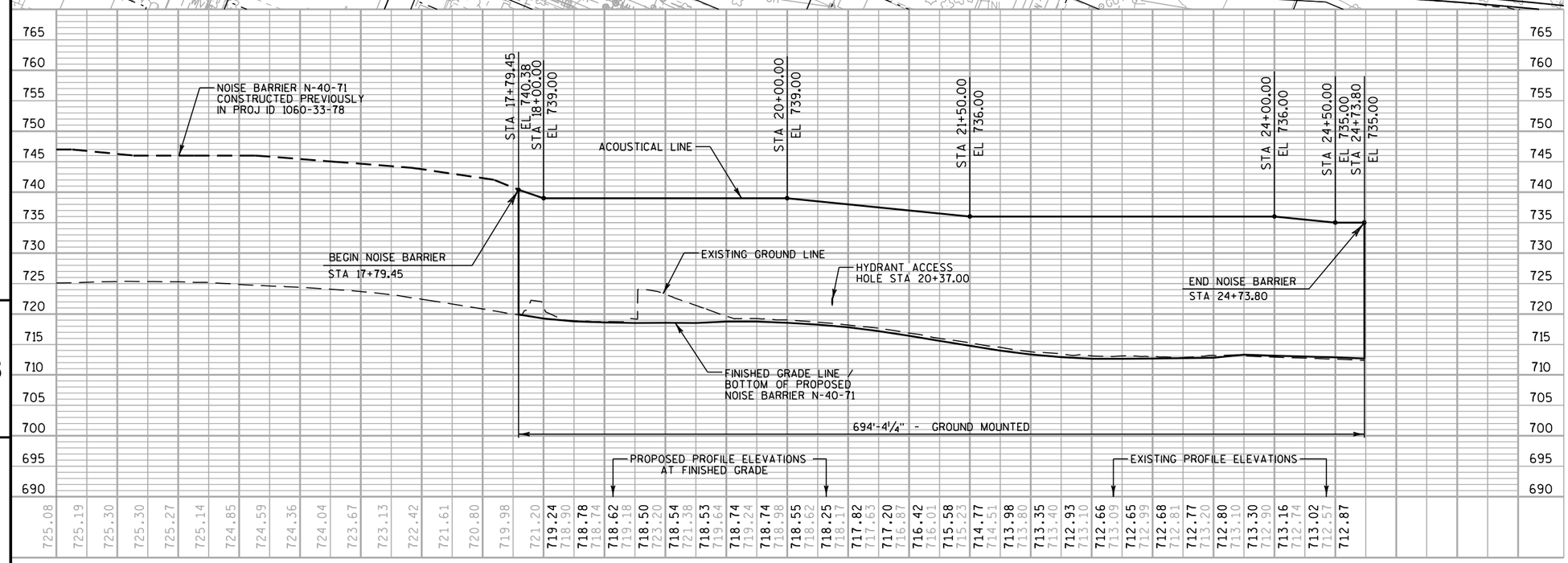
SUBSURFACE EXPLORATION

SHEET 6 OF 6

8

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PLAN & PROFILE: NOISE BARRIER N-40-71

STATE PROJECT NUMBER
1060-33-80

LEGEND

✳ COORDINATE FOUNDATIONS FOR NOISE BARRIER WITH FOUNDATIONS FOR SIGN CANTILEVER S-40-137. SEE S-40-137 PLANS FOR DETAILS.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
6. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-71

NOISE BARRIER ALONG W O'CONNOR/EAST OF 76TH ST

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

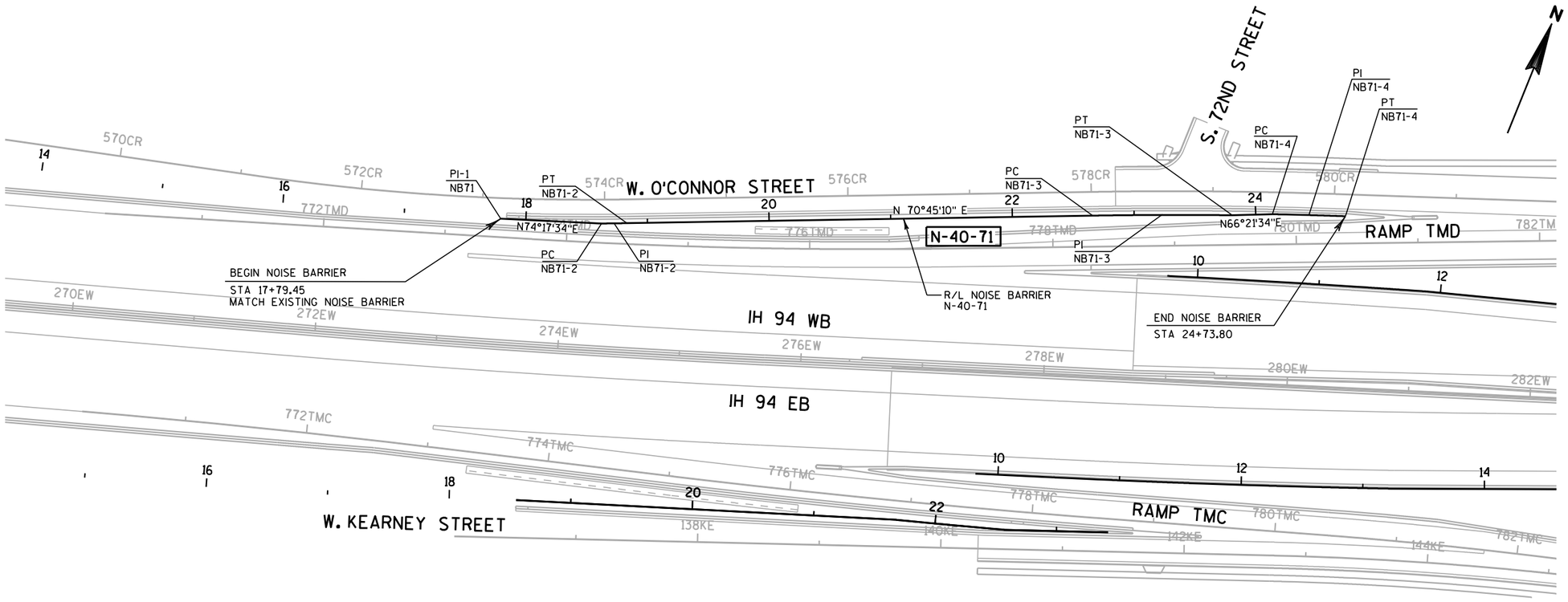
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

3367

STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	17+79.45	580618.55	296149.87

HORIZONTAL CURVE DATA

CURVE NB71-2

P.I. = 18+72.74
X = 580706.43
Y = 296181.15
Δ = 0°37'12.54"
D = 2°59'05.76"
T = 10.39'
L = 20.78'
R = 1919.50'
P.C. = 18+62.35
P.T. = 18+83.13

CURVE NB71-3

P.I. = 23+23.36
X = 581121.43
Y = 296356.75
Δ = 1°38'57.29"
D = 1°26'21.88"
T = 57.29'
L = 114.58'
R = 3980.50'
P.C. = 22+66.07
P.T. = 23+80.65

CURVE NB71-4

P.I. = 24+43.80
X = 581233.23
Y = 296401.50
Δ = 0°51'47.96"
D = 1°26'19.93"
T = 30.00'
L = 60.00'
R = 3982.00'
P.C. = 24+13.80
P.T. = 24+73.80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE N-40-71

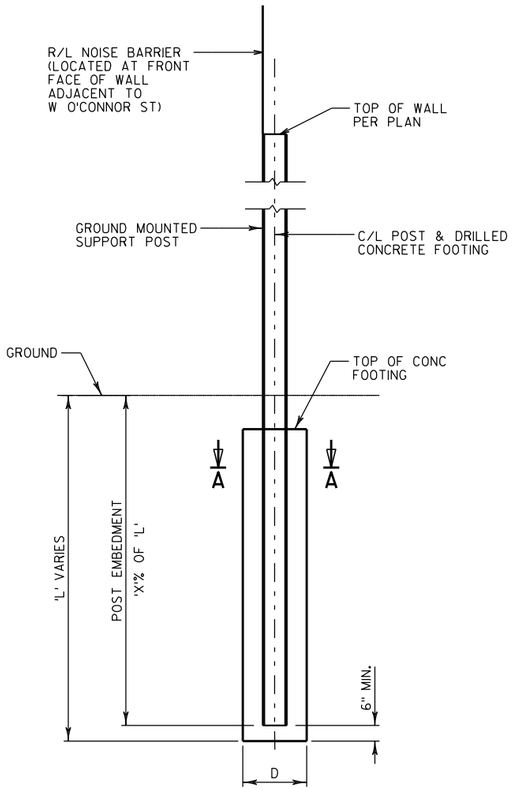
DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

SHEET 2 OF 6

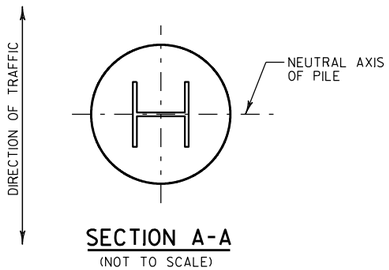
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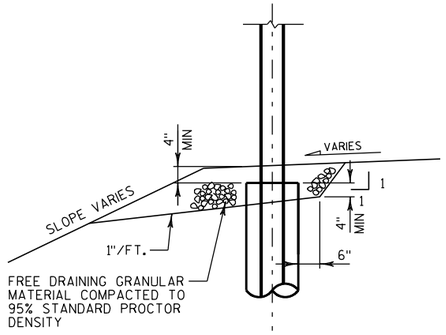
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



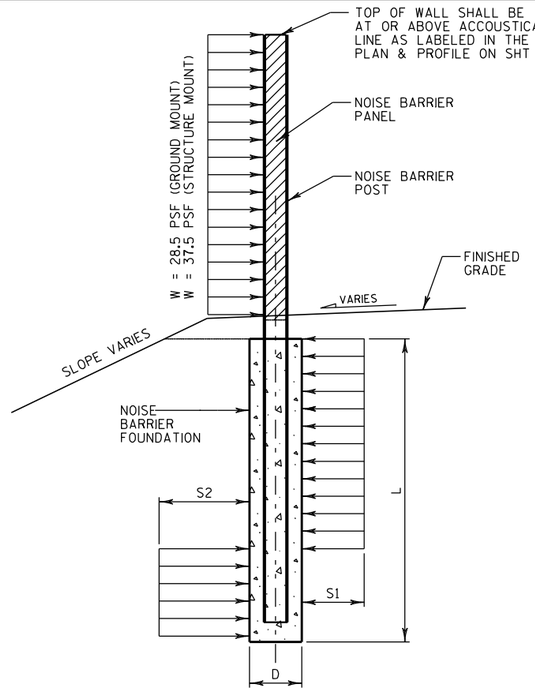
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0005	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71	SF	15,170

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-71

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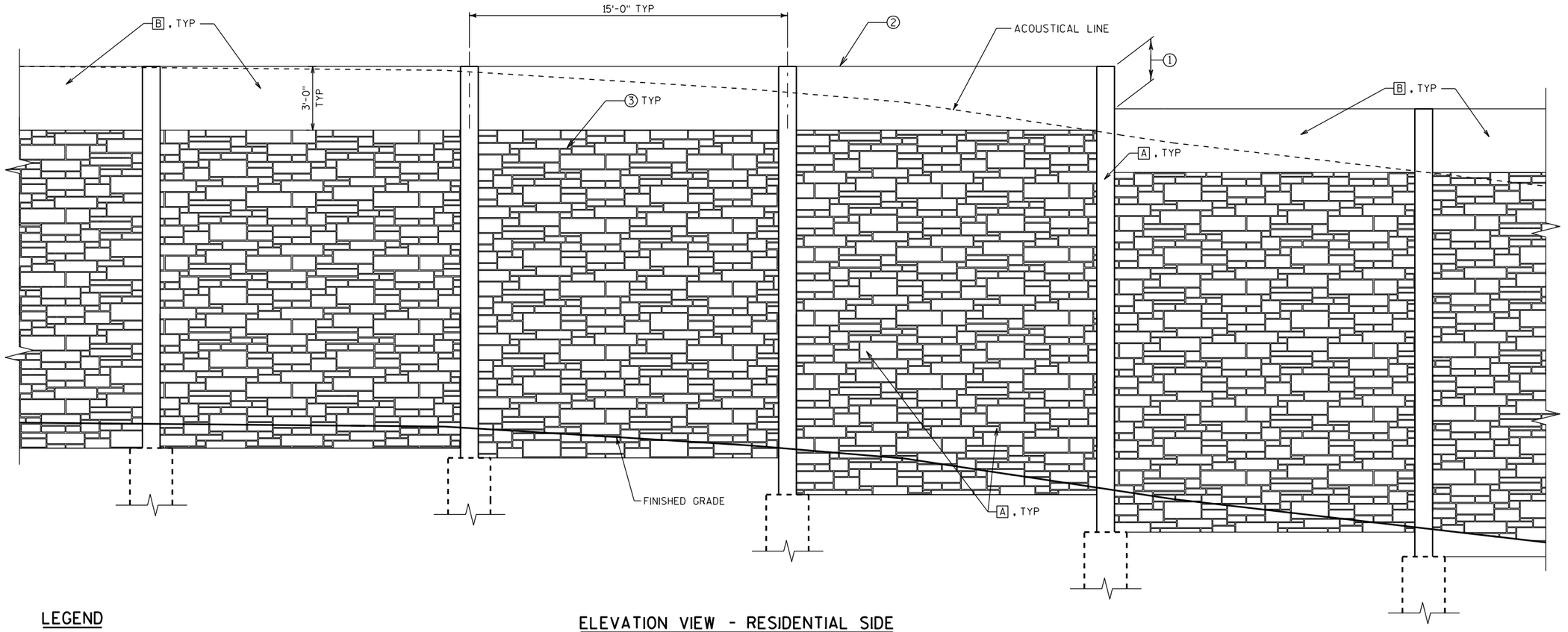
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 6

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

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ACCENT COLOR NO. 1 - 33448

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-71

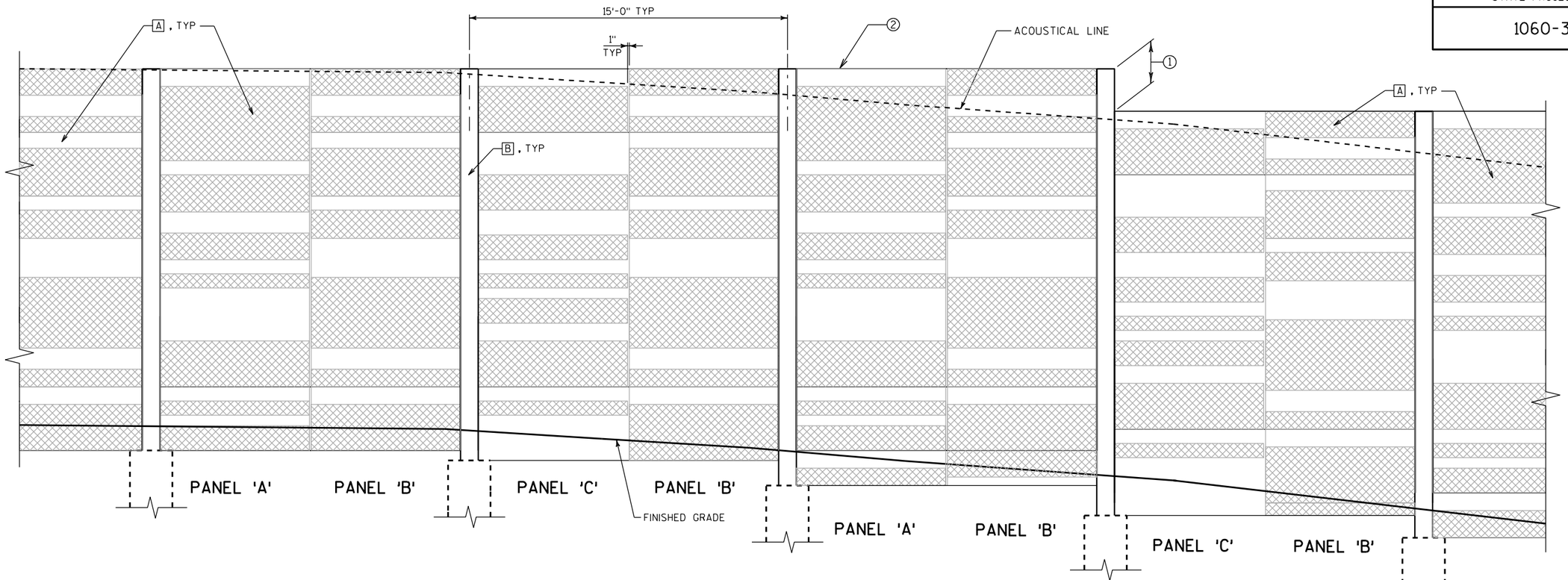
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-71\cds\N71_080104_ae.dgn PLOT DATE : 01-MAY-2014 15:06 PLOT BY : MSCTEK PLOT NAME : N71_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 3'-0"'. STEP INCREMENTS LESS THAN 3'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

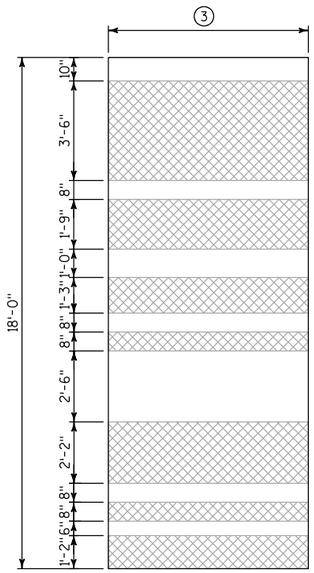
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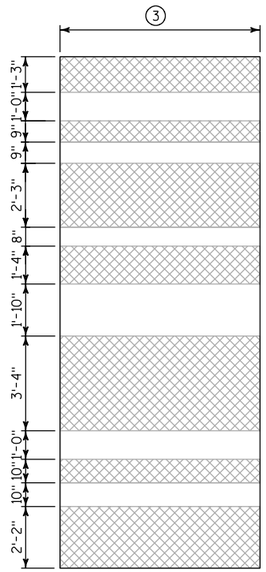
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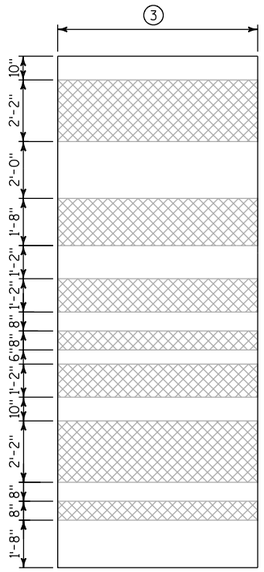
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-71

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 6

8

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NOTE

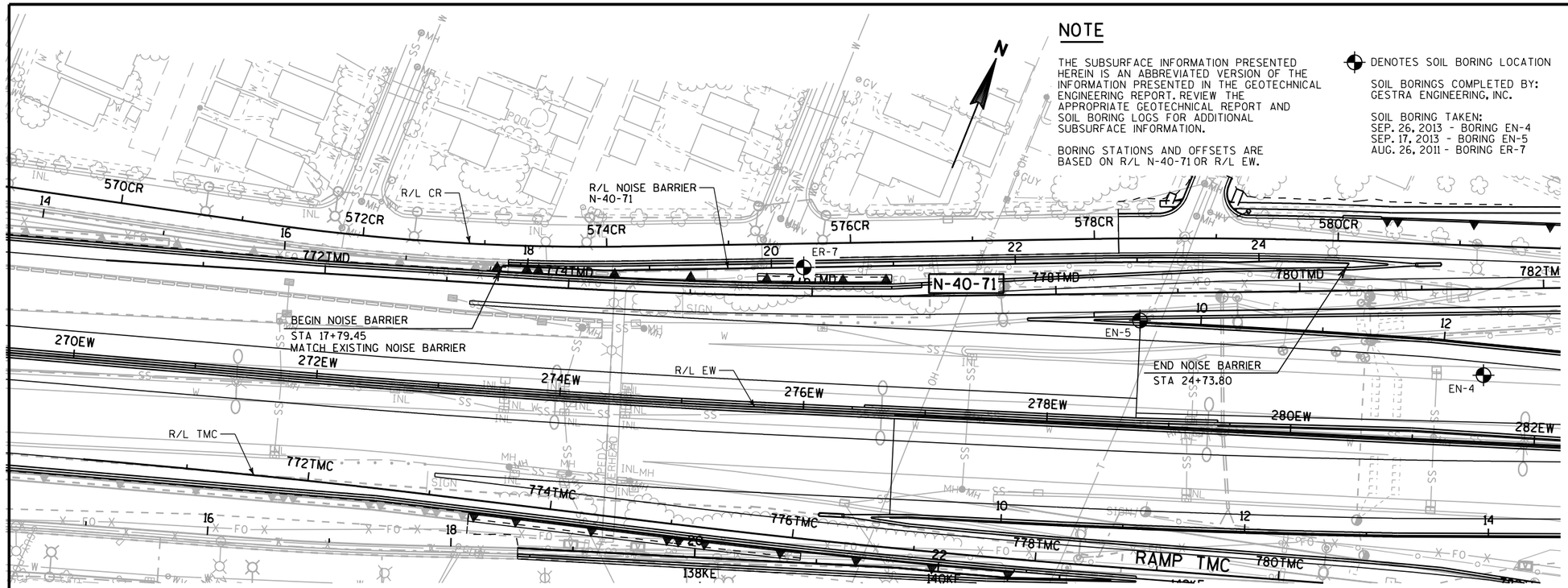
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

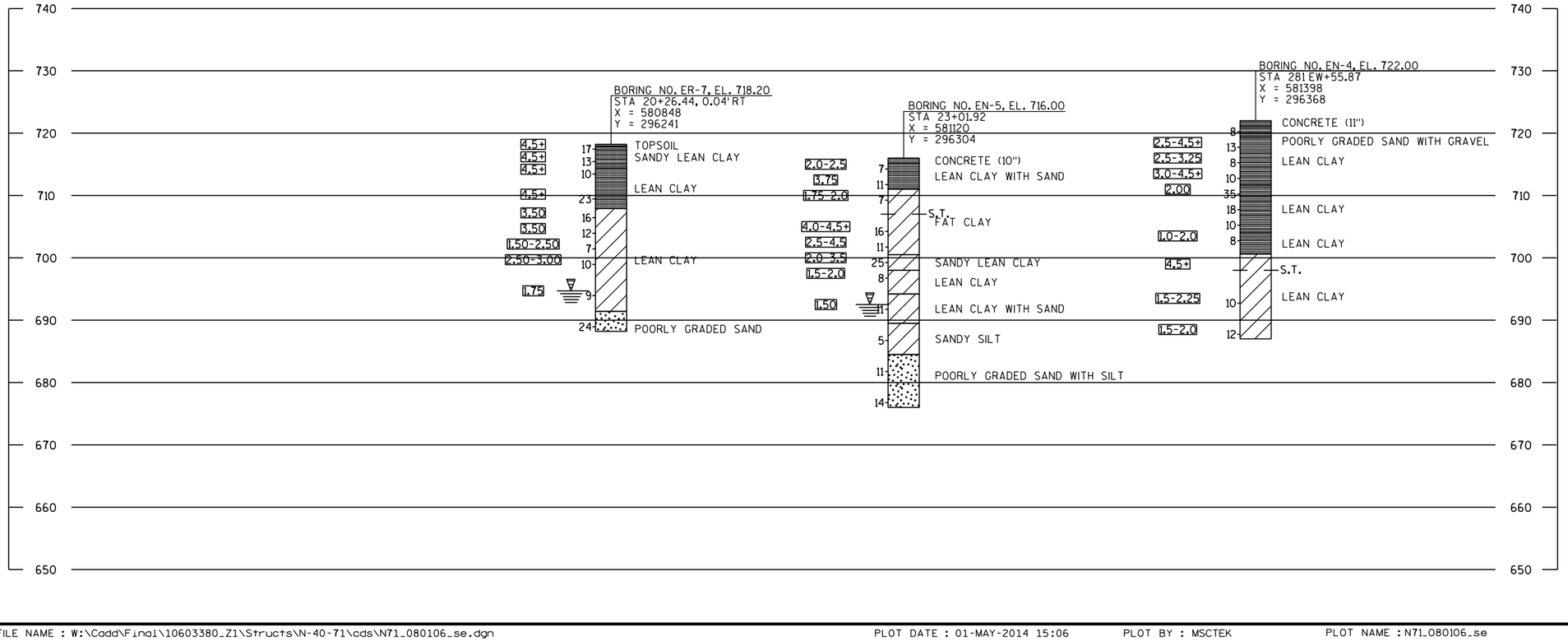
BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-71 OR R/L EW.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEP. 26, 2013 - BORING EN-4
SEP. 17, 2013 - BORING EN-5
AUG. 26, 2011 - BORING ER-7





STATE PROJECT NUMBER

1060-33-80

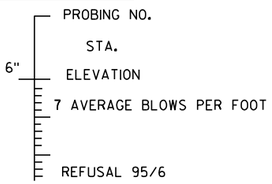
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

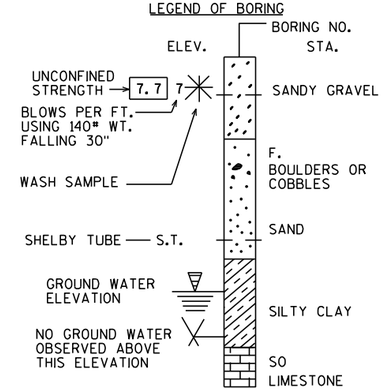
TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-71

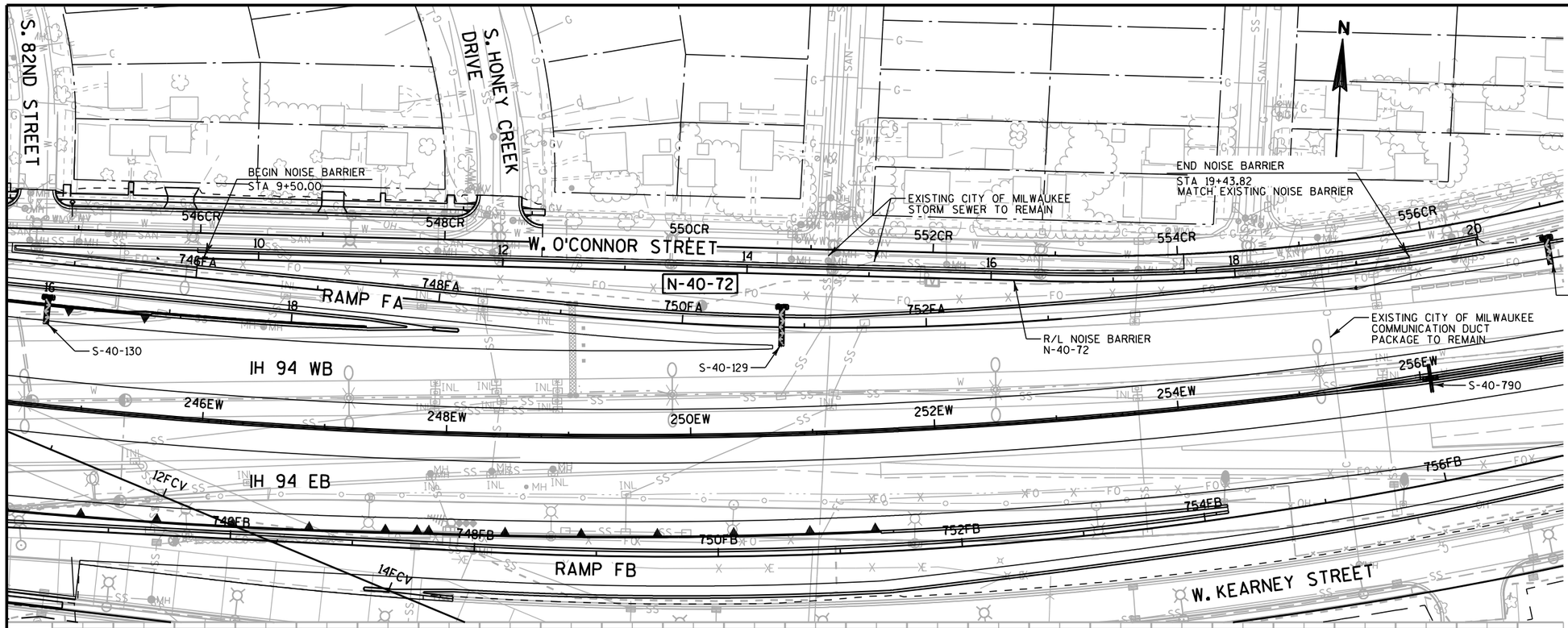
DRAWN BY PRK | PLANS CK'D. KES

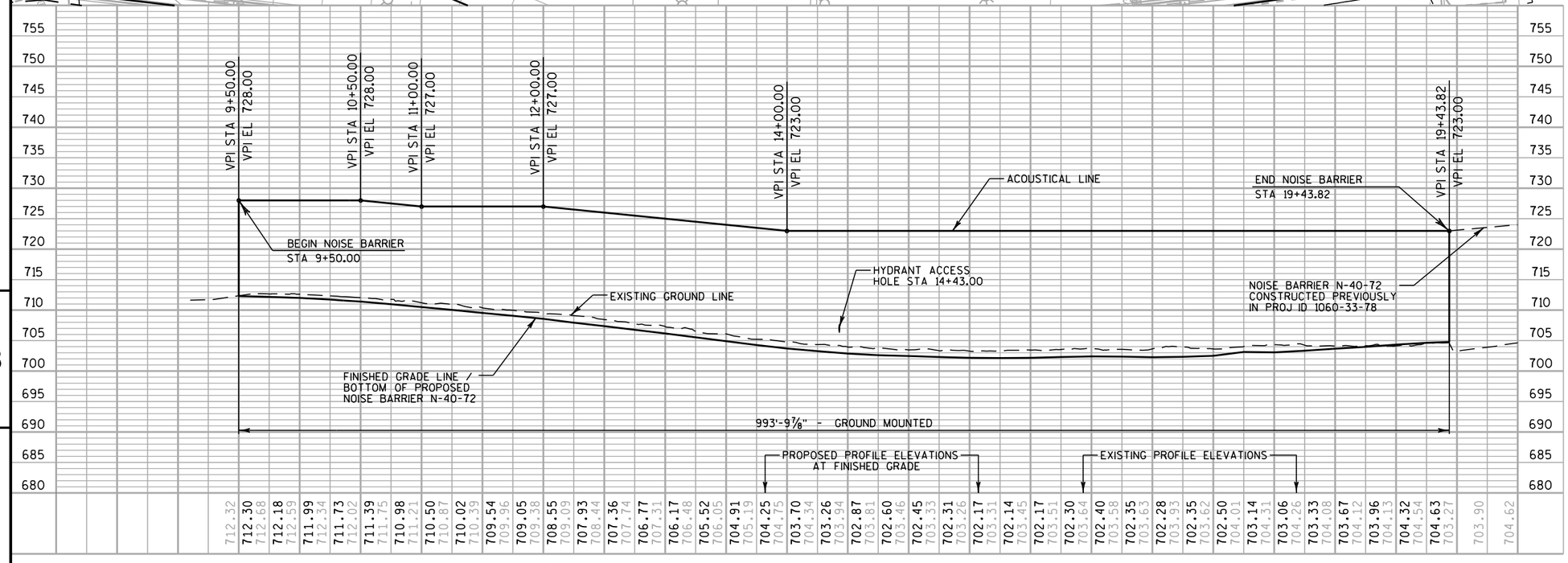
SUBSURFACE EXPLORATION

SHEET 6 OF 6

8

8





PLAN & PROFILE: NOISE BARRIER N-40-72

8

STATE PROJECT NUMBER
1060-33-80

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
6. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER
5/1/2014

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-72

NOISE BARRIER ALONG W O'CONNOR/EAST OF 84TH ST

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

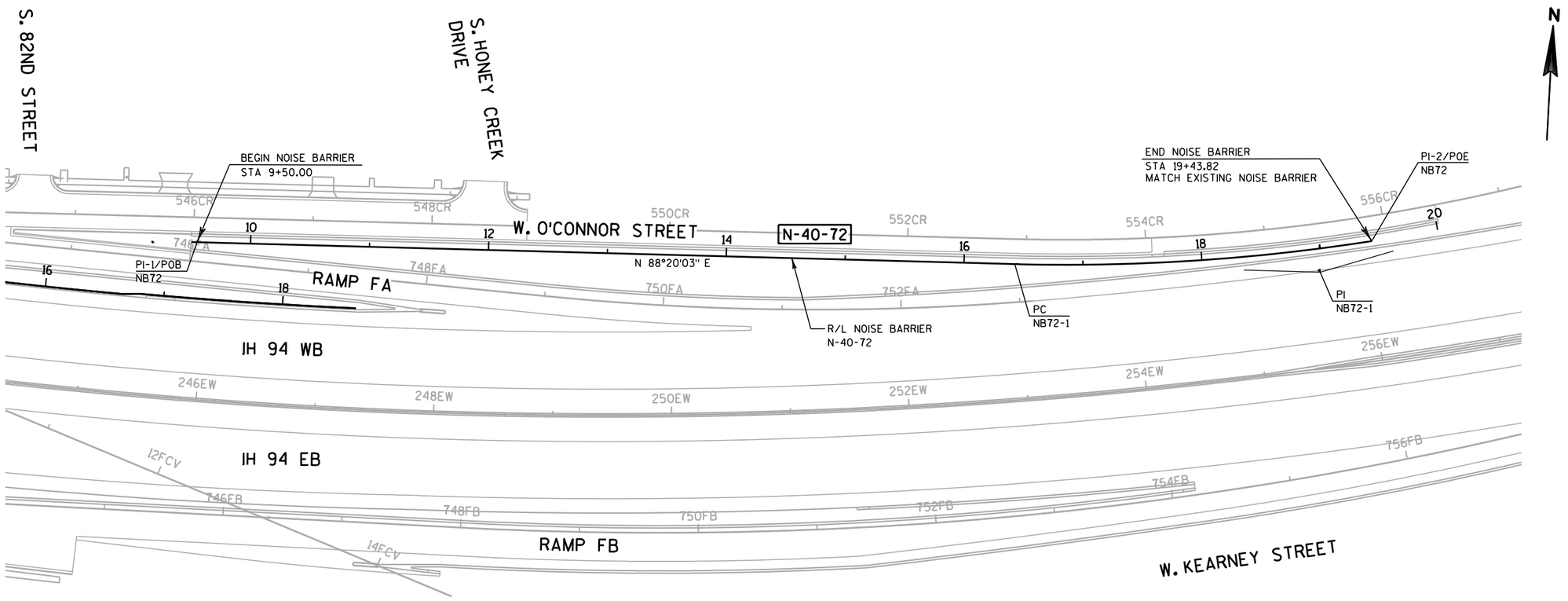
GENERAL PLAN & ELEVATION

SHEET 1 OF 6

3373

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PLOT DATE : 01-MAY-2014 15:09
PLOT BY : MSCTEK
PLOT NAME : N72_080101_gp
PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



HORIZONTAL CURVE DATA

CURVE NB72-1

P.I. = 18+99.59
X = 578920.56
Y = 295627.89
Δ = 17°35'10.53"
D = 3°26'58.11"
T = 256.93'
L = 509.82'
R = 1661.00'
P.C. = 16+42.66
P.T. = 21+52.48
X = 579163.12
Y = 295712.61

ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	9+50.00	577971.37	295600.28
PI-2	19+43.82	578962.34	295656.35

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

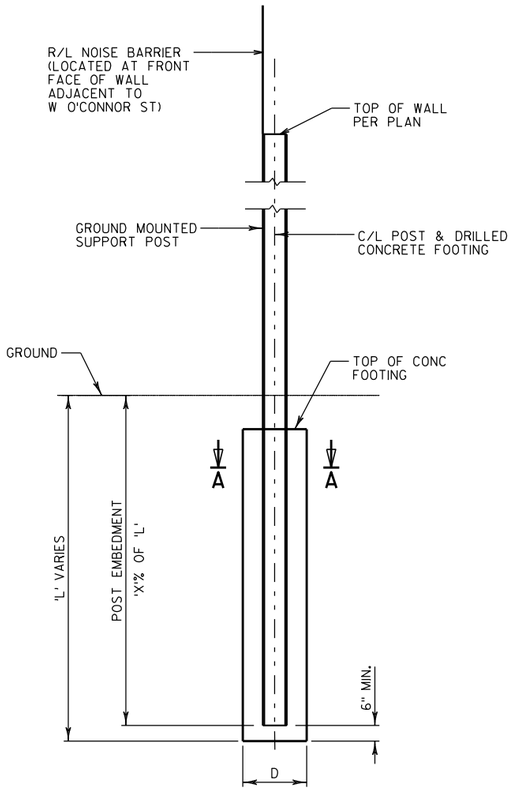
DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

SHEET 2 OF 6

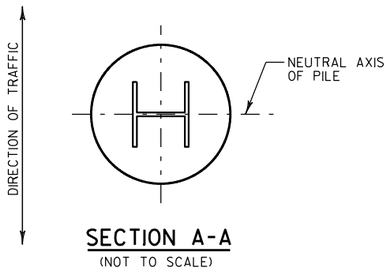
3374

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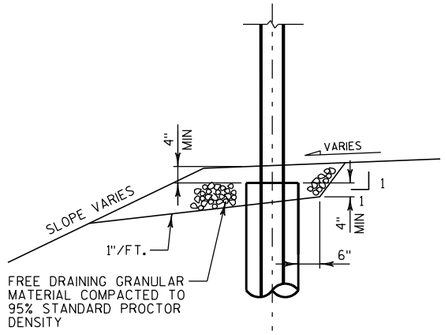
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



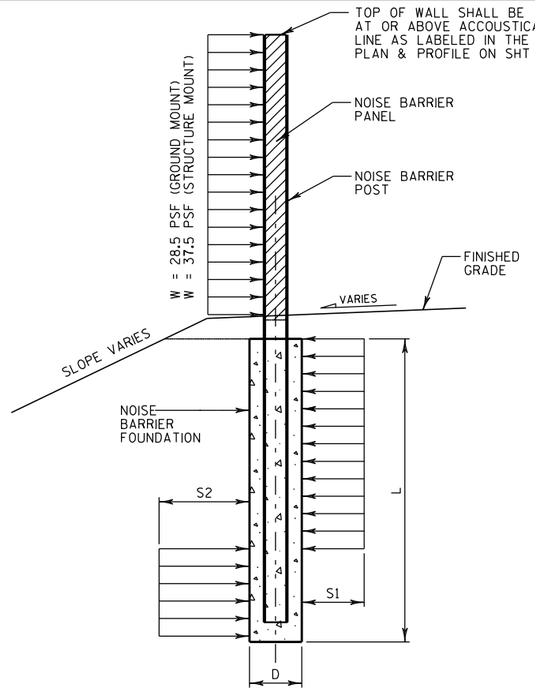
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0006	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72	SF	19,220

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-33116, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

DRAWN BY PAK | PLANS CK'D. KES

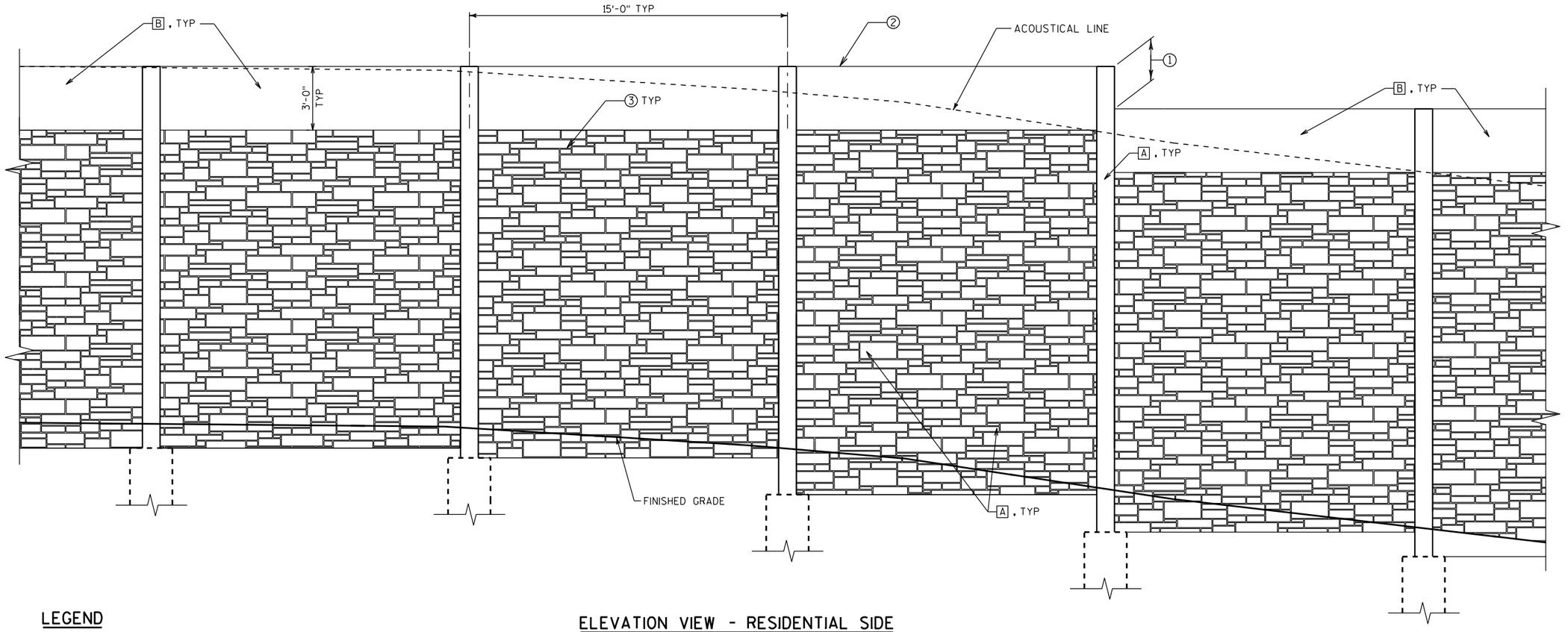
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 6

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

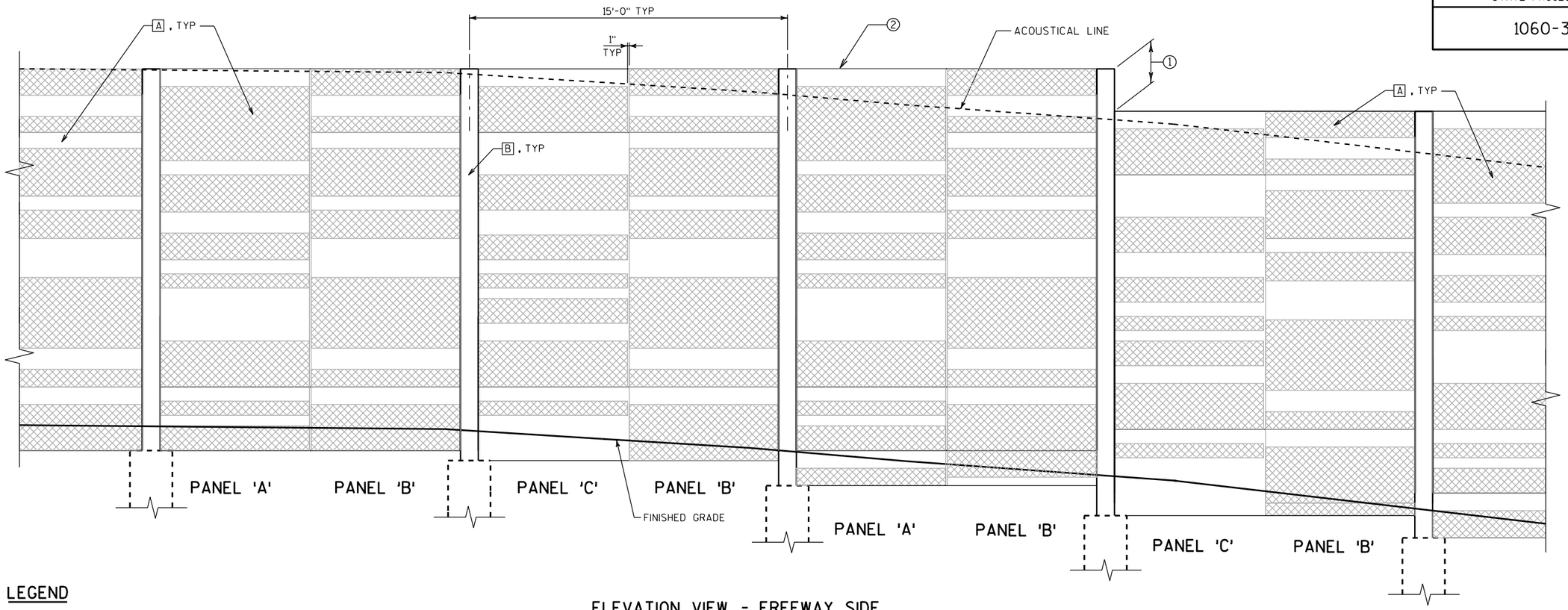
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-72\cds\N72_080104_ae.dgn PLOT DATE : 01-MAY-2014 15:09 PLOT BY : MSCTEK PLOT NAME : N72_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

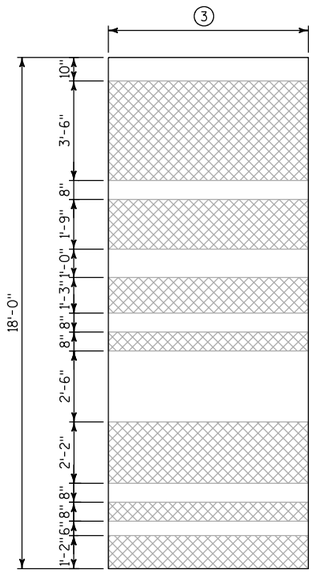
BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

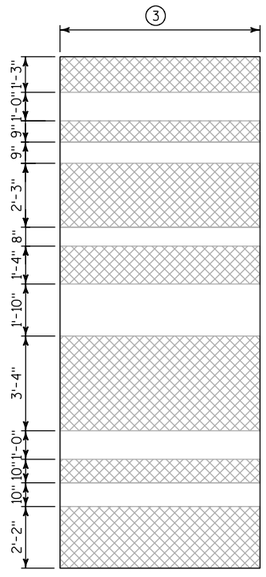
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

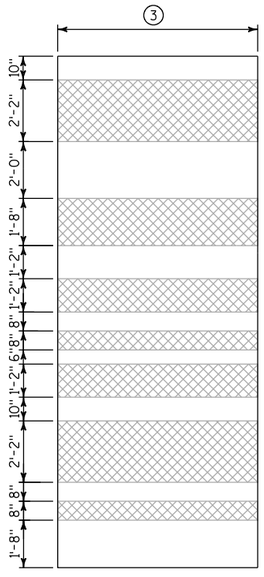
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

DRAWN BY PAK | PLANS CK'D. EKM

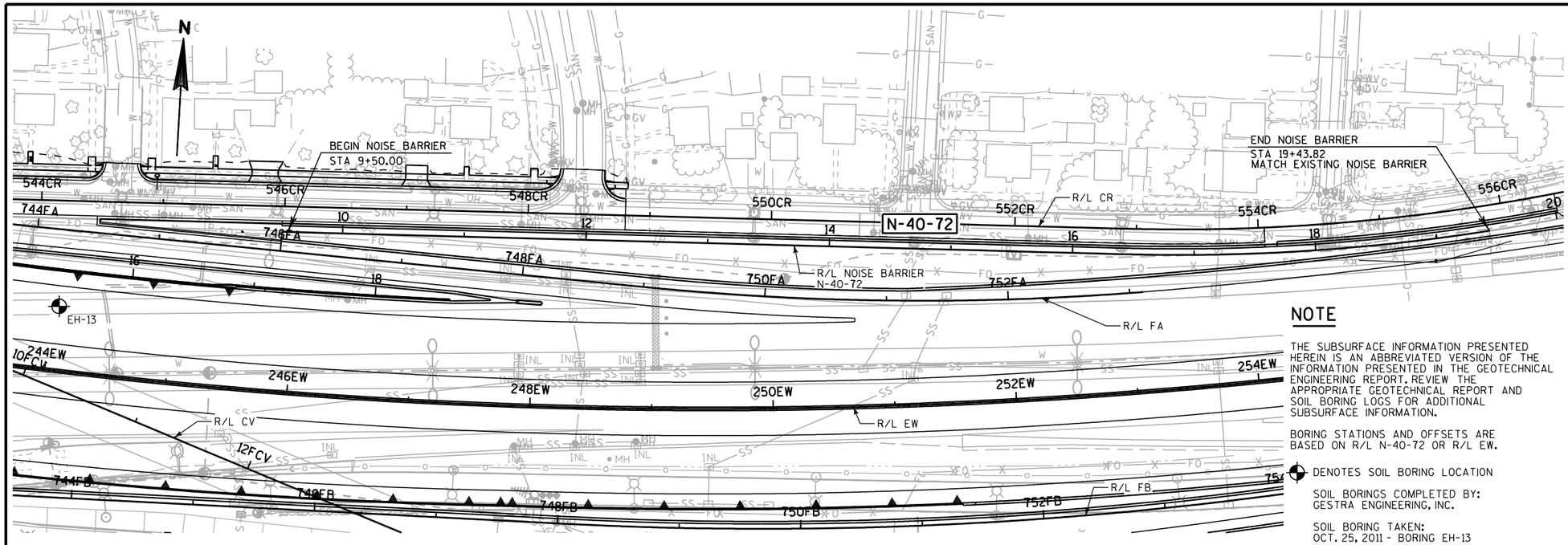
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 6

8

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NOTE

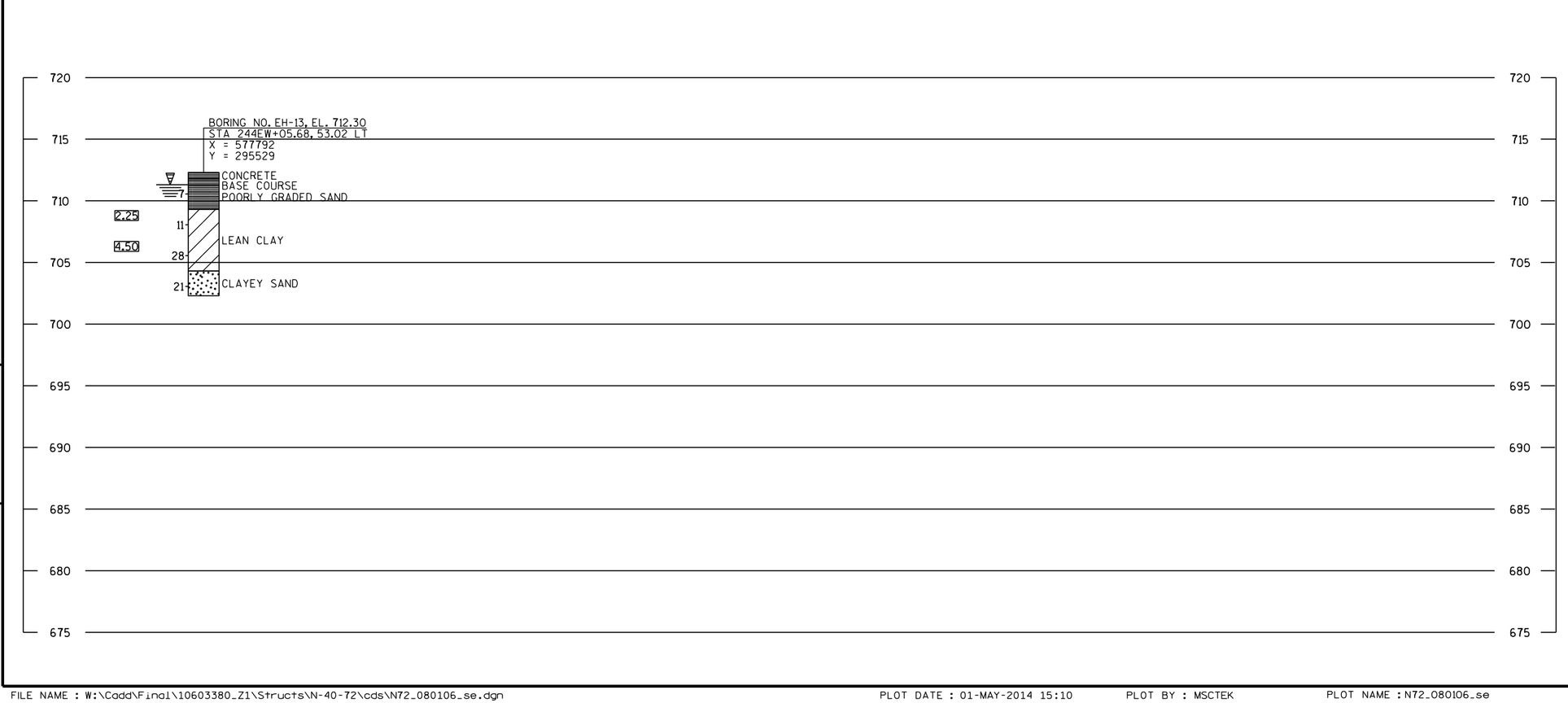
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BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-72 OR R/L EW.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
OCT. 25, 2011 - BORING EH-13



STATE PROJECT NUMBER

1060-33-80

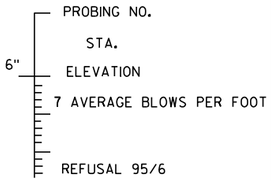
ABBREVIATIONS

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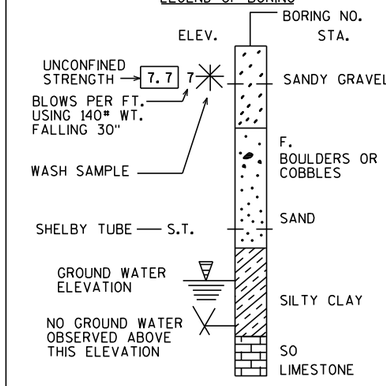
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

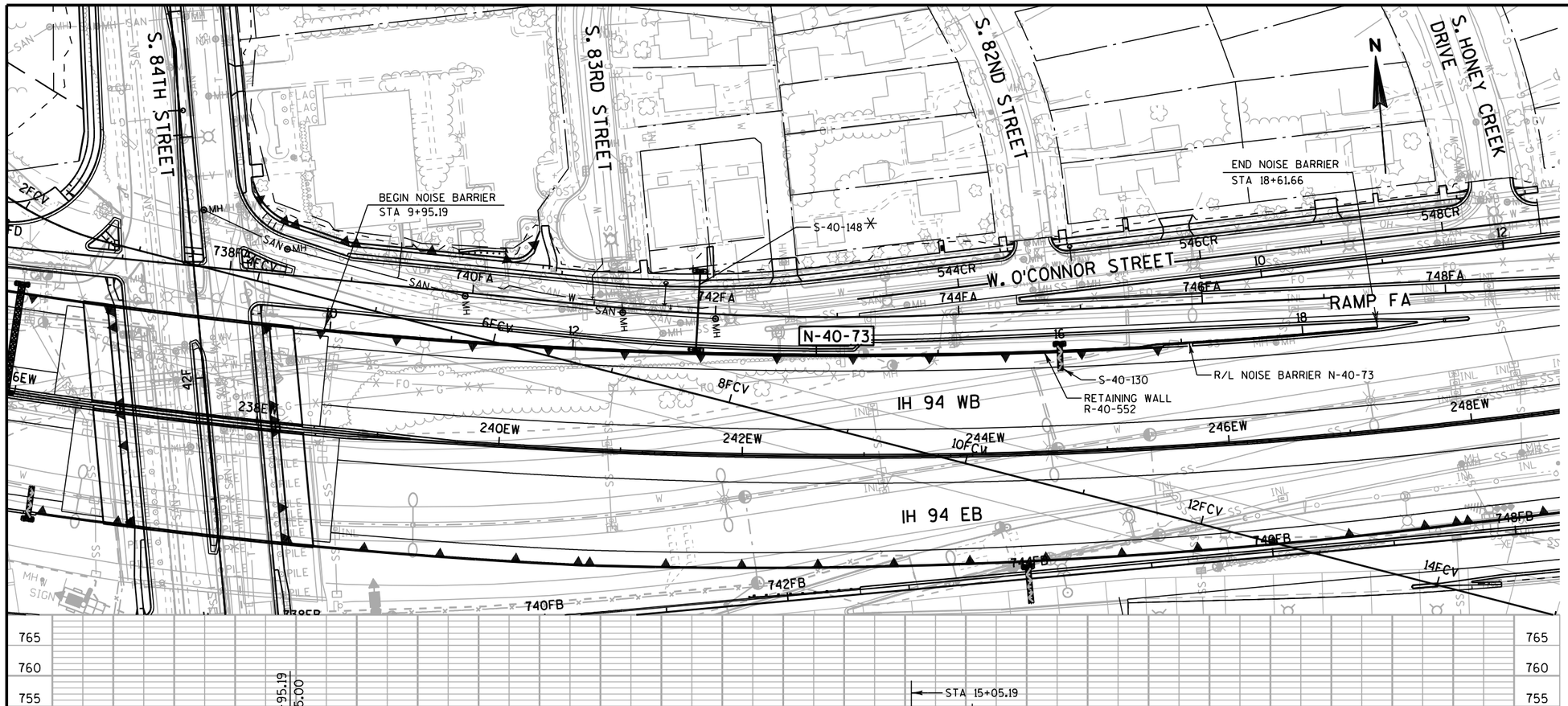
DRAWN BY PRK | PLANS CK'D. KES

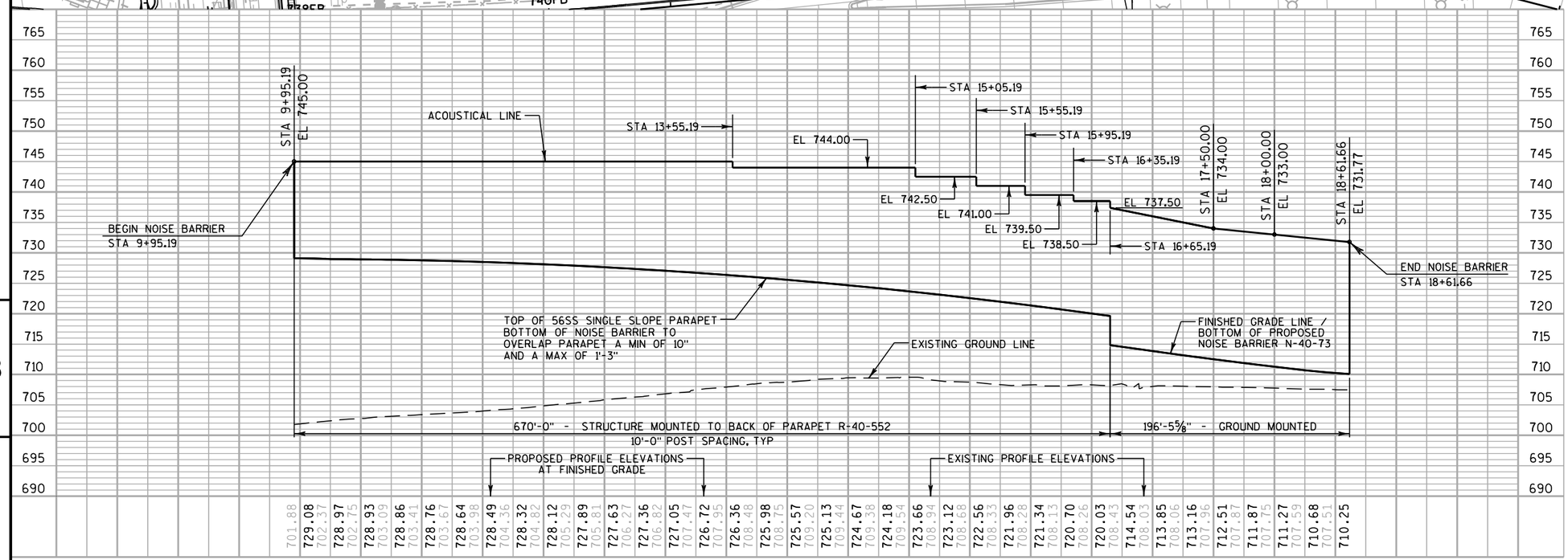
SUBSURFACE EXPLORATION

SHEET 6 OF 6

8

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PLAN & PROFILE: NOISE BARRIER N-40-73

STATE PROJECT NUMBER
1060-33-80

✳ COORDINATE LOCATION OF NOISE BARRIER FOUNDATIONS WITH FOUNDATIONS FOR SIGN STRUCTURE S-40-148. SEE ROADWAY CONSTRUCTION DETAILS FOR S-40-148 FOUNDATION INFORMATION.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. NOISE BARRIER POST CONNECTION DETAILS
5. AESTHETIC WALL TREATMENT DETAILS
6. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER
6/9/2014

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 6/12/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE N-40-73

NOISE BARRIER ALONG IH 94 WB/EAST OF 84TH ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

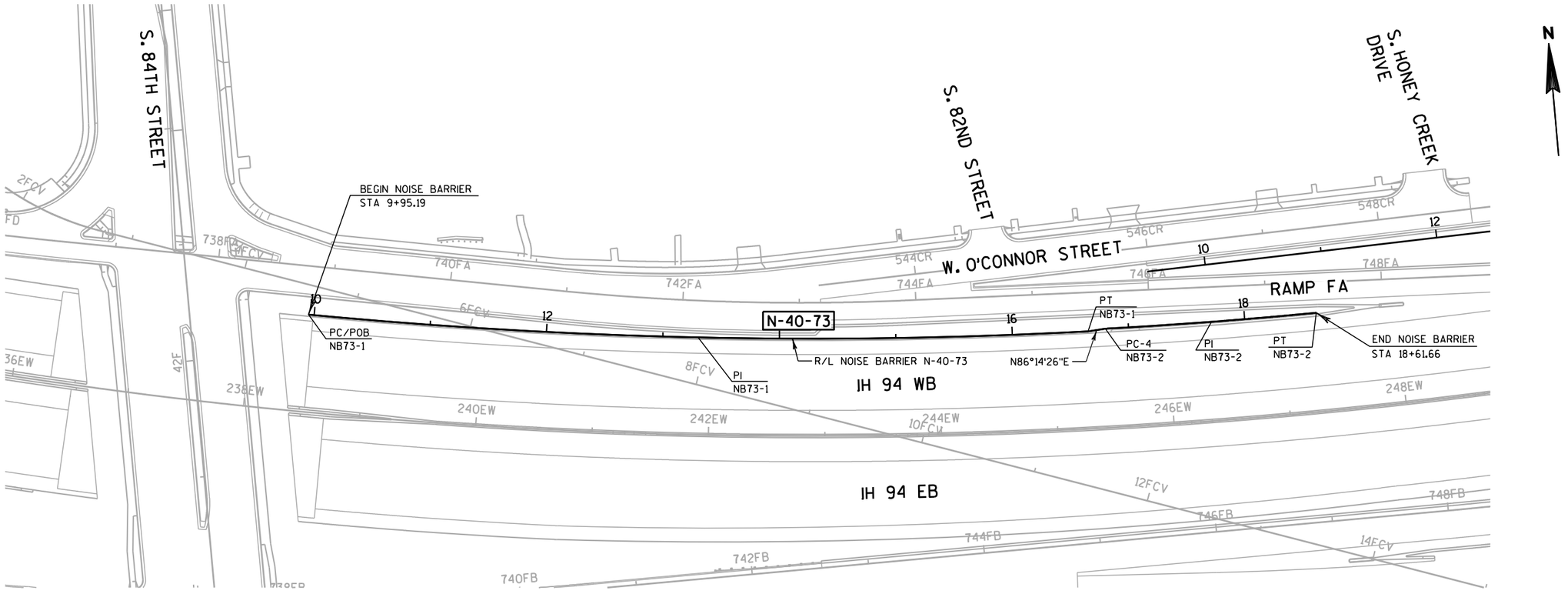
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

3379

STATE PROJECT NUMBER
1060-33-80



HORIZONTAL CURVE DATA

CURVE NB73-1		CURVE NB73-2	
P.I. =	13+30.76	P.I. =	17+70.90
X =	577580.78	X =	578021.87
Y =	295565.20	Y =	295551.65
Δ =	8°29'54.60"	Δ =	2°18'14.37"
D =	1°16'06.94"	D =	1°16'08.43"
T =	335.57'	T =	90.79'
L =	669.91'	L =	181.56'
R =	4516.48'	R =	4515.00'
P.C. =	9+95.19	P.C. =	16+80.10
P.T. =	16+65.10	P.T. =	18+61.66

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-73

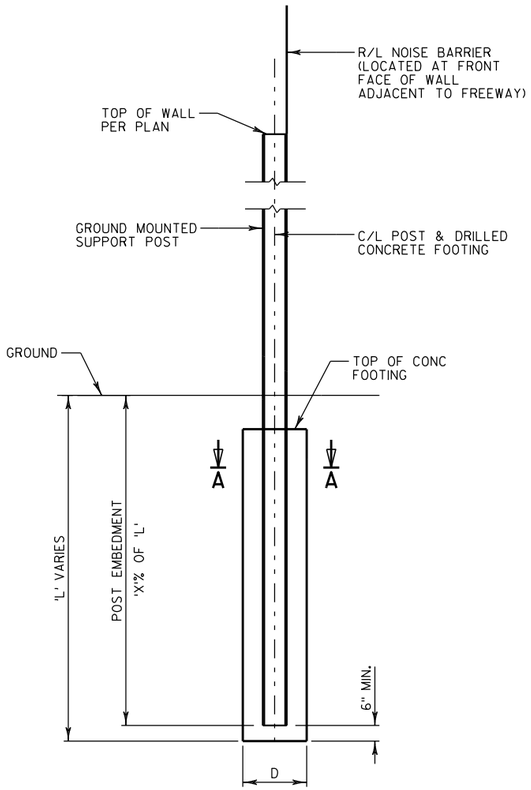
DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

SHEET 2 OF 6

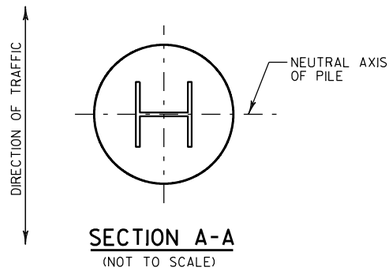
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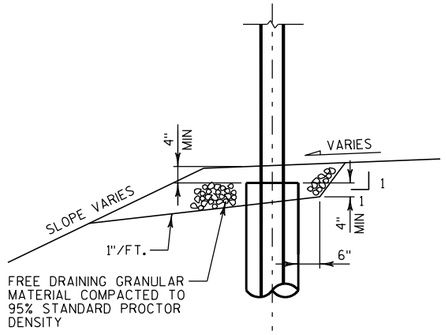
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



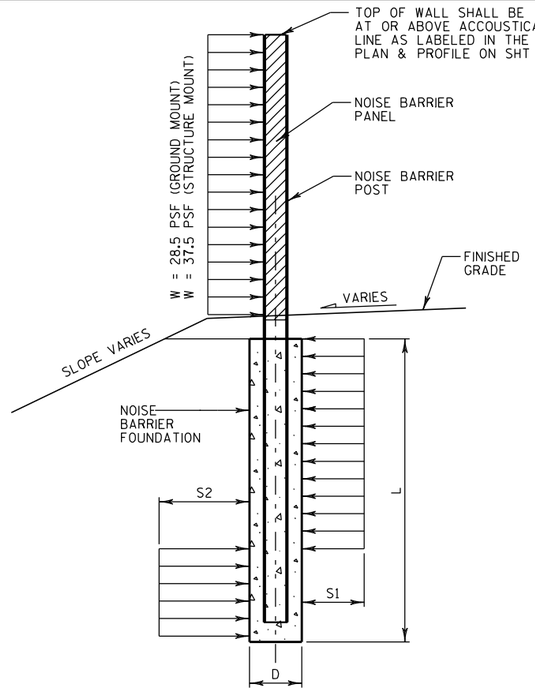
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0007	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73	SF	17,090

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-73".

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-73

DRAWN BY PAK | PLANS CK'D. KES

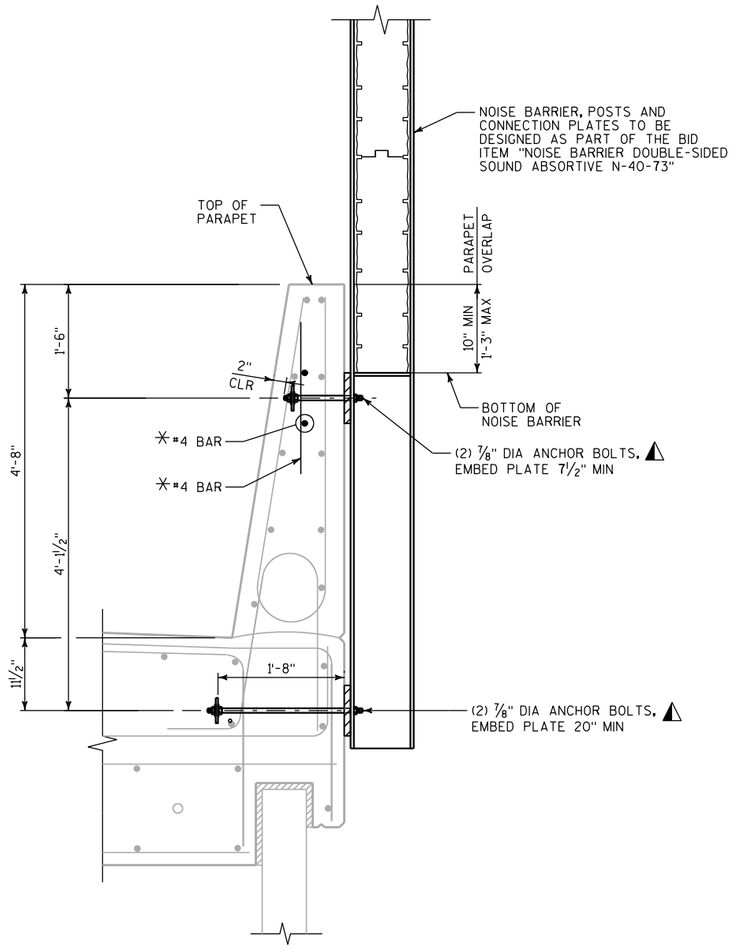
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 6

8

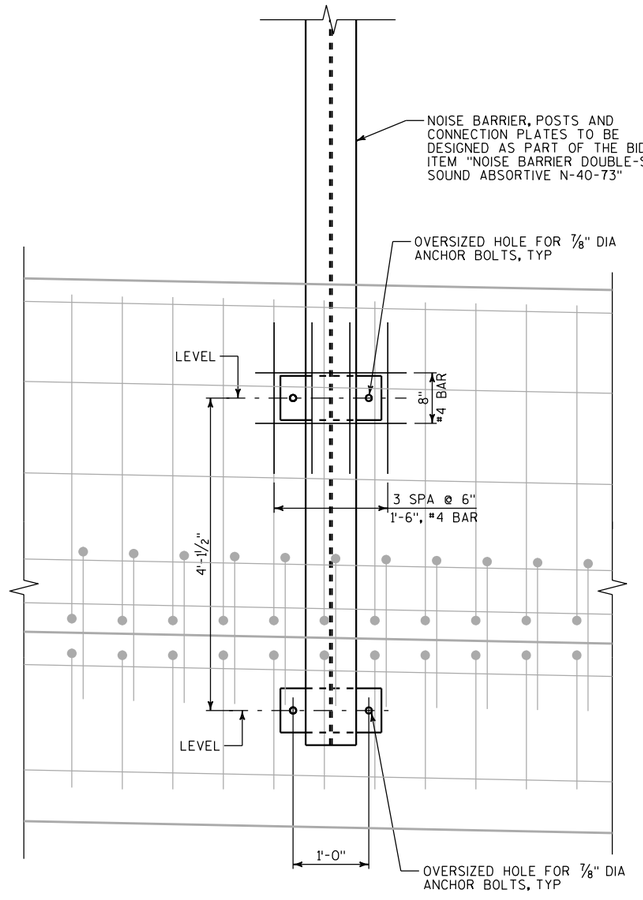
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STATE PROJECT NUMBER
1060-33-80



SECTION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION



ELEVATION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION

LEGEND

⚠ NOISE BARRIER ANCHOR BOLT ASSEMBLY IS INCLUDED WITH THE RETAINING WALL BID ITEMS AND ARE NOT PART OF THE NOISE BARRIER BID ITEMS.

✳ EXACT LOCATION AND SPACING OF #4 BARS TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS. SEE R-40-552 PLANS FOR #4 BAR DETAILS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-73

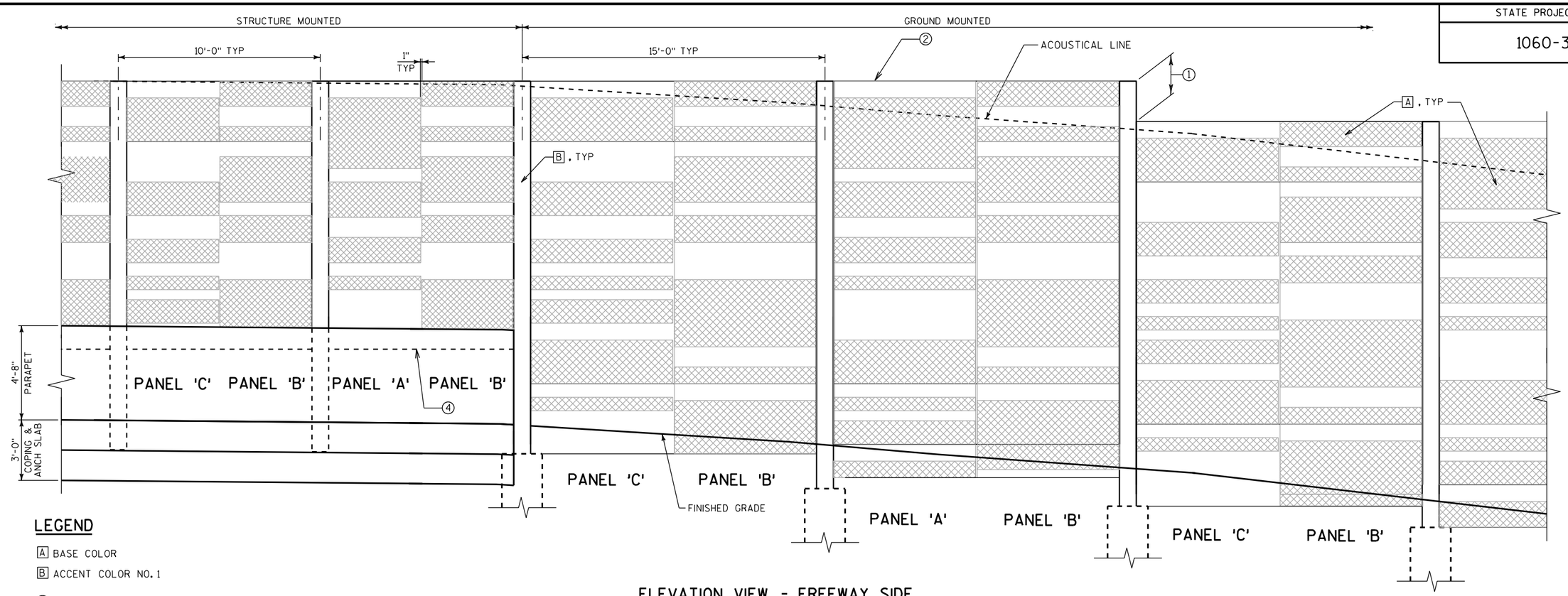
DRAWN BY TEK | PLANS CK'D. KES

NOISE BARRIER POST CONNECTION DETAILS

SHEET 4 OF 6

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PLOT DATE : 09-JUN-2014 10:20
PLOT BY : MSCKES
PLOT NAME : N73_080104_de
PLOT SCALE : 2.000004:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

(RAMP SIDE SIMILAR)

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP TOP OF PANELS FOR GROUND MOUNTED NOISE BARRIER IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) FOR POST SPA > 8'-0" = 0.5 X (POST SPA - POST FLANGE WIDTH - 1")
FOR POST SPA ≤ 8'-0" = POST SPA - POST FLANGE WIDTH

(4) BOTTOM OF NOISE BARRIER TO OVERLAP PARAPET A MINIMUM OF 10" AND A MAXIMUM OF 1'-3"

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

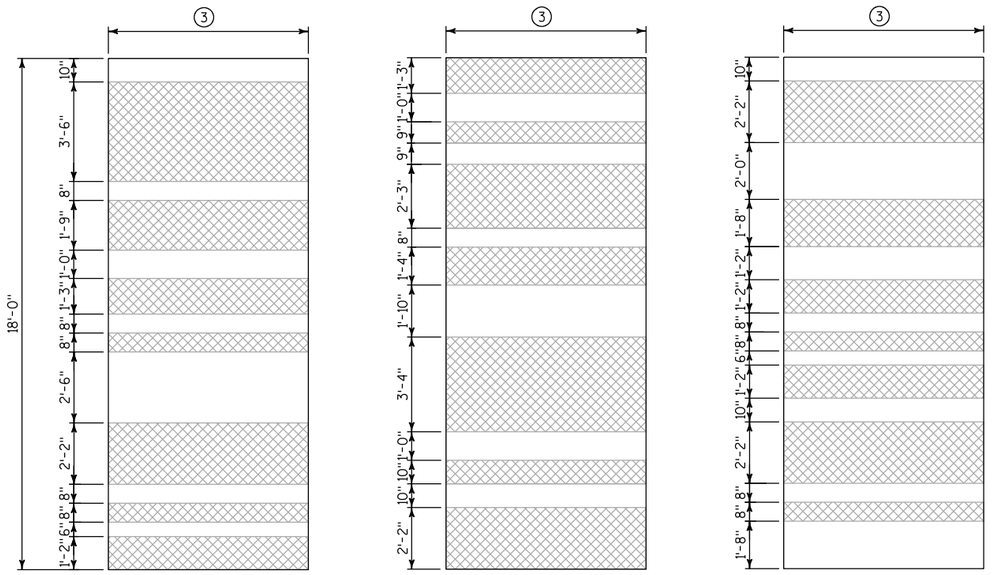
BASE COLOR - 33564
ACCENT COLOR NO. 1 - 33448

NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.

PATTERNS SHOWN WILL BE USED ON THE FREEWAY SIDE AND THE RAMP SIDE OF THE NOISE BARRIER.



PANEL 'A' PATTERN

PANEL 'B' PATTERN

PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-73

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS

SHEET 5 OF 6

3383

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FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-73\cds\N73_080105_ae.dgn PLOT DATE : 09-JUN-2014 10:20 PLOT BY : MSCKES PLOT NAME : N73_080105_ae PLOT SCALE : 5.333333:1

NOTE

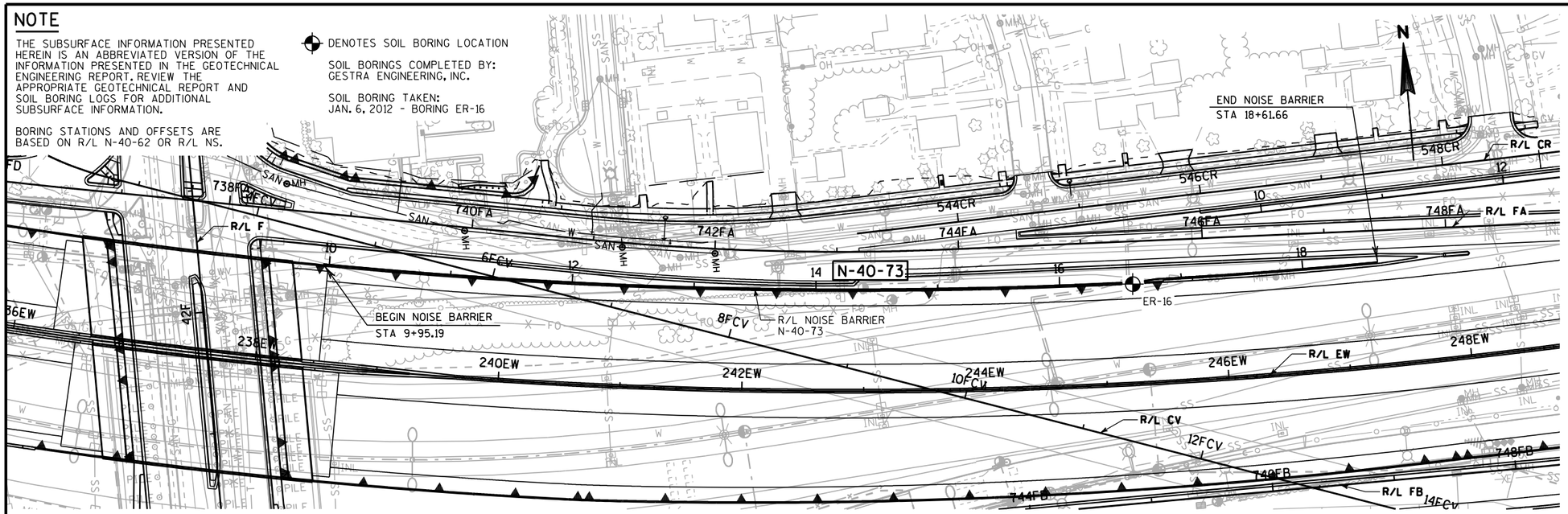
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

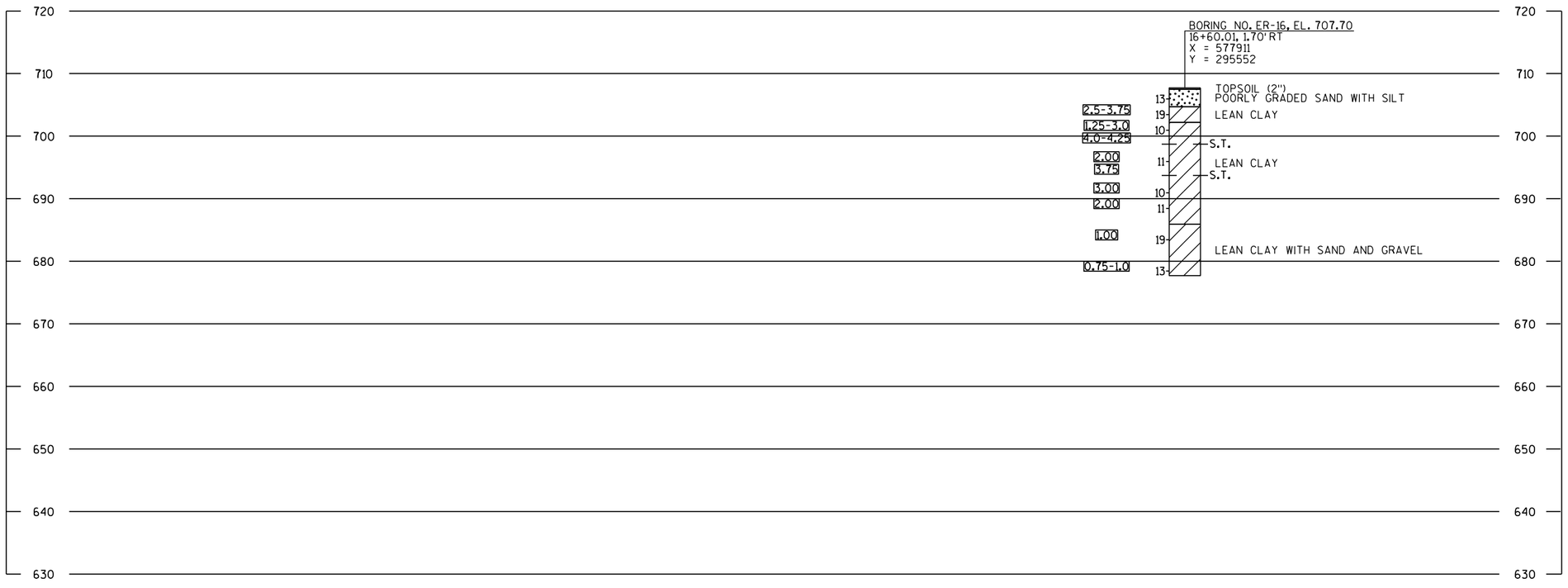
BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-62 OR R/L NS.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 6, 2012 - BORING ER-16





8

STATE PROJECT NUMBER

1060-33-80

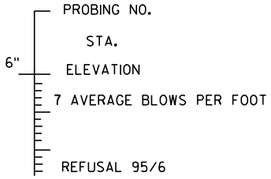
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

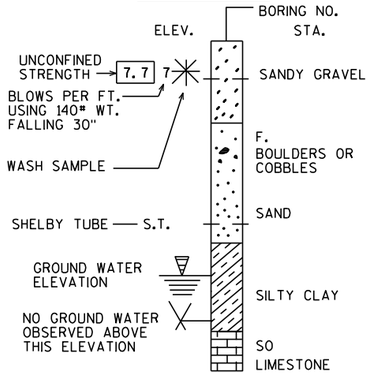
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-73

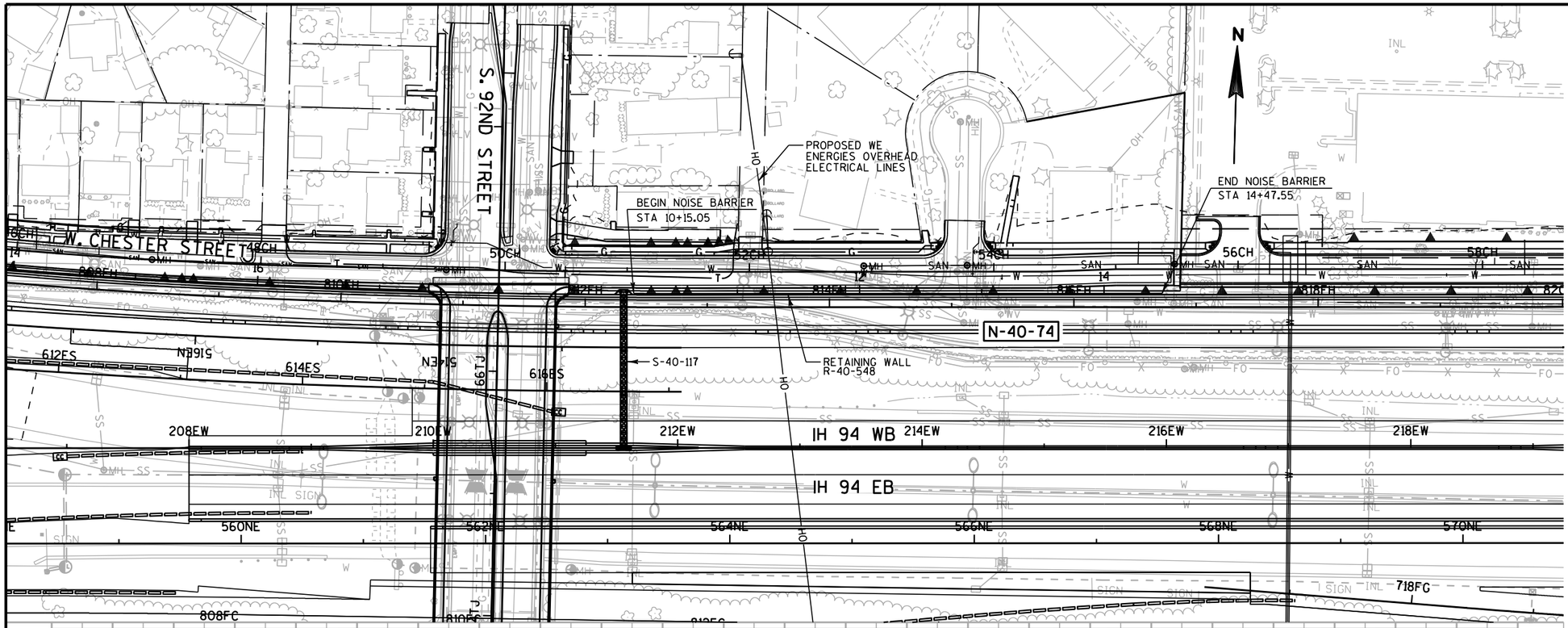
DRAWN BY PRK | PLANS CK'D. KES

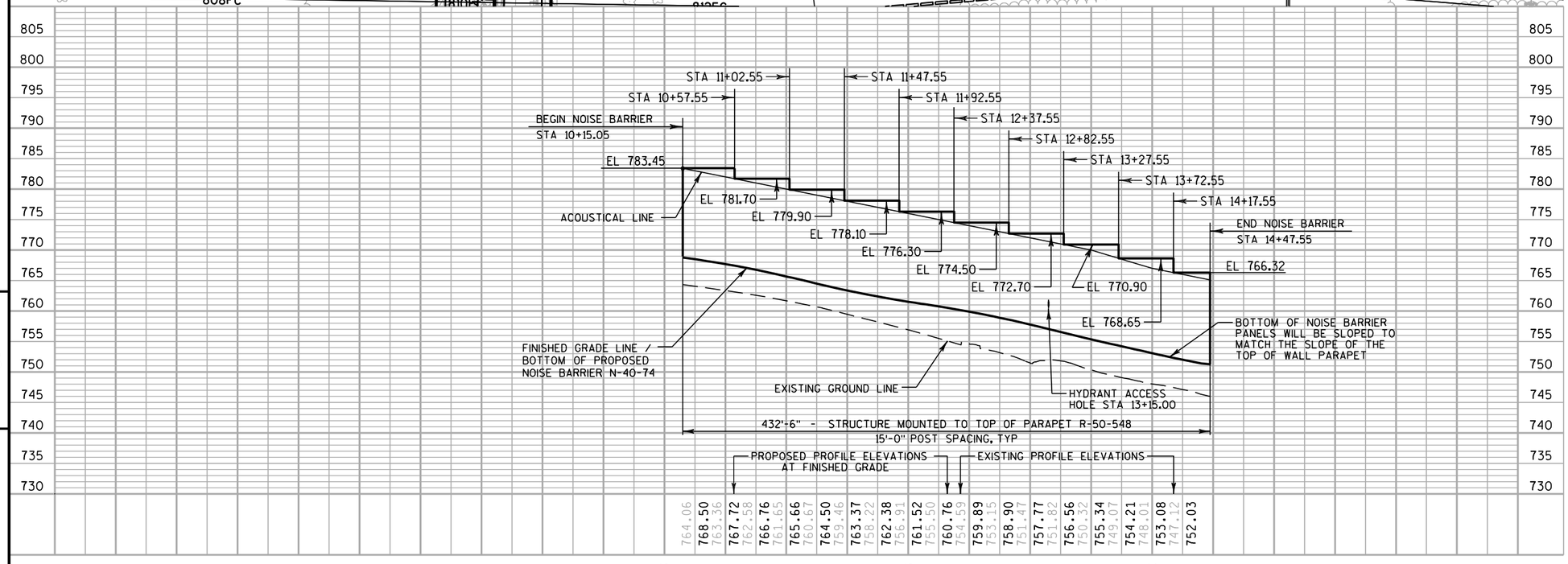
SUBSURFACE EXPLORATION

SHEET 6 OF 6

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STATE PROJECT NUMBER
1060-33-80





PLAN & PROFILE: NOISE BARRIER N-40-74

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/7/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-74

NOISE BARRIER ALONG W CHESTER/EAST OF 92ND ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

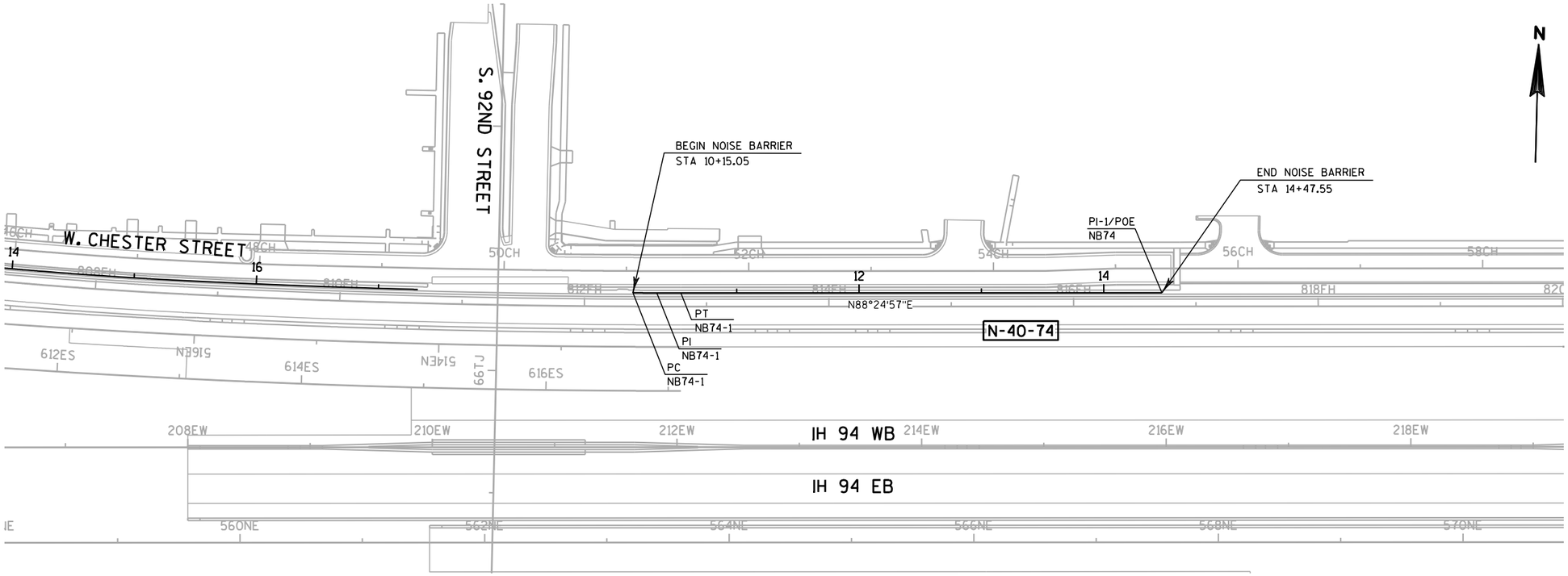
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

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STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	14+47.55	575006.49	295874.33

HORIZONTAL CURVE DATA

CURVE NB74-1

P.I. = 10+34.65
X = 574593.76
Y = 295862.91
Δ = 0°16'48.71"
D = 0°42'53.22"
T = 19.60'
L = 39.20'
R = 8015.83'
P.C. = 10+15.05
P.T. = 10+54.25

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STATE OF WISCONSIN
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STRUCTURE N-40-74

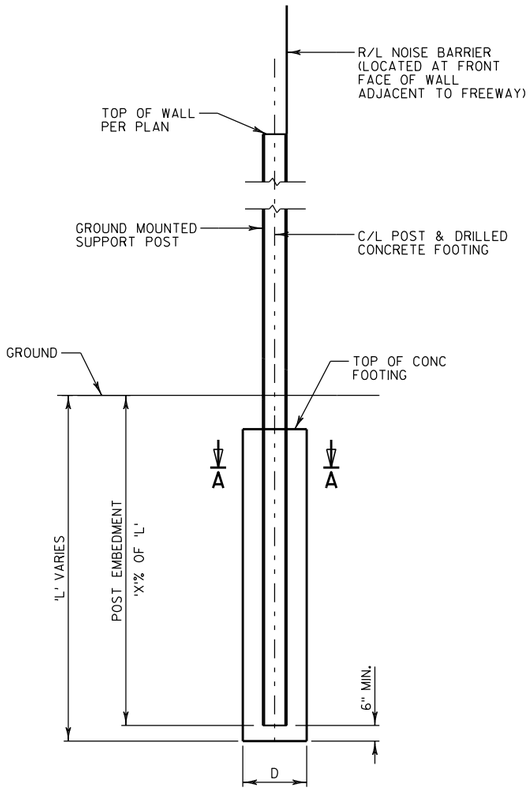
DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

SHEET 2 OF 5

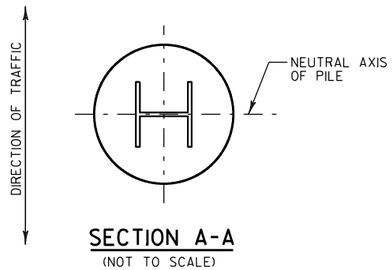
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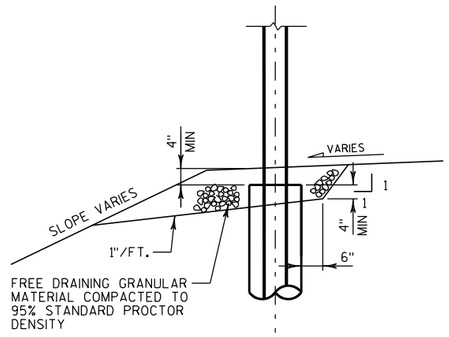
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



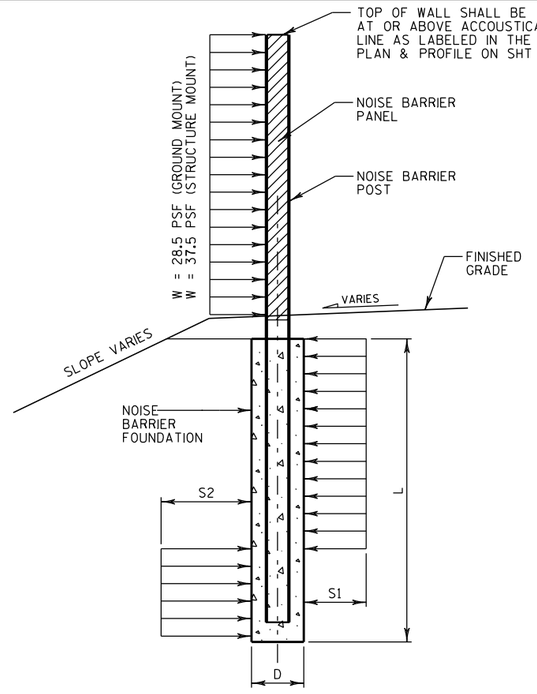
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

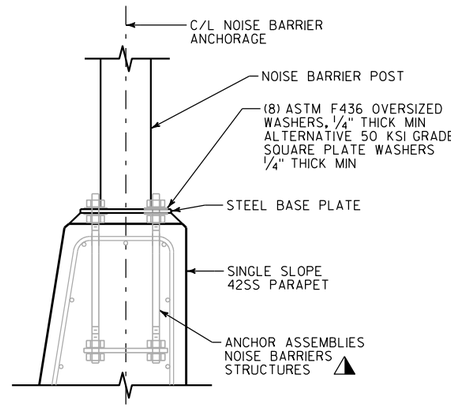
(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

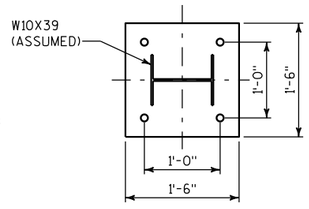
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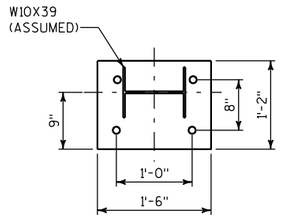
SECTION THRU TOP OF PARAPET

(FOR STRUCTURE MOUNTED NOISE BARRIER)

⚠ NOT A NOISE BARRIER BID ITEM. SEE RETAINING WALL R-40-548 PLANS FOR DETAILS.



BASE PLATE



END BASE PLATE

(USE ADJACENT TO FENCE DECORATIVE WING AND FENCE DECORATIVE WALL)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0008	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74	SF	6,600

STATE PROJECT NUMBER

1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-74".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-74

DRAWN BY PAK | PLANS CK'D. KES

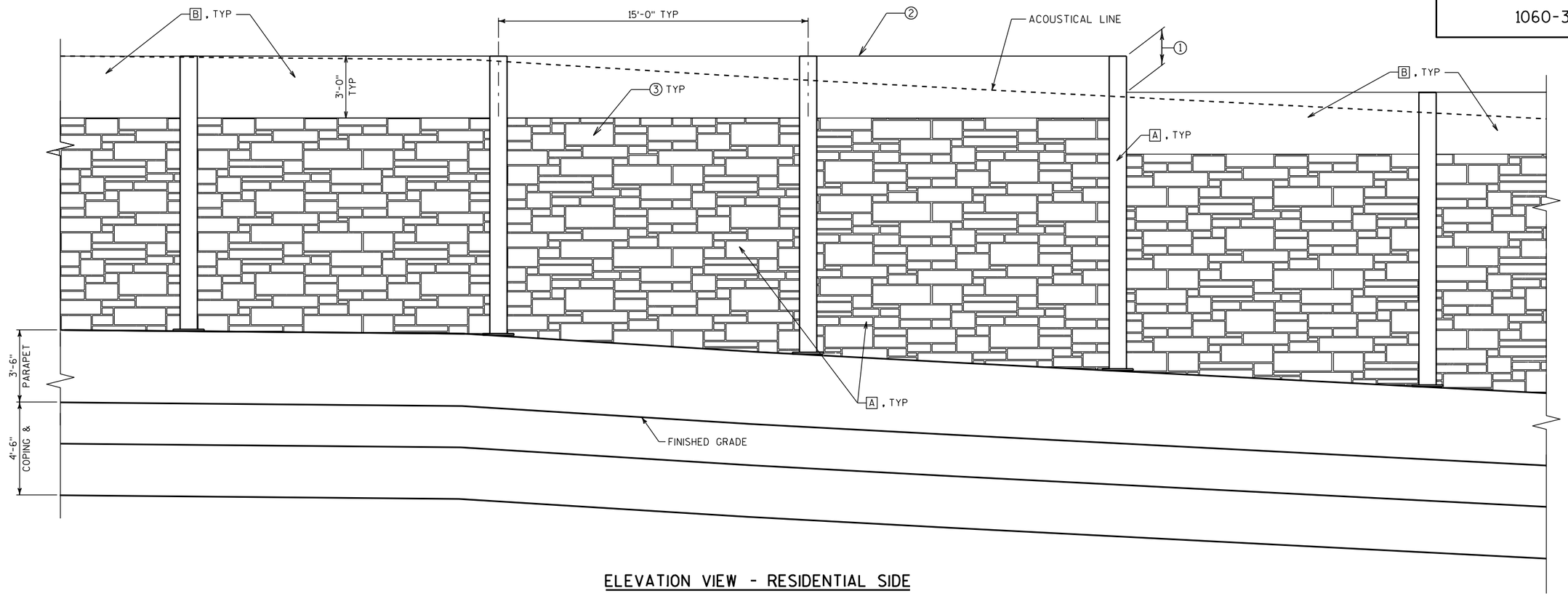
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 5

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

1. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

3. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-74

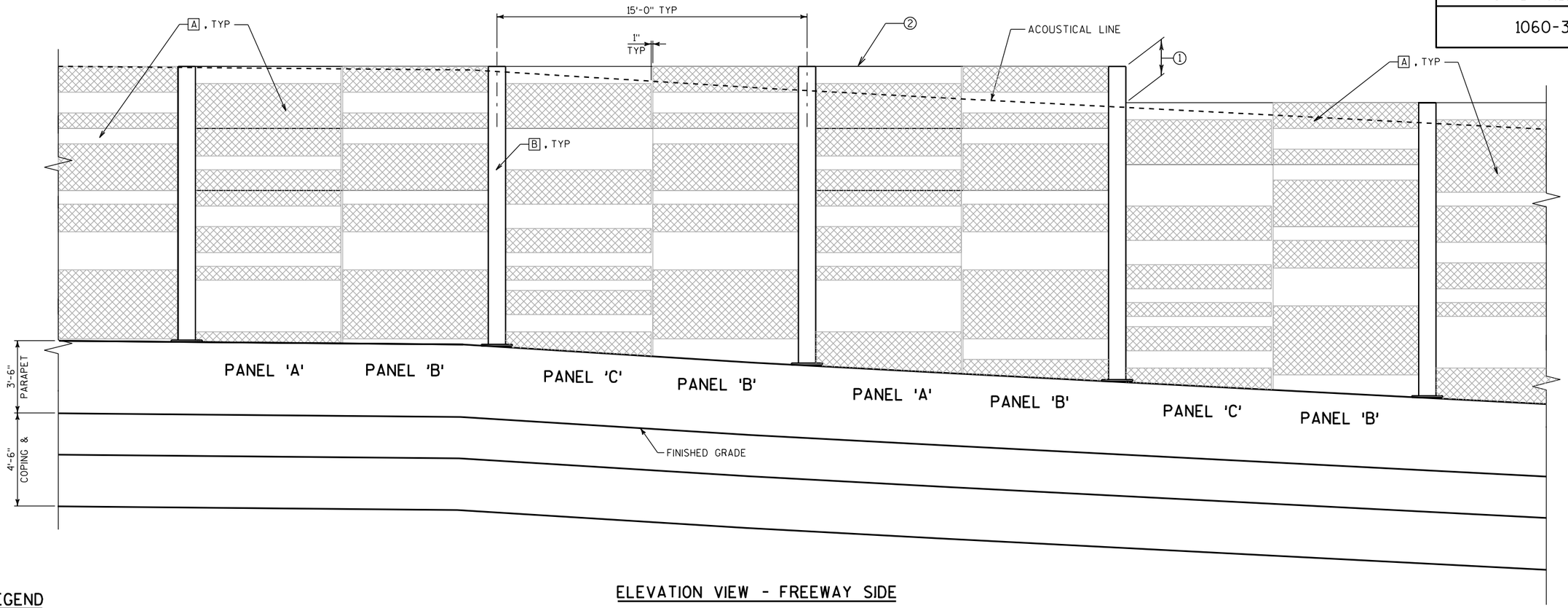
DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 5

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-74\cds\N74_080104_ae.dgn PLOT DATE : 07-MAY-2014 11:11 PLOT BY : MSCKES PLOT NAME : N74_080104_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) FOR POST SPA > 8'-0" = 0.5 x (POST SPA - POST FLANGE WIDTH - 1")
FOR POST SPA ≤ 8'-0" = POST SPA - POST FLANGE WIDTH

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

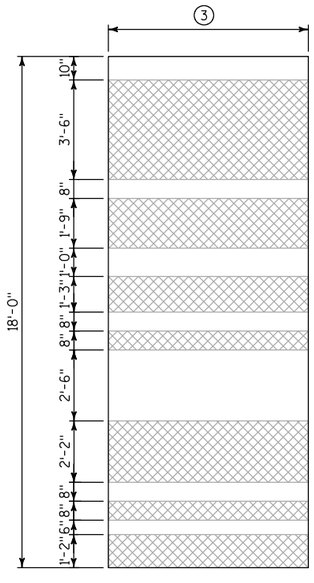
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BASE COLOR - 33564
ACCENT COLOR NO. 1 - 33448

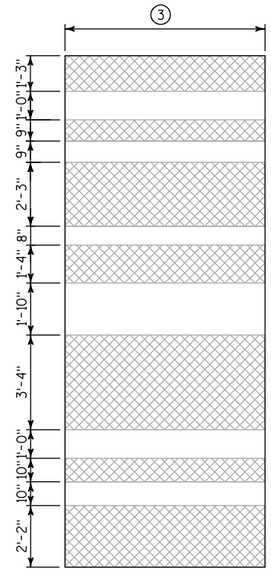
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

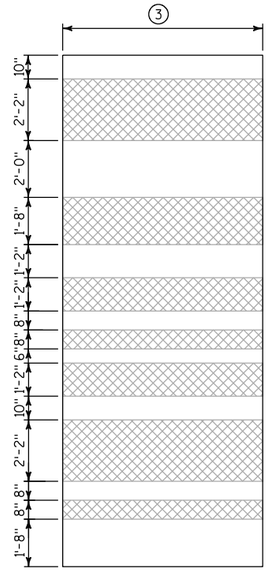
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-74

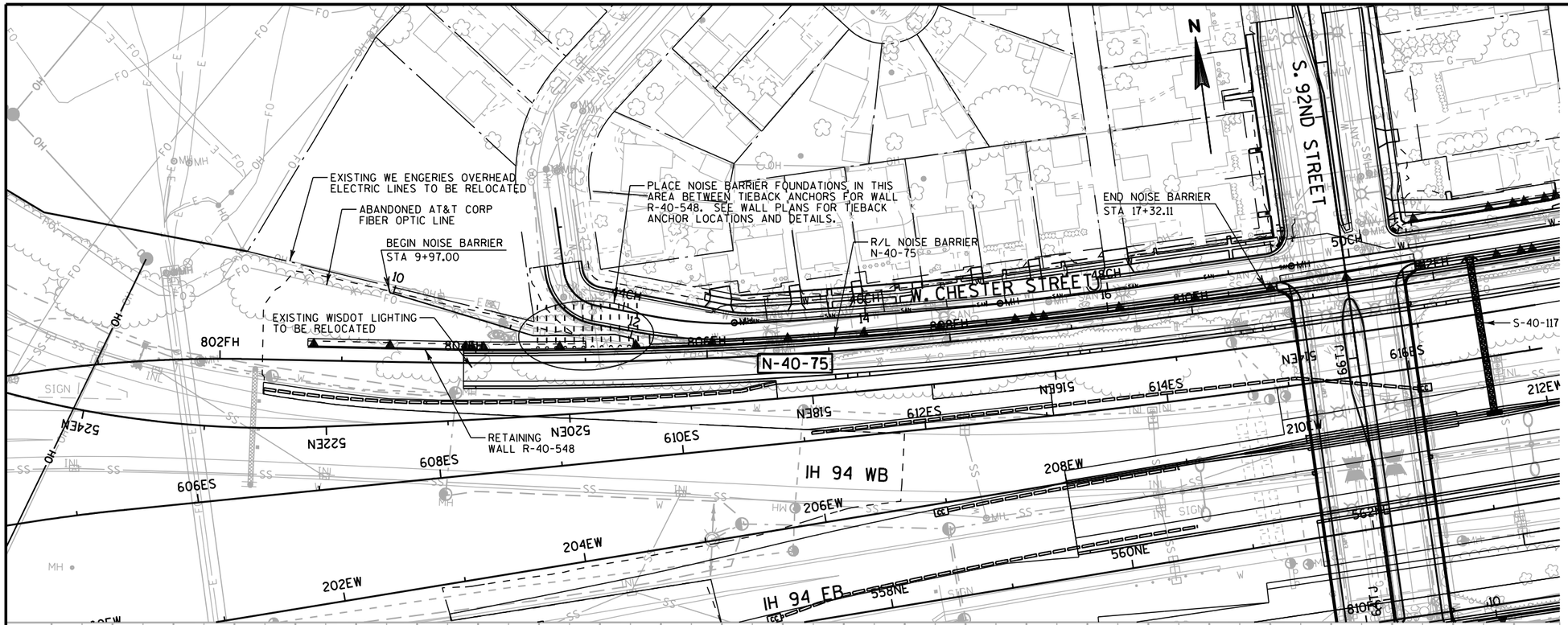
DRAWN BY PAK | PLANS CK'D. EKM

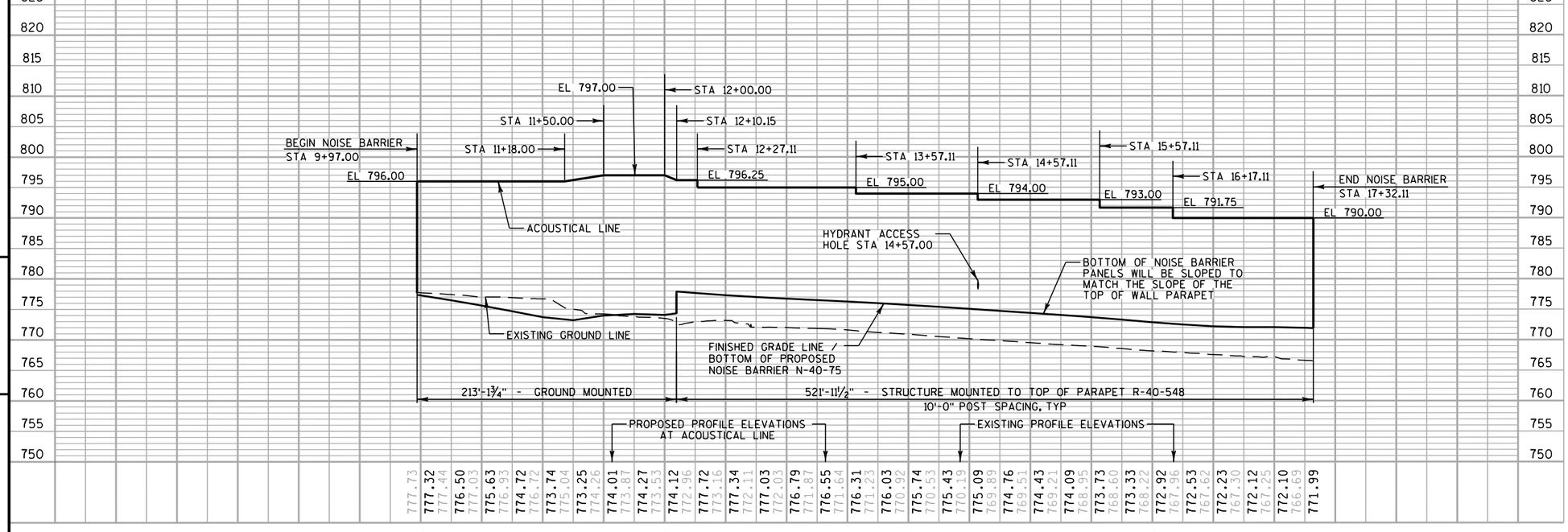
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 5

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PLOT BY : MSCKES
PLOT NAME : N74_080105_ae
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-80





PLAN & PROFILE: NOISE BARRIER N-40-75

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
5. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
6. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/7/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-75

NOISE BARRIER NORTH OF IH 94/EAST OF 76TH ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

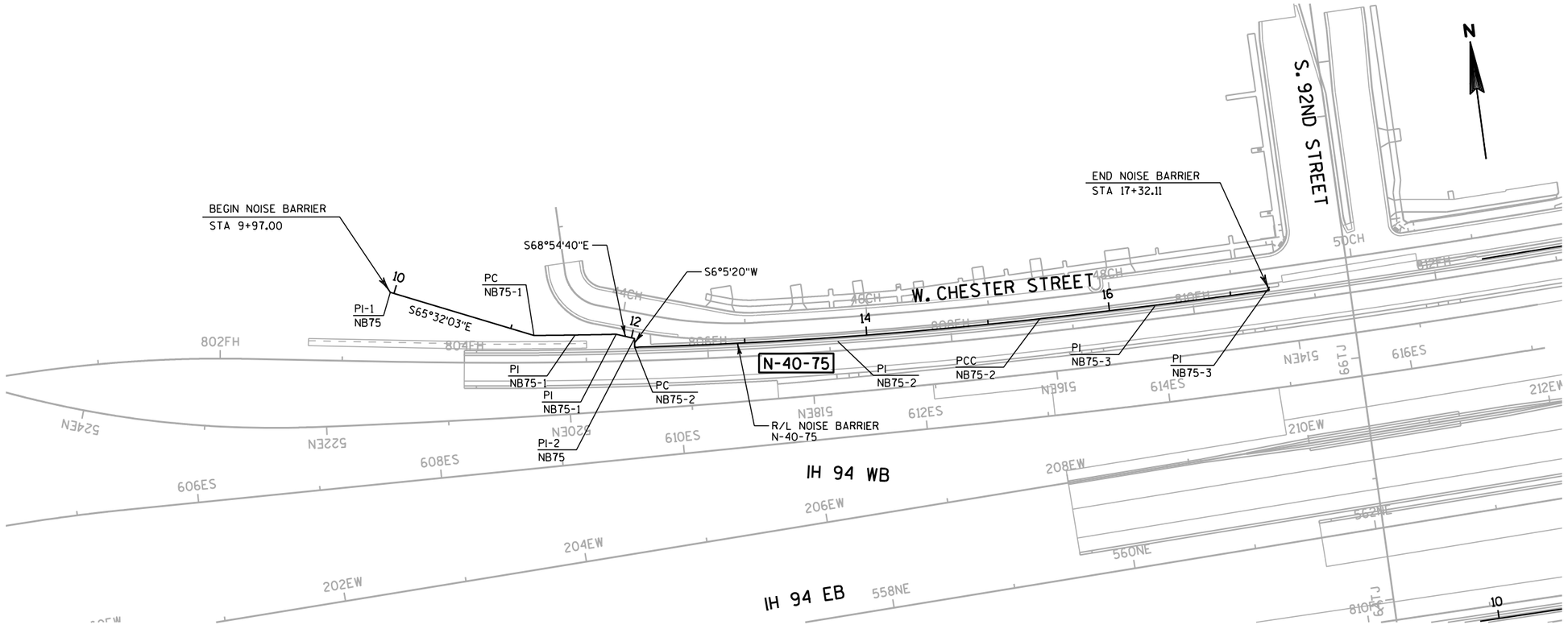
3390

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STATE PROJECT NUMBER
1060-33-80



HORIZONTAL CURVE DATA

CURVE NB75-1		CURVE NB75-2		CURVE NB75-3	
P.I. =	11+53.47	P.I. =	13+76.22	P.I. =	16+37.33
X =	573829.57	X =	574042.28	X =	574303.52
Y =	295900.28	Y =	295866.28	Y =	295860.32
Δ =	0°58'10.83"	Δ =	4°46'50.53"	Δ =	1°21'18.24"
D =	1°26'25.46"	D =	1°26'11.06"	D =	0°42'53.22"
T =	33.66'	T =	166.51'	T =	94.79'
L =	67.32'	L =	332.82'	L =	189.58'
R =	3977.75'	R =	3988.83'	R =	8015.83'
P.C. =	11+19.81	P.C. =	12+09.71	P.C.C. =	15+42.53
P.T. =	11+87.13	P.C.C. =	15+42.53	P.T. =	17+32.11

ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	9+97.00	573684.40	295955.40
PI-2	12+02.60	573877.47	295891.01

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-75

DRAWN BY PAK | PLANS CK'D. EKM

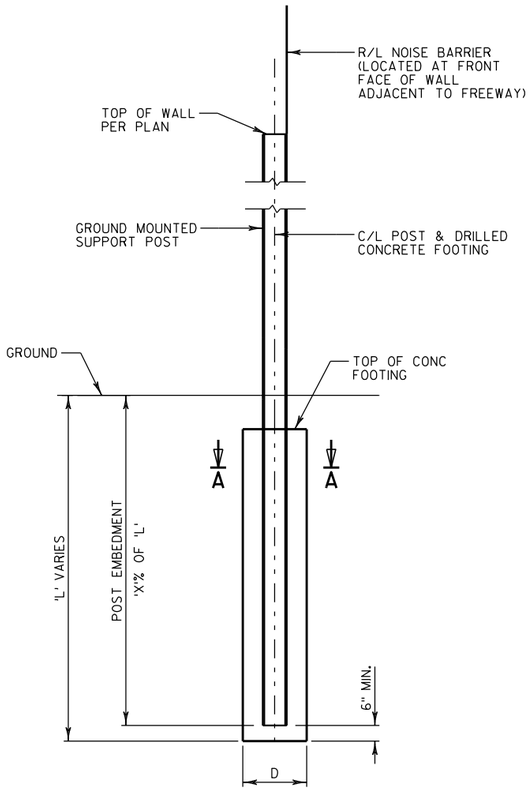
ALIGNMENT PLAN

SHEET 2 OF 6

8

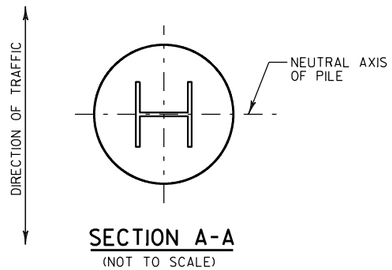
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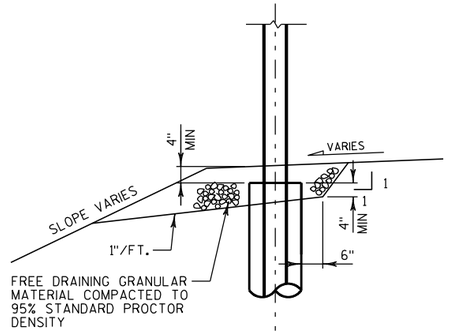
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



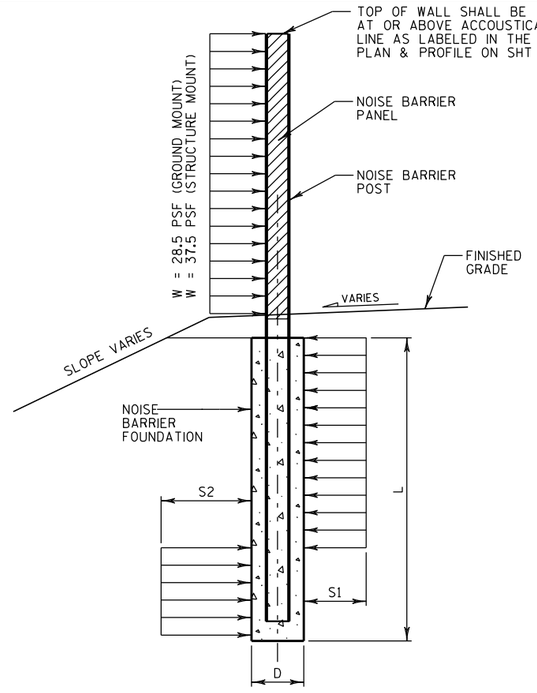
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

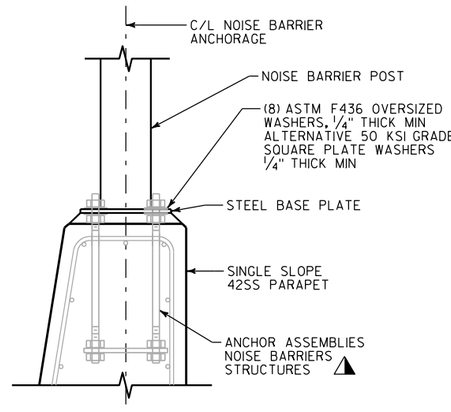
(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

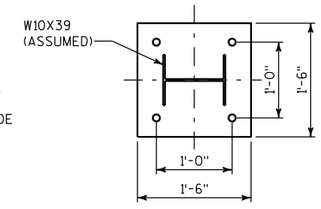
(NOT TO SCALE)



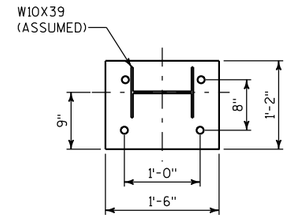
SECTION THRU TOP OF PARAPET

(FOR STRUCTURE MOUNTED NOISE BARRIER)

⚠ NOT A NOISE BARRIER BID ITEM. SEE RETAINING WALL R-40-548 PLANS FOR DETAILS.



BASE PLATE



END BASE PLATE

(USE AT START OF STRUCTURE MOUNTED NOISE BARRIER AND ADJACENT TO FENCE DECORATIVE WING)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0009	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-75	SF	14,250

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-75". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

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28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-75".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-75".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-75".

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STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-75

DRAWN BY PAK | PLANS CK'D. KES

QUANTITIES & CONSTRUCTION DETAILS

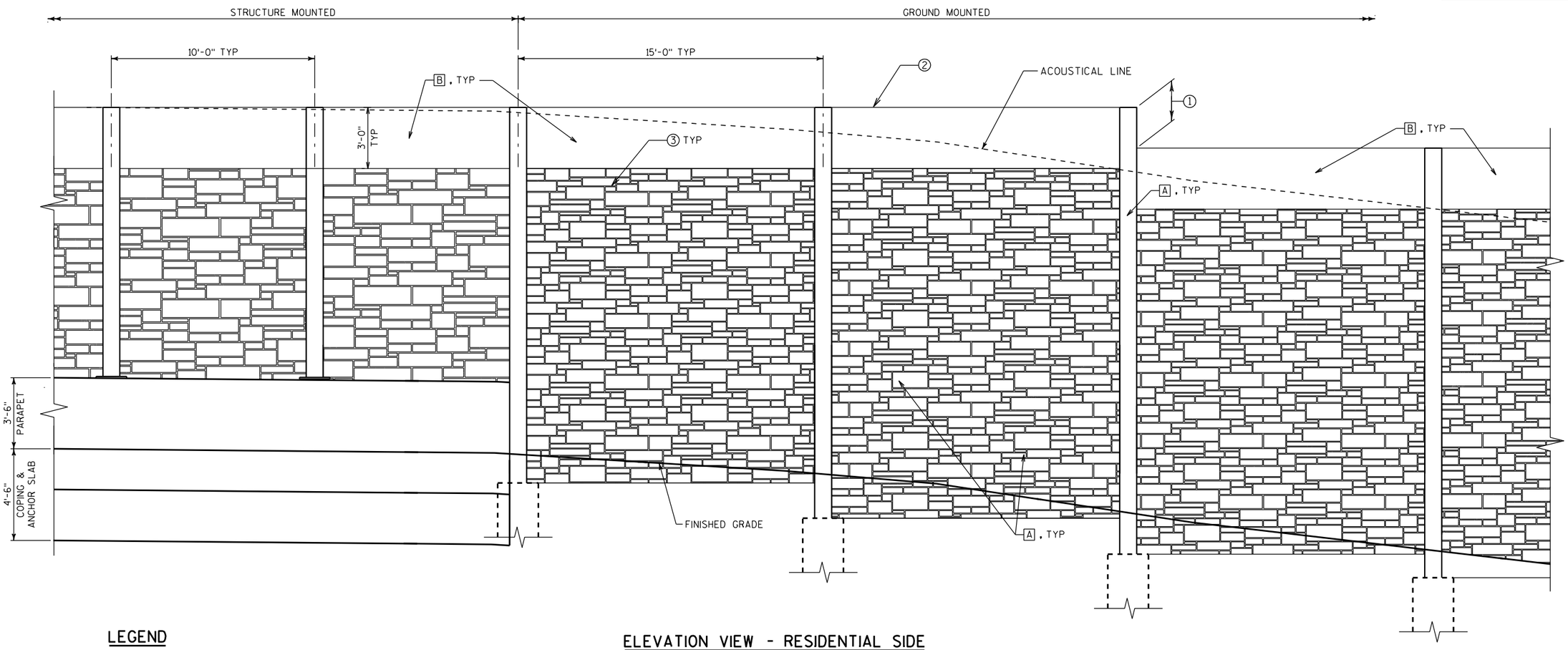
SHEET 3 OF 6

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PLOT DATE : 07-MAY-2014 11:21
PLOT BY : MSCKES
PLOT NAME : N75_080103_gn
PLOT SCALE : 1:1

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

1. STEP TOP OF PANELS FOR GROUND MOUNTED NOISE BARRIER IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

3. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-75

DRAWN BY PAK | PLANS CK'D. EKM

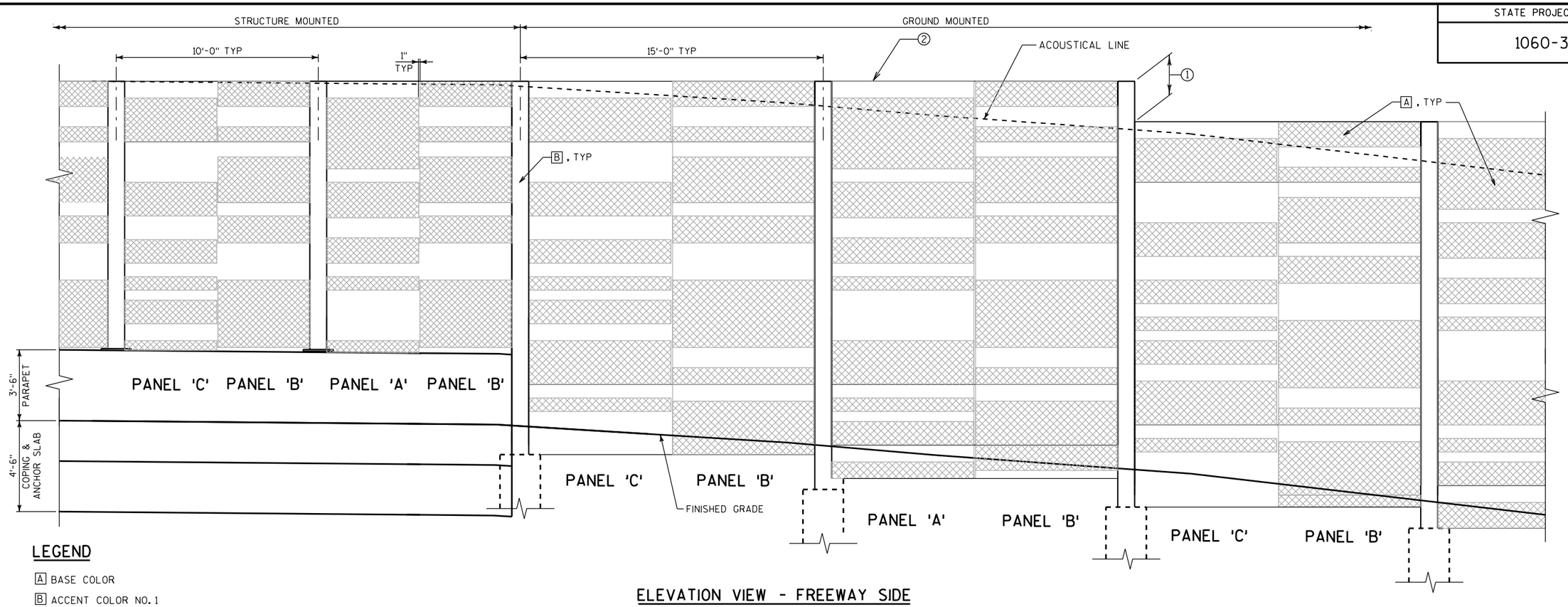
AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 4 OF 6

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STATE PROJECT NUMBER

1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

① STEP TOP OF PANELS FOR GROUND MOUNTED NOISE BARRIER IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER. STEP TOP OF PANELS FOR STRUCTURE MOUNTED NOISE BARRIER PER THE STEPS SHOWN IN THE NOISE BARRIER PROFILE ELEVATION ON SHEET 1. NO VARIANCE FROM THESE STEPS WILL BE ALLOWED.

② ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

③ FOR POST SPA > 8'-0" = 0.5 X (POST SPA - POST FLANGE WIDTH - 1")
FOR POST SPA ≤ 8'-0" = POST SPA - POST FLANGE WIDTH

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

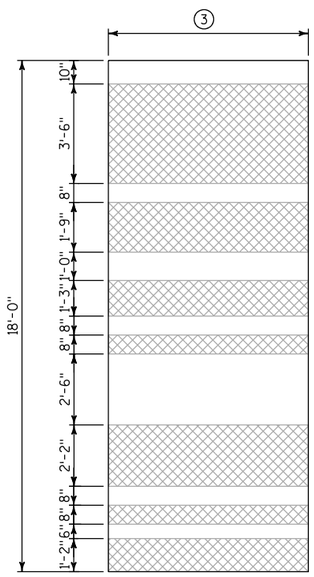
STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:
BASE COLOR - 33564
ACCENT COLOR NO. 1 - 33448

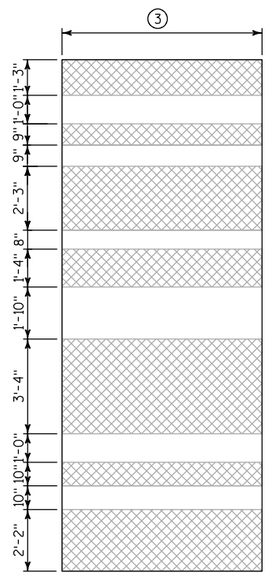
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

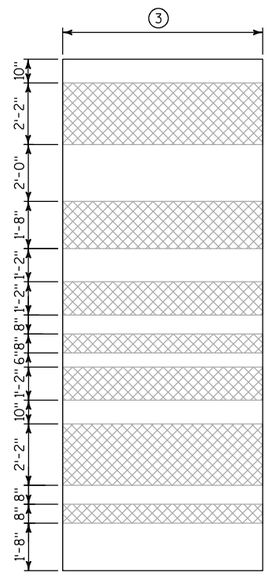
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-75

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 5 OF 6

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-75\cds\N75_080105_ae.dgn PLOT DATE : 07-MAY-2014 11:21 PLOT BY : MSCKES PLOT NAME : N75_080105_ae PLOT SCALE : 5.333333:1

NOTE

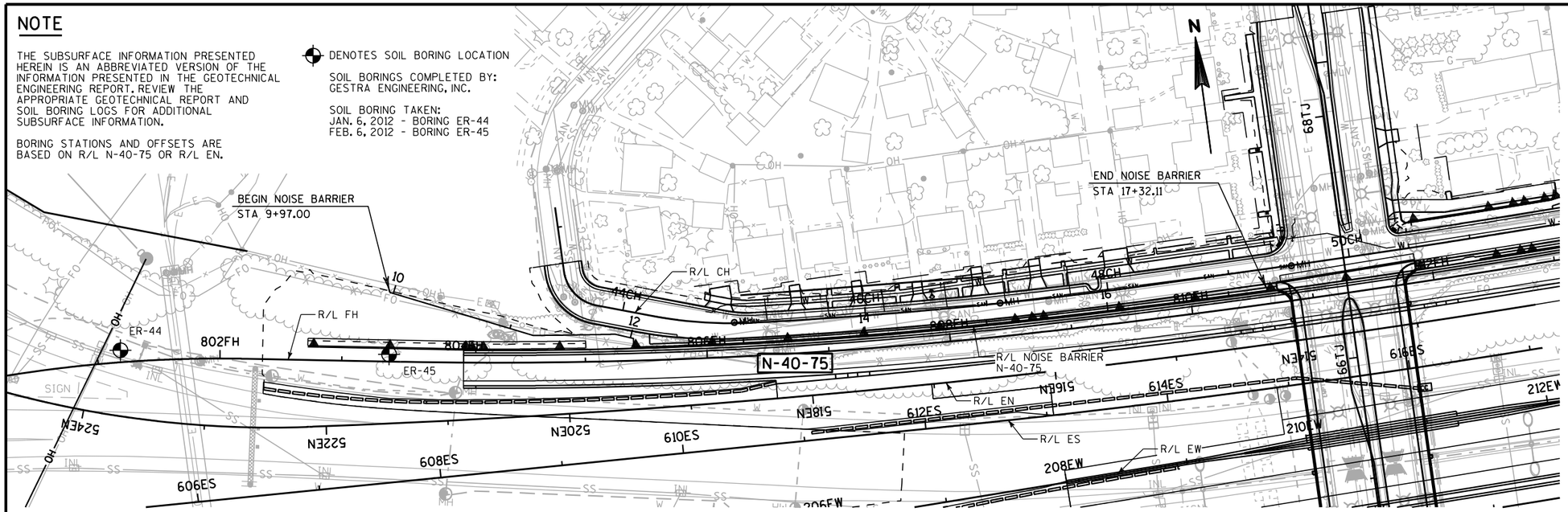
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

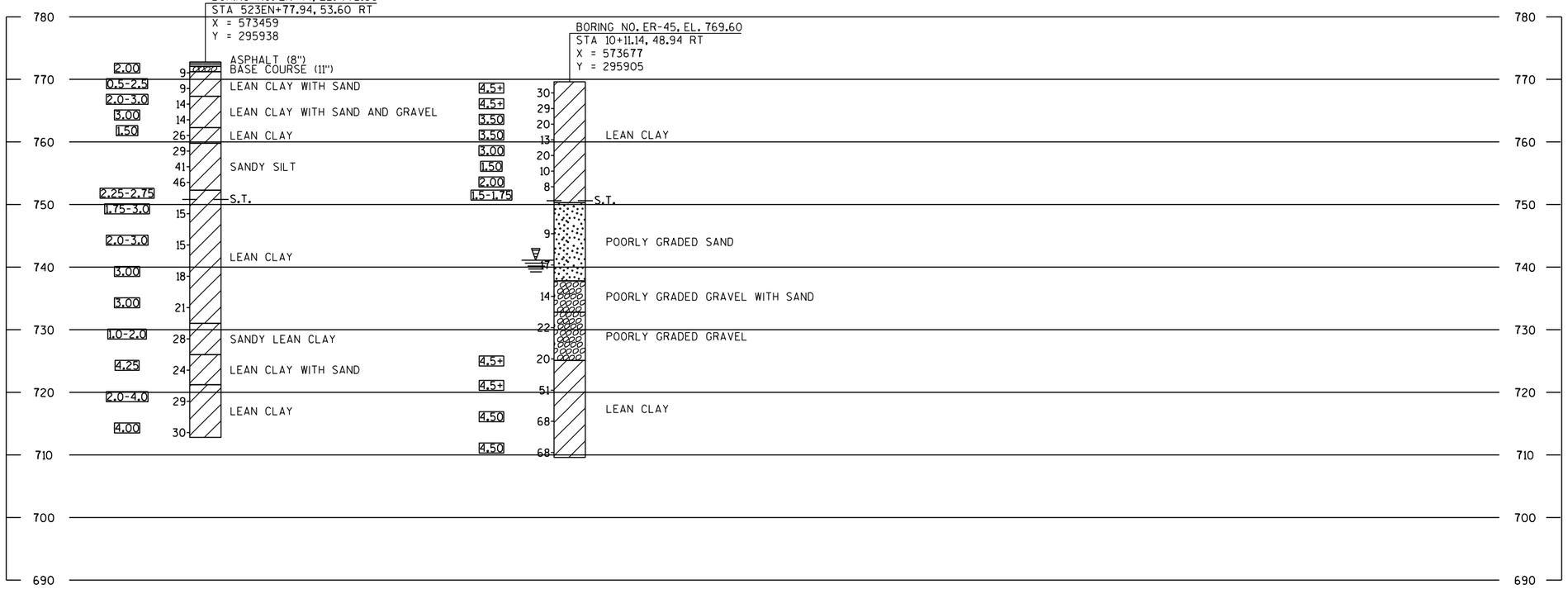
BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-75 OR R/L EN.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JAN. 6, 2012 - BORING ER-44
FEB. 6, 2012 - BORING ER-45





STATE PROJECT NUMBER

1060-33-80

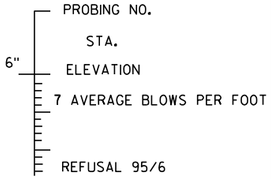
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

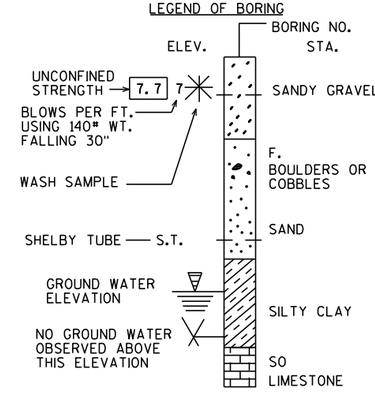
MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-75

DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION

SHEET 6 OF 6

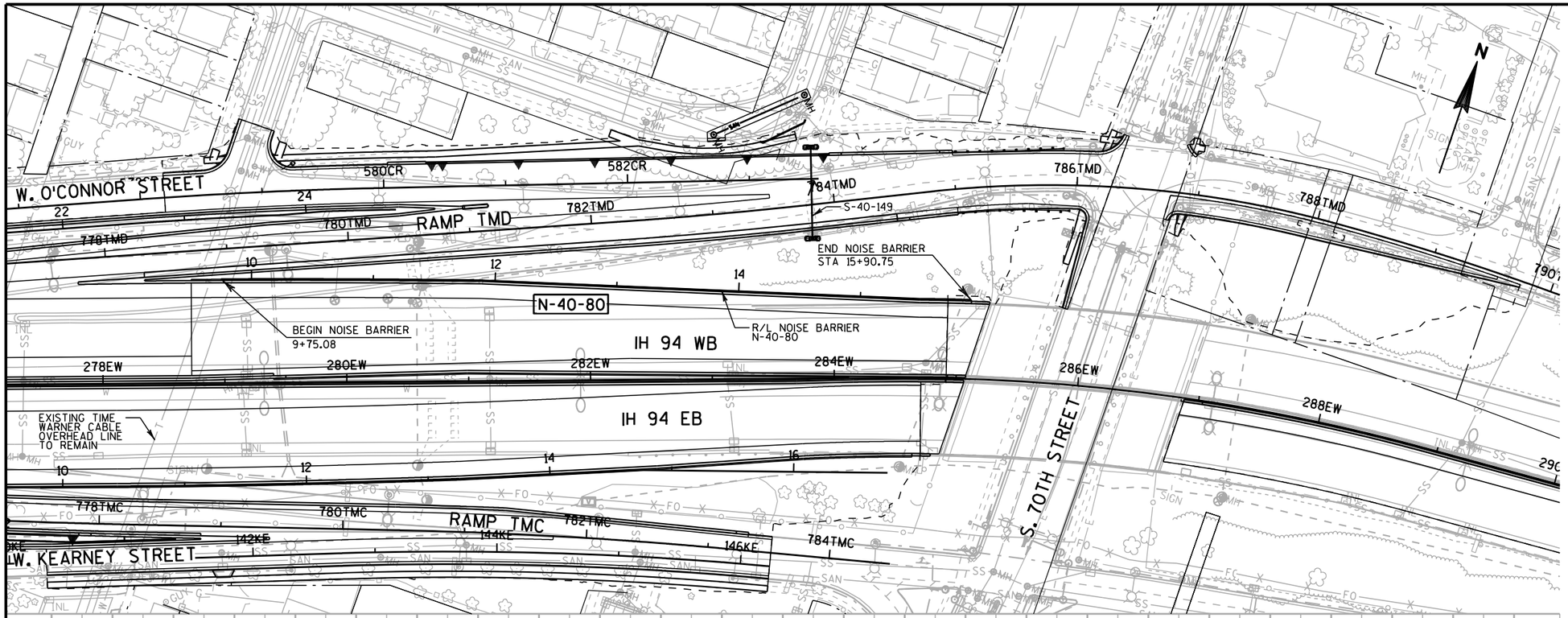
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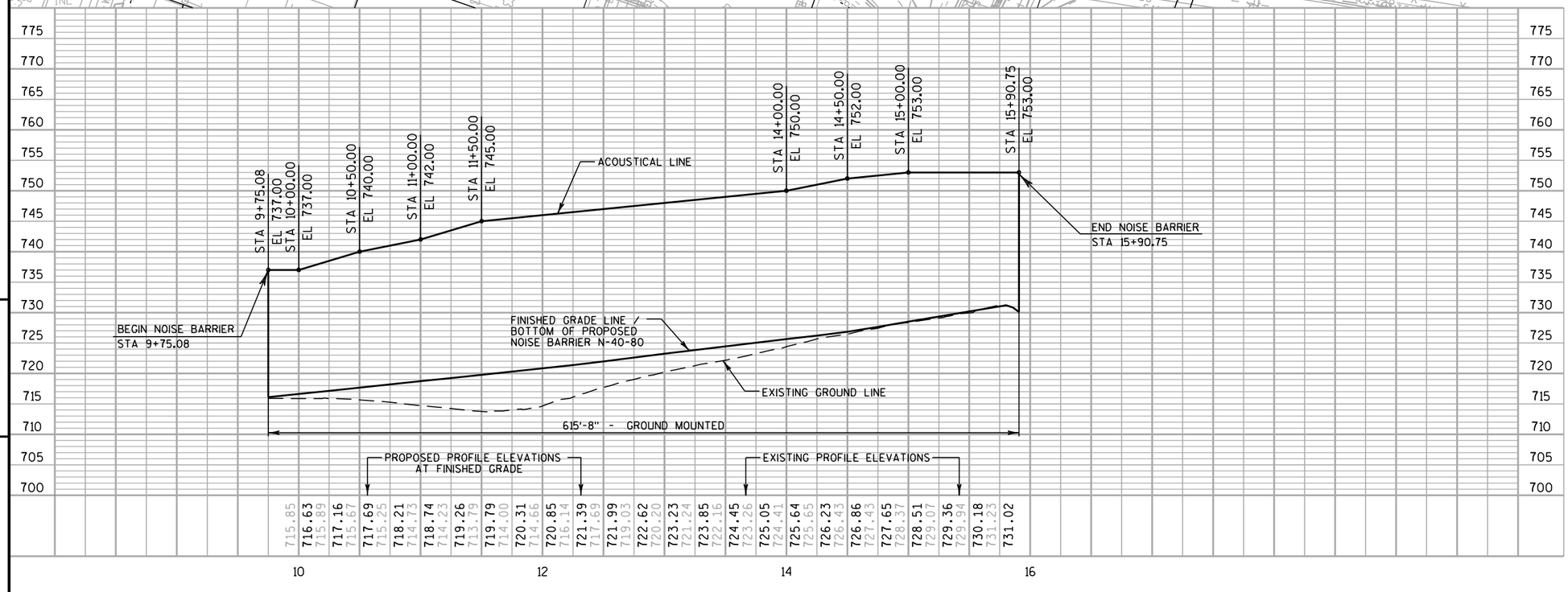
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STATE PROJECT NUMBER
1060-33-80

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS
5. SUBSURFACE EXPLORATION





PLAN & PROFILE: NOISE BARRIER N-40-80

8

8

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-80

NOISE BARRIER ALONG IH 94 WB/WEST OF 70TH ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO 2002

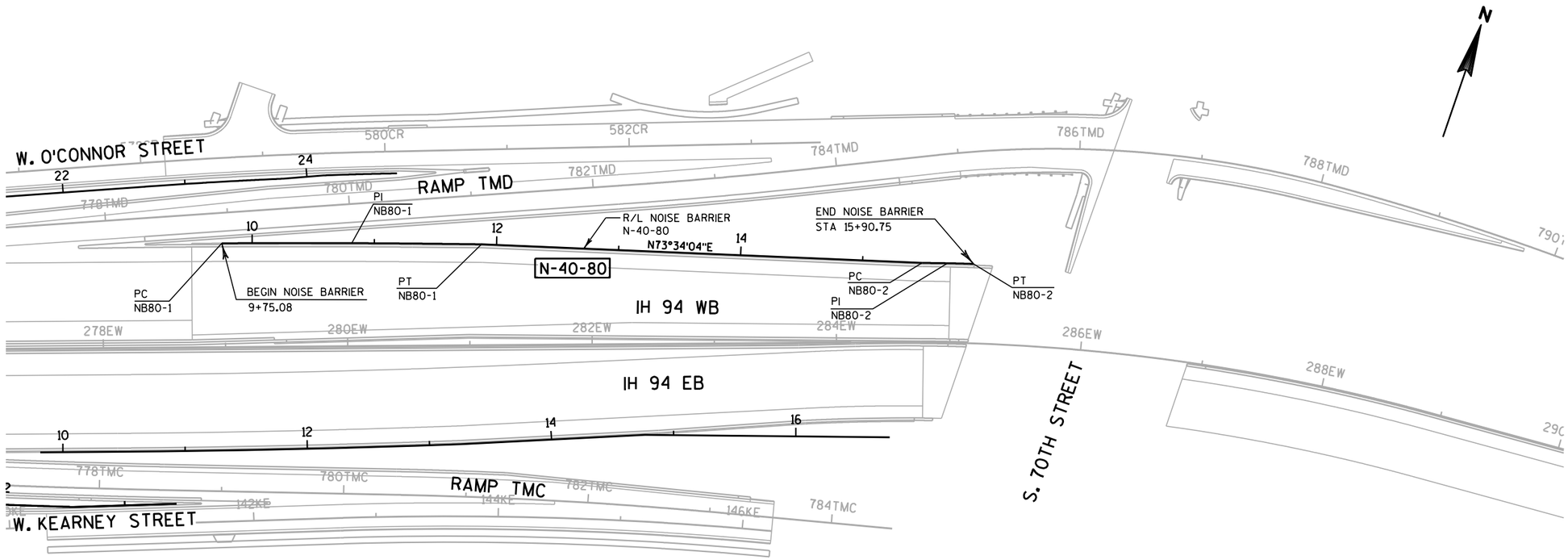
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

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PLOT DATE : 01-MAY-2014 15:22
PLOT BY : MSCTEK
PLOT NAME : N80_080101_gp
PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-80



HORIZONTAL CURVE DATA

CURVE NB80-1		CURVE NB80-2	
P.I. =	10+81.92	P.I. =	15+69.74
X =	581245.01	X =	581711.82
Y =	296346.34	Y =	296487.82
Δ =	1°05'56.75"	Δ =	1°24'53.81"
D =	0°30'51.74"	D =	3°21'58.97"
T =	106.84'	T =	21.02'
L =	213.68'	L =	42.03'
R =	11139.00'	R =	1702.00'
P.C. =	9+75.08	P.C. =	15+48.72
P.T. =	11+88.76	P.T. =	15+90.75

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-80

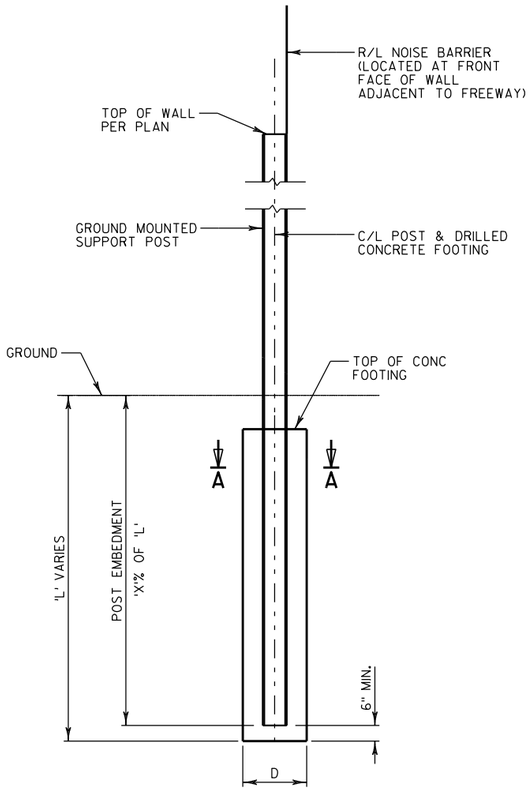
DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

SHEET 2 OF 5

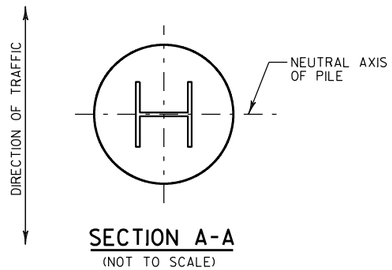
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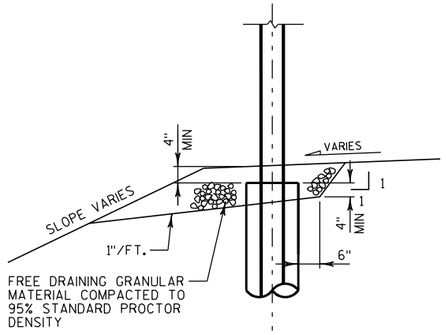
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



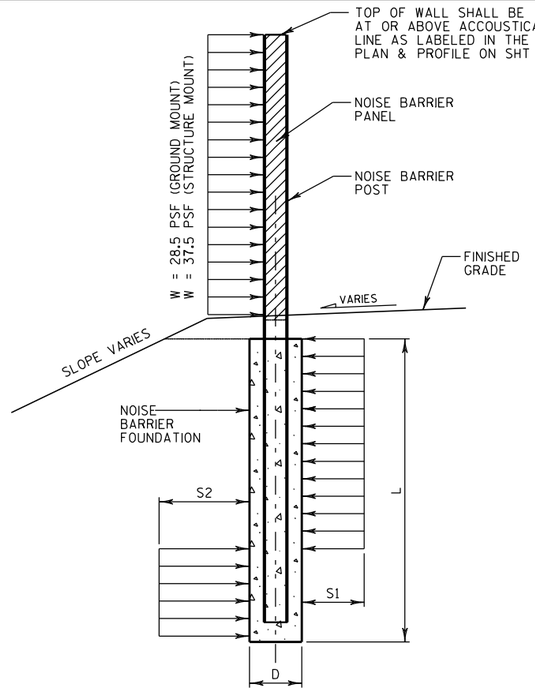
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0010	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80	SF	14,930

STATE PROJECT NUMBER

1060-33-80

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-80".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-80

DRAWN BY PAK | PLANS CK'D. KES

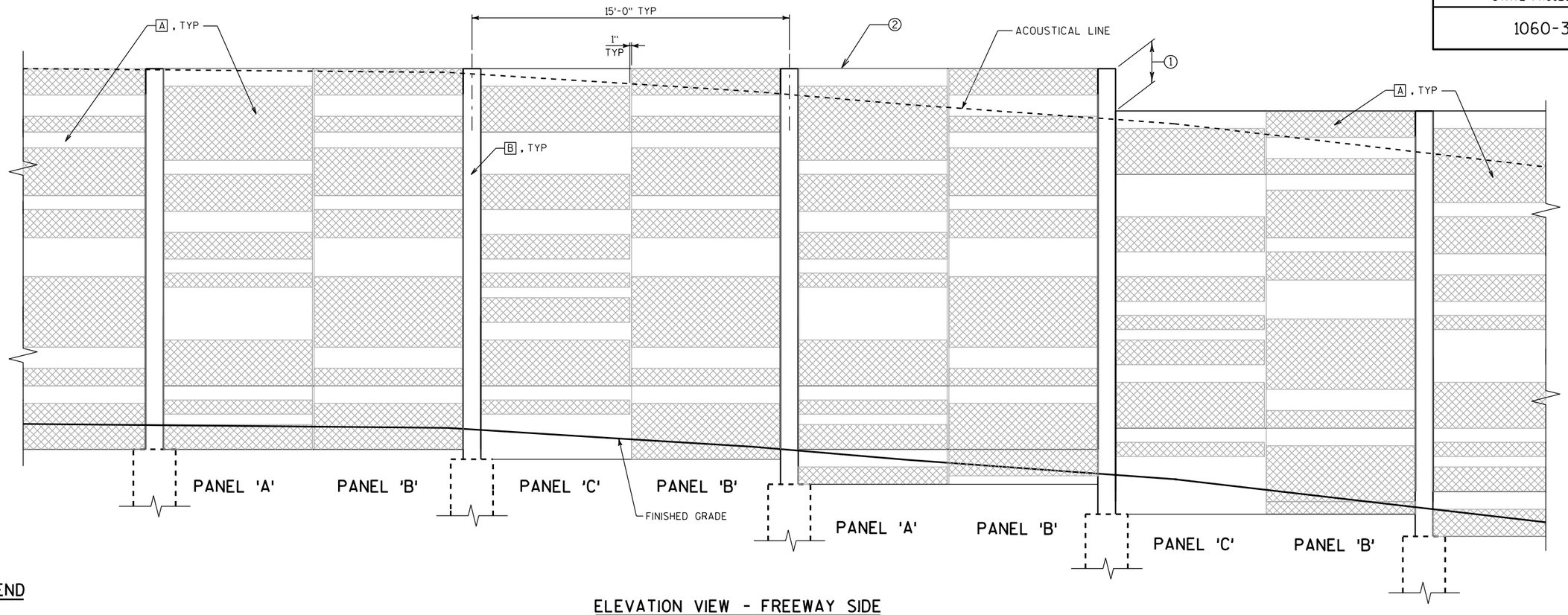
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 5

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

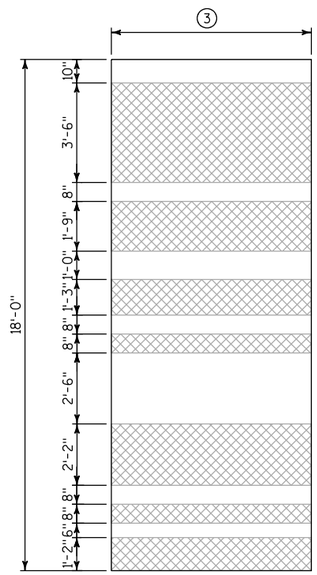
ACCENT COLOR NO. 1 - 33448

NOTES

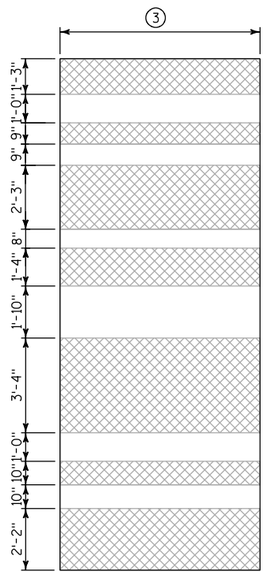
ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.

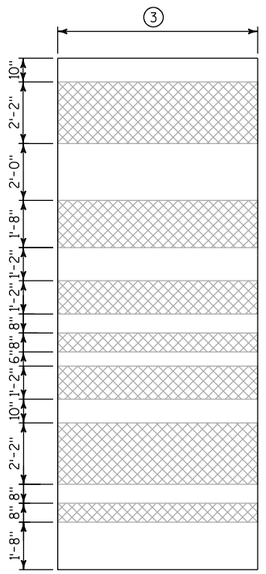
PATTERNS SHOWN WILL BE USED ON THE FREEWAY SIDE AND THE RAMP SIDE OF THE NOISE BARRIER.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-80

DRAWN BY PAK | PLANS CK'D. EKM

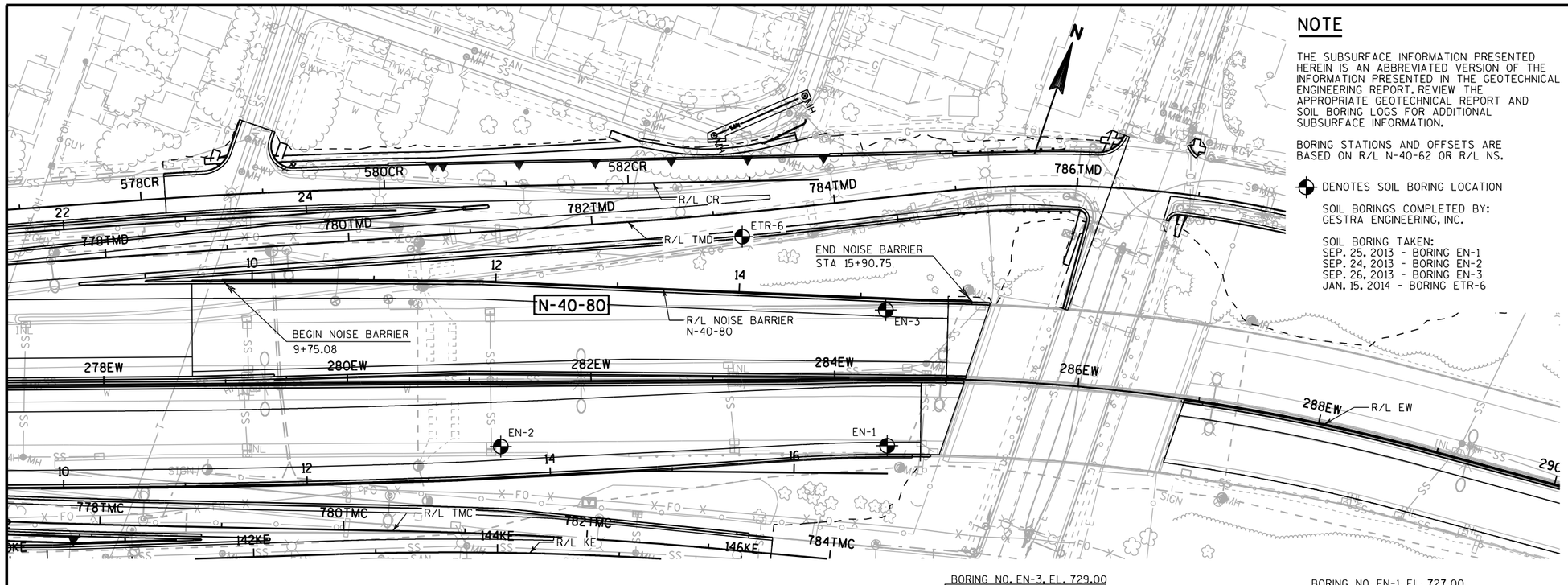
AESTHETIC WALL TREATMENT DETAILS

SHEET 4 OF 5

8

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-80\cds\N80_080104_ae.dgn PLOT DATE : 01-MAY-2014 15:23 PLOT BY : MSCTEK PLOT NAME : N80_080104_ae PLOT SCALE : 5.333333:1



NOTE

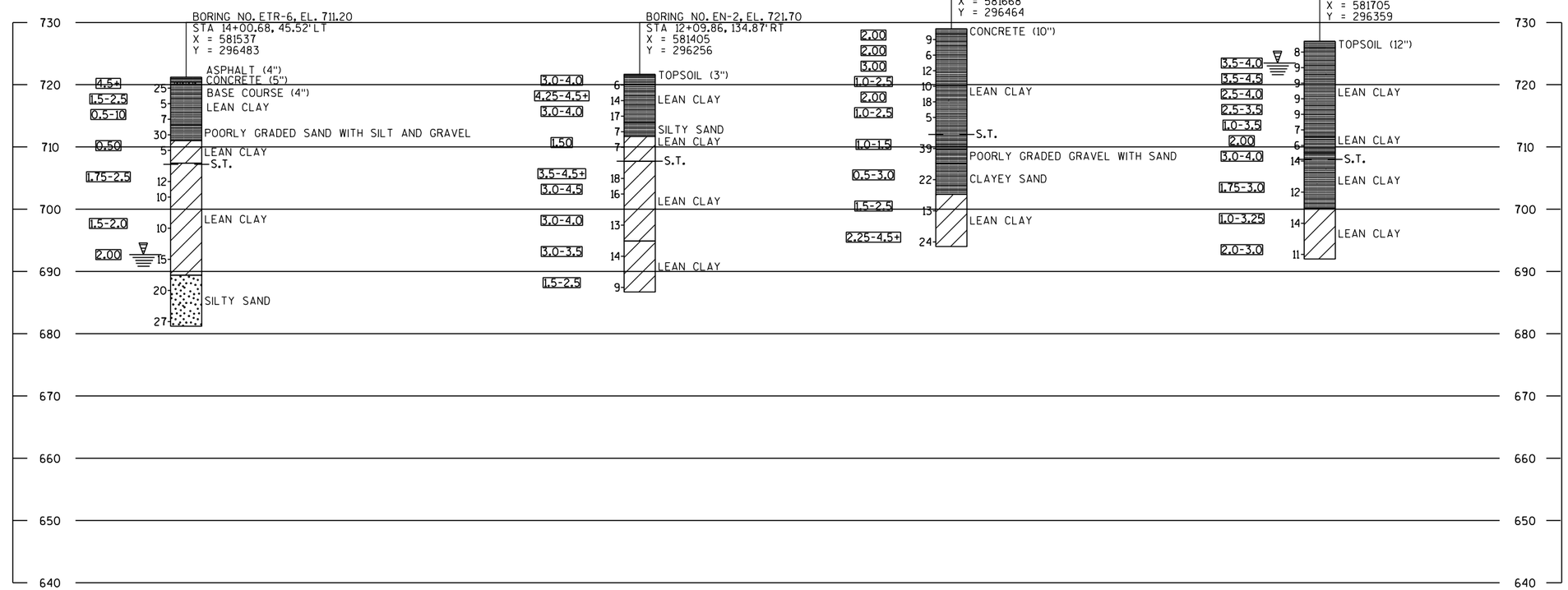
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-62 OR R/L NS.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
SEP. 25, 2013 - BORING EN-1
SEP. 24, 2013 - BORING EN-2
SEP. 26, 2013 - BORING EN-3
JAN. 15, 2014 - BORING ETR-6



STATE PROJECT NUMBER
1060-33-80

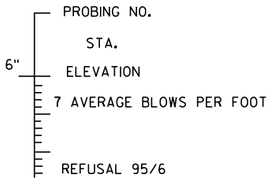
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

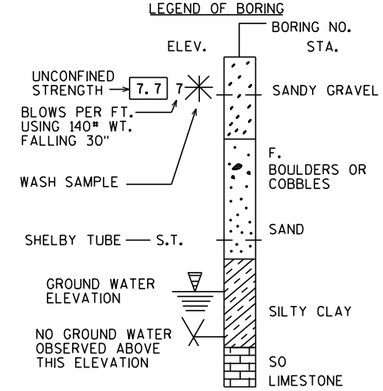
MATERIAL SYMBOLS

TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-80

DRAWN BY PRK | PLANS CK'D. KES

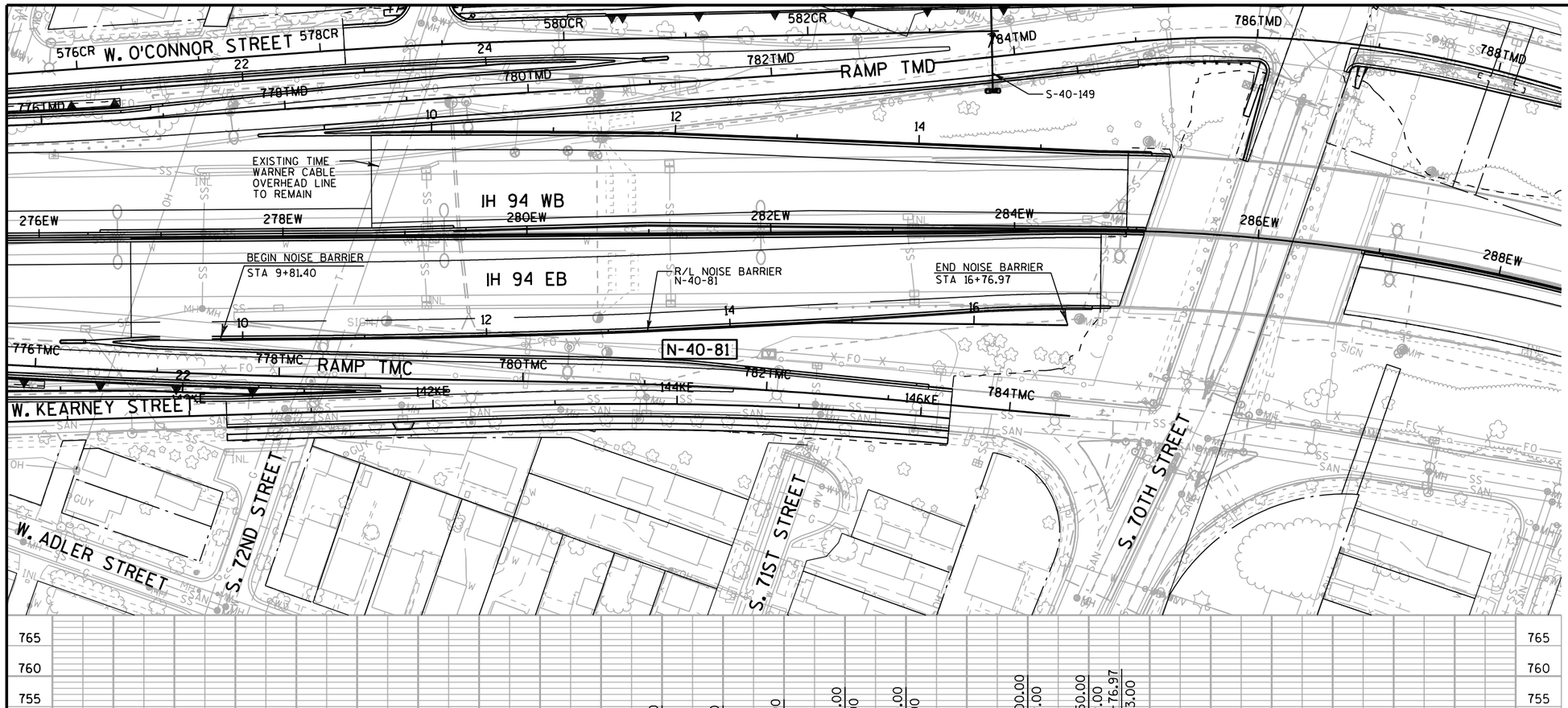
SUBSURFACE EXPLORATION

SHEET 5 OF 5

8

8

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PLAN & PROFILE: NOISE BARRIER N-40-81

STATE PROJECT NUMBER

1060-33-80

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. ALIGNMENT PLAN
3. QUANTITIES & CONSTRUCTION DETAILS
4. AESTHETIC WALL TREATMENT DETAILS
5. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2014

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-81

NOISE BARRIER ALONG IH 94 EB/WEST OF 70TH ST

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	PAK	KES

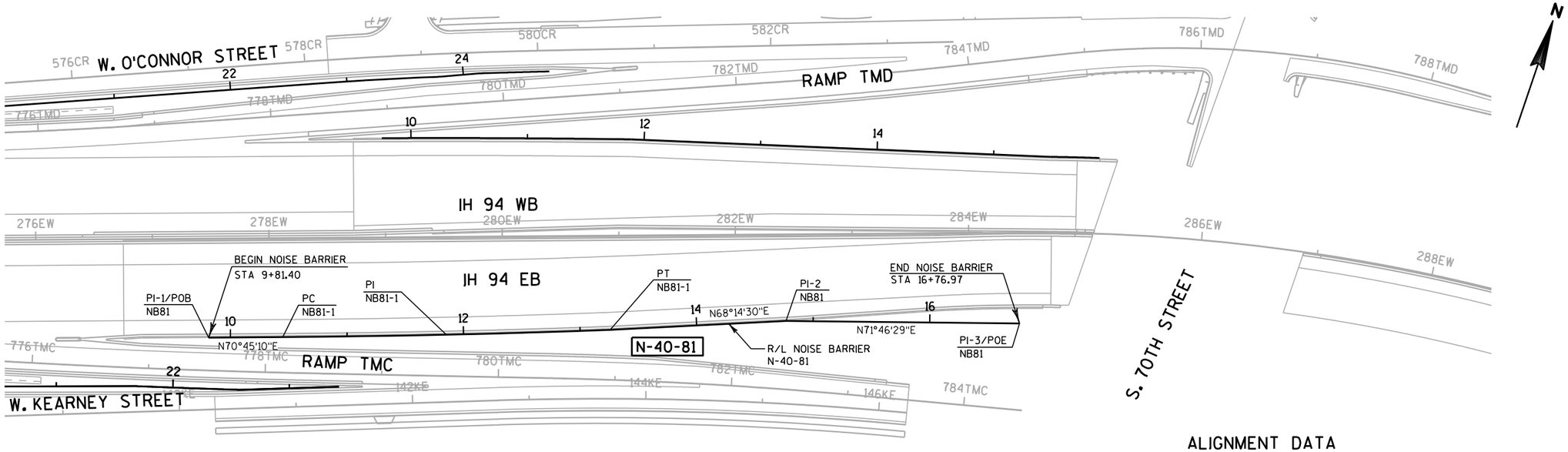
GENERAL PLAN & ELEVATION

SHEET 1 OF 5

3401

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STATE PROJECT NUMBER
1060-33-80



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	9+81.40	581058.74	296101.51
PI-2	14+76.72	581522.66	296274.87
PI-3	16+76.97	581712.86	296337.50

HORIZONTAL CURVE DATA

CURVE NB81-1

P.I. = 11+85.26
X = 581251.20
Y = 296168.71
Δ = 1°40'56.44"
D = 0°35'56.90"
T = 140.41'
L = 280.79'
R = 9563.00'
P.C. = 10+44.85
P.T. = 13+25.64

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

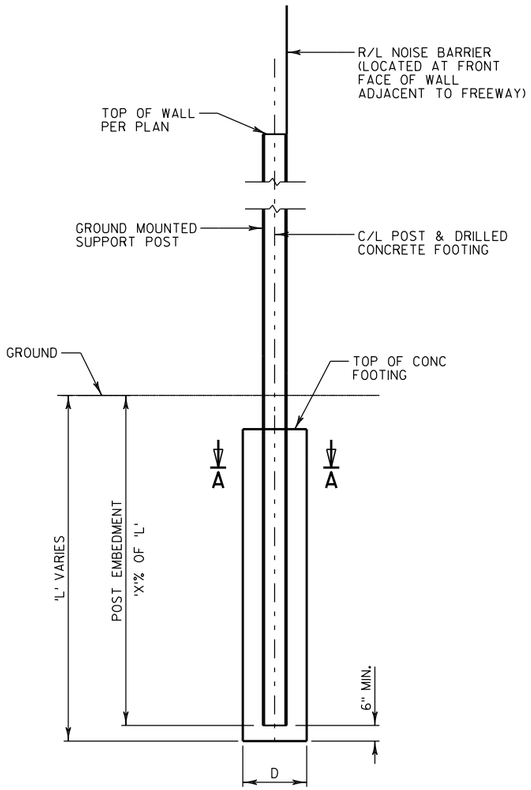
STRUCTURE N-40-81

DRAWN BY PAK | PLANS CK'D. EKM

ALIGNMENT PLAN

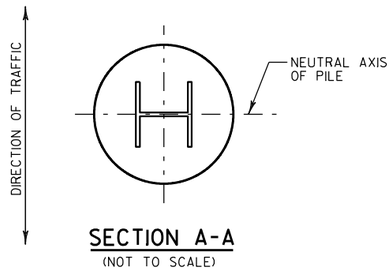
SHEET 2 OF 5

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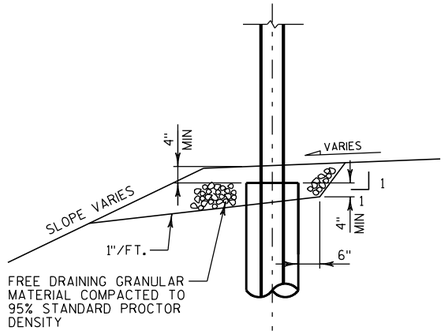
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L' AND 'X' TO BE DETERMINED BY SUPPLIER)



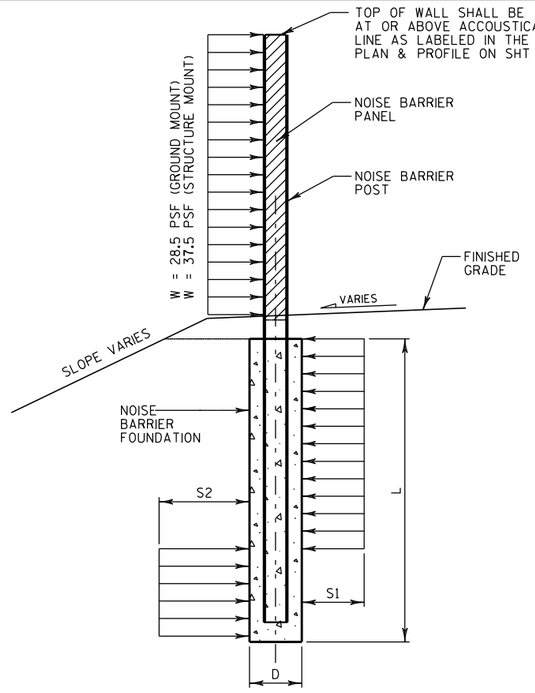
SECTION A-A

(NOT TO SCALE)



POST DRAINAGE BACKFILL DETAIL (SLOPED GRADE)

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0011	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81	SF	11,080

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81".

PLANS, ELEVATIONS AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AND THE ACOUSTICAL LINE SHOWN ON SHEET 1.

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

EXISTING BORING LOGS AND LAB DATA IN THE VICINITY OF THE PROPOSED NOISE BARRIERS HAVE BEEN COMPILED AND INCLUDED IN THE DOCUMENT "NOISE BARRIER DATA MEMORANDUM CORE 1 STRUCTURES", DATED FEBRUARY 28, 2014. CONTACT JAMES KEEGAN - WISDOT, (414) 750-3311, 141 NW BARSTOW STREET, P.O. BOX 798, WAUKESHA, WI 53187 TO OBTAIN A COPY. THE CONTRACTORS ARE RESPONSIBLE TO REVIEW THE DATA IN THIS REPORT TO HELP ASSESS FIELD DRILLING CONDITIONS AND TO SUPPORT DEVELOPMENT OF SOIL DESIGN PARAMETERS FOR THE NOISE BARRIER FOUNDATION DESIGN.

ALL NOISE BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE 1989 GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS, INCLUDING THE 1992 AND 2002 INTERIM'S BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

THE FOLLOWING DESIGN PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
28.5 P.S.F. FOR GROUND MOUNTED BARRIERS
37.5 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81".

LOCATE HYDRANT ACCESS HOLES IN NOISE BARRIERS WITH COVER SIGNS AT LOCATIONS SHOWN ON THE GENERAL PLAN & ELEVATION SHEET. PROVIDING HYDRANT ACCESS HOLES IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-81".

STATE PROJECT NUMBER
1060-33-80

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-81

DRAWN BY PAK | PLANS CK'D. KES

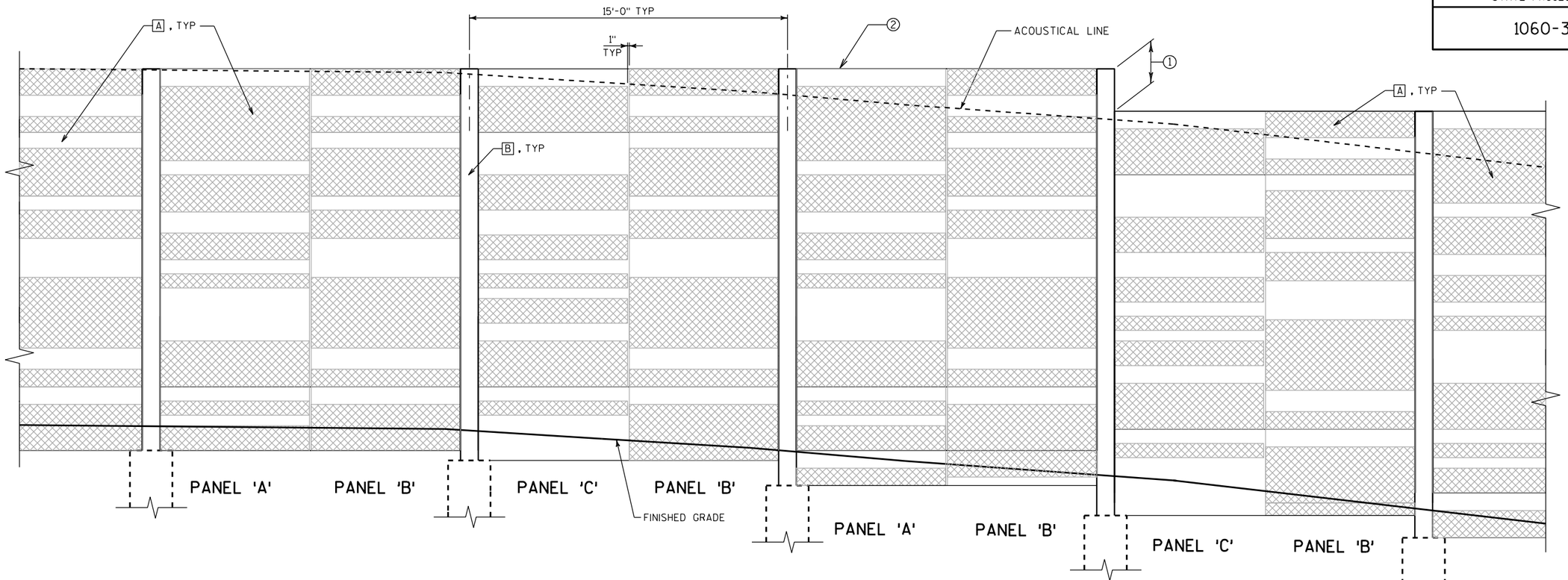
QUANTITIES & CONSTRUCTION DETAILS

SHEET 3 OF 5

8

8

STATE PROJECT NUMBER
1060-33-80



ELEVATION VIEW - FREEWAY SIDE

LEGEND

A BASE COLOR

B ACCENT COLOR NO. 1

(1) STEP PANELS IN INCREMENTS OF 2'-0"'. STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

(2) ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.

(3) 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

PANEL THICKNESS + 0"

PANEL THICKNESS - ¾" MIN, 1" MAX

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564

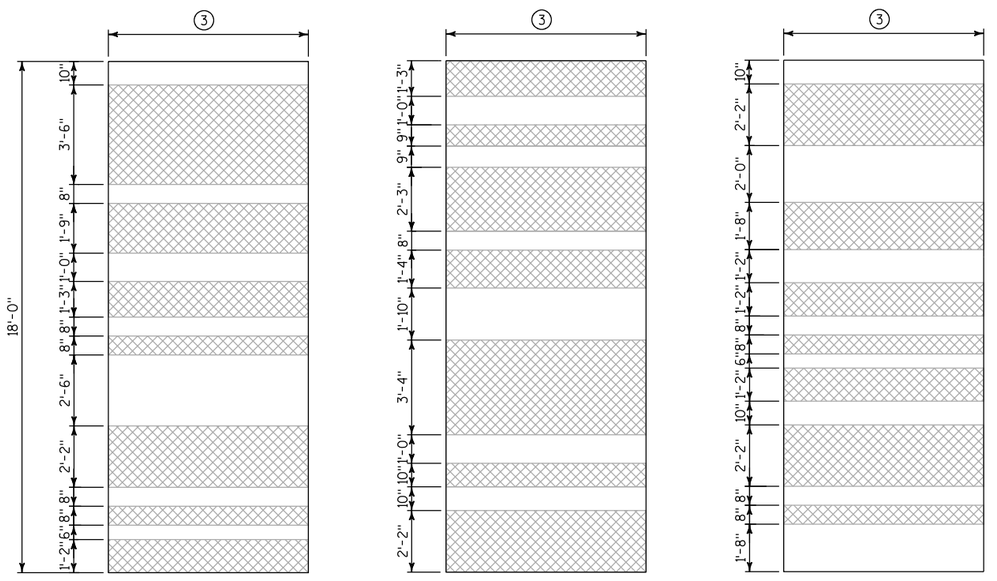
ACCENT COLOR NO. 1 - 33448

NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER 18'-0" IS REQUIRED.

PATTERNS SHOWN WILL BE USED ON THE FREEWAY SIDE AND THE RAMP SIDE OF THE NOISE BARRIER.



PANEL 'A' PATTERN

PANEL 'B' PATTERN

PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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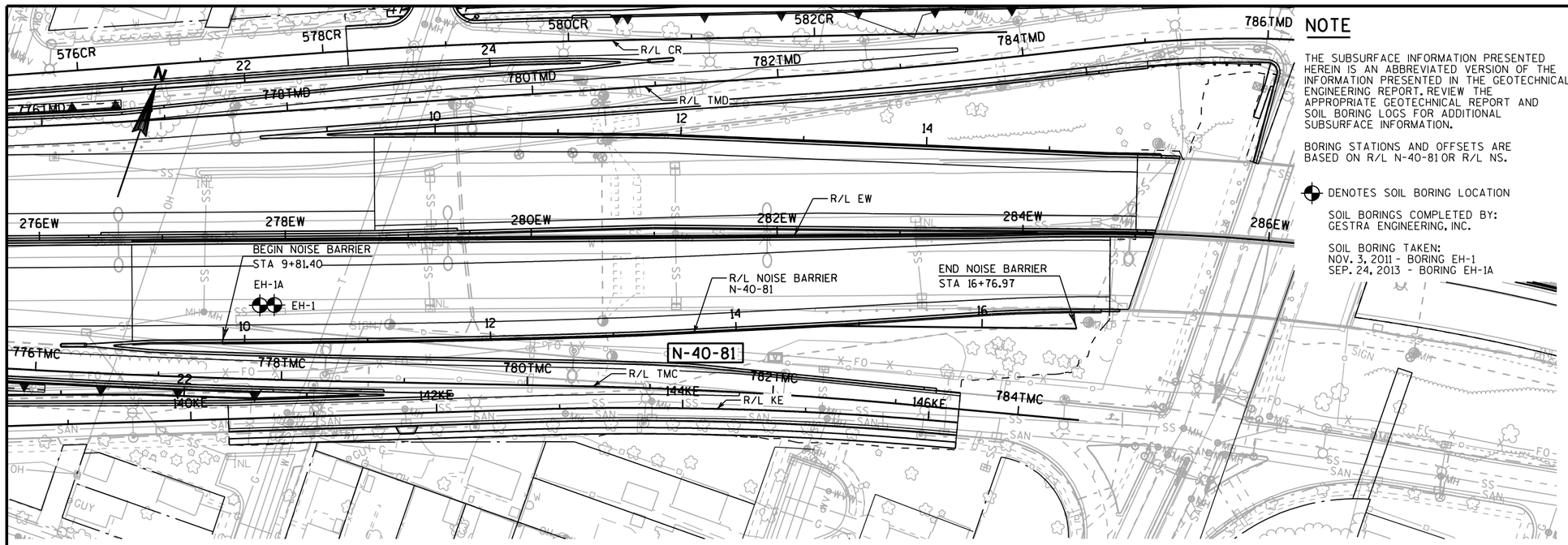
STRUCTURE N-40-81

DRAWN BY PAK | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 4 OF 5

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-81\cds\N81_080104_ae.dgn PLOT DATE : 01-MAY-2014 15:29 PLOT BY : MSCTEK PLOT NAME : N81_080104_ae PLOT SCALE : 5.333333:1



NOTE

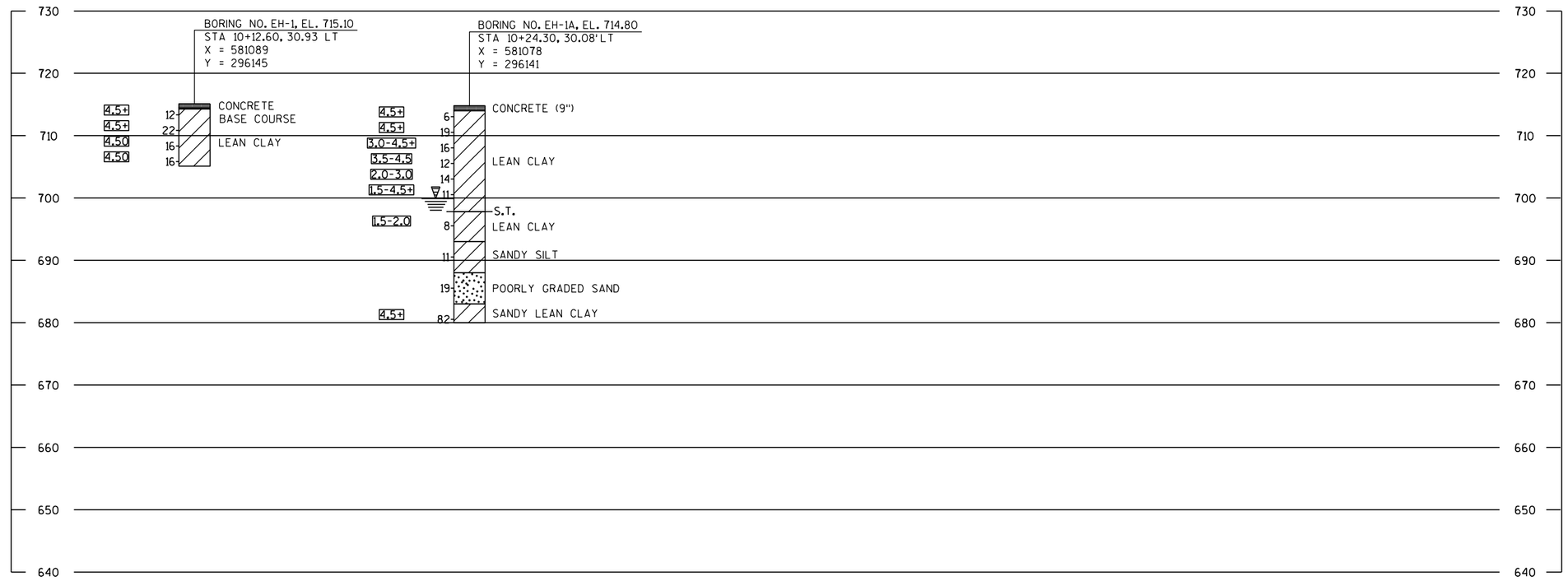
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON R/L N-40-81 OR R/L NS.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 3, 2011 - BORING EH-1
SEP. 24, 2013 - BORING EH-1A



STATE PROJECT NUMBER

1060-33-80

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-81

DRAWN BY PRK | PLANS CK'D. KES

SUBSURFACE EXPLORATION

SHEET 5 OF 5

8

FILE NAME : W:\Cadd\Final\10603380_Z1\Structs\N-40-81\cds\N81_080105_se.dgn PLOT DATE : 01-MAY-2014 15:30 PLOT BY : MSCTEK PLOT NAME : N81_080105_se PLOT SCALE : 100:1

Division 1 USH 45 NB_R-40-557

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
317+04 AH	31704.00	0.00	0.00	0.00	315.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317+50	31750.00	46.00	0.00	0.00	341.00	0.00	0.00	0.00	558.81	0.00	0.00	670.58	0.00	0.00	-670.58
318+00	31800.00	50.00	0.00	0.00	379.00	0.00	0.00	0.00	666.67	0.00	0.00	1470.58	0.00	0.00	-1470.58
318+50	31850.00	50.00	0.00	0.00	385.00	0.00	0.00	0.00	707.41	0.00	0.00	2319.47	0.00	0.00	-2319.47
319+00	31900.00	50.00	0.00	0.00	382.00	0.00	0.00	0.00	710.19	0.00	0.00	3171.69	0.00	0.00	-3171.69
319+50	31950.00	50.00	0.00	0.00	387.00	0.00	0.00	0.00	712.04	0.00	0.00	4026.13	0.00	0.00	-4026.13
320+00	32000.00	50.00	0.00	0.00	436.00	0.00	0.00	0.00	762.04	0.00	0.00	4940.58	0.00	0.00	-4940.58
320+50	32050.00	50.00	0.00	0.00	657.00	0.00	0.00	0.00	1012.04	0.00	0.00	6155.02	0.00	0.00	-6155.02
321+00	32100.00	50.00	0.00	0.00	914.00	0.00	0.00	0.00	1454.63	0.00	0.00	7900.58	0.00	0.00	-7900.58
321+50	32150.00	50.00	0.00	0.00	694.00	0.00	0.00	0.00	1488.89	0.00	0.00	9687.24	0.00	0.00	-9687.24
322+00	32200.00	50.00	0.00	0.00	700.00	0.00	0.00	0.00	1290.74	0.00	0.00	11236.13	0.00	0.00	-11236.13
322+50	32250.00	50.00	0.00	0.00	561.00	0.00	0.00	0.00	1167.59	0.00	0.00	12637.24	0.00	0.00	-12637.24
323+00	32300.00	50.00	0.00	0.00	616.00	0.00	0.00	0.00	1089.81	0.00	0.00	13945.02	0.00	0.00	-13945.02
323+50	32350.00	50.00	0.00	0.00	653.00	0.00	0.00	0.00	1175.00	0.00	0.00	15355.02	0.00	0.00	-15355.02
324+00	32400.00	50.00	0.00	0.00	656.00	0.00	0.00	0.00	1212.04	0.00	0.00	16809.47	0.00	0.00	-16809.47
324+50	32450.00	50.00	0.00	0.00	621.00	0.00	0.00	0.00	1182.41	0.00	0.00	18228.36	0.00	0.00	-18228.36
324+97 BK	32497.00	47.00	0.00	0.00	362.00	0.00	0.00	0.00	855.57	0.00	0.00	19255.04	0.00	0.00	-19255.04
		Column totals					0.00	0.00	16045.87	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
340+33 AH	34033.00	0.00	505.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
340+50	34050.00	17.00	460.48	0.00	0.00	0.00	304.14	0.00	0.00	0.00	304.14	0.00	0.00	0.00	304.14
341+00	34100.00	50.00	373.48	0.00	1.89	0.00	772.19	0.00	1.75	0.00	1076.32	2.10	0.00	0.00	1074.22
341+50	34150.00	50.00	326.10	0.00	0.00	0.00	647.76	0.00	1.75	0.00	1724.08	4.20	0.00	0.00	1719.88
342+00	34200.00	50.00	233.49	0.00	0.00	0.00	518.14	0.00	0.00	0.00	2242.22	4.20	0.00	0.00	2238.02
342+50	34250.00	50.00	131.24	0.00	7.68	0.00	337.71	0.00	7.11	0.00	2579.93	12.73	0.00	0.00	2567.20
343+00	34300.00	50.00	51.55	0.00	8.27	0.00	169.25	0.00	14.77	0.00	2749.18	30.46	0.00	0.00	2718.73
343+50	34350.00	50.00	55.03	0.00	13.17	0.00	98.69	0.00	19.85	0.00	2847.87	54.28	0.00	0.00	2793.59
344+00	34400.00	50.00	34.32	0.00	0.00	0.00	82.73	0.00	12.19	0.00	2930.60	68.91	0.00	0.00	2861.69
344+50	34450.00	50.00	15.80	0.00	0.00	0.00	46.41	0.00	0.00	0.00	2977.01	68.91	0.00	0.00	2908.10
345+00	34500.00	50.00	50.33	0.00	0.00	0.00	61.23	0.00	0.00	0.00	3038.24	68.91	0.00	0.00	2969.33
345+50	34550.00	50.00	58.23	0.00	0.00	0.00	100.52	0.00	0.00	0.00	3138.76	68.91	0.00	0.00	3069.85
346+00	34600.00	50.00	56.34	0.00	0.00	0.00	106.08	0.00	0.00	0.00	3244.84	68.91	0.00	0.00	3175.93
346+50	34650.00	50.00	50.38	0.00	0.00	0.00	98.81	0.00	0.00	0.00	3343.65	68.91	0.00	0.00	3274.74
346+55 BK	34655.00	5.00	48.77	0.00	0.00	0.00	9.18	0.00	0.00	0.00	3352.84	68.91	0.00	0.00	3283.92
						Column totals	3352.84	0.00	57.43	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 RAMP SW

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.00	1.2	1.30	0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
575+86 AH	57586.00	0.00	0.02	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
576+00	57600.00	14.00	15.86	0.00	39.59	0.00	4.12	0.00	10.39	0.00	4.12	12.46	0.00	0.00	-8.35
576+50	57650.00	50.00	29.32	0.00	840.69	0.00	41.83	0.00	815.07	0.00	45.95	990.55	0.00	0.00	-944.60
576+71	57671.01	21.01	41.87	0.00	923.93	0.00	27.70	0.00	686.57	0.00	73.65	1814.43	0.00	0.00	-1740.78
577+00	57700.00	28.99	66.81	0.00	363.38	0.00	58.35	0.00	691.09	0.00	131.99	2643.75	0.00	0.00	-2511.75
577+09	57708.67	8.67	76.71	0.00	314.51	0.00	23.04	0.00	108.84	0.00	155.04	2774.35	0.00	0.00	-2619.32
577+09	57708.68	0.00	76.71	0.00	355.10	0.00	0.00	0.00	0.00	0.00	155.04	2774.35	0.00	0.00	-2619.32
577+50	57750.00	41.32	120.68	0.00	381.44	0.00	151.04	0.00	563.59	0.00	306.08	3450.66	0.00	0.00	-3144.58
578+00	57800.00	50.00	93.92	0.00	381.31	0.00	198.70	0.00	706.25	0.00	504.78	4298.16	0.00	0.00	-3793.38
578+50	57850.00	50.00	33.29	0.00	361.37	0.00	117.79	0.00	687.67	0.00	622.57	5123.36	0.00	0.00	-4500.79
579+00	57900.00	50.00	26.93	0.00	594.85	0.00	55.76	0.00	885.39	0.00	678.33	6185.83	0.00	0.00	-5507.50
579+50	57950.00	50.00	47.34	0.00	753.81	0.00	68.77	0.00	1248.76	0.00	747.09	7684.34	0.00	0.00	-6937.24
579+56 BK	57956.08	6.08	47.65	0.00	762.29	0.00	10.70	0.00	170.70	0.00	757.79	7889.18	0.00	0.00	-7131.39
						Column totals	757.79	0.00	6574.32	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 RAMP BA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
723+77 AH	72376.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
724+00	72400.00	23.18	202.85	0.00	0.00	0.00	87.08	0.00	0.00	0.00	87.08	0.00	0.00	0.00	87.08
724+50	72450.00	50.00	23.08	0.00	15.88	0.00	209.19	0.00	14.70	0.00	296.27	17.64	0.00	0.00	278.63
724+59 BK	72459.42	9.42	17.37	0.00	17.92	0.00	7.06	0.00	5.90	0.00	303.33	24.72	0.00	0.00	278.61
Column totals							303.33	0.00	20.60	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 1 RAMP WC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
746+46 AH	74645.75	0.00	48.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746+50	74650.00	4.25	47.69	0.00	0.00	0.00	7.61	0.00	0.00	0.00	7.61	0.00	0.00	0.00	7.61
747+00	74700.00	50.00	44.13	0.00	0.00	0.00	85.02	0.00	0.00	0.00	92.62	0.00	0.00	0.00	92.62
747+50	74750.00	50.00	71.58	0.00	0.00	0.00	107.14	0.00	0.00	0.00	199.76	0.00	0.00	0.00	199.76
748+00	74800.00	50.00	80.86	0.00	0.00	0.00	141.15	0.00	0.00	0.00	340.91	0.00	0.00	0.00	340.91
748+50	74850.00	50.00	45.68	0.00	0.00	0.00	117.17	0.00	0.00	0.00	458.08	0.00	0.00	0.00	458.08
749+00	74900.00	50.00	2.00	0.00	4.58	0.00	44.15	0.00	4.24	0.00	502.23	5.09	0.00	0.00	497.14
749+42 BK	74941.93	41.93	23.63	0.00	0.00	0.00	19.90	0.00	3.56	0.00	522.13	9.36	0.00	0.00	512.77
Column totals							522.13	0.00	7.80	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 1 RAMP SA

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
570+00 AH	57000.00	0.00	1.46	0.00	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
570+50	57050.00	50.00	0.00	0.00	118.95	0.00	1.35	0.00	112.39	0.00	1.35	134.87	0.00	0.00	-133.51
571+00	57100.00	50.00	0.00	0.00	385.34	0.00	0.00	0.00	466.94	0.00	1.35	695.19	0.00	0.00	-693.84
571+50 BK	57150.00	50.00	0.00	0.00	342.35	0.00	0.00	0.00	673.79	0.00	1.35	1503.73	0.00	0.00	-1502.38
572+13 AH	57213.00	0.00	14.05	0.00	324.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
572+50	57250.00	37.00	0.00	0.00	398.09	0.00	9.63	0.00	495.35	0.00	9.63	594.42	0.00	0.00	-584.79
573+00	57300.00	50.00	0.00	0.00	526.33	0.00	0.00	0.00	855.94	0.00	9.63	1621.55	0.00	0.00	-1611.92
573+50	57350.00	50.00	0.00	0.00	438.02	0.00	0.00	0.00	892.92	0.00	9.63	2693.05	0.00	0.00	-2683.42
574+00	57400.00	50.00	0.00	0.00	272.83	0.00	0.00	0.00	658.19	0.00	9.63	3482.88	0.00	0.00	-3473.26
574+50	57450.00	50.00	0.00	0.00	35.19	0.00	0.00	0.00	285.20	0.00	9.63	3825.13	0.00	0.00	-3815.50
574+75 BK	57475.00	25.00	0.00	0.00	0.15	0.00	0.00	0.00	16.36	0.00	9.63	3844.76	0.00	0.00	-3835.13
		Column totals					10.98	0.00	4457.08	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 W. BLUEMOUND ROAD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
191+20 AH	19120.45	0.00	215.87	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191+50	19150.00	29.55	228.78	0.00	3.67	0.00	243.32	0.00	3.23	0.00	243.32	3.87	0.00	0.00	239.45
192+00	19200.00	50.00	334.96	0.00	0.00	0.00	521.98	0.00	3.40	0.00	765.30	7.95	0.00	0.00	757.35
192+50	19250.00	50.00	240.19	0.00	2.90	0.00	532.55	0.00	2.69	0.00	1297.85	11.17	0.00	0.00	1286.68
193+00	19300.00	50.00	277.20	0.00	3.33	0.00	479.06	0.00	5.77	0.00	1776.91	18.10	0.00	0.00	1758.82
193+50	19350.00	50.00	329.83	0.00	0.56	0.00	562.06	0.00	3.60	0.00	2338.98	22.42	0.00	0.00	2316.56
194+00	19400.00	50.00	312.93	0.00	0.00	0.00	595.15	0.00	0.52	0.00	2934.13	23.04	0.00	0.00	2911.09
194+50	19450.00	50.00	303.70	0.00	2.90	0.00	570.95	0.00	2.69	0.00	3505.08	26.26	0.00	0.00	3478.82
195+00	19500.00	50.00	309.02	0.00	3.17	0.00	567.33	0.00	5.62	0.00	4072.41	33.01	0.00	0.00	4039.41
195+50	19550.00	50.00	231.52	0.00	11.40	0.00	500.50	0.00	13.49	0.00	4572.91	49.20	0.00	0.00	4523.72
196+00	19600.00	50.00	27.21	0.00	566.76	0.00	239.56	0.00	535.33	0.00	4812.48	691.60	0.00	0.00	4120.88
196+14	19614.30	14.30	0.00	0.00	1356.67	0.00	7.21	0.00	509.35	0.00	4819.69	1302.82	0.00	0.00	3516.87
196+40 BK	19639.66	25.36	0.00	0.00	0.00	0.00	0.00	0.00	637.13	0.00	4819.69	2067.38	0.00	0.00	2752.31

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 W. BLUEMOUND ROAD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
198+38 AH	19837.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198+63	19863.23	25.35	0.42	0.00	3.61	0.00	0.20	0.00	1.69	0.00	0.20	2.03	0.00	0.00	-1.84
199+00	19900.00	36.77	70.83	0.00	0.64	0.00	48.52	0.00	2.89	0.00	48.71	5.51	0.00	0.00	43.21
199+50	19950.00	50.00	245.05	0.00	1.01	0.00	292.48	0.00	1.53	0.00	341.19	7.34	0.00	0.00	333.85
200+00	20000.00	50.00	305.18	0.00	1.14	0.00	509.47	0.00	1.99	0.00	850.67	9.73	0.00	0.00	840.94
200+50	20050.00	50.00	286.99	0.00	1.38	0.00	548.31	0.00	2.33	0.00	1398.97	12.53	0.00	0.00	1386.44
201+00	20100.00	50.00	280.34	0.00	1.60	0.00	525.31	0.00	2.76	0.00	1924.28	15.84	0.00	0.00	1908.44
201+50	20150.00	50.00	253.55	0.00	5.79	0.00	494.34	0.00	6.84	0.00	2418.62	24.05	0.00	0.00	2394.57
202+00	20200.00	50.00	236.35	0.00	0.57	0.00	453.61	0.00	5.89	0.00	2872.23	31.12	0.00	0.00	2841.11
202+50	20250.00	50.00	217.25	0.00	0.00	0.00	420.00	0.00	0.53	0.00	3292.23	31.75	0.00	0.00	3260.48
203+00	20300.00	50.00	222.03	0.00	0.00	0.00	406.74	0.00	0.00	0.00	3698.97	31.75	0.00	0.00	3667.22
203+50	20350.00	50.00	267.61	0.00	1.65	0.00	453.37	0.00	1.53	0.00	4152.34	33.58	0.00	0.00	4118.76
204+00	20400.00	50.00	285.76	0.00	0.61	0.00	512.38	0.00	2.09	0.00	4664.72	36.10	0.00	0.00	4628.63
204+50	20450.00	50.00	301.30	0.00	0.07	0.00	543.57	0.00	0.63	0.00	5208.30	36.85	0.00	0.00	5171.45
205+00	20500.00	50.00	300.28	0.00	0.28	0.00	557.02	0.00	0.32	0.00	5765.31	37.24	0.00	0.00	5728.08
205+50	20550.00	50.00	272.28	0.00	0.75	0.00	530.15	0.00	0.95	0.00	6295.46	38.38	0.00	0.00	6257.08
205+82 BK	20582.19	32.19	179.82	0.00	0.00	0.00	269.50	0.00	0.45	0.00	6564.96	38.92	0.00	0.00	6526.04
		Column totals					11384.65	0.00	1755.25	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 1 N. 95TH STREET (SOUTH)

STATION		Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
				Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
								Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
35+86	AH	3585.94	0.00	45.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36+00		3600.00	14.06	44.46	0.00	0.00	0.00	23.30	0.00	0.00	0.00	23.30	0.00	0.00	0.00	23.30
36+50		3650.00	50.00	64.46	0.00	0.00	0.00	100.85	0.00	0.00	0.00	124.16	0.00	0.00	0.00	124.16
37+00		3700.00	50.00	77.23	0.00	0.00	0.00	131.19	0.00	0.00	0.00	255.35	0.00	0.00	0.00	255.35
37+50		3750.00	50.00	96.73	0.00	0.00	0.00	161.07	0.00	0.00	0.00	416.42	0.00	0.00	0.00	416.42
38+00		3800.00	50.00	116.58	0.00	0.00	0.00	197.51	0.00	0.00	0.00	613.93	0.00	0.00	0.00	613.93
38+50		3850.00	50.00	146.41	0.00	0.00	0.00	243.51	0.00	0.00	0.00	857.44	0.00	0.00	0.00	857.44
38+87	BK	3887.18	37.18	70.52	0.00	0.00	0.00	149.36	0.00	0.00	0.00	1006.80	0.00	0.00	0.00	1006.80
							Column totals	1006.80	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 1 N. 95TH STREET (NORTH)

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
39+80	AH	3979.60	0.00	42.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40+00		4000.00	20.40	90.90	0.00	0.00	0.00	50.57	0.00	0.00	0.00	50.57	0.00	0.00	0.00	50.57
40+50		4050.00	50.00	102.64	0.00	17.47	0.00	179.20	0.00	16.18	0.00	229.77	19.41	0.00	0.00	210.36
41+00		4100.00	50.00	105.97	0.00	41.10	0.00	193.16	0.00	54.23	0.00	422.93	84.49	0.00	0.00	338.44
41+50		4150.00	50.00	118.88	0.00	42.69	0.00	208.19	0.00	77.58	0.00	631.12	177.59	0.00	0.00	453.53
42+00		4200.00	50.00	117.44	0.00	42.02	0.00	218.81	0.00	78.44	0.00	849.94	271.71	0.00	0.00	578.22
42+50		4250.00	50.00	114.66	0.00	45.75	0.00	214.91	0.00	81.27	0.00	1064.84	369.23	0.00	0.00	695.61
43+00		4300.00	50.00	104.49	0.00	48.37	0.00	202.92	0.00	87.15	0.00	1267.76	473.81	0.00	0.00	793.95
43+50		4350.00	50.00	90.94	0.00	52.40	0.00	180.95	0.00	93.31	0.00	1448.71	585.78	0.00	0.00	862.94
44+00		4400.00	50.00	112.54	0.00	30.07	0.00	188.41	0.00	76.36	0.00	1637.12	677.41	0.00	0.00	959.71
44+50		4450.00	50.00	95.64	0.00	21.12	0.00	192.76	0.00	47.40	0.00	1829.88	734.29	0.00	0.00	1095.59
45+00		4500.00	50.00	90.55	0.00	31.84	0.00	172.40	0.00	49.04	0.00	2002.28	793.13	0.00	0.00	1209.15
45+50		4550.00	50.00	98.04	0.00	30.24	0.00	174.62	0.00	57.48	0.00	2176.90	862.11	0.00	0.00	1314.79
46+00		4600.00	50.00	92.39	0.00	124.63	0.00	176.32	0.00	143.40	0.00	2353.22	1034.19	0.00	0.00	1319.03
46+50		4650.00	50.00	99.76	0.00	148.36	0.00	177.92	0.00	252.77	0.00	2531.14	1337.51	0.00	0.00	1193.63
47+00		4700.00	50.00	95.27	0.00	22.31	0.00	180.58	0.00	158.03	0.00	2711.72	1527.14	0.00	0.00	1184.58
47+50		4750.00	50.00	129.00	0.00	0.00	0.00	207.66	0.00	20.66	0.00	2919.38	1551.93	0.00	0.00	1367.45
48+00		4800.00	50.00	120.89	0.00	1.96	0.00	231.38	0.00	1.81	0.00	3150.76	1554.11	0.00	0.00	1596.65
48+50		4850.00	50.00	104.01	0.00	50.78	0.00	208.24	0.00	48.83	0.00	3359.00	1612.71	0.00	0.00	1746.29
49+00		4900.00	50.00	87.69	0.00	21.34	0.00	177.50	0.00	66.78	0.00	3536.50	1692.84	0.00	0.00	1843.66
49+36	BK	4936.27	36.27	69.20	0.00	27.92	0.00	105.38	0.00	33.09	0.00	3641.88	1732.55	0.00	0.00	1909.33
							Column totals	3641.88	0.00	1443.79	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 S. 84th ST

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
42+81	AH	4280.78	0.00	147.59	0.00	16.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43+00		4300	19.22	128.51	0.00	0.00	0.00	98.27	0.00	0.00	0.00	98.27	0.00	0.00	0.00	98.27
43+50		4350	50.00	136.04	0.00	0.00	0.00	244.95	0.00	0.00	0.00	343.22	0.00	0.00	0.00	343.22
44+00		4400	50.00	181.18	0.00	45.30	0.00	293.72	0.00	83.89	0.00	636.95	100.67	0.00	0.00	536.28
44+50		4450	50.00	186.36	0.00	43.42	0.00	340.31	0.00	80.41	0.00	977.26	197.16	0.00	0.00	780.11
45+00		4500	50.00	177.10	0.00	13.78	0.00	336.54	0.00	25.52	0.00	1313.80	227.78	0.00	0.00	1086.02
45+50		4550	50.00	159.78	0.00	22.24	0.00	311.93	0.00	41.19	0.00	1625.72	277.20	0.00	0.00	1348.52
45+83		4582.74	32.74	156.12	0.00	7.15	0.00	191.53	0.00	8.67	0.00	1817.25	287.60	0.00	0.00	1529.65
46+00		4600	17.26	152.45	0.00	12.70	0.00	98.63	0.00	8.12	0.00	1915.88	297.35	0.00	0.00	1618.54
46+50		4650	50.00	129.62	0.00	1.25	0.00	261.18	0.00	2.31	0.00	2177.06	300.12	0.00	0.00	1876.93
47+00		4700	50.00	128.09	0.00	0.24	0.00	238.62	0.00	0.44	0.00	2415.68	300.66	0.00	0.00	2115.02
47+50		4750	50.00	95.36	0.00	0.13	0.00	206.90	0.00	0.24	0.00	2622.58	300.95	0.00	0.00	2321.63
48+00		4800	50.00	72.24	0.00	14.40	0.00	155.19	0.00	26.67	0.00	2777.76	332.95	0.00	0.00	2444.82
48+43	BK	4842.89	42.89	67.28	0.00	0.00	0.00	110.82	0.00	0.00	0.00	2888.58	332.95	0.00	0.00	2555.63
							Column totals	2888.58	0.00	277.46	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1: NSA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
28+23 AH	2823.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28+50	2850.00	26.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29+00	2900.00	50.00	174.61	0.00	0.00	0.00	161.68	0.00	0.00	0.00	161.68	0.00	0.00	0.00	161.68
29+38 BK	2937.50	37.50	136.24	0.00	0.05	0.00	215.87	0.00	0.03	0.00	377.54	0.04	0.00	0.00	377.50
		Column totals					377.54	0.00	0.03	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 NSC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3	Cumulative Vol (CY) Reduced EBS In Fill 0.8	Mass Ordinate
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+00 AH	1000.47	0.00	328.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	49.53	678.51	0.00	0.00	0.00	923.74	0.00	0.00	0.00	923.74	0.00	0.00	0.00	923.74
11+00	1100.00	50.00	883.71	0.00	0.00	0.00	1446.50	0.00	0.00	0.00	2370.24	0.00	0.00	0.00	2370.24
11+50	1150.00	50.00	323.43	0.00	0.00	0.00	1117.72	0.00	0.00	0.00	3487.97	0.00	0.00	0.00	3487.97
12+00	1200.00	50.00	411.30	0.00	0.00	0.00	680.31	0.00	0.00	0.00	4168.27	0.00	0.00	0.00	4168.27
12+50	1250.00	50.00	498.09	0.00	0.00	0.00	842.03	0.00	0.00	0.00	5010.30	0.00	0.00	0.00	5010.30
13+00	1300.00	50.00	579.51	0.00	0.00	0.00	997.78	0.00	0.00	0.00	6008.08	0.00	0.00	0.00	6008.08
13+50	1350.00	50.00	705.15	0.00	0.00	0.00	1189.50	0.00	0.00	0.00	7197.58	0.00	0.00	0.00	7197.58
14+00	1400.00	50.00	1098.40	0.00	0.00	0.00	1669.95	0.00	0.00	0.00	8867.53	0.00	0.00	0.00	8867.53
14+50	1450.00	50.00	1066.96	0.00	0.00	0.00	2004.96	0.00	0.00	0.00	10872.49	0.00	0.00	0.00	10872.49
15+00	1500.00	50.00	922.37	0.00	0.00	0.00	1841.97	0.00	0.00	0.00	12714.47	0.00	0.00	0.00	12714.47
15+50	1550.00	50.00	986.46	0.00	0.00	0.00	1767.44	0.00	0.00	0.00	14481.90	0.00	0.00	0.00	14481.90
16+00	1600.00	50.00	1087.64	0.00	0.00	0.00	1920.46	0.00	0.00	0.00	16402.36	0.00	0.00	0.00	16402.36
16+50	1650.00	50.00	806.80	0.00	0.00	0.00	1754.11	0.00	0.00	0.00	18156.48	0.00	0.00	0.00	18156.48
17+00	1700.00	50.00	824.52	0.00	0.00	0.00	1510.48	0.00	0.00	0.00	19666.96	0.00	0.00	0.00	19666.96
17+50	1750.00	50.00	957.51	0.00	0.00	0.00	1650.03	0.00	0.00	0.00	21316.98	0.00	0.00	0.00	21316.98
18+00	1800.00	50.00	1113.10	0.00	0.00	0.00	1917.23	0.00	0.00	0.00	23234.22	0.00	0.00	0.00	23234.22
18+50	1850.00	50.00	1207.19	0.00	0.00	0.00	2148.42	0.00	0.00	0.00	25382.63	0.00	0.00	0.00	25382.63
19+00	1900.00	50.00	1172.05	0.00	0.00	0.00	2203.00	0.00	0.00	0.00	27585.63	0.00	0.00	0.00	27585.63
19+50	1950.00	50.00	1157.00	0.00	0.00	0.00	2156.53	0.00	0.00	0.00	29742.16	0.00	0.00	0.00	29742.16
20+00	2000.00	50.00	1292.06	0.00	0.00	0.00	2267.65	0.00	0.00	0.00	32009.81	0.00	0.00	0.00	32009.81
20+50	2050.00	50.00	1376.87	0.00	0.00	0.00	2471.23	0.00	0.00	0.00	34481.04	0.00	0.00	0.00	34481.04
21+00	2100.00	50.00	1514.38	0.00	0.00	0.00	2677.08	0.00	0.00	0.00	37158.12	0.00	0.00	0.00	37158.12
21+50	2150.00	50.00	1746.83	0.00	0.00	0.00	3019.64	0.00	0.00	0.00	40177.76	0.00	0.00	0.00	40177.76

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 NSC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
22+00	2200.00	50.00	1729.72	0.00	0.00	0.00	3219.03	0.00	0.00	0.00	39689.38	0.00	0.00	0.00	39689.38
22+50	2250.00	50.00	1639.61	0.00	0.00	0.00	3119.75	0.00	0.00	0.00	42809.13	0.00	0.00	0.00	42809.13
23+00	2300.00	50.00	1250.73	0.00	0.00	0.00	2676.24	0.00	0.00	0.00	45485.37	0.00	0.00	0.00	45485.37
23+50	2350.00	50.00	837.41	0.00	0.00	0.00	1933.46	0.00	0.00	0.00	47418.84	0.00	0.00	0.00	47418.84
24+00	2400.00	50.00	873.03	0.00	0.00	0.00	1583.74	0.00	0.00	0.00	49002.58	0.00	0.00	0.00	49002.58
24+50	2450.00	50.00	484.18	0.00	0.00	0.00	1256.68	0.00	0.00	0.00	50259.25	0.00	0.00	0.00	50259.25
25+00	2500.00	50.00	356.57	0.00	0.00	0.00	778.47	0.00	0.00	0.00	51037.73	0.00	0.00	0.00	51037.73
25+50	2550.00	50.00	257.35	0.00	0.00	0.00	568.44	0.00	0.00	0.00	51606.17	0.00	0.00	0.00	51606.17
26+00	2600.00	50.00	188.58	0.00	0.00	0.00	412.90	0.00	0.00	0.00	52019.07	0.00	0.00	0.00	52019.07
26+50	2650.00	50.00	145.71	0.00	0.00	0.00	309.53	0.00	0.00	0.00	52328.60	0.00	0.00	0.00	52328.60
27+00	2700.00	50.00	137.78	0.00	0.00	0.00	262.49	0.00	0.00	0.00	52591.09	0.00	0.00	0.00	52591.09
27+50	2750.00	50.00	173.02	0.00	0.00	0.00	287.78	0.00	0.00	0.00	52878.86	0.00	0.00	0.00	52878.86
28+00	2800.00	50.00	193.92	0.00	0.00	0.00	339.76	0.00	0.00	0.00	53218.62	0.00	0.00	0.00	53218.62
28+50	2850.00	50.00	143.95	0.00	0.00	0.00	312.84	0.00	0.00	0.00	53531.47	0.00	0.00	0.00	53531.47
29+00	2900.00	50.00	83.11	0.00	0.00	0.00	210.24	0.00	0.00	0.00	53741.71	0.00	0.00	0.00	53741.71
29+50	2950.00	50.00	67.93	0.00	0.00	0.00	139.85	0.00	0.00	0.00	53881.56	0.00	0.00	0.00	53881.56
30+00	3000.00	50.00	50.46	0.00	0.00	0.00	109.62	0.00	0.00	0.00	53991.18	0.00	0.00	0.00	53991.18
30+50	3050.00	50.00	45.12	0.00	0.00	0.00	88.50	0.00	0.00	0.00	54079.68	0.00	0.00	0.00	54079.68
31+00	3100.00	50.00	41.08	0.00	0.00	0.00	79.81	0.00	0.00	0.00	54159.49	0.00	0.00	0.00	54159.49
31+50	3150.00	50.00	38.84	0.00	0.00	0.00	74.00	0.00	0.00	0.00	54233.49	0.00	0.00	0.00	54233.49
32+00	3200.00	50.00	38.85	0.00	0.00	0.00	71.94	0.00	0.00	0.00	54305.43	0.00	0.00	0.00	54305.43
32+46 BK	3246.27	46.27	51.78	0.00	0.00	0.00	77.66	0.00	0.00	0.00	54383.09	0.00	0.00	0.00	54383.09
						Column totals	54383.09	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 NSE

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+00 AH	1000.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	18.52	0.00	0.00	0.00	30.38	0.00	0.00	0.00	30.38	0.00	0.00	0.00	30.38
11+00	1100.00	50.00	24.03	0.00	0.00	0.00	39.40	0.00	0.00	0.00	69.78	0.00	0.00	0.00	69.78
11+50	1150.00	50.00	28.71	0.00	0.00	0.00	48.83	0.00	0.00	0.00	118.61	0.00	0.00	0.00	118.61
12+00	1200.00	50.00	31.70	0.00	0.29	0.00	55.94	0.00	0.27	0.00	174.55	0.32	0.00	0.00	174.22
12+50	1250.00	50.00	37.03	0.00	0.01	0.00	63.64	0.00	0.28	0.00	238.19	0.66	0.00	0.00	237.53
13+00	1300.00	50.00	35.37	0.00	0.00	0.00	67.04	0.00	0.01	0.00	305.22	0.67	0.00	0.00	304.56
13+50	1350.00	50.00	33.38	0.00	0.00	0.00	63.66	0.00	0.00	0.00	368.88	0.67	0.00	0.00	368.21
14+00	1400.00	50.00	32.33	0.00	0.00	0.00	60.84	0.00	0.00	0.00	429.72	0.67	0.00	0.00	429.06
14+50	1450.00	50.00	30.79	0.00	0.00	0.00	58.44	0.00	0.00	0.00	488.17	0.67	0.00	0.00	487.50
15+00	1500.00	50.00	31.07	0.00	0.00	0.00	57.28	0.00	0.00	0.00	545.44	0.67	0.00	0.00	544.78
15+50	1550.00	50.00	27.16	0.00	0.00	0.00	53.92	0.00	0.00	0.00	599.36	0.67	0.00	0.00	598.69
16+00	1600.00	50.00	26.60	0.00	0.00	0.00	49.78	0.00	0.00	0.00	649.14	0.67	0.00	0.00	648.47
16+50	1650.00	50.00	84.10	0.00	0.00	0.00	102.50	0.00	0.00	0.00	751.64	0.67	0.00	0.00	750.97
17+00	1700.00	50.00	95.40	0.00	0.00	0.00	166.20	0.00	0.00	0.00	917.84	0.67	0.00	0.00	917.18
17+50	1750.00	50.00	104.03	0.00	0.00	0.00	184.66	0.00	0.00	0.00	1102.50	0.67	0.00	0.00	1101.83
18+00	1800.00	50.00	109.84	0.00	0.00	0.00	198.03	0.00	0.00	0.00	1300.53	0.67	0.00	0.00	1299.86

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 NSE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
18+50	1850.00	50.00	108.94	0.00	0.00	0.00	202.57	0.00	0.00	0.00	1503.10	0.67	0.00	0.00	1502.44
19+00	1900.00	50.00	106.78	0.00	0.00	0.00	199.74	0.00	0.00	0.00	1702.84	0.67	0.00	0.00	1702.18
19+50	1950.00	50.00	98.91	0.00	0.00	0.00	190.45	0.00	0.00	0.00	1893.30	0.67	0.00	0.00	1892.63
20+00	2000.00	50.00	108.15	0.00	0.00	0.00	191.72	0.00	0.00	0.00	2085.02	0.67	0.00	0.00	2084.35
20+50	2050.00	50.00	103.08	0.00	0.00	0.00	195.58	0.00	0.00	0.00	2280.60	0.67	0.00	0.00	2279.94
21+00	2100.00	50.00	97.79	0.00	0.00	0.00	185.99	0.00	0.00	0.00	2466.59	0.67	0.00	0.00	2465.93
21+50	2150.00	50.00	94.29	0.00	0.00	0.00	177.85	0.00	0.00	0.00	2644.44	0.67	0.00	0.00	2643.78
22+00	2200.00	50.00	93.20	0.00	0.00	0.00	173.60	0.00	0.00	0.00	2818.05	0.67	0.00	0.00	2817.38
22+50	2250.00	50.00	89.77	0.00	0.00	0.00	169.42	0.00	0.00	0.00	2987.46	0.67	0.00	0.00	2986.80
23+00	2300.00	50.00	79.48	0.00	0.00	0.00	156.71	0.00	0.00	0.00	3144.18	0.67	0.00	0.00	3143.51
23+50	2350.00	50.00	68.21	0.00	0.00	0.00	136.75	0.00	0.00	0.00	3280.93	0.67	0.00	0.00	3280.26
24+00	2400.00	50.00	54.85	0.00	0.00	0.00	113.94	0.00	0.00	0.00	3394.87	0.67	0.00	0.00	3394.20
24+50	2450.00	50.00	41.69	0.00	0.00	0.00	89.39	0.00	0.00	0.00	3484.26	0.67	0.00	0.00	3483.59
25+00	2500.00	50.00	32.60	0.00	0.00	0.00	68.79	0.00	0.00	0.00	3553.05	0.67	0.00	0.00	3552.38
25+50	2550.00	50.00	24.44	0.00	0.00	0.00	52.81	0.00	0.00	0.00	3605.86	0.67	0.00	0.00	3605.19
25+58 BK	2557.57	7.57	23.13	0.00	0.00	0.00	6.67	0.00	0.00	0.00	3612.53	0.67	0.00	0.00	3611.86
						Column totals	3612.53	0.00	0.56	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 EWK

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+04 AH	1003.72	0.00	19.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	46.28	24.09	0.00	0.00	0.00	37.32	0.00	0.00	0.00	37.32	0.00	0.00	0.00	37.32
11+00	1100.00	50.00	32.25	0.00	1.52	0.00	52.17	0.00	1.41	0.00	89.49	1.69	0.00	0.00	87.80
11+50	1150.00	50.00	47.42	0.00	0.00	0.00	73.77	0.00	1.41	0.00	163.26	3.38	0.00	0.00	159.88
12+00	1200.00	50.00	32.72	0.00	0.00	0.00	74.20	0.00	0.00	0.00	237.46	3.38	0.00	0.00	234.09
12+50	1250.00	50.00	22.53	0.00	0.00	0.00	51.16	0.00	0.00	0.00	288.62	3.38	0.00	0.00	285.24
13+00	1300.00	50.00	17.25	0.00	0.00	0.00	36.83	0.00	0.00	0.00	325.45	3.38	0.00	0.00	322.08
13+50	1350.00	50.00	15.05	0.00	0.00	0.00	29.91	0.00	0.00	0.00	355.36	3.38	0.00	0.00	351.98
14+00	1400.00	50.00	45.29	0.00	0.00	0.00	55.87	0.00	0.00	0.00	411.23	3.38	0.00	0.00	407.85
14+50	1450.00	50.00	33.83	0.00	0.00	0.00	73.26	0.00	0.00	0.00	484.49	3.38	0.00	0.00	481.11
15+00	1500.00	50.00	28.77	0.00	0.00	0.00	57.96	0.00	0.00	0.00	542.45	3.38	0.00	0.00	539.08
15+50	1550.00	50.00	31.36	0.00	0.00	0.00	55.68	0.00	0.00	0.00	598.13	3.38	0.00	0.00	594.75
16+00	1600.00	50.00	27.96	0.00	0.00	0.00	54.93	0.00	0.00	0.00	653.06	3.38	0.00	0.00	649.68
16+50	1650.00	50.00	28.37	0.00	0.00	0.00	52.16	0.00	0.00	0.00	705.21	3.38	0.00	0.00	701.84
17+00	1700.00	50.00	24.98	0.00	0.00	0.00	49.40	0.00	0.00	0.00	754.61	3.38	0.00	0.00	751.23
17+50	1750.00	50.00	16.34	0.00	1.72	0.00	38.26	0.00	1.59	0.00	792.87	5.29	0.00	0.00	787.58
18+00	1800.00	50.00	12.89	0.00	11.76	0.00	27.06	0.00	12.48	0.00	819.94	20.27	0.00	0.00	799.67

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 EWK

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
18+50	1850.00	50.00	13.18	0.00	13.01	0.00	24.14	0.00	22.94	0.00	844.07	47.79	0.00	0.00	796.29
19+00	1900.00	50.00	12.82	0.00	15.37	0.00	24.07	0.00	26.28	0.00	868.15	79.32	0.00	0.00	788.83
19+50	1950.00	50.00	12.43	0.00	27.46	0.00	23.38	0.00	39.66	0.00	891.53	126.91	0.00	0.00	764.62
20+00	2000.00	50.00	16.43	0.00	28.38	0.00	26.72	0.00	51.70	0.00	918.25	188.96	0.00	0.00	729.29
20+50	2050.00	50.00	16.49	0.00	32.81	0.00	30.48	0.00	56.66	0.00	948.73	256.94	0.00	0.00	691.79
21+00	2100.00	50.00	18.27	0.00	23.26	0.00	32.19	0.00	51.92	0.00	980.92	319.24	0.00	0.00	661.67
21+50	2150.00	50.00	21.50	0.00	19.66	0.00	36.82	0.00	39.74	0.00	1017.74	366.93	0.00	0.00	650.81
22+00	2200.00	50.00	24.80	0.00	12.74	0.00	42.87	0.00	30.00	0.00	1060.61	402.93	0.00	0.00	657.68
22+50	2250.00	50.00	26.87	0.00	6.24	0.00	47.84	0.00	17.57	0.00	1108.45	424.02	0.00	0.00	684.43
23+00	2300.00	50.00	31.25	0.00	0.06	0.00	53.81	0.00	5.83	0.00	1162.27	431.02	0.00	0.00	731.25
23+50	2350.00	50.00	36.69	0.00	0.00	0.00	62.91	0.00	0.06	0.00	1225.18	431.09	0.00	0.00	794.09
24+00	2400.00	50.00	36.35	0.00	0.00	0.00	67.63	0.00	0.00	0.00	1292.81	431.09	0.00	0.00	861.72
24+50	2450.00	50.00	35.69	0.00	0.00	0.00	66.70	0.00	0.00	0.00	1359.51	431.09	0.00	0.00	928.42
25+00	2500.00	50.00	36.58	0.00	0.00	0.00	66.92	0.00	0.00	0.00	1426.43	431.09	0.00	0.00	995.34
25+50	2550.00	50.00	37.83	0.00	0.00	0.00	68.90	0.00	0.00	0.00	1495.32	431.09	0.00	0.00	1064.24
26+00	2600.00	50.00	38.47	0.00	0.01	0.00	70.65	0.00	0.01	0.00	1565.97	431.10	0.00	0.00	1134.87
26+50	2650.00	50.00	40.98	0.00	0.12	0.00	73.56	0.00	0.12	0.00	1639.54	431.24	0.00	0.00	1208.29
27+00	2700.00	50.00	34.01	0.00	0.25	0.00	69.44	0.00	0.34	0.00	1708.97	431.66	0.00	0.00	1277.32
27+50	2750.00	50.00	27.80	0.00	0.09	0.00	57.23	0.00	0.31	0.00	1766.20	432.03	0.00	0.00	1334.17
28+00	2800.00	50.00	24.01	0.00	0.00	0.00	47.97	0.00	0.08	0.00	1814.18	432.13	0.00	0.00	1382.04
28+50	2850.00	50.00	21.98	0.00	0.00	0.00	42.58	0.00	0.00	0.00	1856.76	432.13	0.00	0.00	1424.63
29+00	2900.00	50.00	23.23	0.00	0.00	0.00	41.86	0.00	0.00	0.00	1898.62	432.13	0.00	0.00	1466.49
29+50	2950.00	50.00	23.23	0.00	0.00	0.00	43.02	0.00	0.00	0.00	1941.64	432.13	0.00	0.00	1509.51
30+00	3000.00	50.00	21.47	0.00	0.00	0.00	41.39	0.00	0.00	0.00	1983.03	432.13	0.00	0.00	1550.89
30+21 BK	3021.40	21.40	20.71	0.00	0.00	0.00	16.72	0.00	0.00	0.00	1999.74	432.13	0.00	0.00	1567.61
						Column totals	1999.74	0.00	360.11	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 EWL

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
11+80 AH	1180.04	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00	1200.00	19.96	39.14	0.00	0.00	0.00	14.49	0.00	0.00	0.00	14.49	0.00	0.00	0.00	14.49
12+50	1250.00	50.00	37.79	0.00	0.00	0.00	71.23	0.00	0.00	0.00	85.72	0.00	0.00	0.00	85.72
13+00	1300.00	50.00	34.78	0.00	0.00	0.00	67.19	0.00	0.00	0.00	152.91	0.00	0.00	0.00	152.91
13+50	1350.00	50.00	36.46	0.00	0.00	0.00	65.96	0.00	0.00	0.00	218.87	0.00	0.00	0.00	218.87
14+00	1400.00	50.00	35.85	0.00	0.00	0.00	66.95	0.00	0.00	0.00	285.83	0.00	0.00	0.00	285.83
14+50	1450.00	50.00	36.49	0.00	0.00	0.00	66.98	0.00	0.00	0.00	352.81	0.00	0.00	0.00	352.81
15+00	1500.00	50.00	37.46	0.00	0.00	0.00	68.47	0.00	0.00	0.00	421.28	0.00	0.00	0.00	421.28
15+50	1550.00	50.00	36.22	0.00	0.00	0.00	68.22	0.00	0.00	0.00	489.50	0.00	0.00	0.00	489.50
16+00	1600.00	50.00	36.05	0.00	0.00	0.00	66.92	0.00	0.00	0.00	556.42	0.00	0.00	0.00	556.42
16+50	1650.00	50.00	35.74	0.00	0.00	0.00	66.47	0.00	0.00	0.00	622.89	0.00	0.00	0.00	622.89
17+00	1700.00	50.00	34.89	0.00	0.00	0.00	65.40	0.00	0.00	0.00	688.29	0.00	0.00	0.00	688.29
17+50	1750.00	50.00	34.88	0.00	0.00	0.00	64.60	0.00	0.00	0.00	752.89	0.00	0.00	0.00	752.89
18+00	1800.00	50.00	33.32	0.00	0.00	0.00	63.15	0.00	0.00	0.00	816.04	0.00	0.00	0.00	816.04
18+50	1850.00	50.00	0.00	0.00	0.00	0.00	30.85	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89
19+00	1900.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89
19+50	1950.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 EWL

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
												1.0	1.2	1.3	0.8	
								Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
20+00		2000.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89
20+50		2050.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89
21+00		2100.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	846.89	0.00	0.00	0.00	846.89
21+50		2150.00	50.00	21.39	0.00	0.00	0.00	19.81	0.00	0.00	0.00	866.70	0.00	0.00	0.00	866.70
22+00		2200.00	50.00	21.21	0.00	0.00	0.00	39.44	0.00	0.00	0.00	906.14	0.00	0.00	0.00	906.14
22+50		2250.00	50.00	20.26	0.00	0.00	0.00	38.40	0.00	0.00	0.00	944.54	0.00	0.00	0.00	944.54
23+00		2300.00	50.00	38.08	0.00	0.00	0.00	54.02	0.00	0.00	0.00	998.56	0.00	0.00	0.00	998.56
23+50		2350.00	50.00	38.69	0.00	0.00	0.00	71.08	0.00	0.00	0.00	1069.64	0.00	0.00	0.00	1069.64
24+00		2400.00	50.00	39.94	0.00	0.00	0.00	72.81	0.00	0.00	0.00	1142.45	0.00	0.00	0.00	1142.45
24+50		2450.00	50.00	40.09	0.00	0.00	0.00	74.10	0.00	0.00	0.00	1216.55	0.00	0.00	0.00	1216.55
25+00		2500.00	50.00	39.39	0.00	0.00	0.00	73.59	0.00	0.00	0.00	1290.14	0.00	0.00	0.00	1290.14
25+50		2550.00	50.00	38.11	0.00	0.00	0.00	71.76	0.00	0.00	0.00	1361.90	0.00	0.00	0.00	1361.90
26+00		2600.00	50.00	39.23	0.00	0.00	0.00	71.61	0.00	0.00	0.00	1433.51	0.00	0.00	0.00	1433.51
26+50		2650.00	50.00	40.25	0.00	0.00	0.00	73.59	0.00	0.00	0.00	1507.11	0.00	0.00	0.00	1507.11
27+00		2700.00	50.00	40.38	0.00	0.00	0.00	74.66	0.00	0.00	0.00	1581.76	0.00	0.00	0.00	1581.76
27+50		2750.00	50.00	40.58	0.00	0.00	0.00	74.96	0.00	0.00	0.00	1656.73	0.00	0.00	0.00	1656.73
27+58	BK	2757.72	7.72	0.00	0.00	0.00	0.00	5.80	0.00	0.00	0.00	1662.53	0.00	0.00	0.00	1662.53
						Column totals		1662.53	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 1 FCV

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
2+72 AH	271.65	0.00	66.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3+00	300.00	28.35	147.84	0.00	0.00	0.00	112.28	0.00	0.00	0.00	112.28	0.00	0.00	0.00	112.28
3+50	350.00	50.00	182.38	0.00	0.00	0.00	305.76	0.00	0.00	0.00	418.04	0.00	0.00	0.00	418.04
4+00	400.00	50.00	133.72	0.00	0.00	0.00	292.69	0.00	0.00	0.00	710.72	0.00	0.00	0.00	710.72
4+50	450.00	50.00	179.02	0.00	0.00	0.00	289.57	0.00	0.00	0.00	1000.30	0.00	0.00	0.00	1000.30
5+00	500.00	50.00	232.64	0.00	0.00	0.00	381.17	0.00	0.00	0.00	1381.46	0.00	0.00	0.00	1381.46
5+50	550.00	50.00	265.11	0.00	0.00	0.00	460.88	0.00	0.00	0.00	1842.34	0.00	0.00	0.00	1842.34
6+00	600.00	50.00	296.73	0.00	0.00	0.00	520.22	0.00	0.00	0.00	2362.56	0.00	0.00	0.00	2362.56
6+12 BK	612.00	12.00	295.00	0.00	0.00	0.00	131.50	0.00	0.00	0.00	2494.06	0.00	0.00	0.00	2494.06
Column totals							2494.06	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 1 RAMP BA GRADING

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
728+25 AH	72825.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
728+50	72850.00	25.00	246.66	0.00	0.00	0.00	114.19	0.00	0.00	0.00	114.19	0.00	0.00	0.00	114.19
729+00	72900.00	50.00	403.28	0.00	0.00	0.00	601.80	0.00	0.00	0.00	715.99	0.00	0.00	0.00	715.99
729+50	72950.00	50.00	409.95	0.00	0.00	0.00	752.99	0.00	0.00	0.00	1468.98	0.00	0.00	0.00	1468.98
730+00	73000.00	50.00	165.17	0.00	0.00	0.00	532.52	0.00	0.00	0.00	2001.50	0.00	0.00	0.00	2001.50
730+50 BK	73050.00	50.00	12.20	0.00	0.00	0.00	164.23	0.00	0.00	0.00	2165.73	0.00	0.00	0.00	2165.73
					Column totals		2165.73	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 1 RAMP WE GRADING

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
10+20 AH	1020.00	0.00	2.15	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	30.00	24.02	0.00	214.50	0.00	14.54	0.00	119.37	0.00	14.54	143.24	0.00	0.00	-128.70
11+00	1100.00	50.00	3.13	0.00	1951.78	0.00	25.14	0.00	2005.81	0.00	39.68	2550.22	0.00	0.00	-2510.54
11+50	1150.00	50.00	0.03	0.00	2952.75	0.00	2.93	0.00	4541.23	0.00	42.60	7999.70	0.00	0.00	-7957.09
12+00	1200.00	50.00	0.02	0.00	3547.43	0.00	0.05	0.00	6018.69	0.00	42.65	15222.12	0.00	0.00	-15179.47
12+50	1250.00	50.00	0.12	0.00	3594.92	0.00	0.13	0.00	6613.29	0.00	42.78	23158.06	0.00	0.00	-23115.28
13+00	1300.00	50.00	17.15	0.00	3345.11	0.00	15.99	0.00	6425.95	0.00	58.77	30869.21	0.00	0.00	-30810.44
13+50	1350.00	50.00	34.59	0.00	2201.85	0.00	47.91	0.00	5136.07	0.00	106.68	37032.50	0.00	0.00	-36925.82
14+00	1400.00	50.00	0.25	0.00	305.76	0.00	32.26	0.00	2321.86	0.00	138.94	39818.73	0.00	0.00	-39679.79
14+10 BK	1410.00	10.00	0.00	0.00	12.55	0.00	0.05	0.00	58.95	0.00	138.98	39889.46	0.00	0.00	-39750.48
						Column totals	138.98	0.00	33241.22	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
221+50.00 AH	22150.00	0.00	0.00	0.00	7.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222+00.00	22200.00	50.00	1.01	0.00	258.71	0.00	0.94	0.00	246.65	0.00	0.94	295.98	0.00	0.00	-295.04
222+50.00	22250.00	50.00	3.91	0.00	370.46	0.00	4.56	0.00	582.56	0.00	5.49	995.06	0.00	0.00	-989.56
223+00.00	22300.00	50.00	2.46	0.00	414.38	0.00	5.90	0.00	726.70	0.00	11.39	1867.10	0.00	0.00	-1855.71
223+50.00	22350.00	50.00	5.97	0.00	451.95	0.00	7.81	0.00	802.16	0.00	19.19	2829.69	0.00	0.00	-2810.49
224+00.00	22400.00	50.00	13.87	0.00	504.31	0.00	18.37	0.00	885.43	0.00	37.56	3892.20	0.00	0.00	-3854.64
224+50.00	22450.00	50.00	8.31	0.00	561.85	0.00	20.54	0.00	987.19	0.00	58.10	5076.82	0.00	0.00	-5018.72
225+00.00	22500.00	50.00	14.51	0.00	564.44	0.00	21.13	0.00	1042.86	0.00	79.23	6328.26	0.00	0.00	-6249.02
225+50.00	22550.00	50.00	18.69	0.00	538.01	0.00	30.74	0.00	1020.79	0.00	109.97	7553.20	0.00	0.00	-7443.23
226+00.00	22600.00	50.00	26.48	0.00	505.24	0.00	41.82	0.00	965.97	0.00	151.80	8712.37	0.00	0.00	-8560.57
226+50.00	22650.00	50.00	25.38	0.00	465.76	0.00	48.02	0.00	899.07	0.00	199.81	9791.26	0.00	0.00	-9591.44
227+00.00	22700.00	50.00	27.09	0.00	477.94	0.00	48.58	0.00	873.80	0.00	248.40	10839.81	0.00	0.00	-10591.41
227+50.00	22750.00	50.00	15.90	0.00	553.61	0.00	39.81	0.00	955.14	0.00	288.20	11985.98	0.00	0.00	-11697.77
228+00.00	22800.00	50.00	70.33	0.00	734.75	0.00	79.84	0.00	1192.93	0.00	368.05	13417.49	0.00	0.00	-13049.44
228+50.00	22850.00	50.00	38.83	0.00	4.66	0.00	101.07	0.00	684.64	0.00	469.12	14239.06	0.00	0.00	-13769.94
228+74.29 BK	22874.29	24.29	49.24	0.00	0.00	0.00	39.62	0.00	2.10	0.00	508.74	14241.57	0.00	0.00	-13732.84
		Column totals					508.74	0.00	11867.98	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 NB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
288+27 AH	28827.42	0.00	2450.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288+50	28850.00	22.58	2343.94	0.00	0.00	0.00	2004.89	0.00	0.00	0.00	2004.89	0.00	0.00	0.00	2004.89
289+00	28900.00	50.00	479.26	0.00	276.11	0.00	2614.07	0.00	255.66	0.00	4618.96	306.79	0.00	0.00	4312.18
289+50	28950.00	50.00	0.00	0.00	1322.43	0.00	443.76	0.00	1480.13	0.00	5062.72	2082.94	0.00	0.00	2979.78
289+52	28952.22	2.22	0.00	0.00	1322.26	0.00	0.00	0.00	108.73	0.00	5062.72	2213.42	0.00	0.00	2849.31
289+83 BK	28983.00	30.78	0.00	0.00	0.00	0.00	0.00	0.00	753.69	0.00	5062.72	3117.84	0.00	0.00	1944.88
290+66 AH	29065.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290+96	29096.31	30.77	0.00	0.00	2263.02	0.00	0.00	0.00	1289.50	0.00	0.00	1547.40	0.00	0.00	-1547.40
291+00	29100.00	3.69	0.00	0.00	2244.10	0.00	0.00	0.00	307.99	0.00	0.00	1916.99	0.00	0.00	-1916.99
291+50	29150.00	50.00	0.00	0.00	1928.16	0.00	0.00	0.00	3863.20	0.00	0.00	6552.83	0.00	0.00	-6552.83
291+93	29192.64	42.64	0.00	0.00	1686.88	0.00	0.00	0.00	2854.54	0.00	0.00	9978.28	0.00	0.00	-9978.28
292+34 BK	29234.14	41.50	0.00	0.00	0.00	0.00	0.00	0.00	1296.40	0.00	0.00	11533.96	0.00	0.00	-11533.96
294+68 AH	29467.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
295+09	29509.02	41.50	0.00	0.00	1036.67	0.00	0.00	0.00	796.70	0.00	0.00	956.04	0.00	0.00	-956.04
295+50	29550.00	40.98	0.00	0.00	1023.29	0.00	0.00	0.00	1563.28	0.00	0.00	2831.98	0.00	0.00	-2831.98
296+00	29600.00	50.00	0.00	0.00	1074.48	0.00	0.00	0.00	1942.38	0.00	0.00	5162.83	0.00	0.00	-5162.83
296+39	29639.33	39.33	0.00	0.00	1714.52	0.00	0.00	0.00	2031.32	0.00	0.00	7600.42	0.00	0.00	-7600.42
296+60 BK	29660.24	20.91	0.00	0.00	0.00	0.00	0.00	0.00	663.90	0.00	0.00	8397.10	0.00	0.00	-8397.10
297+52 AH	29752.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
297+73	29773.35	20.91	15.50	0.00	1003.77	0.00	6.00	0.00	388.68	0.00	6.00	466.42	0.00	0.00	-460.42
298+00	29800.00	26.65	42.28	0.00	292.31	0.00	28.52	0.00	639.64	0.00	34.52	1233.99	0.00	0.00	-1199.47
298+50	29850.00	50.00	197.17	0.00	0.00	0.00	221.71	0.00	270.66	0.00	256.23	1558.77	0.00	0.00	-1302.54
299+00 BK	29900.00	50.00	428.71	0.00	0.00	0.00	579.52	0.00	0.00	0.00	835.75	1558.77	0.00	0.00	-723.03
						Column totals	5898.47	0.00	20506.40	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 NB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
303+00 AH	30300.00	0.00	159.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
303+50	30350.00	50.00	141.88	0.00	0.00	0.00	279.47	0.00	0.00	0.00	279.47	0.00	0.00	0.00	279.47
304+00 BK	30400.00	50.00	133.66	0.00	0.00	0.00	255.13	0.00	0.00	0.00	534.60	0.00	0.00	0.00	534.60
304+50 AH	30450.00	0.00	71.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305+00	30500.00	50.00	68.74	0.00	0.00	0.00	130.01	0.00	0.00	0.00	130.01	0.00	0.00	0.00	130.01
305+50	30550.00	50.00	64.78	0.00	0.00	0.00	123.63	0.00	0.00	0.00	253.64	0.00	0.00	0.00	253.64
306+00	30600.00	50.00	49.19	0.00	0.00	0.00	105.53	0.00	0.00	0.00	359.17	0.00	0.00	0.00	359.17
306+50	30650.00	50.00	44.91	0.00	0.00	0.00	87.13	0.00	0.00	0.00	446.30	0.00	0.00	0.00	446.30
307+00	30700.00	50.00	47.82	0.00	0.00	0.00	85.86	0.00	0.00	0.00	532.16	0.00	0.00	0.00	532.16
307+32 BK	30732.00	32.00	57.60	0.00	0.00	0.00	62.47	0.00	0.00	0.00	594.63	0.00	0.00	0.00	594.63
		Column totals					1129.23	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
304+45 AH	30445.48	0.00	7.25	0.00	153.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
304+50	30450.00	4.52	6.00	0.00	157.05	0.00	1.11	0.00	25.97	0.00	1.11	31.17	0.00	0.00	-30.06
305+00	30500.00	50.00	12.42	0.00	177.68	0.00	17.06	0.00	309.94	0.00	18.16	403.09	0.00	0.00	-384.92
305+50	30550.00	50.00	0.00	0.00	418.13	0.00	11.50	0.00	551.68	0.00	29.66	1065.10	0.00	0.00	-1035.44
306+00	30600.00	50.00	0.00	0.00	499.74	0.00	0.00	0.00	849.88	0.00	29.66	2084.96	0.00	0.00	-2055.29
306+50	30650.00	50.00	0.00	0.00	534.75	0.00	0.00	0.00	957.86	0.00	29.66	3234.39	0.00	0.00	-3204.72
307+00	30700.00	50.00	0.00	0.00	546.12	0.00	0.00	0.00	1000.81	0.00	29.66	4435.36	0.00	0.00	-4405.69
307+50	30750.00	50.00	0.00	0.00	547.84	0.00	0.00	0.00	1012.93	0.00	29.66	5650.87	0.00	0.00	-5621.20
308+00	30800.00	50.00	0.00	0.00	484.15	0.00	0.00	0.00	955.55	0.00	29.66	6797.52	0.00	0.00	-6767.86
308+00	30800.00	0.00	0.00	0.00	441.21	0.00	0.00	0.00	0.00	0.00	29.66	6797.52	0.00	0.00	-6767.86
308+50	30850.00	50.00	0.00	0.00	491.40	0.00	0.00	0.00	863.53	0.00	29.66	7833.76	0.00	0.00	-7804.09
309+00	30900.00	50.00	0.00	0.00	791.57	0.00	0.00	0.00	1187.94	0.00	29.66	9259.28	0.00	0.00	-9229.61
309+40	30940.00	40.00	3.20	0.00	707.32	0.00	2.37	0.00	1110.29	0.00	32.04	10591.62	0.00	0.00	-10559.59

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
309+40		30940.00	0.00	68.64	0.00	704.67	0.00	0.00	0.00	0.00	0.00	32.04	10591.62	0.00	0.00	-10559.59
309+50		30950.00	10.00	79.79	0.00	683.94	0.00	27.49	0.00	257.15	0.00	59.52	10900.20	0.00	0.00	-10840.68
310+00		31000.00	50.00	138.54	0.00	578.03	0.00	202.16	0.00	1168.49	0.00	261.68	12302.39	0.00	0.00	-12040.71
310+00		31000.00	0.00	87.93	0.00	576.29	0.00	0.00	0.00	0.00	0.00	261.68	12302.39	0.00	0.00	-12040.71
310+50		31050.00	50.00	159.38	0.00	446.36	0.00	228.99	0.00	946.90	0.00	490.67	13438.67	0.00	0.00	-12948.00
310+50		31050.00	0.00	80.94	0.00	443.83	0.00	0.00	0.00	0.00	0.00	490.67	13438.67	0.00	0.00	-12948.00
311+00		31100.00	50.00	155.18	0.00	326.54	0.00	218.63	0.00	713.31	0.00	709.30	14294.64	0.00	0.00	-13585.34
311+00		31100.00	0.00	80.65	0.00	325.64	0.00	0.00	0.00	0.00	0.00	709.30	14294.64	0.00	0.00	-13585.34
311+50	BK	31150.00	50.00	121.13	0.00	233.61	0.00	186.83	0.00	517.82	0.00	896.13	14916.03	0.00	0.00	-14019.89
319+09	AH	31908.92	0.00	233.70	0.00	256.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
319+50		31950.00	41.08	218.95	0.00	271.72	0.00	344.35	0.00	401.63	0.00	344.35	481.95	0.00	0.00	-137.60
320+00	BK	32000.00	50.00	205.76	0.00	297.81	0.00	393.25	0.00	527.34	0.00	737.60	1114.76	0.00	0.00	-377.16
							Column totals	1633.73	0.00	13358.99	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3	Cumulative Vol (CY) Reduced EBS In Fill 0.8	Mass Ordinate
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
320+00 AH	32000.00	0.00	205.76	0.00	297.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
320+50	32050.00	50.00	194.47	0.00	425.93	0.00	370.58	0.00	670.13	0.00	370.58	804.16	0.00	0.00	-433.57
321+00	32100.00	50.00	203.50	0.00	209.79	0.00	368.49	0.00	588.63	0.00	739.07	1510.51	0.00	0.00	-771.44
321+50	32150.00	50.00	223.47	0.00	57.69	0.00	395.34	0.00	247.67	0.00	1134.42	1807.71	0.00	0.00	-673.29
322+00	32200.00	50.00	246.09	0.00	80.72	0.00	434.78	0.00	128.16	0.00	1569.19	1961.50	0.00	0.00	-392.31
322+50	32250.00	50.00	270.42	0.00	220.49	0.00	478.25	0.00	278.90	0.00	2047.44	2296.18	0.00	0.00	-248.73
323+00	32300.00	50.00	290.53	0.00	252.28	0.00	519.40	0.00	437.75	0.00	2566.84	2821.48	0.00	0.00	-254.64
323+50	32350.00	50.00	307.27	0.00	62.16	0.00	553.52	0.00	291.15	0.00	3120.36	3170.86	0.00	0.00	-50.49
324+00	32400.00	50.00	325.80	0.00	121.62	0.00	586.18	0.00	170.17	0.00	3706.54	3375.06	0.00	0.00	331.48
324+50	32450.00	50.00	340.52	0.00	156.72	0.00	616.96	0.00	257.72	0.00	4323.50	3684.32	0.00	0.00	639.18
325+00	32500.00	50.00	361.72	0.00	160.09	0.00	650.22	0.00	293.34	0.00	4973.72	4036.33	0.00	0.00	937.39
325+50	32550.00	50.00	385.66	0.00	140.99	0.00	692.02	0.00	278.78	0.00	5665.74	4370.87	0.00	0.00	1294.87
326+00	32600.00	50.00	401.64	0.00	143.18	0.00	728.98	0.00	263.12	0.00	6394.72	4686.61	0.00	0.00	1708.11
326+50	32650.00	50.00	424.76	0.00	109.04	0.00	765.19	0.00	233.54	0.00	7159.91	4966.86	0.00	0.00	2193.05
327+00	32700.00	50.00	512.11	0.00	148.14	0.00	867.47	0.00	238.13	0.00	8027.38	5252.61	0.00	0.00	2774.77
327+50	32750.00	50.00	568.69	0.00	59.62	0.00	1000.74	0.00	192.37	0.00	9028.12	5483.46	0.00	0.00	3544.66
328+00	32800.00	50.00	592.97	0.00	0.00	0.00	1075.61	0.00	55.20	0.00	10103.73	5549.70	0.00	0.00	4554.03
328+00	32800.00	0.00	712.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10103.73	5549.70	0.00	0.00	4554.03
328+50	32850.00	50.00	720.79	0.00	0.00	0.00	1327.21	0.00	0.00	0.00	11430.94	5549.70	0.00	0.00	5881.24
328+60	32860.00	10.00	685.50	0.00	0.00	0.00	260.42	0.00	0.00	0.00	11691.37	5549.70	0.00	0.00	6141.67
328+60	32860.00	0.00	834.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11691.37	5549.70	0.00	0.00	6141.67
329+00	32900.00	40.00	818.35	0.00	0.00	0.00	1224.24	0.00	0.00	0.00	12915.61	5549.70	0.00	0.00	7365.91
329+50	32950.00	50.00	917.43	0.00	0.00	0.00	1607.20	0.00	0.00	0.00	14522.81	5549.70	0.00	0.00	8973.11
330+00	33000.00	50.00	773.22	0.00	0.00	0.00	1565.42	0.00	0.00	0.00	16088.23	5549.70	0.00	0.00	10538.53
330+00	33000.00	0.00	888.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16088.23	5549.70	0.00	0.00	10538.53
330+50	33050.00	50.00	779.56	0.00	0.00	0.00	1544.55	0.00	0.00	0.00	17632.77	5549.70	0.00	0.00	12083.07
331+00	33100.00	50.00	720.35	0.00	0.00	0.00	1388.81	0.00	0.00	0.00	19021.58	5549.70	0.00	0.00	13471.88
331+00	33100.00	0.00	840.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19021.58	5549.70	0.00	0.00	13471.88
331+50	33150.00	50.00	1071.35	0.00	0.00	0.00	1769.94	0.00	0.00	0.00	20791.52	5549.70	0.00	0.00	15241.82
331+63 BK	33163.00	13.00	1065.20	0.00	0.00	0.00	514.35	0.00	0.00	0.00	21305.88	5549.70	0.00	0.00	15756.18

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
335+00 AH	33500.00	0.00	0.83	0.00	244.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
335+50	33550.00	50.00	37.85	0.00	353.40	0.00	35.81	0.00	553.58	0.00	35.81	664.30	0.00	0.00	-628.49
336+00	33600.00	50.00	492.66	0.00	18.24	0.00	491.21	0.00	344.11	0.00	527.03	1077.23	0.00	0.00	-550.21
336+50	33650.00	50.00	0.00	0.00	877.83	0.00	456.17	0.00	829.69	0.00	983.19	2072.87	0.00	0.00	-1089.67
337+00	33700.00	50.00	0.00	0.00	971.70	0.00	0.00	0.00	1712.53	0.00	983.19	4127.90	0.00	0.00	-3144.71
337+50	33750.00	50.00	0.00	0.00	1068.35	0.00	0.00	0.00	1888.94	0.00	983.19	6394.62	0.00	0.00	-5411.43
338+00	33800.00	50.00	0.00	0.00	1246.90	0.00	0.00	0.00	2143.75	0.00	983.19	8967.12	0.00	0.00	-7983.93
338+00	33800.00	0.00	1877.97	0.00	1246.90	0.00	0.00	0.00	0.00	0.00	983.19	8967.12	0.00	0.00	-7983.93
338+50	33850.00	50.00	1776.74	0.00	1443.73	0.00	3383.99	0.00	2491.32	0.00	4367.19	11956.71	0.00	0.00	-7589.53
339+00	33900.00	50.00	1012.47	0.00	1172.62	0.00	2582.60	0.00	2422.55	0.00	6949.79	14863.77	0.00	0.00	-7913.98
339+50	33950.00	50.00	1273.48	0.00	652.75	0.00	2116.62	0.00	1690.16	0.00	9066.41	16891.96	0.00	0.00	-7825.55
340+00	34000.00	50.00	948.58	0.00	52.33	0.00	2057.46	0.00	652.85	0.00	11123.87	17675.38	0.00	0.00	-6551.51
340+50	34050.00	50.00	630.42	0.00	0.00	0.00	1462.04	0.00	48.45	0.00	12585.91	17733.52	0.00	0.00	-5147.61
341+00	34100.00	50.00	1127.87	0.00	1.89	0.00	1628.05	0.00	1.75	0.00	14213.95	17735.62	0.00	0.00	-3521.67
341+50	34150.00	50.00	1048.21	0.00	8.32	0.00	2014.89	0.00	9.45	0.00	16228.84	17746.97	0.00	0.00	-1518.12
342+00	34200.00	50.00	1438.96	0.00	0.00	0.00	2302.94	0.00	7.70	0.00	18531.78	17756.21	0.00	0.00	775.57
342+50	34250.00	50.00	1827.51	0.00	0.00	0.00	3024.51	0.00	0.00	0.00	21556.29	17756.21	0.00	0.00	3800.08
343+00	34300.00	50.00	1974.60	0.00	0.00	0.00	3520.47	0.00	0.00	0.00	25076.76	17756.21	0.00	0.00	7320.55
343+50	34350.00	50.00	1955.90	0.00	0.00	0.00	3639.35	0.00	0.00	0.00	28716.11	17756.21	0.00	0.00	10959.90
344+00	34400.00	50.00	1812.55	0.00	0.00	0.00	3489.31	0.00	0.00	0.00	32205.42	17756.21	0.00	0.00	14449.21
344+50	34450.00	50.00	1759.46	0.00	0.00	0.00	3307.42	0.00	0.00	0.00	35512.83	17756.21	0.00	0.00	17756.62
345+00	34500.00	50.00	1668.73	0.00	0.00	0.00	3174.25	0.00	0.00	0.00	38687.08	17756.21	0.00	0.00	20930.87
345+50	34550.00	50.00	1678.43	0.00	0.00	0.00	3099.22	0.00	0.00	0.00	41786.31	17756.21	0.00	0.00	24030.09
346+00	34600.00	50.00	1331.90	0.00	0.00	0.00	2787.34	0.00	0.00	0.00	44573.65	17756.21	0.00	0.00	26817.44
346+50	34650.00	50.00	1238.49	0.00	0.00	0.00	2379.99	0.00	0.00	0.00	46953.64	17756.21	0.00	0.00	29197.43
346+55	34655.00	5.00	1275.87	0.00	0.00	0.00	232.81	0.00	0.00	0.00	47186.45	17756.21	0.00	0.00	29430.24

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
346+55	34655.00	0.00	787.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47186.45	17756.21	0.00	0.00	29430.24
347+00	34700.00	45.00	668.11	0.00	0.00	0.00	1212.92	0.00	0.00	0.00	48399.37	17756.21	0.00	0.00	30643.16
347+00	34700.00	0.00	527.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48399.37	17756.21	0.00	0.00	30643.16
347+50	34750.00	50.00	413.09	0.00	0.00	0.00	871.22	0.00	0.00	0.00	49270.59	17756.21	0.00	0.00	31514.38
348+00	34800.00	50.00	243.42	0.00	0.00	0.00	607.88	0.00	0.00	0.00	49878.47	17756.21	0.00	0.00	32122.26
348+00	34800.00	0.00	112.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49878.47	17756.21	0.00	0.00	32122.26
348+50	34850.00	50.00	69.92	0.00	0.00	0.00	169.32	0.00	0.00	0.00	50047.79	17756.21	0.00	0.00	32291.58
349+00 BK	34900.00	50.00	42.30	0.00	0.00	0.00	103.91	0.00	0.00	0.00	50151.70	17756.21	0.00	0.00	32395.49
					Column totals		71457.58	0.00	19421.59	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
147+00 AH	14700.00	0.00	5.05	0.00	288.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147+50	14750.00	50.00	11.88	0.00	282.53	0.00	15.68	0.00	529.18	0.00	15.68	635.01	0.00	0.00	-619.34
148+00	14800.00	50.00	18.63	0.00	261.11	0.00	28.25	0.00	503.37	0.00	43.93	1239.06	0.00	0.00	-1195.13
148+50	14850.00	50.00	21.05	0.00	253.75	0.00	36.74	0.00	476.72	0.00	80.67	1811.12	0.00	0.00	-1730.46
149+00	14900.00	50.00	17.67	0.00	236.05	0.00	35.85	0.00	453.52	0.00	116.52	2355.34	0.00	0.00	-2238.83
149+50	14950.00	50.00	104.79	0.00	55.05	0.00	113.39	0.00	269.54	0.00	229.91	2678.79	0.00	0.00	-2448.88
150+00	15000.00	50.00	194.92	0.00	0.00	0.00	277.51	0.00	50.97	0.00	507.42	2739.96	0.00	0.00	-2232.54
150+50	15050.00	50.00	112.58	0.00	37.08	0.00	284.72	0.00	34.33	0.00	792.14	2781.16	0.00	0.00	-1989.02
151+00	15100.00	50.00	56.52	0.00	40.78	0.00	156.57	0.00	72.09	0.00	948.71	2867.67	0.00	0.00	-1918.95
151+50	15150.00	50.00	40.67	0.00	25.05	0.00	89.99	0.00	60.95	0.00	1038.70	2940.81	0.00	0.00	-1902.11
152+00	15200.00	50.00	40.49	0.00	16.49	0.00	75.15	0.00	38.46	0.00	1113.85	2986.97	0.00	0.00	-1873.11
152+50	15250.00	50.00	29.65	0.00	12.30	0.00	64.94	0.00	26.66	0.00	1178.80	3018.96	0.00	0.00	-1840.16
152+95	15295.00	45.00	34.23	0.00	5.25	0.00	53.23	0.00	14.63	0.00	1232.03	3036.51	0.00	0.00	-1804.48
152+95	15295.00	0.00	43.08	0.00	5.96	0.00	0.00	0.00	0.00	0.00	1232.03	3036.51	0.00	0.00	-1804.48
153+00	15300.00	5.00	42.94	0.00	5.81	0.00	7.96	0.00	1.09	0.00	1239.99	3037.81	0.00	0.00	-1797.82
153+50	15350.00	50.00	43.02	0.00	2.11	0.00	79.59	0.00	7.33	0.00	1319.59	3046.61	0.00	0.00	-1727.03
154+00	15400.00	50.00	50.40	0.00	13.47	0.00	86.50	0.00	14.43	0.00	1406.09	3063.92	0.00	0.00	-1657.84
154+50	15450.00	50.00	56.65	0.00	13.08	0.00	99.12	0.00	24.58	0.00	1505.21	3093.42	0.00	0.00	-1588.22
155+00	15500.00	50.00	65.84	0.00	12.94	0.00	113.42	0.00	24.09	0.00	1618.62	3122.34	0.00	0.00	-1503.71
155+50	15550.00	50.00	69.41	0.00	13.06	0.00	125.23	0.00	24.07	0.00	1743.86	3151.22	0.00	0.00	-1407.37
156+00	15600.00	50.00	81.47	0.00	13.19	0.00	139.70	0.00	24.31	0.00	1883.56	3180.39	0.00	0.00	-1296.83
156+50	15650.00	50.00	126.93	0.00	13.37	0.00	192.96	0.00	24.59	0.00	2076.52	3209.90	0.00	0.00	-1133.38
157+00	15700.00	50.00	111.09	0.00	13.61	0.00	220.39	0.00	24.98	0.00	2296.91	3239.88	0.00	0.00	-942.97
157+50	15750.00	50.00	28.87	0.00	18.70	0.00	129.59	0.00	29.92	0.00	2426.50	3275.78	0.00	0.00	-849.28
158+00	15800.00	50.00	7.19	0.00	32.25	0.00	33.39	0.00	47.18	0.00	2459.89	3332.39	0.00	0.00	-872.50
158+50	15850.00	50.00	11.55	0.00	28.05	0.00	17.35	0.00	55.83	0.00	2477.24	3399.39	0.00	0.00	-922.15
159+00	15900.00	50.00	17.76	0.00	26.03	0.00	27.14	0.00	50.07	0.00	2504.38	3459.48	0.00	0.00	-955.10
159+50	15950.00	50.00	250.26	0.00	14.96	0.00	248.17	0.00	37.95	0.00	2752.55	3505.02	0.00	0.00	-752.47
160+00	16000.00	50.00	1366.44	0.00	0.00	0.00	1496.94	0.00	13.85	0.00	4249.49	3521.65	0.00	0.00	727.85
160+50	16050.00	50.00	1389.45	0.00	0.00	0.00	2551.75	0.00	0.00	0.00	6801.24	3521.65	0.00	0.00	3279.60
161+00	16100.00	50.00	201.66	0.00	26.31	0.00	1473.25	0.00	24.36	0.00	8274.49	3550.88	0.00	0.00	4723.61
161+50	16150.00	50.00	5.47	0.00	187.27	0.00	191.79	0.00	197.76	0.00	8466.28	3788.19	0.00	0.00	4678.09
162+00 BK	16200.00	50.00	4.77	0.00	294.75	0.00	9.48	0.00	446.31	0.00	8475.76	4323.77	0.00	0.00	4151.99

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 EB

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
293+20	AH	29319.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
293+22		29322.36	2.51	45.84	0.00	0.00	0.00	2.13	0.00	0.00	0.00	2.13	0.00	0.00	0.00	2.13
293+50		29350.00	27.64	51.10	0.00	0.00	0.00	49.62	0.00	0.00	0.00	51.75	0.00	0.00	0.00	51.75
294+00		29400.00	50.00	52.10	0.00	0.00	0.00	95.56	0.00	0.00	0.00	147.31	0.00	0.00	0.00	147.31
294+50		29450.00	50.00	53.81	0.00	0.00	0.00	98.06	0.00	0.00	0.00	245.37	0.00	0.00	0.00	245.37
295+00		29500.00	50.00	51.85	0.00	0.00	0.00	97.83	0.00	0.00	0.00	343.20	0.00	0.00	0.00	343.20
295+50		29550.00	50.00	54.09	0.00	0.00	0.00	98.09	0.00	0.00	0.00	441.30	0.00	0.00	0.00	441.30
296+00		29600.00	50.00	53.95	0.00	0.00	0.00	100.04	0.00	0.00	0.00	541.33	0.00	0.00	0.00	541.33
296+50		29650.00	50.00	52.31	0.00	0.00	0.00	98.39	0.00	0.00	0.00	639.72	0.00	0.00	0.00	639.72
296+90	BK	29690.00	40.00	55.20	0.00	0.00	0.00	79.64	0.00	0.00	0.00	719.36	0.00	0.00	0.00	719.36
299+90	AH	29990.00	0.00	13.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300+00		30000.00	10.00	15.98	0.00	0.00	0.00	5.39	0.00	0.00	0.00	5.39	0.00	0.00	0.00	5.39
300+50		30050.00	50.00	22.30	0.00	0.92	0.00	35.44	0.00	0.85	0.00	40.84	1.02	0.00	0.00	39.82
301+00		30100.00	50.00	13.51	0.00	0.12	0.00	33.16	0.00	0.96	0.00	74.00	2.18	0.00	0.00	71.82
301+50		30150.00	50.00	0.27	0.00	0.06	0.00	12.76	0.00	0.17	0.00	86.76	2.38	0.00	0.00	84.38
302+00		30200.00	50.00	0.01	0.00	5.44	0.00	0.26	0.00	5.09	0.00	87.01	8.49	0.00	0.00	78.53
302+50		30250.00	50.00	0.00	0.00	0.46	0.00	0.01	0.00	5.46	0.00	87.02	15.04	0.00	0.00	71.98
303+00		30300.00	50.00	0.00	0.00	0.47	0.00	0.00	0.00	0.86	0.00	87.02	16.08	0.00	0.00	70.95
303+50		30350.00	50.00	0.00	0.00	0.77	0.00	0.00	0.00	1.15	0.00	87.02	17.46	0.00	0.00	69.57
304+00		30400.00	50.00	0.00	0.00	0.36	0.00	0.00	0.00	1.05	0.00	87.02	18.71	0.00	0.00	68.31
304+50		30450.00	50.00	0.83	0.00	0.00	0.00	0.77	0.00	0.33	0.00	87.79	19.11	0.00	0.00	68.68
304+70	BK	30470.01	20.01	0.95	0.00	0.00	0.00	0.66	0.00	0.00	0.00	88.45	19.11	0.00	0.00	69.34
						Column totals		9283.57	0.00	3619.07	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.2	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
209+83 AH	20982.81	0.00	921.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210+00	21000	17.19	965.91	0.00	0.00	0.00	600.78	0.00	0.00	0.00	600.78	0.00	0.00	0.00	600.78
210+50	21050	50.00	1008.75	0.00	0.00	0.00	1828.39	0.00	0.00	0.00	2429.17	0.00	0.00	0.00	2429.17
211+00	21100	50.00	1067.39	0.00	0.00	0.00	1922.35	0.00	0.00	0.00	4351.52	0.00	0.00	0.00	4351.52
211+50	21150	50.00	992.52	0.00	0.00	0.00	1907.32	0.00	0.00	0.00	6258.84	0.00	0.00	0.00	6258.84
212+00	21200	50.00	970.06	0.00	0.00	0.00	1817.20	0.00	0.00	0.00	8076.05	0.00	0.00	0.00	8076.05
212+50	21250	50.00	946.69	0.00	0.00	0.00	1774.77	0.00	0.00	0.00	9850.81	0.00	0.00	0.00	9850.81
213+00	21300	50.00	912.61	0.00	0.00	0.00	1721.57	0.00	0.00	0.00	11572.39	0.00	0.00	0.00	11572.39
213+50	21350	50.00	870.04	0.00	0.00	0.00	1650.60	0.00	0.00	0.00	13222.99	0.00	0.00	0.00	13222.99
214+00	21400	50.00	813.73	0.00	0.00	0.00	1559.05	0.00	0.00	0.00	14782.04	0.00	0.00	0.00	14782.04
214+50	21450	50.00	758.85	0.00	0.00	0.00	1456.09	0.00	0.00	0.00	16238.13	0.00	0.00	0.00	16238.13
215+00	21500	50.00	690.31	0.00	0.00	0.00	1341.81	0.00	0.00	0.00	17579.94	0.00	0.00	0.00	17579.94
215+50	21550	50.00	625.97	0.00	0.00	0.00	1218.78	0.00	0.00	0.00	18798.72	0.00	0.00	0.00	18798.72
216+00	21600	50.00	564.69	0.00	0.00	0.00	1102.46	0.00	0.00	0.00	19901.19	0.00	0.00	0.00	19901.19
216+50	21650	50.00	498.39	0.00	0.00	0.00	984.33	0.00	0.00	0.00	20885.52	0.00	0.00	0.00	20885.52
217+00	21700	50.00	458.43	0.00	0.00	0.00	885.94	0.00	0.00	0.00	21771.46	0.00	0.00	0.00	21771.46
217+50	21750	50.00	423.90	0.00	0.00	0.00	816.97	0.00	0.00	0.00	22588.44	0.00	0.00	0.00	22588.44
218+00	21800	50.00	394.13	0.00	0.00	0.00	757.44	0.00	0.00	0.00	23345.87	0.00	0.00	0.00	23345.87
218+00	21800	0.00	456.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23345.87	0.00	0.00	0.00	23345.87
218+50	21850	50.00	421.23	0.00	0.00	0.00	813.01	0.00	0.00	0.00	24158.88	0.00	0.00	0.00	24158.88
219+00	21900	50.00	368.84	0.00	0.00	0.00	731.55	0.00	0.00	0.00	24890.43	0.00	0.00	0.00	24890.43
219+50	21950	50.00	317.89	0.00	0.00	0.00	635.86	0.00	0.00	0.00	25526.29	0.00	0.00	0.00	25526.29
220+00	22000	50.00	304.01	0.00	0.00	0.00	575.83	0.00	0.00	0.00	26102.12	0.00	0.00	0.00	26102.12
220+50	22050	50.00	319.33	0.00	0.00	0.00	577.17	0.00	0.00	0.00	26679.29	0.00	0.00	0.00	26679.29
221+00	22100	50.00	358.05	0.00	0.05	0.00	627.20	0.00	0.05	0.00	27306.49	0.06	0.00	0.00	27306.44
221+50	22150	50.00	298.16	0.00	0.06	0.00	607.60	0.00	0.10	0.00	27914.09	0.18	0.00	0.00	27913.91
222+00	22200	50.00	312.40	0.00	0.02	0.00	565.33	0.00	0.07	0.00	28479.43	0.27	0.00	0.00	28479.16
222+25	22225	25.00	425.04	0.00	0.02	0.00	341.41	0.00	0.02	0.00	28820.83	0.29	0.00	0.00	28820.54
222+25	22225	0.00	186.12	0.00	0.02	0.00	0.00	0.00	0.00	0.00	28820.83	0.29	0.00	0.00	28820.54
222+50	22250	50.00	180.77	0.00	0.01	0.00	339.71	0.00	0.03	0.00	29160.55	0.32	0.00	0.00	29160.22
223+00	22300	50.00	165.91	0.00	0.00	0.00	321.00	0.00	0.01	0.00	29481.55	0.33	0.00	0.00	29481.21
223+50	22350	50.00	162.57	0.00	0.00	0.00	304.15	0.00	0.00	0.00	29785.69	0.33	0.00	0.00	29785.36
223+50	22350	0.00	126.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29785.69	0.33	0.00	0.00	29785.36
224+00	22400	50.00	163.42	0.00	0.00	0.00	268.77	0.00	0.00	0.00	30054.46	0.33	0.00	0.00	30054.13

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
224+50	22450	50.00	155.87	0.00	0.00	0.00	288.65	0.00	0.00	0.00	30343.11	0.33	0.00	0.00	30342.78
225+00	22500	50.00	152.38	0.00	0.13	0.00	285.42	0.00	0.12	0.00	30628.53	0.48	0.00	0.00	30628.05
225+50	22550	50.00	136.03	0.00	0.32	0.00	267.05	0.00	0.42	0.00	30895.57	0.98	0.00	0.00	30894.60
226+00	22600	50.00	121.24	0.00	0.00	0.00	238.21	0.00	0.30	0.00	31133.79	1.33	0.00	0.00	31132.45
226+00	22600	0.00	120.81	0.00	3.65	0.00	0.00	0.00	0.00	0.00	31133.79	1.33	0.00	0.00	31132.45
226+50	22650	50.00	97.59	0.00	0.68	0.00	202.22	0.00	4.01	0.00	31336.01	6.14	0.00	0.00	31329.86
227+00	22700	50.00	75.69	0.00	4.74	0.00	160.44	0.00	5.02	0.00	31496.45	12.17	0.00	0.00	31484.29
227+45	22745	45.00	59.97	0.00	30.77	0.00	113.05	0.00	29.59	0.00	31609.50	47.68	0.00	0.00	31561.83
227+45	22745	0.00	124.08	0.00	31.10	0.00	0.00	0.00	0.00	0.00	31609.50	47.68	0.00	0.00	31561.83
227+50	22750	5.00	99.17	0.00	33.95	0.00	20.67	0.00	6.02	0.00	31630.17	54.90	1.30	0.00	31575.27
228+00	22800	50.00	60.53	0.00	52.80	0.00	147.87	0.00	80.32	0.00	31778.05	151.29	1.30	0.00	31626.75
228+50	22850	50.00	19.64	0.00	80.93	0.00	74.23	0.00	123.82	0.00	31852.28	299.88	1.30	0.00	31552.39
229+00	22900	50.00	0.00	0.00	125.54	0.00	18.19	0.00	191.18	0.00	31870.46	529.29	1.30	0.00	31341.17
229+50	22950	50.00	0.00	0.00	196.45	0.00	0.00	0.00	298.14	0.00	31870.46	887.06	1.30	0.00	30983.40
230+00	23000	50.00	0.00	0.00	266.46	0.00	0.00	0.00	428.62	0.00	31870.46	1401.40	1.30	0.00	30469.06
230+50	23050	50.00	0.00	0.00	348.25	0.00	0.00	0.00	569.18	0.00	31870.46	2084.42	1.30	0.00	29786.05
231+00	23100	50.00	0.00	0.00	413.98	0.00	0.00	0.00	705.77	0.00	31870.46	2931.34	1.30	0.00	28939.12
231+50	23150	50.00	0.00	0.00	479.12	0.00	0.00	0.00	826.94	0.00	31870.46	3923.67	1.30	0.00	27946.79
232+00	23200	50.00	0.00	0.00	553.03	0.00	0.00	0.00	955.69	0.00	31870.46	5070.50	1.30	0.00	26799.96
232+50	23250	50.00	0.00	0.00	620.43	0.00	0.00	0.00	1086.54	0.00	31870.46	6374.35	1.30	0.00	25496.11
233+00	23300	50.00	0.00	0.00	633.90	0.00	0.00	0.00	1161.42	0.00	31870.46	7768.05	1.30	0.00	24102.41
233+50	23350	50.00	0.00	0.00	663.94	0.00	0.00	0.00	1201.70	0.00	31870.46	9210.09	1.30	0.00	22660.37
234+00	23400	50.00	0.00	0.00	707.31	0.00	0.00	0.00	1269.68	0.00	31870.46	10733.70	1.30	0.00	21136.76
234+50	23450	50.00	0.00	0.00	723.89	0.00	0.00	0.00	1325.19	0.00	31870.46	12323.93	1.30	0.00	19546.54
234+95	23495	45.00	0.00	0.00	723.89	0.00	0.00	0.00	1206.48	0.00	31870.46	13771.71	1.30	0.00	18098.76
234+95	23495	0.00	0.00	0.00	723.89	0.00	0.00	0.00	0.00	0.00	31870.46	13771.71	1.30	0.00	18098.76
235+00	23500	5.00	0.00	0.00	730.28	0.00	0.00	0.00	134.65	0.00	31870.46	13933.28	1.30	0.00	17937.18
235+50	23550	50.00	0.00	0.00	742.24	0.00	0.00	0.00	1363.44	0.00	31870.46	15569.41	1.30	0.00	16301.05
236+00	23600	50.00	0.00	0.00	745.74	0.00	0.00	0.00	1377.76	0.00	31870.46	17222.73	1.30	0.00	14647.74
236+50	23650	50.00	0.00	0.00	704.29	0.00	0.00	0.00	1342.62	0.00	31870.46	18833.87	1.30	0.00	13036.59
236+66	23666.01	16.01	0.00	0.00	685.07	0.00	0.00	0.00	411.92	0.00	31870.46	19328.17	1.30	0.00	12542.29
236+84 BK	23684.02	18.01	0.00	0.00	0.00	0.00	0.00	0.00	228.48	0.00	31870.46	19602.35	1.30	0.00	12268.11

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
238+02 AH	23802.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238+18	23818	15.78	0.00	0.00	1282.32	0.00	0.00	0.00	374.72	0.00	0.00	449.67	0.00	0.00	-449.67
238+50	23850	32.00	0.00	0.00	599.82	0.00	0.00	0.00	1115.34	0.00	0.00	1788.08	0.00	0.00	-1788.08
239+00	23900	50.00	0.00	0.00	590.69	0.00	0.00	0.00	1102.32	0.00	0.00	3110.87	0.00	0.00	-3110.87
239+50	23950	50.00	0.00	0.00	543.91	0.00	0.00	0.00	1050.56	0.00	0.00	4371.53	0.00	0.00	-4371.53
240+00	24000	50.00	0.00	0.00	405.96	0.00	0.00	0.00	879.51	0.00	0.00	5426.94	0.00	0.00	-5426.94
240+50	24050	50.00	0.00	0.00	456.18	0.00	0.00	0.00	798.28	0.00	0.00	6384.88	0.00	0.00	-6384.88
241+00	24100	50.00	0.00	0.00	446.86	0.00	0.00	0.00	836.15	0.00	0.00	7388.26	0.00	0.00	-7388.26
241+50	24150	50.00	0.00	0.00	425.15	0.00	0.00	0.00	807.42	0.00	0.00	8357.16	0.00	0.00	-8357.16
242+00	24200	50.00	0.00	0.00	395.14	0.00	0.00	0.00	759.53	0.00	0.00	9268.59	0.00	0.00	-9268.59
242+00	24200	0.00	0.00	0.00	272.77	0.00	0.00	0.00	0.00	0.00	0.00	9268.59	0.00	0.00	-9268.59
242+50	24250	50.00	0.00	0.00	238.59	0.00	0.00	0.00	473.48	0.00	0.00	9836.77	0.00	0.00	-9836.77
243+00	24300	50.00	0.43	0.00	237.27	0.00	0.40	0.00	440.61	0.00	0.40	10365.50	0.00	0.00	-10365.10
243+50	24350	50.00	0.00	0.00	227.06	0.00	0.40	0.00	429.94	0.00	0.80	10881.42	0.00	0.00	-10880.63
244+00	24400	50.00	0.00	0.00	213.19	0.00	0.00	0.00	407.64	0.00	0.80	11370.59	0.00	0.00	-11369.79
244+50	24450	50.00	0.00	0.00	196.33	0.00	0.00	0.00	379.19	0.00	0.80	11825.61	0.00	0.00	-11824.81
245+00	24500	50.00	0.00	0.00	164.61	0.00	0.00	0.00	334.20	0.00	0.80	12226.66	0.00	0.00	-12225.86
245+50	24550	50.00	0.00	0.00	132.05	0.00	0.00	0.00	274.69	0.00	0.80	12556.28	0.00	0.00	-12555.48
246+00	24600	50.00	0.00	0.00	91.27	0.00	0.00	0.00	206.78	0.00	0.80	12804.41	0.00	0.00	-12803.61
246+50	24650	50.00	0.00	0.00	48.01	0.00	0.00	0.00	128.96	0.00	0.80	12959.17	0.00	0.00	-12958.37
247+00	24700	50.00	0.47	0.00	11.10	0.00	0.44	0.00	54.73	0.00	1.23	13024.84	0.00	0.00	-13023.61
247+50	24750	50.00	19.70	0.00	0.90	0.00	18.68	0.00	11.11	0.00	19.91	13038.18	0.00	0.00	-13018.27
247+64	24764	14.00	28.92	0.00	2.83	0.00	12.61	0.00	0.97	0.00	32.51	13039.34	0.00	0.00	-13006.83
247+64	24764	0.00	16.77	0.00	1.38	0.00	0.00	0.00	0.00	0.00	32.51	13039.34	0.00	0.00	-13006.83
248+00	24800	36.00	29.13	0.00	0.00	0.00	30.60	0.00	0.31	0.00	63.11	13039.71	0.00	0.00	-12976.59
248+50	24850	50.00	48.84	0.00	0.00	0.00	72.19	0.00	0.00	0.00	135.31	13039.71	0.00	0.00	-12904.40
249+00	24900	50.00	71.46	0.00	0.00	0.00	111.39	0.00	0.00	0.00	246.70	13039.71	0.00	0.00	-12793.01
249+50	24950	50.00	92.48	0.00	0.00	0.00	151.80	0.00	0.00	0.00	398.49	13039.71	0.00	0.00	-12641.21

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
250+00	25000	50.00	111.47	0.00	0.00	0.00	188.84	0.00	0.00	0.00	587.33	13039.71	0.00	0.00	-12452.37
250+50	25050	50.00	127.53	0.00	0.00	0.00	221.30	0.00	0.00	0.00	808.63	13039.71	0.00	0.00	-12231.07
250+69	25069	19.00	132.77	0.00	0.00	0.00	91.59	0.00	0.00	0.00	900.22	13039.71	0.00	0.00	-12139.49
250+69	25069	0.00	313.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	900.22	13039.71	0.00	0.00	-12139.49
251+00	25100	50.00	319.01	0.00	0.00	0.00	585.76	0.00	0.00	0.00	1485.98	13039.71	0.00	0.00	-11553.73
251+50	25150	50.00	336.19	0.00	0.00	0.00	606.67	0.00	0.00	0.00	2092.64	13039.71	0.00	0.00	-10947.06
252+00	25200	50.00	351.01	0.00	0.00	0.00	636.30	0.00	0.00	0.00	2728.94	13039.71	0.00	0.00	-10310.77
252+50	25250	50.00	360.19	0.00	0.00	0.00	658.52	0.00	0.00	0.00	3387.46	13039.71	0.00	0.00	-9652.25
253+00	25300	50.00	371.94	0.00	0.00	0.00	677.90	0.00	0.00	0.00	4065.36	13039.71	0.00	0.00	-8974.35
253+50	25350	50.00	376.18	0.00	0.00	0.00	692.70	0.00	0.00	0.00	4758.06	13039.71	0.00	0.00	-8281.65
254+00	25400	50.00	284.49	0.00	0.00	0.00	611.73	0.00	0.00	0.00	5369.79	13039.71	0.00	0.00	-7669.91
254+00	25400	0.00	370.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5369.79	13039.71	0.00	0.00	-7669.91
254+50	25450	50.00	271.03	0.00	0.00	0.00	593.68	0.00	0.00	0.00	5963.47	13039.71	0.00	0.00	-7076.24
255+00	25500	50.00	253.14	0.00	0.00	0.00	485.34	0.00	0.00	0.00	6448.81	13039.71	0.00	0.00	-6590.90
255+50	25550	50.00	240.27	0.00	0.00	0.00	456.86	0.00	0.00	0.00	6905.67	13039.71	0.00	0.00	-6134.03
256+00	25600	50.00	233.85	0.00	0.00	0.00	439.00	0.00	0.00	0.00	7344.67	13039.71	0.00	0.00	-5695.03
256+50	25650	50.00	198.43	0.00	0.01	0.00	400.26	0.00	0.01	0.00	7744.93	13039.72	0.00	0.00	-5294.79
257+00	25700	50.00	201.70	0.00	0.20	0.00	370.49	0.00	0.19	0.00	8115.42	13039.95	0.00	0.00	-4924.53
257+50	25750	50.00	234.87	0.00	0.00	0.00	404.23	0.00	0.19	0.00	8519.65	13040.17	0.00	0.00	-4520.52
258+00	25800	50.00	218.51	0.00	0.00	0.00	419.80	0.00	0.00	0.00	8939.45	13040.17	0.00	0.00	-4100.72
258+50	25850	50.00	225.87	0.00	0.00	0.00	411.46	0.00	0.00	0.00	9350.91	13040.17	0.00	0.00	-3689.26
259+00	25900	50.00	224.21	0.00	0.00	0.00	416.74	0.00	0.00	0.00	9767.65	13040.17	0.00	0.00	-3272.52
259+50	25950	50.00	211.80	0.00	0.00	0.00	403.71	0.00	0.00	0.00	10171.37	13040.17	0.00	0.00	-2868.81
260+00	26000	50.00	196.42	0.00	0.00	0.00	377.98	0.00	0.00	0.00	10549.35	13040.17	0.00	0.00	-2490.82
260+50	26050	50.00	173.64	0.00	0.00	0.00	342.65	0.00	0.00	0.00	10892.00	13040.17	0.00	0.00	-2148.18
261+00	26100	50.00	156.22	0.00	0.00	0.00	305.43	0.00	0.00	0.00	11197.42	13040.17	0.00	0.00	-1842.75
261+50	26150	50.00	143.92	0.00	0.00	0.00	277.91	0.00	0.00	0.00	11475.33	13040.17	0.00	0.00	-1564.84
262+00	26200	50.00	132.61	0.00	0.00	0.00	256.05	0.00	0.00	0.00	11731.38	13040.17	0.00	0.00	-1308.80
262+50	26250	50.00	122.61	0.00	0.00	0.00	236.31	0.00	0.00	0.00	11967.69	13040.17	0.00	0.00	-1072.48
263+00	26300	50.00	114.91	0.00	0.00	0.00	219.93	0.00	0.00	0.00	12187.62	13040.17	0.00	0.00	-852.56
263+50	26350	50.00	114.54	0.00	0.00	0.00	212.45	0.00	0.00	0.00	12400.07	13040.17	0.00	0.00	-640.10

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
264+00	26400	50.00	117.03	0.00	0.00	0.00	214.42	0.00	0.00	0.00	12614.49	13040.17	0.00	0.00	-425.69
264+50	26450	50.00	141.85	0.00	0.00	0.00	239.70	0.00	0.00	0.00	12854.19	13040.17	0.00	0.00	-185.98
265+00	26500	50.00	163.72	0.00	0.00	0.00	282.94	0.00	0.00	0.00	32153.40	18833.87	1.30	0.00	13319.53
265+50	26550	50.00	182.50	0.00	0.00	0.00	320.57	0.00	0.00	0.00	32473.97	18833.87	1.30	0.00	13640.10
266+00	26600	50.00	197.13	0.00	0.00	0.00	351.51	0.00	0.00	0.00	32825.48	18833.87	1.30	0.00	13991.61
266+50	26650	50.00	206.69	0.00	0.00	0.00	373.91	0.00	0.00	0.00	33199.39	18833.87	1.30	0.00	14365.52
267+00	26700	50.00	211.04	0.00	0.00	0.00	386.79	0.00	0.00	0.00	33586.17	18833.87	1.30	0.00	14752.30
267+50	26750	50.00	214.29	0.00	0.00	0.00	393.82	0.00	0.00	0.00	33980.00	18833.87	1.30	0.00	15146.13
268+00	26800	50.00	218.11	0.00	0.00	0.00	400.37	0.00	0.00	0.00	34380.37	18833.87	1.30	0.00	15546.50
268+50	26850	50.00	221.66	0.00	0.00	0.00	407.19	0.00	0.00	0.00	34787.56	18833.87	1.30	0.00	15953.69
269+00	26900	50.00	293.11	0.00	0.00	0.00	476.64	0.00	0.00	0.00	35264.20	18833.87	1.30	0.00	16430.33
269+00	26900	0.00	293.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35264.20	18833.87	0.00	0.00	16430.33
269+50	26950	50.00	294.50	0.00	0.00	0.00	544.08	0.00	0.00	0.00	35808.29	18833.87	0.00	0.00	16974.42
270+00	27000	50.00	288.40	0.00	0.00	0.00	539.72	0.00	0.00	0.00	36348.01	18833.87	0.00	0.00	17514.14
270+50	27050	50.00	263.87	0.00	0.00	0.00	511.36	0.00	0.00	0.00	36859.37	18833.87	0.00	0.00	18025.50
271+00	27100	50.00	231.40	0.00	0.00	0.00	458.58	0.00	0.00	0.00	37317.95	18833.87	0.00	0.00	18484.08
271+50	27150	50.00	198.51	0.00	0.00	0.00	398.06	0.00	0.00	0.00	37716.02	18833.87	0.00	0.00	18882.15
272+00	27200	50.00	165.23	0.00	0.00	0.00	336.80	0.00	0.00	0.00	38052.81	18833.87	0.00	0.00	19218.94
272+50	27250	50.00	135.61	0.00	0.00	0.00	278.56	0.00	0.00	0.00	38331.37	18833.87	0.00	0.00	19497.50
273+00	27300	50.00	106.73	0.00	0.00	0.00	224.39	0.00	0.00	0.00	38555.76	18833.87	0.00	0.00	19721.89
273+20	27320	20.00	184.23	0.00	47.50	0.00	107.76	0.00	17.59	0.00	38663.52	18854.98	0.00	0.00	19808.54
273+20	27320	0.00	186.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38663.52	18854.98	0.00	0.00	19808.54
273+50	27350	30.00	44.64	0.00	0.25	0.00	128.63	0.00	0.14	0.00	38792.15	18855.15	0.00	0.00	19937.01
274+00	27400	50.00	36.57	0.00	1.19	0.00	75.19	0.00	1.33	0.00	38867.35	18856.75	0.00	0.00	20010.60
274+50	27450	50.00	35.09	0.00	1.72	0.00	66.35	0.00	2.69	0.00	38933.70	18859.98	0.00	0.00	20073.72
275+00	27500	50.00	38.51	0.00	1.40	0.00	68.15	0.00	2.89	0.00	39001.85	18863.45	0.00	0.00	20138.40
275+50	27550	50.00	41.07	0.00	1.23	0.00	73.69	0.00	2.44	0.00	39075.53	18866.37	0.00	0.00	20209.16
276+00	27600	50.00	46.09	0.00	0.57	0.00	80.70	0.00	1.67	0.00	39156.24	18868.37	0.00	0.00	20287.87
276+50	27650	50.00	53.95	0.00	0.05	0.00	92.63	0.00	0.57	0.00	39248.87	18869.06	0.00	0.00	20379.81
277+00	27700	50.00	61.96	0.00	0.02	0.00	107.32	0.00	0.06	0.00	39356.19	18869.14	0.00	0.00	20487.05
277+50	27750	50.00	71.28	0.00	0.00	0.00	123.37	0.00	0.02	0.00	39479.56	18869.16	0.00	0.00	20610.40

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
278+00	27800	50.00	77.02	0.00	0.00	0.00	137.31	0.00	0.00	0.00	39616.88	18869.16	0.00	0.00	20747.72
278+35	27835	35.00	80.95	0.00	0.00	0.00	89.49	0.00	0.02	0.00	39706.36	18869.18	0.00	0.00	20837.18
278+35	27835	0.00	137.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39706.36	18869.18	0.00	0.00	20837.18
278+50	27850	50.00	138.87	0.00	0.00	0.00	255.68	0.00	0.00	0.00	39962.04	18869.18	0.00	0.00	21092.86
279+00	27900	50.00	127.51	0.00	0.00	0.00	246.65	0.00	0.00	0.00	40208.69	18869.18	0.00	0.00	21339.51
279+50	27950	50.00	101.54	0.00	0.00	0.00	212.08	0.00	0.00	0.00	40420.77	18869.18	0.00	0.00	21551.59
280+00	28000	50.00	70.14	0.00	0.00	0.00	158.96	0.00	0.00	0.00	40579.73	18869.18	0.00	0.00	21710.55
280+50	28050	50.00	72.62	0.00	17.36	0.00	132.19	0.00	16.07	0.00	40711.92	18888.47	0.00	0.00	21823.45
281+00	28100	50.00	80.27	0.00	21.63	0.00	141.56	0.00	36.10	0.00	40853.48	18931.79	0.00	0.00	21921.69
281+50	28150	50.00	88.11	0.00	9.04	0.00	155.91	0.00	28.40	0.00	41009.39	18965.87	0.00	0.00	22043.52
282+00	28200	50.00	94.49	0.00	1.80	0.00	169.07	0.00	10.04	0.00	41178.46	18977.91	0.00	0.00	22200.55
282+50	28250	50.00	93.92	0.00	0.00	0.00	174.45	0.00	1.67	0.00	41352.92	18979.91	0.00	0.00	22373.00
283+00	28300	50.00	94.51	0.00	0.00	0.00	174.47	0.00	0.00	0.00	41527.39	18979.91	0.00	0.00	22547.48
283+50	28350	50.00	103.04	0.00	0.04	0.00	182.92	0.00	0.04	0.00	41710.31	18979.96	0.00	0.00	22730.35
284+00	28400	50.00	103.67	0.00	0.00	0.00	191.40	0.00	0.04	0.00	41901.71	18980.00	0.00	0.00	22921.70
284+50	28450	50.00	93.77	0.00	0.00	0.00	182.81	0.00	0.00	0.00	42084.52	18980.00	0.00	0.00	23104.52
284+92 BK	28491.85	41.85	91.21	0.00	0.00	0.00	143.36	0.00	0.00	0.00	42227.88	18980.00	0.00	0.00	23247.88
293+23 AH	29323	0.00	0.00	0.00	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
293+50	29350	27.00	0.00	0.00	2.57	0.00	0.00	0.00	2.98	0.00	0.00	3.57	0.00	0.00	-3.57
294+00	29400	50.00	0.00	0.00	3.45	0.00	0.00	0.00	5.57	0.00	0.00	10.26	0.00	0.00	-10.26
294+50	29450	50.00	0.00	0.00	1.75	0.00	0.00	0.00	4.81	0.00	0.00	16.04	0.00	0.00	-16.04
295+00	29500	50.00	0.00	0.00	0.28	0.00	0.00	0.00	1.88	0.00	0.00	18.29	0.00	0.00	-18.29
295+50	29550	50.00	15.60	0.00	1.02	0.00	14.44	0.00	1.20	0.00	14.44	19.74	0.00	0.00	-5.29
296+00	29600	50.00	15.87	0.00	0.58	0.00	29.14	0.00	1.48	0.00	43.58	21.51	0.00	0.00	22.07
296+50	29650	50.00	16.72	0.00	2.21	0.00	30.18	0.00	2.58	0.00	73.76	24.61	0.00	0.00	49.14
297+00	29700	50.00	16.55	0.00	0.00	0.00	30.81	0.00	2.05	0.00	104.56	27.07	0.00	0.00	77.49
297+50 BK	29750	50.00	16.42	0.00	0.11	0.00	30.53	0.00	0.10	0.00	135.09	27.19	0.00	0.00	107.90
		Column totals					55217.16	0.00	27346.54	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP SW

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
592+63 AH	59263.00	0.00	0.00	0.00	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
592+82	59282.00	19.00	0.00	0.00	417.10	0.00	0.00	0.00	153.06	0.00	0.00	183.67	0.00	0.00	-183.67
593+00	59300.00	18.00	0.00	0.00	548.05	0.00	0.00	0.00	321.71	0.00	0.00	569.73	0.00	0.00	-569.73
593+50	59350.00	50.00	0.00	0.00	1276.75	0.00	0.00	0.00	1689.63	0.00	0.00	2597.28	0.00	0.00	-2597.28
594+00	59400.00	50.00	0.00	0.00	1211.91	0.00	0.00	0.00	2304.31	0.00	0.00	5362.46	0.00	0.00	-5362.46
594+50	59450.00	50.00	0.00	0.00	1052.49	0.00	0.00	0.00	2096.67	0.00	0.00	7878.46	0.00	0.00	-7878.46
595+00	59500.00	50.00	1.29	0.00	1014.88	0.00	1.19	0.00	1914.23	0.00	1.19	10175.54	0.00	0.00	-10174.34
595+50	59550.00	50.00	2.16	0.00	909.29	0.00	3.19	0.00	1781.64	0.00	4.39	12313.50	0.00	0.00	-12309.11
595+94	59593.75	43.75	0.00	0.00	1602.15	0.00	1.75	0.00	2034.73	0.00	6.14	14755.18	0.00	0.00	-14749.04
596+09 BK	59609.00	15.25	0.00	0.00	0.00	0.00	0.00	0.00	452.46	0.00	6.14	15298.13	0.00	0.00	-15291.99
						Column totals	6.14	0.00	12748.44	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP NW

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
477+09 AH	47709.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
477+50	47750.00	41.00	0.00	0.00	189.80	0.00	0.00	0.00	144.11	0.00	0.00	172.93	0.00	0.00	-172.93
478+00	47800.00	50.00	0.00	0.00	350.95	0.00	0.00	0.00	500.69	0.00	0.00	773.76	0.00	0.00	-773.76
478+50	47850.00	50.00	0.44	0.00	477.74	0.00	0.41	0.00	767.31	0.00	0.41	1694.53	0.00	0.00	-1694.12
479+00	47900.00	50.00	0.40	0.00	501.50	0.00	0.78	0.00	906.70	0.00	1.19	2782.57	0.00	0.00	-2781.39
479+50	47950.00	50.00	0.00	0.00	548.37	0.00	0.37	0.00	972.10	0.00	1.56	3949.10	0.00	0.00	-3947.54
480+00	48000.00	50.00	73.57	0.00	524.39	0.00	68.12	0.00	993.30	0.00	69.68	5141.05	0.00	0.00	-5071.38
480+50	48050.00	50.00	3.86	0.00	823.40	0.00	71.69	0.00	1247.95	0.00	141.37	6638.60	0.00	0.00	-6497.23
481+00	48100.00	50.00	3.83	0.00	1083.32	0.00	7.12	0.00	1765.48	0.00	148.49	8757.17	0.00	0.00	-8608.68
481+50	48150.00	50.00	3.66	0.00	1162.25	0.00	6.94	0.00	2079.23	0.00	155.43	11252.25	0.00	0.00	-11096.83
482+00	48200.00	50.00	24.75	0.00	1074.86	0.00	26.31	0.00	2071.40	0.00	181.73	13737.93	0.00	0.00	-13556.20
482+50	48250.00	50.00	31.34	0.00	1021.23	0.00	51.94	0.00	1940.82	0.00	233.67	16066.92	0.00	0.00	-15833.25
483+00	48300.00	50.00	35.00	0.00	946.41	0.00	61.43	0.00	1821.89	0.00	295.09	18253.18	0.00	0.00	-17958.09
483+50	48350.00	50.00	83.51	0.00	549.57	0.00	109.73	0.00	1385.17	0.00	404.82	19915.38	0.00	0.00	-19510.56
484+00	48400.00	50.00	48.38	0.00	524.09	0.00	122.12	0.00	994.13	0.00	526.94	21108.34	0.00	0.00	-20581.40
484+50	48450.00	50.00	53.33	0.00	424.93	0.00	94.18	0.00	878.72	0.00	621.12	22162.81	0.00	0.00	-21541.69
485+00	48500.00	50.00	57.49	0.00	290.57	0.00	102.61	0.00	662.50	0.00	723.73	22957.81	0.00	0.00	-22234.08
485+50	48550.00	50.00	66.80	0.00	114.88	0.00	115.08	0.00	375.42	0.00	838.81	23408.31	0.00	0.00	-22569.49

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP NW

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
486+00		48600.00	50.00	164.15	0.00	18.32	0.00	213.84	0.00	123.33	0.00	1052.66	23556.31	0.00	0.00	-22503.65
486+50		48650.00	50.00	50.21	0.00	57.18	0.00	198.48	0.00	69.91	0.00	1251.14	23640.20	0.00	0.00	-22389.06
487+00		48700.00	50.00	5.81	0.00	150.42	0.00	51.87	0.00	192.22	0.00	1303.01	23870.86	0.00	0.00	-22567.85
487+50		48750.00	50.00	0.00	0.00	311.30	0.00	5.38	0.00	427.52	0.00	1308.39	24383.88	0.00	0.00	-23075.50
488+00		48800.00	50.00	0.00	0.00	1049.77	0.00	0.00	0.00	1260.25	0.00	1308.39	25896.18	0.00	0.00	-24587.80
488+50		48850.00	50.00	0.00	0.00	2113.85	0.00	0.00	0.00	2929.28	0.00	1308.39	29411.32	0.00	0.00	-28102.93
489+00		48900.00	50.00	0.00	0.00	1605.51	0.00	0.00	0.00	3443.85	0.00	1308.39	33543.94	0.00	0.00	-32235.55
489+50		48950.00	50.00	0.00	0.00	1368.47	0.00	0.00	0.00	2753.69	0.00	1308.39	36848.36	0.00	0.00	-35539.97
490+00		49000.00	50.00	0.00	0.00	1467.21	0.00	0.00	0.00	2625.63	0.00	1308.39	39999.12	0.00	0.00	-38690.73
490+50		49050.00	50.00	0.00	0.00	1068.84	0.00	0.00	0.00	2348.19	0.00	1308.39	42816.95	0.00	0.00	-41508.56
491+00		49100.00	50.00	0.00	0.00	686.39	0.00	0.00	0.00	1625.21	0.00	1308.39	44767.21	0.00	0.00	-43458.82
491+50		49150.00	50.00	0.00	0.00	213.12	0.00	0.00	0.00	832.88	0.00	1308.39	45766.66	0.00	0.00	-44458.27
492+00		49200.00	50.00	0.00	0.00	194.03	0.00	0.00	0.00	376.99	0.00	1308.39	46219.05	0.00	0.00	-44910.66
492+50		49250.00	50.00	0.00	0.00	757.84	0.00	0.00	0.00	881.36	0.00	1308.39	47276.68	0.00	0.00	-45968.30
493+00		49300.00	50.00	0.00	0.00	819.80	0.00	0.00	0.00	1460.78	0.00	1308.39	49029.62	0.00	0.00	-47721.23
493+25		49324.65	24.65	0.00	0.00	1288.94	0.00	0.00	0.00	962.60	0.00	1308.39	50184.74	0.00	0.00	-48876.35
493+50		49350.00	25.35	0.00	0.00	1519.81	0.00	0.00	0.00	1318.55	0.00	1308.39	51767.00	0.00	0.00	-50458.61
494+00		49400.00	50.00	0.00	0.00	469.54	0.00	0.00	0.00	1841.99	0.00	1308.39	53977.39	0.00	0.00	-52669.00
494+50		49450.00	50.00	0.00	0.00	29.92	0.00	0.00	0.00	462.46	0.00	1308.39	54532.35	0.00	0.00	-53223.96
494+55	BK	49455.00	5.00	0.00	0.00	39.65	0.00	0.00	0.00	6.44	0.00	1308.39	54540.08	0.00	0.00	-53231.69
							Column totals	1308.39	0.00	45450.06	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP EN

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
514+22 AH	51422	0.00	934.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
514+50	51450	28.00	838.03	0.00	0.00	0.00	919.15	0.00	0.00	0.00	919.15	0.00	0.00	0.00	919.15
515+00	51500	50.00	708.07	0.00	0.00	0.00	1431.57	0.00	0.00	0.00	2350.73	0.00	0.00	0.00	2350.73
515+50	51550	50.00	623.76	0.00	0.68	0.00	1233.18	0.00	0.63	0.00	3583.90	0.76	0.00	0.00	3583.15
516+00	51600	50.00	541.71	0.00	0.94	0.00	1079.14	0.00	1.50	0.00	4663.04	2.56	0.00	0.00	4660.49
516+05	51605	5.00	531.25	0.00	0.86	0.00	99.35	0.00	0.17	0.00	4762.39	2.76	0.00	0.00	4759.63
516+05	51605	0.00	390.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4762.39	2.76	0.00	0.00	4759.63
516+50	51650	45.00	357.60	0.00	0.00	0.00	623.54	0.00	0.00	0.00	5385.93	2.76	0.00	0.00	5383.18
517+00	51700	95.00	324.68	0.00	0.00	0.00	1200.31	0.00	0.00	0.00	6586.24	2.76	0.00	0.00	6583.48
517+00	51700	0.00	208.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6586.24	2.76	0.00	0.00	6583.48
517+50	51750	50.00	208.10	0.00	0.00	0.00	385.38	0.00	0.00	0.00	6971.62	2.76	0.00	0.00	6968.86
518+00	51800	50.00	203.34	0.00	0.00	0.00	380.96	0.00	0.00	0.00	7352.58	2.76	0.00	0.00	7349.83
518+29 BK	51828.92	28.92	189.67	0.00	0.00	0.00	210.48	0.00	0.00	0.00	7563.06	2.76	0.00	0.00	7560.30
						Column totals	7563.06	0.00	2.30	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP NE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
521+88 AH	52187.53	0.00	298.50	0.00	238.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522+00	52200	12.47	309.07	0.00	232.95	0.00	140.30	0.00	108.80	0.00	140.30	130.56	0.00	0.00	9.74
522+50	52250	50.00	350.72	0.00	210.19	0.00	610.92	0.00	410.31	0.00	751.22	622.94	0.00	0.00	128.28
523+00	52300	50.00	407.76	0.00	187.31	0.00	702.30	0.00	368.06	0.00	1453.52	1064.61	0.00	0.00	388.91
523+50	52350	50.00	557.37	0.00	156.52	0.00	893.64	0.00	318.36	0.00	2347.16	1446.64	0.00	0.00	900.52
524+00	52400	50.00	958.22	0.00	121.84	0.00	1403.32	0.00	257.74	0.00	3750.48	1755.93	0.00	0.00	1994.55
524+50	52450	50.00	1113.52	0.00	84.71	0.00	1918.28	0.00	191.25	0.00	5668.76	1985.43	0.00	0.00	3683.33
525+00	52500	50.00	1126.11	0.00	60.18	0.00	2073.73	0.00	134.16	0.00	7742.49	2146.42	0.00	0.00	5596.07
525+50	52550	50.00	575.75	0.00	23.91	0.00	1575.80	0.00	77.86	0.00	9318.29	2239.85	0.00	0.00	7078.44
526+00	52600	50.00	320.70	0.00	9.44	0.00	830.05	0.00	30.88	0.00	10148.33	2276.91	0.00	0.00	7871.43
526+50	52650	50.00	162.56	0.00	4.87	0.00	447.46	0.00	13.25	0.00	10595.79	2292.81	0.00	0.00	8302.99
527+00	52700	50.00	22.85	0.00	58.42	0.00	171.68	0.00	58.60	0.00	10767.47	2363.13	0.00	0.00	8404.34
527+50	52750	50.00	3.97	0.00	153.50	0.00	24.83	0.00	196.22	0.00	10792.30	2598.59	0.00	0.00	8193.71
528+00	52800	50.00	4.00	0.00	249.37	0.00	7.38	0.00	373.03	0.00	10799.68	3046.23	0.00	0.00	7753.46
528+50	52850	50.00	4.00	0.00	322.16	0.00	7.41	0.00	529.19	0.00	10807.09	3681.26	0.00	0.00	7125.83
528+89	52889	39.00	3.98	0.00	401.17	0.00	5.76	0.00	522.41	0.00	10812.85	4308.15	0.00	0.00	6504.71
528+89	52889	0.00	3.98	0.00	505.09	0.00	0.00	0.00	0.00	0.00	10812.85	4308.15	0.00	0.00	6504.71
529+00	52900	11.00	3.92	0.00	533.76	0.00	1.61	0.00	211.62	0.00	10814.46	4562.09	0.00	0.00	6252.38
529+50	52950	50.00	4.01	0.00	654.45	0.00	7.34	0.00	1100.19	0.00	10821.81	5882.32	0.00	0.00	4939.48
530+00	53000	50.00	4.00	0.00	775.16	0.00	7.42	0.00	1323.71	0.00	10829.22	7470.78	0.00	0.00	3358.45
530+50	53050	50.00	3.97	0.00	884.51	0.00	7.38	0.00	1536.73	0.00	10836.60	9314.85	0.00	0.00	1521.75
531+00	53100	50.00	4.01	0.00	947.99	0.00	7.39	0.00	1696.76	0.00	10843.99	11350.97	0.00	0.00	-506.97
531+50	53150	50.00	4.02	0.00	972.90	0.00	7.44	0.00	1778.60	0.00	10851.43	13485.29	0.00	0.00	-2633.86
532+00	53200	50.00	4.20	0.00	994.52	0.00	7.61	0.00	1821.69	0.00	10859.04	15671.31	0.00	0.00	-4812.27
532+50	53250	50.00	7.07	0.00	701.55	0.00	10.44	0.00	1570.44	0.00	10869.47	17555.83	0.00	0.00	-6686.36
532+51 BK	53251.33	1.33	7.20	0.00	675.46	0.00	0.35	0.00	33.92	0.00	10869.82	17596.53	0.00	0.00	-6726.71

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP NE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
535+92 AH	53592	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
536+00	53600	8.00	1.50	0.00	744.53	0.00	0.22	0.00	110.30	0.00	0.22	132.36	0.00	0.00	-132.14
536+50	53650	50.00	0.00	0.00	841.58	0.00	1.39	0.00	1468.62	0.00	1.61	1894.71	0.00	0.00	-1893.09
536+78	53677.8	27.80	0.00	0.00	1632.14	0.00	0.00	0.00	1273.51	0.00	1.61	3422.91	0.00	0.00	-3421.30
536+78	53677.8	0.00	0.00	0.00	923.98	0.00	0.00	0.00	0.00	0.00	1.61	3422.91	0.00	0.00	-3421.30
537+00	53700	50.00	0.00	0.00	803.52	0.00	0.00	0.00	1599.54	0.00	1.61	5342.36	0.00	0.00	-5340.75
537+50	53750	50.00	0.00	0.00	919.24	0.00	0.00	0.00	1595.15	0.00	1.61	7256.54	0.00	0.00	-7254.93
537+85 BK	53784.89	34.89	0.00	0.00	920.68	0.00	0.00	0.00	1188.79	0.00	1.61	8683.09	0.00	0.00	-8681.48
						Column totals	10871.44	0.00	21899.68	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 Ramp GD R-40-525

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
768+01 AH	76801.00	0.00	0.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
768+50	76850.00	49.00	0.00	0.00	51.00	0.00	0.00	0.00	56.26	0.00	0.00	67.51	0.00	0.00	-67.51
769+00	76900.00	50.00	0.00	0.00	71.00	0.00	0.00	0.00	112.96	0.00	0.00	203.07	0.00	0.00	-203.07
769+50	76950.00	50.00	0.00	0.00	119.00	0.00	0.00	0.00	175.93	0.00	0.00	414.18	0.00	0.00	-414.18
770+00	77000.00	50.00	0.00	0.00	159.00	0.00	0.00	0.00	257.41	0.00	0.00	723.07	0.00	0.00	-723.07
770+50	77050.00	50.00	0.00	0.00	223.00	0.00	0.00	0.00	353.70	0.00	0.00	1147.51	0.00	0.00	-1147.51
771+00	77100.00	50.00	0.00	0.00	313.00	0.00	0.00	0.00	496.30	0.00	0.00	1743.07	0.00	0.00	-1743.07
771+50	77150.00	50.00	0.00	0.00	386.00	0.00	0.00	0.00	647.22	0.00	0.00	2519.73	0.00	0.00	-2519.73
772+00	77200.00	50.00	0.00	0.00	461.00	0.00	0.00	0.00	784.26	0.00	0.00	3460.84	0.00	0.00	-3460.84
772+50	77250.00	50.00	0.00	0.00	471.00	0.00	0.00	0.00	862.96	0.00	0.00	4496.40	0.00	0.00	-4496.40
773+00	77300.00	50.00	0.00	0.00	474.00	0.00	0.00	0.00	875.00	0.00	0.00	5546.40	0.00	0.00	-5546.40
773+50	77350.00	50.00	0.00	0.00	491.00	0.00	0.00	0.00	893.52	0.00	0.00	6618.62	0.00	0.00	-6618.62
774+00	77400.00	50.00	0.00	0.00	31.00	0.00	0.00	0.00	483.33	0.00	0.00	7198.62	0.00	0.00	-7198.62
774+50	77450.00	50.00	0.00	0.00	103.00	0.00	0.00	0.00	124.07	0.00	0.00	7347.51	0.00	0.00	-7347.51
775+00	77500.00	50.00	0.00	0.00	223.00	0.00	0.00	0.00	301.85	0.00	0.00	7709.73	0.00	0.00	-7709.73
775+50	77550.00	50.00	0.00	0.00	300.00	0.00	0.00	0.00	484.26	0.00	0.00	8290.84	0.00	0.00	-8290.84
776+00	77600.00	50.00	0.00	0.00	333.00	0.00	0.00	0.00	586.11	0.00	0.00	8994.18	0.00	0.00	-8994.18
776+50	77650.00	50.00	0.00	0.00	378.00	0.00	0.00	0.00	658.33	0.00	0.00	9784.18	0.00	0.00	-9784.18
777+00	77700.00	50.00	0.00	0.00	402.00	0.00	0.00	0.00	722.22	0.00	0.00	10650.84	0.00	0.00	-10650.84
777+50	77750.00	50.00	0.00	0.00	440.00	0.00	0.00	0.00	779.63	0.00	0.00	11586.40	0.00	0.00	-11586.40
778+00	77800.00	50.00	0.00	0.00	479.00	0.00	0.00	0.00	850.93	0.00	0.00	12607.51	0.00	0.00	-12607.51
778+50	77850.00	50.00	0.00	0.00	519.00	0.00	0.00	0.00	924.07	0.00	0.00	13716.40	0.00	0.00	-13716.40
779+00	77900.00	50.00	0.00	0.00	562.00	0.00	0.00	0.00	1000.93	0.00	0.00	14917.51	0.00	0.00	-14917.51
779+50	77950.00	50.00	0.00	0.00	627.00	0.00	0.00	0.00	1100.93	0.00	0.00	16238.62	0.00	0.00	-16238.62
779+76 BK	77976.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00	301.89	0.00	0.00	16600.89	0.00	0.00	-16600.89
		Column totals					0.00	0.00	13834.07	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 RAMP BB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
822+48 AH	82248.00	0.00	54.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
822+50	82250.00	2.00	57.00	0.00	0.00	0.00	4.11	0.00	0.00	0.00	4.11	0.00	0.00	0.00	4.11
823+00	82300.00	50.00	91.00	0.00	0.00	0.00	137.04	0.00	0.00	0.00	141.15	0.00	0.00	0.00	141.15
823+32 BK	82332.00	32.00	18.00	0.00	0.00	0.00	64.59	0.00	0.00	0.00	205.74	0.00	0.00	0.00	205.74
		Column totals					205.74	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 RAMP BC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
702+68 AH	70267.61	0.00	0.00	0.00	188.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
703+00	70300.00	32.39	0.00	0.00	186.50	0.00	0.00	0.00	224.68	0.00	0.00	269.61	0.00	0.00	-269.61
703+50	70350.00	50.00	0.00	0.00	266.25	0.00	0.00	0.00	419.21	0.00	0.00	772.67	0.00	0.00	-772.67
704+00	70400.00	50.00	0.00	0.00	341.02	0.00	0.00	0.00	562.29	0.00	0.00	1447.41	0.00	0.00	-1447.41
704+50	70450.00	50.00	0.00	0.00	279.53	0.00	0.00	0.00	574.58	0.00	0.00	2136.91	0.00	0.00	-2136.91
705+00	70500.00	50.00	0.00	0.00	215.76	0.00	0.00	0.00	458.60	0.00	0.00	2687.24	0.00	0.00	-2687.24
705+50	70550.00	50.00	19.04	0.00	383.10	0.00	17.63	0.00	554.50	0.00	17.63	3352.64	0.00	0.00	-3335.01
706+00	70600.00	50.00	9.84	0.00	363.56	0.00	26.74	0.00	691.35	0.00	44.37	4182.26	0.00	0.00	-4137.89
706+50	70650.00	50.00	7.72	0.00	302.59	0.00	16.26	0.00	616.81	0.00	60.63	4922.43	0.00	0.00	-4861.80
707+00	70700.00	50.00	8.69	0.00	233.50	0.00	15.19	0.00	496.38	0.00	75.82	5518.08	0.00	0.00	-5442.26
707+50	70750.00	50.00	6.26	0.00	166.82	0.00	13.84	0.00	370.67	0.00	89.67	5962.88	0.00	0.00	-5873.21
708+00	70800.00	50.00	4.01	0.00	115.76	0.00	9.51	0.00	261.65	0.00	99.18	6276.86	0.00	0.00	-6177.68
708+34 BK	70834.37	34.37	3.22	0.00	87.88	0.00	4.60	0.00	129.61	0.00	103.78	6432.39	0.00	0.00	-6328.62
720+92 AH	72092.46	0.00	31.84	0.00	190.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
721+00	72100.00	7.54	34.18	0.00	197.60	0.00	9.22	0.00	54.16	0.00	9.22	64.99	0.00	0.00	-55.78
721+50	72150.00	50.00	99.87	0.00	297.64	0.00	124.12	0.00	458.56	0.00	133.34	615.26	0.00	0.00	-481.92
721+93 BK	72192.73	42.73	0.00	0.00	141.12	0.00	79.03	0.00	347.19	0.00	212.37	1031.89	0.00	0.00	-819.52
					Column totals		316.14	0.00	6220.24	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP BD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
723+01 AH	72301.05	0.00	129.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
723+50	72350.00	48.95	101.50	0.00	451.04	0.00	209.34	0.00	408.86	0.00	209.34	490.63	0.00	0.00	-281.29
724+00	72400.00	50.00	123.43	0.00	340.32	0.00	208.27	0.00	732.74	0.00	417.61	1369.92	0.00	0.00	-952.31
724+50	72450.00	50.00	139.14	0.00	242.85	0.00	243.12	0.00	539.97	0.00	660.73	2017.89	0.00	0.00	-1357.16
725+00	72500.00	50.00	202.52	0.00	189.84	0.00	316.35	0.00	400.64	0.00	977.08	2498.65	0.00	0.00	-1521.57
725+50	72550.00	50.00	322.40	0.00	127.99	0.00	486.04	0.00	294.29	0.00	1463.12	2851.80	0.00	0.00	-1388.68
726+00	72600.00	50.00	478.33	0.00	69.29	0.00	741.42	0.00	182.67	0.00	2204.54	3071.00	0.00	0.00	-866.46
726+50	72650.00	50.00	518.09	0.00	28.95	0.00	922.61	0.00	90.96	0.00	3127.15	3180.15	0.00	0.00	-53.01
727+00	72700.00	50.00	462.89	0.00	11.59	0.00	908.31	0.00	37.54	0.00	4035.46	3225.20	0.00	0.00	810.27
727+50	72750.00	50.00	516.92	0.00	19.67	0.00	907.23	0.00	28.94	0.00	4942.69	3259.93	0.00	0.00	1682.76
728+00	72800.00	50.00	401.40	0.00	39.33	0.00	850.30	0.00	54.63	0.00	5792.99	3325.49	0.00	0.00	2467.50
728+50	72850.00	50.00	474.70	0.00	45.95	0.00	811.20	0.00	78.96	0.00	6604.19	3420.24	0.00	0.00	3183.95
729+00	72900.00	50.00	560.03	0.00	46.26	0.00	958.08	0.00	85.38	0.00	7562.28	3522.70	0.00	0.00	4039.58
729+50	72950.00	50.00	627.13	0.00	43.46	0.00	1099.22	0.00	83.07	0.00	8661.50	3622.39	0.00	0.00	5039.11
730+00	73000.00	50.00	641.81	0.00	108.53	0.00	1174.94	0.00	140.73	0.00	9836.44	3791.26	0.00	0.00	6045.18
730+50	73050.00	50.00	678.48	0.00	0.00	0.00	1222.49	0.00	100.49	0.00	11058.94	3911.85	0.00	0.00	7147.08
731+00	73100.00	50.00	680.37	0.00	0.00	0.00	1258.19	0.00	0.00	0.00	12317.13	3911.85	0.00	0.00	8405.28
731+50	73150.00	50.00	711.96	0.00	0.00	0.00	1289.19	0.00	0.00	0.00	13606.32	3911.85	0.00	0.00	9694.47
731+70 BK	73170.33	20.33	729.15	0.00	0.00	0.00	542.55	0.00	0.00	0.00	14148.88	3911.85	0.00	0.00	10237.02
						Column totals	14148.88	0.00	3259.88	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP WC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
746+46 AH	74645.75	0.00	438.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746+50	74650.00	4.25	490.21	0.00	0.00	0.00	73.13	0.00	0.00	0.00	73.13	0.00	0.00	0.00	73.13
747+00	74700.00	50.00	476.54	0.00	0.00	0.00	895.14	0.00	0.00	0.00	968.27	0.00	0.00	0.00	968.27
747+50	74750.00	50.00	487.56	0.00	0.00	0.00	892.69	0.00	0.00	0.00	1860.95	0.00	0.00	0.00	1860.95
748+00	74800.00	50.00	435.17	0.00	0.00	0.00	854.38	0.00	0.00	0.00	2715.33	0.00	0.00	0.00	2715.33
748+50	74850.00	50.00	324.66	0.00	0.00	0.00	703.55	0.00	0.00	0.00	3418.88	0.00	0.00	0.00	3418.88
749+00	74900.00	50.00	254.89	0.00	0.72	0.00	536.62	0.00	0.67	0.00	3955.50	0.80	0.00	0.00	3954.70
749+00	74900.00	0.00	192.62	0.00	2.47	0.00	0.00	0.00	0.00	0.00	3955.50	0.80	0.00	0.00	3954.70
749+44 BK	74944.34	44.34	172.19	0.00	0.00	0.00	299.55	0.00	2.03	0.00	4255.05	3.23	0.00	0.00	4251.81
		Column totals					4255.05	0.00	2.69	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FA

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
738+09 AH	73809	0.00	78.05	0.00	51.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
738+50	73850	41.00	104.08	0.00	59.29	0.00	138.28	0.00	84.05	0.00	138.28	100.86	0.00	0.00	37.42
739+00	73900	50.00	129.8	0.00	77.7	0.00	216.56	0.00	126.84	0.00	354.84	253.07	0.00	0.00	101.77
739+50	73950	50.00	184.75	0.00	98.8	0.00	291.25	0.00	163.43	0.00	646.09	449.18	0.00	0.00	196.91
740+00	74000	50.00	247.94	0.00	114.19	0.00	400.64	0.00	197.21	0.00	1046.73	685.84	0.00	0.00	360.89
740+50	74050	50.00	191.83	0.00	98.56	0.00	407.19	0.00	196.99	0.00	1453.92	922.23	0.00	0.00	531.70
741+00	74100	50.00	106.58	0.00	72.59	0.00	276.31	0.00	158.47	0.00	1730.23	1112.39	0.00	0.00	617.84
741+50	74150	50.00	119.45	0.00	23.61	0.00	209.29	0.00	89.07	0.00	1939.52	1219.28	0.00	0.00	720.23
742+00	74200	50.00	146.33	0.00	0.14	0.00	246.09	0.00	21.99	0.00	2185.61	1245.67	0.00	0.00	939.94
742+50	74250	50.00	165.75	0.00	0	0.00	288.96	0.00	0.13	0.00	2474.57	1245.83	0.00	0.00	1228.74
743+00	74300	50.00	170.02	0.00	0.01	0.00	310.90	0.00	0.01	0.00	2785.47	1245.84	0.00	0.00	1539.63
743+18	74318	18.00	158.52	0.00	0.3	0.00	109.51	0.00	0.10	0.00	2894.98	1245.96	0.00	0.00	1649.02
743+18	74318	0.00	65.24	0.00	0	0.00	0.00	0.00	0.00	0.00	2894.98	1245.96	0.00	0.00	1649.02
743+50	74350	32.00	53.86	0.00	0.76	0.00	70.58	0.00	0.15	0.00	2965.56	1246.14	0.00	0.00	1719.42
744+00	74400	50.00	34.35	0.00	7.95	0.00	81.68	0.00	8.06	0.00	3047.24	1255.82	0.00	0.00	1791.42
744+48	74448	48.00	25.94	0.00	32.54	0.00	53.59	0.00	35.99	0.00	3100.83	1299.01	0.00	0.00	1801.82
744+48	74448	0.00	15.59	0.00	34.19	0.00	0.00	0.00	0.00	0.00	2894.98	1299.01	0.00	0.00	1801.82
744+50	74450	2.00	15.38	0.00	33.68	0.00	1.15	0.00	2.51	0.00	2896.13	1302.03	0.00	0.00	1799.95
745+00	74500	50.00	12.22	0.00	60.88	0.00	25.56	0.00	87.56	0.00	2921.69	1407.09	0.00	0.00	1720.44
745+50	74550	50.00	8.4	0.00	77.86	0.00	19.09	0.00	128.46	0.00	2940.78	1561.25	0.00	0.00	1585.37
746+00	74600	50.00	9.13	0.00	80.25	0.00	16.23	0.00	146.40	0.00	2957.01	1736.93	0.00	0.00	1425.93
746+50	74650	50.00	9.21	0.00	65.35	0.00	16.98	0.00	134.81	0.00	2973.99	1898.70	0.00	0.00	1281.13
747+00	74700	50.00	12.27	0.00	41.65	0.00	19.89	0.00	99.07	0.00	2993.88	2017.59	0.00	0.00	1182.13

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
747+50	74750	50.00	15.97	0.00	10.95	0.00	26.15	0.00	48.70	0.00	3020.03	2076.04	0.00	0.00	1149.84
747+76	74776	26.00	21.31	0.00	0.08	0.00	17.95	0.00	5.31	0.00	3037.98	2082.41	0.00	0.00	1161.41
747+76	74776	0.00	52.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3037.98	2082.41	0.00	0.00	1161.41
748+00	74800	24.00	68.13	0.00	0.00	0.00	53.47	0.00	0.00	0.00	3091.44	2082.41	0.00	0.00	1214.88
748+50	74850	50.00	105.79	0.00	0.00	0.00	161.04	0.00	0.00	0.00	3252.48	2082.41	0.00	0.00	1375.92
749+00	74900	50.00	149.01	0.00	0.00	0.00	235.93	0.00	0.00	0.00	3488.41	2082.41	0.00	0.00	1611.84
749+50	74950	50.00	189.57	0.00	0.00	0.00	313.50	0.00	0.00	0.00	3801.91	2082.41	0.00	0.00	1925.34
750+00	75000	50.00	220.94	0.00	0.00	0.00	380.10	0.00	0.00	0.00	4182.01	2082.41	0.00	0.00	2305.44
750+50	75050	50.00	235.12	0.00	0.00	0.00	422.28	0.00	0.00	0.00	4604.29	2082.41	0.00	0.00	2727.72
750+74 BK	75074	24.00	228.51	0.00	0.00	0.00	206.06	0.00	0.00	0.00	4810.34	2082.41	0.00	0.00	2933.78
					Column totals		5016.19	0.00	1735.34	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
801+60 AH	80160	0.00	604.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
802+00	80200	40.00	623.53	0.00	0.00	0.00	909.31	0.00	0.00	0.00	909.31	0.00	0.00	0.00	909.31
802+50	80250	50.00	627.30	0.00	0.00	0.00	1158.18	0.00	0.00	0.00	2067.49	0.00	0.00	0.00	2067.49
803+00	80300	50.00	639.61	0.00	0.00	0.00	1173.06	0.00	0.00	0.00	3240.55	0.00	0.00	0.00	3240.55
803+50	80350	50.00	644.18	0.00	0.00	0.00	1188.69	0.00	0.00	0.00	4429.25	0.00	0.00	0.00	4429.25
804+00	80400	50.00	661.89	0.00	0.00	0.00	1209.32	0.00	0.00	0.00	5638.57	0.00	0.00	0.00	5638.57
804+50	80450	50.00	675.36	0.00	0.00	0.00	1238.19	0.00	0.00	0.00	6876.76	0.00	0.00	0.00	6876.76
805+00	80500	50.00	698.51	0.00	0.00	0.00	1272.10	0.00	0.00	0.00	8148.87	0.00	0.00	0.00	8148.87
805+50	80550	50.00	694.73	0.00	0.00	0.00	1290.04	0.00	0.00	0.00	9438.90	0.00	0.00	0.00	9438.90
806+00	80600	50.00	679.50	0.00	0.00	0.00	1272.44	0.00	0.00	0.00	10711.34	0.00	0.00	0.00	10711.34
806+50	80650	50.00	674.80	0.00	0.00	0.00	1253.98	0.00	0.00	0.00	11965.32	0.00	0.00	0.00	11965.32
807+00	80700	50.00	658.02	0.00	0.00	0.00	1234.09	0.00	0.00	0.00	13199.41	0.00	0.00	0.00	13199.41
807+50	80750	50.00	643.14	0.00	0.00	0.00	1204.78	0.00	0.00	0.00	14404.19	0.00	0.00	0.00	14404.19
808+00	80800	50.00	630.19	0.00	0.00	0.00	1179.01	0.00	0.00	0.00	15583.20	0.00	0.00	0.00	15583.20
808+50	80850	50.00	634.67	0.00	0.00	0.00	1171.17	0.00	0.00	0.00	16754.37	0.00	0.00	0.00	16754.37
809+00	80900	50.00	637.57	0.00	0.00	0.00	1178.00	0.00	0.00	0.00	17932.37	0.00	0.00	0.00	17932.37
809+50	80950	50.00	653.87	0.00	0.00	0.00	1195.78	0.00	0.00	0.00	19128.14	0.00	0.00	0.00	19128.14
810+00	81000	50.00	660.48	0.00	0.00	0.00	1216.99	0.00	0.00	0.00	20345.14	0.00	0.00	0.00	20345.14
810+50	81050	50.00	661.86	0.00	0.00	0.00	1224.39	0.00	0.00	0.00	21569.52	0.00	0.00	0.00	21569.52
811+00	81100	50.00	610.34	0.00	0.00	0.00	1177.96	0.00	0.00	0.00	22747.49	0.00	0.00	0.00	22747.49
811+50	81150	50.00	559.64	0.00	0.00	0.00	1083.31	0.00	0.00	0.00	23830.80	0.00	0.00	0.00	23830.80
812+00	81200	50.00	533.45	0.00	0.00	0.00	1012.12	0.00	0.00	0.00	24842.92	0.00	0.00	0.00	24842.92
812+50	81250	50.00	486.32	0.00	0.00	0.00	944.23	0.00	0.00	0.00	25787.15	0.00	0.00	0.00	25787.15
813+00	81300	50.00	445.39	0.00	0.00	0.00	862.69	0.00	0.00	0.00	26649.85	0.00	0.00	0.00	26649.85
813+50	81350	50.00	393.76	0.00	0.00	0.00	776.99	0.00	0.00	0.00	27426.84	0.00	0.00	0.00	27426.84
814+00	81400	50.00	342.23	0.00	0.00	0.00	681.47	0.00	0.00	0.00	28108.31	0.00	0.00	0.00	28108.31

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
814+50	81450	50.00	304.20	0.00	0.00	0.00	598.55	0.00	0.00	0.00	28706.86	0.00	0.00	0.00	28706.86
815+00	81500	50.00	274.64	0.00	0.00	0.00	535.96	0.00	0.00	0.00	29242.82	0.00	0.00	0.00	29242.82
815+50	81550	50.00	230.30	0.00	0.00	0.00	467.54	0.00	0.00	0.00	29710.36	0.00	0.00	0.00	29710.36
816+00	81600	50.00	197.34	0.00	0.00	0.00	395.96	0.00	0.00	0.00	30106.32	0.00	0.00	0.00	30106.32
816+50	81650	50.00	168.85	0.00	0.00	0.00	339.06	0.00	0.00	0.00	30445.39	0.00	0.00	0.00	30445.39
817+00	81700	50.00	134.08	0.00	0.31	0.00	280.49	0.00	0.29	0.00	30725.88	0.34	0.00	0.00	30725.53
817+50	81750	50.00	107.75	0.00	0.14	0.00	223.92	0.00	0.42	0.00	30949.79	0.84	0.00	0.00	30948.95
818+00	81800	50.00	80.58	0.00	0.24	0.00	174.38	0.00	0.35	0.00	31124.17	1.27	0.00	0.00	31122.91
818+50	81850	50.00	79.78	0.00	0.24	0.00	148.48	0.00	0.44	0.00	31272.65	1.80	0.00	0.00	31270.85
819+00	81900	50.00	69.62	0.00	0.19	0.00	138.33	0.00	0.40	0.00	31410.99	2.28	0.00	0.00	31408.71
819+50	81950	50.00	68.93	0.00	0.13	0.00	128.29	0.00	0.30	0.00	31539.27	2.63	0.00	0.00	31536.64
820+00	82000	50.00	74.87	0.00	0.00	0.00	133.15	0.00	0.12	0.00	31672.42	2.78	0.00	0.00	31669.64
820+50	82050	50.00	71.85	0.00	0.00	0.00	135.85	0.00	0.00	0.00	31808.27	2.78	0.00	0.00	31805.50
821+00	82100	50.00	76.11	0.00	0.00	0.00	137.00	0.00	0.00	0.00	31945.27	2.78	0.00	0.00	31942.50
821+50	82150	50.00	80.86	0.00	0.00	0.00	145.34	0.00	0.00	0.00	32090.62	2.78	0.00	0.00	32087.84
822+00	82200	50.00	83.64	0.00	0.00	0.00	152.31	0.00	0.00	0.00	32242.93	2.78	0.00	0.00	32240.15
822+50	82250	50.00	84.23	0.00	0.00	0.00	155.44	0.00	0.00	0.00	32398.37	2.78	0.00	0.00	32395.59
822+57	82257	7.00	84.23	0.00	0.00	0.00	21.84	0.00	0.00	0.00	32420.20	2.78	0.00	0.00	32417.43
822+57	82257	0.00	115.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32420.20	2.78	0.00	0.00	32417.43
823+00	82300	43.00	121.05	0.00	0.00	0.00	188.48	0.00	0.00	0.00	32608.69	2.78	0.00	0.00	32605.91
823+50	82350	50.00	124.72	0.00	0.00	0.00	227.56	0.00	0.00	0.00	32836.25	2.78	0.00	0.00	32833.47
824+00	82400	50.00	113.88	0.00	0.00	0.00	220.93	0.00	0.00	0.00	33057.18	2.78	0.00	0.00	33054.40
824+50	82450	50.00	92.27	0.00	0.00	0.00	190.88	0.00	0.00	0.00	33248.06	2.78	0.00	0.00	33245.28
825+05 BK	82505	55.00	83.41	0.00	0.04	0.00	178.93	0.00	0.04	0.00	33426.99	2.83	0.00	0.00	33424.16
						Column totals	33426.99	0.00	2.36	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
722+25 AH	72225.00	0.00	139.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
722+50	72250.00	25.00	146.45	0.00	0.00	0.00	132.23	0.00	0.00	0.00	132.23	0.00	0.00	0.00	132.23
723+00	72300.00	50.00	161.87	0.00	0.00	0.00	285.48	0.00	0.00	0.00	417.71	0.00	0.00	0.00	417.71
723+50	72350.00	50.00	180.09	0.00	0.00	0.00	316.63	0.00	0.00	0.00	734.34	0.00	0.00	0.00	734.34
724+00	72400.00	50.00	215.19	0.00	0.00	0.00	366.00	0.00	0.00	0.00	1100.34	0.00	0.00	0.00	1100.34
724+50	72450.00	50.00	193.24	0.00	0.00	0.00	378.18	0.00	0.00	0.00	1478.51	0.00	0.00	0.00	1478.51
725+00	72500.00	50.00	194.78	0.00	4.97	0.00	359.28	0.00	4.60	0.00	1837.79	5.52	0.00	0.00	1832.27
725+50	72550.00	50.00	183.72	0.00	6.43	0.00	350.46	0.00	10.56	0.00	2188.25	18.19	0.00	0.00	2170.07
725+58	72558.00	8.00	183.91	0.00	0.00	0.00	54.46	0.00	0.95	0.00	2242.72	19.33	0.00	0.00	2223.39
725+58	72558.00	0.00	422.64	0.00	14.65	0.00	0.00	0.00	0.00	0.00	2242.72	19.33	0.00	0.00	2223.39
726+00	72600.00	50.00	435.85	0.00	17.40	0.00	794.90	0.00	9.89	0.00	3037.62	31.20	0.00	0.00	3006.41
726+50	72650.00	50.00	424.92	0.00	13.73	0.00	797.01	0.00	9.61	0.00	3834.63	42.73	0.00	0.00	3791.89
727+00	72700.00	50.00	436.32	0.00	7.59	0.00	797.44	0.00	6.58	0.00	4632.07	50.63	0.00	0.00	4581.44
727+50	72750.00	50.00	440.15	0.00	4.28	0.00	811.55	0.00	3.66	0.00	5443.62	55.02	0.00	0.00	5388.59
727+54	72754.00	4.00	440.00	0.00	4.00	0.00	65.20	0.00	0.20	0.00	5508.81	55.27	0.00	0.00	5453.54
727+54	72754.00	0.00	375.23	0.00	3.96	0.00	0.00	0.00	0.00	0.00	5508.81	55.27	0.00	0.00	5453.54
728+00	72800.00	50.00	358.14	0.00	4.19	0.00	679.05	0.00	7.55	0.00	6187.86	64.33	0.00	0.00	6123.53
728+50	72850.00	50.00	288.26	0.00	2.99	0.00	598.52	0.00	6.65	0.00	6786.38	72.30	0.00	0.00	6714.07

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
729+00	72900.00	50.00	196.05	0.00	1.21	0.00	448.44	0.00	3.89	0.00	7234.81	76.97	0.00	0.00	7157.84
729+50	72950.00	50.00	120.14	0.00	3.86	0.00	292.77	0.00	4.69	0.00	7527.58	82.60	0.00	0.00	7444.98
730+00	73000.00	50.00	48.54	0.00	7.73	0.00	156.19	0.00	10.73	0.00	7683.77	95.48	0.00	0.00	7588.29
730+50	73050.00	50.00	46.13	0.00	4.13	0.00	87.66	0.00	10.98	0.00	7771.42	108.66	0.00	0.00	7662.77
731+00	73100.00	50.00	66.27	0.00	1.43	0.00	104.07	0.00	5.15	0.00	7875.50	114.84	0.00	0.00	7760.66
731+50	73150.00	50.00	126.12	0.00	4.79	0.00	178.14	0.00	5.76	0.00	8053.64	121.75	0.00	0.00	7931.89
732+00	73200.00	50.00	197.97	0.00	4.13	0.00	300.08	0.00	8.26	0.00	8353.72	131.66	0.00	0.00	8222.06
732+50	73250.00	50.00	249.77	0.00	5.14	0.00	414.57	0.00	8.58	0.00	8768.29	141.96	0.00	0.00	8626.34
733+00	73300.00	50.00	303.62	0.00	17.95	0.00	512.40	0.00	21.38	0.00	9280.69	167.61	0.00	0.00	9113.08
733+50	73350.00	50.00	358.77	0.00	18.66	0.00	613.32	0.00	33.90	0.00	9894.02	208.29	0.00	0.00	9685.72
734+00	73400.00	50.00	346.27	0.00	23.69	0.00	652.81	0.00	39.21	0.00	10546.83	255.35	0.00	0.00	10291.48
734+50	73450.00	50.00	223.10	0.00	23.17	0.00	527.19	0.00	43.39	0.00	11074.03	307.41	0.00	0.00	10766.61
734+60	73460.00	10.00	220.50	0.00	22.60	0.00	82.15	0.00	8.48	0.00	11156.17	317.59	0.00	0.00	10838.59
735+00	73500.00	50.00	63.10	0.00	22.13	0.00	262.59	0.00	41.42	0.00	11418.77	367.29	0.00	0.00	11051.48
735+50	73550.00	50.00	82.12	0.00	16.79	0.00	134.46	0.00	36.04	0.00	11553.23	410.53	0.00	0.00	11142.70
736+00	73600.00	50.00	9.54	0.00	522.13	0.00	84.87	0.00	499.00	0.00	11638.10	1009.33	0.00	0.00	10628.77
736+50	73650.00	50.00	10.30	0.00	756.38	0.00	18.37	0.00	1183.81	0.00	11656.47	2429.90	0.00	0.00	9226.57
737+00 BK	73699.93	49.93	162.66	0.00	36.33	0.00	159.92	0.00	732.96	0.00	11816.39	3309.45	0.00	0.00	8506.94
						Column totals	11816.39	0.00	2757.88	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FG

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
719+00 AH	71900	0.00	102.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719+50	71950	50.00	79.41	0.00	0.00	0.00	168.85	0.00	0.00	0.00	168.85	0.00	0.00	0.00	168.85
720+00	72000	50.00	76.93	0.00	0.00	0.00	144.76	0.00	0.00	0.00	313.61	0.00	0.00	0.00	313.61
720+50	72050	50.00	72.56	0.00	0.00	0.00	138.42	0.00	0.00	0.00	452.03	0.00	0.00	0.00	452.03
721+00	72100	50.00	64.99	0.00	0.00	0.00	127.36	0.00	0.00	0.00	579.39	0.00	0.00	0.00	579.39
721+50	72150	50.00	72.29	0.00	0.00	0.00	127.11	0.00	0.00	0.00	706.50	0.00	0.00	0.00	706.50
722+00	72200	50.00	73.88	0.00	0.00	0.00	135.34	0.00	0.00	0.00	841.84	0.00	0.00	0.00	841.84
722+50	72250	50.00	67.14	0.00	0.00	0.00	130.57	0.00	0.00	0.00	972.42	0.00	0.00	0.00	972.42
722+82 BK	72281.5	31.50	58.52	0.00	0.00	0.00	73.30	0.00	0.00	0.00	1045.72	0.00	0.00	0.00	1045.72
						Column totals	1045.72	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP FH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
802+35 AH	80235	0.00	65.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
802+50	80250	15.00	378.64	0.00	0.00	0.00	123.34	0.00	0.00	0.00	123.34	0.00	0.00	0.00	123.34
803+00	80300	50.00	614.81	0.00	0.00	0.00	919.86	0.00	0.00	0.00	1043.20	0.00	0.00	0.00	1043.20
803+50	80350	50.00	521.19	0.00	0.00	0.00	1051.85	0.00	0.00	0.00	2095.05	0.00	0.00	0.00	2095.05
804+00	80400	50.00	446.63	0.00	0.00	0.00	896.13	0.00	0.00	0.00	2991.18	0.00	0.00	0.00	2991.18
804+00	80400	0.00	522.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2991.18	0.00	0.00	0.00	2991.18
804+50	80450	50.00	493.41	0.00	0.00	0.00	940.22	0.00	0.00	0.00	3931.40	0.00	0.00	0.00	3931.40
805+00	80500	50.00	450.89	0.00	0.00	0.00	874.35	0.00	0.00	0.00	4805.75	0.00	0.00	0.00	4805.75
805+50	80550	50.00	465.94	0.00	0.00	0.00	848.92	0.00	0.00	0.00	5654.67	0.00	0.00	0.00	5654.67
806+00	80600	50.00	535.09	0.00	0.00	0.00	926.88	0.00	0.00	0.00	6581.55	0.00	0.00	0.00	6581.55
806+50	80650	50.00	575.10	0.00	0.00	0.00	1027.95	0.00	0.00	0.00	7609.50	0.00	0.00	0.00	7609.50
807+00	80700	50.00	579.61	0.00	0.00	0.00	1069.18	0.00	0.00	0.00	8678.68	0.00	0.00	0.00	8678.68
807+50	80750	50.00	593.90	0.00	0.00	0.00	1086.58	0.00	0.00	0.00	9765.26	0.00	0.00	0.00	9765.26
808+00	80800	50.00	590.26	0.00	0.00	0.00	1096.44	0.00	0.00	0.00	10861.71	0.00	0.00	0.00	10861.71
808+50	80850	50.00	608.05	0.00	0.00	0.00	1109.55	0.00	0.00	0.00	11971.25	0.00	0.00	0.00	11971.25
809+00	80900	50.00	629.82	0.00	0.00	0.00	1146.18	0.00	0.00	0.00	13117.43	0.00	0.00	0.00	13117.43
809+50	80950	50.00	663.92	0.00	0.00	0.00	1197.91	0.00	0.00	0.00	14315.34	0.00	0.00	0.00	14315.34
810+00	81000	50.00	697.62	0.00	0.00	0.00	1260.69	0.00	0.00	0.00	15576.02	0.00	0.00	0.00	15576.02
810+50	81050	50.00	731.14	0.00	0.00	0.00	1322.93	0.00	0.00	0.00	16898.95	0.00	0.00	0.00	16898.95
811+00	81100	50.00	775.74	0.00	0.00	0.00	1395.26	0.00	0.00	0.00	18294.21	0.00	0.00	0.00	18294.21
811+50	81150	50.00	793.59	0.00	0.00	0.00	1453.08	0.00	0.00	0.00	19747.29	0.00	0.00	0.00	19747.29
812+00	81200	50.00	800.75	0.00	0.00	0.00	1476.24	0.00	0.00	0.00	21223.53	0.00	0.00	0.00	21223.53
812+50	81250	50.00	795.44	0.00	0.00	0.00	1477.95	0.00	0.00	0.00	22701.48	0.00	0.00	0.00	22701.48
813+00	81300	50.00	766.39	0.00	0.00	0.00	1446.14	0.00	0.00	0.00	24147.62	0.00	0.00	0.00	24147.62
813+50	81350	50.00	725.98	0.00	0.00	0.00	1381.82	0.00	0.00	0.00	25529.45	0.00	0.00	0.00	25529.45
814+00	81400	50.00	667.73	0.00	0.00	0.00	1290.47	0.00	0.00	0.00	26819.92	0.00	0.00	0.00	26819.92
814+50	81450	50.00	613.39	0.00	0.00	0.00	1186.22	0.00	0.00	0.00	28006.14	0.00	0.00	0.00	28006.14
815+00	81500	50.00	551.77	0.00	0.00	0.00	1078.85	0.00	0.00	0.00	29084.99	0.00	0.00	0.00	29084.99
815+50	81550	50.00	498.95	0.00	0.00	0.00	972.89	0.00	0.00	0.00	30057.88	0.00	0.00	0.00	30057.88
816+00	81600	50.00	437.34	0.00	0.00	0.00	866.94	0.00	0.00	0.00	30924.82	0.00	0.00	0.00	30924.82

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP FH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
816+50	81650	50.00	386.93	0.00	0.00	0.00	763.21	0.00	0.00	0.00	31688.03	0.00	0.00	0.00	31688.03
817+00	81700	50.00	348.04	0.00	0.00	0.00	680.53	0.00	0.00	0.00	32368.56	0.00	0.00	0.00	32368.56
817+50	81750	50.00	313.43	0.00	0.00	0.00	612.47	0.00	0.00	0.00	32981.03	0.00	0.00	0.00	32981.03
818+00	81800	50.00	285.88	0.00	0.00	0.00	554.92	0.00	0.00	0.00	33535.95	0.00	0.00	0.00	33535.95
818+50	81850	50.00	260.16	0.00	0.00	0.00	505.59	0.00	0.00	0.00	34041.54	0.00	0.00	0.00	34041.54
819+00	81900	50.00	243.14	0.00	0.00	0.00	466.02	0.00	0.00	0.00	34507.56	0.00	0.00	0.00	34507.56
819+50	81950	50.00	222.68	0.00	0.00	0.00	431.31	0.00	0.00	0.00	34938.87	0.00	0.00	0.00	34938.87
820+00	82000	50.00	200.08	0.00	0.00	0.00	391.44	0.00	0.00	0.00	35330.32	0.00	0.00	0.00	35330.32
820+50	82050	50.00	180.72	0.00	0.00	0.00	352.59	0.00	0.00	0.00	35682.91	0.00	0.00	0.00	35682.91
821+00	82100	50.00	178.74	0.00	0.00	0.00	332.83	0.00	0.00	0.00	36015.74	0.00	0.00	0.00	36015.74
821+50	82150	50.00	240.91	0.00	0.00	0.00	388.56	0.00	0.00	0.00	36404.31	0.00	0.00	0.00	36404.31
822+00	82200	50.00	297.89	0.00	0.00	0.00	498.89	0.00	0.00	0.00	36903.20	0.00	0.00	0.00	36903.20
822+00	82200	0.00	430.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36903.20	0.00	0.00	0.00	36903.20
822+50	82250	50.00	434.60	0.00	0.00	0.00	800.56	0.00	0.00	0.00	37703.75	0.00	0.00	0.00	37703.75
823+00	82300	50.00	247.09	0.00	0.00	0.00	631.19	0.00	0.00	0.00	38334.95	0.00	0.00	0.00	38334.95
823+50	82350	50.00	160.14	0.00	0.00	0.00	377.06	0.00	0.00	0.00	38712.01	0.00	0.00	0.00	38712.01
824+00	82400	50.00	159.56	0.00	0.00	0.00	296.02	0.00	0.00	0.00	39008.03	0.00	0.00	0.00	39008.03
824+50	82450	50.00	204.77	0.00	0.00	0.00	337.34	0.00	0.00	0.00	39345.37	0.00	0.00	0.00	39345.37
825+00	82500	50.00	282.23	0.00	0.00	0.00	450.93	0.00	0.00	0.00	39796.30	0.00	0.00	0.00	39796.30
825+50	82550	50.00	396.92	0.00	9.81	0.00	628.84	0.00	9.08	0.00	40425.14	10.90	0.00	0.00	40414.24
826+00	82600	50.00	298.19	0.00	20.23	0.00	643.62	0.00	27.81	0.00	41068.76	44.28	0.00	0.00	41024.48
826+34 BK	82633.5	33.50	283.02	0.00	19.92	0.00	360.57	0.00	24.91	0.00	41429.33	74.17	0.00	0.00	41355.16
						Column totals	41429.33	0.00	61.81	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP TMD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
773+20 AH	77320	0.00	66.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
773+50	77350	30.00	177.37	0.00	1.16	0.00	135.35	0.00	0.64	0.00	135.35	0.77	0.00	0.00	134.58
774+00	77400	50.00	183.75	0.00	1.30	0.00	334.37	0.00	2.28	0.00	469.72	3.51	0.00	0.00	466.21
774+50	77450	50.00	355.99	0.00	0.00	0.00	499.76	0.00	1.20	0.00	969.48	4.95	0.00	0.00	964.53
775+00	77500	50.00	260.77	0.00	0.00	0.00	571.07	0.00	0.00	0.00	1540.55	4.95	0.00	0.00	1535.60
775+50	77550	50.00	240.30	0.00	0.00	0.00	463.95	0.00	0.00	0.00	2004.51	4.95	0.00	0.00	1999.56
776+00	77600	50.00	230.75	0.00	0.00	0.00	436.16	0.00	0.00	0.00	2440.66	4.95	0.00	0.00	2435.71
776+50	77650	50.00	216.36	0.00	0.00	0.00	413.99	0.00	0.00	0.00	2854.66	4.95	0.00	0.00	2849.70
777+00	77700	50.00	194.82	0.00	0.00	0.00	380.72	0.00	0.00	0.00	3235.38	4.95	0.00	0.00	3230.43
777+50	77750	50.00	181.40	0.00	0.00	0.00	348.35	0.00	0.00	0.00	3583.73	4.95	0.00	0.00	3578.78
778+00	77800	50.00	184.51	0.00	0.00	0.00	338.81	0.00	0.00	0.00	3922.54	4.95	0.00	0.00	3917.58
778+31	77831	31.00	121.87	0.00	0.00	0.00	175.88	0.00	0.00	0.00	4098.42	4.95	0.00	0.00	4093.47
778+31	77831	0.00	151.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4098.42	4.95	0.00	0.00	4093.47
778+50	77850	19.00	131.80	0.00	0.13	0.00	99.80	0.00	0.05	0.00	4198.22	5.01	0.00	0.00	4193.21
779+00	77900	50.00	124.57	0.00	0.07	0.00	237.38	0.00	0.19	0.00	4435.60	5.23	0.00	0.00	4430.37
779+50	77950	50.00	121.56	0.00	4.38	0.00	227.90	0.00	4.12	0.00	4663.49	10.17	0.00	0.00	4653.32
780+00	78000	50.00	94.53	0.00	16.41	0.00	200.08	0.00	19.25	0.00	4863.58	33.27	0.00	0.00	4830.30
780+50	78050	50.00	101.10	0.00	38.95	0.00	181.14	0.00	51.26	0.00	5044.72	94.78	0.00	0.00	4949.93
780+73	78073	23.00	104.18	0.00	38.95	0.00	87.43	0.00	33.18	0.00	5132.15	134.60	0.00	0.00	4997.55
780+73	78073	0.00	113.55	0.00	38.95	0.00	0.00	0.00	0.00	0.00	5132.15	134.60	0.00	0.00	4997.55
781+00	78100	27.00	113.98	0.00	67.60	0.00	113.77	0.00	53.28	0.00	5245.91	198.53	0.00	0.00	5047.39
781+50	78150	50.00	119.80	0.00	94.00	0.00	216.46	0.00	149.63	0.00	5462.38	378.08	0.00	0.00	5084.29
782+00	78200	50.00	133.74	0.00	105.73	0.00	234.76	0.00	184.94	0.00	5697.14	600.01	0.00	0.00	5097.13
782+50	78250	50.00	144.48	0.00	96.20	0.00	257.61	0.00	186.97	0.00	5954.75	824.37	0.00	0.00	5130.37
783+00	78300	50.00	148.43	0.00	70.41	0.00	271.21	0.00	154.27	0.00	6225.96	1009.50	0.00	0.00	5216.47
783+48	78348	48.00	146.05	0.00	13.86	0.00	261.76	0.00	74.91	0.00	6487.72	1099.38	0.00	0.00	5388.34

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 RAMP TMD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
783+48	78348	0.00	255.84	0.00	15.19	0.00	0.00	0.00	0.00	0.00	6487.72	1099.38	0.00	0.00	5388.34
783+50	78350	2.00	258.48	0.00	12.84	0.00	19.05	0.00	1.04	0.00	6245.01	1010.74	0.00	0.00	5234.27
784+00	78400	50.00	298.48	0.00	16.26	0.00	515.70	0.00	26.94	0.00	6760.71	1043.08	0.00	0.00	5717.64
784+50	78450	50.00	390.05	0.00	0.35	0.00	637.53	0.00	15.38	0.00	7398.24	1061.53	0.00	0.00	6336.71
785+00	78500	50.00	335.25	0.00	0.00	0.00	671.57	0.00	0.32	0.00	8069.82	1061.92	0.00	0.00	7007.90
785+50	78550	50.00	153.98	0.00	3.13	0.00	452.99	0.00	2.90	0.00	8522.81	1065.40	0.00	0.00	7457.41
786+00	78600	50.00	238.22	0.00	1.65	0.00	363.15	0.00	4.43	0.00	8885.95	1070.71	0.00	0.00	7815.25
786+28 BK	78627.9	27.90	83.10	0.00	2.59	0.00	166.02	0.00	2.19	0.00	9051.97	1073.34	0.00	0.00	7978.63
786+77 AH	78677.13	0.00	49.91	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
787+00	78700	22.87	43.81	0.00	0.00	0.00	39.69	0.00	0.01	0.00	39.69	0.01	0.00	0.00	39.68
787+50	78750	50.00	179.27	0.00	0.00	0.00	206.56	0.00	0.00	0.00	246.25	0.01	0.00	0.00	246.24
788+00	78800	50.00	256.12	0.00	0.00	0.00	403.14	0.00	0.00	0.00	649.39	0.01	0.00	0.00	649.38
788+50	78850	50.00	200.85	0.00	0.00	0.00	423.12	0.00	0.00	0.00	1072.51	0.01	0.00	0.00	1072.50
789+00	78900	50.00	69.21	0.00	0.00	0.00	250.06	0.00	0.00	0.00	1322.56	0.01	0.00	0.00	1322.55
789+50	78950	50.00	15.13	0.00	0.00	0.00	78.09	0.00	0.00	0.00	1400.66	0.01	0.00	0.00	1400.64
789+75 BK	78974.5	24.50	8.26	0.00	0.00	0.00	10.61	0.00	0.00	0.00	1411.27	0.01	0.00	0.00	1411.26
		Column totals					10725.00	0.00	969.36	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 S. 100th STREET

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
31+73	AH	3173.00	0.00	20.00	0.00	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32+00		3200.00	27.00	20.00	0.00	18.00	0.00	20.00	0.00	19.50	0.00	20.00	23.40	0.00	0.00	-3.40
32+50		3250.00	50.00	11.00	0.00	15.00	0.00	28.70	0.00	30.56	0.00	48.70	60.07	0.00	0.00	-11.36
33+00		3300.00	50.00	7.00	0.00	15.00	0.00	16.67	0.00	27.78	0.00	65.37	93.40	0.00	0.00	-28.03
33+50		3350.00	50.00	3.00	0.00	15.00	0.00	9.26	0.00	27.78	0.00	74.63	126.73	0.00	0.00	-52.10
34+00		3400.00	50.00	1.00	0.00	15.00	0.00	3.70	0.00	27.78	0.00	78.33	160.07	0.00	0.00	-81.73
34+50		3450.00	50.00	1.00	0.00	15.00	0.00	1.85	0.00	27.78	0.00	80.19	193.40	0.00	0.00	-113.21
35+00		3500.00	50.00	1.00	0.00	15.00	0.00	1.85	0.00	27.78	0.00	82.04	226.73	0.00	0.00	-144.70
35+50		3550.00	50.00	2.00	0.00	15.00	0.00	2.78	0.00	27.78	0.00	84.81	260.07	0.00	0.00	-175.25
36+00		3600.00	50.00	3.00	0.00	15.00	0.00	4.63	0.00	27.78	0.00	89.44	293.40	0.00	0.00	-203.96
36+50		3650.00	50.00	2.00	0.00	15.00	0.00	4.63	0.00	27.78	0.00	94.07	326.73	0.00	0.00	-232.66
37+00		3700.00	50.00	2.00	0.00	14.00	0.00	3.70	0.00	26.85	0.00	97.78	358.96	0.00	0.00	-261.18
37+21	BK	3721.00	21.00	69.00	0.00	0.00	0.00	27.61	0.00	5.44	0.00	125.39	365.49	0.00	0.00	-240.10
							Column totals	125.39	0.00	304.57	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 N. 97TH STREET

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
38+94 AH	3893.89	0.00	16.46	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39+00	3900.00	6.11	16.93	0.00	0.00	0.00	3.78	0.00	0.00	0.00	3.78	0.01	0.00	0.00	3.77
39+50	3950.00	50.00	25.86	0.00	0.00	0.00	39.62	0.00	0.00	0.00	43.40	0.01	0.00	0.00	43.39
40+00	4000.00	50.00	35.42	0.00	5.50	0.00	56.74	0.00	5.09	0.00	100.14	6.12	0.00	0.00	94.02
40+50	4050.00	50.00	72.67	0.00	4.85	0.00	100.08	0.00	9.58	0.00	200.22	17.62	0.00	0.00	182.61
41+00	4100.00	50.00	37.21	0.00	1.75	0.00	101.74	0.00	6.11	0.00	301.96	24.95	0.00	0.00	277.01
41+20 BK	4120.24	20.24	38.48	0.00	1.25	0.00	28.37	0.00	1.12	0.00	330.33	26.30	0.00	0.00	304.03
		Column totals					330.33	0.00	21.92	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 ADLER ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
983+30 AH	98330	0.00	39.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
983+50	98350	20.00	54.07	0.00	0.00	0.00	34.66	0.00	0.00	0.00	34.66	0.00	0.00	0.00	34.66
984+00	98400	50.00	37.38	0.00	0.00	0.00	84.68	0.00	0.00	0.00	119.34	0.00	0.00	0.00	119.34
984+50	98450	50.00	5.28	0.00	0.00	0.00	39.50	0.00	0.00	0.00	158.84	0.00	0.00	0.00	158.84
985+00	98500	50.00	5.52	0.00	0.00	0.00	10.00	0.00	0.00	0.00	168.84	0.00	0.00	0.00	168.84
985+50	98550	50.00	9.61	0.00	0.00	0.00	14.01	0.00	0.00	0.00	182.85	0.00	0.00	0.00	182.85
986+00	98600	50.00	15.69	0.00	0.00	0.00	23.43	0.00	0.00	0.00	206.27	0.00	0.00	0.00	206.27
986+50	98650	50.00	19.79	0.00	0.00	0.00	32.85	0.00	0.00	0.00	239.13	0.00	0.00	0.00	239.13
987+00	98700	50.00	21.95	0.00	0.00	0.00	38.65	0.00	0.00	0.00	277.77	0.00	0.00	0.00	277.77
987+50	98750	50.00	9.65	0.00	0.00	0.00	29.26	0.00	0.00	0.00	307.03	0.00	0.00	0.00	307.03
988+00	98800	50.00	13.26	0.00	0.00	0.00	21.21	0.00	0.00	0.00	328.25	0.00	0.00	0.00	328.25
988+50	98850	50.00	8.87	0.00	0.00	0.00	20.49	0.00	0.00	0.00	348.74	0.00	0.00	0.00	348.74
989+00	98900	50.00	6.97	0.00	0.00	0.00	14.67	0.00	0.00	0.00	363.40	0.00	0.00	0.00	363.40
989+50	98950	50.00	9.06	0.00	0.00	0.00	14.84	0.00	0.00	0.00	378.25	0.00	0.00	0.00	378.25
990+00	99000	50.00	14.69	0.00	0.00	0.00	21.99	0.00	0.00	0.00	400.24	0.00	0.00	0.00	400.24
990+50	99050	50.00	16.95	0.00	0.00	0.00	29.30	0.00	0.00	0.00	429.53	0.00	0.00	0.00	429.53
991+00	99100	50.00	19.86	0.00	0.00	0.00	34.08	0.00	0.00	0.00	463.62	0.00	0.00	0.00	463.62
991+50	99150	50.00	20.50	0.00	0.00	0.00	37.37	0.00	0.00	0.00	500.99	0.00	0.00	0.00	500.99
992+00	99200	50.00	18.60	0.00	0.00	0.00	36.20	0.00	0.00	0.00	537.19	0.00	0.00	0.00	537.19
992+50	99250	50.00	14.90	0.00	0.00	0.00	31.02	0.00	0.00	0.00	568.21	0.00	0.00	0.00	568.21
993+00	99300	50.00	25.58	0.00	0.00	0.00	37.48	0.00	0.00	0.00	605.69	0.00	0.00	0.00	605.69
993+50	99350	50.00	32.42	0.00	0.00	0.00	53.70	0.00	0.00	0.00	659.39	0.00	0.00	0.00	659.39
994+00	99400	50.00	30.13	0.00	0.00	0.00	57.92	0.00	0.00	0.00	717.31	0.00	0.00	0.00	717.31
994+50 BK	99450	50.00	28.88	0.00	0.00	0.00	54.64	0.00	0.00	0.00	771.95	0.00	0.00	0.00	771.95

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 ADLER ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
996+25 AH	99625	0.00	19.19	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
996+50	99650	25.00	33.35	0.00	0.00	0.00	24.32	0.00	0.16	0.00	24.32	0.19	0.00	0.00	24.13
997+00	99700	50.00	50.67	0.00	0.00	0.00	77.80	0.00	0.00	0.00	102.12	0.19	0.00	0.00	101.93
997+50	99750	50.00	48.55	0.00	0.00	0.00	91.87	0.00	0.00	0.00	193.99	0.19	0.00	0.00	193.80
998+00	99800	50.00	36.83	0.00	0.00	0.00	79.06	0.00	0.00	0.00	273.05	0.19	0.00	0.00	272.85
998+50	99850	50.00	23.38	0.00	0.11	0.00	55.75	0.00	0.10	0.00	328.80	0.32	0.00	0.00	328.48
999+00	99900	50.00	18.80	0.00	0.41	0.00	39.06	0.00	0.48	0.00	367.85	0.89	0.00	0.00	366.96
999+50	99950	50.00	22.19	0.00	0.14	0.00	37.95	0.00	0.51	0.00	405.81	1.51	0.00	0.00	404.30
1000+00	100000	50.00	26.61	0.00	0.00	0.00	45.19	0.00	0.13	0.00	450.99	1.66	0.00	0.00	449.33
1000+50	100050	50.00	27.74	0.00	0.00	0.00	50.32	0.00	0.00	0.00	501.31	1.66	0.00	0.00	499.65
1001+00	100100	50.00	22.56	0.00	0.06	0.00	46.57	0.00	0.06	0.00	547.89	1.73	0.00	0.00	546.16
1001+50	100150	50.00	16.67	0.00	0.25	0.00	36.32	0.00	0.29	0.00	584.21	2.07	0.00	0.00	582.14
1002+00	100200	50.00	24.00	0.00	6.40	0.00	37.66	0.00	6.16	0.00	621.87	9.46	0.00	0.00	612.41
1002+50	100250	50.00	24.17	0.00	0.00	0.00	44.60	0.00	5.93	0.00	666.47	16.57	0.00	0.00	649.90
1003+00	100300	50.00	25.37	0.00	0.00	0.00	45.87	0.00	0.00	0.00	712.34	16.57	0.00	0.00	695.77
1003+50	100350	50.00	24.92	0.00	0.00	0.00	46.56	0.00	0.00	0.00	758.91	16.57	0.00	0.00	742.34
1004+00	100400	50.00	22.42	0.00	0.00	0.00	43.83	0.00	0.00	0.00	802.74	16.57	0.00	0.00	786.17
1004+50	100450	50.00	24.63	0.00	0.00	0.00	43.56	0.00	0.00	0.00	846.31	16.57	0.00	0.00	829.73
1005+00	100500	50.00	26.57	0.00	0.12	0.00	47.41	0.00	0.11	0.00	893.71	16.71	0.00	0.00	877.01
1005+50	100550	50.00	27.15	0.00	0.23	0.00	49.74	0.00	0.32	0.00	943.45	17.09	0.00	0.00	926.36
1006+00	100600	50.00	27.84	0.00	0.22	0.00	50.92	0.00	0.42	0.00	994.37	17.59	0.00	0.00	976.78
1006+50	100650	50.00	21.51	0.00	0.39	0.00	45.69	0.00	0.56	0.00	1040.06	18.27	0.00	0.00	1021.79
1007+00	100700	50.00	21.13	0.00	0.27	0.00	39.48	0.00	0.61	0.00	1079.55	19.01	0.00	0.00	1060.54
1007+50	100750	50.00	24.89	0.00	0.11	0.00	42.61	0.00	0.35	0.00	1122.16	19.43	0.00	0.00	1102.73
1008+00	100800	50.00	29.44	0.00	0.00	0.00	50.31	0.00	0.10	0.00	1172.46	19.55	0.00	0.00	1152.91
1008+50	100850	50.00	29.59	0.00	0.02	0.00	54.66	0.00	0.02	0.00	1227.12	19.57	0.00	0.00	1207.55
1009+00	100900	50.00	27.86	0.00	0.03	0.00	53.19	0.00	0.05	0.00	1280.31	19.63	0.00	0.00	1260.69
1009+50	100950	50.00	27.20	0.00	0.35	0.00	50.98	0.00	0.35	0.00	1331.30	20.05	0.00	0.00	1311.25
1010+00	101000	50.00	29.11	0.00	0.32	0.00	52.14	0.00	0.62	0.00	1383.44	20.79	0.00	0.00	1362.64

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 ADLER ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
1010+50	101050	50.00	30.22	0.00	0.58	0.00	54.94	0.00	0.83	0.00	1438.37	21.79	0.00	0.00	1416.58
1011+00	101100	50.00	28.20	0.00	0.91	0.00	54.09	0.00	1.38	0.00	1492.46	23.45	0.00	0.00	1469.01
1011+50	101150	50.00	27.38	0.00	0.60	0.00	51.46	0.00	1.40	0.00	1543.93	25.13	0.00	0.00	1518.80
1012+00	101200	50.00	25.93	0.00	0.11	0.00	49.36	0.00	0.66	0.00	1593.29	25.92	0.00	0.00	1567.37
1012+50	101250	50.00	25.09	0.00	0.13	0.00	47.24	0.00	0.22	0.00	1640.53	26.18	0.00	0.00	1614.34
1013+00	101300	50.00	26.37	0.00	0.09	0.00	47.65	0.00	0.20	0.00	1688.18	26.43	0.00	0.00	1661.75
1013+50	101350	50.00	23.32	0.00	0.43	0.00	46.01	0.00	0.48	0.00	1734.19	27.01	0.00	0.00	1707.18
1014+00	101400	50.00	20.37	0.00	0.91	0.00	40.45	0.00	1.24	0.00	1774.64	28.49	0.00	0.00	1746.14
1014+50	101450	50.00	15.90	0.00	0.68	0.00	33.58	0.00	1.47	0.00	1808.22	30.26	0.00	0.00	1777.96
1015+00	101500	50.00	10.57	0.00	4.68	0.00	24.51	0.00	4.96	0.00	1832.73	36.22	0.00	0.00	1796.51
1015+50	101550	50.00	9.68	0.00	19.04	0.00	18.75	0.00	21.96	0.00	1851.48	62.57	0.00	0.00	1788.91
1016+00	101600	50.00	11.50	0.00	3.03	0.00	19.61	0.00	20.44	0.00	1871.09	87.09	0.00	0.00	1784.00
1016+50	101650	50.00	18.98	0.00	1.85	0.00	28.22	0.00	4.52	0.00	1899.31	92.52	0.00	0.00	1806.80
1017+00	101700	50.00	20.43	0.00	1.40	0.00	36.49	0.00	3.01	0.00	1935.81	96.13	0.00	0.00	1839.68
1017+50	101750	50.00	19.49	0.00	0.78	0.00	36.96	0.00	2.02	0.00	1972.77	98.55	0.00	0.00	1874.22
1018+00	101800	50.00	21.64	0.00	0.45	0.00	38.08	0.00	1.14	0.00	2010.85	99.92	0.00	0.00	1910.94
1018+50	101850	50.00	22.77	0.00	0.92	0.00	41.12	0.00	1.27	0.00	2051.97	101.44	0.00	0.00	1950.53
1019+00	101900	50.00	25.39	0.00	0.58	0.00	44.59	0.00	1.39	0.00	2096.56	103.11	0.00	0.00	1993.46
1019+50	101950	50.00	28.48	0.00	6.15	0.00	49.88	0.00	6.23	0.00	2146.44	110.58	0.00	0.00	2035.86
1020+00	102000	50.00	29.27	0.00	0.00	0.00	53.47	0.00	5.69	0.00	2199.92	117.42	0.00	0.00	2082.50
1020+50	102050	50.00	27.09	0.00	0.57	0.00	52.19	0.00	0.53	0.00	2252.10	118.05	0.00	0.00	2134.05
1021+00	102100	50.00	28.99	0.00	0.61	0.00	51.93	0.00	1.09	0.00	2304.03	119.36	0.00	0.00	2184.67
1021+50	102150	50.00	28.24	0.00	1.24	0.00	52.99	0.00	1.71	0.00	2357.02	121.42	0.00	0.00	2235.60
1022+00	102200	50.00	25.90	0.00	1.61	0.00	50.13	0.00	2.64	0.00	2407.15	124.58	0.00	0.00	2282.56
1022+50	102250	50.00	24.31	0.00	2.92	0.00	46.49	0.00	4.19	0.00	2453.64	129.62	0.00	0.00	2324.02
1022+66 BK	102266	16.00	23.44	0.00	3.61	0.00	14.15	0.00	1.93	0.00	2467.79	131.94	0.00	0.00	2335.85
						Column totals	3239.74	0.00	109.95	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 CHESTER ST

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
43+30	AH	4330	0.00	50.55	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43+50		4350	20.00	46.72	0.00	0.35	0.00	36.03	0.00	0.14	0.00	36.03	0.17	0.00	0.00	35.86
44+00		4400	50.00	43.40	0.00	8.87	0.00	83.44	0.00	8.54	0.00	119.47	10.41	0.00	0.00	109.06
44+50		4450	50.00	35.42	0.00	0.43	0.00	72.98	0.00	8.61	0.00	192.45	20.75	0.00	0.00	171.71
45+00		4500	50.00	24.43	0.00	0.96	0.00	55.42	0.00	1.29	0.00	247.87	22.29	0.00	0.00	225.58
45+50		4550	50.00	27.72	0.00	0.06	0.00	48.29	0.00	0.94	0.00	296.16	23.42	0.00	0.00	272.73
46+00		4600	50.00	19.01	0.00	0.92	0.00	43.27	0.00	0.91	0.00	339.42	24.51	0.00	0.00	314.91
46+50		4650	50.00	19.51	0.00	1.42	0.00	35.67	0.00	2.17	0.00	375.09	27.11	0.00	0.00	347.98
47+00		4700	50.00	19.02	0.00	2.74	0.00	35.68	0.00	3.85	0.00	410.77	31.74	0.00	0.00	379.03
47+50		4750	50.00	22.14	0.00	4.97	0.00	38.11	0.00	7.14	0.00	448.88	40.30	0.00	0.00	408.58
48+00		4800	50.00	45.35	0.00	0.00	0.00	62.49	0.00	4.60	0.00	511.37	45.82	0.00	0.00	465.54
48+50		4850	50.00	37.13	0.00	0.01	0.00	76.37	0.00	0.01	0.00	587.74	45.84	0.00	0.00	541.90
49+00		4900	50.00	21.35	0.00	2.27	0.00	54.15	0.00	2.11	0.00	641.89	48.37	0.00	0.00	593.52
49+50		4950	50.00	26.73	0.00	3.07	0.00	44.52	0.00	4.94	0.00	686.41	54.30	0.00	0.00	632.10
49+53	BK	4953	3.00	24.36	0.00	0.01	0.00	2.84	0.00	0.17	0.00	689.24	54.51	0.00	0.00	634.74
50+34	AH	5034.35	0.00	37.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50+50		5050	15.65	40.93	0.00	0.00	0.00	22.67	0.00	0.00	0.00	22.67	0.00	0.00	0.00	22.67
51+00		5100	50.00	68.09	0.00	2.54	0.00	126.09	0.00	4.70	0.00	148.76	5.64	0.00	0.00	143.12
51+50		5150	50.00	79.61	0.00	2.52	0.00	136.76	0.00	4.69	0.00	285.52	11.27	0.00	0.00	274.26
52+00		5200	50.00	61.77	0.00	0.00	0.00	130.91	0.00	2.33	0.00	416.43	14.07	0.00	0.00	402.36
52+50		5250	50.00	55.14	0.00	0.00	0.00	108.25	0.00	0.00	0.00	524.68	14.07	0.00	0.00	510.61
53+00		5300	50.00	70.09	0.00	0.96	0.00	115.95	0.00	0.89	0.00	640.64	15.13	0.00	0.00	625.50
53+50		5350	50.00	21.79	0.00	3.77	0.00	85.07	0.00	4.38	0.00	725.71	20.39	0.00	0.00	705.32
54+00		5400	50.00	47.01	0.00	1.50	0.00	63.70	0.00	4.88	0.00	789.41	26.24	0.00	0.00	763.17
54+50		5450	50.00	220.59	0.00	0.09	0.00	247.78	0.00	1.47	0.00	1037.19	28.01	0.00	0.00	1009.18
55+00		5500	50.00	346.37	0.00	0.00	0.00	524.96	0.00	0.08	0.00	1562.15	28.11	0.00	0.00	1534.04
55+45	BK	5545	45.00	253.31	0.00	0.44	0.00	499.73	0.00	0.37	0.00	2061.89	28.55	0.00	0.00	2033.34
							Column totals	2751.13	0.00	69.22	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 HONEY CREEK WEST ACCESS DRIVE

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
55+45 AH	5545	0.00	253.31	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55+50	5550	5.00	240.10	0.00	0.00	0.00	45.69	0.00	0.04	0.00	45.69	0.05	0.00	0.00	45.64
55+75	5575	25.00	40.80	0.00	6.00	0.00	130.05	0.00	2.78	0.00	175.73	3.38	0.00	0.00	172.35
56+00	5600	25.00	33.10	0.00	10.80	0.00	34.21	0.00	7.78	0.00	209.95	12.72	0.00	0.00	197.23
56+25	5625	25.00	42.40	0.00	3.80	0.00	34.95	0.00	6.76	0.00	244.90	20.83	0.00	0.00	224.07
56+50	5650	25.00	28.90	0.00	4.30	0.00	33.01	0.00	3.75	0.00	277.91	25.33	0.00	0.00	252.58
56+75	5675	25.00	10.00	0.00	12.40	0.00	18.01	0.00	7.73	0.00	295.92	34.60	0.00	0.00	261.31
57+00	5700	25.00	0.30	0.00	318.70	0.00	4.77	0.00	153.29	0.00	300.69	218.55	0.00	0.00	82.14
57+25	5725	25.00	0.00	0.00	303.60	0.00	0.14	0.00	288.10	0.00	300.83	564.27	0.00	0.00	-263.45
57+50	5750	25.00	0.10	0.00	274.10	0.00	0.05	0.00	267.45	0.00	300.87	885.22	0.00	0.00	-584.34
57+75	5775	25.00	2.60	0.00	223.30	0.00	1.25	0.00	230.28	0.00	302.12	1161.55	0.00	0.00	-859.43
58+00	5800	25.00	5.20	0.00	173.50	0.00	3.61	0.00	183.70	0.00	305.73	1381.99	0.00	0.00	-1076.26
58+25	5825	25.00	10.10	0.00	119.40	0.00	7.08	0.00	135.60	0.00	312.82	1544.72	0.00	0.00	-1231.90
58+50	5850	25.00	18.40	0.00	76.60	0.00	13.19	0.00	90.74	0.00	326.01	1653.60	0.00	0.00	-1327.59
58+75	5875	25.00	33.20	0.00	40.80	0.00	23.89	0.00	54.35	0.00	349.90	1718.83	0.00	0.00	-1368.93
59+00	5900	25.00	62.10	1.00	12.60	0.00	44.12	0.00	24.72	0.00	394.02	1748.49	0.00	0.00	-1354.47
59+25	5925	25.00	288.70	2.00	1.10	0.00	162.41	0.00	6.34	0.00	556.43	1756.10	0.00	0.00	-1199.68
59+50	5950	25.00	83.60	3.00	16.30	0.00	172.36	0.00	8.06	0.00	728.79	1765.77	0.00	0.00	-1036.98
59+75	5975	25.00	52.60	4.00	11.60	0.00	63.06	0.00	12.92	0.00	791.84	1781.27	0.00	0.00	-989.43
59+97 BK	5997	22.00	44.20	5.00	0.00	0.00	39.44	0.00	4.73	0.00	831.28	1786.94	0.00	0.00	-955.66
Column totals							831.28	0.00	1489.12	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 92ND ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
66+72 AH	6672	0.00	110.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67+00	6700	28.00	133.58	0.00	1.49	0.00	126.63	0.00	0.77	0.00	126.63	0.93	0.00	0.00	125.70
67+50	6750	50.00	168.59	0.00	0.00	0.00	279.79	0.00	1.38	0.00	406.41	2.58	0.00	0.00	403.83
68+00	6800	50.00	158.87	0.00	0.11	0.00	303.20	0.00	0.10	0.00	709.62	2.70	0.00	0.00	706.91
68+50	6850	50.00	142.01	0.00	0.53	0.00	278.59	0.00	0.59	0.00	988.21	3.42	0.00	0.00	984.79
68+84	6884	34.00	126.26	0.00	0.36	0.00	168.91	0.00	0.56	0.00	1157.12	4.09	0.00	0.00	1153.03
68+84	6884	0.00	11.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1157.12	4.09	0.00	0.00	1153.03
69+00	6900	16.00	7.75	0.00	1.06	0.00	5.63	0.00	0.31	0.00	1162.75	4.47	0.00	0.00	1158.29
69+06 BK	6906	6.00	6.40	0.00	0.07	0.00	1.57	0.00	0.13	0.00	1164.32	4.62	0.00	0.00	1159.71
Column totals							1164.32	0.00	3.85	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 S. 84th ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
42+81 AH	4280.78	0.00	87.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43+00	4300	19.22	102.86	0.00	0.00	0.00	67.90	0.00	0.00	0.00	67.90	0.00	0.00	0.00	67.90
43+50	4350	50.00	108.34	0.00	0.48	0.00	195.56	0.00	0.44	0.00	263.46	0.53	0.00	0.00	262.93
44+00	4400	50.00	107.68	0.00	0.16	0.00	200.02	0.00	0.59	0.00	463.48	1.24	0.00	0.00	462.23
44+50	4450	50.00	110.87	0.00	0.07	0.00	202.36	0.00	0.21	0.00	665.84	1.50	0.00	0.00	664.34
45+00	4500	50.00	117.98	0.00	0.16	0.00	211.90	0.00	0.21	0.00	877.74	1.76	0.00	0.00	875.98
45+50	4550	50.00	132.56	0.00	0.00	0.00	231.98	0.00	0.15	0.00	1109.72	1.93	0.00	0.00	1107.79
45+50	4582.74	32.74	138.18	0.00	0.00	0.00	164.15	0.00	0.00	0.00	1273.87	1.93	0.00	0.00	1271.93
46+00	4600	17.26	131.11	0.00	0.75	0.00	86.07	0.00	0.24	0.00	1359.94	2.22	0.00	0.00	1357.72
46+50	4650	50.00	123.95	0.00	3.20	0.00	236.17	0.00	3.66	0.00	1596.11	6.61	0.00	0.00	1589.50
47+00	4700	50.00	255.42	0.00	0.48	0.00	351.27	0.00	3.41	0.00	1947.38	10.70	0.00	0.00	1936.68
47+50	4750	50.00	315.45	0.00	2.02	0.00	528.58	0.00	2.31	0.00	2475.96	13.48	0.00	0.00	2462.48
48+00	4800	50.00	160.84	0.00	0.16	0.00	441.01	0.00	2.02	0.00	2916.97	15.90	0.00	0.00	2901.07
48+43 BK	4842.89	42.89	149.26	0.00	0.28	0.00	246.30	0.00	0.35	0.00	3163.27	16.32	0.00	0.00	3146.95
		Column totals					3163.27	0.00	13.60	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 O'CONNOR ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
543+16 AH	54316.31	0.00	89.69	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
543+50	54350	33.69	90.07	0.00	0.66	0.00	112.15	0.00	0.69	0.00	112.15	0.82	0.00	0.00	111.33
544+00	54400	50.00	91.55	0.00	0.73	0.00	168.17	0.00	1.29	0.00	280.32	2.37	0.00	0.00	277.95
544+50	54450	50.00	48.05	0.00	0.00	0.00	129.26	0.00	0.68	0.00	409.58	3.18	0.00	0.00	406.40
545+00	54500	50.00	46.72	0.00	0.39	0.00	87.75	0.00	0.36	0.00	497.33	3.61	0.00	0.00	493.71
545+50	54550	50.00	41.66	0.00	0.69	0.00	81.83	0.00	1.00	0.00	579.16	4.81	0.00	0.00	574.35
546+00	54600	50.00	58.50	0.00	0.46	0.00	92.74	0.00	1.06	0.00	671.90	6.09	0.00	0.00	665.81
546+50	54650	50.00	69.18	0.00	0.00	0.00	118.22	0.00	0.43	0.00	790.12	6.60	0.00	0.00	783.52
547+00	54700	50.00	76.46	0.00	0.00	0.00	134.85	0.00	0.00	0.00	924.97	6.60	0.00	0.00	918.37
547+50	54750	50.00	69.34	0.00	0.00	0.00	135.00	0.00	0.00	0.00	1059.97	6.60	0.00	0.00	1053.37
548+00	54800	50.00	79.55	0.00	0.00	0.00	137.86	0.00	0.00	0.00	1197.84	6.60	0.00	0.00	1191.23
548+50	54850	50.00	102.29	0.00	0.00	0.00	168.37	0.00	0.00	0.00	1366.21	6.60	0.00	0.00	1359.60
548+80	54880	30.00	82.62	0.00	0.12	0.00	102.73	0.00	0.07	0.00	1468.93	6.68	0.00	0.00	1462.25
548+80	54880	0.00	41.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1468.93	6.68	0.00	0.00	1462.25
549+00	54900	20.00	40.24	0.00	0.00	0.00	30.23	0.00	0.00	0.00	1499.16	6.68	0.00	0.00	1492.48
549+50	54950	50.00	35.63	0.00	0.00	0.00	70.25	0.00	0.00	0.00	1569.41	6.68	0.00	0.00	1562.73
550+00	55000	50.00	31.93	0.00	0.00	0.00	62.56	0.00	0.00	0.00	1631.97	6.68	0.00	0.00	1625.29
550+50	55050	50.00	21.68	0.00	0.00	0.00	49.64	0.00	0.00	0.00	1681.61	6.68	0.00	0.00	1674.93
551+00	55100	50.00	70.44	0.00	0.00	0.00	85.30	0.00	0.00	0.00	1766.90	6.68	0.00	0.00	1760.22
551+50	55150	50.00	74.79	0.00	0.00	0.00	134.47	0.00	0.00	0.00	1901.38	6.68	0.00	0.00	1894.69
552+00	55200	50.00	78.30	0.00	0.00	0.00	141.75	0.00	0.00	0.00	2043.13	6.68	0.00	0.00	2036.44
552+50	55250	50.00	79.31	0.00	0.00	0.00	145.94	0.00	0.00	0.00	2189.06	6.68	0.00	0.00	2182.38
553+00	55300	50.00	62.98	0.00	0.00	0.00	131.75	0.00	0.00	0.00	2320.81	6.68	0.00	0.00	2314.13
553+50	55350	50.00	42.77	0.00	0.00	0.00	97.92	0.00	0.00	0.00	2418.73	6.68	0.00	0.00	2412.05
554+00	55400	50.00	21.04	0.00	0.00	0.00	59.08	0.00	0.00	0.00	2477.81	6.68	0.00	0.00	2471.13
554+05	55405	5.00	19.29	0.00	0.00	0.00	3.73	0.00	0.00	0.00	2481.55	6.68	0.00	0.00	2474.86

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 O'CONNOR ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
554+05	55405	0.00	63.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2481.55	6.68	0.00	0.00	2474.86
554+50	55450	50.00	66.25	0.00	0.00	0.00	120.38	0.00	0.00	0.00	2601.93	6.68	0.00	0.00	2595.24
555+00	55500	50.00	61.29	0.00	0.12	0.00	118.09	0.00	0.11	0.00	2720.02	6.81	0.00	0.00	2713.20
555+50	55550	50.00	55.33	0.00	0.72	0.00	107.98	0.00	0.78	0.00	2828.00	7.75	0.00	0.00	2820.25
556+00	55600	50.00	50.62	0.00	7.62	0.00	98.10	0.00	7.72	0.00	2926.10	17.01	0.00	0.00	2909.09
556+45 BK	55645	45.00	55.25	0.00	2.40	0.00	88.23	0.00	8.35	0.00	3014.33	27.03	0.00	0.00	2987.29
573+20 AH	57320	0.00	10.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
573+50	57350	30.00	7.74	0.00	0.00	0.00	9.97	0.00	0.00	0.00	9.97	0.00	0.00	0.00	9.97
574+00	57400	50.00	7.51	0.00	0.00	0.00	14.12	0.00	0.00	0.00	24.09	0.00	0.00	0.00	24.09
574+50	57450	50.00	14.07	0.00	0.00	0.00	19.98	0.00	0.00	0.00	44.07	0.00	0.00	0.00	44.07
575+00	57500	50.00	9.52	0.00	0.00	0.00	21.84	0.00	0.00	0.00	65.92	0.00	0.00	0.00	65.92
575+50	57550	50.00	9.26	0.00	0.00	0.00	17.39	0.00	0.00	0.00	83.31	0.00	0.00	0.00	83.31
576+00	57600	50.00	9.21	0.00	0.00	0.00	17.10	0.00	0.00	0.00	100.41	0.00	0.00	0.00	100.41
576+50	57650	50.00	9.63	0.00	0.00	0.00	17.44	0.00	0.00	0.00	117.85	0.00	0.00	0.00	117.85
577+00	57700	50.00	9.58	0.00	0.00	0.00	17.79	0.00	0.00	0.00	135.64	0.00	0.00	0.00	135.64
577+50	57750	50.00	10.71	0.00	0.00	0.00	18.79	0.00	0.00	0.00	154.43	0.00	0.00	0.00	154.43
578+00	57800	50.00	10.04	0.00	0.00	0.00	19.21	0.00	0.00	0.00	173.64	0.00	0.00	0.00	173.64
578+20	57820	20.00	10.00	0.00	0.31	0.00	7.42	0.00	0.11	0.00	181.06	0.14	0.00	0.00	180.92

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 O'CONNOR ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
578+20	57820	0.00	56.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	181.06	0.14	0.00	0.00	180.92
578+50	57850	30.00	54.17	0.00	3.38	0.00	61.25	0.00	1.88	0.00	242.31	2.39	0.00	0.00	239.92
579+00	57900	50.00	70.96	0.00	0.92	0.00	115.86	0.00	3.98	0.00	358.17	7.17	0.00	0.00	351.00
579+50	57950	50.00	41.17	0.00	4.53	0.00	103.82	0.00	5.05	0.00	462.00	13.22	0.00	0.00	448.77
580+00	58000	50.00	43.79	0.00	3.73	0.00	78.67	0.00	7.65	0.00	540.66	22.40	0.00	0.00	518.26
580+50	58050	50.00	77.28	0.00	1.63	0.00	112.10	0.00	4.96	0.00	652.76	28.36	0.00	0.00	624.41
581+00	58100	50.00	74.54	0.00	1.65	0.00	140.57	0.00	3.04	0.00	793.34	32.00	0.00	0.00	761.34
581+50	58150	50.00	65.94	0.00	3.05	0.00	130.07	0.00	4.35	0.00	923.41	37.22	0.00	0.00	886.19
582+00	58200	50.00	65.88	0.00	7.70	0.00	122.06	0.00	9.95	0.00	1045.47	49.17	0.00	0.00	996.30
582+50	58250	50.00	80.23	0.00	6.50	0.00	135.29	0.00	13.15	0.00	1180.76	64.95	0.00	0.00	1115.81
583+00	58300	50.00	98.47	0.00	3.06	0.00	165.46	0.00	8.85	0.00	1346.22	75.57	0.00	0.00	1270.65
583+16 BK	58316	16.00	105.44	0.00	21.75	0.00	60.42	0.00	7.35	0.00	1406.64	84.39	0.00	0.00	1322.25
					Column totals		4420.96	0.00	92.85	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 EWB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3	Cumulative Vol (CY) Reduced EBS In Fill 0.8	Mass Ordinate
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
15+13 AH	1513.13	0.00	2.61	0.00	289.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15+50	1550.00	36.87	54.09	0.00	325.72	0.00	38.71	0.00	419.99	0.00	38.71	503.99	0.00	0.00	-465.27
16+00	1600.00	50.00	53.54	0.00	366.91	0.00	99.66	0.00	641.32	0.00	138.37	1273.58	0.00	0.00	-1135.21
16+50	1650.00	50.00	60.22	0.00	426.63	0.00	105.33	0.00	734.76	0.00	243.70	2155.29	0.00	0.00	-1911.58
17+00	1700.00	50.00	66.45	0.00	509.19	0.00	117.29	0.00	866.50	0.00	360.99	3195.09	0.00	0.00	-2834.10
17+50	1750.00	50.00	71.21	0.00	508.11	0.00	127.46	0.00	941.94	0.00	488.45	4325.42	0.00	0.00	-3836.97
18+00	1800.00	50.00	59.85	0.00	554.31	0.00	121.35	0.00	983.72	0.00	609.81	5505.89	0.00	0.00	-4896.08
18+50	1850.00	50.00	72.83	0.00	590.99	0.00	122.85	0.00	1060.46	0.00	732.66	6778.44	0.00	0.00	-6045.79
19+00	1900.00	50.00	75.02	0.00	608.70	0.00	136.90	0.00	1110.82	0.00	869.56	8111.43	0.00	0.00	-7241.88
19+50	1950.00	50.00	73.49	0.00	603.36	0.00	137.51	0.00	1122.28	0.00	1007.07	9458.17	0.00	0.00	-8451.10
20+00	2000.00	50.00	73.52	0.00	604.96	0.00	136.12	0.00	1118.81	0.00	1143.19	10800.74	0.00	0.00	-9657.56
20+50	2050.00	50.00	67.06	0.00	598.83	0.00	130.17	0.00	1114.62	0.00	1273.35	12138.29	0.00	0.00	-10864.94
21+00	2100.00	50.00	61.19	0.00	572.73	0.00	118.75	0.00	1084.78	0.00	1392.10	13440.02	0.00	0.00	-12047.92
21+50	2150.00	50.00	63.85	0.00	544.63	0.00	115.78	0.00	1034.59	0.00	1507.88	14681.53	0.00	0.00	-13173.65
22+00	2200.00	50.00	63.45	0.00	511.53	0.00	117.87	0.00	977.93	0.00	1625.75	15855.04	0.00	0.00	-14229.29
22+50	2250.00	50.00	59.17	0.00	470.38	0.00	113.54	0.00	909.18	0.00	1739.29	16946.05	0.00	0.00	-15206.77
23+00	2300.00	50.00	58.90	0.00	425.26	0.00	109.32	0.00	829.30	0.00	1848.61	17941.21	0.00	0.00	-16092.60
23+50	2350.00	50.00	64.56	0.00	373.24	0.00	114.31	0.00	739.35	0.00	1962.93	18828.43	0.00	0.00	-16865.51
24+00	2400.00	50.00	68.46	0.00	291.31	0.00	123.17	0.00	615.32	0.00	2086.09	19566.82	0.00	0.00	-17480.73
24+50	2450.00	50.00	0.00	0.00	0.00	0.00	63.39	0.00	269.73	0.00	2149.48	19890.50	0.00	0.00	-17741.02
25+00	2500.00	50.00	67.54	0.00	192.73	0.00	62.54	0.00	178.45	0.00	2212.02	20104.64	0.00	0.00	-17892.62
25+50	2550.00	50.00	66.75	0.00	107.77	0.00	124.34	0.00	278.24	0.00	2336.36	20438.53	0.00	0.00	-18102.17
26+00	2600.00	50.00	60.95	0.00	79.48	0.00	118.24	0.00	173.38	0.00	2454.60	20646.59	0.00	0.00	-18191.99
26+50	2650.00	50.00	54.19	0.00	67.03	0.00	106.61	0.00	135.66	0.00	2561.21	20809.38	0.00	0.00	-18248.16

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 EWB

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
27+00		2700.00	50.00	49.86	0.00	31.01	0.00	96.34	0.00	90.78	0.00	2657.56	20918.31	0.00	0.00	-18260.75
27+50		2750.00	50.00	90.13	0.00	15.38	0.00	129.62	0.00	42.95	0.00	2787.18	20969.85	0.00	0.00	-18182.68
28+00		2800.00	50.00	104.53	0.00	5.98	0.00	180.24	0.00	19.78	0.00	2967.42	20993.59	0.00	0.00	-18026.17
28+50		2850.00	50.00	101.95	0.00	25.55	0.00	191.19	0.00	29.19	0.00	3158.60	21028.62	0.00	0.00	-17870.02
29+00		2900.00	50.00	108.47	0.00	64.78	0.00	194.83	0.00	83.64	0.00	3353.44	21128.99	0.00	0.00	-17775.55
29+50		2950.00	50.00	102.70	0.00	104.53	0.00	195.53	0.00	156.77	0.00	3548.96	21317.11	0.00	0.00	-17768.15
30+00		3000.00	50.00	61.21	0.00	123.52	0.00	151.77	0.00	211.16	0.00	3700.73	21570.50	0.00	0.00	-17869.77
30+50		3050.00	50.00	60.91	0.00	161.36	0.00	113.07	0.00	263.78	0.00	3813.81	21887.03	0.00	0.00	-18073.23
31+00		3100.00	50.00	55.32	0.00	195.20	0.00	107.62	0.00	330.15	0.00	3921.43	22283.21	0.00	0.00	-18361.78
31+50		3150.00	50.00	52.99	0.00	323.20	0.00	100.29	0.00	480.00	0.00	4021.71	22859.21	0.00	0.00	-18837.50
32+00		3200.00	50.00	57.42	0.00	392.12	0.00	102.23	0.00	662.33	0.00	4123.94	23654.01	0.00	0.00	-19530.07
32+50		3250.00	50.00	61.16	0.00	379.64	0.00	109.80	0.00	714.59	0.00	4233.74	24511.52	0.00	0.00	-20277.78
33+00		3300.00	50.00	58.44	0.00	354.53	0.00	110.74	0.00	679.79	0.00	4344.48	25327.27	0.00	0.00	-20982.78
33+50		3350.00	50.00	55.89	0.00	310.01	0.00	105.86	0.00	615.31	0.00	4450.34	26065.64	0.00	0.00	-21615.30
34+00		3400.00	50.00	56.35	0.00	246.91	0.00	103.93	0.00	515.67	0.00	4554.27	26684.44	0.00	0.00	-22130.17
34+50		3450.00	50.00	61.96	0.00	189.85	0.00	109.55	0.00	404.41	0.00	4663.82	27169.73	0.00	0.00	-22505.92
35+00		3500.00	50.00	57.38	0.00	139.79	0.00	110.50	0.00	305.22	0.00	4774.32	27536.00	0.00	0.00	-22761.68
35+50		3550.00	50.00	61.52	0.00	59.60	0.00	110.09	0.00	184.62	0.00	4884.41	27757.54	0.00	0.00	-22873.14
36+00		3600.00	50.00	52.36	0.00	4.34	0.00	105.44	0.00	59.20	0.00	4989.85	27828.59	0.00	0.00	-22838.74
36+50		3650.00	50.00	40.92	0.00	0.00	0.00	86.37	0.00	4.02	0.00	5076.22	27833.41	0.00	0.00	-22757.19
37+00		3700.00	50.00	27.07	0.00	0.00	0.00	62.95	0.00	0.00	0.00	5139.18	27833.41	0.00	0.00	-22694.23
37+50	BK	3750.00	50.00	18.29	0.00	0.00	0.00	42.00	0.00	0.00	0.00	5181.18	27833.41	0.00	0.00	-22652.23
							Column totals	5181.18	0.00	23194.51	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 EWC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
168+50 AH	16850.00	0.00	16.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169+00	16900.00	50.00	14.28	0.00	0.00	0.00	28.64	0.00	0.00	0.00	28.64	0.00	0.00	0.00	28.64
169+50	16950.00	50.00	5.19	0.00	1.32	0.00	18.03	0.00	1.22	0.00	46.67	1.47	0.00	0.00	45.20
170+00	17000.00	50.00	125.85	0.00	0.17	0.00	121.33	0.00	1.38	0.00	168.00	3.12	0.00	0.00	164.88
170+50	17050.00	50.00	83.21	0.00	3.31	0.00	193.57	0.00	3.22	0.00	361.57	6.99	0.00	0.00	354.59
171+00	17100.00	50.00	60.37	0.00	4.27	0.00	132.94	0.00	7.02	0.00	494.52	15.41	0.00	0.00	479.11
171+50	17150.00	50.00	40.91	0.00	7.09	0.00	93.78	0.00	10.52	0.00	588.30	28.03	0.00	0.00	560.26
172+00	17200.00	50.00	40.12	0.00	18.40	0.00	75.03	0.00	23.60	0.00	663.32	56.36	0.00	0.00	606.97
172+50	17250.00	50.00	41.41	0.00	13.63	0.00	75.49	0.00	29.66	0.00	738.81	91.94	0.00	0.00	646.87
173+00	17300.00	50.00	38.29	0.00	3.88	0.00	73.80	0.00	16.21	0.00	812.61	111.40	0.00	0.00	701.21
173+50	17350.00	50.00	37.02	0.00	0.26	0.00	69.73	0.00	3.83	0.00	882.34	116.00	0.00	0.00	766.34
174+00	17400.00	50.00	38.05	0.00	0.00	0.00	69.51	0.00	0.24	0.00	951.85	116.29	0.00	0.00	835.56
174+42 BK	17442.32	42.32	80.65	0.00	0.85	0.00	93.03	0.00	0.67	0.00	1044.88	117.09	0.00	0.00	927.79
		Column totals					1044.88	0.00	97.57	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 EWD

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+00 AH	1000.00	0.00	85.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	90.29	0.00	12.88	0.00	163.02	0.00	11.93	0.00	163.02	14.31	0.00	0.00	148.71
11+00	1100.00	50.00	94.96	0.00	17.51	0.00	171.53	0.00	28.14	0.00	334.55	48.08	0.00	0.00	286.47
11+50	1150.00	50.00	97.46	0.00	44.40	0.00	178.17	0.00	57.32	0.00	512.71	116.87	0.00	0.00	395.85
12+00	1200.00	50.00	97.77	0.00	76.32	0.00	180.77	0.00	111.78	0.00	693.48	251.00	0.00	0.00	442.48
12+50	1250.00	50.00	104.27	0.00	86.81	0.00	187.07	0.00	151.05	0.00	880.56	432.26	0.00	0.00	448.30
13+00	1300.00	50.00	115.60	0.00	97.13	0.00	203.58	0.00	170.31	0.00	1084.14	636.63	0.00	0.00	447.51
13+50	1350.00	50.00	138.92	0.00	87.75	0.00	235.67	0.00	171.19	0.00	1319.81	842.06	0.00	0.00	477.75
14+00	1400.00	50.00	187.18	0.00	55.85	0.00	301.94	0.00	132.96	0.00	1621.75	1001.61	0.00	0.00	620.14
14+50	1450.00	50.00	275.14	0.00	0.01	0.00	428.07	0.00	51.72	0.00	2049.82	1063.68	0.00	0.00	986.15
15+00	1500.00	50.00	465.31	0.00	0.00	0.00	685.60	0.00	0.01	0.00	2735.43	1063.69	0.00	0.00	1671.74
15+50	1550.00	50.00	689.98	0.00	0.00	0.00	1069.71	0.00	0.00	0.00	3805.14	1063.69	0.00	0.00	2741.45
16+00	1600.00	50.00	853.61	0.00	0.00	0.00	1429.25	0.00	0.00	0.00	5234.39	1063.69	0.00	0.00	4170.70
16+50	1650.00	50.00	955.90	0.00	0.00	0.00	1675.47	0.00	0.00	0.00	6909.86	1063.69	0.00	0.00	5846.17
17+00	1700.00	50.00	970.67	0.00	1.14	0.00	1783.86	0.00	1.06	0.00	8693.72	1064.96	0.00	0.00	7628.77
17+50	1750.00	50.00	872.19	0.00	0.27	0.00	1706.35	0.00	1.31	0.00	10400.07	1066.52	0.00	0.00	9333.55
18+00	1800.00	50.00	575.36	0.00	1.33	0.00	1340.32	0.00	1.48	0.00	11740.40	1068.30	0.00	0.00	10672.10
18+50	1850.00	50.00	275.86	0.00	0.00	0.00	788.17	0.00	1.23	0.00	12528.56	1069.78	0.00	0.00	11458.79
19+00	1900.00	50.00	111.60	0.00	0.00	0.00	358.76	0.00	0.00	0.00	12887.32	1069.78	0.00	0.00	11817.55
19+50	1950.00	50.00	27.91	0.00	3.11	0.00	129.18	0.00	2.88	0.00	13016.50	1073.23	0.00	0.00	11943.27
20+00	2000.00	50.00	60.29	0.00	4.45	0.00	81.67	0.00	7.00	0.00	13098.17	1081.63	0.00	0.00	12016.53
20+50	2050.00	50.00	91.37	0.00	0.00	0.00	140.43	0.00	4.12	0.00	13238.59	1086.58	0.00	0.00	12152.01
21+00	2100.00	50.00	1262.45	0.00	0.04	0.00	1253.54	0.00	0.04	0.00	14492.13	1086.62	0.00	0.00	13405.51
21+50	2150.00	50.00	1062.82	0.00	0.00	0.00	2153.03	0.00	0.04	0.00	16645.16	1086.67	0.00	0.00	15558.49
22+00	2200.00	50.00	662.69	0.00	0.00	0.00	1597.69	0.00	0.00	0.00	18242.85	1086.67	0.00	0.00	17156.19
22+50	2250.00	50.00	311.61	0.00	0.00	0.00	902.13	0.00	0.00	0.00	19144.98	1086.67	0.00	0.00	18058.31
23+00	2300.00	50.00	95.34	0.00	0.00	0.00	376.81	0.00	0.00	0.00	19521.79	1086.67	0.00	0.00	18435.12
23+50	2350.00	50.00	37.76	0.00	0.00	0.00	123.24	0.00	0.00	0.00	19645.03	1086.67	0.00	0.00	18558.36
24+00	2400.00	50.00	21.02	0.00	0.00	0.00	54.43	0.00	0.00	0.00	19699.45	1086.67	0.00	0.00	18612.79
24+50	2450.00	50.00	17.68	0.00	0.00	0.00	35.83	0.00	0.00	0.00	19735.29	1086.67	0.00	0.00	18648.62
24+80 BK	2479.62	29.62	32.21	0.00	0.00	0.00	27.37	0.00	0.00	0.00	19762.65	1086.67	0.00	0.00	18675.99
					Column totals		19762.65	0.00	905.56	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 EWE

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
10+56 AH	1055.57	0.00	28.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11+00	1100.00	44.43	31.71	0.00	0.03	0.00	49.93	0.00	0.02	0.00	49.93	0.03	0.00	0.00	49.90
11+50	1150.00	50.00	27.93	0.00	0.02	0.00	55.22	0.00	0.05	0.00	105.16	0.09	0.00	0.00	105.07
12+00	1200.00	50.00	32.04	0.00	0.02	0.00	55.53	0.00	0.04	0.00	160.68	0.13	0.00	0.00	160.55
12+50	1250.00	50.00	45.49	0.00	0.00	0.00	71.79	0.00	0.02	0.00	232.47	0.15	0.00	0.00	232.32
13+00	1300.00	50.00	62.23	0.00	0.00	0.00	99.74	0.00	0.00	0.00	332.21	0.15	0.00	0.00	332.06
13+50	1350.00	50.00	92.85	0.00	0.00	0.00	143.59	0.00	0.00	0.00	475.80	0.15	0.00	0.00	475.65
14+00	1400.00	50.00	124.85	0.00	0.00	0.00	201.57	0.00	0.00	0.00	677.38	0.15	0.00	0.00	677.23
14+50	1450.00	50.00	183.59	0.00	0.00	0.00	285.59	0.00	0.00	0.00	962.97	0.15	0.00	0.00	962.82
15+00	1500.00	50.00	124.07	0.00	0.00	0.00	284.87	0.00	0.00	0.00	1247.84	0.15	0.00	0.00	1247.69
15+50	1550.00	50.00	151.11	0.00	0.30	0.00	254.80	0.00	0.28	0.00	1502.64	0.49	0.00	0.00	1502.15
16+00	1600.00	50.00	182.40	0.00	0.41	0.00	308.81	0.00	0.66	0.00	1811.44	1.27	0.00	0.00	1810.17
16+50	1650.00	50.00	85.83	0.00	0.21	0.00	248.36	0.00	0.57	0.00	2059.80	1.96	0.00	0.00	2057.84
17+00	1700.00	50.00	110.54	0.00	0.00	0.00	181.82	0.00	0.19	0.00	2241.63	2.20	0.00	0.00	2239.43
17+03 BK	1703.16	3.16	112.73	0.00	0.00	0.00	13.07	0.00	0.00	0.00	2254.69	2.20	0.00	0.00	2252.50
						Column totals	2254.69	0.00	1.83	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 EWH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
11+41 AH	1141.45	0.00	32.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11+50	1150.00	8.55	67.29	0.00	0.00	0.00	15.78	0.00	0.00	0.00	15.78	0.00	0.00	0.00	15.78
12+00	1200.00	50.00	70.84	0.00	0.41	0.00	127.90	0.00	0.38	0.00	143.68	0.46	0.00	0.00	143.22
12+50	1250.00	50.00	92.46	0.00	0.26	0.00	151.20	0.00	0.62	0.00	294.88	1.20	0.00	0.00	293.68
13+00	1300.00	50.00	82.64	0.00	8.22	0.00	162.13	0.00	7.85	0.00	457.01	10.62	0.00	0.00	446.39
13+50	1350.00	50.00	86.19	0.00	16.26	0.00	156.32	0.00	22.67	0.00	613.33	37.82	0.00	0.00	575.51
14+00	1400.00	50.00	80.09	0.00	13.06	0.00	153.96	0.00	27.15	0.00	767.30	70.40	0.00	0.00	696.90
14+50	1450.00	50.00	89.17	0.00	0.00	0.00	156.72	0.00	12.09	0.00	924.02	84.91	0.00	0.00	839.11
15+00	1500.00	50.00	149.63	0.00	0.00	0.00	221.11	0.00	0.00	0.00	1145.13	84.91	0.00	0.00	1060.22
15+50	1550.00	50.00	198.78	0.00	0.00	0.00	322.60	0.00	0.00	0.00	1467.73	84.91	0.00	0.00	1382.82
16+00	1600.00	50.00	195.90	0.00	0.00	0.00	365.44	0.00	0.00	0.00	1833.18	84.91	0.00	0.00	1748.26
16+50	1650.00	50.00	167.20	0.00	0.00	0.00	336.20	0.00	0.00	0.00	2169.38	84.91	0.00	0.00	2084.47
17+00	1700.00	50.00	162.51	0.00	0.00	0.00	305.29	0.00	0.00	0.00	2474.67	84.91	0.00	0.00	2389.76
17+50	1750.00	50.00	158.19	0.00	0.00	0.00	296.94	0.00	0.00	0.00	2771.61	84.91	0.00	0.00	2686.70
18+00	1800.00	50.00	120.23	0.00	0.00	0.00	257.80	0.00	0.00	0.00	3029.41	84.91	0.00	0.00	2944.50
18+50	1850.00	50.00	145.39	0.00	4.07	0.00	245.94	0.00	3.77	0.00	3275.35	89.43	0.00	0.00	3185.92
19+00	1900.00	50.00	124.34	0.00	9.49	0.00	249.75	0.00	12.56	0.00	3525.10	104.50	0.00	0.00	3420.60
19+50	1950.00	50.00	95.56	0.00	0.00	0.00	203.61	0.00	8.79	0.00	3728.71	115.04	0.00	0.00	3613.67
20+00	2000.00	50.00	40.78	0.00	15.72	0.00	126.24	0.00	14.56	0.00	3854.95	132.51	0.00	0.00	3722.44
20+50	2050.00	50.00	9.45	0.00	85.96	0.00	46.51	0.00	94.15	0.00	3901.46	245.49	0.00	0.00	3655.97
21+00	2100.00	50.00	5.52	0.00	210.48	0.00	13.86	0.00	274.48	0.00	3915.32	574.87	0.00	0.00	3340.46
21+50	2150.00	50.00	4.58	0.00	270.31	0.00	9.35	0.00	445.18	0.00	3924.68	1109.08	0.00	0.00	2815.60
21+98 BK	2198.26	48.26	6.48	0.00	265.51	0.00	9.88	0.00	478.86	0.00	3934.56	1683.71	0.00	0.00	2250.85
						Column totals	3934.56	0.00	1403.10	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 EWI

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
11+69 AH	1168.99	0.00	87.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00	1200.00	31.01	85.68	0.00	0.00	0.00	99.51	0.00	0.00	0.00	99.51	0.00	0.00	0.00	99.51
12+50	1250.00	50.00	82.91	0.00	0.00	0.00	156.10	0.00	0.00	0.00	255.61	0.00	0.00	0.00	255.61
13+00	1300.00	50.00	84.76	0.00	0.00	0.00	155.25	0.00	0.00	0.00	410.86	0.00	0.00	0.00	410.86
13+50	1350.00	50.00	83.04	0.00	0.00	0.00	155.37	0.00	0.00	0.00	566.23	0.00	0.00	0.00	566.23
14+00	1400.00	50.00	82.76	0.00	0.00	0.00	153.52	0.00	0.00	0.00	719.75	0.00	0.00	0.00	719.75
14+50	1450.00	50.00	82.13	0.00	0.00	0.00	152.68	0.00	0.00	0.00	872.42	0.00	0.00	0.00	872.42
15+00	1500.00	50.00	81.53	0.00	0.00	0.00	151.54	0.00	0.00	0.00	1023.96	0.00	0.00	0.00	1023.96
15+50	1550.00	50.00	82.61	0.00	0.00	0.00	151.98	0.00	0.00	0.00	1175.94	0.00	0.00	0.00	1175.94
16+00	1600.00	50.00	84.02	0.00	0.00	0.00	154.29	0.00	0.00	0.00	1330.23	0.00	0.00	0.00	1330.23
16+50	1650.00	50.00	84.40	0.00	0.00	0.00	155.94	0.00	0.00	0.00	1486.17	0.00	0.00	0.00	1486.17
17+00	1700.00	50.00	83.75	0.00	0.00	0.00	155.69	0.00	0.00	0.00	1641.87	0.00	0.00	0.00	1641.87
17+50	1750.00	50.00	81.40	0.00	0.00	0.00	152.92	0.00	0.00	0.00	1794.79	0.00	0.00	0.00	1794.79
18+00	1800.00	50.00	79.75	0.00	0.00	0.00	149.21	0.00	0.00	0.00	1944.00	0.00	0.00	0.00	1944.00
18+50	1850.00	50.00	80.19	0.00	0.00	0.00	148.09	0.00	0.00	0.00	2092.09	0.00	0.00	0.00	2092.09
19+00	1900.00	50.00	79.54	0.00	0.00	0.00	147.90	0.00	0.00	0.00	2239.99	0.00	0.00	0.00	2239.99
19+50	1950.00	50.00	79.53	0.00	0.00	0.00	147.29	0.00	0.00	0.00	2387.28	0.00	0.00	0.00	2387.28
20+00	2000.00	50.00	80.36	0.00	0.00	0.00	148.05	0.00	0.00	0.00	2535.32	0.00	0.00	0.00	2535.32
20+50	2050.00	50.00	79.10	0.00	0.00	0.00	147.65	0.00	0.00	0.00	2682.97	0.00	0.00	0.00	2682.97
20+89 BK	2088.77	38.77	76.18	0.00	0.00	0.00	111.49	0.00	0.00	0.00	2794.46	0.00	0.00	0.00	2794.46
						Column totals	2794.46	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 NEB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
0+00 AH	0.00	0.00	12.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0+50	50.00	50.00	13.15	0.00	0.00	0.00	23.98	0.00	0.00	0.00	23.98	0.00	0.00	0.00	23.98
1+00	100.00	50.00	14.58	0.00	0.01	0.00	25.68	0.00	0.01	0.00	49.66	0.01	0.00	0.00	49.65
1+50	150.00	50.00	19.10	0.00	0.39	0.00	31.19	0.00	0.37	0.00	80.84	0.46	0.00	0.00	80.39
2+00	200.00	50.00	19.83	0.00	9.18	0.00	36.05	0.00	8.86	0.00	116.89	11.09	0.00	0.00	105.80
2+50	250.00	50.00	28.73	0.00	0.00	0.00	44.96	0.00	8.50	0.00	161.85	21.29	0.00	0.00	140.56
3+00	300.00	50.00	41.14	0.00	0.00	0.00	64.69	0.00	0.00	0.00	226.55	21.29	0.00	0.00	205.26
3+50	350.00	50.00	30.10	0.00	0.00	0.00	65.96	0.00	0.00	0.00	292.51	21.29	0.00	0.00	271.22
4+00	400.00	50.00	24.56	0.00	0.00	0.00	50.61	0.00	0.00	0.00	343.12	21.29	0.00	0.00	321.83
4+50	450.00	50.00	0.00	0.00	0.00	0.00	22.74	0.00	0.00	0.00	365.86	21.29	0.00	0.00	344.57
5+00	500.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	365.86	21.29	0.00	0.00	344.57
5+50	550.00	50.00	122.21	0.00	0.00	0.00	113.16	0.00	0.00	0.00	479.02	21.29	0.00	0.00	457.73
6+00	600.00	50.00	134.71	0.00	0.02	0.00	237.89	0.00	0.02	0.00	716.91	21.31	0.00	0.00	695.60
6+50	650.00	50.00	91.80	0.00	0.20	0.00	209.73	0.00	0.20	0.00	926.64	21.56	0.00	0.00	905.08
7+00	700.00	50.00	94.49	0.00	1.04	0.00	172.49	0.00	1.15	0.00	1099.13	22.93	0.00	0.00	1076.20
7+50	750.00	50.00	102.70	0.00	1.35	0.00	182.58	0.00	2.21	0.00	1281.71	25.59	0.00	0.00	1256.12
8+00	800.00	50.00	95.72	0.00	0.92	0.00	183.72	0.00	2.10	0.00	1465.44	28.11	0.00	0.00	1437.32
8+50	850.00	50.00	119.33	0.00	0.84	0.00	199.12	0.00	1.63	0.00	1664.56	30.07	0.00	0.00	1634.49
9+00	900.00	50.00	144.45	0.00	0.00	0.00	244.24	0.00	0.78	0.00	1908.80	31.00	0.00	0.00	1877.80
9+50	950.00	50.00	112.87	0.00	0.00	0.00	238.26	0.00	0.00	0.00	2147.06	31.00	0.00	0.00	2116.06
10+00	1000.00	50.00	143.27	0.00	0.00	0.00	237.17	0.00	0.00	0.00	2384.22	31.00	0.00	0.00	2353.22
10+50	1050.00	50.00	196.39	0.00	0.00	0.00	314.50	0.00	0.00	0.00	2698.72	31.00	0.00	0.00	2667.72
10+86 BK	1085.51	35.51	194.34	0.00	0.00	0.00	256.94	0.00	0.00	0.00	2955.66	31.00	0.00	0.00	2924.66
		Column totals					2955.66	0.00	25.83	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 WCA

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
10+00 AH	1000.00	0.00	140.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	79.70	0.00	2.13	0.00	203.63	0.00	1.97	0.00	203.63	2.37	0.00	0.00	201.26
11+00	1100.00	50.00	29.70	0.00	65.91	0.00	101.30	0.00	63.00	0.00	304.93	77.97	0.00	0.00	226.96
11+50	1150.00	50.00	29.73	0.00	77.76	0.00	55.03	0.00	133.03	0.00	359.95	237.60	0.00	0.00	122.35
12+00	1200.00	50.00	24.80	0.00	40.62	0.00	50.49	0.00	109.61	0.00	410.44	369.13	0.00	0.00	41.31
12+50	1250.00	50.00	50.00	0.00	11.02	0.00	69.26	0.00	47.81	0.00	479.70	426.51	0.00	0.00	53.19
13+00	1300.00	50.00	141.92	0.00	1.00	0.00	177.70	0.00	11.13	0.00	657.41	439.87	0.00	0.00	217.54
13+50	1350.00	50.00	82.76	0.00	0.73	0.00	208.04	0.00	1.60	0.00	865.44	441.79	0.00	0.00	423.66
14+00	1400.00	50.00	352.95	0.00	0.00	0.00	403.44	0.00	0.68	0.00	1268.88	442.60	0.00	0.00	826.28
14+50	1450.00	50.00	302.87	0.00	0.00	0.00	607.24	0.00	0.00	0.00	1876.12	442.60	0.00	0.00	1433.52
15+00	1500.00	50.00	210.54	0.00	0.00	0.00	475.38	0.00	0.00	0.00	2351.50	442.60	0.00	0.00	1908.90
15+13 BK	1512.96	12.96	293.50	0.00	0.00	0.00	120.97	0.00	0.00	0.00	2472.47	442.60	0.00	0.00	2029.87
		Column totals					2472.47	0.00	368.83	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 SLB

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
10+00	AH	1000.00	0.00	89.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50		1050.00	50.00	95.22	0.00	8.60	0.00	170.68	0.00	7.96	0.00	170.68	9.56	0.00	0.00	161.12
11+00		1100.00	50.00	94.05	0.00	29.80	0.00	175.25	0.00	35.56	0.00	345.93	52.22	0.00	0.00	293.70
11+50		1150.00	50.00	229.33	0.00	73.83	0.00	299.43	0.00	95.95	0.00	645.35	167.37	0.00	0.00	477.99
12+00		1200.00	50.00	68.73	0.00	185.59	0.00	275.98	0.00	240.20	0.00	921.33	455.61	0.00	0.00	465.72
12+50		1250.00	50.00	0.00	0.00	174.03	0.00	63.64	0.00	332.98	0.00	984.97	855.19	0.00	0.00	129.78
13+00		1300.00	50.00	0.00	0.00	100.31	0.00	0.00	0.00	254.02	0.00	984.97	1160.01	0.00	0.00	-175.04
13+50		1350.00	50.00	0.00	0.00	52.59	0.00	0.00	0.00	141.57	0.00	984.97	1329.90	0.00	0.00	-344.93
14+00		1400.00	50.00	0.00	0.00	24.21	0.00	0.00	0.00	71.11	0.00	984.97	1415.23	0.00	0.00	-430.26
14+50		1450.00	50.00	0.00	0.00	15.09	0.00	0.00	0.00	36.39	0.00	984.97	1458.90	0.00	0.00	-473.93
15+00		1500.00	50.00	0.00	0.00	10.62	0.00	0.00	0.00	23.81	0.00	984.97	1487.47	0.00	0.00	-502.49
15+50		1550.00	50.00	0.08	0.00	8.89	0.00	0.07	0.00	18.06	0.00	985.05	1509.14	0.00	0.00	-524.10
15+60	BK	1560.27	10.27	0.07	0.00	8.76	0.00	0.03	0.00	3.36	0.00	985.07	1513.17	0.00	0.00	-528.10
							Column totals	985.07	0.00	1260.98	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 FCB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
10+00 AH	1000.00	0.00	18.89	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	55.23	0.00	0.00	0.00	68.63	0.00	0.34	0.00	68.63	0.41	0.00	0.00	68.22
11+00	1100.00	50.00	197.29	0.00	0.00	0.00	233.81	0.00	0.00	0.00	302.44	0.41	0.00	0.00	302.03
11+50	1150.00	50.00	246.98	0.00	0.00	0.00	411.36	0.00	0.00	0.00	713.81	0.41	0.00	0.00	713.39
12+00	1200.00	50.00	281.91	0.00	34.29	0.00	489.71	0.00	31.75	0.00	1203.52	38.51	0.00	0.00	1165.01
12+50	1250.00	50.00	318.07	0.00	64.91	0.00	555.54	0.00	91.85	0.00	1759.06	148.73	0.00	0.00	1610.32
13+00	1300.00	50.00	377.33	0.00	80.95	0.00	643.89	0.00	135.06	0.00	2402.94	310.80	0.00	0.00	2092.14
13+50	1350.00	50.00	412.40	0.00	102.18	0.00	731.23	0.00	169.56	0.00	3134.18	514.28	0.00	0.00	2619.90
14+00	1400.00	50.00	425.39	0.00	80.72	0.00	775.73	0.00	169.35	0.00	3909.91	717.50	0.00	0.00	3192.41
14+50	1450.00	50.00	518.66	0.00	61.93	0.00	874.12	0.00	132.08	0.00	4784.03	876.00	0.00	0.00	3908.03
15+00	1500.00	50.00	615.24	0.00	43.52	0.00	1049.91	0.00	97.64	0.00	5833.94	993.17	0.00	0.00	4840.77
15+50	1550.00	50.00	715.56	0.00	25.88	0.00	1232.22	0.00	64.26	0.00	7066.16	1070.28	0.00	0.00	5995.88
16+00	1600.00	50.00	880.42	0.00	15.26	0.00	1477.76	0.00	38.09	0.00	8543.92	1115.99	0.00	0.00	7427.93
16+50	1650.00	50.00	958.25	0.00	19.53	0.00	1702.47	0.00	32.21	0.00	10246.39	1154.64	0.00	0.00	9091.74
17+00	1700.00	50.00	387.14	0.00	0.00	0.00	1245.73	0.00	18.08	0.00	11492.12	1176.34	0.00	0.00	10315.78
17+50	1750.00	50.00	413.89	0.00	0.00	0.00	741.69	0.00	0.00	0.00	12233.81	1176.34	0.00	0.00	11057.47
18+00	1800.00	50.00	455.12	0.00	0.00	0.00	804.64	0.00	0.00	0.00	13038.45	1176.34	0.00	0.00	11862.11
18+50	1850.00	50.00	480.77	0.00	0.00	0.00	866.56	0.00	0.00	0.00	13905.02	1176.34	0.00	0.00	12728.67
19+00	1900.00	50.00	429.86	0.00	0.00	0.00	843.18	0.00	0.00	0.00	14748.19	1176.34	0.00	0.00	13571.85
19+50	1950.00	50.00	453.28	0.00	0.00	0.00	817.72	0.00	0.00	0.00	15565.92	1176.34	0.00	0.00	14389.57
20+00	2000.00	50.00	442.22	0.00	0.00	0.00	829.17	0.00	0.00	0.00	16395.08	1176.34	0.00	0.00	15218.74
20+50	2050.00	50.00	416.90	0.00	0.00	0.00	795.48	0.00	0.00	0.00	17190.56	1176.34	0.00	0.00	16014.22
21+00	2100.00	50.00	396.07	0.00	0.00	0.00	752.75	0.00	0.00	0.00	17943.31	1176.34	0.00	0.00	16766.97
21+50	2150.00	50.00	365.00	0.00	0.00	0.00	704.69	0.00	0.00	0.00	18648.01	1176.34	0.00	0.00	17471.66

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090101_ew.ppt PLOT DATE : 4/29/2014 6:43:57 PM PLOT BY : MSCCEJ PLOT NAME : 090101_ew84 PLOT SCALE : 1:1

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Division 2 FCB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
22+00	2200.00	50.00	341.45	0.00	0.00	0.00	654.12	0.00	0.00	0.00	19302.13	1176.34	0.00	0.00	18125.79
22+50	2250.00	50.00	330.69	0.00	0.00	0.00	622.35	0.00	0.00	0.00	19924.48	1176.34	0.00	0.00	18748.14
23+00	2300.00	50.00	361.50	0.00	0.00	0.00	640.92	0.00	0.00	0.00	20565.40	1176.34	0.00	0.00	19389.05
23+50	2350.00	50.00	322.34	0.00	0.00	0.00	633.19	0.00	0.00	0.00	21198.58	1176.34	0.00	0.00	20022.24
24+00	2400.00	50.00	289.12	0.00	0.00	0.00	566.17	0.00	0.00	0.00	21764.75	1176.34	0.00	0.00	20588.41
24+50	2450.00	50.00	634.07	0.00	0.00	0.00	854.81	0.00	0.00	0.00	22619.56	1176.34	0.00	0.00	21443.21
25+00	2500.00	50.00	679.85	0.00	0.00	0.00	1216.59	0.00	0.00	0.00	23836.15	1176.34	0.00	0.00	22659.80
25+50	2550.00	50.00	679.55	0.00	0.00	0.00	1258.70	0.00	0.00	0.00	25094.85	1176.34	0.00	0.00	23918.51
26+00	2600.00	50.00	665.63	0.00	0.00	0.00	1245.54	0.00	0.00	0.00	26340.39	1176.34	0.00	0.00	25164.04
26+50	2650.00	50.00	641.49	0.00	0.00	0.00	1210.30	0.00	0.00	0.00	27550.69	1176.34	0.00	0.00	26374.34
27+00	2700.00	50.00	623.96	0.00	0.00	0.00	1171.71	0.00	0.00	0.00	28722.40	1176.34	0.00	0.00	27546.05
27+50	2750.00	50.00	607.32	0.00	0.00	0.00	1140.07	0.00	0.00	0.00	29862.47	1176.34	0.00	0.00	28686.13
28+00	2800.00	50.00	586.16	0.00	0.00	0.00	1105.07	0.00	0.00	0.00	30967.55	1176.34	0.00	0.00	29791.20
28+50	2850.00	50.00	542.19	0.00	0.00	0.00	1044.77	0.00	0.00	0.00	32012.31	1176.34	0.00	0.00	30835.97
29+00	2900.00	50.00	495.29	0.00	0.00	0.00	960.63	0.00	0.00	0.00	32972.94	1176.34	0.00	0.00	31796.60
29+50	2950.00	50.00	442.76	0.00	0.00	0.00	868.56	0.00	0.00	0.00	33841.51	1176.34	0.00	0.00	32665.16
30+00	3000.00	50.00	386.07	0.00	0.00	0.00	767.44	0.00	0.00	0.00	34608.94	1176.34	0.00	0.00	33432.60
30+50	3050.00	50.00	335.26	0.00	0.00	0.00	667.90	0.00	0.00	0.00	35276.84	1176.34	0.00	0.00	34100.50
31+00	3100.00	50.00	301.61	0.00	0.00	0.00	589.69	0.00	0.00	0.00	35866.54	1176.34	0.00	0.00	34690.19
31+50	3150.00	50.00	266.47	0.00	0.00	0.00	526.00	0.00	0.00	0.00	36392.54	1176.34	0.00	0.00	35216.19
32+00	3200.00	50.00	249.48	0.00	0.00	0.00	477.73	0.00	0.00	0.00	36870.27	1176.34	0.00	0.00	35693.92
32+50	3250.00	50.00	229.82	0.00	0.00	0.00	443.80	0.00	0.00	0.00	37314.06	1176.34	0.00	0.00	36137.72
33+00	3300.00	50.00	184.20	0.00	0.00	0.00	383.35	0.00	0.00	0.00	37697.42	1176.34	0.00	0.00	36521.07
33+50	3350.00	50.00	159.01	0.00	0.00	0.00	317.79	0.00	0.00	0.00	38015.20	1176.34	0.00	0.00	36838.86
34+00	3400.00	50.00	0.00	0.00	0.00	0.00	147.23	0.00	0.00	0.00	38162.44	1176.34	0.00	0.00	36986.09

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 FCB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
34+50	3450.00	50.00	11.87	0.00	0.00	0.00	10.99	0.00	0.00	0.00	38173.43	1176.34	0.00	0.00	36997.08
35+00	3500.00	50.00	14.64	0.00	0.00	0.00	24.55	0.00	0.00	0.00	38197.97	1176.34	0.00	0.00	37021.63
35+50	3550.00	50.00	15.15	0.00	0.00	0.00	27.58	0.00	0.00	0.00	38225.56	1176.34	0.00	0.00	37049.21
36+00	3600.00	50.00	14.86	0.00	0.00	0.00	27.79	0.00	0.00	0.00	38253.34	1176.34	0.00	0.00	37077.00
36+50	3650.00	50.00	15.92	0.00	0.00	0.00	28.50	0.00	0.00	0.00	38281.84	1176.34	0.00	0.00	37105.50
37+00	3700.00	50.00	31.07	0.00	0.00	0.00	43.51	0.00	0.00	0.00	38325.35	1176.34	0.00	0.00	37149.01
37+50	3750.00	50.00	11.38	0.00	0.00	0.00	39.31	0.00	0.00	0.00	38364.66	1176.34	0.00	0.00	37188.31
38+00	3800.00	50.00	5.74	0.00	1.36	0.00	15.85	0.00	1.26	0.00	38380.51	1177.86	0.00	0.00	37202.65
38+50	3850.00	50.00	6.28	0.00	1.45	0.00	11.13	0.00	2.60	0.00	38391.64	1180.98	0.00	0.00	37210.66
39+00	3900.00	50.00	7.21	0.00	0.32	0.00	12.49	0.00	1.64	0.00	38404.13	1182.94	0.00	0.00	37221.19
39+50	3950.00	50.00	0.36	0.00	13.81	0.00	7.01	0.00	13.08	0.00	38411.14	1198.64	0.00	0.00	37212.49
40+00	4000.00	50.00	0.30	0.00	15.42	0.00	0.61	0.00	27.06	0.00	38411.75	1231.12	0.00	0.00	37180.63
40+50	4050.00	50.00	39.07	0.00	16.18	0.00	36.45	0.00	29.26	0.00	38448.20	1266.23	0.00	0.00	37181.97
41+00	4100.00	50.00	92.68	0.00	0.00	0.00	121.99	0.00	14.98	0.00	38570.19	1284.21	0.00	0.00	37285.98
41+50	4150.00	50.00	185.30	0.00	0.16	0.00	257.39	0.00	0.15	0.00	38827.58	1284.39	0.00	0.00	37543.19
42+00	4200.00	50.00	247.02	0.00	0.26	0.00	400.30	0.00	0.39	0.00	39227.88	1284.86	0.00	0.00	37943.02
42+50	4250.00	50.00	257.09	0.00	0.00	0.00	466.77	0.00	0.24	0.00	39694.65	1285.14	0.00	0.00	38409.50
43+00	4300.00	50.00	238.28	0.00	0.00	0.00	458.68	0.00	0.00	0.00	40153.32	1285.14	0.00	0.00	38868.18
43+50	4350.00	50.00	182.84	0.00	0.00	0.00	389.93	0.00	0.00	0.00	40543.25	1285.14	0.00	0.00	39258.11
44+00	4400.00	50.00	114.27	0.00	0.00	0.00	275.10	0.00	0.00	0.00	40818.35	1285.14	0.00	0.00	39533.21
44+50	4450.00	50.00	72.85	0.00	0.00	0.00	173.26	0.00	0.00	0.00	40991.61	1285.14	0.00	0.00	39706.47
45+00	4500.00	50.00	43.15	0.00	0.00	0.00	107.41	0.00	0.00	0.00	41099.02	1285.14	0.00	0.00	39813.87
45+50	4550.00	50.00	20.12	0.00	0.00	0.00	58.58	0.00	0.00	0.00	41157.60	1285.14	0.00	0.00	39872.46
45+90 BK	4589.84	39.84	15.36	0.00	0.00	0.00	26.18	0.00	0.00	0.00	41183.78	1285.14	0.00	0.00	39898.63
					Column totals		41183.78	0.00	1070.95	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 FDB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
10+00 AH	1000.00	0.00	23.10	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50	1050.00	50.00	28.35	0.00	0.01	0.00	47.64	0.00	0.69	0.00	47.64	0.82	0.00	0.00	46.82
11+00	1100.00	50.00	27.68	0.00	0.00	0.00	51.88	0.00	0.01	0.00	99.52	0.83	0.00	0.00	98.69
11+50	1150.00	50.00	29.69	0.00	0.03	0.00	53.12	0.00	0.03	0.00	152.64	0.87	0.00	0.00	151.77
12+00	1200.00	50.00	56.07	0.00	0.12	0.00	79.41	0.00	0.14	0.00	232.05	1.03	0.00	0.00	231.01
12+50	1250.00	50.00	36.64	0.00	2.10	0.00	85.84	0.00	2.06	0.00	317.89	3.50	0.00	0.00	314.39
13+00	1300.00	50.00	17.09	0.00	7.78	0.00	49.75	0.00	9.15	0.00	367.64	14.48	0.00	0.00	353.16
13+50	1350.00	50.00	16.69	0.00	6.15	0.00	31.28	0.00	12.90	0.00	398.92	29.96	0.00	0.00	368.96
14+00	1400.00	50.00	5.16	0.00	0.04	0.00	20.23	0.00	5.73	0.00	419.15	36.83	0.00	0.00	382.31
14+15 BK	1415.20	15.20	0.01	0.00	0.00	0.00	1.46	0.00	0.01	0.00	420.60	36.85	0.00	0.00	383.76
Column totals							420.60	0.00	30.71	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 NWA

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
												1.0	1.2	1.3	0.8	
								Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
18+18	AH	1817.93	0.00	58.22	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18+50		1850.00	32.07	35.66	0.00	1.07	0.00	55.75	0.00	0.69	0.00	55.75	0.83	0.00	0.00	54.93
19+00		1900.00	50.00	25.39	0.00	0.17	0.00	56.53	0.00	1.15	0.00	112.28	2.20	0.00	0.00	110.08
19+50		1950.00	50.00	45.77	0.00	0.00	0.00	65.89	0.00	0.16	0.00	178.17	2.39	0.00	0.00	175.78
20+00		2000.00	50.00	66.45	0.00	0.00	0.00	103.91	0.00	0.00	0.00	282.08	2.39	0.00	0.00	279.69
20+50		2050.00	50.00	85.50	0.00	0.00	0.00	140.69	0.00	0.00	0.00	422.77	2.39	0.00	0.00	420.38
21+00		2100.00	50.00	37.41	0.00	0.06	0.00	113.81	0.00	0.06	0.00	536.58	2.46	0.00	0.00	534.12
21+50		2150.00	50.00	22.09	0.00	1.37	0.00	55.09	0.00	1.32	0.00	591.67	4.05	0.00	0.00	587.62
22+00		2200.00	50.00	17.62	0.00	8.83	0.00	36.77	0.00	9.44	0.00	628.44	15.38	0.00	0.00	613.06
22+50		2250.00	50.00	17.14	0.00	14.01	0.00	32.19	0.00	21.15	0.00	660.62	40.76	0.00	0.00	619.86
23+00		2300.00	50.00	16.36	0.00	2.58	0.00	31.02	0.00	15.36	0.00	691.64	59.19	0.00	0.00	632.45
23+16	BK	2315.99	15.99	14.73	0.00	0.13	0.00	9.21	0.00	0.80	0.00	700.85	60.16	0.00	0.00	640.69
							Column totals	700.85	0.00	50.13	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 FCV

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
6+12	AH	612.00	0.00	295.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6+50		650.00	38.00	400.45	0.00	0.00	0.00	489.39	0.00	0.00	0.00	489.39	0.00	0.00	0.00	489.39
7+00		700.00	50.00	556.95	0.00	0.00	0.00	886.48	0.00	0.00	0.00	1375.87	0.00	0.00	0.00	1375.87
7+50		750.00	50.00	677.53	0.00	0.00	0.00	1143.04	0.00	0.00	0.00	2518.91	0.00	0.00	0.00	2518.91
8+00		800.00	50.00	747.89	0.00	0.00	0.00	1319.83	0.00	0.00	0.00	3838.74	0.00	0.00	0.00	3838.74
8+12	BK	812.00	12.00	746.50	0.00	0.00	0.00	332.09	0.00	0.00	0.00	4170.83	0.00	0.00	0.00	4170.83
			Column totals					4170.83	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 2 RAMP BA GRADING

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
724+50 AH	72450.00	0.00	0.00	0.00	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
725+00	72500.00	50.00	0.00	0.00	1551.22	0.00	0.00	0.00	1440.87	0.00	0.00	1729.04	0.00	0.00	-1729.04
725+50	72550.00	50.00	0.00	0.00	3125.84	0.00	0.00	0.00	4330.61	0.00	0.00	6925.78	0.00	0.00	-6925.78
726+00	72600.00	50.00	0.00	0.00	1182.26	0.00	0.00	0.00	3988.98	0.00	0.00	11712.56	0.00	0.00	-11712.56
726+50	72650.00	50.00	0.00	0.00	845.84	0.00	0.00	0.00	1877.87	0.00	0.00	13966.00	0.00	0.00	-13966.00
727+00	72700.00	50.00	0.00	0.00	699.45	0.00	0.00	0.00	1430.82	0.00	0.00	15682.99	0.00	0.00	-15682.99
727+50	72750.00	50.00	0.00	0.00	512.60	0.00	0.00	0.00	1122.27	0.00	0.00	17029.71	0.00	0.00	-17029.71
728+00	72800.00	50.00	0.00	0.00	461.80	0.00	0.00	0.00	902.22	0.00	0.00	18112.38	0.00	0.00	-18112.38
728+50	72850.00	50.00	0.00	0.00	2269.00	0.00	0.00	0.00	2528.52	0.00	0.00	21146.60	0.00	0.00	-21146.60
729+00	72900.00	50.00	0.00	0.00	1698.07	0.00	0.00	0.00	3673.21	0.00	0.00	25554.46	0.00	0.00	-25554.46
729+50	72950.00	50.00	0.00	0.00	1839.39	0.00	0.00	0.00	3275.43	0.00	0.00	29484.97	0.00	0.00	-29484.97
730+00	73000.00	50.00	0.00	0.00	1678.23	0.00	0.00	0.00	3257.06	0.00	0.00	33393.43	0.00	0.00	-33393.43
730+50	73050.00	50.00	0.00	0.00	1545.99	0.00	0.00	0.00	2985.39	0.00	0.00	36975.90	0.00	0.00	-36975.90
731+00	73100.00	50.00	0.20	0.00	1262.97	0.00	0.19	0.00	2600.89	0.00	0.19	40096.97	0.00	0.00	-40096.78
731+50	73150.00	50.00	0.01	0.00	1247.46	0.00	0.19	0.00	2324.47	0.00	0.38	42886.33	0.00	0.00	-42885.95
732+00	73200.00	50.00	2.59	0.00	1183.77	0.00	2.41	0.00	2251.14	0.00	2.79	45587.70	0.00	0.00	-45584.91
732+50	73250.00	50.00	0.02	0.00	920.30	0.00	2.42	0.00	1948.21	0.00	5.20	47925.56	0.00	0.00	-47920.35
733+00	73300.00	50.00	0.00	0.00	496.38	0.00	0.02	0.00	1311.74	0.00	5.22	49499.64	0.00	0.00	-49494.42
733+50	73350.00	50.00	9.15	0.00	177.53	0.00	8.47	0.00	623.99	0.00	13.69	50248.43	0.00	0.00	-50234.74
733+85 BK	73385.00	35.00	0.21	0.00	20.65	0.00	6.07	0.00	128.45	0.00	19.76	50402.57	0.00	0.00	-50382.81
Column totals							19.76	0.00	42002.14	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 USH 45 NB GRADING

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
335+50 AH	33550.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
336+00	33600.00	50.00	0.00	0.00	389.75	0.00	0.00	0.00	360.88	0.00	0.00	433.06	0.00	0.00	-433.06
336+50	33650.00	50.00	0.00	0.00	616.40	0.00	0.00	0.00	931.62	0.00	0.00	1551.00	0.00	0.00	-1551.00
337+00	33700.00	50.00	0.00	0.00	620.73	0.00	0.00	0.00	1145.49	0.00	0.00	2925.59	0.00	0.00	-2925.59
337+50	33750.00	50.00	0.02	0.00	608.44	0.00	0.02	0.00	1138.12	0.00	0.02	4291.33	0.00	0.00	-4291.31
338+00	33800.00	50.00	0.06	0.00	732.43	0.00	0.07	0.00	1241.55	0.00	0.09	5781.19	0.00	0.00	-5781.10
338+50	33850.00	50.00	1.11	0.00	790.29	0.00	1.08	0.00	1409.93	0.00	1.18	7473.10	0.00	0.00	-7471.92
339+00	33900.00	50.00	0.00	0.00	751.17	0.00	1.03	0.00	1427.28	0.00	2.20	9185.83	0.00	0.00	-9183.63
339+50	33950.00	50.00	0.00	0.00	819.73	0.00	0.00	0.00	1454.54	0.00	2.20	10931.28	0.00	0.00	-10929.07
340+00	34000.00	50.00	0.00	0.00	800.76	0.00	0.00	0.00	1500.45	0.00	2.20	12731.82	0.00	0.00	-12729.62
340+50	34050.00	50.00	0.04	0.00	721.02	0.00	0.04	0.00	1409.06	0.00	2.24	14422.69	0.00	0.00	-14420.45
341+00	34100.00	50.00	0.04	0.00	634.03	0.00	0.07	0.00	1254.68	0.00	2.31	15928.30	0.00	0.00	-15925.99
341+50	34150.00	50.00	0.01	0.00	609.40	0.00	0.05	0.00	1151.32	0.00	2.36	17309.89	0.00	0.00	-17307.53
342+00	34200.00	50.00	0.03	0.00	417.42	0.00	0.04	0.00	950.76	0.00	2.40	18450.80	0.00	0.00	-18448.40
342+40 BK	34240.00	40.00	0.06	0.00	1.34	0.00	0.07	0.00	310.19	0.00	2.46	18823.03	0.00	0.00	-18820.57
		Column totals					2.46	0.00	15685.86	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 IH 94 EB/WB GRADING

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
88+00	AH	8800.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88+50		8850.00	50.00	0.00	0.00	5.87	0.00	0.00	0.00	5.53	0.00	0.00	6.63	0.00	0.00	-6.63
89+00		8900.00	50.00	0.00	0.00	7.52	0.00	0.00	0.00	12.40	0.00	0.00	21.51	0.00	0.00	-21.51
89+50		8950.00	50.00	0.00	0.00	11.20	0.00	0.00	0.00	17.33	0.00	0.00	42.31	0.00	0.00	-42.31
90+00		9000.00	50.00	0.00	0.00	20.06	0.00	0.00	0.00	28.94	0.00	0.00	77.04	0.00	0.00	-77.04
90+50		9050.00	50.00	0.00	0.00	23.52	0.00	0.00	0.00	40.35	0.00	0.00	125.47	0.00	0.00	-125.47
91+00		9100.00	50.00	0.00	0.00	43.47	0.00	0.00	0.00	62.03	0.00	0.00	199.90	0.00	0.00	-199.90
91+50		9150.00	50.00	0.00	0.00	44.16	0.00	0.00	0.00	81.14	0.00	0.00	297.27	0.00	0.00	-297.27
92+00		9200.00	50.00	0.00	0.00	77.83	0.00	0.00	0.00	112.95	0.00	0.00	432.81	0.00	0.00	-432.81
92+50		9250.00	50.00	0.00	0.00	104.59	0.00	0.00	0.00	168.91	0.00	0.00	635.50	0.00	0.00	-635.50
93+00		9300.00	50.00	0.00	0.00	129.31	0.00	0.00	0.00	216.57	0.00	0.00	895.39	0.00	0.00	-895.39
93+50		9350.00	50.00	0.00	0.00	216.96	0.00	0.00	0.00	320.62	0.00	0.00	1280.13	0.00	0.00	-1280.13
94+00		9400.00	50.00	0.00	0.00	296.21	0.00	0.00	0.00	475.16	0.00	0.00	1850.32	0.00	0.00	-1850.32
94+50		9450.00	50.00	0.00	0.00	415.30	0.00	0.00	0.00	658.81	0.00	0.00	2640.89	0.00	0.00	-2640.89
95+00		9500.00	50.00	0.00	0.00	511.66	0.00	0.00	0.00	858.30	0.00	0.00	3670.84	0.00	0.00	-3670.84
95+50		9550.00	50.00	0.00	0.00	573.21	0.00	0.00	0.00	1004.51	0.00	0.00	4876.26	0.00	0.00	-4876.26
96+00		9600.00	50.00	0.00	0.00	732.17	0.00	0.00	0.00	1208.69	0.00	0.00	6326.68	0.00	0.00	-6326.68
96+50		9650.00	50.00	0.00	0.00	798.41	0.00	0.00	0.00	1417.20	0.00	0.00	8027.32	0.00	0.00	-8027.32
97+00		9700.00	50.00	0.00	0.00	828.01	0.00	0.00	0.00	1505.94	0.00	0.00	9834.46	0.00	0.00	-9834.46
97+50		9750.00	50.00	0.00	0.00	997.33	0.00	0.00	0.00	1690.13	0.00	0.00	11862.61	0.00	0.00	-11862.61
98+00		9800.00	50.00	0.00	0.00	1067.11	0.00	0.00	0.00	1911.52	0.00	0.00	14156.43	0.00	0.00	-14156.43
98+50		9850.00	50.00	0.00	0.00	1075.79	0.00	0.00	0.00	1984.17	0.00	0.00	16537.43	0.00	0.00	-16537.43
99+00		9900.00	50.00	0.00	0.00	887.38	0.00	0.00	0.00	1817.75	0.00	0.00	18718.73	0.00	0.00	-18718.73
99+35	BK	9935.00	35.00	0.00	0.00	43.63	0.00	0.00	0.00	603.43	0.00	0.00	19442.85	0.00	0.00	-19442.85

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 EB/WB GRADING

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
102+10	AH	10210.00	0.00	0.00	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102+50		10250.00	40.00	0.00	0.00	492.82	0.00	0.00	0.00	366.39	0.00	0.00	439.67	0.00	0.00	-439.67
103+00		10300.00	50.00	0.00	0.00	561.06	0.00	0.00	0.00	975.81	0.00	0.00	1610.65	0.00	0.00	-1610.65
103+50		10350.00	50.00	0.00	0.00	515.33	0.00	0.00	0.00	996.66	0.00	0.00	2806.64	0.00	0.00	-2806.64
104+00		10400.00	50.00	0.00	0.00	498.09	0.00	0.00	0.00	938.35	0.00	0.00	3932.66	0.00	0.00	-3932.66
104+50		10450.00	50.00	0.00	0.00	465.42	0.00	0.00	0.00	892.14	0.00	0.00	5003.23	0.00	0.00	-5003.23
105+00		10500.00	50.00	0.00	0.00	435.14	0.00	0.00	0.00	833.85	0.00	0.00	6003.85	0.00	0.00	-6003.85
105+50		10550.00	50.00	0.00	0.00	425.34	0.00	0.00	0.00	796.74	0.00	0.00	6959.94	0.00	0.00	-6959.94
106+00		10600.00	50.00	0.00	0.00	446.78	0.00	0.00	0.00	807.52	0.00	0.00	7928.96	0.00	0.00	-7928.96
106+50		10650.00	50.00	0.00	0.00	425.38	0.00	0.00	0.00	807.56	0.00	0.00	8898.03	0.00	0.00	-8898.03
107+00		10700.00	50.00	0.00	0.00	422.26	0.00	0.00	0.00	784.85	0.00	0.00	9839.85	0.00	0.00	-9839.85
107+50		10750.00	50.00	0.00	0.00	415.56	0.00	0.00	0.00	775.76	0.00	0.00	10770.76	0.00	0.00	-10770.76
108+00		10800.00	50.00	0.00	0.00	402.08	0.00	0.00	0.00	757.07	0.00	0.00	11679.25	0.00	0.00	-11679.25
108+50		10850.00	50.00	0.00	0.00	375.96	0.00	0.00	0.00	720.41	0.00	0.00	12543.74	0.00	0.00	-12543.74
109+00		10900.00	50.00	0.00	0.00	398.97	0.00	0.00	0.00	717.53	0.00	0.00	13404.77	0.00	0.00	-13404.77
109+50		10950.00	50.00	0.00	0.00	435.58	0.00	0.00	0.00	772.73	0.00	0.00	14332.05	0.00	0.00	-14332.05
110+00		11000.00	50.00	0.00	0.00	510.18	0.00	0.00	0.00	875.70	0.00	0.00	15382.89	0.00	0.00	-15382.89
110+50		11050.00	50.00	0.00	0.00	573.78	0.00	0.00	0.00	1003.67	0.00	0.00	16587.29	0.00	0.00	-16587.29
111+00		11100.00	50.00	0.00	0.00	731.85	0.00	0.00	0.00	1208.92	0.00	0.00	18037.99	0.00	0.00	-18037.99
111+50		11150.00	50.00	0.00	0.00	190.81	0.00	0.00	0.00	854.31	0.00	0.00	19063.17	0.00	0.00	-19063.17
111+60	BK	11160.00	10.00	0.00	0.00	39.73	0.00	0.00	0.00	42.69	0.00	0.00	19114.40	0.00	0.00	-19114.40
							Column totals	0.00	0.00	32131.05	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 IH94 CORE GRADING

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
178+85 AH	17885.00	0.00	5.33	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179+00	17900.00	15.00	7.56	0.00	2.89	0.00	3.58	0.00	0.90	0.00	3.58	1.08	0.00	0.00	2.50
179+50	17950.00	50.00	24.23	0.00	8.20	0.00	29.44	0.00	10.27	0.00	33.02	13.40	0.00	0.00	19.61
180+00	18000.00	50.00	73.90	0.00	17.65	0.00	90.86	0.00	23.94	0.00	123.88	42.12	0.00	0.00	81.75
180+50	18050.00	50.00	216.50	0.00	14.30	0.00	268.89	0.00	29.58	0.00	392.77	77.62	0.00	0.00	315.14
181+00	18100.00	50.00	476.09	0.00	14.28	0.00	641.29	0.00	26.46	0.00	1034.05	109.38	0.00	0.00	924.67
181+50	18150.00	50.00	897.67	0.00	33.49	0.00	1272.00	0.00	44.23	0.00	2306.05	162.46	0.00	0.00	2143.60
182+00	18200.00	50.00	1484.88	0.00	24.70	0.00	2206.06	0.00	53.88	0.00	4512.12	227.11	0.00	0.00	4285.00
182+50	18250.00	50.00	2459.71	0.00	3.19	0.00	3652.40	0.00	25.82	0.00	8164.52	258.10	0.00	0.00	7906.41
183+00	18300.00	50.00	3538.62	0.00	0.18	0.00	5554.01	0.00	3.12	0.00	13718.53	261.85	0.00	0.00	13456.68
183+50	18350.00	50.00	4584.94	0.00	0.26	0.00	7521.81	0.00	0.41	0.00	21240.34	262.34	0.00	0.00	20978.00
184+00	18400.00	50.00	5289.89	0.00	0.00	0.00	9143.36	0.00	0.24	0.00	30383.70	262.62	0.00	0.00	30121.08
184+50	18450.00	50.00	5992.88	0.00	0.36	0.00	10447.01	0.00	0.33	0.00	40830.71	263.02	0.00	0.00	40567.69
185+00	18500.00	50.00	7192.88	0.00	0.00	0.00	12209.04	0.00	0.33	0.00	53039.75	263.42	0.00	0.00	52776.32
185+50	18550.00	50.00	6212.19	0.00	0.67	0.00	12412.10	0.00	0.62	0.00	65451.85	264.17	0.00	0.00	65187.68
186+00	18600.00	50.00	1307.10	0.00	0.15	0.00	6962.31	0.00	0.76	0.00	72414.15	265.08	0.00	0.00	72149.07
186+35 BK	18635.00	35.00	0.25	0.00	0.00	0.00	847.36	0.00	0.10	0.00	73261.51	265.20	0.00	0.00	72996.31
						Column totals	73261.51	0.00	221.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 2 IH 94 PIER GRADING

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.2	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
188+03 AH	18802.5	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188+50	18850	47.50	971.22	0.00	0.00	0.00	855.38	0.00	0.00	0.00	855.38	0.00	0.00	0.00	855.38
189+00	18900	50.00	1832.37	0.00	0.00	0.00	2595.92	0.00	0.00	0.00	3451.29	0.00	0.00	0.00	3451.29
189+50	18950	50.00	2163.53	0.00	0.00	0.00	3699.91	0.00	0.00	0.00	7151.20	0.00	0.00	0.00	7151.20
190+00	19000	50.00	1965.97	0.00	0.00	0.00	3823.61	0.00	0.00	0.00	10974.81	0.00	0.00	0.00	10974.81
190+50	19050	50.00	1426.95	0.00	0.00	0.00	3141.59	0.00	0.00	0.00	14116.41	0.00	0.00	0.00	14116.41
191+00	19100	50.00	553.30	0.00	0.00	0.00	1833.56	0.00	0.00	0.00	15949.97	0.00	0.00	0.00	15949.97
191+50	19150	50.00	252.91	0.00	0.00	0.00	746.49	0.00	0.00	0.00	16696.46	0.00	0.00	0.00	16696.46
192+00	19200	50.00	145.07	0.00	0.00	0.00	368.50	0.00	0.00	0.00	17064.96	0.00	0.00	0.00	17064.96
192+25 BK	19224.5	24.50	101.56	0.00	0.00	0.00	111.90	0.00	0.00	0.00	17176.86	0.00	0.00	0.00	17176.86
Column totals							17176.86	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 2 RAMP EN

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
524+86 AH	52486.01	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525+00	52500	13.99	1.64	0.00	24.90	0.00	0.42	0.00	6.53	0.00	0.42	7.83	0.00	0.00	-7.41
525+50	52550	50.00	4.95	0.00	119.57	0.00	6.10	0.00	133.77	0.00	6.53	168.36	0.00	0.00	-161.83
526+00	52600	50.00	6.48	0.00	378.91	0.00	10.58	0.00	461.56	0.00	17.11	722.22	0.00	0.00	-705.11
526+50	52650	50.00	0.00	0.00	849.68	0.00	6.00	0.00	1137.58	0.00	23.11	2087.32	0.00	0.00	-2064.21
527+00	52700	50.00	0.00	0.00	1268.16	0.00	0.00	0.00	1960.96	0.00	23.11	4440.48	0.00	0.00	-4417.37
527+50	52750	50.00	0.00	0.00	2517.26	0.00	0.00	0.00	3505.02	0.00	23.11	8646.50	0.00	0.00	-8623.39
528+00	52800	50.00	4.09	0.00	1874.37	0.00	3.79	0.00	4066.32	0.00	26.90	13526.09	0.00	0.00	-13499.19
528+50	52850	50.00	1.69	0.00	842.14	0.00	5.35	0.00	2515.29	0.00	32.25	16544.43	0.00	0.00	-16512.19
529+00	52900	50.00	0.91	0.00	359.08	0.00	2.41	0.00	1112.24	0.00	34.66	17879.12	0.00	0.00	-17844.47
529+43 BK	52942.99	42.99	0.00	0.00	2.12	0.00	0.72	0.00	287.56	0.00	35.38	18224.19	0.00	0.00	-18188.81
Column totals							35.38	0.00	15186.82	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 USH 45 NB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
276+00 AH	27600.00	0.00	0.00	0.00	111.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276+50	27650.00	50.00	0.00	0.00	159.05	0.00	0.00	0.00	250.06	0.00	0.00	300.07	0.00	0.00	-300.07
277+00	27700.00	50.00	0.03	0.00	160.99	0.00	0.03	0.00	296.33	0.00	0.03	655.67	0.00	0.00	-655.64
277+50	27750.00	50.00	2.74	0.00	174.38	0.00	2.56	0.00	310.53	0.00	2.59	1028.30	0.00	0.00	-1025.71
278+00	27800.00	50.00	18.43	0.00	131.54	0.00	19.60	0.00	283.26	0.00	22.19	1368.21	0.00	0.00	-1346.02
278+30	27830.00	30.00	29.98	0.00	85.21	0.00	26.89	0.00	120.42	0.00	49.09	1512.71	0.00	0.00	-1463.62
278+30	27830.00	0.00	54.93	0.00	52.41	0.00	0.00	0.00	0.00	0.00	0.00	1028.30	0.00	0.00	-1463.62
278+50	27850.00	50.00	70.00	0.00	53.60	0.00	115.68	0.00	98.16	0.00	115.68	1146.09	0.00	0.00	-1348.13
279+00	27900.00	50.00	111.96	0.00	84.01	0.00	168.48	0.00	127.42	0.00	284.16	1298.99	0.00	0.00	-1332.55
279+50	27950.00	50.00	9.89	0.00	263.60	0.00	112.82	0.00	321.86	0.00	396.98	1685.22	0.00	0.00	-1605.96
279+76	27976.00	26.00	0.00	0.00	1652.87	0.00	4.76	0.00	922.74	0.00	401.74	2792.52	0.00	0.00	-2708.49
279+82 BK	27982.19	6.19	0.00	0.00	0.00	0.00	0.00	0.00	189.47	0.00	401.74	3019.88	0.00	0.00	-2935.85

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 USH 45 NB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
280+58 AH	28057.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280+66	28066.26	8.55	0.00	0.00	1056.20	0.00	0.00	0.00	167.23	0.00	0.00	200.68	0.00	0.00	-200.68
281+00	28100.00	33.74	244.69	0.00	173.02	0.00	152.89	0.00	768.03	0.00	152.89	1122.32	0.00	0.00	-969.43
281+50	28150.00	50.00	349.63	0.00	143.49	0.00	550.30	0.00	293.06	0.00	703.18	1474.00	0.00	0.00	-770.82
282+00	28200.00	50.00	302.83	0.00	176.24	0.00	604.13	0.00	296.05	0.00	1307.31	1829.25	0.00	0.00	-521.94
282+50	28250.00	50.00	285.52	0.00	199.49	0.00	544.77	0.00	347.90	0.00	1852.08	2246.73	0.00	0.00	-394.65
283+00	28300.00	50.00	281.09	0.00	236.95	0.00	524.64	0.00	404.11	0.00	2376.72	2731.66	0.00	0.00	-354.95
283+50	28350.00	50.00	292.48	0.00	137.72	0.00	531.08	0.00	346.92	0.00	2907.80	3147.96	0.00	0.00	-240.16
284+00	28400.00	50.00	326.77	0.00	48.99	0.00	573.38	0.00	172.88	0.00	3481.18	3355.42	0.00	0.00	125.76
284+50	28450.00	50.00	347.79	0.00	26.86	0.00	624.59	0.00	70.23	0.00	4105.77	3439.70	0.00	0.00	666.08
285+00	28500.00	50.00	258.57	0.00	329.11	0.00	561.44	0.00	329.60	0.00	4667.22	3835.22	0.00	0.00	832.00
285+10	28509.93	9.93	189.51	0.00	348.82	0.00	82.40	0.00	124.66	0.00	4749.62	3984.82	0.00	0.00	764.80
285+22 BK	28522.36	12.43	0.00	0.00	0.00	0.00	43.62	0.00	80.29	0.00	4793.24	4081.17	0.00	0.00	712.07
286+37 AH	28636.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286+52	28651.74	14.94	162.85	0.00	19.15	0.00	45.06	0.00	5.30	0.00	45.06	6.36	0.00	0.00	38.70
287+00	28700.00	48.26	1456.58	0.00	0.00	0.00	1447.29	0.00	17.11	0.00	1492.35	26.90	0.00	0.00	1465.45
287+50	28750.00	50.00	1906.58	0.00	0.00	0.00	3114.04	0.00	0.00	0.00	4606.38	26.90	0.00	0.00	4579.49
288+00	28800.00	50.00	2366.08	0.00	0.00	0.00	3956.17	0.00	0.00	0.00	8562.55	26.90	0.00	0.00	8535.65
288+27 BK	28827.42	27.42	2450.75	0.00	0.00	0.00	2445.88	0.00	0.00	0.00	11008.43	26.90	0.00	0.00	10981.53
		Column totals					16252.50	0.00	6343.63	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 USH 45 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
331+63 AH	33163.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
332+00	33200.00	50.00	830.85	0.00	0.00	0.00	769.31	0.00	0.00	0.00	769.31	0.00	0.00	0.00	769.31
332+50	33250.00	50.00	636.10	0.00	0.00	0.00	1358.29	0.00	0.00	0.00	2127.59	0.00	0.00	0.00	2127.59
333+00	33300.00	50.00	811.59	0.00	0.00	0.00	1340.45	0.00	0.00	0.00	3468.05	0.00	0.00	0.00	3468.05
333+50	33350.00	50.00	1320.17	0.00	0.00	0.00	1973.85	0.00	0.00	0.00	5441.90	0.00	0.00	0.00	5441.90
333+57	33357.00	7.00	1437.08	0.00	0.00	0.00	357.42	0.00	0.00	0.00	5799.32	0.00	0.00	0.00	5799.32
333+57	33357.00	0.00	2248.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5799.32	0.00	0.00	0.00	5799.32
334+00	33400.00	43.00	3770.36	0.00	0.00	0.00	4793.03	0.00	0.00	0.00	10592.35	0.00	0.00	0.00	10592.35
334+50	33450.00	50.00	3698.52	0.00	0.00	0.00	6915.63	0.00	0.00	0.00	17507.98	0.00	0.00	0.00	17507.98
335+00	33500.00	50.00	4028.94	0.00	0.00	0.00	7155.06	0.00	0.00	0.00	24663.03	0.00	0.00	0.00	24663.03
335+50	33550.00	50.00	2099.60	0.00	0.00	0.00	5674.57	0.00	0.00	0.00	30337.61	0.00	0.00	0.00	30337.61
336+00	33600.00	50.00	2379.89	0.00	0.00	0.00	4147.68	0.00	0.00	0.00	34485.28	0.00	0.00	0.00	34485.28
336+50	33650.00	50.00	1543.16	0.00	0.00	0.00	3632.45	0.00	0.00	0.00	38117.74	0.00	0.00	0.00	38117.74
337+00	33700.00	50.00	1287.11	0.00	0.00	0.00	2620.62	0.00	0.00	0.00	40738.36	0.00	0.00	0.00	40738.36
337+50	33750.00	50.00	1573.12	0.00	0.00	0.00	2648.36	0.00	0.00	0.00	43386.72	0.00	0.00	0.00	43386.72
338+00 BK	33800.00	50.00	1877.97	0.00	0.00	0.00	3195.45	0.00	0.00	0.00	46582.17	0.00	0.00	0.00	46582.17

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
348+00 AH	34800.00	0.00	127.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
348+50	34850.00	50.00	87.22	0.00	0.06	0.00	199.15	0.00	0.06	0.00	199.15	0.07	0.00	0.00	199.08
349+00	34900.00	50.00	52.75	0.00	0.01	0.00	129.60	0.00	0.06	0.00	328.75	0.14	0.00	0.00	328.61
349+00	34900.00	0.00	93.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	328.75	0.14	0.00	0.00	328.61
349+50	34950.00	50.00	92.54	0.00	0.10	0.00	172.46	0.00	0.09	0.00	501.21	0.26	0.00	0.00	500.96
350+00	35000.00	50.00	88.76	0.00	0.00	0.00	167.87	0.00	0.09	0.00	669.08	0.37	0.00	0.00	668.72
350+00	35000.00	0.00	69.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	669.08	0.37	0.00	0.00	668.72
350+50	35050.00	50.00	66.97	0.00	0.00	0.00	126.23	0.00	0.00	0.00	795.31	0.37	0.00	0.00	794.95
350+67	35067.00	17.00	65.17	0.00	0.00	0.00	41.60	0.00	0.00	0.00	836.91	0.37	0.00	0.00	836.55
350+67	35067.00	0.00	117.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	836.91	0.37	0.00	0.00	836.55
351+00	35100.00	33.00	106.70	0.00	0.00	0.00	137.04	0.00	0.00	0.00	973.96	0.37	0.00	0.00	973.59
351+50	35150.00	50.00	110.28	0.00	0.08	0.00	200.91	0.00	0.07	0.00	1174.86	0.46	0.00	0.00	1174.41
352+00	35200.00	50.00	118.39	0.00	4.22	0.00	211.73	0.00	3.98	0.00	1386.60	5.23	0.00	0.00	1381.36
352+50	35250.00	50.00	121.48	0.00	11.56	0.00	222.10	0.00	14.61	0.00	1608.70	22.77	0.00	0.00	1585.93
352+80 BK	35280.41	30.41	128.28	0.00	0.01	0.00	140.65	0.00	6.52	0.00	1749.35	30.59	0.00	0.00	1718.76
						Column totals	48331.52	0.00	25.49	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 EB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.00 Note 1	1.2	1.30 Note 4	0.80 Note 5	Note 6
208+00 AH	20800	0.00	339.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208+50	20850	50.00	357.42	0.00	0.00	0.00	645.56	0.00	0.00	0.00	645.56	0.00	0.00	0.00	645.56
209+00	20900	50.00	410.58	0.00	0.00	0.00	711.11	0.00	0.00	0.00	1356.67	0.00	0.00	0.00	1356.67
209+50	20950	50.00	501.76	0.00	0.00	0.00	844.76	0.00	0.00	0.00	2201.43	0.00	0.00	0.00	2201.43
210+00	21000	50.00	357.17	0.00	0.00	0.00	795.31	0.00	0.00	0.00	2996.73	0.00	0.00	0.00	2996.73
210+50	21050	50.00	407.86	0.00	0.00	0.00	708.36	0.00	0.00	0.00	3705.09	0.00	0.00	0.00	3705.09
211+00	21100	50.00	464.89	0.00	0.00	0.00	808.10	0.00	0.00	0.00	4513.19	0.00	0.00	0.00	4513.19
211+50	21150	50.00	521.08	0.00	0.00	0.00	964.96	0.00	0.00	0.00	5478.16	0.00	0.00	0.00	5478.16
212+00	21200	50.00	581.22	0.00	0.00	0.00	1076.33	0.00	0.00	0.00	6554.49	0.00	0.00	0.00	6554.49
212+50	21250	50.00	626.90	0.00	0.00	0.00	1160.93	0.00	0.00	0.00	7715.42	0.00	0.00	0.00	7715.42
213+00	21300	50.00	666.39	0.00	0.00	0.00	1234.06	0.00	0.00	0.00	8949.47	0.00	0.00	0.00	8949.47
213+50	21350	50.00	697.38	0.00	0.00	0.00	1291.44	0.00	0.00	0.00	10240.92	0.00	0.00	0.00	10240.92
214+00	21400	50.00	714.59	0.00	0.00	0.00	1323.31	0.00	0.00	0.00	11564.23	0.00	0.00	0.00	11564.23
214+50	21450	50.00	711.20	0.00	0.00	0.00	1317.04	0.00	0.00	0.00	12881.27	0.00	0.00	0.00	12881.27
215+00	21500	50.00	687.57	0.00	0.00	0.00	1273.28	0.00	0.00	0.00	14154.55	0.00	0.00	0.00	14154.55
215+50	21550	50.00	654.69	0.00	0.00	0.00	1212.39	0.00	0.00	0.00	15366.94	0.00	0.00	0.00	15366.94
216+00	21600	50.00	606.73	0.00	0.00	0.00	1123.57	0.00	0.00	0.00	16490.51	0.00	0.00	0.00	16490.51
216+50	21650	50.00	554.20	0.00	0.00	0.00	1026.30	0.00	0.00	0.00	17516.81	0.00	0.00	0.00	17516.81
217+00	21700	50.00	504.48	0.00	0.00	0.00	934.22	0.00	0.00	0.00	18451.03	0.00	0.00	0.00	18451.03
217+50	21750	50.00	456.57	0.00	0.00	0.00	845.50	0.00	0.00	0.00	19296.53	0.00	0.00	0.00	19296.53
218+00	21800	50.00	415.16	0.00	0.00	0.00	807.16	0.00	0.00	0.00	20103.69	0.00	0.00	0.00	20103.69
218+50	21850	50.00	378.29	0.00	0.00	0.00	734.68	0.00	0.00	0.00	20838.36	0.00	0.00	0.00	20838.36
219+00	21900	50.00	344.47	0.00	0.00	0.00	669.22	0.00	0.00	0.00	21507.58	0.00	0.00	0.00	21507.58
219+50	21950	50.00	318.13	0.00	0.00	0.00	613.52	0.00	0.00	0.00	22121.10	0.00	0.00	0.00	22121.10
220+00	22000	50.00	285.80	0.00	0.00	0.00	559.19	0.00	0.00	0.00	22680.30	0.00	0.00	0.00	22680.30
220+50	22050	50.00	268.27	0.00	0.00	0.00	513.03	0.00	0.00	0.00	23193.32	0.00	0.00	0.00	23193.32
221+00	22100	50.00	249.73	0.00	0.00	0.00	479.63	0.00	0.00	0.00	23672.95	0.00	0.00	0.00	23672.95
221+50	22150	50.00	236.94	0.00	0.00	0.00	450.62	0.00	0.00	0.00	24123.57	0.00	0.00	0.00	24123.57
222+00	22200	50.00	226.20	0.00	0.00	0.00	428.83	0.00	0.00	0.00	24552.41	0.00	0.00	0.00	24552.41
222+50	22250	50.00	210.89	0.00	0.00	0.00	404.71	0.00	0.00	0.00	24957.12	0.00	0.00	0.00	24957.12
223+00	22300	50.00	187.80	0.00	0.00	0.00	369.16	0.00	0.00	0.00	25326.28	0.00	0.00	0.00	25326.28

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
223+50	22350	50.00	161.77	0.00	0.00	0.00	323.68	0.00	0.00	0.00	25649.95	0.00	0.00	0.00	25649.95
224+00	22400	50.00	123.93	0.00	0.00	0.00	264.54	0.00	0.00	0.00	25914.49	0.00	0.00	0.00	25914.49
224+50	22450	50.00	83.99	0.00	0.01	0.00	192.52	0.00	0.01	0.00	26107.01	0.01	0.00	0.00	26107.00
225+00	22500	50.00	42.18	0.00	0.02	0.00	116.82	0.00	0.03	0.00	26223.83	0.04	0.00	0.00	26223.79
225+50	22550	50.00	7.69	0.00	4.49	0.00	46.18	0.00	4.18	0.00	26270.01	5.06	0.00	0.00	26264.95
226+00	22600	50.00	1.77	0.00	40.87	0.00	8.76	0.00	42.00	0.00	26278.77	55.46	0.00	0.00	26223.31
226+50	22650	50.00	0.00	0.00	67.99	0.00	1.64	0.00	100.80	0.00	26280.41	176.41	0.00	0.00	26104.00
227+00	22700	50.00	0.00	0.00	113.55	0.00	0.00	0.00	168.09	0.00	26280.41	378.12	0.00	0.00	25902.29
227+50	22750	50.00	0.00	0.00	162.18	0.00	0.00	0.00	255.31	0.00	26280.41	684.49	0.00	0.00	25595.92
228+00	22800	50.00	0.00	0.00	204.84	0.00	0.00	0.00	339.83	0.00	26280.41	1092.29	0.00	0.00	25188.12
228+50	22850	50.00	0.00	0.00	238.33	0.00	0.00	0.00	410.34	0.00	26280.41	1584.70	0.00	0.00	24695.71
229+00	22900	50.00	0.00	0.00	266.84	0.00	0.00	0.00	467.75	0.00	26280.41	2146.00	0.00	0.00	24134.41
229+50	22950	50.00	0.00	0.00	287.21	0.00	0.00	0.00	513.01	0.00	26280.41	2761.61	0.00	0.00	23518.80
230+00	23000	50.00	0.00	0.00	301.92	0.00	0.00	0.00	545.49	0.00	26280.41	3416.20	0.00	0.00	22864.21
230+00	23000	0.00	0.00	0.00	301.92	0.00	0.00	0.00	0.00	0.00	26280.41	3416.20	0.00	0.00	22864.21
230+50	23050	50.00	0.00	0.00	306.41	0.00	0.00	0.00	563.27	0.00	26280.41	4092.12	0.00	0.00	22188.29
230+84	23084	34.00	0.00	0.00	305.98	0.00	0.00	0.00	385.58	0.00	26280.41	4554.82	0.00	0.00	21725.59
230+84	23084	0.00	0.00	0.00	407.99	0.00	0.00	0.00	0.00	0.00	26280.41	4554.82	0.00	0.00	21725.59
231+00	23100	50.00	0.00	0.00	400.24	0.00	0.00	0.00	748.36	0.00	26280.41	5452.85	0.00	0.00	20827.56
231+50	23150	50.00	0.00	0.00	377.10	0.00	0.00	0.00	719.76	0.00	26280.41	6316.56	0.00	0.00	19963.85
232+00	23200	50.00	0.00	0.00	266.89	0.00	0.00	0.00	596.29	0.00	26280.41	7032.11	0.00	0.00	19248.30
232+00	23200	0.00	0.00	0.00	347.09	0.00	0.00	0.00	0.00	0.00	26280.41	7032.11	0.00	0.00	19248.30
232+50	23250	50.00	0.00	0.00	249.39	0.00	0.00	0.00	552.30	0.00	26280.41	7694.86	0.00	0.00	18585.55
233+00	23300	50.00	0.00	0.00	164.40	0.00	0.00	0.00	383.14	0.00	26280.41	8154.63	0.00	0.00	18125.78
233+00	23300	0.00	0.00	0.00	226.14	0.00	0.00	0.00	0.00	0.00	26280.41	8154.63	0.00	0.00	18125.78
233+50	23350	50.00	0.00	0.00	150.91	0.00	0.00	0.00	349.12	0.00	26280.41	8573.57	0.00	0.00	17706.83
234+00	23400	50.00	0.00	0.00	105.53	0.00	0.00	0.00	237.44	0.00	26280.41	8858.51	0.00	0.00	17421.90

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
234+00	23400	0.00	0.00	0.00	156.15	0.00	0.00	0.00	0.00	0.00	26280.41	8858.51	0.00	0.00	17421.90
234+50	23450	50.00	0.00	0.00	100.48	0.00	0.00	0.00	237.62	0.00	26280.41	9143.65	0.00	0.00	17136.76
235+00	23500	50.00	0.00	0.00	95.51	0.00	0.00	0.00	181.47	0.00	26280.41	9361.42	0.00	0.00	16918.99
235+50	23550	50.00	0.00	0.00	93.97	0.00	0.00	0.00	175.44	0.00	26280.41	9571.95	0.00	0.00	16708.46
236+00 BK	23600	50.00	0.00	0.00	81.45	0.00	0.00	0.00	162.43	0.00	26280.41	9766.86	0.00	0.00	16513.55
239+10 AH	23909.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
239+50	23950	40.37	0.00	0.00	59.17	0.00	0.00	0.00	44.24	0.00	0.00	53.08	0.00	0.00	-53.08
240+00	24000	50.00	0.00	0.00	60.79	0.00	0.00	0.00	111.07	0.00	0.00	186.37	0.00	0.00	-186.37
240+50	24050	50.00	0.00	0.00	66.69	0.00	0.00	0.00	118.04	0.00	0.00	328.02	0.00	0.00	-328.02
241+00	24100	50.00	0.00	0.00	74.98	0.00	0.00	0.00	131.18	0.00	0.00	485.43	0.00	0.00	-485.43
241+50	24150	50.00	0.00	0.00	79.80	0.00	0.00	0.00	143.31	0.00	0.00	657.40	0.00	0.00	-657.40
242+00	24200	50.00	0.00	0.00	83.51	0.00	0.00	0.00	151.21	0.00	0.00	838.86	0.00	0.00	-838.86
242+50	24250	50.00	0.00	0.00	86.23	0.00	0.00	0.00	157.17	0.00	0.00	1027.46	0.00	0.00	-1027.46
243+00 BK	24300	50.00	0.00	0.00	86.87	0.00	0.00	0.00	160.28	0.00	0.00	1219.79	0.00	0.00	-1219.79
Column totals							26280.41	0.00	9155.55	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.00 Note 1	1.2	1.30 Note 4	0.80 Note 5	Note 6
208+00 AH	20800	0.00	59.92	0.00	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208+50	20850	50.00	30.16	0.00	37.45	0.00	83.41	0.00	39.73	0.00	83.41	47.68	0.00	0.00	35.73
209+00	20900	50.00	40.57	0.00	22.70	0.00	65.49	0.00	55.69	0.00	148.90	114.51	0.00	0.00	34.39
209+50	20950	50.00	70.52	0.00	2.39	0.00	102.86	0.00	23.23	0.00	251.76	142.39	0.00	0.00	109.37
209+83	20983	33.00	101.73	0.00	0.00	0.00	105.26	0.00	1.46	0.00	357.02	144.14	0.00	0.00	137.90
209+83	20983	0.00	199.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	357.02	144.14	0.00	0.00	137.90
210+00	21000	17.00	207.93	0.00	0.00	0.00	128.38	0.00	0.00	0.00	485.40	144.14	0.00	0.00	266.27
210+50	21050	50.00	255.07	0.00	0.00	0.00	428.70	0.00	0.00	0.00	914.10	144.14	0.00	0.00	694.98
211+00	21100	50.00	319.03	0.00	0.00	0.00	531.57	0.00	0.00	0.00	1445.68	144.14	0.00	0.00	1226.55
211+50	21150	50.00	369.40	0.00	0.00	0.00	637.44	0.00	0.00	0.00	2083.11	144.14	0.00	0.00	1863.99
212+00	21200	50.00	422.31	0.00	0.00	0.00	733.06	0.00	0.00	0.00	2816.18	144.14	0.00	0.00	2597.05
212+50	21250	50.00	426.48	0.00	0.00	0.00	785.92	0.00	0.00	0.00	3602.09	144.14	0.00	0.00	3382.97
213+00	21300	50.00	448.95	0.00	0.00	0.00	810.58	0.00	0.00	0.00	4412.68	144.14	0.00	0.00	4193.55
213+50	21350	50.00	465.06	0.00	0.00	0.00	846.31	0.00	0.00	0.00	5258.98	144.14	0.00	0.00	5039.86
214+00	21400	50.00	468.45	0.00	0.00	0.00	864.36	0.00	0.00	0.00	6123.34	144.14	0.00	0.00	5904.22
214+50	21450	50.00	462.04	0.00	0.00	0.00	861.56	0.00	0.00	0.00	6984.91	144.14	0.00	0.00	6765.78
215+00	21500	50.00	442.12	0.00	0.00	0.00	837.19	0.00	0.00	0.00	6960.53	144.14	0.00	0.00	6741.40
215+50	21550	50.00	418.96	0.00	0.00	0.00	797.30	0.00	0.00	0.00	7757.82	144.14	0.00	0.00	7538.70
216+00	21600	50.00	385.17	0.00	0.00	0.00	744.56	0.00	0.00	0.00	8502.39	144.14	0.00	0.00	8283.26
216+50	21650	50.00	343.03	0.00	0.00	0.00	674.26	0.00	0.00	0.00	9176.65	144.14	0.00	0.00	8957.52
217+00	21700	50.00	311.58	0.00	0.00	0.00	606.12	0.00	0.00	0.00	9782.77	144.14	0.00	0.00	9563.64
217+50	21750	50.00	284.91	0.00	0.00	0.00	552.31	0.00	0.00	0.00	10335.07	144.14	0.00	0.00	10115.95
218+00	21800	50.00	256.50	0.00	0.00	0.00	501.31	0.00	0.00	0.00	10836.38	144.14	0.00	0.00	10617.25
218+00	21800	0.00	192.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10836.38	144.14	0.00	0.00	10617.25
218+50	21850	50.00	173.79	0.00	0.00	0.00	339.56	0.00	0.00	0.00	11175.94	144.14	0.00	0.00	10956.82
219+00	21900	50.00	154.37	0.00	0.00	0.00	303.85	0.00	0.00	0.00	11479.80	144.14	0.00	0.00	11260.67
219+50	21950	50.00	152.57	0.00	0.00	0.00	284.20	0.00	0.00	0.00	11764.00	144.14	0.00	0.00	11544.88
220+00	22000	50.00	131.77	0.00	0.00	0.00	263.28	0.00	0.00	0.00	12027.28	144.14	0.00	0.00	11808.15
220+50	22050	50.00	119.97	0.00	0.00	0.00	233.09	0.00	0.00	0.00	12260.37	144.14	0.00	0.00	12041.25
221+00	22100	50.00	113.17	0.00	0.00	0.00	215.87	0.00	0.00	0.00	12476.24	144.14	0.00	0.00	12257.12
221+50	22150	50.00	102.63	0.00	0.00	0.00	199.81	0.00	0.00	0.00	12676.06	144.14	0.00	0.00	12456.93
222+00	22200	50.00	103.86	0.00	0.00	0.00	191.19	0.00	0.00	0.00	12867.25	144.14	0.00	0.00	12648.13
222+50	22250	50.00	93.04	0.00	0.00	0.00	182.31	0.00	0.00	0.00	13049.57	144.14	0.00	0.00	12830.44
223+00	22300	50.00	79.22	0.00	0.00	0.00	159.50	0.00	0.00	0.00	13209.07	144.14	0.00	0.00	12989.94
223+50	22350	50.00	63.05	0.00	0.00	0.00	131.73	0.00	0.00	0.00	13340.80	144.14	0.00	0.00	13121.67

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION		Real Station	Distance	AREA (SF) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cumulative Vol (CY) Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	Mass Ordinate
												1.00	1.2	1.30	0.80	
								Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
223+50		22350	0.00	98.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13340.80	144.14	0.00	0.00	13121.67
224+00		22400	50.00	49.66	0.00	0.00	0.00	137.61	0.00	0.00	0.00	13478.41	144.14	0.00	0.00	13259.28
224+50		22450	50.00	41.82	0.00	0.01	0.00	84.70	0.00	0.01	0.00	13563.11	144.15	0.00	0.00	13343.98
225+00		22500	50.00	37.10	0.00	0.01	0.00	73.07	0.00	0.02	0.00	13636.19	144.17	0.00	0.00	13417.03
225+50		22550	50.00	23.62	0.00	0.01	0.00	56.22	0.00	0.02	0.00	13692.41	144.20	0.00	0.00	13473.23
226+00		22600	50.00	12.88	0.00	3.64	0.00	33.80	0.00	3.38	0.00	13726.20	148.25	0.00	0.00	13502.97
226+00		22600	0.00	2.10	0.00	16.17	0.00	0.00	0.00	0.00	0.00	13726.20	148.25	0.00	0.00	13502.97
226+50		22650	50.00	2.16	0.00	34.60	0.00	3.94	0.00	47.01	0.00	13730.15	204.66	0.00	0.00	13450.50
227+00		22700	50.00	0.00	0.00	48.27	0.00	2.00	0.00	76.73	0.00	13732.15	296.74	0.00	0.00	13360.42
227+50		22750	50.00	0.00	0.00	38.86	0.00	0.00	0.00	80.68	0.00	13732.15	393.55	0.00	0.00	13263.61
228+00		22800	50.00	0.00	0.00	60.69	0.00	0.00	0.00	92.18	0.00	13732.15	504.16	0.00	0.00	13153.00
228+50		22850	50.00	0.00	0.00	80.15	0.00	0.00	0.00	130.41	0.00	13732.15	660.65	0.00	0.00	12996.51
229+00		22900	50.00	0.00	0.00	98.70	0.00	0.00	0.00	165.60	0.00	13732.15	859.37	0.00	0.00	12797.79
229+50		22950	50.00	0.00	0.00	114.16	0.00	0.00	0.00	197.09	0.00	13732.15	1095.89	0.00	0.00	12561.28
230+00		23000	50.00	0.00	0.00	128.37	0.00	0.00	0.00	224.56	0.00	13732.15	1365.36	0.00	0.00	12291.80
230+03	BK	23002.67	2.67	0.00	0.00	129.29	0.00	0.00	0.00	12.74	0.00	13732.15	1380.65	0.00	0.00	12276.51
234+85	AH	23485	0.00	0.00	0.00	178.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235+00		23500	0.00	0.00	0.00	178.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235+50		23550	50.00	0.00	0.00	195.84	0.00	0.00	0.00	346.69	0.00	0.00	416.03	0.00	0.00	-416.03
236+00		23600	50.00	0.00	0.00	191.92	0.00	0.00	0.00	359.04	0.00	0.00	846.88	0.00	0.00	-846.88
236+50		23650	50.00	0.00	0.00	181.77	0.00	0.00	0.00	346.01	0.00	0.00	1262.09	0.00	0.00	-1262.09
236+66		23666.06	16.06	0.00	0.00	192.00	0.00	0.00	0.00	111.16	0.00	0.00	1395.48	0.00	0.00	-1395.48
236+84	BK	23684.02	17.96	0.00	0.00	0.00	0.00	0.00	0.00	63.86	0.00	0.00	1472.11	0.00	0.00	-1472.11

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
238+32 AH	23831.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238+38	23837.76	5.77	0.00	0.00	1015.47	0.00	0.00	0.00	108.50	0.00	0.00	130.21	0.00	0.00	-130.21
238+50	23850	12.24	0.00	0.00	409.74	0.00	0.00	0.00	323.05	0.00	0.00	517.86	0.00	0.00	-517.86
239+00	23900	50.00	0.00	0.00	367.06	0.00	0.00	0.00	719.26	0.00	0.00	1380.97	0.00	0.00	-1380.97
239+50	23950	50.00	0.00	0.00	311.94	0.00	0.00	0.00	628.70	0.00	0.00	2135.42	0.00	0.00	-2135.42
240+00	24000	50.00	0.00	0.00	303.47	0.00	0.00	0.00	569.82	0.00	0.00	2819.21	0.00	0.00	-2819.21
240+50	24050	50.00	0.00	0.00	290.38	0.00	0.00	0.00	549.86	0.00	0.00	3479.04	0.00	0.00	-3479.04
241+00	24100	50.00	0.00	0.00	326.87	0.00	0.00	0.00	571.53	0.00	0.00	4164.87	0.00	0.00	-4164.87
241+50	24150	50.00	0.00	0.00	350.47	0.00	0.00	0.00	627.17	0.00	0.00	4917.47	0.00	0.00	-4917.47
242+00	24200	50.00	0.00	0.00	476.21	0.00	0.00	0.00	765.44	0.00	0.00	5836.01	0.00	0.00	-5836.01
242+00	24200	0.00	0.00	0.00	354.13	0.00	0.00	0.00	0.00	0.00	0.00	5836.01	0.00	0.00	-5836.01
242+50	24250	50.00	0.00	0.00	441.68	0.00	0.00	0.00	736.86	0.00	0.00	6720.24	0.00	0.00	-6720.24
243+00	24300	50.00	0.00	0.00	404.71	0.00	0.00	0.00	783.69	0.00	0.00	7660.67	0.00	0.00	-7660.67
243+00	24300	0.00	0.00	0.00	325.58	0.00	0.00	0.00	0.00	0.00	0.00	7660.67	0.00	0.00	-7660.67
243+50	24350	50.00	0.00	0.00	363.44	0.00	0.00	0.00	637.98	0.00	0.00	8426.25	0.00	0.00	-8426.25
244+00	24400	50.00	0.00	0.00	324.16	0.00	0.00	0.00	636.67	0.00	0.00	9190.25	0.00	0.00	-9190.25
244+50	24450	50.00	0.00	0.00	296.36	0.00	0.00	0.00	574.56	0.00	0.00	9879.72	0.00	0.00	-9879.72
245+00	24500	50.00	0.00	0.00	251.71	0.00	0.00	0.00	507.47	0.00	0.00	10488.69	0.00	0.00	-10488.69
245+50	24550	50.00	0.00	0.00	202.80	0.00	0.00	0.00	420.84	0.00	0.00	10993.70	0.00	0.00	-10993.70
246+00	24600	50.00	0.00	0.00	153.35	0.00	0.00	0.00	329.77	0.00	0.00	11389.42	0.00	0.00	-11389.42
246+50	24650	50.00	0.00	0.00	108.80	0.00	0.00	0.00	242.73	0.00	0.00	11680.70	0.00	0.00	-11680.70
247+00	24700	50.00	0.00	0.00	70.35	0.00	0.00	0.00	165.88	0.00	0.00	11879.75	0.00	0.00	-11879.75
247+50	24750	50.00	0.08	0.00	33.22	0.00	0.07	0.00	95.90	0.00	0.07	11994.83	0.00	0.00	-11994.76
248+00	24800	50.00	5.26	0.00	7.71	0.00	4.94	0.00	37.90	0.00	5.02	12040.31	0.00	0.00	-12035.29
248+50	24850	50.00	32.52	0.00	0.00	0.00	34.98	0.00	7.14	0.00	40.00	12048.87	0.00	0.00	-12008.87
249+00	24900	50.00	75.42	0.00	0.00	0.00	99.94	0.00	0.00	0.00	139.94	12048.87	0.00	0.00	-11908.93
249+50	24950	50.00	118.31	0.00	0.00	0.00	179.38	0.00	0.00	0.00	319.32	12048.87	0.00	0.00	-11729.55
250+00	25000	50.00	153.93	0.00	0.00	0.00	252.07	0.00	0.00	0.00	571.40	12048.87	0.00	0.00	-11477.48
250+50	25050	50.00	149.76	0.00	0.00	0.00	281.19	0.00	0.00	0.00	852.59	12048.87	0.00	0.00	-11196.28

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
250+50	25050	0.00	103.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	852.59	12048.87	0.00	0.00	-11196.28
251+00	25100	50.00	215.43	0.00	0.00	0.00	295.63	0.00	0.00	0.00	1148.22	12048.87	0.00	0.00	-10900.65
251+50	25150	50.00	240.98	0.00	0.00	0.00	422.60	0.00	0.00	0.00	1570.82	12048.87	0.00	0.00	-10478.05
252+00	25200	50.00	260.57	0.00	0.00	0.00	464.40	0.00	0.00	0.00	2035.22	12048.87	0.00	0.00	-10013.65
252+50	25250	50.00	272.74	0.00	0.00	0.00	493.81	0.00	0.00	0.00	2529.03	12048.87	0.00	0.00	-9519.85
253+00	25300	50.00	283.60	0.00	0.00	0.00	515.13	0.00	0.00	0.00	3044.16	12048.87	0.00	0.00	-9004.72
253+50	25350	50.00	288.95	0.00	0.00	0.00	530.14	0.00	0.00	0.00	3574.30	12048.87	0.00	0.00	-8474.58
254+00	25400	50.00	163.57	0.00	0.00	0.00	419.00	0.00	0.00	0.00	3993.30	12048.87	0.00	0.00	-8055.58
254+00	25400	0.00	248.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3993.30	12048.87	0.00	0.00	-8055.58
254+50	25450	50.00	246.30	0.00	0.00	0.00	458.60	0.00	0.00	0.00	4451.90	12048.87	0.00	0.00	-7596.98
255+00	25500	50.00	242.07	0.00	0.00	0.00	452.19	0.00	0.00	0.00	4904.09	12048.87	0.00	0.00	-7144.78
255+50	25550	50.00	237.66	0.00	0.00	0.00	444.19	0.00	0.00	0.00	5348.29	12048.87	0.00	0.00	-6700.59
256+00	25600	50.00	236.11	0.00	0.00	0.00	438.68	0.00	0.00	0.00	5786.96	12048.87	0.00	0.00	-6261.91
256+50	25650	50.00	236.20	0.00	0.00	0.00	437.32	0.00	0.00	0.00	6224.29	12048.87	0.00	0.00	-5824.59
257+00	25700	50.00	234.51	0.00	0.00	0.00	435.84	0.00	0.00	0.00	6660.13	12048.87	0.00	0.00	-5388.74
257+50	25750	50.00	232.87	0.00	0.00	0.00	432.76	0.00	0.00	0.00	7092.89	12048.87	0.00	0.00	-4955.99
257+50	25750	0.00	470.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7092.89	12048.87	0.00	0.00	-4955.99
258+00	25800	50.00	305.64	0.00	0.00	0.00	718.47	0.00	0.00	0.00	7811.36	12048.87	0.00	0.00	-4237.51
258+00	25800	0.00	489.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7811.36	12048.87	0.00	0.00	-4237.51
258+50	25850	50.00	333.35	0.00	0.00	0.00	762.09	0.00	0.00	0.00	8573.45	12048.87	0.00	0.00	-3475.42
259+00	25900	50.00	312.43	0.00	0.00	0.00	597.94	0.00	0.00	0.00	9171.40	12048.87	0.00	0.00	-2877.48
259+50	25950	50.00	292.25	0.00	0.00	0.00	559.89	0.00	0.00	0.00	9731.29	12048.87	0.00	0.00	-2317.59
260+00	26000	50.00	274.34	0.00	0.00	0.00	524.62	0.00	0.00	0.00	10255.91	12048.87	0.00	0.00	-1792.97
260+50	26050	50.00	258.26	0.00	0.00	0.00	493.15	0.00	0.00	0.00	10749.06	12048.87	0.00	0.00	-1299.82
261+00	26100	50.00	246.52	0.00	0.00	0.00	467.39	0.00	0.00	0.00	11216.44	12048.87	0.00	0.00	-832.43
261+50	26150	50.00	234.26	0.00	0.00	0.00	445.17	0.00	0.00	0.00	11661.61	12048.87	0.00	0.00	-387.26

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.00 Note 1	1.2	1.30 Note 4	0.80 Note 5	Note 6
262+00	26200	50.00	228.30	0.00	0.00	0.00	428.30	0.00	0.00	0.00	12089.91	12048.87	0.00	0.00	41.03
262+50	26250	50.00	224.31	0.00	0.00	0.00	419.08	0.00	0.00	0.00	12508.99	12048.87	0.00	0.00	460.12
263+00	26300	50.00	222.11	0.00	0.00	0.00	413.35	0.00	0.00	0.00	12922.34	12048.87	0.00	0.00	873.47
263+50	26350	50.00	234.41	0.00	0.00	0.00	422.70	0.00	0.00	0.00	13345.05	12048.87	0.00	0.00	1296.17
264+00	26400	50.00	256.23	0.00	0.00	0.00	454.30	0.00	0.00	0.00	13799.34	12048.87	0.00	0.00	1750.47
264+50	26450	50.00	291.42	0.00	0.00	0.00	507.08	0.00	0.00	0.00	14306.43	12048.87	0.00	0.00	2257.55
265+00	26500	50.00	311.45	0.00	0.00	0.00	558.21	0.00	0.00	0.00	14864.64	12048.87	0.00	0.00	2815.76
265+50	26550	50.00	335.25	0.00	0.00	0.00	598.80	0.00	0.00	0.00	15463.44	12048.87	0.00	0.00	3414.56
266+00	26600	50.00	349.21	0.00	0.00	0.00	633.76	0.00	0.00	0.00	16097.19	12048.87	0.00	0.00	4048.32
266+50	26650	50.00	358.44	0.00	0.00	0.00	655.23	0.00	0.00	0.00	16752.43	12048.87	0.00	0.00	4703.55
267+00	26700	50.00	365.02	0.00	0.00	0.00	669.87	0.00	0.00	0.00	17422.30	12048.87	0.00	0.00	5373.42
267+50	26750	50.00	371.57	0.00	0.00	0.00	682.03	0.00	0.00	0.00	18104.32	12048.87	0.00	0.00	6055.45
268+00	26800	50.00	376.98	0.00	0.00	0.00	693.10	0.00	0.00	0.00	18797.43	12048.87	0.00	0.00	6748.55
268+50	26850	50.00	378.23	0.00	0.00	0.00	699.27	0.00	0.00	0.00	19496.69	12048.87	0.00	0.00	7447.82
269+00	26900	50.00	376.76	0.00	0.00	0.00	699.06	0.00	0.00	0.00	20195.76	12048.87	0.00	0.00	8146.89
269+00	26900	0.00	307.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20195.76	12048.87	0.00	0.00	8146.89
269+50	26950	50.00	294.24	0.00	0.00	0.00	557.20	0.00	0.00	0.00	20752.96	12048.87	0.00	0.00	8704.09
270+00	27000	50.00	274.57	0.00	0.00	0.00	526.68	0.00	0.00	0.00	21279.64	12048.87	0.00	0.00	9230.76
270+50	27050	50.00	250.00	0.00	0.00	0.00	485.71	0.00	0.00	0.00	21765.35	12048.87	0.00	0.00	9716.48
271+00	27100	50.00	224.01	0.00	0.00	0.00	438.90	0.00	0.00	0.00	22204.25	12048.87	0.00	0.00	10155.38
271+50	27150	50.00	198.40	0.00	0.00	0.00	391.12	0.00	0.00	0.00	22595.37	12048.87	0.00	0.00	10546.50
272+00	27200	50.00	173.68	0.00	0.00	0.00	344.52	0.00	0.00	0.00	22939.89	12048.87	0.00	0.00	10891.01
272+50	27250	50.00	147.41	0.00	0.00	0.00	297.31	0.00	0.00	0.00	23237.19	12048.87	0.00	0.00	11188.32
273+00	27300	50.00	121.68	0.00	0.00	0.00	249.16	0.00	0.00	0.00	23486.35	12048.87	0.00	0.00	11437.48
273+50	27350	50.00	103.34	0.00	0.00	0.00	208.35	0.00	0.00	0.00	23694.70	12048.87	0.00	0.00	11645.83
274+00	27400	50.00	93.71	0.00	0.00	0.00	182.45	0.00	0.00	0.00	23877.16	12048.87	0.00	0.00	11828.28
274+50	27450	50.00	95.01	0.00	0.00	0.00	174.74	0.00	0.00	0.00	24051.90	12048.87	0.00	0.00	12003.02
275+00	27500	50.00	102.49	0.00	0.00	0.00	182.87	0.00	0.00	0.00	24234.77	12048.87	0.00	0.00	12185.89
275+50	27550	50.00	115.44	0.00	0.00	0.00	201.79	0.00	0.00	0.00	24436.56	12048.87	0.00	0.00	12387.68

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 IH 94 WB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
											1.00	1.2	1.30	0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
276+00	27600	50.00	129.16	0.00	0.00	0.00	226.48	0.00	0.00	0.00	24663.04	12048.87	0.00	0.00	12614.16
276+50	27650	50.00	144.45	0.00	1.80	0.00	253.34	0.00	1.67	0.00	24916.38	12050.87	0.00	0.00	12865.51
277+00	27700	50.00	157.32	0.00	1.55	0.00	279.42	0.00	3.10	0.00	25195.80	12054.60	0.00	0.00	13141.20
277+50	27750	50.00	167.54	0.00	1.37	0.00	300.80	0.00	2.70	0.00	25496.59	12057.84	0.00	0.00	13438.75
278+00	27800	50.00	173.76	0.00	1.21	0.00	316.02	0.00	2.39	0.00	25812.61	12060.71	0.00	0.00	13751.90
278+50	27850	50.00	175.60	0.00	1.01	0.00	323.48	0.00	2.06	0.00	26136.09	12063.17	0.00	0.00	14072.92
279+00	27900	50.00	127.19	0.00	1.18	0.00	280.36	0.00	2.03	0.00	26416.45	12065.61	0.00	0.00	14350.85
279+40	27940	40.00	198.44	0.00	0.00	0.00	241.21	0.00	0.87	0.00	26657.66	12066.66	0.00	0.00	14591.00
279+40	27940	0.00	127.19	0.00	1.18	0.00	0.00	0.00	0.00	0.00	26657.66	12066.66	0.00	0.00	14591.00
279+50	27950	50.00	119.70	0.00	0.35	0.00	228.60	0.00	1.42	0.00	26886.26	12068.36	0.00	0.00	14817.91
280+00	28000	50.00	112.11	0.00	0.30	0.00	214.64	0.00	0.60	0.00	27100.90	12069.08	0.00	0.00	15031.82
280+50	28050	50.00	102.39	0.00	0.32	0.00	198.61	0.00	0.57	0.00	27299.51	12069.77	0.00	0.00	15229.75
281+00	28100	50.00	94.92	0.00	0.36	0.00	182.69	0.00	0.63	0.00	27482.21	12070.52	0.00	0.00	15411.68
281+50	28150	50.00	87.66	0.00	0.26	0.00	169.06	0.00	0.57	0.00	27651.26	12071.21	0.00	0.00	15580.05
282+00	28200	50.00	88.66	0.00	0.07	0.00	163.26	0.00	0.31	0.00	27814.52	12071.58	0.00	0.00	15742.94
282+50	28250	50.00	96.36	0.00	0.04	0.00	171.31	0.00	0.10	0.00	27985.84	12071.70	0.00	0.00	15914.14
283+00	28300	50.00	105.72	0.00	0.10	0.00	179.47	0.00	0.13	0.00	28165.31	12071.86	0.00	0.00	16093.45
283+50	28350	50.00	117.47	0.00	0.06	0.00	197.25	0.00	0.15	0.00	28362.56	12072.03	0.00	0.00	16290.53
284+00	28400	50.00	122.21	0.00	0.00	0.00	221.93	0.00	0.06	0.00	28584.49	12072.10	0.00	0.00	16512.38
284+50	28450	50.00	123.56	0.00	0.00	0.00	227.56	0.00	0.00	0.00	28812.05	12072.10	0.00	0.00	16739.95
284+92 BK	28491.85	41.85	128.12	0.00	0.00	0.00	195.05	0.00	0.00	0.00	29007.10	12072.10	0.00	0.00	16935.00
						Column totals	43600.82	0.00	12437.39	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 RAMP SW

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
564+81 AH	56481.3	0.00	238.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
565+00	56500.00	18.70	207.12	0.00	12.01	0.00	154.22	0.00	4.16	0.00	154.22	4.99	0.00	0.00	149.23
565+50	56550.00	50.00	127.91	0.00	60.01	0.00	310.21	0.00	66.69	0.00	464.43	85.01	0.00	0.00	379.42
566+00	56600.00	50.00	40.44	0.00	72.12	0.00	155.88	0.00	122.34	0.00	620.31	231.82	0.00	0.00	388.48
566+50	56650.00	50.00	28.60	0.00	206.72	0.00	63.93	0.00	258.19	0.00	684.23	541.65	0.00	0.00	142.59
567+00	56700.00	50.00	25.34	0.00	330.94	0.00	49.94	0.00	497.83	0.00	734.18	1139.05	0.00	0.00	-404.87
567+50	56750.00	50.00	22.47	0.00	355.69	0.00	44.27	0.00	635.77	0.00	778.45	1901.97	0.00	0.00	-1123.52
568+00	56800.00	50.00	19.14	0.00	437.73	0.00	38.53	0.00	734.65	0.00	816.98	2783.55	0.00	0.00	-1966.57
568+50	56850.00	50.00	15.49	0.00	529.97	0.00	32.06	0.00	896.02	0.00	849.04	3858.77	0.00	0.00	-3009.73
569+00	56900.00	50.00	11.32	0.00	612.40	0.00	24.82	0.00	1057.75	0.00	873.86	5128.07	0.00	0.00	-4254.20
569+50	56950.00	50.00	11.69	0.00	672.32	0.00	21.31	0.00	1189.56	0.00	895.17	6555.54	0.00	0.00	-5660.37
570+00	57000.00	50.00	13.13	0.00	691.84	0.00	22.98	0.00	1263.11	0.00	918.15	8071.27	0.00	0.00	-7153.12
570+50	57050.00	50.00	10.82	0.00	554.03	0.00	22.18	0.00	1153.58	0.00	940.33	9455.57	0.00	0.00	-8515.24
571+00	57100.00	50.00	5.81	0.00	562.84	0.00	15.40	0.00	1034.14	0.00	955.73	10696.54	0.00	0.00	-9740.81
571+15 BK	57114.50	14.50	4.67	0.00	528.57	0.00	2.81	0.00	293.06	0.00	958.54	11048.21	0.00	0.00	-10089.67
596+78 AH	59678.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
596+91	59691.28	13.28	0.00	0.00	1689.74	0.00	0.00	0.00	415.55	0.00	0.00	498.66	0.00	0.00	-498.66
597+00	59700.00	8.72	0.00	0.00	1533.06	0.00	0.00	0.00	520.42	0.00	0.00	1123.17	0.00	0.00	-1123.17
597+50	59750.00	50.00	0.00	0.00	1147.41	0.00	0.00	0.00	2481.92	0.00	0.00	4101.47	0.00	0.00	-4101.47
598+00	59800.00	50.00	0.00	0.00	908.70	0.00	0.00	0.00	1903.81	0.00	0.00	6386.03	0.00	0.00	-6386.03
598+46	59845.80	45.80	0.00	0.00	698.16	0.00	0.00	0.00	1362.86	0.00	0.00	8021.46	0.00	0.00	-8021.46
598+46	59845.81	0.00	0.00	0.00	746.44	0.00	0.00	0.00	0.00	0.00	0.00	8021.46	0.00	0.00	-8021.46
598+50	59850.00	4.19	0.00	0.00	721.57	0.00	0.00	0.00	113.91	0.00	0.00	8158.15	0.00	0.00	-8158.15
598+95 BK	59895.01	45.01	0.00	0.00	466.36	0.00	0.00	0.00	990.16	0.00	0.00	9346.34	0.00	0.00	-9346.34
						Column totals	958.54	0.00	16995.46	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 RAMP NE

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.00	1.2	1.30	0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
561+55 AH	56155	0.00	223.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
562+00	56200	45.00	264.08	0.00	0.00	0.00	406.57	0.00	0.00	0.00	406.57	0.00	0.00	0.00	406.57
562+50	56250	50.00	297.38	0.00	0.00	0.00	519.87	0.00	0.00	0.00	926.44	0.00	0.00	0.00	926.44
563+00	56300	50.00	329.96	0.00	0.00	0.00	580.87	0.00	0.00	0.00	1507.31	0.00	0.00	0.00	1507.31
563+50	56350	50.00	357.76	0.00	0.00	0.00	636.78	0.00	0.00	0.00	2144.09	0.00	0.00	0.00	2144.09
564+00	56400	50.00	382.24	0.00	0.00	0.00	685.19	0.00	0.00	0.00	2829.27	0.00	0.00	0.00	2829.27
564+50	56450	50.00	401.98	0.00	0.00	0.00	726.13	0.00	0.00	0.00	3555.40	0.00	0.00	0.00	3555.40
565+00	56500	50.00	418.79	0.00	0.00	0.00	759.97	0.00	0.00	0.00	4315.37	0.00	0.00	0.00	4315.37
565+50	56550	50.00	429.85	0.00	0.00	0.00	785.78	0.00	0.00	0.00	5101.15	0.00	0.00	0.00	5101.15
566+00	56600	50.00	433.43	0.00	0.00	0.00	799.33	0.00	0.00	0.00	5900.48	0.00	0.00	0.00	5900.48
566+50	56650	50.00	426.96	0.00	0.00	0.00	796.66	0.00	0.00	0.00	6697.14	0.00	0.00	0.00	6697.14
567+00	56700	50.00	411.71	0.00	0.00	0.00	776.55	0.00	0.00	0.00	7473.69	0.00	0.00	0.00	7473.69
567+50	56750	50.00	388.23	0.00	0.00	0.00	740.69	0.00	0.00	0.00	8214.37	0.00	0.00	0.00	8214.37
568+00	56800	50.00	357.47	0.00	0.00	0.00	690.46	0.00	0.00	0.00	8904.84	0.00	0.00	0.00	8904.84
568+50	56850	50.00	325.27	0.00	0.00	0.00	632.17	0.00	0.00	0.00	9537.00	0.00	0.00	0.00	9537.00
569+00	56900	50.00	293.19	0.00	0.00	0.00	572.65	0.00	0.00	0.00	10109.65	0.00	0.00	0.00	10109.65
569+50	56950	50.00	264.21	0.00	0.00	0.00	516.11	0.00	0.00	0.00	10625.76	0.00	0.00	0.00	10625.76
570+00	57000	50.00	238.94	0.00	0.00	0.00	465.88	0.00	0.00	0.00	11091.64	0.00	0.00	0.00	11091.64
570+50	57050	50.00	215.24	0.00	0.00	0.00	420.54	0.00	0.00	0.00	11512.18	0.00	0.00	0.00	11512.18
571+00	57100	50.00	195.68	0.00	0.00	0.00	380.48	0.00	0.00	0.00	7077.62	0.00	0.00	0.00	7077.62
571+50	57150	50.00	178.75	0.00	0.00	0.00	346.69	0.00	0.00	0.00	7424.32	0.00	0.00	0.00	7424.32
572+00	57200	50.00	166.57	0.00	0.00	0.00	319.74	0.00	0.00	0.00	7744.06	0.00	0.00	0.00	7744.06
572+50	57250	50.00	154.62	0.00	0.00	0.00	297.40	0.00	0.00	0.00	8041.46	0.00	0.00	0.00	8041.46
573+00	57300	50.00	144.46	0.00	0.00	0.00	276.93	0.00	0.00	0.00	8318.38	0.00	0.00	0.00	8318.38

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 RAMP NE

STATION		Real Station	Distance	AREA (SF) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cumulative Vol (CY) Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	Mass Ordinate
												1.00	1.2	1.30	0.80	
								Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
573+50		57350	50.00	135.32	0.00	0.00	0.00	259.06	0.00	0.00	0.00	8577.44	0.00	0.00	0.00	8577.44
574+00		57400	50.00	124.91	0.00	0.00	0.00	240.95	0.00	0.00	0.00	8818.39	0.00	0.00	0.00	8818.39
574+50		57450	50.00	114.27	0.00	0.00	0.00	221.46	0.00	0.00	0.00	9039.85	0.00	0.00	0.00	9039.85
575+00		57500	50.00	102.68	0.00	0.00	0.00	200.88	0.00	0.00	0.00	9240.73	0.00	0.00	0.00	9240.73
575+50		57550	50.00	92.12	0.00	0.00	0.00	180.37	0.00	0.00	0.00	9421.10	0.00	0.00	0.00	9421.10
576+00		57600	50.00	77.21	0.00	0.00	0.00	156.79	0.00	0.00	0.00	9577.89	0.00	0.00	0.00	9577.89
576+50		57650	50.00	55.56	0.00	0.00	0.00	122.94	0.00	0.00	0.00	9700.83	0.00	0.00	0.00	9700.83
577+00		57700	50.00	30.06	0.00	0.00	0.00	79.28	0.00	0.00	0.00	9780.10	0.00	0.00	0.00	9780.10
577+50		57750	50.00	4.72	0.00	10.09	0.00	32.20	0.00	9.34	0.00	9812.31	11.21	0.00	0.00	9801.10
577+98		57798	48.00	4.72	0.00	57.51	0.00	8.39	0.00	60.09	0.00	9820.70	83.32	0.00	0.00	9737.38
577+98		57798	0.00	4.72	0.00	43.58	0.00	0.00	0.00	0.00	0.00	9820.70	83.32	0.00	0.00	9737.38
578+00		57800	2.00	0.00	0.00	58.81	0.00	0.17	0.00	3.79	0.00	9820.87	87.87	0.00	0.00	9733.00
578+50		57850	50.00	0.00	0.00	97.65	0.00	0.00	0.00	144.87	0.00	9820.87	261.71	0.00	0.00	9559.16
579+00		57900	50.00	0.00	0.00	138.57	0.00	0.00	0.00	218.72	0.00	9820.87	524.18	0.00	0.00	9296.69
579+50		57950	50.00	0.00	0.00	162.77	0.00	0.00	0.00	279.02	0.00	9820.87	859.00	0.00	0.00	8961.87
580+00		58000	50.00	0.00	0.00	175.23	0.00	0.00	0.00	312.96	0.00	9820.87	1234.56	0.00	0.00	8586.32
580+00		58000	0.00	0.00	0.00	125.77	0.00	0.00	0.00	0.00	0.00	9820.87	1234.56	0.00	0.00	8586.32
580+50		58050	50.00	0.00	0.00	127.56	0.00	0.00	0.00	234.56	0.00	9820.87	1516.04	0.00	0.00	8304.84
581+00		58100	50.00	0.00	0.00	121.45	0.00	0.00	0.00	230.56	0.00	9820.87	1792.71	0.00	0.00	8028.16
581+50		58150	50.00	0.00	0.00	115.84	0.00	0.00	0.00	219.71	0.00	9820.87	2056.37	0.00	0.00	7764.50
582+00		58200	50.00	0.00	0.00	105.26	0.00	0.00	0.00	204.72	0.00	9820.87	2302.04	0.00	0.00	7518.84
582+26	BK	58225.5	25.50	0.00	0.00	100.38	0.00	0.00	0.00	97.11	0.00	9820.87	2418.56	0.00	0.00	7402.31
							Column totals	14635.91	0.00	2015.47	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 RAMP BD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
731+70 AH	73170.33	0.00	729.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732+00	73200.00	29.67	839.11	0.00	0.00	0.00	861.67	0.00	0.00	0.00	861.67	0.00	0.00	0.00	861.67
732+50	73250.00	50.00	734.28	0.00	0.00	0.00	1456.84	0.00	0.00	0.00	2318.51	0.00	0.00	0.00	2318.51
733+00	73300.00	50.00	410.68	0.00	0.00	0.00	1060.15	0.00	0.00	0.00	3378.66	0.00	0.00	0.00	3378.66
733+50	73350.00	50.00	619.61	0.00	0.00	0.00	953.97	0.00	0.00	0.00	4332.63	0.00	0.00	0.00	4332.63
733+60 BK	73360.35	10.35	817.23	0.00	0.00	0.00	275.39	0.00	0.00	0.00	4608.03	0.00	0.00	0.00	4608.03
						Column totals	4608.03	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

Division 3 RAMP WC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
749+00 AH	74900.00	0.00	61.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
749+50	74950.00	50.00	43.14	0.00	0.00	0.00	96.83	0.00	0.00	0.00	96.83	0.00	0.00	0.00	96.83
750+00	75000.00	50.00	64.20	0.00	0.00	0.00	99.39	0.00	0.00	0.00	196.22	0.00	0.00	0.00	196.22
750+43	75043.14	43.14	74.24	0.00	0.00	0.00	110.60	0.00	0.00	0.00	306.82	0.00	0.00	0.00	306.82
750+43	75043.14	0.00	20.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	306.82	0.00	0.00	0.00	306.82
750+50	75050.00	6.86	20.43	0.00	0.00	0.00	5.19	0.00	0.00	0.00	312.01	0.00	0.00	0.00	312.01
751+00	75100.00	50.00	13.37	0.00	0.00	0.00	31.30	0.00	0.00	0.00	343.30	0.00	0.00	0.00	343.30
751+50	75150.00	50.00	17.57	0.00	0.00	0.00	28.65	0.00	0.00	0.00	371.95	0.00	0.00	0.00	371.95
752+00	75200.00	50.00	22.84	0.00	0.00	0.00	37.42	0.00	0.00	0.00	409.37	0.00	0.00	0.00	409.37
752+50	75250.00	50.00	26.88	0.00	0.00	0.00	46.04	0.00	0.00	0.00	455.41	0.00	0.00	0.00	455.41
753+00	75300.00	50.00	26.02	0.00	0.00	0.00	48.98	0.00	0.00	0.00	504.39	0.00	0.00	0.00	504.39
753+07 BK	75307.42	7.42	25.18	0.00	0.00	0.00	7.04	0.00	0.00	0.00	511.42	0.00	0.00	0.00	511.42
		Column totals					511.42	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 RAMP SA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
548+50 AH	54850.00	0.00	170.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
549+00	54900.00	50.00	128.02	0.00	33.34	0.00	276.67	0.00	30.87	0.00	276.67	37.04	0.00	0.00	239.62
549+50	54950.00	50.00	43.59	0.00	50.62	0.00	158.90	0.00	77.74	0.00	435.56	130.33	0.00	0.00	305.23
550+00	55000.00	50.00	6.78	0.00	146.60	0.00	46.64	0.00	182.61	0.00	482.20	349.47	0.00	0.00	132.74
550+50	55050.00	50.00	1.03	0.00	178.21	0.00	7.23	0.00	300.75	0.00	489.44	710.37	0.00	0.00	-220.93
551+00	55100.00	50.00	5.66	0.00	83.89	0.00	6.19	0.00	242.69	0.00	495.63	1001.59	0.00	0.00	-505.96
551+50	55150.00	50.00	59.35	0.00	11.14	0.00	60.19	0.00	87.99	0.00	555.82	1107.18	0.00	0.00	-551.35
552+00	55200.00	50.00	114.78	0.00	0.51	0.00	161.23	0.00	10.79	0.00	717.06	1120.12	0.00	0.00	-403.07
552+50	55250.00	50.00	149.88	0.00	0.00	0.00	245.06	0.00	0.47	0.00	962.11	1120.69	0.00	0.00	-158.58
553+00	55300.00	50.00	167.99	0.00	0.00	0.00	294.32	0.00	0.00	0.00	1256.44	1120.69	0.00	0.00	135.75
553+50	55350.00	50.00	175.19	0.00	0.00	0.00	317.76	0.00	0.00	0.00	1574.19	1120.69	0.00	0.00	453.51
554+00	55400.00	50.00	174.00	0.00	0.00	0.00	323.32	0.00	0.00	0.00	1897.52	1120.69	0.00	0.00	776.83
554+50	55450.00	50.00	166.37	0.00	0.00	0.00	315.16	0.00	0.00	0.00	2212.68	1120.69	0.00	0.00	1091.99
555+00	55500.00	50.00	154.75	0.00	0.00	0.00	297.33	0.00	0.00	0.00	2510.01	1120.69	0.00	0.00	1389.32
555+50	55550.00	50.00	158.78	0.00	0.00	0.00	290.31	0.00	0.00	0.00	2800.31	1120.69	0.00	0.00	1679.63
556+00	55600.00	50.00	167.85	0.00	0.00	0.00	302.44	0.00	0.00	0.00	3102.75	1120.69	0.00	0.00	1982.06
556+50	55650.00	50.00	192.64	0.00	0.00	0.00	333.79	0.00	0.00	0.00	3436.54	1120.69	0.00	0.00	2315.85
557+00	55700.00	50.00	215.88	0.00	0.00	0.00	378.26	0.00	0.00	0.00	3814.80	1120.69	0.00	0.00	2694.11
557+50	55750.00	50.00	211.33	0.00	0.00	0.00	395.56	0.00	0.00	0.00	4210.36	1120.69	0.00	0.00	3089.67
558+00	55800.00	50.00	217.89	0.00	0.00	0.00	397.43	0.00	0.00	0.00	4607.79	1120.69	0.00	0.00	3487.10
558+50	55850.00	50.00	233.51	0.00	0.00	0.00	417.96	0.00	0.00	0.00	5025.75	1120.69	0.00	0.00	3905.06
559+00	55900.00	50.00	891.95	0.00	0.09	0.00	1042.09	0.00	0.08	0.00	6067.84	1120.79	0.00	0.00	4947.05
559+50	55950.00	50.00	602.06	0.00	0.04	0.00	1383.34	0.00	0.12	0.00	7451.19	1120.93	0.00	0.00	6330.25
559+81	55981.00	31.00	360.43	0.00	0.29	0.00	552.54	0.00	0.19	0.00	8003.73	1121.16	0.00	0.00	6882.57
559+81	55981.00	19.00	326.17	0.00	0.28	0.00	0.00	0.00	0.00	0.00	8003.73	1121.16	0.00	0.00	6882.57
560+00	56000.00	50.00	287.42	0.00	0.00	0.00	568.14	0.00	0.26	0.00	8571.86	1121.47	0.00	0.00	7450.39
560+50	56050.00	50.00	277.06	0.00	0.00	0.00	522.67	0.00	0.00	0.00	9094.53	1121.47	0.00	0.00	7973.06
561+00	56100.00	50.00	259.28	0.00	0.00	0.00	496.61	0.00	0.00	0.00	9591.14	1121.47	0.00	0.00	8469.67
561+50	56150.00	50.00	304.29	0.00	0.00	0.00	521.82	0.00	0.00	0.00	10112.97	1121.47	0.00	0.00	8991.49
562+00	56200.00	50.00	346.67	0.00	0.00	0.00	602.74	0.00	0.00	0.00	10715.71	1121.47	0.00	0.00	9594.24
562+50	56250.00	50.00	371.09	0.00	0.00	0.00	664.59	0.00	0.00	0.00	11380.30	1121.47	0.00	0.00	10258.83
563+00	56300.00	50.00	373.51	0.00	0.00	0.00	689.44	0.00	0.00	0.00	12069.74	1121.47	0.00	0.00	10948.27
563+28 BK	56328.00	28.00	387.55	0.00	0.00	0.00	394.62	0.00	0.00	0.00	12464.37	1121.47	0.00	0.00	11342.90
		Column totals					12464.37	0.00	934.56	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 ADLER ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
983+30 AH	98330	0.00	32.24	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
983+50	98350	20.00	35.78	0.00	0.00	0.00	25.19	0.00	0.03	0.00	25.19	0.03	0.00	0.00	25.16
984+00	98400	50.00	24.02	0.00	2.78	0.00	55.37	0.00	2.57	0.00	80.56	3.12	0.00	0.00	77.44
984+50	98450	50.00	11.67	0.00	7.48	0.00	33.05	0.00	9.50	0.00	113.61	14.52	0.00	0.00	99.09
985+00	98500	50.00	20.51	0.00	0.82	0.00	29.80	0.00	7.69	0.00	143.41	23.74	0.00	0.00	119.66
985+50	98550	50.00	30.25	0.00	0.00	0.00	47.00	0.00	0.76	0.00	190.41	24.65	0.00	0.00	165.75
986+00	98600	50.00	33.52	0.00	0.00	0.00	59.05	0.00	0.00	0.00	249.45	24.65	0.00	0.00	224.80
986+50	98650	50.00	48.93	0.00	0.00	0.00	76.34	0.00	0.00	0.00	325.79	24.65	0.00	0.00	301.14
987+00	98700	50.00	41.88	0.00	0.00	0.00	84.08	0.00	0.00	0.00	409.88	24.65	0.00	0.00	385.22
987+50	98750	50.00	32.95	0.00	0.00	0.00	69.29	0.00	0.00	0.00	479.16	24.65	0.00	0.00	454.51
988+00	98800	50.00	30.48	0.00	0.12	0.00	58.73	0.00	0.11	0.00	537.90	24.79	0.00	0.00	513.11
988+50	98850	50.00	21.07	0.00	0.75	0.00	47.73	0.00	0.81	0.00	585.63	25.75	0.00	0.00	559.87
989+00	98900	50.00	18.91	0.00	1.52	0.00	37.02	0.00	2.10	0.00	622.65	28.28	0.00	0.00	594.37
989+50	98950	50.00	22.11	0.00	1.61	0.00	37.98	0.00	2.90	0.00	660.63	31.75	0.00	0.00	628.87
990+00	99000	50.00	31.75	0.00	0.00	0.00	49.87	0.00	1.49	0.00	710.50	33.54	0.00	0.00	676.96
990+50	99050	50.00	35.48	0.00	1.06	0.00	62.25	0.00	0.98	0.00	772.75	34.72	0.00	0.00	738.03
991+00	99100	50.00	36.23	0.00	0.00	0.00	66.40	0.00	0.98	0.00	839.15	35.90	0.00	0.00	803.25
991+50	99150	50.00	37.84	0.00	0.00	0.00	68.58	0.00	0.00	0.00	907.73	35.90	0.00	0.00	871.83
992+00	99200	50.00	27.57	0.00	0.02	0.00	60.56	0.00	0.02	0.00	968.29	35.92	0.00	0.00	932.37
992+50	99250	50.00	22.17	0.00	0.23	0.00	46.06	0.00	0.23	0.00	1014.35	36.20	0.00	0.00	978.15
993+00	99300	50.00	59.79	0.00	0.00	0.00	75.89	0.00	0.21	0.00	1090.24	36.45	0.00	0.00	1053.79
993+50	99350	50.00	39.16	0.00	0.00	0.00	91.62	0.00	0.00	0.00	1181.86	36.45	0.00	0.00	1145.41
994+00	99400	50.00	34.73	0.00	0.00	0.00	68.42	0.00	0.00	0.00	1250.28	36.45	0.00	0.00	1213.82
994+50	99450	50.00	16.27	0.00	1.15	0.00	47.22	0.00	1.06	0.00	1297.50	37.73	0.00	0.00	1259.77
995+00	99500	50.00	15.62	0.00	1.35	0.00	29.53	0.00	2.31	0.00	1327.03	40.51	0.00	0.00	1286.52
995+12 BK	99512	12.00	24.77	0.00	1.58	0.00	8.98	0.00	0.65	0.00	1336.00	41.29	0.00	0.00	1294.71

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 ADLER ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
995+88 AH	99587.95	0.00	11.68	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
996+00	99600	12.05	10.82	0.00	3.79	0.00	5.02	0.00	1.83	0.00	5.02	2.20	0.00	0.00	2.82
996+25	99625	25.00	11.17	0.00	1.47	0.00	10.18	0.00	2.44	0.00	15.20	5.12	0.00	0.00	10.08
996+25	99625	0.00	21.12	0.00	1.47	0.00	0.00	0.00	0.00	0.00	15.20	5.12	0.00	0.00	10.08
996+50	99650	25.00	24.61	0.00	1.04	0.00	21.17	0.00	1.16	0.00	36.37	6.52	0.00	0.00	29.85
997+00	99700	50.00	27.47	0.00	0.09	0.00	48.22	0.00	1.05	0.00	84.59	7.77	0.00	0.00	76.82
997+50	99750	50.00	31.38	0.00	0.00	0.00	54.49	0.00	0.08	0.00	139.09	7.87	0.00	0.00	131.21
998+00	99800	50.00	31.38	0.00	0.52	0.00	58.11	0.00	0.48	0.00	197.20	8.45	0.00	0.00	188.75
998+50	99850	50.00	48.26	0.00	0.00	0.00	73.74	0.00	0.48	0.00	270.94	9.03	0.00	0.00	261.91
999+00	99900	50.00	31.21	0.00	0.00	0.00	73.58	0.00	0.00	0.00	344.52	9.03	0.00	0.00	335.49
999+50	99950	50.00	32.16	0.00	0.02	0.00	58.68	0.00	0.02	0.00	403.20	9.05	0.00	0.00	394.15
1000+00	100000	50.00	34.33	0.00	0.00	0.00	61.56	0.00	0.02	0.00	464.76	9.07	0.00	0.00	455.69
1000+50	100050	50.00	26.38	0.00	1.08	0.00	56.21	0.00	1.00	0.00	520.97	10.27	0.00	0.00	510.70
1001+00	100100	50.00	44.86	0.00	0.00	0.00	65.96	0.00	1.00	0.00	586.94	11.47	0.00	0.00	575.46
1001+50	100150	50.00	31.21	0.00	0.00	0.00	70.44	0.00	0.00	0.00	657.37	11.47	0.00	0.00	645.90
1002+00	100200	50.00	31.50	0.00	2.34	0.00	58.06	0.00	2.17	0.00	715.44	14.07	0.00	0.00	701.36
1002+50	100250	50.00	29.27	0.00	0.21	0.00	56.27	0.00	2.36	0.00	771.71	16.91	0.00	0.00	754.80
1003+00	100300	50.00	29.77	0.00	0.37	0.00	54.67	0.00	0.54	0.00	826.37	0.64	0.00	0.00	808.82
1003+50	100350	50.00	45.58	0.00	0.00	0.00	69.77	0.00	0.34	0.00	896.14	1.06	0.00	0.00	878.18
1004+00	100400	50.00	34.41	0.00	0.00	0.00	74.06	0.00	0.00	0.00	970.21	1.06	0.00	0.00	952.24
1004+50	100450	50.00	33.65	0.00	0.00	0.00	63.02	0.00	0.00	0.00	1033.22	1.06	0.00	0.00	1015.26
1005+00	100500	50.00	31.20	0.00	0.12	0.00	60.05	0.00	0.11	0.00	1093.27	1.19	0.00	0.00	1075.18
1005+50	100550	50.00	31.37	0.00	0.14	0.00	57.94	0.00	0.24	0.00	1151.21	1.48	0.00	0.00	1132.82
1006+00	100600	50.00	31.81	0.00	0.82	0.00	58.50	0.00	0.89	0.00	1209.71	2.54	0.00	0.00	1190.25
1006+50	100650	50.00	36.33	0.00	0.00	0.00	63.09	0.00	0.76	0.00	1272.80	3.46	0.00	0.00	1252.44
1007+00	100700	50.00	30.05	0.00	0.27	0.00	61.46	0.00	0.25	0.00	1334.26	3.76	0.00	0.00	1313.60
1007+50	100750	50.00	32.84	0.00	0.00	0.00	58.23	0.00	0.25	0.00	1392.49	4.06	0.00	0.00	1371.53
1008+00	100800	50.00	32.57	0.00	0.00	0.00	60.56	0.00	0.00	0.00	1453.06	4.06	0.00	0.00	1432.10

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 ADLER ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
1008+50	100850	50.00	32.04	0.00	0.70	0.00	59.82	0.00	0.65	0.00	1512.88	4.83	0.00	0.00	1491.14
1009+00	100900	50.00	63.91	0.00	0.00	0.00	88.84	0.00	0.65	0.00	1601.72	5.61	0.00	0.00	1579.21
1009+50	100950	50.00	33.17	0.00	0.08	0.00	89.89	0.00	0.07	0.00	1691.61	5.70	0.00	0.00	1669.01
1010+00	101000	50.00	33.75	0.00	0.00	0.00	61.96	0.00	0.07	0.00	1753.58	5.79	0.00	0.00	1730.88
1010+50	101050	50.00	36.30	0.00	0.00	0.00	64.86	0.00	0.00	0.00	1818.44	5.79	0.00	0.00	1795.74
1011+00	101100	50.00	33.34	0.00	0.10	0.00	64.48	0.00	0.09	0.00	1882.92	5.90	0.00	0.00	1860.11
1011+50	101150	50.00	62.45	0.00	0.00	0.00	88.69	0.00	0.09	0.00	1971.61	6.01	0.00	0.00	1948.70
1012+00	101200	50.00	31.61	0.00	0.16	0.00	87.09	0.00	0.15	0.00	2058.71	6.19	0.00	0.00	2035.61
1012+50	101250	50.00	31.93	0.00	0.19	0.00	58.83	0.00	0.32	0.00	2117.54	6.58	0.00	0.00	2094.05
1013+00	101300	50.00	42.32	0.00	0.00	0.00	68.75	0.00	0.18	0.00	2186.29	6.79	0.00	0.00	2162.59
1013+50	101350	50.00	26.64	0.00	0.73	0.00	63.85	0.00	0.68	0.00	2250.14	7.60	0.00	0.00	2225.63
1014+00	101400	50.00	53.83	0.00	0.00	0.00	74.51	0.00	0.68	0.00	2324.65	8.41	0.00	0.00	2299.33
1014+50	101450	50.00	31.30	0.00	0.05	0.00	78.82	0.00	0.05	0.00	2403.47	8.47	0.00	0.00	2378.10
1015+00	101500	50.00	22.96	0.00	0.48	0.00	50.24	0.00	0.49	0.00	2453.72	9.06	0.00	0.00	2427.75
1015+50	101550	50.00	24.72	0.00	0.18	0.00	44.15	0.00	0.61	0.00	2497.86	9.79	0.00	0.00	2471.17
1016+00	101600	50.00	25.59	0.00	0.02	0.00	46.58	0.00	0.19	0.00	2544.45	10.01	0.00	0.00	2517.53
1016+50	101650	50.00	31.67	0.00	0.28	0.00	53.02	0.00	0.28	0.00	2597.47	5.94	0.00	0.00	2570.21
1017+00	101700	50.00	89.43	0.00	0.00	0.00	112.13	0.00	0.26	0.00	2709.59	6.26	0.00	0.00	2682.03
1017+50	101750	50.00	29.74	0.00	0.00	0.00	110.34	0.00	0.00	0.00	2819.94	6.26	0.00	0.00	2792.38
1018+00	101800	50.00	25.96	0.00	0.41	0.00	51.57	0.00	0.38	0.00	2871.51	6.71	0.00	0.00	2843.49
1018+50	101850	50.00	25.85	0.00	0.78	0.00	47.97	0.00	1.10	0.00	2919.48	8.03	0.00	0.00	2890.14
1019+00	101900	50.00	28.28	0.00	0.38	0.00	50.12	0.00	1.07	0.00	2969.60	9.32	0.00	0.00	2938.98
1019+50	101950	50.00	29.08	0.00	0.00	0.00	53.11	0.00	0.35	0.00	3022.72	9.74	0.00	0.00	2991.66
1020+00	102000	50.00	37.34	0.00	0.00	0.00	61.50	0.00	0.00	0.00	3084.22	9.74	0.00	0.00	3053.16
1020+50	102050	50.00	44.88	0.00	0.00	0.00	76.13	0.00	0.00	0.00	3160.34	9.74	0.00	0.00	3129.29
1021+00	102100	50.00	41.70	0.00	0.03	0.00	80.17	0.00	0.03	0.00	3240.51	9.78	0.00	0.00	3209.43
1021+50	102150	50.00	45.46	0.00	0.00	0.00	80.70	0.00	0.03	0.00	3321.22	9.81	0.00	0.00	3290.10
1022+00	102200	50.00	48.65	0.00	0.00	0.00	87.14	0.00	0.00	0.00	3408.35	9.81	0.00	0.00	3377.24
1022+50	102250	50.00	40.96	0.00	0.00	0.00	82.97	0.00	0.00	0.00	3491.33	9.81	0.00	0.00	3460.21
1022+66 BK	102266	16.00	38.87	0.00	0.00	0.00	23.65	0.00	0.00	0.00	3514.98	9.81	0.00	0.00	3483.86
						Column totals	4850.98	0.00	60.34	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 92ND ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
61+85 AH	6185	0.00	106.65	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62+00	6200	15.00	117.16	0.00	2.11	0.00	62.17	0.00	0.65	0.00	62.17	0.78	0.00	0.00	61.39
62+50	6250	50.00	124.22	0.00	0.20	0.00	223.50	0.00	2.14	0.00	285.67	3.35	0.00	0.00	282.32
63+00	6300	50.00	137.38	0.00	0.02	0.00	242.22	0.00	0.20	0.00	527.89	3.59	0.00	0.00	524.30
63+33 BK	6332.85	32.85	103.26	0.00	0.00	0.00	146.39	0.00	0.01	0.00	674.28	3.61	0.00	0.00	670.67
		Column totals					674.28	0.00	3.01	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 NSB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
15+99 AH	1598.70	0.00	23.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16+00	1600.00	1.30	23.32	0.00	0.00	0.00	1.12	0.00	0.00	0.00	1.12	0.00	0.00	0.00	1.12
16+50	1650.00	50.00	33.85	0.00	0.02	0.00	52.94	0.00	0.02	0.00	54.05	0.02	0.00	0.00	54.03
17+00	1700.00	50.00	28.67	0.00	37.15	0.00	57.89	0.00	34.42	0.00	111.94	41.32	0.00	0.00	70.62
17+50	1750.00	50.00	2.54	0.00	113.55	0.00	28.90	0.00	139.54	0.00	140.84	208.77	0.00	0.00	-67.93
18+00	1800.00	50.00	0.00	0.00	176.52	0.00	2.35	0.00	268.58	0.00	143.19	531.07	0.00	0.00	-387.87
18+50	1850.00	50.00	0.00	0.00	126.26	0.00	0.00	0.00	280.35	0.00	143.19	867.49	0.00	0.00	-724.30
19+00	1900.00	50.00	3.28	0.00	105.78	0.00	3.04	0.00	214.85	0.00	146.23	1125.31	0.00	0.00	-979.08
19+50	1950.00	50.00	3.73	0.00	66.24	0.00	6.49	0.00	159.28	0.00	152.72	1316.44	0.00	0.00	-1163.72
20+00	2000.00	50.00	6.41	0.00	34.72	0.00	9.39	0.00	93.48	0.00	162.11	1428.62	0.00	0.00	-1266.51
20+50	2050.00	50.00	7.38	0.00	61.41	0.00	12.77	0.00	89.01	0.00	174.88	1535.43	0.00	0.00	-1360.56
21+00	2100.00	50.00	2.96	0.00	265.98	0.00	9.57	0.00	303.14	0.00	184.45	1899.20	0.00	0.00	-1714.75
21+01 BK	2100.87	0.87	2.94	0.00	268.16	0.00	0.10	0.00	8.61	0.00	184.55	1909.53	0.00	0.00	-1724.98
26+06 AH	2606.20	0.00	0.00	0.00	571.93	0.00	0.00	0.00	0.00	0.00	184.55	1909.53	0.00	0.00	-1724.98
26+50	2650.00	43.80	0.00	0.00	512.80	0.00	0.00	0.00	879.84	0.00	184.55	2965.33	0.00	0.00	-2780.78
27+00	2700.00	50.00	0.00	0.00	419.47	0.00	0.00	0.00	863.21	0.00	184.55	4001.19	0.00	0.00	-3816.64
27+50	2750.00	50.00	0.00	0.00	300.30	0.00	0.00	0.00	666.45	0.00	184.55	4800.93	0.00	0.00	-4616.38
28+00	2800.00	50.00	2.83	0.00	193.25	0.00	2.62	0.00	456.99	0.00	187.17	5349.32	0.00	0.00	-5162.15
28+50	2850.00	50.00	122.43	0.00	117.89	0.00	115.98	0.00	288.09	0.00	303.15	5695.03	0.00	0.00	-5391.88
29+00	2900.00	50.00	107.04	0.00	165.35	0.00	212.47	0.00	262.26	0.00	515.62	6009.74	0.00	0.00	-5494.12
29+50	2950.00	50.00	81.91	0.00	85.30	0.00	174.95	0.00	232.08	0.00	690.57	6288.24	0.00	0.00	-5597.67
30+00	3000.00	50.00	111.86	0.00	11.76	0.00	179.42	0.00	89.87	0.00	869.99	6396.09	0.00	0.00	-5526.09
30+50	3050.00	50.00	131.35	0.00	0.00	0.00	225.19	0.00	10.89	0.00	1095.19	6409.15	0.00	0.00	-5313.97
31+00	3100.00	50.00	130.77	0.00	0.00	0.00	242.70	0.00	0.00	0.00	1337.89	6409.15	0.00	0.00	-5071.26
31+19 BK	3118.77	18.77	136.74	0.00	0.00	0.00	92.98	0.00	0.00	0.00	1430.87	6409.15	0.00	0.00	-4978.28
						Column totals	1430.87	0.00	5340.96	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 EWJ

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
10+34	AH	1034.04	0.00	55.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10+50		1050.00	15.96	52.00	0.00	0.00	0.00	31.76	0.00	0.00	0.00	31.76	0.00	0.00	0.00	31.76
11+00		1100.00	50.00	136.56	0.00	0.00	0.00	174.59	0.00	0.00	0.00	206.35	0.00	0.00	0.00	206.35
11+50		1150.00	50.00	111.63	0.00	0.00	0.00	229.81	0.00	0.00	0.00	436.16	0.00	0.00	0.00	436.16
12+00		1200.00	50.00	94.37	0.00	0.00	0.00	190.74	0.00	0.00	0.00	626.90	0.00	0.00	0.00	626.90
12+50		1250.00	50.00	107.72	0.00	0.00	0.00	187.12	0.00	0.00	0.00	814.02	0.00	0.00	0.00	814.02
13+00		1300.00	50.00	238.17	0.00	0.00	0.00	320.27	0.00	0.00	0.00	1134.29	0.00	0.00	0.00	1134.29
13+50		1350.00	50.00	235.35	0.00	0.00	0.00	438.44	0.00	0.00	0.00	1572.73	0.00	0.00	0.00	1572.73
14+00		1400.00	50.00	266.18	0.00	0.00	0.00	464.38	0.00	0.00	0.00	2037.11	0.00	0.00	0.00	2037.11
14+50		1450.00	50.00	314.06	0.00	0.00	0.00	537.26	0.00	0.00	0.00	2574.37	0.00	0.00	0.00	2574.37
15+00		1500.00	50.00	320.41	0.00	0.00	0.00	587.47	0.00	0.00	0.00	3161.84	0.00	0.00	0.00	3161.84
15+50		1550.00	50.00	328.78	0.00	0.14	0.00	601.10	0.00	0.13	0.00	3762.95	0.16	0.00	0.00	3762.79
16+00		1600.00	50.00	372.22	0.00	0.00	0.00	649.07	0.00	0.13	0.00	4412.02	0.31	0.00	0.00	4411.71
16+01	BK	1600.94	0.94	372.23	0.00	0.00	0.00	12.96	0.00	0.00	0.00	4424.98	0.31	0.00	0.00	4424.67
							Column totals	4424.98	0.00	0.26	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 3 EWM

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
11+06 AH	1106.17	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11+50	1150.00	43.83	0.00	0.00	169.90	0.00	0.00	0.00	137.96	0.00	0.00	165.55	0.00	0.00	-165.55
12+00	1200.00	50.00	0.00	0.00	201.07	0.00	0.00	0.00	343.49	0.00	0.00	577.74	0.00	0.00	-577.74
12+50	1250.00	50.00	0.00	0.00	229.34	0.00	0.00	0.00	398.53	0.00	0.00	1055.97	0.00	0.00	-1055.97
13+00	1300.00	50.00	0.00	0.00	252.39	0.00	0.00	0.00	446.05	0.00	0.00	1591.23	0.00	0.00	-1591.23
13+50	1350.00	50.00	0.00	0.00	254.16	0.00	0.00	0.00	469.03	0.00	0.00	2154.06	0.00	0.00	-2154.06
14+00	1400.00	50.00	0.00	0.00	252.90	0.00	0.00	0.00	469.50	0.00	0.00	2717.46	0.00	0.00	-2717.46
14+50	1450.00	50.00	0.00	0.00	242.81	0.00	0.00	0.00	458.99	0.00	0.00	3268.25	0.00	0.00	-3268.25
15+00	1500.00	50.00	0.00	0.00	235.14	0.00	0.00	0.00	442.55	0.00	0.00	3799.31	0.00	0.00	-3799.31
15+50	1550.00	50.00	0.00	0.00	234.77	0.00	0.00	0.00	435.10	0.00	0.00	4321.43	0.00	0.00	-4321.43
15+89 BK	1588.72	38.72	0.00	0.00	0.00	0.00	0.00	0.00	168.34	0.00	0.00	4523.44	0.00	0.00	-4523.44
		Column totals					0.00	0.00	3769.53	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 EWN

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
11+95 AH	1195.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00	1200.00	4.58	1.69	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14
12+50	1250.00	50.00	11.79	0.00	0.00	0.00	12.48	0.00	0.00	0.00	12.62	0.00	0.00	0.00	12.62
13+00	1300.00	50.00	41.62	0.00	0.00	0.00	49.45	0.00	0.00	0.00	62.08	0.00	0.00	0.00	62.08
13+50	1350.00	50.00	48.64	0.00	0.00	0.00	83.57	0.00	0.00	0.00	145.65	0.00	0.00	0.00	145.65
14+00	1400.00	50.00	50.77	0.00	0.00	0.00	92.05	0.00	0.00	0.00	237.70	0.00	0.00	0.00	237.70
14+50	1450.00	50.00	50.42	0.00	0.00	0.00	93.69	0.00	0.00	0.00	331.39	0.00	0.00	0.00	331.39
15+00	1500.00	50.00	50.24	0.00	0.00	0.00	93.20	0.00	0.00	0.00	424.60	0.00	0.00	0.00	424.60
15+50	1550.00	50.00	52.15	0.00	0.00	0.00	94.81	0.00	0.00	0.00	519.40	0.00	0.00	0.00	519.40
16+00	1600.00	50.00	50.90	0.00	0.00	0.00	95.42	0.00	0.00	0.00	614.82	0.00	0.00	0.00	614.82
16+50	1650.00	50.00	42.42	0.00	0.00	0.00	86.41	0.00	0.00	0.00	701.23	0.00	0.00	0.00	701.23
17+00	1700.00	50.00	36.27	0.00	0.01	0.00	72.86	0.00	0.01	0.00	774.09	0.01	0.00	0.00	774.08
17+50	1750.00	50.00	29.93	0.00	0.19	0.00	61.30	0.00	0.19	0.00	835.38	0.23	0.00	0.00	835.15
18+00	1800.00	50.00	26.26	0.00	0.36	0.00	52.03	0.00	0.51	0.00	887.41	0.84	0.00	0.00	886.57
18+32 BK	1832.45	32.45	20.39	0.00	0.06	0.00	28.03	0.00	0.25	0.00	915.45	1.15	0.00	0.00	914.30
		Column totals					915.45	0.00	0.96	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 NEA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
1+40 AH	139.96	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1+50	150.00	10.04	3.78	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.79
2+00	200.00	50.00	18.05	0.00	0.00	0.00	20.21	0.00	0.00	0.00	21.00	0.00	0.00	0.00	21.00
2+50	250.00	50.00	31.53	0.00	0.00	0.00	45.91	0.00	0.00	0.00	66.91	0.00	0.00	0.00	66.91
3+00	300.00	50.00	45.41	0.00	0.00	0.00	71.24	0.00	0.00	0.00	138.15	0.00	0.00	0.00	138.15
3+50	350.00	50.00	59.12	0.00	0.00	0.00	96.79	0.00	0.00	0.00	234.94	0.00	0.00	0.00	234.94
4+00	400.00	50.00	67.28	0.00	0.00	0.00	117.04	0.00	0.00	0.00	351.98	0.00	0.00	0.00	351.98
4+50	450.00	50.00	72.87	0.00	0.00	0.00	129.77	0.00	0.00	0.00	481.74	0.00	0.00	0.00	481.74
5+00	500.00	50.00	71.53	0.00	0.00	0.00	133.70	0.00	0.00	0.00	615.45	0.00	0.00	0.00	615.45
5+50	550.00	50.00	65.06	0.00	1.72	0.00	126.47	0.00	1.59	0.00	741.92	1.91	0.00	0.00	740.01
6+00	600.00	50.00	53.99	0.00	6.16	0.00	110.23	0.00	7.30	0.00	852.15	10.67	0.00	0.00	841.48
6+50	650.00	50.00	52.20	0.00	6.98	0.00	98.32	0.00	12.17	0.00	950.48	25.27	0.00	0.00	925.21
7+00	700.00	50.00	61.11	0.00	5.52	0.00	104.92	0.00	11.57	0.00	1055.39	39.16	0.00	0.00	1016.24
7+50	750.00	50.00	68.36	0.00	3.14	0.00	119.88	0.00	8.02	0.00	1175.27	48.78	0.00	0.00	1126.49
8+00	800.00	50.00	71.61	0.00	2.22	0.00	129.60	0.00	4.96	0.00	1304.87	54.73	0.00	0.00	1250.14
8+50	850.00	50.00	72.60	0.00	1.95	0.00	133.53	0.00	3.86	0.00	1438.40	59.37	0.00	0.00	1379.03
9+00	900.00	50.00	66.12	0.00	1.48	0.00	128.44	0.00	3.18	0.00	1566.85	63.18	0.00	0.00	1503.67
9+50	950.00	50.00	64.93	0.00	1.74	0.00	121.34	0.00	2.98	0.00	1688.19	66.76	0.00	0.00	1621.43
10+00	1000.00	50.00	43.84	0.00	8.97	0.00	100.71	0.00	9.92	0.00	1788.90	78.66	0.00	0.00	1710.25
10+50	1050.00	50.00	7.91	0.00	17.80	0.00	47.92	0.00	24.79	0.00	1836.82	108.40	0.00	0.00	1728.42
11+00	1100.00	50.00	0.09	0.00	76.42	0.00	7.41	0.00	87.24	0.00	1844.23	213.09	0.00	0.00	1631.14
11+50	1150.00	50.00	0.05	0.00	127.37	0.00	0.13	0.00	188.69	0.00	1844.36	439.52	0.00	0.00	1404.83
12+00	1200.00	50.00	0.01	0.00	222.09	0.00	0.06	0.00	323.57	0.00	1844.41	827.81	0.00	0.00	1016.60
12+50	1250.00	50.00	4.36	0.00	230.19	0.00	4.05	0.00	418.78	0.00	1848.46	1330.34	0.00	0.00	518.11
13+00	1300.00	50.00	15.26	0.00	221.86	0.00	18.17	0.00	418.56	0.00	1866.62	1832.62	0.00	0.00	34.00
13+50	1350.00	50.00	37.74	0.00	198.55	0.00	49.07	0.00	389.27	0.00	1915.70	2299.74	0.00	0.00	-384.05
14+00	1400.00	50.00	51.16	0.00	165.18	0.00	82.31	0.00	336.79	0.00	1998.01	2703.89	0.00	0.00	-705.88
14+50	1450.00	50.00	59.13	0.00	134.36	0.00	102.12	0.00	277.35	0.00	2100.13	3036.71	0.00	0.00	-936.58
15+00	1500.00	50.00	55.34	0.00	44.11	0.00	105.99	0.00	165.25	0.00	2206.12	3235.01	0.00	0.00	-1028.89
15+50	1550.00	50.00	34.22	0.00	2.48	0.00	82.93	0.00	43.14	0.00	2289.05	3286.78	0.00	0.00	-997.73
16+00	1600.00	50.00	17.86	0.00	0.09	0.00	48.22	0.00	2.38	0.00	2337.27	3289.63	0.00	0.00	-952.36
16+50 BK	1650.00	50.00	18.20	0.00	0.15	0.00	33.39	0.00	0.22	0.00	2370.66	3289.90	0.00	0.00	-919.24
						Column totals	2370.66	0.00	2741.58	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 SAB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
12+07 AH	1206.66	0.00	289.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+50	1250.00	43.34	299.64	0.00	0.00	0.00	472.67	0.00	0.00	0.00	472.67	0.00	0.00	0.00	472.67
13+00	1300.00	50.00	261.79	0.00	0.00	0.00	519.84	0.00	0.00	0.00	992.51	0.00	0.00	0.00	992.51
13+50	1350.00	50.00	212.23	0.00	0.00	0.00	438.91	0.00	0.00	0.00	1431.42	0.00	0.00	0.00	1431.42
14+00	1400.00	50.00	155.54	0.00	0.00	0.00	340.53	0.00	0.00	0.00	1771.95	0.00	0.00	0.00	1771.95
14+50	1450.00	50.00	48.38	0.00	0.00	0.00	188.81	0.00	0.00	0.00	1960.76	0.00	0.00	0.00	1960.76
15+00	1500.00	50.00	11.59	0.00	0.00	0.00	55.53	0.00	0.00	0.00	2016.29	0.00	0.00	0.00	2016.29
15+50	1550.00	50.00	0.00	0.00	13.44	0.00	10.73	0.00	12.44	0.00	2027.02	14.93	0.00	0.00	2012.09
15+77 BK	1576.68	26.68	0.00	0.00	29.26	0.00	0.00	0.00	21.10	0.00	2027.02	40.25	0.00	0.00	1986.77
Column totals							2027.02	0.00	33.54	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 SWB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
14+73 AH	1472.74	0.00	14.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15+00	1500.00	27.26	14.25	0.00	0.00	0.00	14.36	0.00	0.00	0.00	14.36	0.00	0.00	0.00	14.36
15+50	1550.00	50.00	14.42	0.00	0.00	0.00	26.55	0.00	0.00	0.00	40.90	0.00	0.00	0.00	40.90
16+00	1600.00	50.00	14.67	0.00	0.00	0.00	26.94	0.00	0.00	0.00	67.84	0.00	0.00	0.00	67.84
16+50	1650.00	50.00	34.63	0.00	0.00	0.00	45.65	0.00	0.00	0.00	113.49	0.00	0.00	0.00	113.49
17+00	1700.00	50.00	39.12	0.00	0.00	0.00	68.29	0.00	0.00	0.00	181.77	0.00	0.00	0.00	181.77
17+50	1750.00	50.00	44.64	0.00	0.00	0.00	77.56	0.00	0.00	0.00	259.33	0.00	0.00	0.00	259.33
18+00	1800.00	50.00	68.23	0.00	0.00	0.00	104.51	0.00	0.00	0.00	363.84	0.00	0.00	0.00	363.84
18+50	1850.00	50.00	67.27	0.00	0.00	0.00	125.46	0.00	0.00	0.00	489.30	0.00	0.00	0.00	489.30
19+00	1900.00	50.00	92.76	0.00	0.00	0.00	148.18	0.00	0.00	0.00	637.48	0.00	0.00	0.00	637.48
19+50	1950.00	50.00	105.85	0.00	0.00	0.00	183.90	0.00	0.00	0.00	821.38	0.00	0.00	0.00	821.38
20+00	2000.00	50.00	130.80	0.00	0.00	0.00	219.12	0.00	0.00	0.00	1040.50	0.00	0.00	0.00	1040.50
20+50	2050.00	50.00	146.22	0.00	0.00	0.00	256.50	0.00	0.00	0.00	1297.00	0.00	0.00	0.00	1297.00
21+00	2100.00	50.00	161.89	0.00	0.00	0.00	285.29	0.00	0.00	0.00	1582.28	0.00	0.00	0.00	1582.28
21+50	2150.00	50.00	155.02	0.00	0.00	0.00	293.44	0.00	0.00	0.00	1875.72	0.00	0.00	0.00	1875.72
22+00	2200.00	50.00	163.05	0.00	0.00	0.00	294.51	0.00	0.00	0.00	2170.23	0.00	0.00	0.00	2170.23
22+50	2250.00	50.00	160.06	0.00	0.00	0.00	299.18	0.00	0.00	0.00	2469.40	0.00	0.00	0.00	2469.40
23+00	2300.00	50.00	153.68	0.00	0.00	0.00	290.50	0.00	0.00	0.00	2759.90	0.00	0.00	0.00	2759.90
23+28 BK	2328.41	28.41	142.89	0.00	0.00	0.00	156.03	0.00	0.00	0.00	2915.93	0.00	0.00	0.00	2915.93
							Column totals	2915.93	0.00	0.00	0.00				

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 3 FCV

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
8+12	AH	812.00	0.00	746.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8+50		850.00	38.00	762.15	0.00	0.00	0.00	1061.64	0.00	0.00	0.00	1061.64	0.00	0.00	0.00	1061.64
9+00		900.00	50.00	733.07	0.00	0.00	0.00	1384.46	0.00	0.00	0.00	2446.11	0.00	0.00	0.00	2446.11
9+25	BK	925.00	25.00	732.90	0.00	0.00	0.00	678.69	0.00	0.00	0.00	3124.80	0.00	0.00	0.00	3124.80
							Column totals	3124.80	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 USH 45 NB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
299+00 AH	29900.00	0.00	428.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
299+50	29950.00	50.00	682.40	0.00	0.00	0.00	1028.81	0.00	0.00	0.00	1028.81	0.00	0.00	0.00	1028.81
300+00	30000.00	50.00	861.37	0.00	0.00	0.00	1429.42	0.00	0.00	0.00	2458.22	0.00	0.00	0.00	2458.22
300+50	30050.00	50.00	912.67	0.00	0.00	0.00	1642.63	0.00	0.00	0.00	4100.85	0.00	0.00	0.00	4100.85
301+00	30100.00	50.00	1048.13	0.00	0.00	0.00	1815.56	0.00	0.00	0.00	5916.41	0.00	0.00	0.00	5916.41
301+50	30150.00	50.00	1106.82	0.00	1.96	0.00	1995.32	0.00	1.81	0.00	7911.73	2.18	0.00	0.00	7909.55
302+00	30200.00	50.00	1195.98	0.00	0.00	0.00	2132.22	0.00	1.81	0.00	10043.95	4.36	0.00	0.00	10039.60
302+50	30250.00	50.00	1122.26	0.00	0.00	0.00	2146.52	0.00	0.00	0.00	12190.47	4.36	0.00	0.00	12186.12
303+00	30300.00	50.00	966.84	0.00	0.00	0.00	1934.35	0.00	0.00	0.00	14124.82	4.36	0.00	0.00	14120.47
303+00	30300.00	0.00	806.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14124.82	4.36	0.00	0.00	14120.47
303+50	30350.00	50.00	755.00	0.00	0.00	0.00	1445.37	0.00	0.00	0.00	15570.19	4.36	0.00	0.00	15565.84
304+00	30400.00	50.00	701.09	0.00	0.00	0.00	1348.23	0.00	0.00	0.00	16918.43	4.36	0.00	0.00	16914.07
304+50	30450.00	50.00	643.05	0.00	0.00	0.00	1244.57	0.00	0.00	0.00	18163.00	4.36	0.00	0.00	18158.64
304+50	30450.00	0.00	557.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18163.00	4.36	0.00	0.00	18158.64
305+00	30500.00	50.00	605.60	0.00	0.00	0.00	1076.48	0.00	0.00	0.00	19239.48	4.36	0.00	0.00	19235.13
305+50	30550.00	50.00	579.74	0.00	0.00	0.00	1097.54	0.00	0.00	0.00	20337.02	4.36	0.00	0.00	20332.66
306+00	30600.00	50.00	541.64	0.00	0.00	0.00	1038.31	0.00	0.00	0.00	21375.33	4.36	0.00	0.00	21370.98
306+50	30650.00	50.00	540.00	0.00	0.00	0.00	1001.52	0.00	0.00	0.00	22376.85	4.36	0.00	0.00	22372.50
307+00	30700.00	50.00	580.52	0.00	0.00	0.00	1037.52	0.00	0.00	0.00	23414.37	4.36	0.00	0.00	23410.01
307+50	30750.00	50.00	588.28	0.00	0.00	0.00	1082.22	0.00	0.00	0.00	24496.59	4.36	0.00	0.00	24492.24
308+00 BK	30800.00	50.00	656.83	0.00	0.00	0.00	1152.88	0.00	0.00	0.00	25649.47	4.36	0.00	0.00	25645.12
					Column totals		25649.47	0.00	3.63	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 USH 45 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	Mass Ordinate
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
310+00 AH	31000.00	0.00	52.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310+50	31050.00	50.00	69.63	0.00	0.00	0.00	112.69	0.00	0.00	0.00	112.69	0.00	0.00	0.00	112.69
310+50	31050.00	0.00	150.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.69	0.00	0.00	0.00	112.69
311+00	31100.00	50.00	192.25	0.00	0.00	0.00	317.03	0.00	0.00	0.00	429.72	0.00	0.00	0.00	429.72
311+00	31100.00	0.00	268.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	429.72	0.00	0.00	0.00	429.72
311+50	31150.00	50.00	655.87	0.00	0.00	0.00	855.79	0.00	0.00	0.00	1285.51	0.00	0.00	0.00	1285.51
312+00	31200.00	50.00	725.83	0.00	0.00	0.00	1279.35	0.00	0.00	0.00	2564.86	0.00	0.00	0.00	2564.86
312+50	31250.00	50.00	747.51	0.00	0.00	0.00	1364.20	0.00	0.00	0.00	3929.06	0.00	0.00	0.00	3929.06
313+00	31300.00	50.00	715.44	0.00	0.00	0.00	1354.58	0.00	0.00	0.00	5283.65	0.00	0.00	0.00	5283.65
313+50	31350.00	50.00	663.03	0.00	0.00	0.00	1276.36	0.00	0.00	0.00	6560.01	0.00	0.00	0.00	6560.01
314+00	31400.00	50.00	611.90	0.00	0.00	0.00	1180.49	0.00	0.00	0.00	7740.50	0.00	0.00	0.00	7740.50
314+00	31400.00	0.00	1021.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7740.50	0.00	0.00	0.00	7740.50
314+50	31450.00	50.00	942.01	0.00	0.00	0.00	1818.41	0.00	0.00	0.00	9558.91	0.00	0.00	0.00	9558.91
315+00	31500.00	50.00	829.91	0.00	0.00	0.00	1640.67	0.00	0.00	0.00	11199.57	0.00	0.00	0.00	11199.57
315+50	31550.00	50.00	706.37	0.00	0.00	0.00	1422.48	0.00	0.00	0.00	12622.06	0.00	0.00	0.00	12622.06
315+64	31564.00	14.00	694.93	0.00	0.00	0.00	363.30	0.00	0.00	0.00	12985.36	0.00	0.00	0.00	12985.36

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
315+64	31564.00	0.00	524.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12985.36	0.00	0.00	0.00	12985.36
316+00	31600.00	36.00	486.63	0.00	0.00	0.00	673.92	0.00	0.00	0.00	13659.28	0.00	0.00	0.00	13659.28
316+50	31650.00	50.00	431.73	0.00	0.00	0.00	850.33	0.00	0.00	0.00	14509.61	0.00	0.00	0.00	14509.61
317+00	31700.00	50.00	374.59	0.00	0.00	0.00	746.59	0.00	0.00	0.00	15256.20	0.00	0.00	0.00	15256.20
317+50	31750.00	50.00	318.31	0.00	0.00	0.00	641.57	0.00	0.00	0.00	15897.78	0.00	0.00	0.00	15897.78
318+00	31800.00	50.00	273.44	0.00	0.00	0.00	547.92	0.00	0.00	0.00	16445.69	0.00	0.00	0.00	16445.69
318+50	31850.00	50.00	228.99	0.00	0.00	0.00	465.21	0.00	0.00	0.00	16910.91	0.00	0.00	0.00	16910.91
319+00	31900.00	50.00	196.37	0.00	0.00	0.00	393.85	0.00	0.00	0.00	17304.76	0.00	0.00	0.00	17304.76
319+08	31908.00	8.00	191.98	0.00	0.00	0.00	57.53	0.00	0.00	0.00	17362.29	0.00	0.00	0.00	17362.29
319+08	31908.00	0.00	261.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17362.29	0.00	0.00	0.00	17362.29
319+50	31950.00	42.00	229.58	0.00	0.00	0.00	382.04	0.00	0.00	0.00	17744.33	0.00	0.00	0.00	17744.33
319+80	31980.00	30.00	215.42	0.00	0.00	0.00	247.22	0.00	0.00	0.00	17991.55	0.00	0.00	0.00	17991.55
319+80	31980.00	0.00	166.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17991.55	0.00	0.00	0.00	17991.55
320+00 BK	32000.00	20.00	162.36	0.00	0.00	0.00	121.80	0.00	0.00	0.00	18113.35	0.00	0.00	0.00	18113.35
					Column totals		18113.35	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 USH 45 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
320+00 AH	32000.00	0.00	162.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
320+50	32050.00	50.00	155.56	0.00	0.00	0.00	294.37	0.00	0.00	0.00	294.37	0.00	0.00	0.00	294.37
321+00	32100.00	50.00	168.26	0.00	0.00	0.00	299.83	0.00	0.00	0.00	594.20	0.00	0.00	0.00	594.20
321+50	32150.00	50.00	195.41	0.00	0.00	0.00	336.73	0.00	0.00	0.00	930.94	0.00	0.00	0.00	930.94
322+00	32200.00	50.00	221.91	0.00	0.00	0.00	386.41	0.00	0.00	0.00	1317.34	0.00	0.00	0.00	1317.34
322+50	32250.00	50.00	352.68	0.00	0.00	0.00	532.03	0.00	0.00	0.00	1849.37	0.00	0.00	0.00	1849.37
323+00	32300.00	50.00	390.99	0.00	0.00	0.00	688.58	0.00	0.00	0.00	2537.95	0.00	0.00	0.00	2537.95
323+50	32350.00	50.00	420.63	0.00	0.00	0.00	751.50	0.00	0.00	0.00	3289.45	0.00	0.00	0.00	3289.45
324+00	32400.00	50.00	445.42	0.00	0.00	0.00	801.90	0.00	0.00	0.00	4091.35	0.00	0.00	0.00	4091.35
324+50	32450.00	50.00	473.90	0.00	0.00	0.00	851.22	0.00	0.00	0.00	4942.57	0.00	0.00	0.00	4942.57
325+00	32500.00	50.00	509.46	0.00	0.00	0.00	910.52	0.00	0.00	0.00	5853.09	0.00	0.00	0.00	5853.09
325+50	32550.00	50.00	555.29	0.00	0.00	0.00	985.88	0.00	0.00	0.00	6838.97	0.00	0.00	0.00	6838.97
326+00	32600.00	50.00	607.05	0.00	0.00	0.00	1076.24	0.00	0.00	0.00	7915.21	0.00	0.00	0.00	7915.21
326+50	32650.00	50.00	643.99	0.00	0.00	0.00	1158.37	0.00	0.00	0.00	9073.58	0.00	0.00	0.00	9073.58
327+00	32700.00	50.00	674.82	0.00	0.51	0.00	1221.12	0.00	0.47	0.00	10294.70	0.57	0.00	0.00	10294.14
327+50	32750.00	50.00	712.18	0.00	10.29	0.00	1284.26	0.00	10.00	0.00	11578.96	12.57	0.00	0.00	11566.40
328+00	32800.00	50.00	733.02	0.00	0.00	0.00	1338.15	0.00	9.53	0.00	12917.11	24.00	0.00	0.00	12893.11
328+00	32800.00	0.00	613.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12917.11	24.00	0.00	0.00	12893.11
328+50	32850.00	50.00	625.26	0.00	0.00	0.00	1146.80	0.00	0.00	0.00	14063.91	24.00	0.00	0.00	14039.91
328+60	32860.00	10.00	625.94	0.00	0.00	0.00	231.70	0.00	0.00	0.00	14295.61	24.00	0.00	0.00	14271.61
328+60	32860.00	0.00	511.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14295.61	24.00	0.00	0.00	14271.61
329+00	32900.00	40.00	515.12	0.00	0.00	0.00	760.60	0.00	0.00	0.00	15056.21	24.00	0.00	0.00	15032.21
329+50	32950.00	50.00	508.88	0.00	0.00	0.00	948.15	0.00	0.00	0.00	16004.36	24.00	0.00	0.00	15980.36
330+00	33000.00	50.00	495.64	0.00	0.00	0.00	930.11	0.00	0.00	0.00	16934.47	24.00	0.00	0.00	16910.47
330+00	33000.00	0.00	376.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16934.47	24.00	0.00	0.00	16910.47
330+50	33050.00	50.00	367.59	0.00	0.00	0.00	689.03	0.00	0.00	0.00	17623.50	24.00	0.00	0.00	17599.50
331+00 BK	33100.00	50.00	377.70	0.00	0.00	0.00	690.08	0.00	0.00	0.00	18313.58	24.00	0.00	0.00	18289.58

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
344+00 AH	34400.00	0.00	86.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
344+50	34450.00	50.00	96.39	0.00	0.00	0.00	169.53	0.00	0.00	0.00	169.53	0.00	0.00	0.00	169.53
345+00	34500.00	50.00	79.66	0.00	0.00	0.00	163.01	0.00	0.00	0.00	332.54	0.00	0.00	0.00	332.54
345+50	34550.00	50.00	302.32	0.00	0.00	0.00	353.69	0.00	0.00	0.00	686.22	0.00	0.00	0.00	686.22
346+00	34600.00	50.00	133.68	0.00	0.00	0.00	403.70	0.00	0.00	0.00	1089.93	0.00	0.00	0.00	1089.93
346+50	34650.00	50.00	70.42	0.00	0.03	0.00	188.98	0.00	0.03	0.00	1278.91	0.03	0.00	0.00	1278.87
347+00	34700.00	50.00	52.74	0.00	0.01	0.00	114.04	0.00	0.04	0.00	1392.94	0.08	0.00	0.00	1392.87
347+00	34700.00	0.00	204.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1392.94	0.08	0.00	0.00	1392.87
347+50	34750.00	50.00	137.38	0.00	0.04	0.00	316.11	0.00	0.05	0.00	1709.06	0.13	0.00	0.00	1708.92
348+00	34800.00	50.00	92.93	0.00	0.06	0.00	213.25	0.00	0.09	0.00	1922.31	0.24	0.00	0.00	1922.06
348+50	34850.00	50.00	85.54	0.00	0.17	0.00	165.25	0.00	0.21	0.00	2087.56	0.50	0.00	0.00	2087.06
349+00	34900.00	50.00	81.18	0.00	0.38	0.00	154.37	0.00	0.51	0.00	2241.93	1.11	0.00	0.00	2240.81
349+50	34950.00	50.00	81.73	0.00	0.51	0.00	150.84	0.00	0.82	0.00	2392.77	2.10	0.00	0.00	2390.67
350+00	35000.00	50.00	84.22	0.00	0.69	0.00	153.66	0.00	1.11	0.00	2546.43	3.43	0.00	0.00	2542.99
350+00	35000.00	0.00	103.82	0.00	0.69	0.00	0.00	0.00	0.00	0.00	2546.43	3.43	0.00	0.00	2542.99
350+50	35050.00	50.00	113.96	0.00	0.57	0.00	201.65	0.00	1.17	0.00	2748.07	4.83	0.00	0.00	2743.24
351+00	35100.00	50.00	128.41	0.00	0.22	0.00	224.42	0.00	0.73	0.00	2972.49	5.71	0.00	0.00	2966.78
351+50	35150.00	50.00	145.44	0.00	0.03	0.00	253.56	0.00	0.23	0.00	3226.06	5.99	0.00	0.00	3220.07
352+00	35200.00	50.00	164.13	0.00	0.00	0.00	286.64	0.00	0.03	0.00	3512.69	6.02	0.00	0.00	3506.67
352+50	35250.00	50.00	171.99	0.00	0.00	0.00	311.22	0.00	0.00	0.00	3823.92	6.02	0.00	0.00	3817.89
352+80 BK	35280.41	30.41	170.23	0.00	0.02	0.00	192.72	0.00	0.01	0.00	4016.64	6.04	0.00	0.00	4010.60
						Column totals	22330.22	0.00	25.03	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
				Note 1				Note 2	Note 3		Note 1				
230+84 AH	23084.21	0.00	0.00	0.00	225.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231+00	23100	15.79	0.00	0.00	229.13	0.00	0.00	0.00	132.84	0.00	0.00	159.41	0.00	0.00	-159.41
231+50	23150	50.00	0.00	0.00	234.10	0.00	0.00	0.00	428.92	0.00	0.00	674.11	0.00	0.00	-674.11
232+00	23200	50.00	0.00	0.00	313.23	0.00	0.00	0.00	506.79	0.00	0.00	1282.25	0.00	0.00	-1282.25
232+00	23200	0.00	0.00	0.00	233.05	0.00	0.00	0.00	0.00	0.00	0.00	1282.25	0.00	0.00	-1282.25
232+50	23250	50.00	0.00	0.00	288.07	0.00	0.00	0.00	482.52	0.00	0.00	1861.27	0.00	0.00	-1861.27
233+00	23300	50.00	0.00	0.00	327.07	0.00	0.00	0.00	569.57	0.00	0.00	2544.76	0.00	0.00	-2544.76
233+00	23300	0.00	0.00	0.00	265.32	0.00	0.00	0.00	0.00	0.00	0.00	2544.76	0.00	0.00	-2544.76
233+50	23350	50.00	0.00	0.00	300.65	0.00	0.00	0.00	524.05	0.00	0.00	3173.62	0.00	0.00	-3173.62
234+00	23400	50.00	0.00	0.00	326.40	0.00	0.00	0.00	580.60	0.00	0.00	3870.34	0.00	0.00	-3870.34
234+00	23400	0.00	0.00	0.00	275.76	0.00	0.00	0.00	0.00	0.00	0.00	3870.34	0.00	0.00	-3870.34
234+50	23450	50.00	0.00	0.00	304.66	0.00	0.00	0.00	268.71	0.00	0.00	4192.79	0.00	0.00	-4192.79
235+00	23500	50.00	0.00	0.00	276.43	0.00	0.00	0.00	538.05	0.00	0.00	4838.45	0.00	0.00	-4838.45
235+50	23550	50.00	0.00	0.00	256.55	0.00	0.00	0.00	493.50	0.00	0.00	5430.65	0.00	0.00	-5430.65
236+00	23600	50.00	0.00	0.00	337.36	0.00	0.00	0.00	549.92	0.00	0.00	6090.55	0.00	0.00	-6090.55
236+00	23600	0.00	0.00	0.00	336.14	0.00	0.00	0.00	0.00	0.00	0.00	6090.55	0.00	0.00	-6090.55
236+50	23650	50.00	0.00	0.00	320.26	0.00	0.00	0.00	607.78	0.00	0.00	6819.88	0.00	0.00	-6819.88
236+86	23685.82	35.82	39.98	0.00	703.42	0.00	26.52	0.00	679.04	0.00	26.52	7634.73	0.00	0.00	-7608.21
237+06 BK	23705.7	19.88	0.00	0.00	0.00	0.00	14.72	0.00	258.96	0.00	41.24	7945.49	0.00	0.00	-7904.25

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
238+19 AH	23819.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238+37	23836.51	17.20	4.45	0.00	1048.84	0.00	1.42	0.00	334.07	0.00	1.42	400.89	0.00	0.00	-399.47
238+50	23850	13.49	17.13	0.00	687.23	0.00	5.39	0.00	433.70	0.00	6.81	921.33	0.00	0.00	-914.52
239+00	23900	50.00	23.60	0.00	411.67	0.00	37.71	0.00	1017.50	0.00	44.52	2142.33	0.00	0.00	-2097.80
239+10	23910	10.00	23.60	0.00	420.51	0.00	8.74	0.00	154.11	0.00	53.26	2327.25	0.00	0.00	-2273.99
239+10	23910	0.00	23.60	0.00	315.00	0.00	0.00	0.00	0.00	0.00	53.26	2327.25	0.00	0.00	-2273.99
239+50	23950	50.00	24.86	0.00	393.61	0.00	44.87	0.00	656.12	0.00	98.13	3114.60	0.00	0.00	-2840.28
240+00	24000	50.00	24.14	0.00	425.02	0.00	45.37	0.00	757.99	0.00	143.50	4024.19	0.00	0.00	-3704.50
240+50	24050	50.00	22.22	0.00	466.94	0.00	42.93	0.00	825.89	0.00	186.43	5015.25	0.00	0.00	-4652.64
241+00	24100	50.00	20.02	0.00	510.94	0.00	39.11	0.00	905.44	0.00	225.54	6101.79	0.00	0.00	-5700.06
241+50	24150	50.00	17.63	0.00	549.08	0.00	34.86	0.00	981.50	0.00	260.40	7279.59	0.00	0.00	-6843.00
242+00	24200	50.00	14.91	0.00	585.33	0.00	30.13	0.00	1050.38	0.00	290.53	8540.04	0.00	0.00	-8073.32
242+50	24250	50.00	12.02	0.00	615.27	0.00	24.94	0.00	1111.67	0.00	315.47	9874.04	0.00	0.00	-9382.39
243+00	24300	50.00	9.66	0.00	628.28	0.00	20.07	0.00	1151.44	0.00	335.54	11255.77	0.00	0.00	-10744.04
243+00	24300	0.00	0.00	0.00	-96.90	0.00	0.00	0.00	0.00	0.00	335.54	11255.77	0.00	0.00	-10744.04
243+50	24350	50.00	11.29	0.00	694.58	0.00	10.45	0.00	553.41	0.00	345.99	11919.85	0.00	0.00	-11397.67
244+00	24400	50.00	9.71	0.00	627.21	0.00	19.44	0.00	1223.88	0.00	365.44	13388.51	0.00	0.00	-12846.88
244+50	24450	50.00	11.17	0.00	537.01	0.00	19.33	0.00	1077.98	0.00	384.77	14682.09	0.00	0.00	-14121.13
245+00	24500	50.00	6.31	0.00	443.30	0.00	16.19	0.00	907.69	0.00	400.96	15771.32	0.00	0.00	-15194.18
245+50	24550	50.00	0.00	0.00	375.91	0.00	5.84	0.00	758.53	0.00	406.80	16681.55	0.00	0.00	-16098.57
246+00	24600	50.00	0.00	0.00	297.93	0.00	0.00	0.00	623.93	0.00	406.80	17430.27	0.00	0.00	-16847.28
246+50	24650	50.00	0.00	0.00	274.27	0.00	0.00	0.00	529.81	0.00	406.80	18066.04	0.00	0.00	-17483.06
247+00	24700	50.00	0.00	0.00	229.98	0.00	0.00	0.00	466.90	0.00	406.80	18626.32	0.00	0.00	-18043.33
247+50	24750	50.00	2.10	0.00	173.03	0.00	1.94	0.00	373.16	0.00	408.74	19074.11	0.00	0.00	-18489.18
248+00	24800	50.00	10.23	0.00	134.52	0.00	11.42	0.00	284.77	0.00	420.16	19415.83	0.00	0.00	-18819.48
248+50	24850	50.00	30.77	0.00	108.09	0.00	37.96	0.00	224.64	0.00	458.12	19685.40	0.00	0.00	-19051.09
249+00	24900	50.00	62.00	0.00	91.96	0.00	85.90	0.00	185.23	0.00	544.02	19907.68	0.00	0.00	-19187.47

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
249+50	24950	50.00	95.92	0.00	81.95	0.00	146.22	0.00	161.03	0.00	690.24	20100.91	0.00	0.00	-19234.48
250+00	25000	50.00	129.92	0.00	48.09	0.00	209.11	0.00	120.41	0.00	899.35	20245.40	0.00	0.00	-19169.86
250+50	25050	50.00	181.25	0.00	25.13	0.00	288.12	0.00	67.80	0.00	1187.48	20326.75	0.00	0.00	-18963.09
251+00	25100	50.00	257.42	0.00	19.76	0.00	406.18	0.00	41.56	0.00	1593.65	20376.63	0.00	0.00	-18606.79
251+50	25150	50.00	333.82	0.00	16.73	0.00	547.44	0.00	33.79	0.00	2141.10	20417.18	0.00	0.00	-18099.89
252+00	25200	50.00	390.60	0.00	0.00	0.00	670.76	0.00	15.49	0.00	2811.85	20435.77	0.00	0.00	-17447.72
252+50	25250	50.00	431.04	0.00	0.00	0.00	760.78	0.00	0.00	0.00	3572.63	20435.77	0.00	0.00	-16686.94
253+00	25300	50.00	466.41	0.00	0.00	0.00	830.97	0.00	0.00	0.00	4403.60	20435.77	0.00	0.00	-15855.97
253+50	25350	50.00	490.26	0.00	0.00	0.00	885.81	0.00	0.00	0.00	5289.41	20435.77	0.00	0.00	-14970.17
254+00	25400	50.00	504.18	0.00	0.00	0.00	920.78	0.00	0.00	0.00	6210.19	20435.77	0.00	0.00	-14049.39
254+32	25432	32.00	528.31	0.00	0.00	0.00	611.85	0.00	0.00	0.00	6822.03	20435.77	0.00	0.00	-13437.54
254+32	25432	0.00	451.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6822.03	20435.77	0.00	0.00	-13437.54
254+50	25450	50.00	430.54	0.00	0.00	0.00	816.86	0.00	0.00	0.00	7638.90	20435.77	0.00	0.00	-12620.68
255+00	25500	50.00	425.25	0.00	0.00	0.00	792.40	0.00	0.00	0.00	8431.29	20435.77	0.00	0.00	-11828.28
255+50	25550	50.00	429.42	0.00	0.00	0.00	791.36	0.00	0.00	0.00	9222.65	20435.77	0.00	0.00	-11036.92
256+00	25600	50.00	416.30	0.00	0.00	0.00	783.07	0.00	0.00	0.00	10005.73	20435.77	0.00	0.00	-10253.85
256+50	25650	50.00	418.93	0.00	0.00	0.00	773.36	0.00	0.00	0.00	10779.09	20435.77	0.00	0.00	-9480.49
257+00	25700	50.00	419.75	0.00	0.00	0.00	776.56	0.00	0.00	0.00	11555.65	20435.77	0.00	0.00	-8703.93
257+50	25750	50.00	419.10	0.00	0.00	0.00	776.71	0.00	0.00	0.00	12332.36	20435.77	0.00	0.00	-7927.22
258+00	25800	50.00	410.40	0.00	0.00	0.00	768.06	0.00	0.00	0.00	13100.41	20435.77	0.00	0.00	-7159.16
258+28	25828	28.00	500.50	0.00	0.00	0.00	472.32	0.00	0.00	0.00	13572.73	20435.77	0.00	0.00	-6686.84
258+28	25828	0.00	630.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13572.73	20435.77	0.00	0.00	-6686.84
258+50	25850	50.00	597.76	0.00	0.00	0.00	1137.52	0.00	0.00	0.00	14710.25	20435.77	0.00	0.00	-5549.33
259+00	25900	50.00	566.80	0.00	0.01	0.00	1078.30	0.00	0.01	0.00	15788.55	20435.78	0.00	0.00	-4471.04
259+50	25950	50.00	544.94	0.00	0.11	0.00	1029.39	0.00	0.11	0.00	16817.94	20435.91	0.00	0.00	-3441.79
260+00	26000	50.00	535.73	0.00	0.00	0.00	1000.62	0.00	0.10	0.00	17818.56	20436.03	0.00	0.00	-2441.29
260+50	26050	50.00	557.06	0.00	0.00	0.00	1011.84	0.00	0.00	0.00	18830.40	20436.03	0.00	0.00	-1429.44
261+00	26100	50.00	574.47	0.00	0.00	0.00	1047.71	0.00	0.00	0.00	19878.11	20436.03	0.00	0.00	-381.73
261+50	26150	50.00	577.28	0.00	0.00	0.00	1066.44	0.00	0.00	0.00	20944.55	20436.03	0.00	0.00	684.70
262+00	26200	50.00	572.43	0.00	0.00	0.00	1064.55	0.00	0.00	0.00	22009.09	20436.03	0.00	0.00	1749.25
262+50	26250	50.00	598.29	0.00	0.00	0.00	1084.00	0.00	0.00	0.00	23093.09	20436.03	0.00	0.00	2833.25
263+00	26300	50.00	576.38	0.00	0.00	0.00	1087.66	0.00	0.00	0.00	24180.75	20436.03	0.00	0.00	3920.91
263+50	26350	50.00	492.33	0.00	0.00	0.00	989.55	0.00	0.00	0.00	25170.30	20436.03	0.00	0.00	4910.45
264+00	26400	50.00	534.04	0.00	0.00	0.00	950.34	0.00	0.00	0.00	26120.64	20436.03	0.00	0.00	5860.80

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 IH 94 EB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.2	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
264+50	26450	50.00	578.58	0.00	0.00	0.00	1030.20	0.00	0.00	0.00	27150.84	20436.03	0.00	0.00	6891.00
265+00	26500	50.00	617.53	0.00	0.00	0.00	1107.51	0.00	0.00	0.00	28258.35	20436.03	0.00	0.00	7998.51
265+50	26550	50.00	634.92	0.00	0.00	0.00	1159.68	0.00	0.00	0.00	29418.03	20436.03	0.00	0.00	9158.18
266+00	26600	50.00	650.65	0.00	0.00	0.00	1190.34	0.00	0.00	0.00	30608.37	20436.03	0.00	0.00	10348.53
266+50	26650	50.00	655.24	0.00	0.00	0.00	1209.16	0.00	0.00	0.00	31817.53	20436.03	0.00	0.00	11557.68
267+00	26700	50.00	641.07	0.00	0.00	0.00	1200.29	0.00	0.00	0.00	33017.82	20436.03	0.00	0.00	12757.97
267+50	26750	50.00	625.31	0.00	0.00	0.00	1172.57	0.00	0.00	0.00	34190.39	20436.03	0.00	0.00	13930.55
268+00	26800	50.00	607.38	0.00	0.00	0.00	1141.38	0.00	0.00	0.00	35331.77	20436.03	0.00	0.00	15071.93
268+50	26850	50.00	616.76	0.00	0.00	0.00	1133.46	0.00	0.00	0.00	36465.23	20436.03	0.00	0.00	16205.39
269+00	26900	50.00	603.29	0.00	0.00	0.00	1129.68	0.00	0.00	0.00	37594.91	20436.03	0.00	0.00	17335.06
269+50	26950	50.00	590.75	0.00	0.00	0.00	1105.59	0.00	0.00	0.00	38700.50	20436.03	0.00	0.00	18440.66
270+00	27000	50.00	562.41	0.00	0.00	0.00	1067.74	0.00	0.00	0.00	39768.24	20436.03	0.00	0.00	19508.40
270+50	27050	50.00	515.49	0.00	0.00	0.00	998.06	0.00	0.00	0.00	40766.30	20436.03	0.00	0.00	20506.45
271+00	27100	50.00	457.90	0.00	0.00	0.00	901.29	0.00	0.00	0.00	41667.58	20436.03	0.00	0.00	21407.74
271+50	27150	50.00	398.91	0.00	0.00	0.00	793.34	0.00	0.00	0.00	42460.93	20436.03	0.00	0.00	22201.08
272+00	27200	50.00	333.77	0.00	0.00	0.00	678.41	0.00	0.00	0.00	43139.33	20436.03	0.00	0.00	22879.49
272+50	27250	50.00	273.92	0.00	0.00	0.00	562.68	0.00	0.00	0.00	43702.01	20436.03	0.00	0.00	23442.17
273+00	27300	50.00	223.69	0.00	0.00	0.00	460.75	0.00	0.00	0.00	44162.76	20436.03	0.00	0.00	23902.92
273+02	27302	2.00	222.94	0.00	0.00	0.00	16.54	0.00	0.00	0.00	44179.30	20436.03	0.00	0.00	23919.46
273+02	27302	0.00	126.48	0.00	14.72	0.00	0.00	0.00	0.00	0.00	44179.30	20436.03	0.00	0.00	23919.46
273+50	27350	48.00	110.66	0.00	0.00	0.00	210.79	0.00	13.08	0.00	44390.09	20451.73	0.00	0.00	24114.55
274+00	27400	50.00	73.43	0.00	0.01	0.00	170.45	0.00	0.01	0.00	44560.55	20451.74	0.00	0.00	24284.99
274+50	27450	50.00	53.48	0.00	0.01	0.00	117.51	0.00	0.02	0.00	44678.06	20451.77	0.00	0.00	24402.48
275+00	27500	50.00	46.71	0.00	0.01	0.00	92.77	0.00	0.02	0.00	44770.82	20451.79	0.00	0.00	24495.22
275+50	27550	50.00	42.33	0.00	0.01	0.00	82.44	0.00	0.02	0.00	44853.27	20451.81	0.00	0.00	24577.65
276+00	27600	50.00	47.49	0.00	0.01	0.00	83.17	0.00	0.02	0.00	44936.44	20451.83	0.00	0.00	24660.79
276+50	27650	50.00	57.46	0.00	0.01	0.00	97.18	0.00	0.02	0.00	45033.61	20451.86	0.00	0.00	24757.94
276+60	27660	10.00	59.73	0.00	0.01	0.00	21.70	0.00	0.00	0.00	45055.31	20451.86	0.00	0.00	24779.64
276+60	27660	0.00	73.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	45055.31	20451.86	0.00	0.00	24779.64
276+75	27675	15.00	94.88	0.00	0.01	0.00	46.66	0.00	0.01	0.00	45101.97	20451.87	0.00	0.00	24826.30
276+75	27675	0.00	49.85	0.00	0.01	0.00	0.00	0.00	0.00	0.00	45101.97	20451.87	0.00	0.00	24826.30
277+00	27700	25.00	47.54	0.00	3.26	0.00	45.09	0.00	1.51	0.00	45147.06	20453.68	0.00	0.00	24869.57
277+50	27750	50.00	48.89	0.00	2.98	0.00	89.29	0.00	5.78	0.00	45236.35	20460.62	0.00	0.00	24951.92
278+00	27800	50.00	52.93	0.00	2.71	0.00	94.28	0.00	5.27	0.00	45330.63	20466.94	0.00	0.00	25039.88
278+50	27850	50.00	53.64	0.00	2.57	0.00	98.68	0.00	4.89	0.00	45429.30	20472.81	0.00	0.00	25132.69
278+87	27887	37.00	117.80	0.00	0.01	0.00	117.47	0.00	1.77	0.00	45546.77	20474.93	0.00	0.00	25248.03

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
							Note 1	Note 2	Note 3						
278+87	27887	0.00	117.80	0.00	0.01	0.00	0.00	0.00	0.00	0.00	45546.77	20474.93	0.00	0.00	25248.03
279+00	27900	13.00	58.08	0.00	2.21	0.00	42.34	0.00	0.53	0.00	45589.11	20475.57	0.00	0.00	25289.73
279+15	27915	15.00	43.76	0.00	0.00	0.00	28.29	0.00	0.61	0.00	45617.40	20476.30	0.00	0.00	25317.28
279+15	27915	0.00	63.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45617.40	20476.30	0.00	0.00	25317.28
279+50	27950	35.00	39.08	0.00	2.05	0.00	66.79	0.00	1.33	0.00	45684.19	20477.90	0.00	0.00	25382.48
280+00	28000	50.00	34.04	0.00	1.53	0.00	67.70	0.00	3.31	0.00	45751.90	20481.88	0.00	0.00	25446.21
280+50	28050	50.00	34.67	0.00	6.40	0.00	63.62	0.00	7.34	0.00	45815.52	20490.69	0.00	0.00	25501.02
281+00	28100	50.00	42.65	0.00	7.86	0.00	71.59	0.00	13.20	0.00	45887.11	20506.53	0.00	0.00	25556.77
281+50	28150	50.00	59.53	0.00	3.41	0.00	94.61	0.00	10.44	0.00	45981.72	20519.05	0.00	0.00	25638.85
282+00	28200	50.00	80.46	0.00	0.05	0.00	129.62	0.00	3.20	0.00	46111.34	20522.90	0.00	0.00	25764.63
282+00	28200	0.00	80.46	0.00	18.90	0.00	0.00	0.00	0.00	0.00	46111.34	20522.90	0.00	0.00	25764.63
282+50	28250	50.00	98.83	0.00	15.27	0.00	166.01	0.00	31.64	0.00	46277.35	20560.87	0.00	0.00	25892.67
283+00	28300	50.00	114.70	0.00	22.05	0.00	197.71	0.00	34.56	0.00	46475.06	20602.33	0.00	0.00	26048.92
283+50	28350	50.00	126.40	0.00	93.64	0.00	223.24	0.00	107.12	0.00	46698.30	20730.88	0.00	0.00	26143.62
284+00	28400	50.00	128.13	0.00	52.87	0.00	235.68	0.00	135.66	0.00	46933.98	20893.67	0.00	0.00	26216.50
284+50	28450	50.00	126.48	0.00	26.09	0.00	235.75	0.00	73.11	0.00	47169.73	20981.40	0.00	0.00	26364.52
284+71 BK	28471	21.00	126.36	0.00	0.97	0.00	98.33	0.00	10.52	0.00	47268.06	20994.03	0.00	0.00	26450.22
Column totals							47309.30	0.00	24116.26	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP NW

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.00 Note 1	1.2	1.30 Note 4	0.80 Note 5	Note 6
480+00 AH	48000.00	0.00	18.74	0.00	97.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
480+50	48050.00	50.00	8.86	0.00	531.21	0.00	25.56	0.00	582.06	0.00	25.56	698.47	0.00	0.00	-672.91
481+00	48100.00	50.00	2.50	0.00	813.32	0.00	10.52	0.00	1244.94	0.00	36.07	2192.39	0.00	0.00	-2156.31
481+50	48150.00	50.00	1.85	0.00	1018.26	0.00	4.03	0.00	1695.91	0.00	40.10	4227.48	0.00	0.00	-4187.38
482+00	48200.00	50.00	1.93	0.00	987.22	0.00	3.50	0.00	1856.93	0.00	43.60	6455.79	0.00	0.00	-6412.19
482+50	48250.00	50.00	1.65	0.00	1005.17	0.00	3.31	0.00	1844.81	0.00	46.92	8669.56	0.00	0.00	-8622.64
483+00	48300.00	50.00	1.00	0.00	1060.76	0.00	2.45	0.00	1912.90	0.00	49.37	10965.03	0.00	0.00	-10915.66
483+50	48350.00	50.00	1.51	0.00	1086.52	0.00	2.32	0.00	1988.22	0.00	51.69	13350.90	0.00	0.00	-13299.21
484+00	48400.00	50.00	2.03	0.00	1087.00	0.00	3.28	0.00	2012.52	0.00	54.97	15765.92	0.00	0.00	-15710.95
484+50	48450.00	50.00	1.78	0.00	1073.47	0.00	3.53	0.00	2000.44	0.00	58.50	18166.44	0.00	0.00	-18107.94
485+00	48500.00	50.00	2.05	0.00	1073.24	0.00	3.55	0.00	1987.69	0.00	62.05	20551.68	0.00	0.00	-20489.63
485+50	48550.00	50.00	2.02	0.00	1136.13	0.00	3.77	0.00	2045.71	0.00	65.81	23006.53	0.00	0.00	-22940.72
486+00	48600.00	50.00	2.88	0.00	1219.08	0.00	4.54	0.00	2180.75	0.00	70.35	25623.43	0.00	0.00	-25553.08
486+50	48650.00	50.00	28.38	0.00	1089.54	0.00	28.94	0.00	2137.61	0.00	99.30	28188.57	0.00	0.00	-28089.27
487+00	48700.00	50.00	46.25	0.00	1028.15	0.00	69.10	0.00	1960.82	0.00	168.40	30541.56	0.00	0.00	-30373.16
487+50	48750.00	50.00	42.81	0.00	1136.85	0.00	82.46	0.00	2004.63	0.00	250.86	32947.11	0.00	0.00	-32696.25
488+00	48800.00	50.00	4.76	0.00	1083.23	0.00	44.05	0.00	2055.63	0.00	294.91	35413.87	0.00	0.00	-35118.96
488+50	48850.00	50.00	6.90	0.00	811.16	0.00	10.80	0.00	1754.06	0.00	305.70	37518.74	0.00	0.00	-37213.04
489+00	48900.00	50.00	34.80	0.00	375.29	0.00	38.61	0.00	1098.56	0.00	344.31	38837.02	0.00	0.00	-38492.71
489+50	48950.00	50.00	86.14	0.00	351.46	0.00	111.98	0.00	672.92	0.00	456.30	39644.52	0.00	0.00	-39188.23
490+00	49000.00	50.00	41.05	0.00	548.03	0.00	117.77	0.00	832.86	0.00	574.06	40643.96	0.00	0.00	-40069.89
490+50	49050.00	50.00	2.24	0.00	620.80	0.00	40.08	0.00	1082.25	0.00	614.15	41942.66	0.00	0.00	-41328.51
491+00	49100.00	50.00	0.00	0.00	388.54	0.00	2.07	0.00	934.57	0.00	616.22	43064.14	0.00	0.00	-42447.92
491+50	49150.00	50.00	0.00	0.00	415.59	0.00	0.00	0.00	744.56	0.00	616.22	43957.62	0.00	0.00	-43341.40
492+00	49200.00	50.00	0.00	0.00	328.24	0.00	0.00	0.00	688.73	0.00	616.22	44784.10	0.00	0.00	-44167.88
492+50	49250.00	50.00	0.00	0.00	186.03	0.00	0.00	0.00	476.18	0.00	616.22	45355.51	0.00	0.00	-44739.29
493+00 BK	49300.00	50.00	0.00	0.00	263.40	0.00	0.00	0.00	416.14	0.00	616.22	45854.88	0.00	0.00	-45238.66
Column totals							616.22	0.00	38212.40	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 RAMP NE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.2	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
521+88 AH	52187.54	0.00	13.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522+00	52200	12.46	16.12	0.00	0.00	0.00	6.78	0.00	0.00	0.00	6.78	0.00	0.00	0.00	6.78
522+50	52250	50.00	32.17	0.00	0.00	0.00	59.57	0.00	0.00	0.00	66.35	0.00	0.00	0.00	66.35
523+00	52300	50.00	57.18	0.00	0.00	0.00	82.73	0.00	0.00	0.00	149.08	0.00	0.00	0.00	149.08
523+50	52350	50.00	97.57	0.00	0.00	0.00	143.29	0.00	0.00	0.00	292.37	0.00	0.00	0.00	292.37
524+00	52400	50.00	151.43	0.00	0.00	0.00	230.56	0.00	0.00	0.00	522.93	0.00	0.00	0.00	522.93
524+50	52450	50.00	212.21	0.00	0.00	0.00	336.70	0.00	0.00	0.00	859.63	0.00	0.00	0.00	859.63
525+00	52500	50.00	267.48	0.00	0.00	0.00	444.16	0.00	0.00	0.00	1303.79	0.00	0.00	0.00	1303.79
525+30	52530	30.00	304.04	0.00	0.00	0.00	317.51	0.00	0.00	0.00	1621.30	0.00	0.00	0.00	1621.30
525+30	52530	0.00	150.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1621.30	0.00	0.00	0.00	1621.30
525+50	52550	20.00	150.31	0.00	0.00	0.00	111.34	0.00	0.00	0.00	1732.64	0.00	0.00	0.00	1732.64
525+66 BK	52566	16.00	147.19	0.00	0.00	0.00	88.15	0.00	0.00	0.00	1820.79	0.00	0.00	0.00	1820.79
561+55 AH	56155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
562+00	56200	45.00	17.10	0.00	0.00	0.00	14.25	0.00	0.00	0.00	14.25	0.00	0.00	0.00	14.25
562+50	56250	50.00	22.42	0.00	0.00	0.00	36.59	0.00	0.00	0.00	50.84	0.00	0.00	0.00	50.84
563+00	56300	50.00	29.57	0.00	0.00	0.00	48.14	0.00	0.00	0.00	98.98	0.00	0.00	0.00	98.98
563+50	56350	50.00	37.31	0.00	0.00	0.00	61.93	0.00	0.00	0.00	160.91	0.00	0.00	0.00	160.91
564+00	56400	50.00	45.75	0.00	0.00	0.00	76.91	0.00	0.00	0.00	237.81	0.00	0.00	0.00	237.81
564+50	56450	50.00	53.96	0.00	0.00	0.00	92.32	0.00	0.00	0.00	330.14	0.00	0.00	0.00	330.14
565+00	56500	50.00	62.00	0.00	0.00	0.00	107.37	0.00	0.00	0.00	437.51	0.00	0.00	0.00	437.51
565+50	56550	50.00	69.82	0.00	0.00	0.00	122.06	0.00	0.00	0.00	559.56	0.00	0.00	0.00	559.56
566+00	56600	50.00	77.36	0.00	0.00	0.00	136.28	0.00	0.00	0.00	695.84	0.00	0.00	0.00	695.84
566+50	56650	50.00	81.16	0.00	0.00	0.00	146.78	0.00	0.00	0.00	842.62	0.00	0.00	0.00	842.62
567+00	56700	50.00	82.79	0.00	0.00	0.00	151.81	0.00	0.00	0.00	994.43	0.00	0.00	0.00	994.43
567+50	56750	50.00	82.17	0.00	0.00	0.00	152.74	0.00	0.00	0.00	1147.17	0.00	0.00	0.00	1147.17
568+00	56800	50.00	78.41	0.00	0.00	0.00	148.69	0.00	0.00	0.00	1295.85	0.00	0.00	0.00	1295.85
568+26	56825.86	25.86	74.41	0.00	0.00	0.00	73.18	0.00	0.00	0.00	1369.04	0.00	0.00	0.00	1369.04
568+26	56825.86	0.00	119.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1369.04	0.00	0.00	0.00	1369.04
568+50	56850	24.14	119.47	0.00	0.00	0.00	106.72	0.00	0.00	0.00	1475.75	0.00	0.00	0.00	1475.75
569+00	56900	50.00	117.35	0.00	0.00	0.00	219.28	0.00	0.00	0.00	1695.03	0.00	0.00	0.00	1695.03
569+50	56950	50.00	108.46	0.00	0.00	0.00	209.08	0.00	0.00	0.00	1904.11	0.00	0.00	0.00	1904.11
570+00	57000	50.00	113.30	0.00	0.00	0.00	205.33	0.00	0.00	0.00	2109.45	0.00	0.00	0.00	2109.45
570+14	57014	14.00	149.90	0.00	0.00	0.00	68.24	0.00	0.00	0.00	2177.68	0.00	0.00	0.00	2177.68

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP NE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
570+14	57014	0.00	60.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2177.68	0.00	0.00	0.00	2177.68
570+50	57050	50.00	53.87	0.00	0.00	0.00	105.84	0.00	0.00	0.00	2283.53	0.00	0.00	0.00	2283.53
571+00	57100	50.00	47.27	0.00	0.00	0.00	93.65	0.00	0.00	0.00	2377.17	0.00	0.00	0.00	2377.17
571+50	57150	50.00	43.75	0.00	0.00	0.00	84.28	0.00	0.00	0.00	2461.45	0.00	0.00	0.00	2461.45
572+00	57200	50.00	40.89	0.00	0.00	0.00	78.37	0.00	0.00	0.00	2539.82	0.00	0.00	0.00	2539.82
572+50	57250	50.00	37.08	0.00	0.00	0.00	72.19	0.00	0.00	0.00	2612.02	0.00	0.00	0.00	2612.02
573+00	57300	50.00	34.72	0.00	0.00	0.00	66.48	0.00	0.00	0.00	2678.50	0.00	0.00	0.00	2678.50
573+50	57350	50.00	31.85	0.00	0.00	0.00	61.64	0.00	0.00	0.00	2740.14	0.00	0.00	0.00	2740.14
573+97	57397	47.00	31.85	0.00	0.00	0.00	55.44	0.00	0.00	0.00	2795.58	0.00	0.00	0.00	2795.58
573+97	57397	0.00	73.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2795.58	0.00	0.00	0.00	2795.58
574+00	57400	3.00	75.32	0.00	0.00	0.00	8.26	0.00	0.00	0.00	2803.84	0.00	0.00	0.00	2803.84
574+50	57450	50.00	65.65	0.00	0.00	0.00	130.53	0.00	0.00	0.00	2934.37	0.00	0.00	0.00	2934.37
575+00	57500	50.00	59.11	0.00	0.00	0.00	115.52	0.00	0.00	0.00	3049.89	0.00	0.00	0.00	3049.89
575+50	57550	50.00	52.67	0.00	0.00	0.00	103.50	0.00	0.00	0.00	3153.39	0.00	0.00	0.00	3153.39
576+00	57600	50.00	40.70	0.00	0.00	0.00	86.45	0.00	0.00	0.00	3239.84	0.00	0.00	0.00	3239.84
576+50	57650	50.00	24.86	0.00	0.00	0.00	60.70	0.00	0.00	0.00	3300.55	0.00	0.00	0.00	3300.55
577+00	57700	50.00	12.13	0.00	2.31	0.00	34.25	0.00	2.14	0.00	3334.80	2.57	0.00	0.00	3332.23
577+50	57750	50.00	6.29	0.00	19.79	0.00	17.06	0.00	20.46	0.00	3351.85	27.12	0.00	0.00	3324.73
578+00	57800	50.00	0.44	0.00	39.48	0.00	6.23	0.00	54.88	0.00	3358.09	92.98	0.00	0.00	3265.11
578+50	57850	50.00	0.00	0.00	67.71	0.00	0.41	0.00	99.25	0.00	3358.49	212.08	0.00	0.00	3146.41
579+00	57900	50.00	0.00	0.00	89.73	0.00	0.00	0.00	145.78	0.00	3358.49	387.01	0.00	0.00	2971.48
579+50	57950	50.00	0.00	0.00	102.11	0.00	0.00	0.00	177.63	0.00	3358.49	600.17	0.00	0.00	2758.33
580+00	58000	50.00	0.00	0.00	159.96	0.00	0.00	0.00	242.66	0.00	3358.49	891.36	0.00	0.00	2467.14
580+00	58000	0.00	0.00	0.00	110.49	0.00	0.00	0.00	0.00	0.00	3358.49	891.36	0.00	0.00	2467.14
580+50	58050	50.00	0.00	0.00	180.13	0.00	0.00	0.00	89.70	0.00	3358.49	998.99	0.00	0.00	2359.50
581+00	58100	50.00	0.00	0.00	195.96	0.00	0.00	0.00	348.23	0.00	3358.49	1416.87	0.00	0.00	1941.62
581+50	58150	50.00	0.00	0.00	207.57	0.00	0.00	0.00	373.64	0.00	3358.49	1865.24	0.00	0.00	1493.26
582+00	58200	50.00	0.00	0.00	217.31	0.00	0.00	0.00	393.41	0.00	3358.49	2337.33	0.00	0.00	1021.17
582+25 BK	58225.4	25.40	0.00	0.00	225.14	0.00	0.00	0.00	208.12	0.00	3358.49	2587.06	0.00	0.00	771.43
						Column totals	5179.28	0.00	2155.89	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 RAMP FB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3	Cumulative Vol (CY) Reduced EBS In Fill 0.8	Mass Ordinate
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
737+80 AH	73780.00	0.00	25.54	0.00	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
738+00	73800	20.00	349.57	0.00	11.21	0.00	138.93	0.00	5.01	0.00	138.93	6.01	0.00	0.00	132.92
738+50	73850	50.00	1237.14	0.00	17.43	0.00	1469.18	0.00	26.52	0.00	1608.11	37.83	0.00	0.00	1570.27
739+00	73900	50.00	1054.04	0.00	11.44	0.00	2121.46	0.00	26.73	0.00	3729.57	69.91	0.00	0.00	3659.66
739+50	73950	50.00	869.05	0.00	8.38	0.00	1780.64	0.00	18.35	0.00	5510.21	91.93	0.00	0.00	5418.28
740+00	74000	50.00	688.15	0.00	0.00	0.00	1441.85	0.00	7.76	0.00	6952.06	101.24	0.00	0.00	6850.82
740+50	74050	50.00	535.57	0.00	0.00	0.00	1133.07	0.00	0.00	0.00	8085.13	101.24	0.00	0.00	7983.89
741+00	74100	50.00	425.01	0.00	0.00	0.00	889.43	0.00	0.00	0.00	8974.56	101.24	0.00	0.00	8873.32
741+50	74150	50.00	305.85	0.00	0.00	0.00	676.72	0.00	0.00	0.00	9651.28	101.24	0.00	0.00	9550.04
742+00	74200	50.00	261.49	0.00	0.00	0.00	525.31	0.00	0.00	0.00	10176.60	101.24	0.00	0.00	10075.35
742+50	74250	50.00	263.41	0.00	0.00	0.00	486.02	0.00	0.00	0.00	10662.61	101.24	0.00	0.00	10561.37
743+00	74300	50.00	265.79	0.00	0.00	0.00	490.00	0.00	0.00	0.00	11152.61	101.24	0.00	0.00	11051.37
743+50	74350	50.00	241.97	0.00	0.00	0.00	470.15	0.00	0.00	0.00	11622.76	101.24	0.00	0.00	11521.52
744+00	74400	50.00	221.49	0.00	0.00	0.00	429.13	0.00	0.00	0.00	12051.89	101.24	0.00	0.00	11950.65
744+50	74450	50.00	199.35	0.00	0.00	0.00	389.67	0.00	0.00	0.00	12441.56	101.24	0.00	0.00	12340.32
744+78	74478	28.00	187.94	0.00	0.00	0.00	200.82	0.00	0.00	0.00	12642.38	101.24	0.00	0.00	12541.13
744+78	74478	0.00	103.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12642.38	101.24	0.00	0.00	12541.13
745+00	74500	22.00	94.10	0.00	0.00	0.00	80.40	0.00	0.00	0.00	12722.77	101.24	0.00	0.00	12621.53
745+50	74550	50.00	89.57	0.00	0.00	0.00	170.06	0.00	0.00	0.00	12892.84	101.24	0.00	0.00	12791.60
746+00	74600	50.00	102.23	0.00	0.00	0.00	177.59	0.00	0.00	0.00	13070.43	101.24	0.00	0.00	12969.19
746+50	74650	50.00	98.12	0.00	0.00	0.00	185.51	0.00	0.00	0.00	13255.94	101.24	0.00	0.00	13154.70
747+00	74700	50.00	95.67	0.00	0.00	0.00	179.44	0.00	0.00	0.00	13435.38	101.24	0.00	0.00	13334.13
747+50	74750	50.00	95.92	0.00	0.00	0.00	177.40	0.00	0.00	0.00	13612.77	101.24	0.00	0.00	13511.53
747+85	74785	35.00	97.53	0.00	0.00	0.00	125.38	0.00	0.00	0.00	13738.16	101.24	0.00	0.00	13636.92
747+85	74785	0.00	69.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13738.16	101.24	0.00	0.00	13636.92
748+00	74800	15.00	81.56	0.00	1.01	0.00	42.03	0.00	0.09	0.00	13780.19	101.35	0.00	0.00	13678.83
748+50	74850	50.00	71.51	0.00	3.00	0.00	141.73	0.00	3.71	0.00	13921.92	105.81	0.00	0.00	13816.11
749+00	74900	50.00	65.63	0.00	4.38	0.00	126.98	0.00	6.83	0.00	14048.90	114.01	0.00	0.00	13934.89

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP FB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
749+50	74950	50.00	68.41	0.00	4.62	0.00	124.11	0.00	8.33	0.00	14173.01	124.01	0.00	0.00	14049.00
750+00	75000	50.00	78.98	0.00	3.28	0.00	136.47	0.00	7.31	0.00	14309.49	132.79	0.00	0.00	14176.70
750+50	75050	50.00	94.77	0.00	1.12	0.00	160.88	0.00	4.07	0.00	14470.36	137.68	0.00	0.00	14332.69
751+00	75100	50.00	115.08	0.00	0.17	0.00	194.31	0.00	1.19	0.00	14664.67	139.11	0.00	0.00	14525.56
751+50	75150	50.00	130.51	0.00	2.33	0.00	227.40	0.00	2.31	0.00	14892.07	141.89	0.00	0.00	14750.18
752+00	75200	50.00	137.76	0.00	0.55	0.00	248.40	0.00	2.67	0.00	15140.47	145.09	0.00	0.00	14995.38
752+50	75250	50.00	141.04	0.00	0.00	0.00	258.15	0.00	0.51	0.00	15398.61	145.70	0.00	0.00	15252.92
753+00	75300	50.00	145.70	0.00	0.00	0.00	265.50	0.00	0.00	0.00	15664.11	145.70	0.00	0.00	15518.42
753+50	75350	50.00	148.03	0.00	0.00	0.00	271.97	0.00	0.00	0.00	15936.09	145.70	0.00	0.00	15790.39
754+00	75400	50.00	152.13	0.00	0.00	0.00	277.93	0.00	0.00	0.00	16214.01	145.70	0.00	0.00	16068.31
754+20	75419.85	19.85	166.84	0.00	0.00	0.00	117.25	0.00	0.00	0.00	16331.26	145.70	0.00	0.00	16185.57
754+20	75419.85	0.00	244.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16331.26	145.70	0.00	0.00	16185.57
754+50	75450	30.15	242.82	0.00	0.00	0.00	272.28	0.00	0.00	0.00	16603.54	145.70	0.00	0.00	16457.84
755+00	75500	50.00	217.37	0.00	0.00	0.00	426.10	0.00	0.00	0.00	17029.64	145.70	0.00	0.00	16883.94
755+50	75550	50.00	205.40	0.00	0.00	0.00	391.45	0.00	0.00	0.00	17421.10	145.70	0.00	0.00	17275.40
756+00	75600	50.00	220.27	0.00	0.00	0.00	394.14	0.00	0.00	0.00	17815.24	145.70	0.00	0.00	17669.54
756+50	75650	50.00	199.28	0.00	0.00	0.00	388.47	0.00	0.00	0.00	18203.71	145.70	0.00	0.00	18058.01
757+00	75700	50.00	197.69	0.00	0.00	0.00	367.56	0.00	0.00	0.00	18571.27	145.70	0.00	0.00	18425.57
757+50	75750	50.00	223.42	0.00	5.22	0.00	389.92	0.00	4.83	0.00	18961.19	151.50	0.00	0.00	18809.69
758+00	75800	50.00	242.86	0.00	0.39	0.00	431.74	0.00	5.19	0.00	19392.93	157.73	0.00	0.00	19235.20
758+24 BK	75824	24.00	239.68	0.00	0.01	0.00	214.46	0.00	0.18	0.00	19607.39	157.95	0.00	0.00	19449.45
					Column totals		19607.39	0.00	131.62	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 RAMP FC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
822+56 AH	82256	0.00	21.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
823+00	82300	44.00	22.50	0.00	0.00	0.00	35.87	0.00	0.00	0.00	35.87	0.00	0.00	0.00	35.87
823+50	82350	50.00	23.20	0.00	0.00	0.00	42.31	0.00	0.00	0.00	78.18	0.00	0.00	0.00	78.18
824+00	82400	50.00	23.18	0.00	0.01	0.00	42.94	0.00	0.01	0.00	121.13	0.01	0.00	0.00	121.12
824+50	82450	50.00	22.95	0.00	0.57	0.00	42.71	0.00	0.54	0.00	163.84	0.66	0.00	0.00	163.18
825+05	82505.35	55.35	22.87	0.00	1.63	0.00	46.97	0.00	2.26	0.00	210.81	3.36	0.00	0.00	207.44
825+05	82505.35	0.00	106.29	0.00	1.66	0.00	0.00	0.00	0.00	0.00	210.81	3.36	0.00	0.00	207.44
825+50	82550	44.65	111.55	0.00	3.89	0.00	180.12	0.00	4.59	0.00	390.93	8.87	0.00	0.00	382.06
826+00	82600	50.00	87.08	0.00	11.09	0.00	183.92	0.00	13.87	0.00	574.84	25.51	0.00	0.00	549.33
826+50	82650	50.00	38.45	0.00	22.86	0.00	116.23	0.00	31.44	0.00	691.08	63.24	0.00	0.00	627.84
827+00	82700	50.00	0.00	0.00	56.58	0.00	35.60	0.00	73.56	0.00	726.68	151.50	0.00	0.00	575.18
827+50	82750	50.00	0.00	0.00	113.58	0.00	0.00	0.00	157.56	0.00	726.68	340.57	0.00	0.00	386.11
828+00	82800	50.00	0.00	0.00	148.75	0.00	0.00	0.00	242.90	0.00	726.68	632.05	0.00	0.00	94.63
828+50	82850	50.00	0.00	0.00	151.35	0.00	0.00	0.00	277.87	0.00	726.68	965.49	0.00	0.00	-238.81
829+00	82900	50.00	0.00	0.00	134.23	0.00	0.00	0.00	264.43	0.00	726.68	1282.80	0.00	0.00	-556.12

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP FC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
829+50	82950	50.00	0.00	0.00	122.26	0.00	0.00	0.00	237.49	0.00	726.68	1567.79	0.00	0.00	-841.11
830+00	83000	50.00	0.00	0.00	133.23	0.00	0.00	0.00	236.56	0.00	726.68	1851.67	0.00	0.00	-1124.99
830+50	83050	50.00	0.00	0.00	170.08	0.00	0.00	0.00	280.84	0.00	726.68	2188.68	0.00	0.00	-1462.00
831+00	83100	50.00	0.00	0.00	188.19	0.00	0.00	0.00	331.73	0.00	726.68	2586.76	0.00	0.00	-1860.08
831+50	83150	50.00	0.00	0.00	200.82	0.00	0.00	0.00	360.19	0.00	726.68	3018.99	0.00	0.00	-2292.31
832+00	83200	50.00	0.00	0.00	176.60	0.00	0.00	0.00	349.46	0.00	726.68	3438.35	0.00	0.00	-2711.67
832+50	83250	50.00	20.29	0.00	128.41	0.00	18.79	0.00	282.42	0.00	745.46	3777.25	0.00	0.00	-3031.78
833+00	83300	50.00	77.60	0.00	98.59	0.00	90.64	0.00	210.19	0.00	836.10	4029.47	0.00	0.00	-3193.37
833+50	83350	50.00	176.40	0.00	103.64	0.00	235.19	0.00	187.25	0.00	1071.29	4254.17	0.00	0.00	-3182.88
834+00	83400	50.00	295.48	0.00	75.34	0.00	436.93	0.00	165.72	0.00	1508.21	4453.04	0.00	0.00	-2944.82
834+50	83450	50.00	429.74	0.00	99.51	0.00	671.50	0.00	161.90	0.00	2179.71	4647.31	0.00	0.00	-2467.60
835+00	83500	50.00	581.76	0.00	119.73	0.00	936.57	0.00	203.00	0.00	3116.29	4890.91	0.00	0.00	-1774.62
835+50	83550	50.00	674.72	0.00	208.61	0.00	1163.41	0.00	304.02	0.00	4279.70	5255.74	0.00	0.00	-976.04
836+00	83600	50.00	860.12	0.00	161.79	0.00	1421.15	0.00	342.96	0.00	5700.84	5667.29	0.00	0.00	33.55
836+50	83650	50.00	1224.89	0.00	44.40	0.00	1930.56	0.00	190.92	0.00	7631.41	5896.39	0.00	0.00	1735.02
836+92 BK	83692	42.00	300.45	0.00	6.07	0.00	1186.38	0.00	39.25	0.00	8817.78	5943.50	0.00	0.00	2874.29
						Column totals	8817.78	0.00	4952.91	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP FG

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
718+56 AH	71855.5	0.00	118.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719+00	71900	44.50	129.58	0.00	0.00	0.00	204.12	0.00	0.00	0.00	204.12	0.00	0.00	0.00	204.12
719+00	71900	0.00	26.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	204.12	0.00	0.00	0.00	204.12
719+50	71950	50.00	35.22	0.00	0.00	0.00	57.27	0.00	0.00	0.00	261.39	0.00	0.00	0.00	261.39
720+00	72000	50.00	41.79	0.00	0.01	0.00	71.31	0.00	0.01	0.00	332.70	0.01	0.00	0.00	332.69
720+50	72050	50.00	47.16	0.00	0.01	0.00	82.36	0.00	0.02	0.00	415.06	0.03	0.00	0.00	415.03
721+00	72100	50.00	50.00	0.00	0.03	0.00	89.96	0.00	0.04	0.00	505.02	0.08	0.00	0.00	504.94
721+50	72150	50.00	53.92	0.00	0.00	0.00	96.22	0.00	0.03	0.00	601.24	0.11	0.00	0.00	601.13
722+00	72200	50.00	67.74	0.00	0.00	0.00	112.65	0.00	0.00	0.00	713.89	0.11	0.00	0.00	713.78
722+50	72250	50.00	19.92	0.00	0.00	0.00	81.17	0.00	0.00	0.00	795.06	0.11	0.00	0.00	794.95
722+82 BK	72281.5	31.50	20.71	0.00	0.00	0.00	23.70	0.00	0.00	0.00	818.76	0.11	0.00	0.00	818.65
		Column totals					818.76	0.00	0.09	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 RAMP TMC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
773+03 AH	77303.1	0.00	71.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
773+50	77350	46.90	205.70	0.00	6.90	0.00	241.17	0.00	5.99	0.00	241.17	7.19	0.00	0.00	233.98
774+00	77400	50.00	257.88	0.00	0.70	0.00	429.24	0.00	7.04	0.00	670.41	15.64	0.00	0.00	654.78
774+50	77450	50.00	255.71	0.00	0.77	0.00	475.55	0.00	1.36	0.00	1145.96	17.27	0.00	0.00	1128.69
775+00	77500	50.00	269.10	0.00	0.01	0.00	485.94	0.00	0.72	0.00	1631.89	18.14	0.00	0.00	1613.76
775+50	77550	50.00	259.20	0.00	0.62	0.00	489.17	0.00	0.58	0.00	2121.06	18.84	0.00	0.00	2102.22
776+00	77600	50.00	252.58	0.00	0.39	0.00	473.87	0.00	0.94	0.00	2594.93	19.96	0.00	0.00	2574.97
776+50	77650	50.00	228.35	0.00	0.24	0.00	445.31	0.00	0.58	0.00	3040.24	20.66	0.00	0.00	3019.58
776+63	77663	13.00	221.35	0.00	0.22	0.00	108.26	0.00	0.11	0.00	3148.50	20.79	0.00	0.00	3127.71
776+63	77663	0.00	187.30	0.00	0.31	0.00	0.00	0.00	0.00	0.00	3148.50	20.79	0.00	0.00	3127.71
777+00	77700	37.00	162.56	0.00	3.64	0.00	239.72	0.00	2.71	0.00	3388.22	24.04	0.00	0.00	3364.18
777+50	77750	50.00	124.77	0.00	7.99	0.00	266.05	0.00	10.77	0.00	3654.26	36.96	0.00	0.00	3617.30
778+00	77800	50.00	111.04	0.00	10.99	0.00	218.34	0.00	17.57	0.00	3872.60	58.05	0.00	0.00	3814.55
778+50	77850	50.00	81.49	0.00	11.54	0.00	178.27	0.00	20.86	0.00	4050.87	83.08	0.00	0.00	3967.79
779+00	77900	50.00	74.27	0.00	9.21	0.00	144.22	0.00	19.21	0.00	4195.09	106.14	0.00	0.00	4088.96
779+40	77940	40.00	67.40	0.00	5.52	0.00	104.94	0.00	10.91	0.00	4300.04	119.23	0.00	0.00	4180.80
779+40	77940	0.00	73.34	0.00	4.82	0.00	0.00	0.00	0.00	0.00	4300.04	119.23	0.00	0.00	4180.80
779+50	77950	10.00	74.85	0.00	4.50	0.00	27.44	0.00	1.73	0.00	4327.48	121.30	0.00	0.00	4206.17
780+00	78000	50.00	81.64	0.00	6.85	0.00	144.90	0.00	10.51	0.00	4472.38	133.91	0.00	0.00	4338.46

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 RAMP TMC

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
780+50	78050	50.00	86.91	0.00	17.58	0.00	156.06	0.00	22.62	0.00	4628.44	161.06	0.00	0.00	4467.38
781+00	78100	50.00	82.48	0.00	32.65	0.00	156.84	0.00	46.51	0.00	4785.28	216.87	0.00	0.00	4568.41
781+50	78150	50.00	73.90	0.00	43.04	0.00	144.80	0.00	70.08	0.00	4930.08	300.97	0.00	0.00	4629.11
781+73	78173	23.00	65.44	0.00	46.82	0.00	59.35	0.00	38.27	0.00	4989.43	346.90	0.00	0.00	4642.53
781+73	78173	0.00	126.48	0.00	47.30	0.00	0.00	0.00	0.00	0.00	4989.43	346.90	0.00	0.00	4642.53
782+00	78200	27.00	120.54	0.00	46.43	0.00	123.51	0.00	46.87	0.00	5112.94	403.14	0.00	0.00	4709.80
782+50	78250	50.00	100.00	0.00	63.33	0.00	204.20	0.00	101.63	0.00	5317.14	525.09	0.00	0.00	4792.05
783+00	78300	50.00	92.89	0.00	90.06	0.00	178.60	0.00	142.03	0.00	5495.74	695.53	0.00	0.00	4800.22
783+50	78350	50.00	99.43	0.00	76.81	0.00	178.07	0.00	154.51	0.00	5673.82	880.94	0.00	0.00	4792.88
783+52 BK	78351.8	1.80	100.82	0.00	72.49	0.00	6.68	0.00	4.98	0.00	5680.49	886.91	0.00	0.00	4793.58
Column totals							5680.49	0.00	739.09	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 ADLER ST

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
994+50 AH	99450	0.00	44.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
995+00	99500	50.00	42.46	0.00	0.86	0.00	80.07	0.00	0.80	0.00	80.07	0.96	0.00	0.00	79.12
995+12 BK	99512	12.00	42.83	0.00	0.00	0.00	18.95	0.00	0.19	0.00	99.03	1.18	0.00	0.00	97.84
995+88 AH	99587.95	0.00	29.92	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
996+00	99600	12.05	27.63	0.00	1.01	0.00	12.84	0.00	0.35	0.00	12.84	0.43	0.00	0.00	12.42
996+25 BK	99625	25.00	29.15	0.00	0.35	0.00	26.29	0.00	0.63	0.00	39.13	1.18	0.00	0.00	37.95
1022+66 AH	102266	0.00	62.31	0.00	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1023+00	102300	34.00	54.12	0.00	4.34	0.00	73.31	0.00	5.01	0.00	73.31	6.01	0.00	0.00	67.30
1023+50	102350	50.00	41.63	0.00	6.25	0.00	88.66	0.00	9.81	0.00	161.97	17.77	0.00	0.00	144.19
1023+92 BK	102392	42.00	35.70	0.00	0.76	0.00	60.15	0.00	5.45	0.00	222.11	24.32	0.00	0.00	197.79
		Column totals					360.27	0.00	22.24	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 92ND ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
											1.0	1.2	1.3	0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
63+33 AH	6332.85	0.00	103.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63+50	6350	17.15	99.56	0.00	0.00	0.00	64.41	0.00	0.00	0.00	64.41	0.00	0.00	0.00	64.41
63+65 BK	6365	15.00	90.83	0.00	0.00	0.00	52.89	0.00	0.00	0.00	117.30	0.00	0.00	0.00	117.30
Column totals							117.30	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 S. 84th ST

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
35+26	AH	3526.45	0.00	18.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35+50		3550	23.55	23.52	0.00	0.00	0.00	18.26	0.00	0.00	0.00	18.26	0.00	0.00	0.00	18.26
35+89		3589.25	39.25	33.47	0.00	0.00	0.00	41.42	0.00	0.00	0.00	59.68	0.00	0.00	0.00	59.68
35+89		3589.26	0.00	223.78	0.00	2.05	0.00	0.00	0.00	0.00	0.00	59.68	0.00	0.00	0.00	59.68
36+00		3600	10.74	236.43	0.00	1.58	0.00	91.53	0.00	0.72	0.00	151.21	0.87	0.00	0.00	150.35
36+50		3650	50.00	258.58	0.00	0.00	0.00	458.34	0.00	1.46	0.00	609.56	2.62	0.00	0.00	606.93
37+00		3700	50.00	203.17	0.00	1.87	0.00	427.55	0.00	1.73	0.00	1037.10	4.70	0.00	0.00	1032.40
37+50		3750	50.00	191.89	0.00	19.18	0.00	365.80	0.00	19.49	0.00	1402.90	28.09	0.00	0.00	1374.81
38+00		3800	50.00	213.15	0.00	19.74	0.00	375.04	0.00	36.04	0.00	1777.94	71.33	0.00	0.00	1706.60
38+50		3850	50.00	266.29	0.00	27.57	0.00	443.93	0.00	43.81	0.00	2221.86	123.90	0.00	0.00	2097.96
39+00		3900	50.00	333.16	0.00	25.74	0.00	555.05	0.00	49.36	0.00	2776.91	183.13	0.00	0.00	2593.78
39+50		3950	50.00	154.30	0.00	8.79	0.00	451.35	0.00	31.97	0.00	3228.26	221.50	0.00	0.00	3006.76
40+00		4000	50.00	203.03	0.00	3.40	0.00	330.86	0.00	11.29	0.00	3559.12	235.04	0.00	0.00	3324.08
40+50		4050	50.00	502.65	0.00	2.34	0.00	653.41	0.00	5.31	0.00	4212.53	241.42	0.00	0.00	3971.11
41+00		4100	50.00	234.94	1.00	0.00	0.00	682.95	0.00	2.17	0.00	4895.48	244.02	0.00	0.00	4651.46
41+50		4150	50.00	275.06	2.00	0.00	0.00	472.22	0.00	0.00	0.00	5367.70	244.02	0.00	0.00	5123.68
42+00		4200	50.00	304.24	0.00	0.00	0.00	536.39	0.00	0.00	0.00	5904.09	244.02	0.00	0.00	5660.07
42+50		4250	50.00	217.93	0.00	8.04	0.00	483.49	0.00	7.44	0.00	6387.58	252.96	0.00	0.00	6134.63
42+81	BK	4280.78	30.78	235.51	5.00	16.14	0.00	268.48	0.00	18.40	0.00	6656.07	275.03	0.00	0.00	6381.03
							Column totals	6656.07	0.00	229.20	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 KEARNEY ST

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.00 Note 1	1.2	1.30 Note 4	0.80 Note 5	Note 6
136+50 AH	13650	0.00	12.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137+00	13700	50.00	11.47	0.00	0.00	0.00	21.78	0.00	0.00	0.00	21.78	0.00	0.00	0.00	21.78
137+50	13750	50.00	10.38	0.00	0.00	0.00	20.23	0.00	0.00	0.00	42.01	0.00	0.00	0.00	42.01
138+00	13800	50.00	9.57	0.00	0.00	0.00	18.47	0.00	0.00	0.00	60.48	0.00	0.00	0.00	60.48
138+50	13850	50.00	8.39	0.00	0.00	0.00	16.63	0.00	0.00	0.00	77.11	0.00	0.00	0.00	77.11
139+00	13900	50.00	8.81	0.00	0.00	0.00	15.93	0.00	0.00	0.00	93.04	0.00	0.00	0.00	93.04
139+50	13950	50.00	8.61	0.00	0.00	0.00	16.13	0.00	0.00	0.00	109.17	0.00	0.00	0.00	109.17
140+00	14000	50.00	8.09	0.00	0.00	0.00	15.46	0.00	0.00	0.00	124.63	0.00	0.00	0.00	124.63
140+30	14030	30.00	8.00	0.00	0.00	0.00	8.94	0.00	0.00	0.00	133.57	0.00	0.00	0.00	133.57
140+30	14030	0.00	84.52	0.00	0.01	0.00	0.00	0.00	0.00	0.00	133.57	0.00	0.00	0.00	133.57
140+50	14050	20.00	74.61	0.00	1.31	0.00	58.94	0.00	0.49	0.00	192.51	0.59	0.00	0.00	191.92
141+00	14100	50.00	77.80	0.00	0.00	0.00	141.12	0.00	1.21	0.00	333.63	2.04	0.00	0.00	331.58
141+50	14150	50.00	75.32	0.00	0.01	0.00	141.78	0.00	0.01	0.00	475.40	2.05	0.00	0.00	473.35
142+00	14200	50.00	67.25	0.00	0.04	0.00	132.01	0.00	0.05	0.00	607.41	2.11	0.00	0.00	605.30
142+50	14250	50.00	57.22	0.00	0.38	0.00	115.25	0.00	0.39	0.00	722.66	2.58	0.00	0.00	720.09
143+00	14300	50.00	59.01	0.00	0.31	0.00	107.62	0.00	0.64	0.00	830.28	3.34	0.00	0.00	826.94
143+50	14350	50.00	64.18	0.00	0.02	0.00	114.06	0.00	0.31	0.00	944.35	3.71	0.00	0.00	940.64
144+00	14400	50.00	64.15	0.00	0.05	0.00	118.82	0.00	0.06	0.00	1063.17	3.79	0.00	0.00	1059.39
144+46 BK	14445.6	45.60	60.39	0.00	0.39	0.00	105.17	0.00	0.37	0.00	1168.34	4.23	0.00	0.00	1164.11
		Column totals					1168.34	0.00	3.53	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 NSF

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
11+75 AH	1175.20	0.00	60.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00	1200.00	24.80	60.52	0.00	0.00	0.00	55.67	0.00	0.00	0.00	55.67	0.00	0.00	0.00	55.67
12+50	1250.00	50.00	60.58	0.00	0.00	0.00	112.13	0.00	0.00	0.00	167.80	0.00	0.00	0.00	167.80
13+00	1300.00	50.00	60.72	0.00	0.00	0.00	112.31	0.00	0.00	0.00	280.12	0.00	0.00	0.00	280.12
13+50	1350.00	50.00	62.05	0.00	0.00	0.00	113.68	0.00	0.00	0.00	393.79	0.00	0.00	0.00	393.79
14+00	1400.00	50.00	60.50	0.00	0.00	0.00	113.47	0.00	0.00	0.00	507.26	0.00	0.00	0.00	507.26
14+50	1450.00	50.00	61.20	0.00	0.00	0.00	112.69	0.00	0.00	0.00	619.95	0.00	0.00	0.00	619.95
15+00	1500.00	50.00	66.49	0.00	0.00	0.00	118.23	0.00	0.00	0.00	738.18	0.00	0.00	0.00	738.18
15+50	1550.00	50.00	71.65	0.00	0.00	0.00	127.91	0.00	0.00	0.00	866.09	0.00	0.00	0.00	866.09
16+00	1600.00	50.00	82.79	0.00	0.00	0.00	143.00	0.00	0.00	0.00	1009.09	0.00	0.00	0.00	1009.09
16+50	1650.00	50.00	94.22	0.00	0.00	0.00	163.90	0.00	0.00	0.00	1172.99	0.00	0.00	0.00	1172.99
17+00	1700.00	50.00	105.78	0.00	0.00	0.00	185.19	0.00	0.00	0.00	1358.17	0.00	0.00	0.00	1358.17
17+50	1750.00	50.00	118.67	0.00	0.00	0.00	207.82	0.00	0.00	0.00	1566.00	0.00	0.00	0.00	1566.00
18+00	1800.00	50.00	105.05	0.00	0.03	0.00	207.15	0.00	0.03	0.00	1773.14	0.03	0.00	0.00	1773.11
18+50	1850.00	50.00	111.47	0.00	0.00	0.00	200.48	0.00	0.03	0.00	1973.63	0.07	0.00	0.00	1973.56
19+00	1900.00	50.00	86.87	0.00	0.00	0.00	183.65	0.00	0.00	0.00	2157.27	0.07	0.00	0.00	2157.21
19+50	1950.00	50.00	51.77	0.00	2.29	0.00	128.37	0.00	2.12	0.00	2285.64	2.61	0.00	0.00	2283.03
20+00	2000.00	50.00	10.73	0.00	15.69	0.00	57.87	0.00	16.65	0.00	2343.51	22.59	0.00	0.00	2320.93
20+50	2050.00	50.00	0.00	0.00	48.18	0.00	9.94	0.00	59.14	0.00	2353.45	93.56	0.00	0.00	2259.89
21+00	2100.00	50.00	0.00	0.00	74.10	0.00	0.00	0.00	113.22	0.00	2353.45	229.42	0.00	0.00	2124.03
21+50	2150.00	50.00	0.00	0.00	81.19	0.00	0.00	0.00	143.79	0.00	2353.45	401.97	0.00	0.00	1951.48
22+00	2200.00	50.00	0.00	0.00	78.23	0.00	0.00	0.00	147.61	0.00	2353.45	579.10	0.00	0.00	1774.35
22+17 BK	2216.50	16.50	0.00	0.00	77.73	0.00	0.00	0.00	47.65	0.00	2353.45	636.29	0.00	0.00	1717.16
Column totals							2353.45	0.00	530.24	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 NSG

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
17+60 AH	1759.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18+00	1800.00	40.05	85.69	0.00	5.15	0.00	63.55	0.00	3.82	0.00	63.55	4.58	0.00	0.00	58.97
18+50	1850.00	50.00	80.90	0.00	23.13	0.00	154.25	0.00	26.19	0.00	217.80	36.01	0.00	0.00	181.80
19+00	1900.00	50.00	75.24	0.00	62.27	0.00	144.57	0.00	79.07	0.00	362.38	130.89	0.00	0.00	231.48
19+50	1950.00	50.00	46.88	0.00	109.78	0.00	113.07	0.00	159.31	0.00	475.45	322.06	0.00	0.00	153.39
20+00	2000.00	50.00	26.88	0.00	116.98	0.00	68.30	0.00	209.96	0.00	543.75	574.02	0.00	0.00	-30.27
20+50	2050.00	50.00	28.70	0.00	96.80	0.00	51.46	0.00	197.94	0.00	595.21	811.55	0.00	0.00	-216.34
21+00	2100.00	50.00	83.05	0.00	5.72	0.00	103.47	0.00	94.93	0.00	698.68	925.46	0.00	0.00	-226.78
21+50	2150.00	50.00	127.35	0.00	27.99	0.00	194.81	0.00	31.21	0.00	893.50	962.92	0.00	0.00	-69.42
22+00	2200.00	50.00	408.07	0.00	59.22	0.00	495.76	0.00	80.75	0.00	1389.26	1059.82	0.00	0.00	329.44
22+50	2250.00	50.00	248.64	0.00	27.33	0.00	608.06	0.00	80.14	0.00	1997.32	1155.98	0.00	0.00	841.34
23+00	2300.00	50.00	318.63	0.00	5.25	0.00	525.25	0.00	30.17	0.00	2522.57	1192.18	0.00	0.00	1330.39
23+50	2350.00	50.00	289.79	0.00	0.00	0.00	563.35	0.00	4.86	0.00	3085.92	1198.02	0.00	0.00	1887.91
24+00	2400.00	50.00	311.15	0.00	0.00	0.00	556.43	0.00	0.00	0.00	3642.35	1198.02	0.00	0.00	2444.33
24+50	2450.00	50.00	315.10	0.00	0.00	0.00	579.86	0.00	0.00	0.00	4222.21	1198.02	0.00	0.00	3024.19
24+82 BK	2482.16	32.16	342.96	0.00	0.00	0.00	391.91	0.00	0.00	0.00	4614.12	1198.02	0.00	0.00	3416.11
						Column totals	4614.12	0.00	998.35	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 NEC

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.0	Expanded Fill 1.2	Expanded EBS Backfill 1.3	Reduced EBS In Fill 0.8	
							Note 1	Note 2	Note 3				Note 4	Note 5	Note 6
11+81 AH	1180.75	0.00	75.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00	1200.00	19.25	72.08	0.00	0.00	0.00	52.56	0.00	0.00	0.00	52.56	0.00	0.00	0.00	52.56
12+50	1250.00	50.00	69.36	0.00	0.00	0.00	130.96	0.00	0.00	0.00	183.52	0.00	0.00	0.00	183.52
13+00	1300.00	50.00	112.45	0.00	0.00	0.00	168.34	0.00	0.00	0.00	351.86	0.00	0.00	0.00	351.86
13+50	1350.00	50.00	140.95	0.00	0.00	0.00	234.63	0.00	0.00	0.00	586.49	0.00	0.00	0.00	586.49
14+00 BK	1400.00	50.00	169.51	0.00	0.00	0.00	287.46	0.00	0.00	0.00	873.95	0.00	0.00	0.00	873.95
						Column totals	873.95	0.00	0.00	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 SWA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
11+19 AH	1118.87	0.00	23.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11+50	1150.00	31.13	45.27	0.00	0.04	0.00	39.57	0.00	0.02	0.00	39.57	0.03	0.00	0.00	39.54
12+00	1200.00	50.00	47.05	0.00	1.71	0.00	85.48	0.00	1.62	0.00	125.05	1.97	0.00	0.00	123.08
12+50	1250.00	50.00	38.66	0.00	4.59	0.00	79.36	0.00	5.83	0.00	204.41	8.97	0.00	0.00	195.44
13+00	1300.00	50.00	15.42	0.00	12.31	0.00	50.07	0.00	15.65	0.00	254.49	27.75	0.00	0.00	226.74
13+50	1350.00	50.00	2.51	0.00	22.86	0.00	16.60	0.00	32.56	0.00	271.09	66.83	0.00	0.00	204.26
14+00	1400.00	50.00	0.21	0.00	46.46	0.00	2.52	0.00	64.19	0.00	273.61	143.85	0.00	0.00	129.76
14+50	1450.00	50.00	0.00	0.00	85.62	0.00	0.19	0.00	122.30	0.00	273.80	290.61	0.00	0.00	-16.80
15+00	1500.00	50.00	0.00	0.00	112.78	0.00	0.00	0.00	183.70	0.00	273.80	511.05	0.00	0.00	-237.25
15+50	1550.00	50.00	0.00	0.00	161.06	0.00	0.00	0.00	253.56	0.00	273.80	815.32	0.00	0.00	-541.52
16+00	1600.00	50.00	0.00	0.00	194.13	0.00	0.00	0.00	328.88	0.00	273.80	1209.97	0.00	0.00	-936.17
16+50	1650.00	50.00	0.00	0.00	390.19	0.00	0.00	0.00	541.04	0.00	273.80	1859.22	0.00	0.00	-1585.42
17+00	1700.00	50.00	0.00	0.00	364.92	0.00	0.00	0.00	699.18	0.00	273.80	2698.23	0.00	0.00	-2424.43
17+50	1750.00	50.00	0.00	0.00	470.88	0.00	0.00	0.00	773.89	0.00	273.80	3626.89	0.00	0.00	-3353.09
17+67 BK	1767.34	17.34	0.00	0.00	496.66	0.00	0.00	0.00	310.69	0.00	273.80	3999.72	0.00	0.00	-3725.92
Column totals							273.80	0.00	3333.10	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 4 WSA

STATION		Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
11+50	AH	1150.00	0.00	41.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12+00		1200.00	50.00	51.37	0.00	12.78	0.00	85.63	0.00	11.83	0.00	85.63	14.20	0.00	0.00	71.43
12+50		1250.00	50.00	1.09	0.00	82.75	0.00	48.57	0.00	88.45	0.00	134.20	120.34	0.00	0.00	13.86
13+00		1300.00	50.00	0.00	0.00	89.25	0.00	1.01	0.00	159.26	0.00	135.21	311.46	0.00	0.00	-176.24
13+50		1350.00	50.00	0.55	0.00	41.97	0.00	0.51	0.00	121.50	0.00	135.72	457.26	0.00	0.00	-321.53
14+00		1400.00	50.00	13.34	0.00	17.37	0.00	12.86	0.00	54.94	0.00	148.58	523.19	0.00	0.00	-374.61
14+50		1450.00	50.00	28.80	0.00	7.05	0.00	39.02	0.00	22.61	0.00	187.60	550.32	0.00	0.00	-362.72
15+00		1500.00	50.00	50.13	0.00	1.65	0.00	73.08	0.00	8.06	0.00	260.69	559.99	0.00	0.00	-299.30
15+50		1550.00	50.00	77.63	0.00	0.00	0.00	118.30	0.00	1.53	0.00	378.98	561.82	0.00	0.00	-182.84
16+00		1600.00	50.00	89.98	0.00	0.21	0.00	155.19	0.00	0.19	0.00	534.18	562.06	0.00	0.00	-27.88
16+49	BK	1648.59	48.59	23.72	0.00	32.37	0.00	102.31	0.00	29.32	0.00	636.48	597.23	0.00	0.00	39.25
						Column totals		636.48	0.00	497.70	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 4 FCV

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3		1.0	1.2	1.3 Note 4	0.8 Note 5	Note 6
9+25 AH	925.00	0.00	732.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9+50	950.00	25.00	689.31	0.00	0.00	0.00	658.25	0.00	0.00	0.00	658.25	0.00	0.00	0.00	658.25
10+00	1000.00	50.00	652.27	0.00	0.00	0.00	1242.20	0.00	0.00	0.00	1900.45	0.00	0.00	0.00	1900.45
10+50	1050.00	50.00	619.07	0.00	0.00	0.00	1177.17	0.00	0.00	0.00	3077.62	0.00	0.00	0.00	3077.62
11+00	1100.00	50.00	592.04	0.00	0.00	0.00	1121.40	0.00	0.00	0.00	4199.01	0.00	0.00	0.00	4199.01
11+50	1150.00	50.00	563.31	0.00	0.00	0.00	1069.77	0.00	0.00	0.00	5268.78	0.00	0.00	0.00	5268.78
12+00	1200.00	50.00	504.74	0.00	0.00	0.00	988.94	0.00	0.00	0.00	6257.72	0.00	0.00	0.00	6257.72
12+50	1250.00	50.00	456.89	0.00	0.00	0.00	890.40	0.00	0.00	0.00	7148.12	0.00	0.00	0.00	7148.12
13+00	1300.00	50.00	397.15	0.00	0.00	0.00	790.78	0.00	0.00	0.00	7938.89	0.00	0.00	0.00	7938.89
13+48 BK	1347.54	47.54	53.36	0.00	0.00	0.00	396.62	0.00	0.00	0.00	8335.51	0.00	0.00	0.00	8335.51
							Column totals	8335.51	0.00	0.00	0.00				

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

Division 5 USH 45 SB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.0	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.3 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.8 Note 5	Mass Ordinate Note 6
311+50 AH	31150.00	0.00	88.30	0.00	32.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312+00	31200.00	50.00	120.42	0.00	27.40	0.00	193.26	0.00	55.72	0.00	193.26	66.87	0.00	0.00	126.39
312+50	31250.00	50.00	206.61	0.00	15.58	0.00	302.81	0.00	39.80	0.00	496.06	114.62	0.00	0.00	381.44
313+00	31300.00	50.00	295.96	0.00	0.08	0.00	465.34	0.00	14.50	0.00	961.41	132.02	0.00	0.00	829.39
313+50	31350.00	50.00	383.59	0.00	0.00	0.00	629.21	0.00	0.07	0.00	1590.62	132.11	0.00	0.00	1458.51
314+00 BK	31400.00	50.00	411.07	0.00	0.00	0.00	735.80	0.00	0.00	0.00	2326.42	132.11	0.00	0.00	2194.31
						Column totals	2326.42	0.00	110.09	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 5 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Cumulative Vol (CY) Expanded EBS Backfill	Cumulative Vol (CY) Reduced EBS In Fill	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1	1.2	Note 4	Note 5	Note 6
230+58 AH	23057.66	0.00	0.00	0.00	59.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231+00	23100	42.34	0.00	0.00	57.89	0.00	0.00	0.00	92.18	0.00	0.00	110.62	0.00	0.00	-110.62
231+50	23150	50.00	0.00	0.00	54.77	0.00	0.00	0.00	104.31	0.00	0.00	235.80	0.00	0.00	-235.80
232+00	23200	50.00	0.00	0.00	50.45	0.00	0.00	0.00	97.43	0.00	0.00	352.71	0.00	0.00	-352.71
232+50	23250	50.00	0.00	0.00	47.26	0.00	0.00	0.00	90.47	0.00	0.00	461.28	0.00	0.00	-461.28
233+00	23300	50.00	0.00	0.00	43.85	0.00	0.00	0.00	84.36	0.00	0.00	562.51	0.00	0.00	-562.51
233+50	23350	50.00	0.00	0.00	40.45	0.00	0.00	0.00	78.06	0.00	0.00	656.18	0.00	0.00	-656.18
234+00	23400	50.00	0.00	0.00	53.26	0.00	0.00	0.00	86.77	0.00	0.00	760.30	0.00	0.00	-760.30
234+50	23450	50.00	0.00	0.00	49.83	0.00	0.00	0.00	95.45	0.00	0.00	874.84	0.00	0.00	-874.84
234+85 BK	23485	35.00	0.00	0.00	48.96	0.00	0.00	0.00	64.03	0.00	0.00	951.68	0.00	0.00	-951.68
276+75 AH	27675	0.00	45.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277+00	27700	25.00	47.12	0.00	0.01	0.00	42.66	0.00	0.01	0.00	42.66	0.01	0.00	0.00	42.65
277+50	27750	50.00	53.55	0.00	0.01	0.00	93.21	0.00	0.02	0.00	135.88	0.03	0.00	0.00	135.84
278+00	27800	50.00	58.60	0.00	0.01	0.00	103.84	0.00	0.02	0.00	239.72	0.06	0.00	0.00	239.66
278+50	27850	50.00	64.18	0.00	0.00	0.00	113.69	0.00	0.01	0.00	353.40	0.07	0.00	0.00	353.34
279+00	27900	50.00	68.59	0.00	0.00	0.00	122.94	0.00	0.00	0.00	476.34	0.07	0.00	0.00	476.27
279+50	27950	50.00	93.38	0.00	0.00	0.00	149.97	0.00	0.00	0.00	626.31	0.07	0.00	0.00	626.24
280+00	28000	50.00	99.68	0.00	0.00	0.00	178.76	0.00	0.00	0.00	805.07	0.07	0.00	0.00	805.00
280+50	28050	50.00	102.33	0.00	0.00	0.00	187.05	0.00	0.00	0.00	992.12	0.07	0.00	0.00	992.05
281+00	28100	50.00	104.20	0.00	0.00	0.00	191.23	0.00	0.00	0.00	1183.35	0.07	0.00	0.00	1183.28
281+50	28150	50.00	107.35	0.00	0.00	0.00	195.88	0.00	0.00	0.00	1379.23	0.07	0.00	0.00	1379.16
282+00	28200	50.00	109.49	0.00	0.00	0.00	200.78	0.00	0.00	0.00	1580.00	0.07	0.00	0.00	1579.94
282+50	28250	50.00	107.35	0.00	0.00	0.00	200.78	0.00	0.00	0.00	1780.78	0.07	0.00	0.00	1780.72
283+00	28300	50.00	102.24	0.00	0.00	0.00	194.06	0.00	0.00	0.00	1974.85	0.07	0.00	0.00	1974.78
283+50	28350	50.00	98.74	0.00	0.00	0.00	186.09	0.00	0.00	0.00	2160.94	0.07	0.00	0.00	2160.87
284+00	28400	50.00	96.50	0.00	0.00	0.00	180.78	0.00	0.00	0.00	2341.72	0.07	0.00	0.00	2341.65
284+50	28450	50.00	96.55	0.00	0.00	0.00	178.75	0.00	0.00	0.00	2520.47	0.07	0.00	0.00	2520.40
284+71 BK	28471	21.00	95.53	0.00	0.00	0.00	74.70	0.00	0.00	0.00	2595.17	0.07	0.00	0.00	2595.10

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

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Division 5 IH 94 EB

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
286+86 AH	28685.71	0.00	53.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287+00	28700	14.29	49.46	0.00	0.00	0.00	27.17	0.00	0.00	0.00	27.17	0.00	0.00	0.00	27.17
287+50	28750	50.00	46.48	0.00	0.00	0.00	88.83	0.00	0.00	0.00	116.01	0.00	0.00	0.00	116.01
288+00	28800	50.00	47.77	0.00	0.00	0.00	87.27	0.00	0.00	0.00	203.27	0.00	0.00	0.00	203.27
288+50	28850	50.00	47.64	0.00	0.00	0.00	88.34	0.00	0.00	0.00	291.62	0.00	0.00	0.00	291.62
289+00	28900	50.00	48.07	0.00	0.00	0.00	88.62	0.00	0.00	0.00	380.24	0.00	0.00	0.00	380.24
289+50	28950	50.00	49.16	0.00	0.00	0.00	90.03	0.00	0.00	0.00	470.26	0.00	0.00	0.00	470.26
290+00	29000	50.00	47.80	0.00	0.00	0.00	89.78	0.00	0.00	0.00	560.04	0.00	0.00	0.00	560.04
290+50	29050	50.00	47.68	0.00	0.00	0.00	88.41	0.00	0.00	0.00	648.45	0.00	0.00	0.00	648.45
291+00	29100	50.00	52.97	0.00	0.00	0.00	93.19	0.00	0.00	0.00	741.64	0.00	0.00	0.00	741.64
291+50	29150	50.00	54.28	0.00	0.00	0.00	99.31	0.00	0.00	0.00	840.95	0.00	0.00	0.00	840.95
291+55	29155.46	55.46	55.84	0.00	0.00	0.00	113.10	0.00	0.00	0.00	954.05	0.00	0.00	0.00	954.05
291+58 BK	29157.99	2.53	0.00	0.00	0.00	0.00	2.62	0.00	0.00	0.00	956.66	0.00	0.00	0.00	956.66
					Column totals		3551.83	0.00	793.12	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

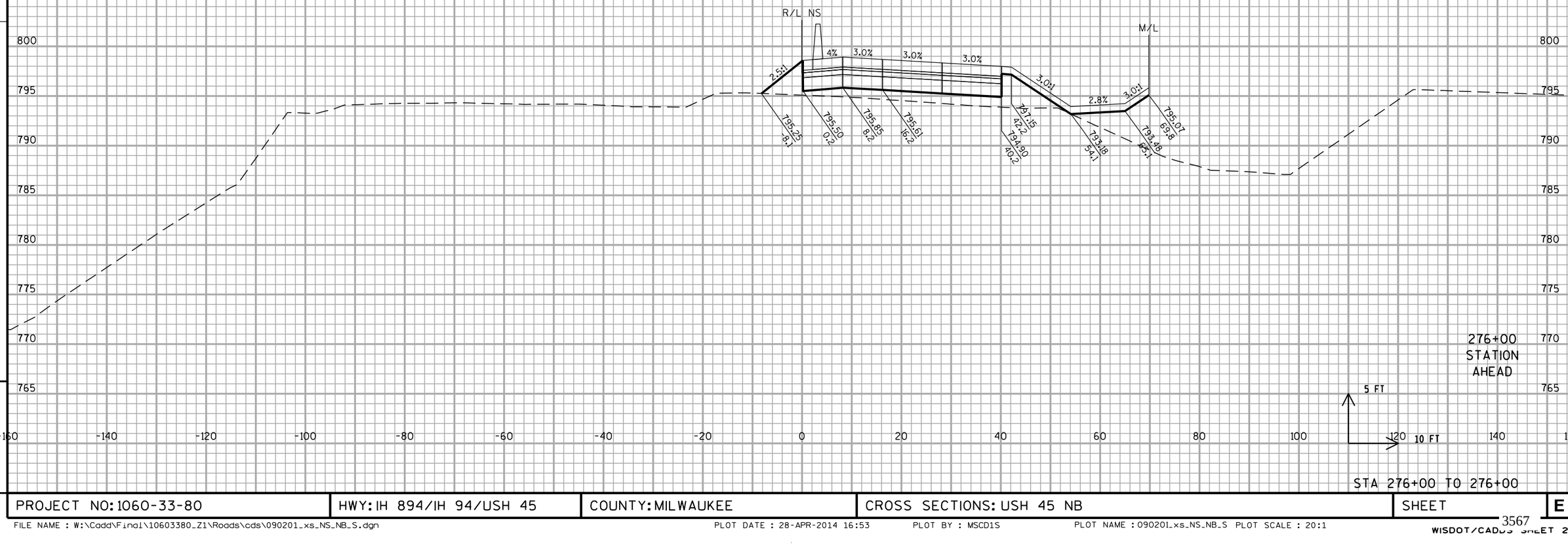
Division 5 NE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/ Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
525+66 AH	52566	0.00	147.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526+00	52600	34.00	137.14	0.00	0.00	0.00	179.02	0.00	0.00	0.00	179.02	0.00	0.00	0.00	179.02
526+50	52650	50.00	115.69	0.00	0.00	0.00	234.10	0.00	0.00	0.00	413.12	0.00	0.00	0.00	413.12
527+00	52700	50.00	74.33	0.00	0.00	0.00	175.94	0.00	0.00	0.00	589.07	0.00	0.00	0.00	589.07
527+50	52750	50.00	20.07	0.00	1.15	0.00	87.41	0.00	1.06	0.00	676.48	1.28	0.00	0.00	675.20
528+00	52800	50.00	0.00	0.00	47.68	0.00	18.58	0.00	45.21	0.00	695.06	55.53	0.00	0.00	639.53
528+50	52850	50.00	0.00	0.00	94.45	0.00	0.00	0.00	131.60	0.00	695.06	213.46	0.00	0.00	481.60
528+90 BK	52890	40.00	0.00	0.00	127.06	0.00	0.00	0.00	164.08	0.00	695.06	410.35	0.00	0.00	284.71
						Column totals	695.06	0.00	341.96	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

9

ALL WORK STAGE 3



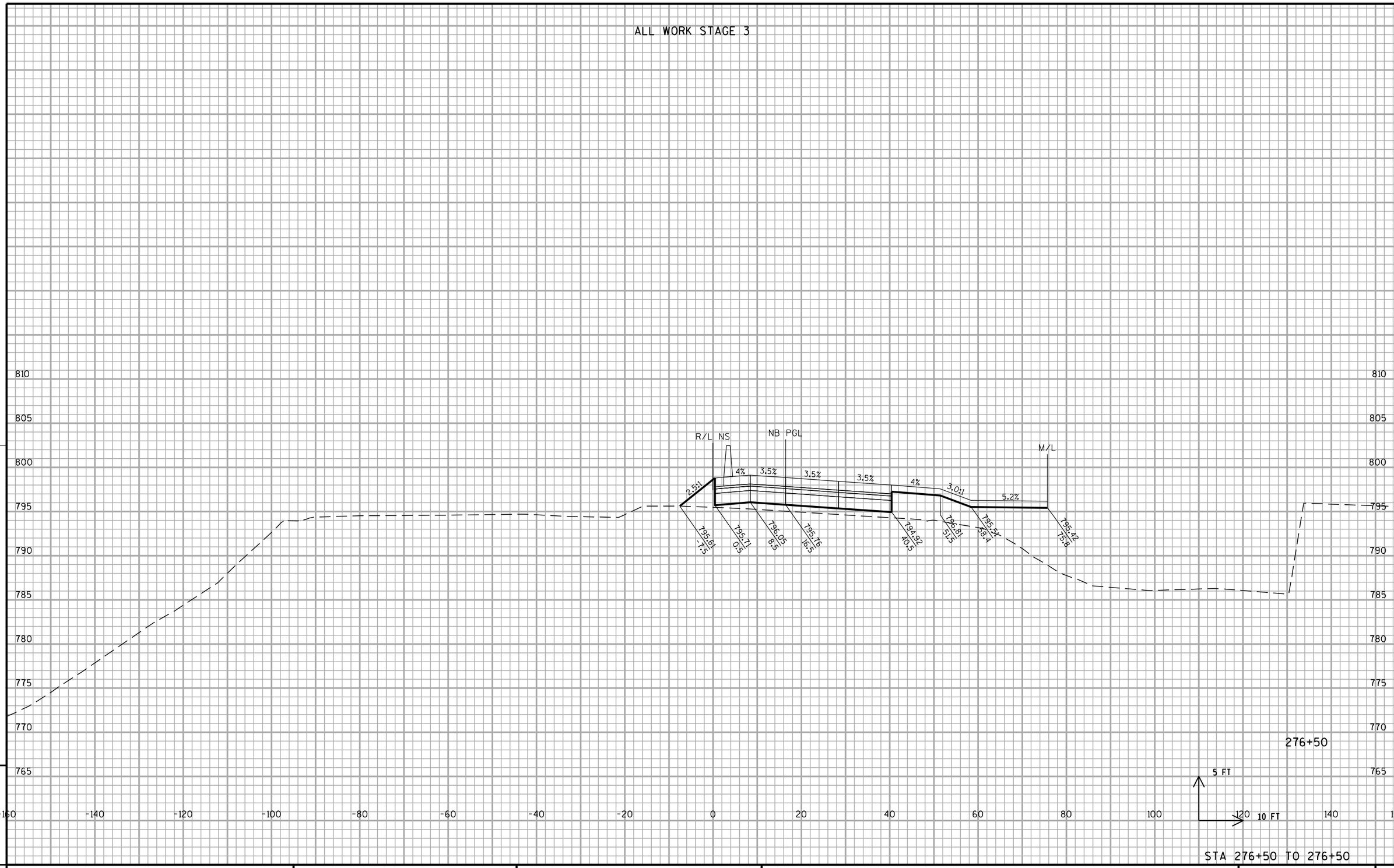
STA 276+00 TO 276+00

9

9

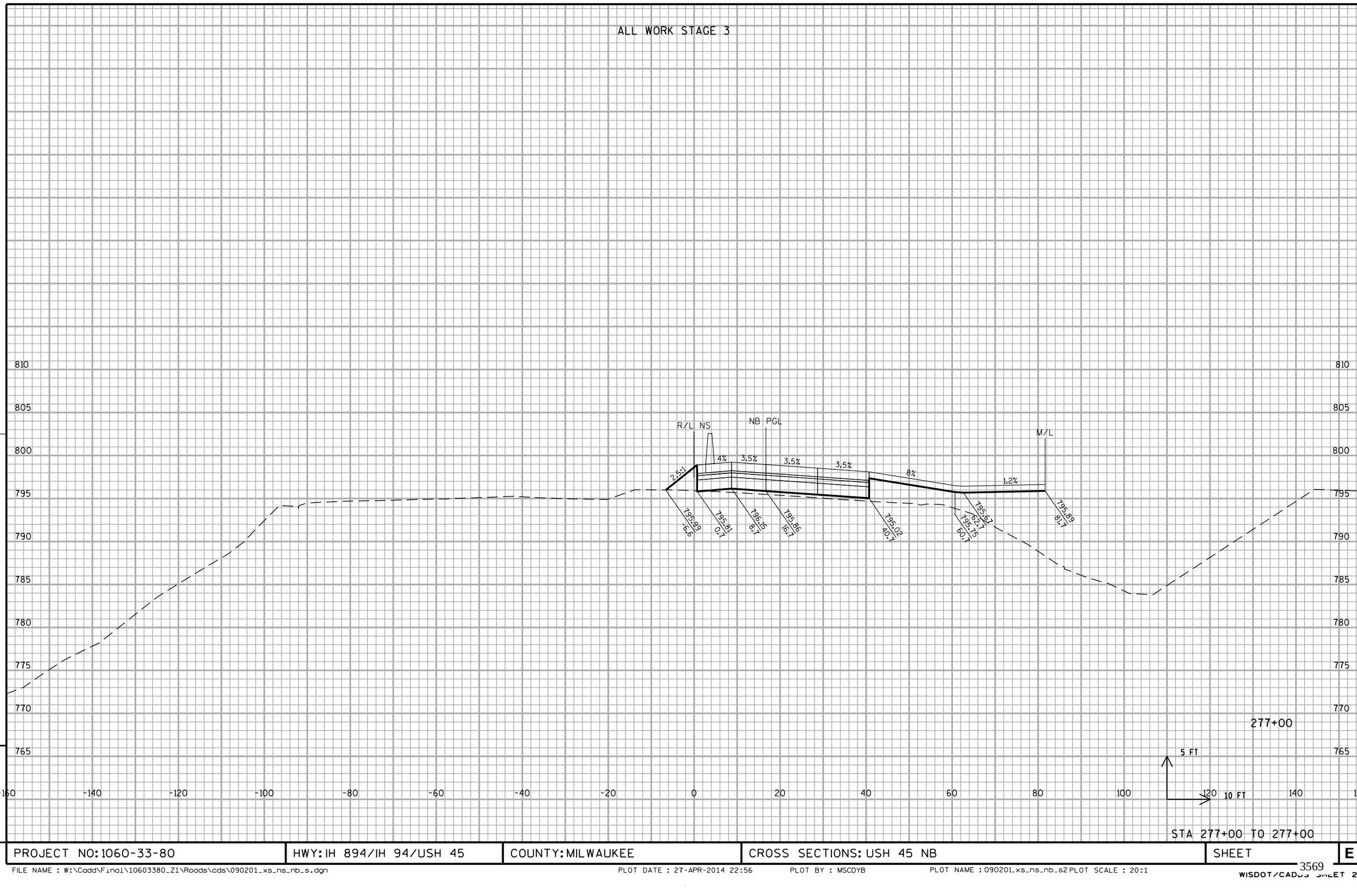
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

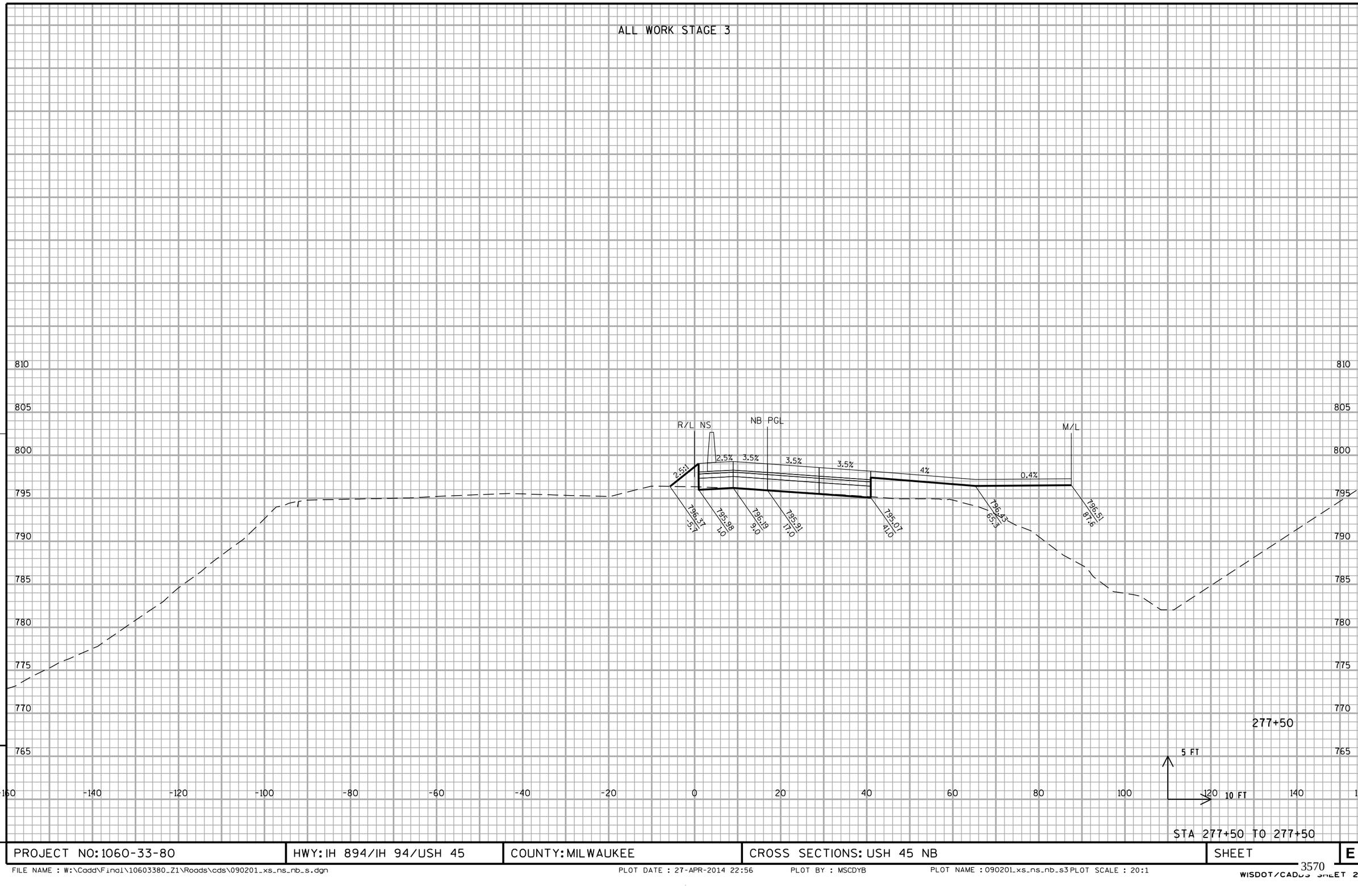
ALL WORK STAGE 3



STA 277+00 TO 277+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 3



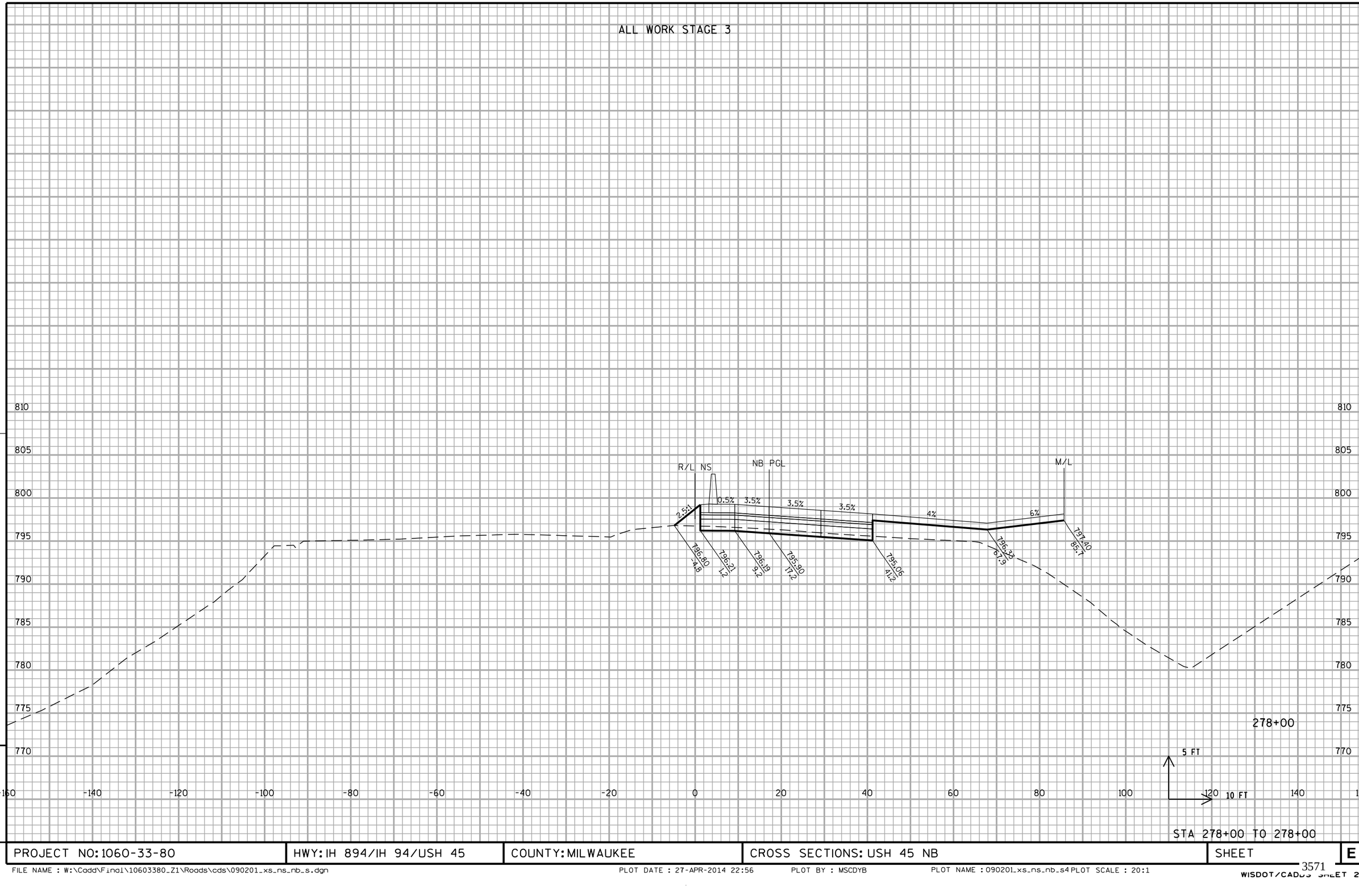
STA 277+50 TO 277+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

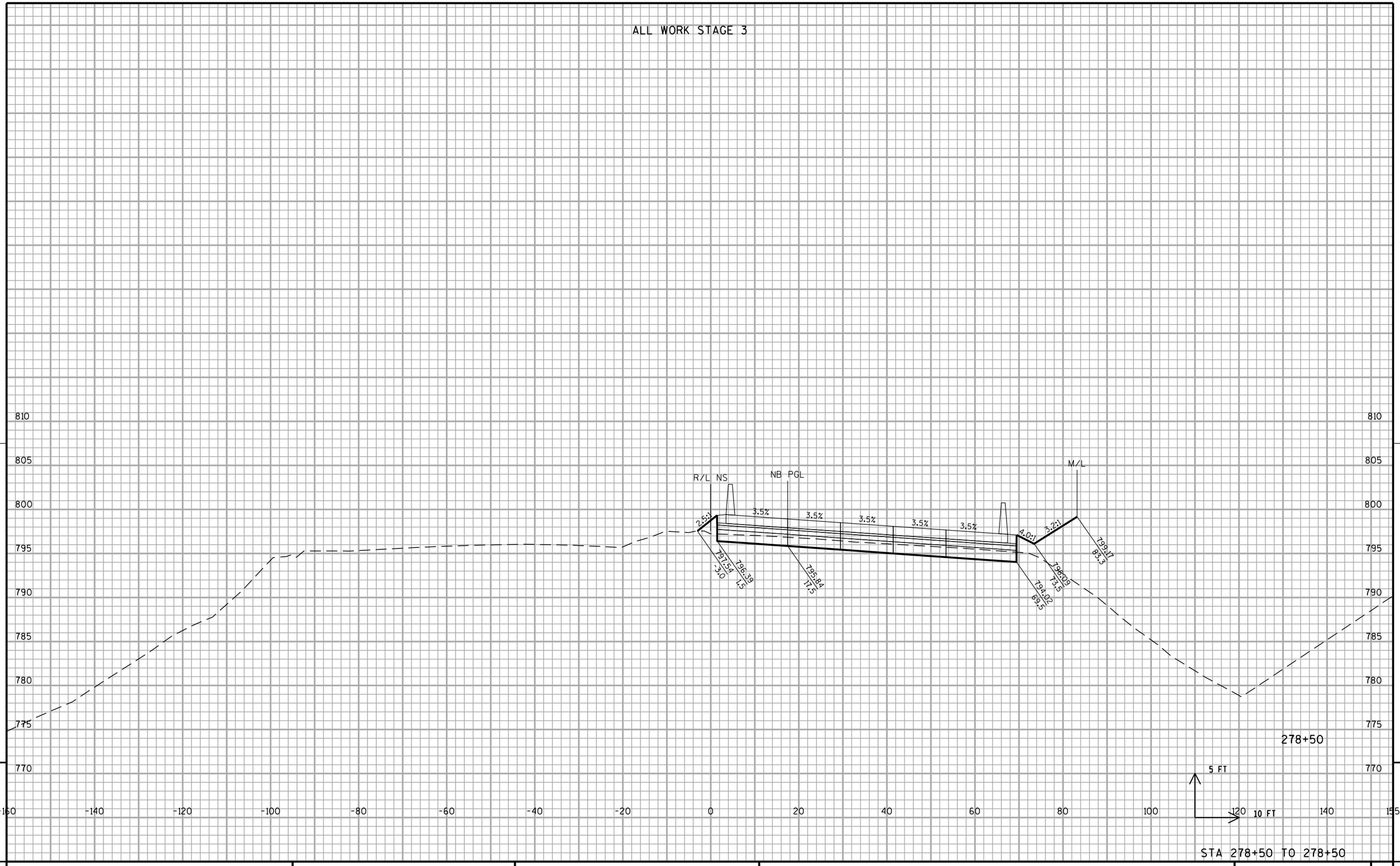
ALL WORK STAGE 3



STA 278+00 TO 278+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

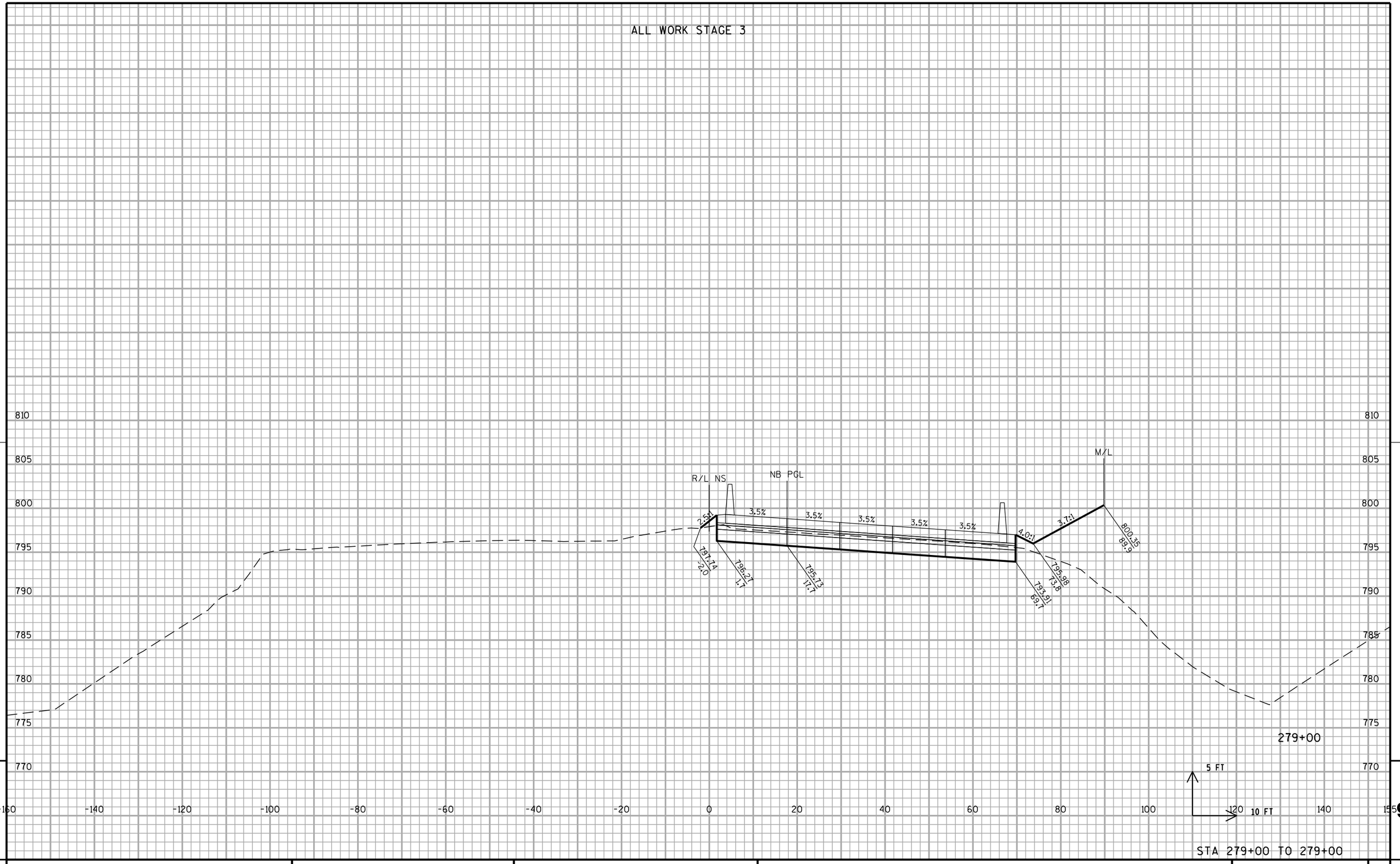
ALL WORK STAGE 3



STA 278+50 TO 278+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 3



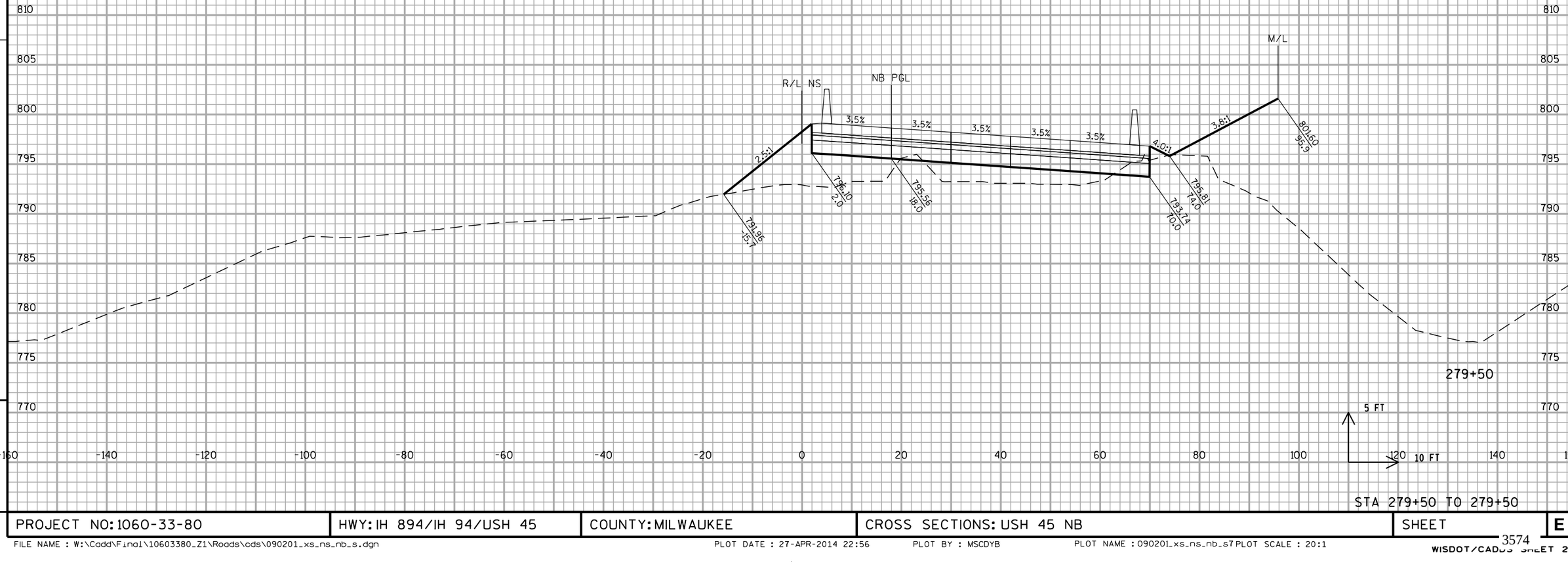
STA 279+00 TO 279+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



9

9

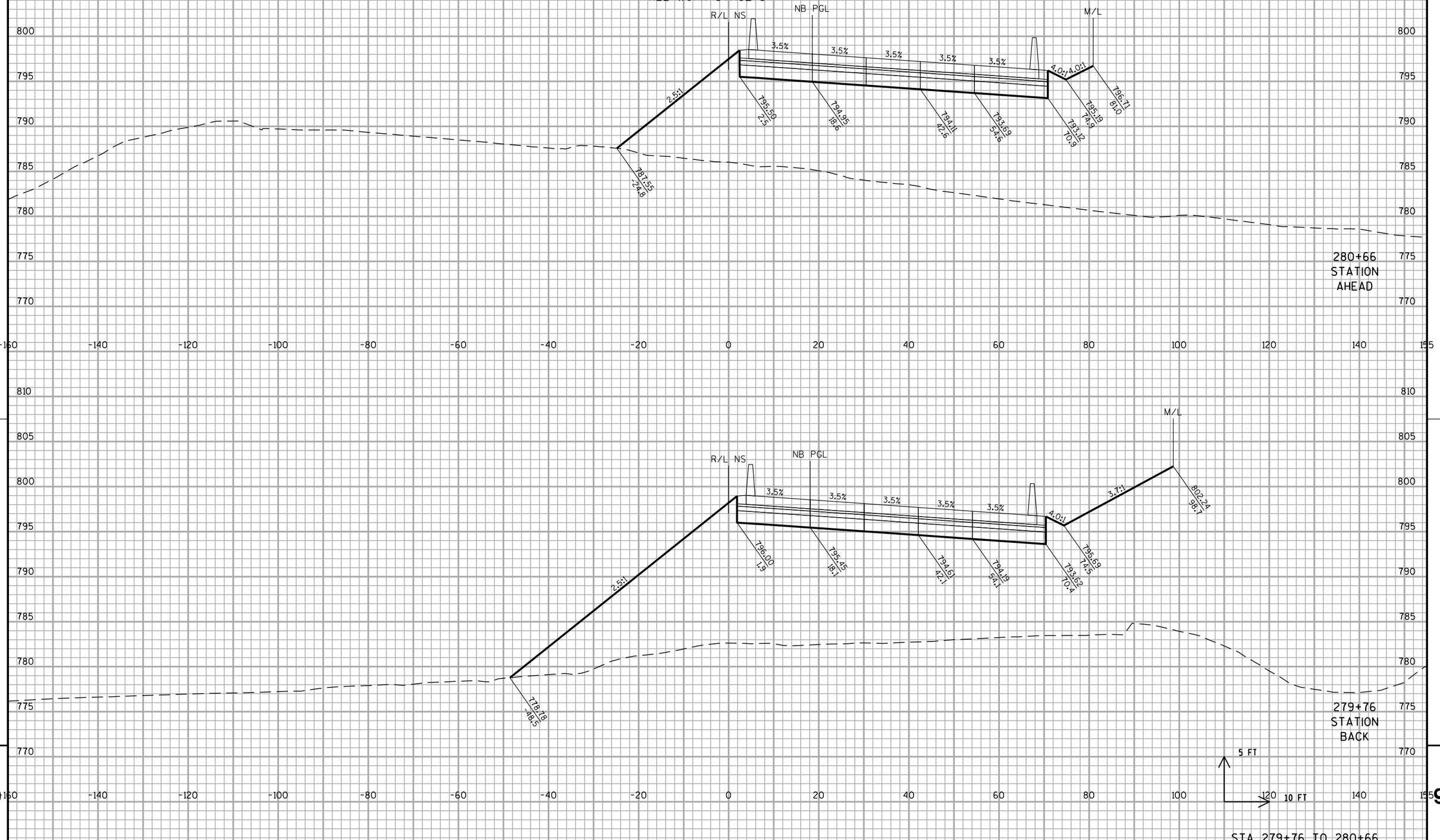
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

STA 279+50 TO 279+50

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

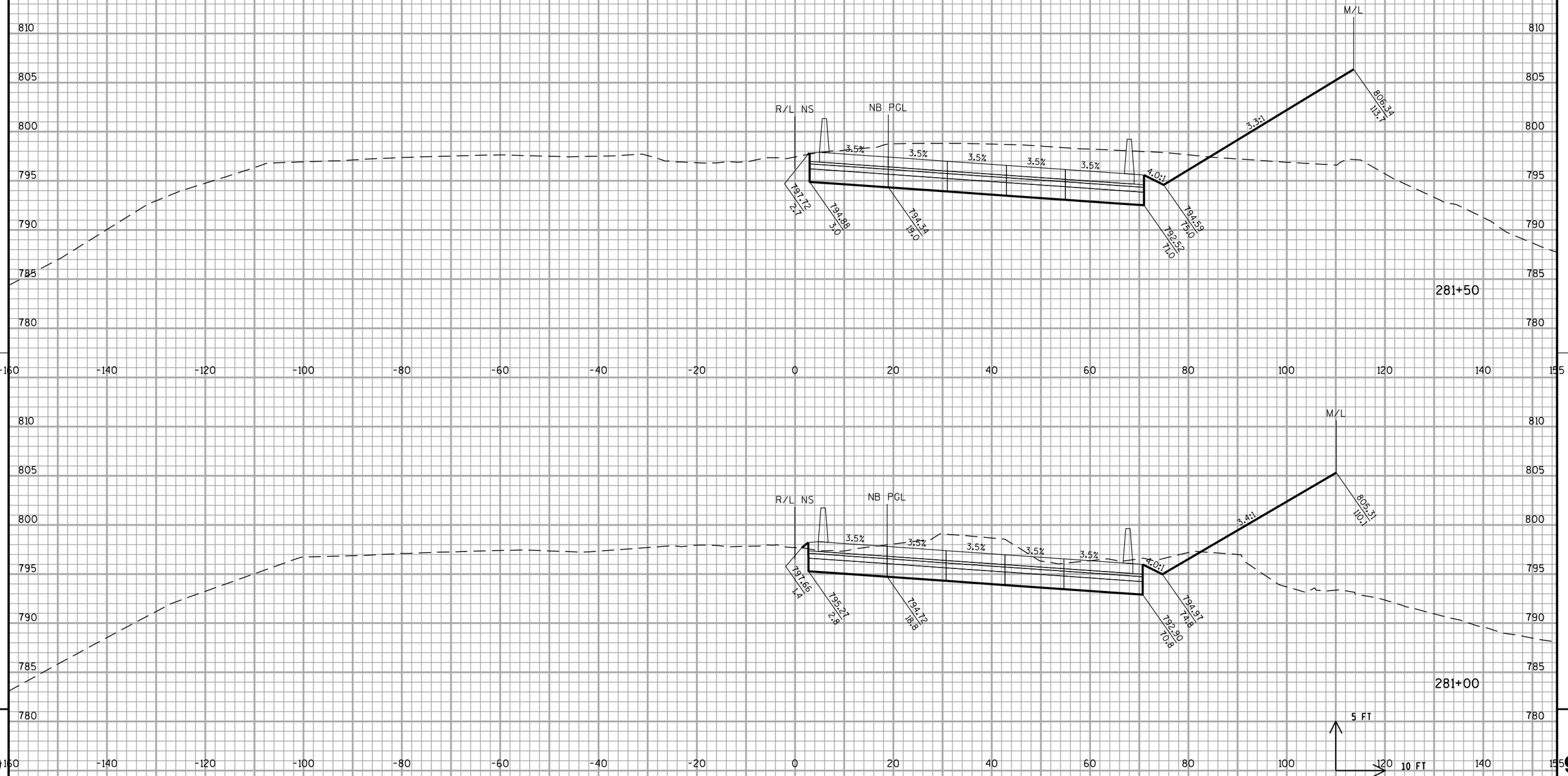


STA 279+76 TO 280+66

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s8 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

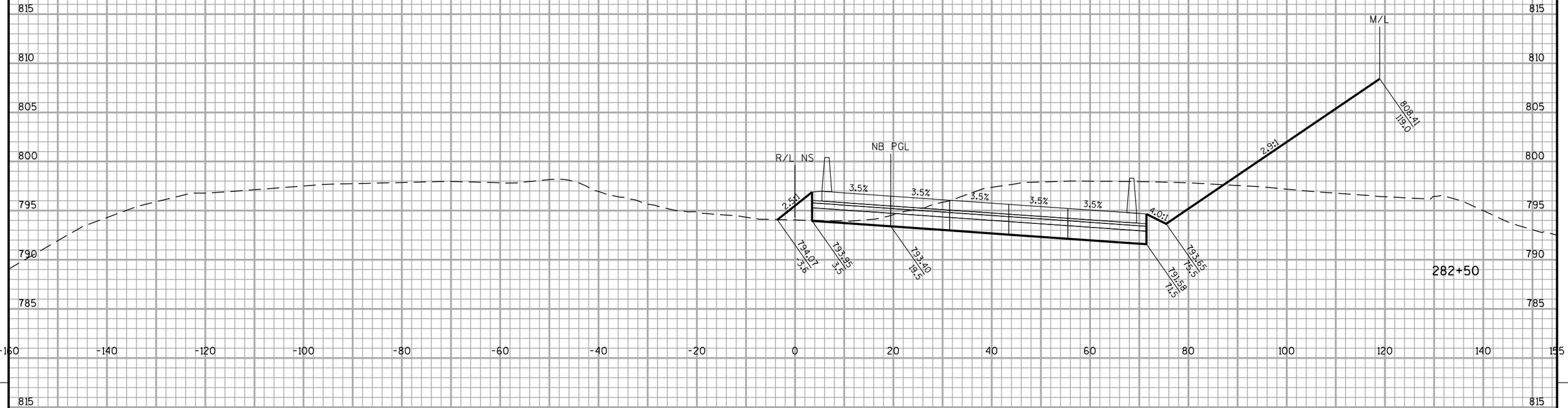
ALL WORK STAGE 3

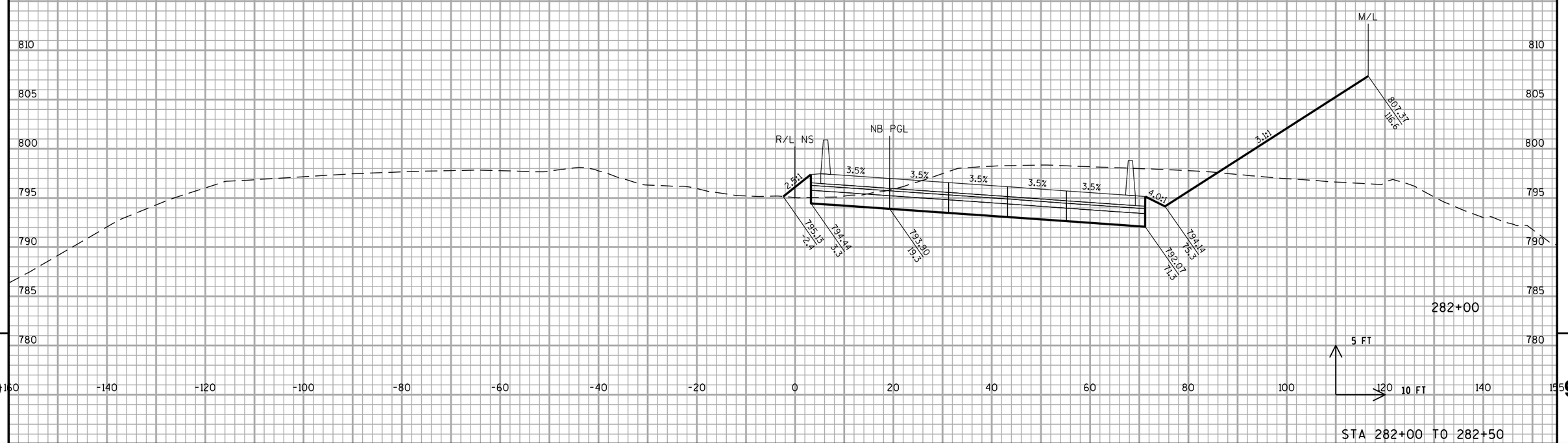


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s9 PLOT SCALE : 20:1

ALL WORK STAGE 3

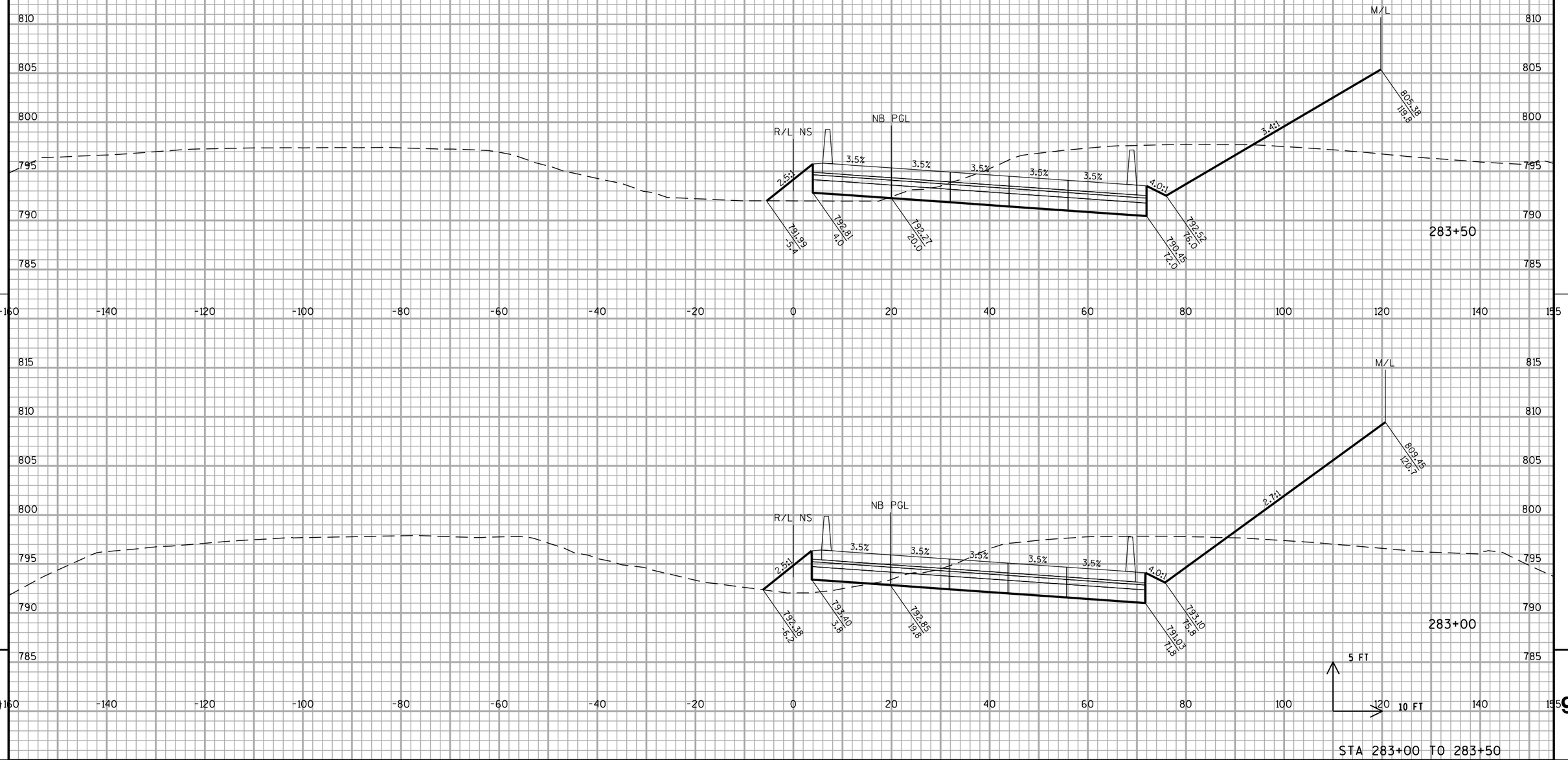




STA 282+00 TO 282+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

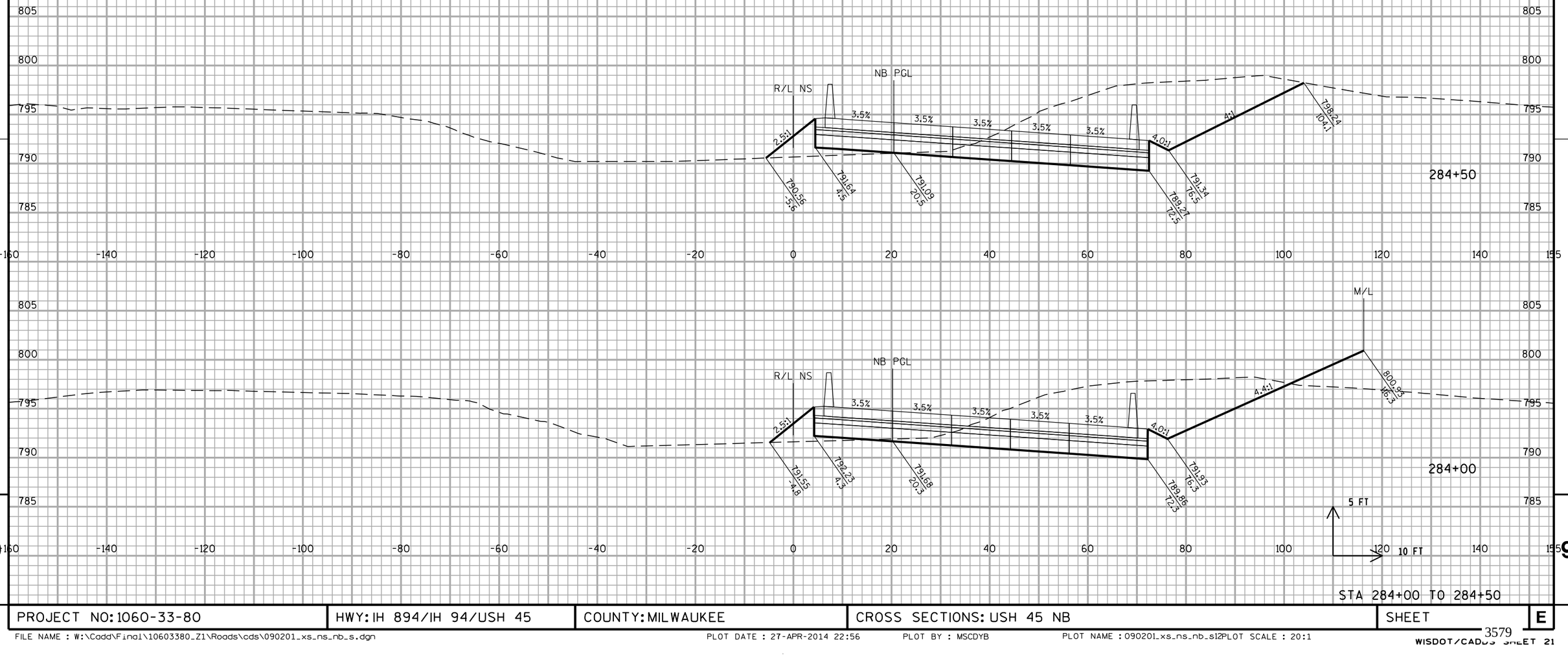
ALL WORK STAGE 3



STA 283+00 TO 283+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 3

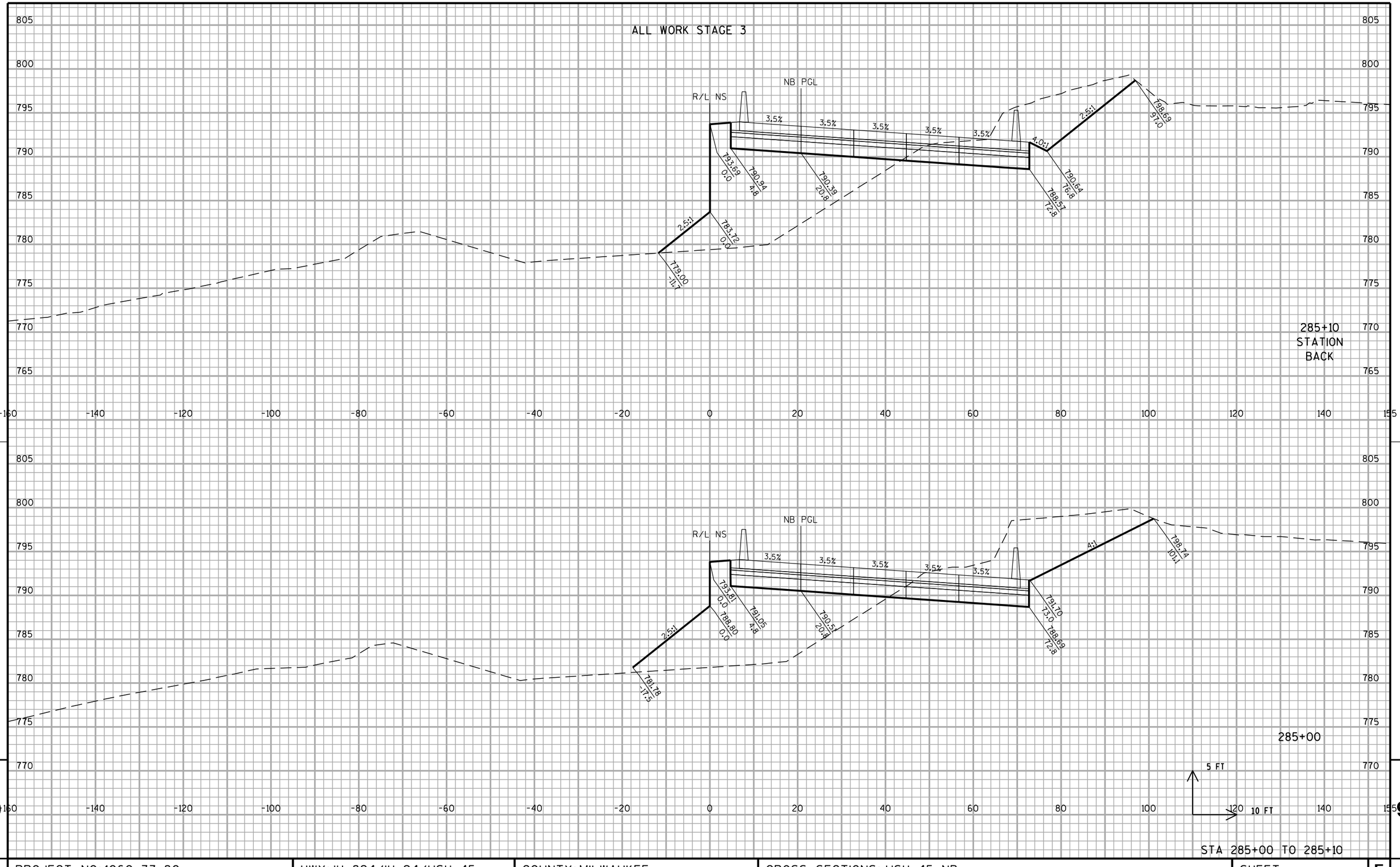


STA 284+00 TO 284+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s12PLOT SCALE : 20:1

ALL WORK STAGE 3

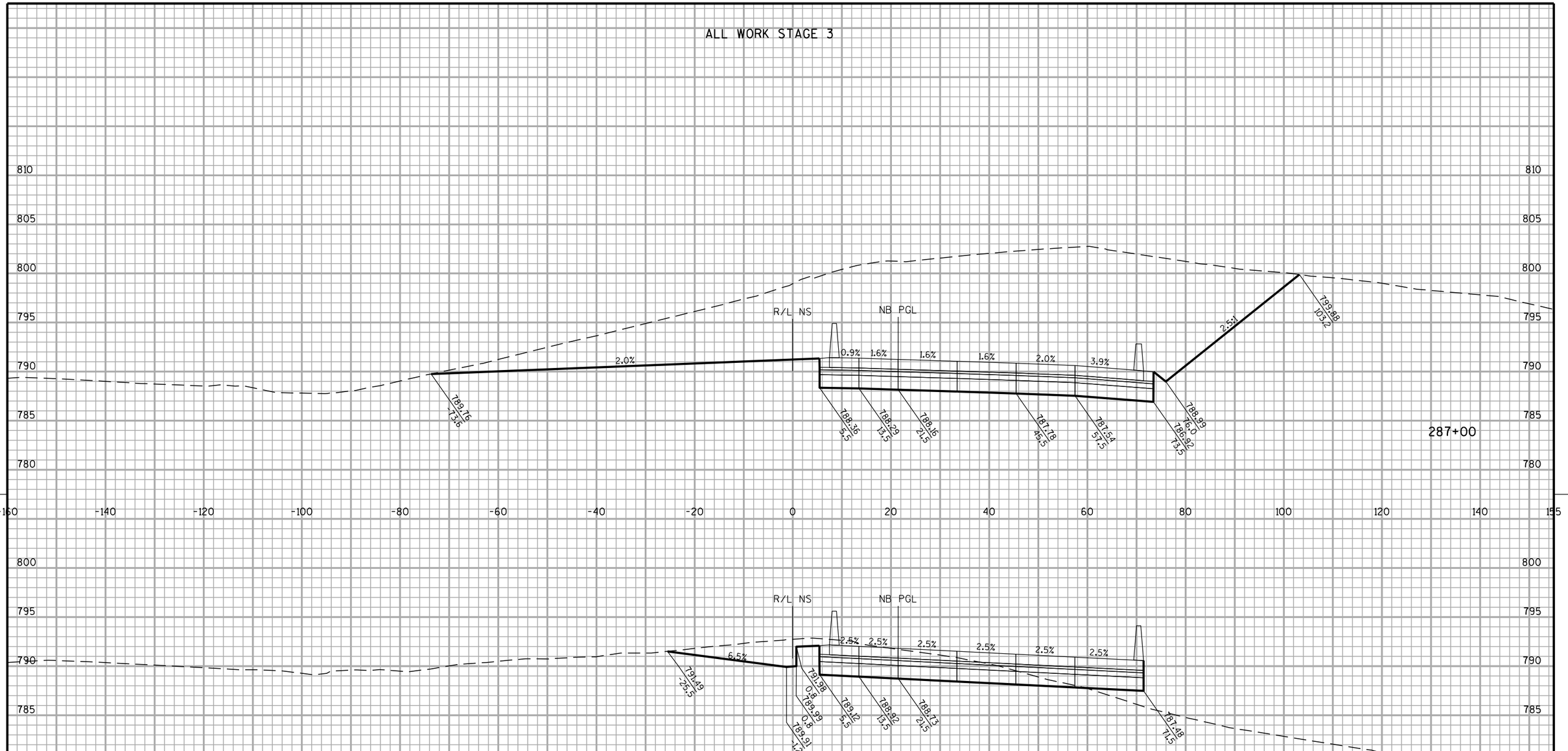


STA 285+00 TO 285+10

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s13 PLOT SCALE : 20:1

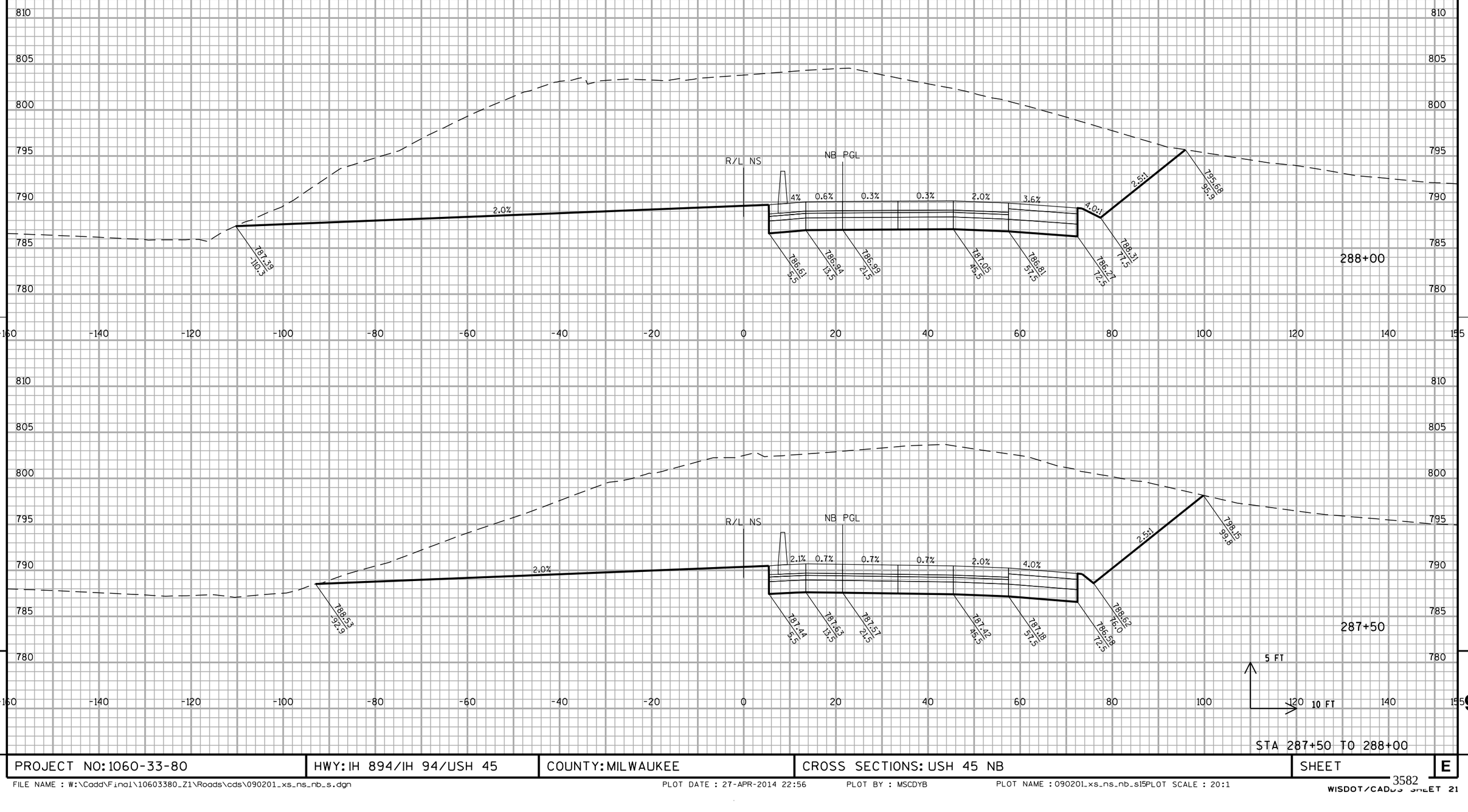
ALL WORK STAGE 3



STA 286+52 TO 287+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 3



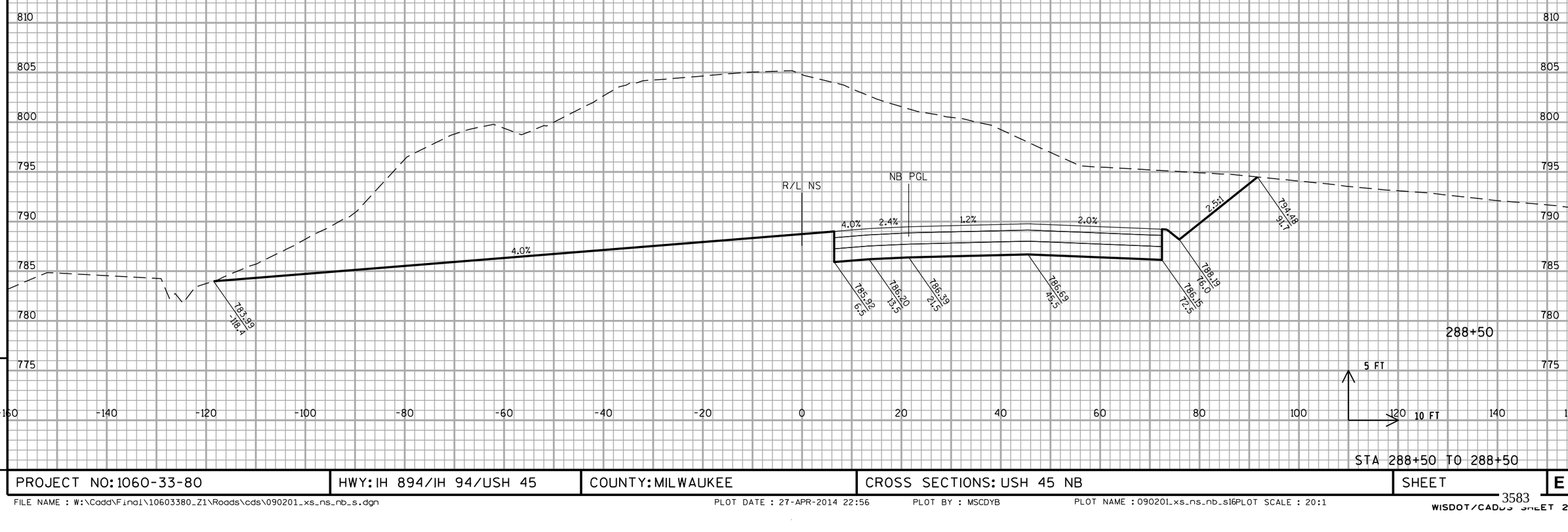
STA 287+50 TO 288+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s15PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

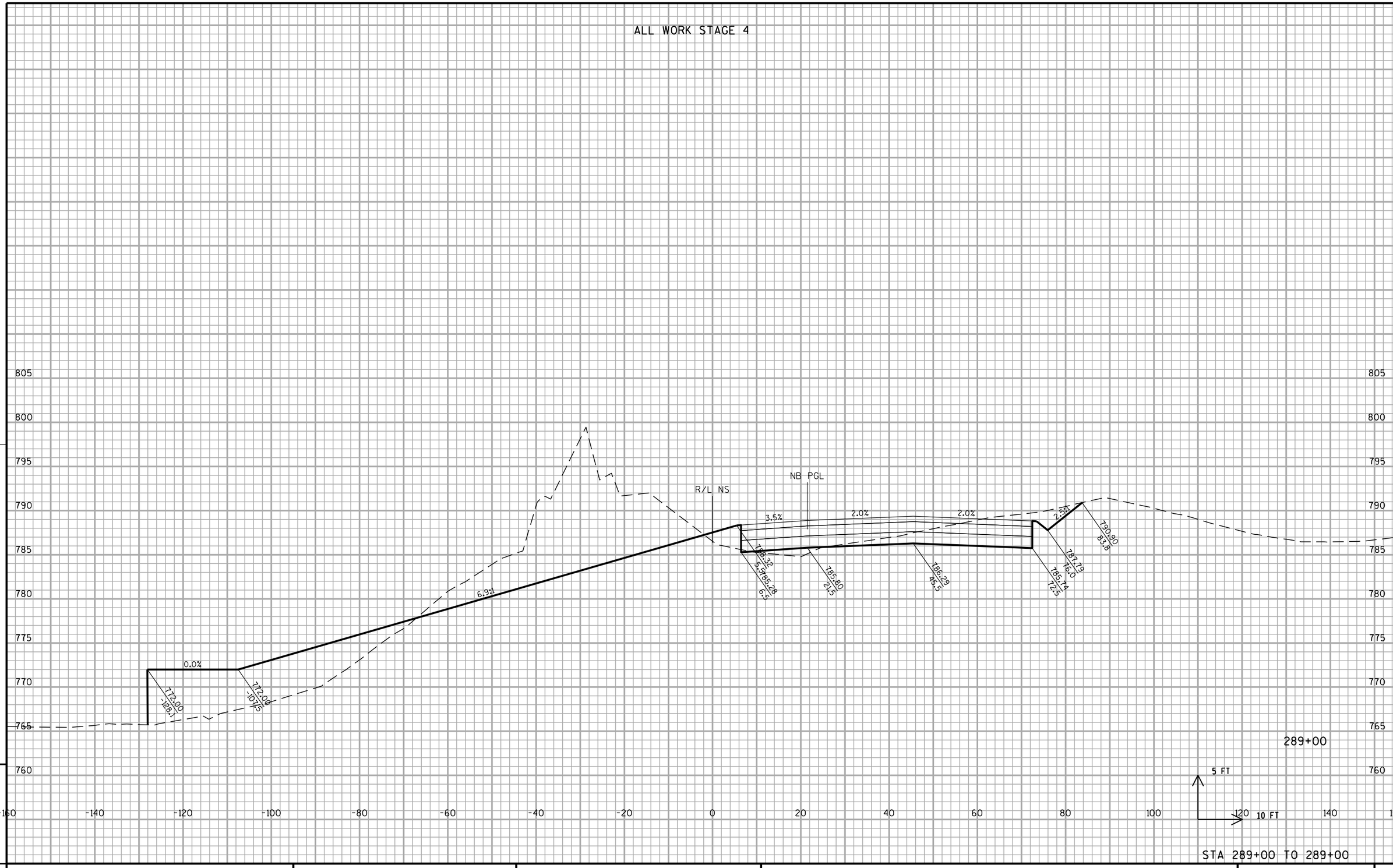


STA 288+50 TO 288+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s16PLOT SCALE : 20:1

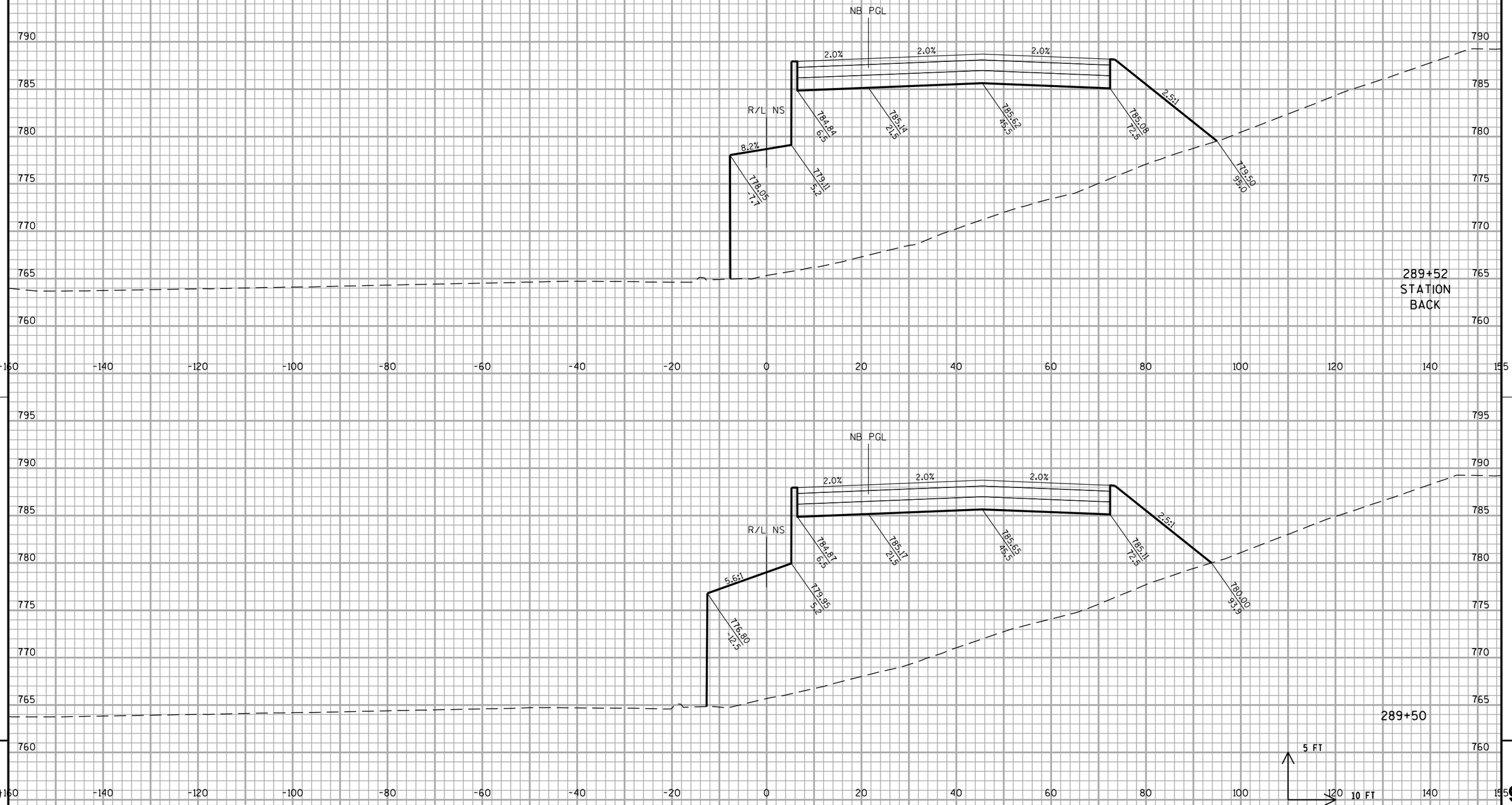
ALL WORK STAGE 4



STA 289+00 TO 289+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 4

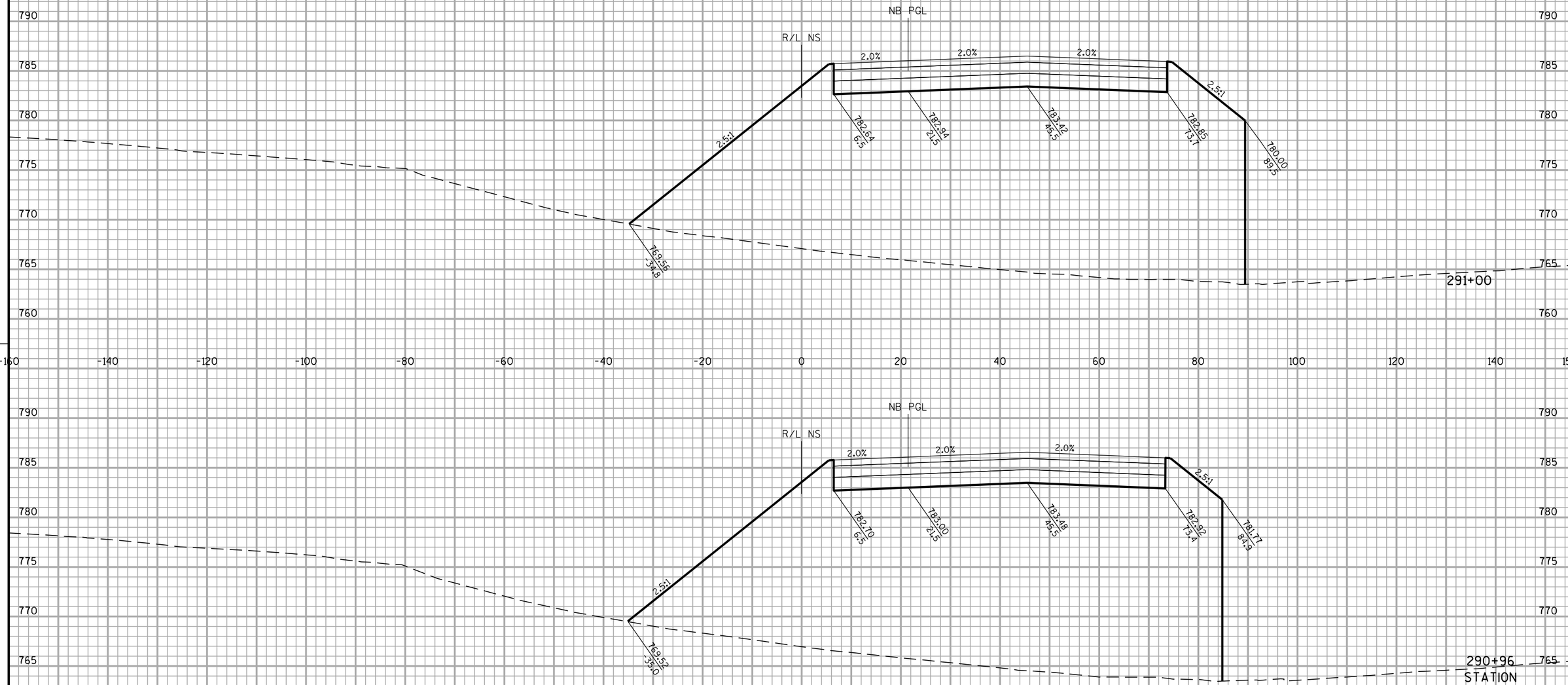


STA 289+50 TO 289+52

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s18PLOT SCALE : 20:1

ALL WORK STAGE 4



790 785 780 775 770 765 760

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

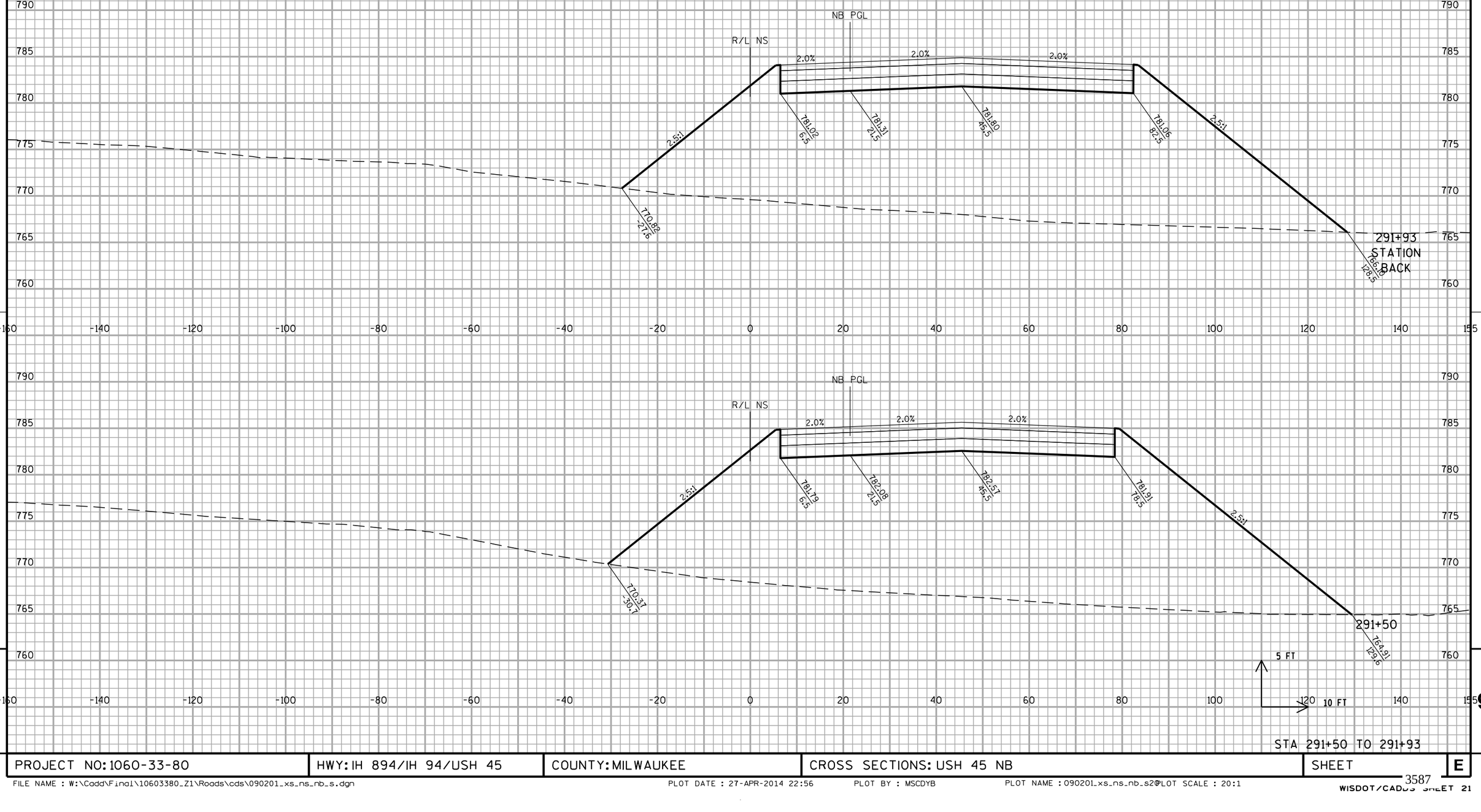
STA 290+96 TO 291+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s19PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

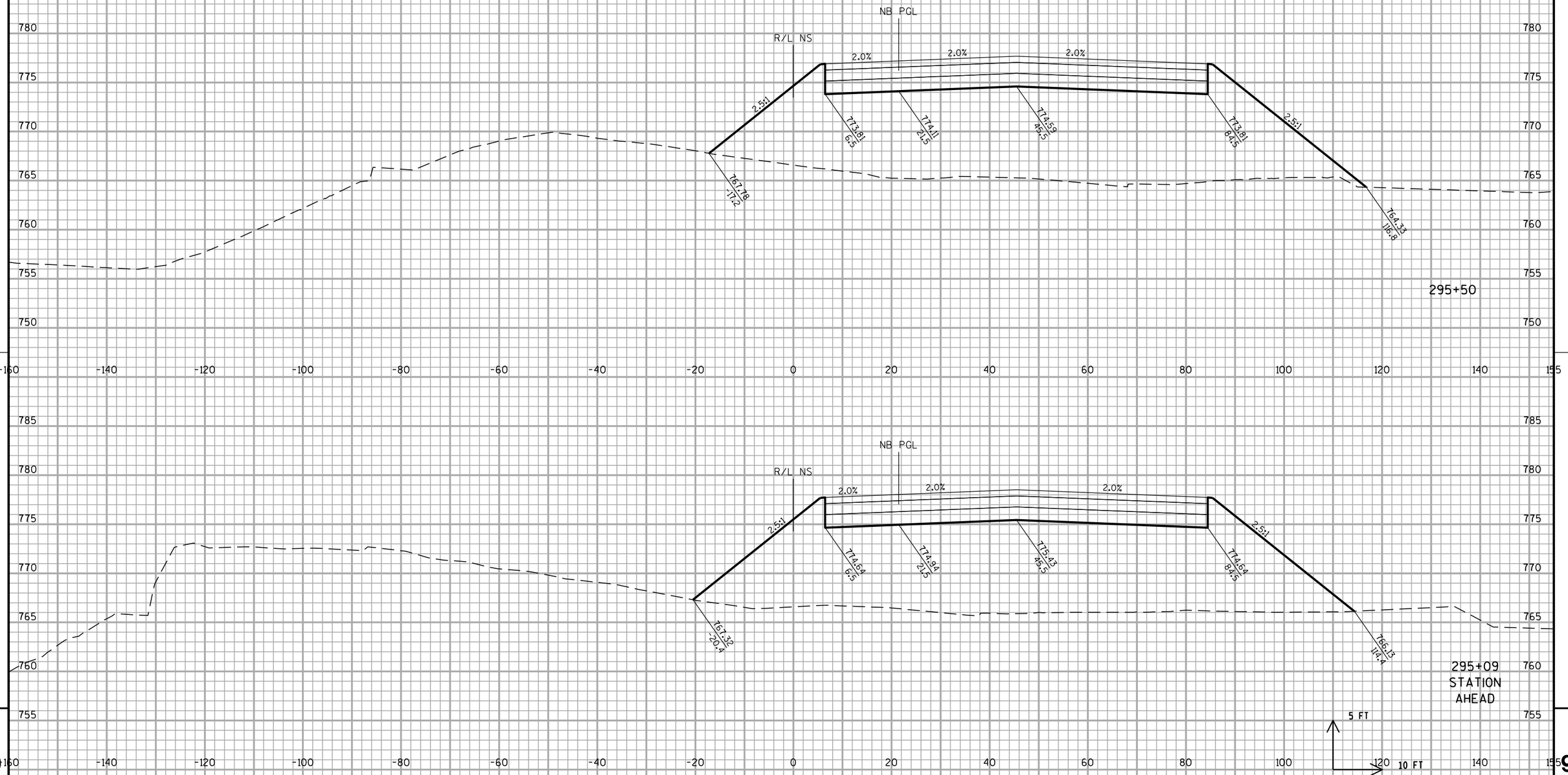
ALL WORK STAGE 4



STA 291+50 TO 291+93

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

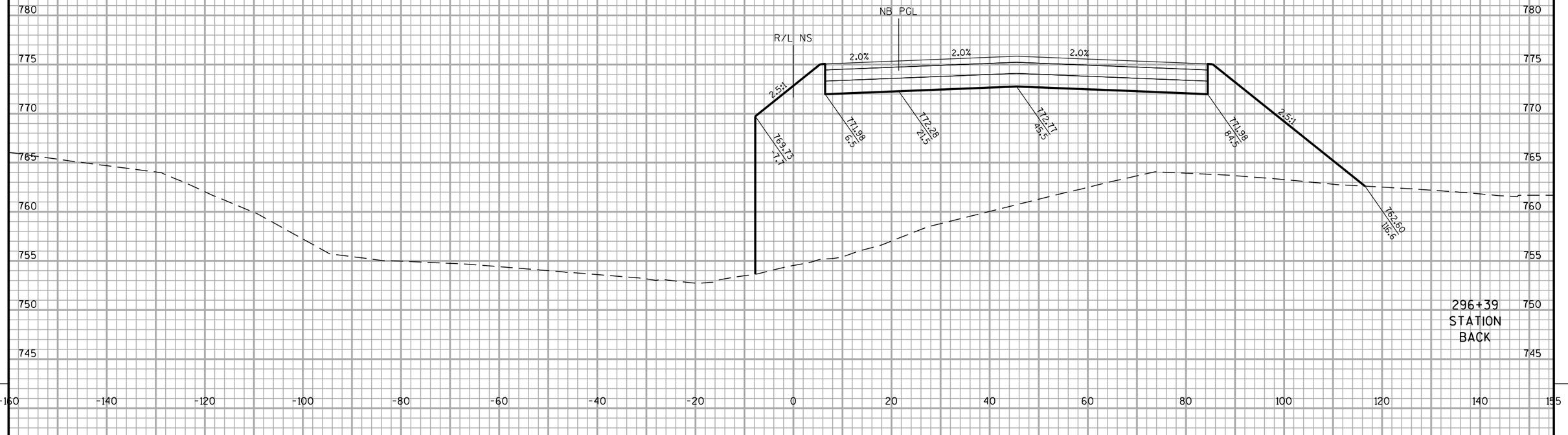
ALL WORK STAGE 4



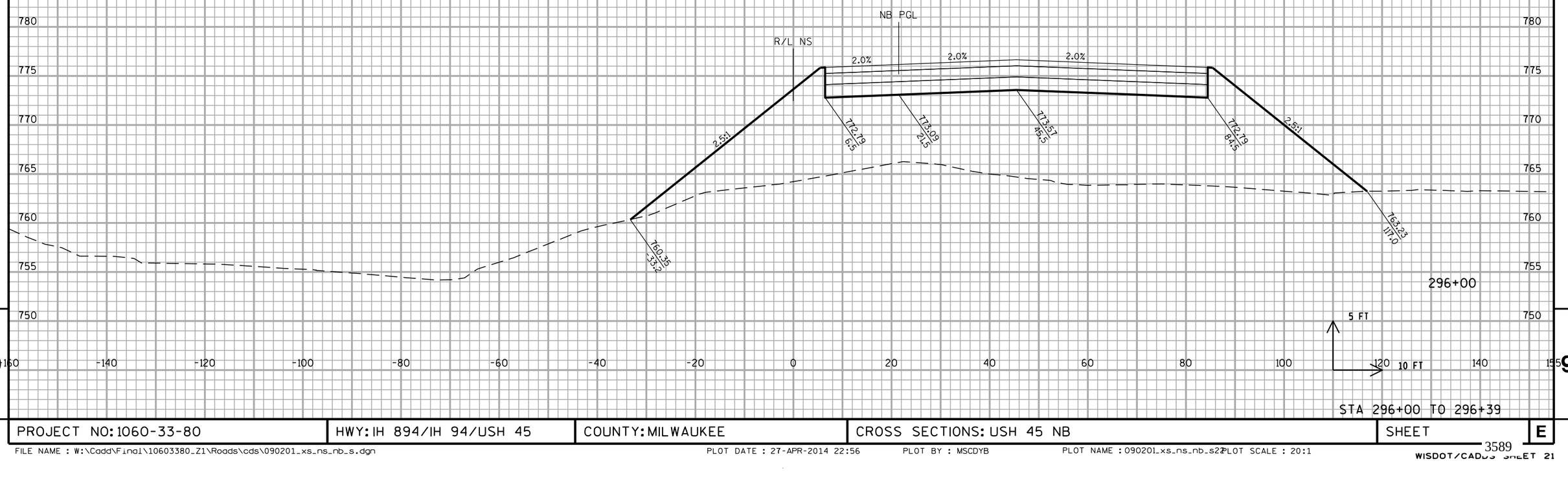
STA 295+09 TO 295+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 4



296+39
STATION
BACK



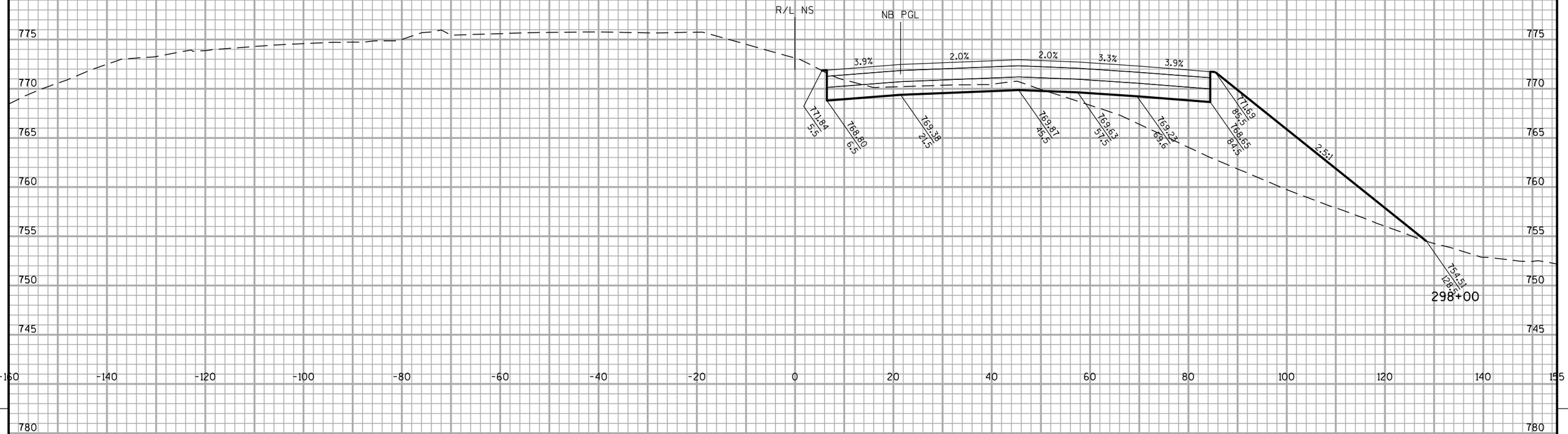
296+00

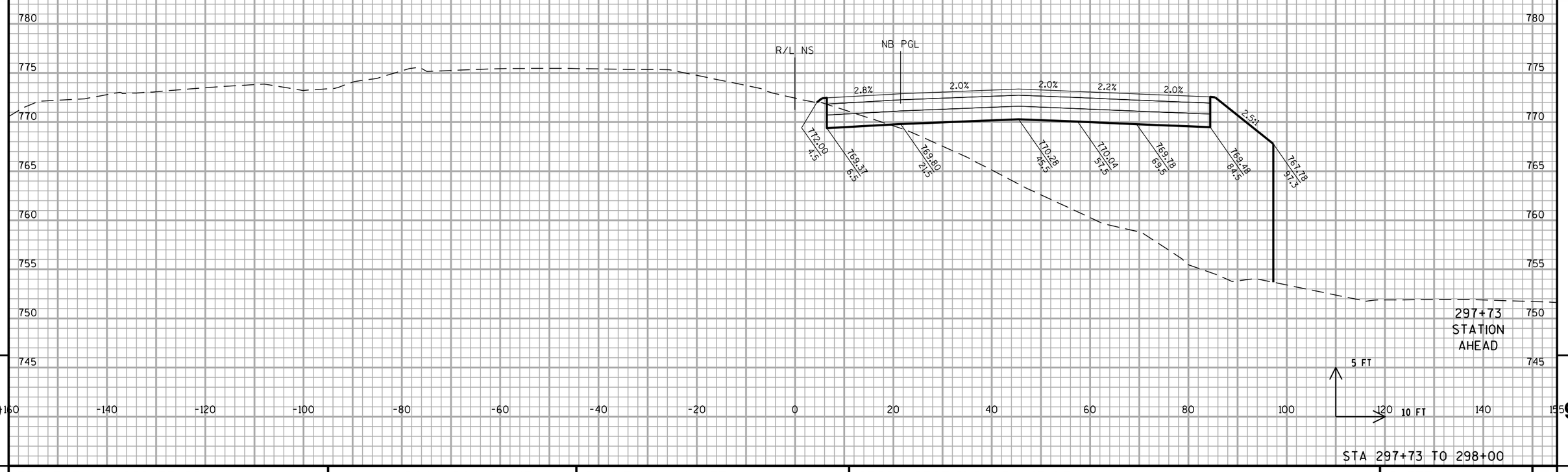
STA 296+00 TO 296+39

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s2 PLOT SCALE : 20:1

ALL WORK STAGE 4



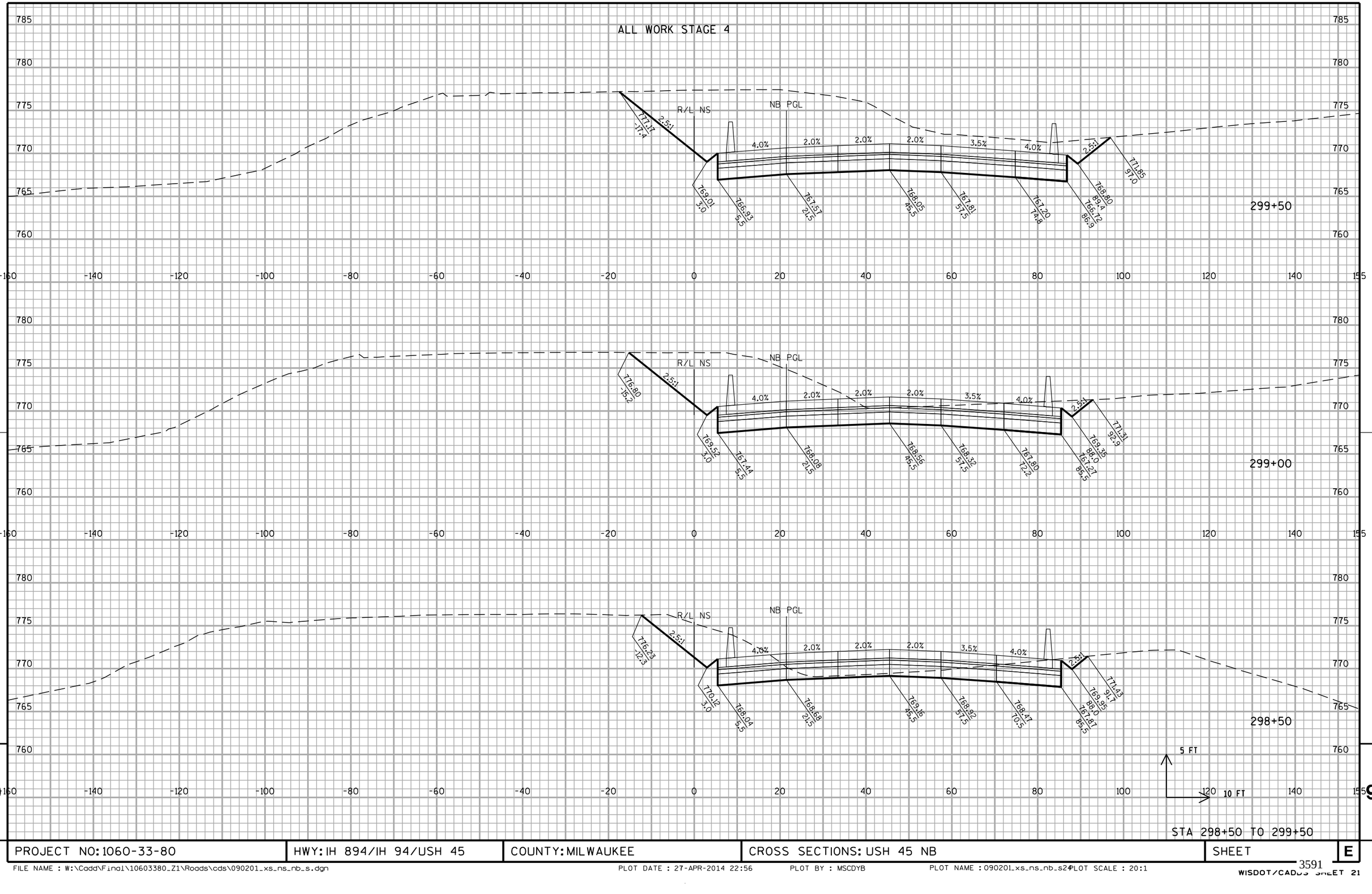


STA 297+73 TO 298+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s2 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

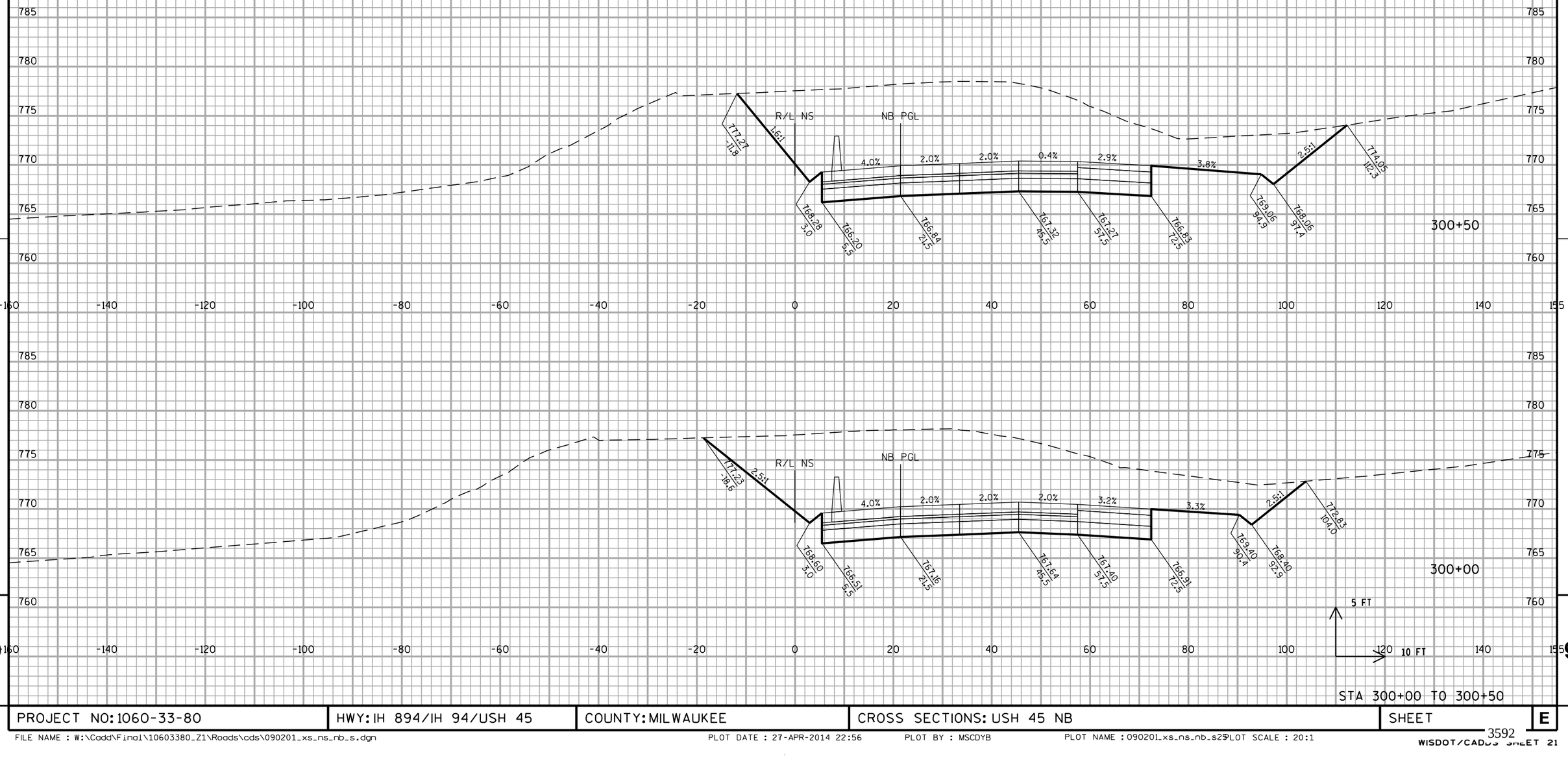
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s2 PLOT SCALE : 20:1

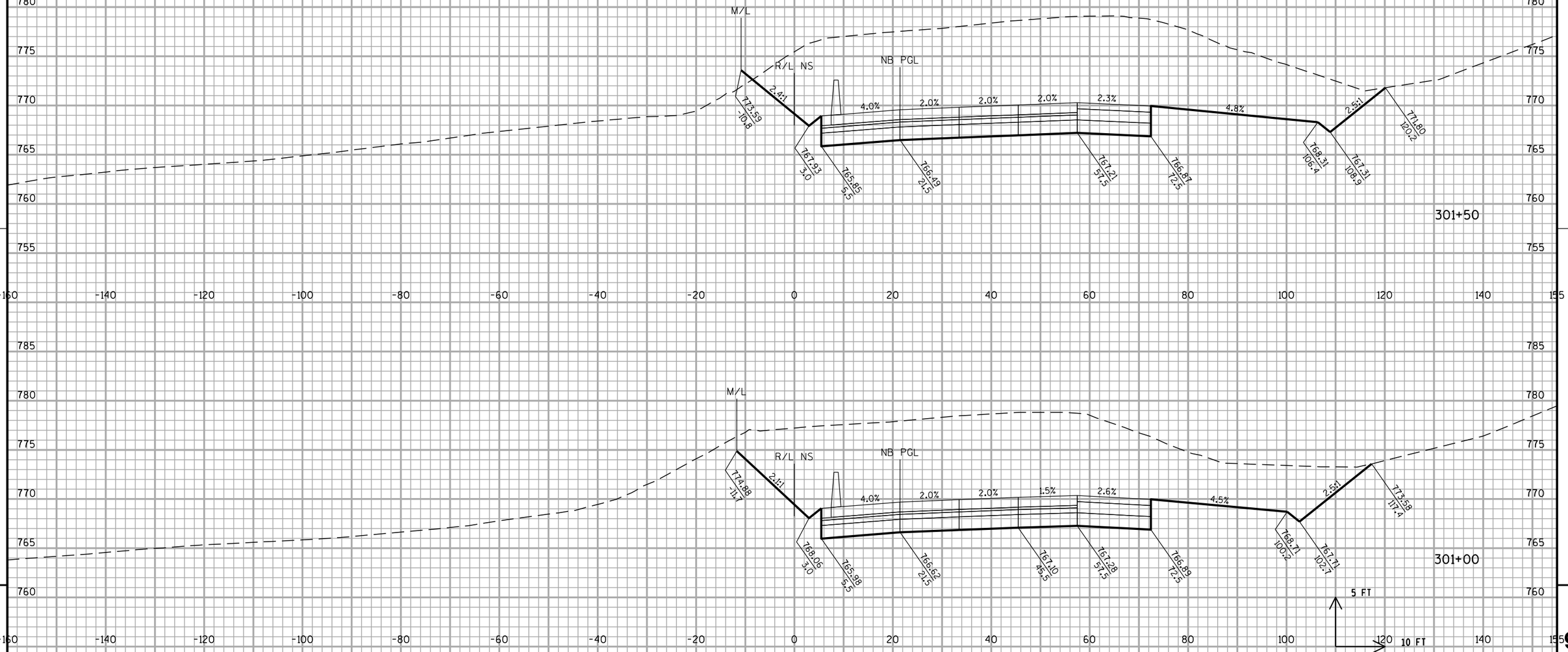
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s25 PLOT SCALE : 20:1

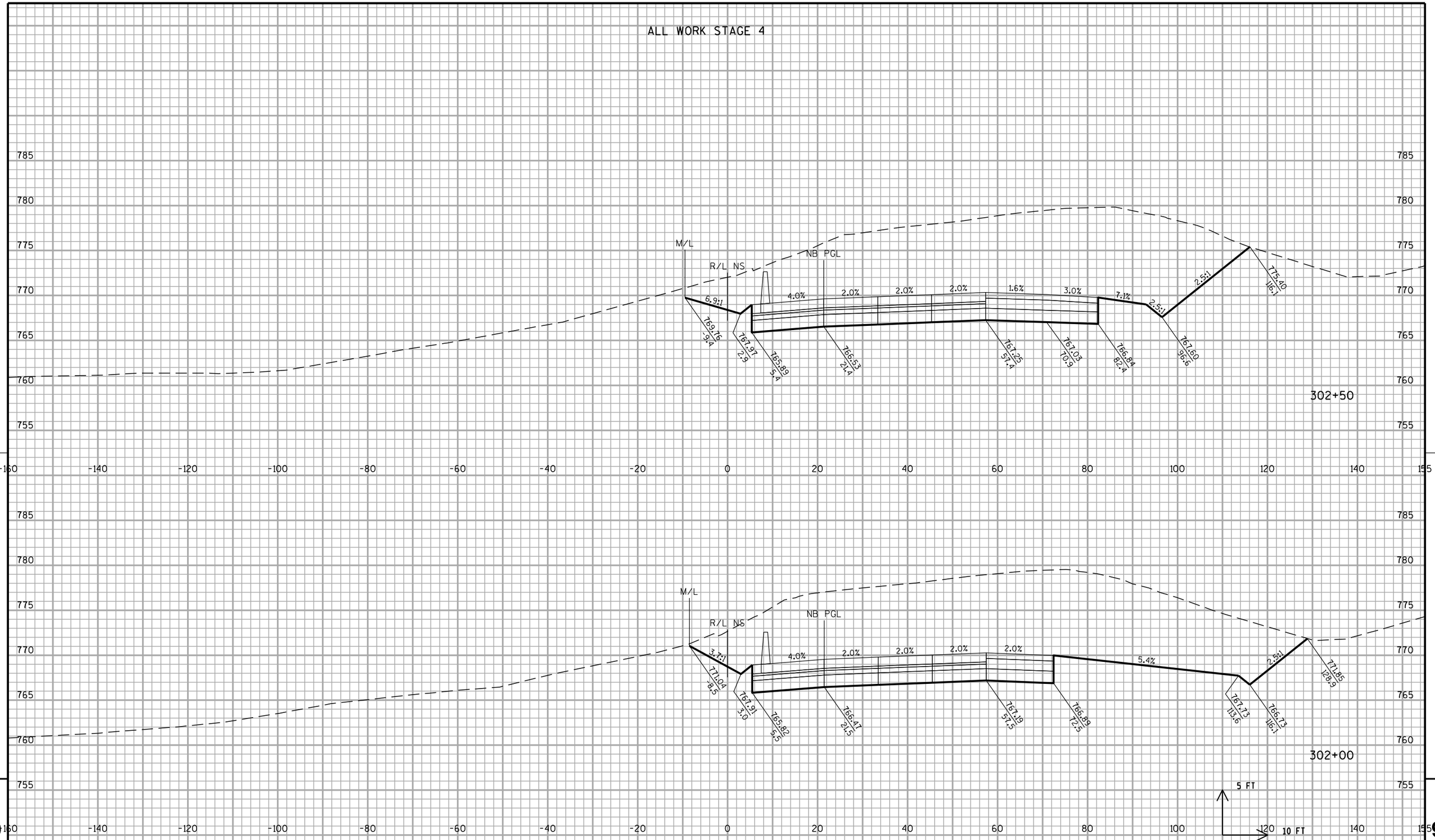
ALL WORK STAGE 4



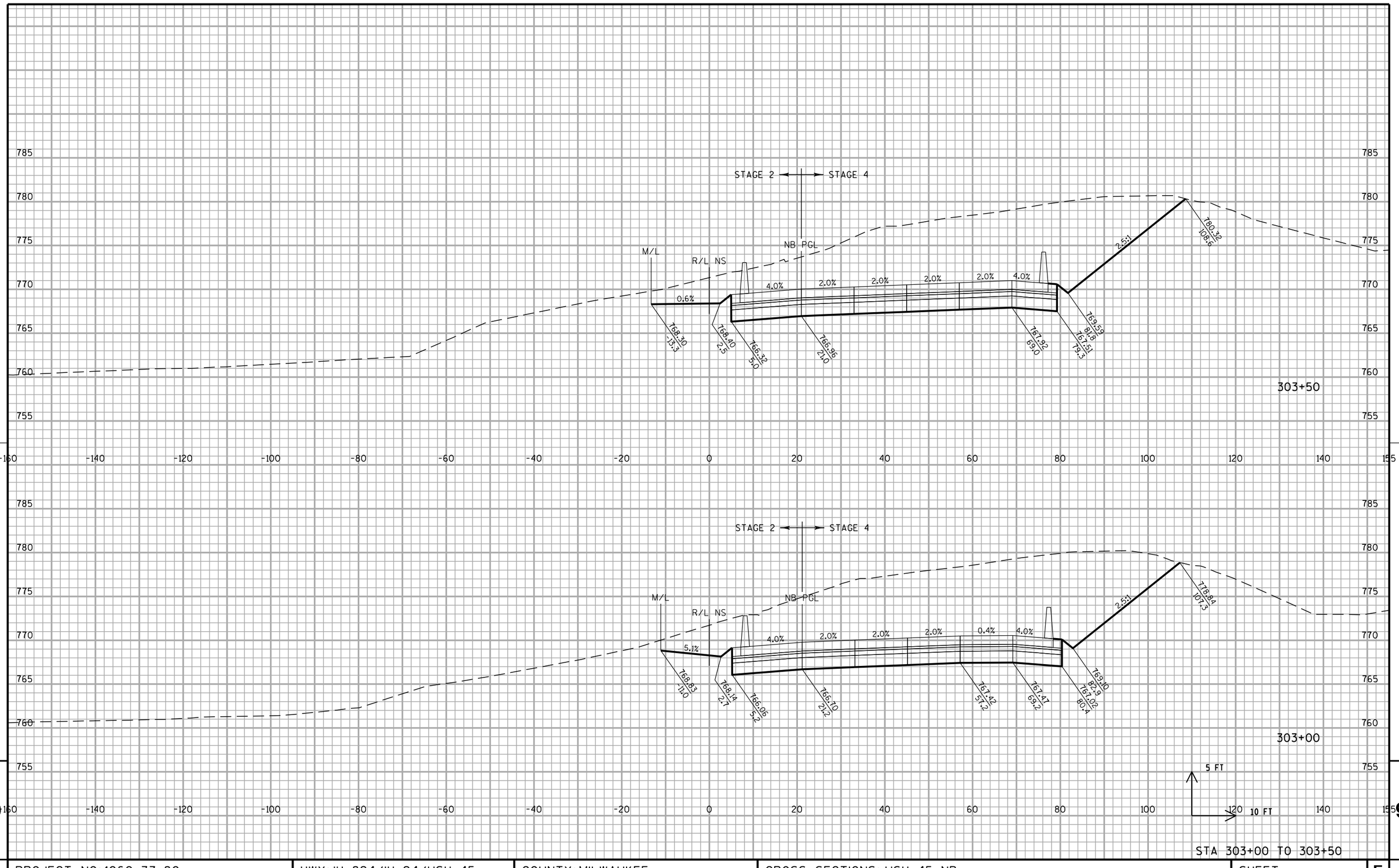
STA 301+00 TO 301+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 4

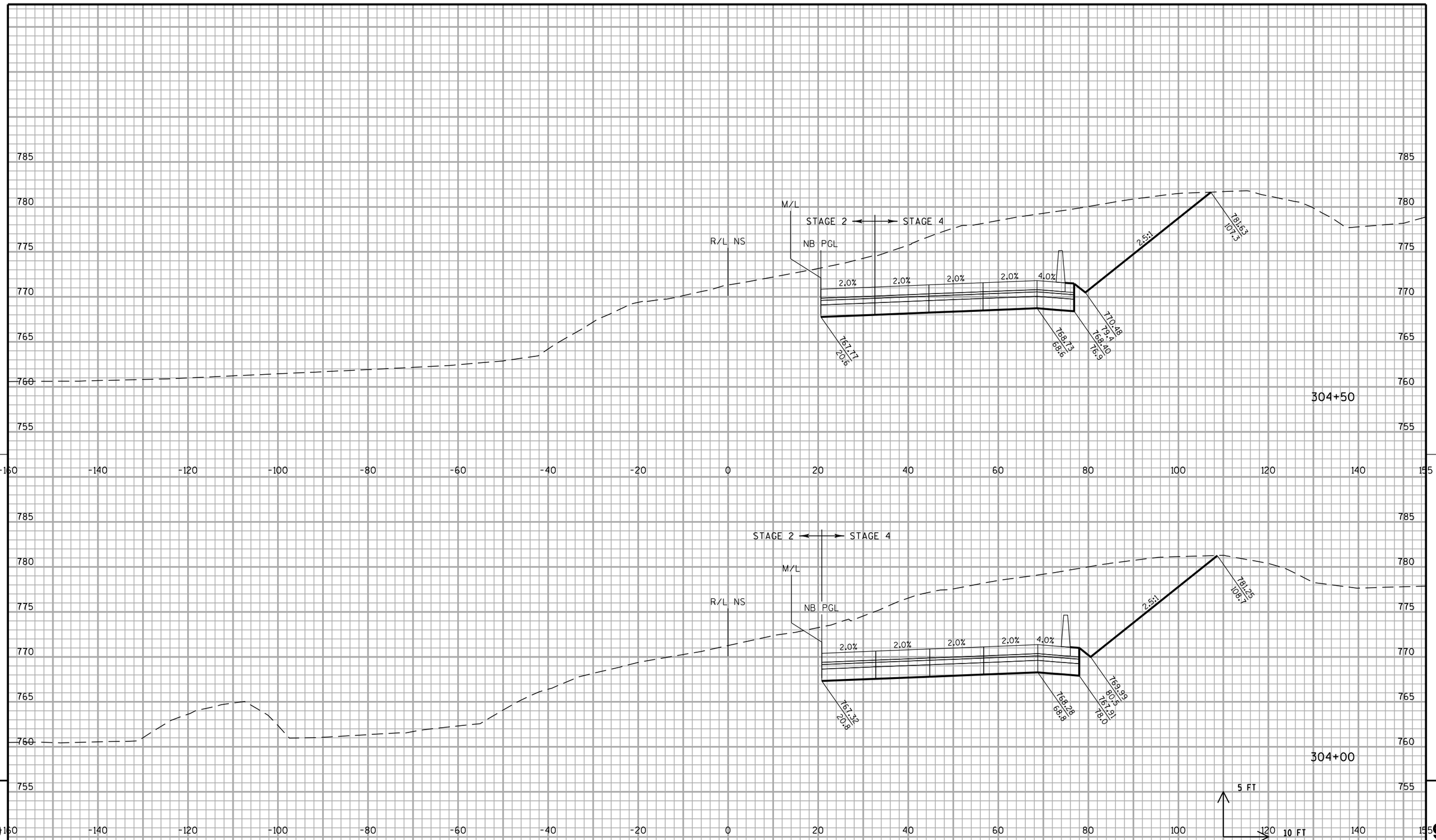


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

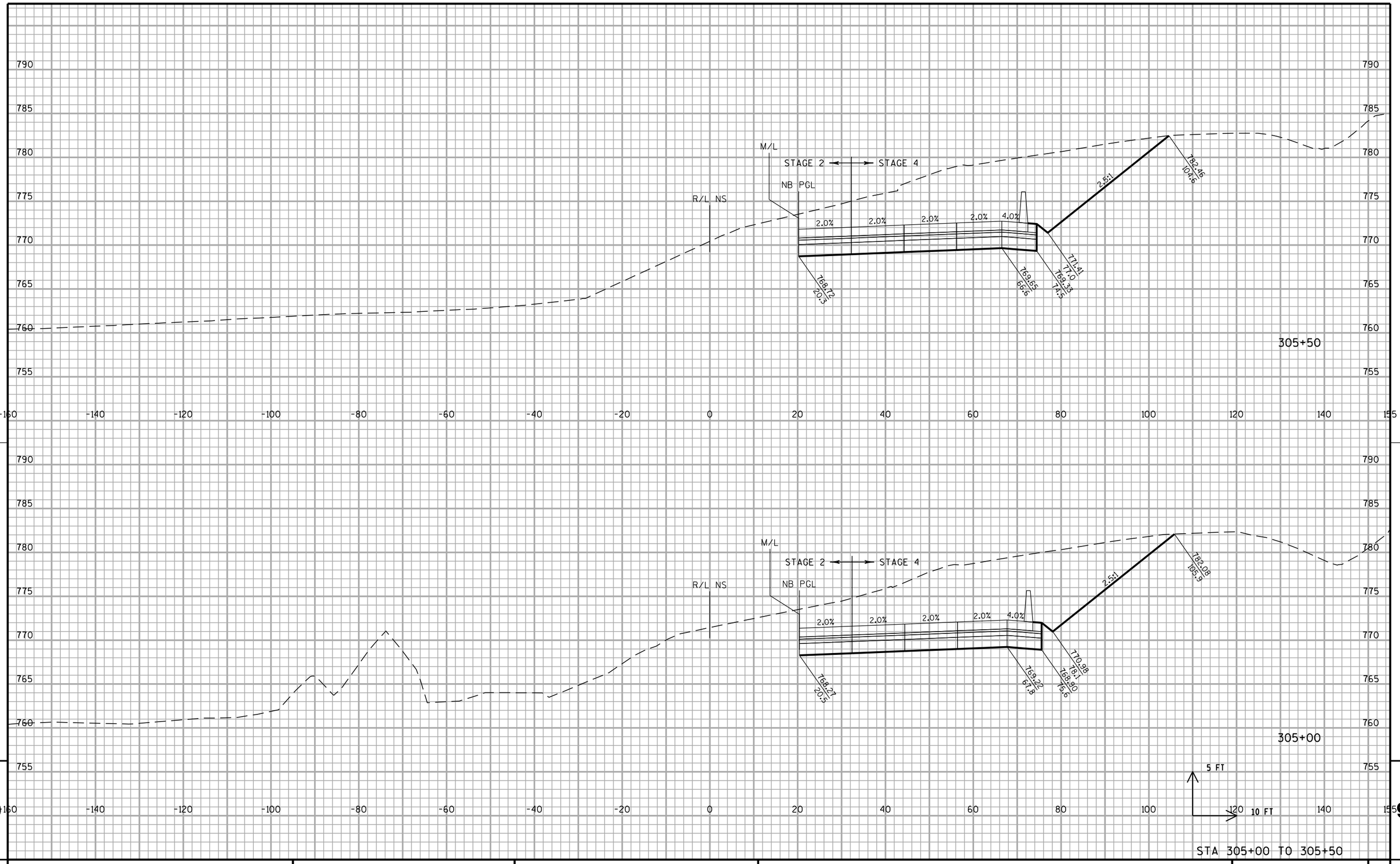
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn
PLOT DATE : 27-APR-2014 22:56
PLOT BY : MSCDYB
PLOT NAME : 090201_xs_ns_nb_s2
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



STA 304+00 TO 304+50

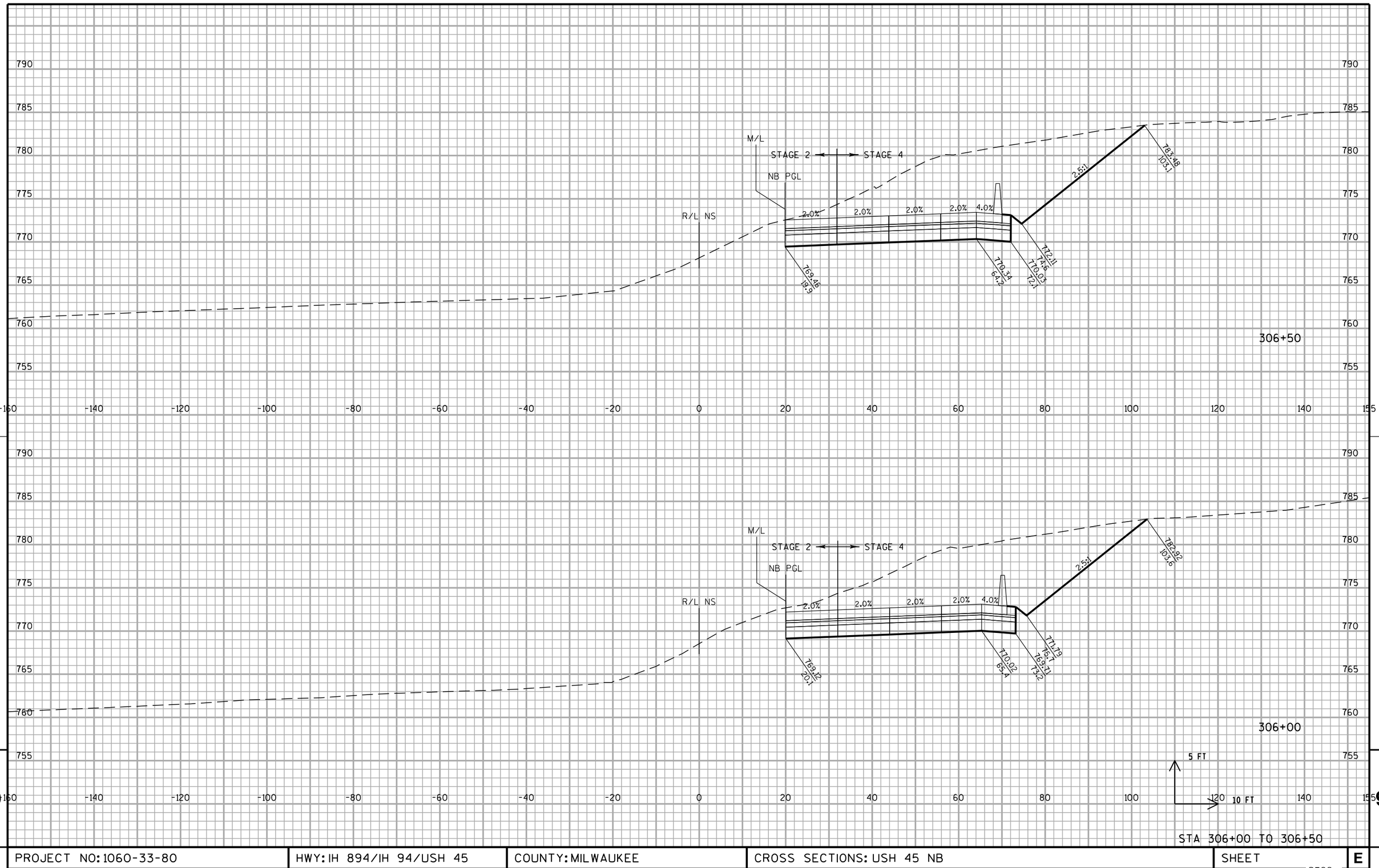
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090201_xs_ns_nb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090201_xs_ns_nb_s2 PLOT SCALE : 20:1



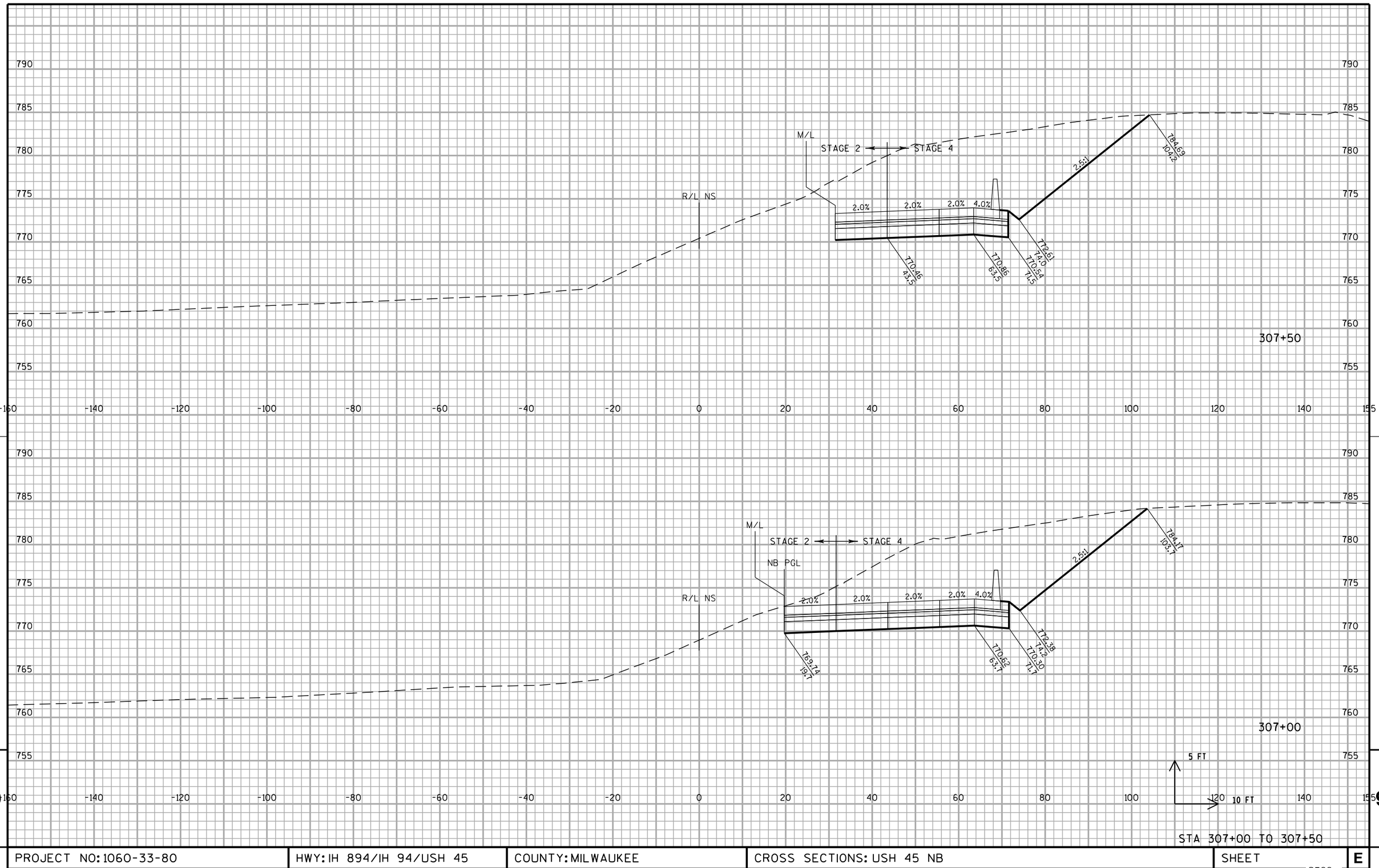
STA 305+00 TO 305+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E



STA 306+00 TO 306+50

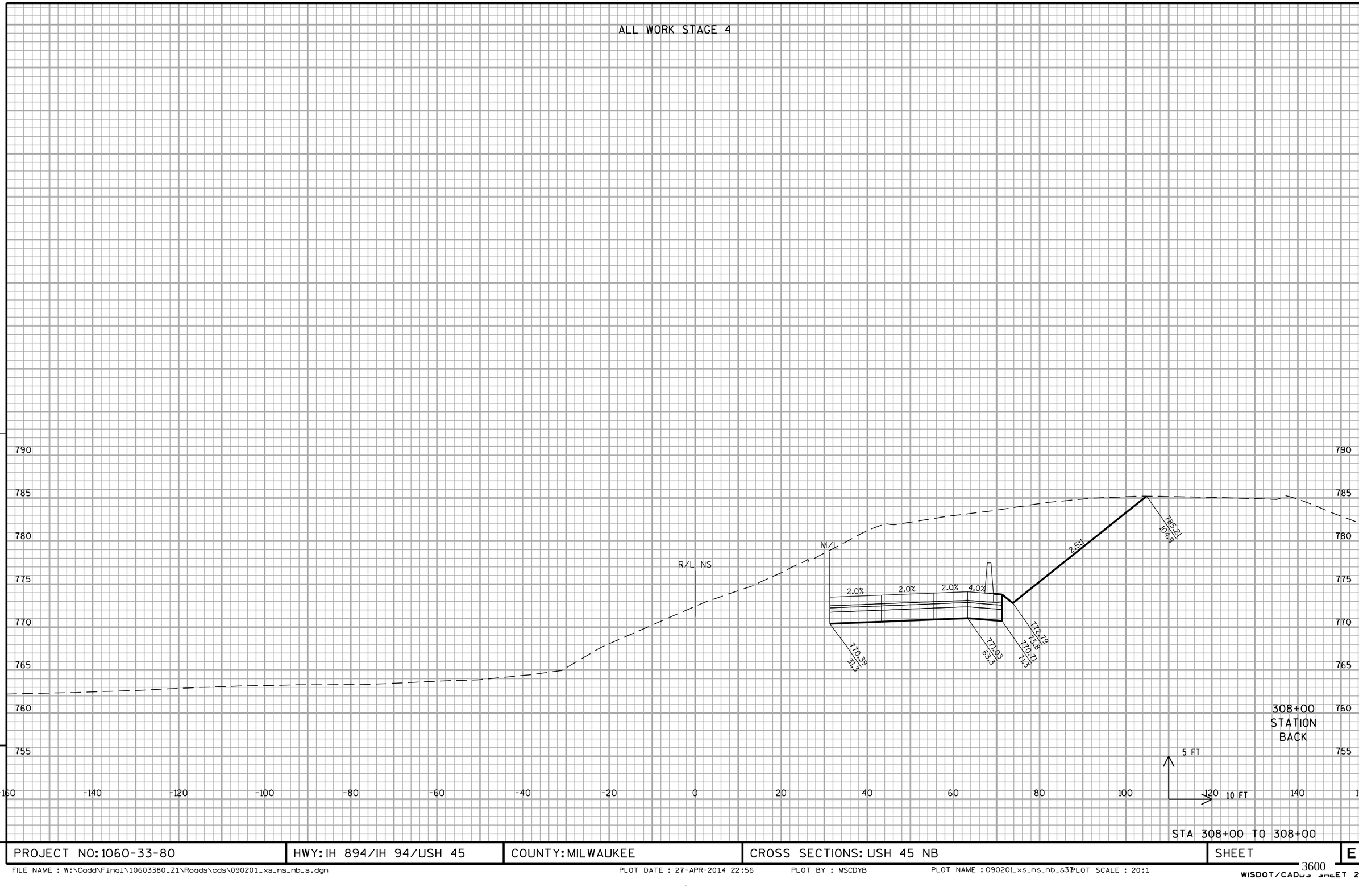
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E



STA 307+00 TO 307+50

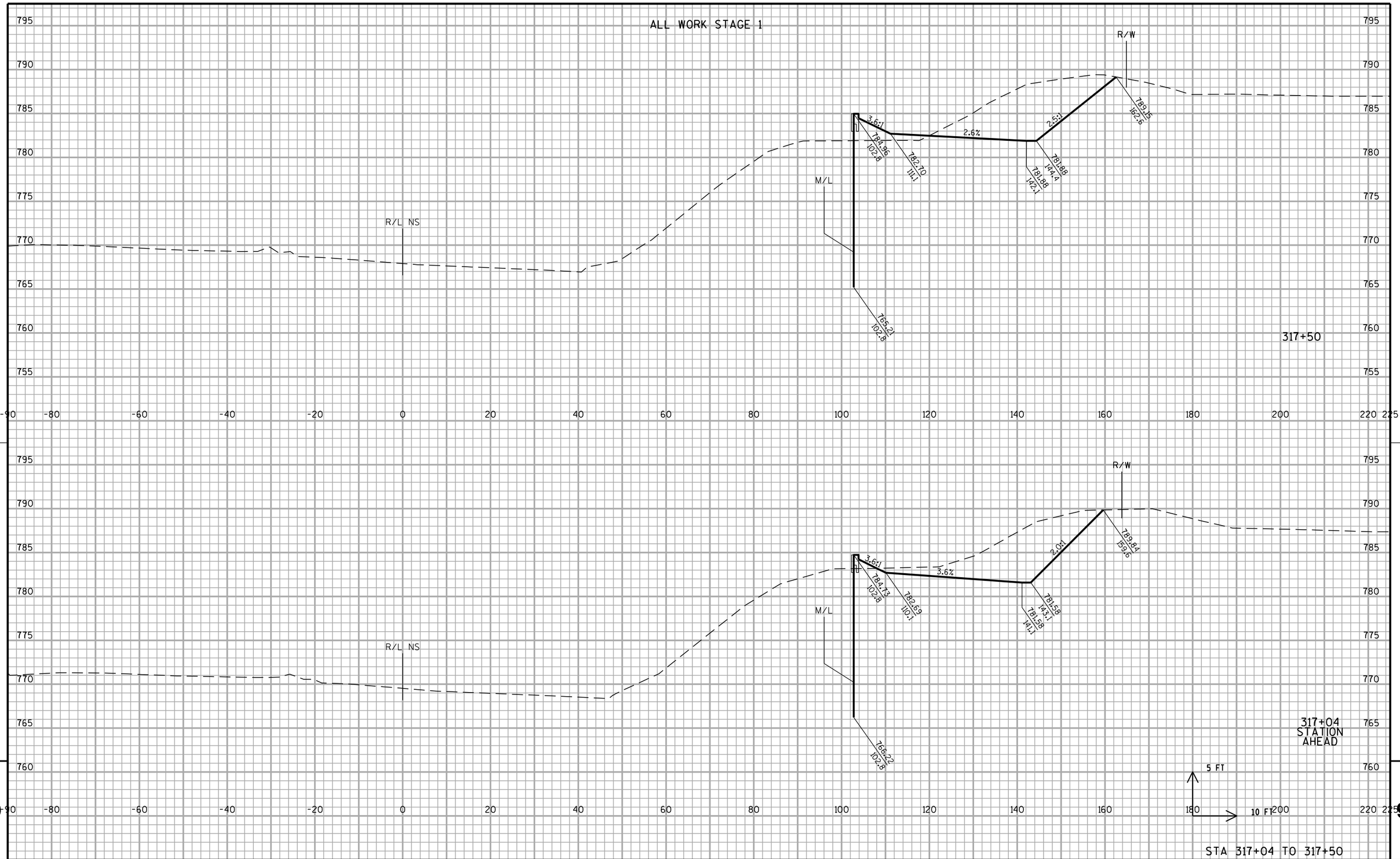
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E

ALL WORK STAGE 4



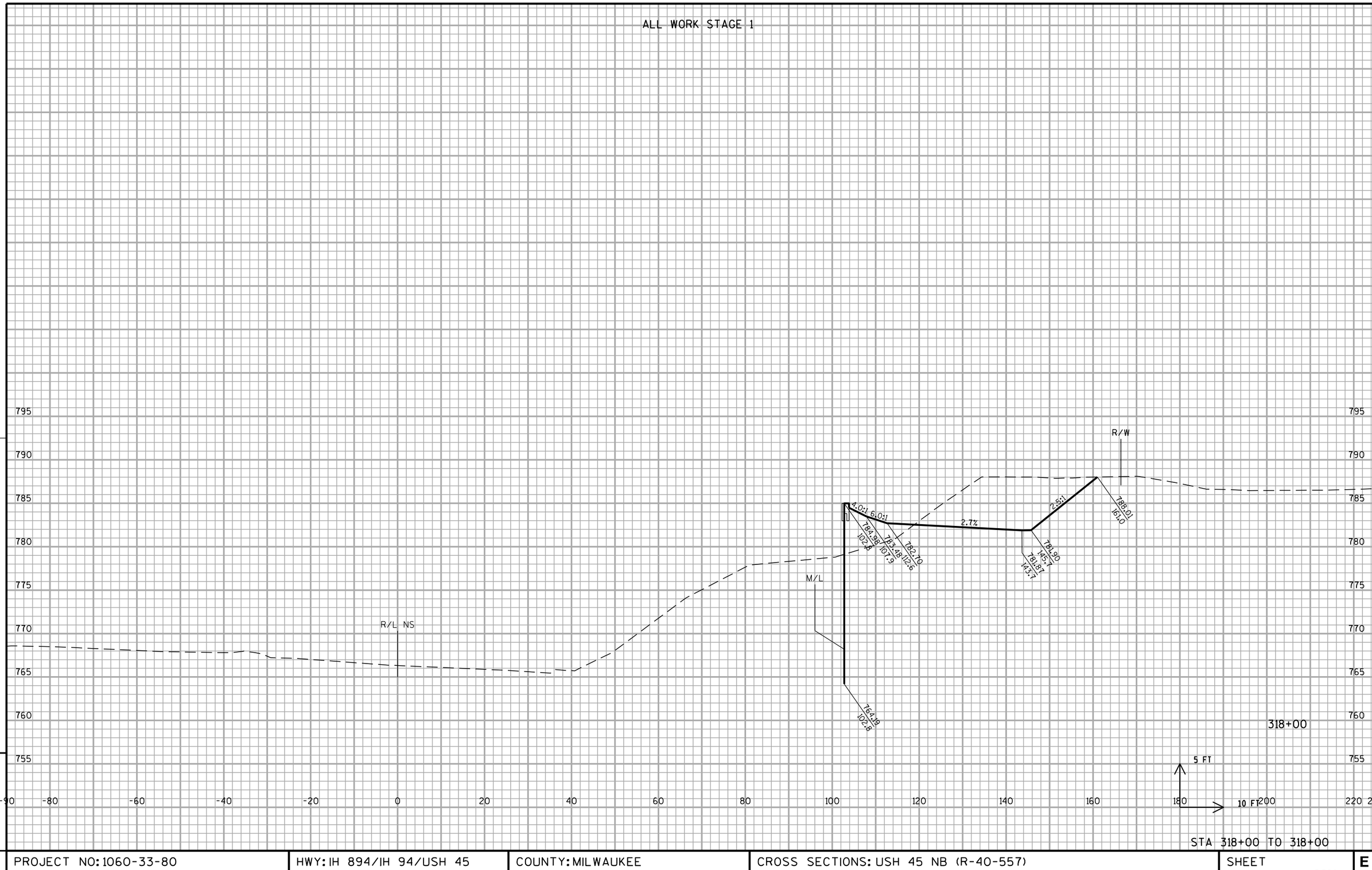
STA 308+00 TO 308+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB	SHEET	E



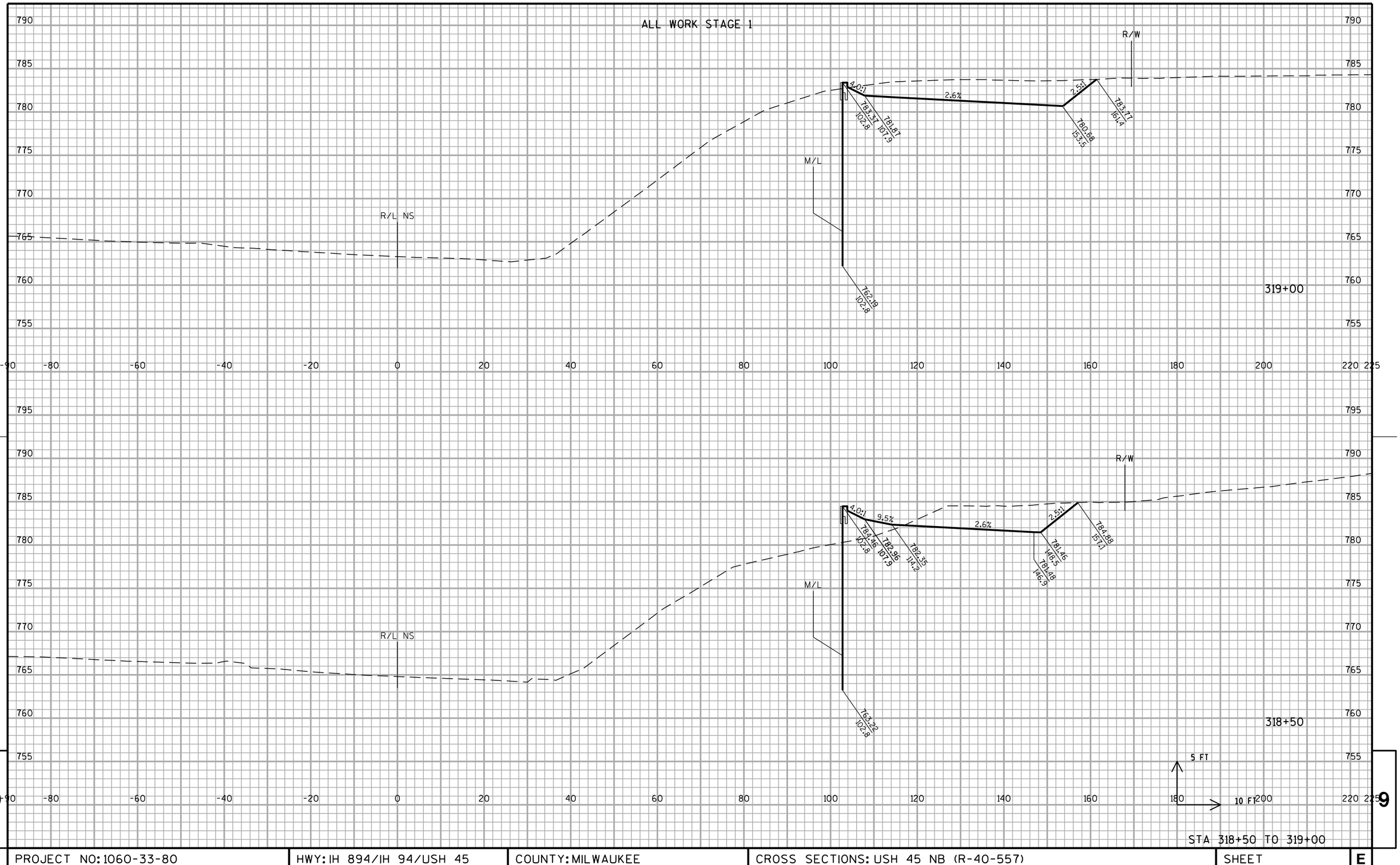
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

ALL WORK STAGE 1



STA 318+00 TO 318+00

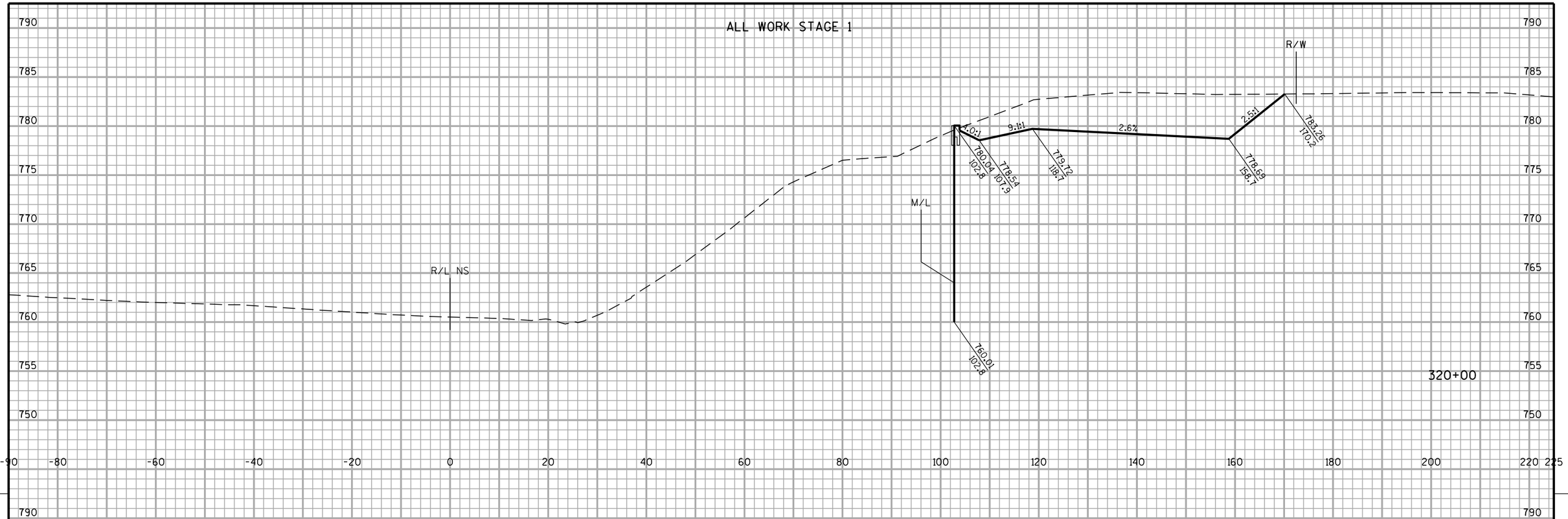
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

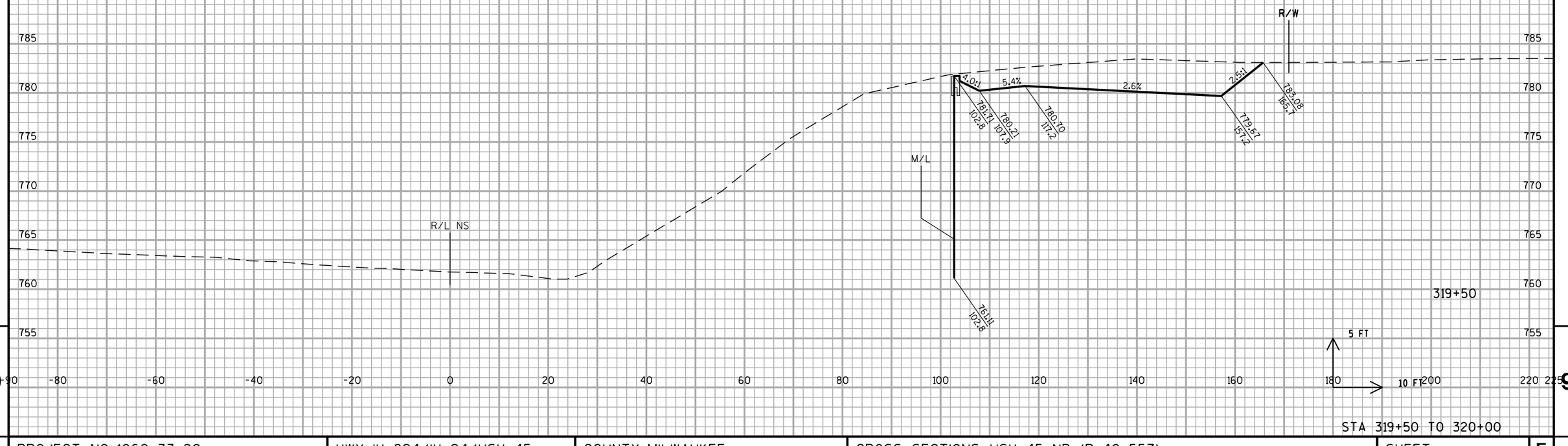


STA 318+50 TO 319+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

ALL WORK STAGE 1





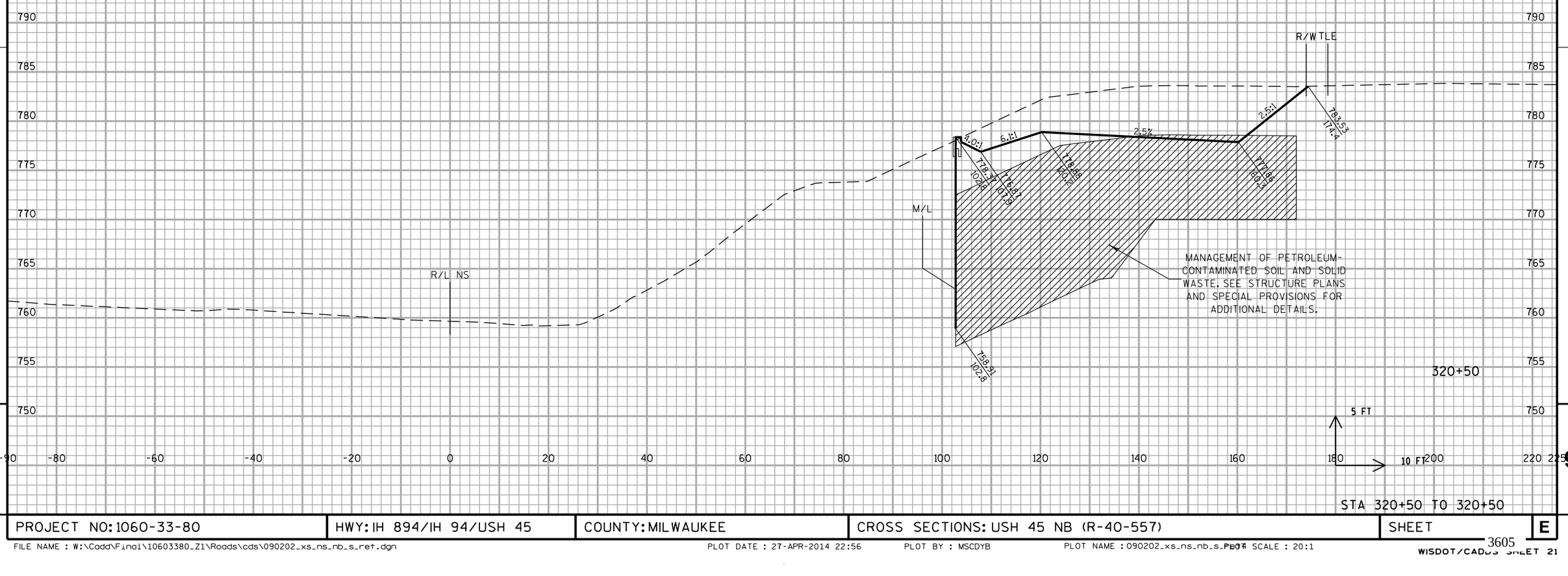
STA 319+50 TO 320+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090202_xs_ns_nb_s_ret.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

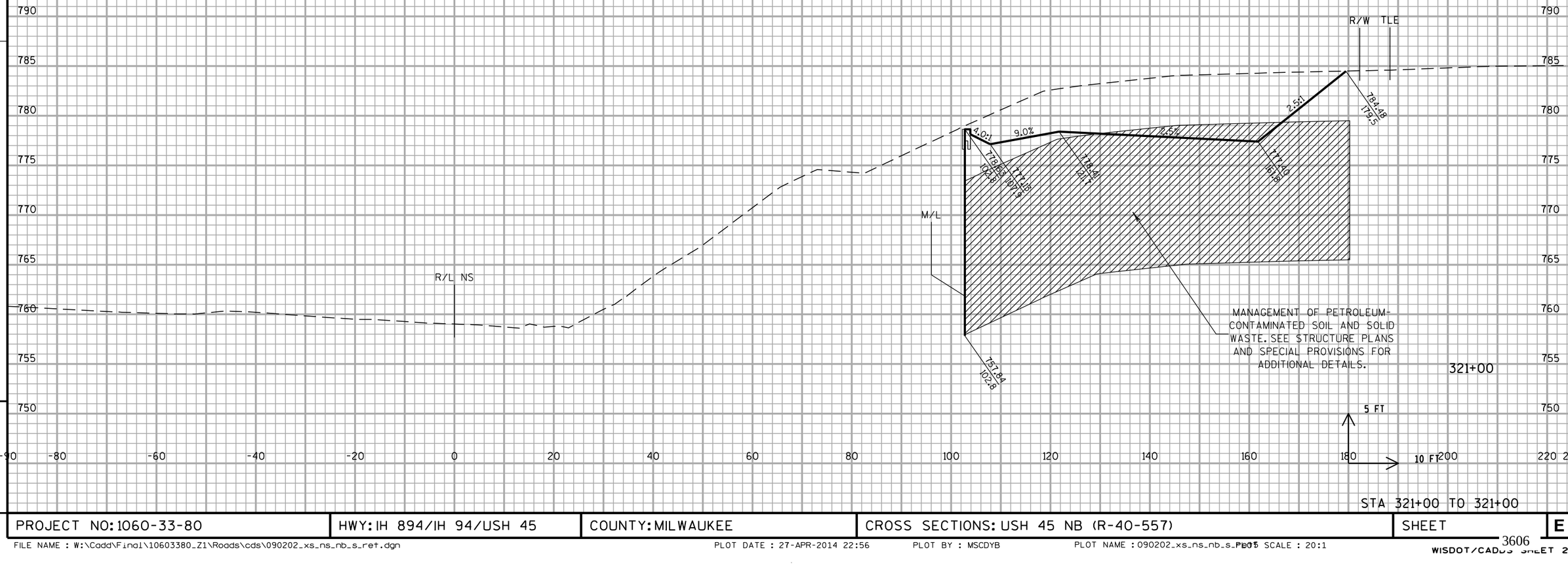
ALL WORK STAGE 1



STA 320+50 TO 320+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

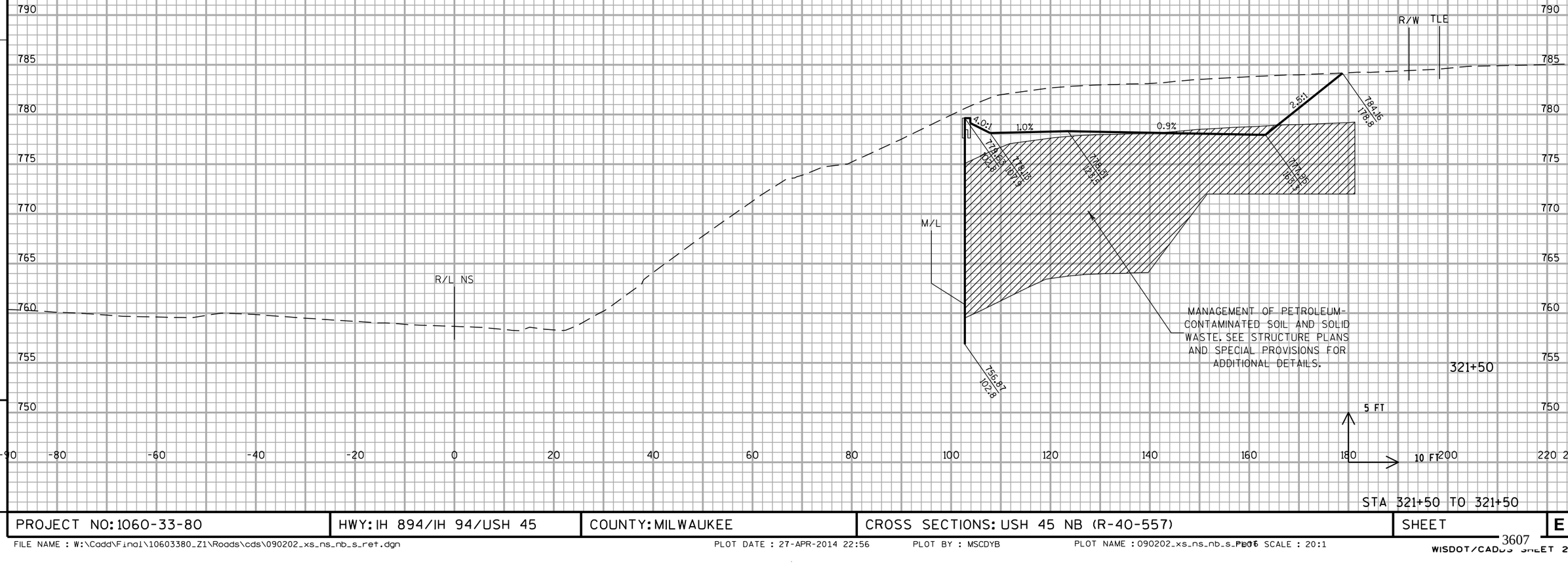
ALL WORK STAGE 1



STA 321+00 TO 321+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

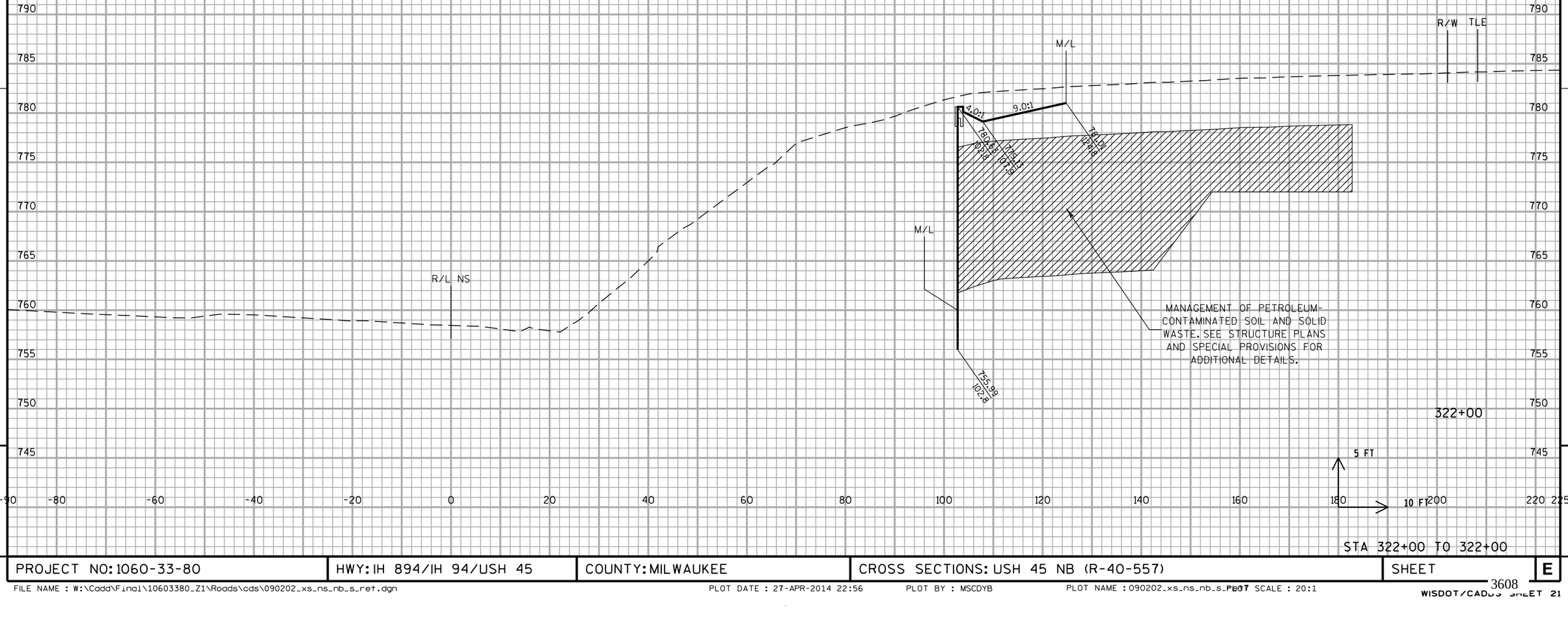
ALL WORK STAGE 1



STA 321+50 TO 321+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

ALL WORK STAGE 1



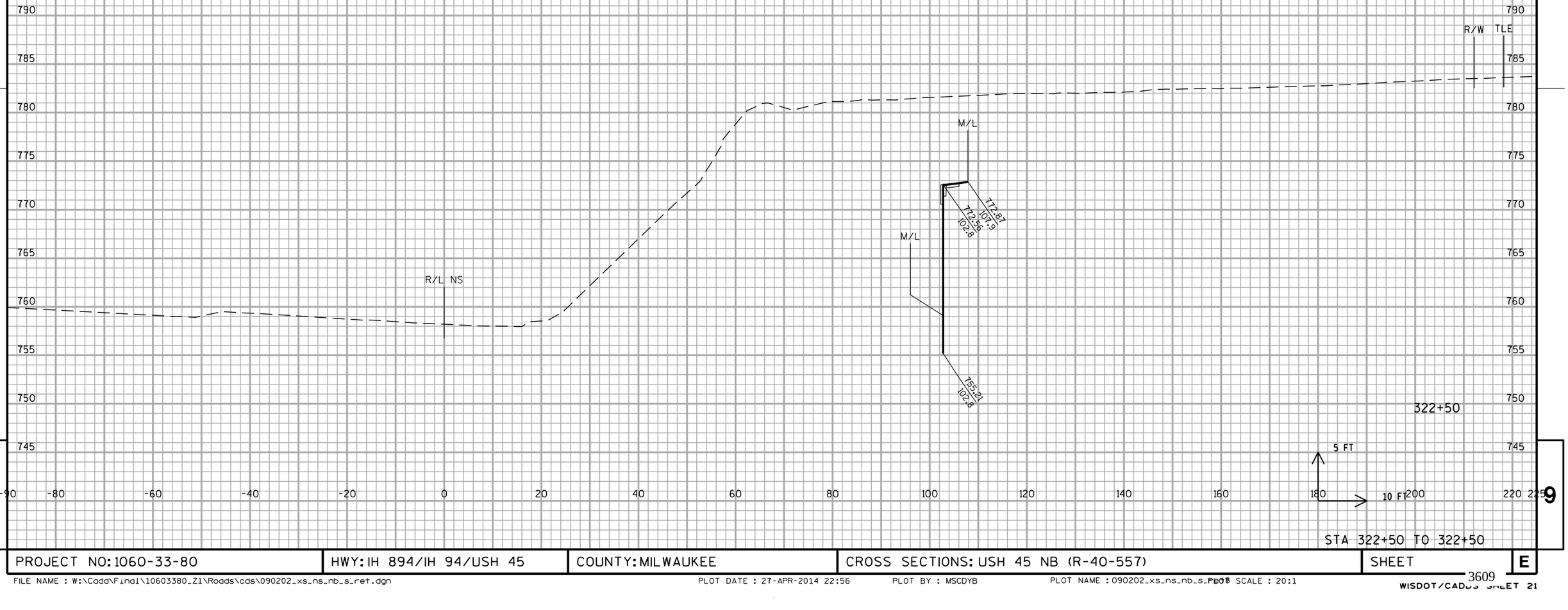
STA 322+00 TO 322+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090202_xs_ns_nb_s_ret.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



STA 322+50 TO 322+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090202_xs_ns_nb_s_ret.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

790
785
780
775
770
765
760
755
750
745

-90 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160 180 200 220 225

R/L NS

M/L

772.87
108.0

772.56
102.8

M/L

754.53
102.8

323+00

5 FT

10 FT

STA 323+00 TO 323+00

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090202_xs_ns_nb_s_ret.dgn PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

790
785
780
775
770
765
760
755
750
745

-90 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160 180 200 220 225

R/L NS

M/L
772.87
101.9
772.56
102.9
M/L
753.94
102.8

323+50

5 FT
10 FT

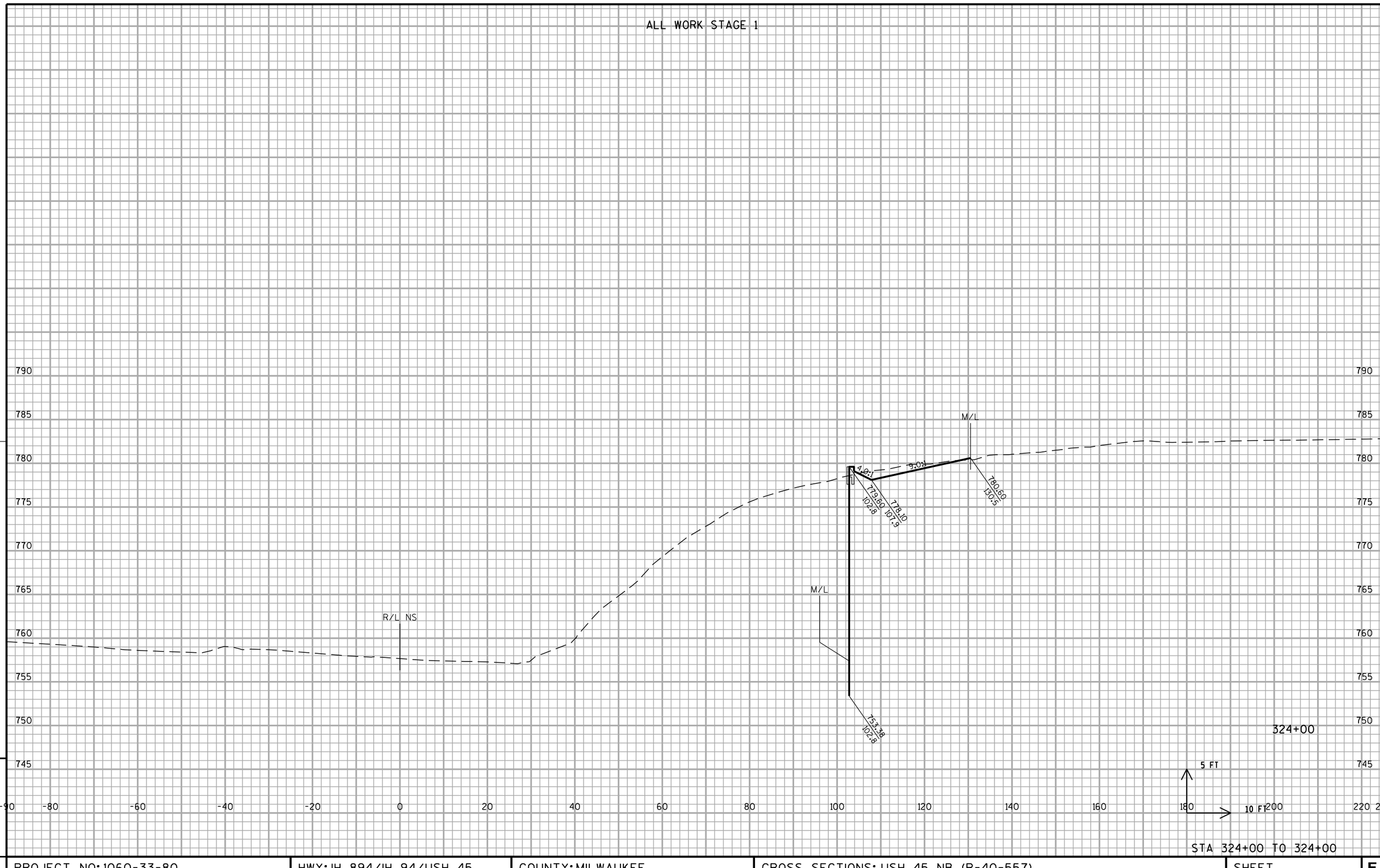
STA 323+50 TO 323+50

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090202_xs_ns_nb_s_ret.pl0 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

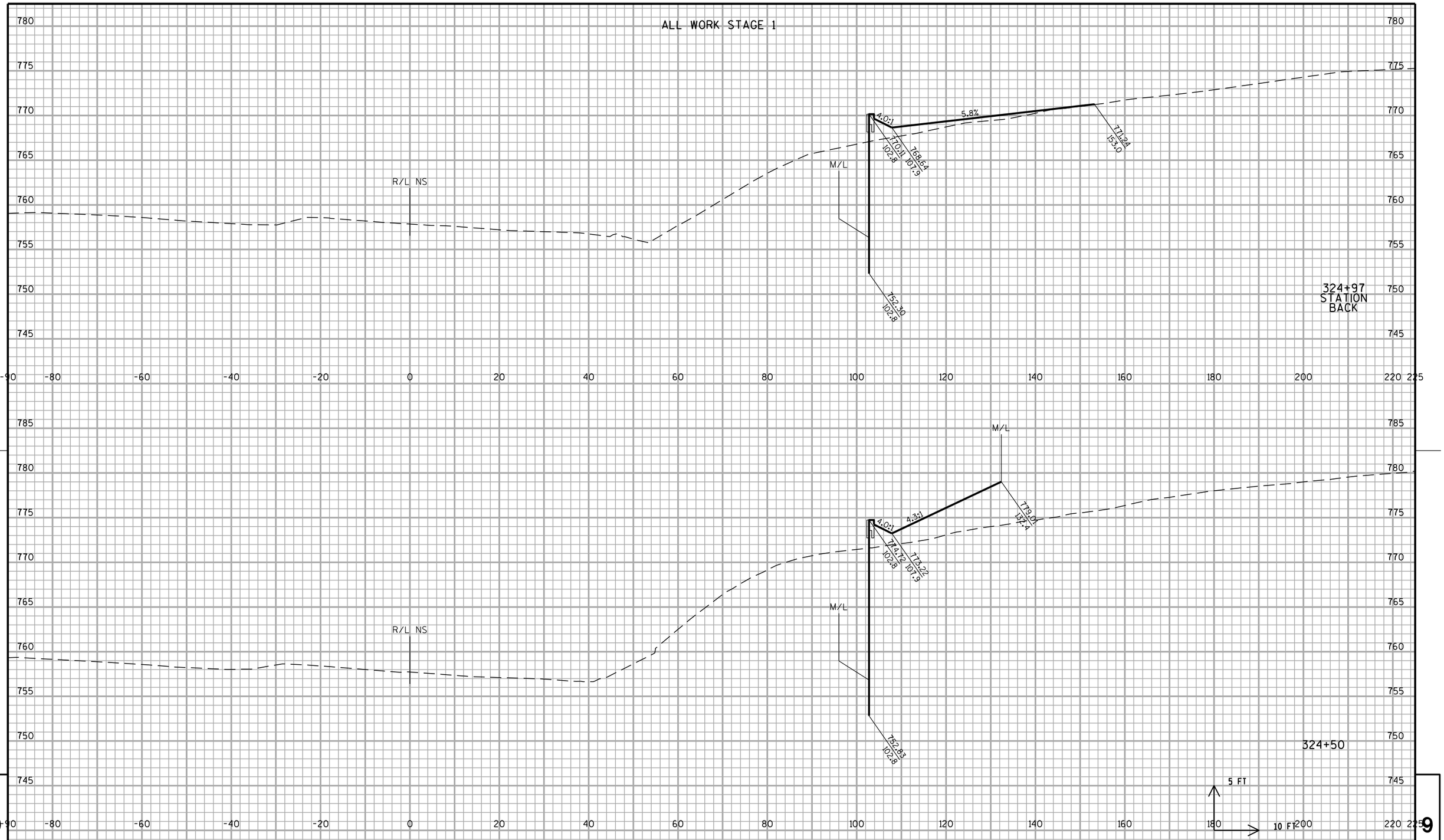
ALL WORK STAGE 1



STA 324+00 TO 324+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

ALL WORK STAGE 1



STA 324+50 TO 324+97

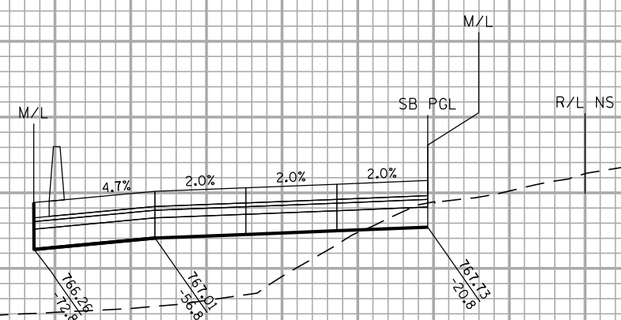
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB (R-40-557)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090202_xs_ns_nb_s_ret.dgn
PLOT DATE : 27-APR-2014 22:56
PLOT BY : MSCDYB
PLOT NAME : 090202_xs_ns_nb_s_ret.pl2
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



304+50



304+45
STATION
AHEAD

5 FT
10 FT

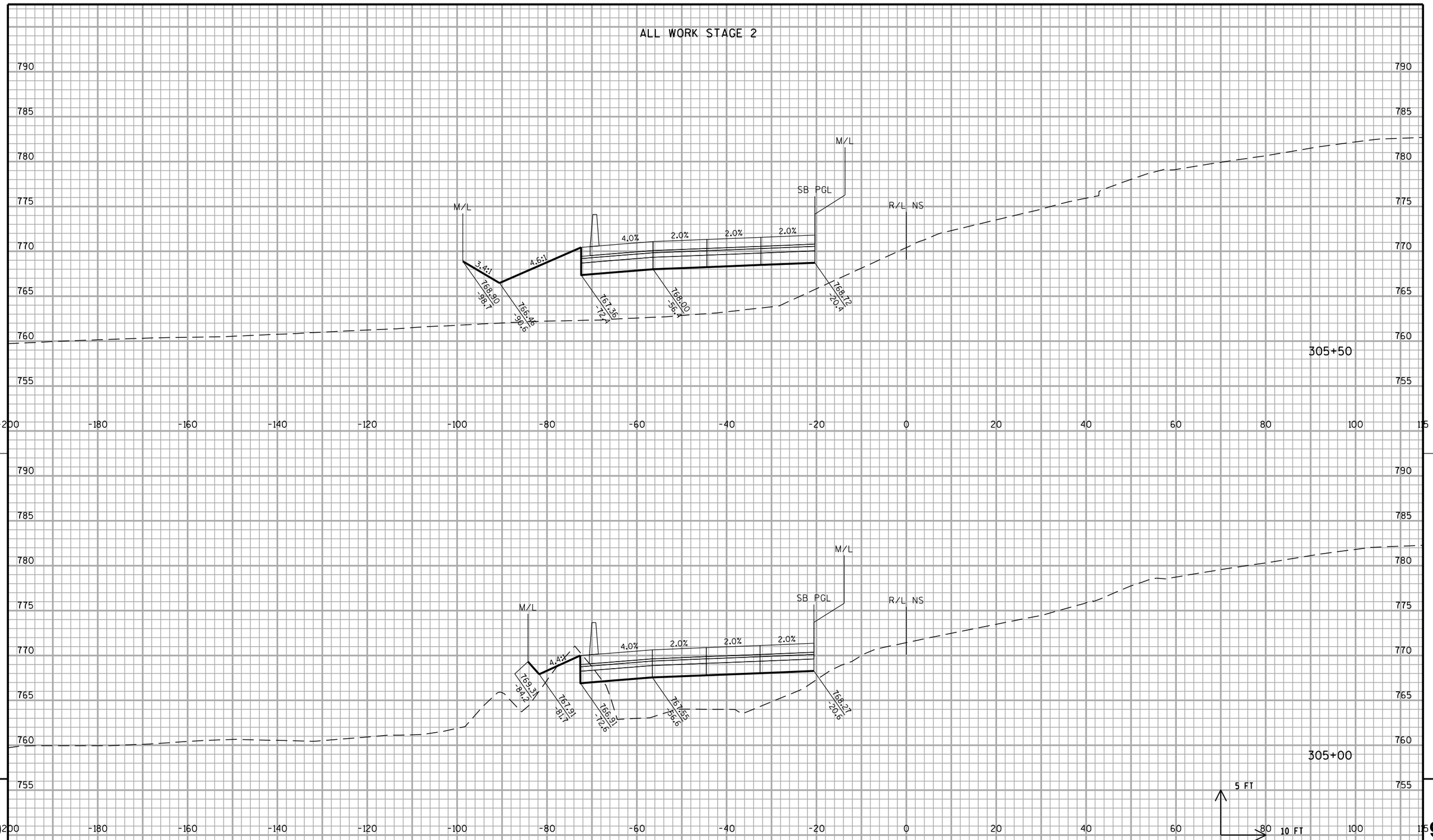
STA 304+45 TO 304+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

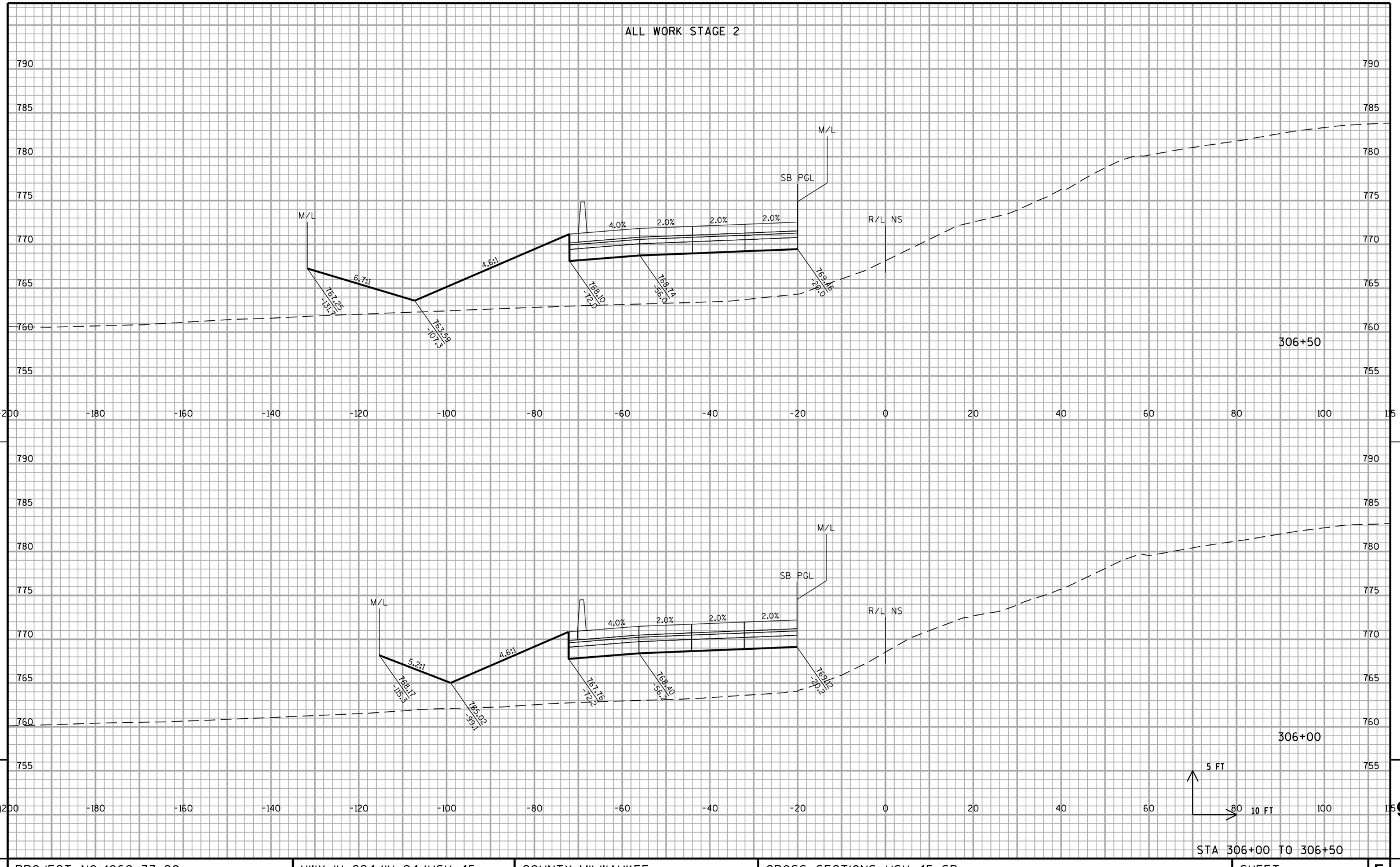


STA 305+00 TO 305+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s1 PLOT SCALE : 20:1

ALL WORK STAGE 2

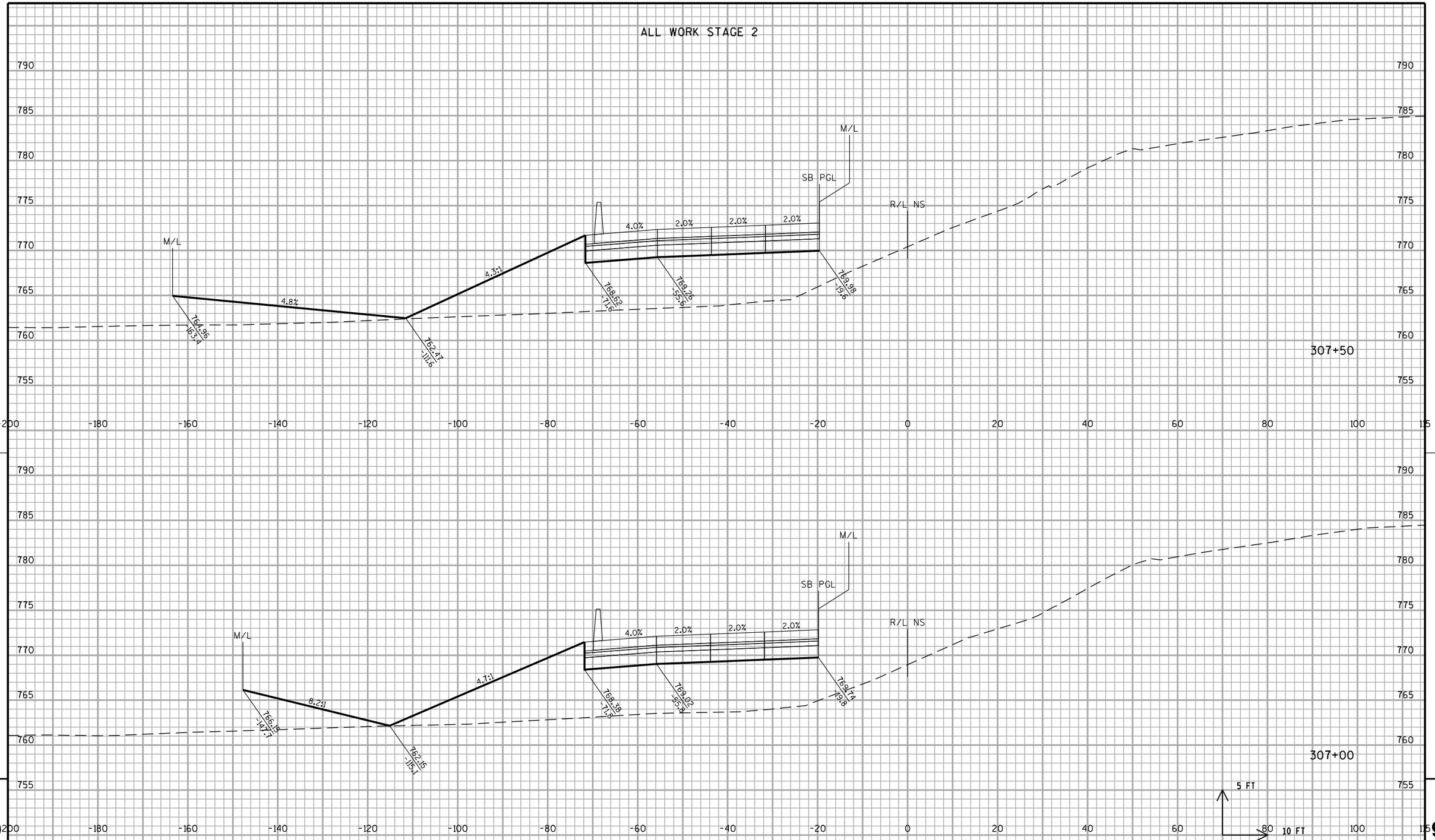


STA 306+00 TO 306+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

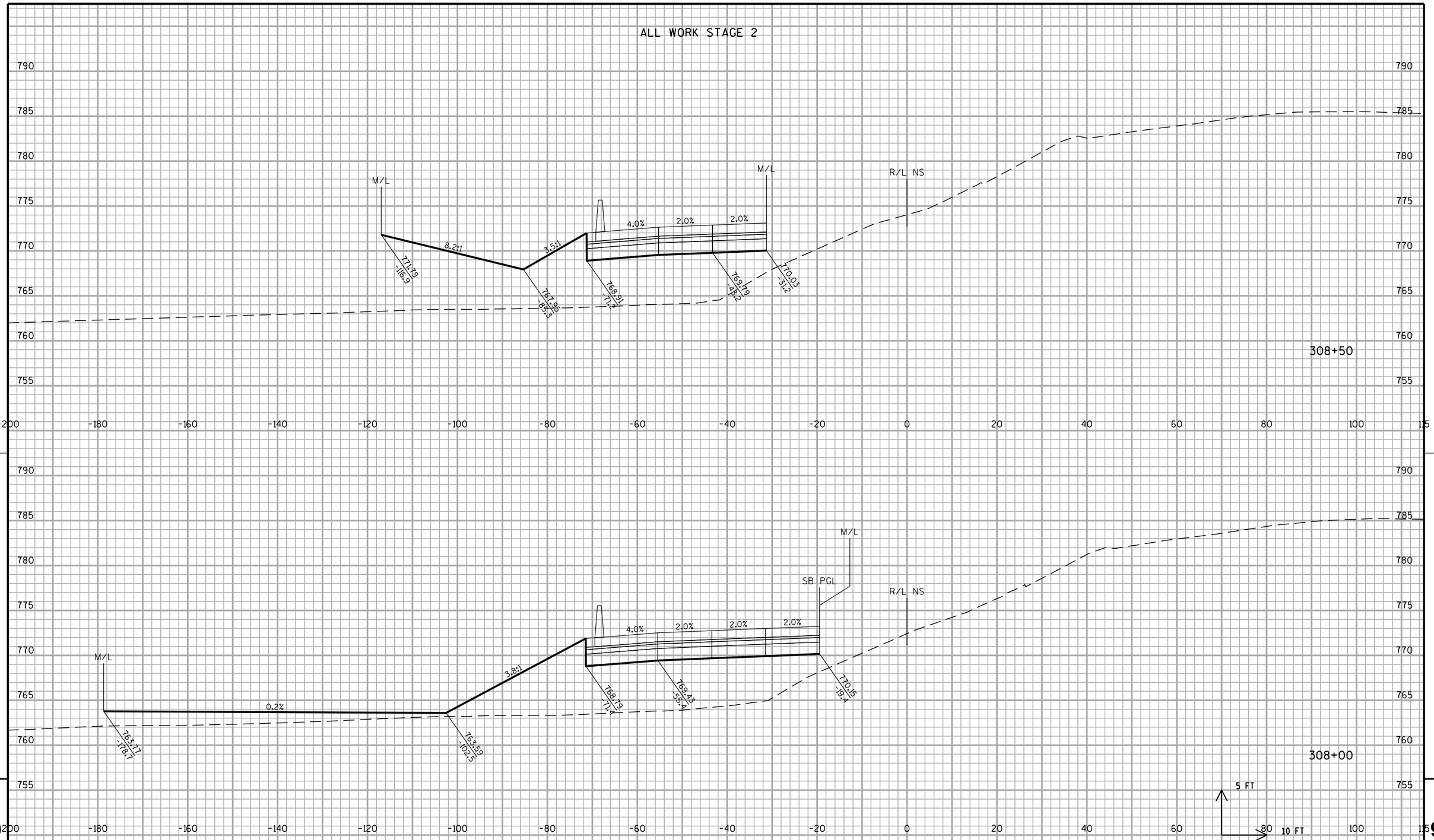
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s2PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 2

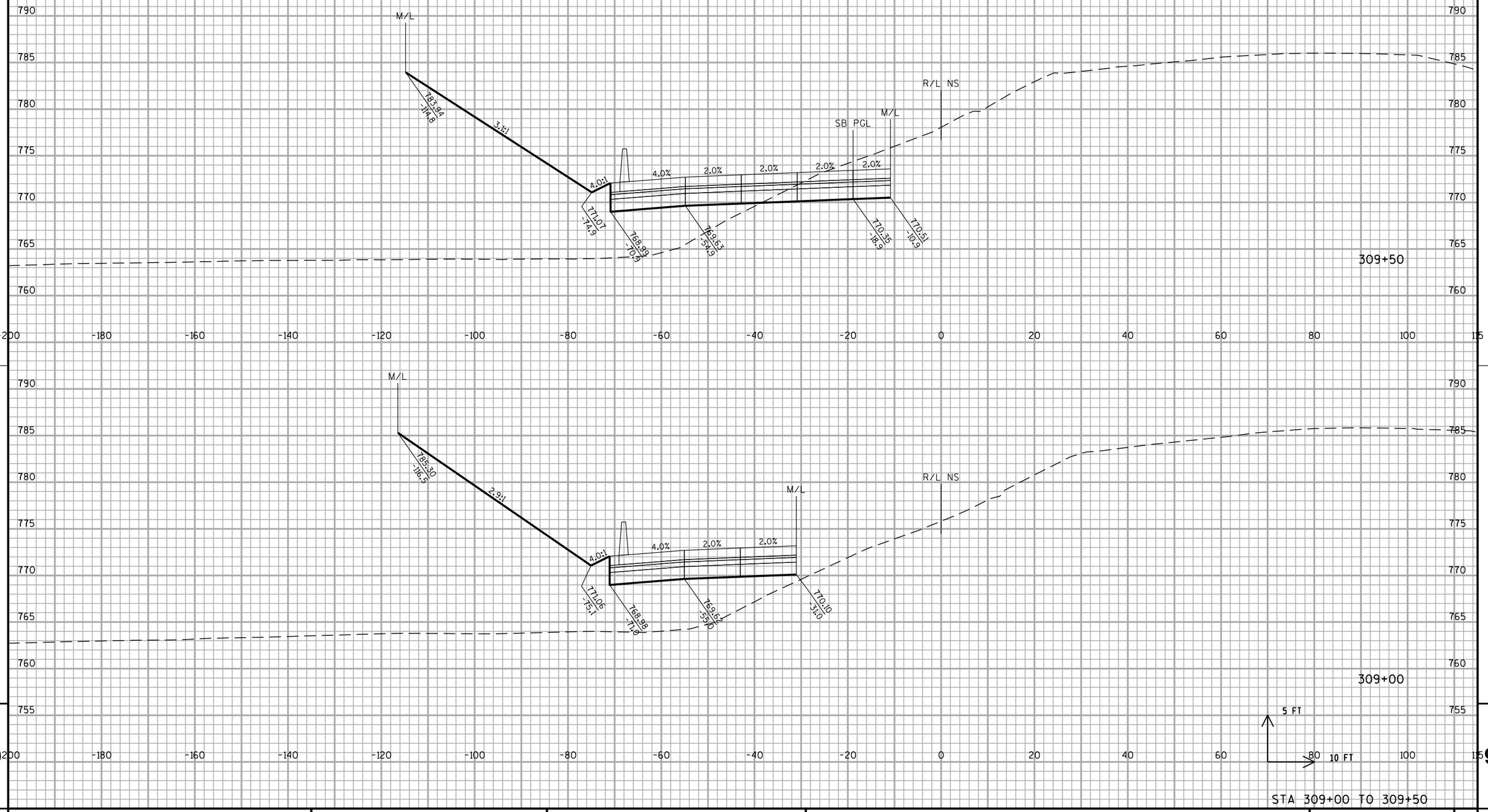


STA 308+00 TO 308+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

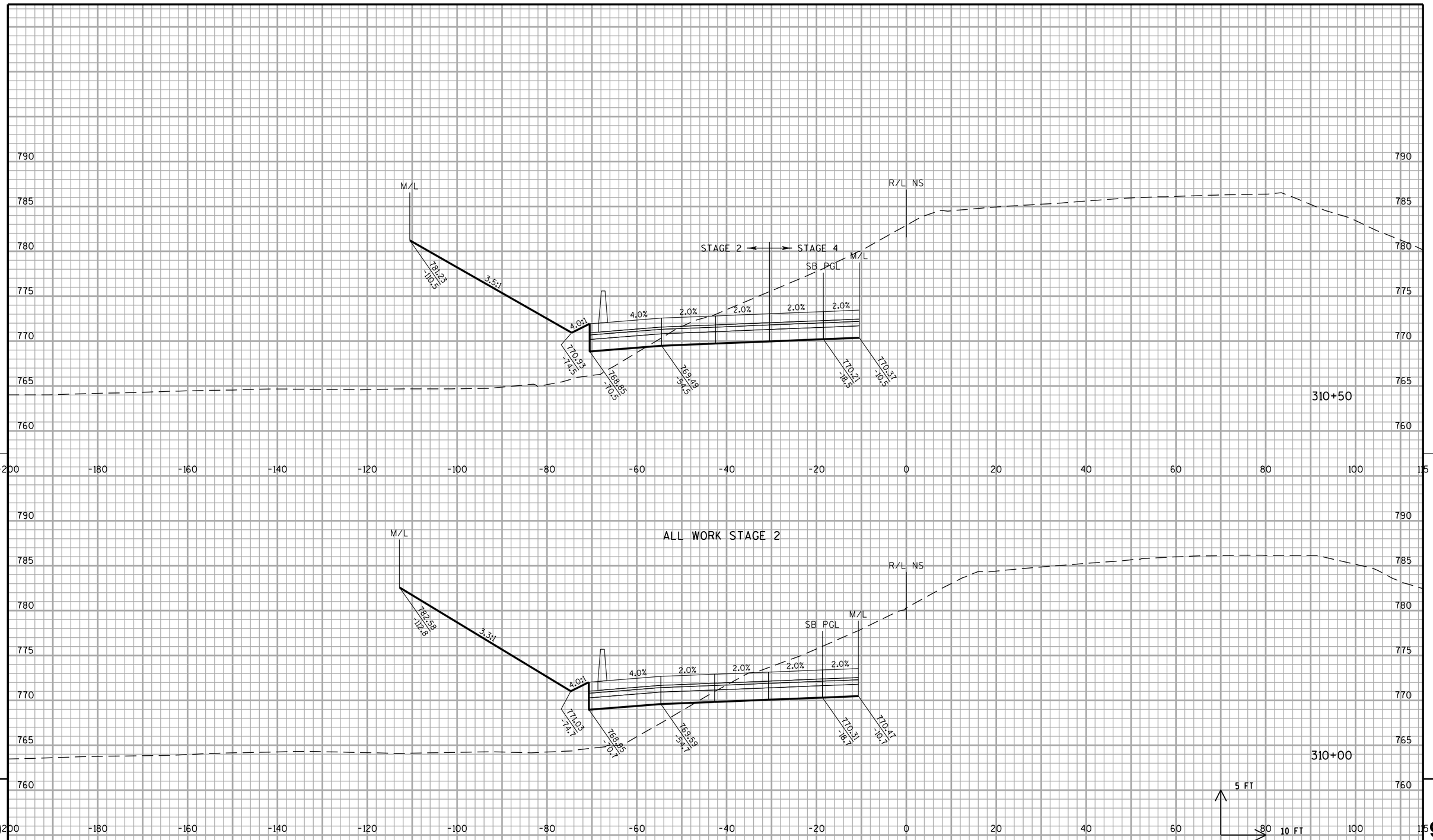
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s4PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

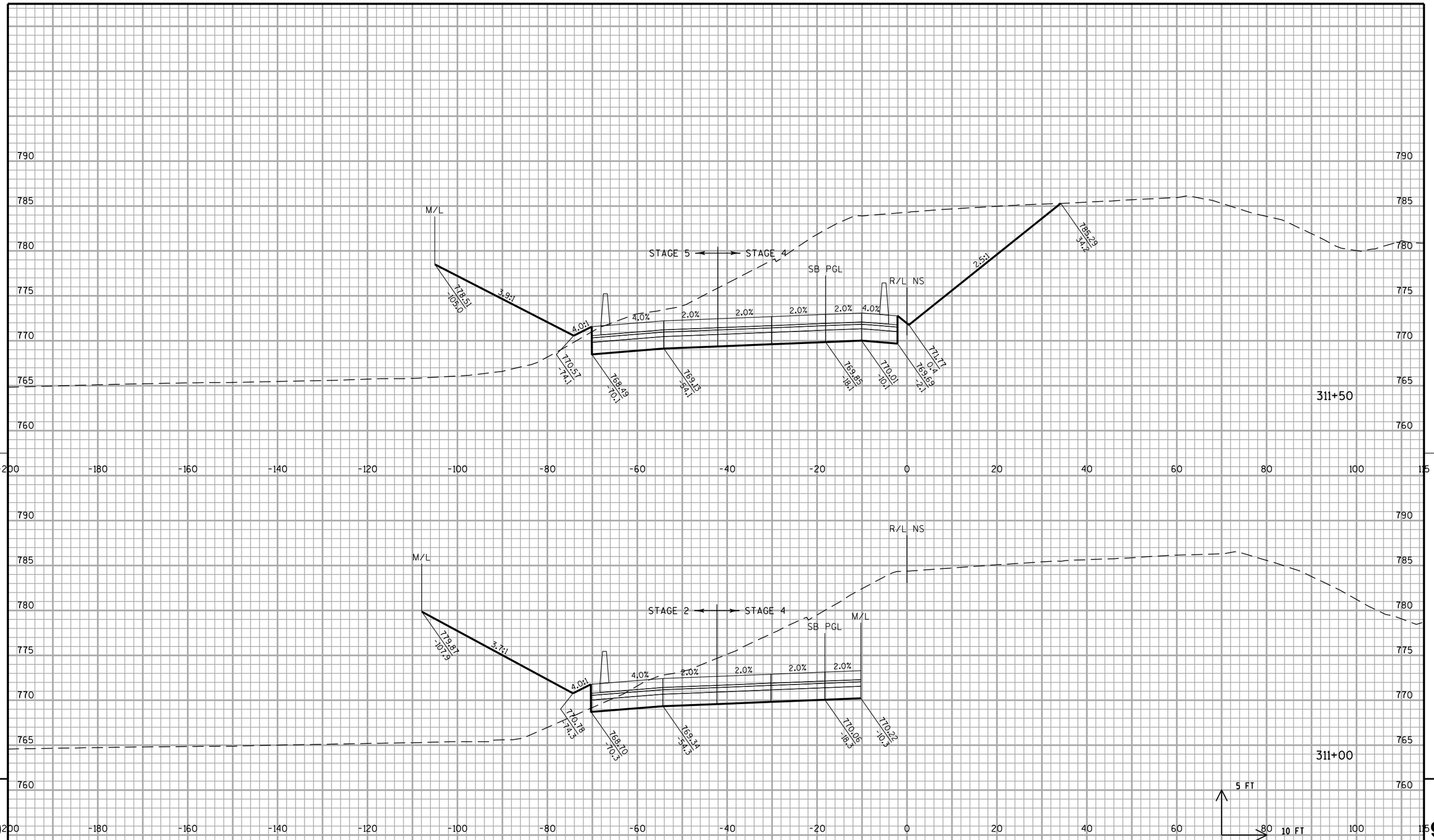
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s5PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



STA 310+00 TO 310+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

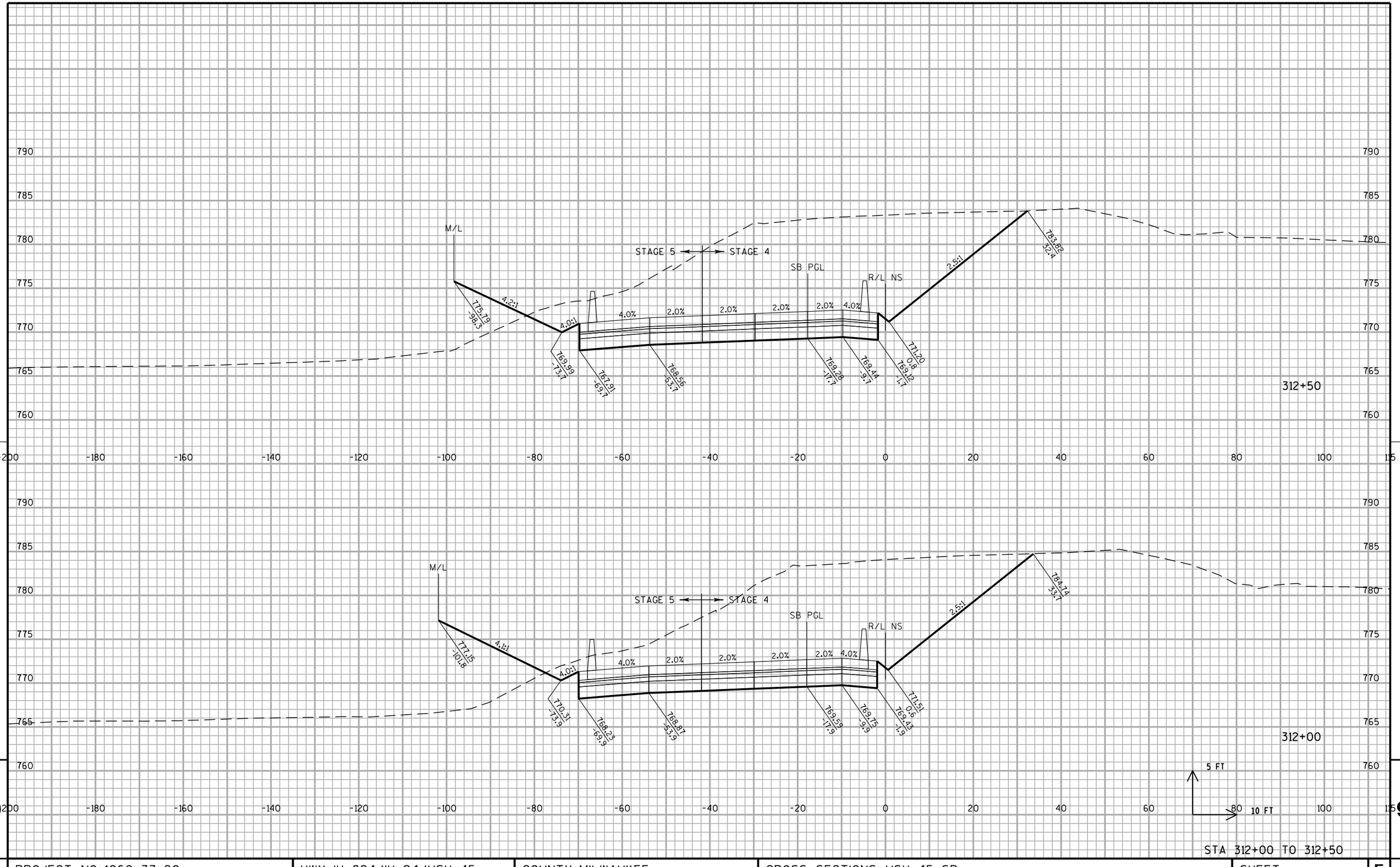
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s6PLOT SCALE : 20:1



STA 311+00 TO 311+50

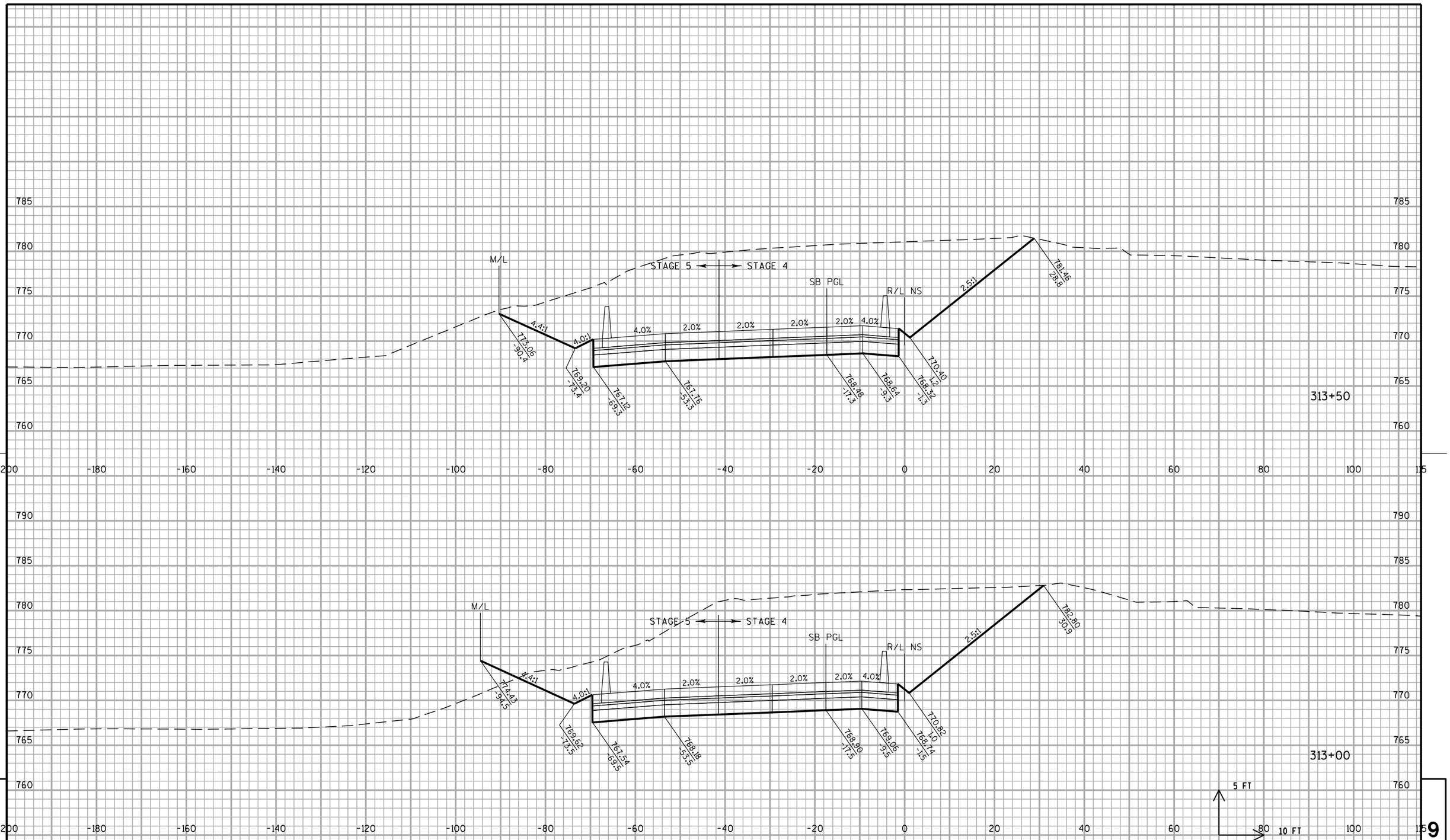
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s7PLOT SCALE : 20:1



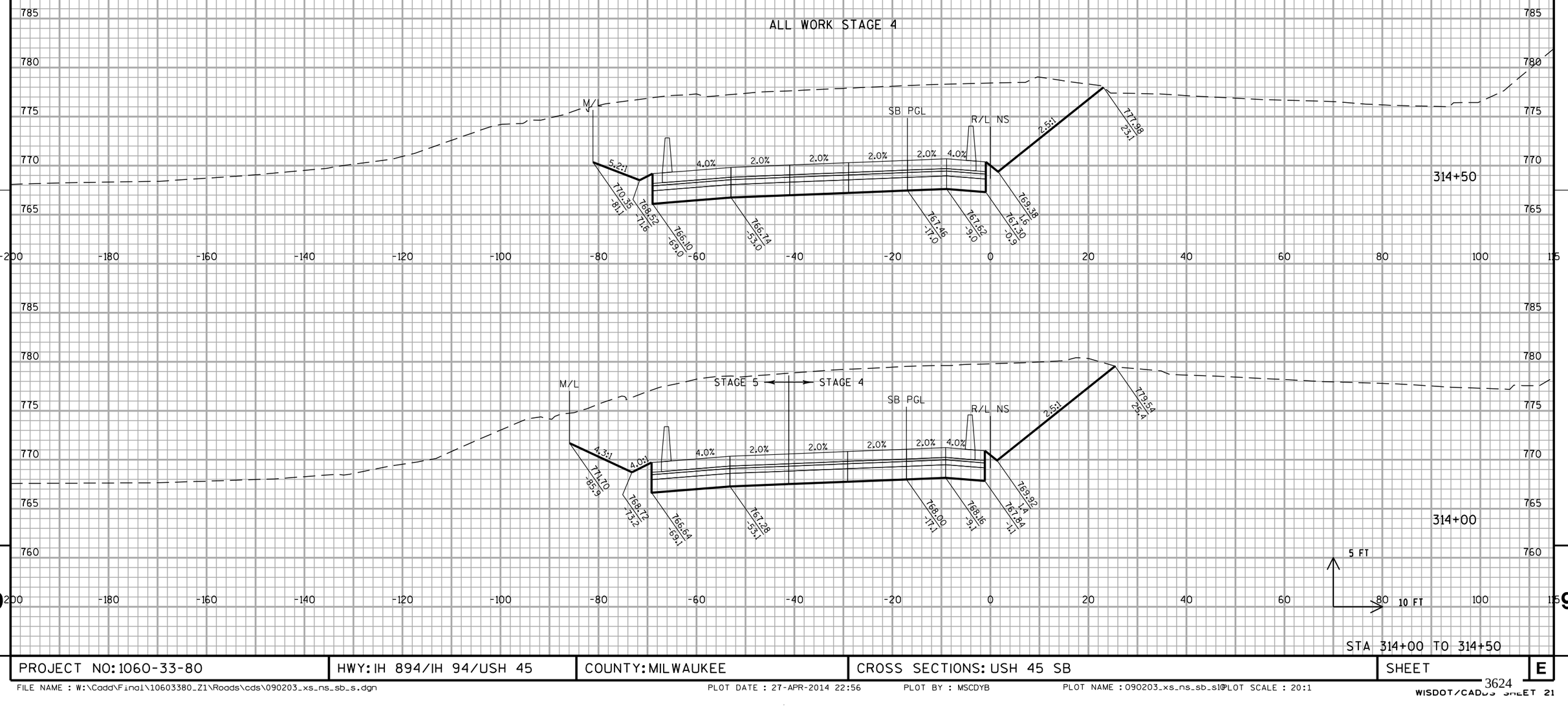
STA 312+00 TO 312+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 4

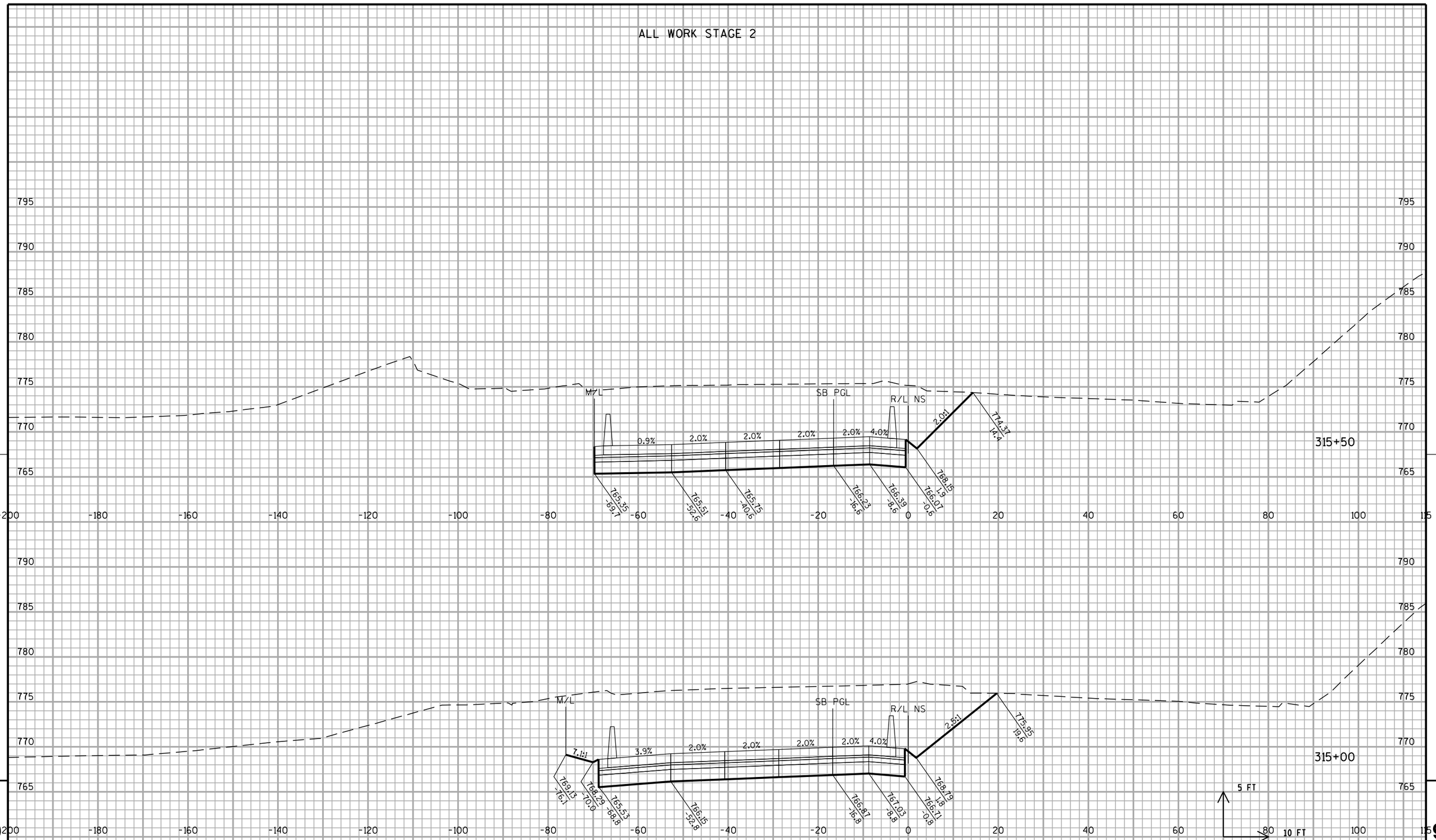


STA 314+00 TO 314+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s1 PLOT SCALE : 20:1

ALL WORK STAGE 2

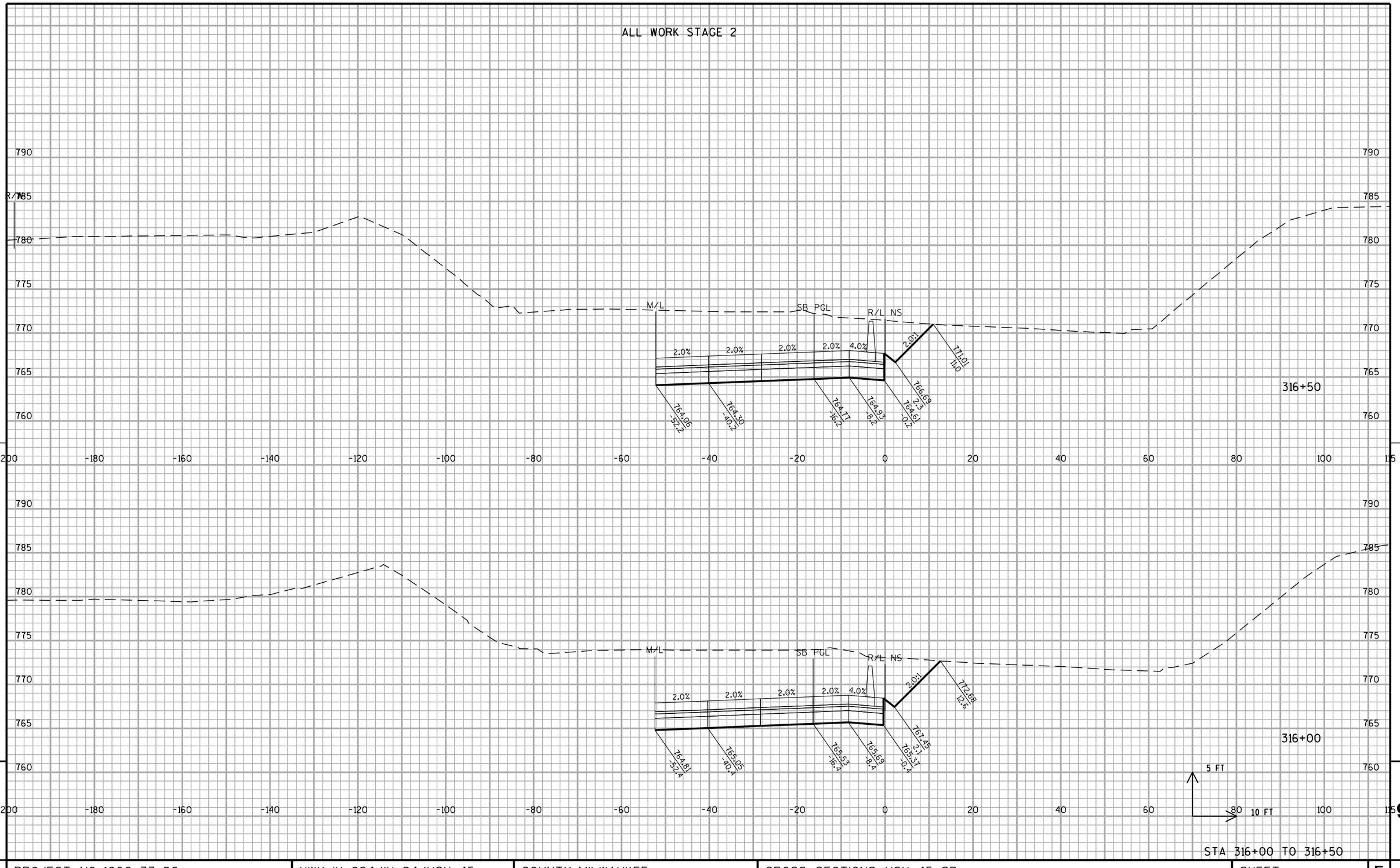


STA 315+00 TO 315+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s1 PLOT SCALE : 20:1

ALL WORK STAGE 2

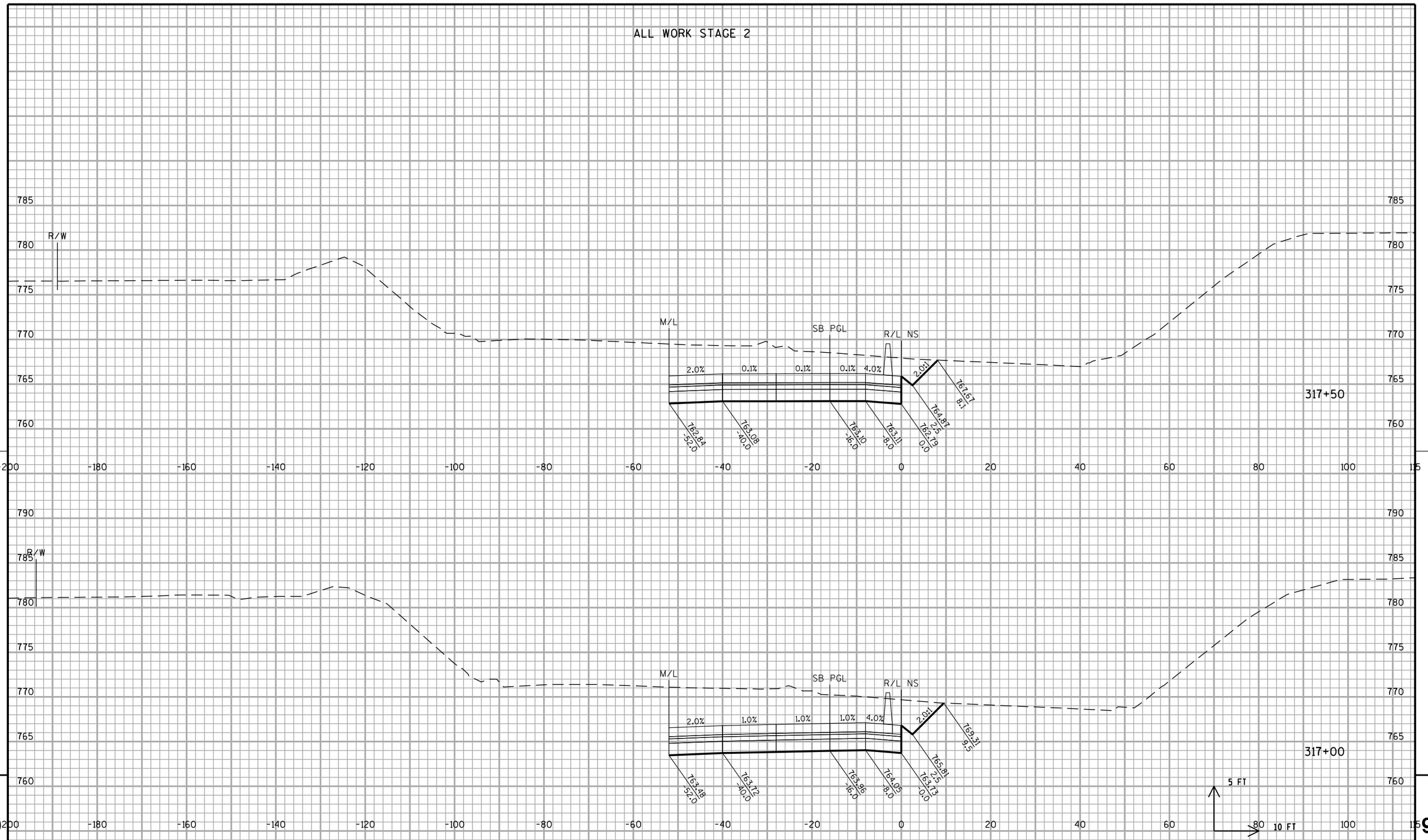


STA 316+00 TO 316+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s12 PLOT SCALE : 20:1

ALL WORK STAGE 2



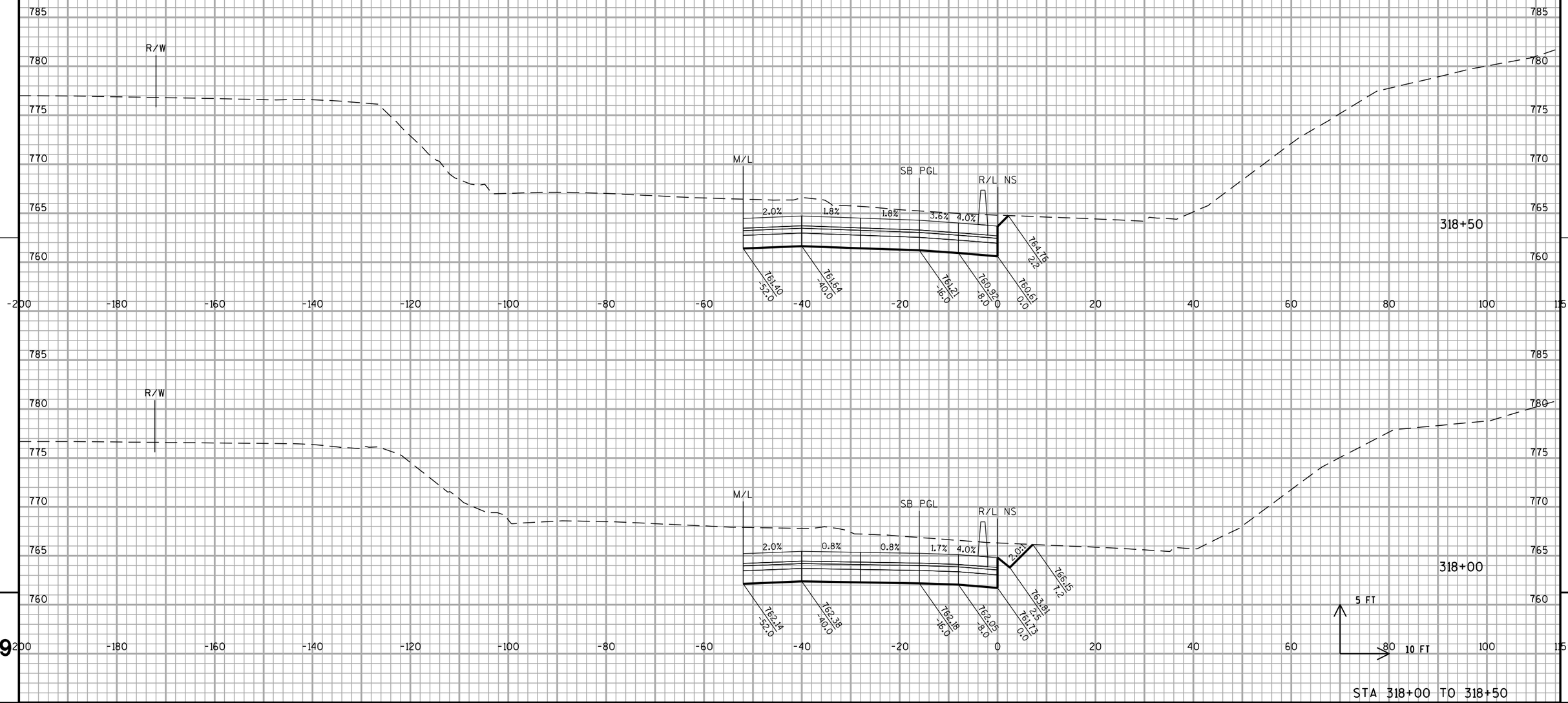
STA 317+00 TO 317+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s13 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

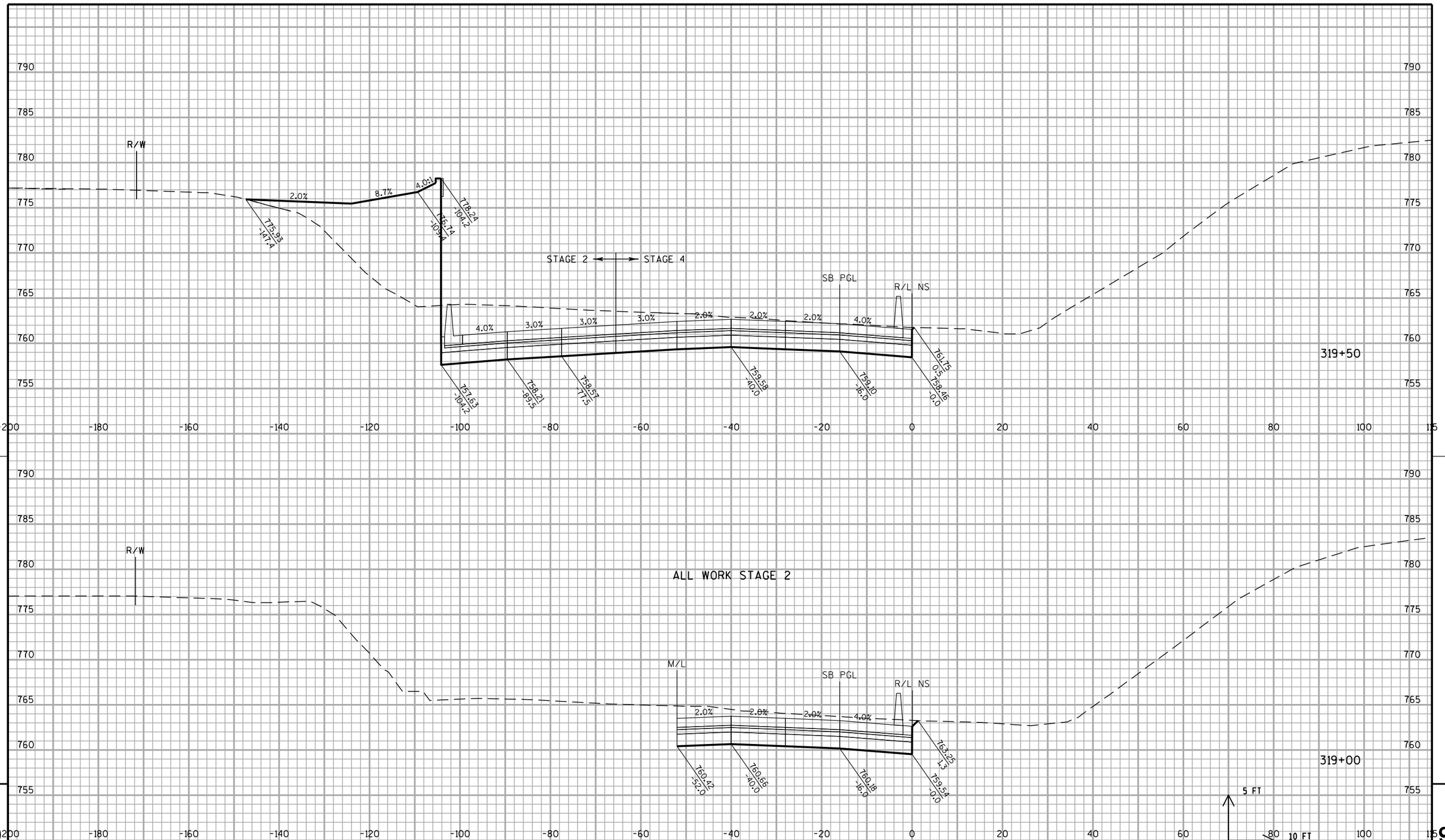
ALL WORK STAGE 2



STA 318+00 TO 318+50

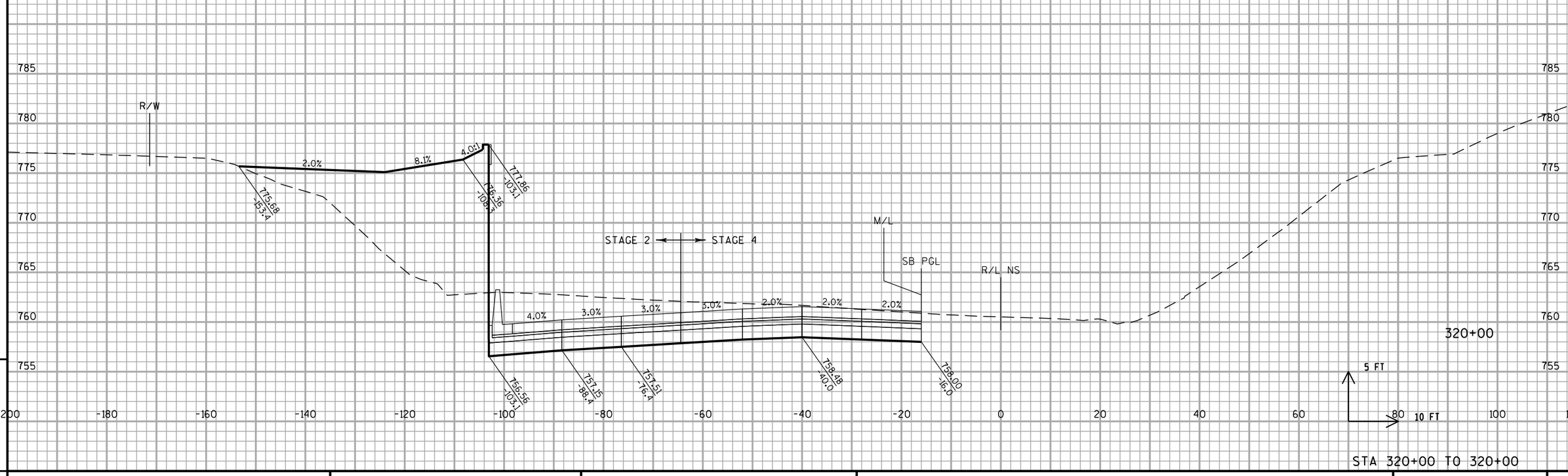
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090203_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090203_xs_ns_sb_s1 PLOT SCALE : 20:1



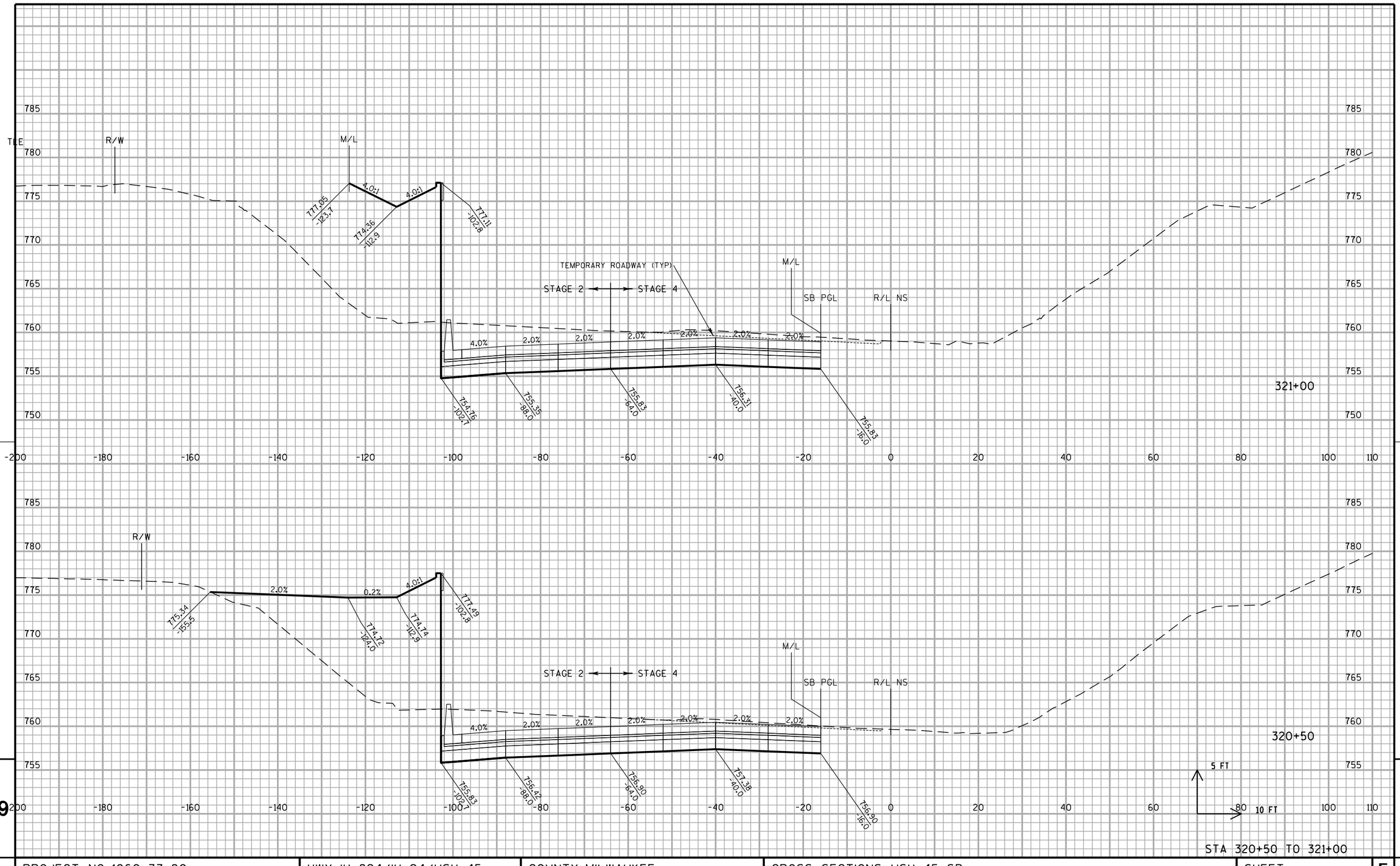
STA 319+00 TO 319+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



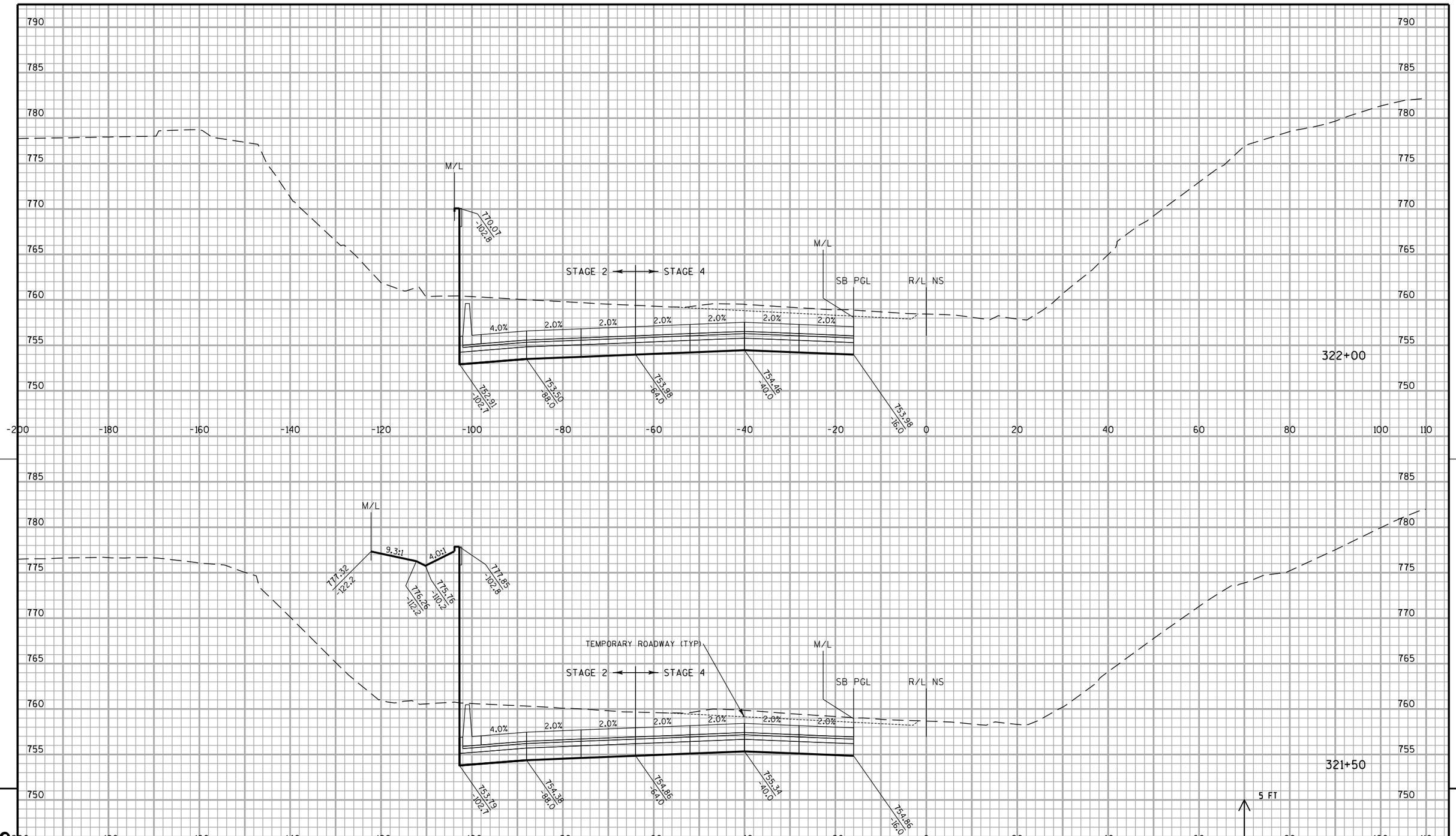
STA 320+00 TO 320+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



STA 320+50 TO 321+00

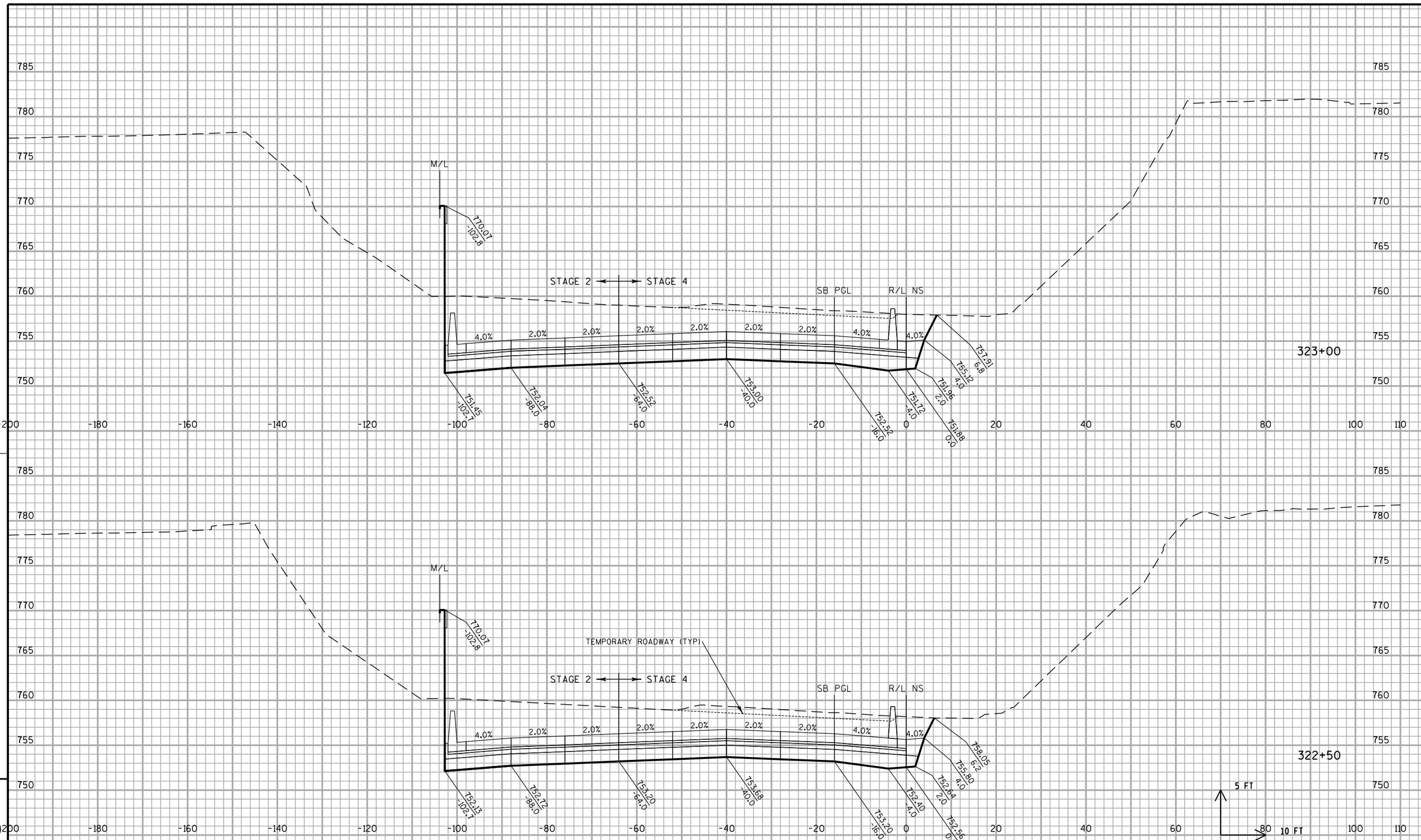
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



STA 321+50 TO 322+00

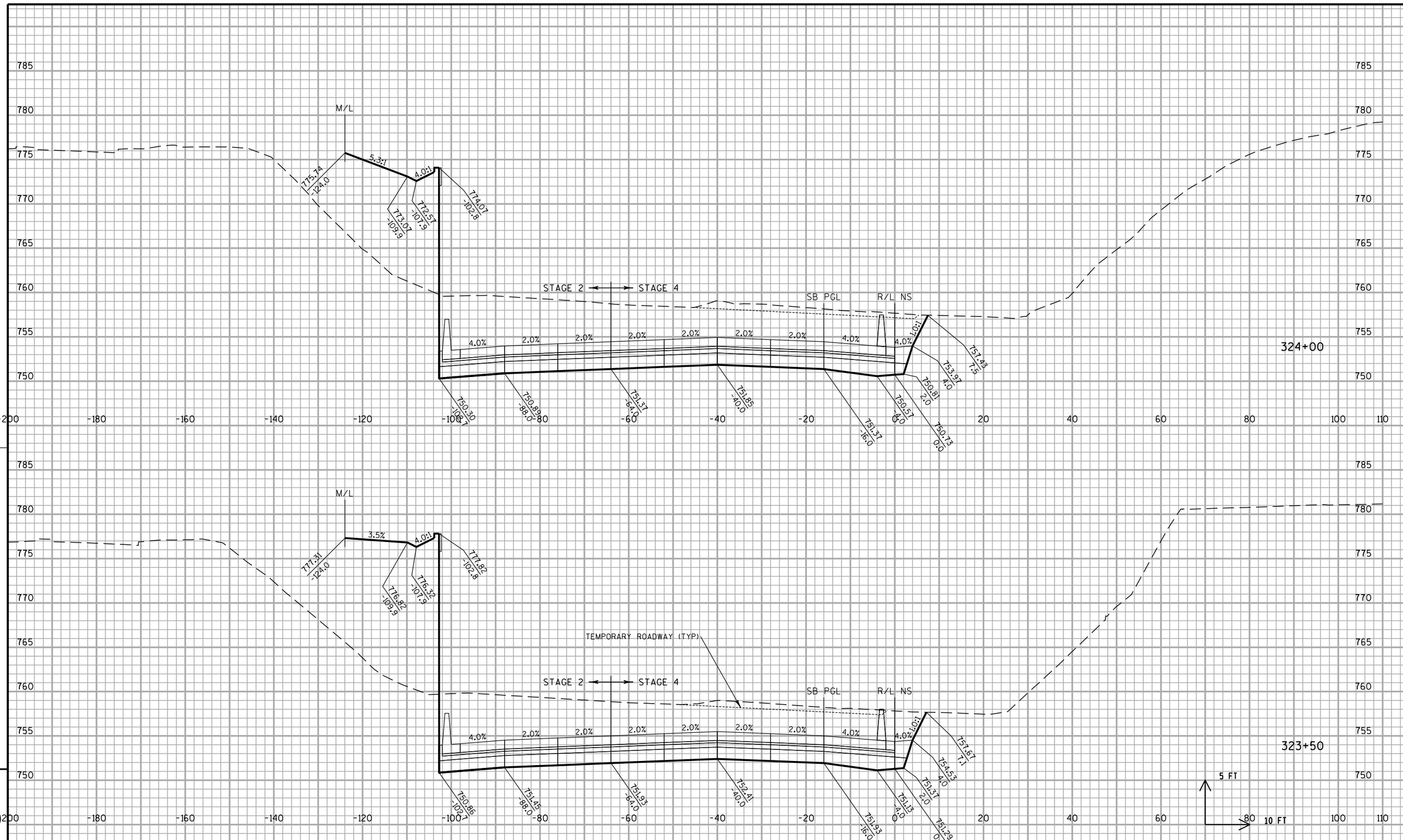
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n1 PLOT SCALE : 20:1



STA 322+50 TO 323+00

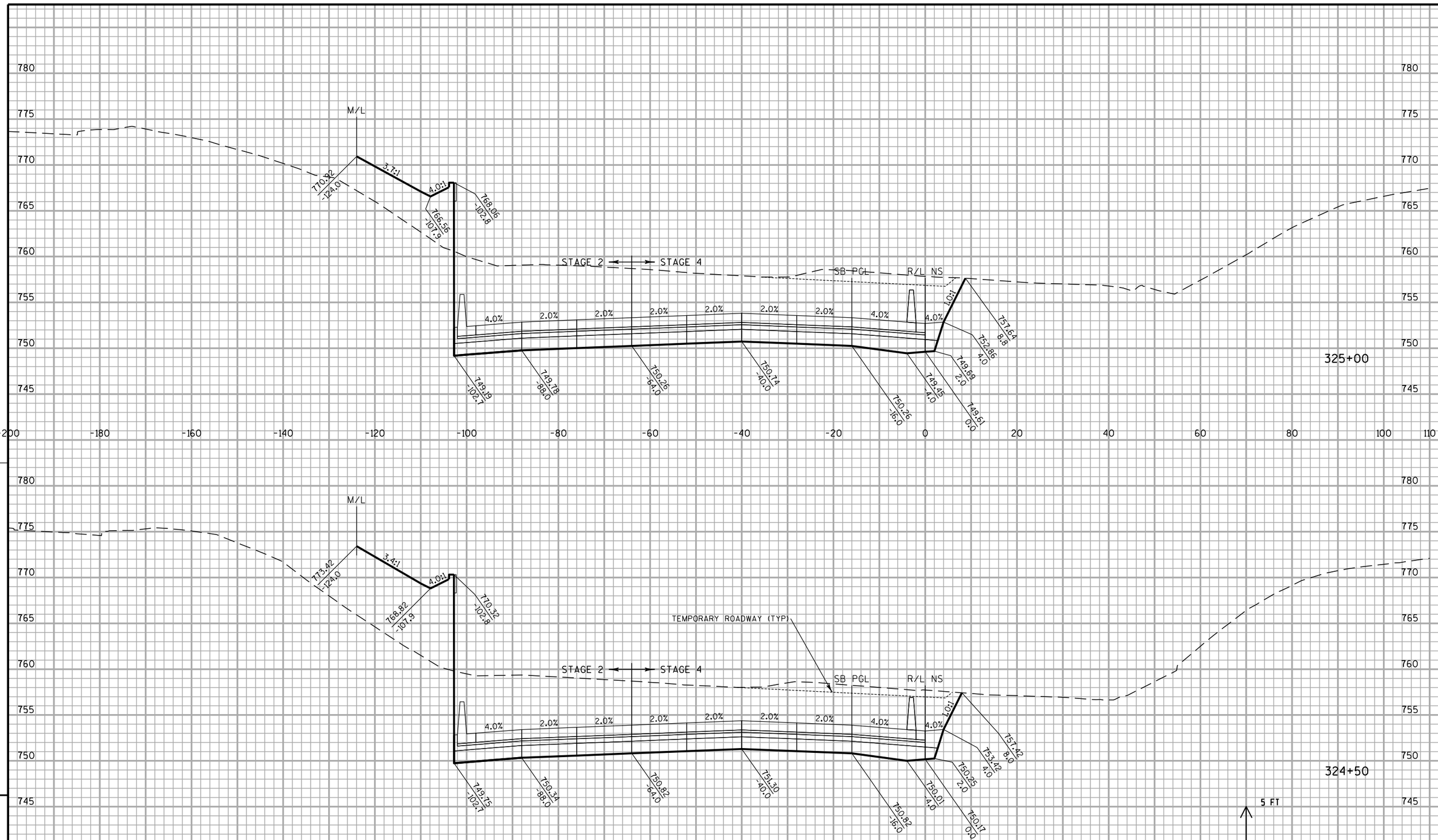
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



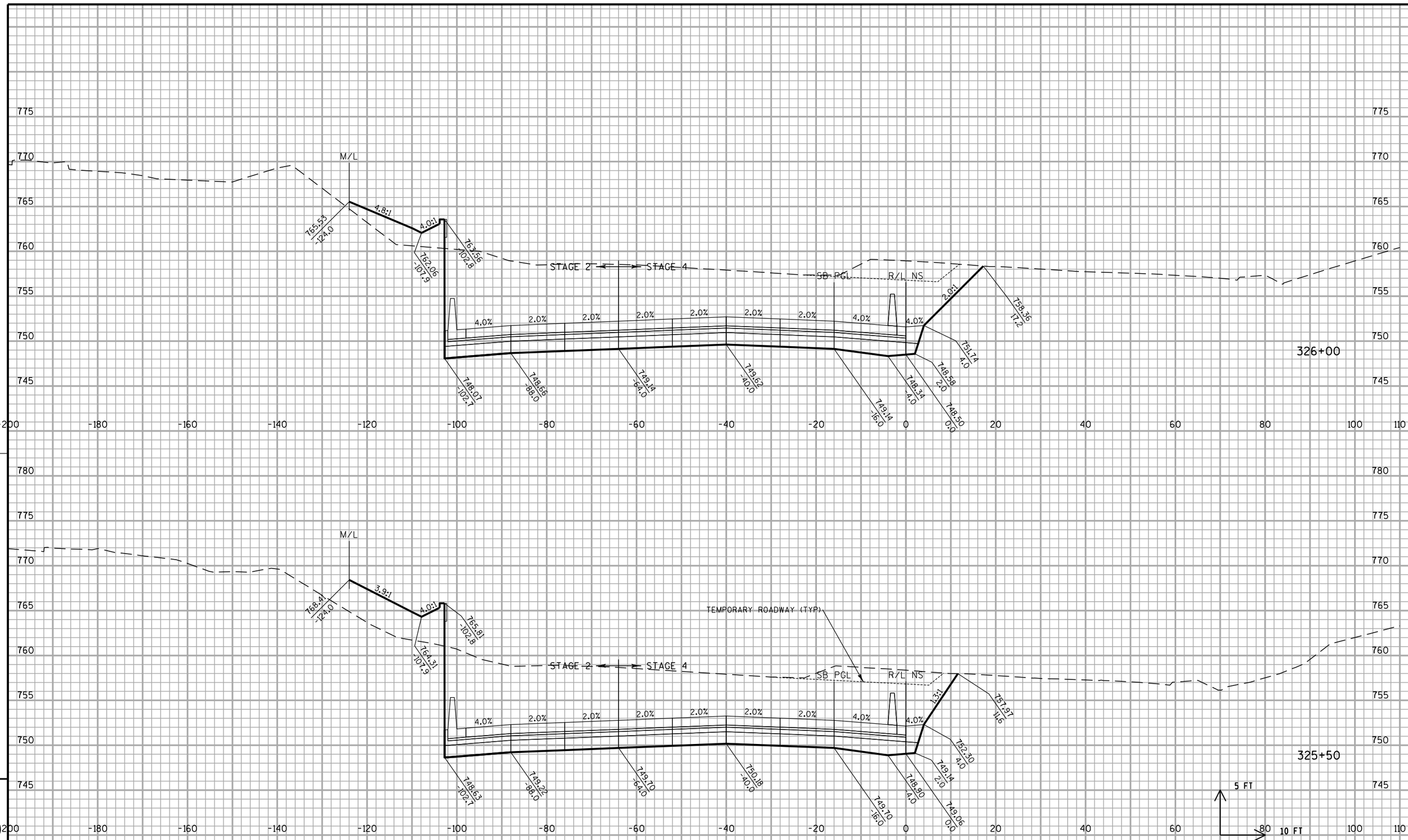
STA 323+50 TO 324+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

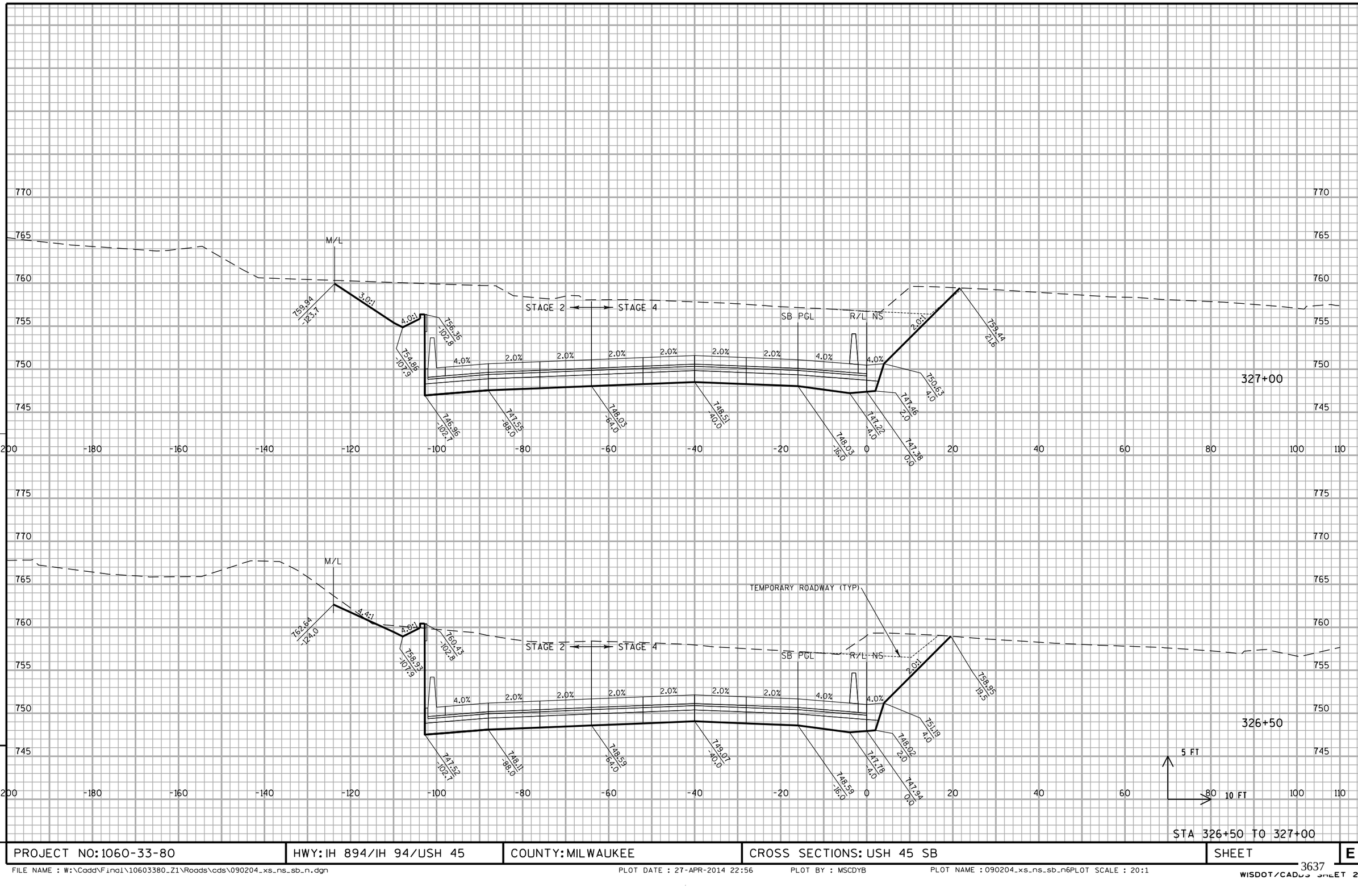
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n3PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



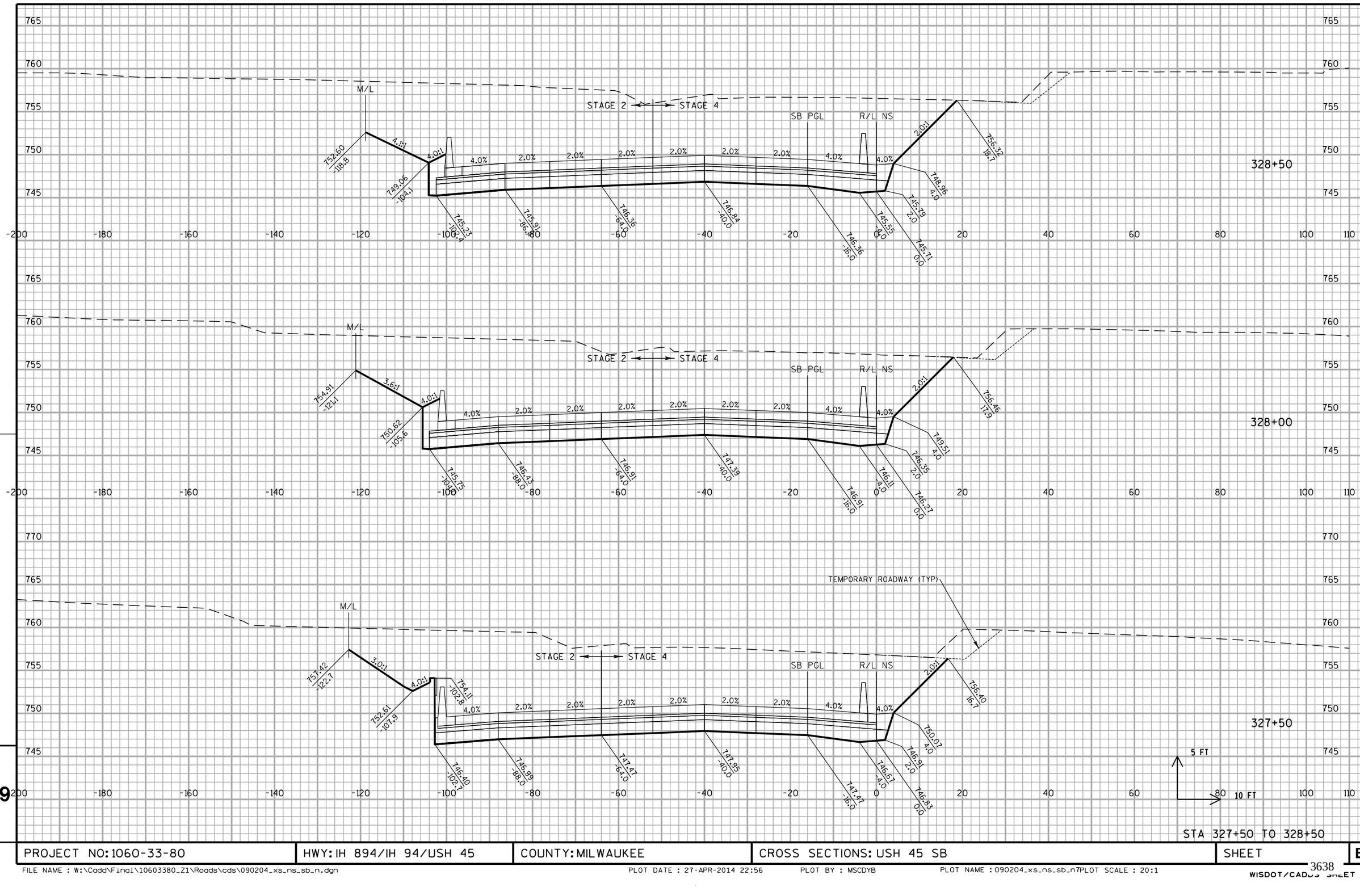
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

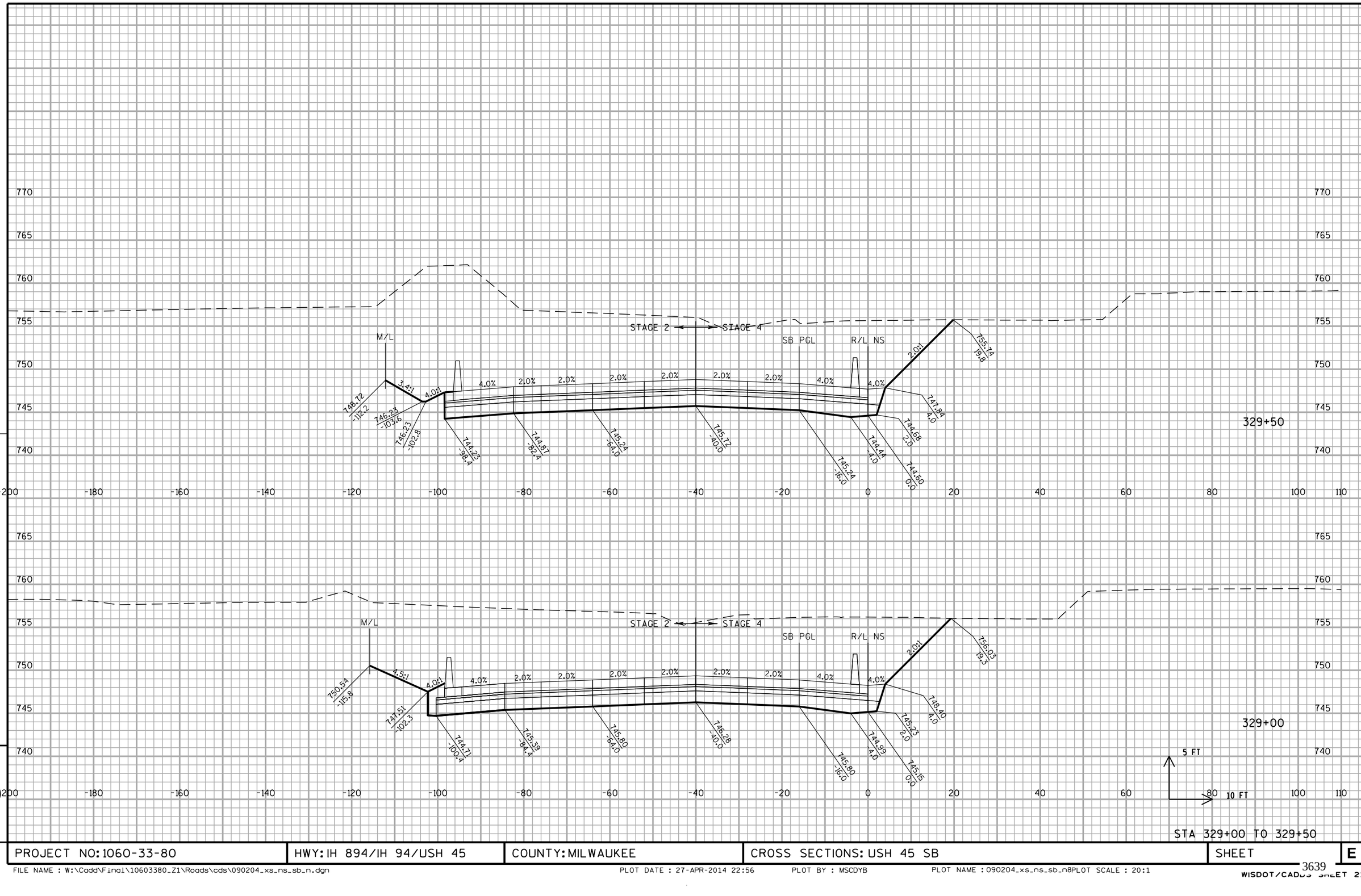
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n6PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



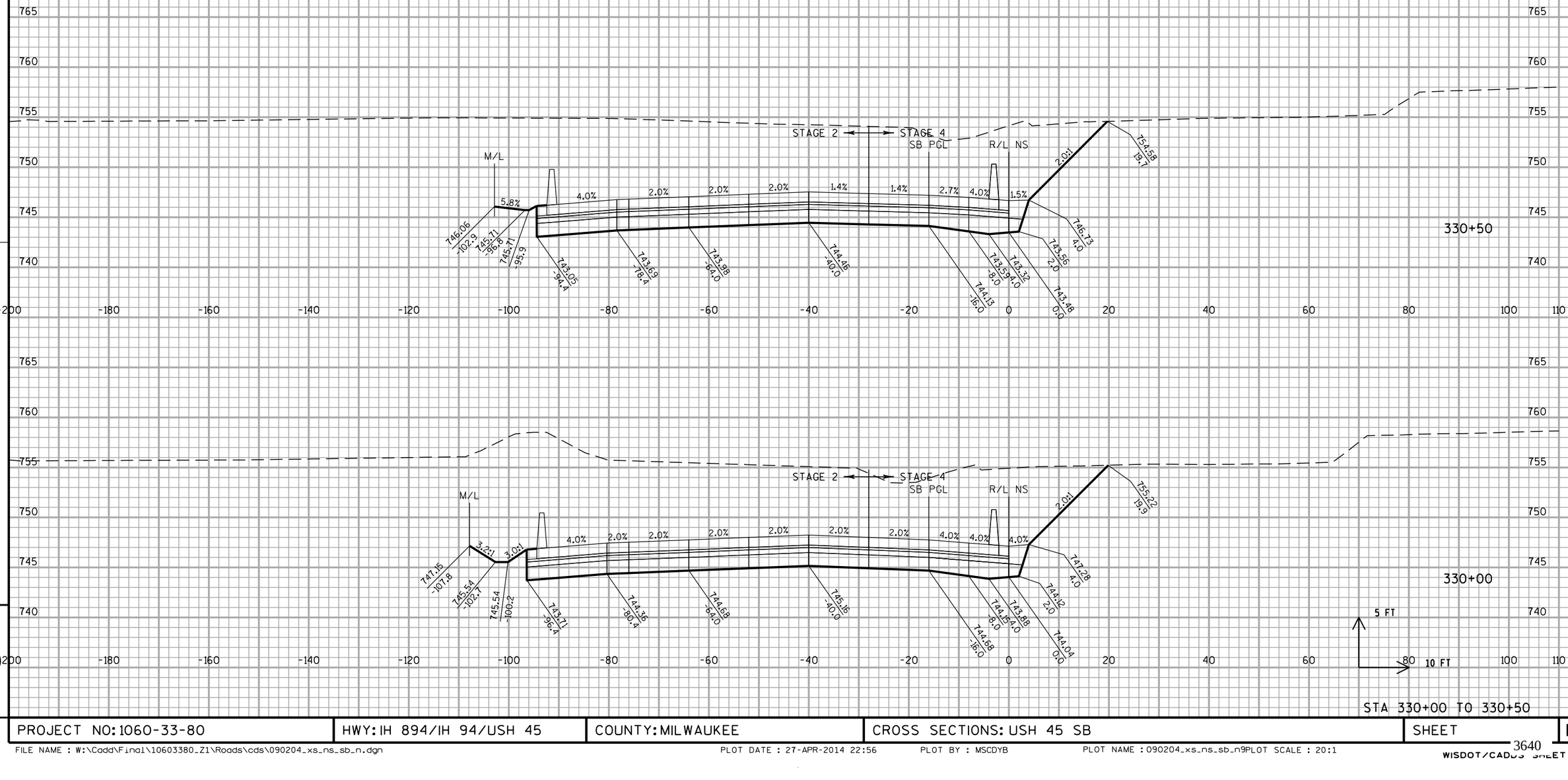
STA 327+50 TO 328+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



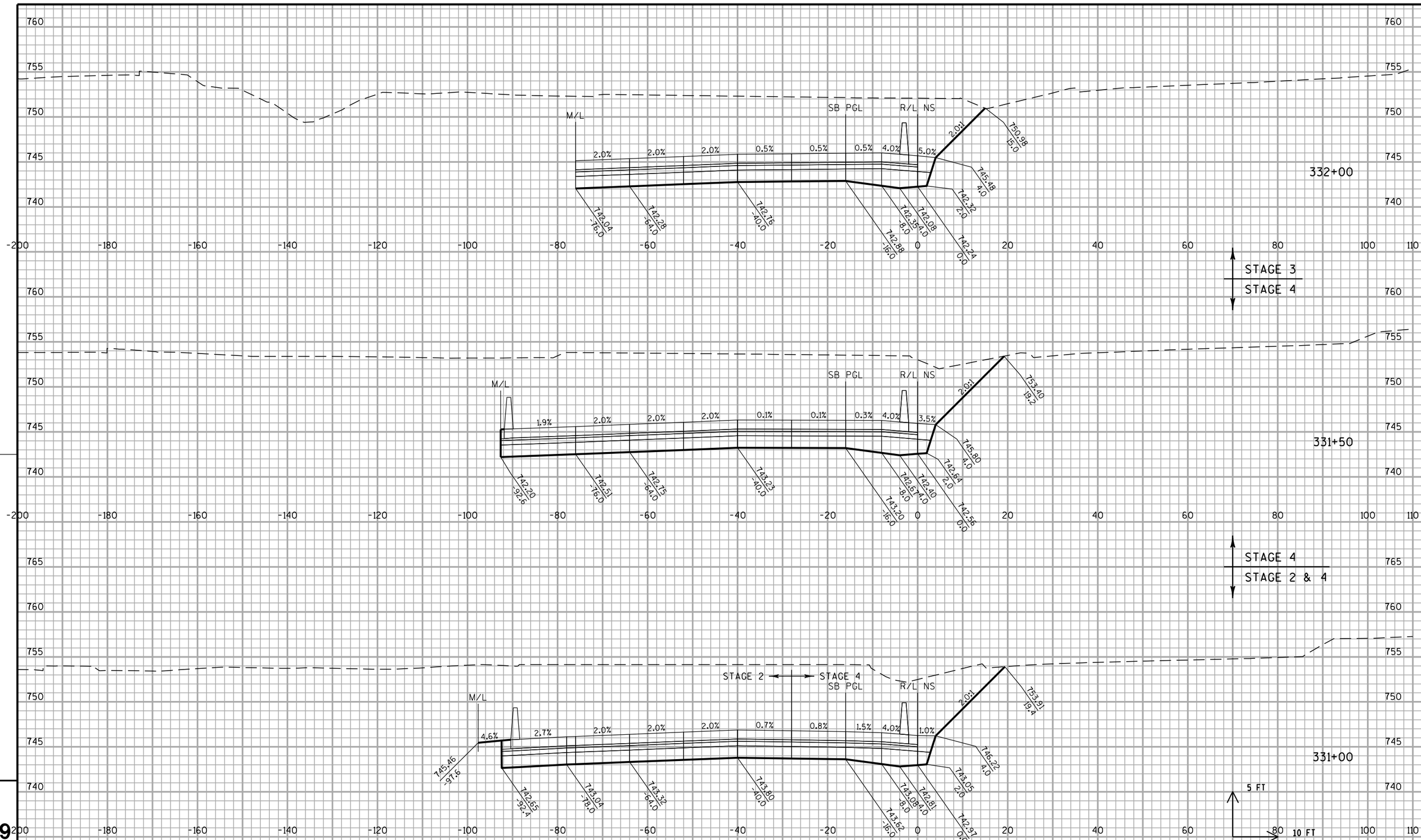
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n8PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET E

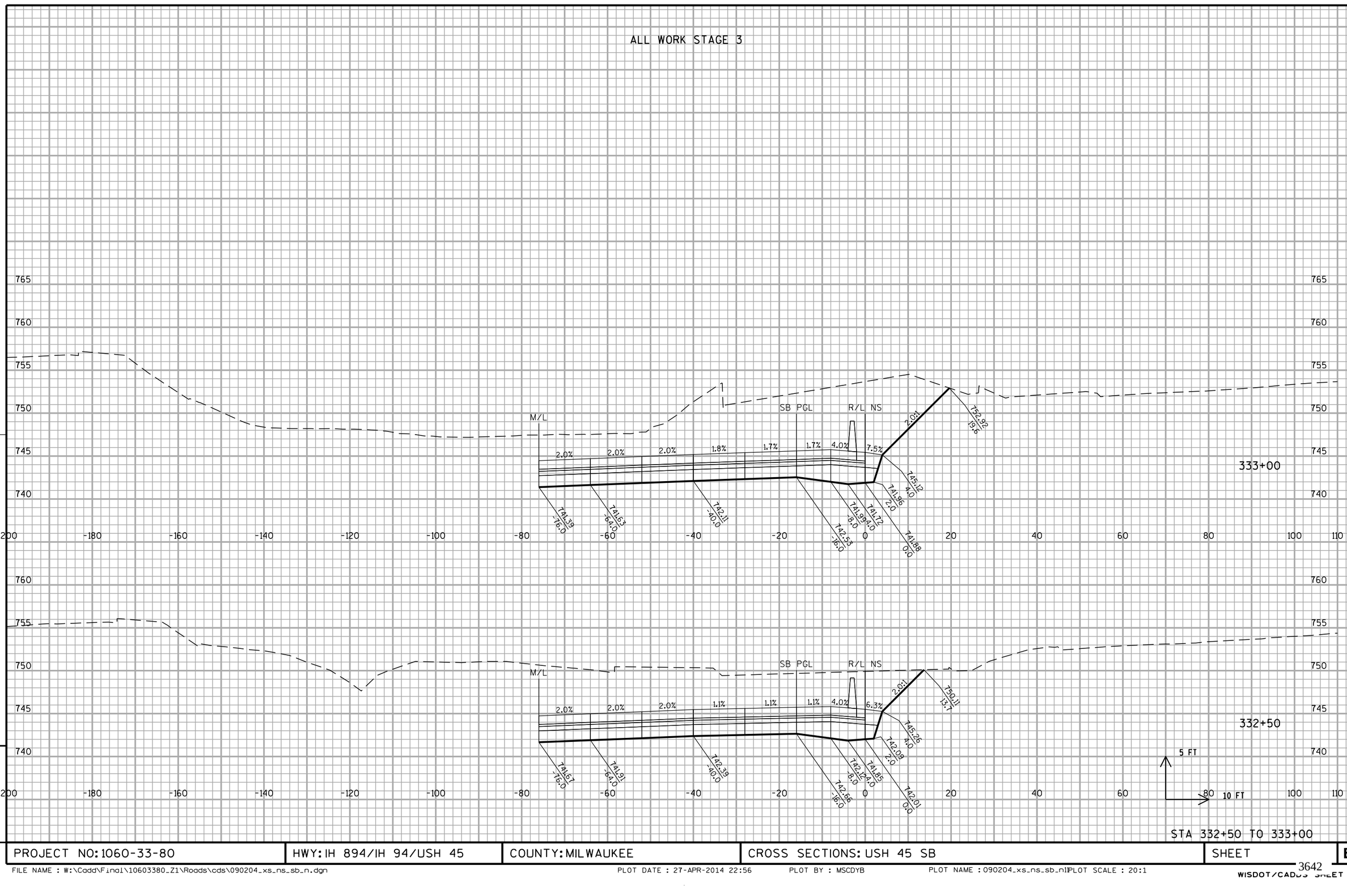
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n9 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_NS_SB_N.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090204_xs_NS_SB_N1 PLOT SCALE : 20:1

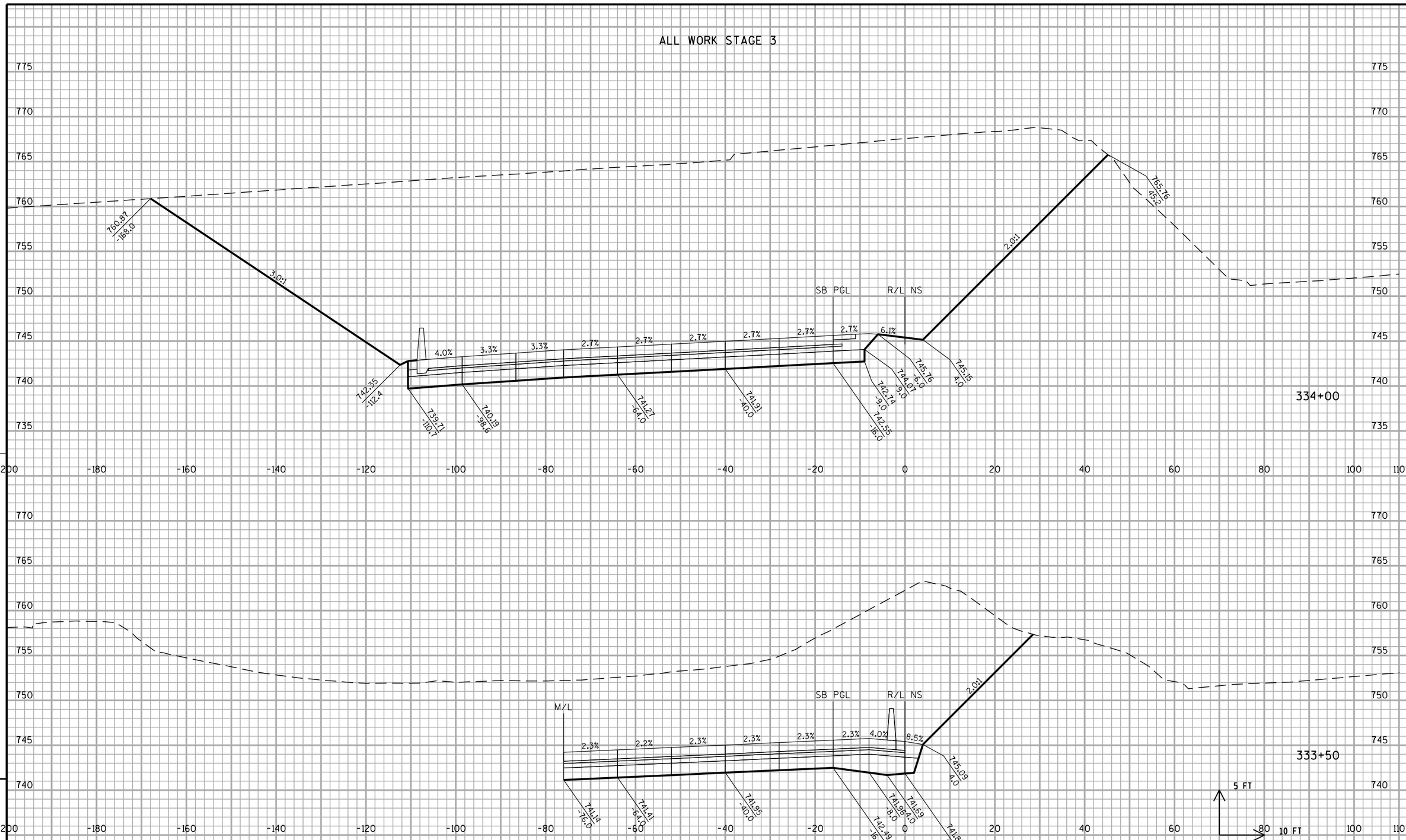
ALL WORK STAGE 3



STA 332+50 TO 333+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 3

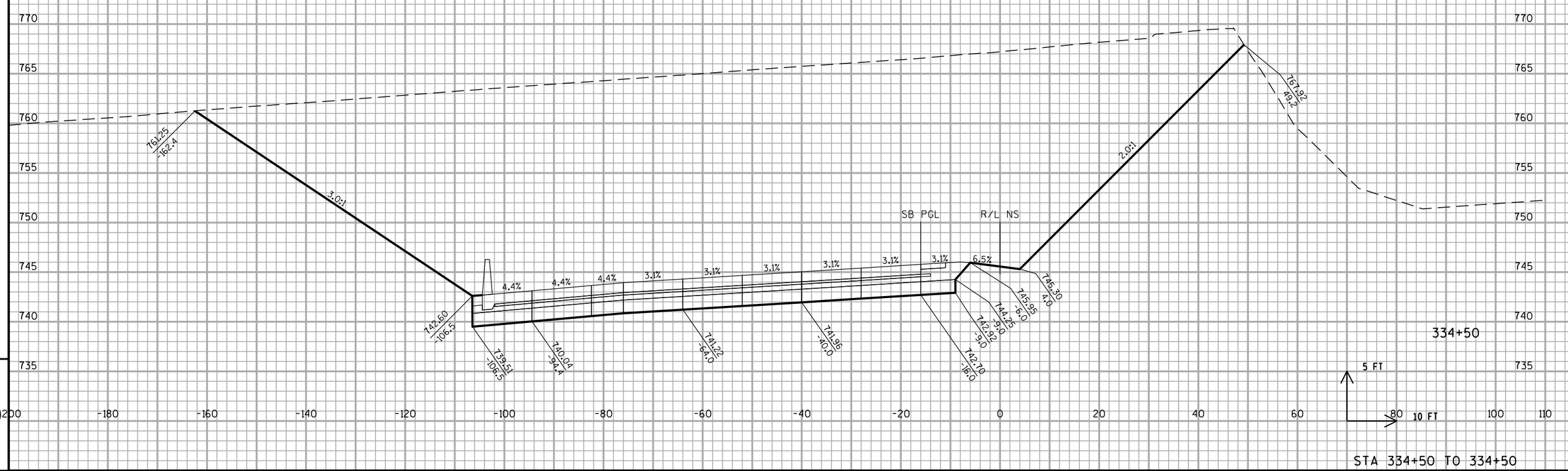


STA 333+50 TO 334+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n12 PLOT SCALE : 20:1

ALL WORK STAGE 3



STA 334+50 TO 334+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 3

M/L

3.5%

759.98
-200.0

758.82
-166.8

3.0:1

4.0:1

4.0%

4.4%

4.4%

3.9%

3.9%

3.9%

3.9%

3.9%

3.9%

4.0%

8.5:1

SB PGL

R/L NS

2.0:1

754.50
21.2

745.90
4.0

742.74
2.0

742.50
-8.0

742.76
-64.0

743.30
-16.0

742.66
-0.0

741.36
-113.8

742.61
-108.8

739.72
-104.0

740.34
-89.9

741.42
-64.0

742.35
-40.0

335+50

770
765
760
755
750
745
740
735
775

-220 -200 -180 -160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 95

M/L

1.8%

759.84
-200.0

760.46
-166.4

3.0:1

4.0%

4.4%

4.4%

4.4%

3.5%

3.5%

3.5%

3.5%

3.5%

3.5%

6.8%

SB PGL

R/L NS

2.0:1

766.07
45.0

744.53
-9.0

746.23
-6.0

745.55
4.0

743.20
-9.0

742.95
-16.0

741.94
-110.8

742.53
-108.4

739.61
-104.2

740.17
-91.5

741.27
-64.0

742.11
-40.0

335+00

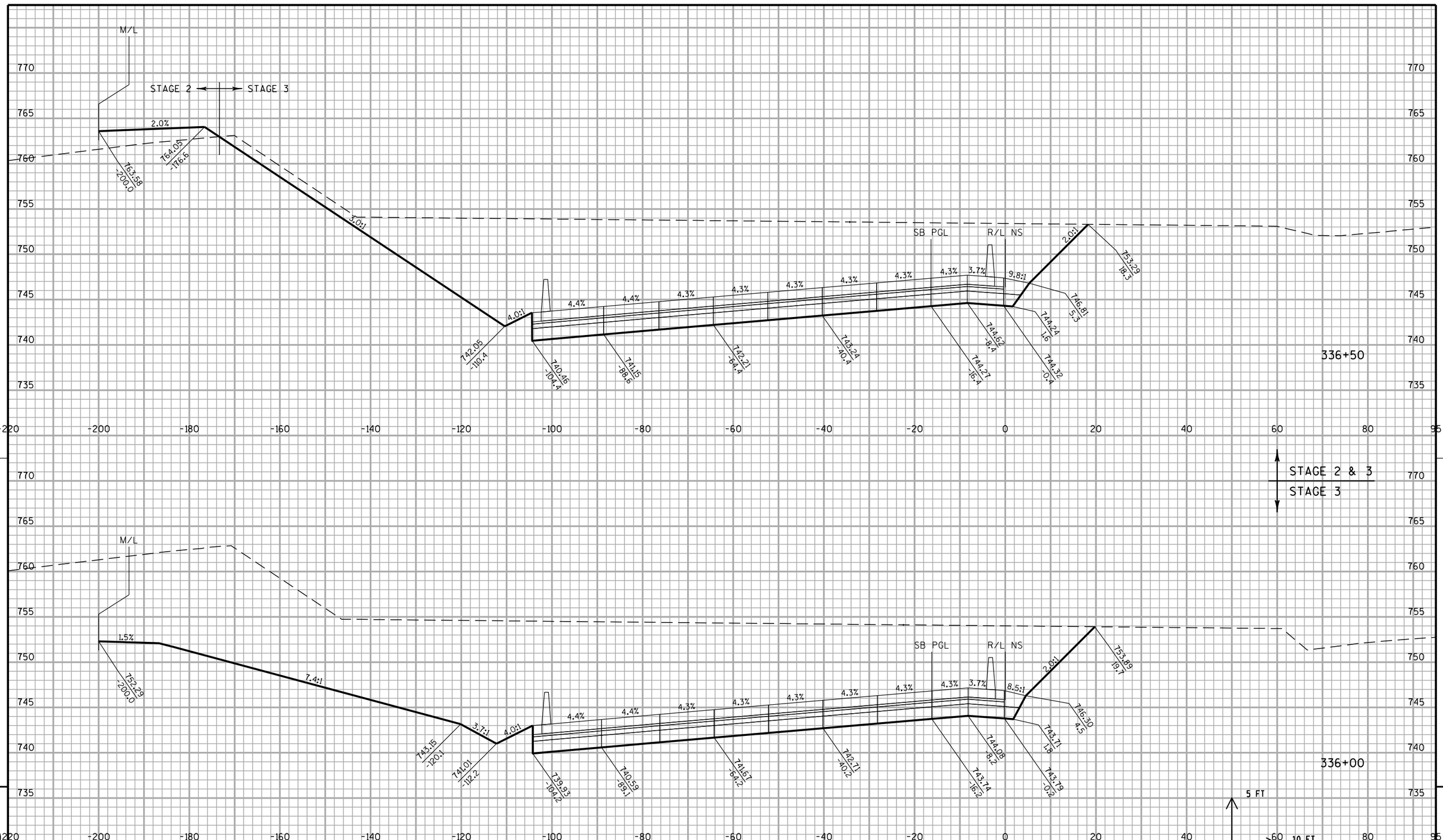
5 FT

10 FT

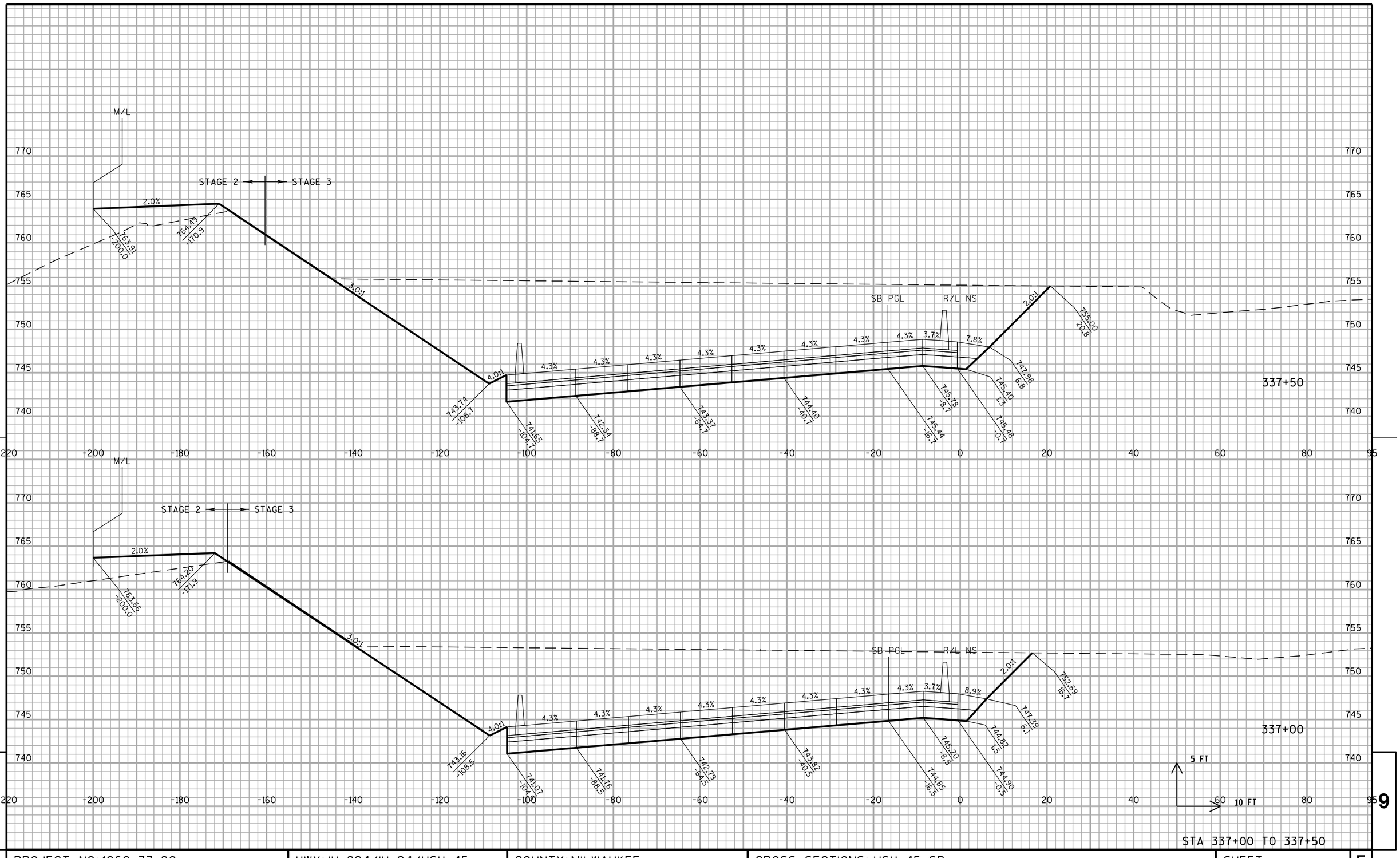
STA 335+00 TO 335+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n1 PLOT SCALE : 20:1



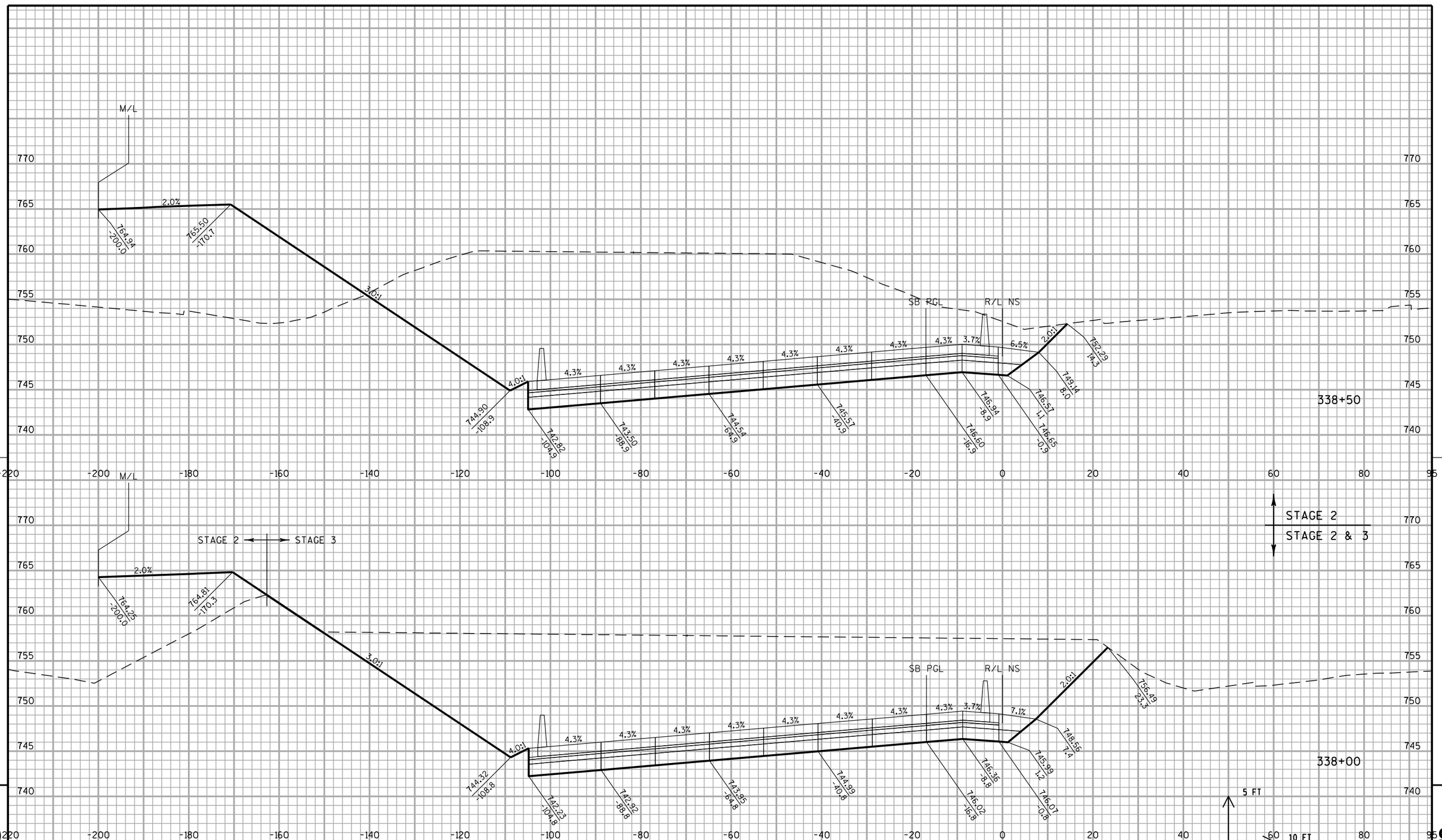
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



STA 337+00 TO 337+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:56 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n1 PLOT SCALE : 20:1

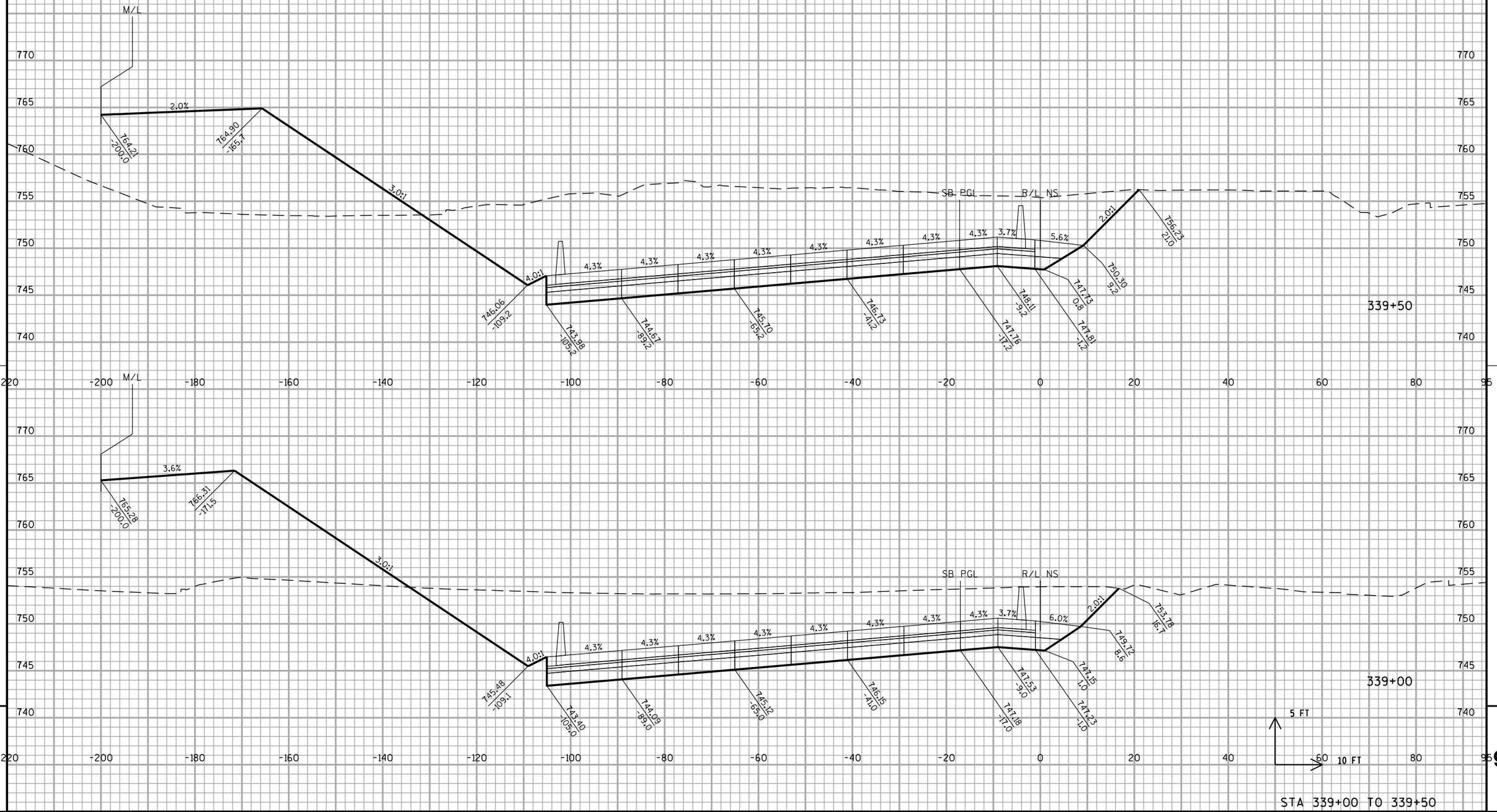


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET E

STA 338+00 TO 338+50

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_NS_SB_N.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090204_xs_NS_SB_N PLOT SCALE : 20:1

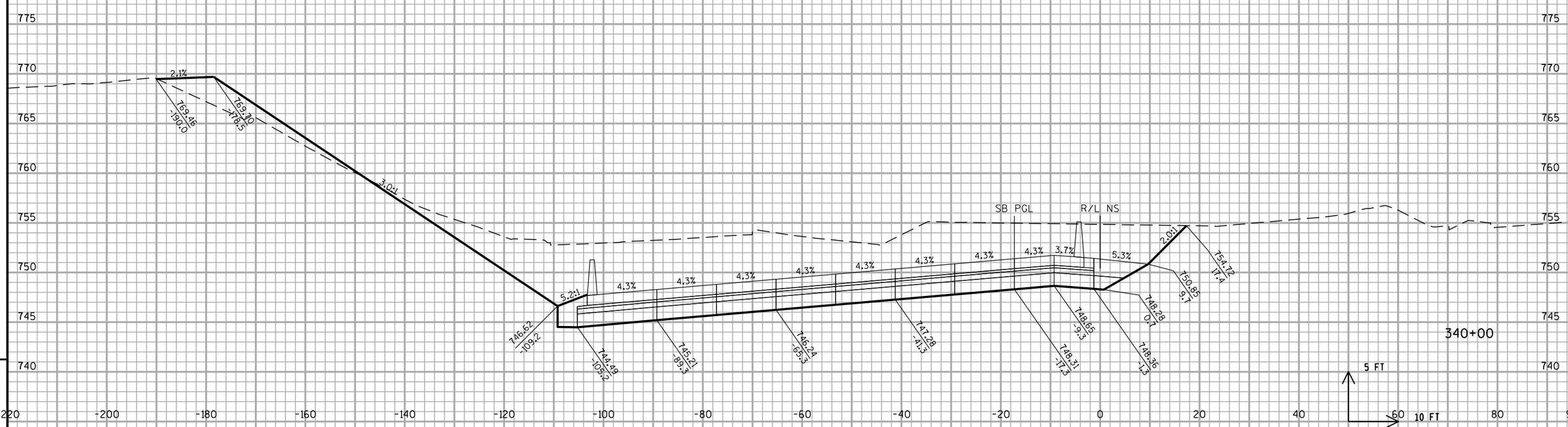
ALL WORK STAGE 2



STA 339+00 TO 339+50

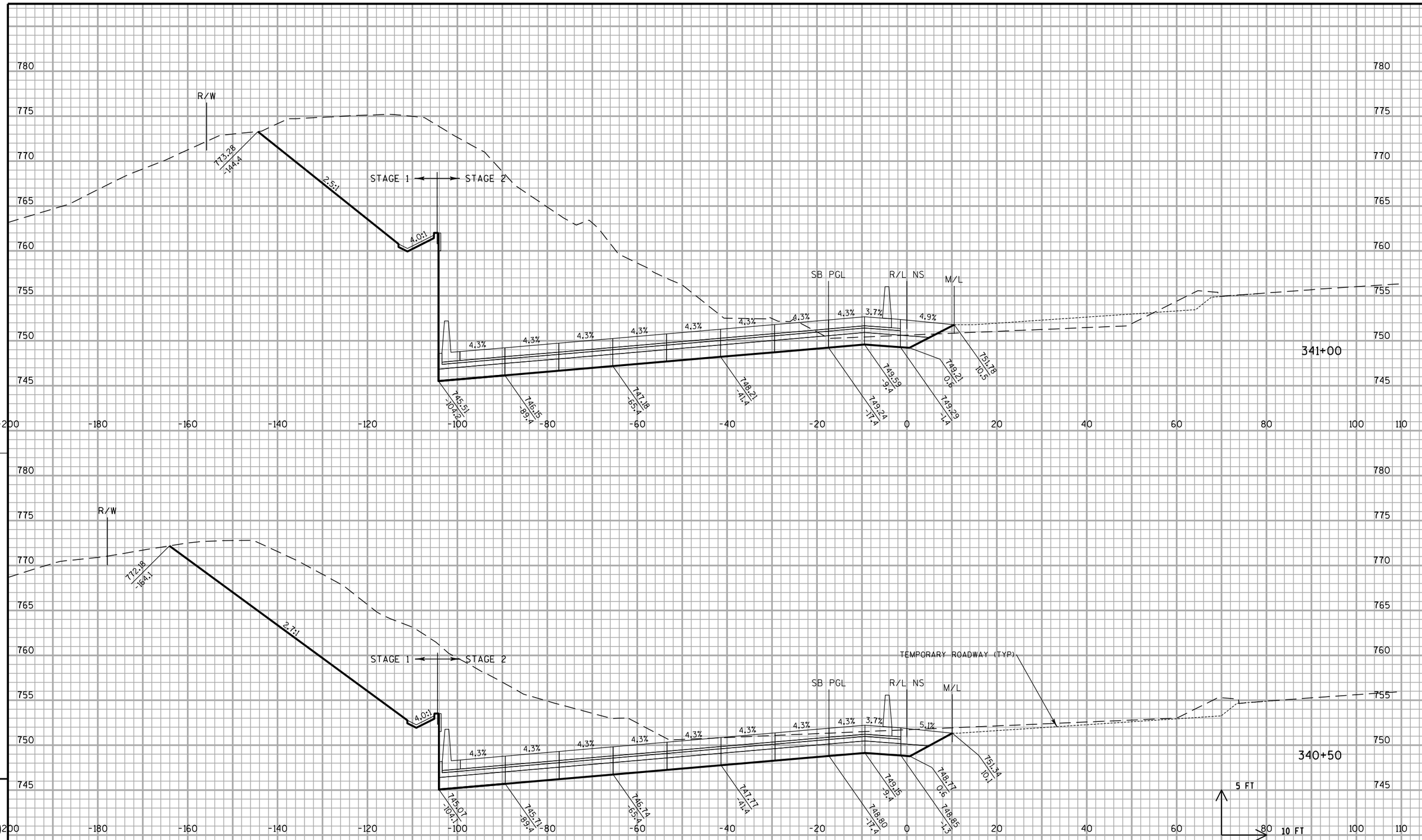
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 2



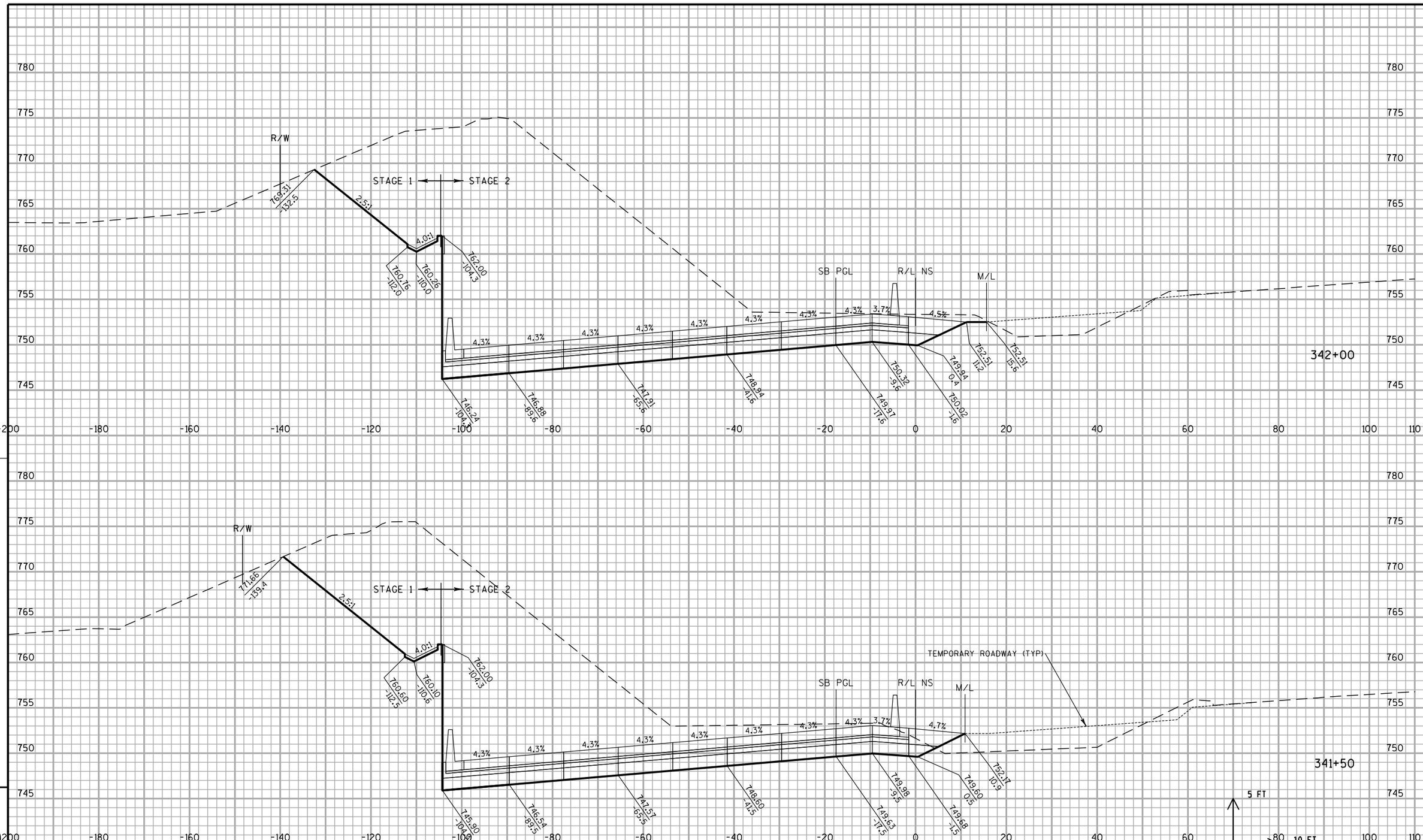
STA 340+00 TO 340+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

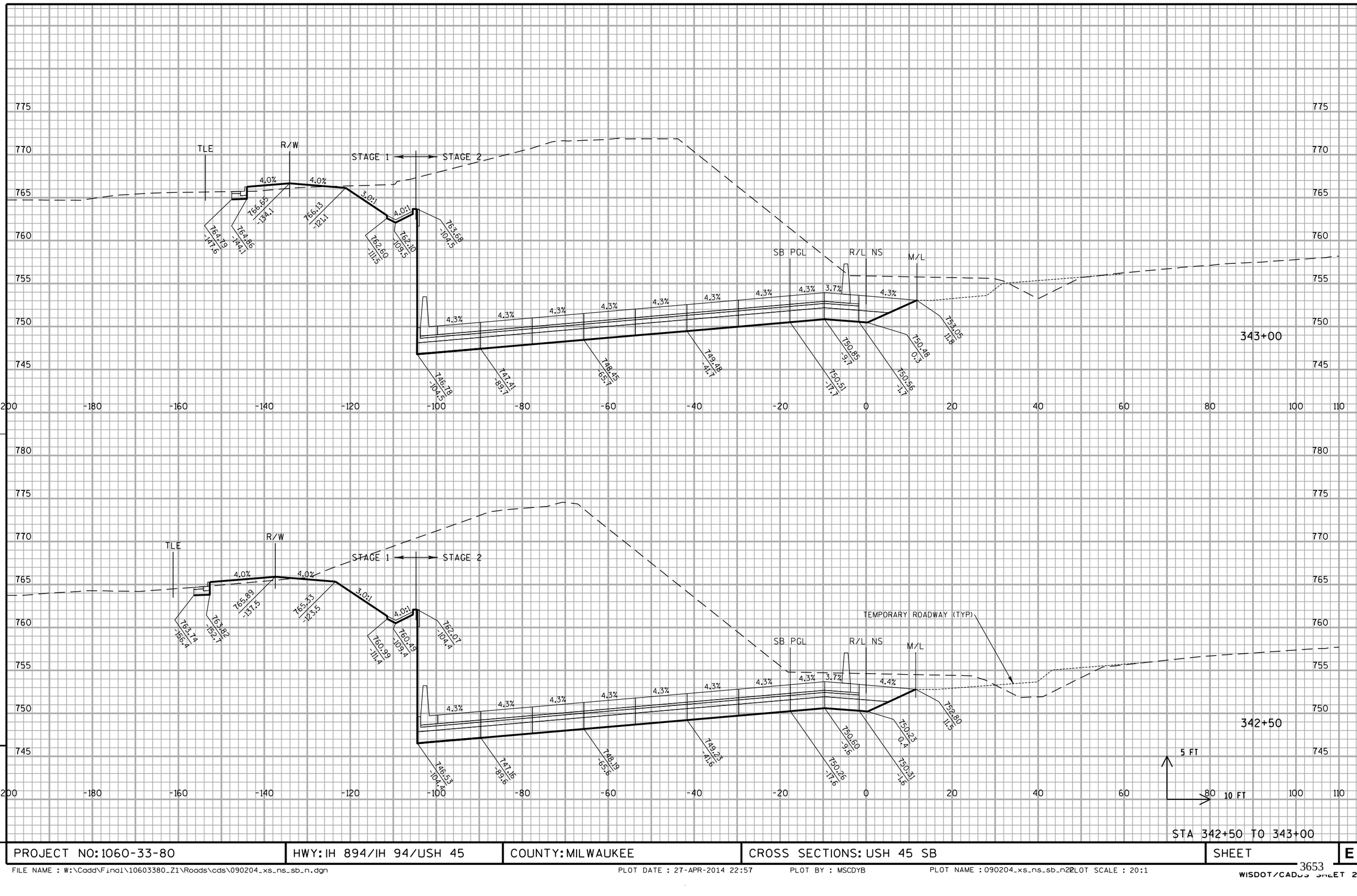


STA 340+50 TO 341+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

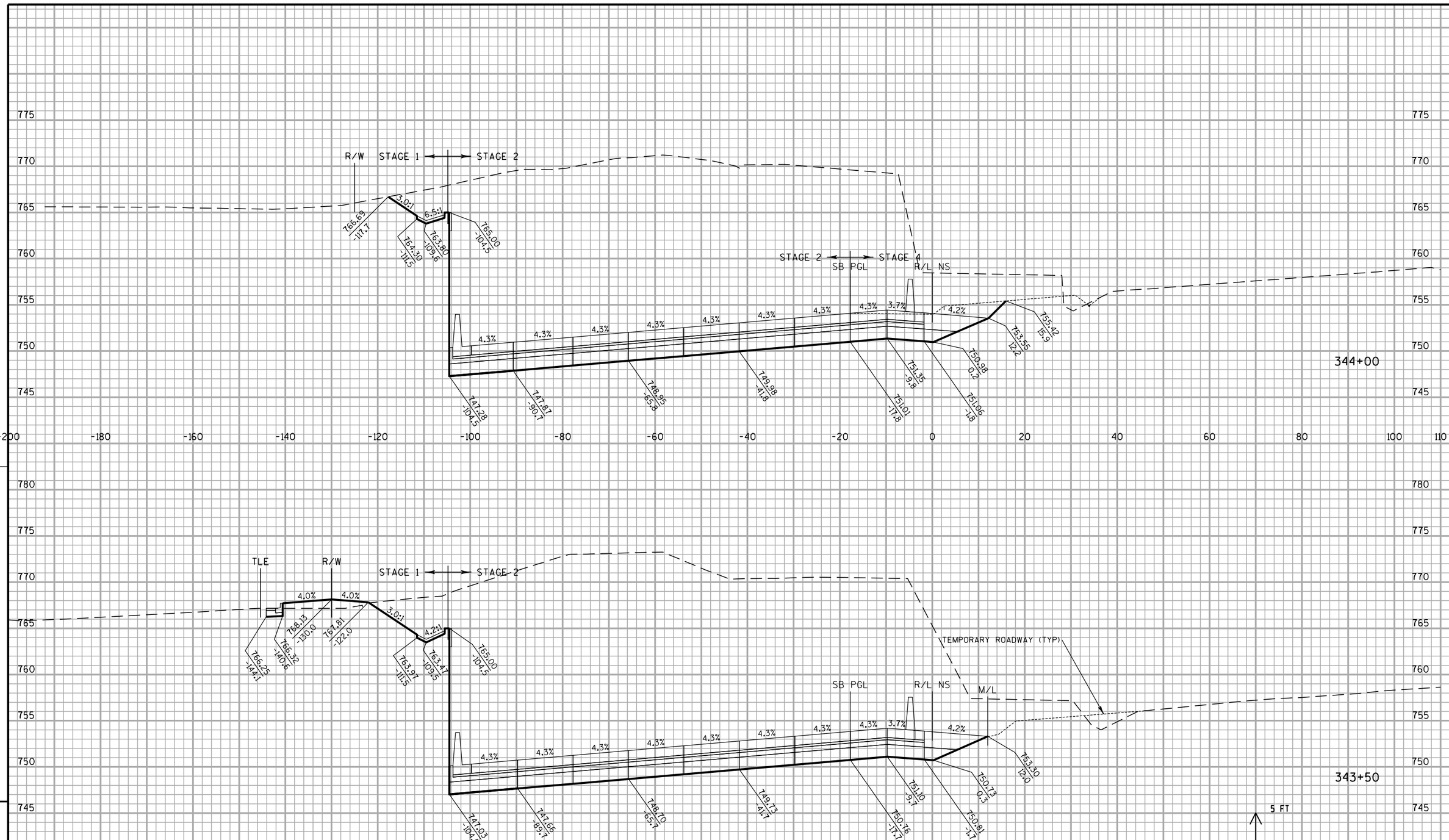


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

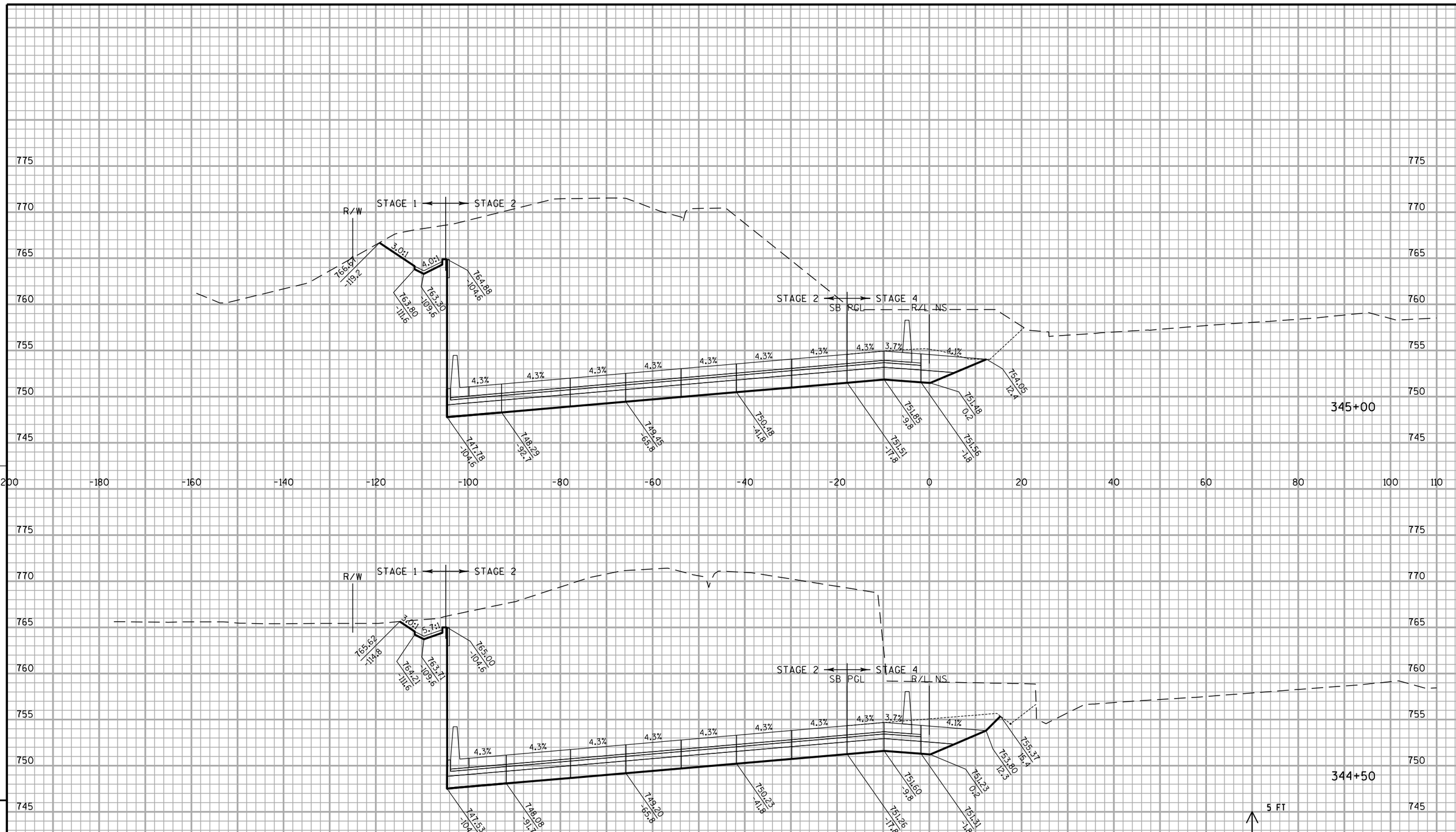


STA 342+50 TO 343+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

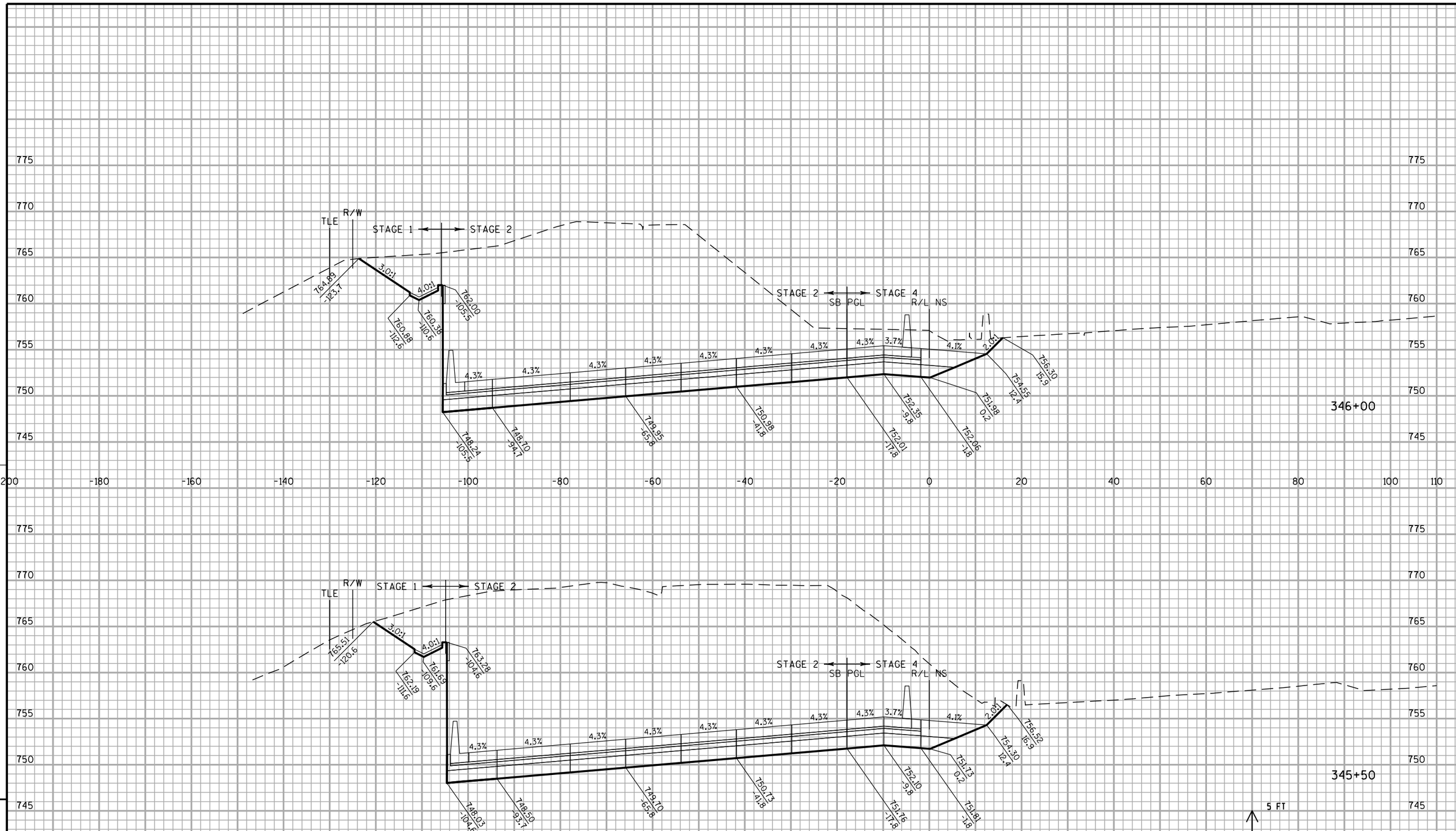


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

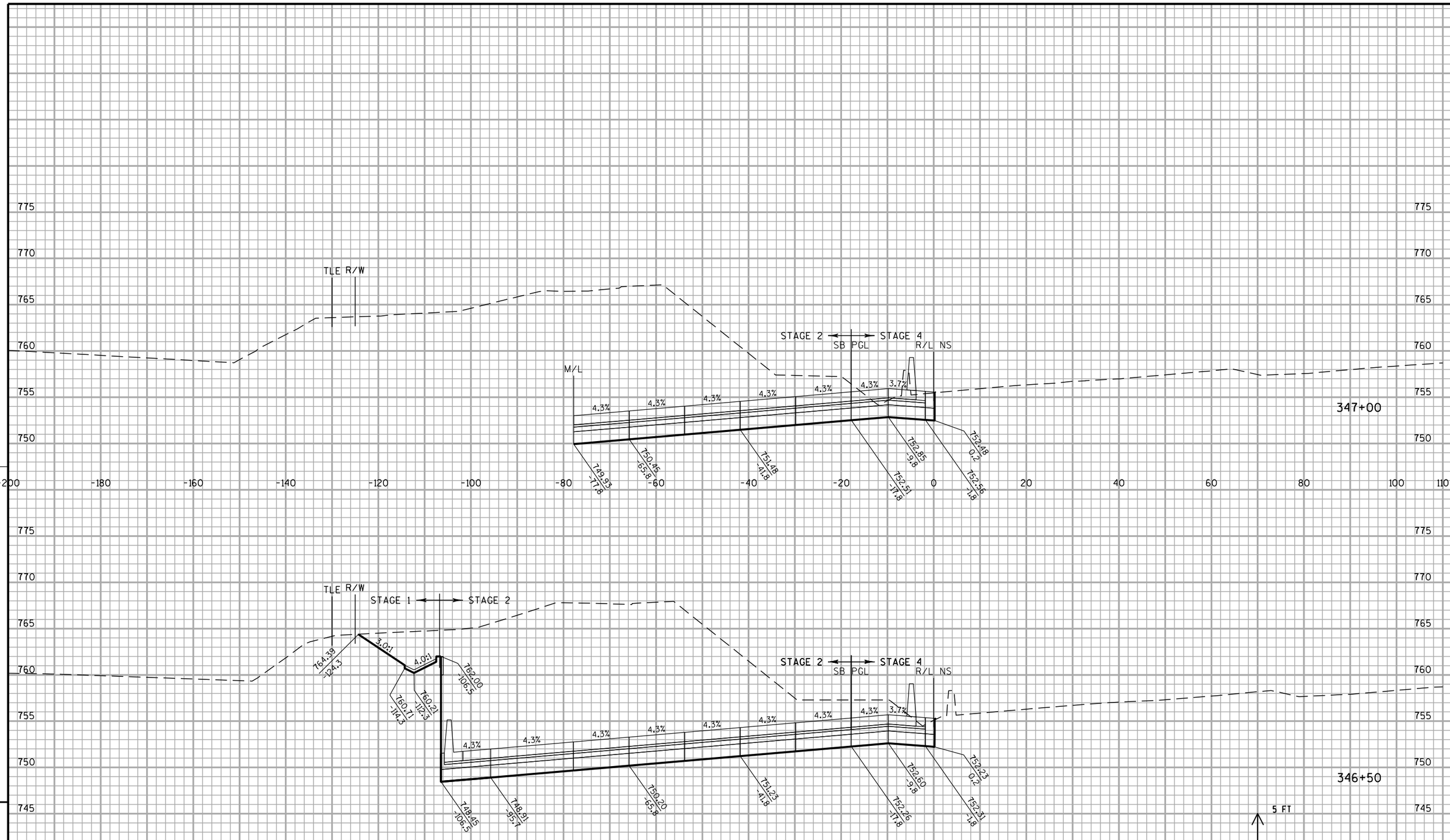


STA 344+50 TO 345+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



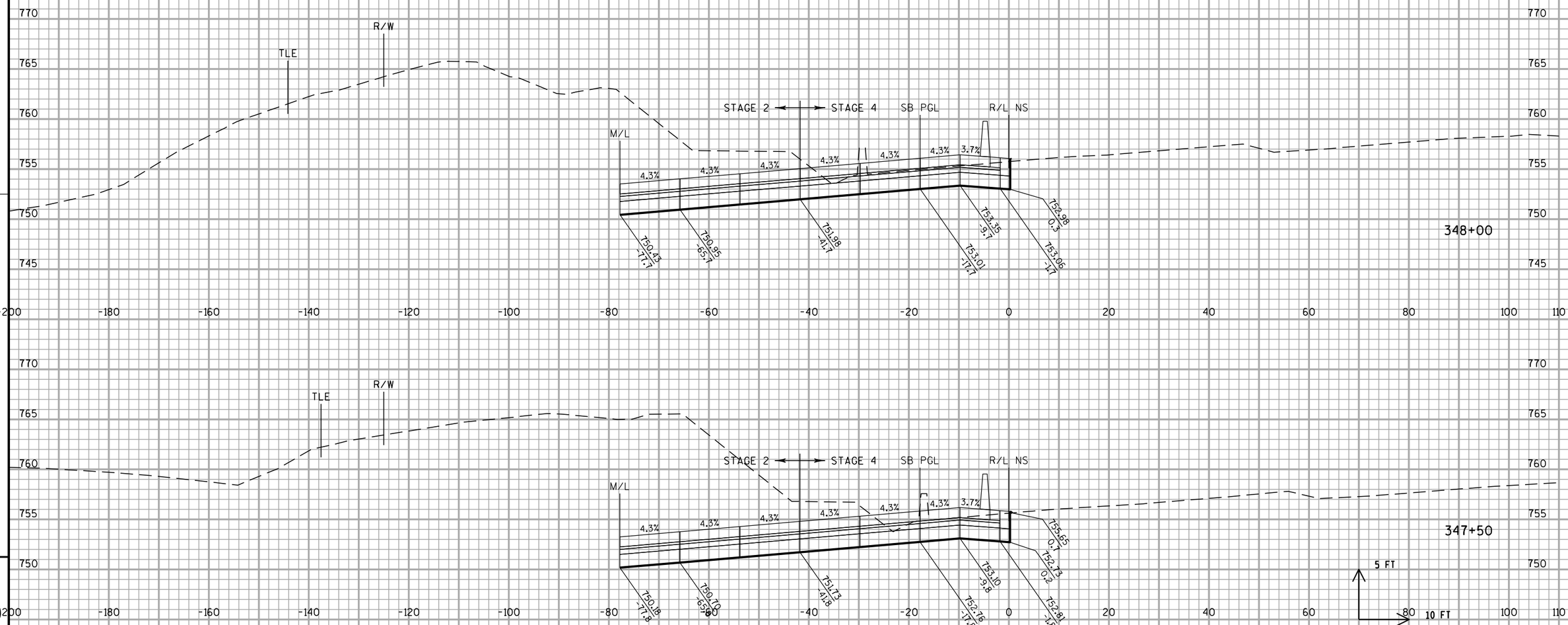
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



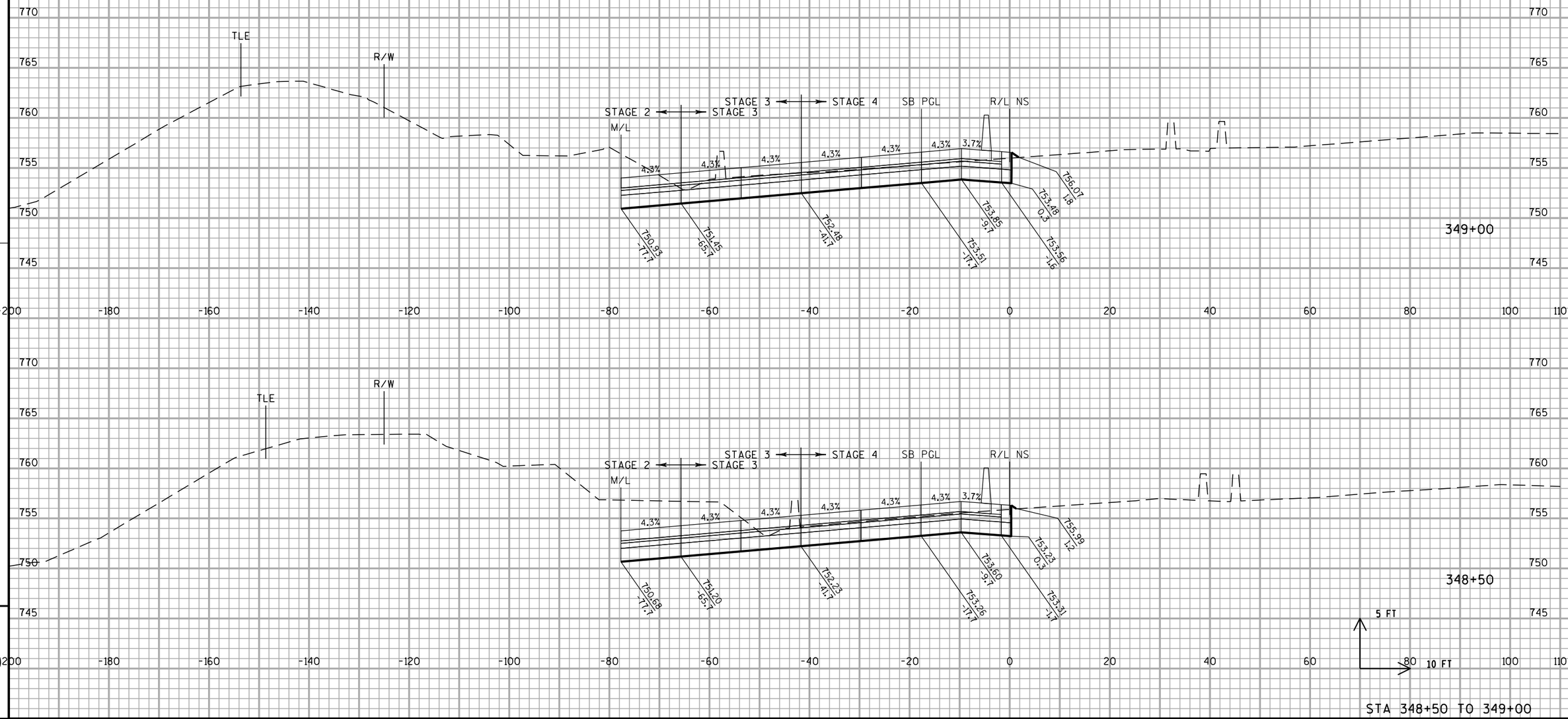
STA 346+50 TO 347+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_NS_SB_N.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090204_xs_NS_SB_N2 PLOT SCALE : 20:1

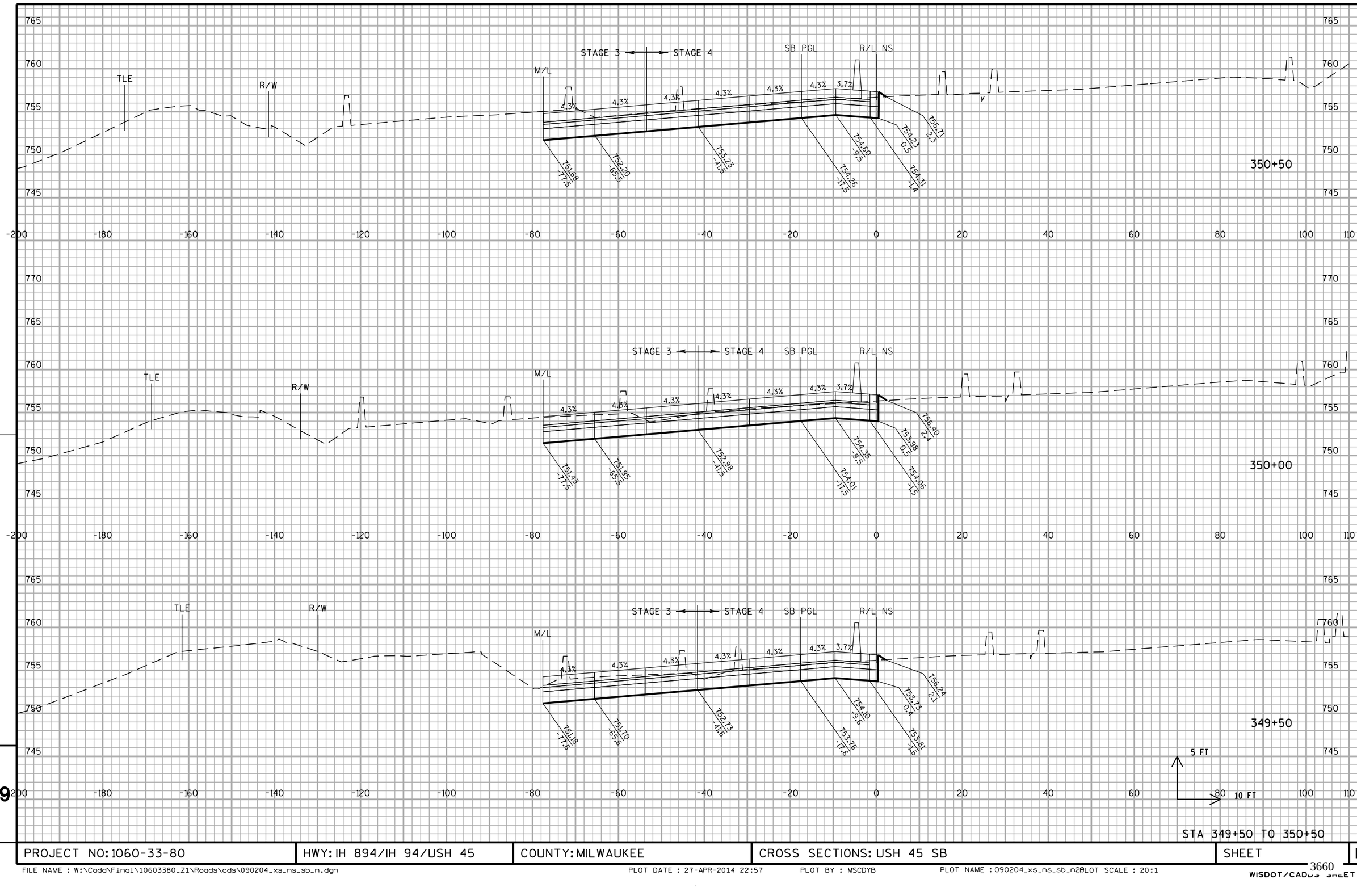


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

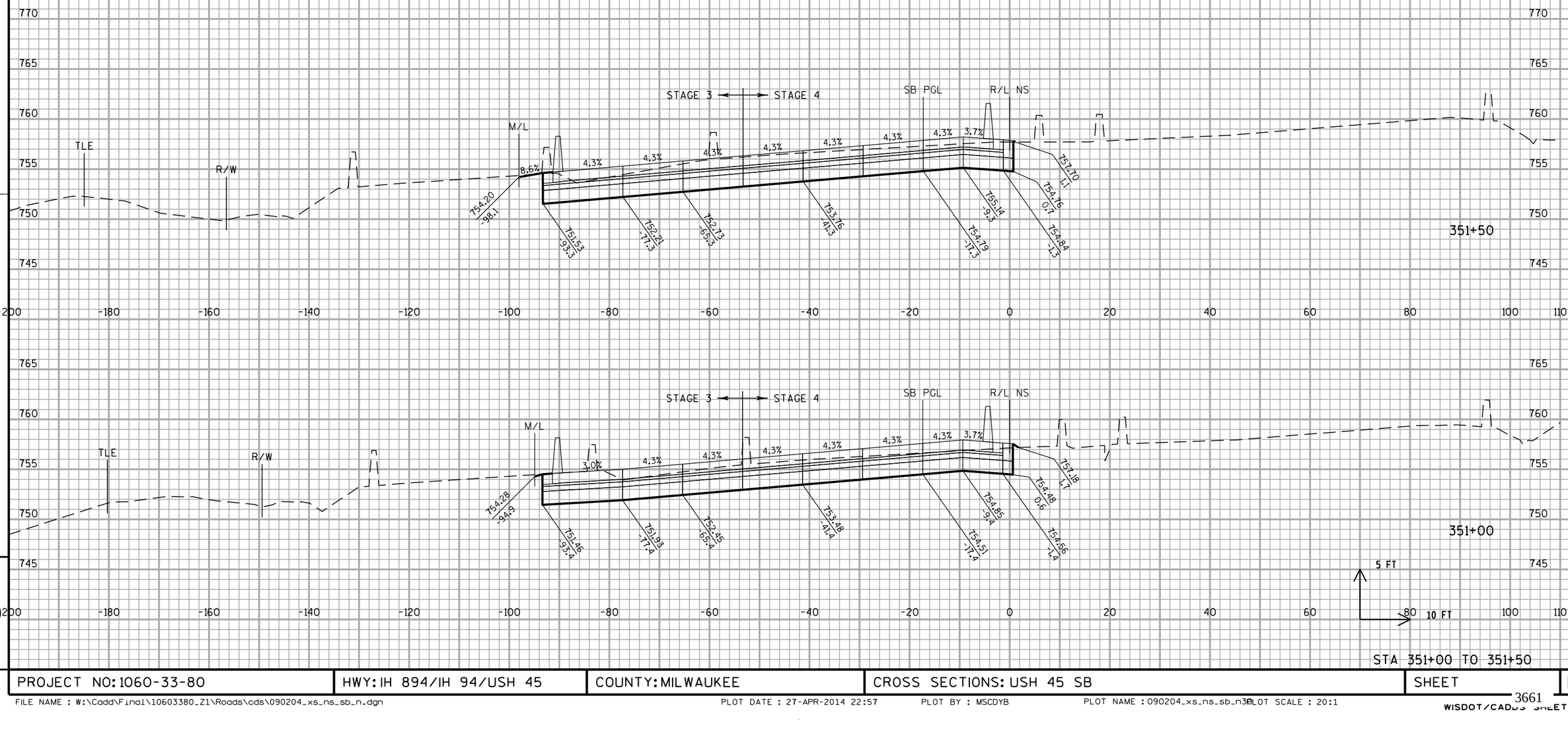
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n2 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET E

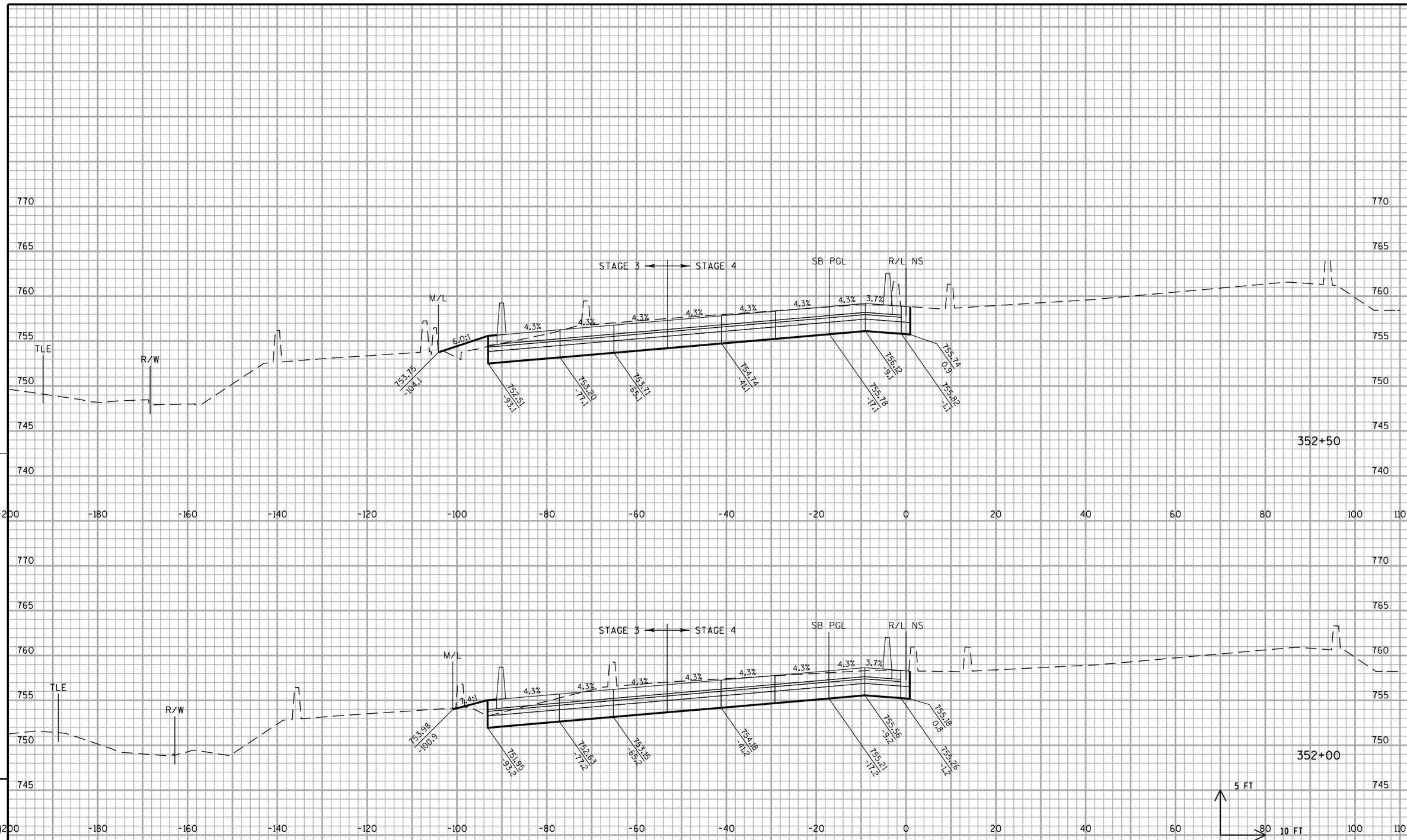
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_ns_sb_n.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090204_xs_ns_sb_n2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

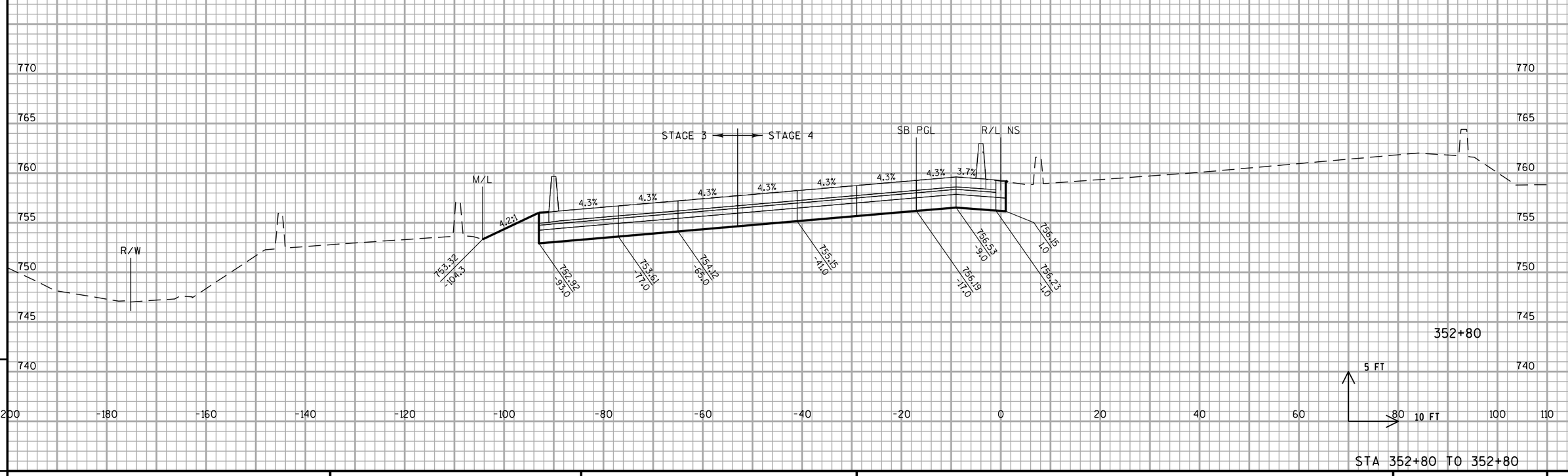


STA 351+00 TO 351+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E



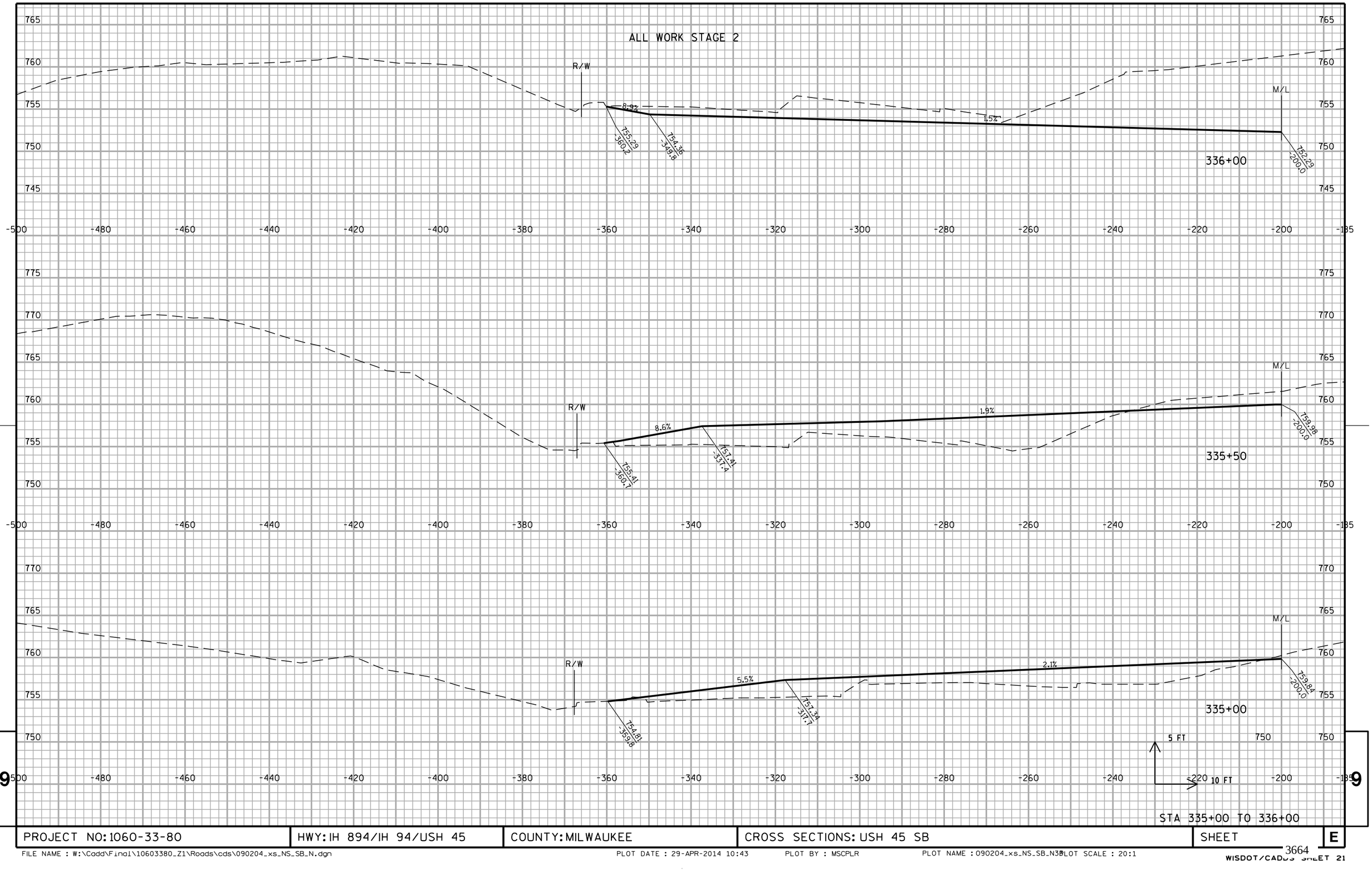
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET E



STA 352+80 TO 352+80

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

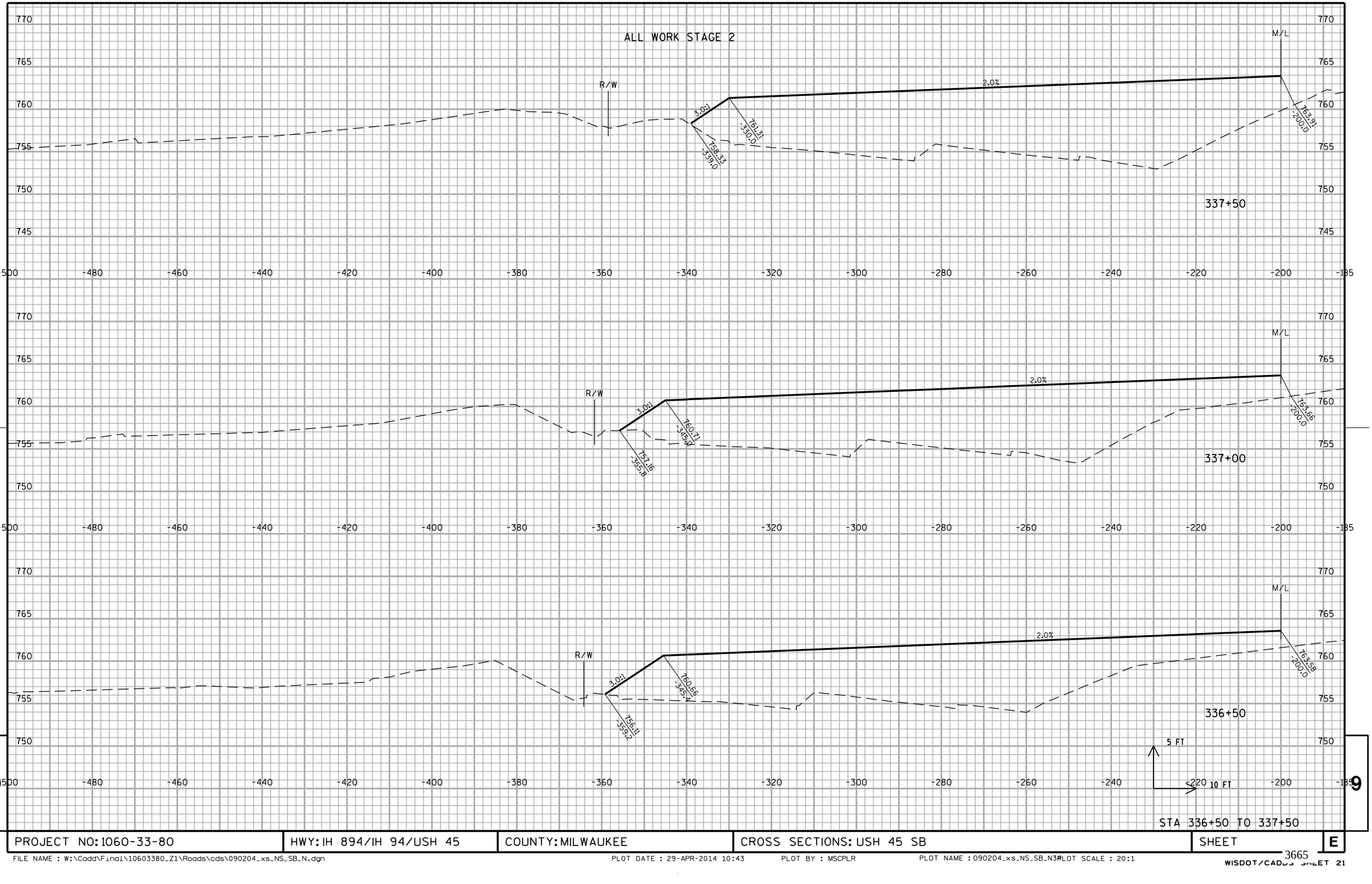
ALL WORK STAGE 2



STA 335+00 TO 336+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

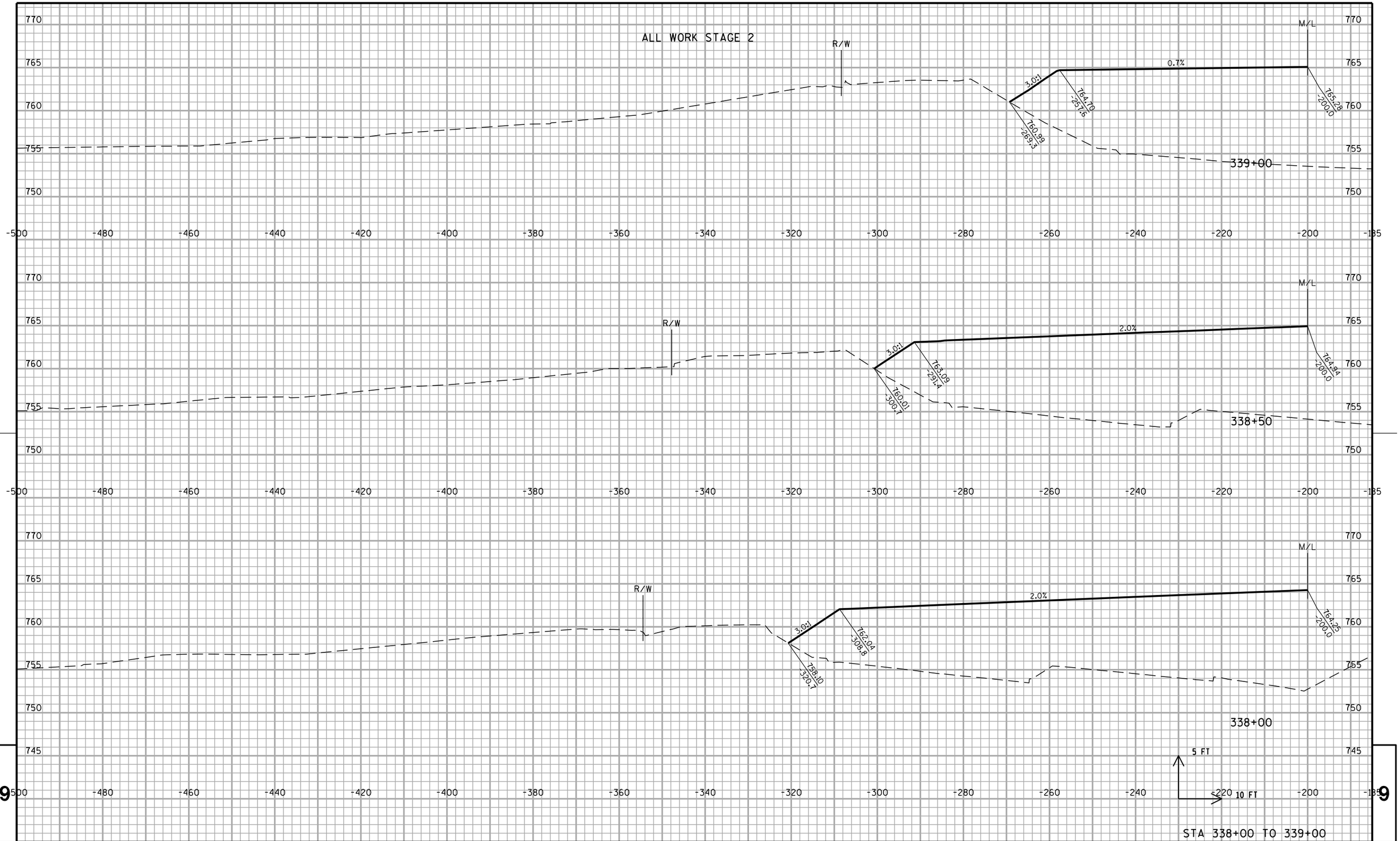
ALL WORK STAGE 2



STA 336+50 TO 337+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 2



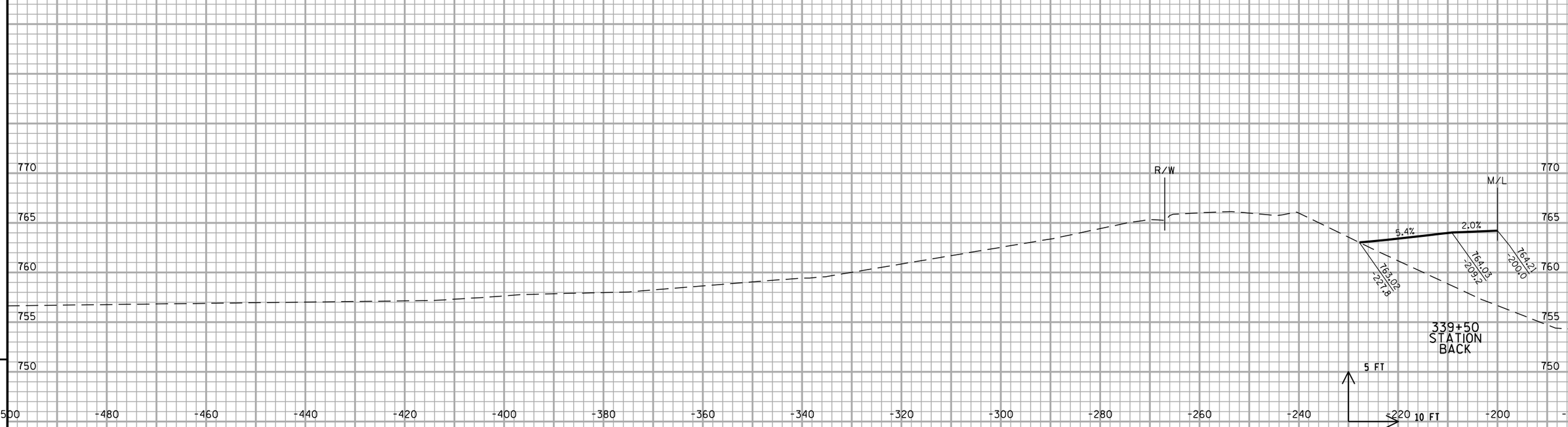
STA 338+00 TO 339+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_NS_SB_N.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090204_xs_NS_SB_N3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

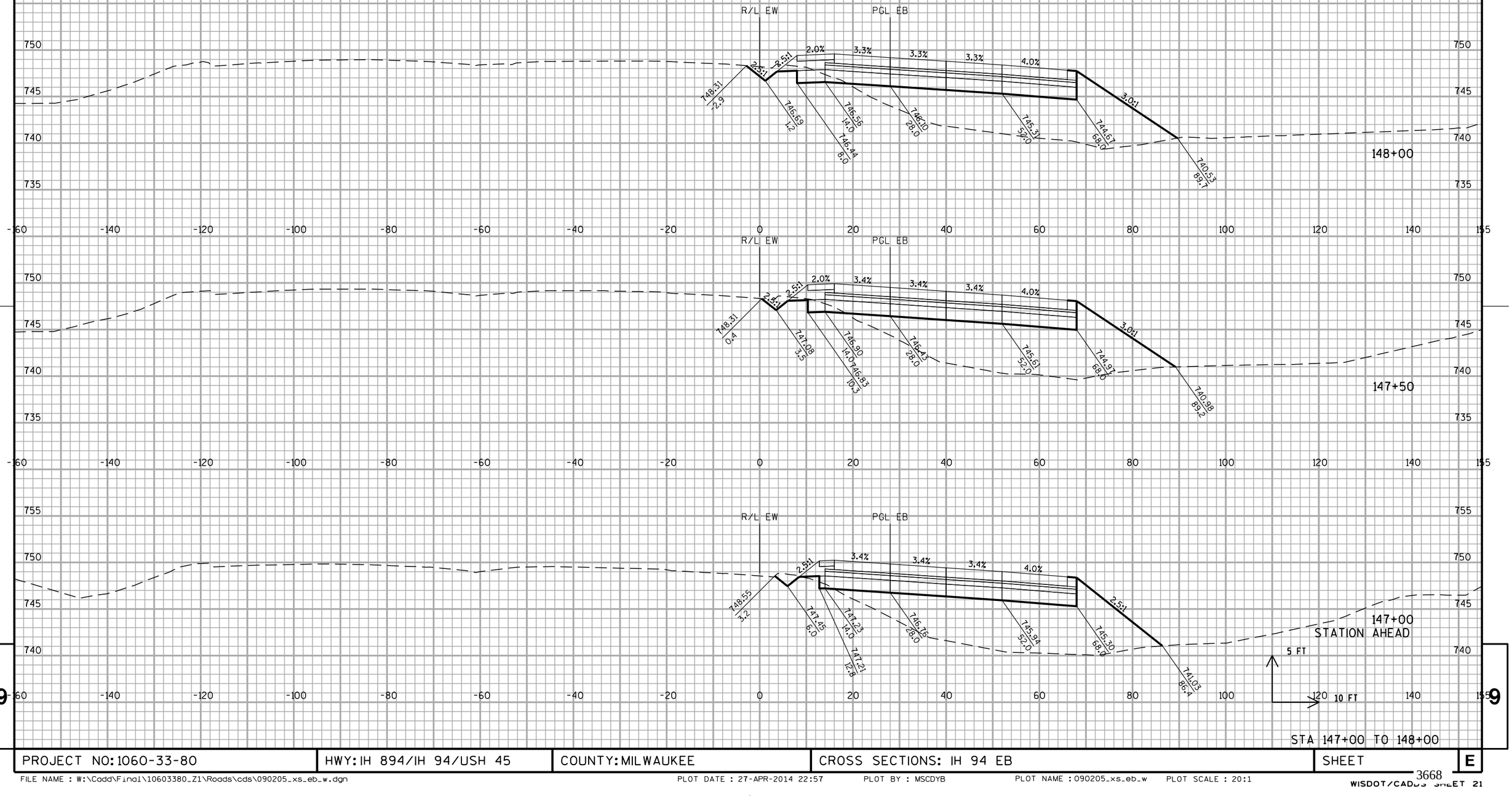


STA 339+50 TO 339+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090204_xs_NS_SB_N.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090204_xs_NS_SB_N3 PLOT SCALE : 20:1

ALL WORK STAGE 2

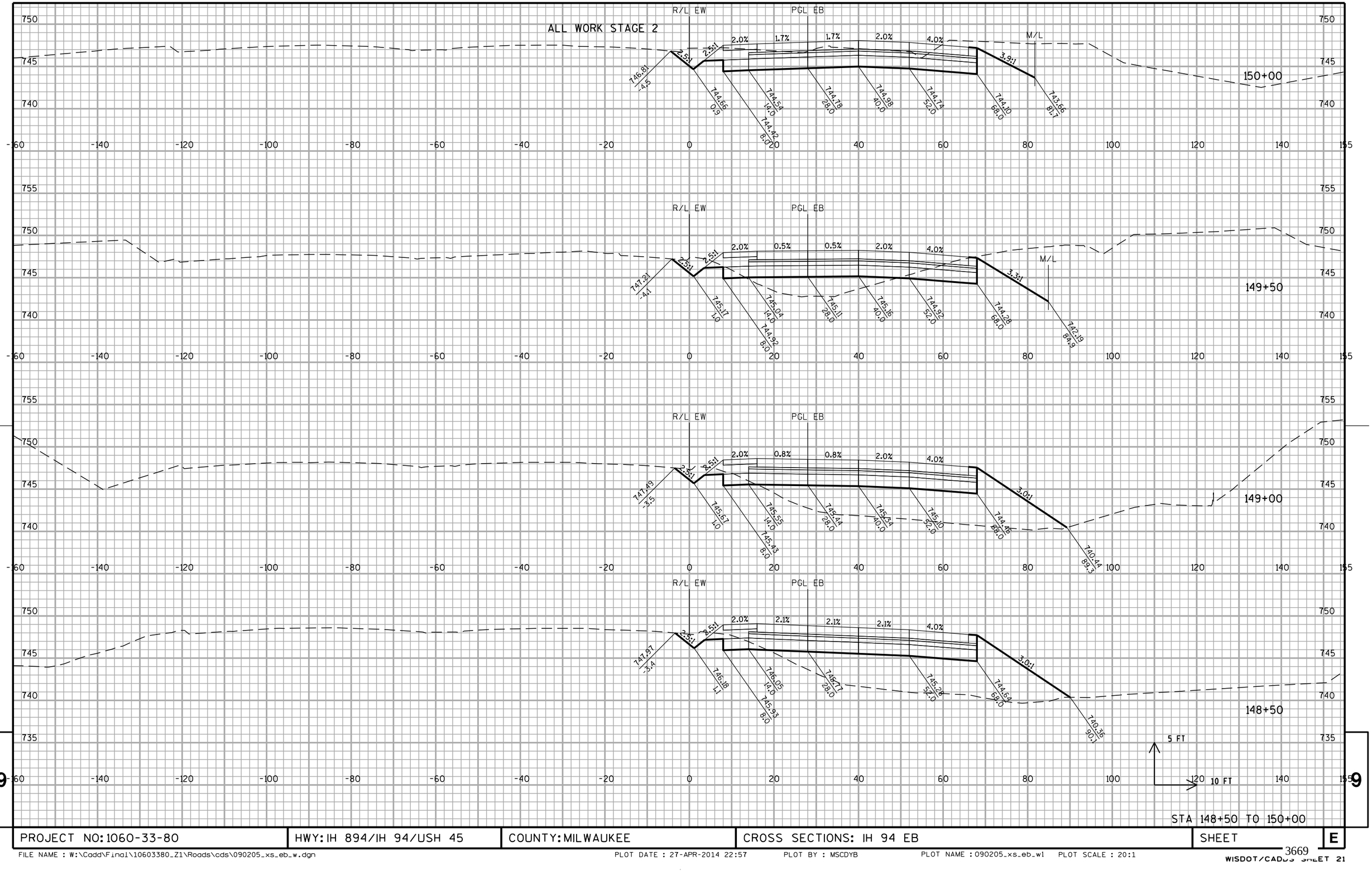


STA 147+00 TO 148+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_eb_w.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090205_xs_eb_w PLOT SCALE : 20:1

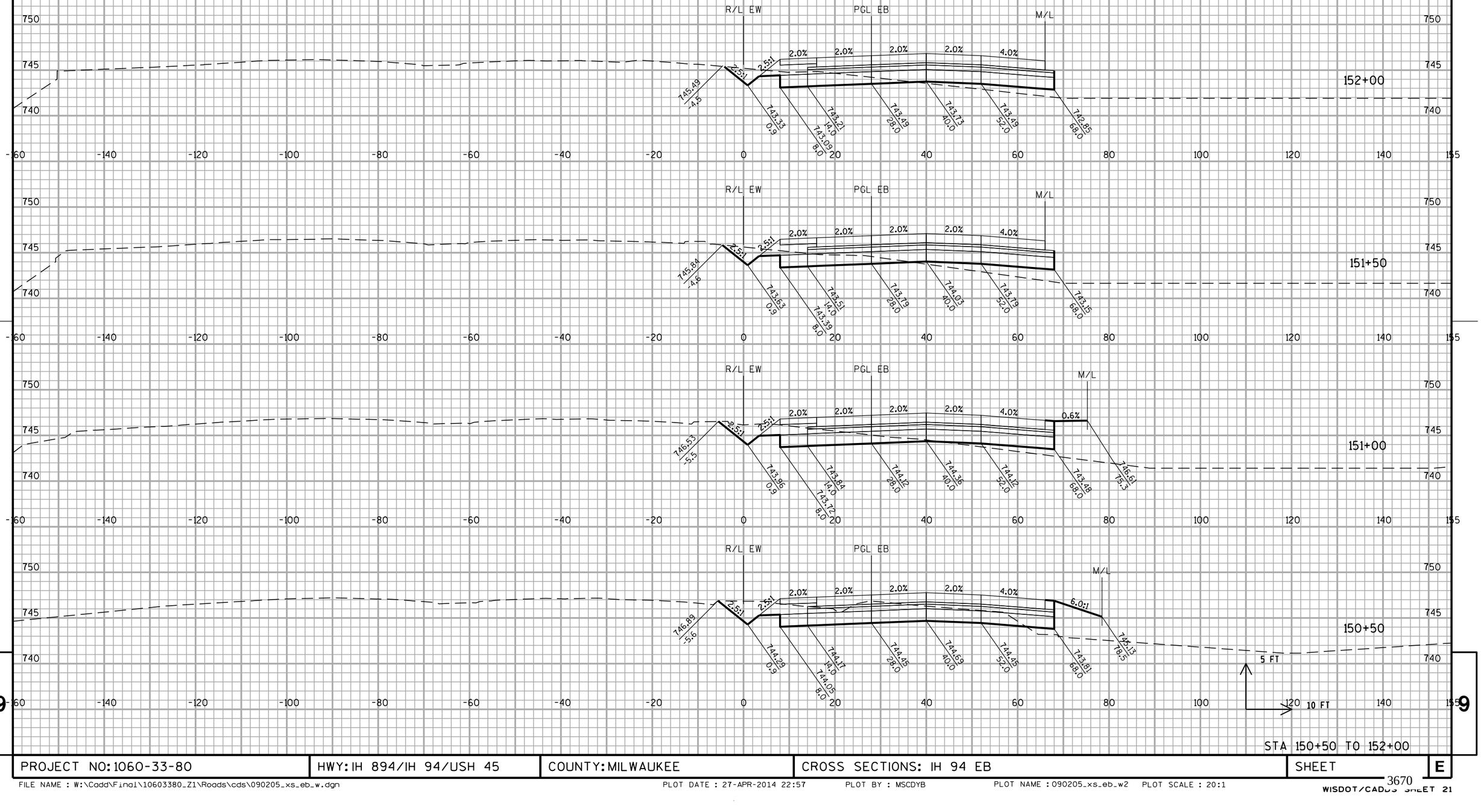
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_eb_w.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090205_xs_eb_w1 PLOT SCALE : 20:1

ALL WORK STAGE 2

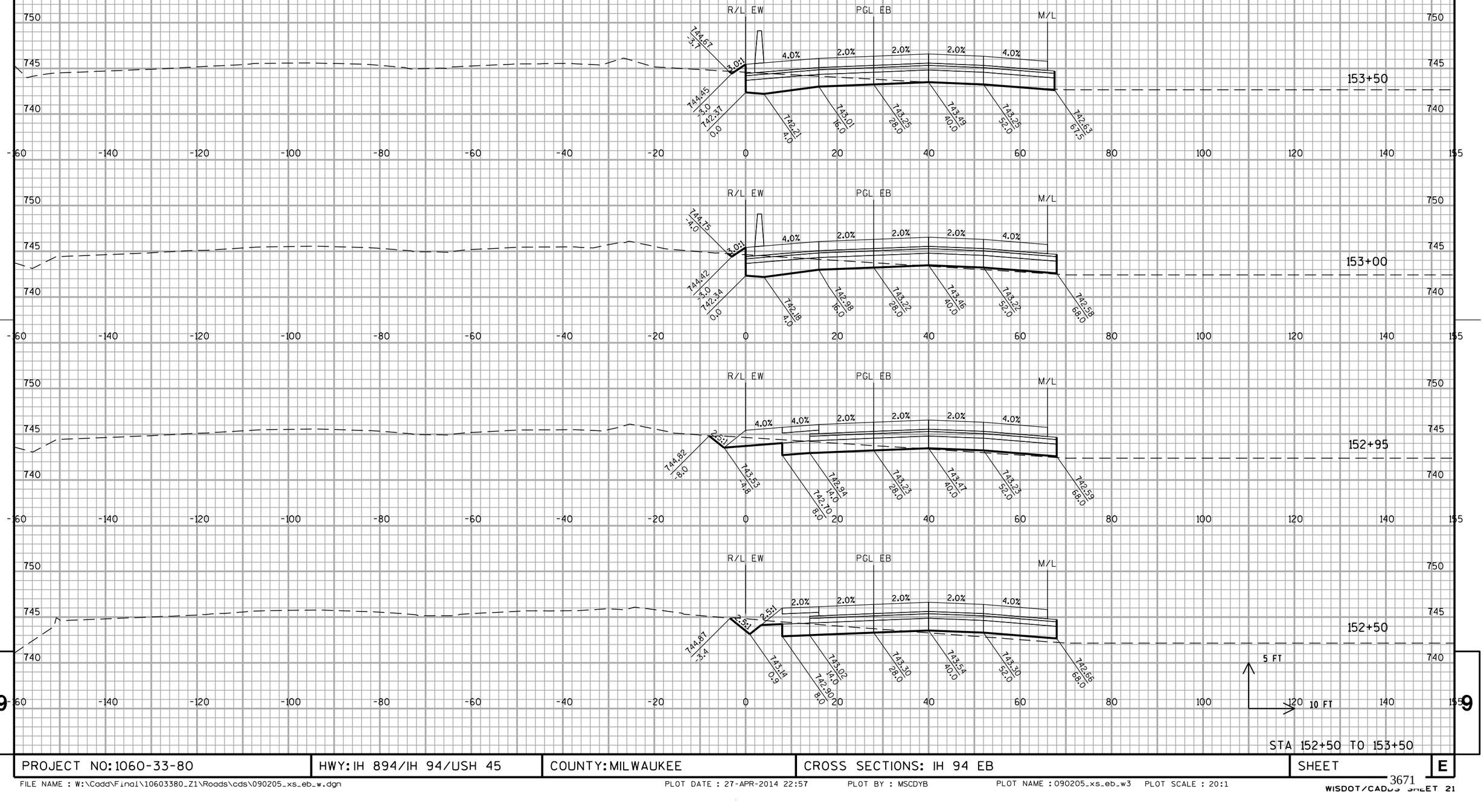


STA 150+50 TO 152+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_eb_w.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090205_xs_eb_w2 PLOT SCALE : 20:1

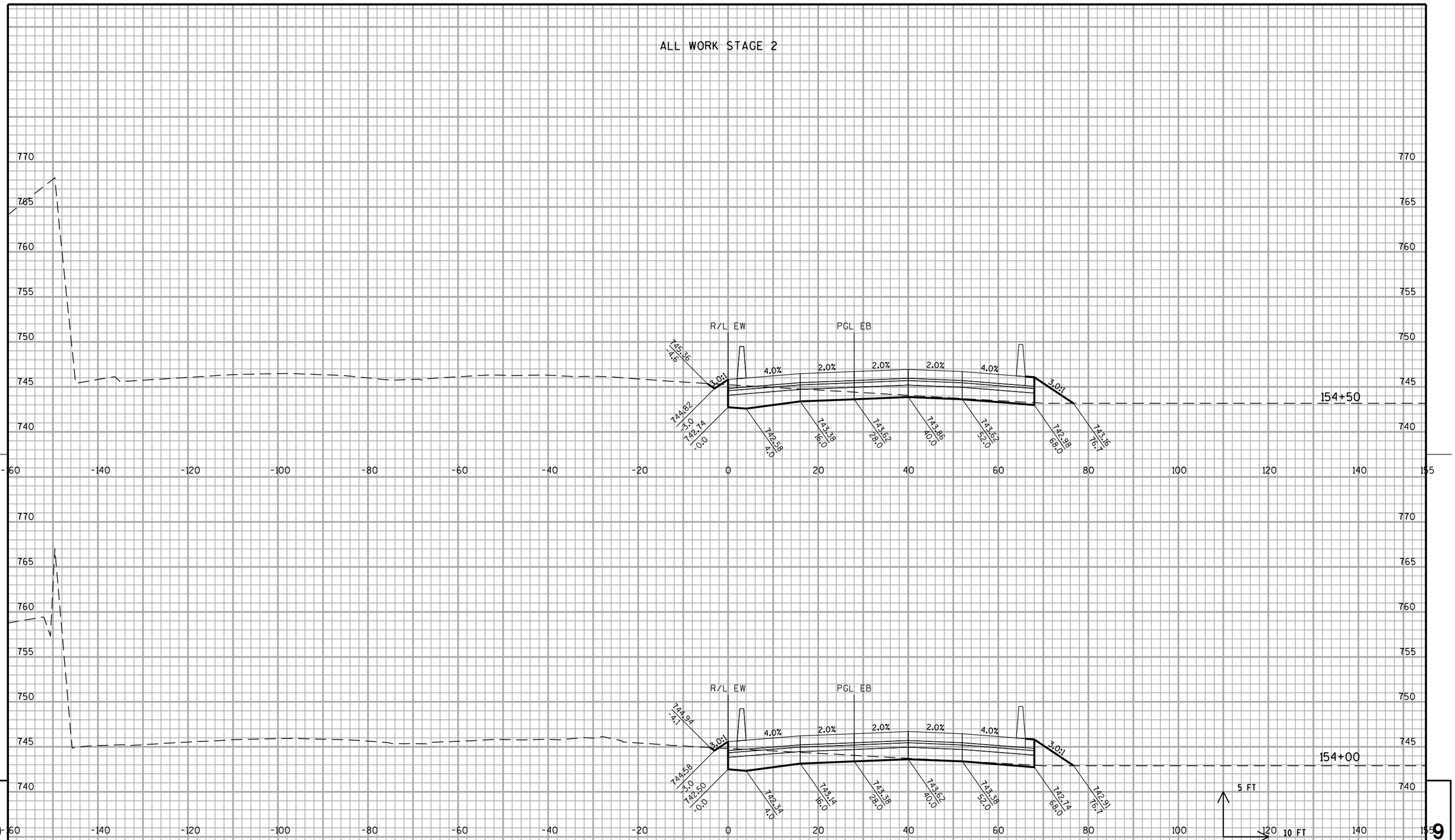
ALL WORK STAGE 2



STA 152+50 TO 153+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 2

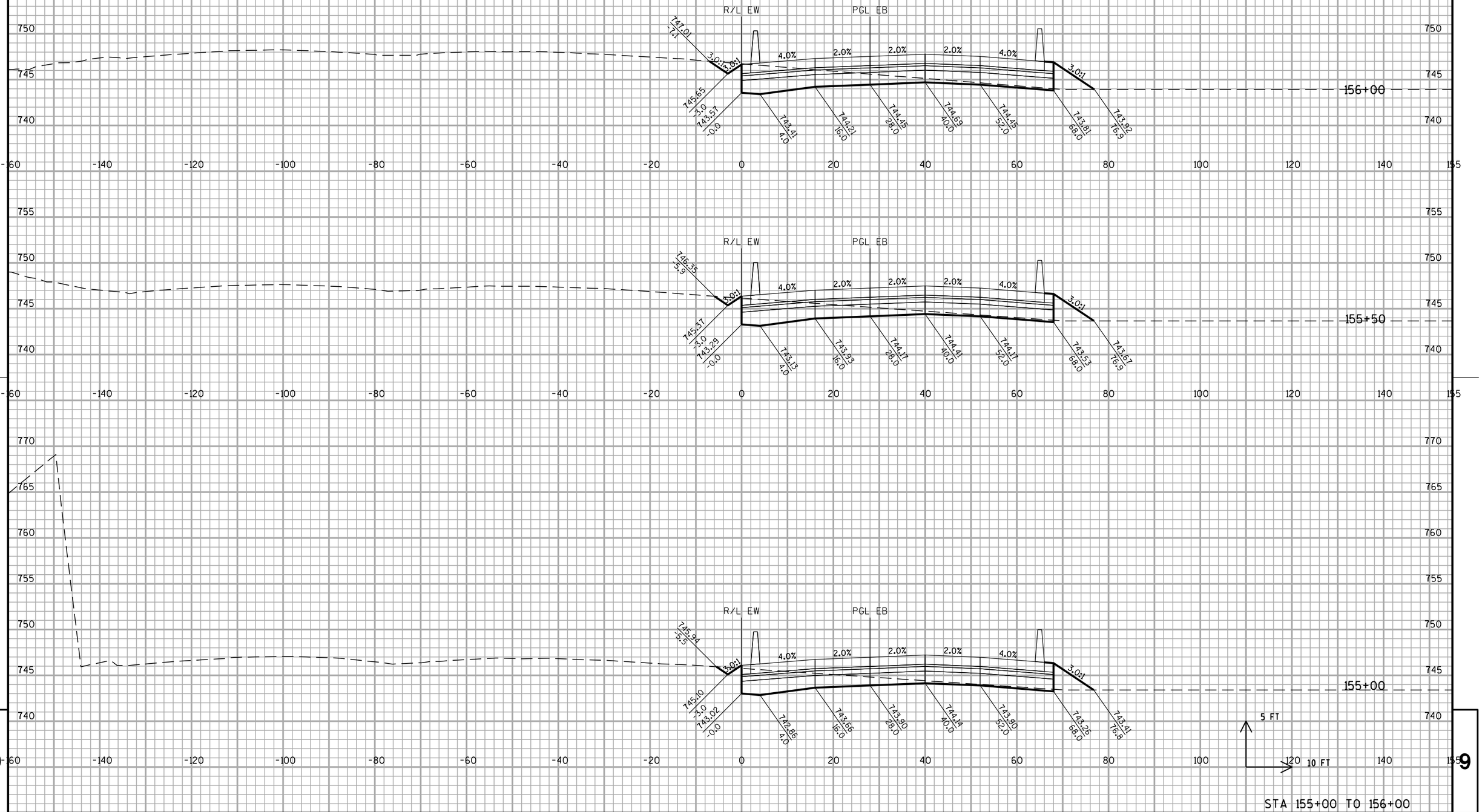


STA 154+00 TO 154+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_eb_w.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090205_xs_eb_w4 PLOT SCALE : 20:1

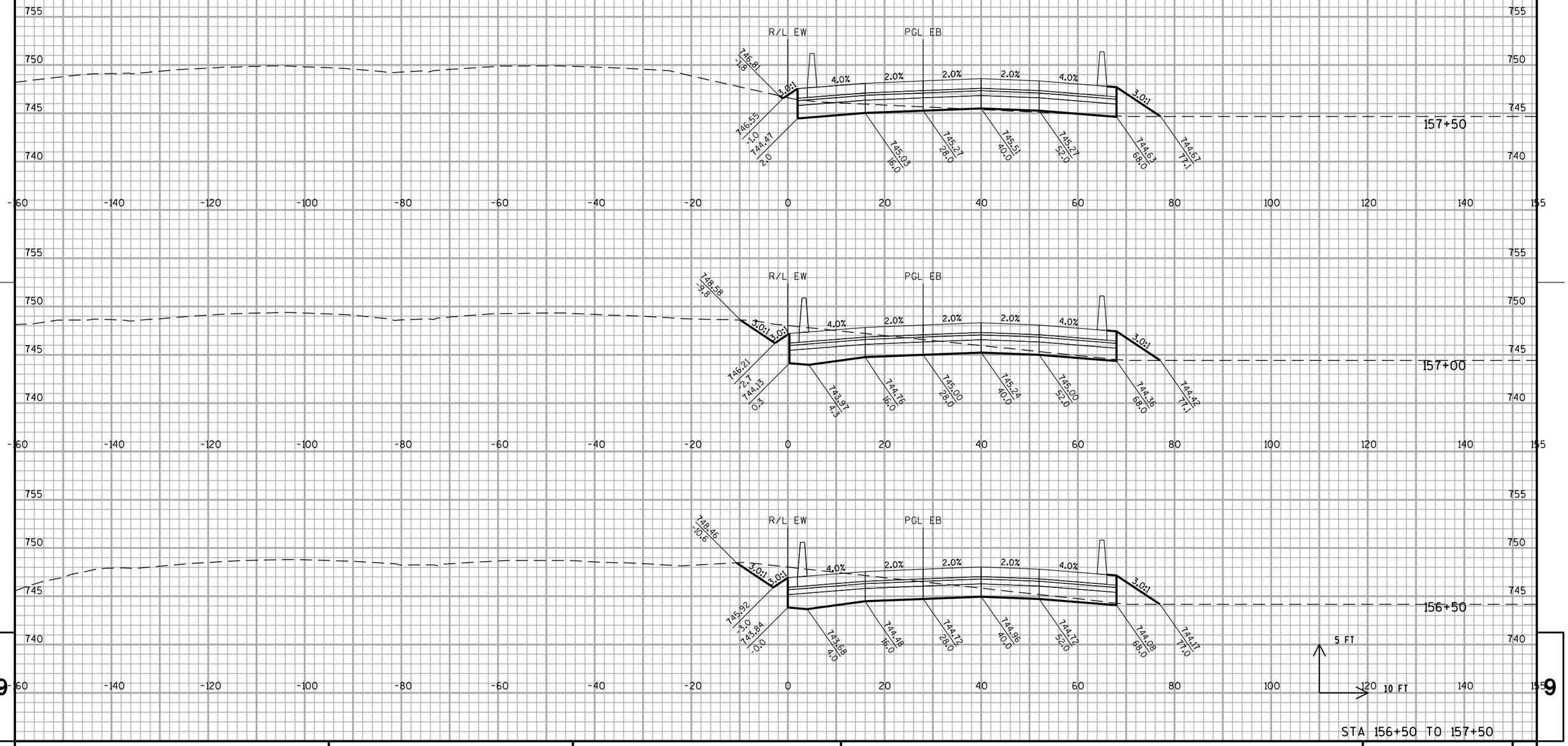
ALL WORK STAGE 2



STA 155+00 TO 156+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 2

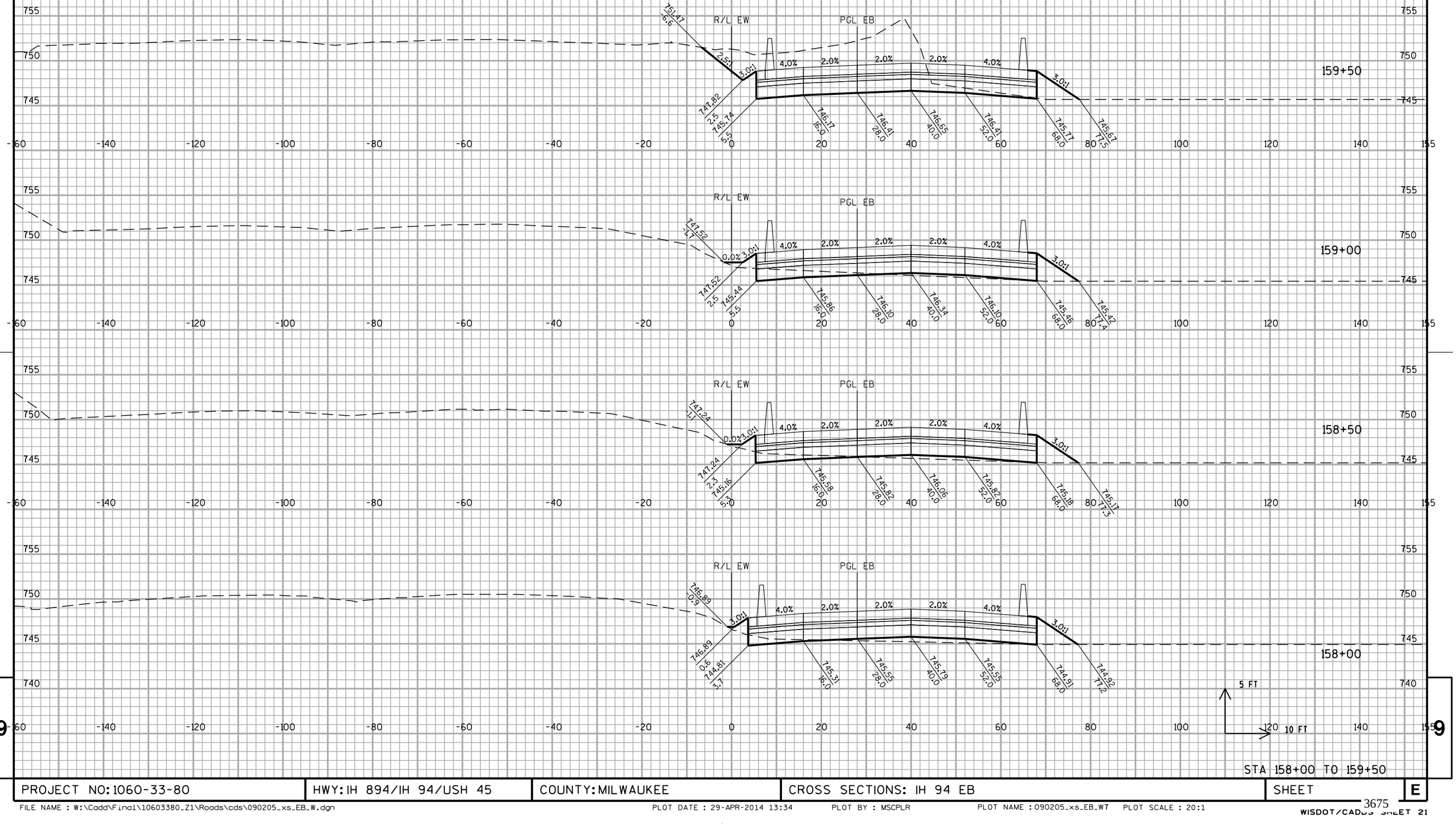


STA 156+50 TO 157+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_eb_w.dgn PLOT DATE : 27-APR-2014 22:57 PLOT BY : MSCDYB PLOT NAME : 090205_xs_eb_w6 PLOT SCALE : 20:1

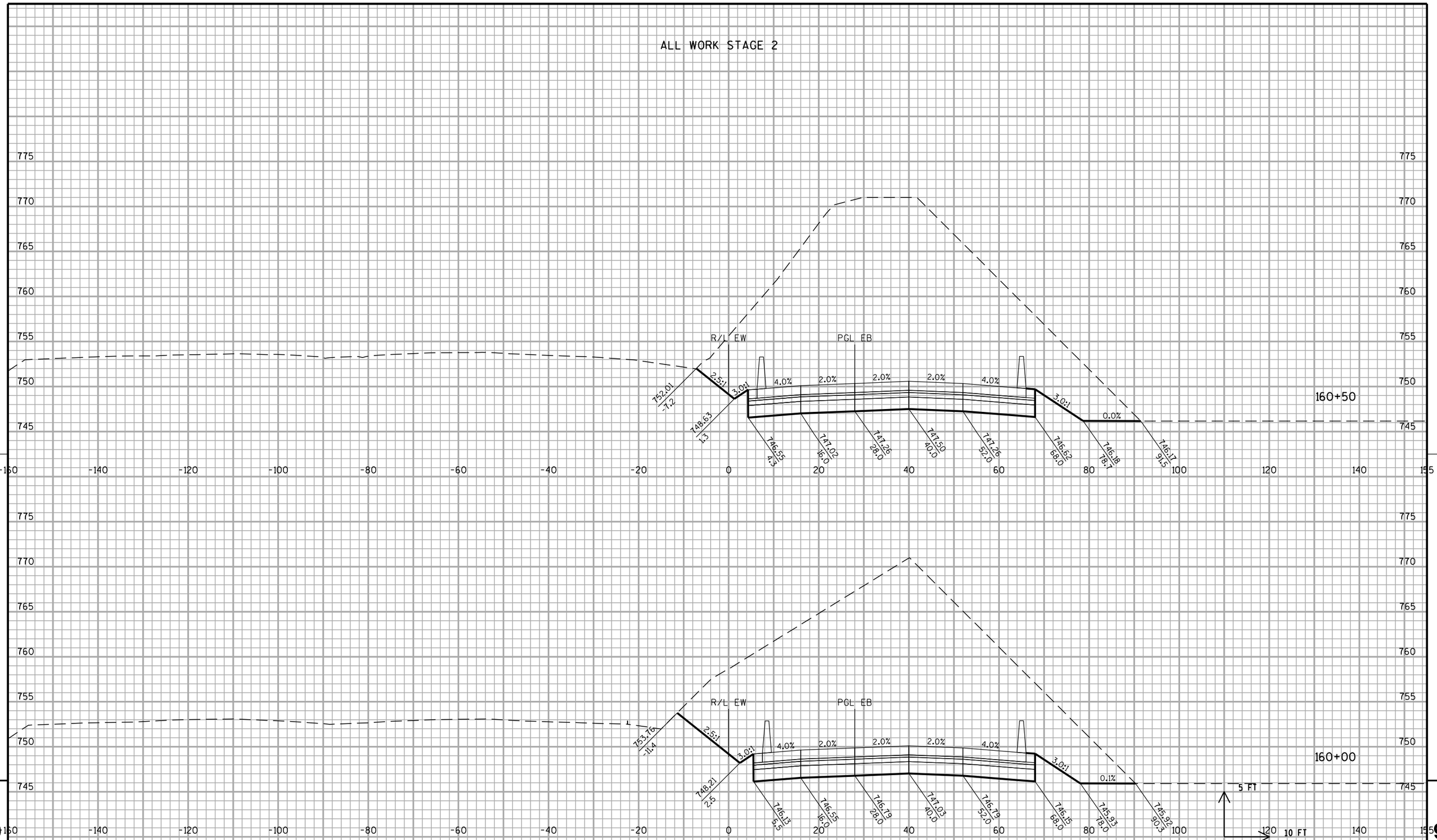
ALL WORK STAGE 2



STA 158+00 TO 159+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 2



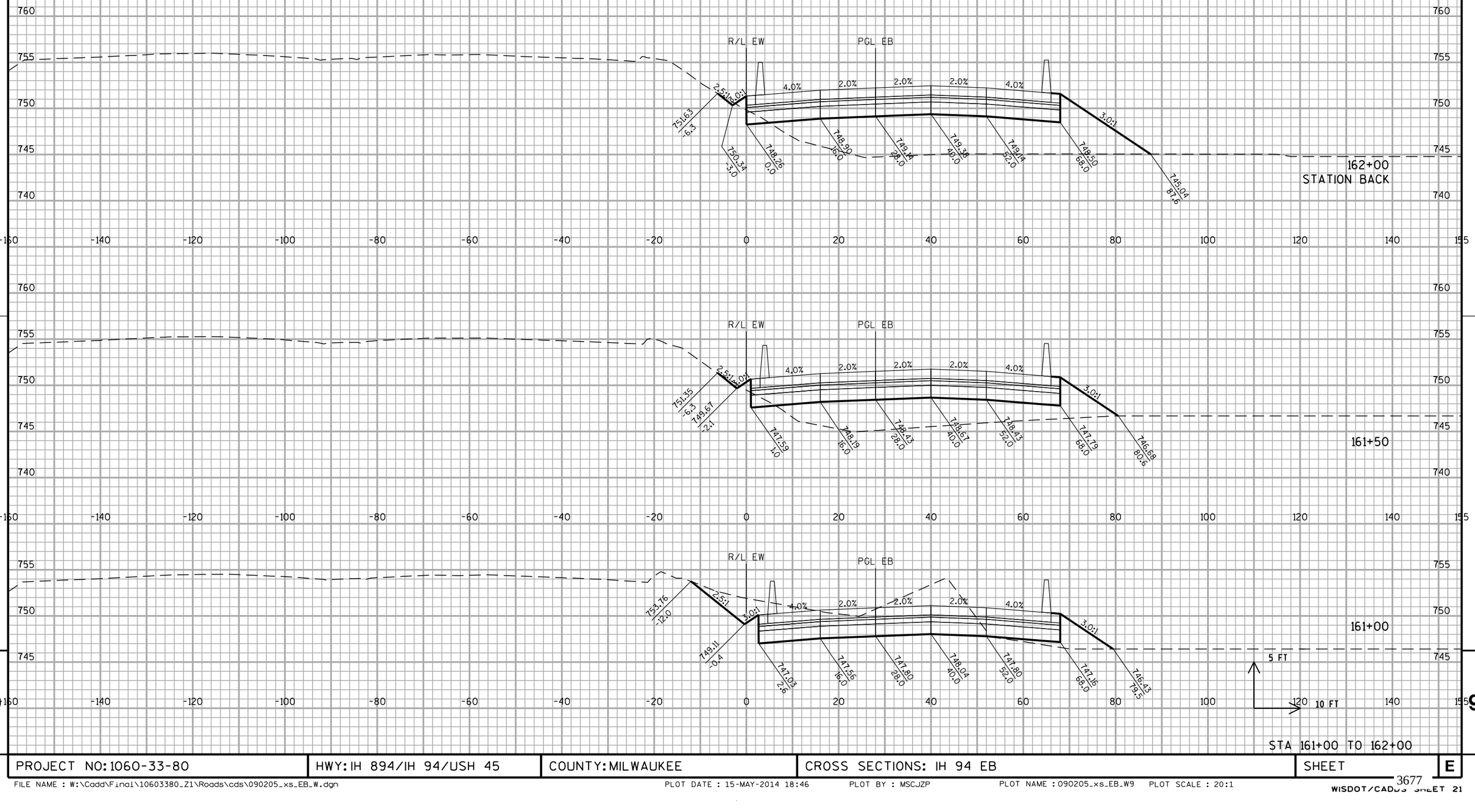
STA 160+00 TO 160+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_EB_W.dgn PLOT DATE : 29-APR-2014 13:34 PLOT BY : MSCPLR PLOT NAME : 090205_xs_EB_W8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



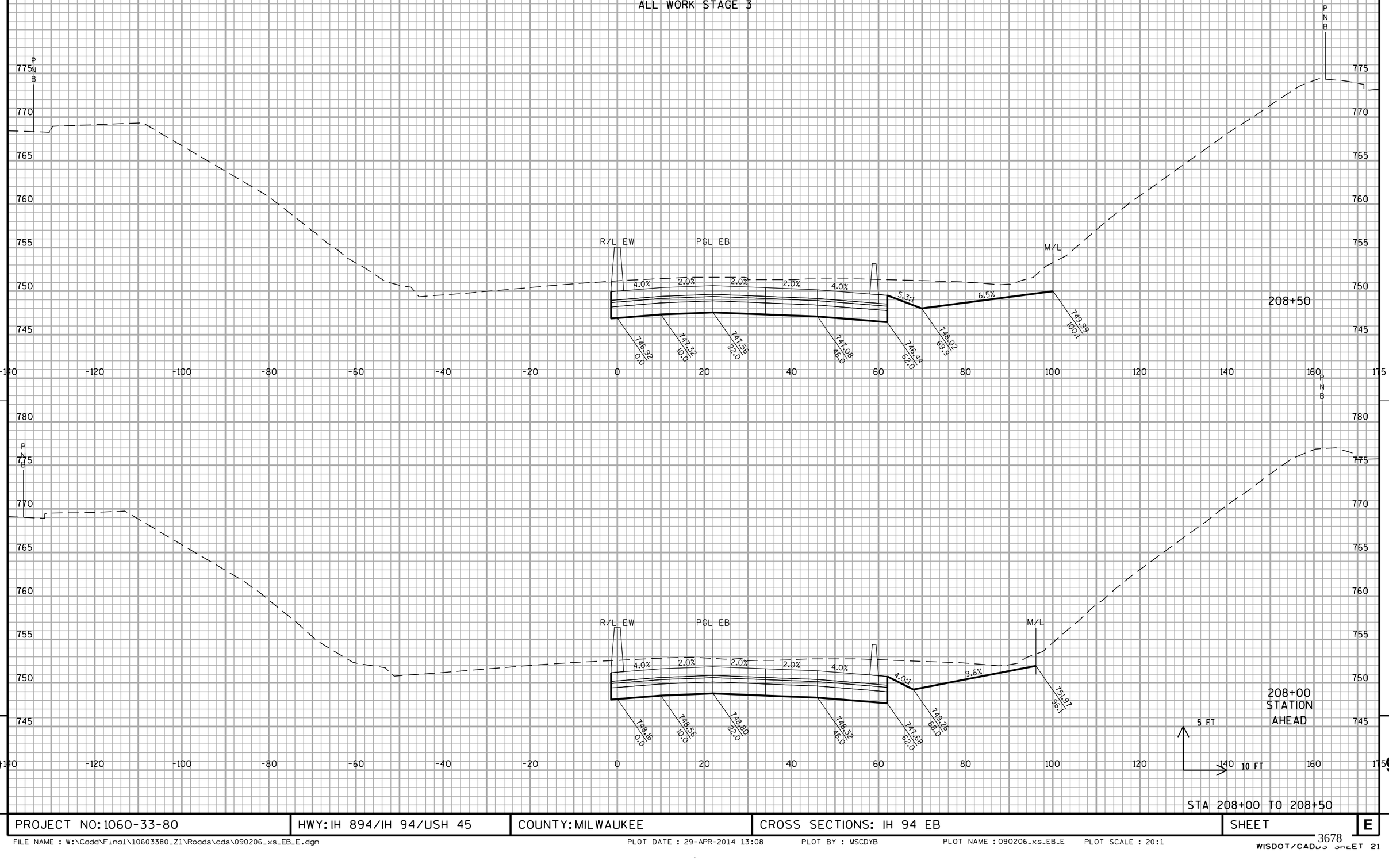
STA 161+00 TO 162+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090205_xs_EB_W.dgn PLOT DATE : 15-MAY-2014 18:46 PLOT BY : MSCJZP PLOT NAME : 090205_xs_EB_W9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

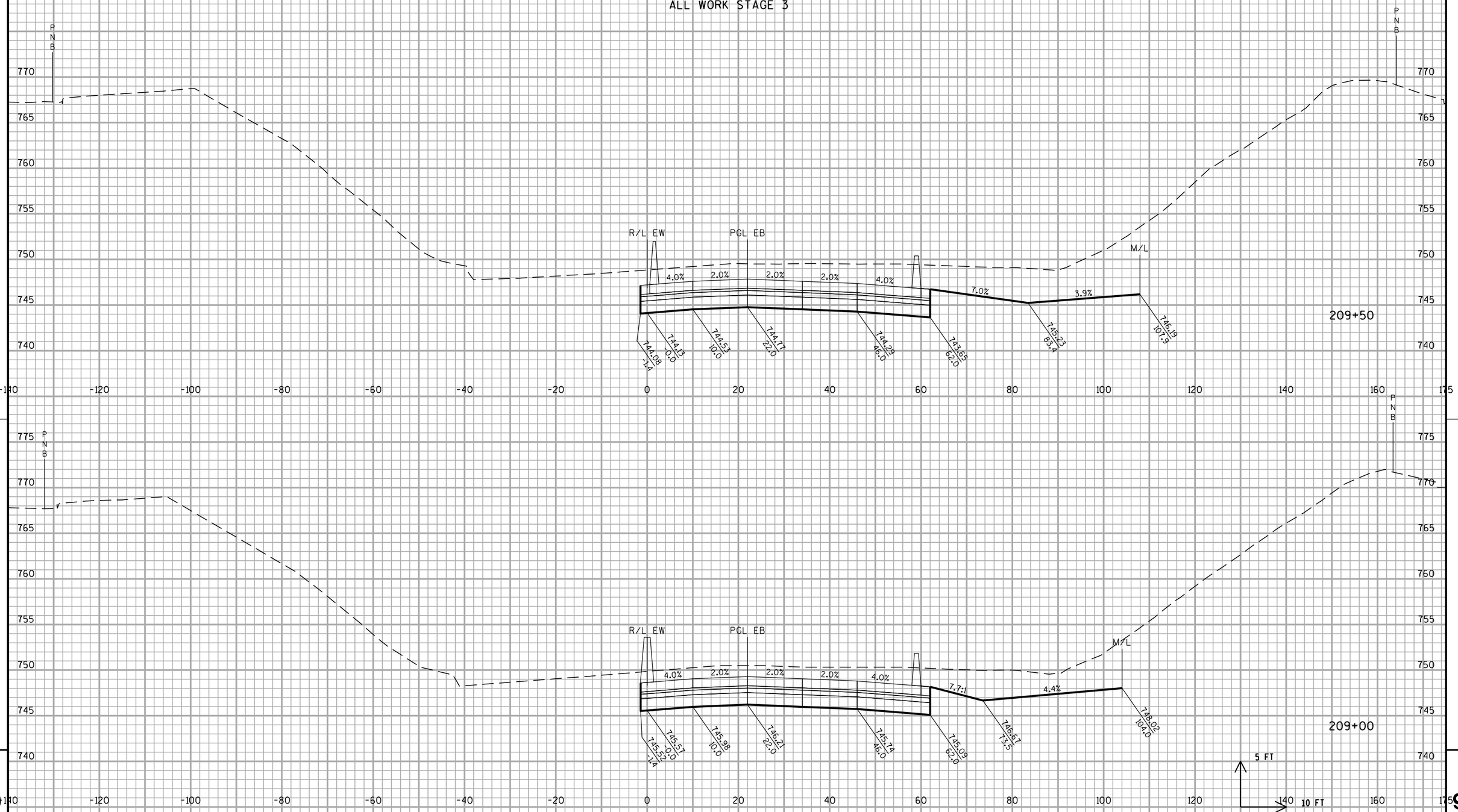


STA 208+00 TO 208+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:08 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E PLOT SCALE : 20:1

ALL WORK STAGE 3

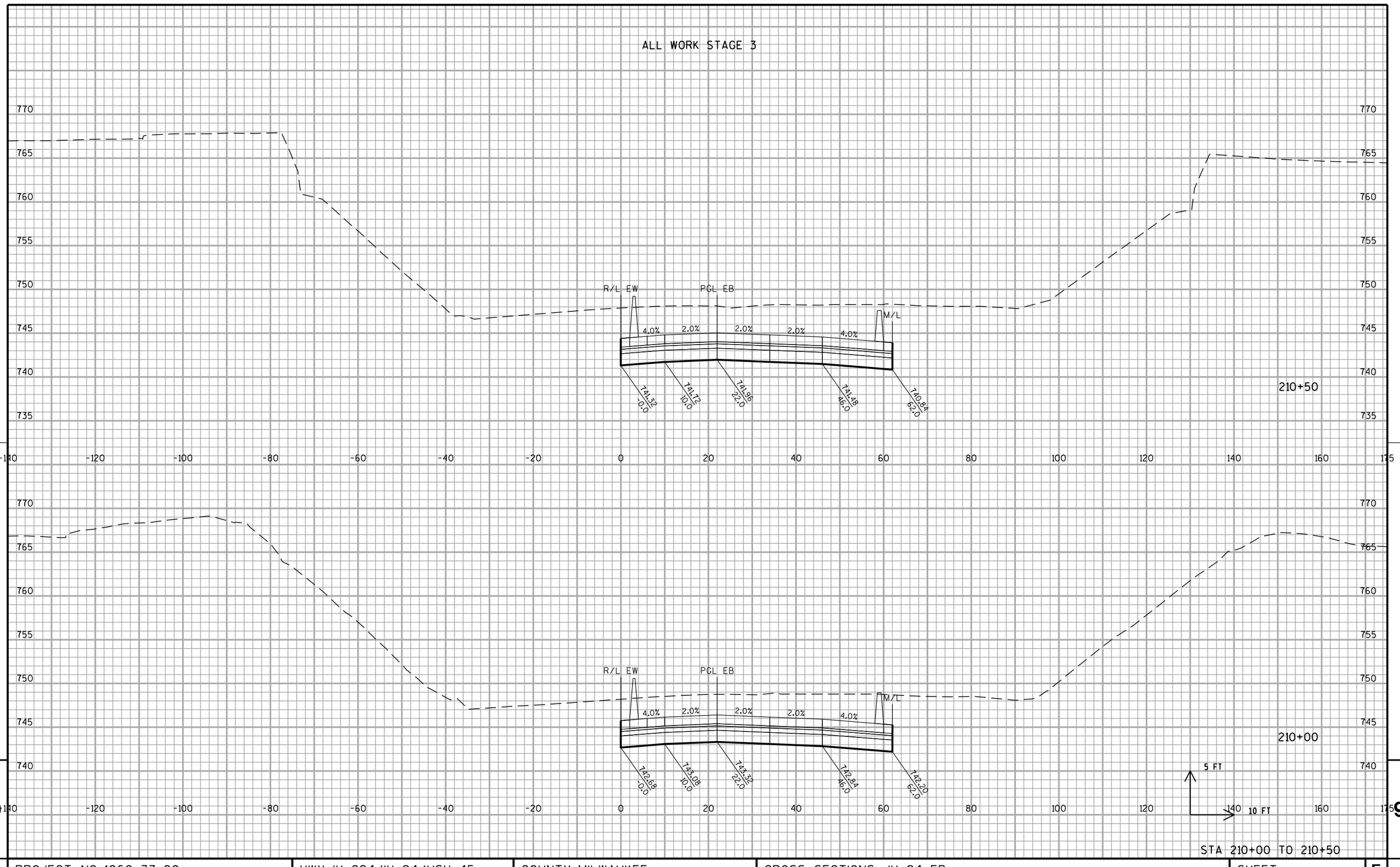


STA 209+00 TO 209+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:08 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E1 PLOT SCALE : 20:1

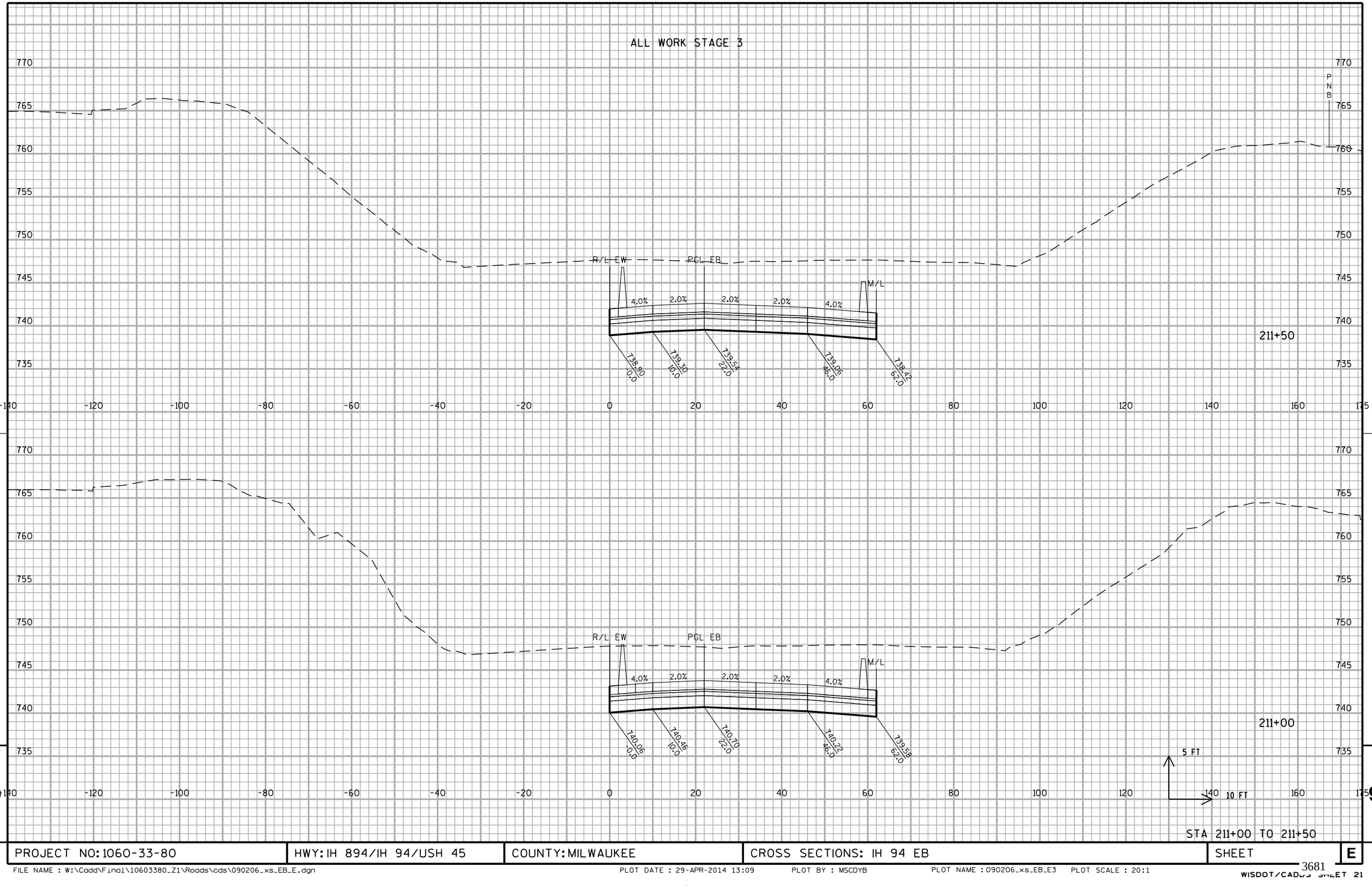
ALL WORK STAGE 3



STA 210+00 TO 210+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

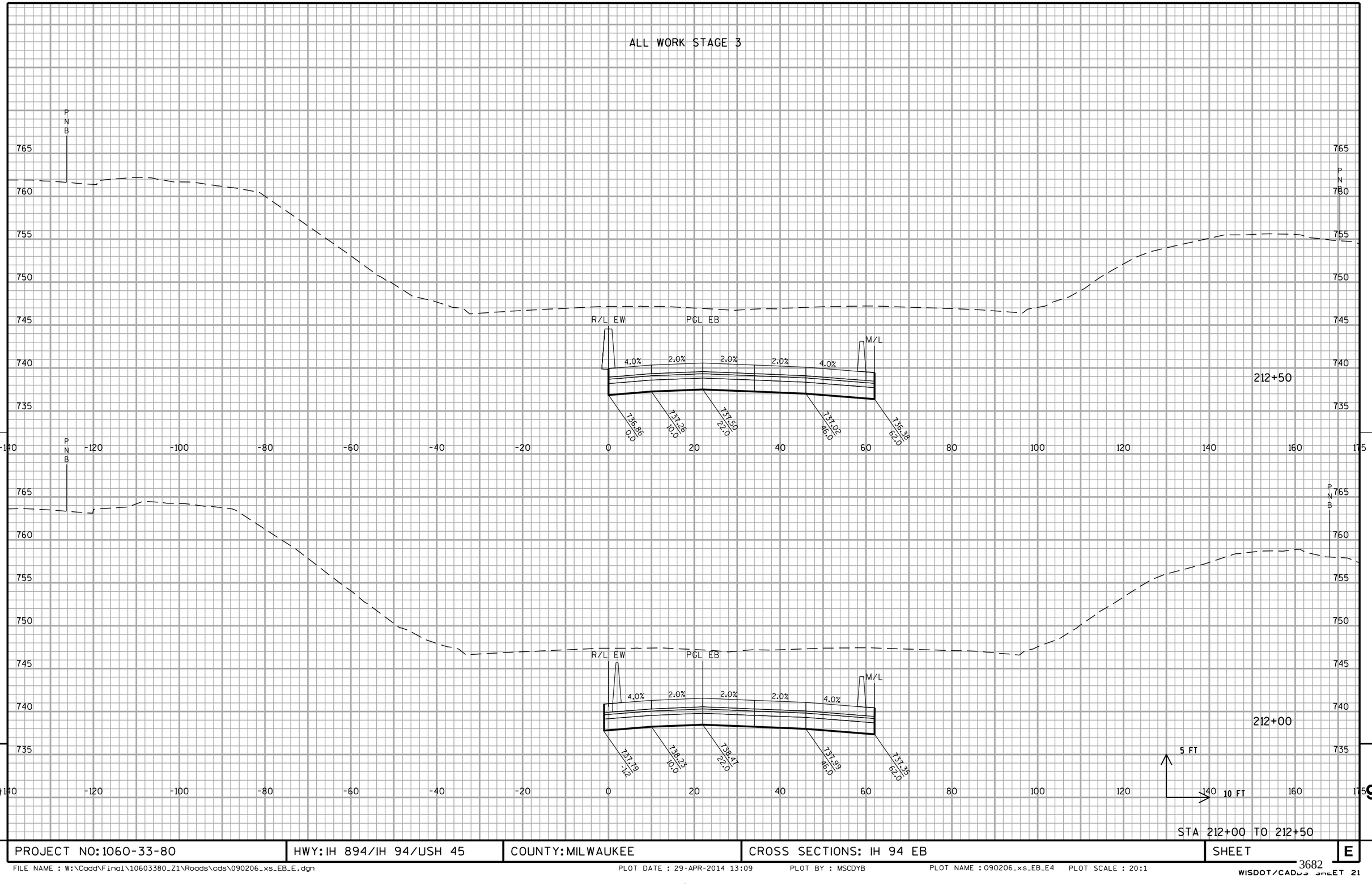
ALL WORK STAGE 3



STA 211+00 TO 211+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 3

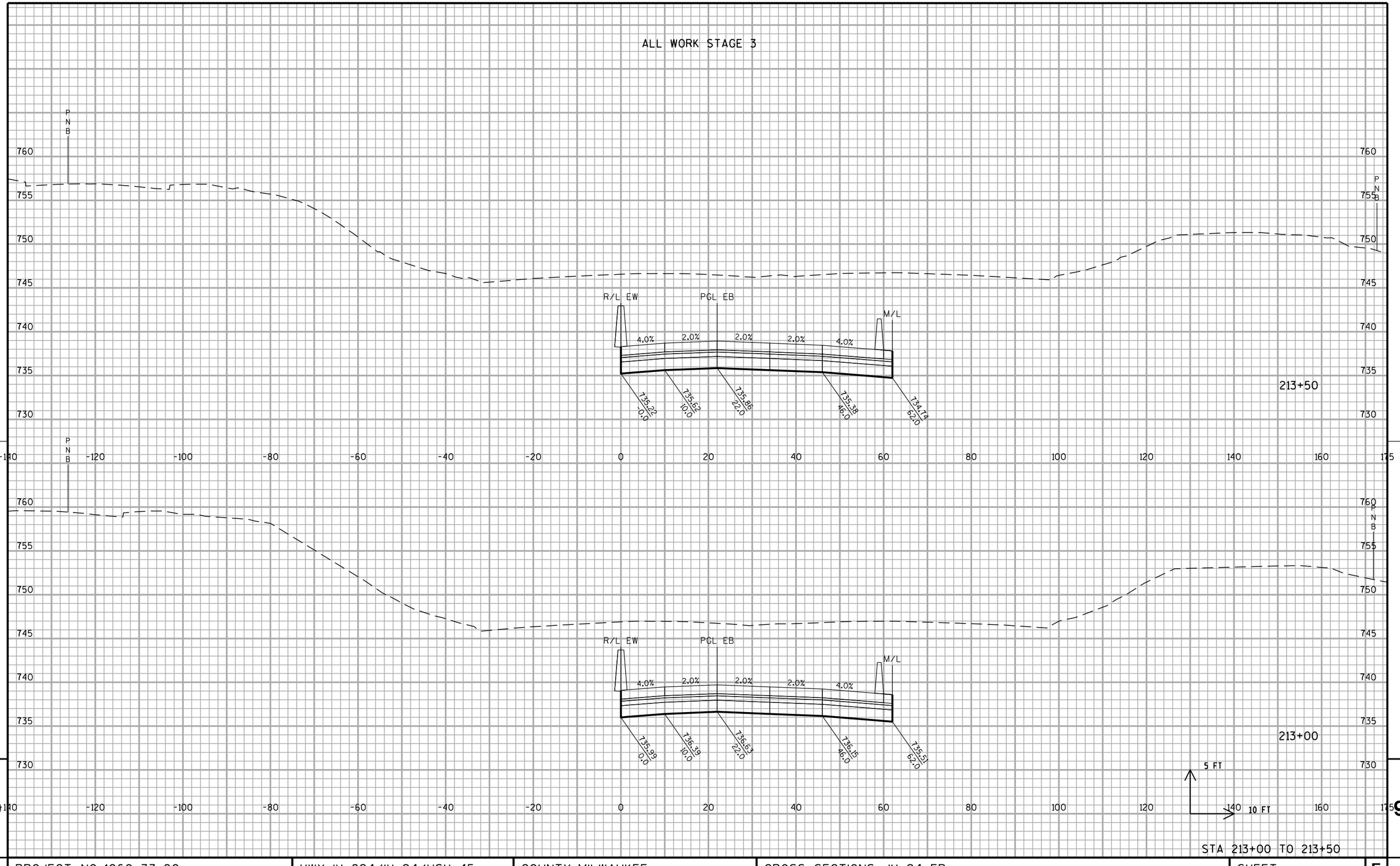


STA 212+00 TO 212+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E4 PLOT SCALE : 20:1

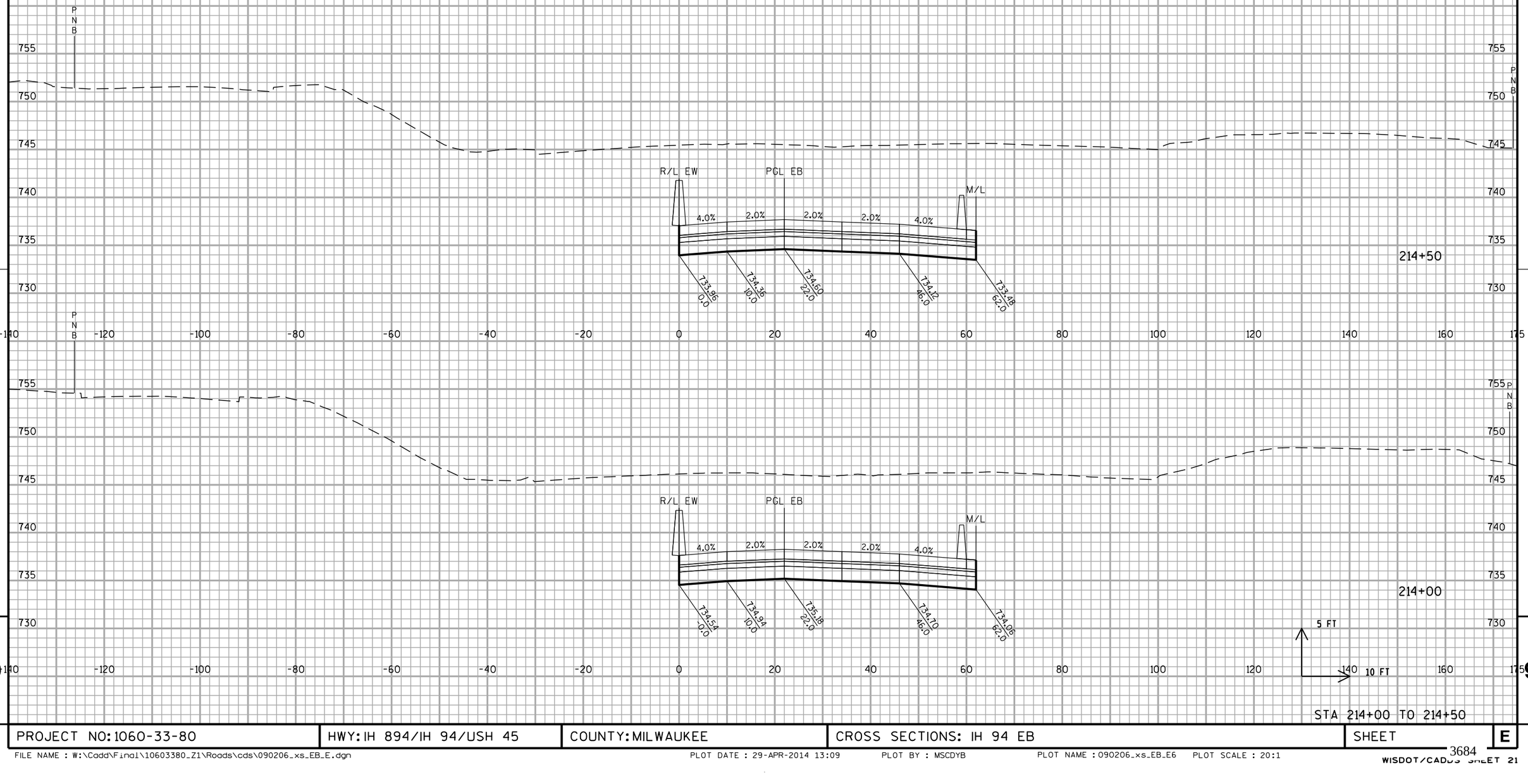
ALL WORK STAGE 3



STA 213+00 TO 213+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 3

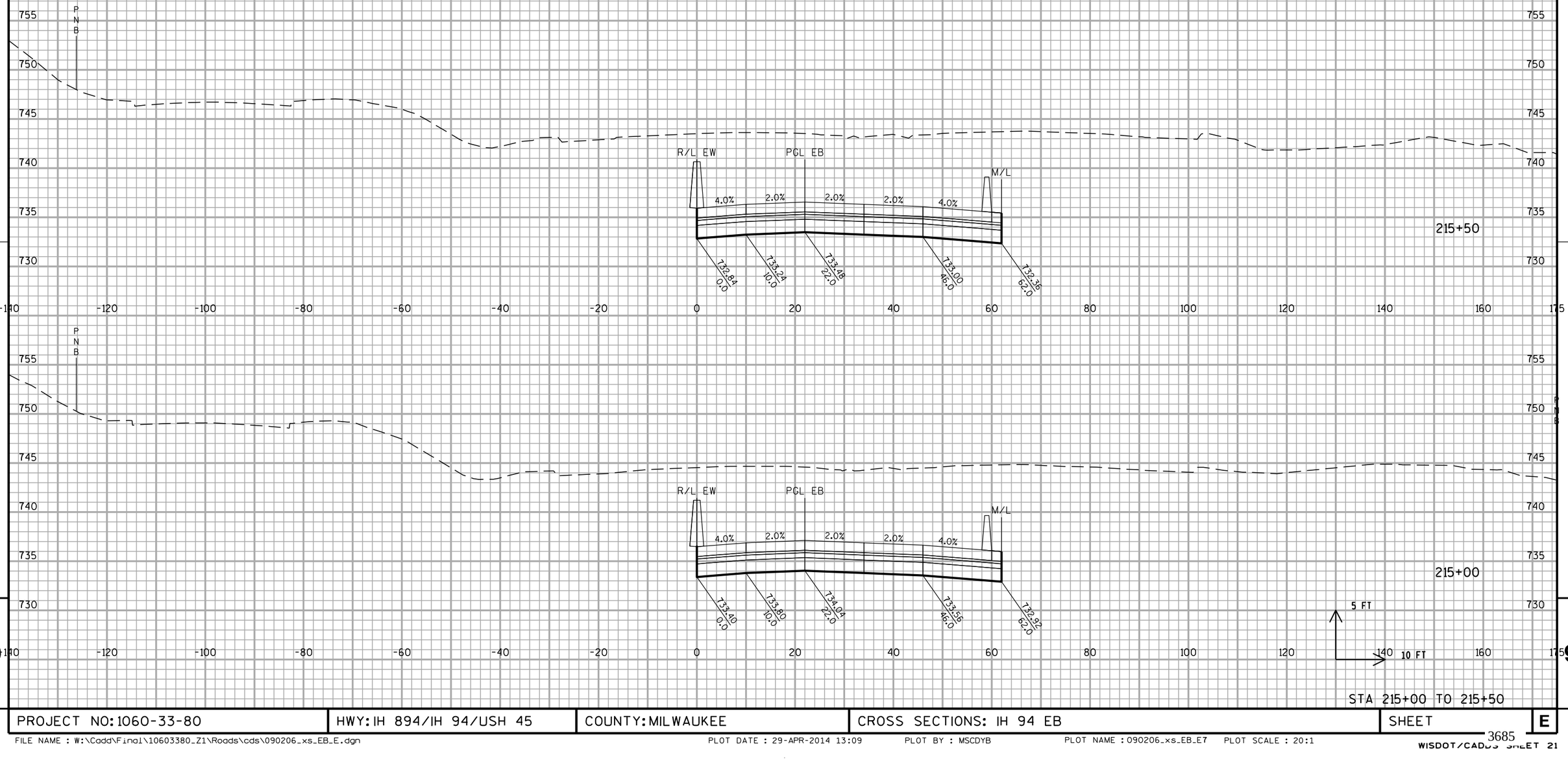


STA 214+00 TO 214+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E6 PLOT SCALE : 20:1

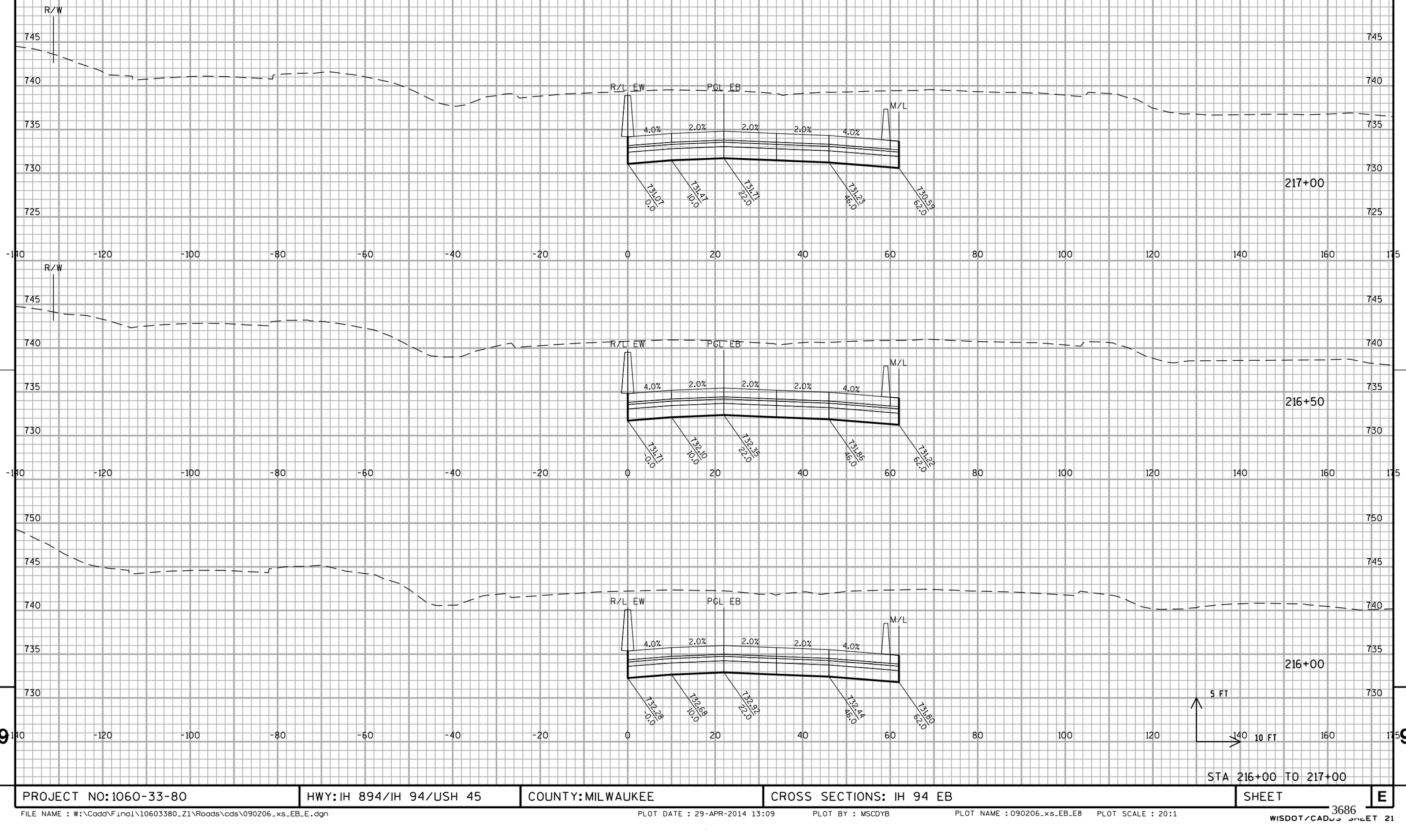
ALL WORK STAGE 3



STA 215+00 TO 215+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 3



STA 216+00 TO 217+00

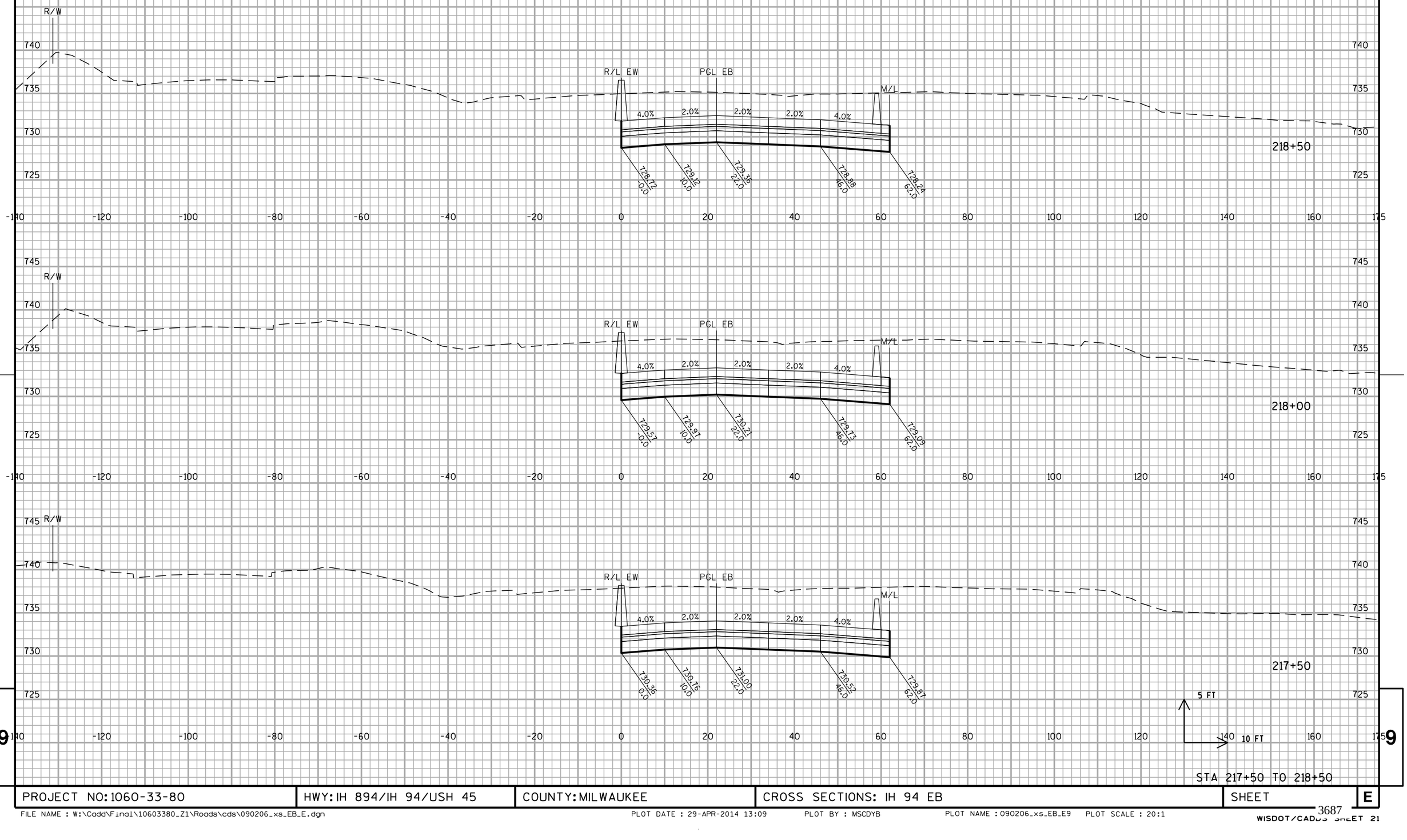
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

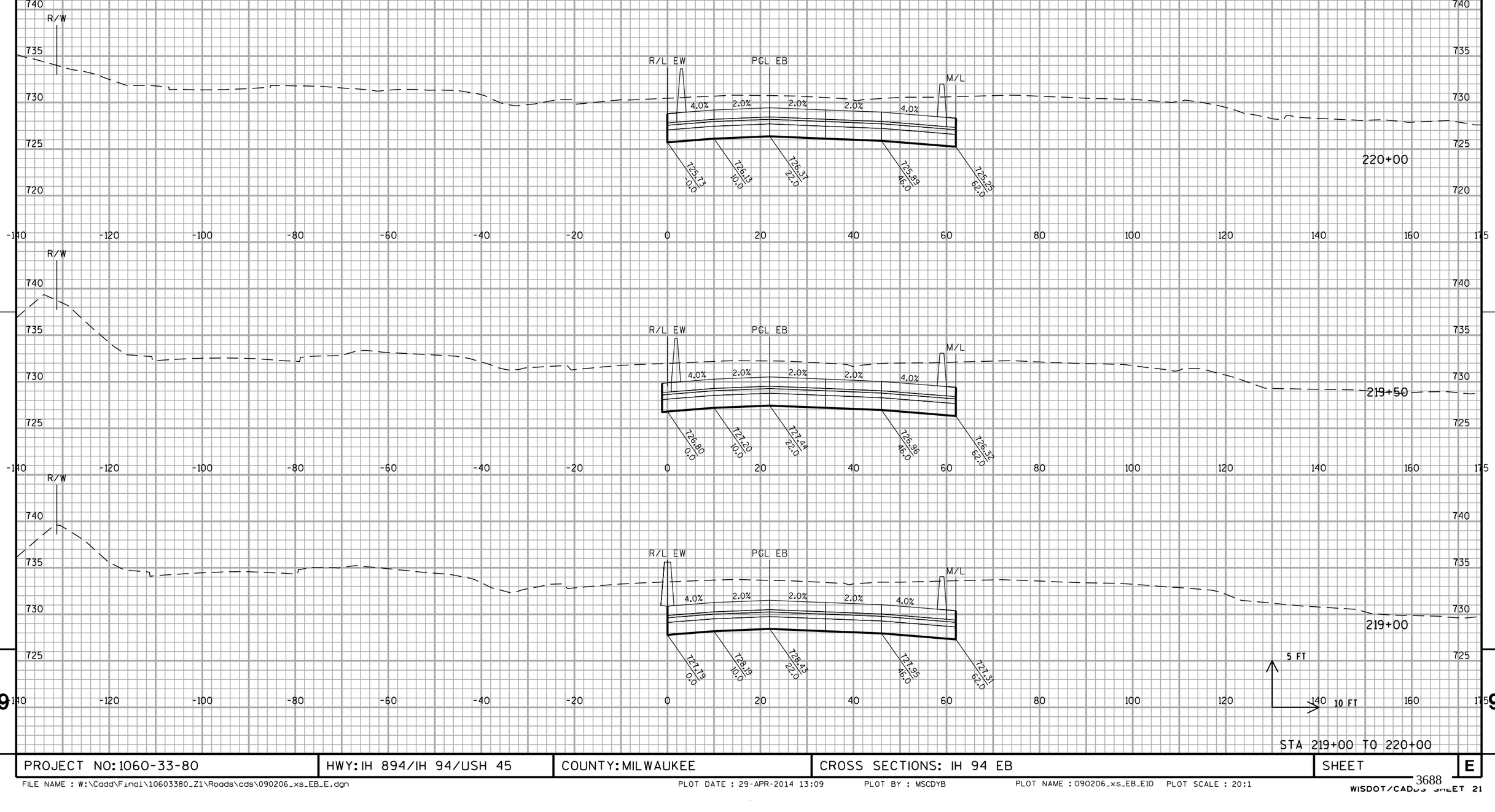


STA 217+50 TO 218+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

9 9

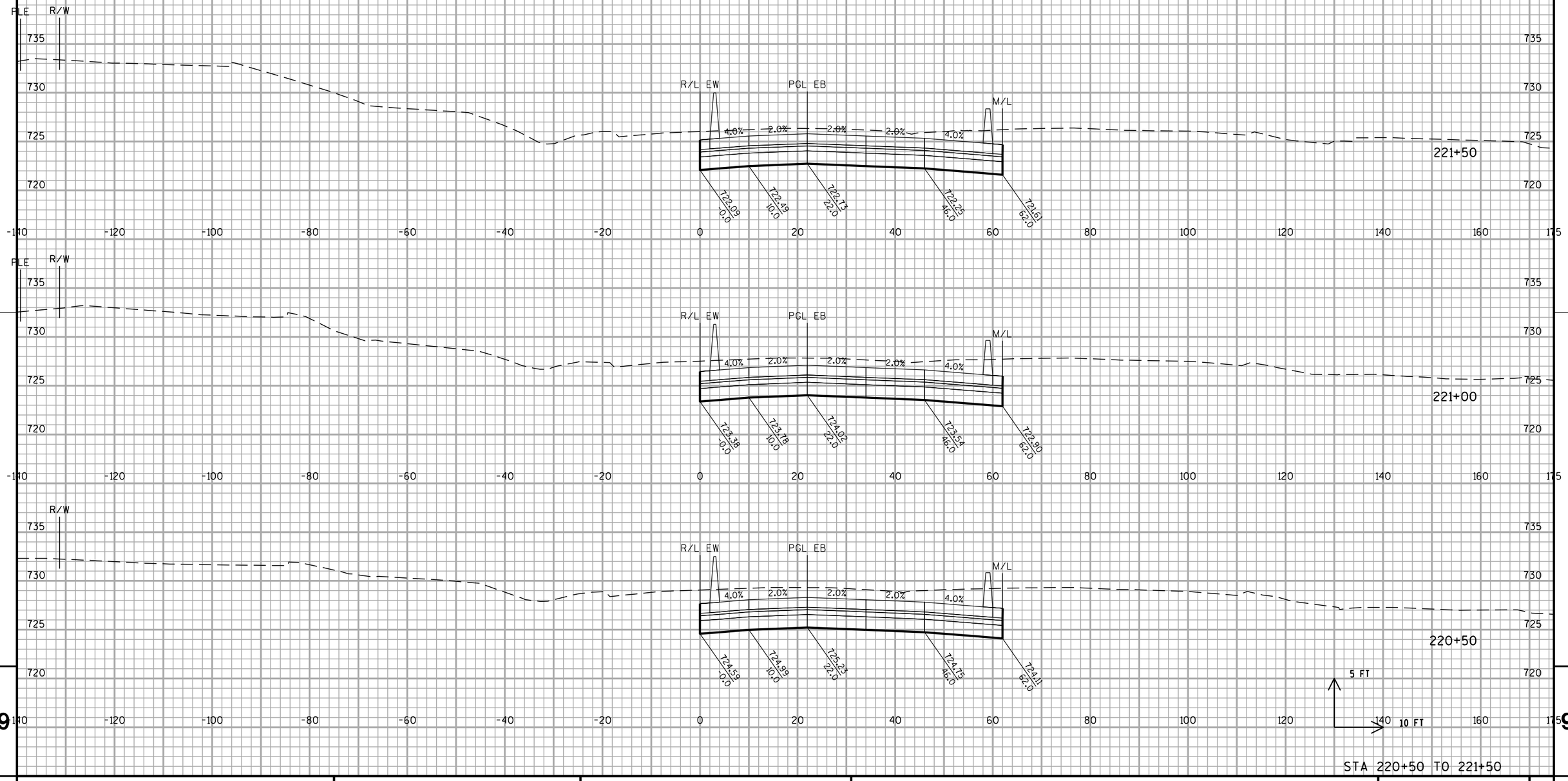
ALL WORK STAGE 3



STA 219+00 TO 220+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

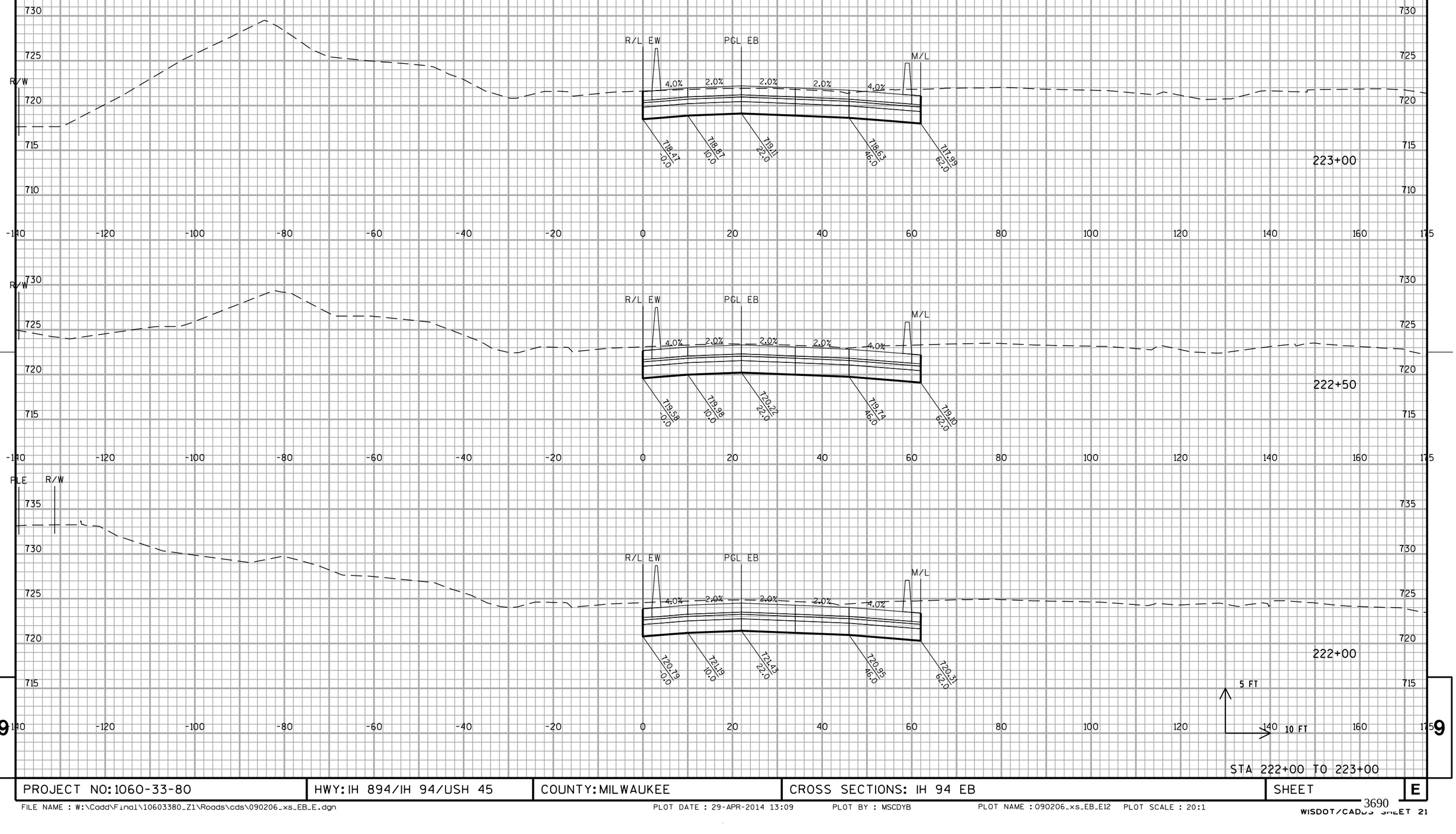
ALL WORK STAGE 3



STA 220+50 TO 221+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

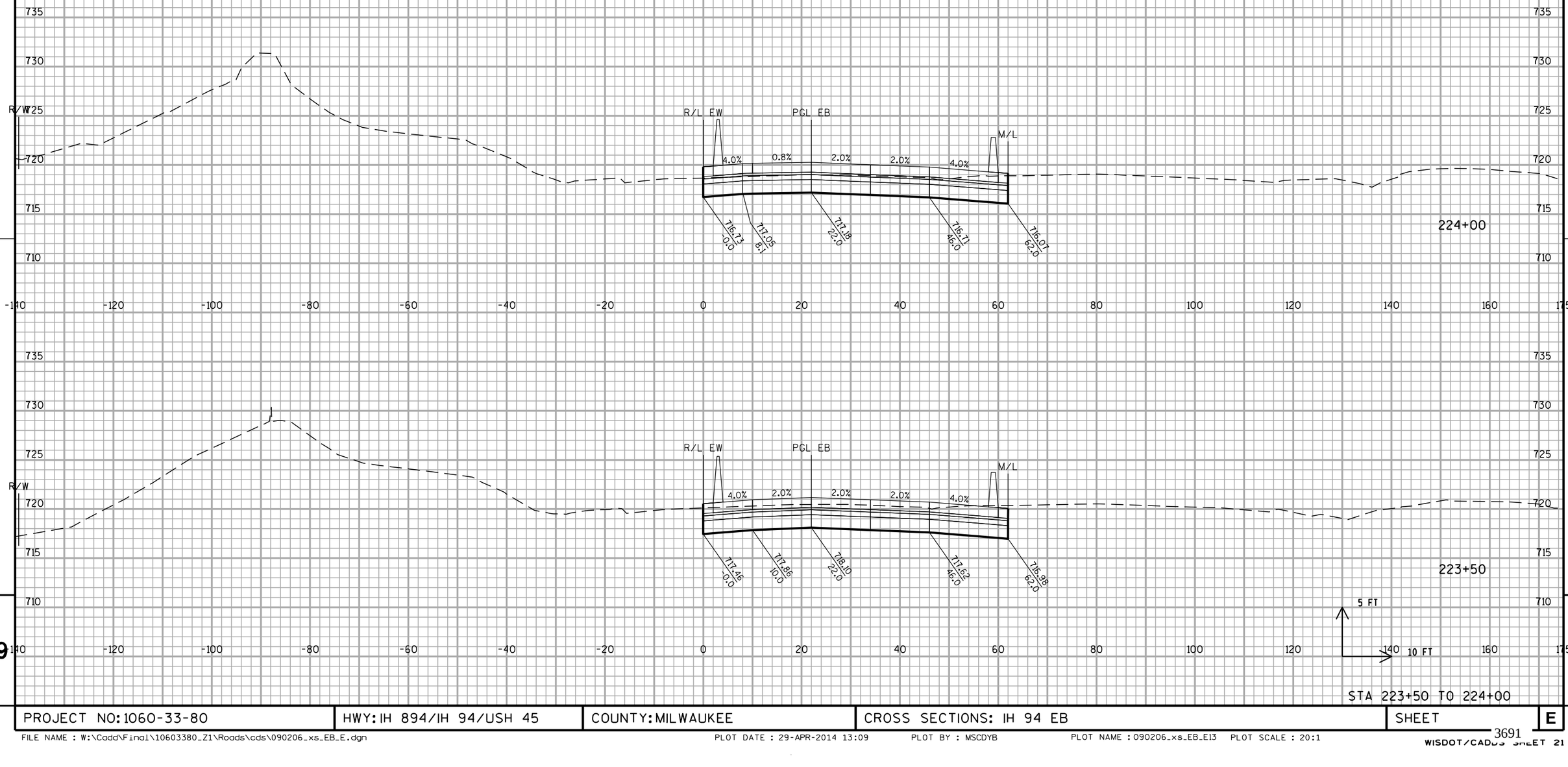
ALL WORK STAGE 3



STA 222+00 TO 223+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

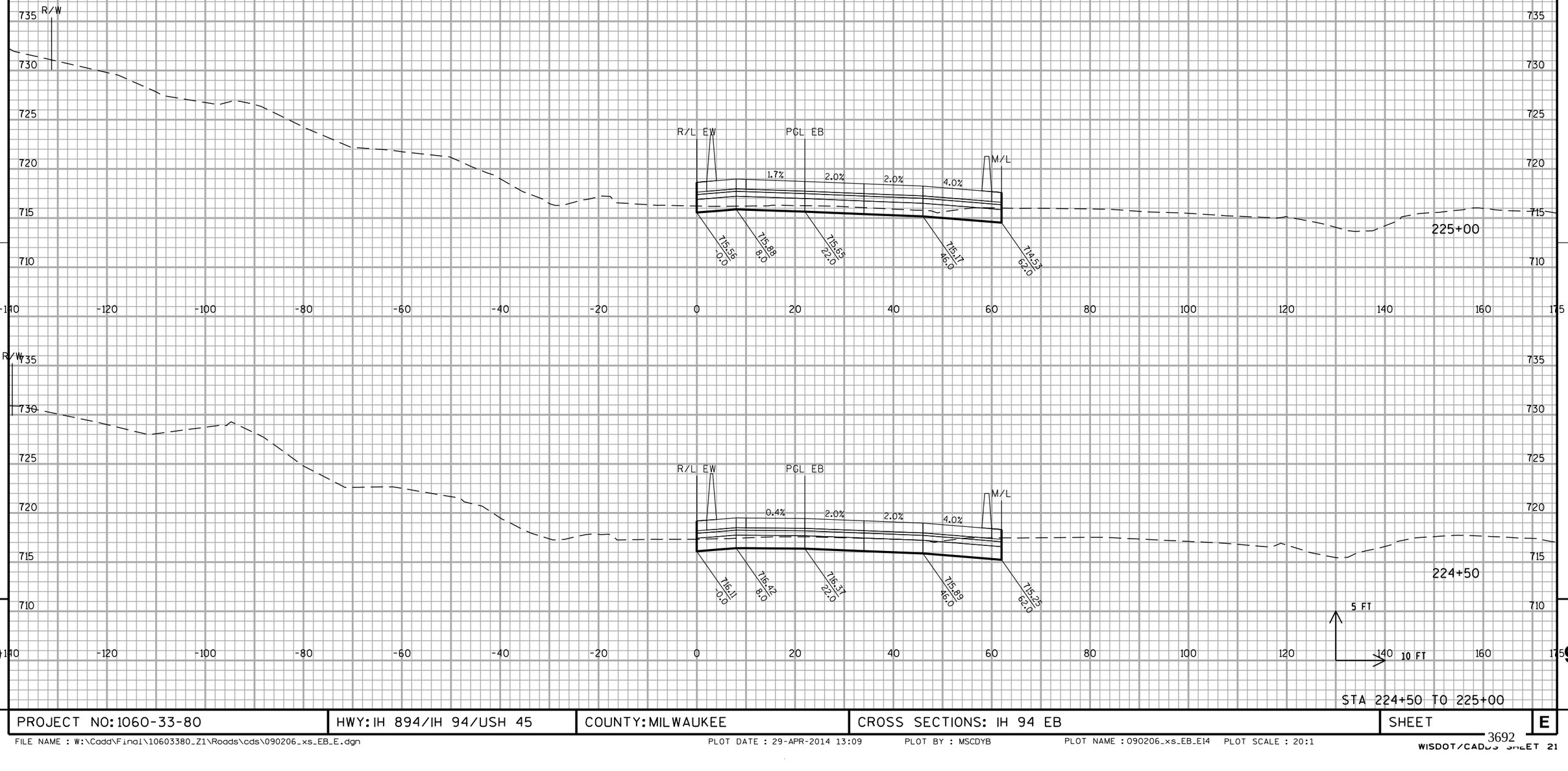
ALL WORK STAGE 3



STA 223+50 TO 224+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 3

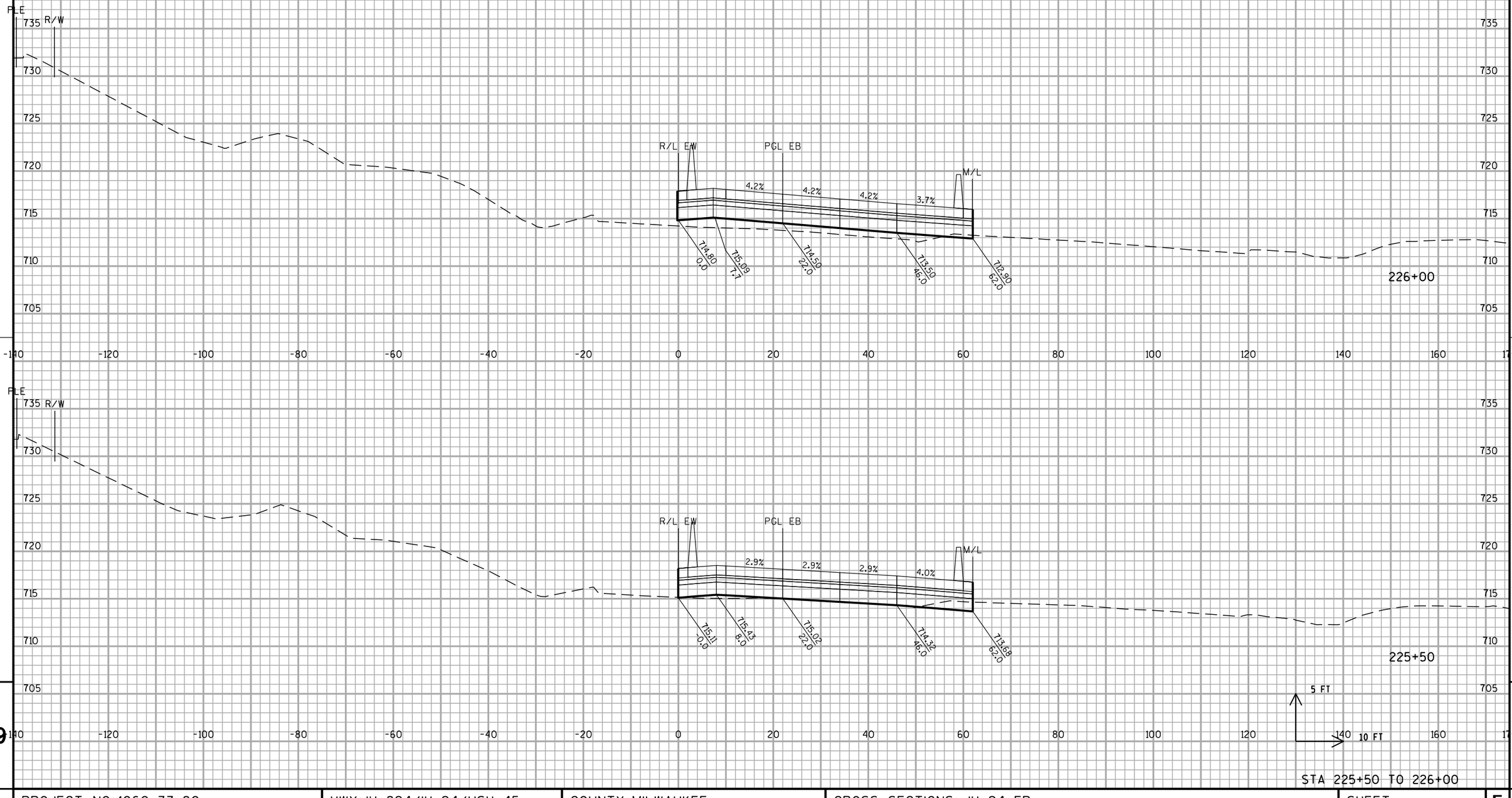


STA 224+50 TO 225+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E14 PLOT SCALE : 20:1

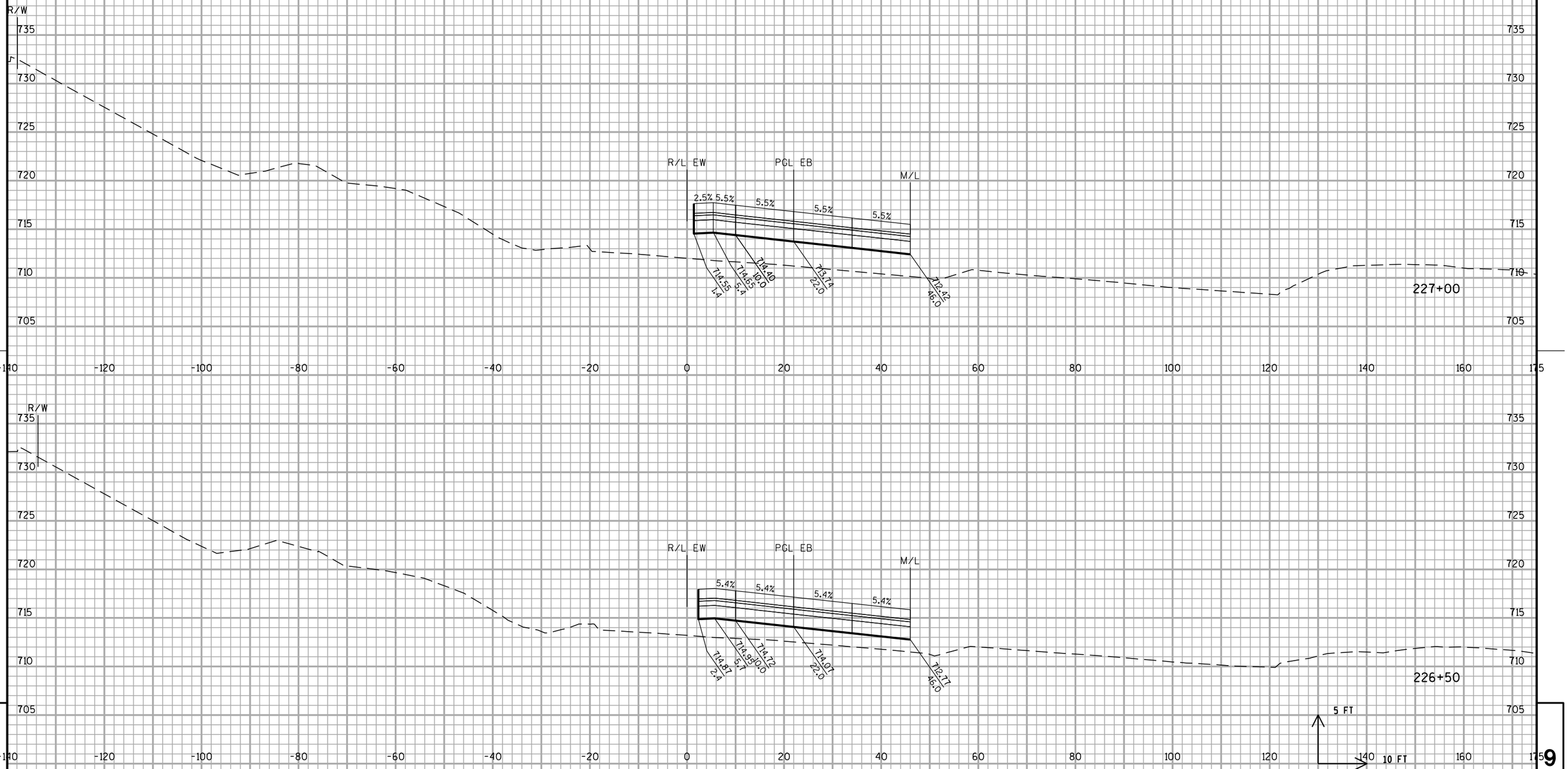
ALL WORK STAGE 3



STA 225+50 TO 226+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 3

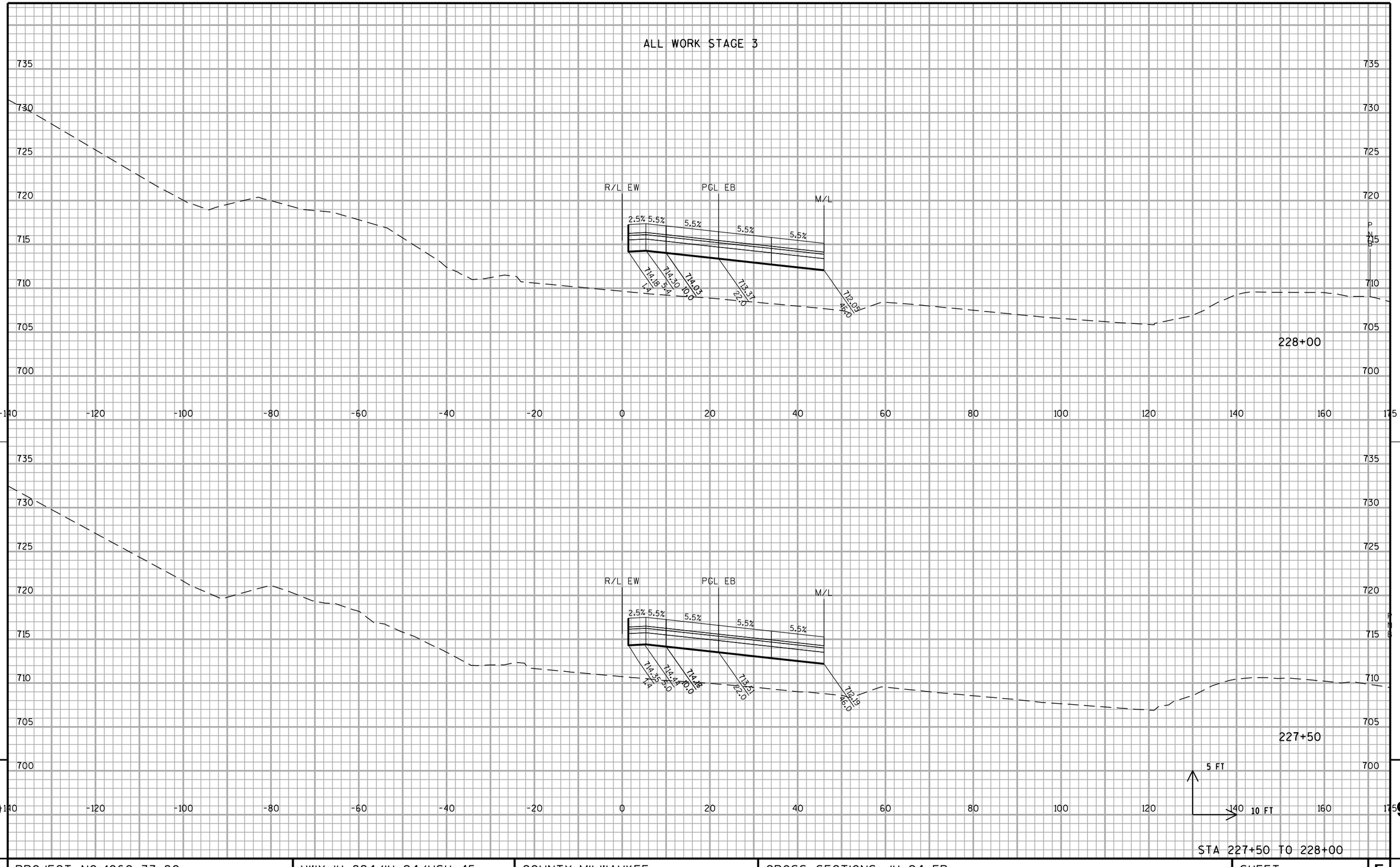


STA 226+50 TO 227+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E16 PLOT SCALE : 20:1

ALL WORK STAGE 3

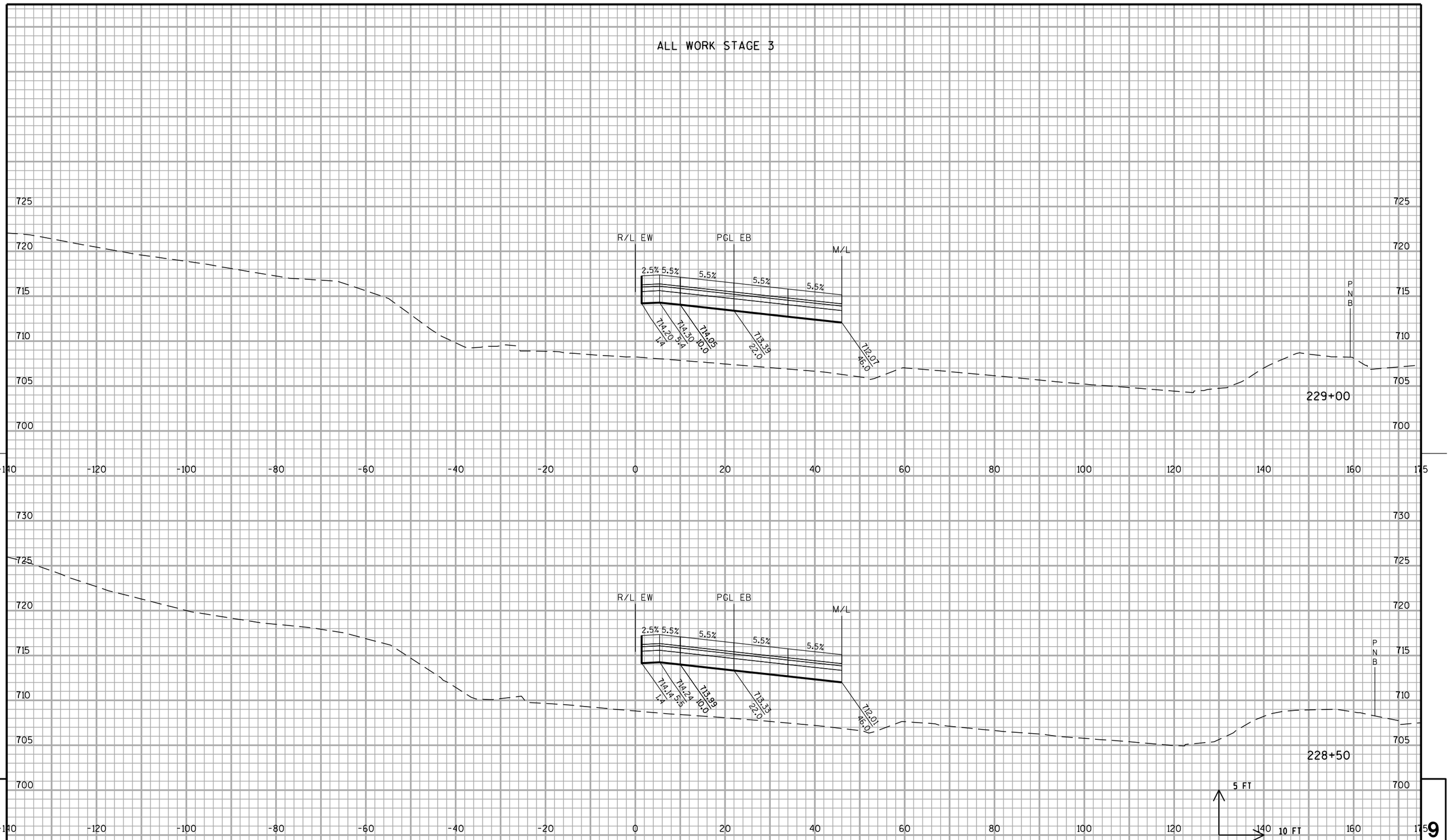


STA 227+50 TO 228+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E17 PLOT SCALE : 20:1

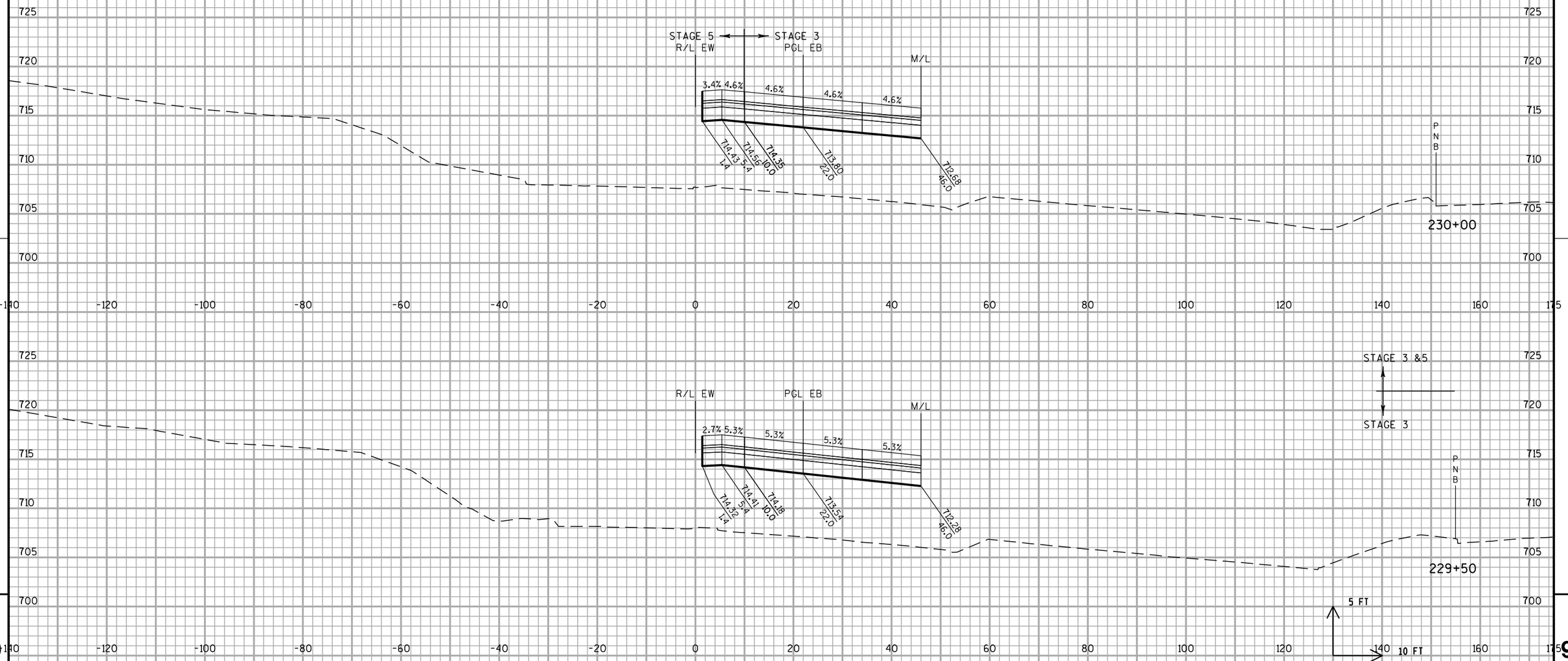
ALL WORK STAGE 3



9

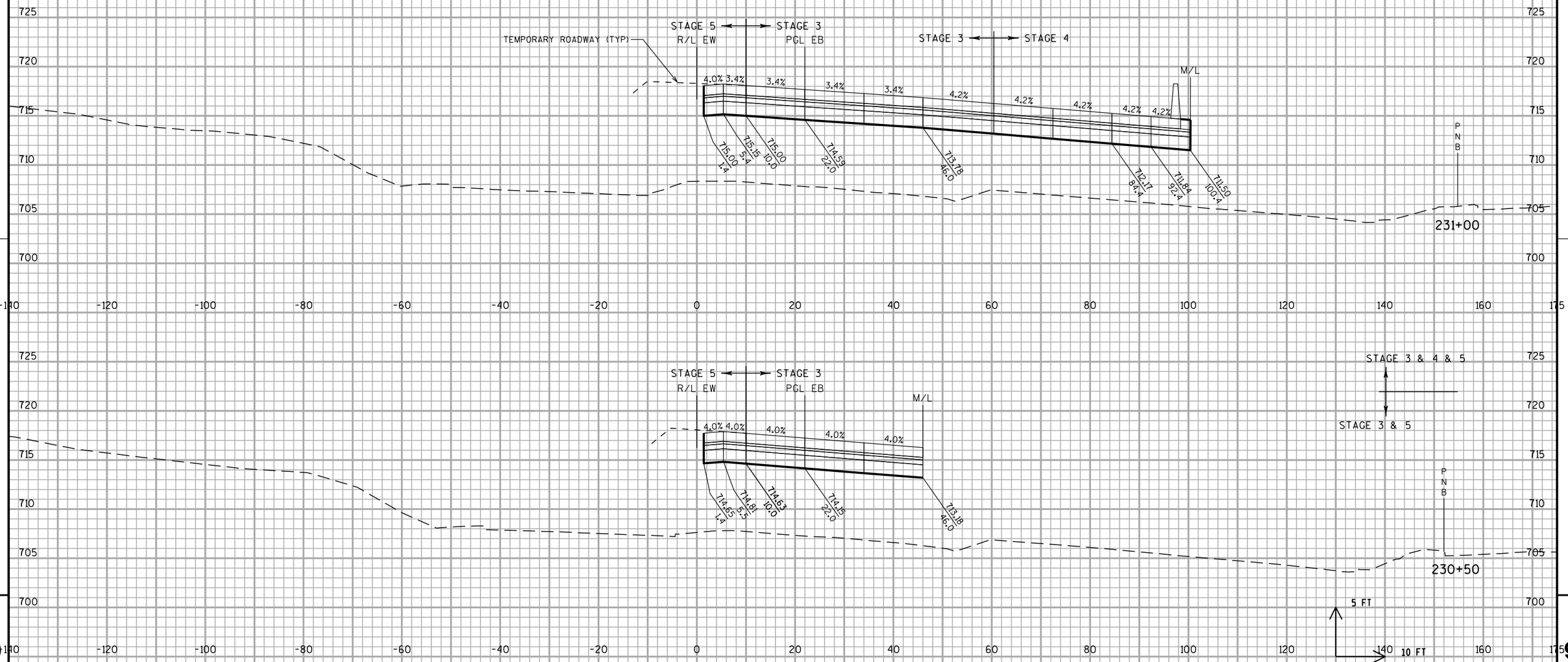
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

STA 228+50 TO 229+00



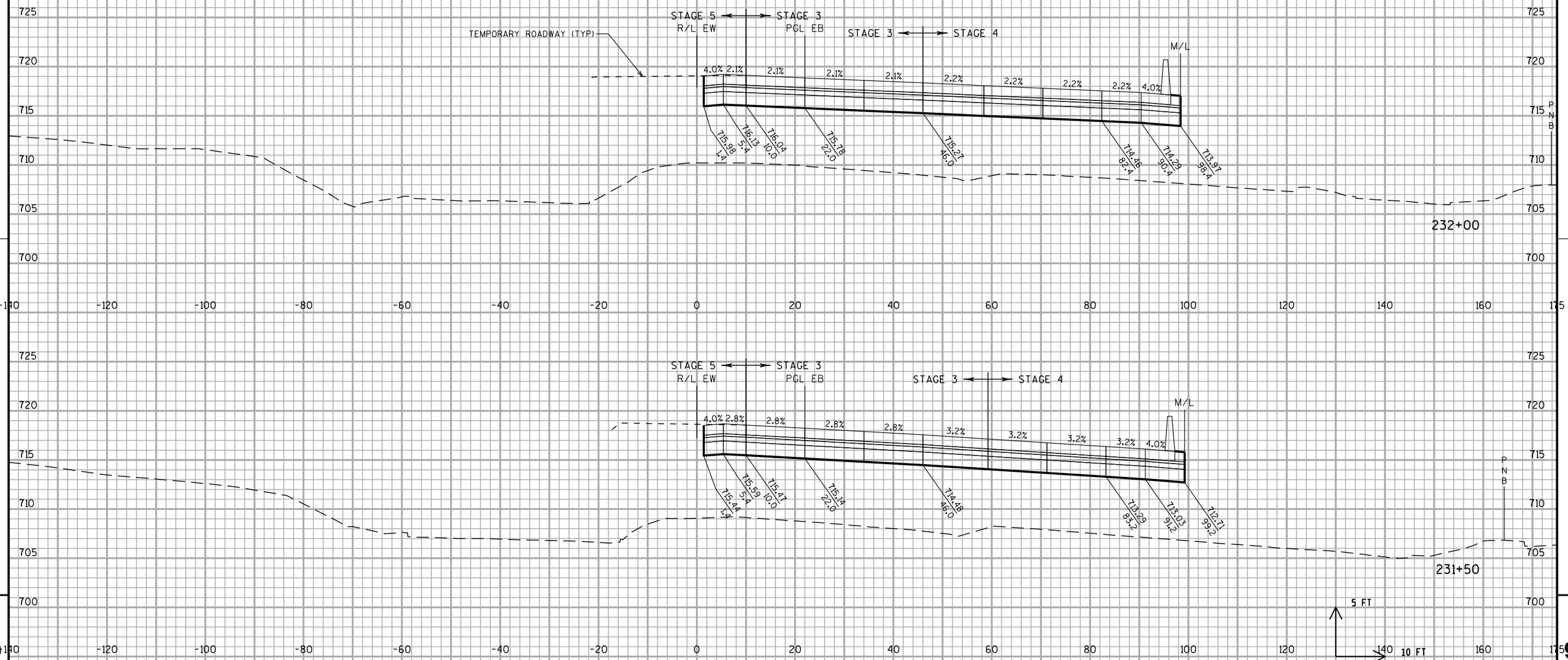
STA 229+50 TO 230+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



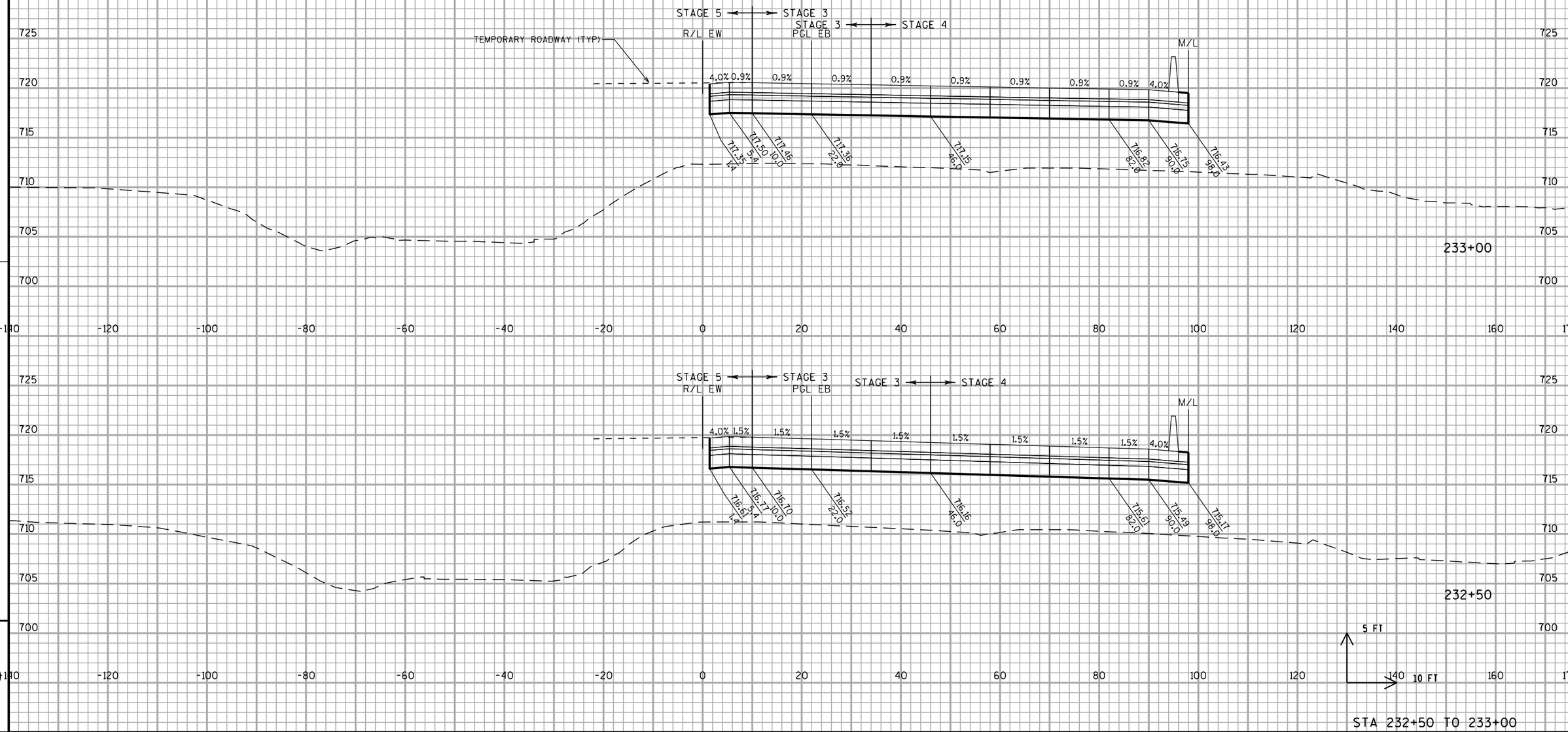
STA 230+50 TO 231+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



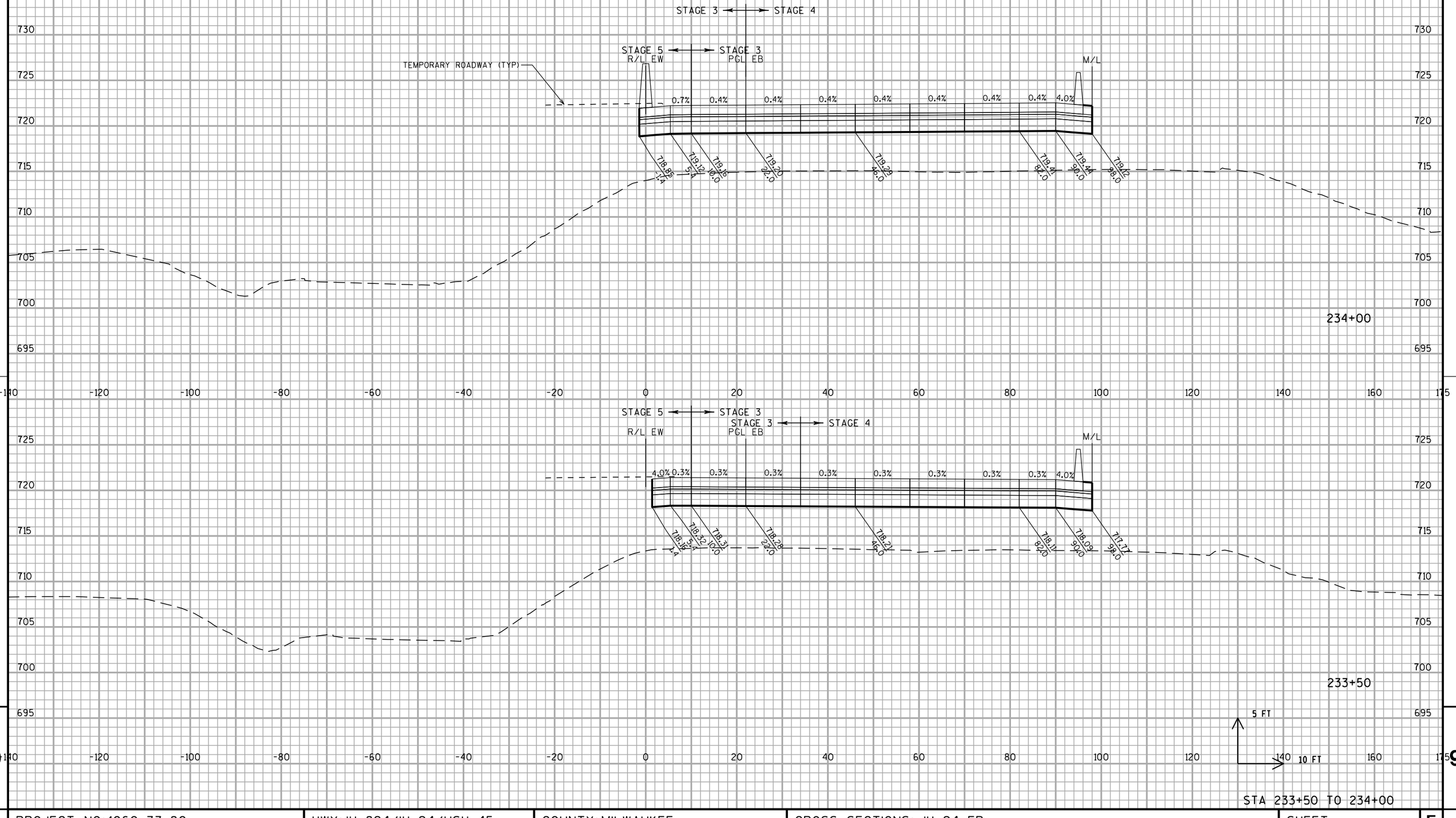
STA 231+50 TO 232+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



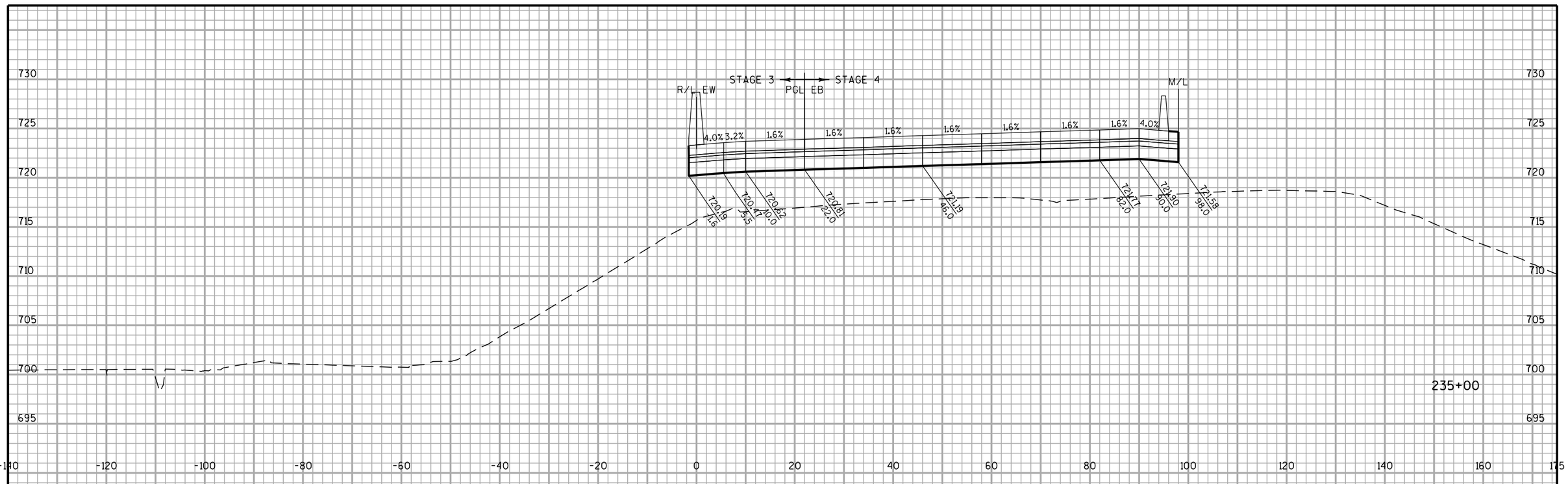
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

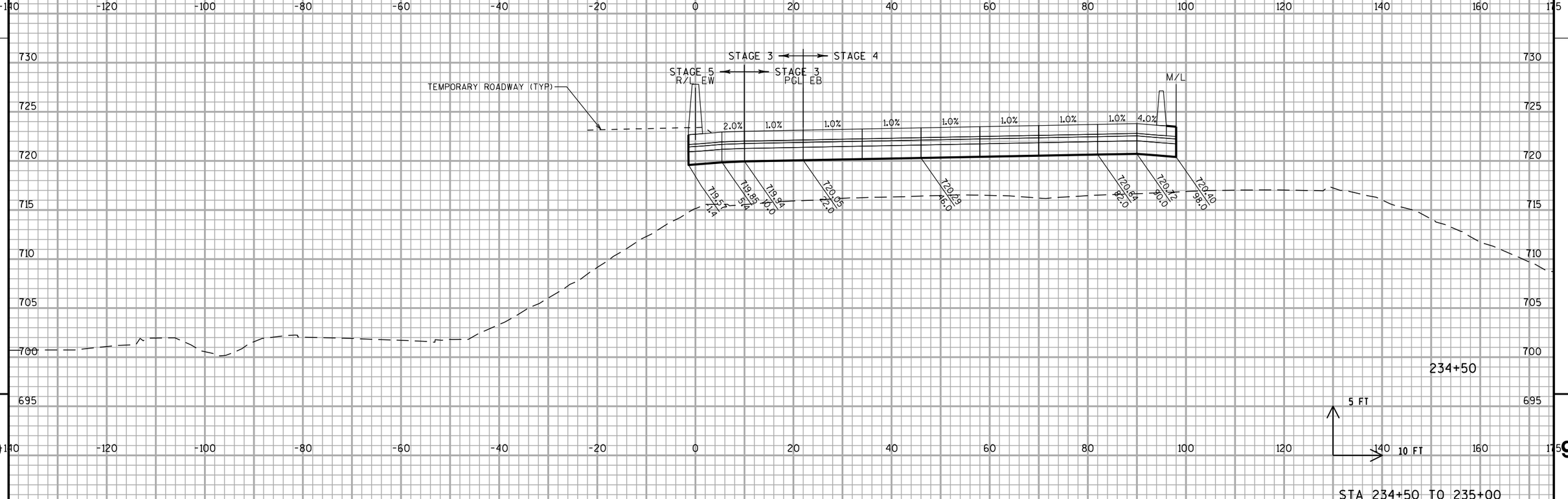
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E22 PLOT SCALE : 20:1



STA 233+50 TO 234+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E





STA 234+50 TO 235+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E24 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

730

STAGE 3 ← → STAGE 4

R/L EW

PGL EB

M/L

4.0% 2.2% 2.2% 2.2% 2.2% 2.2% 2.2% 2.2% 1.5%

720.83 0.9

721.20 10.3

721.46 22.0

722.00 46.0

722.80 82.0

722.97 90.0

722.85 98.0

730 725 720 715 710 705 700 695 690

-140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160 175

235+50

5 FT

10 FT

STA 235+50 TO 235+50

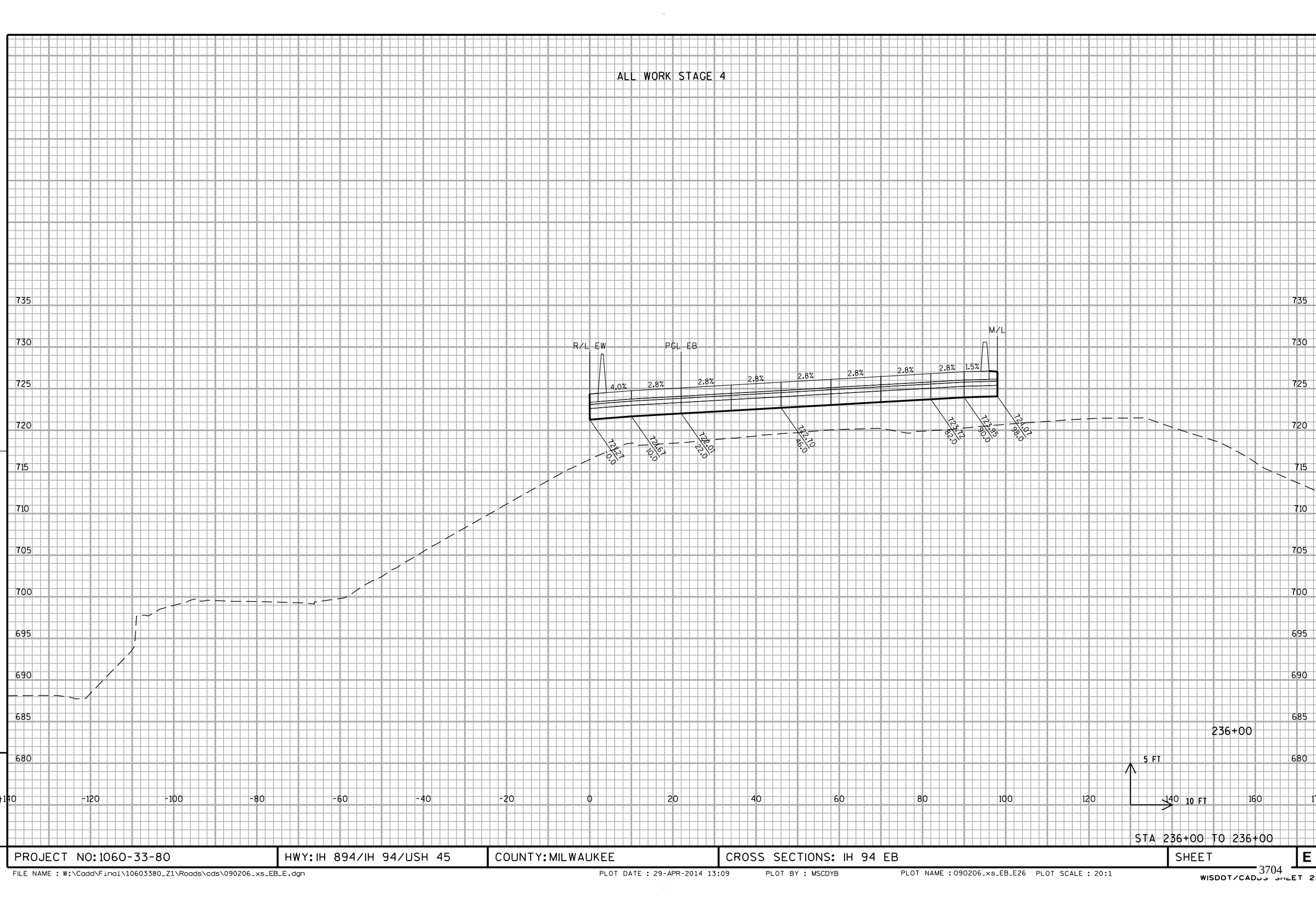
9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E25 PLOT SCALE : 20:1

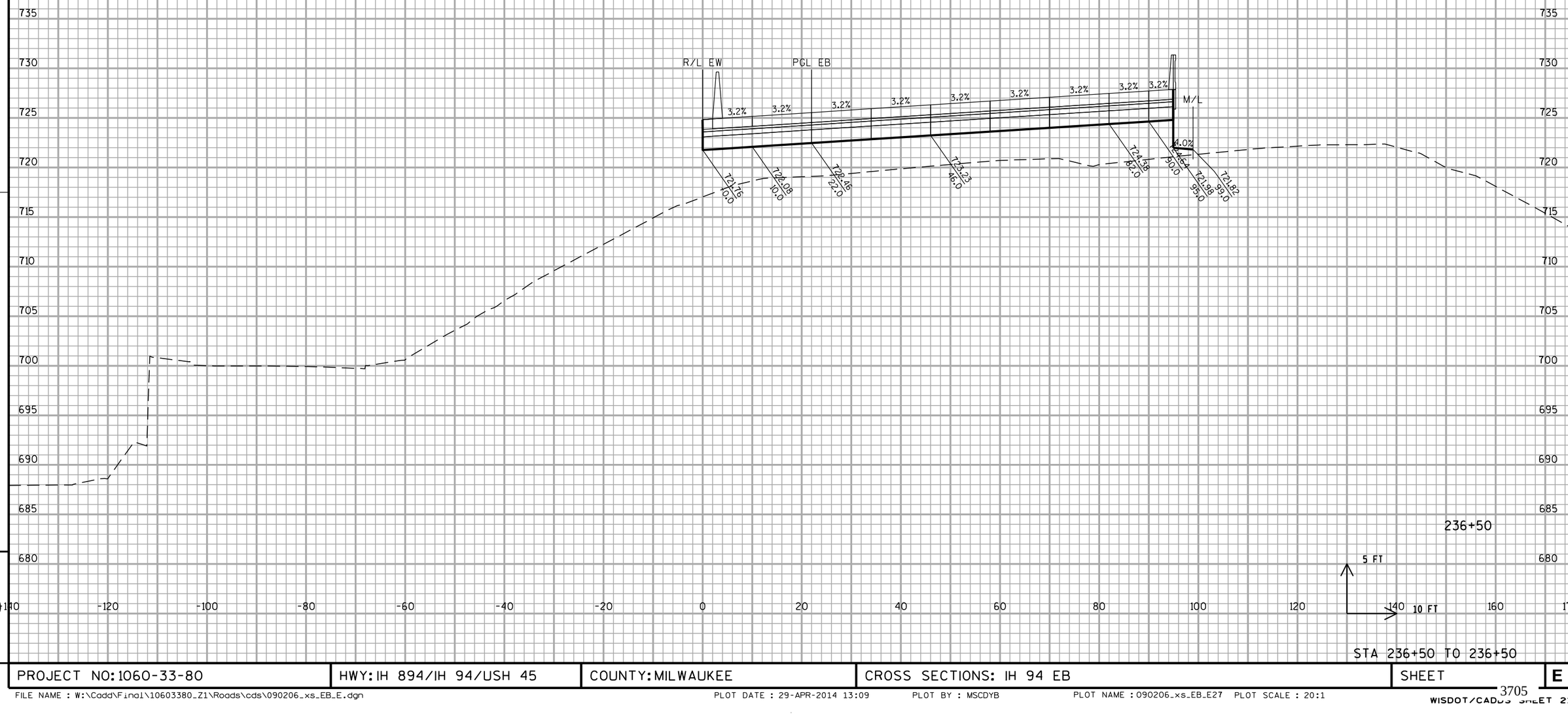
ALL WORK STAGE 4



STA 236+00 TO 236+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

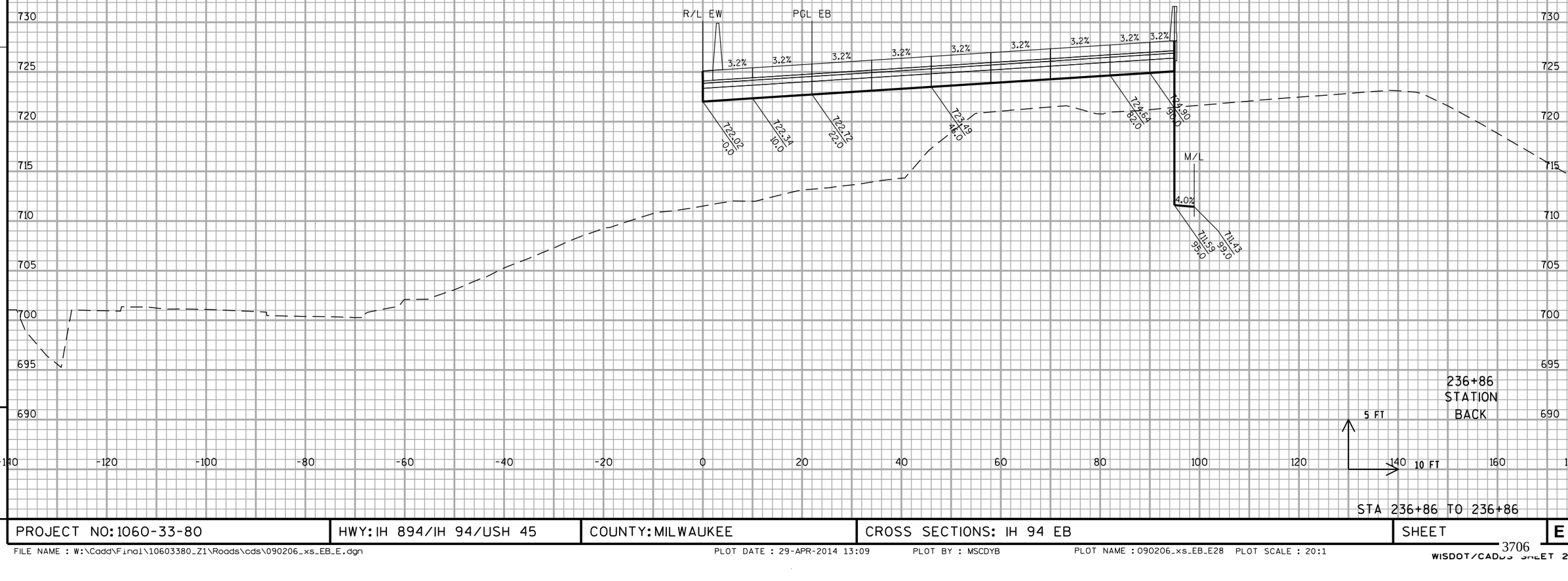
ALL WORK STAGE 4



STA 236+50 TO 236+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 4

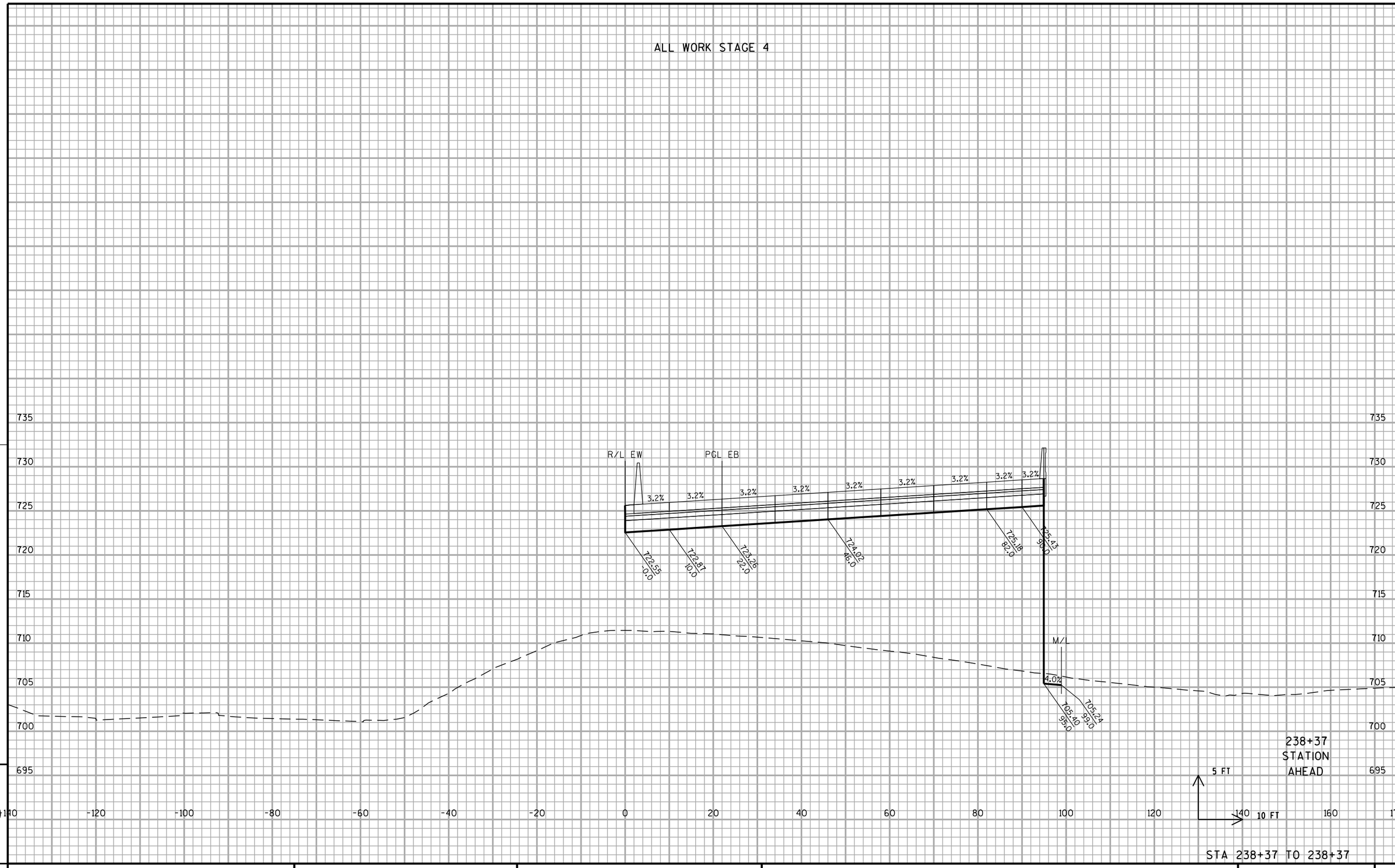


STA 236+86 TO 236+86

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E28 PLOT SCALE : 20:1

ALL WORK STAGE 4



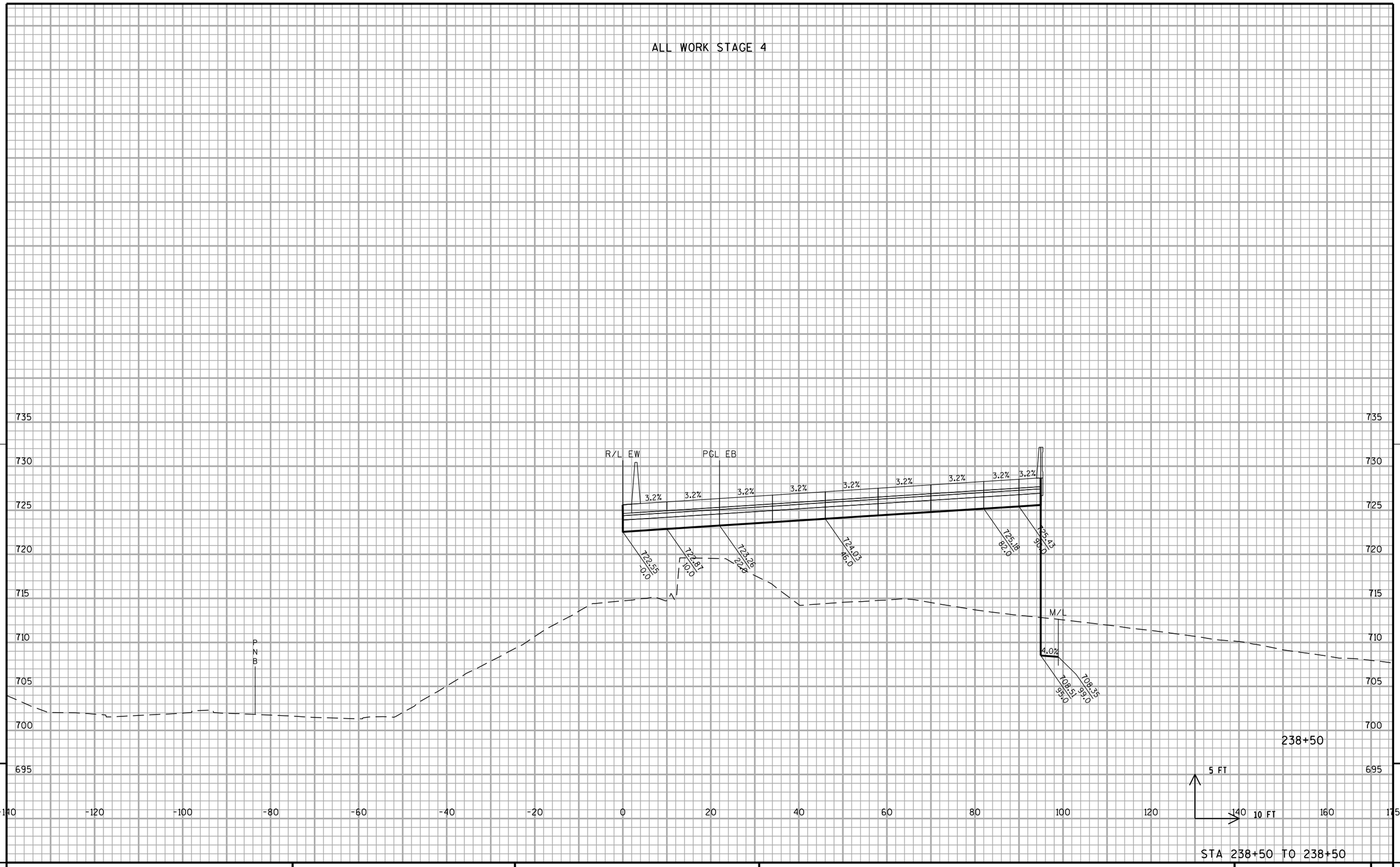
9

9

STA 238+37 TO 238+37

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

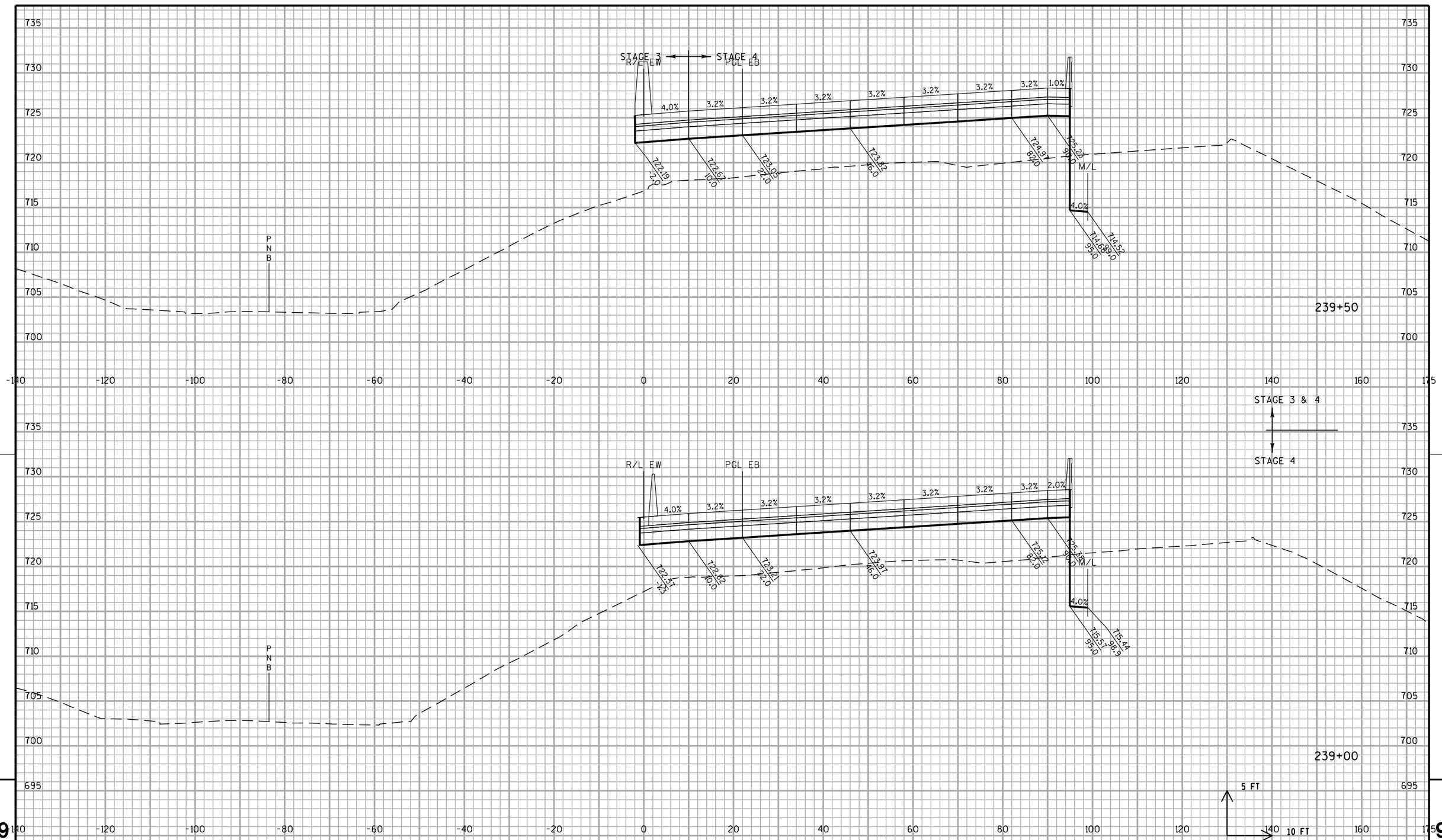
ALL WORK STAGE 4



STA 238+50 TO 238+50

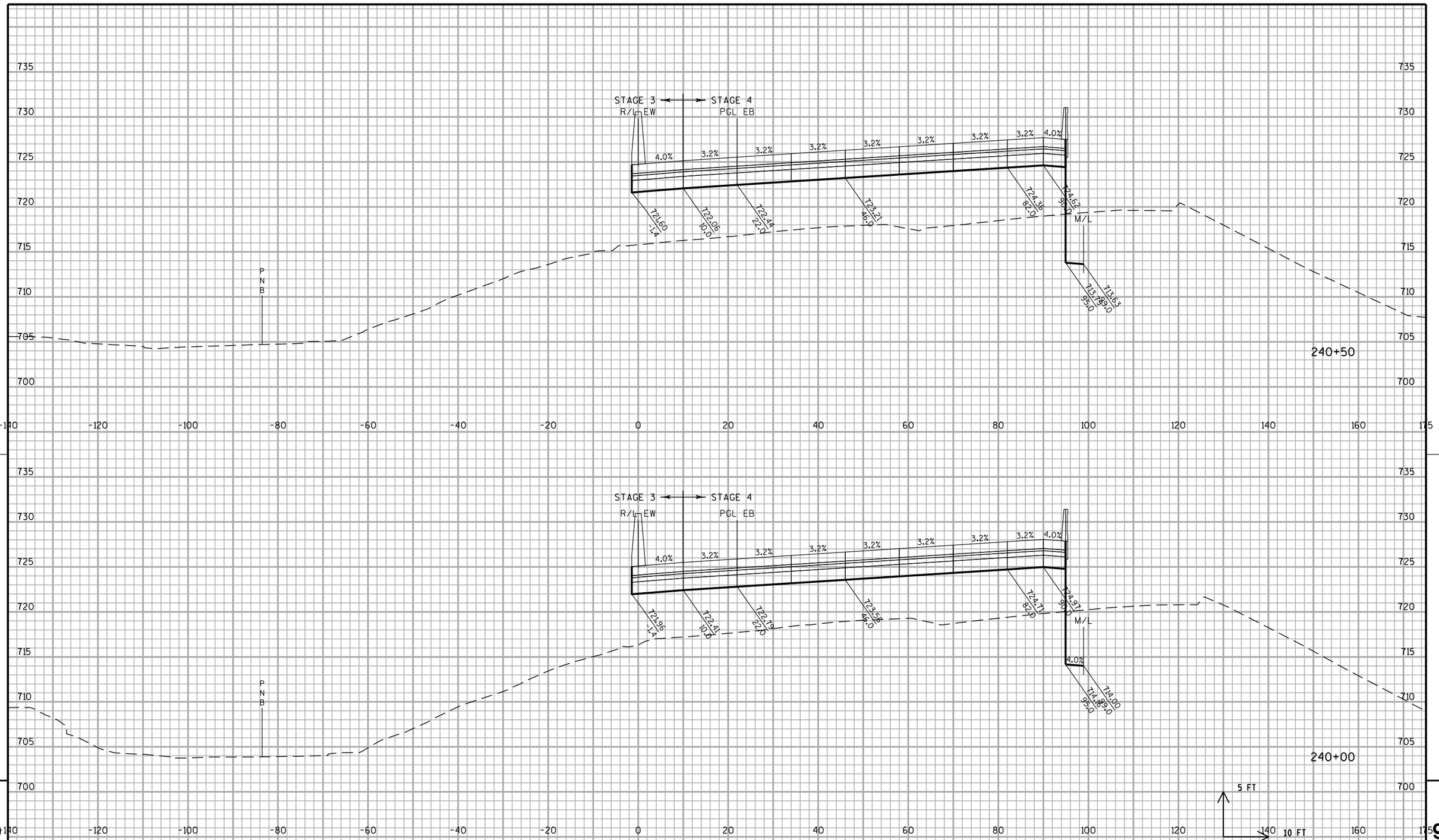
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E30 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

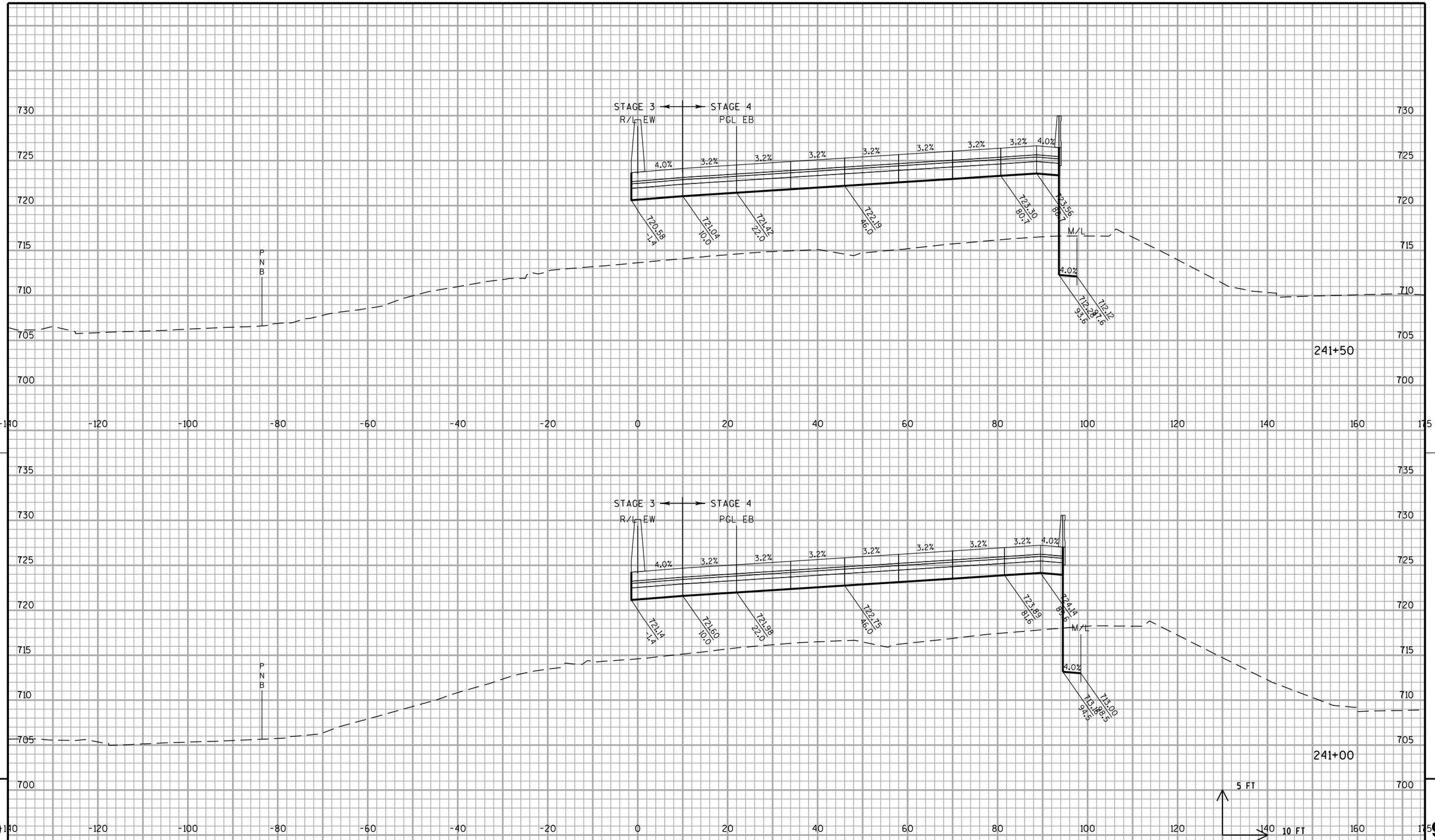
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E31 PLOT SCALE : 20:1



STA 240+00 TO 240+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

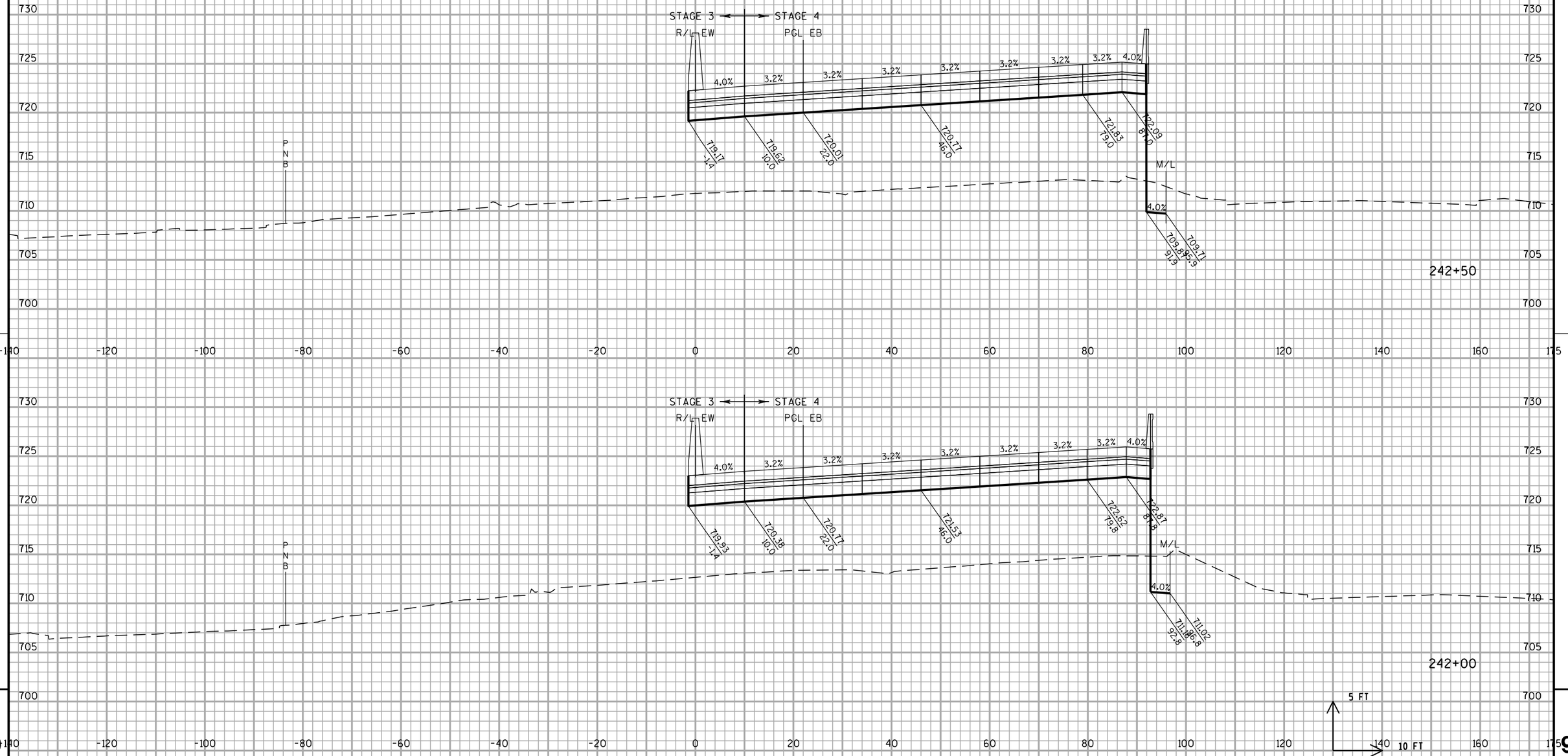
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E32 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET E

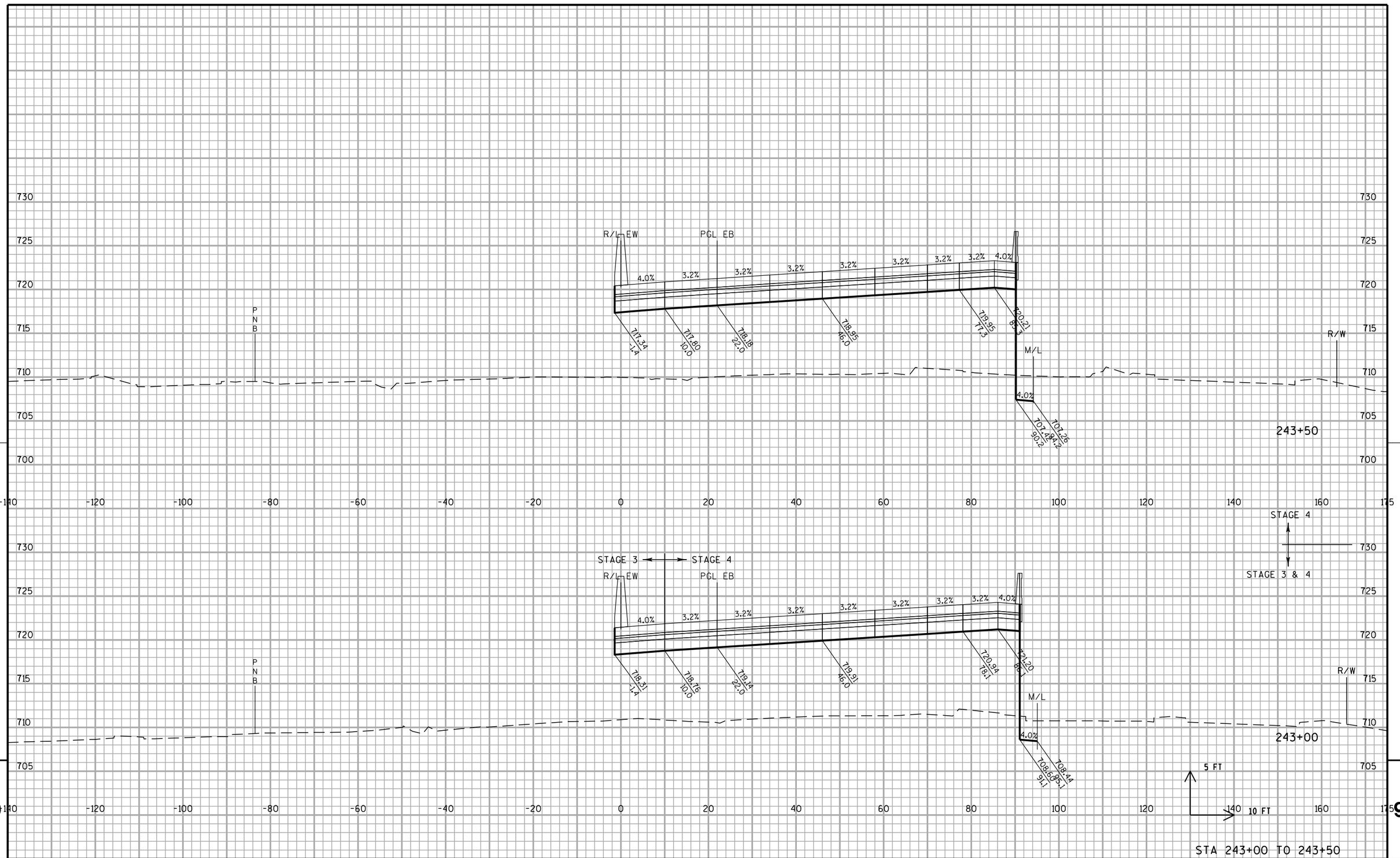
STA 241+00 TO 241+50

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:09 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E33 PLOT SCALE : 20:1



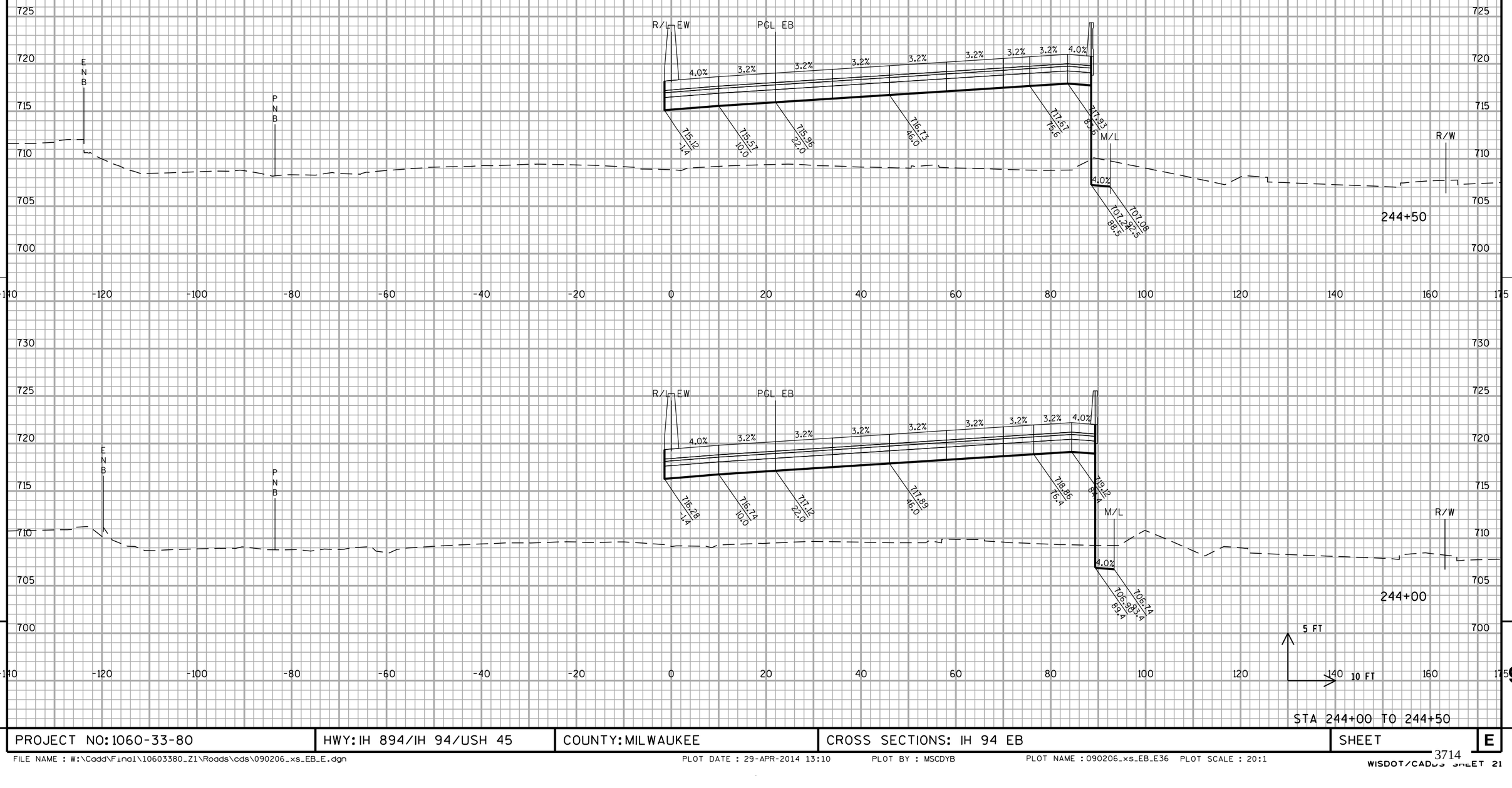
STA 242+00 TO 242+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

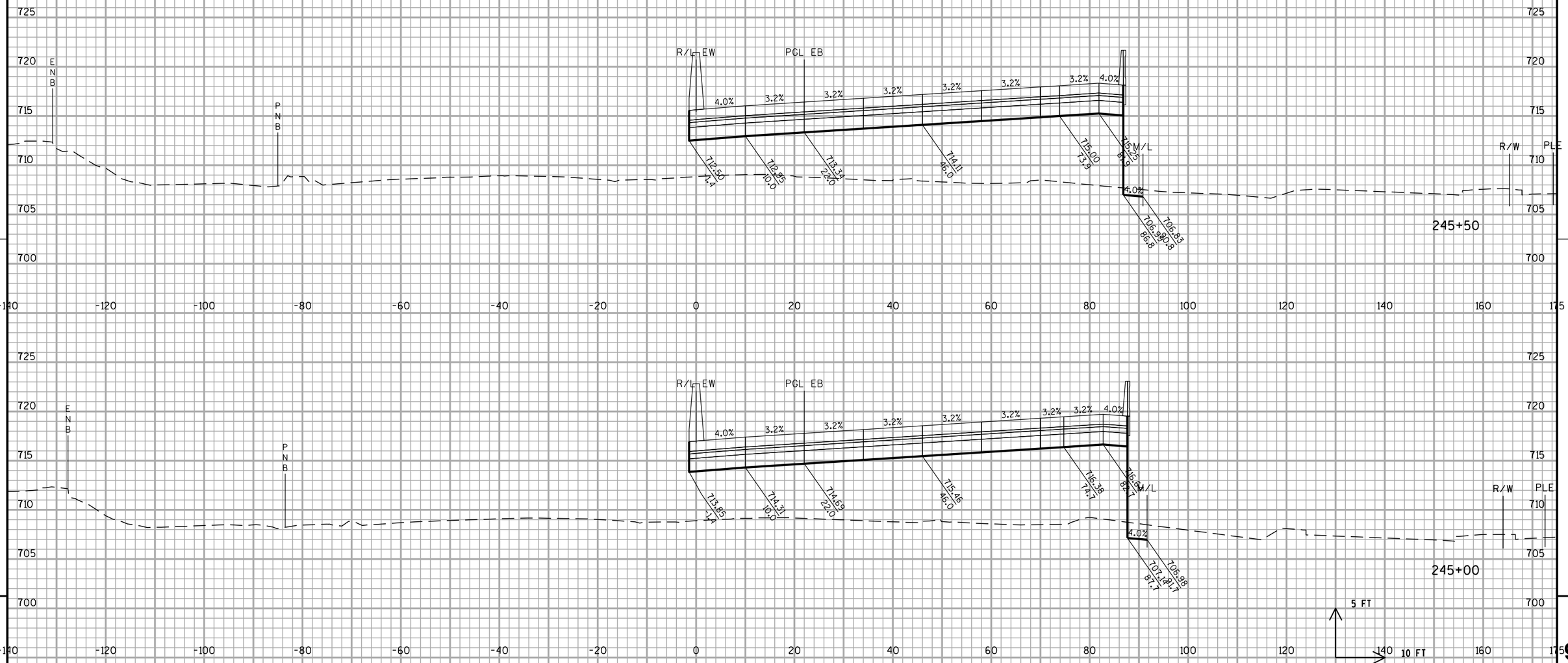
ALL WORK STAGE 4



STA 244+00 TO 244+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

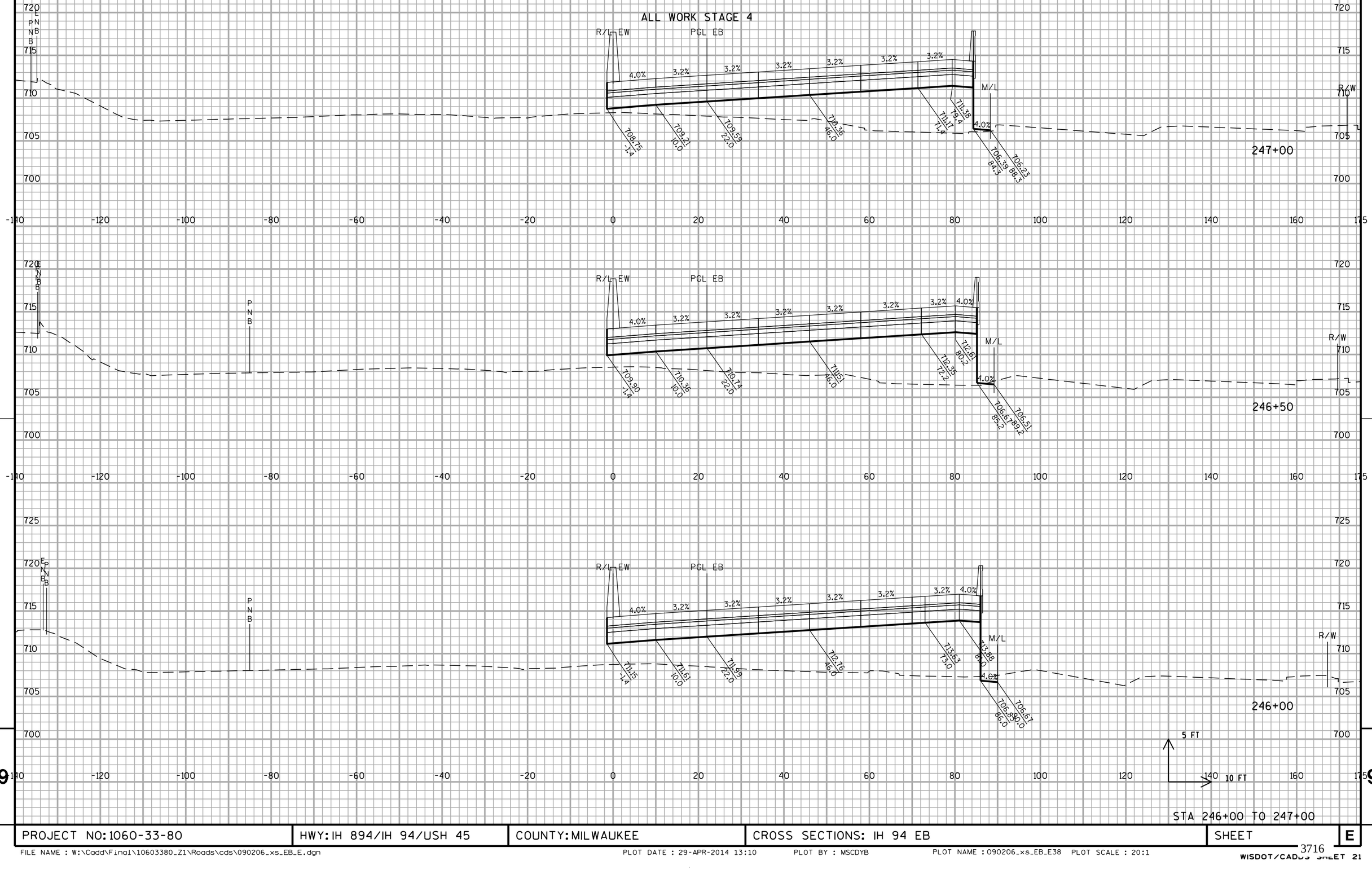
ALL WORK STAGE 4



STA 245+00 TO 245+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 4

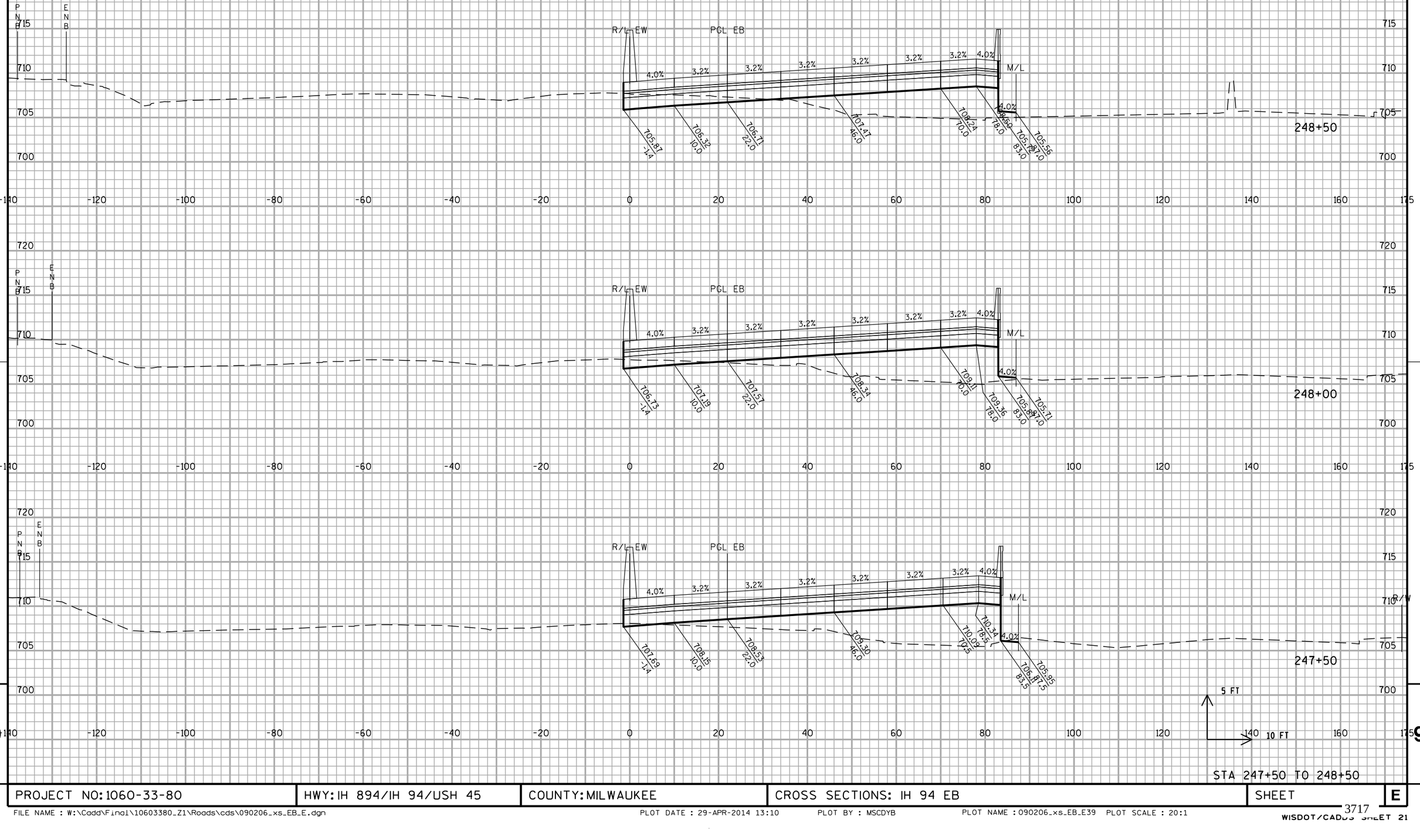


STA 246+00 TO 247+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E38 PLOT SCALE : 20:1

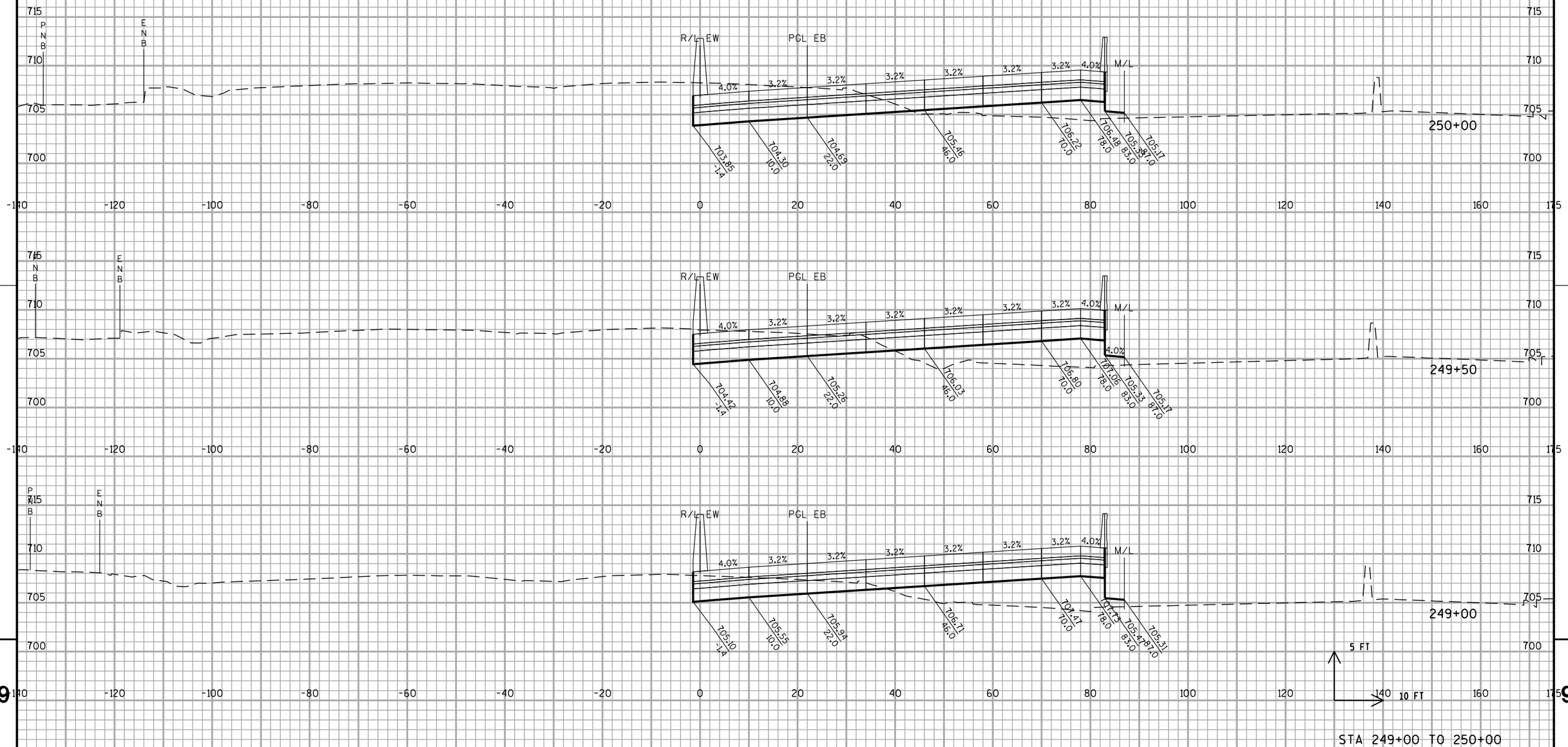
ALL WORK STAGE 4



STA 247+50 TO 248+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 4



STA 249+00 TO 250+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E40 PLOT SCALE : 20:1

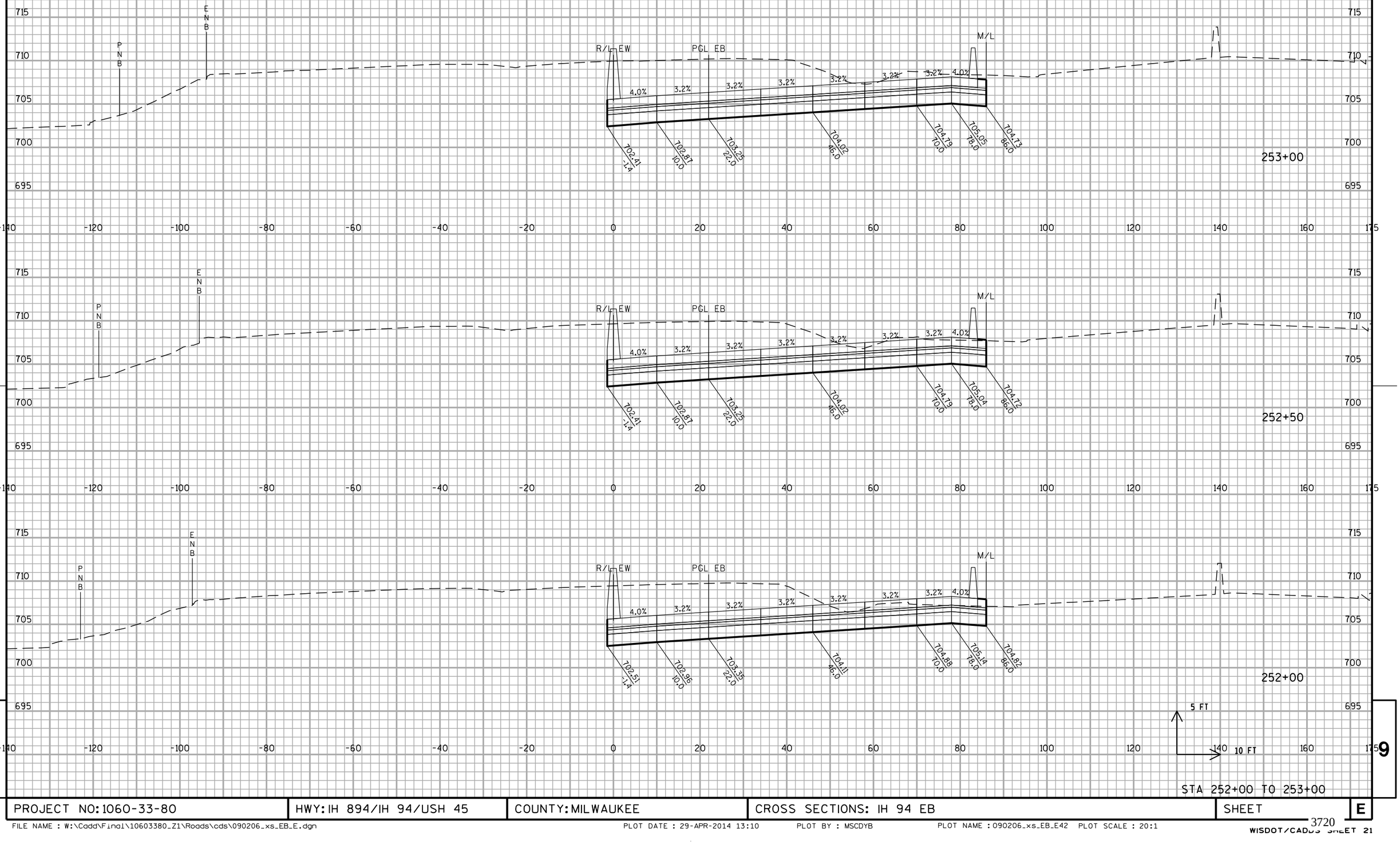
ALL WORK STAGE 4

STA 250+50 TO 251+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E41 PLOT SCALE : 20:1

ALL WORK STAGE 4

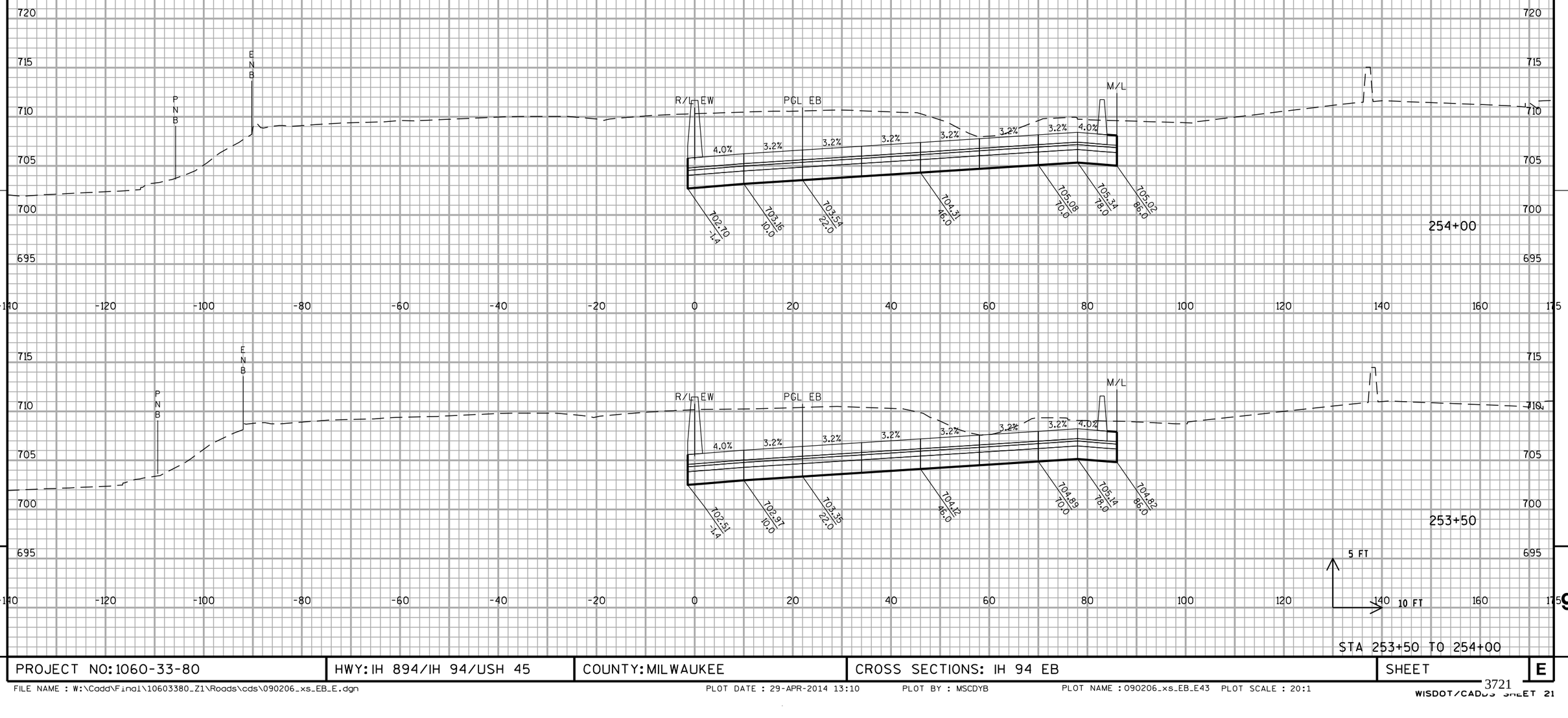


STA 252+00 TO 253+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E42 PLOT SCALE : 20:1

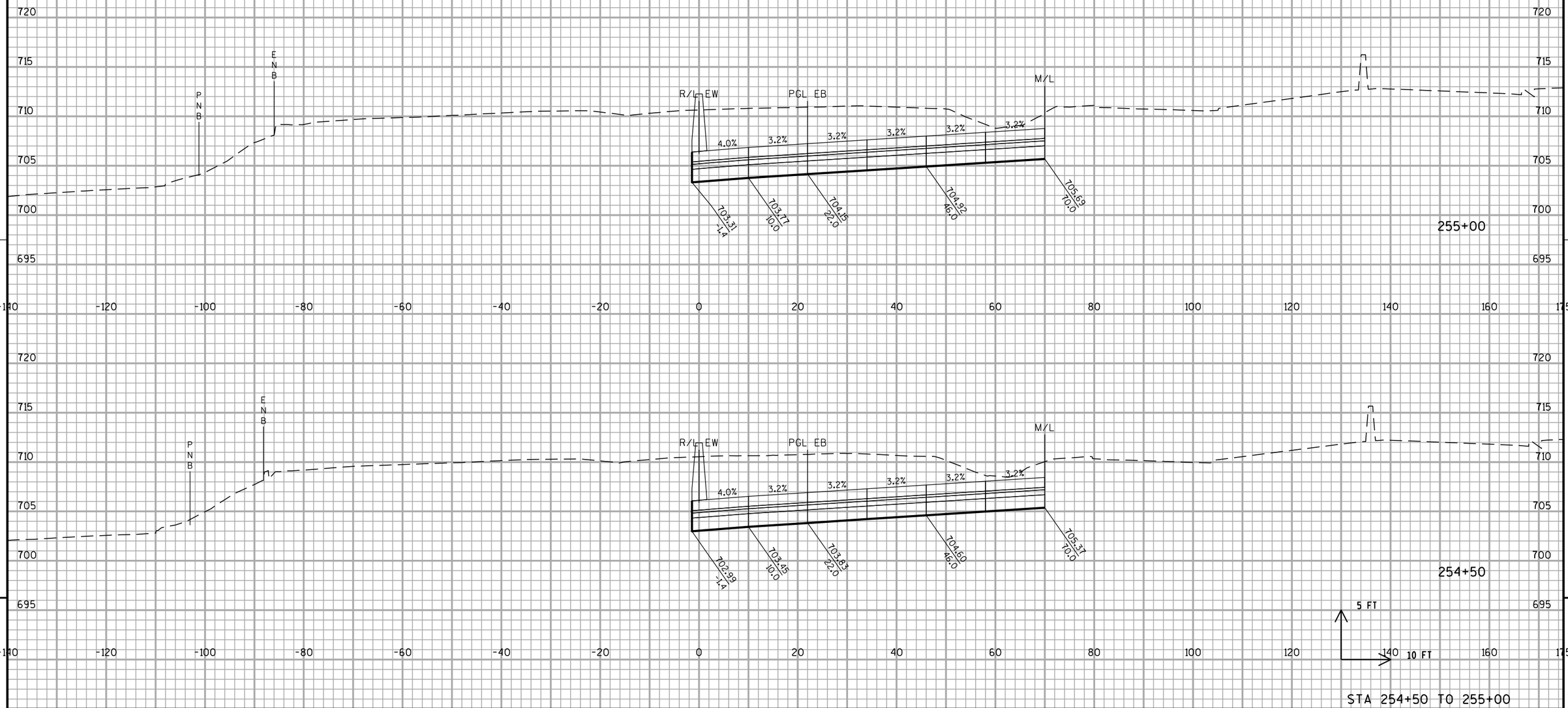
ALL WORK STAGE 4



STA 253+50 TO 254+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

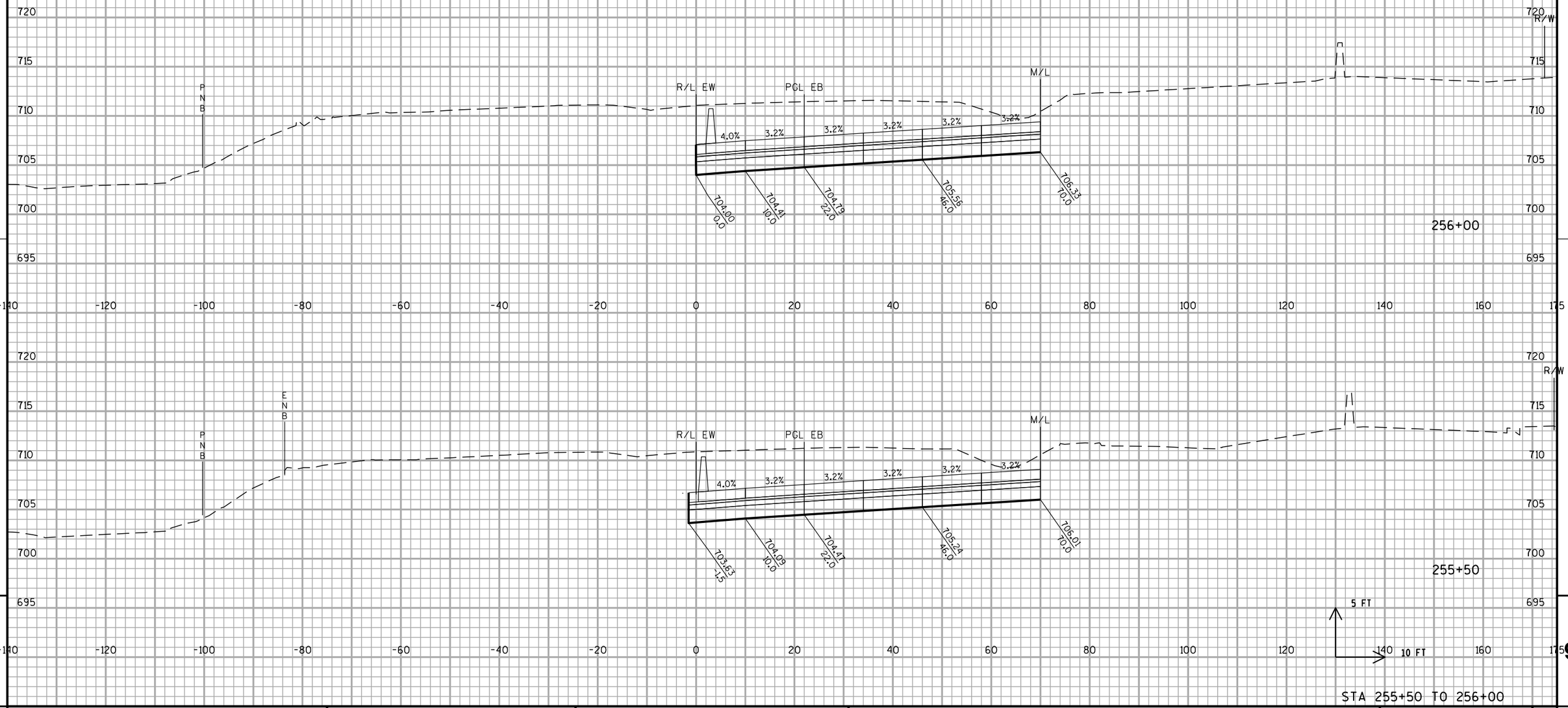
ALL WORK STAGE 4



STA 254+50 TO 255+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

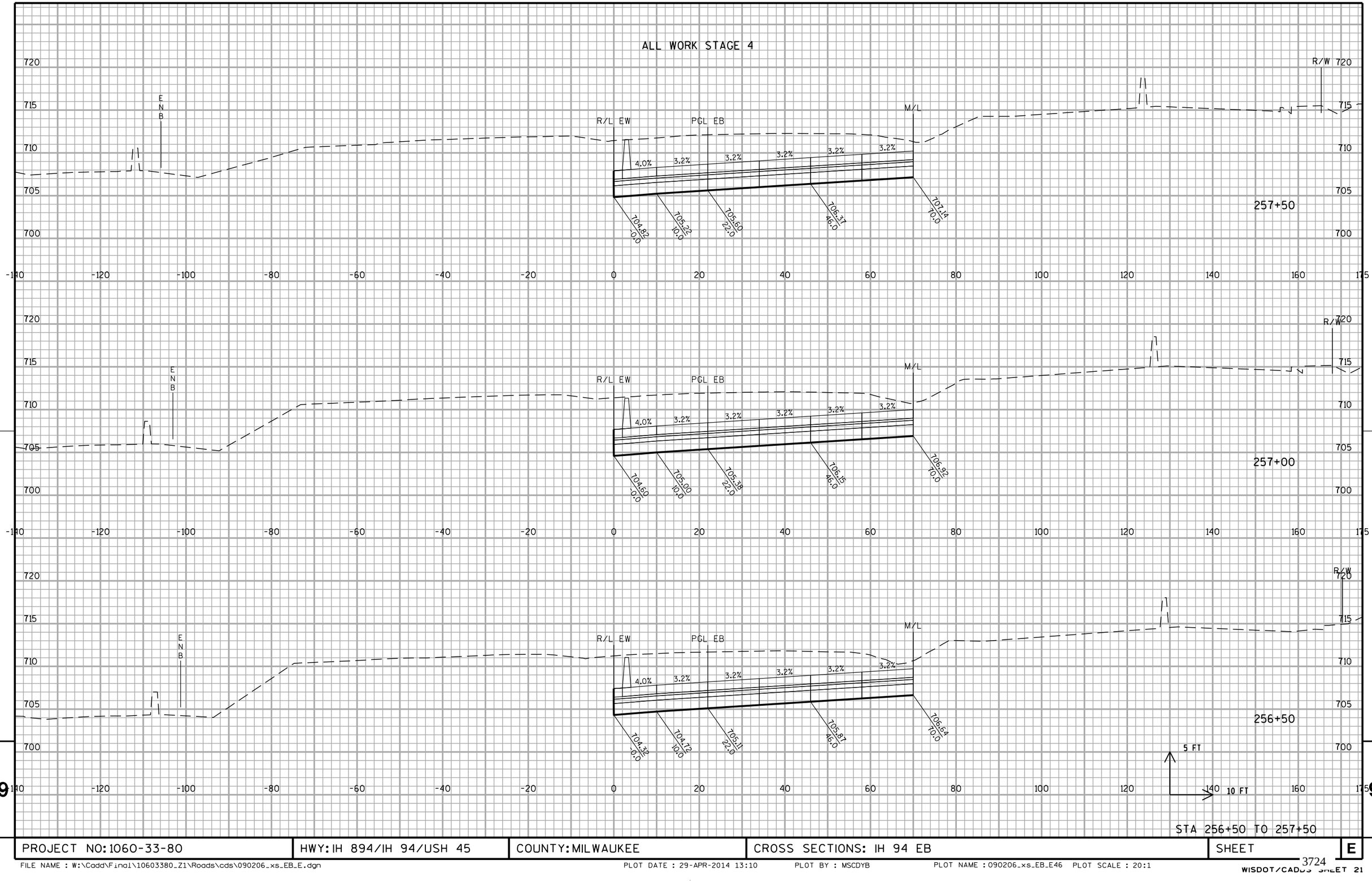
ALL WORK STAGE 4



STA 255+50 TO 256+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

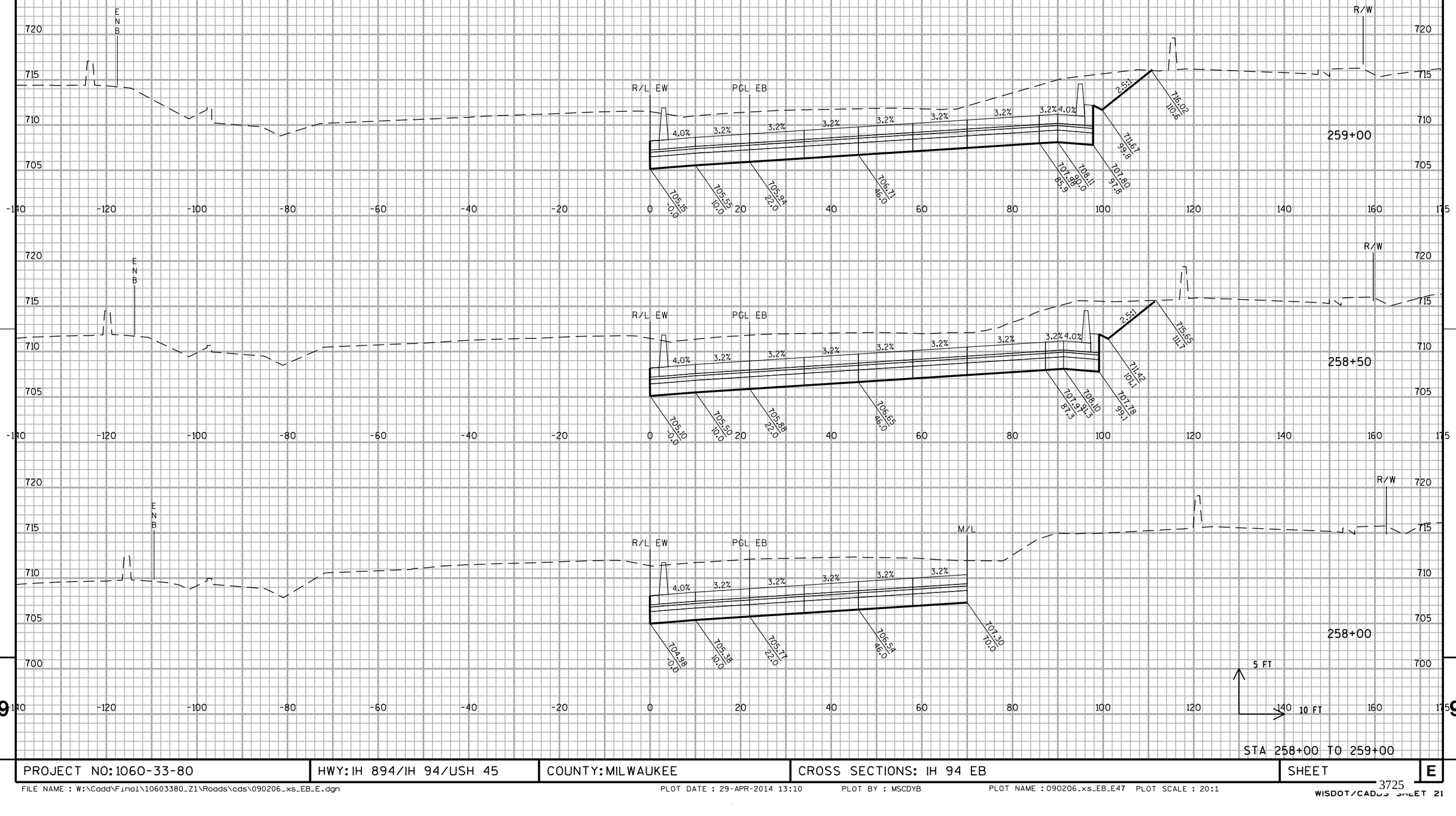
ALL WORK STAGE 4



STA 256+50 TO 257+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 4

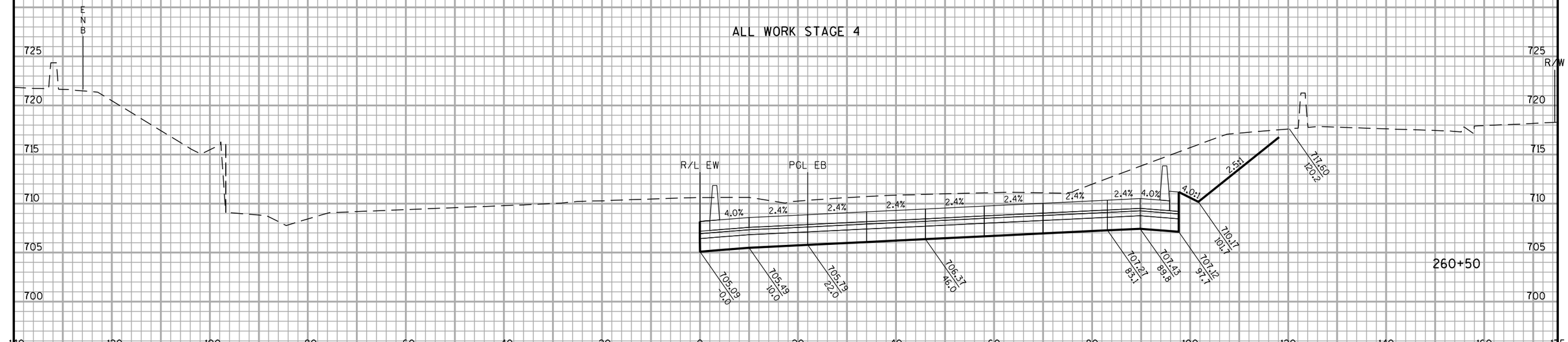


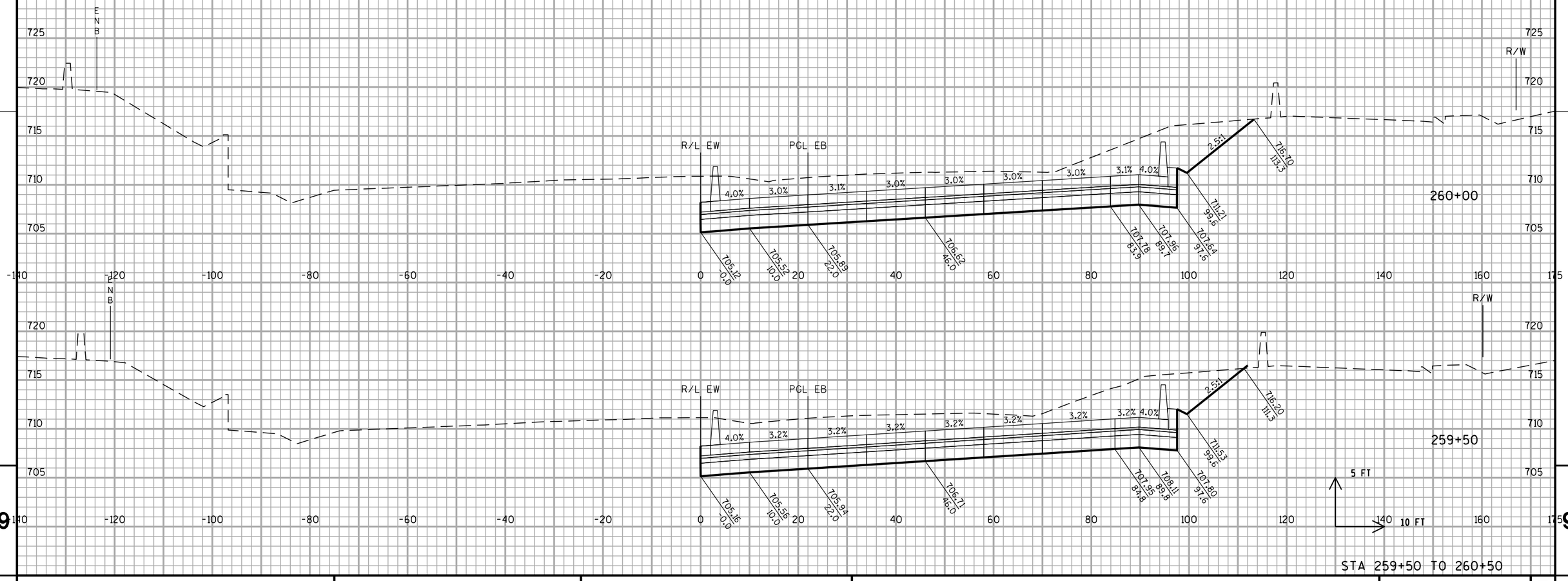
STA 258+00 TO 259+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E47 PLOT SCALE : 20:1

ALL WORK STAGE 4



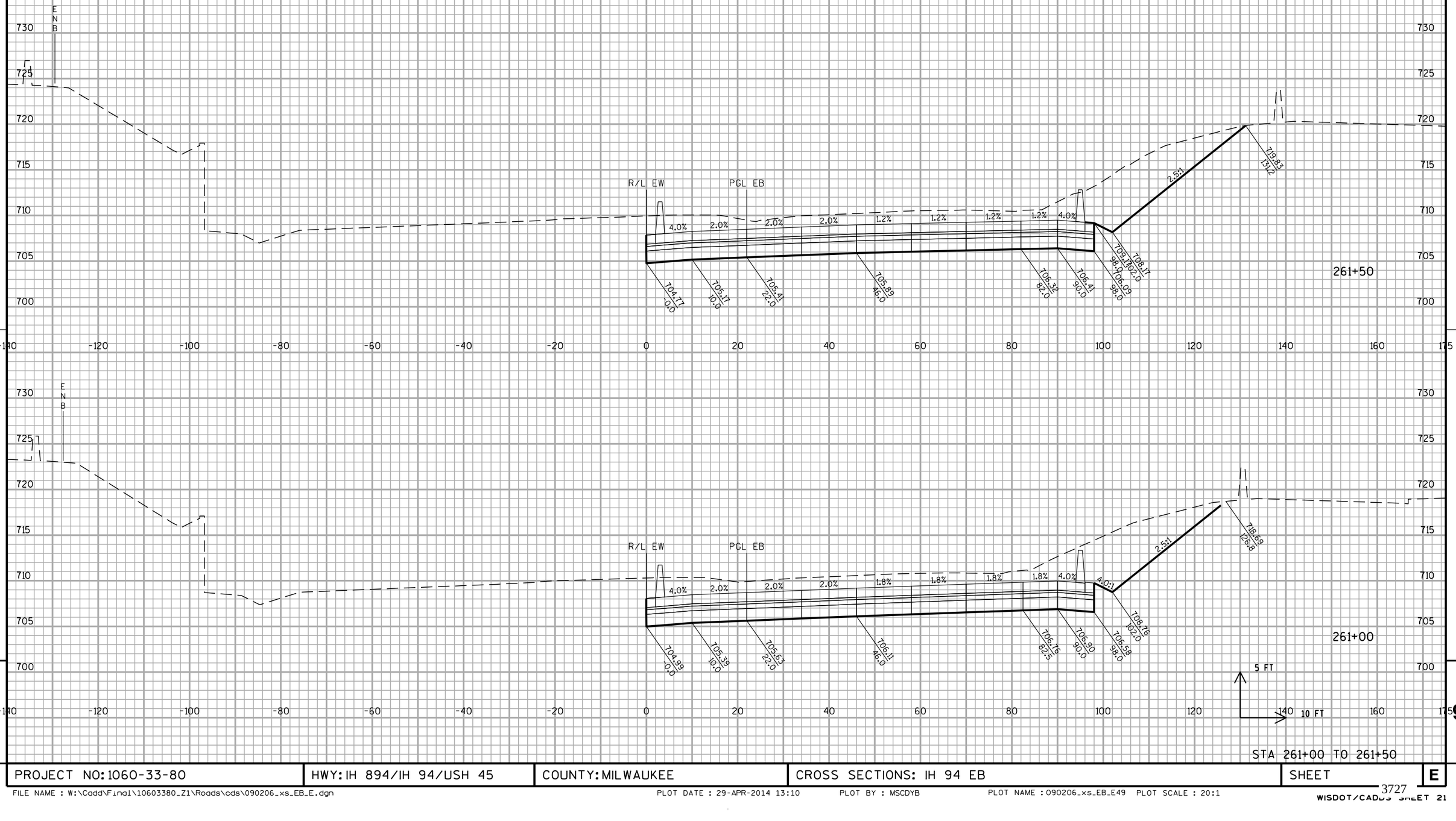


STA 259+50 TO 260+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E48 PLOT SCALE : 20:1

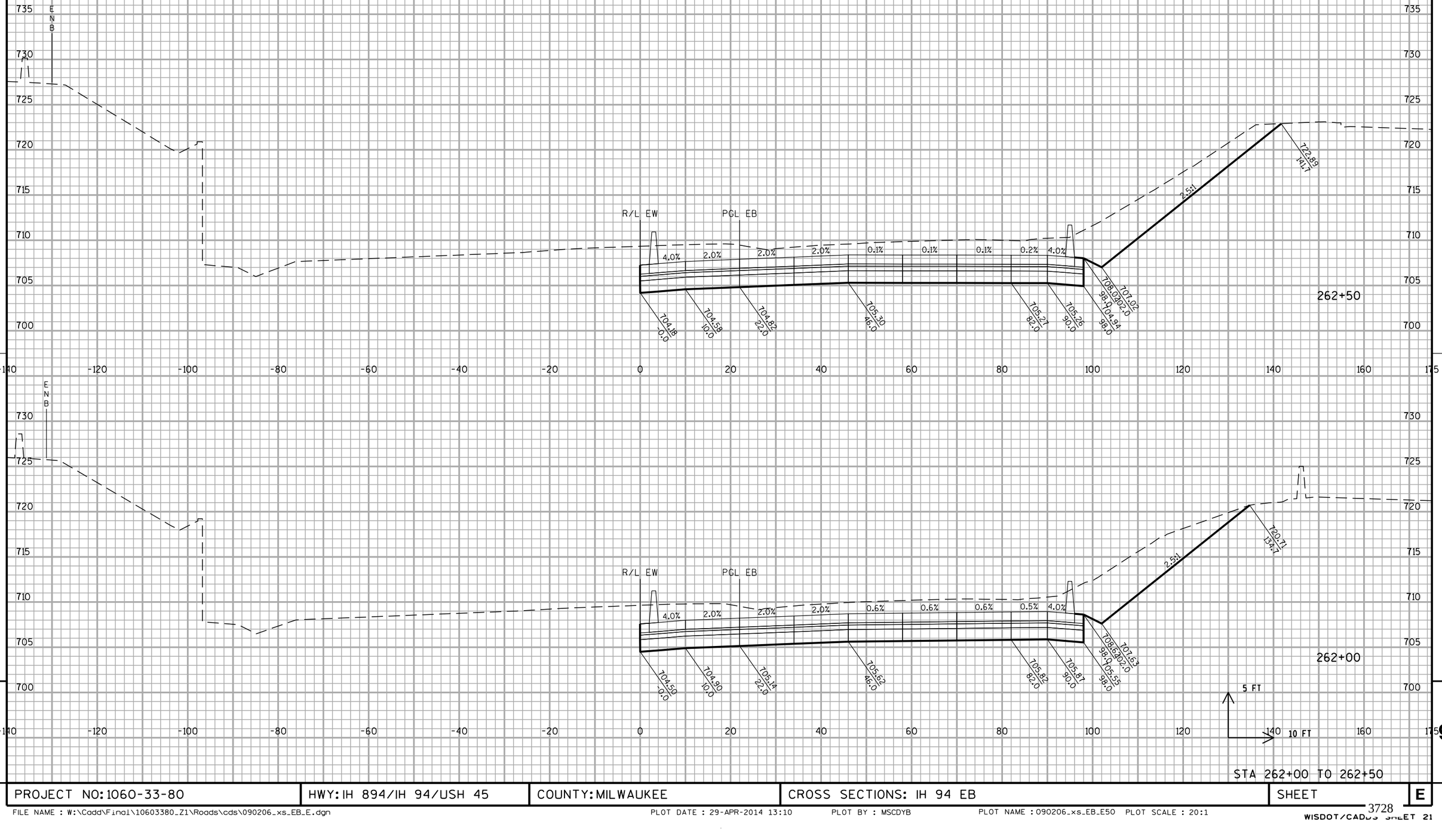
ALL WORK STAGE 4



STA 261+00 TO 261+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

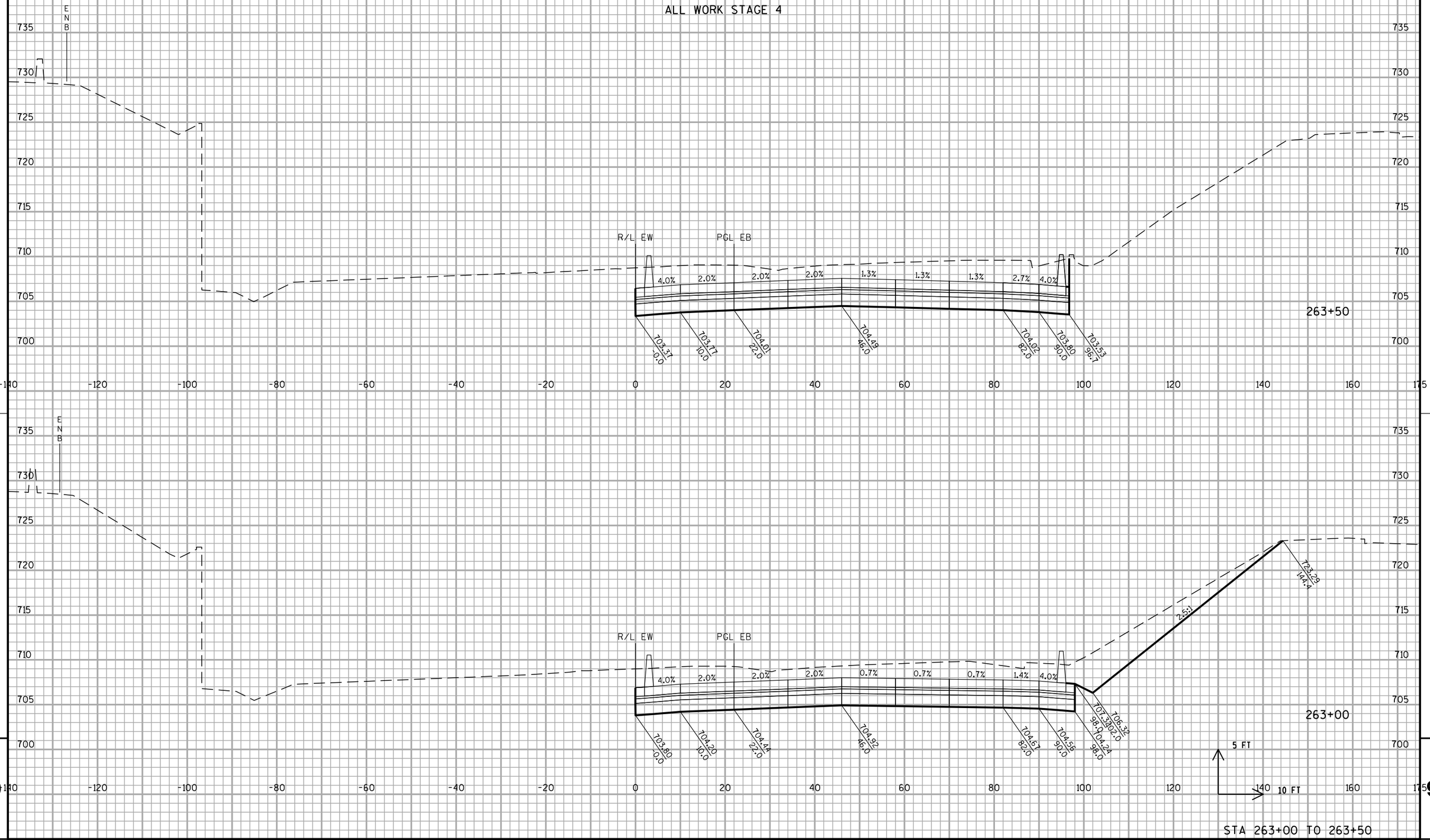
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E50 PLOT SCALE : 20:1

ALL WORK STAGE 4



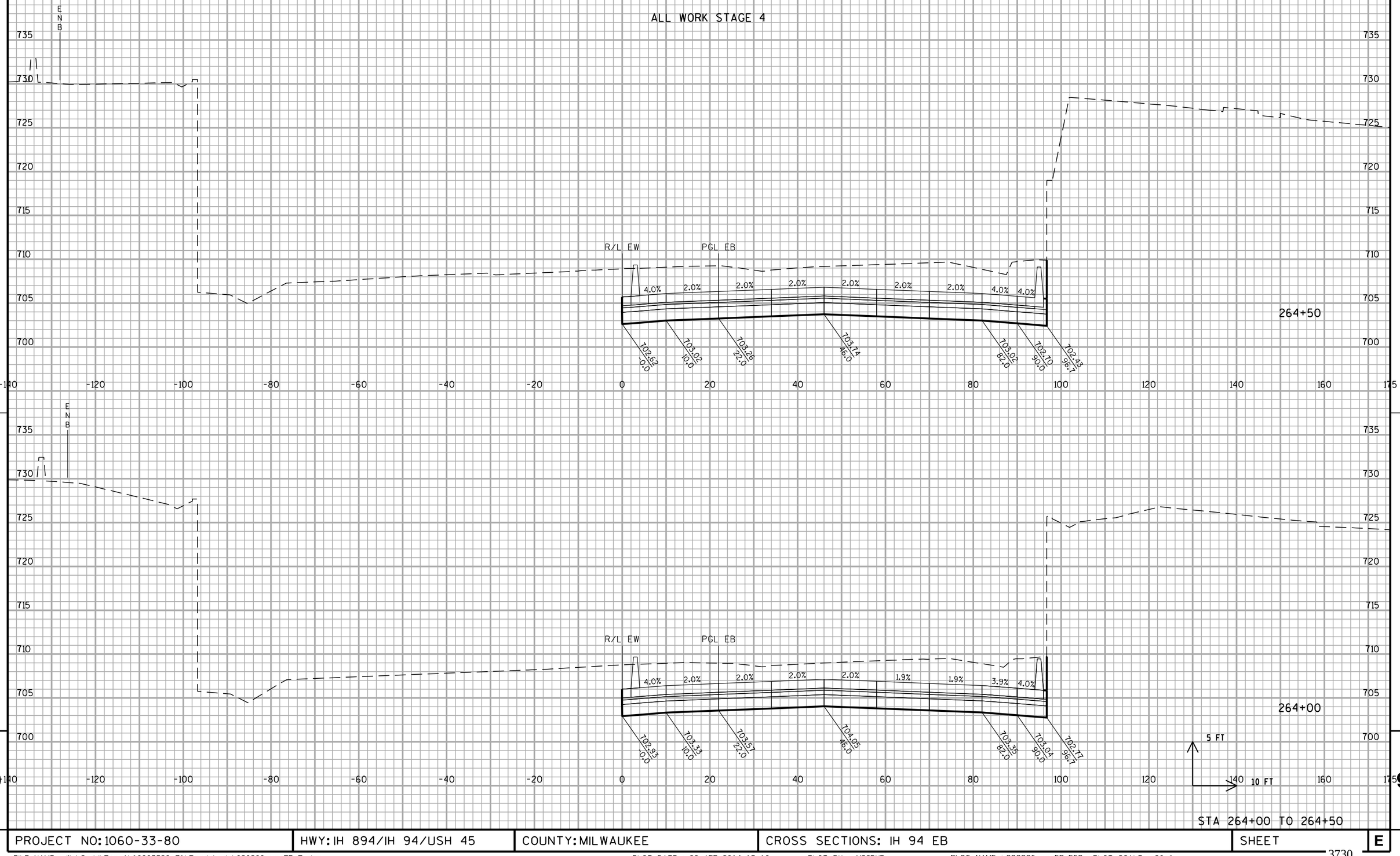
STA 263+00 TO 263+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E51 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



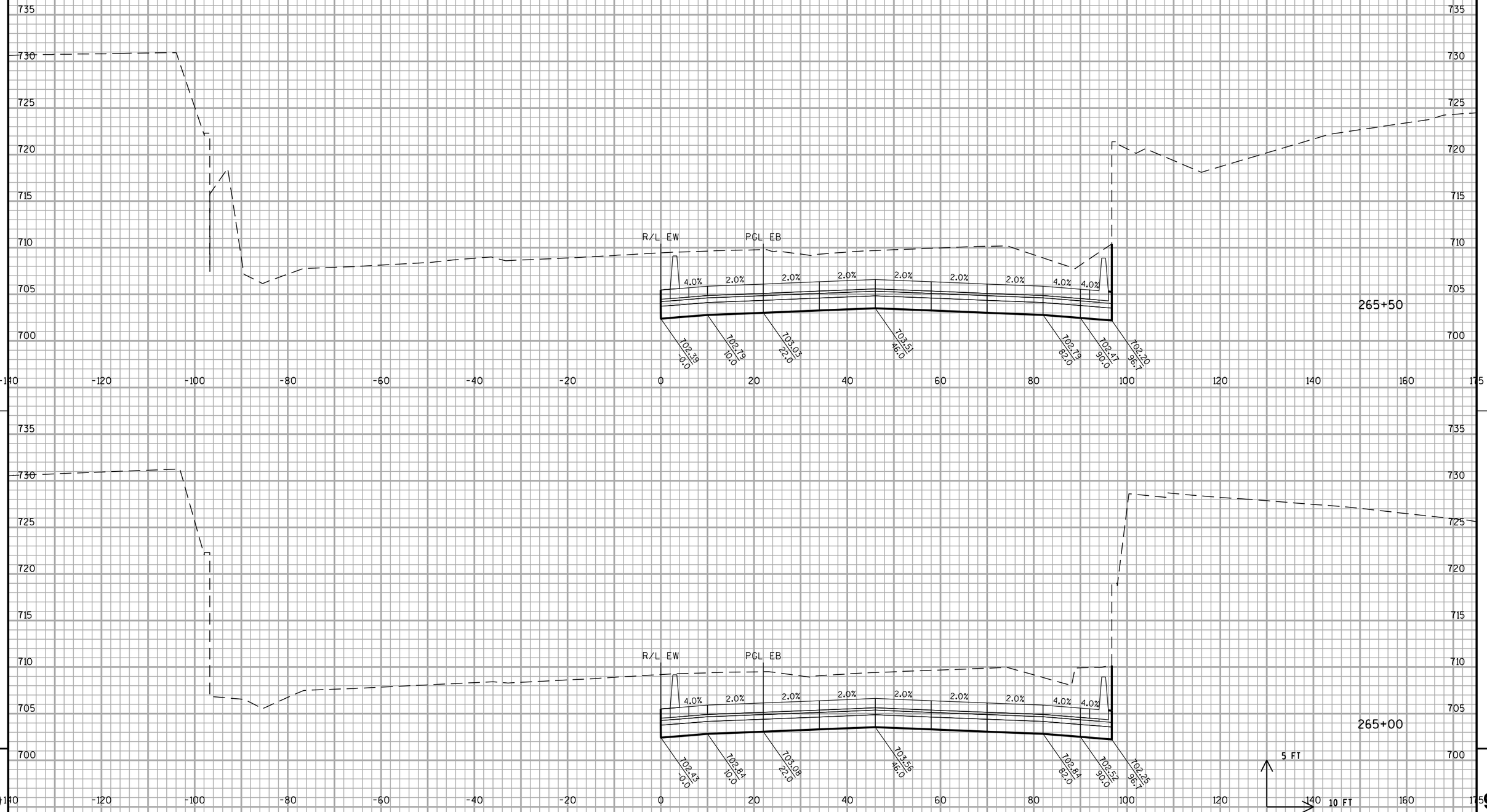
STA 264+00 TO 264+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E52 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

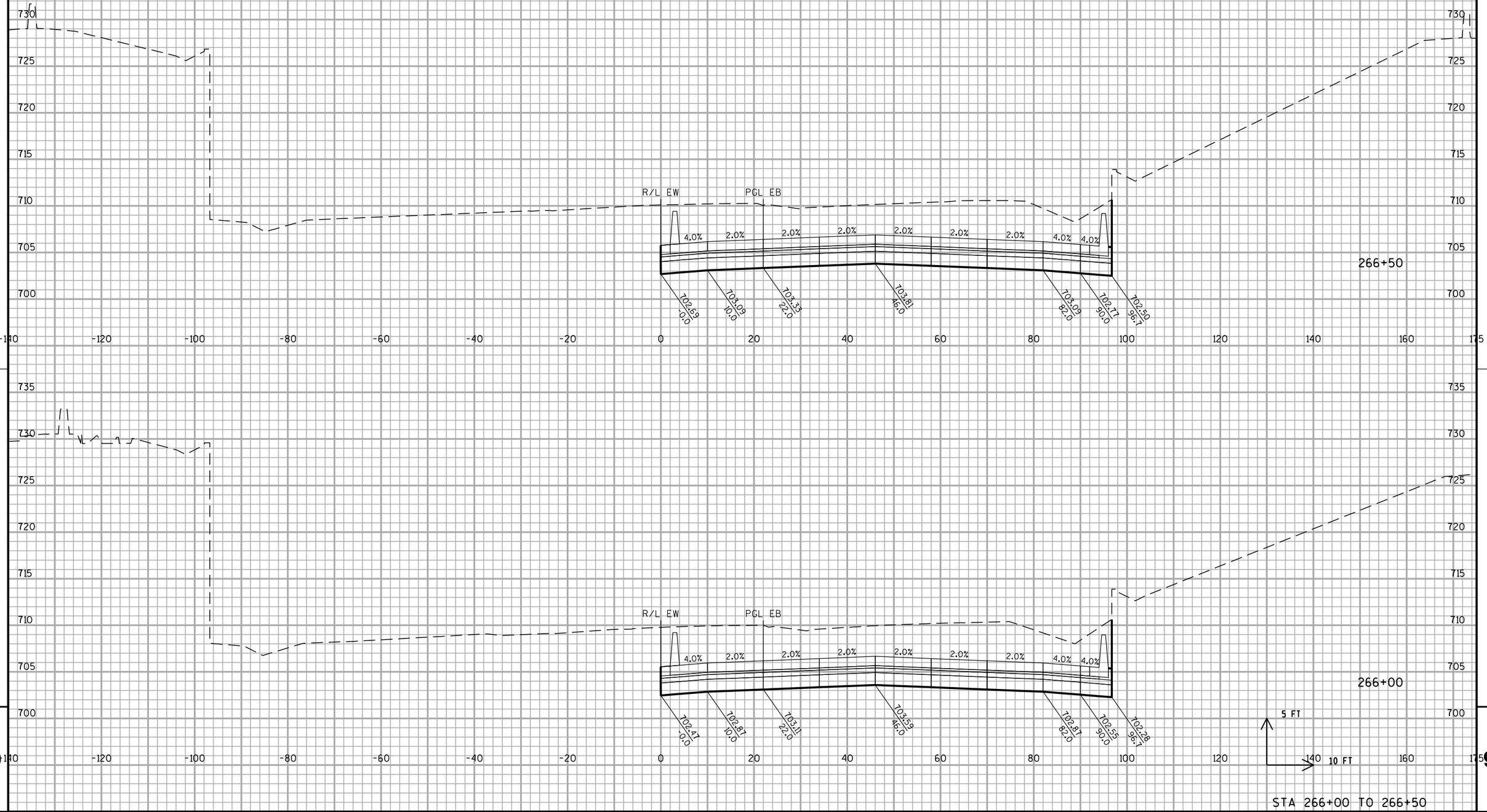
ALL WORK STAGE 4



STA 265+00 TO 265+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

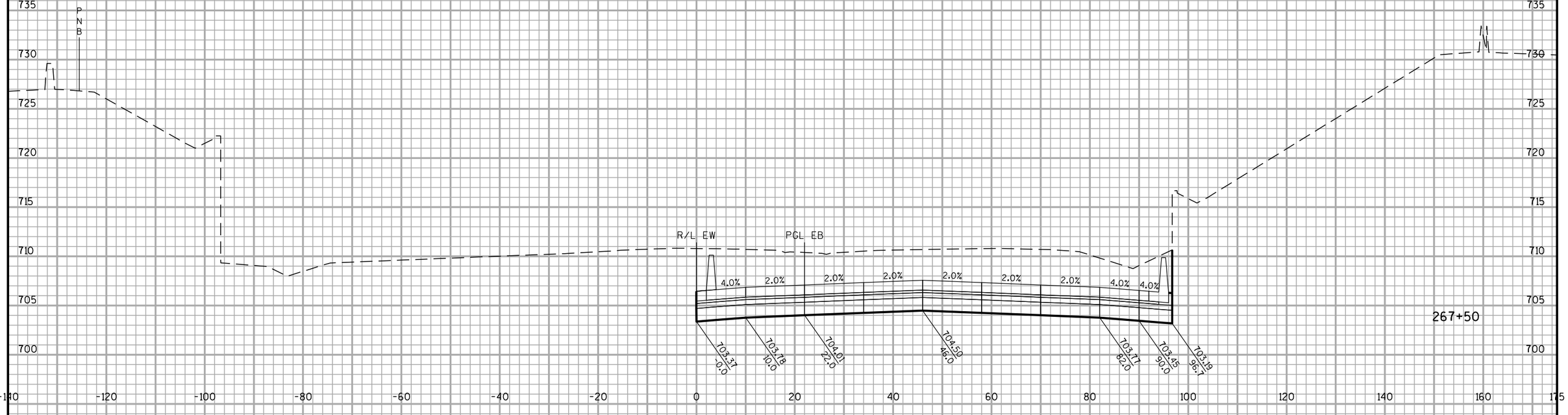
ALL WORK STAGE 4

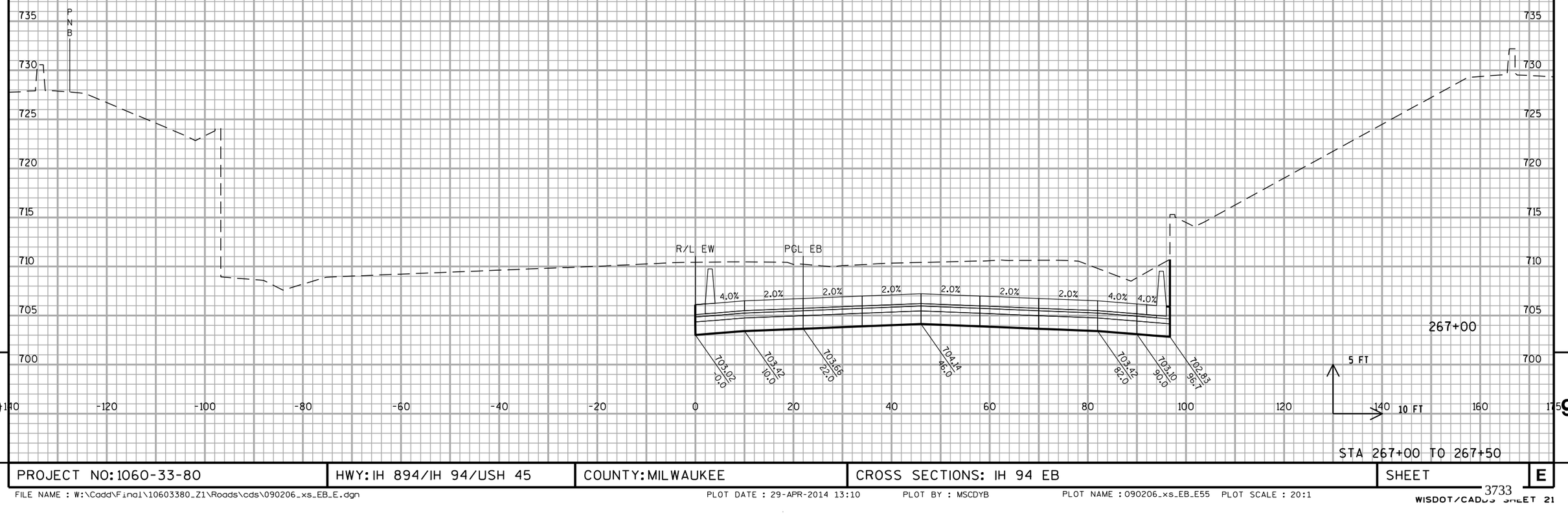


STA 266+00 TO 266+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 4





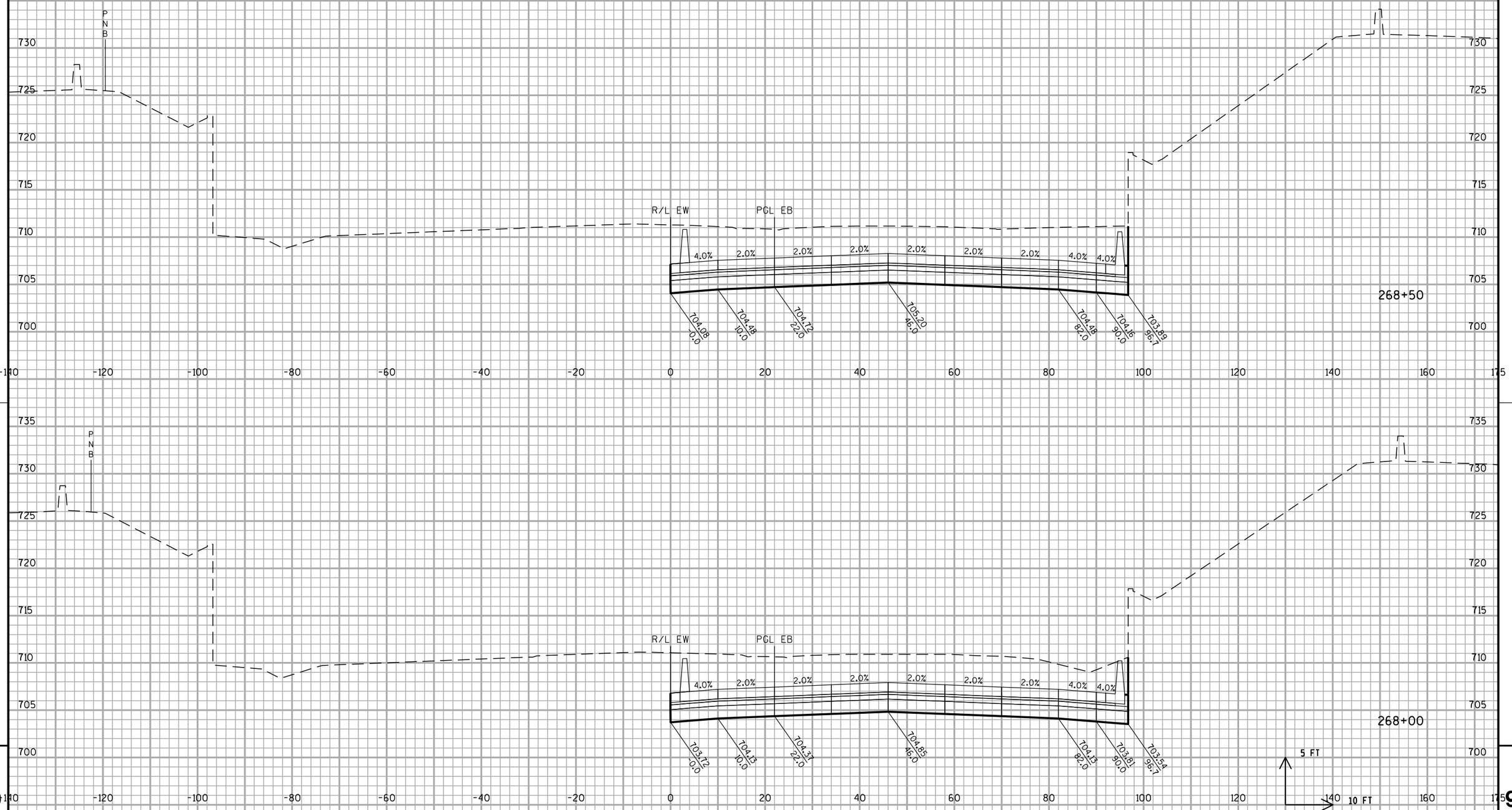
STA 267+00 TO 267+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E55 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



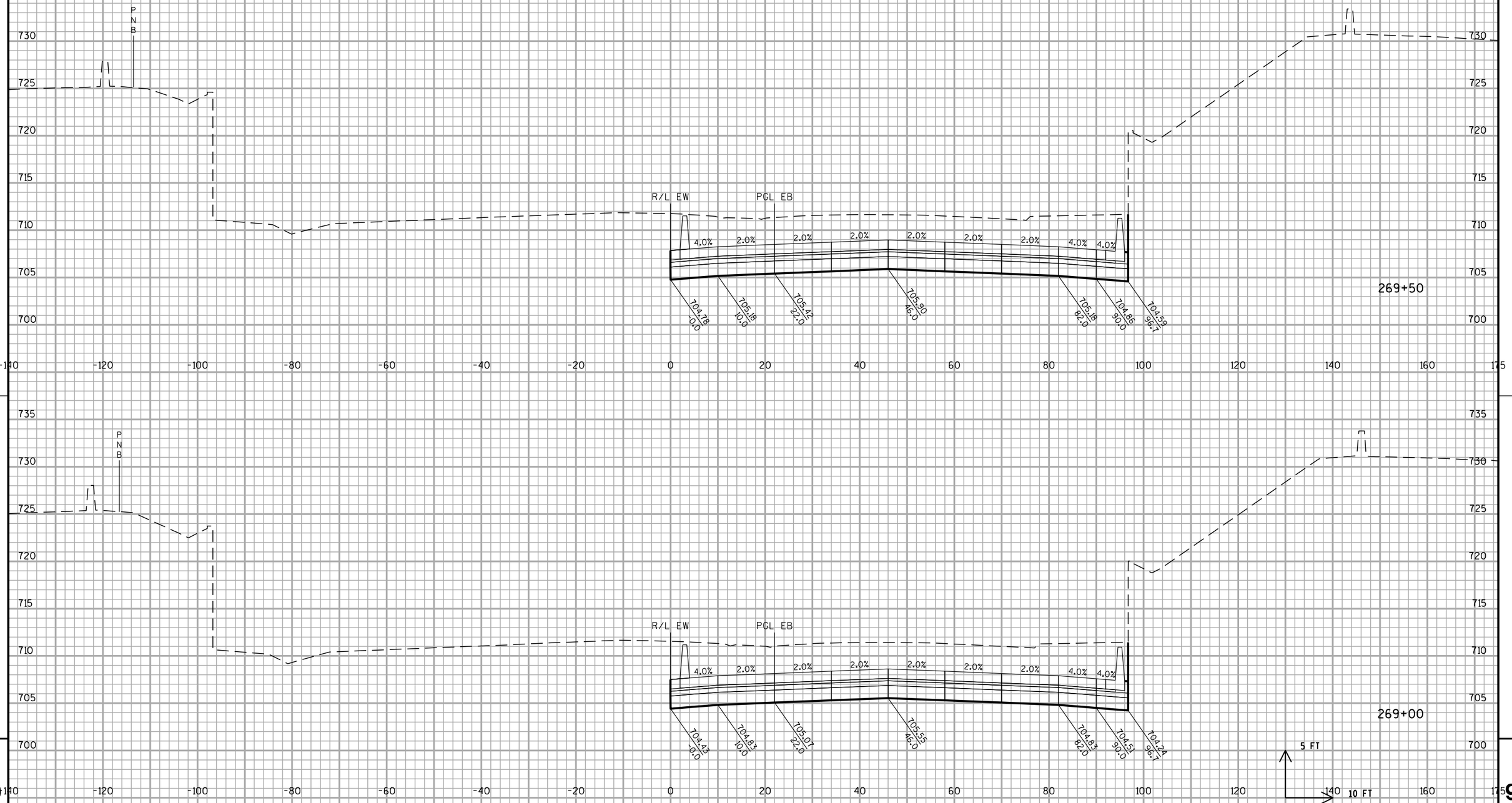
STA 268+00 TO 268+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E56 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



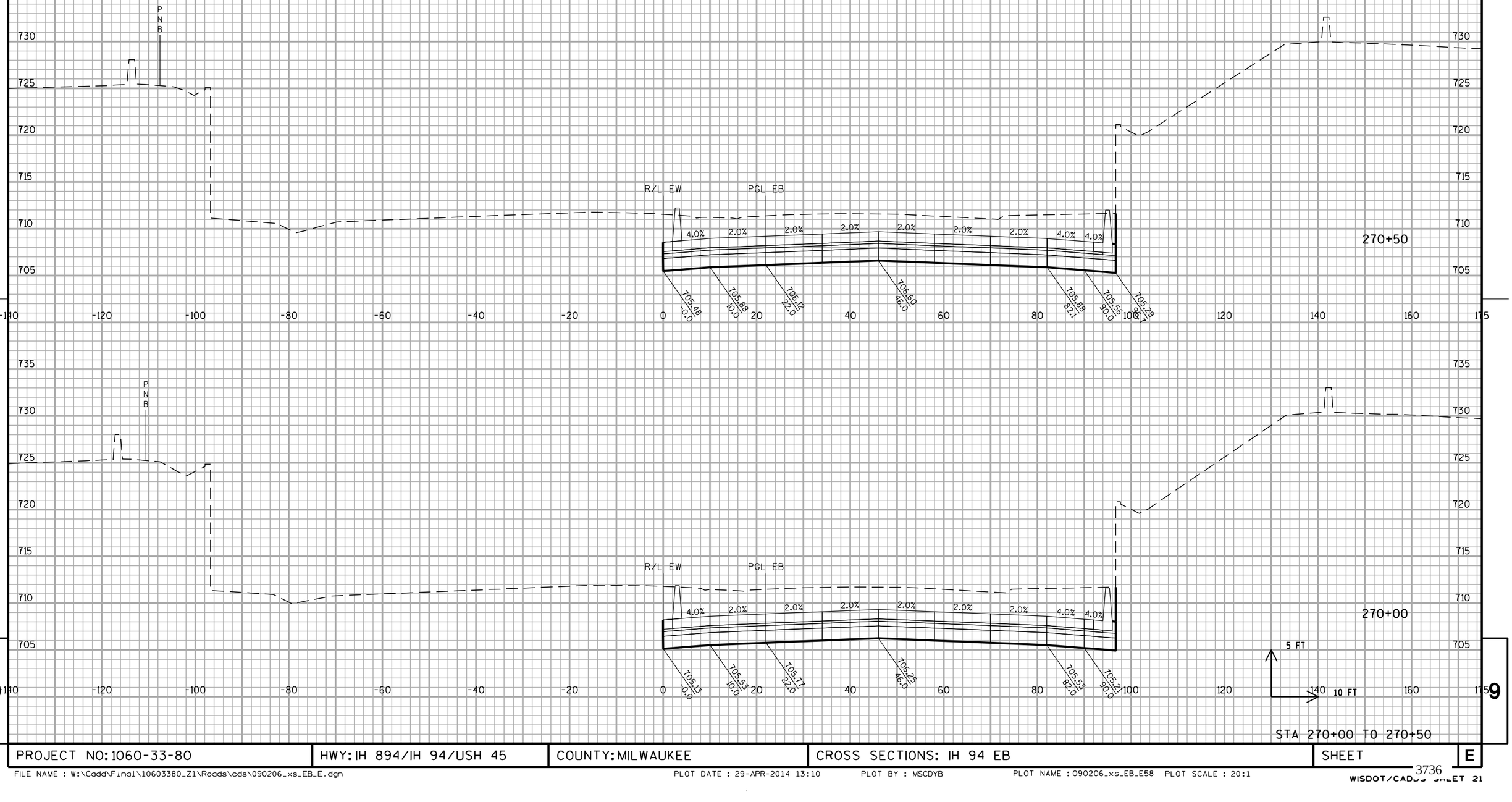
STA 269+00 TO 269+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E57 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

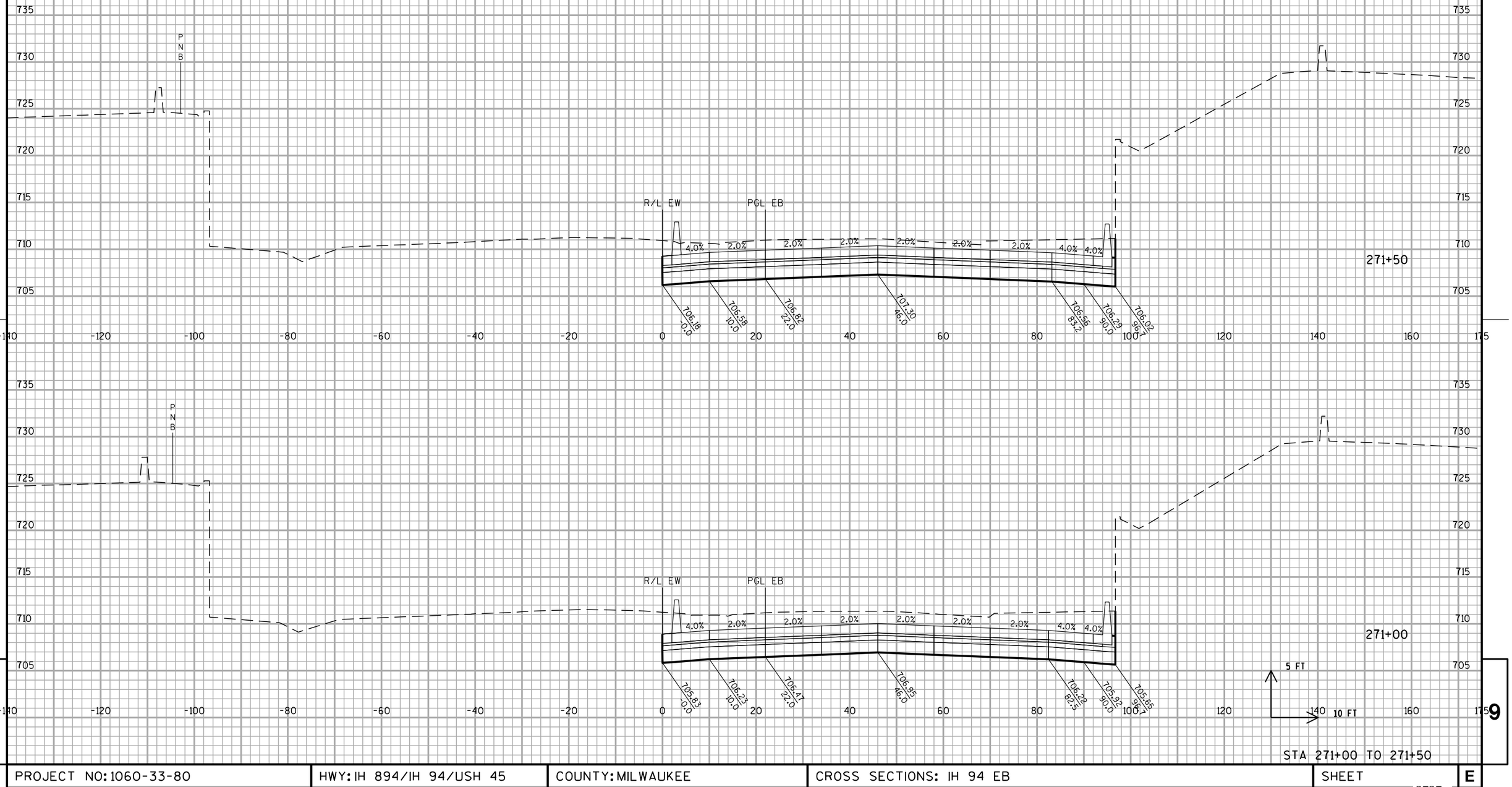


STA 270+00 TO 270+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E58 PLOT SCALE : 20:1

ALL WORK STAGE 4

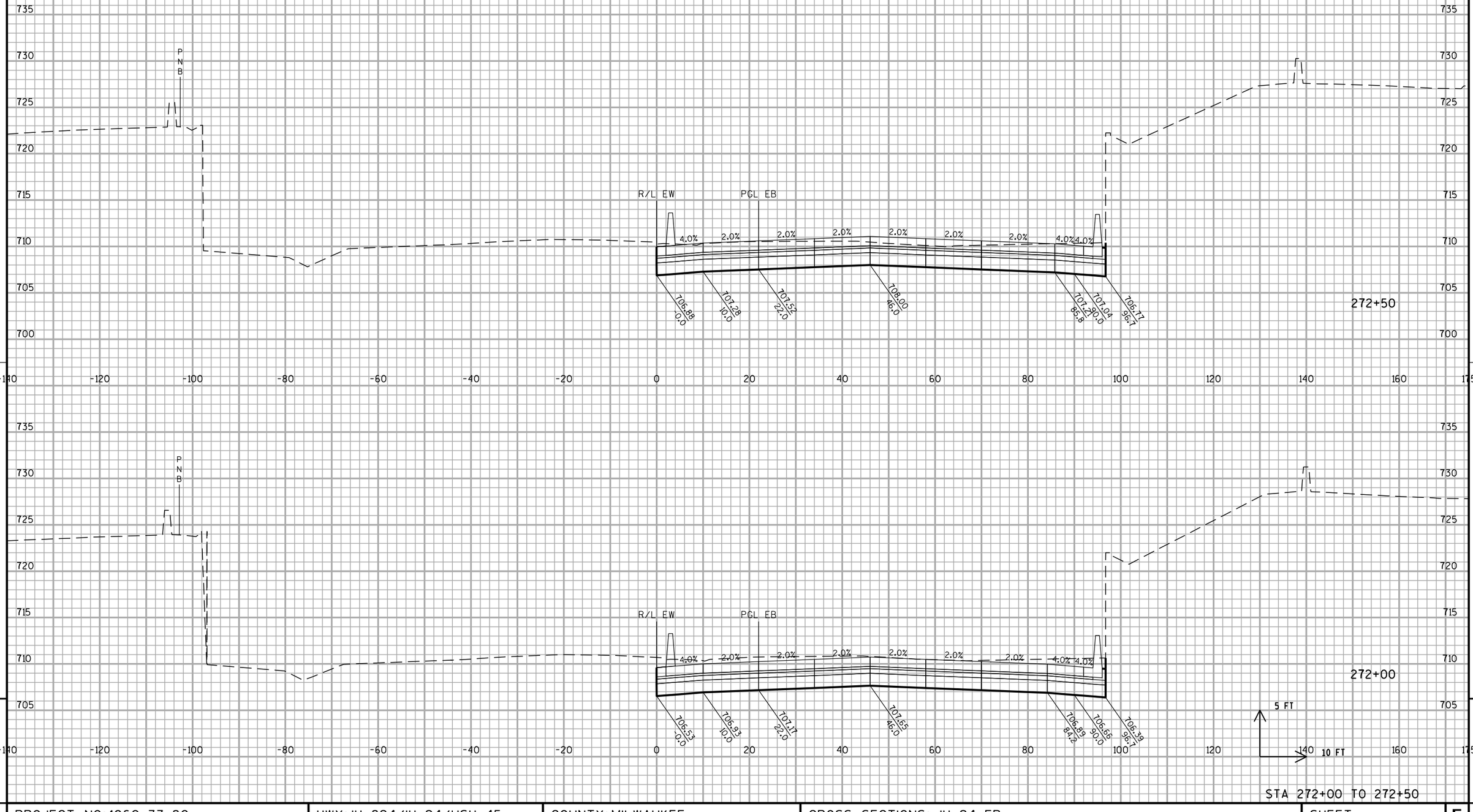


STA 271+00 TO 271+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E59 PLOT SCALE : 20:1

ALL WORK STAGE 4



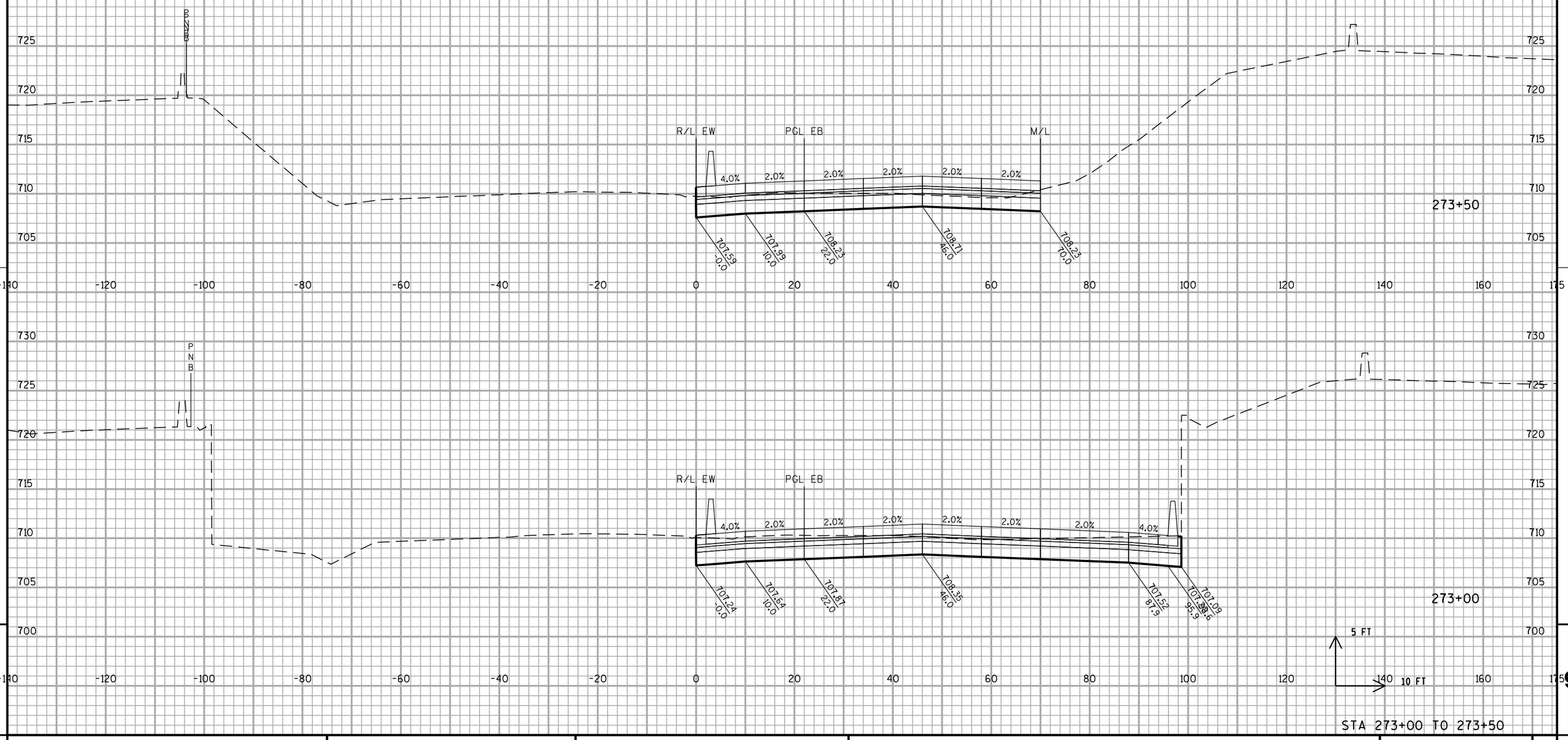
STA 272+00 TO 272+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E60 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

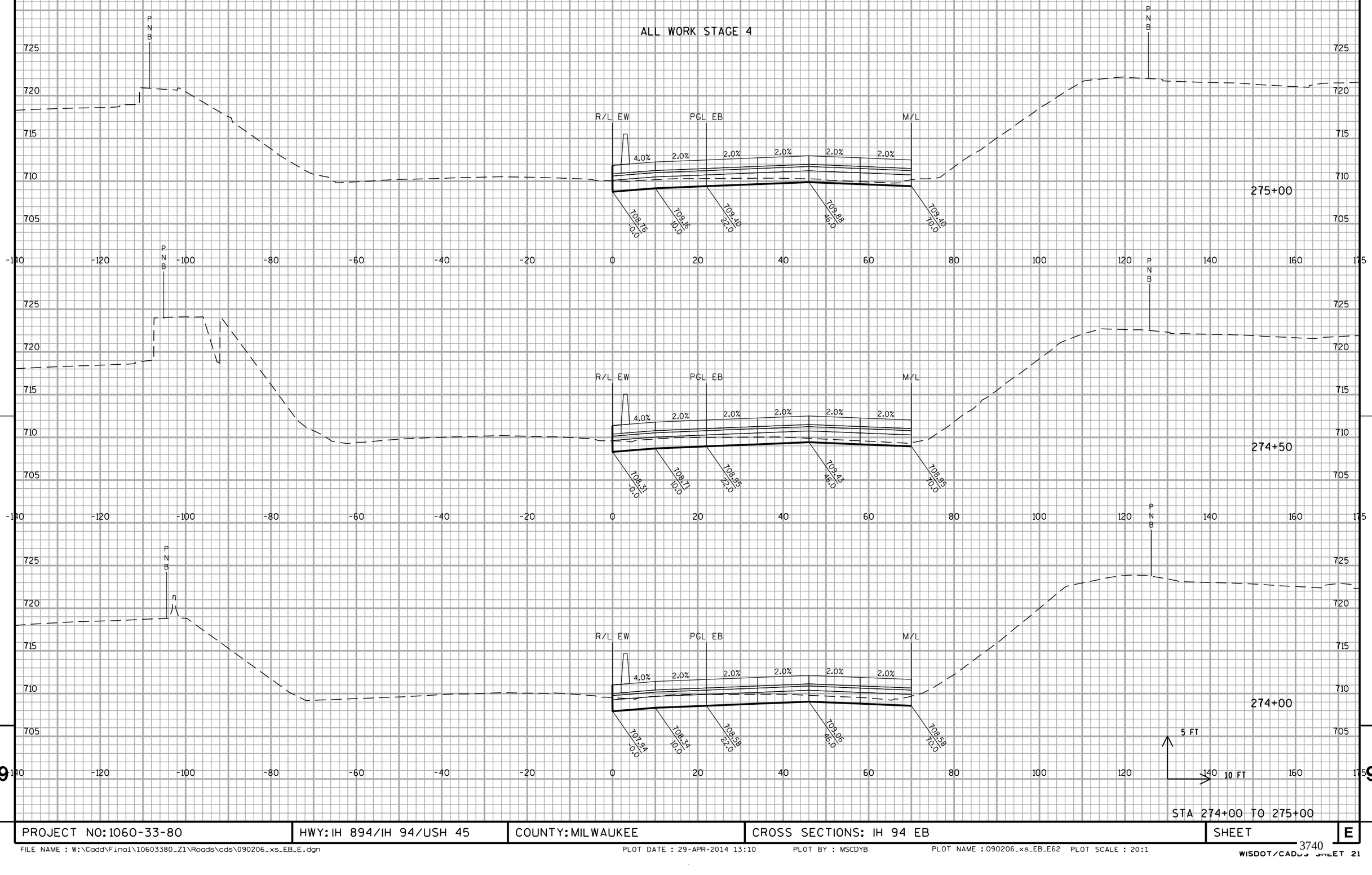
ALL WORK STAGE 4



STA 273+00 TO 273+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

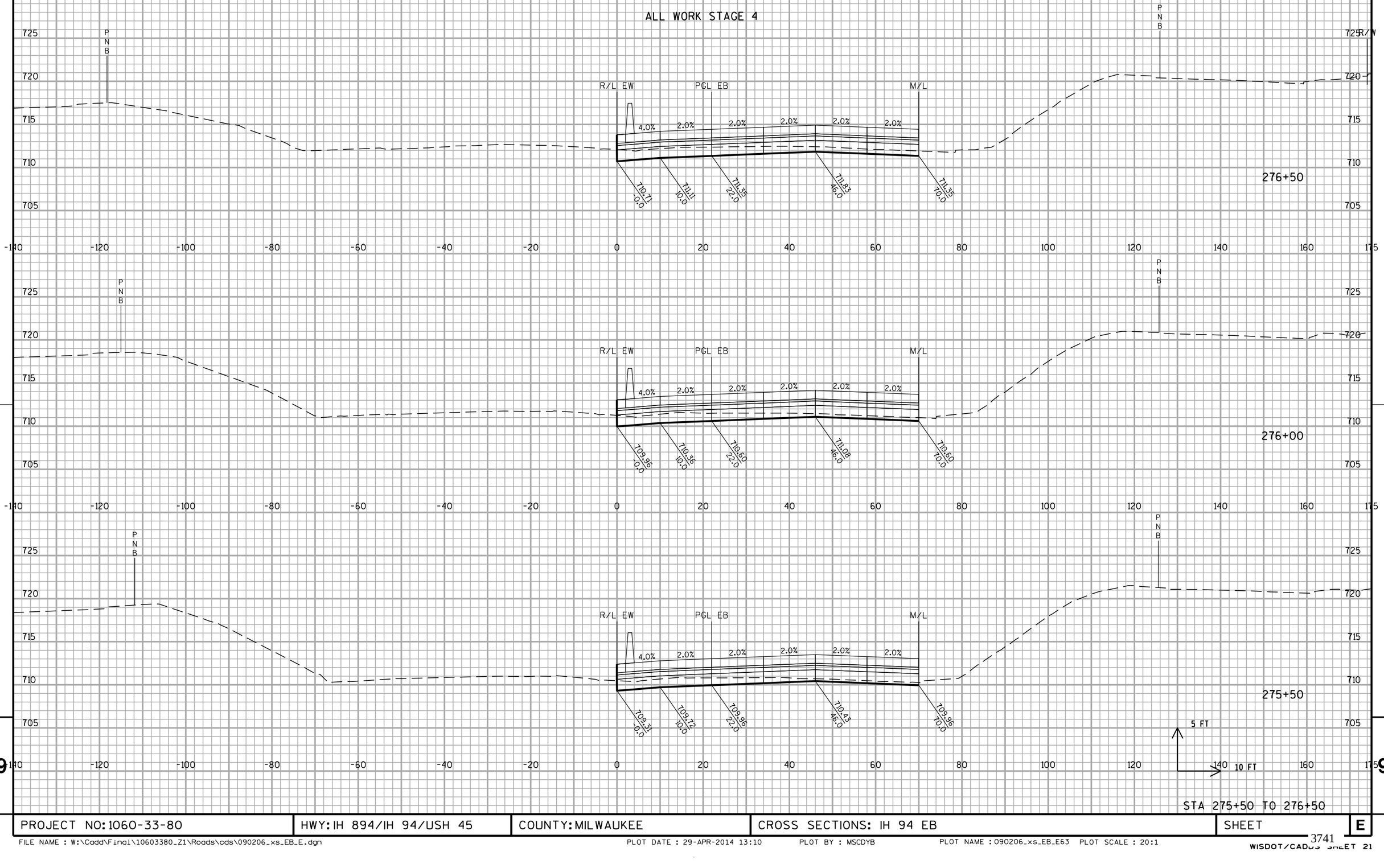
ALL WORK STAGE 4



STA 274+00 TO 275+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

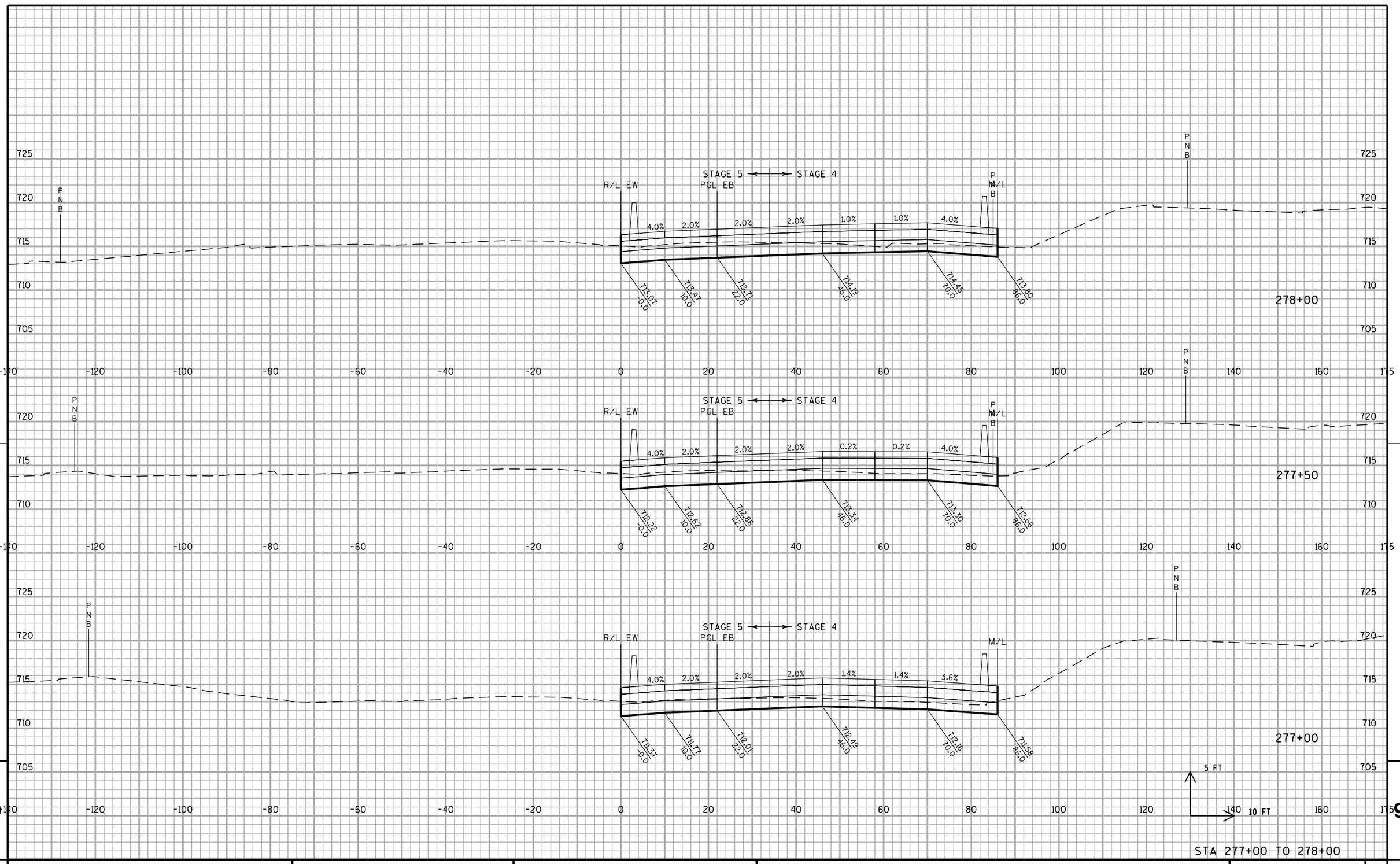
ALL WORK STAGE 4



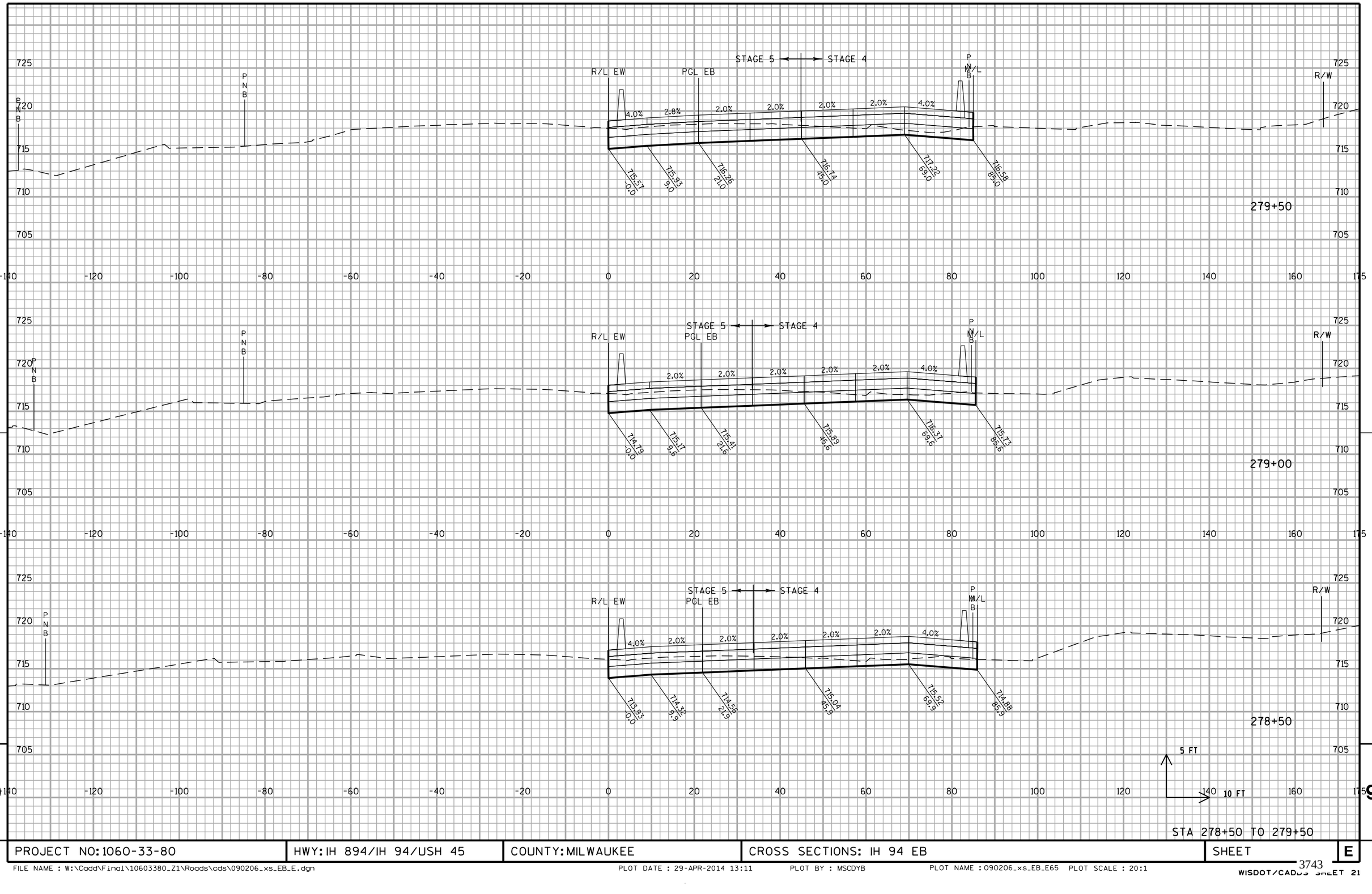
STA 275+50 TO 276+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:10 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E63 PLOT SCALE : 20:1

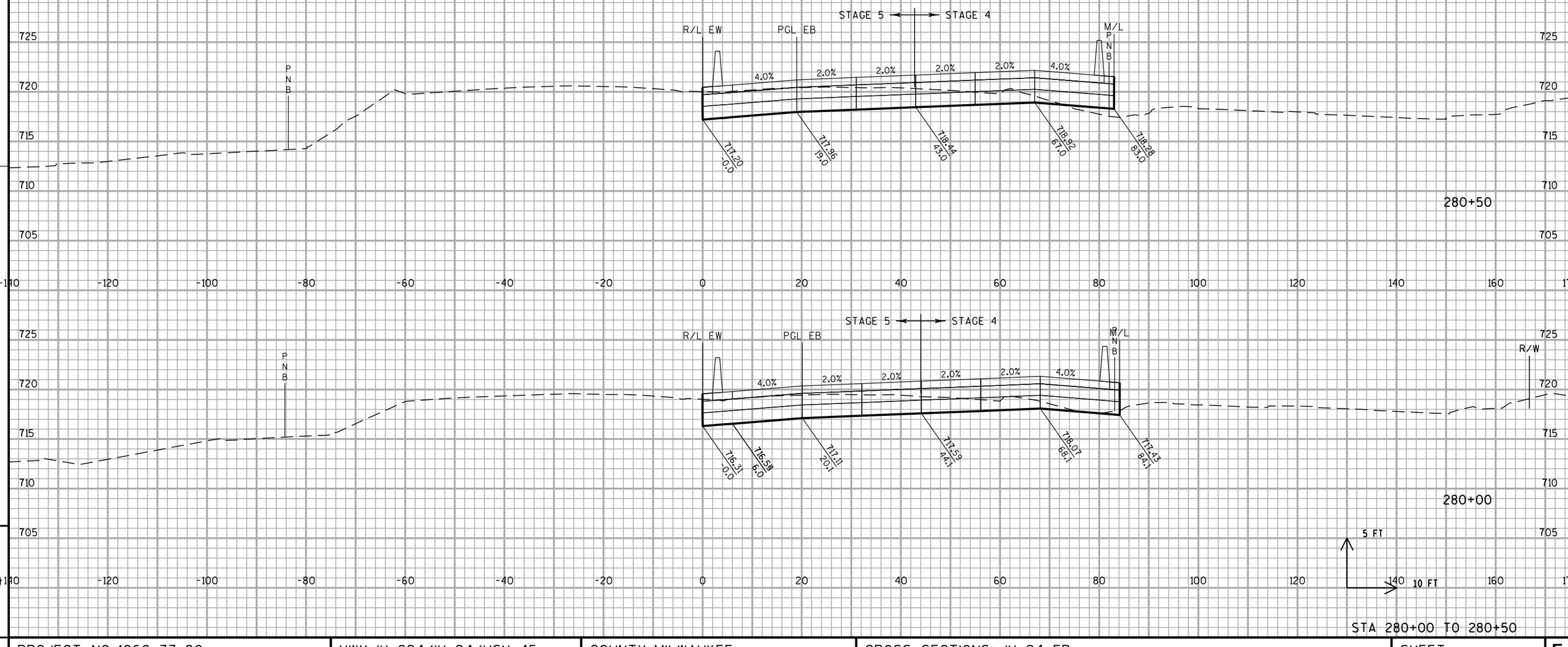


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 278+50 TO 279+50

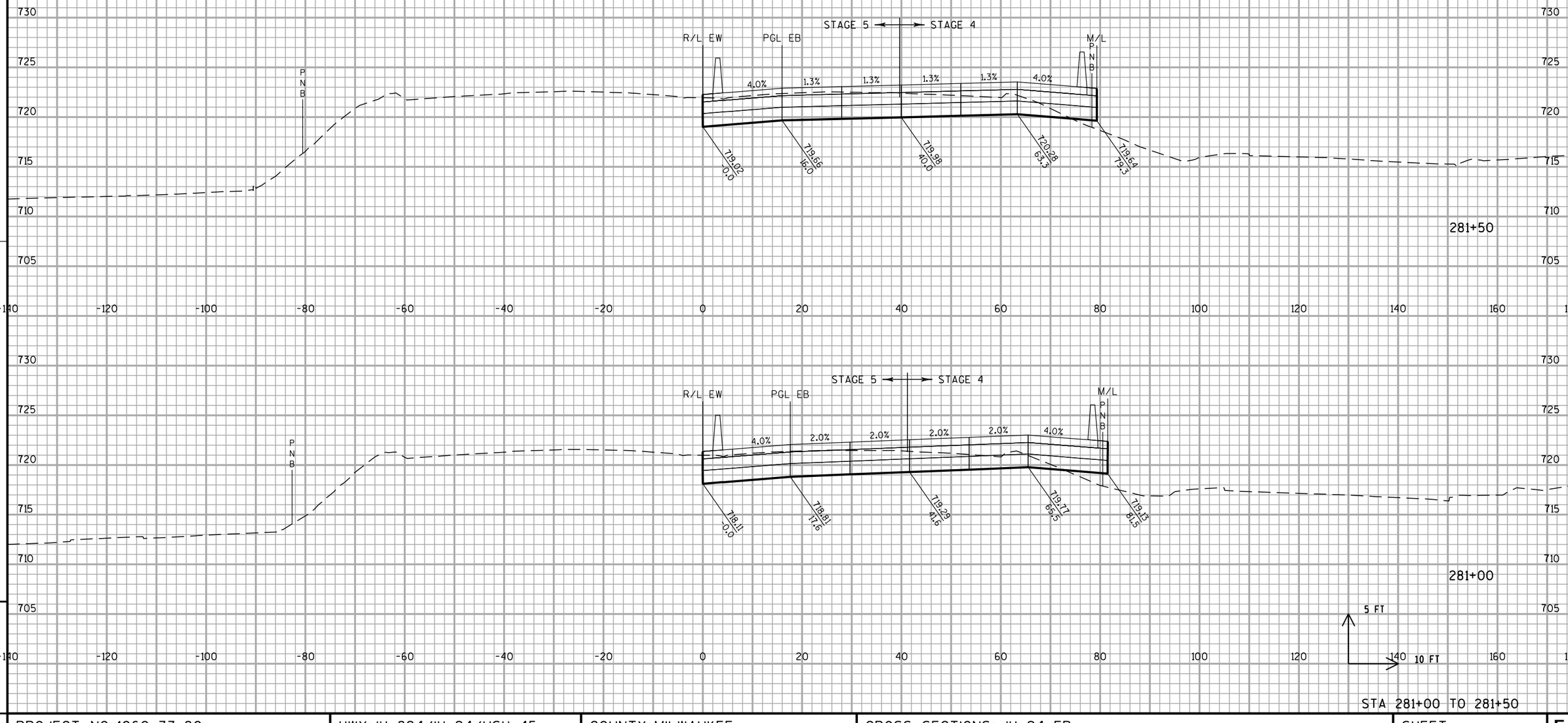
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 280+00 TO 280+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E66 PLOT SCALE : 20:1



9

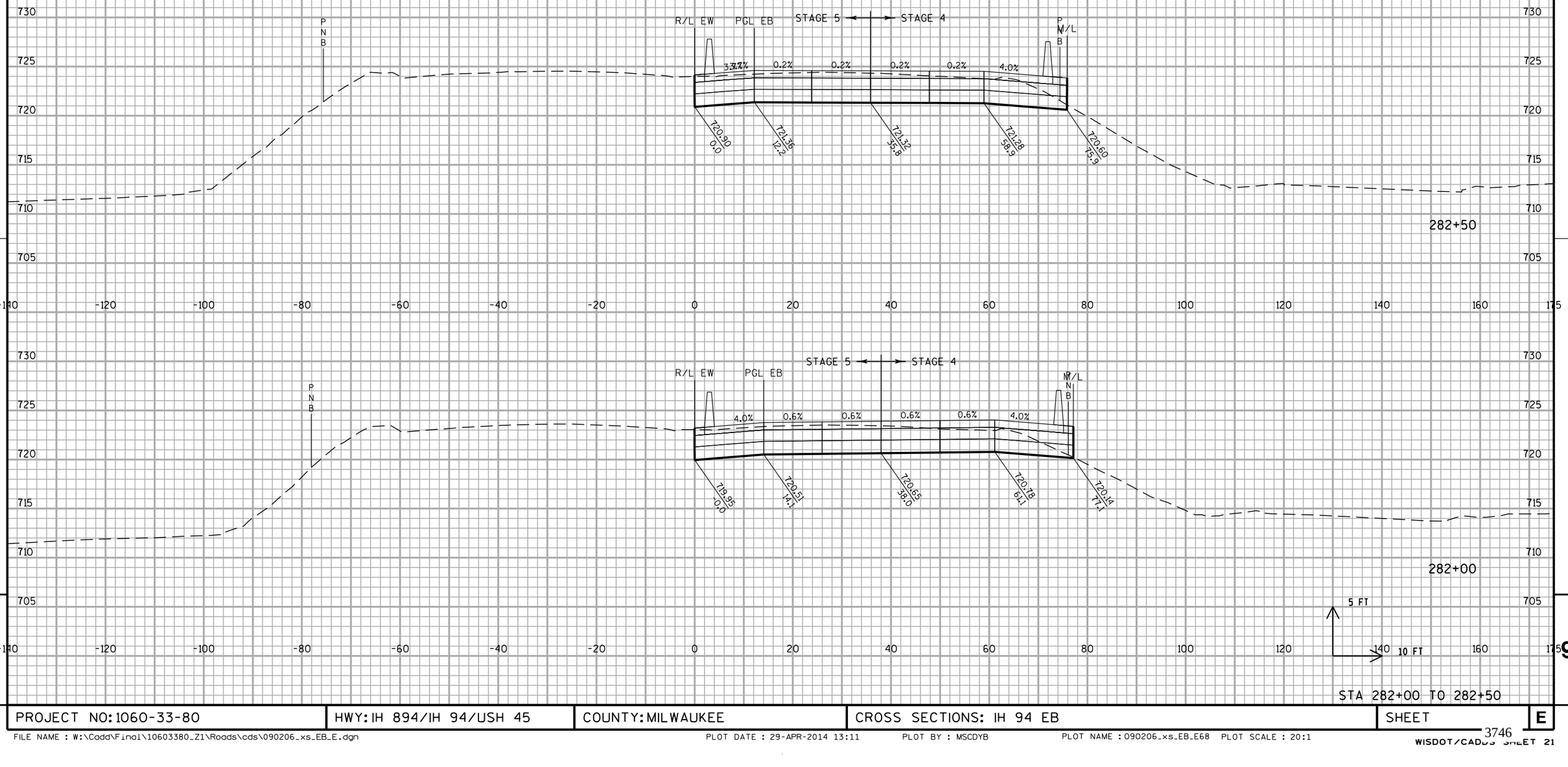
9

STA 281+00 TO 281+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E67 PLOT SCALE : 20:1

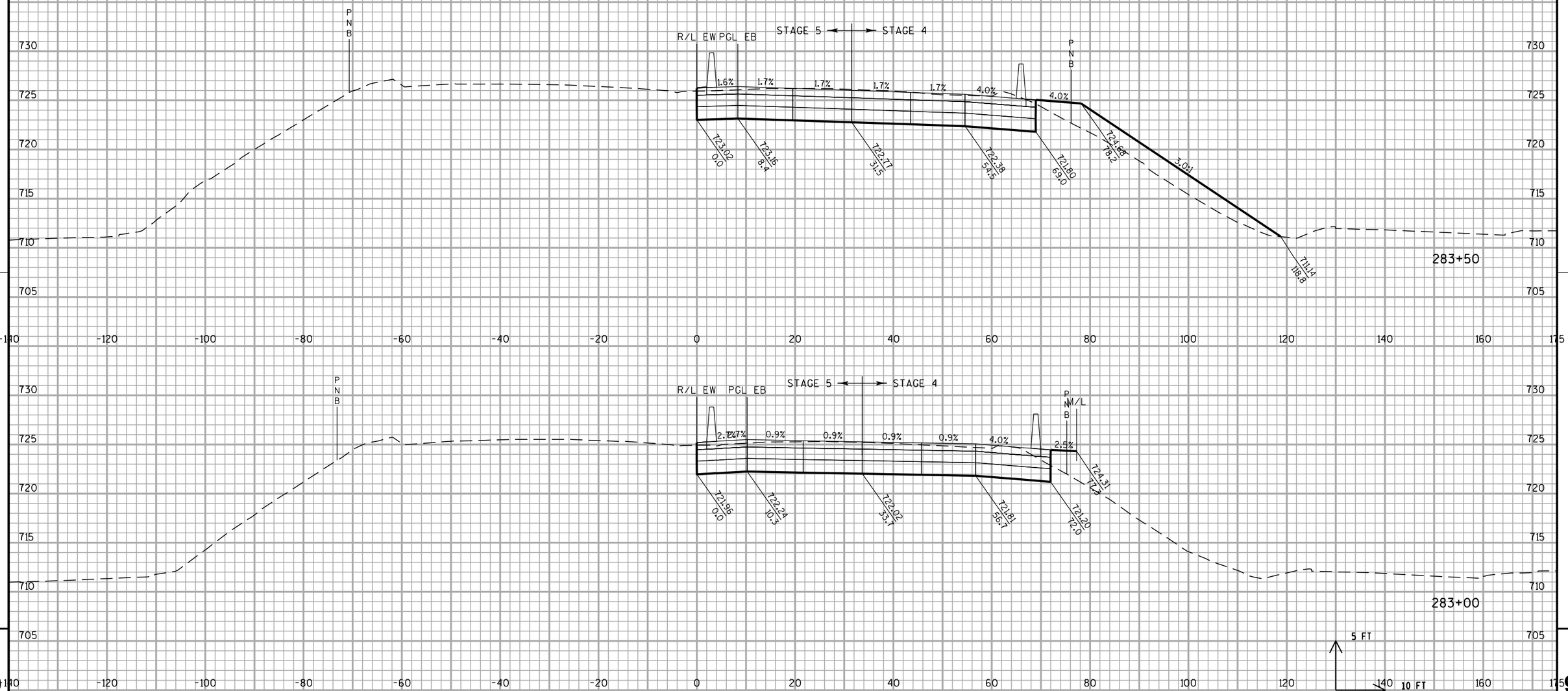
WISDOT/CADDS SHEET 21



STA 282+00 TO 282+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

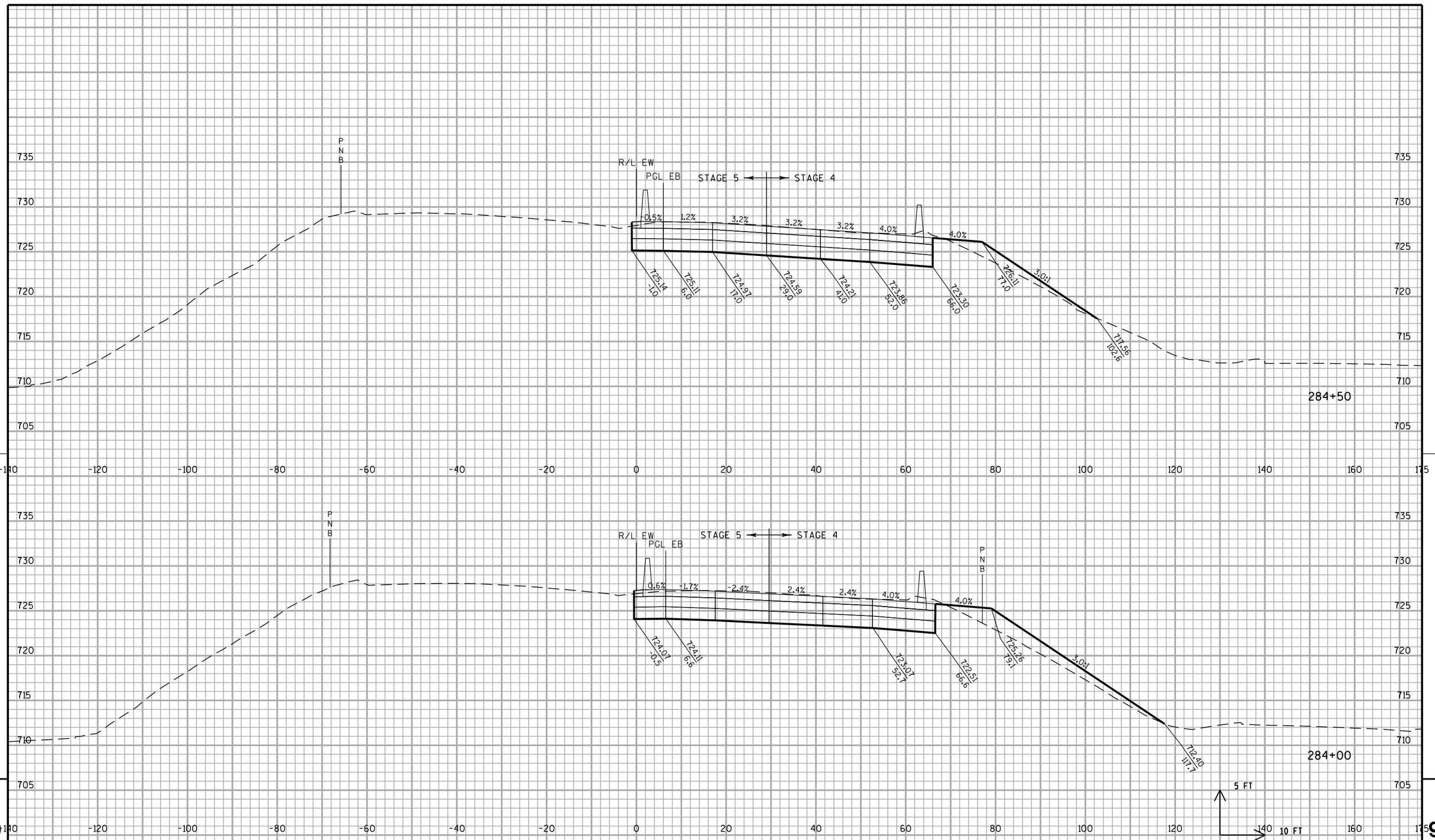
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E68 PLOT SCALE : 20:1



STA 283+00 TO 283+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

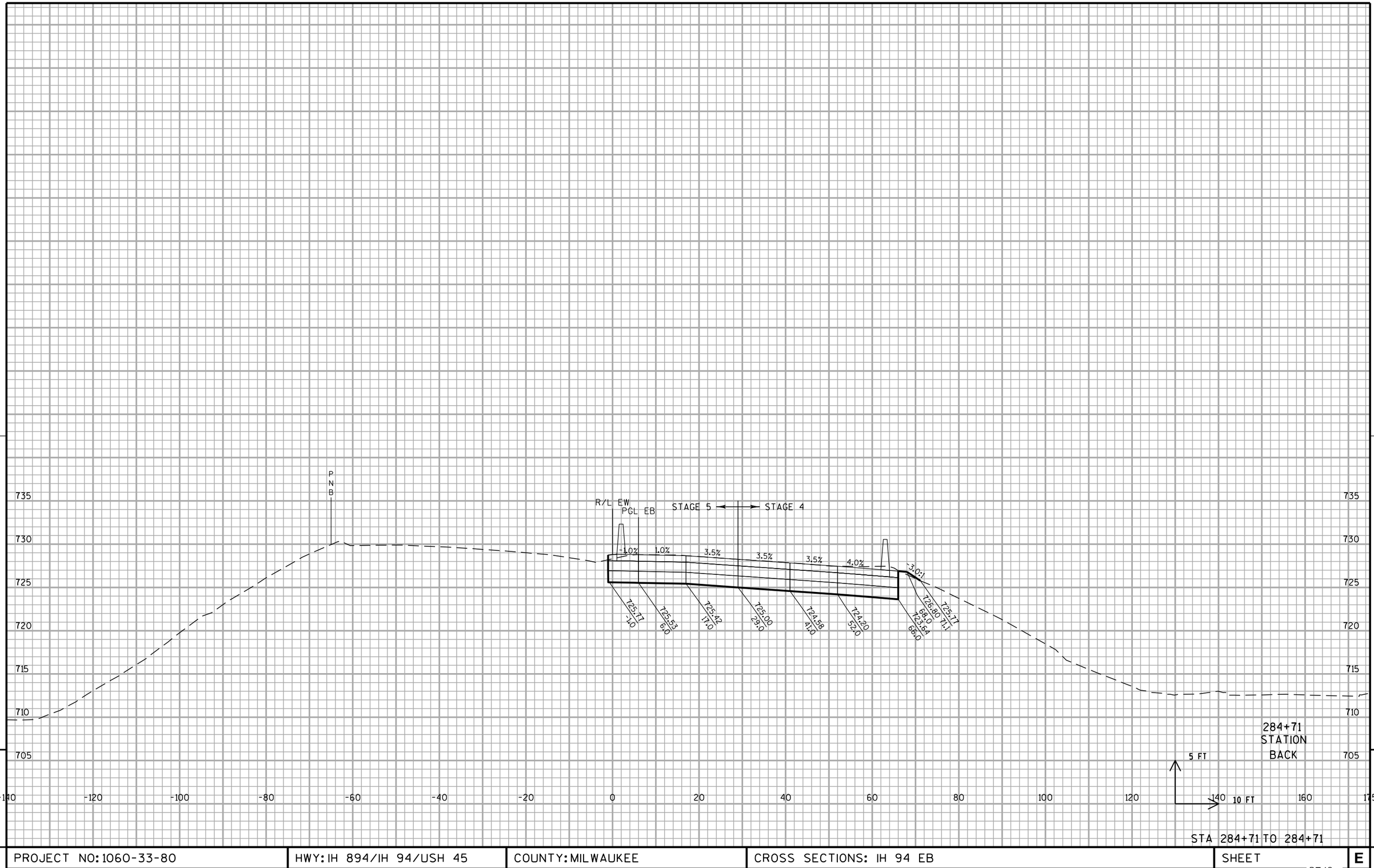
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E69 PLOT SCALE : 20:1



STA 284+00 TO 284+50

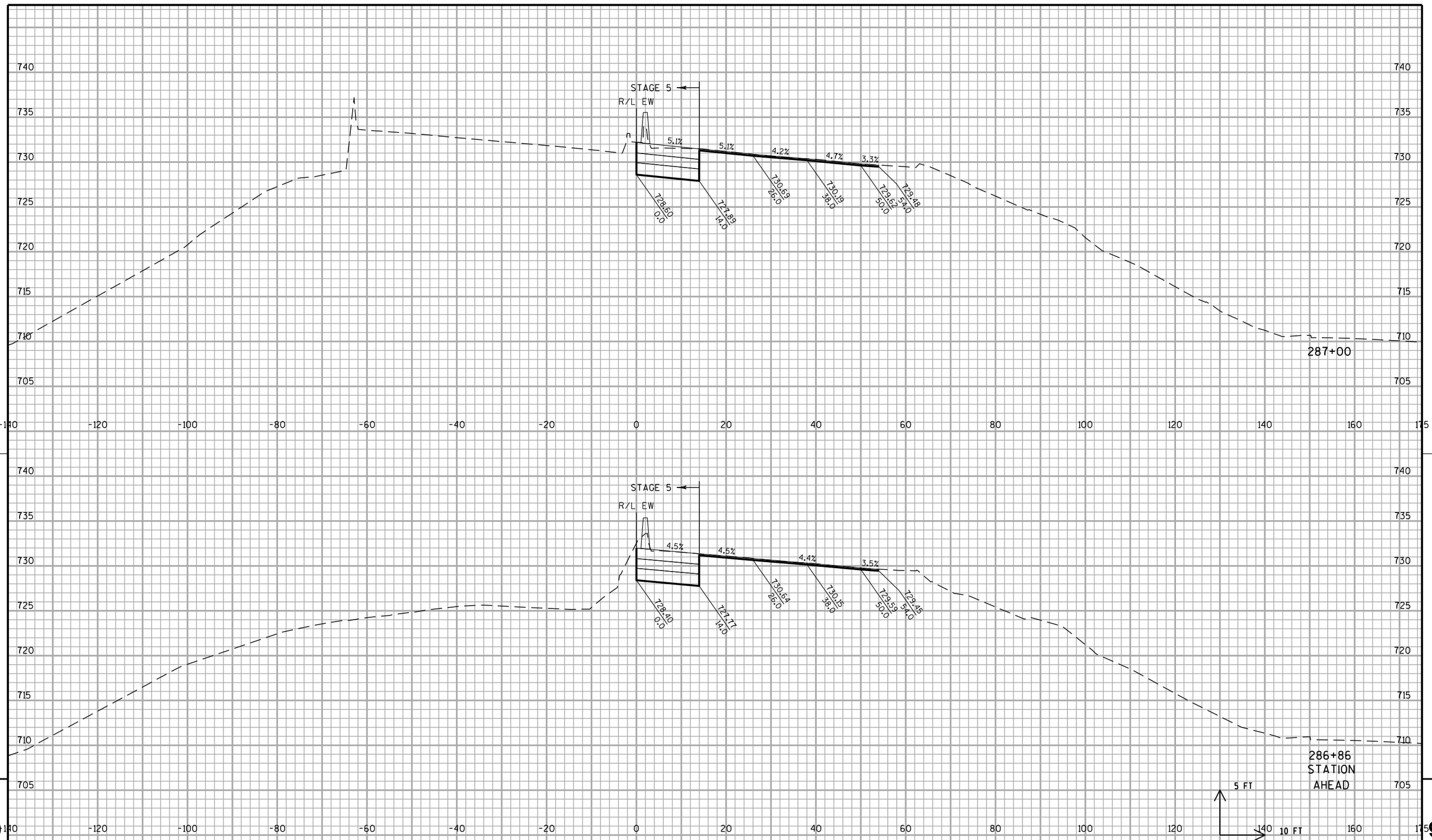
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E70 PLOT SCALE : 20:1



STA 284+71 TO 284+71

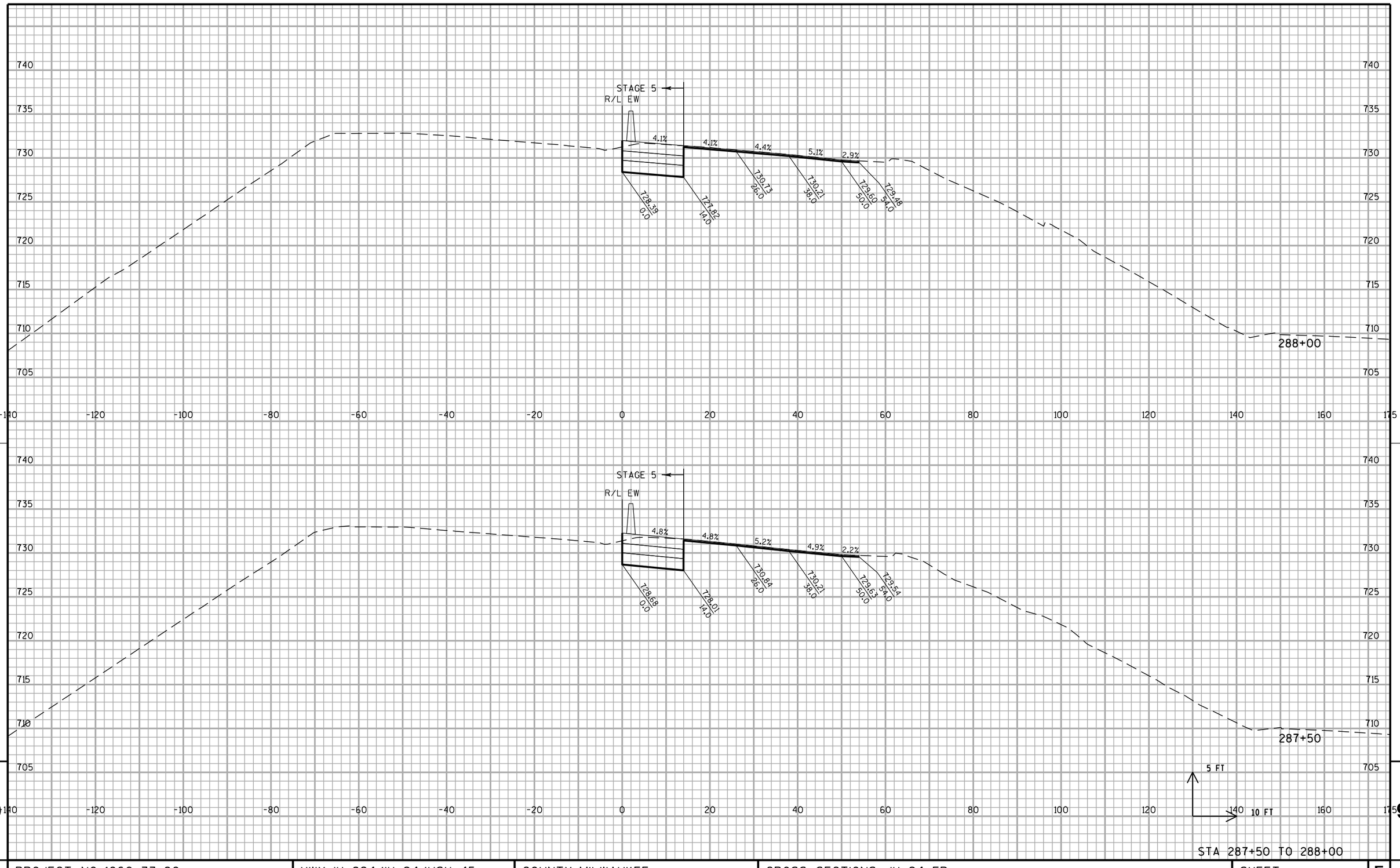
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 286+86 TO 287+00

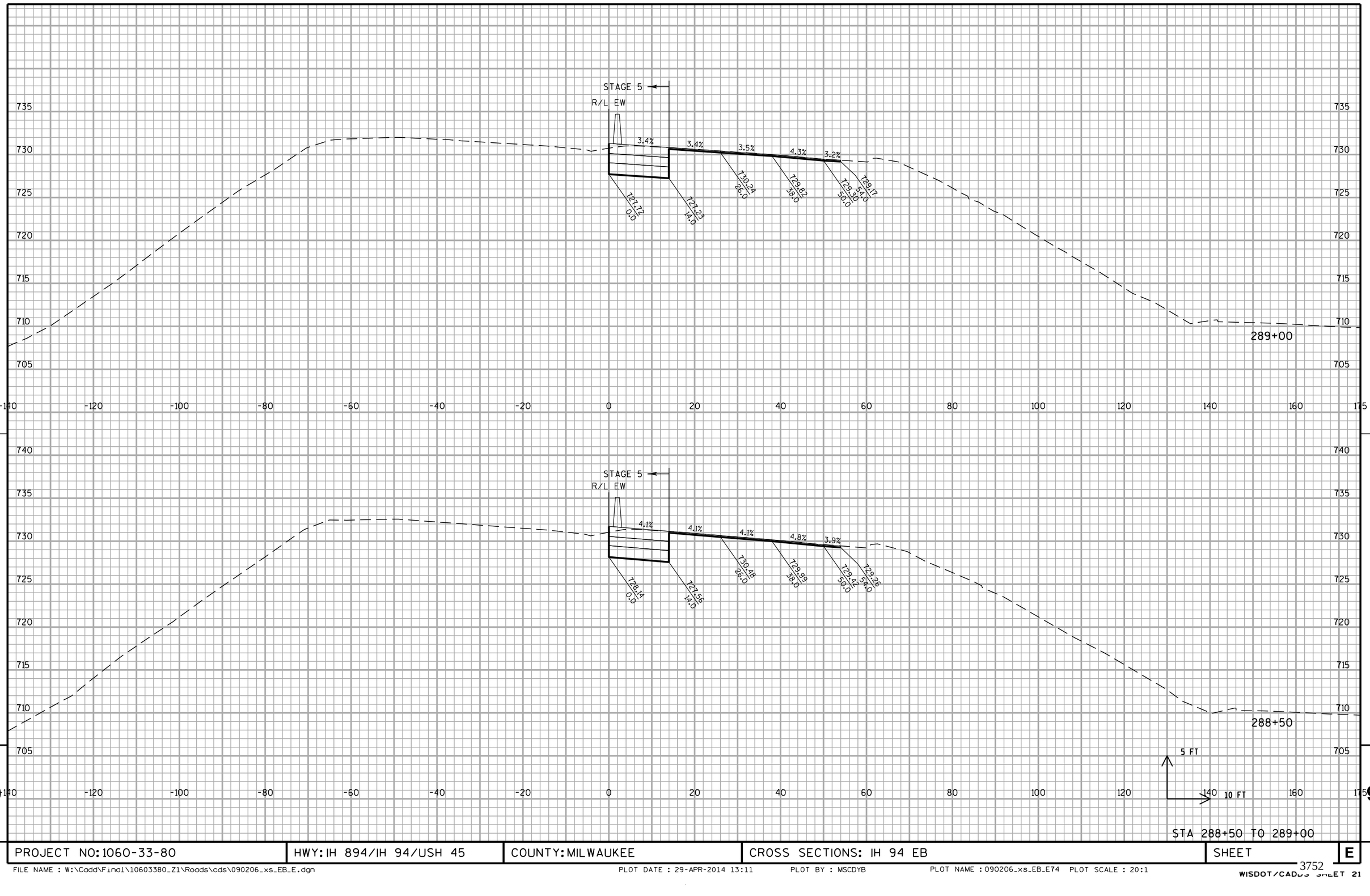
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E72 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



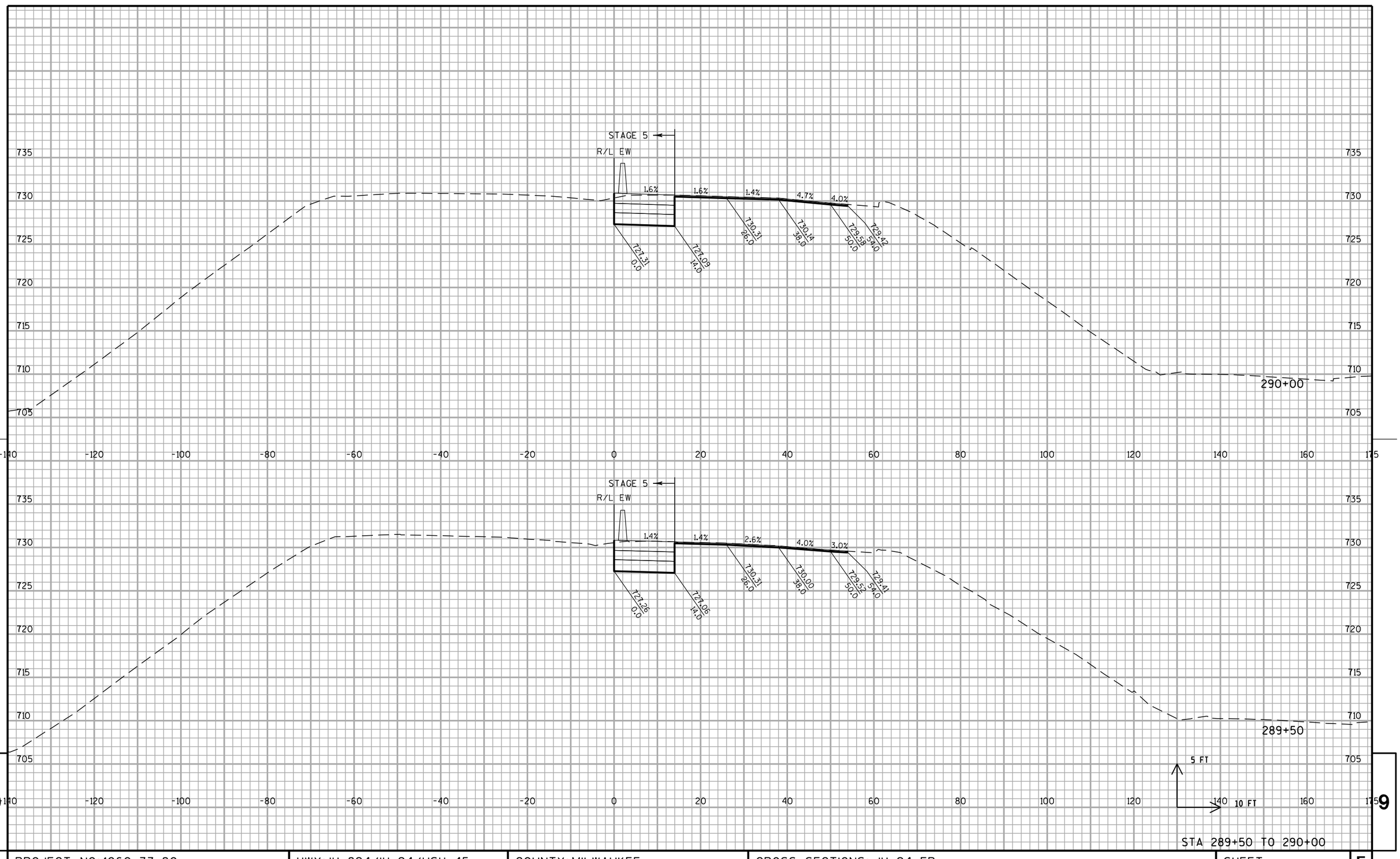
STA 287+50 TO 288+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 288+50 TO 289+00

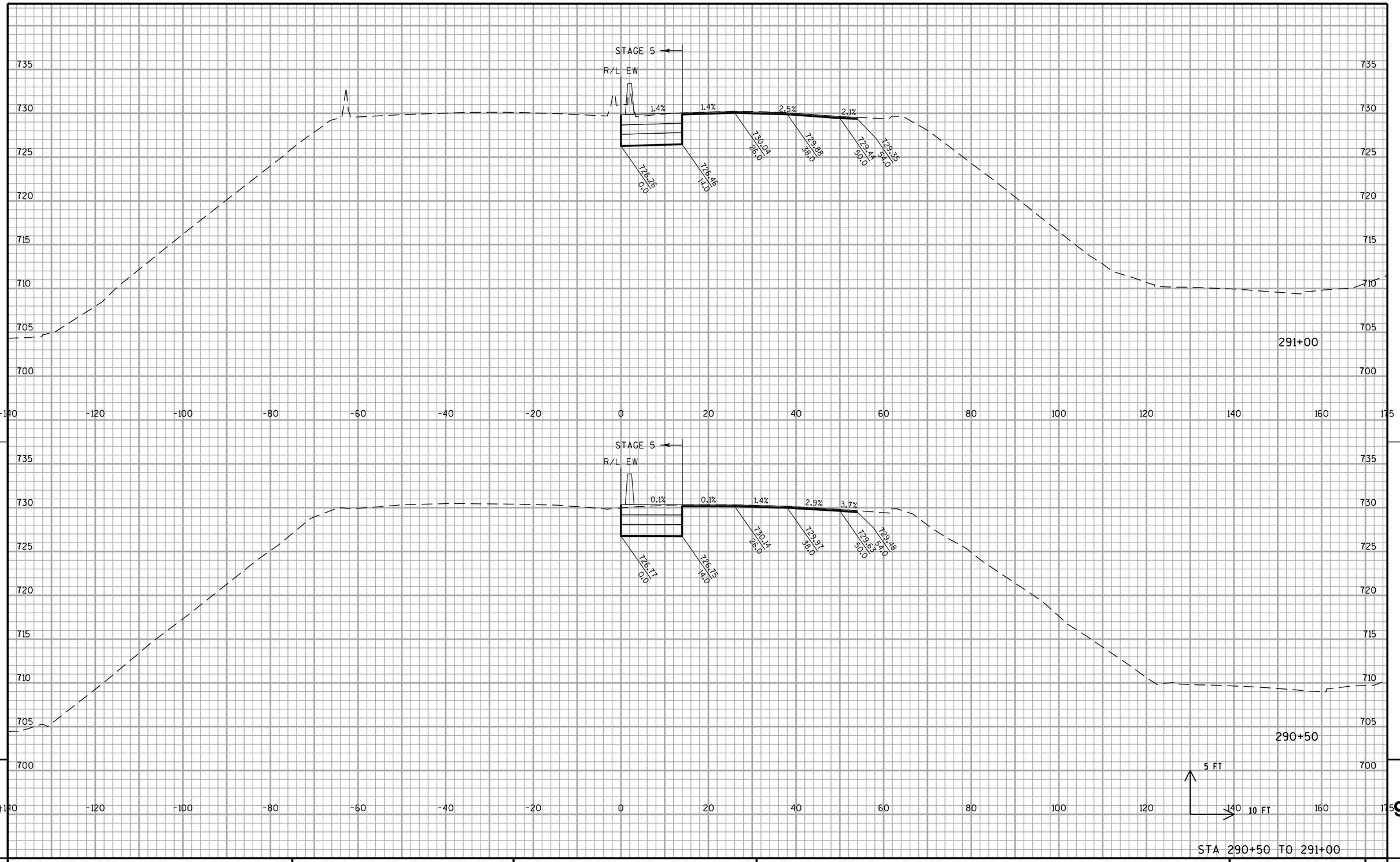
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 289+50 TO 290+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

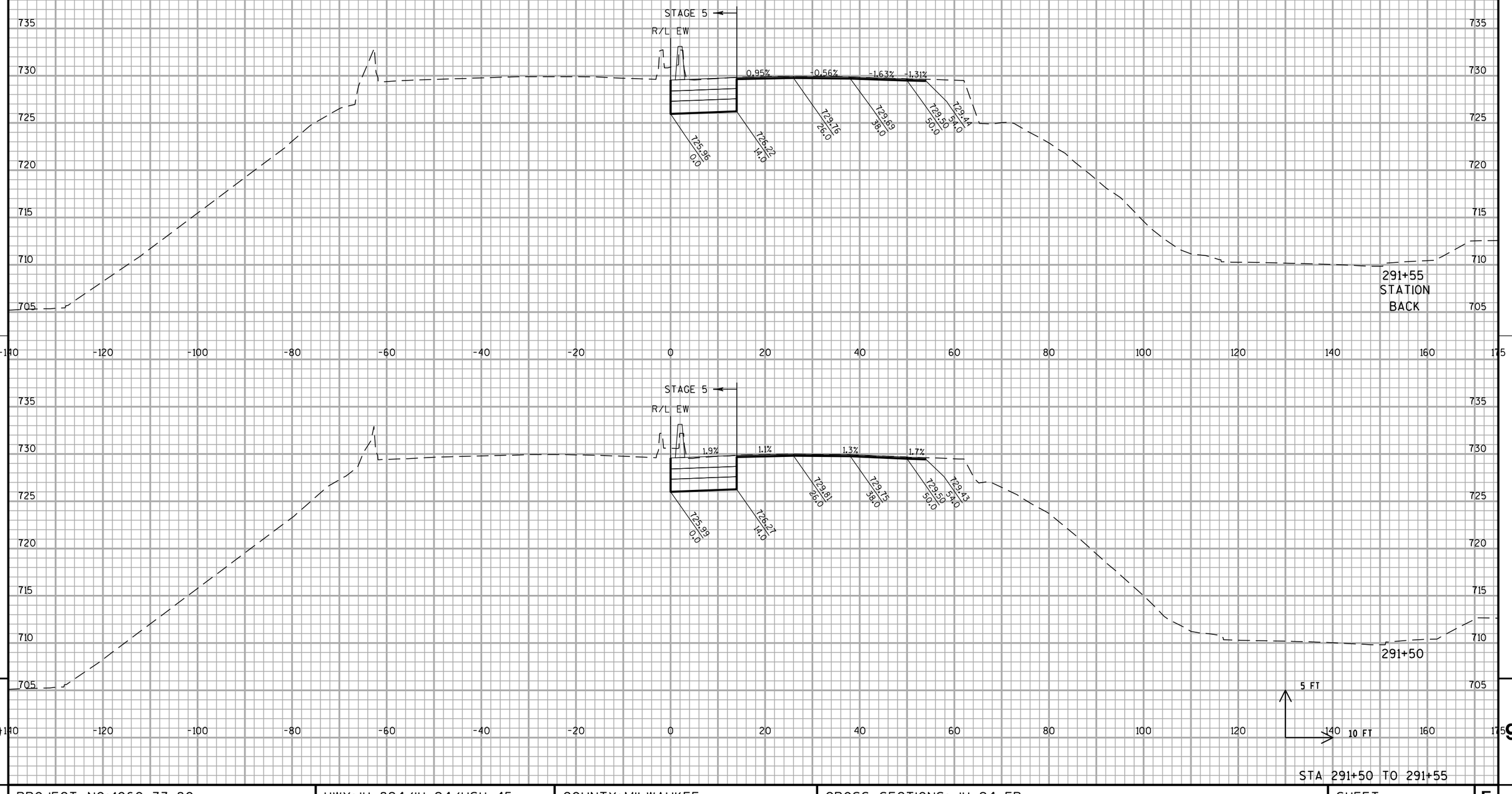
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E75 PLOT SCALE : 20:1



STA 290+50 TO 291+00

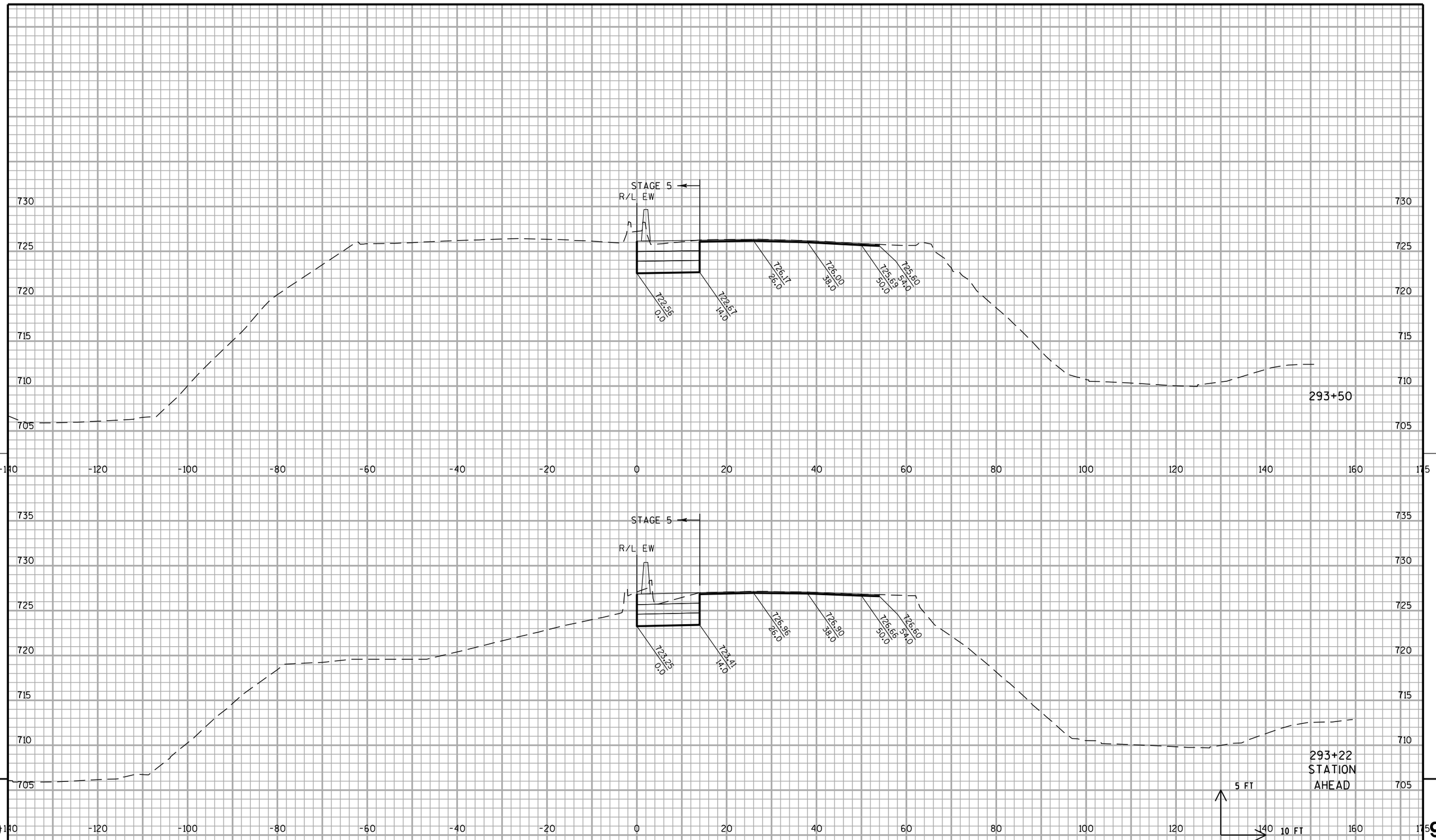
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E76 PLOT SCALE : 20:1



STA 291+50 TO 291+55

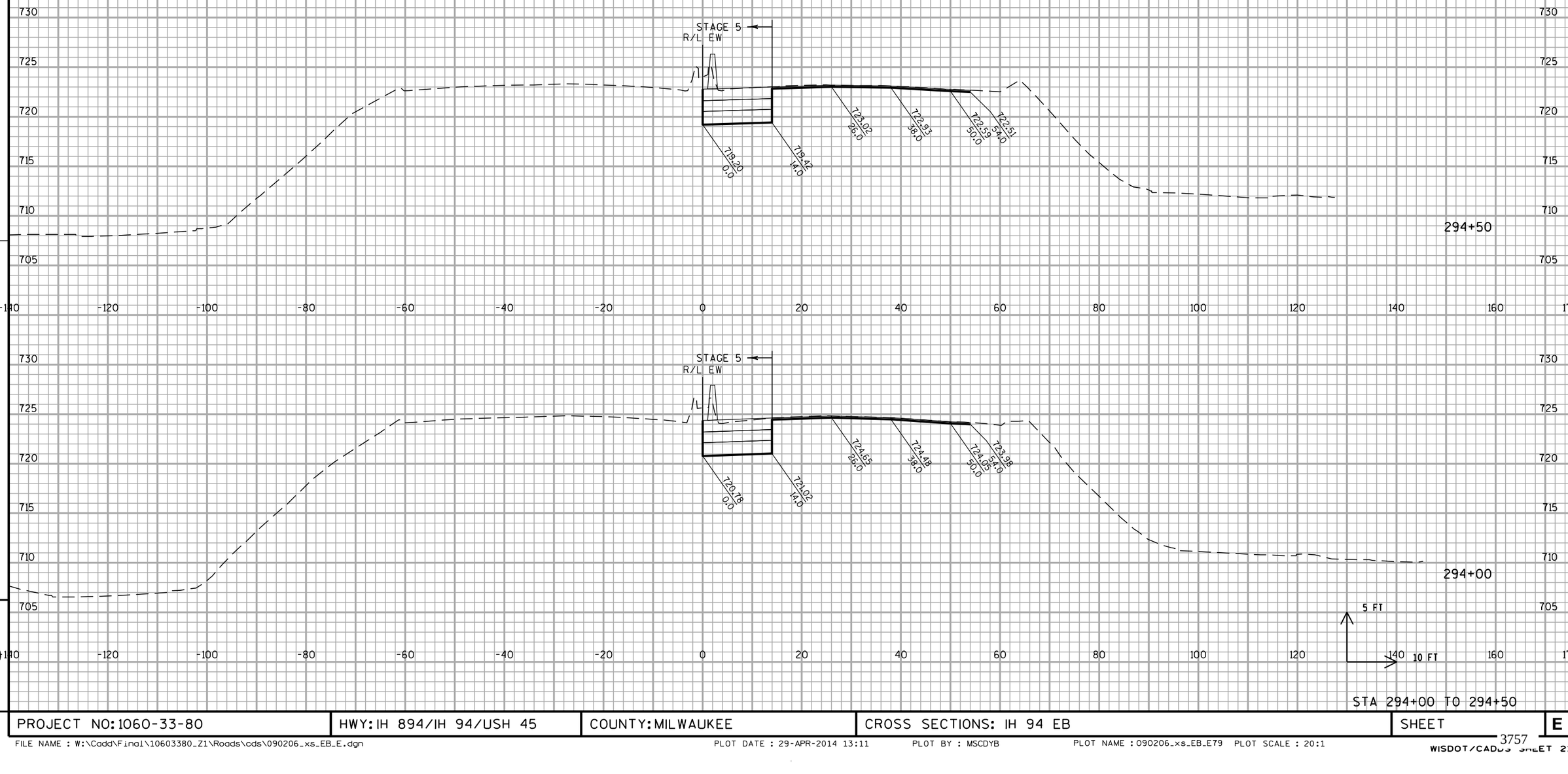
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 293+22 TO 293+50

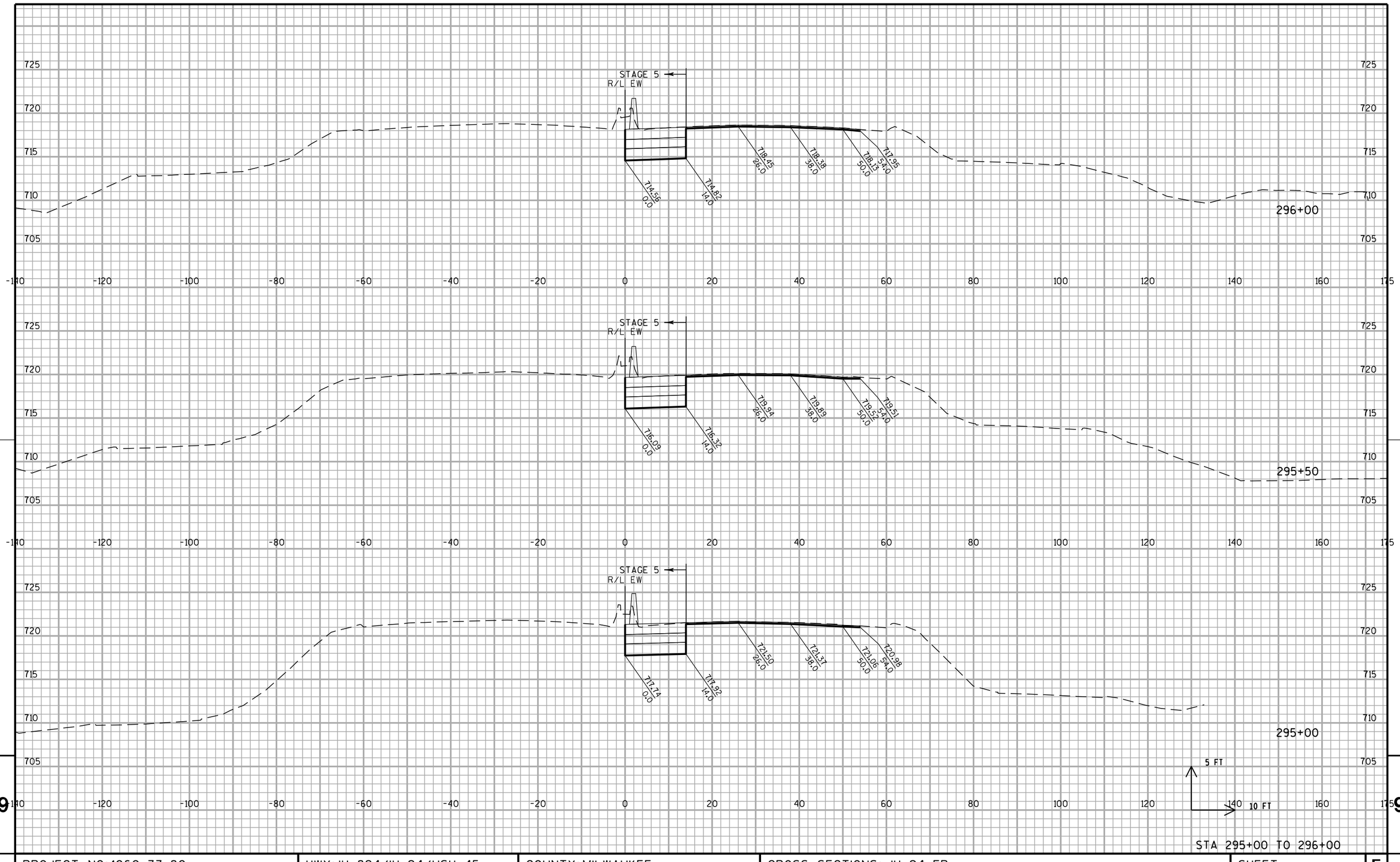
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E78 PLOT SCALE : 20:1



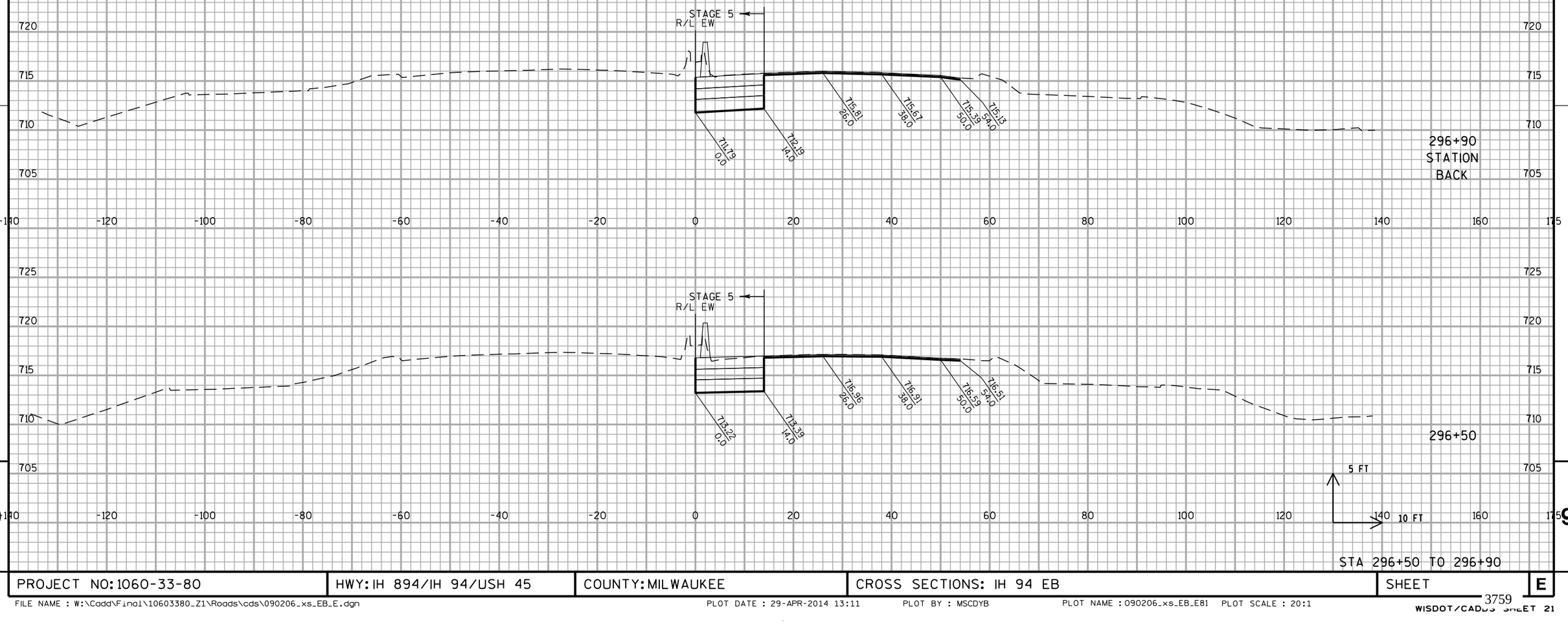
STA 294+00 TO 294+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 295+00 TO 296+00

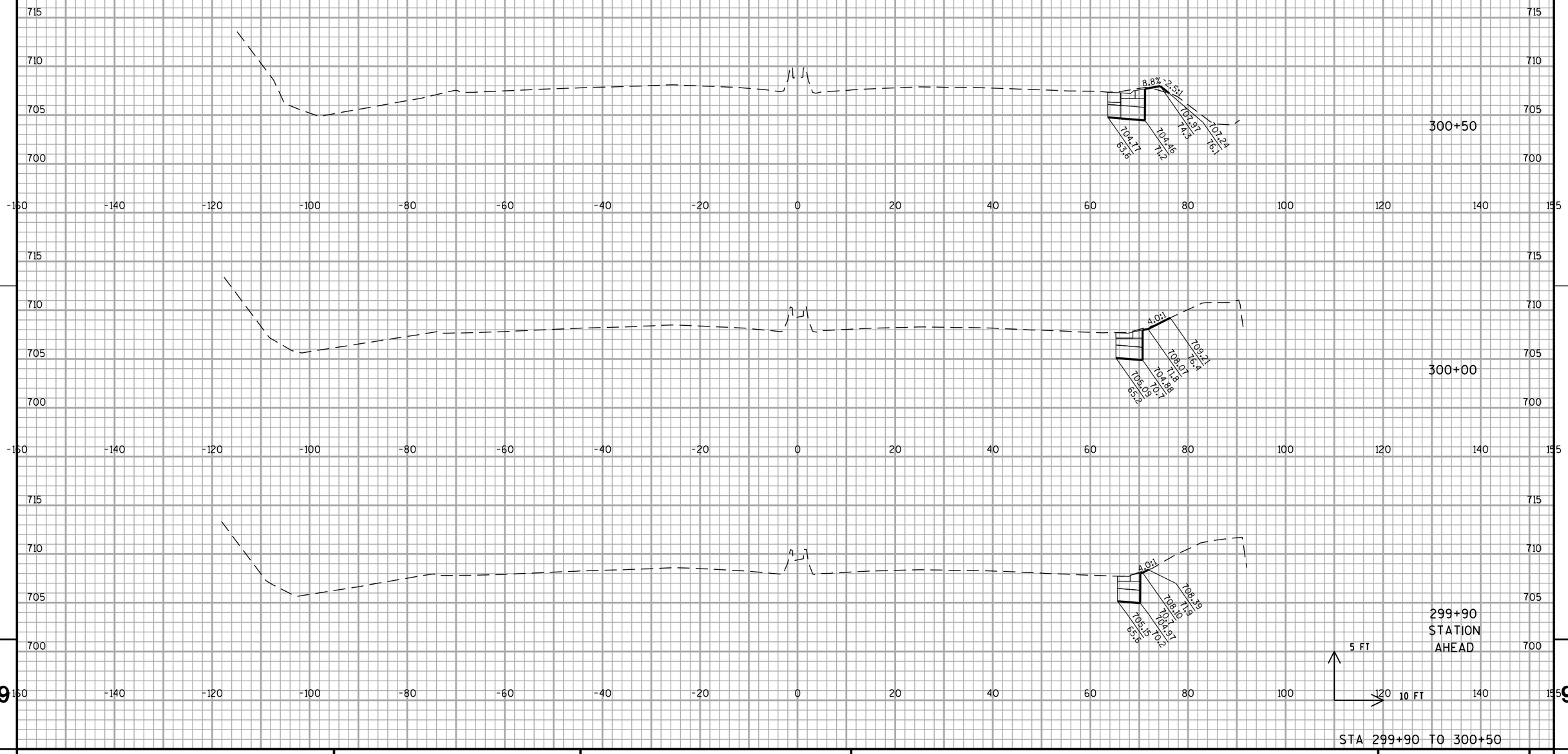
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E



STA 296+50 TO 296+90

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 1

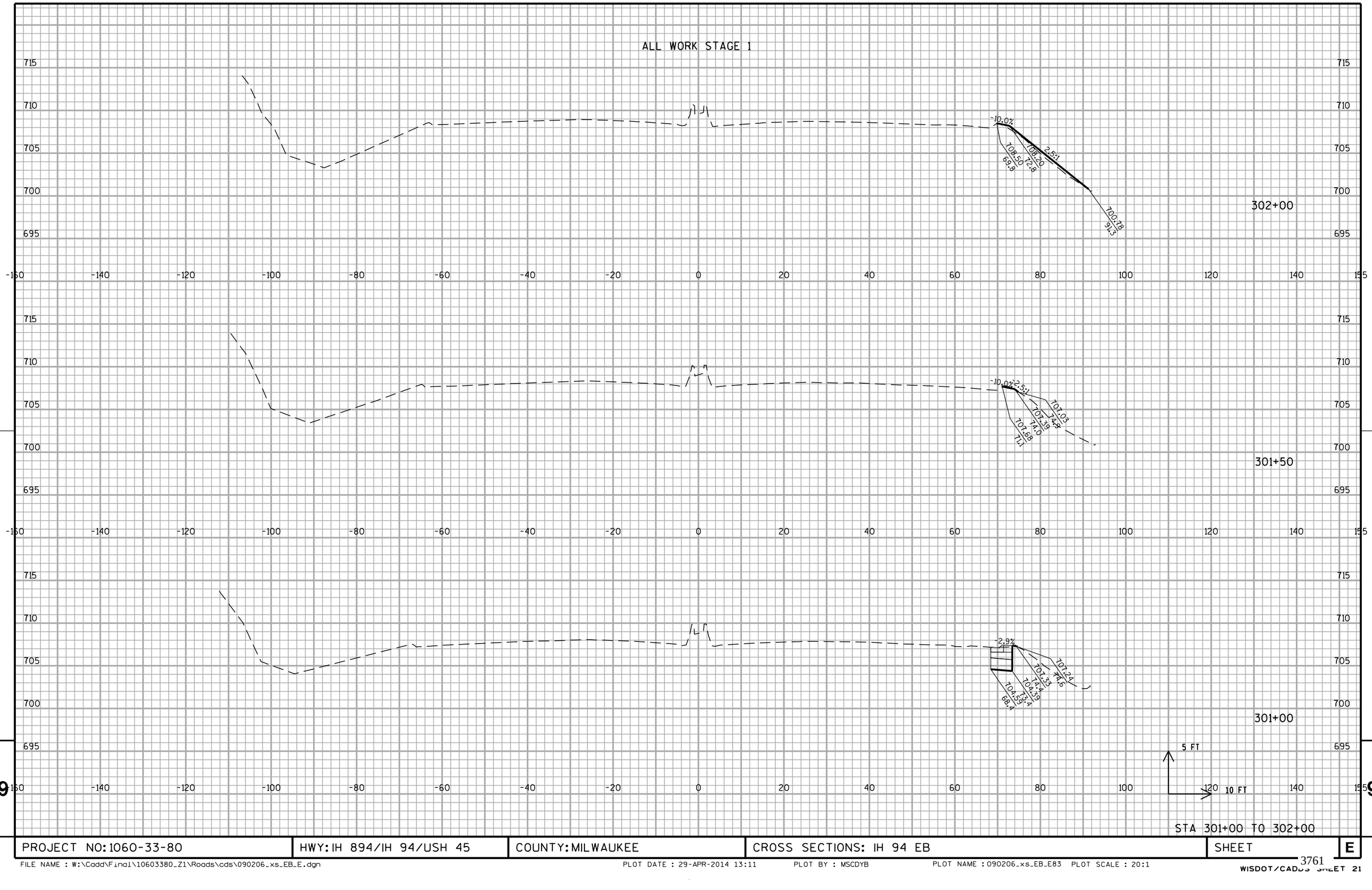


STA 299+90 TO 300+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E82 PLOT SCALE : 20:1

ALL WORK STAGE 1



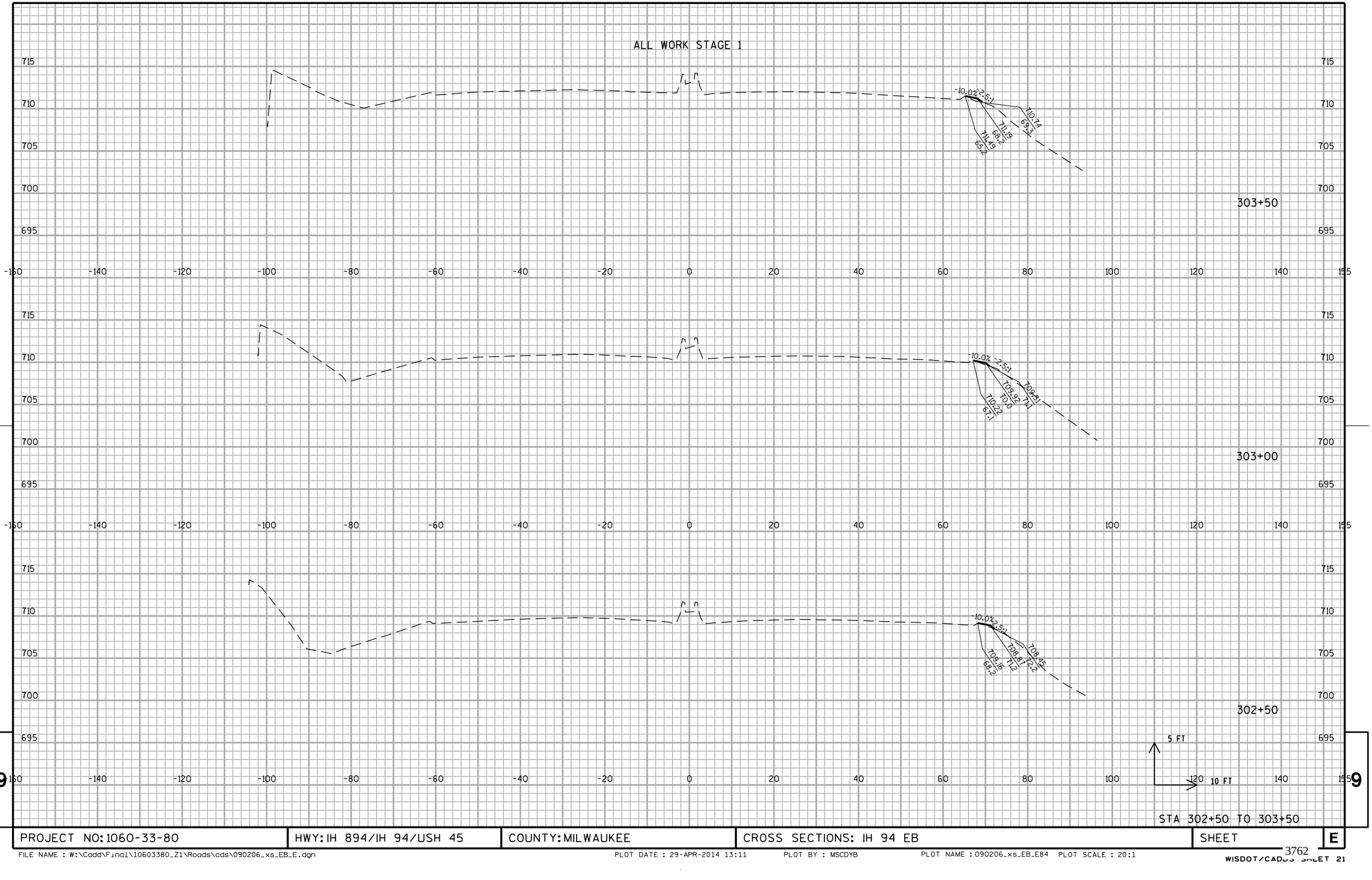
STA 301+00 TO 302+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E83 PLOT SCALE : 20:1

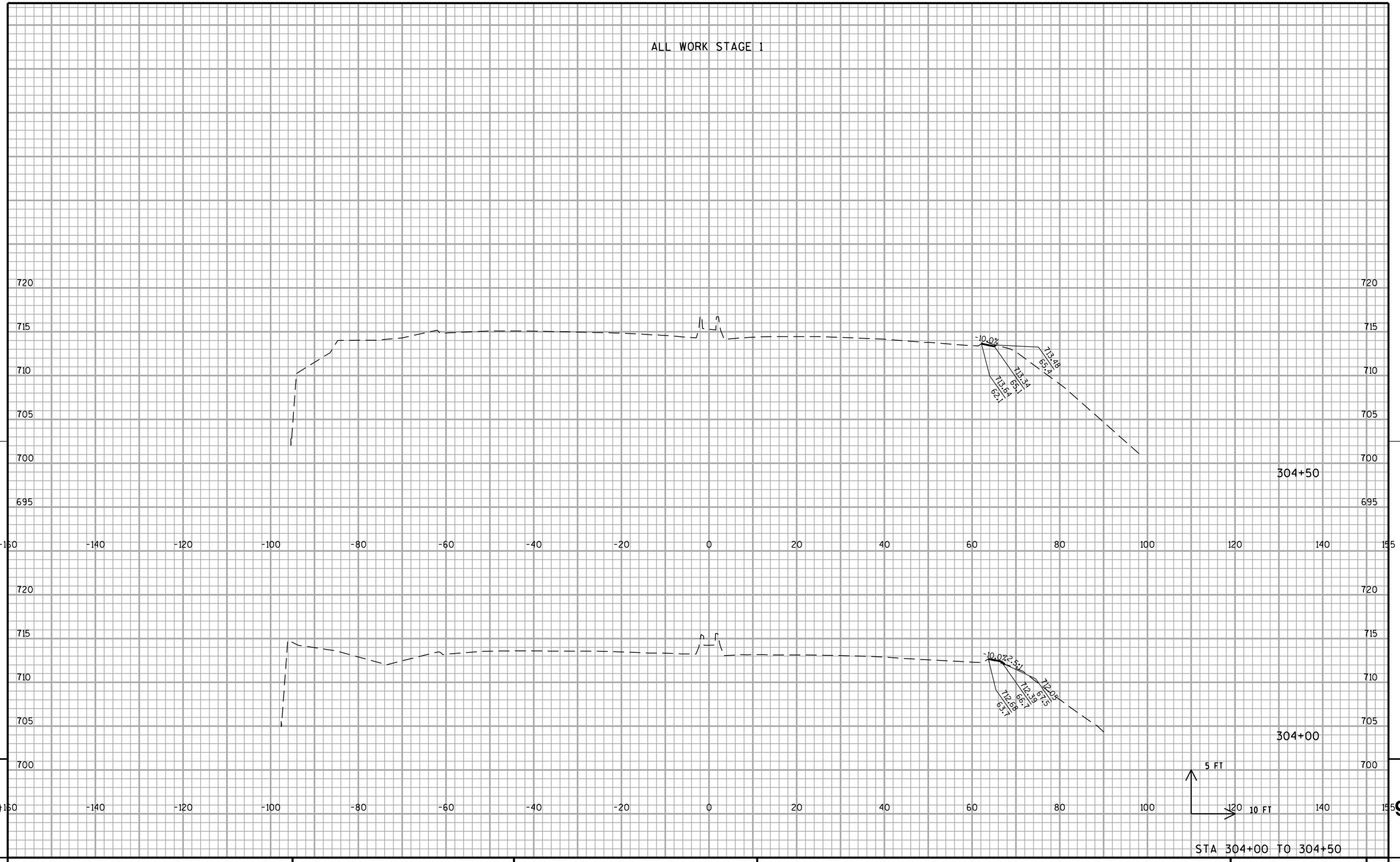
WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

ALL WORK STAGE 1



STA 304+00 TO 304+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E85 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



STA 304+70 TO 304+70

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090206_xs_EB_E.dgn PLOT DATE : 29-APR-2014 13:11 PLOT BY : MSCDYB PLOT NAME : 090206_xs_EB_E86 PLOT SCALE : 20:1

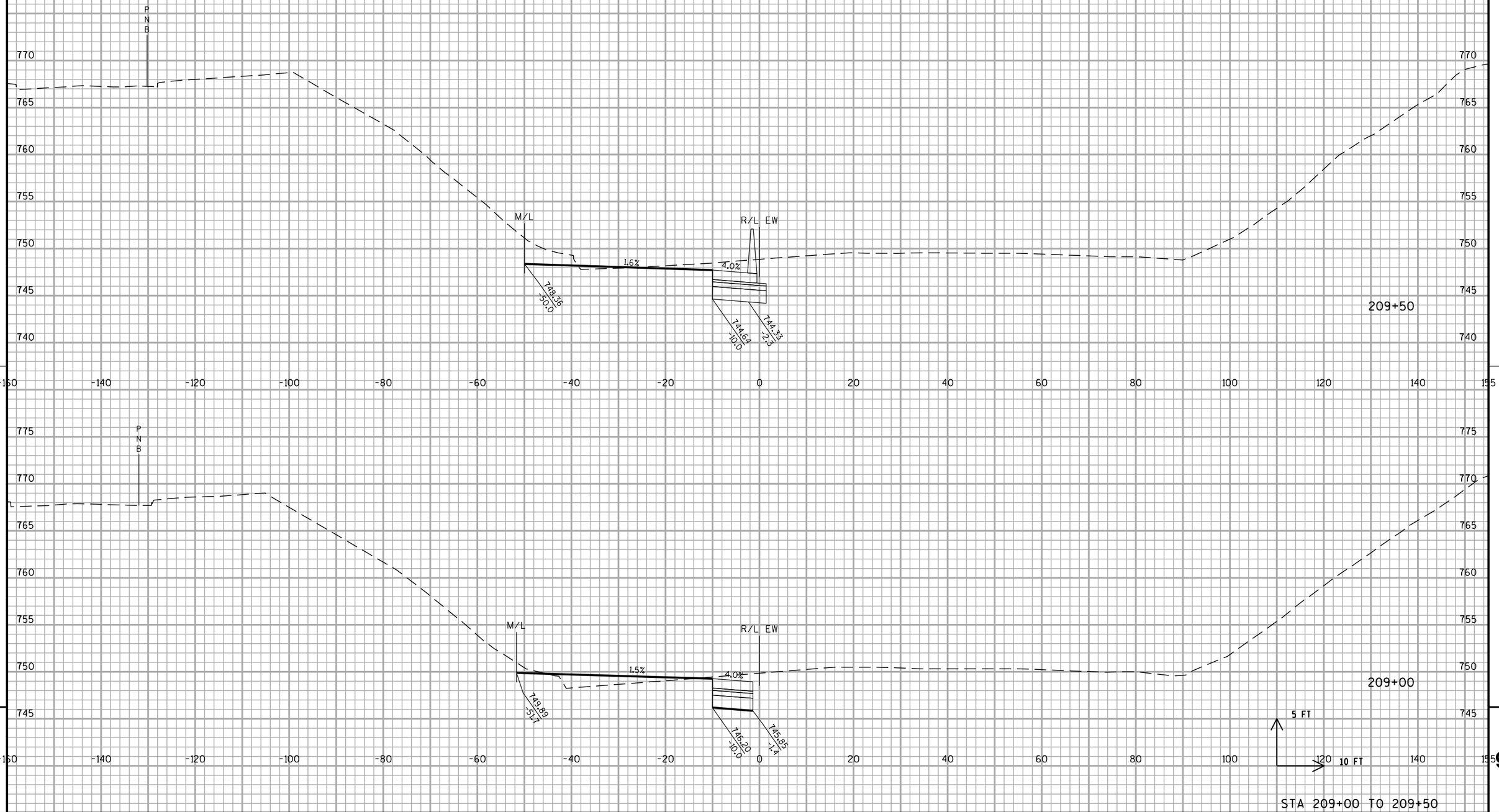
ALL WORK STAGE 3



STA 208+00 TO 208+50

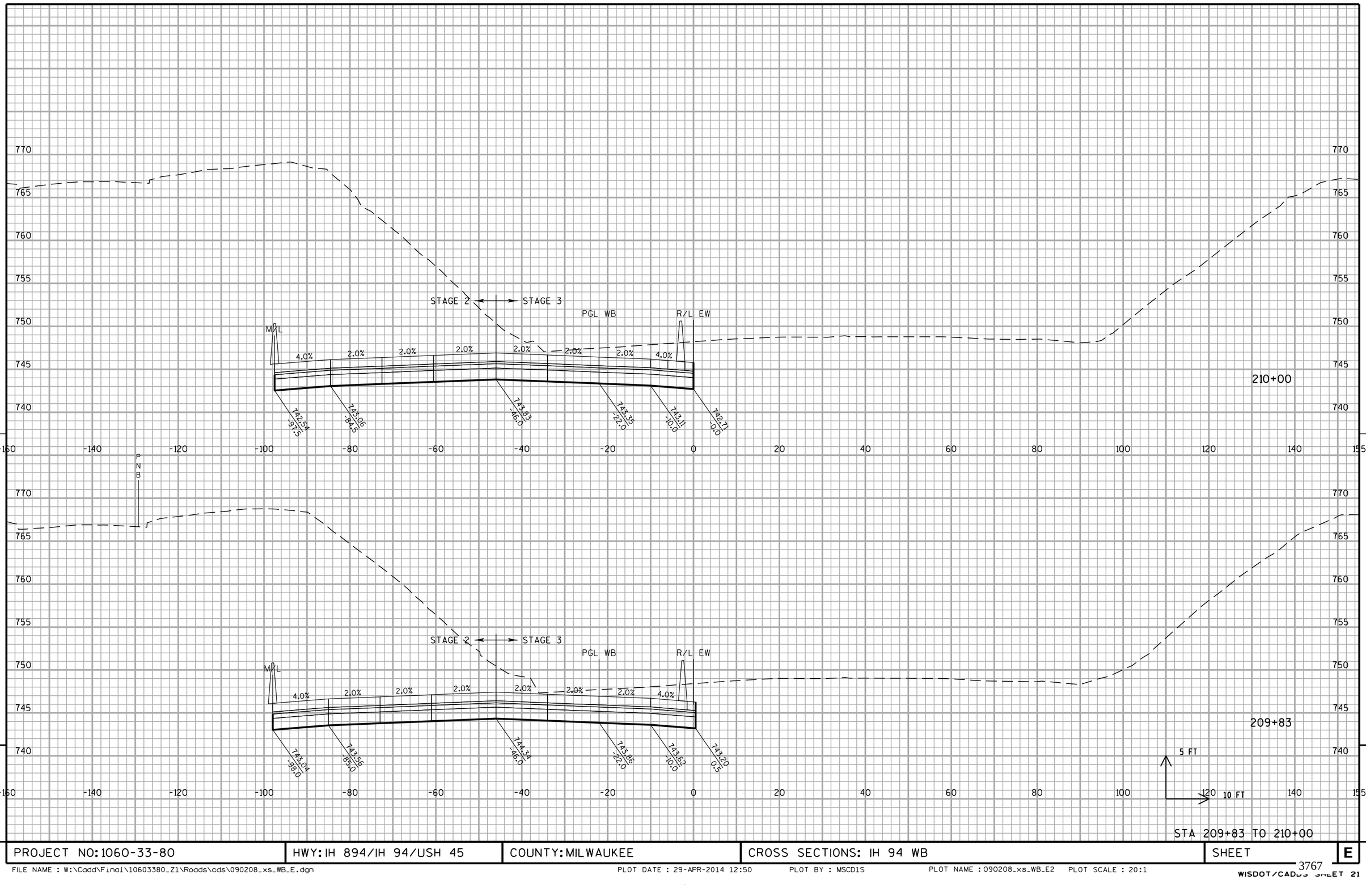
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

ALL WORK STAGE 3



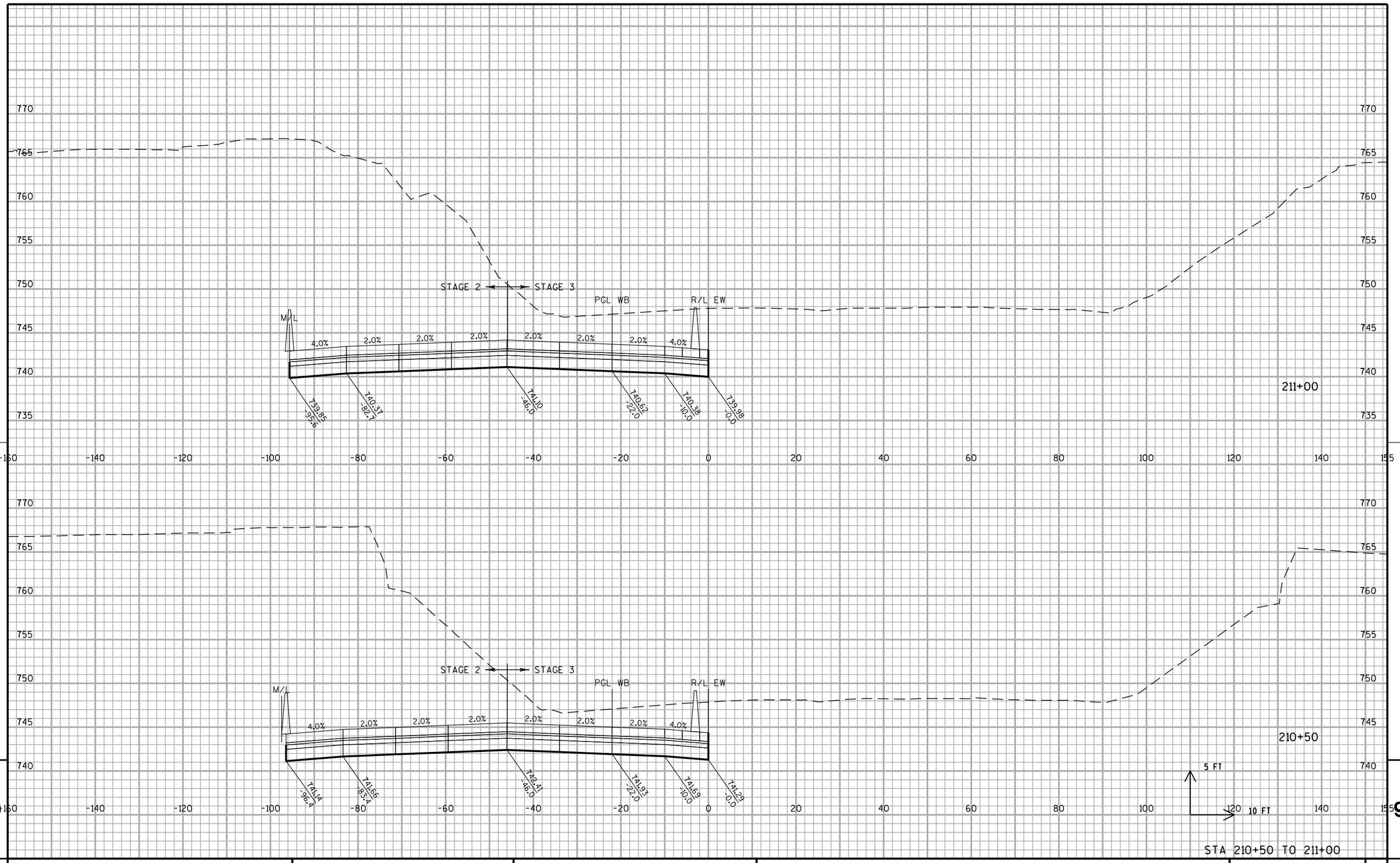
STA 209+00 TO 209+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



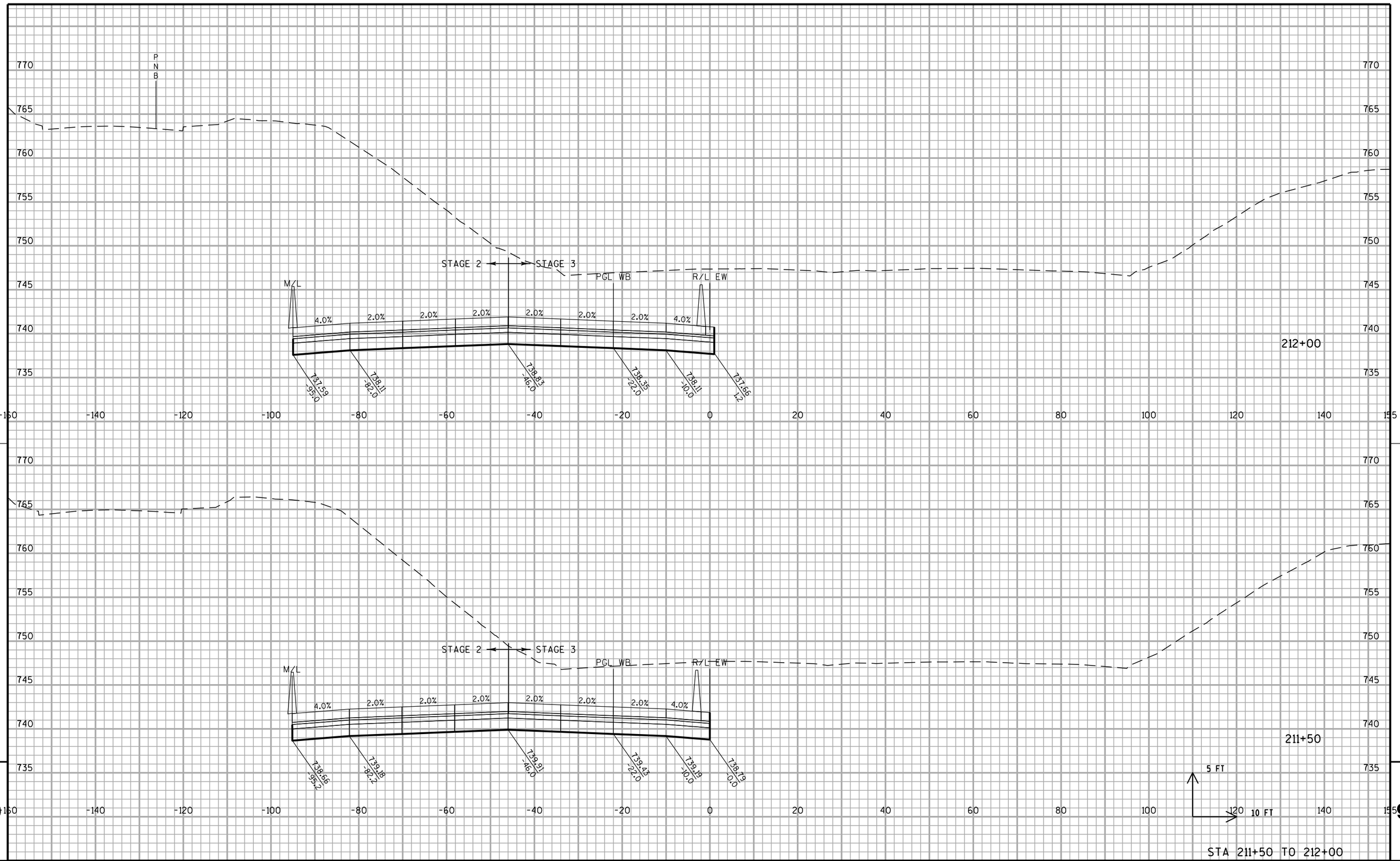
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:50 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E2 PLOT SCALE : 20:1



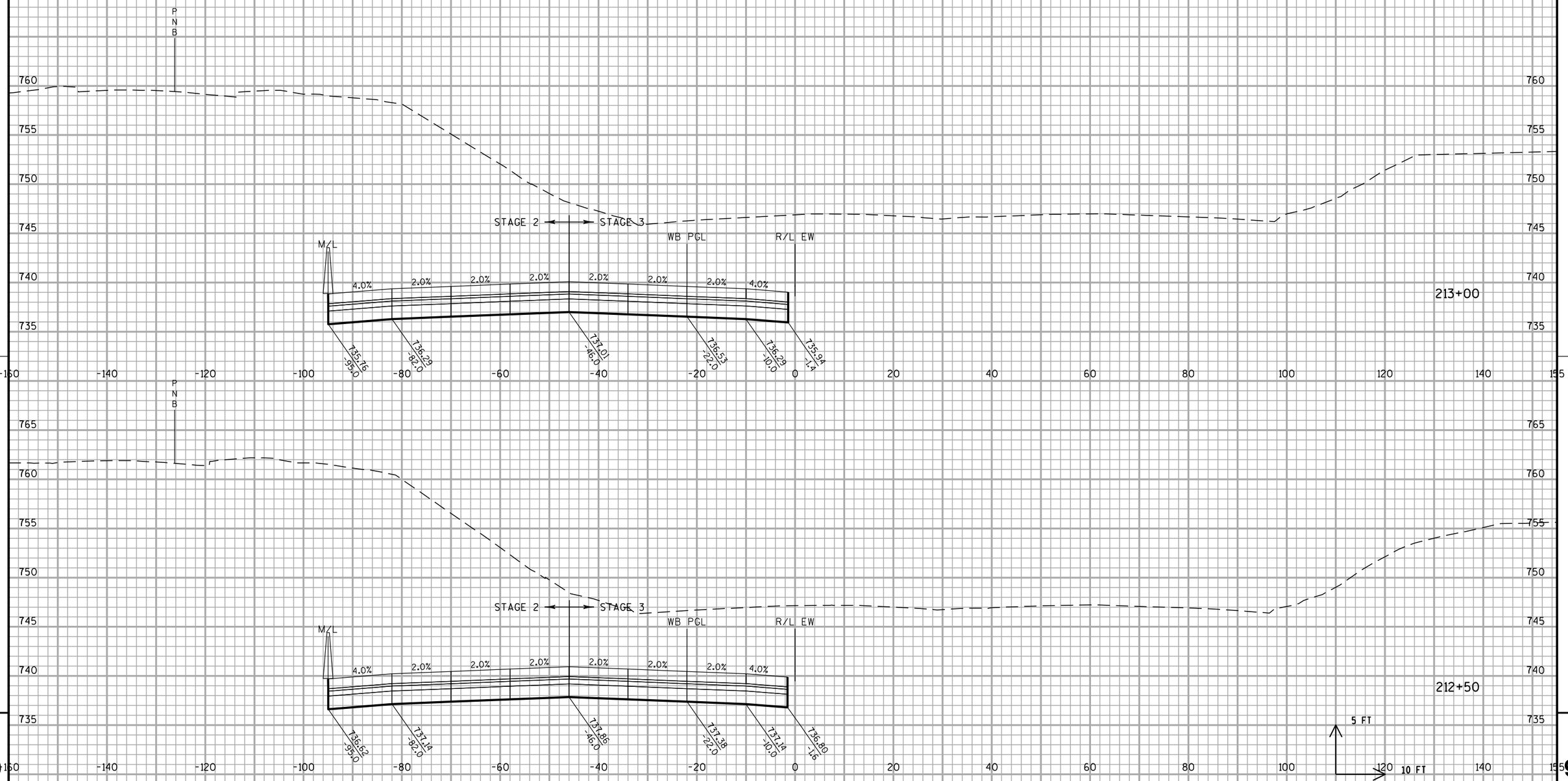
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:50 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E3 PLOT SCALE : 20:1



STA 211+50 TO 212+00

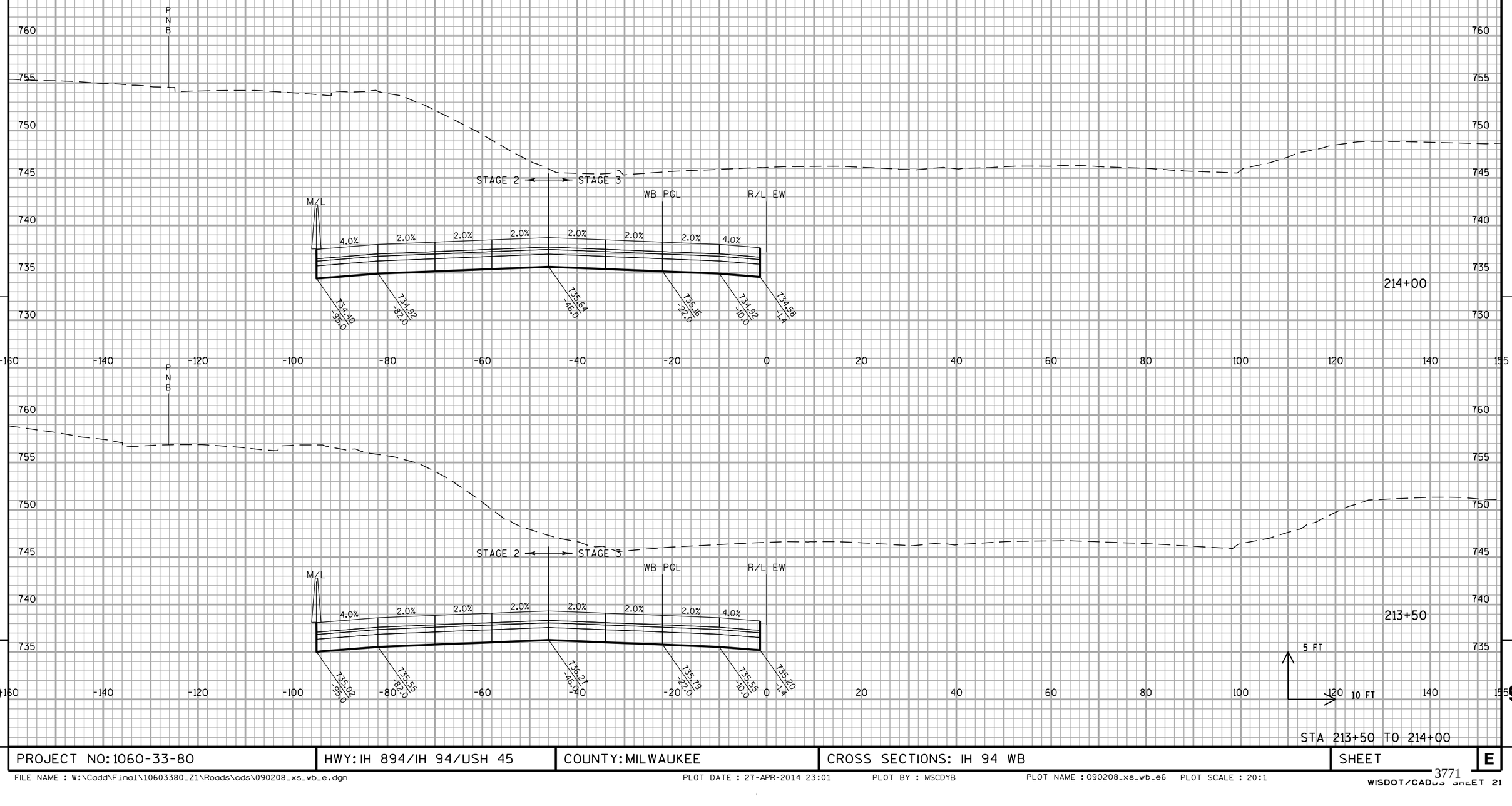
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



9

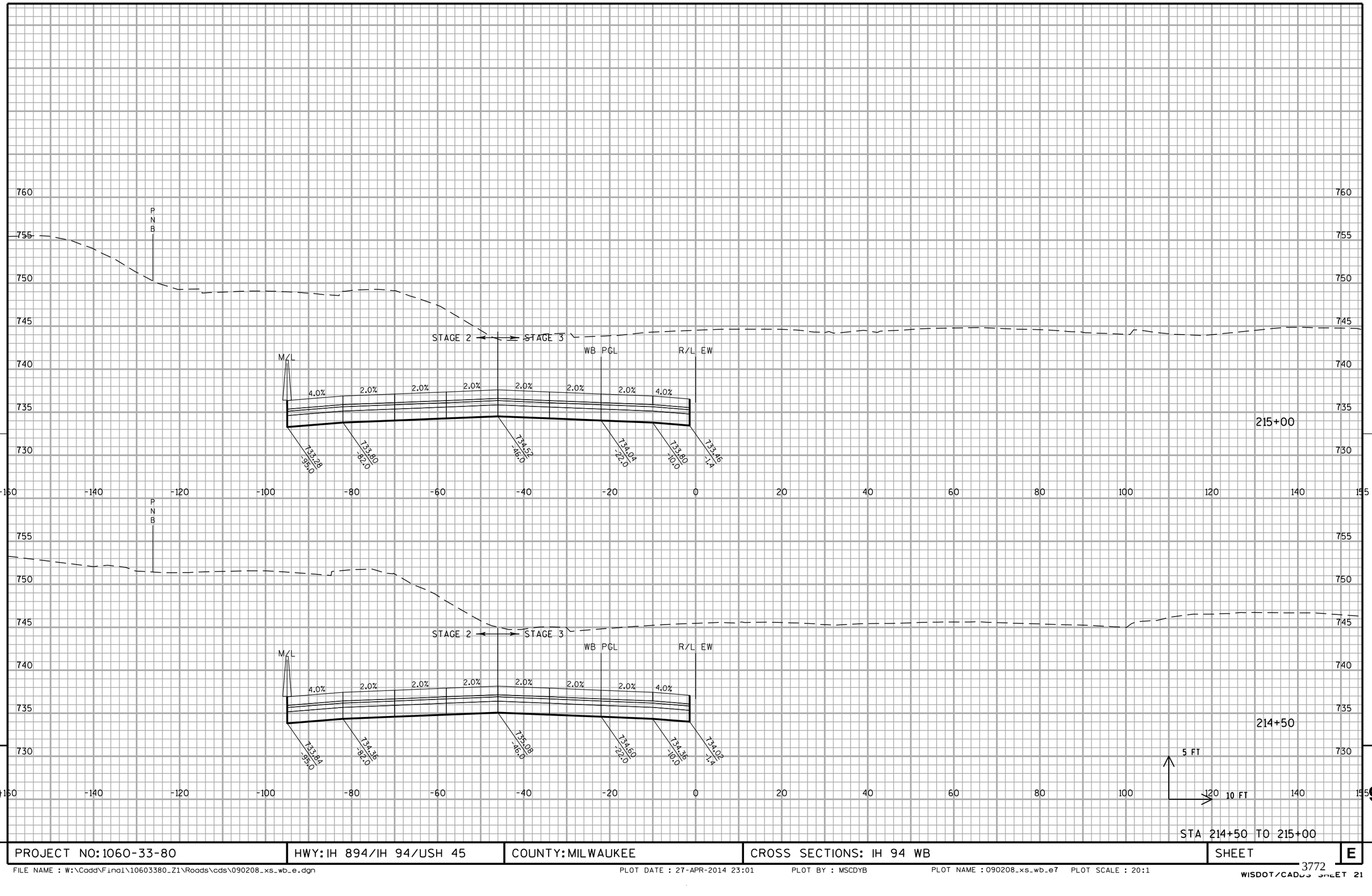
STA 212+50 TO 213+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

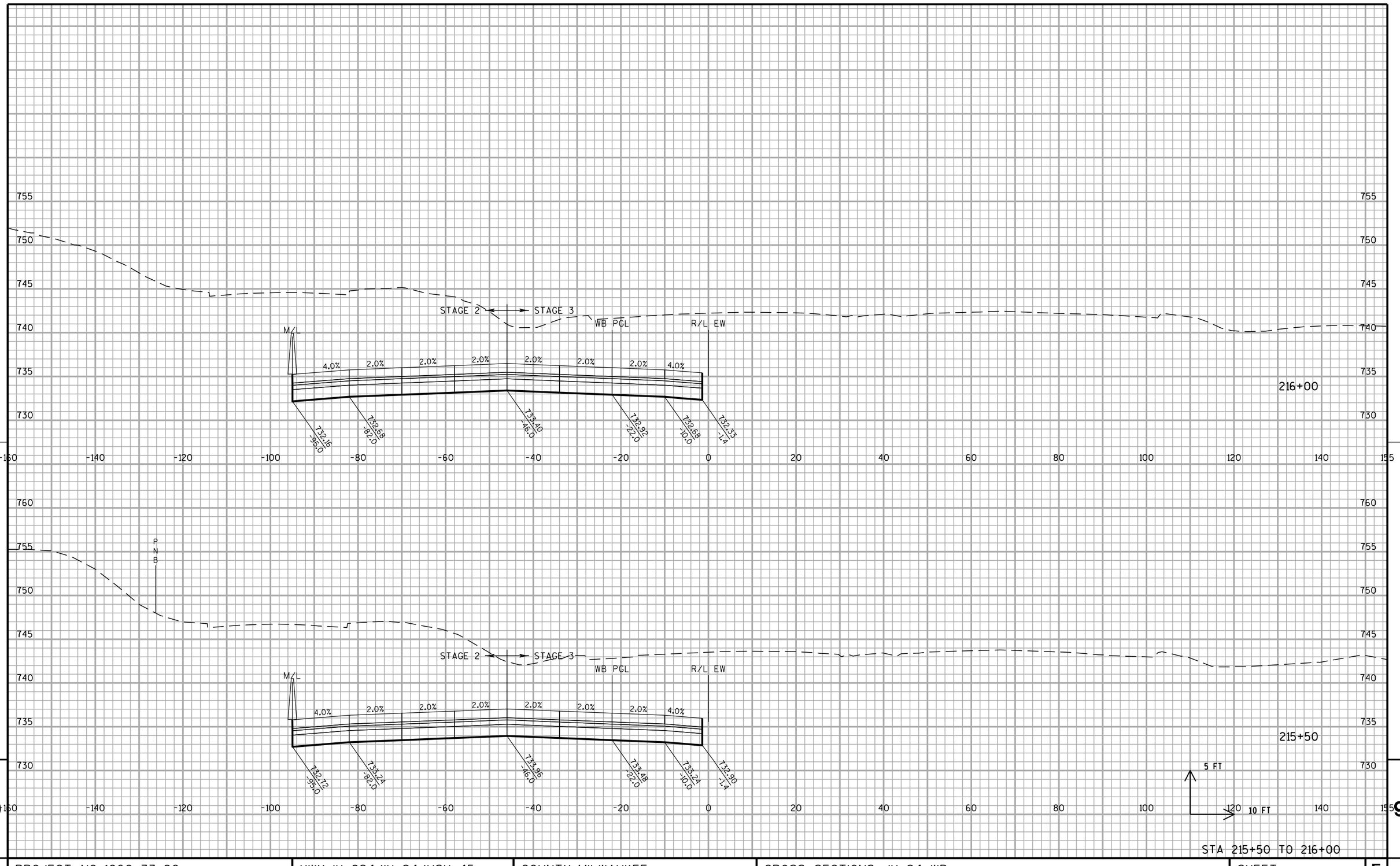
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:01 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e6 PLOT SCALE : 20:1



9

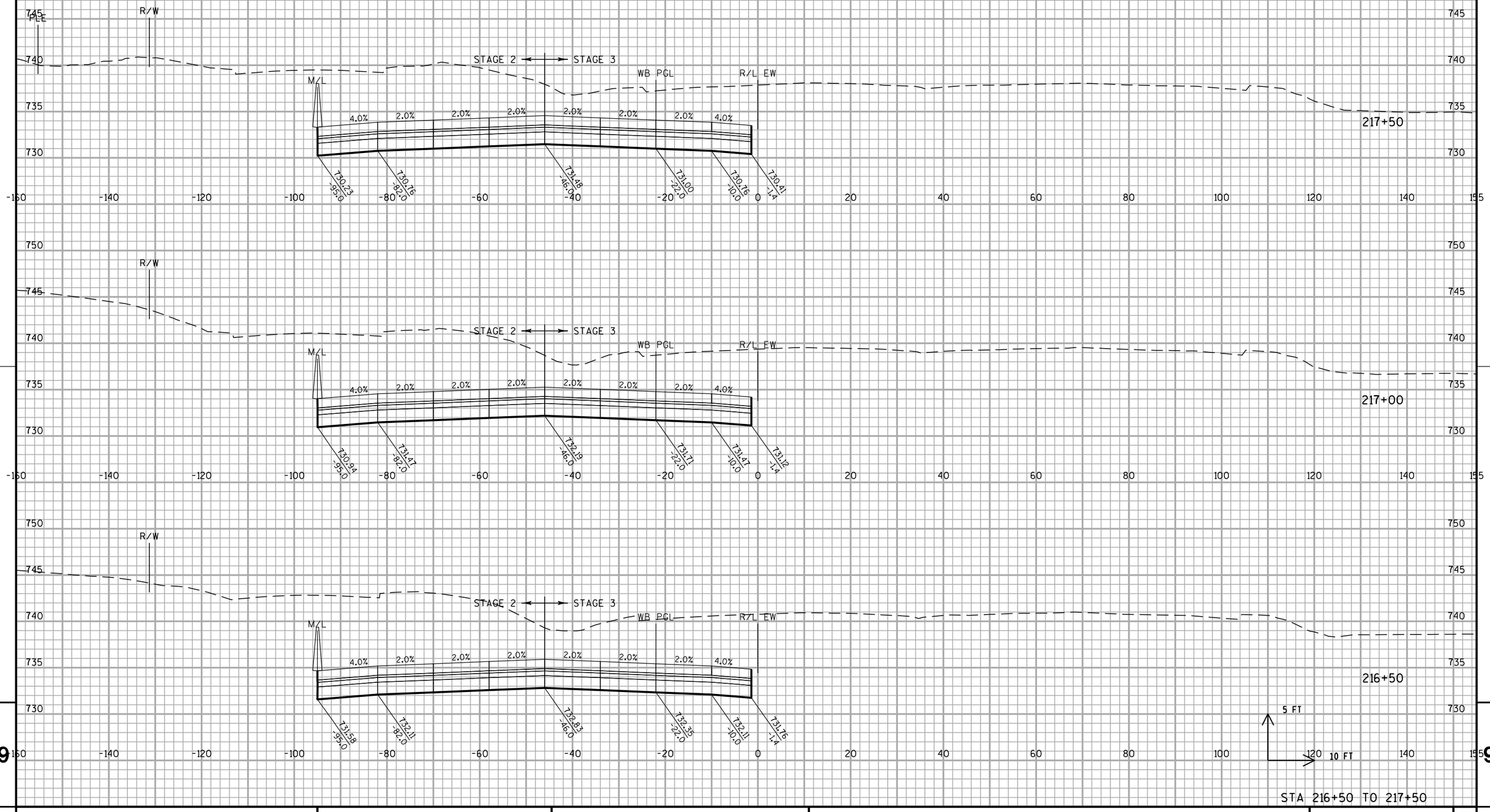
STA 214+50 TO 215+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



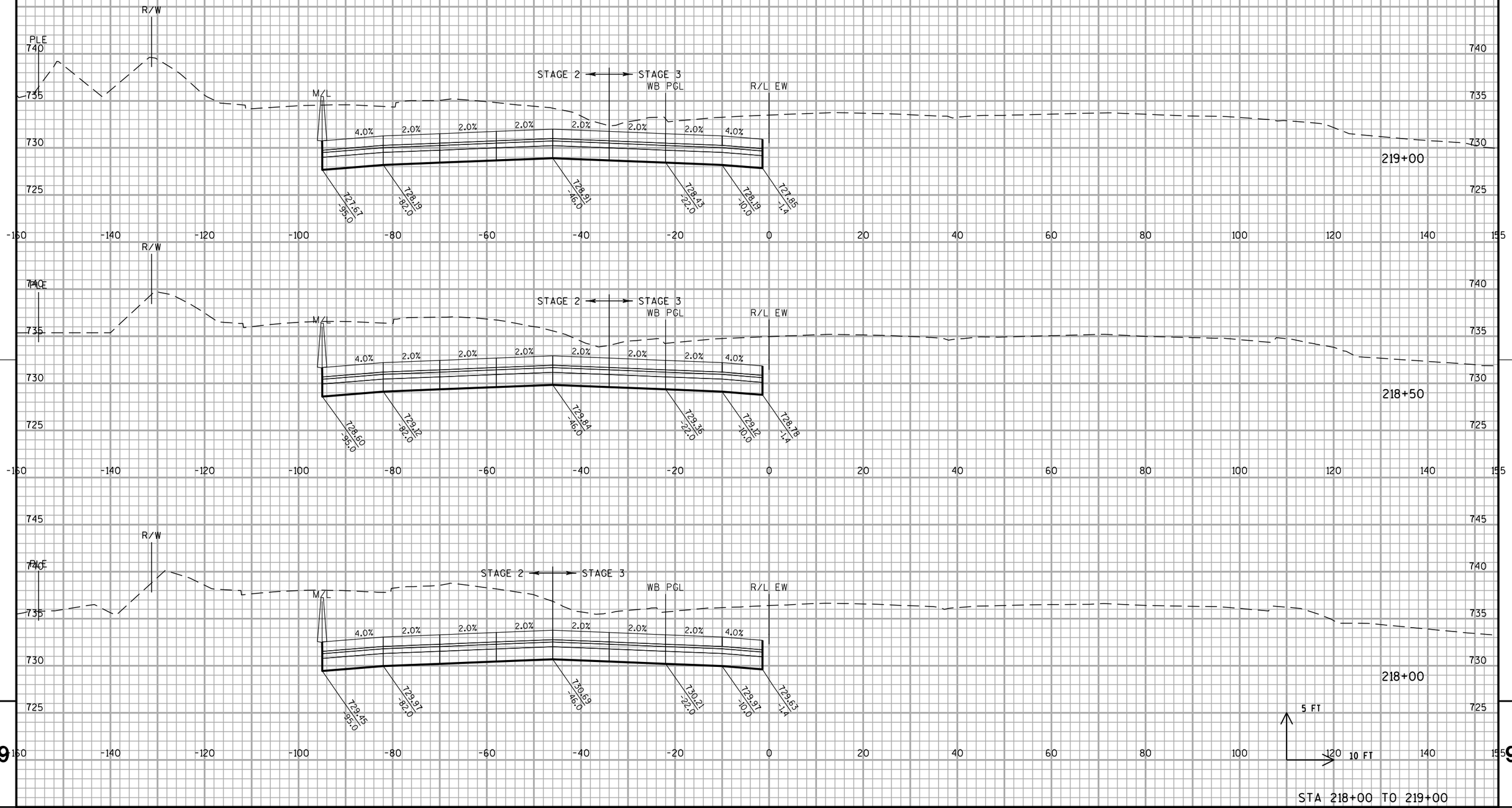
STA 215+50 TO 216+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



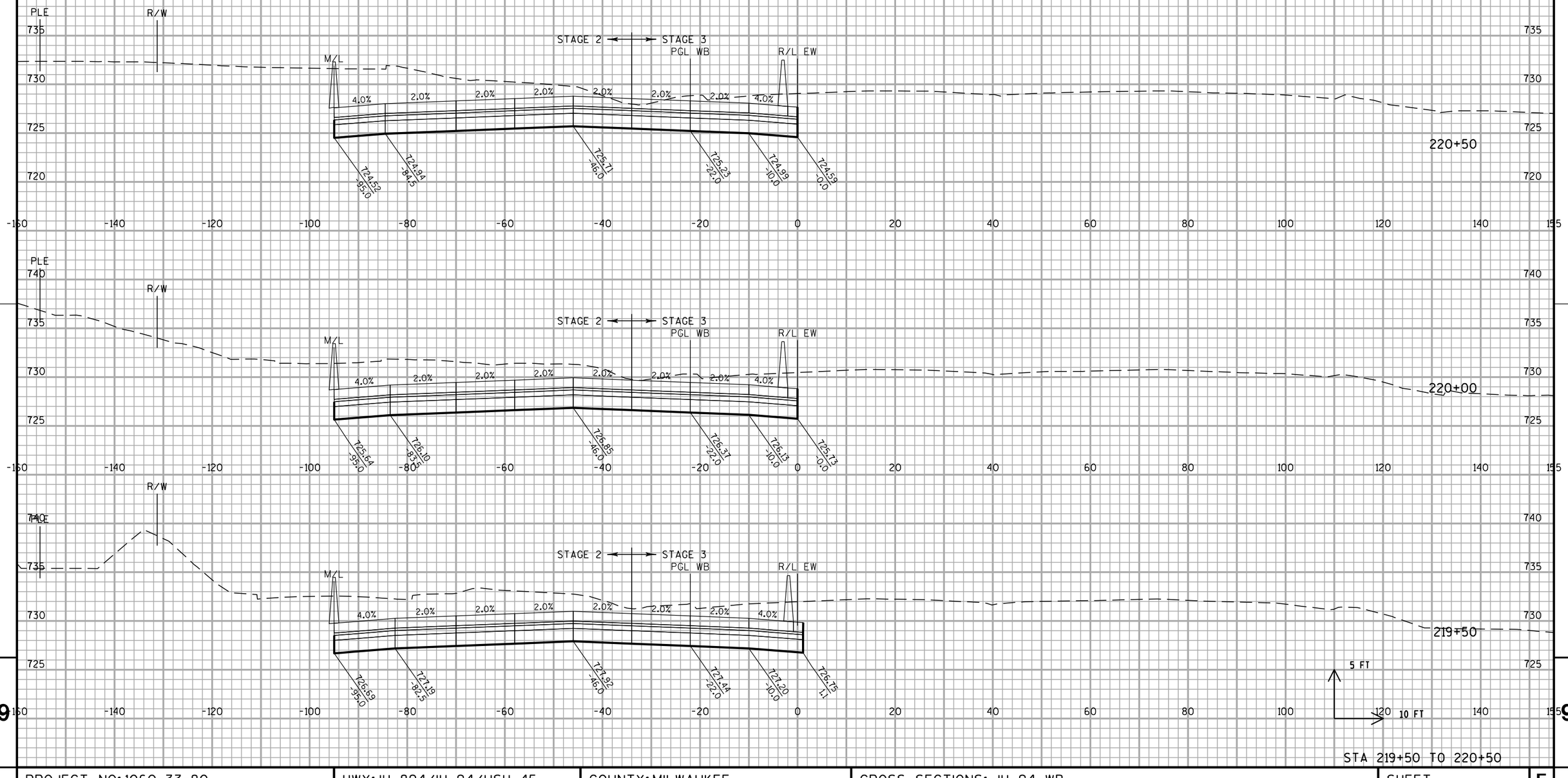
STA 216+50 TO 217+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



9 9

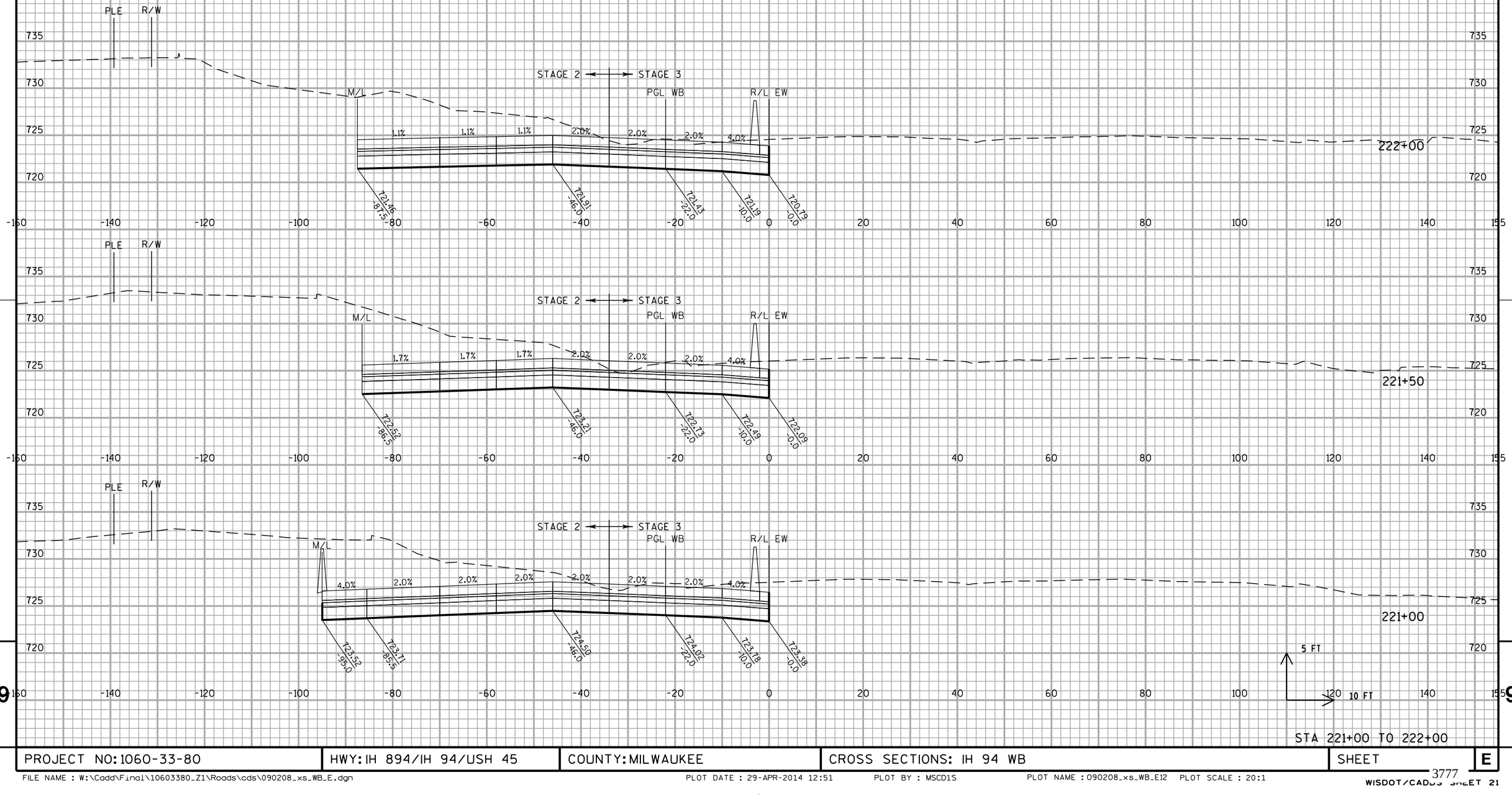
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 219+50 TO 220+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:51 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E11 PLOT SCALE : 20:1



9

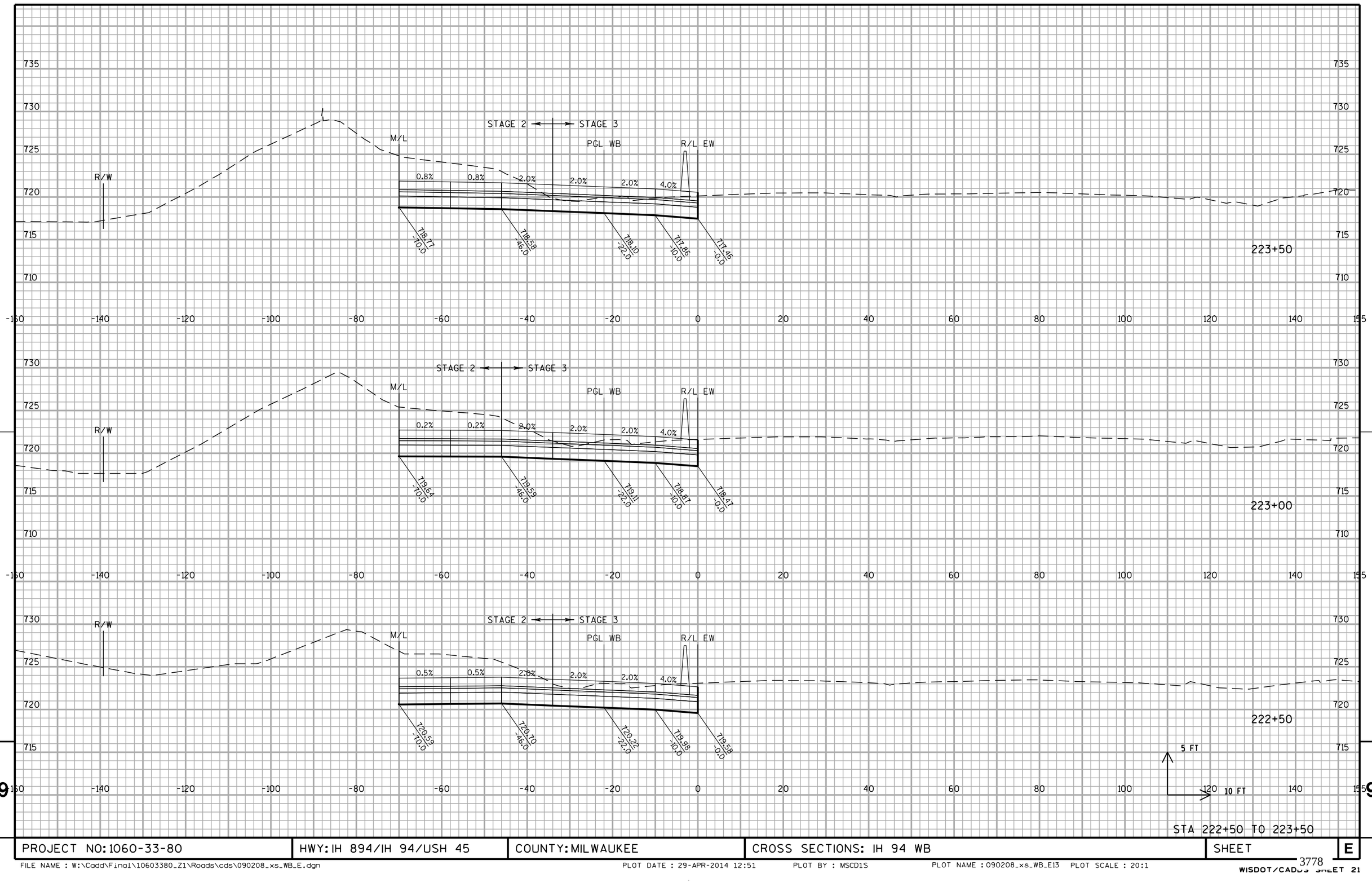
9

STA 221+00 TO 222+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

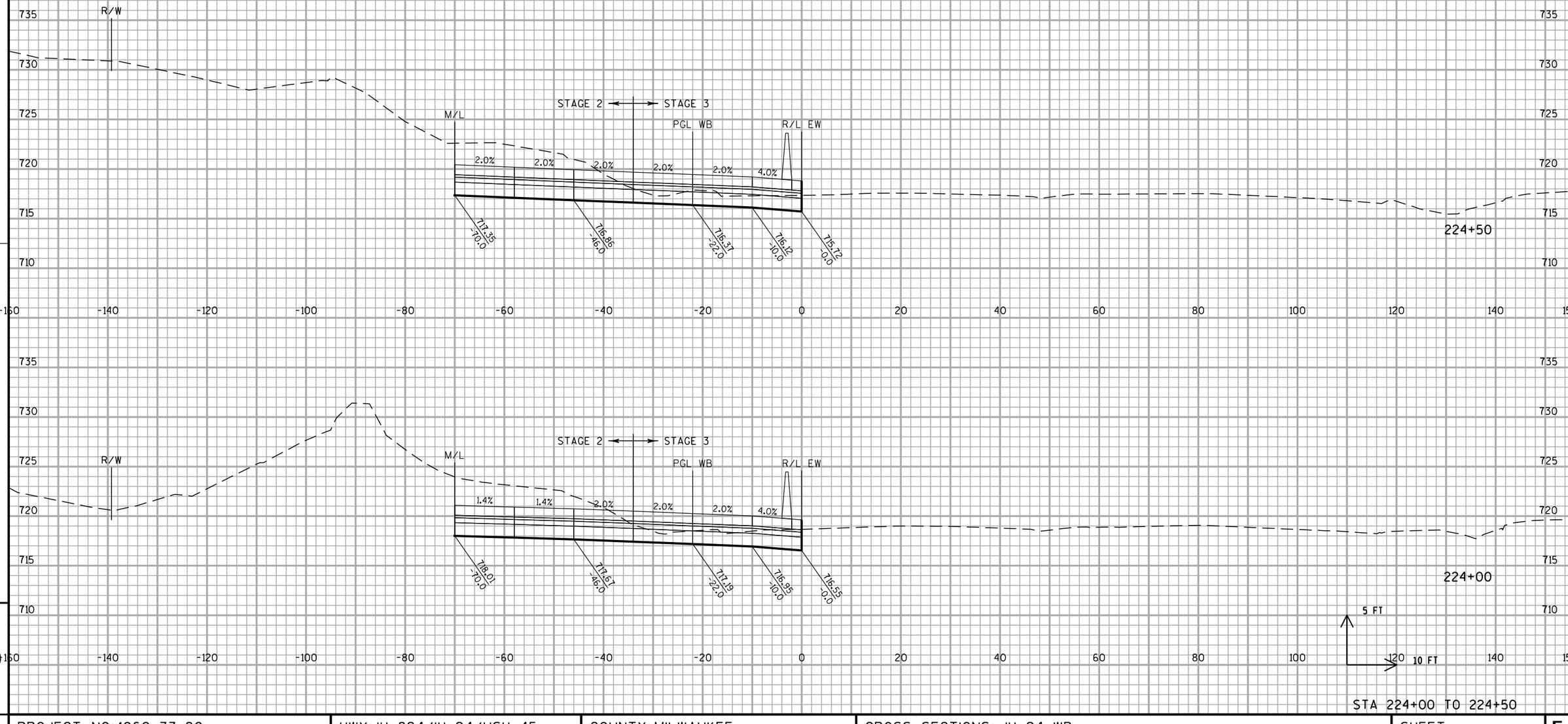
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:51 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

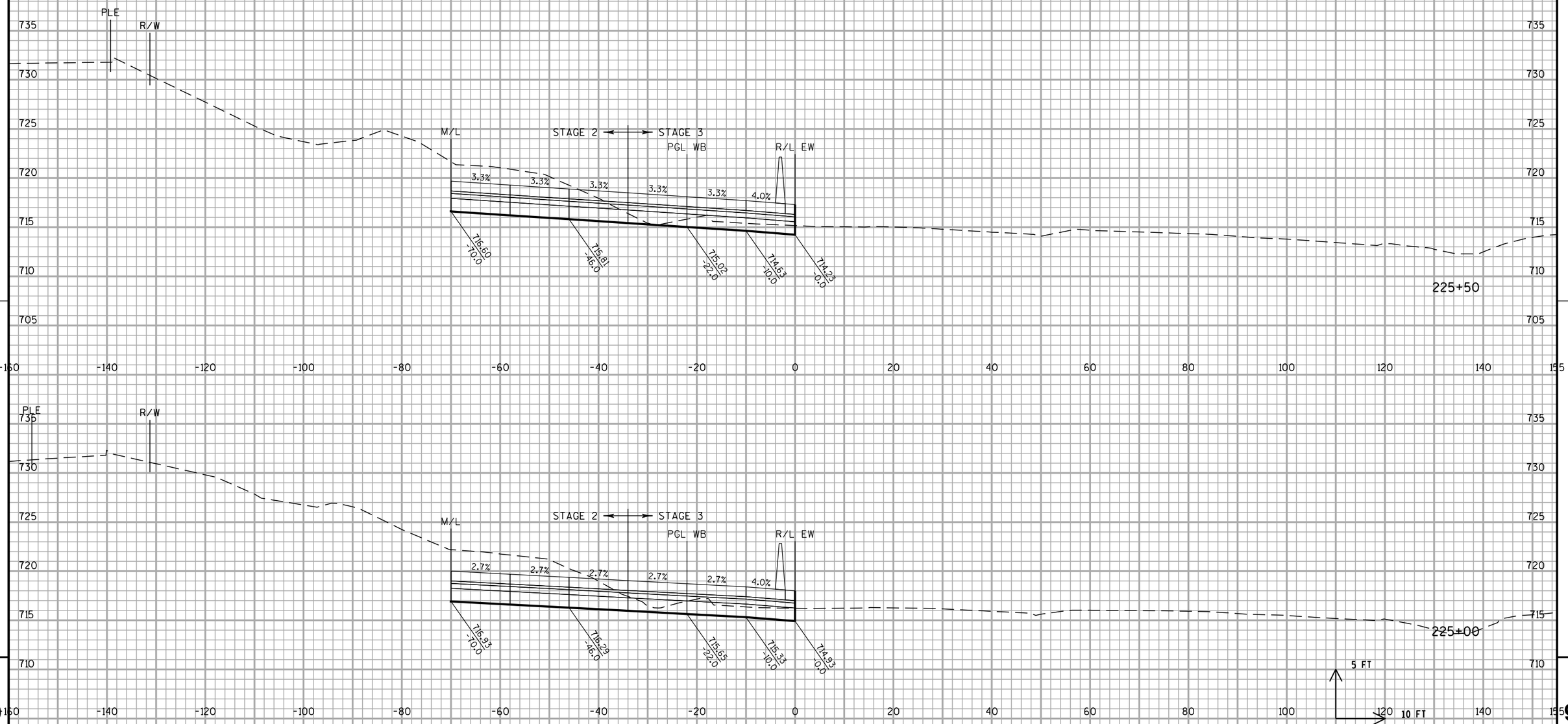
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:51 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E13 PLOT SCALE : 20:1



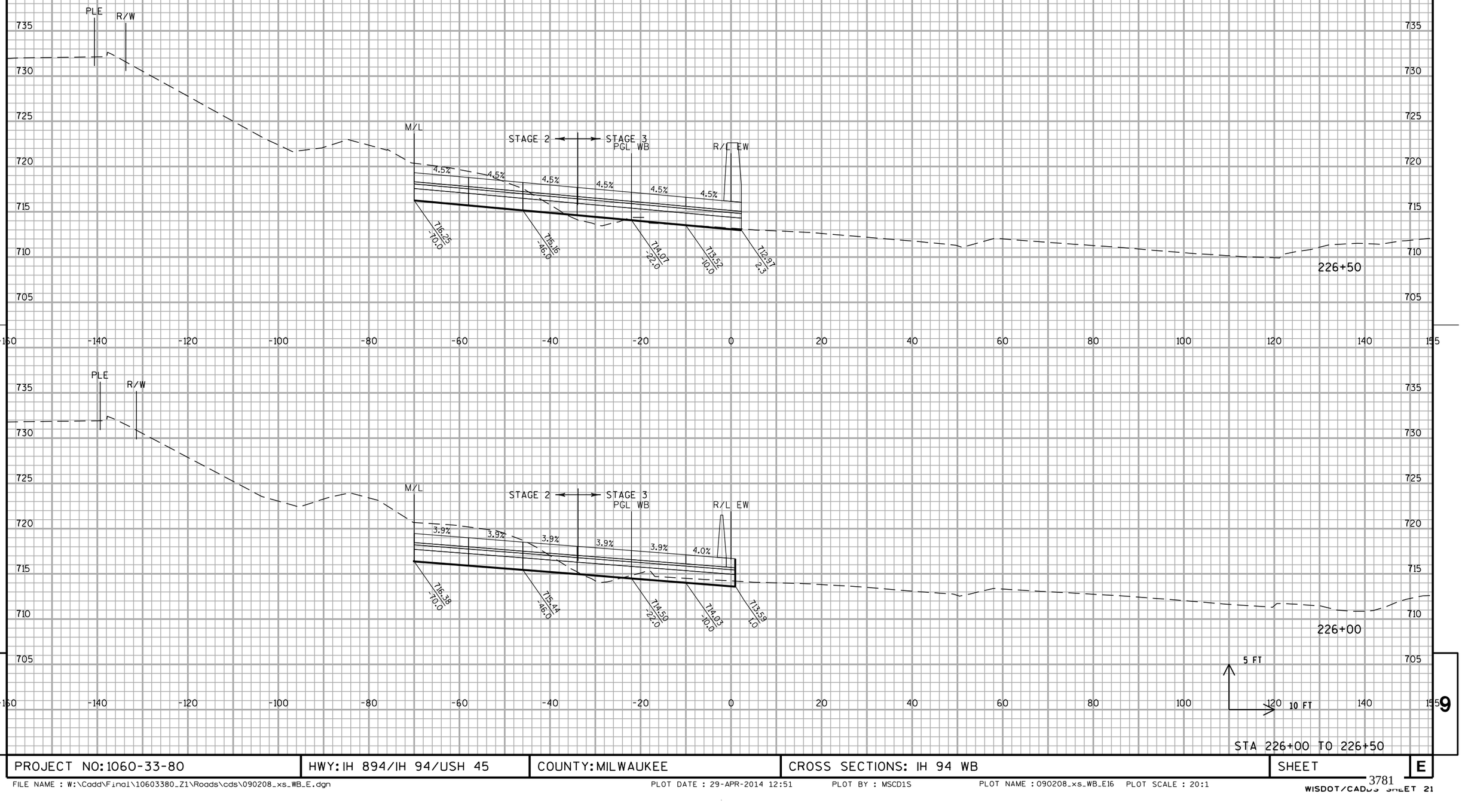
STA 224+00 TO 224+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:51 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E14 PLOT SCALE : 20:1

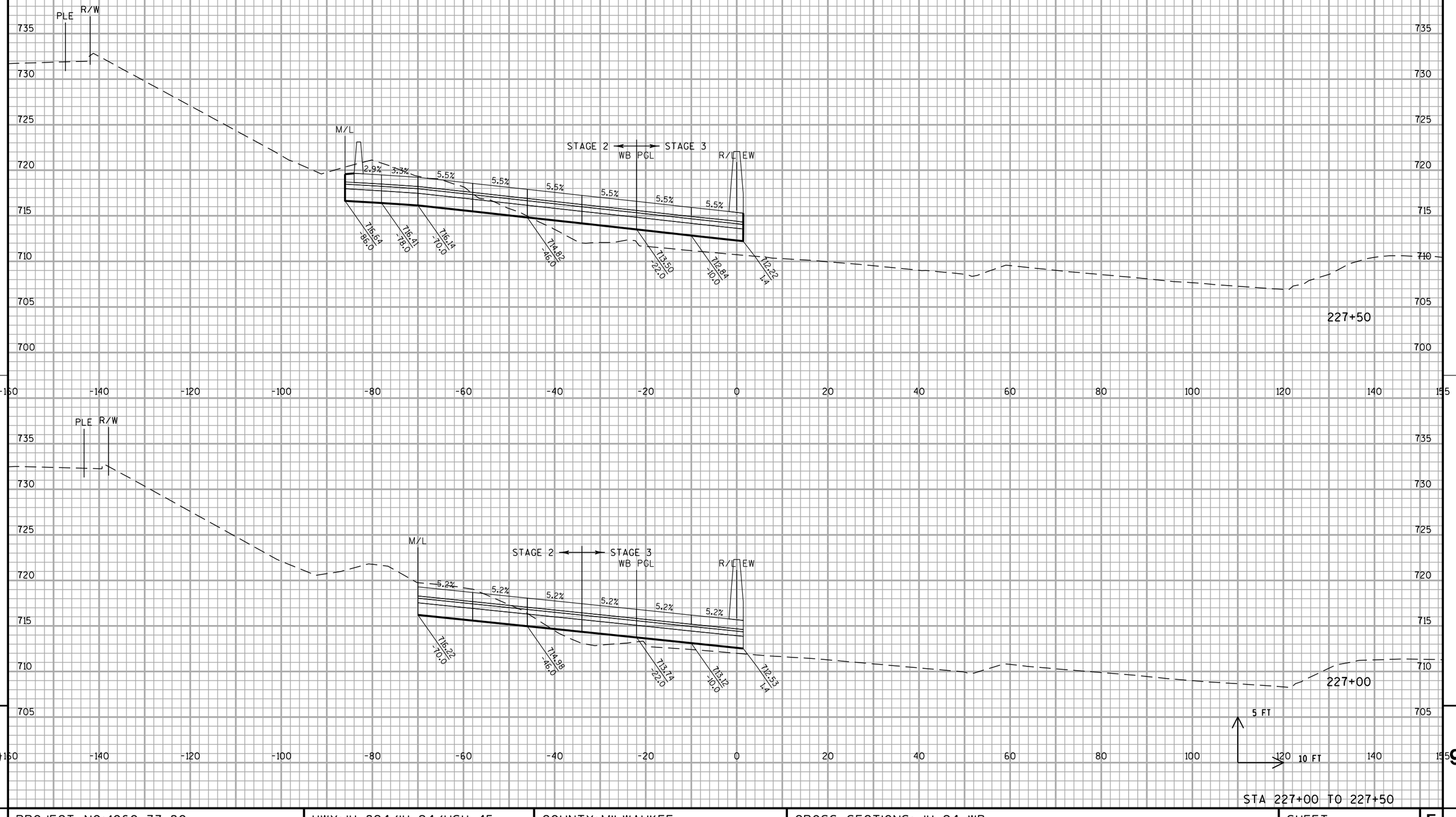


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:51 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E16 PLOT SCALE : 20:1

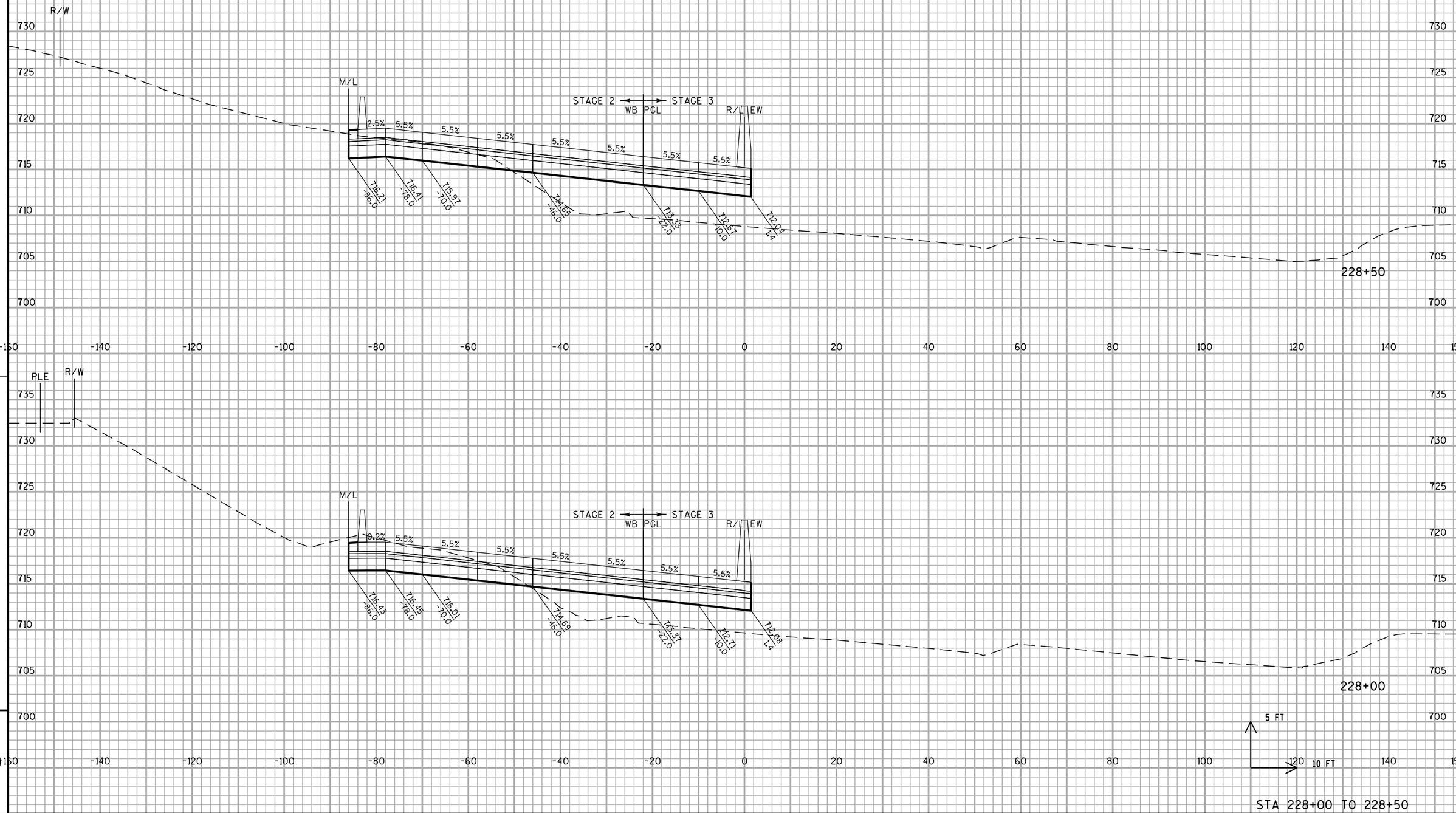


STA 227+00 TO 227+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

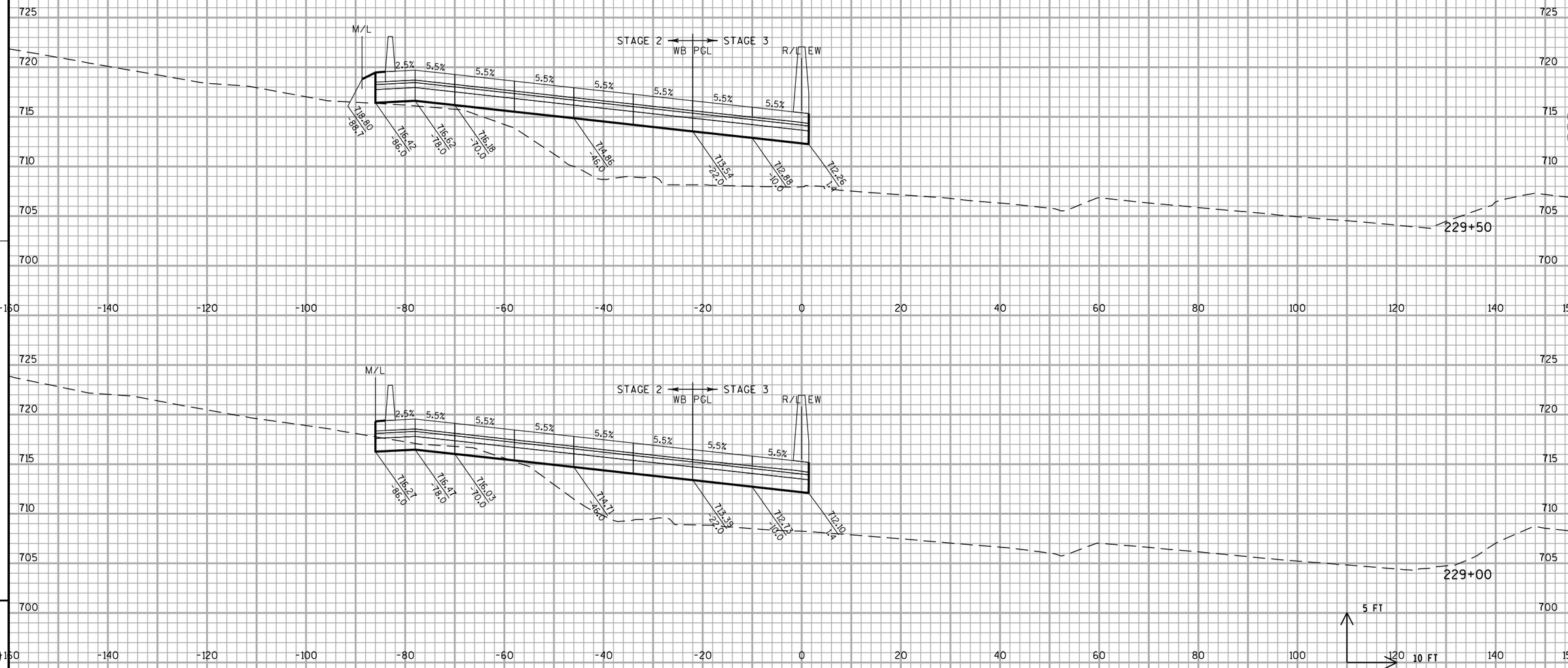
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:01 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e17 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



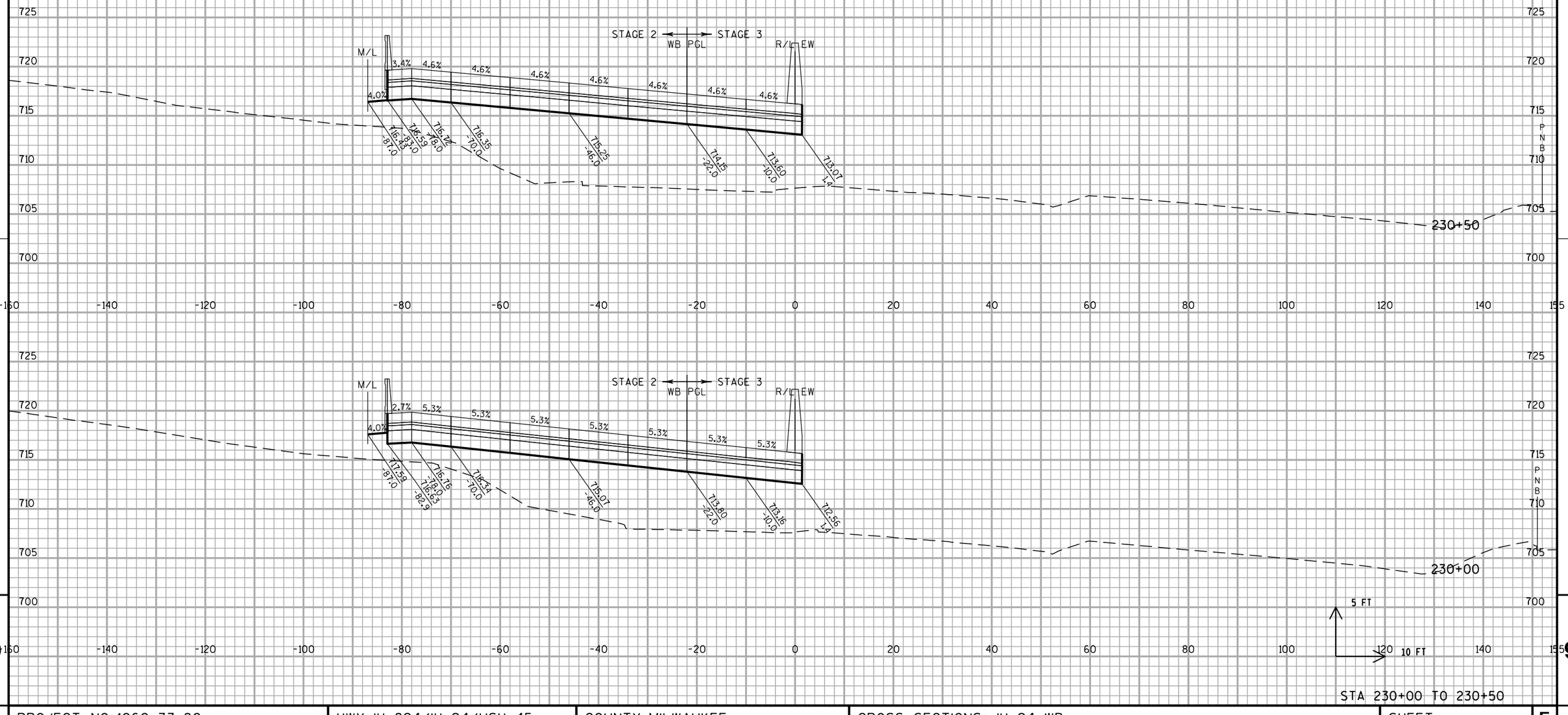
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:01 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e18 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



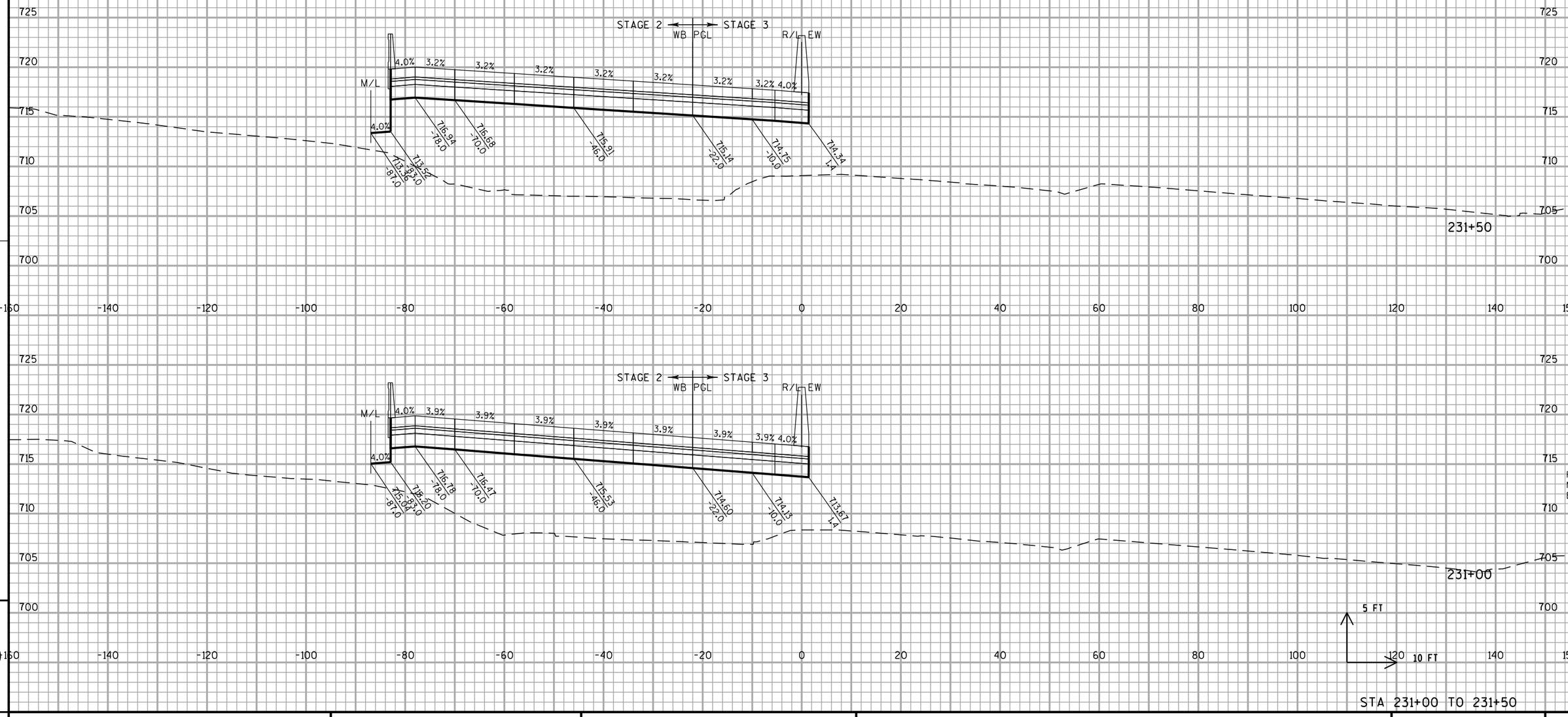
STA 229+00 TO 229+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 230+00 TO 230+50

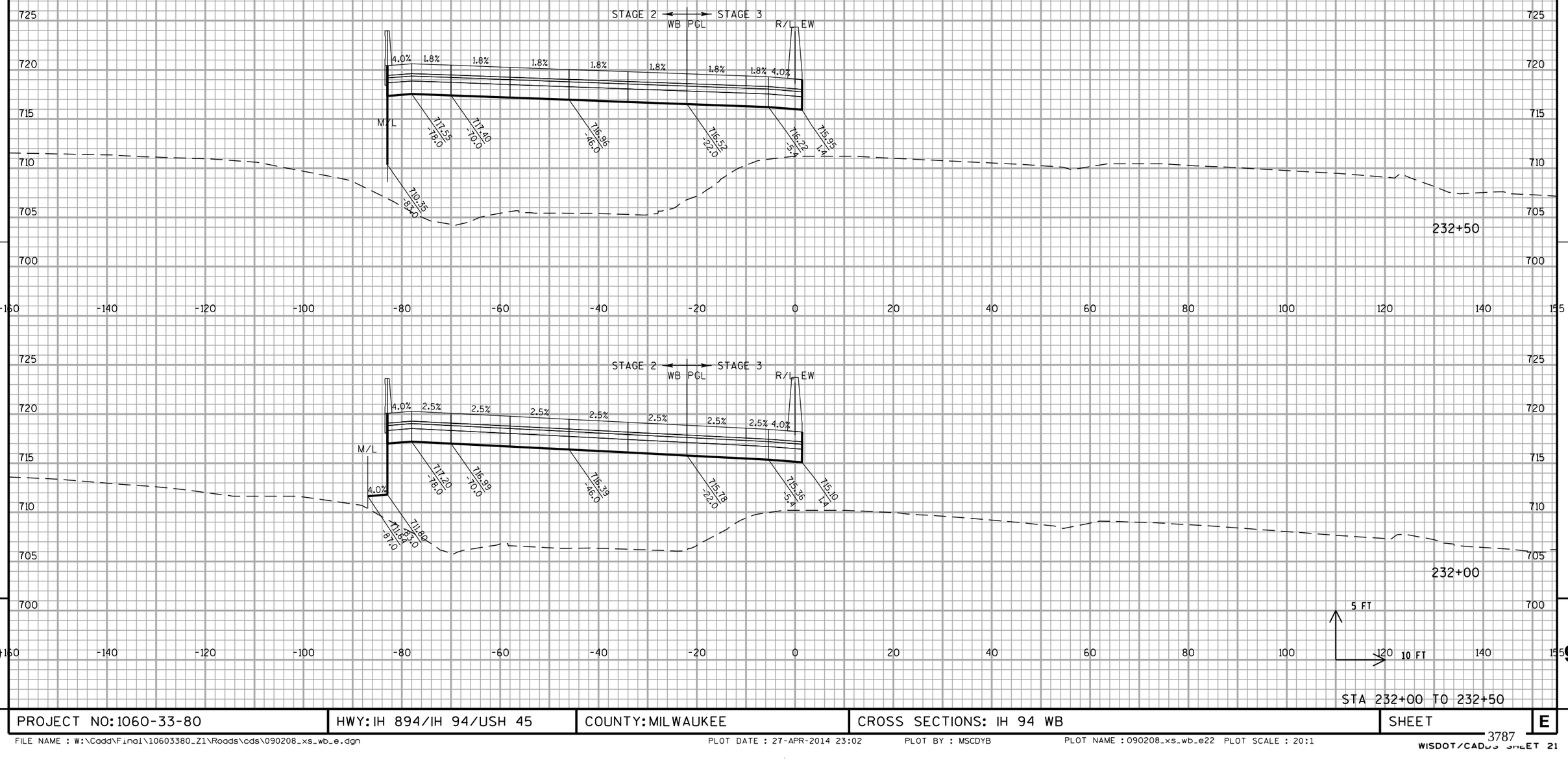
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 231+00 TO 231+50

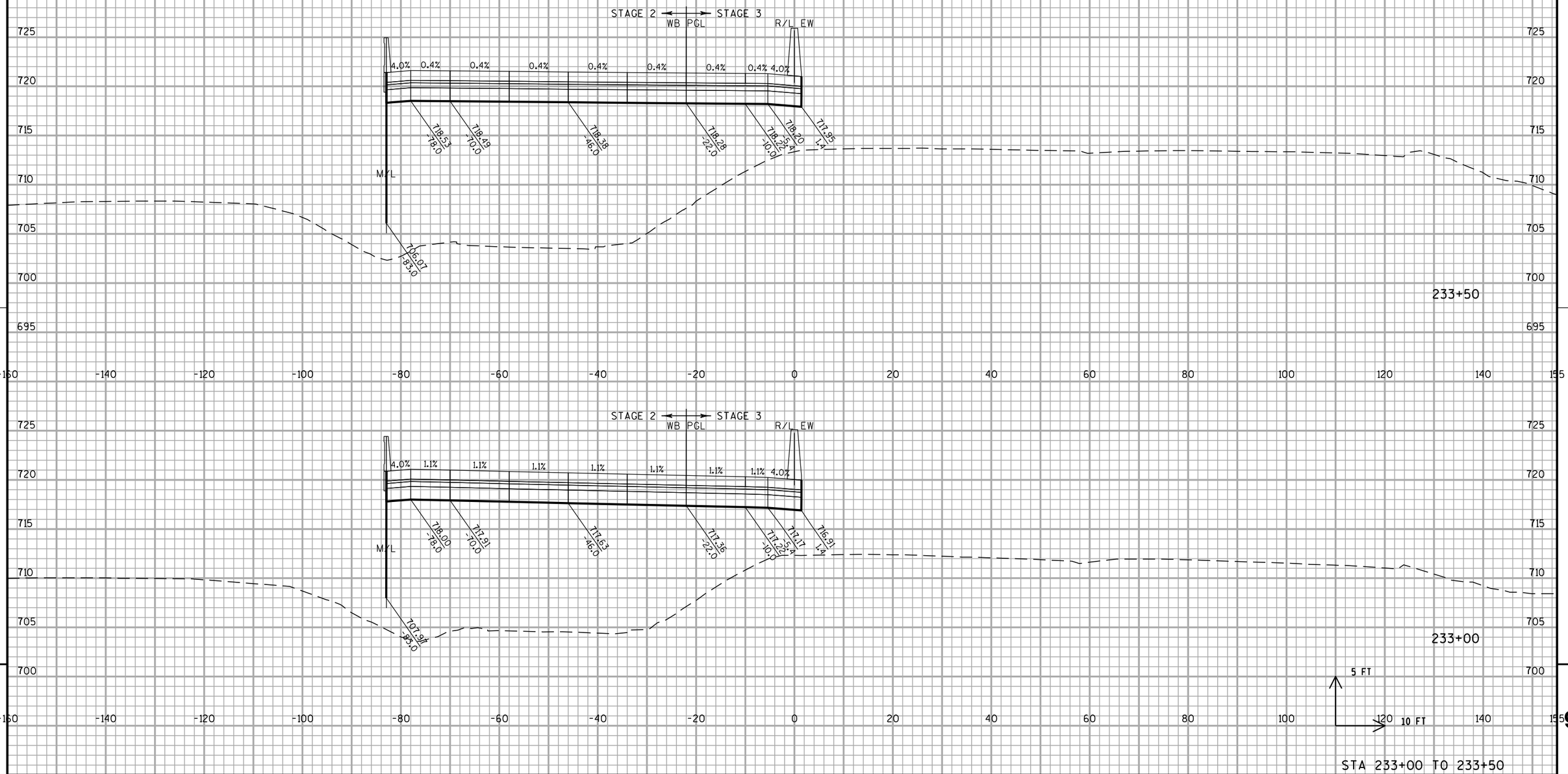
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:01 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e21 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



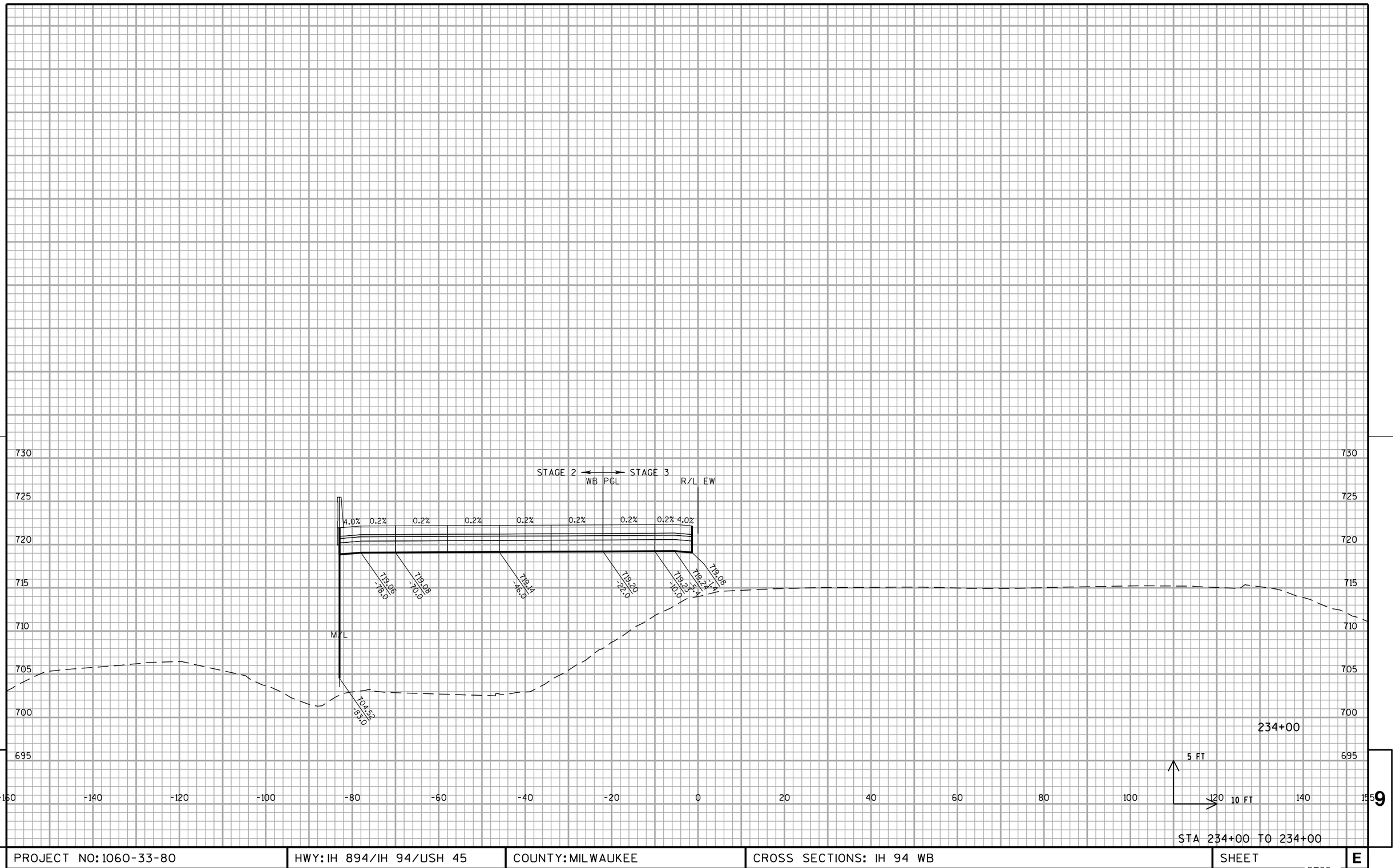
STA 232+00 TO 232+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 233+00 TO 233+50

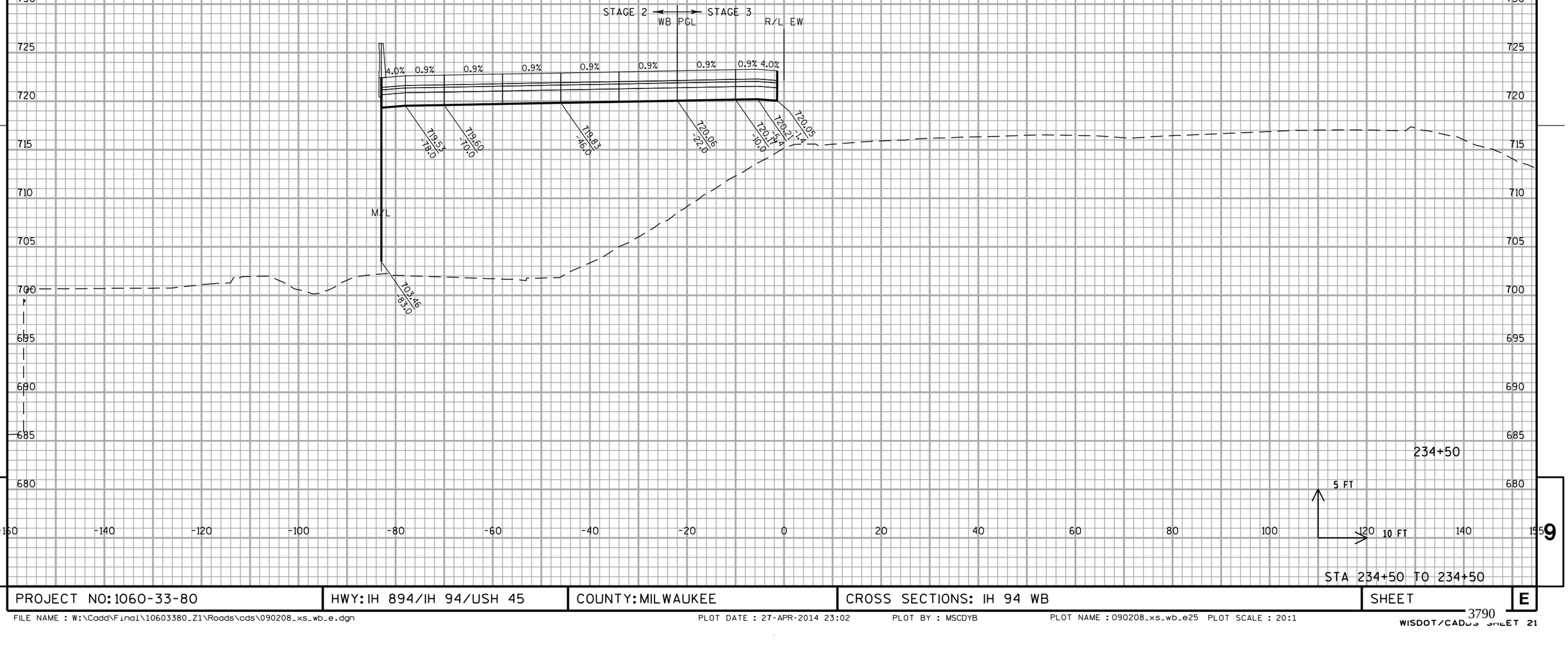
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

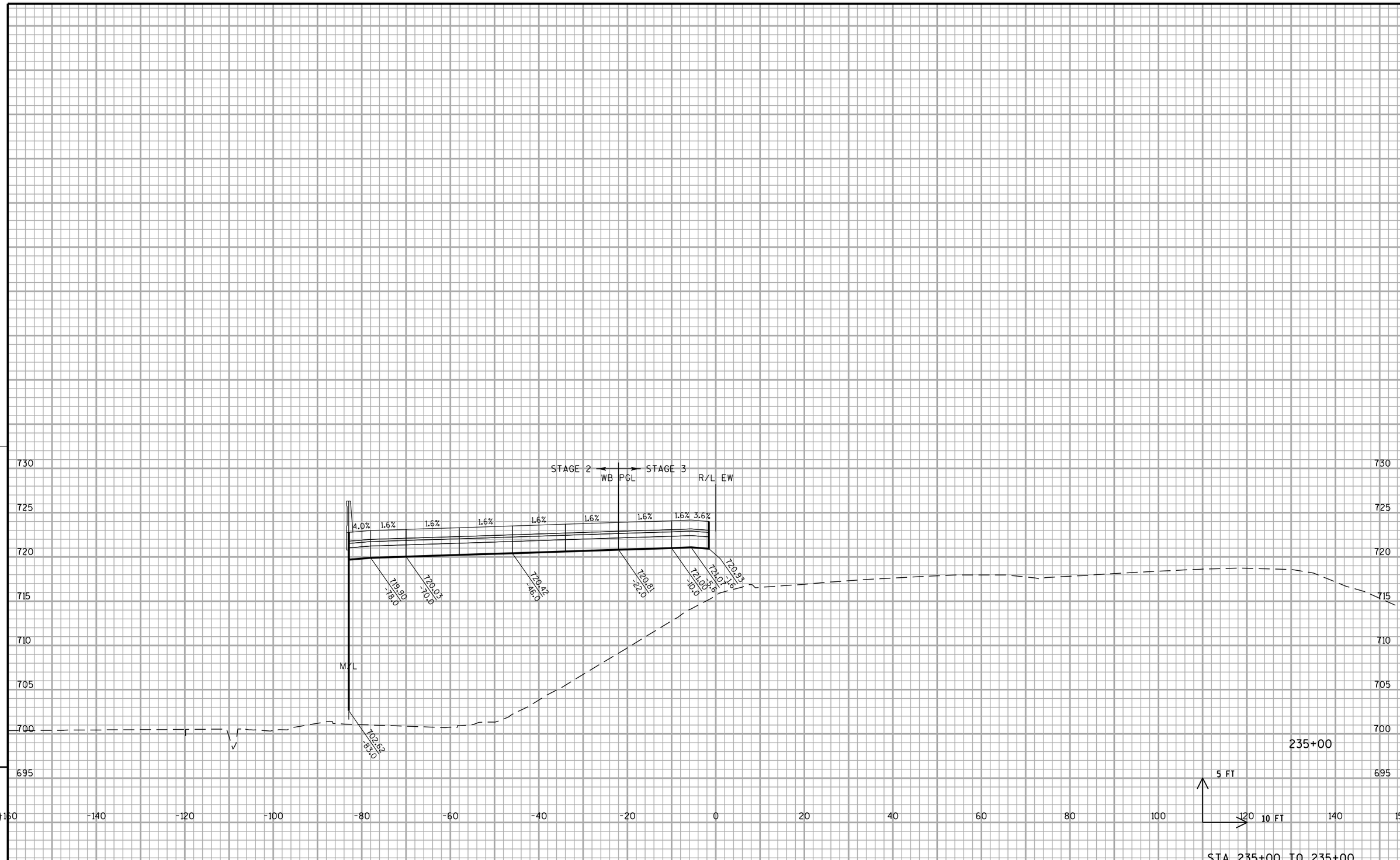
STA 234+00 TO 234+00



STA 234+50 TO 234+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

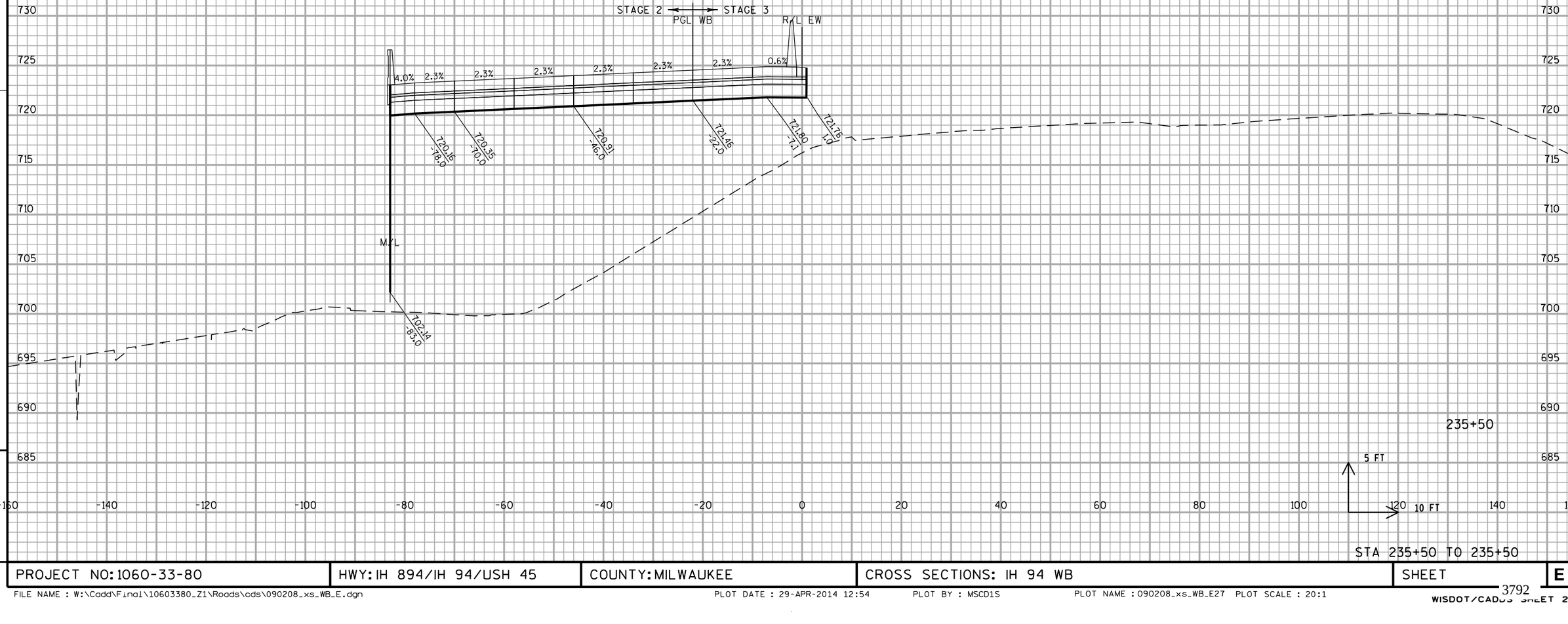
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:02 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e25 PLOT SCALE : 20:1



STA 235+00 TO 235+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

ALL WORK STAGE 2

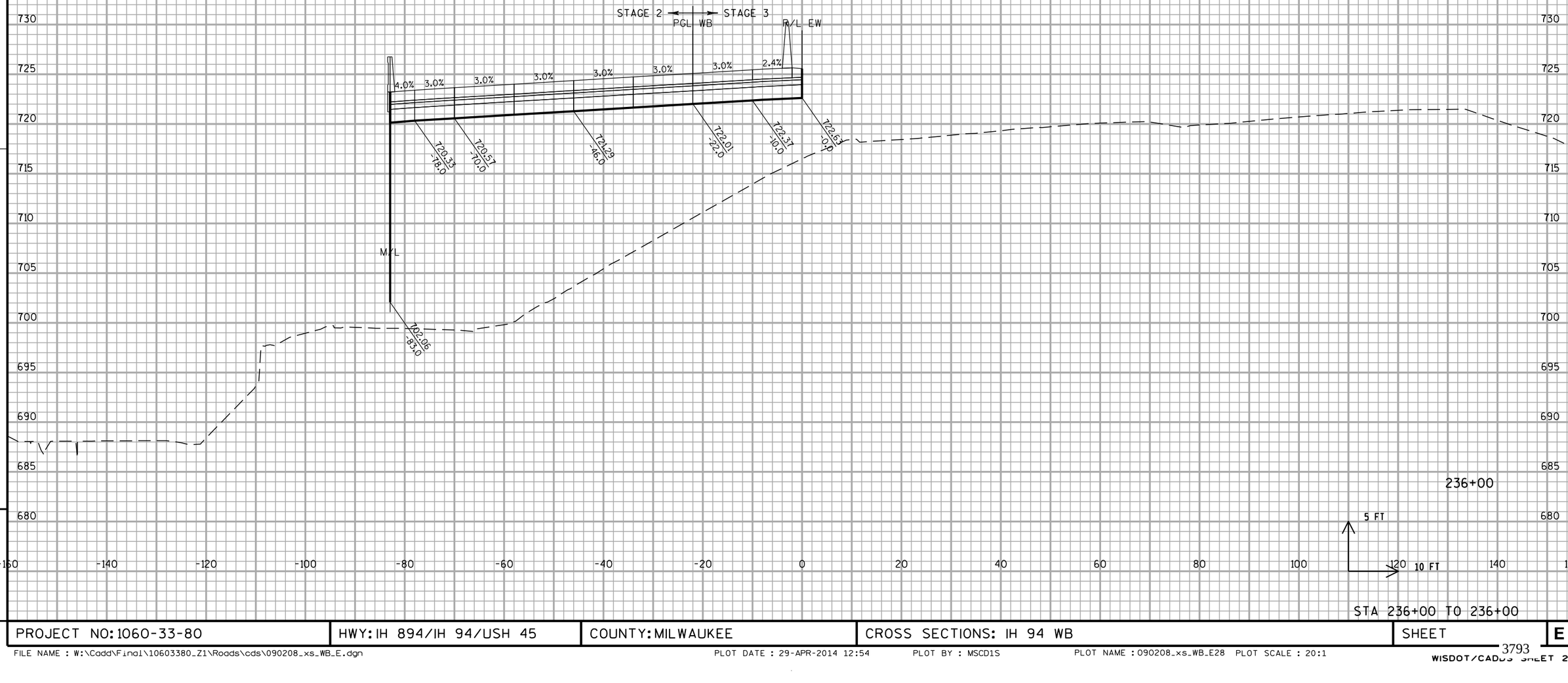


STA 235+50 TO 235+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:54 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E27 PLOT SCALE : 20:1

ALL WORK STAGE 2

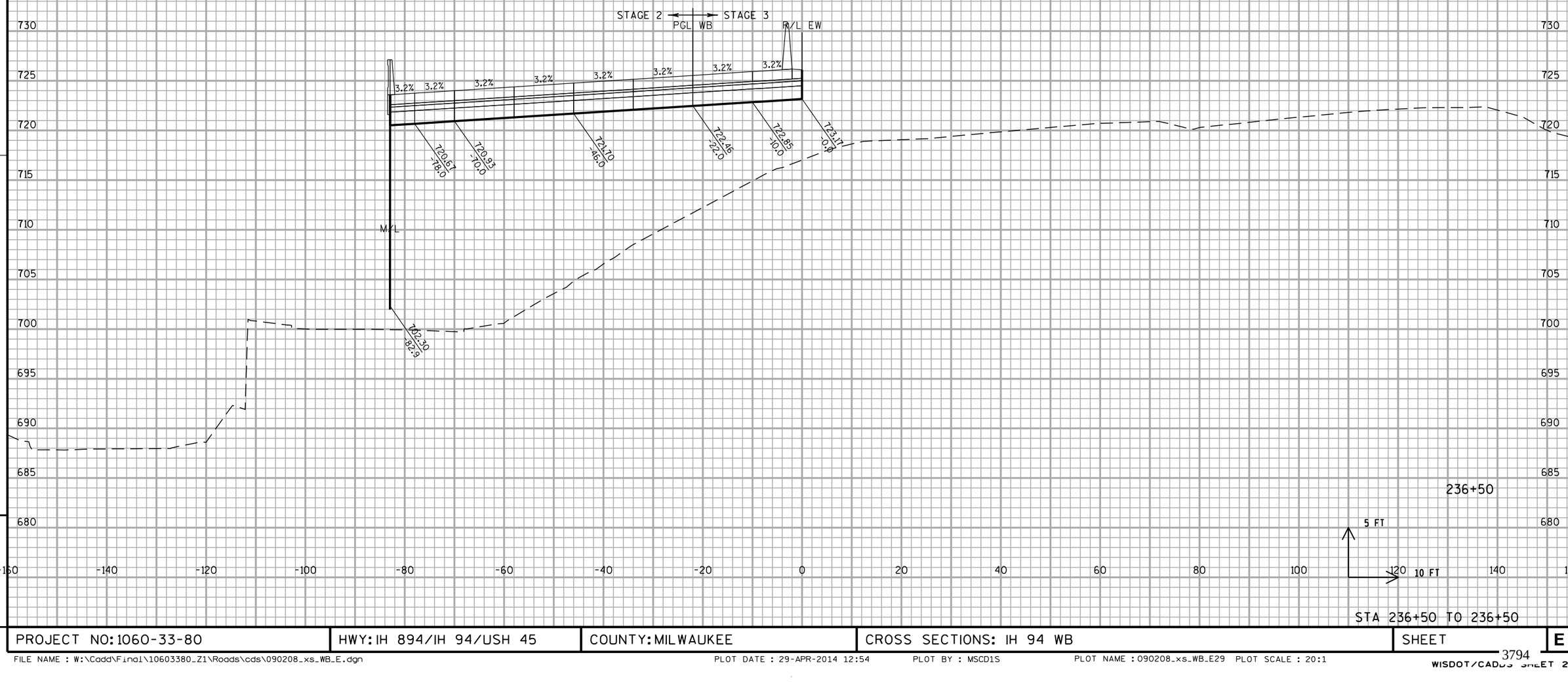


STA 236+00 TO 236+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:54 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E28 PLOT SCALE : 20:1

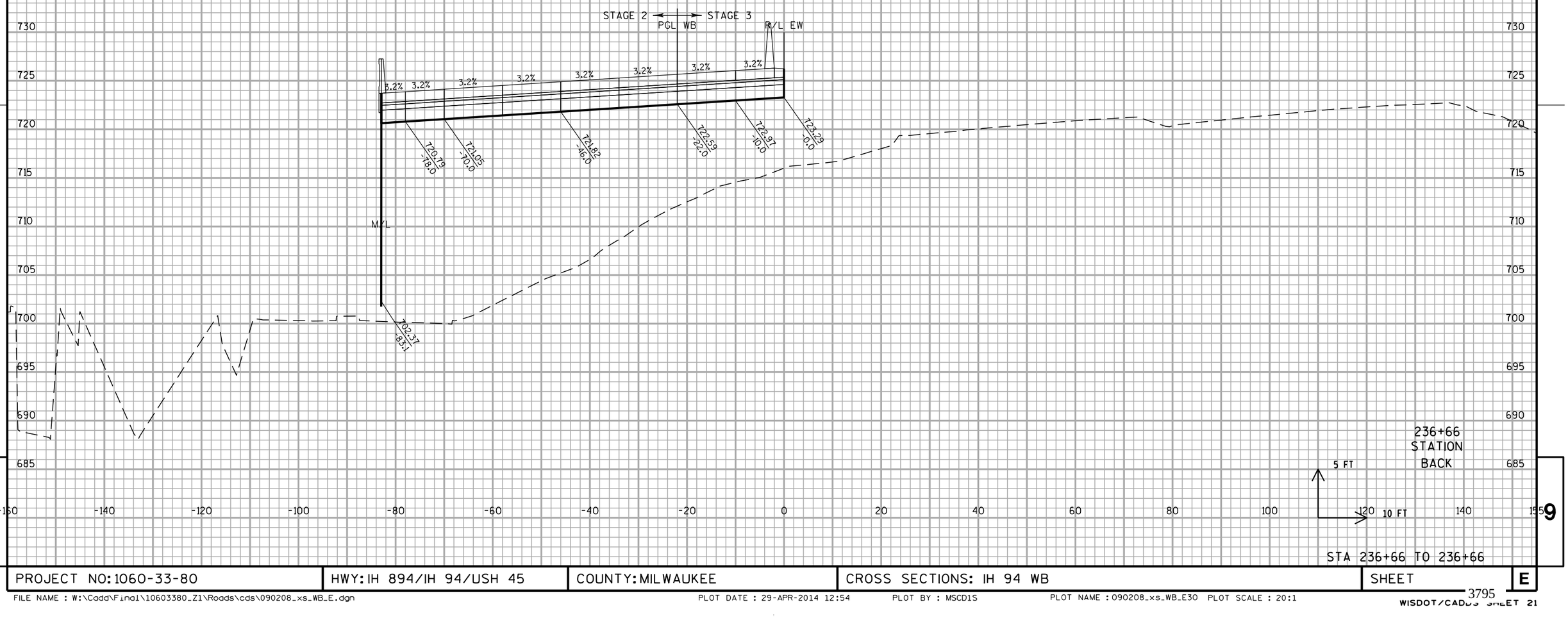
ALL WORK STAGE 2



STA 236+50 TO 236+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

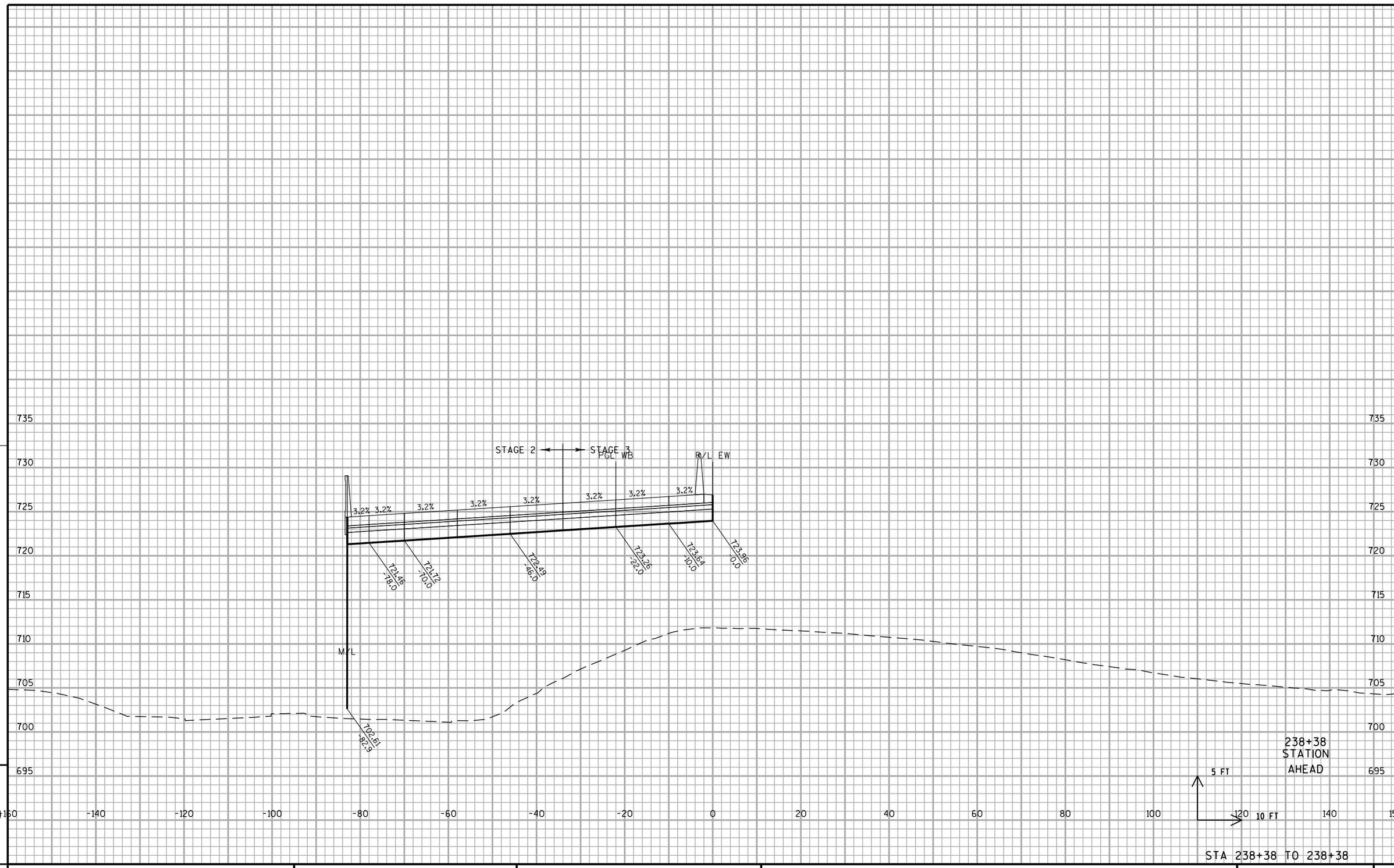
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:54 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E29 PLOT SCALE : 20:1



STA 236+66 TO 236+66

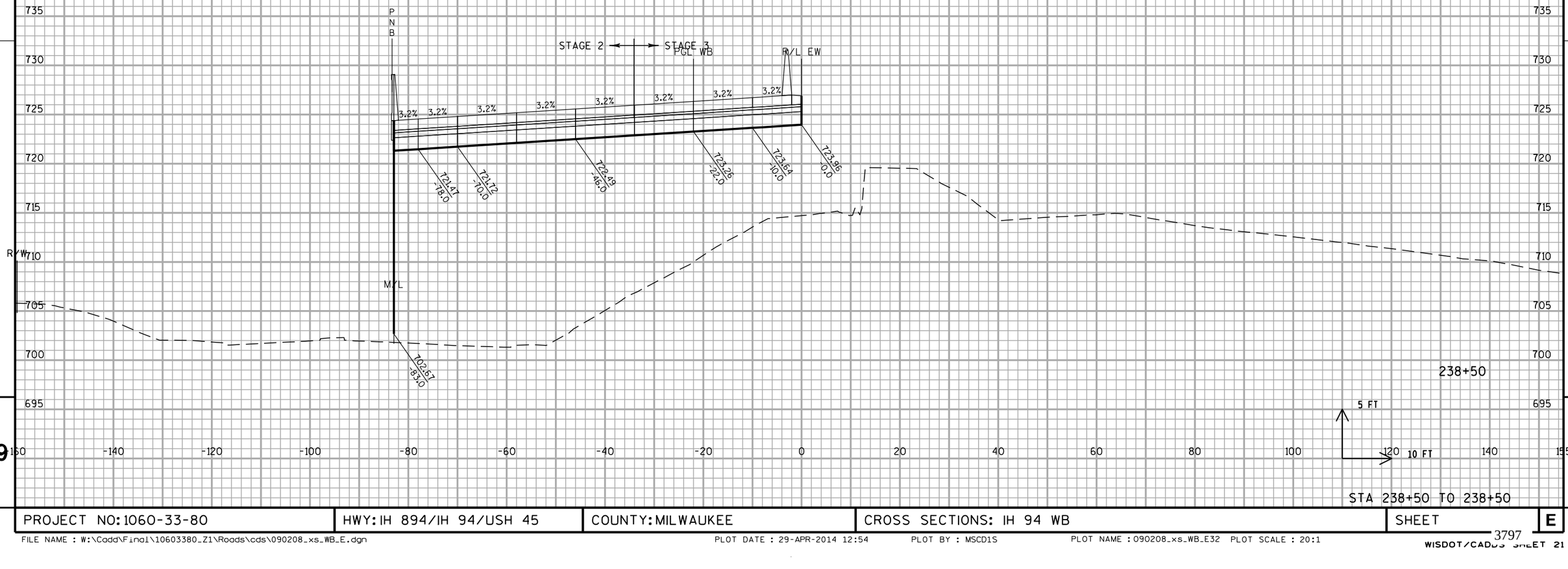
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:54 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E30 PLOT SCALE : 20:1



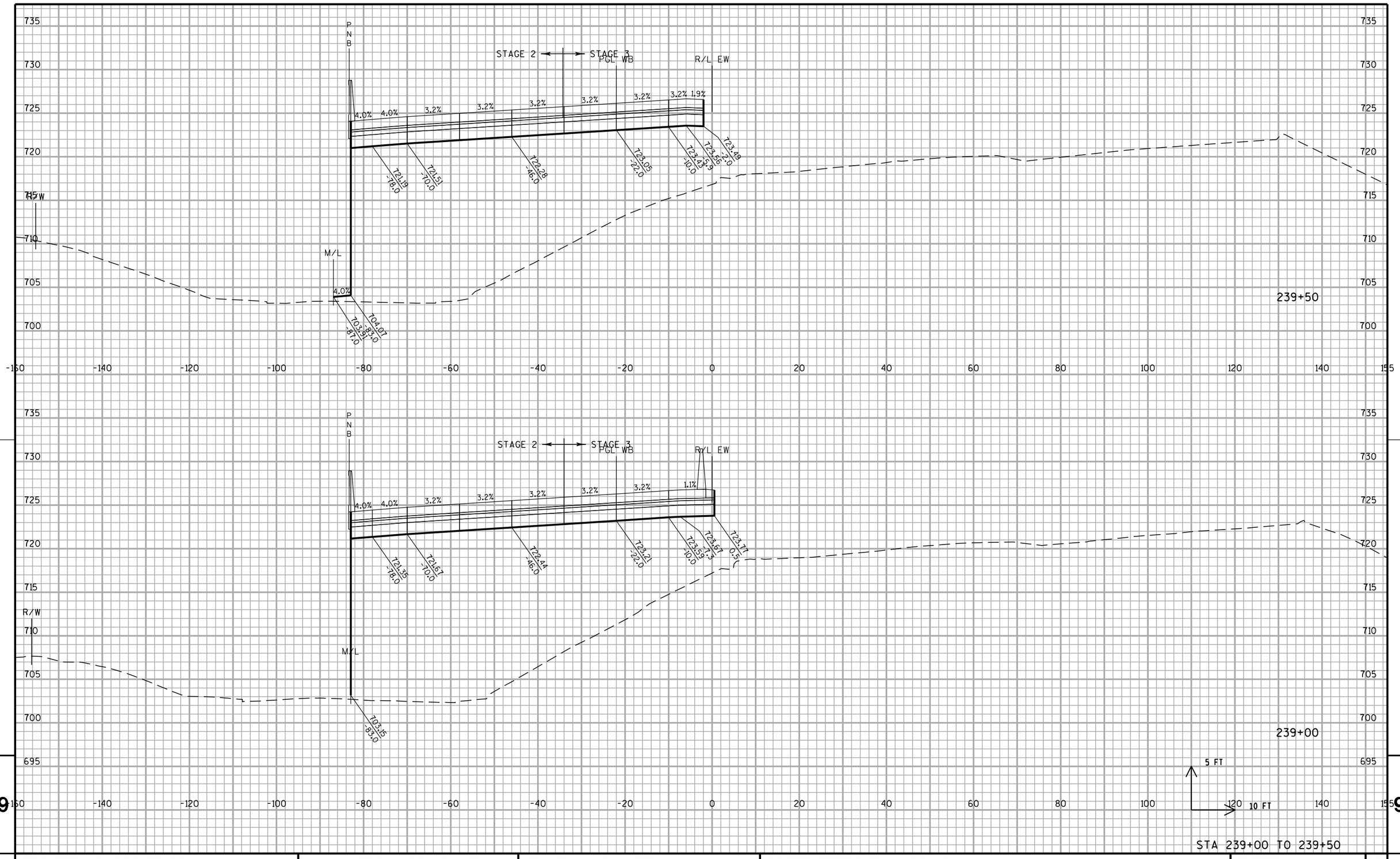
STA 238+38 TO 238+38

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



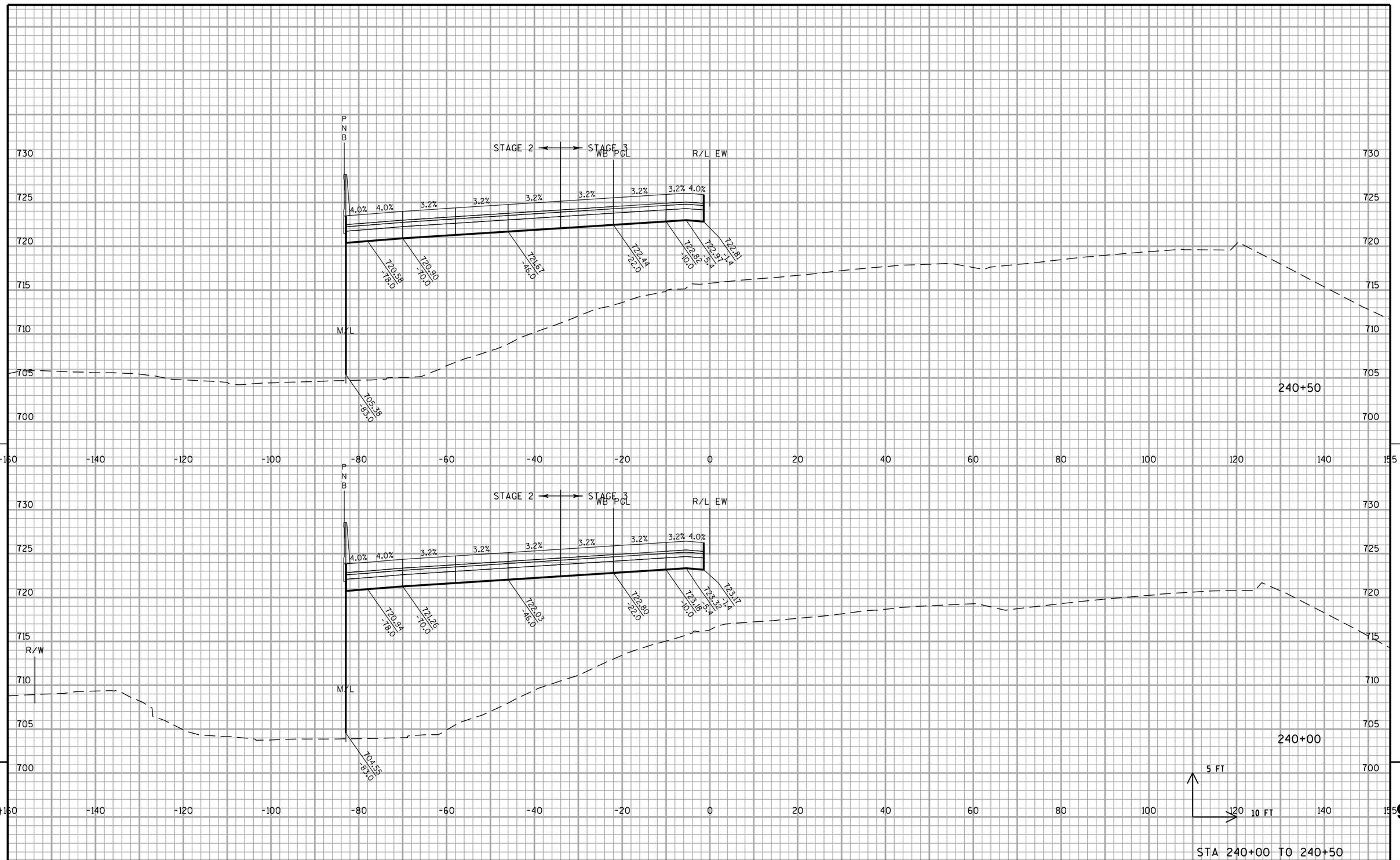
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

STA 238+50 TO 238+50



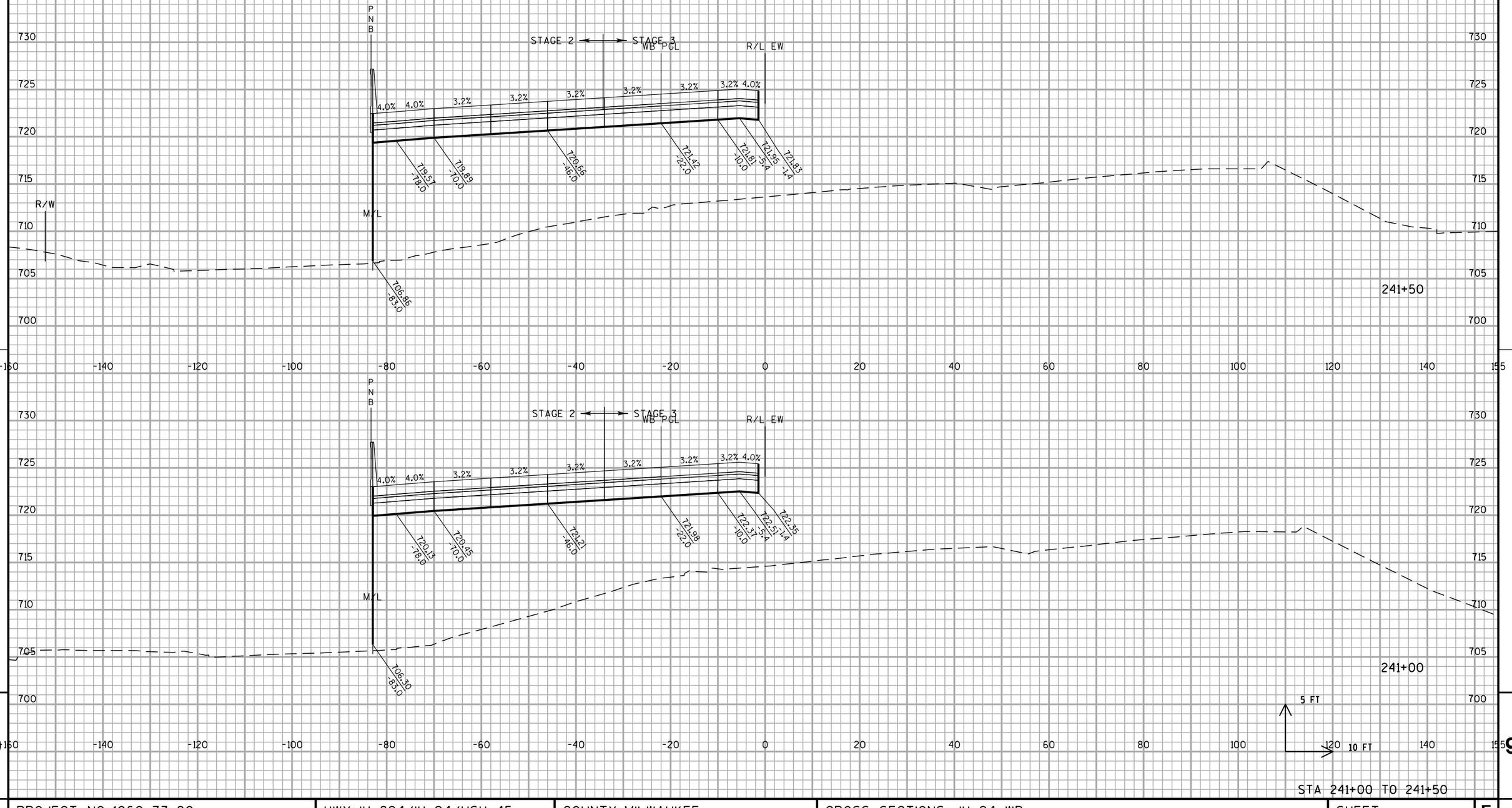
STA 239+00 TO 239+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:02 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e34 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



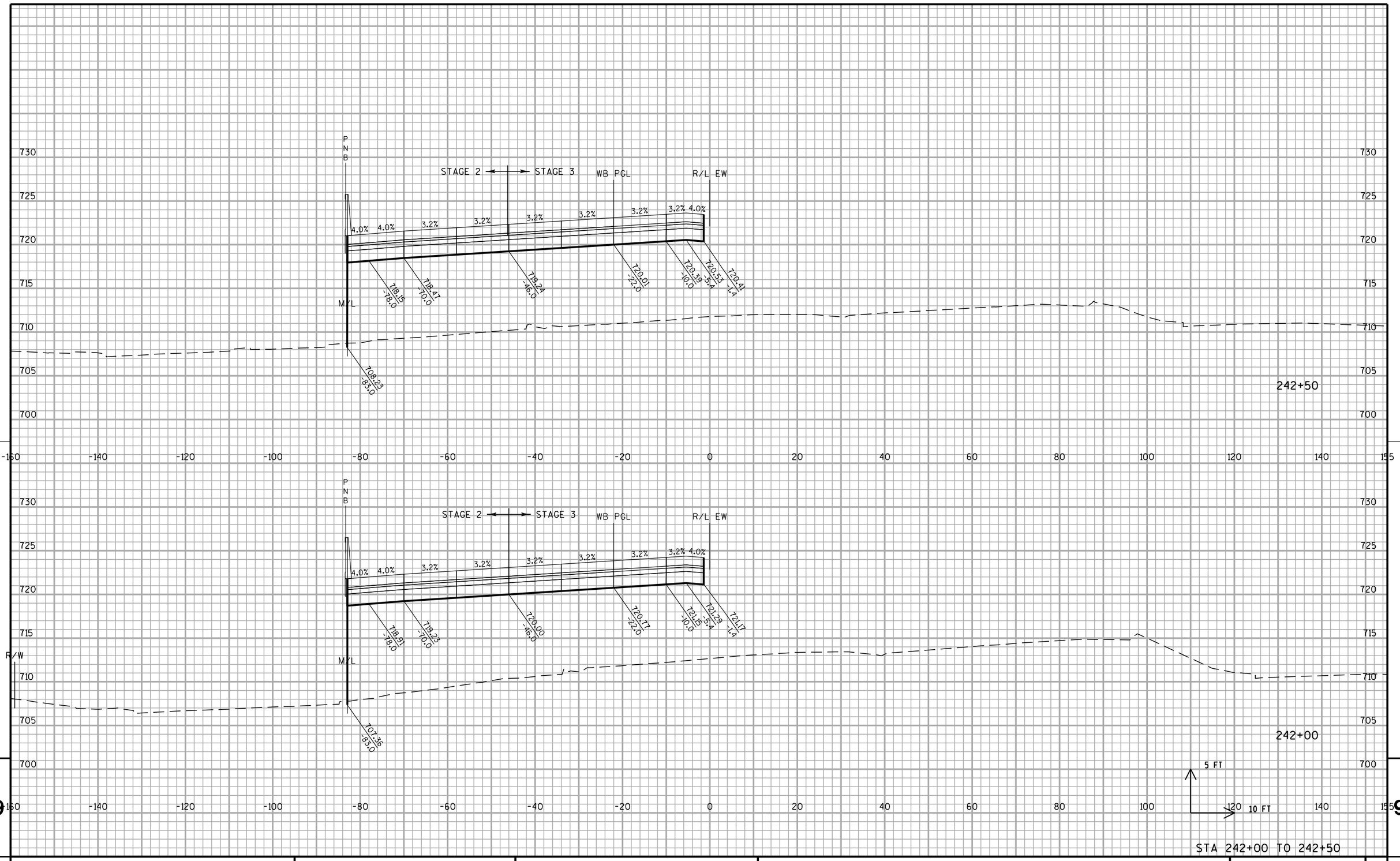
9

9

STA 241+00 TO 241+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:02 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e35 PLOT SCALE : 20:1

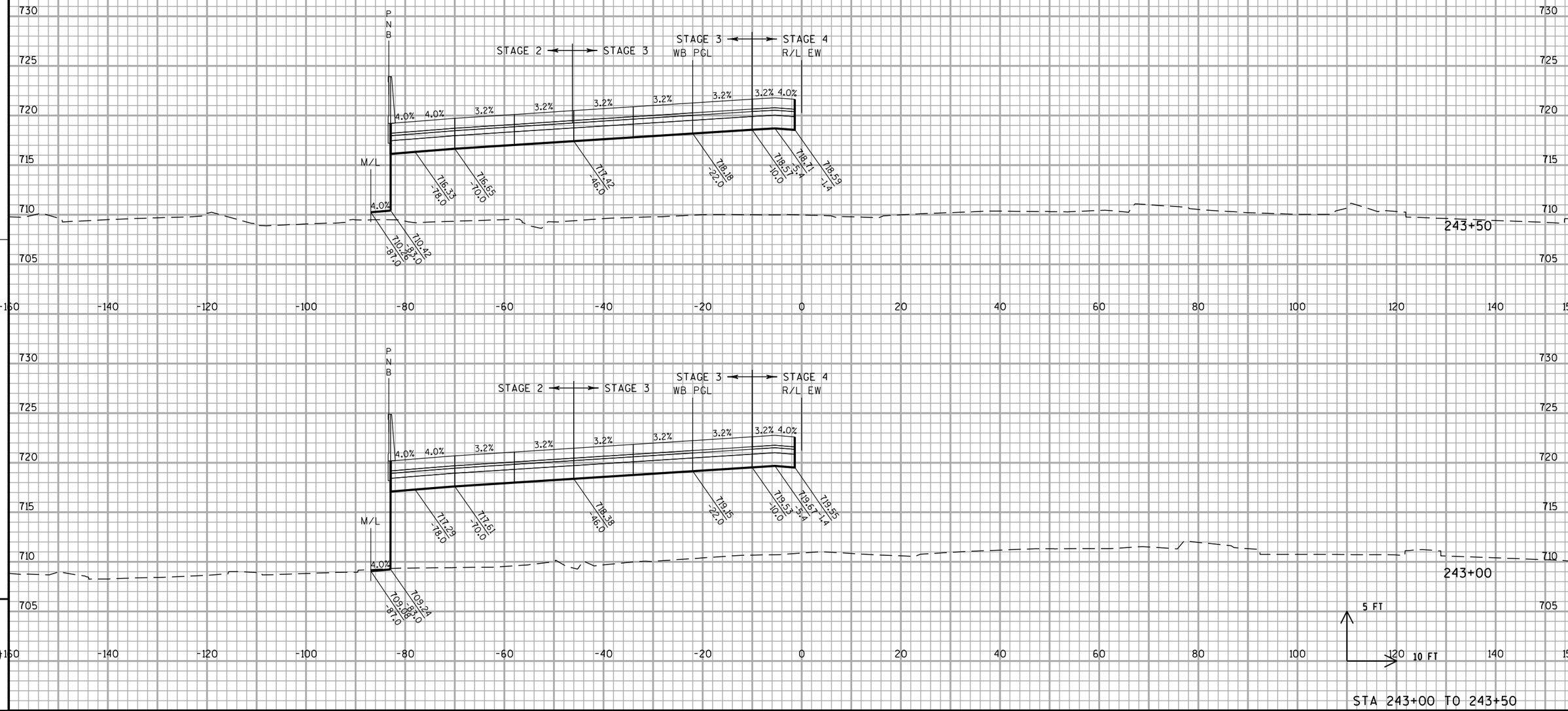


9

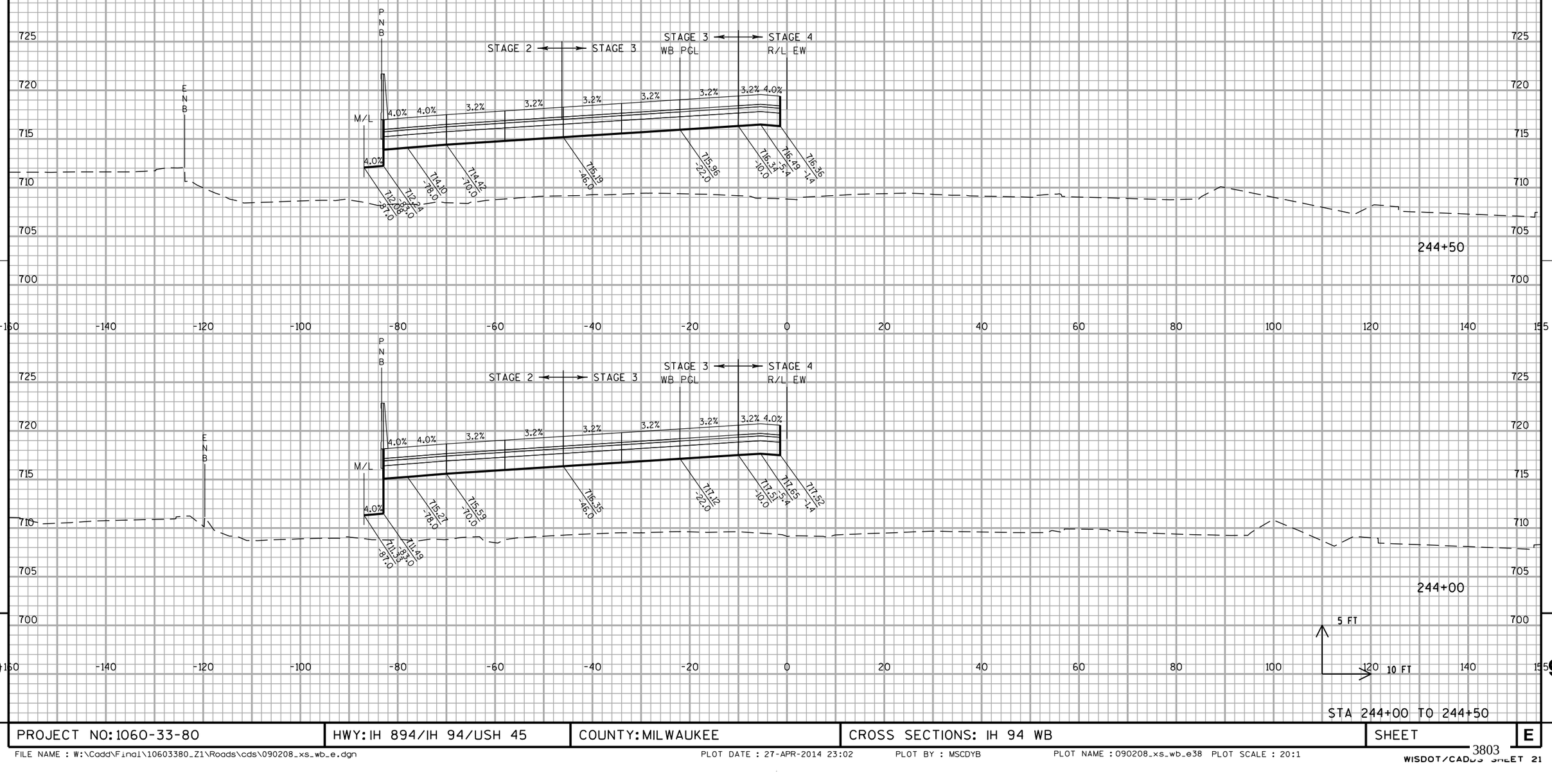
STA 242+00 TO 242+50

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

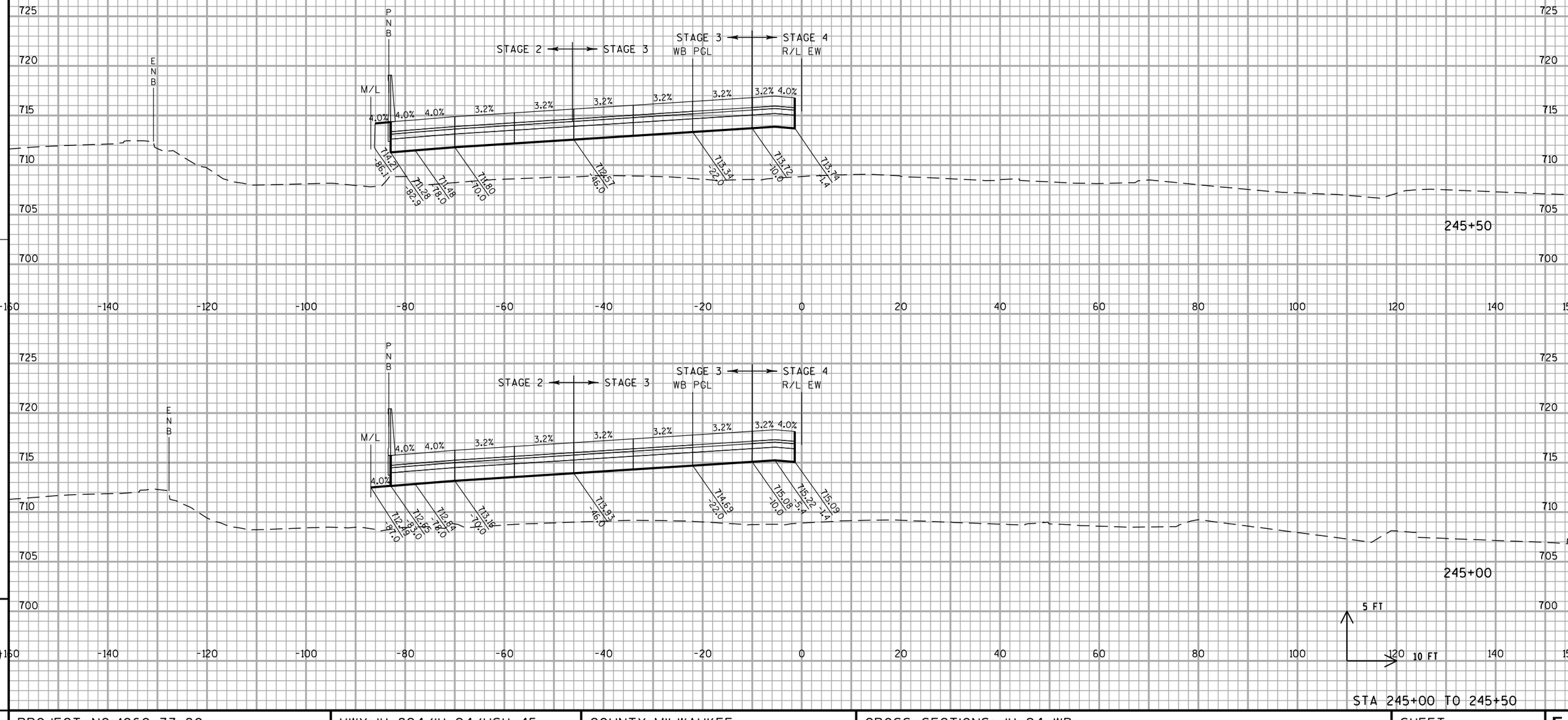


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



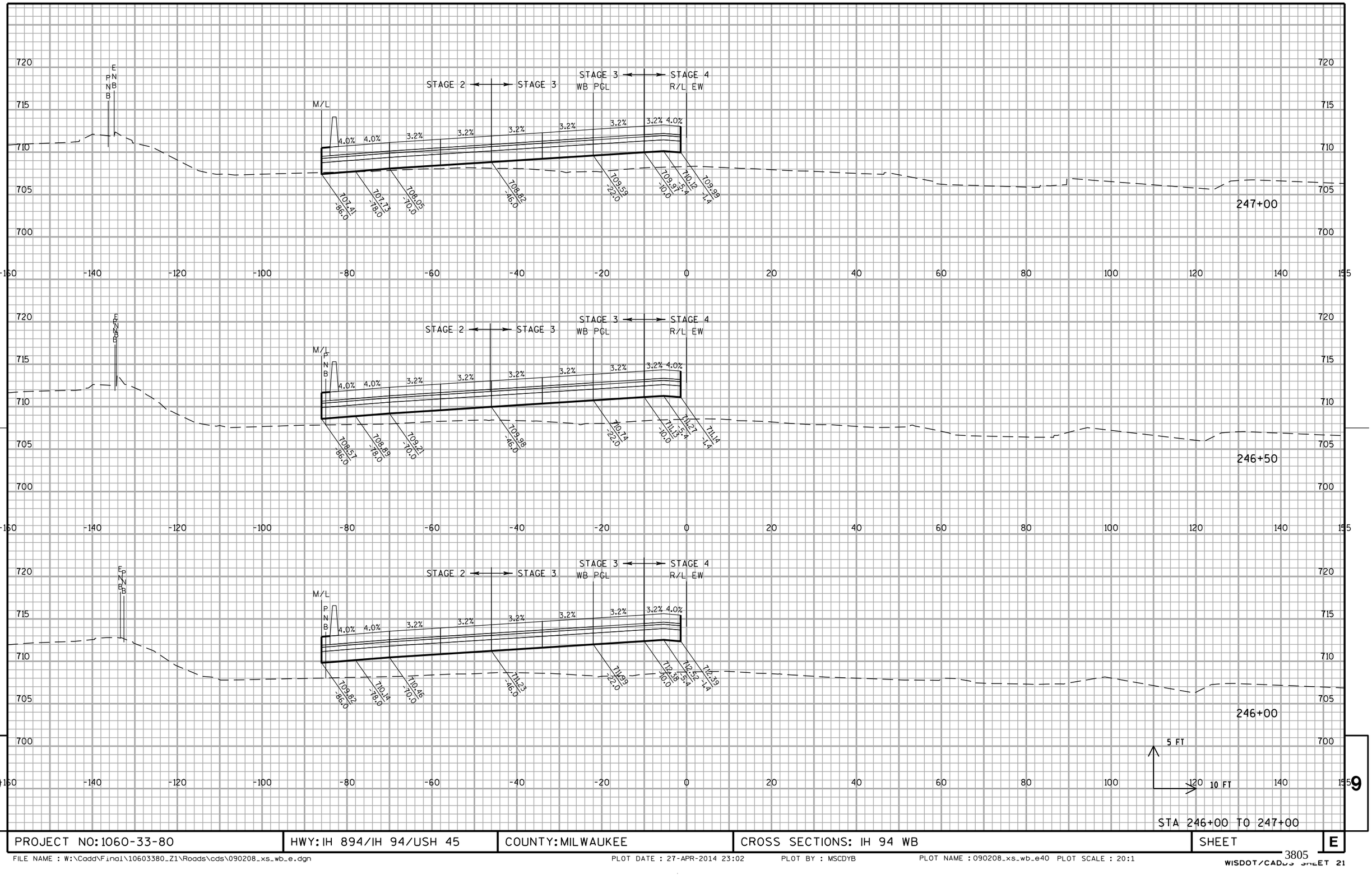
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

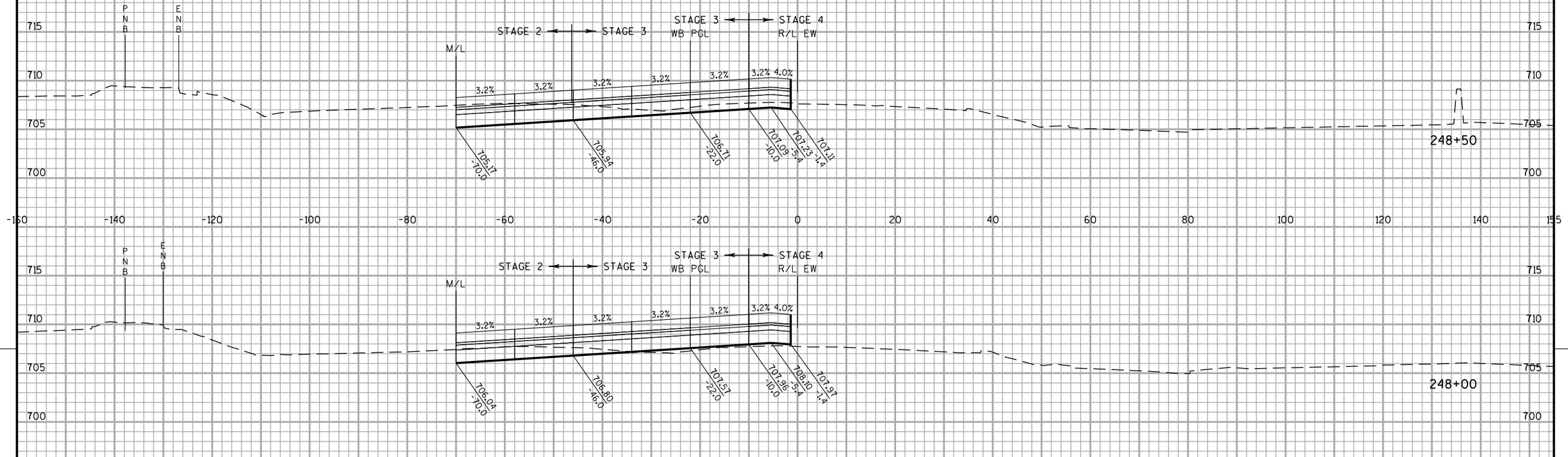


STA 245+00 TO 245+50

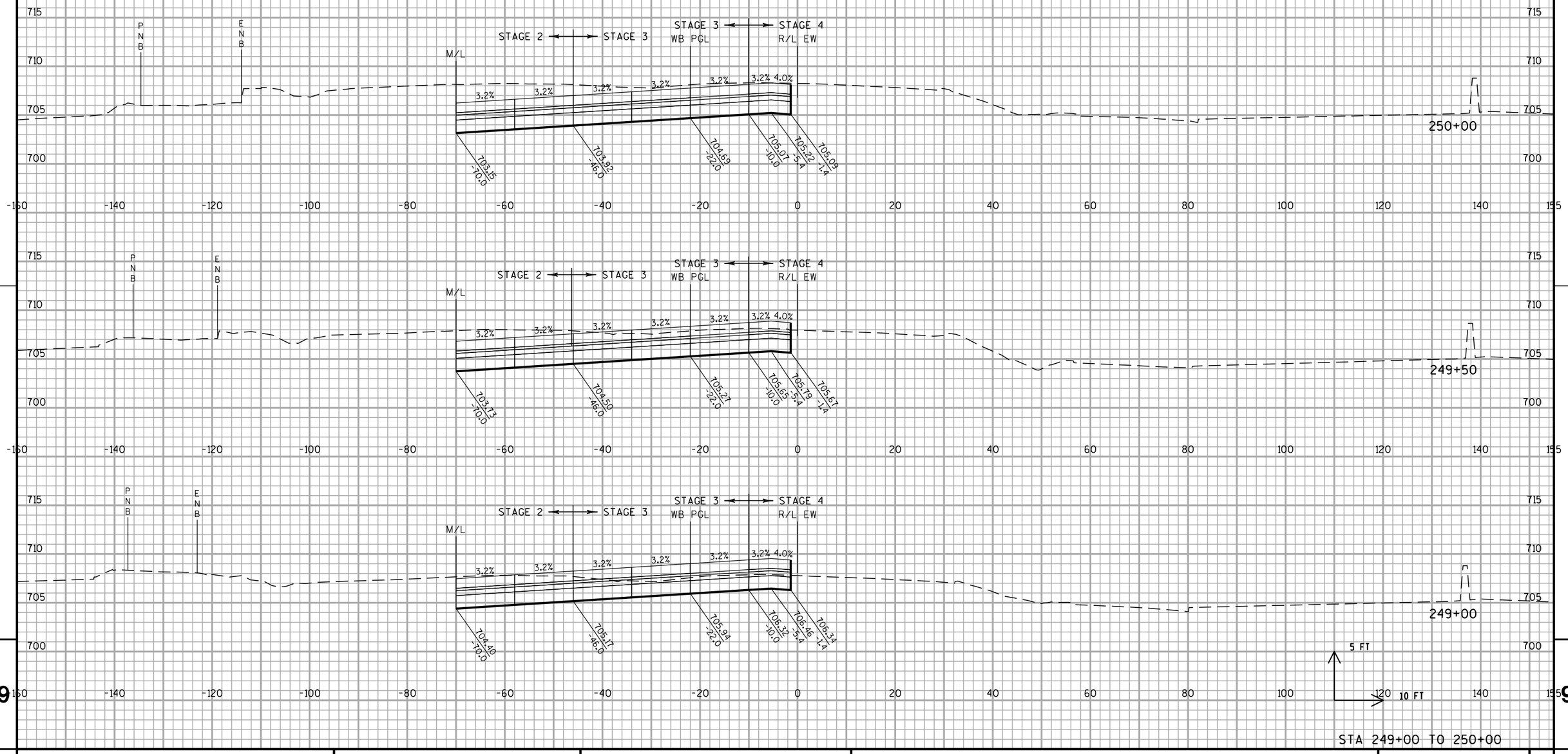
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

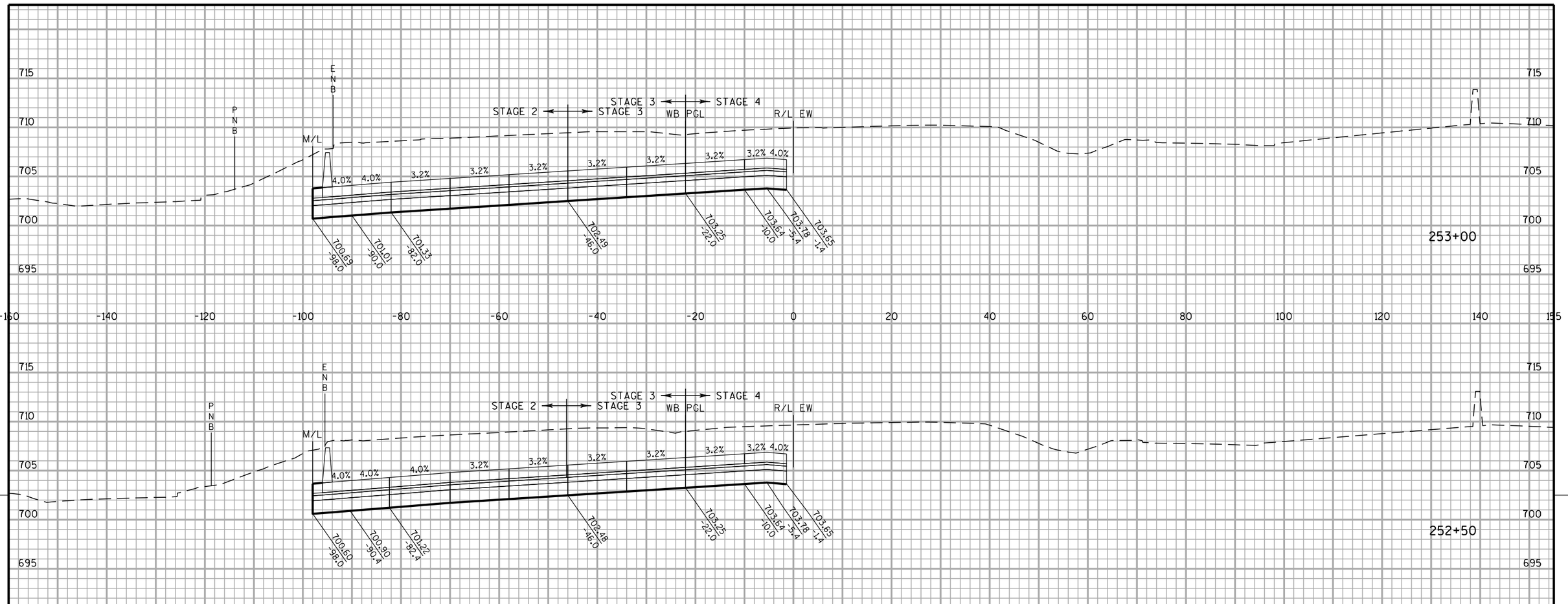


STA 249+00 TO 250+00

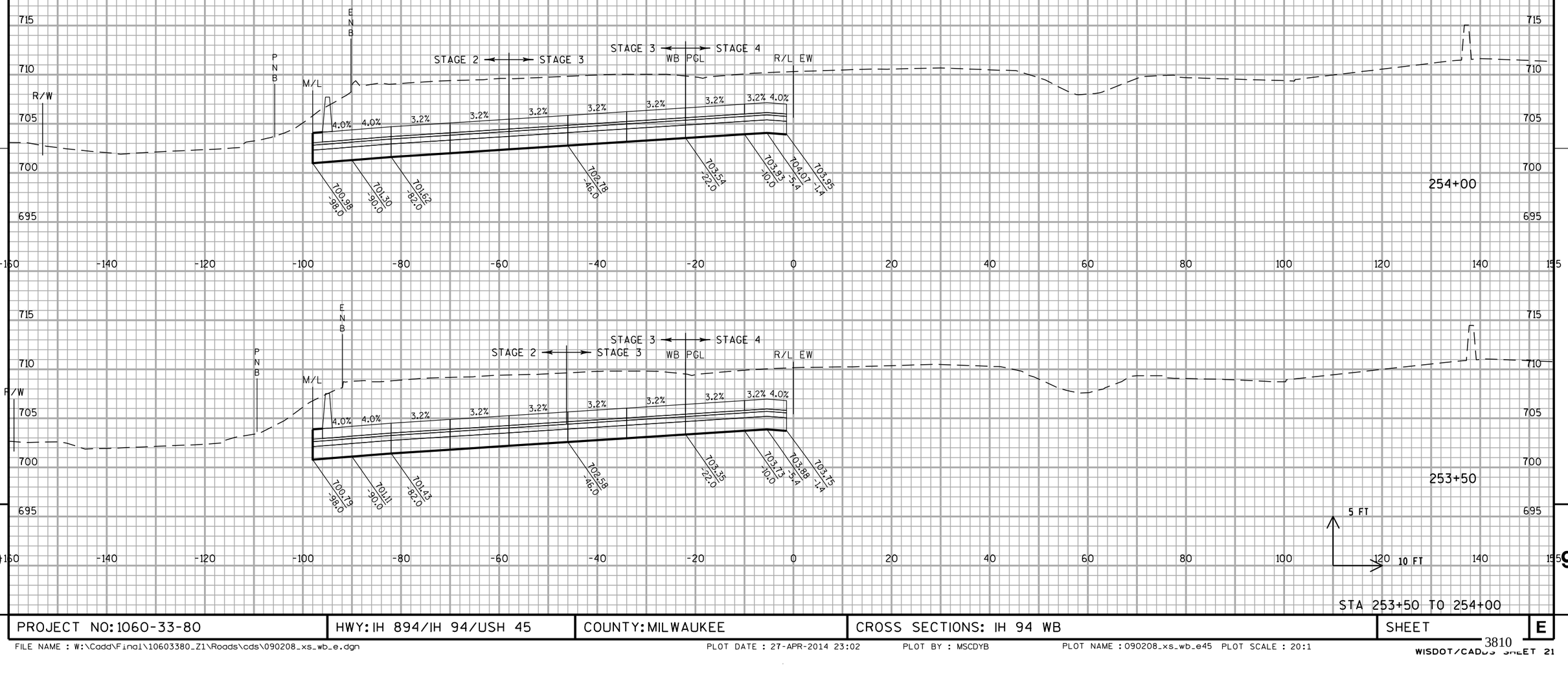
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

STA 250+50 TO 251+50

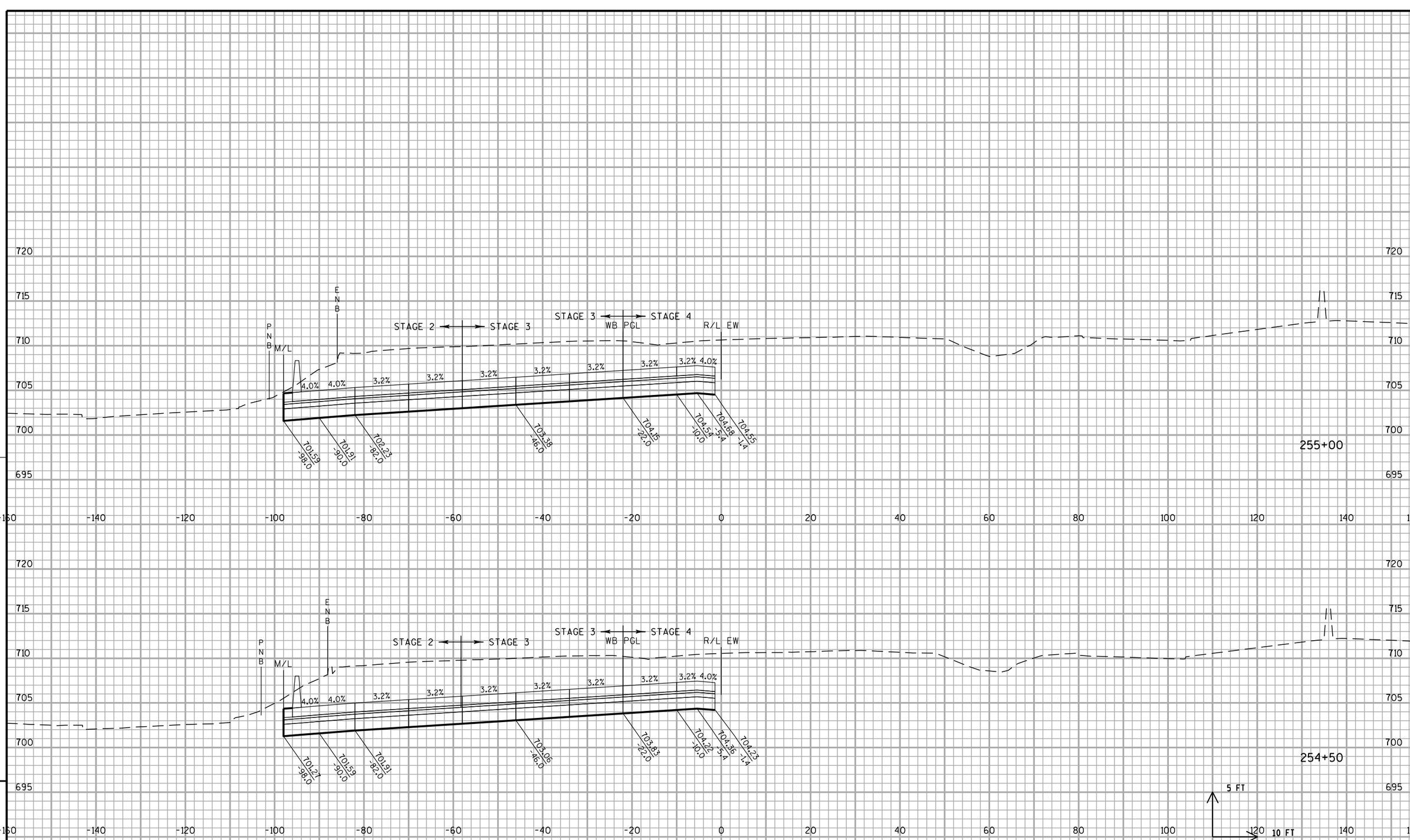
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

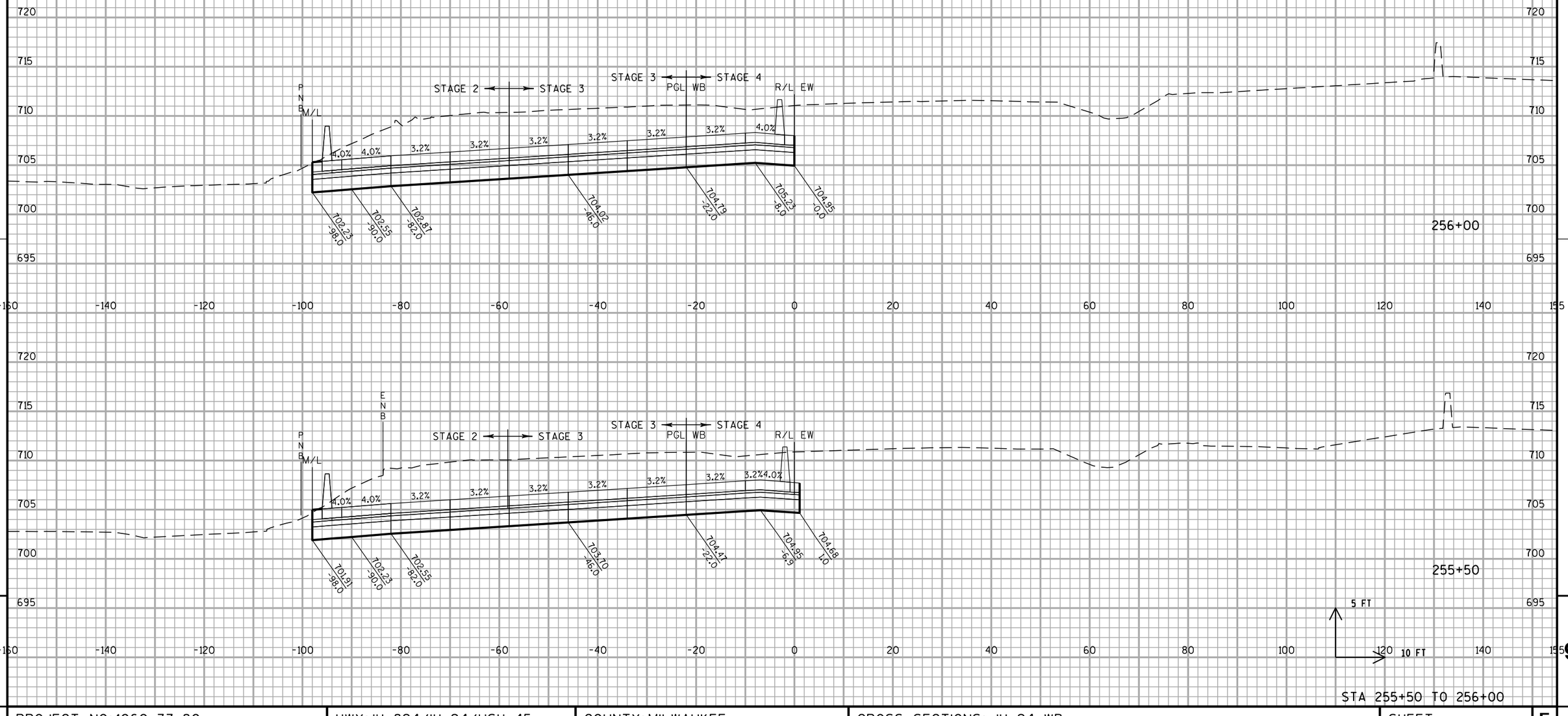


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET E



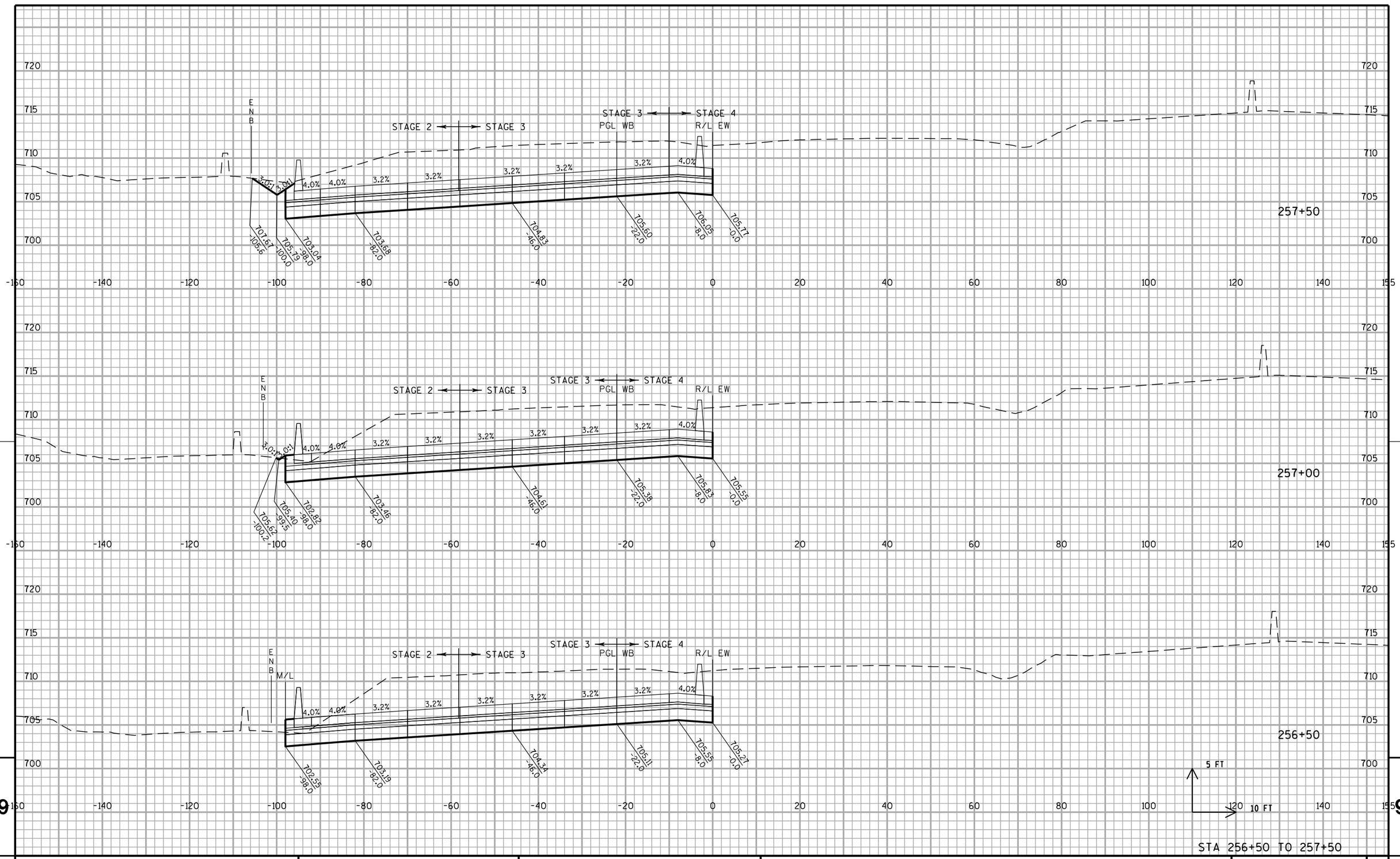
STA 254+50 TO 255+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 255+50 TO 256+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



9

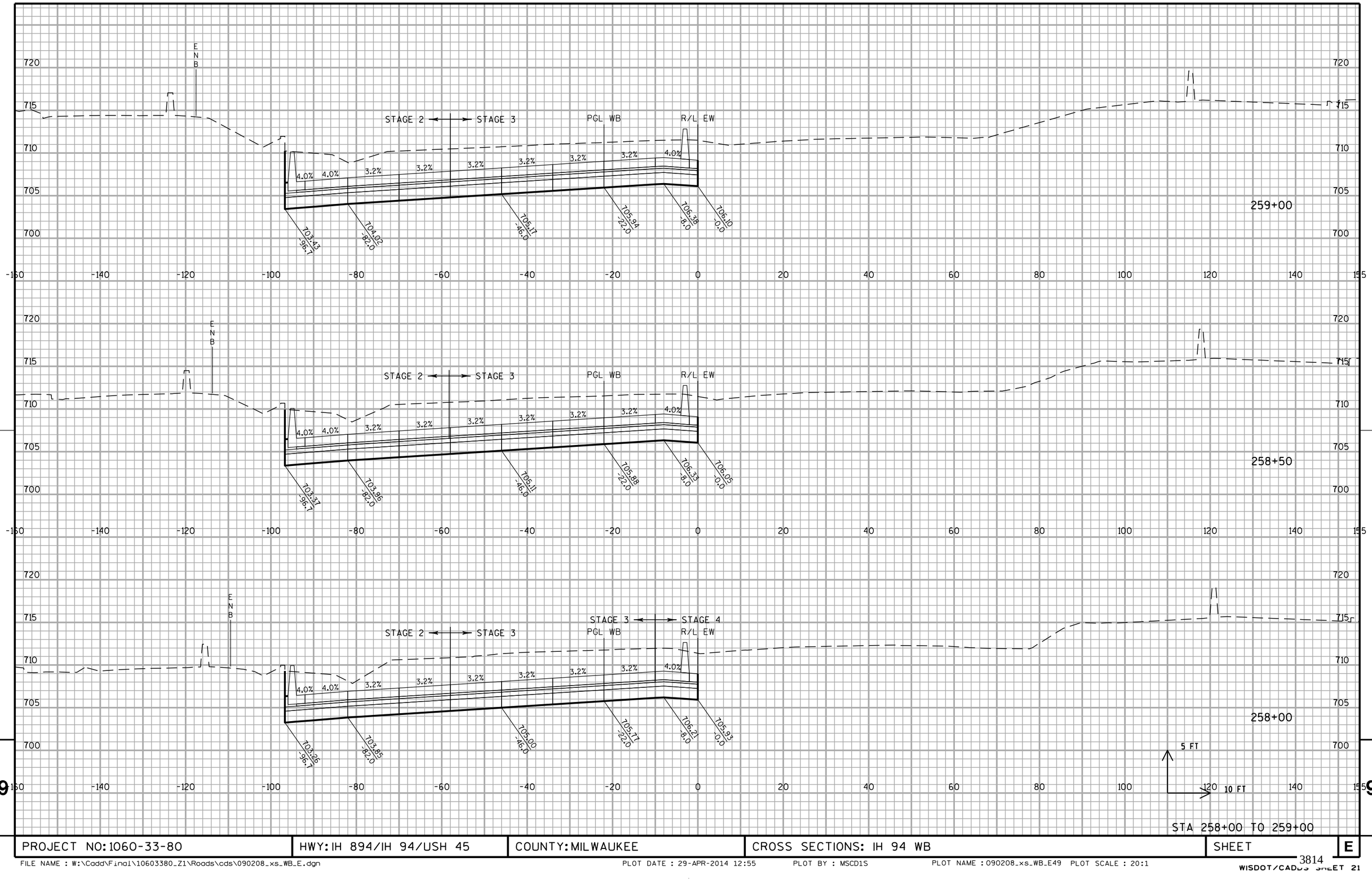
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

STA 256+50 TO 257+50

9

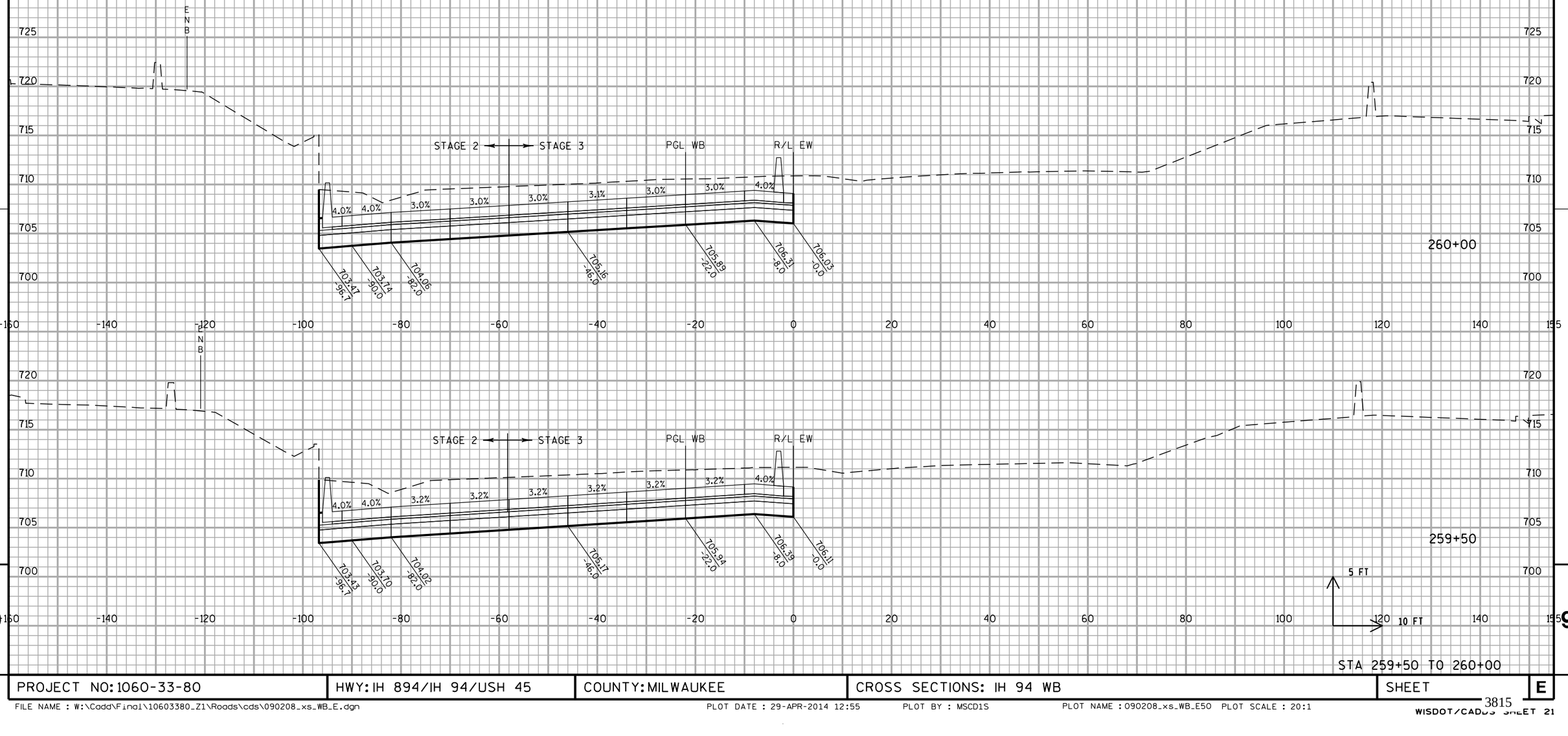
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:55 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E48 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

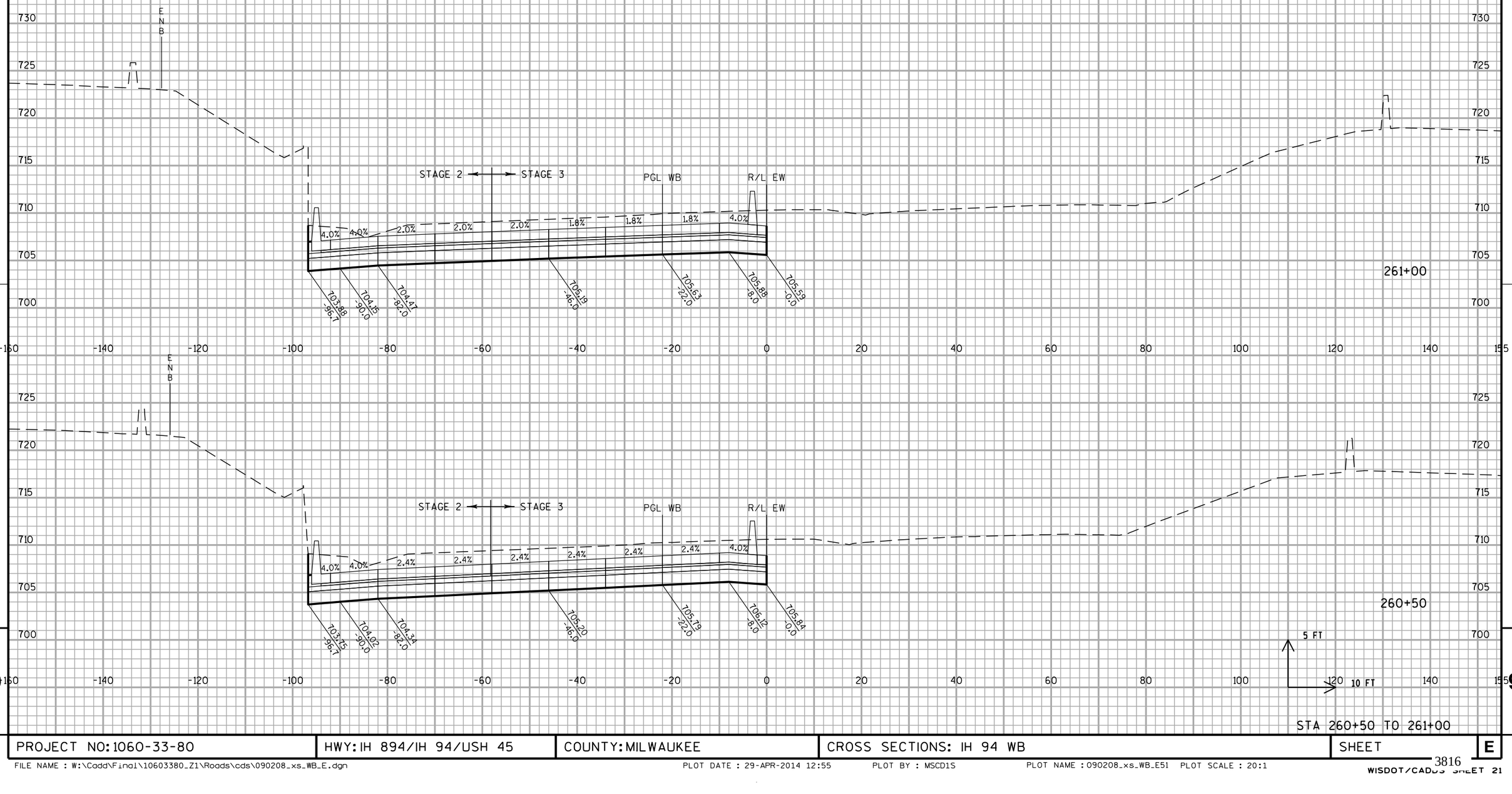


STA 258+00 TO 259+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

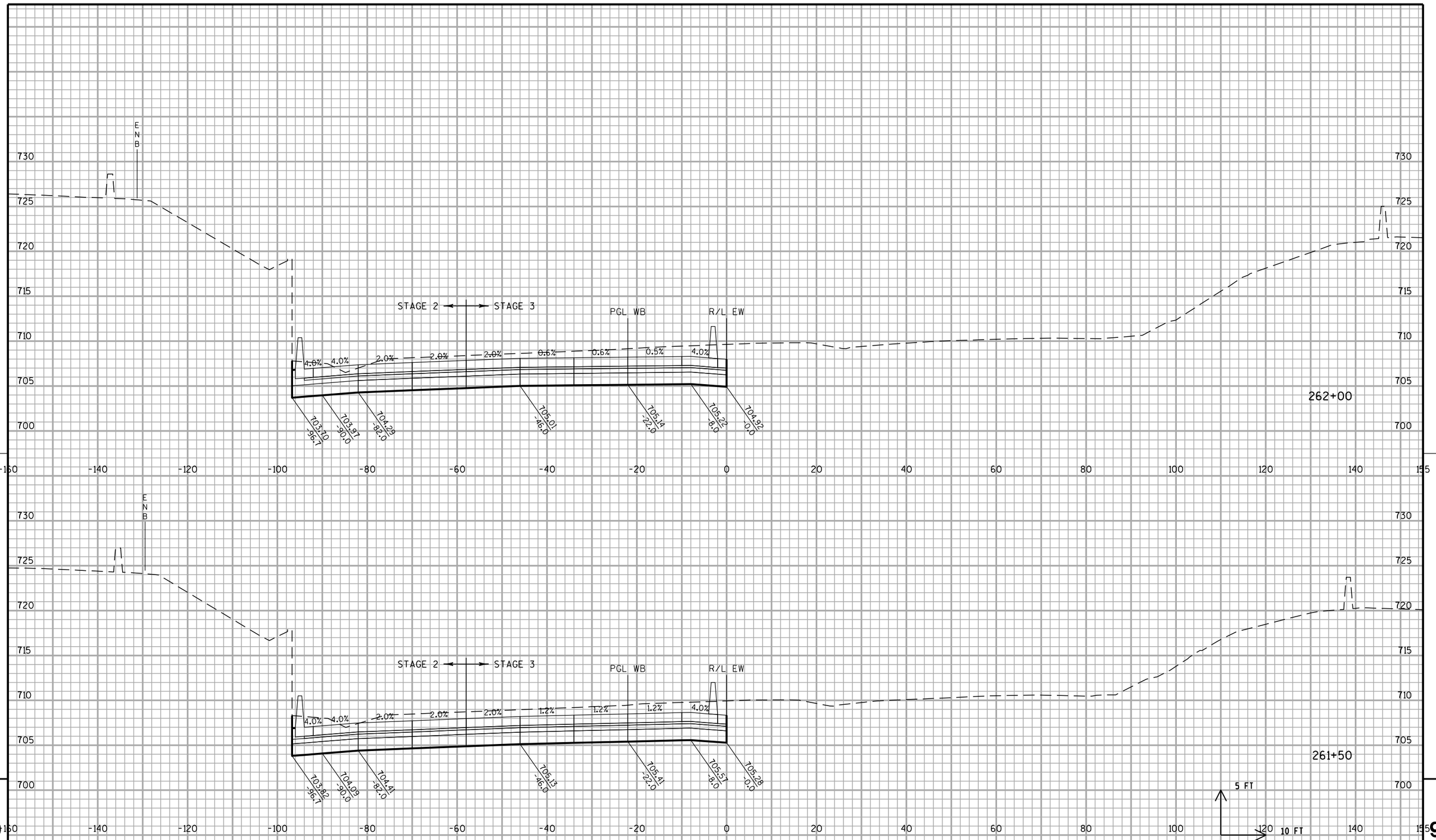


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 260+50 TO 261+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



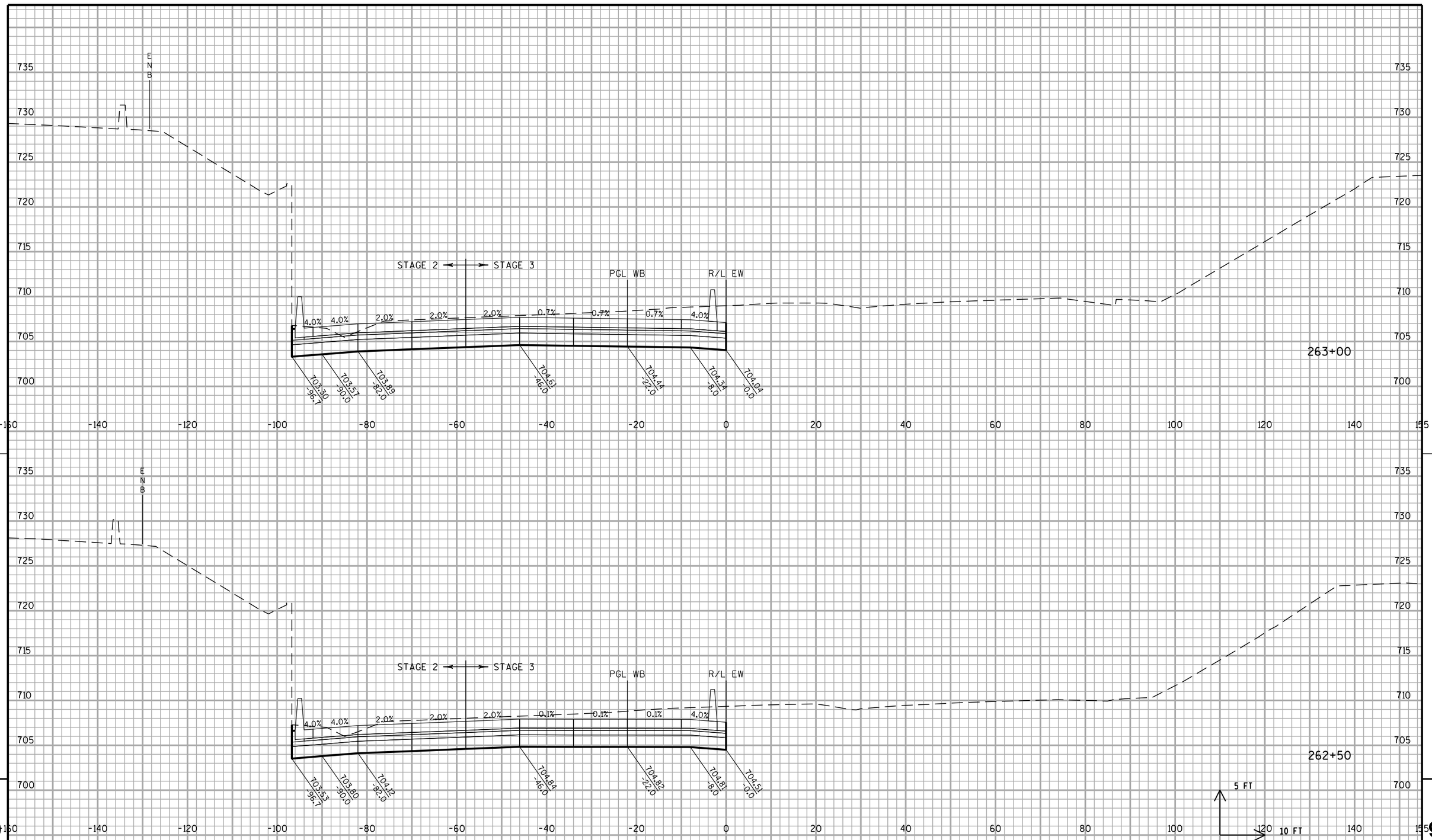
9

9

STA 261+50 TO 262+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

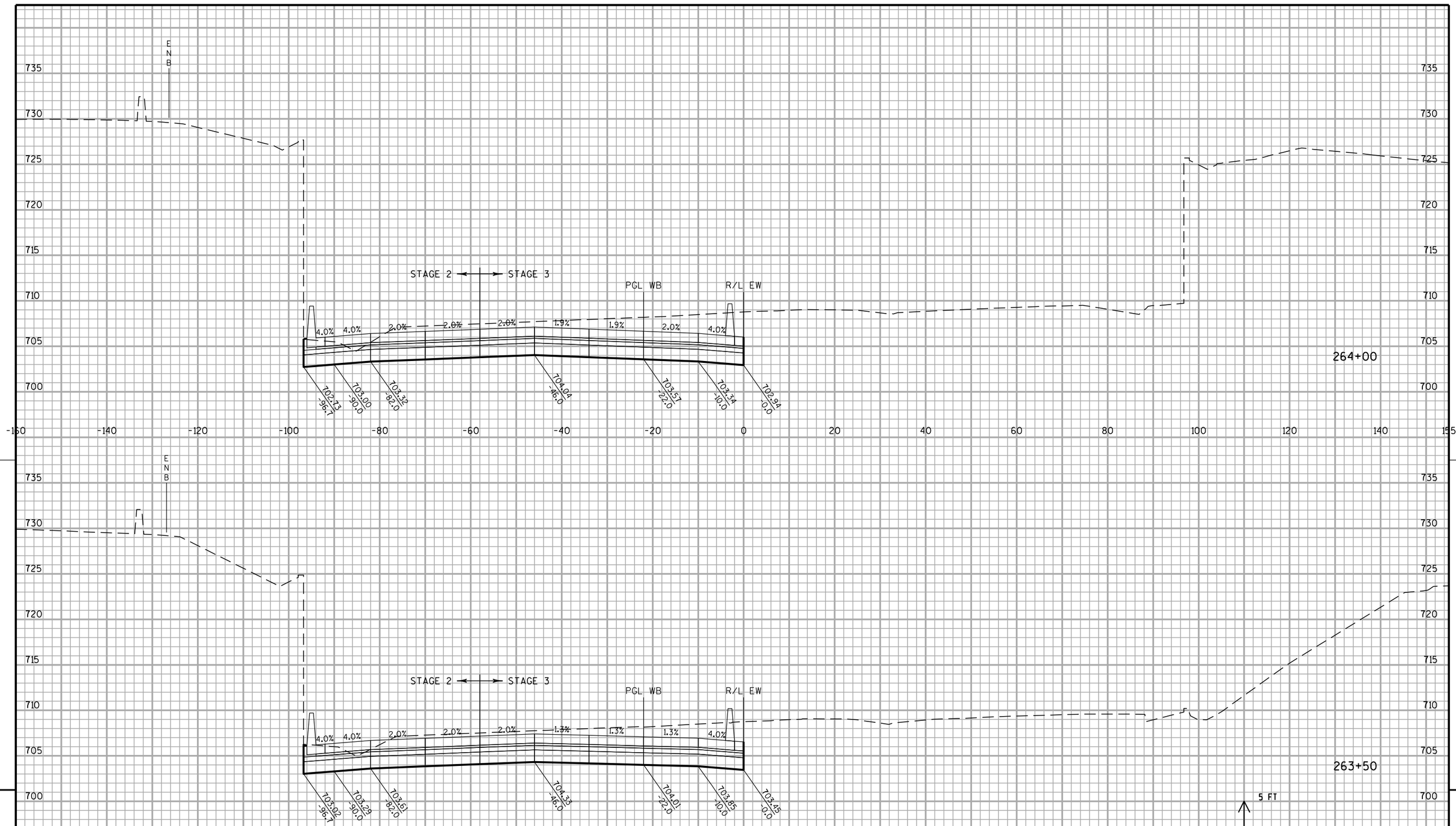
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:55 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E52 PLOT SCALE : 20:1



9

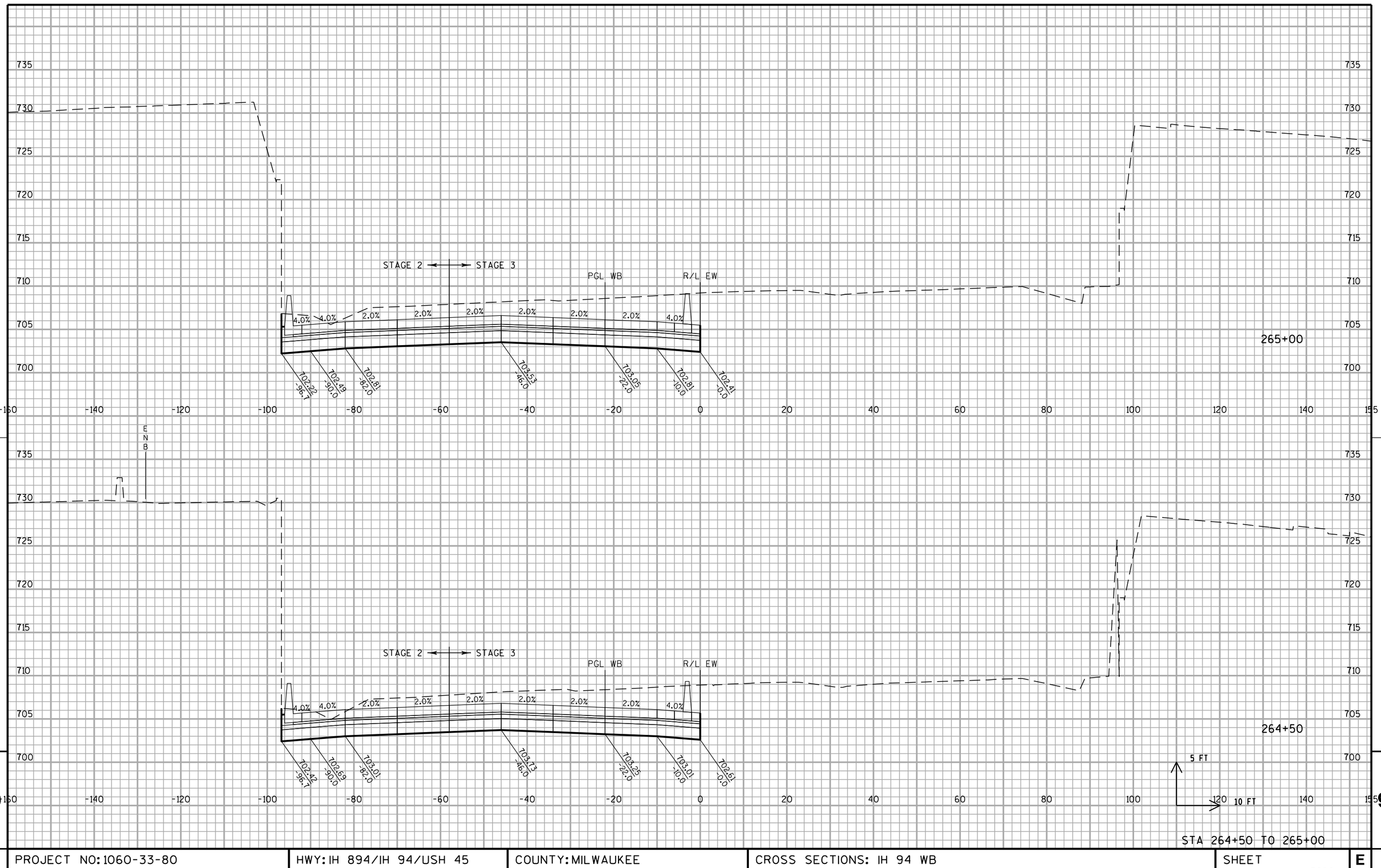
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

STA 262+50 TO 263+00



STA 263+50 TO 264+00

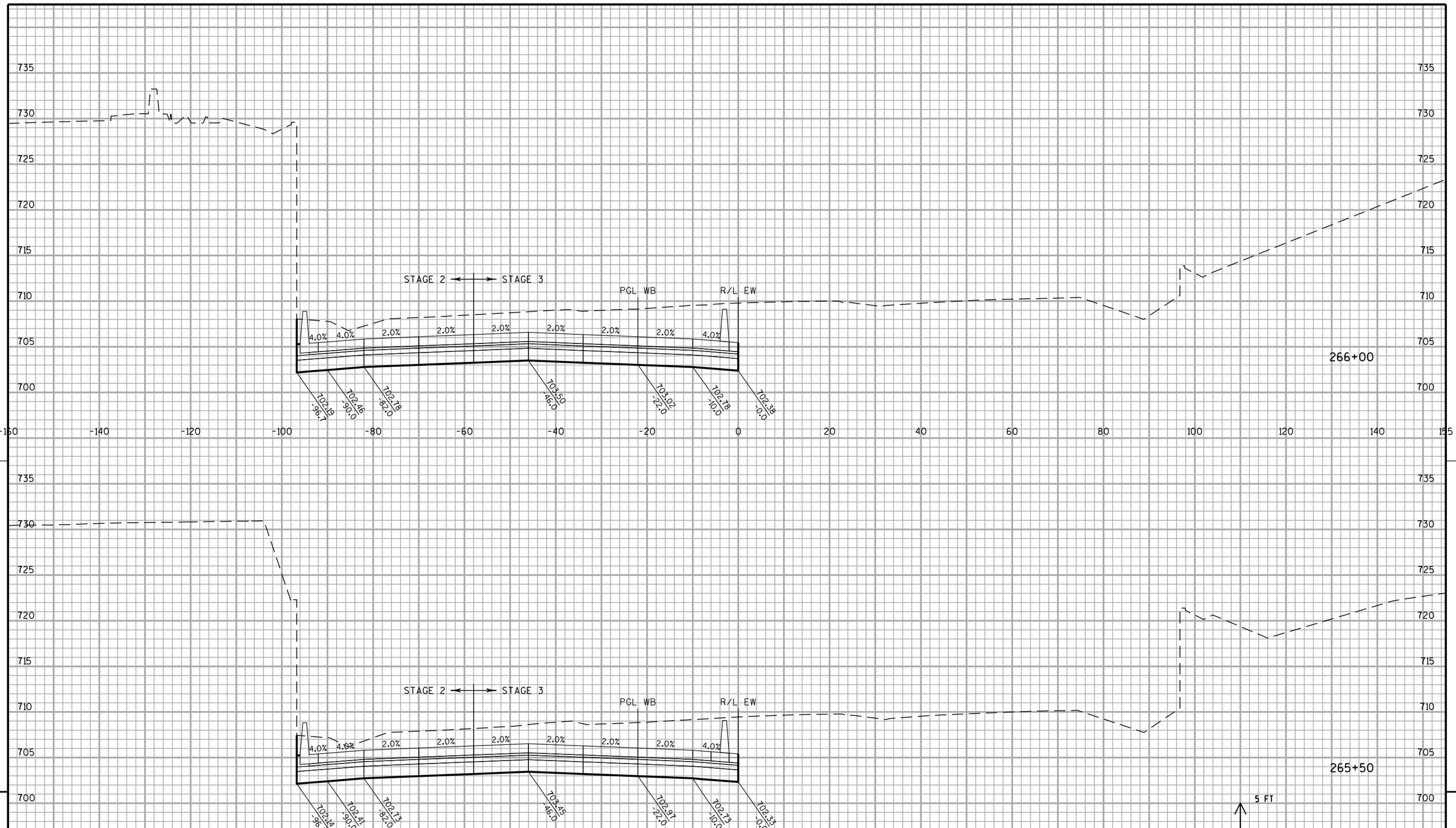
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



9

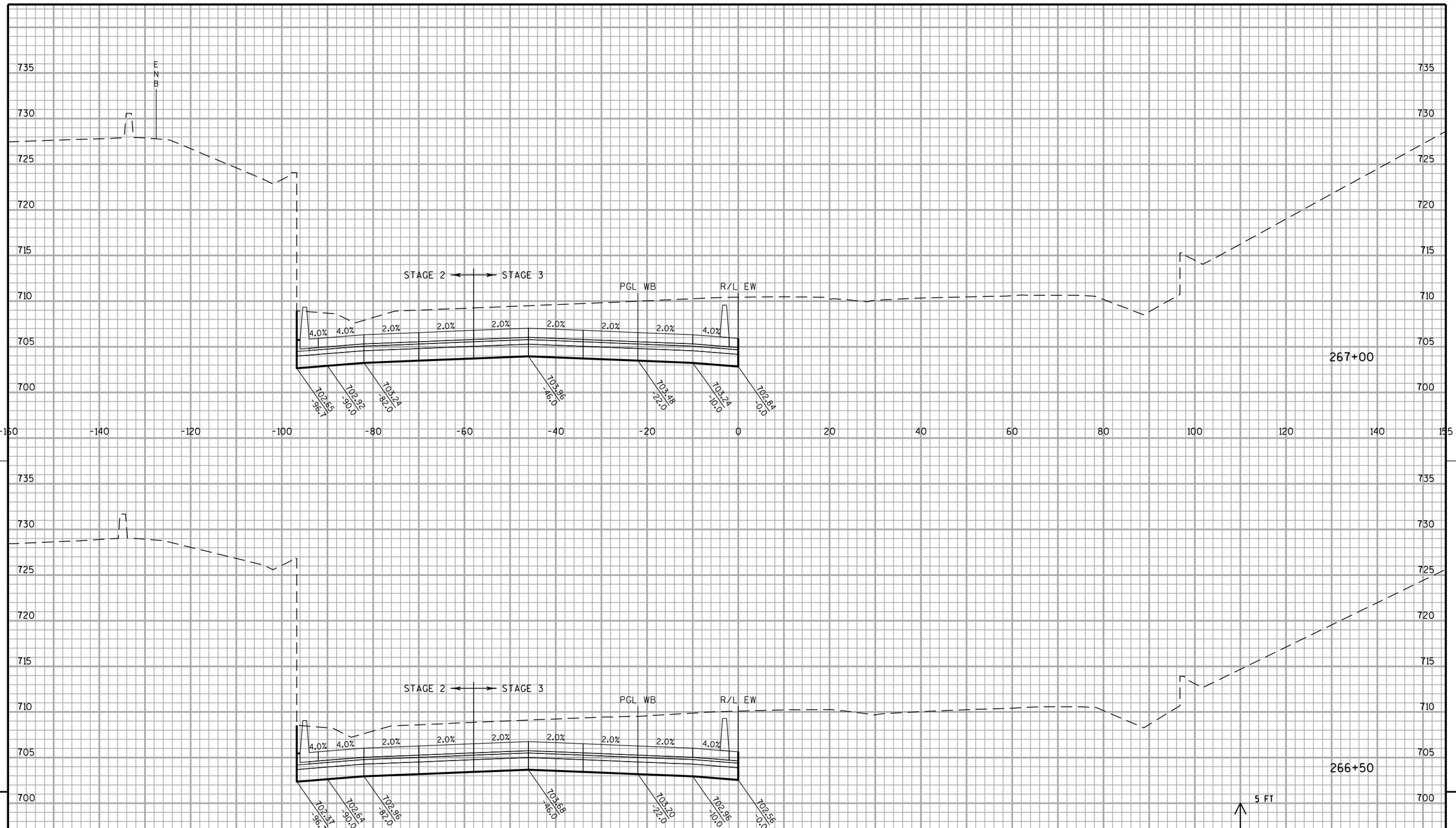
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

STA 264+50 TO 265+00



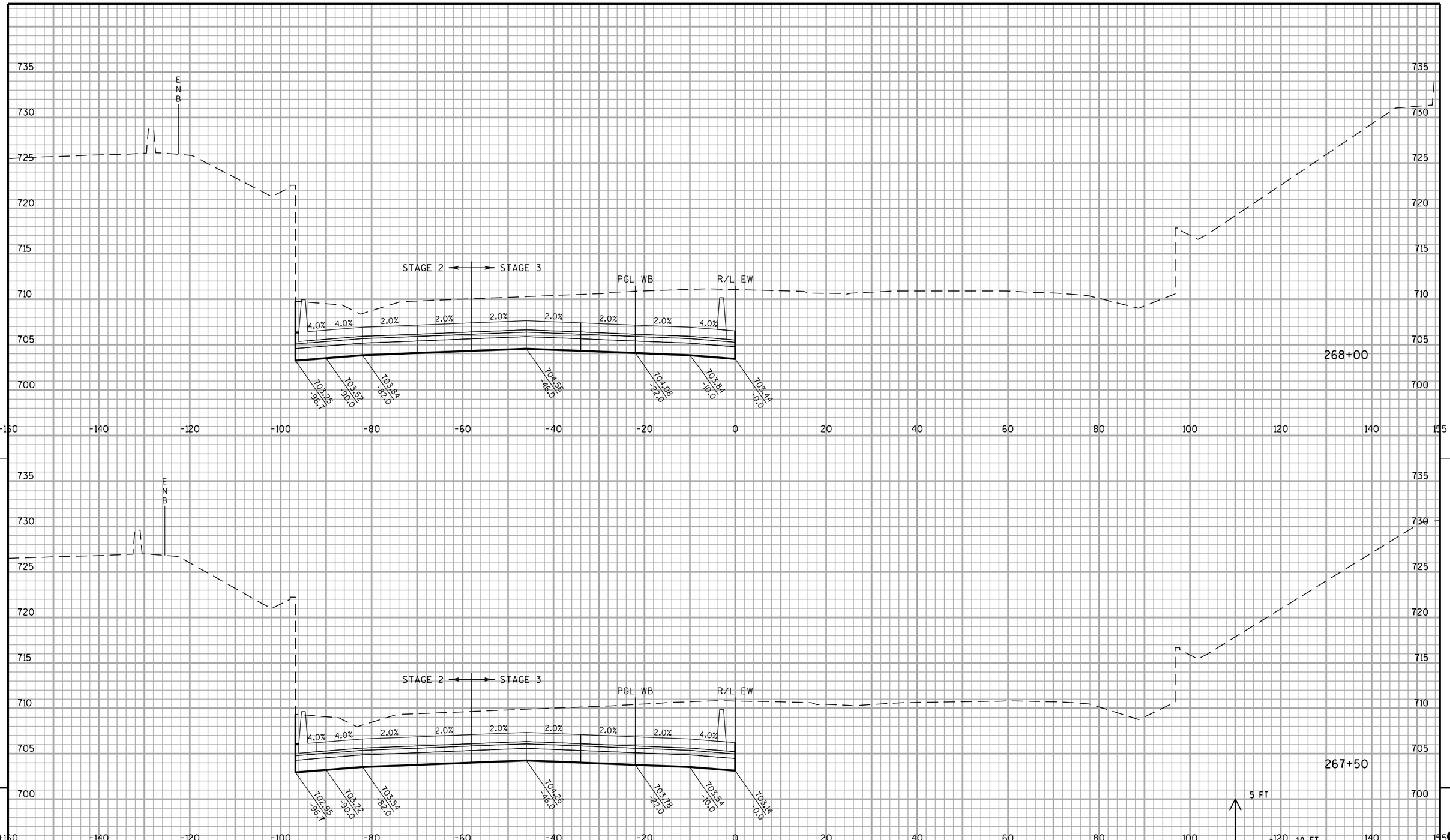
STA 265+50 TO 266+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 266+50 TO 267+00

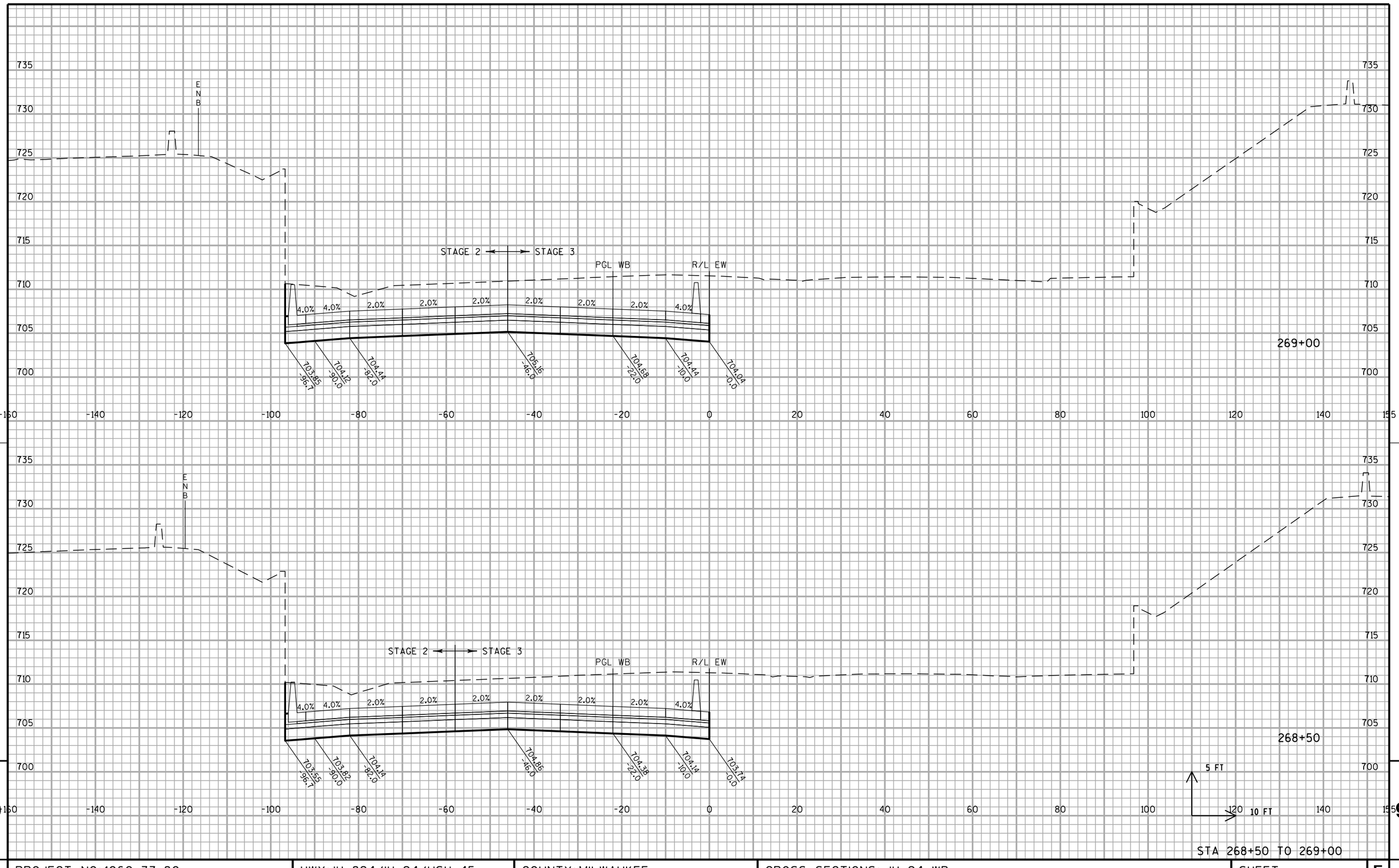
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 267+50 TO 268+00

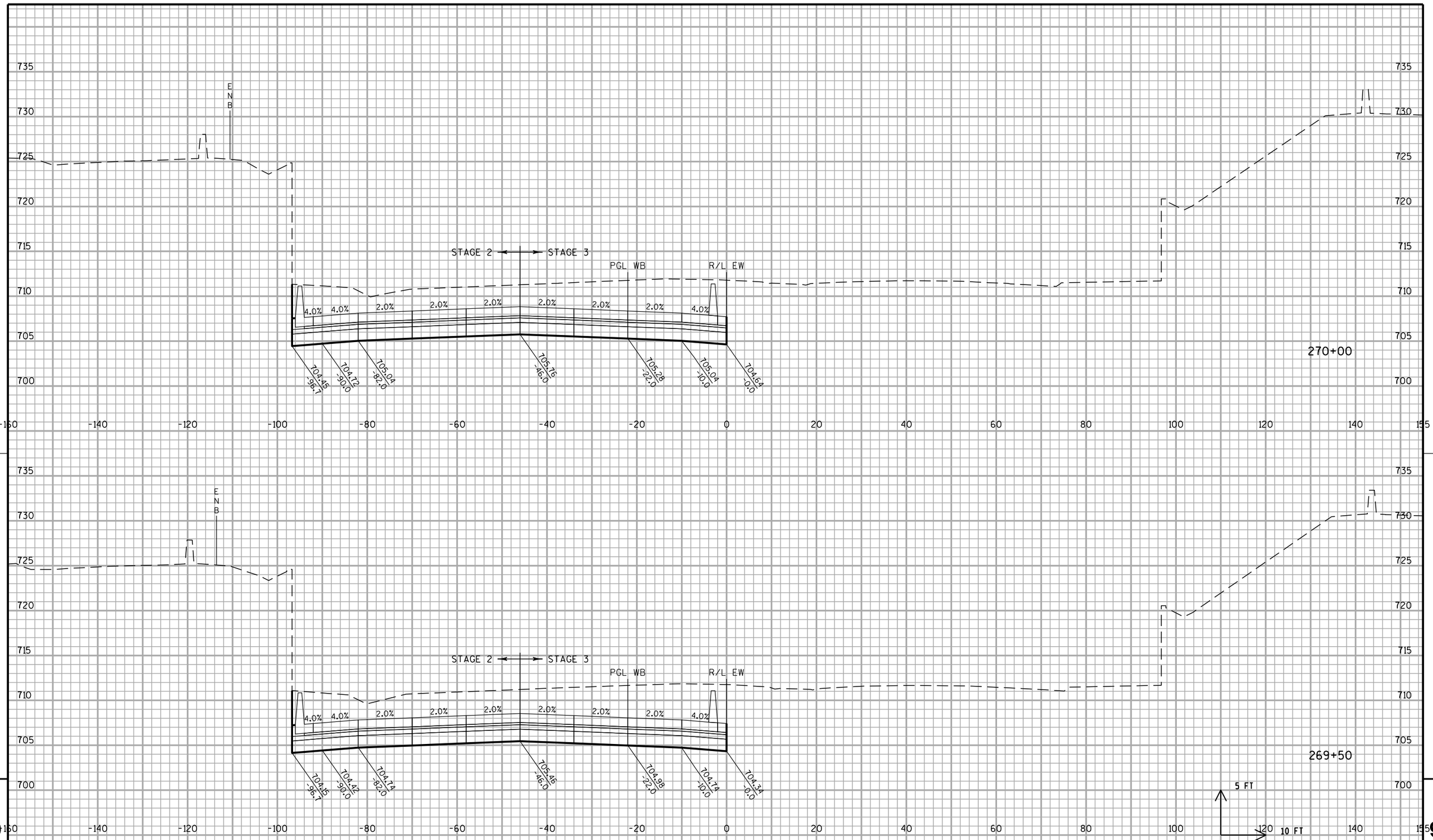
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:55 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E58 PLOT SCALE : 20:1



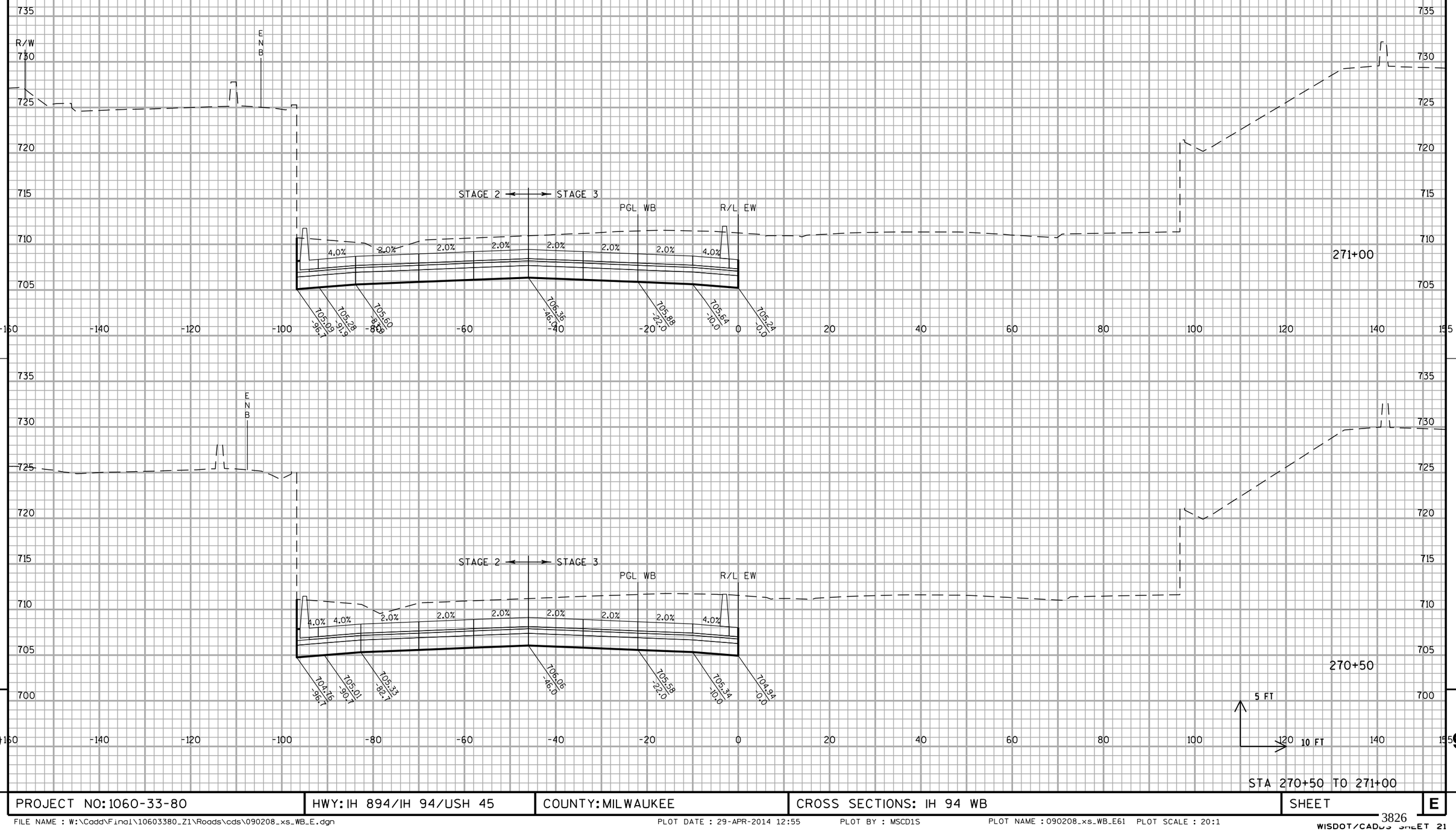
STA 268+50 TO 269+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



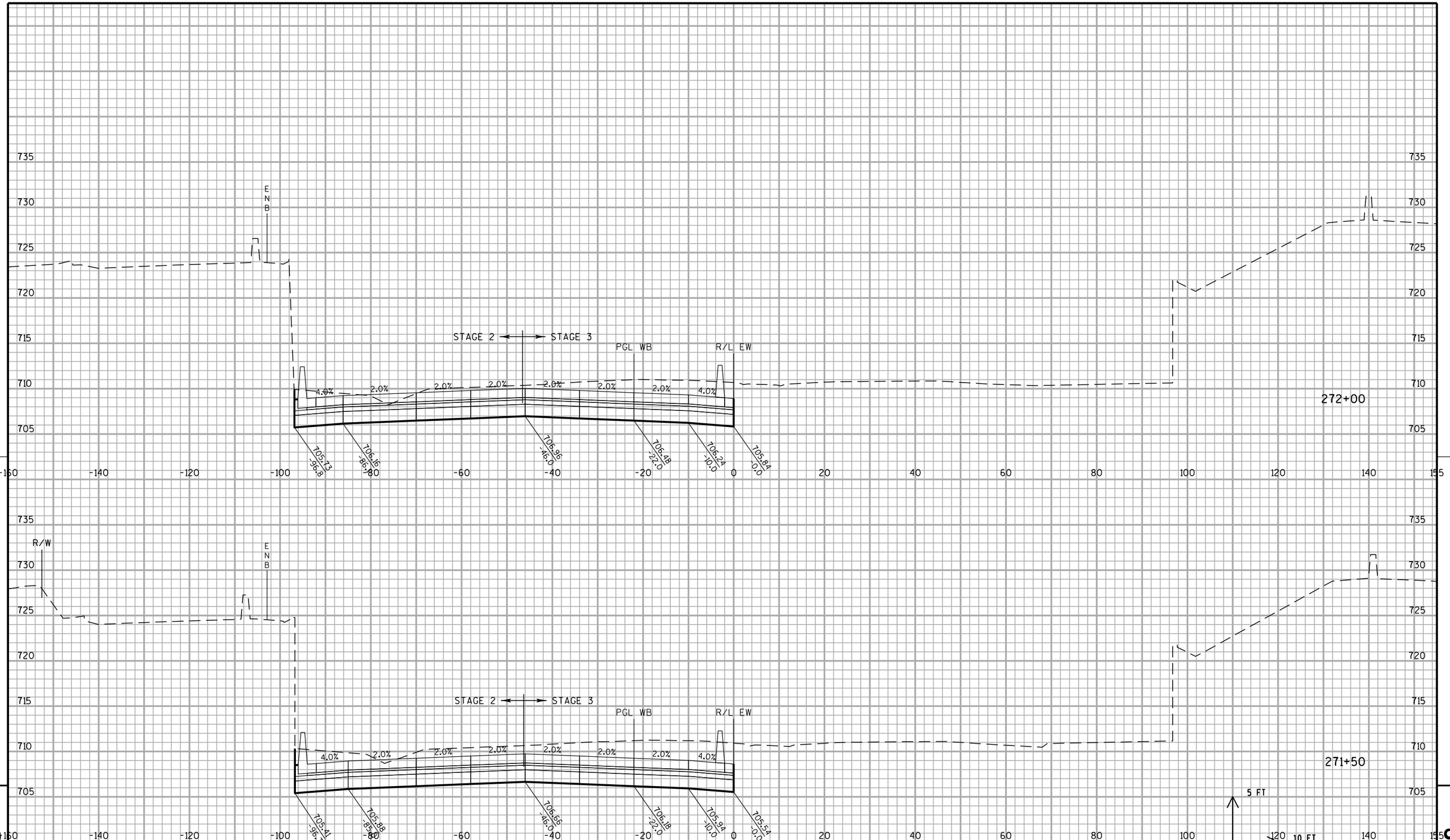
STA 269+50 TO 270+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



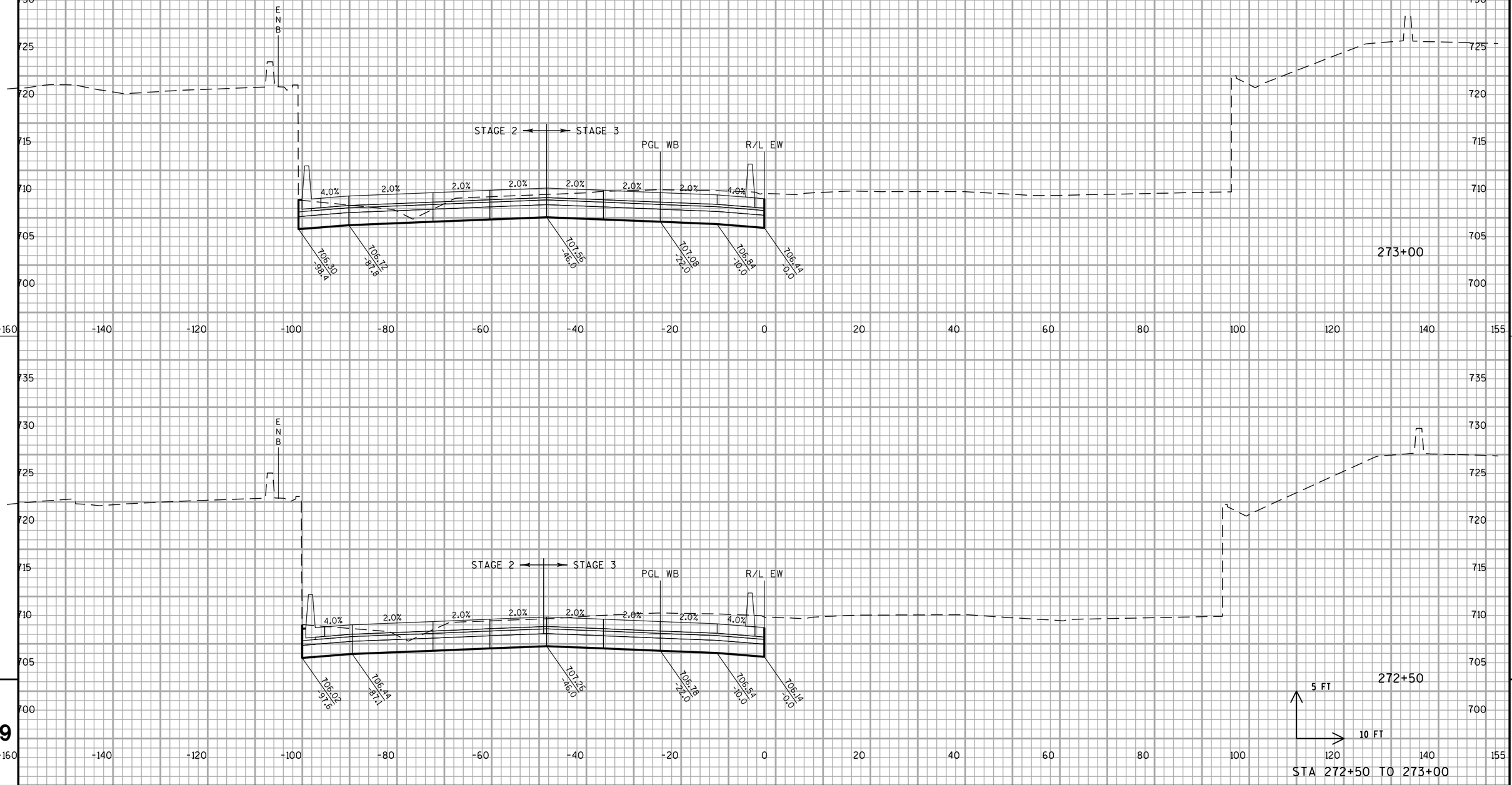
STA 270+50 TO 271+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



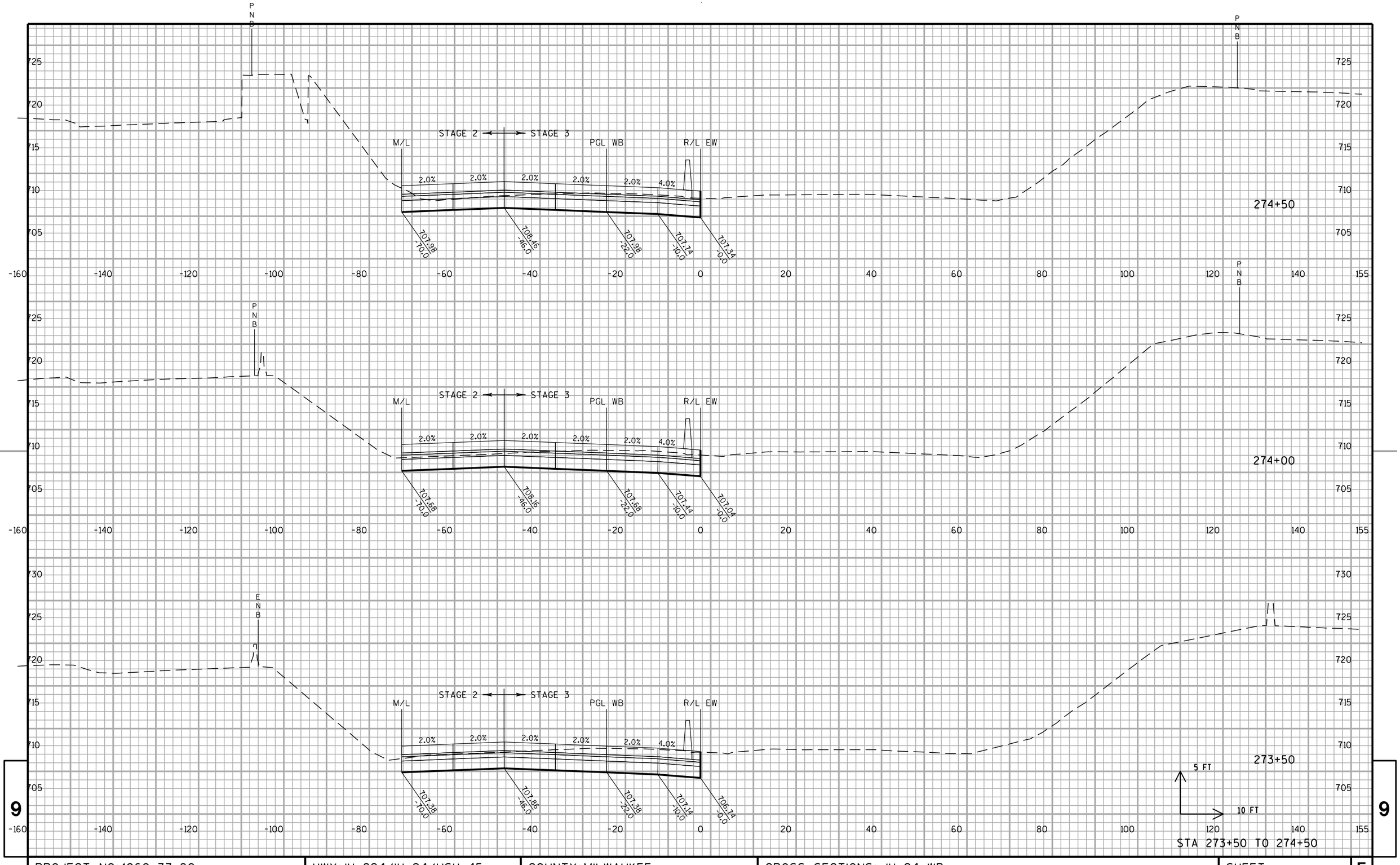
STA 271+50 TO 272+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

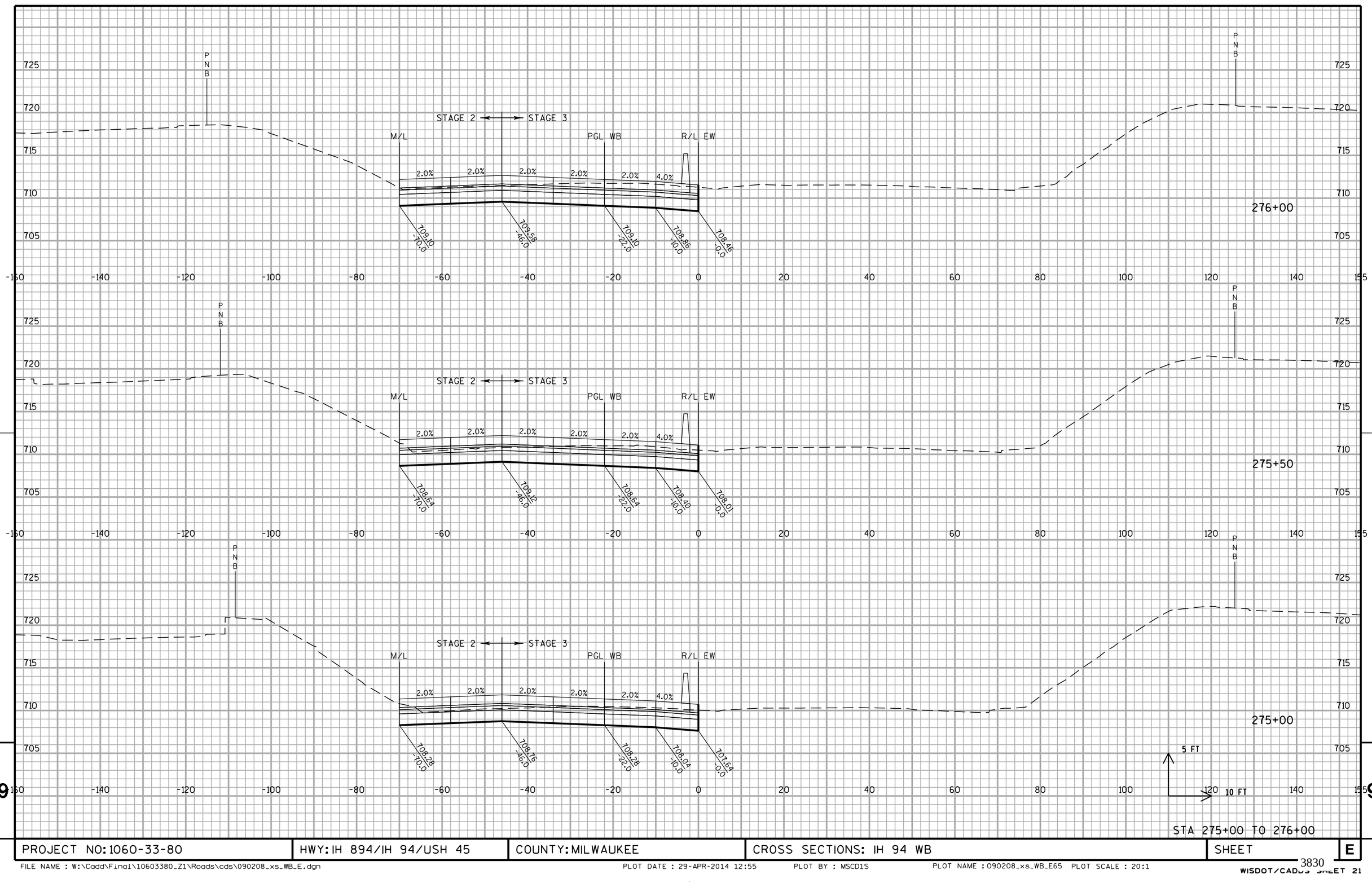


9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



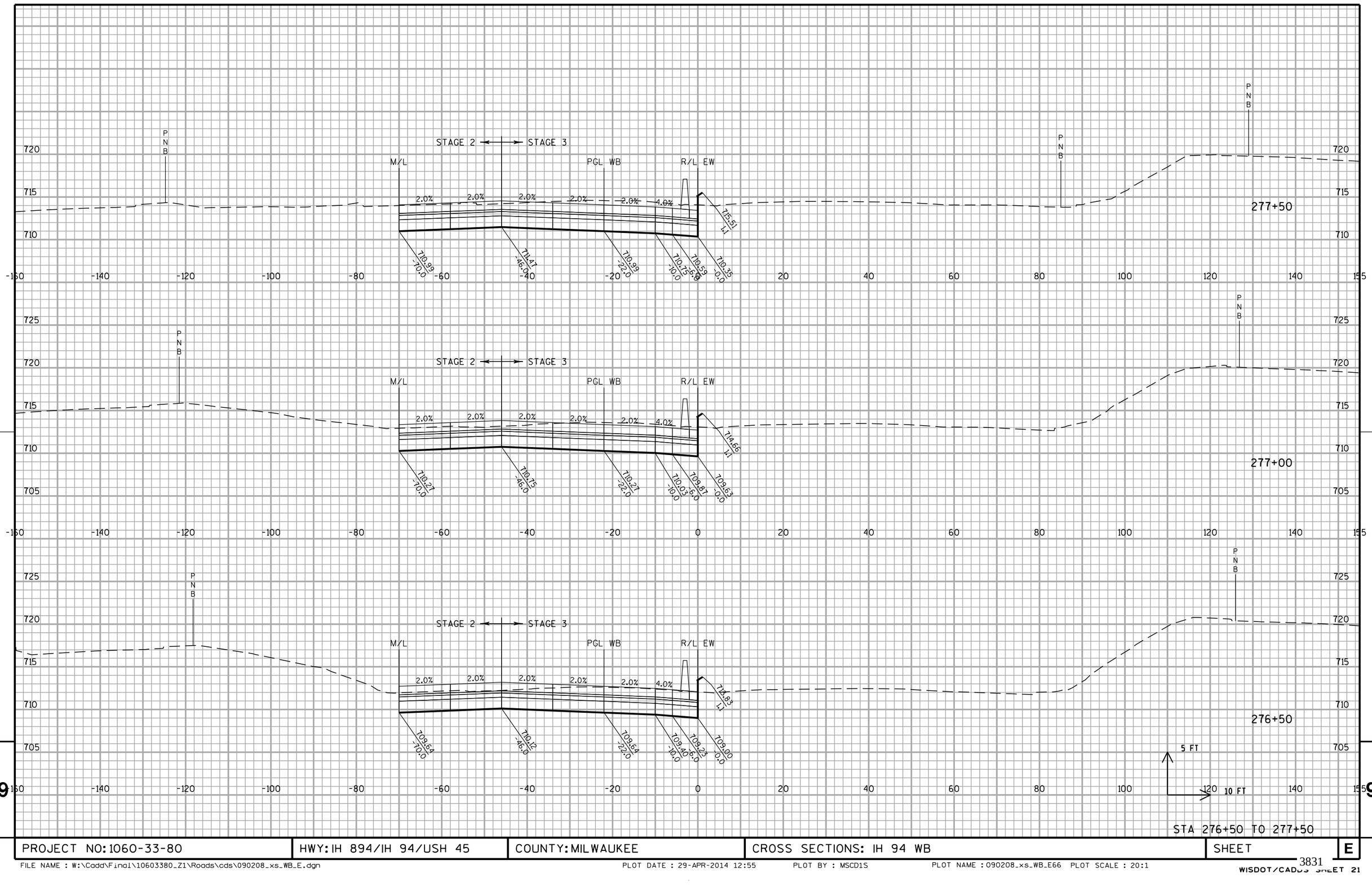
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



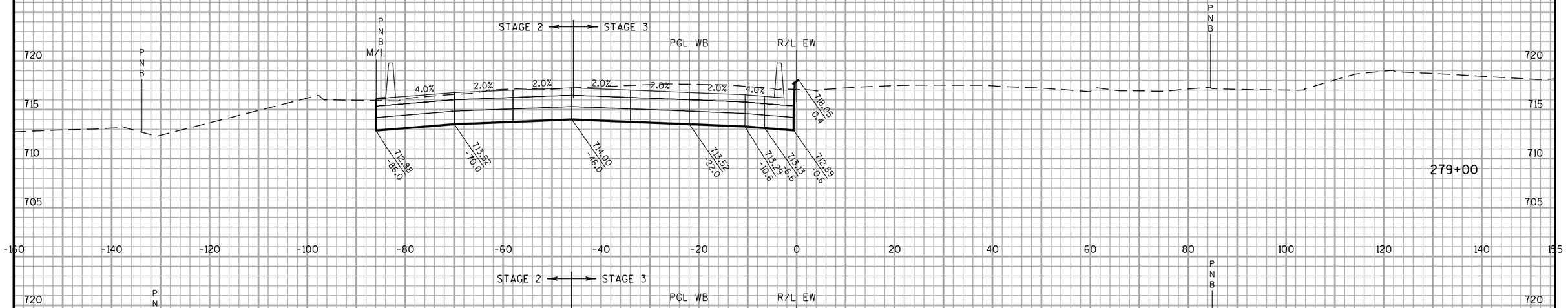
STA 275+00 TO 276+00

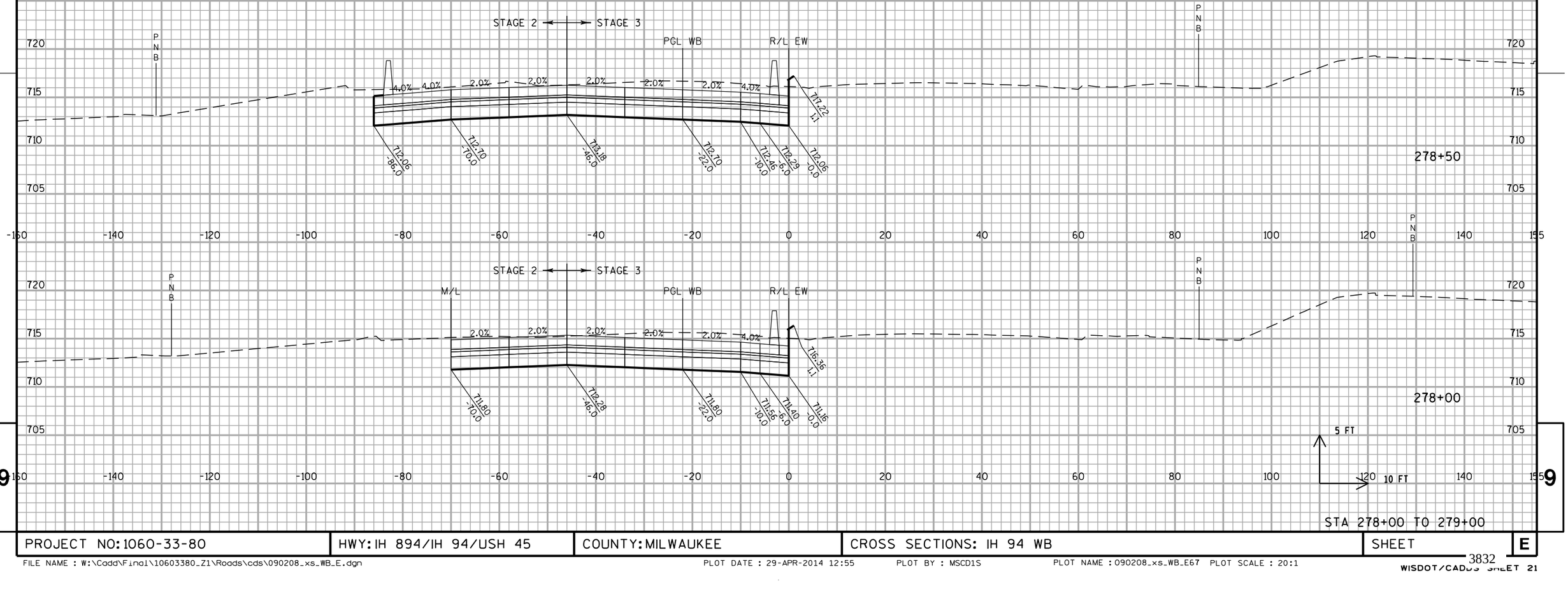
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_WB_E.dgn PLOT DATE : 29-APR-2014 12:55 PLOT BY : MSCD1S PLOT NAME : 090208_xs_WB_E65 PLOT SCALE : 20:1



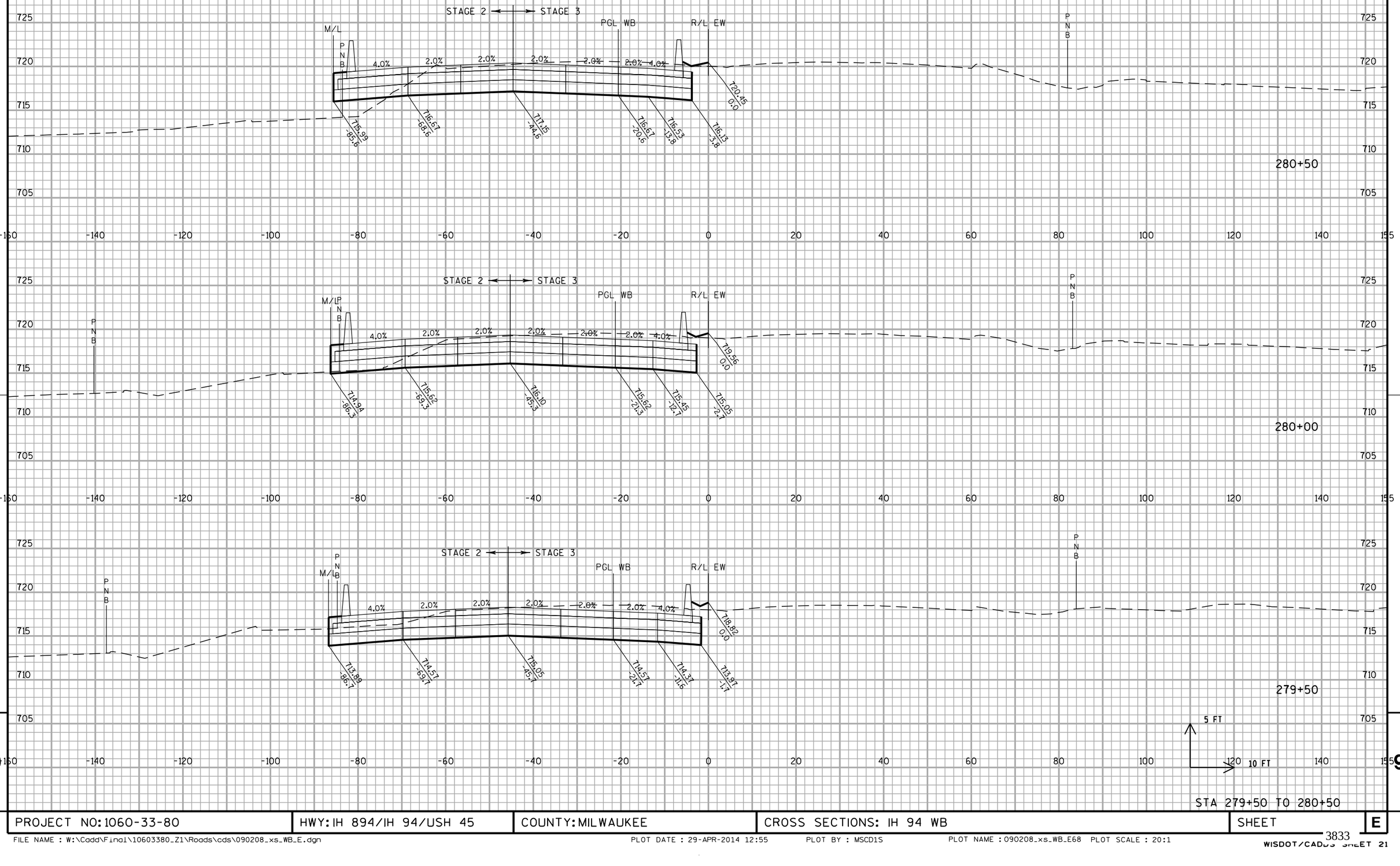
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET E





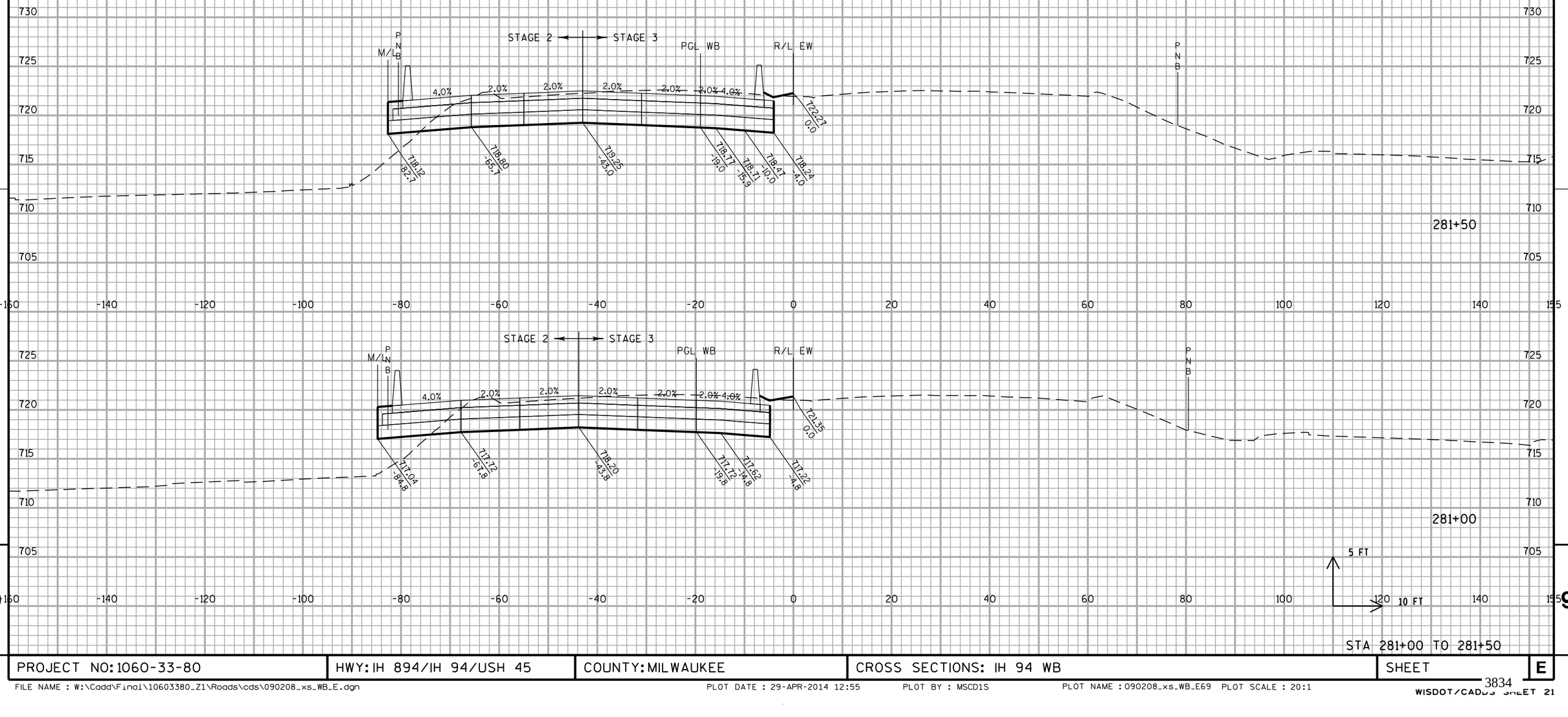
STA 278+00 TO 279+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



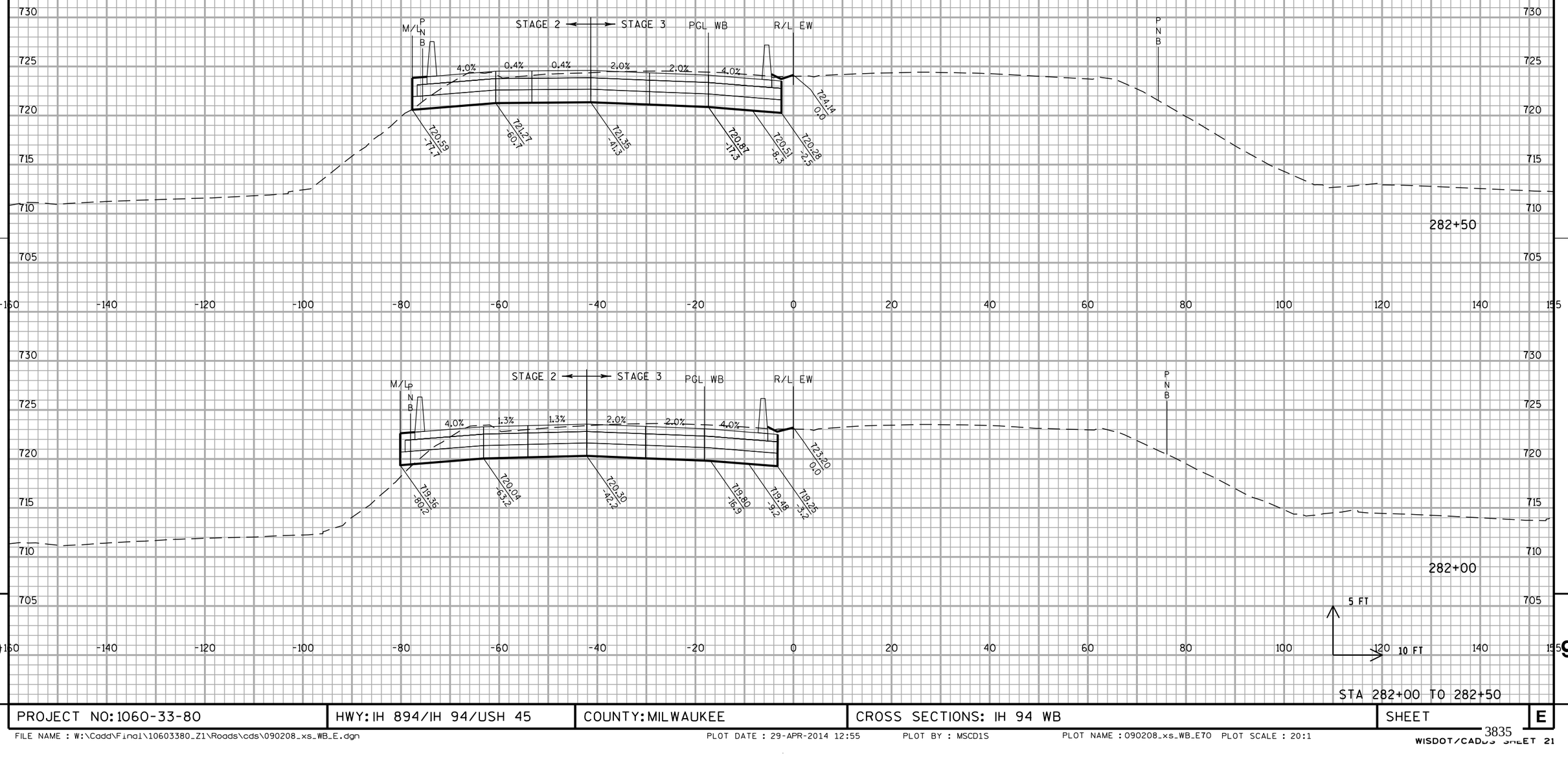
STA 279+50 TO 280+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



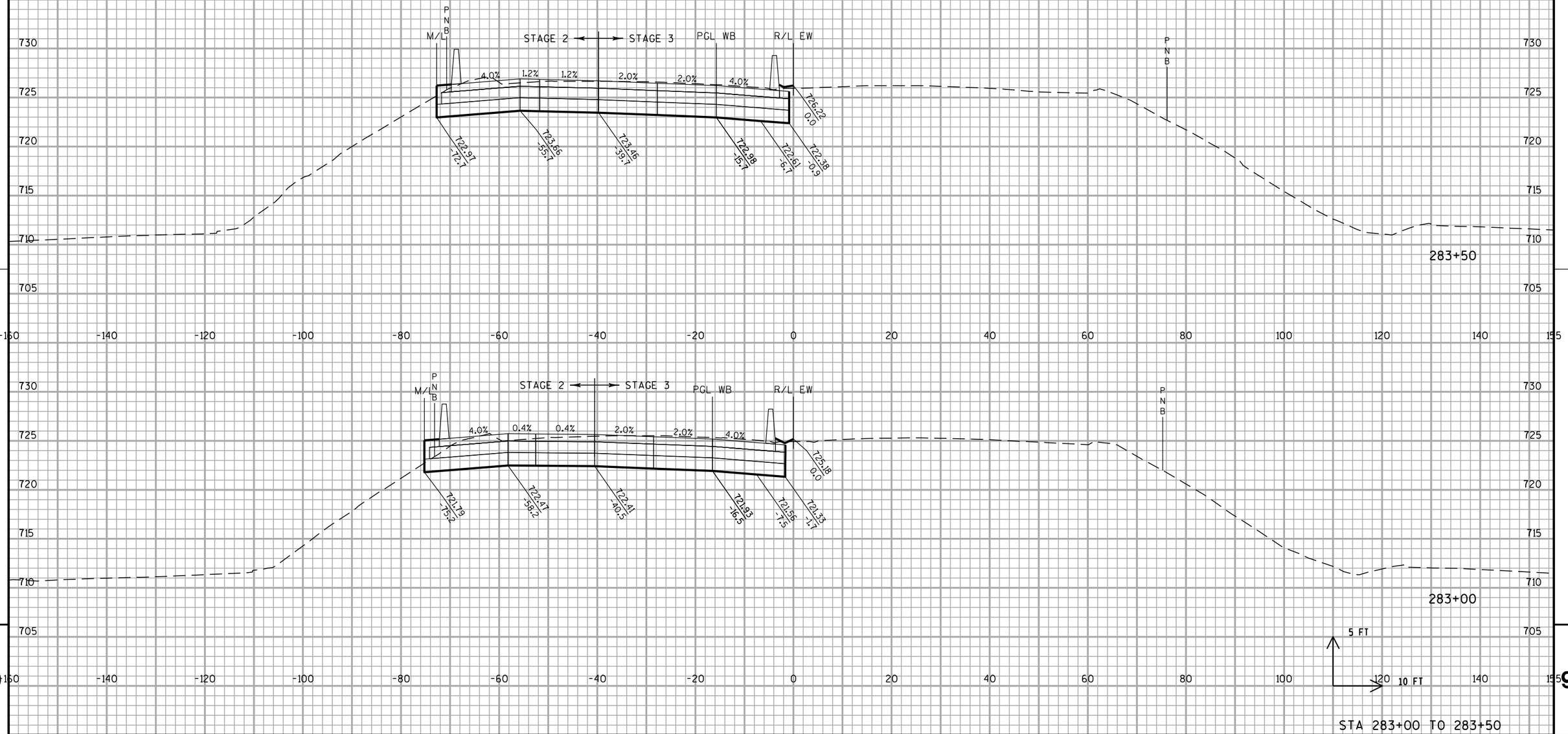
STA 281+00 TO 281+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



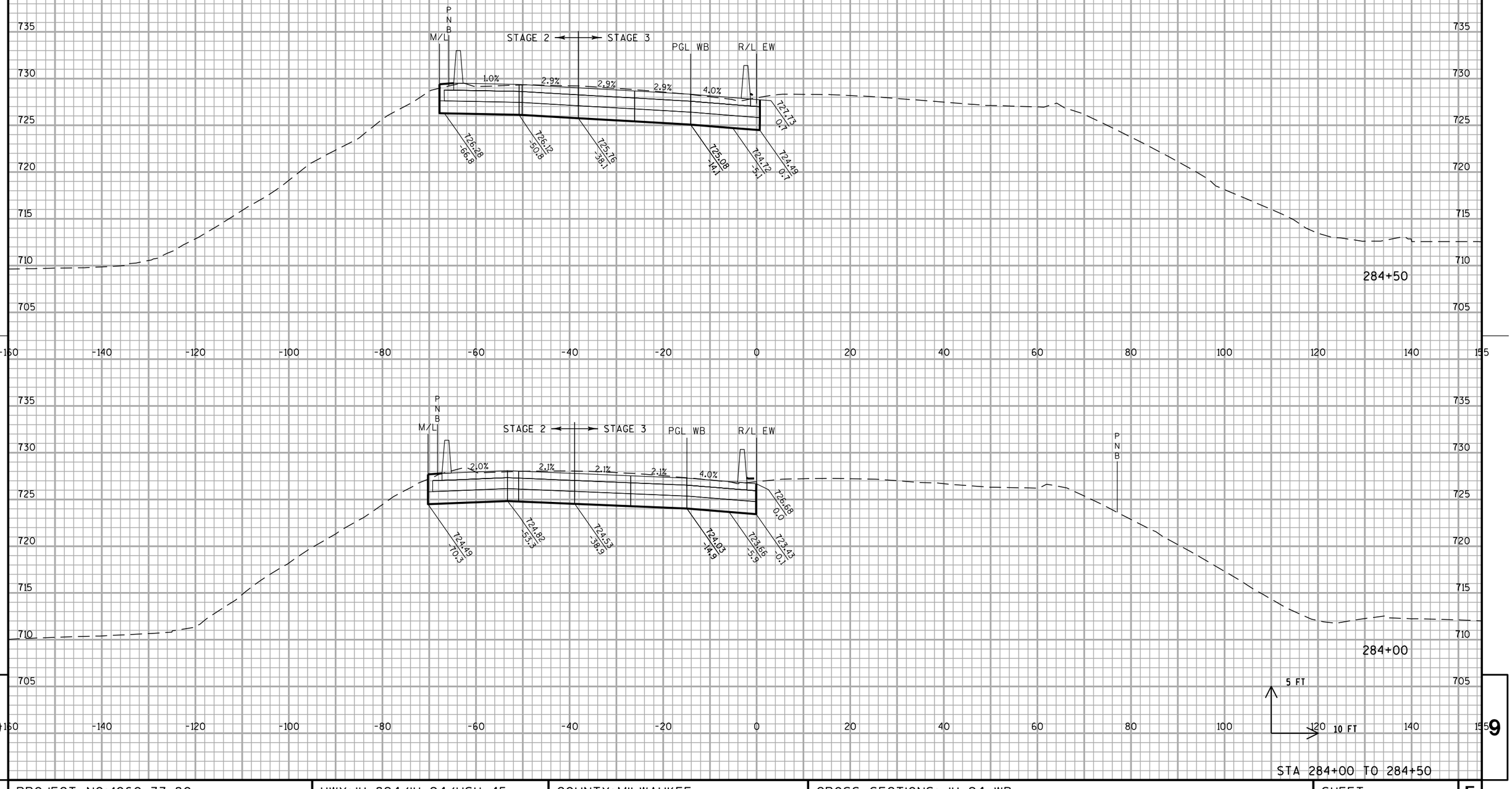
STA 282+00 TO 282+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



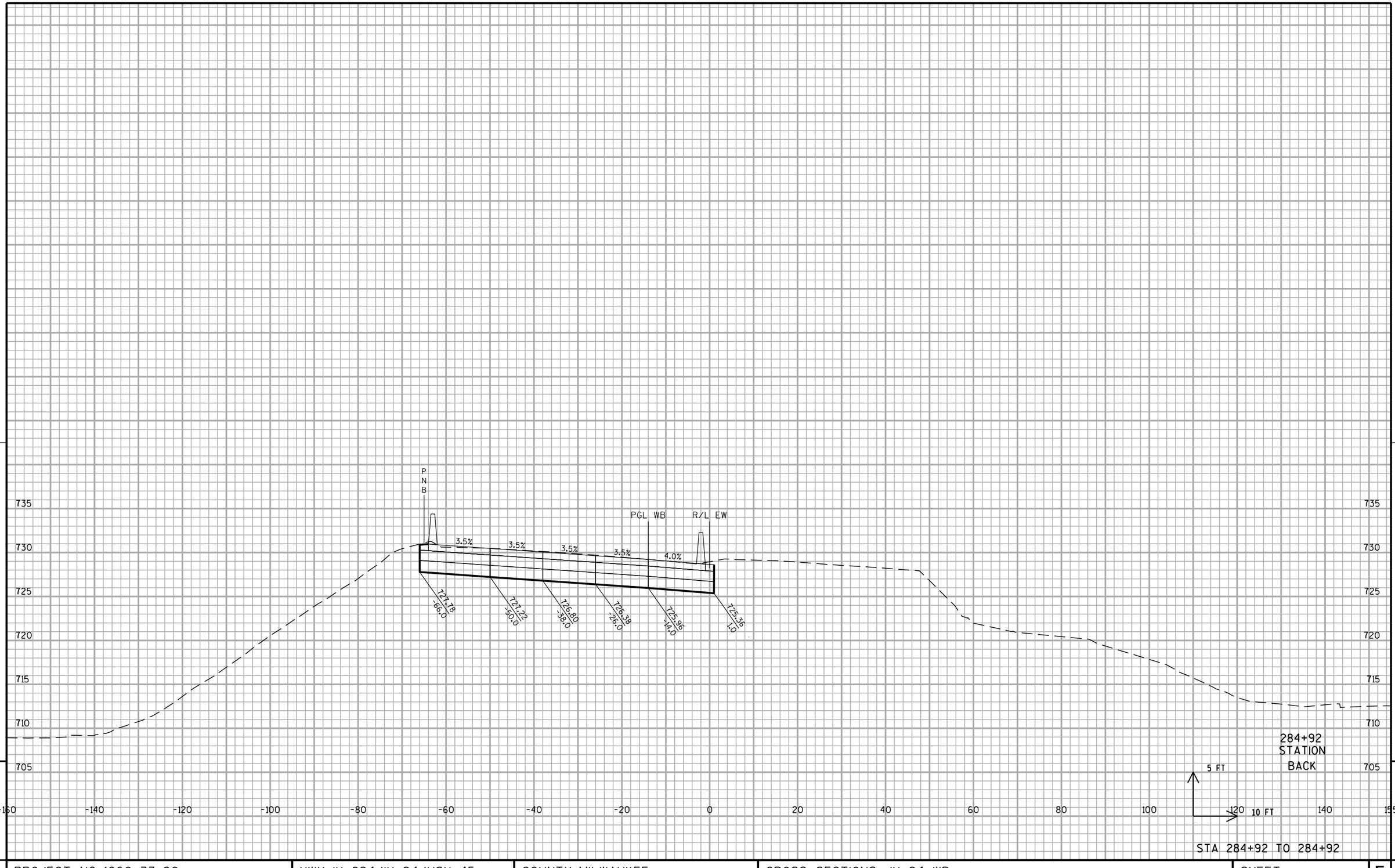
STA 283+00 TO 283+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E



STA 284+00 TO 284+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

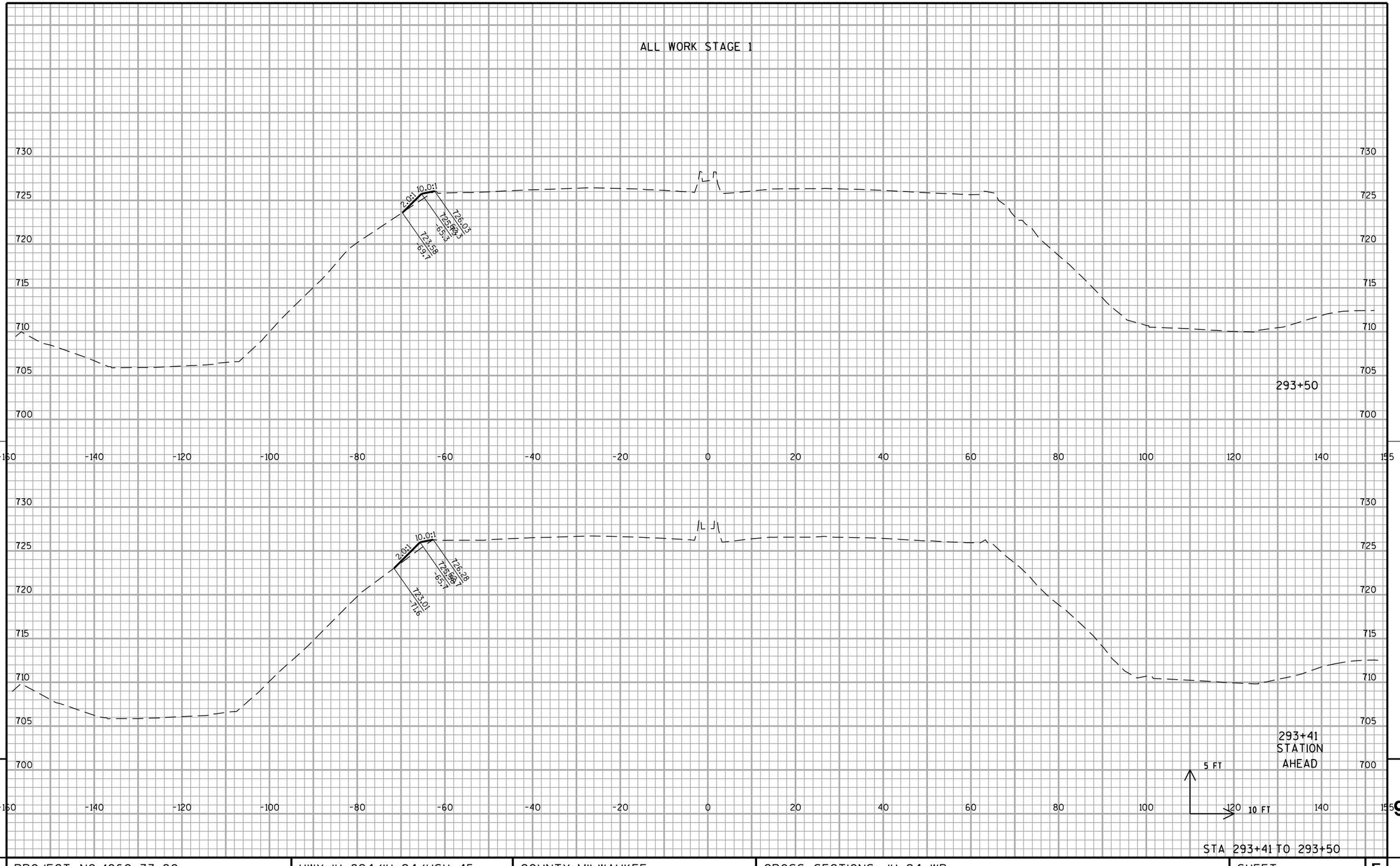


STA 284+92 TO 284+92

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

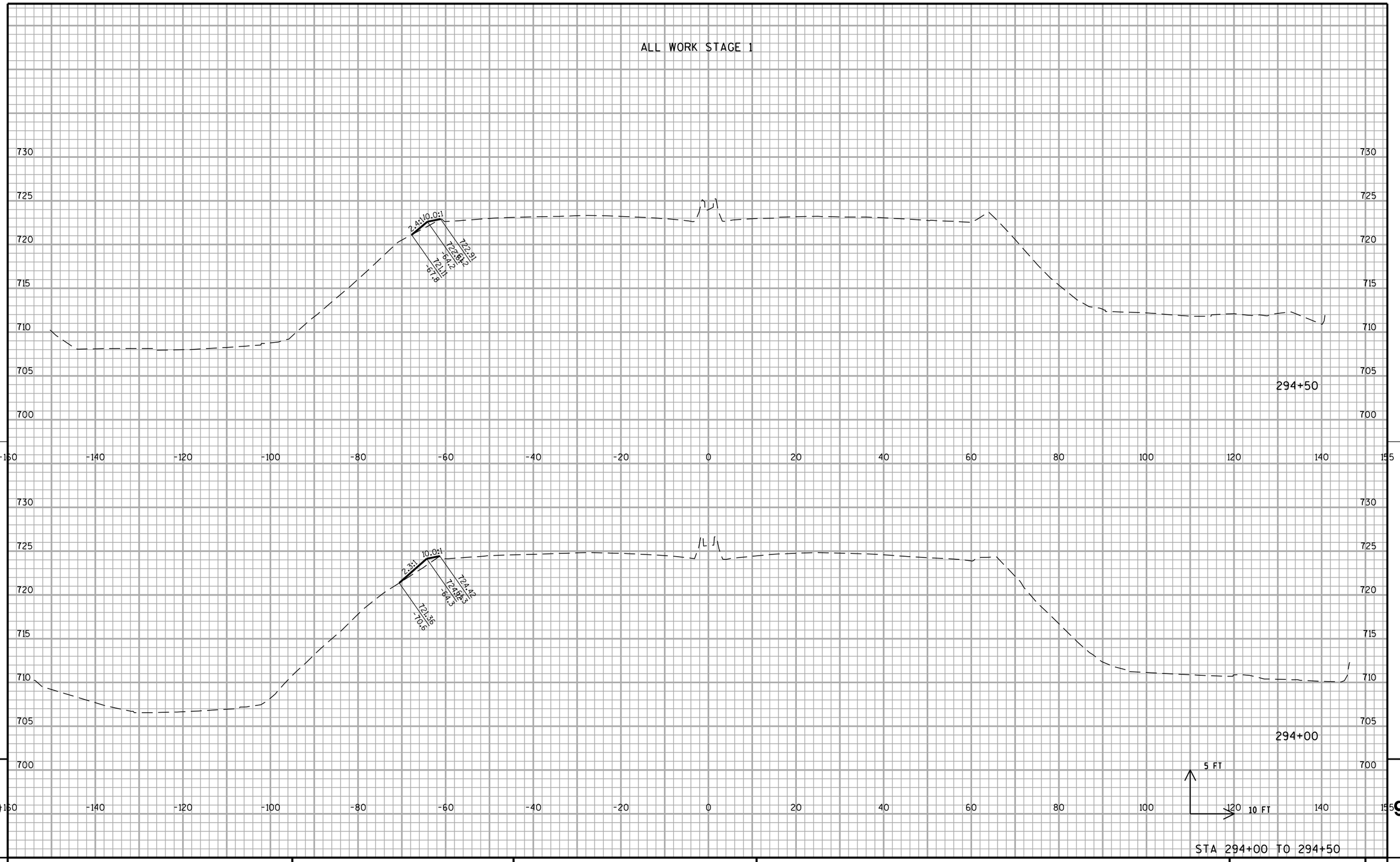
ALL WORK STAGE 1



STA 293+41 TO 293+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

ALL WORK STAGE 1



STA 294+00 TO 294+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e75 PLOT SCALE : 20:1

ALL WORK STAGE 1

296+00

295+50

295+00

5 FT

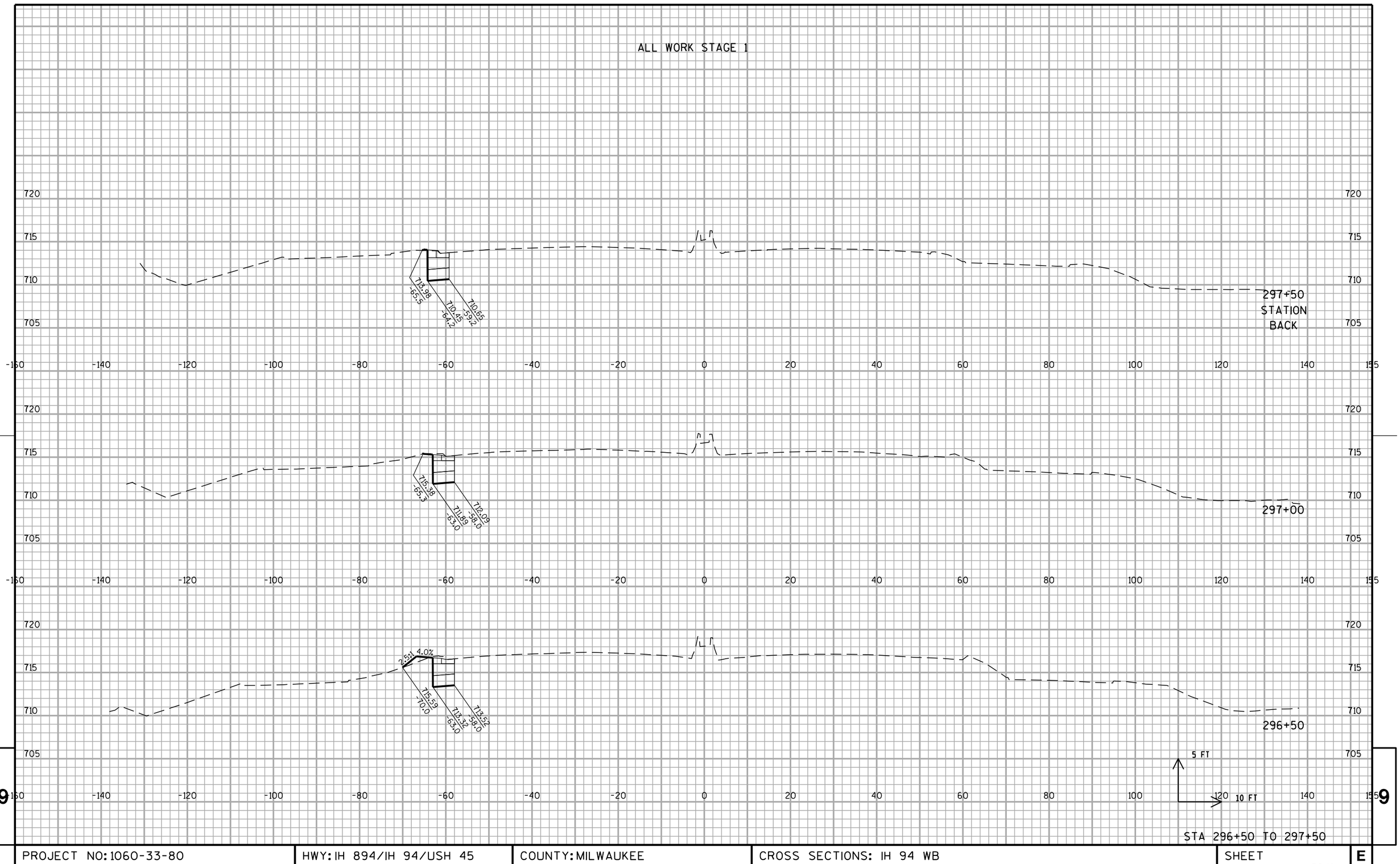
10 FT

STA 295+00 TO 296+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e76 PLOT SCALE : 20:1

ALL WORK STAGE 1

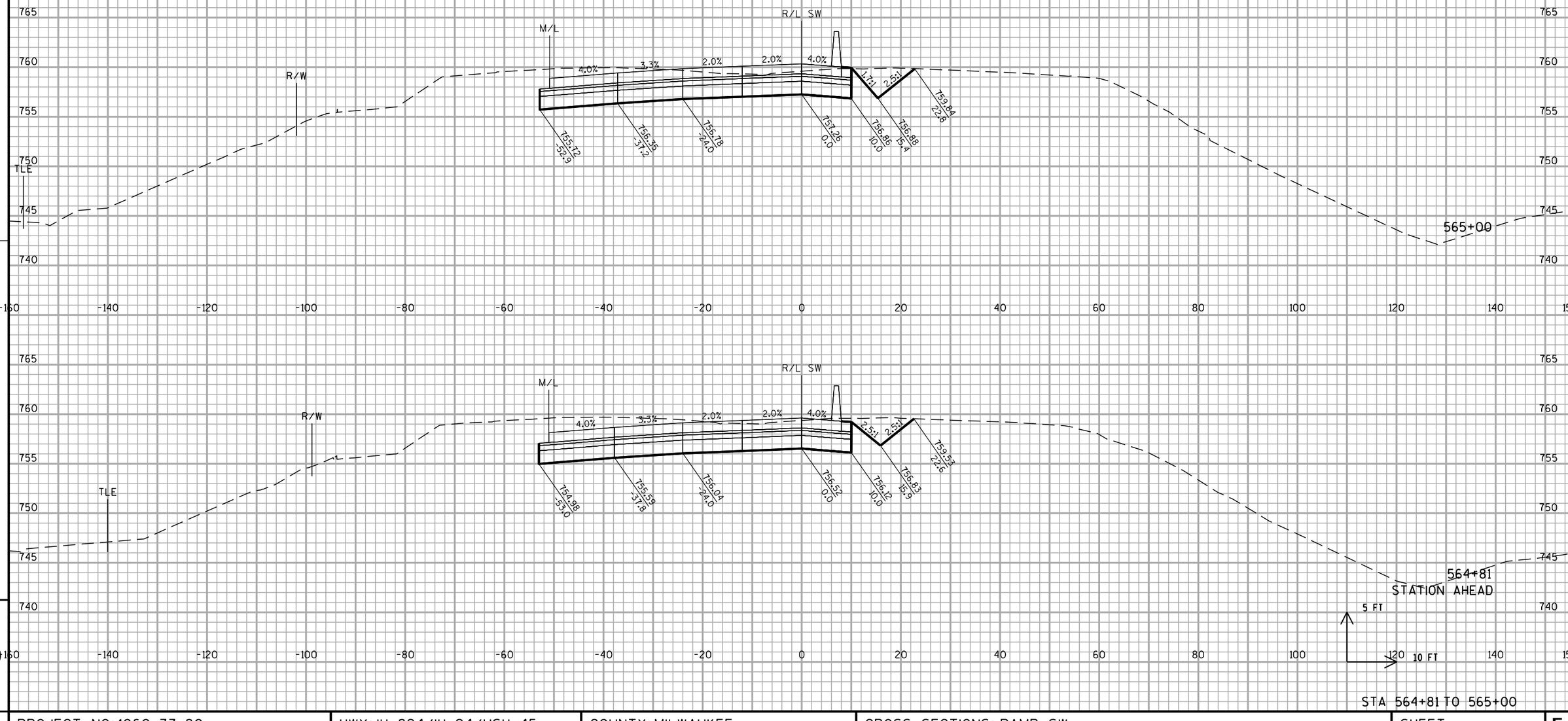


STA 296+50 TO 297+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090208_xs_wb_e.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090208_xs_wb_e77 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

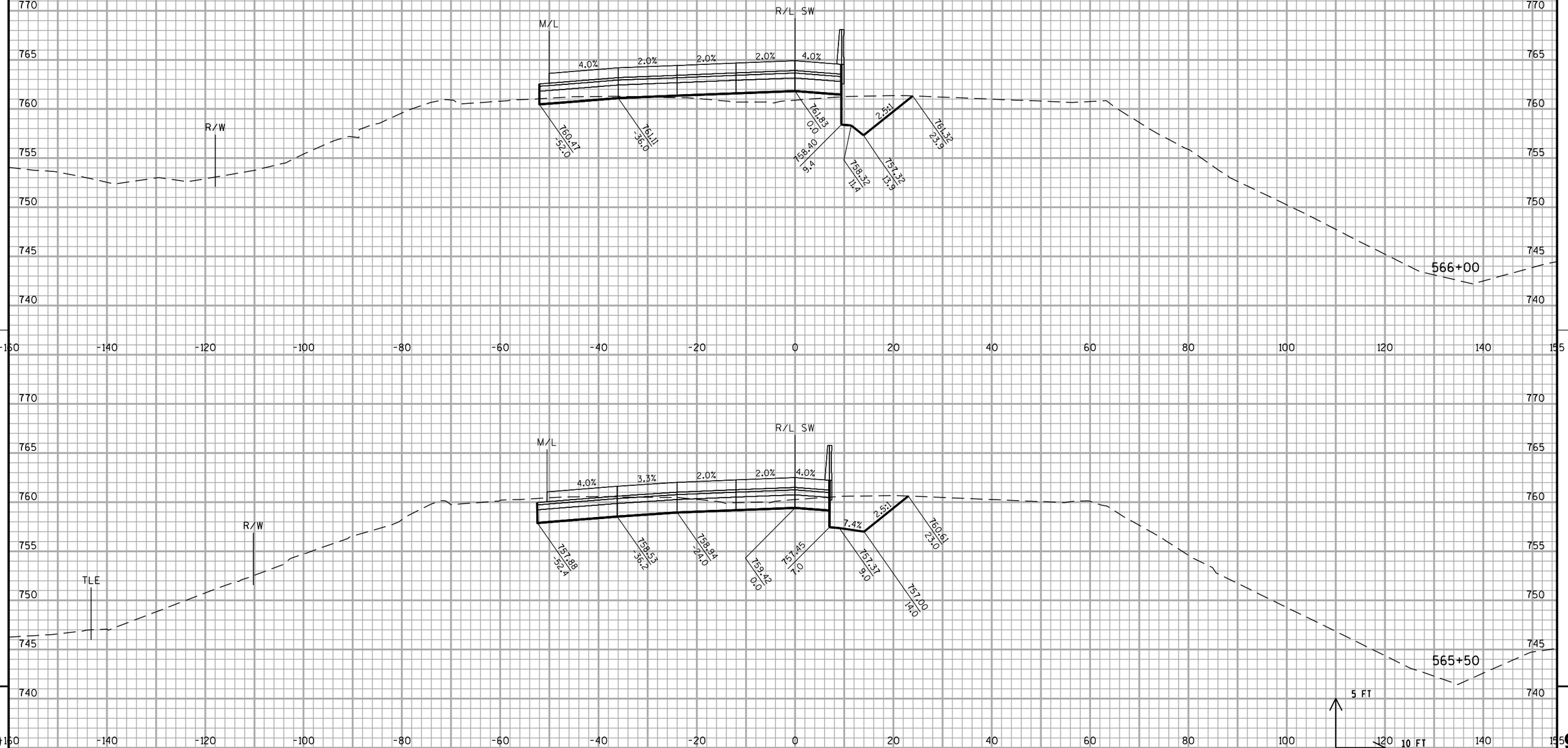
ALL WORK STAGE 3



STA 564+81 TO 565+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 3

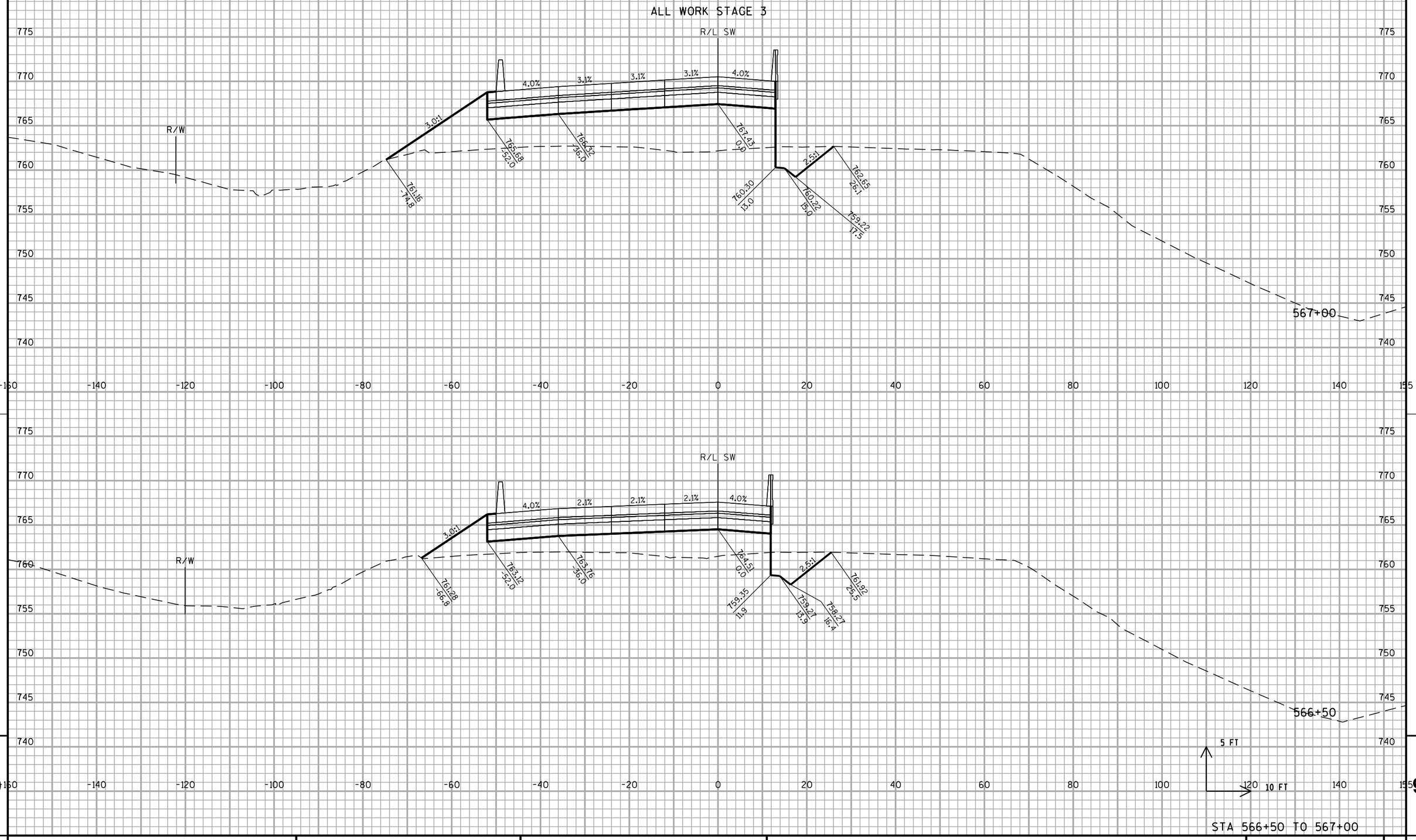


9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

STA 565+50 TO 566+00

ALL WORK STAGE 3

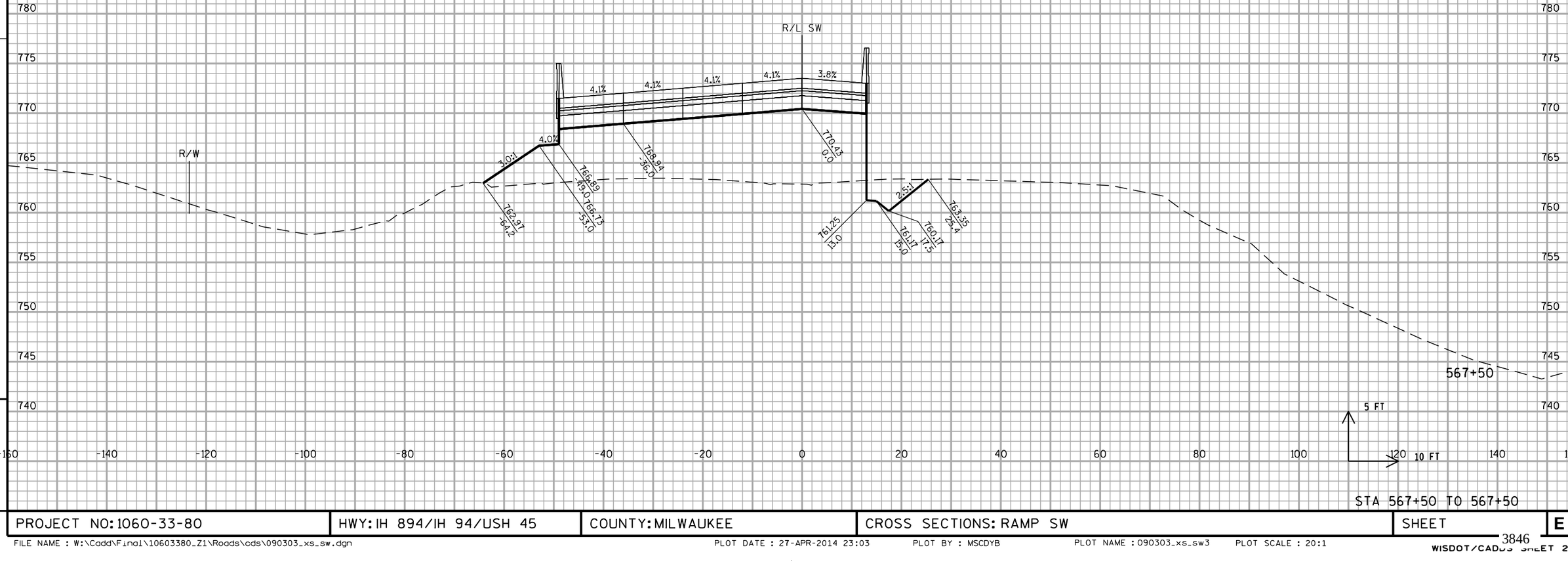


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

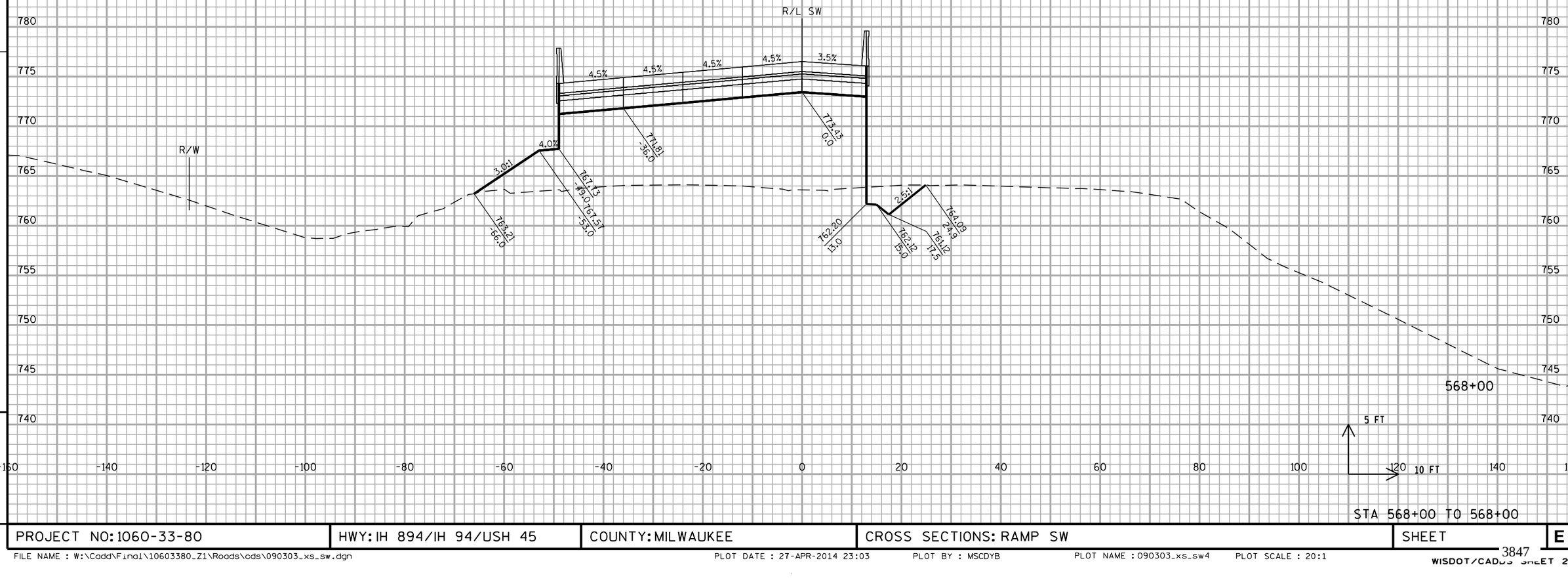
ALL WORK STAGE 3



STA 567+50 TO 567+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

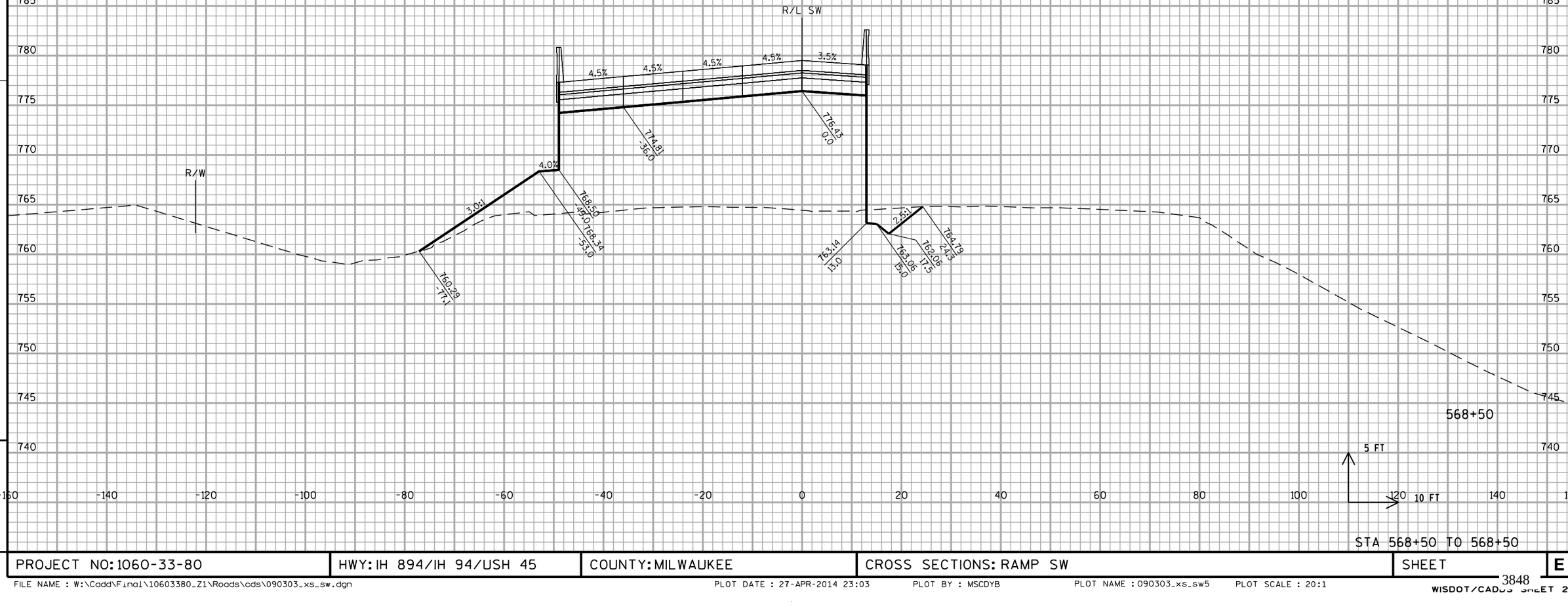
ALL WORK STAGE 3



STA 568+00 TO 568+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

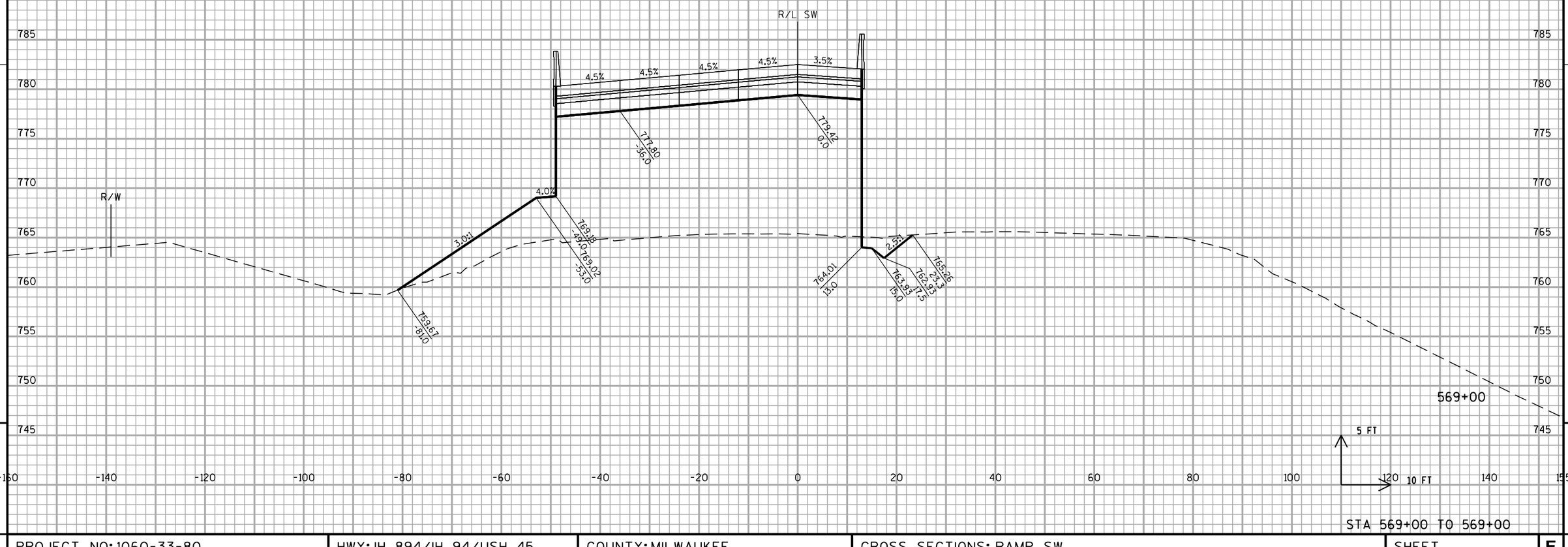
ALL WORK STAGE 3



STA 568+50 TO 568+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 3

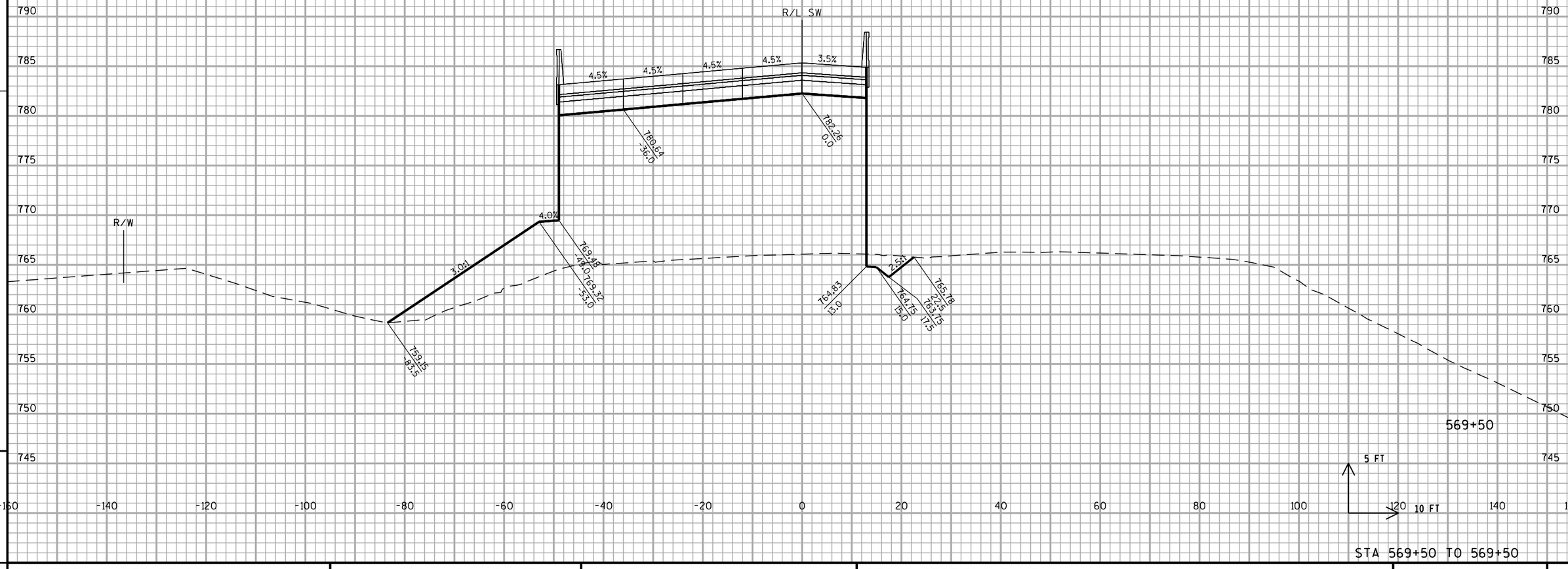


STA 569+00 TO 569+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw6 PLOT SCALE : 20:1

ALL WORK STAGE 3

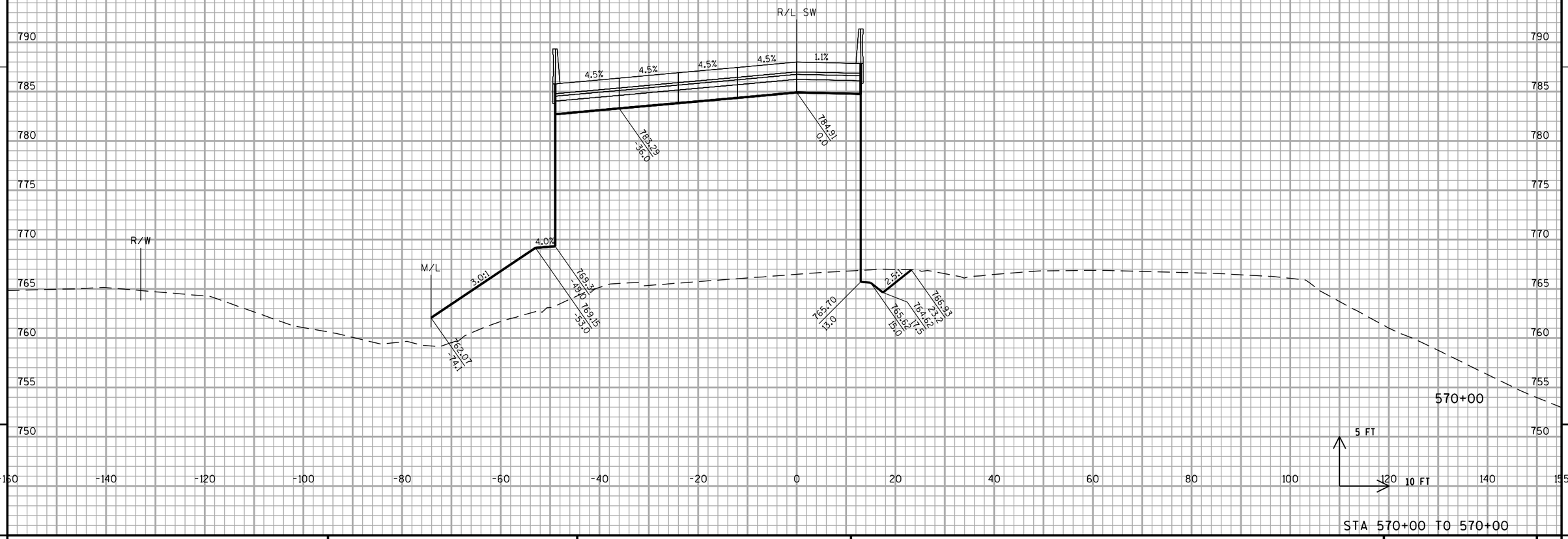


STA 569+50 TO 569+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw7 PLOT SCALE : 20:1

ALL WORK STAGE 3

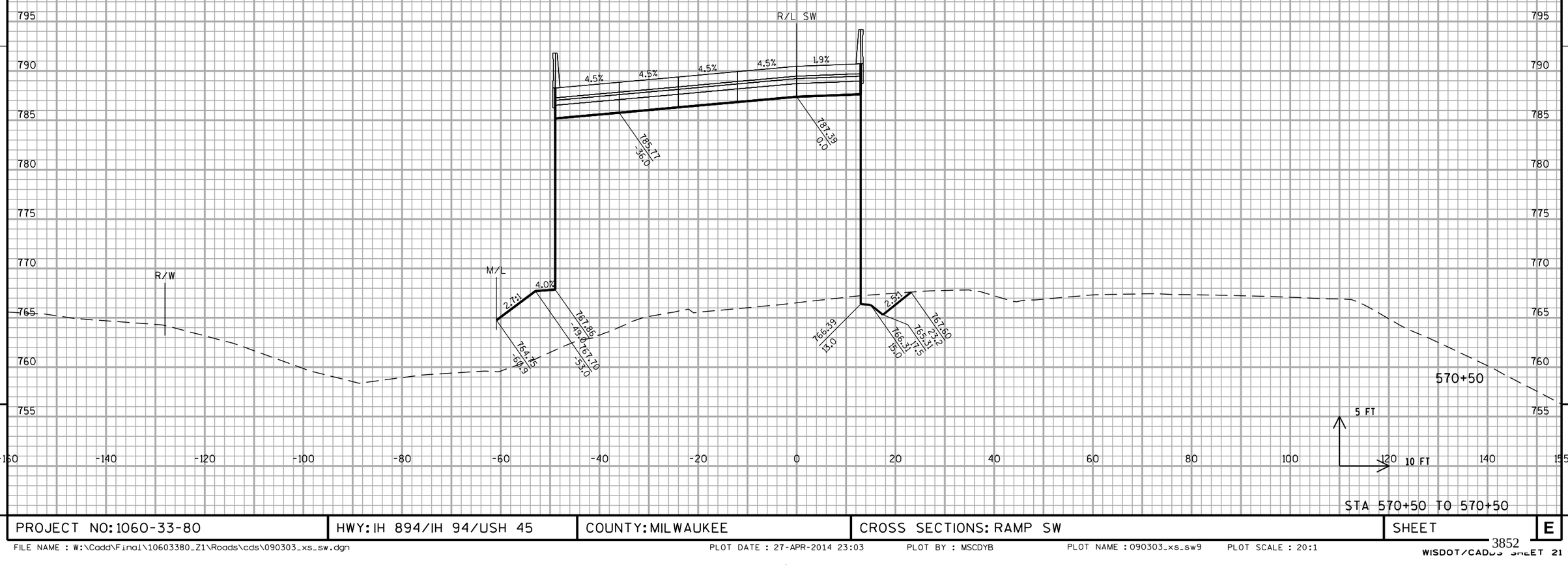


STA 570+00 TO 570+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw8 PLOT SCALE : 20:1

ALL WORK STAGE 3



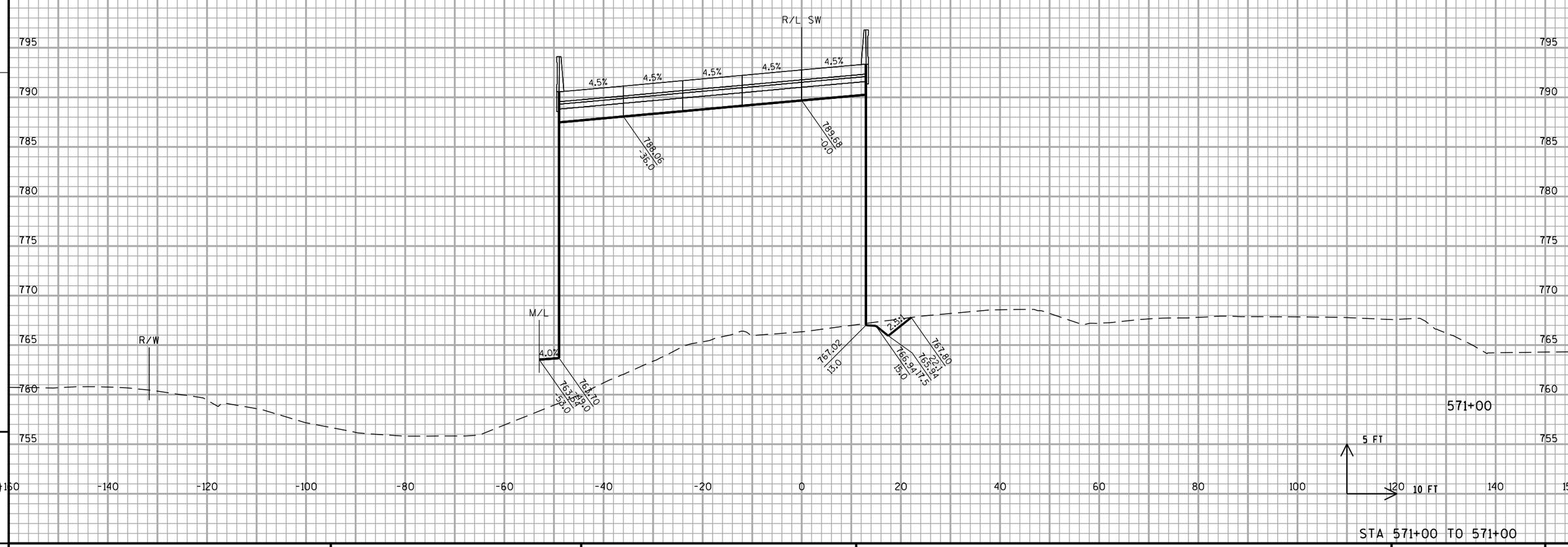
STA 570+50 TO 570+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

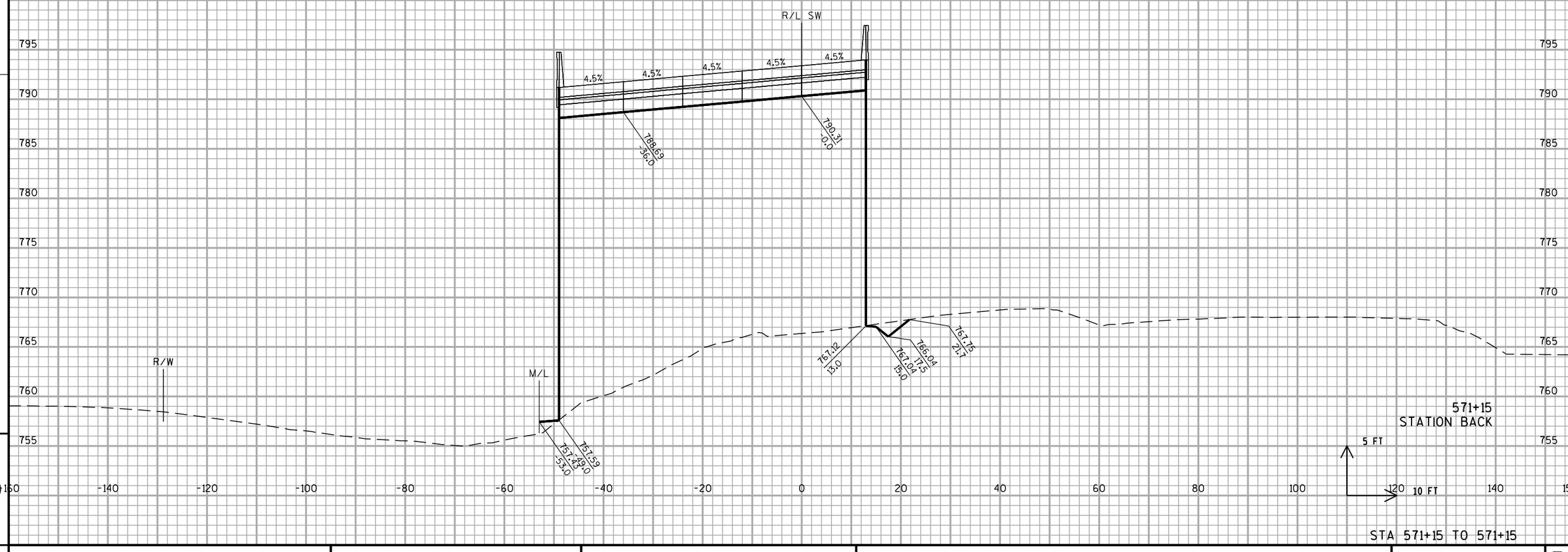


STA 571+00 TO 571+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw10 PLOT SCALE : 20:1

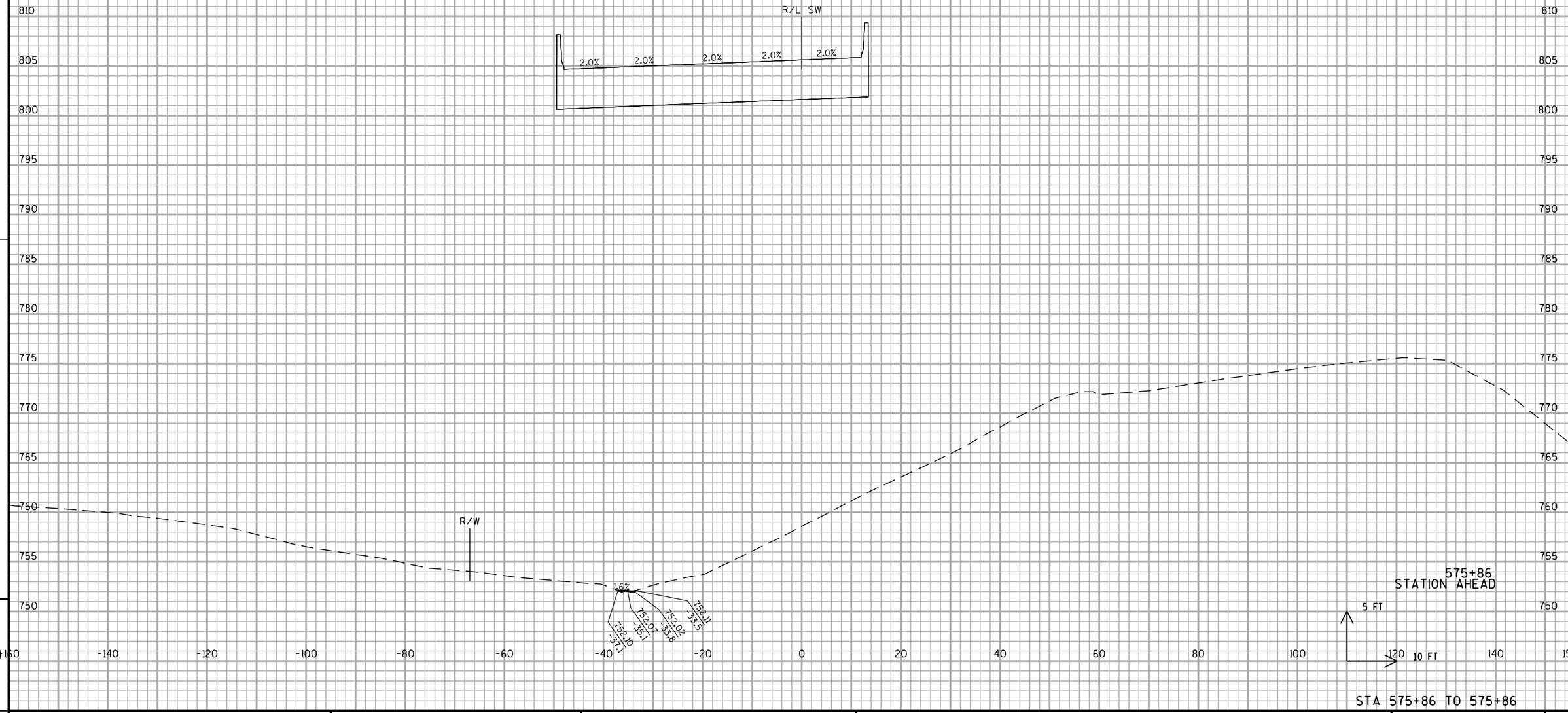
ALL WORK STAGE 3



STA 571+15 TO 571+15

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 1-3



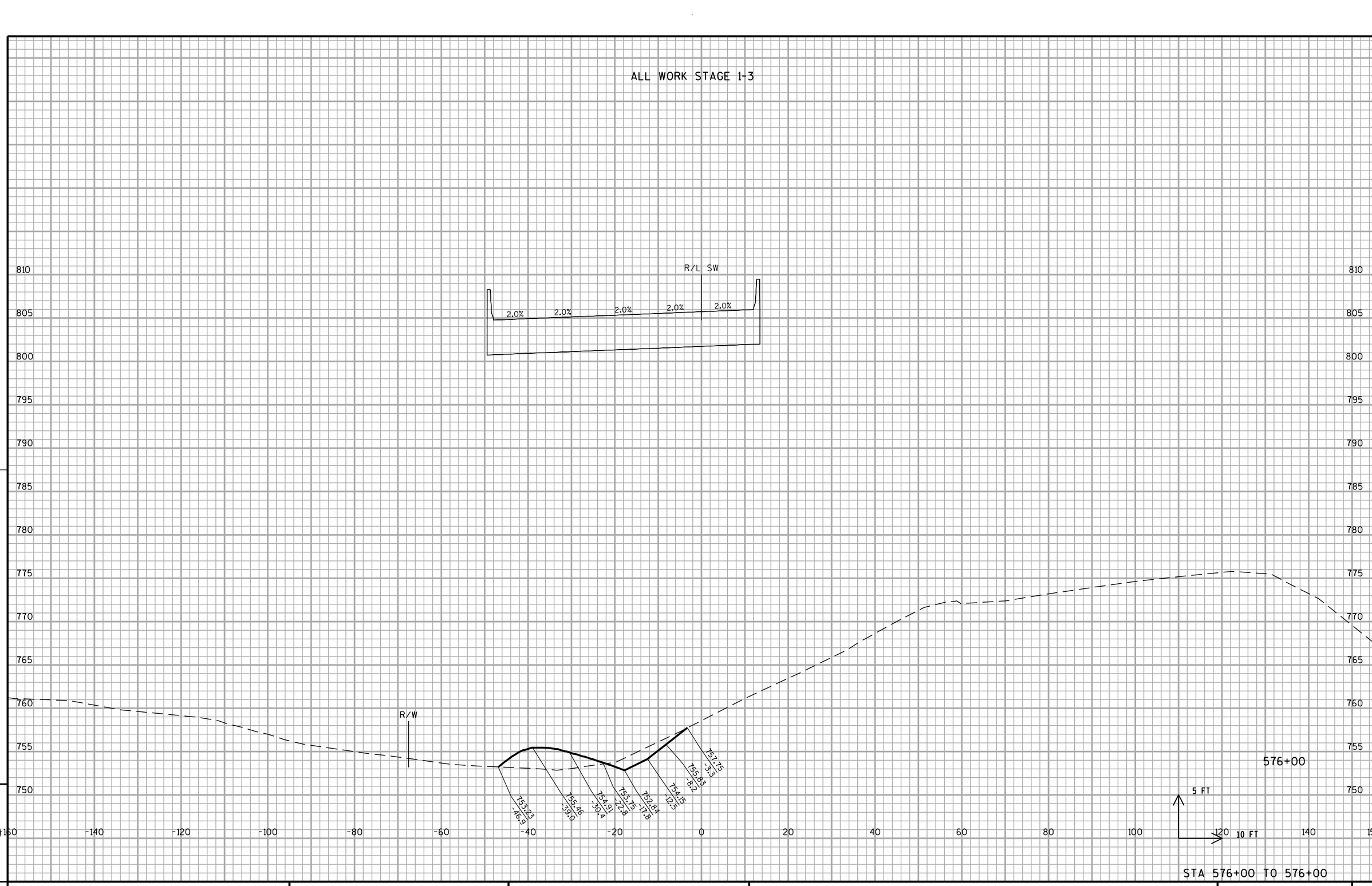
STA 575+86 TO 575+86

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1-3



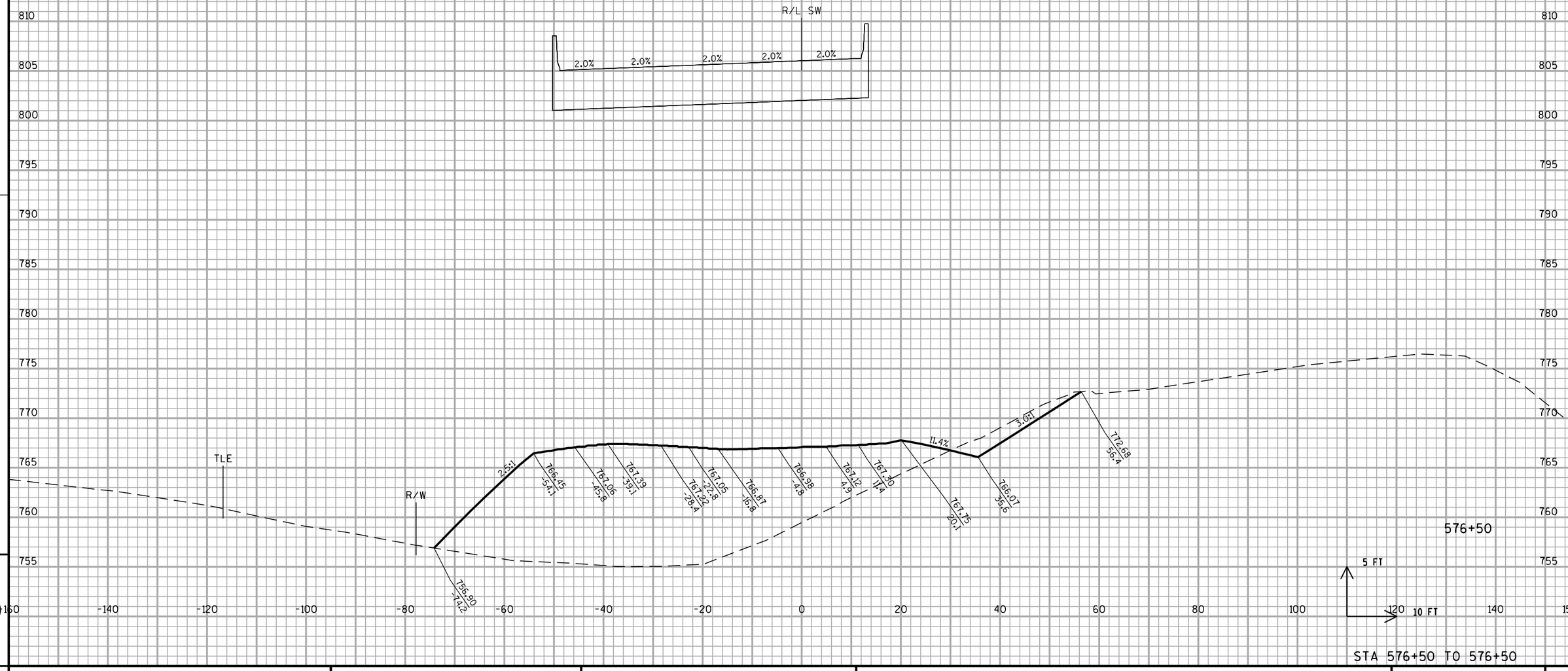
STA 576+00 TO 576+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw13 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1-3

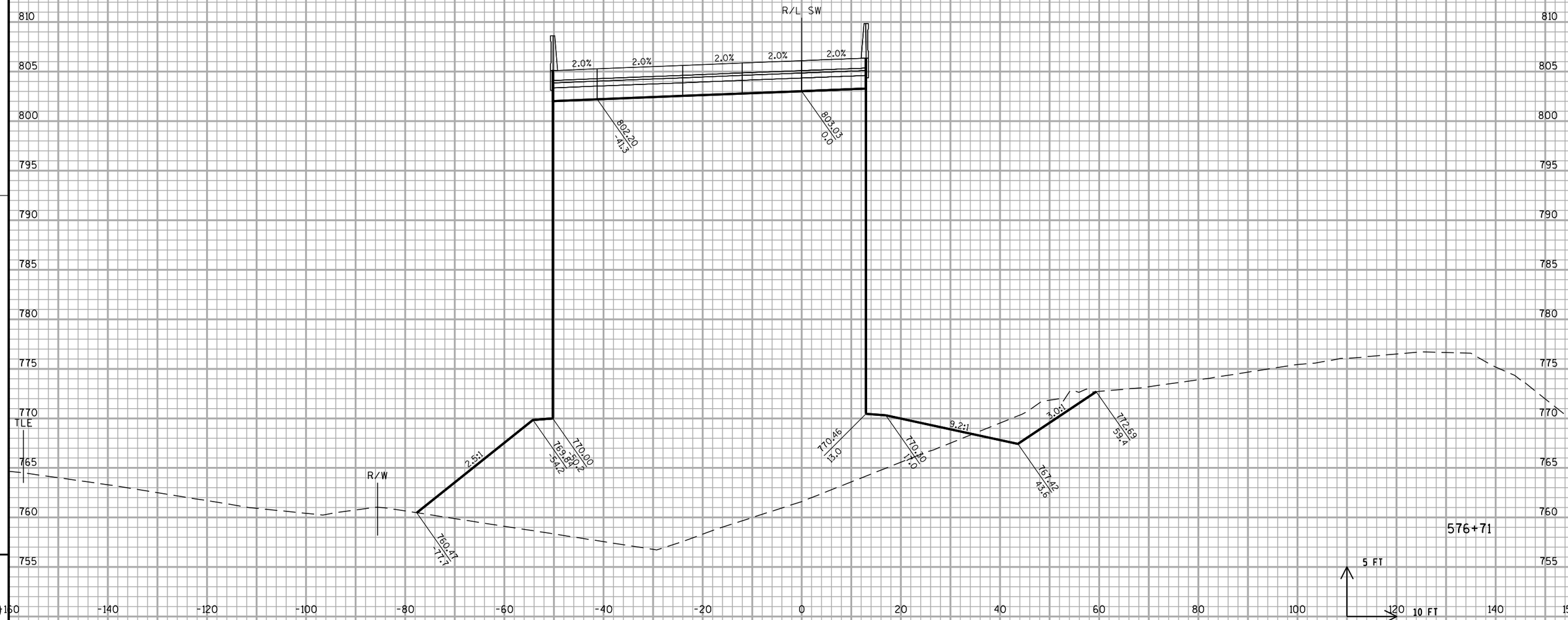


STA 576+50 TO 576+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw14 PLOT SCALE : 20:1

ALL WORK STAGE 1-3

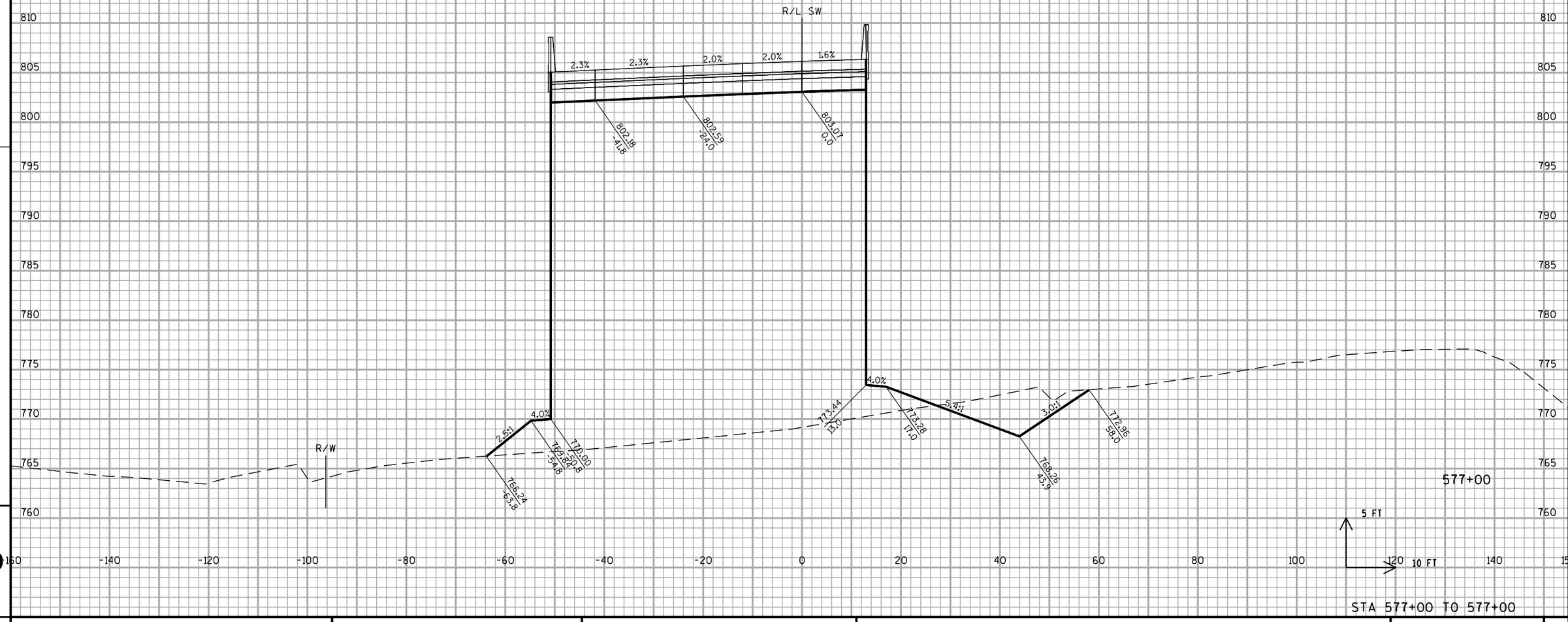


STA 576+71 TO 576+71

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_SW.dgn PLOT DATE : 29-APR-2014 14:00 PLOT BY : MSCPLR PLOT NAME : 090303_xs_SW15 PLOT SCALE : 20:1

ALL WORK STAGE 1-3

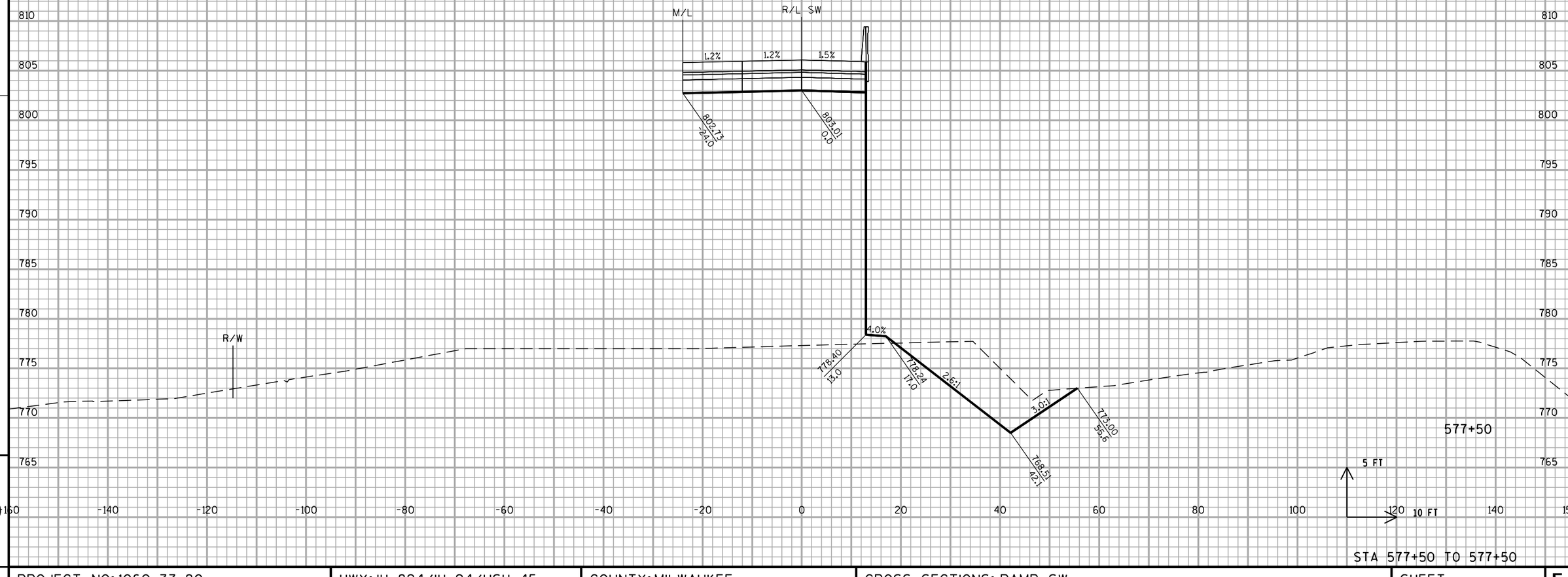


STA 577+00 TO 577+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw16 PLOT SCALE : 20:1

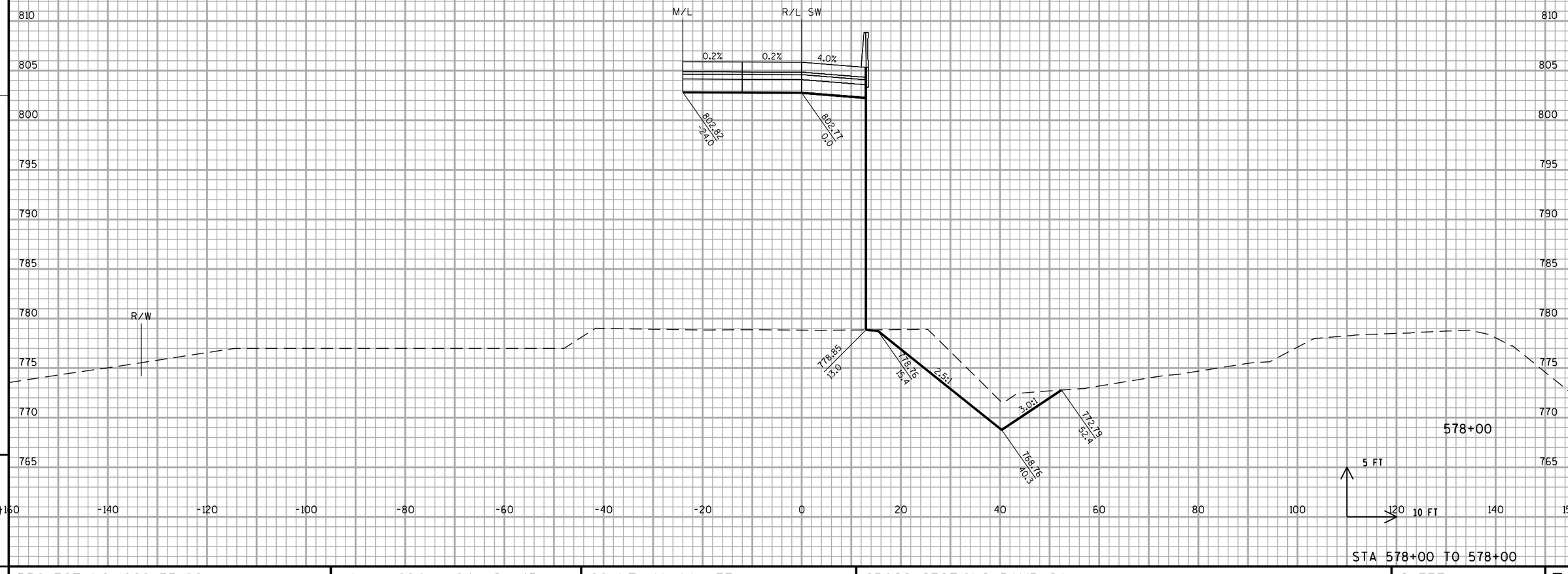
ALL WORK STAGE 1-3



STA 577+50 TO 577+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

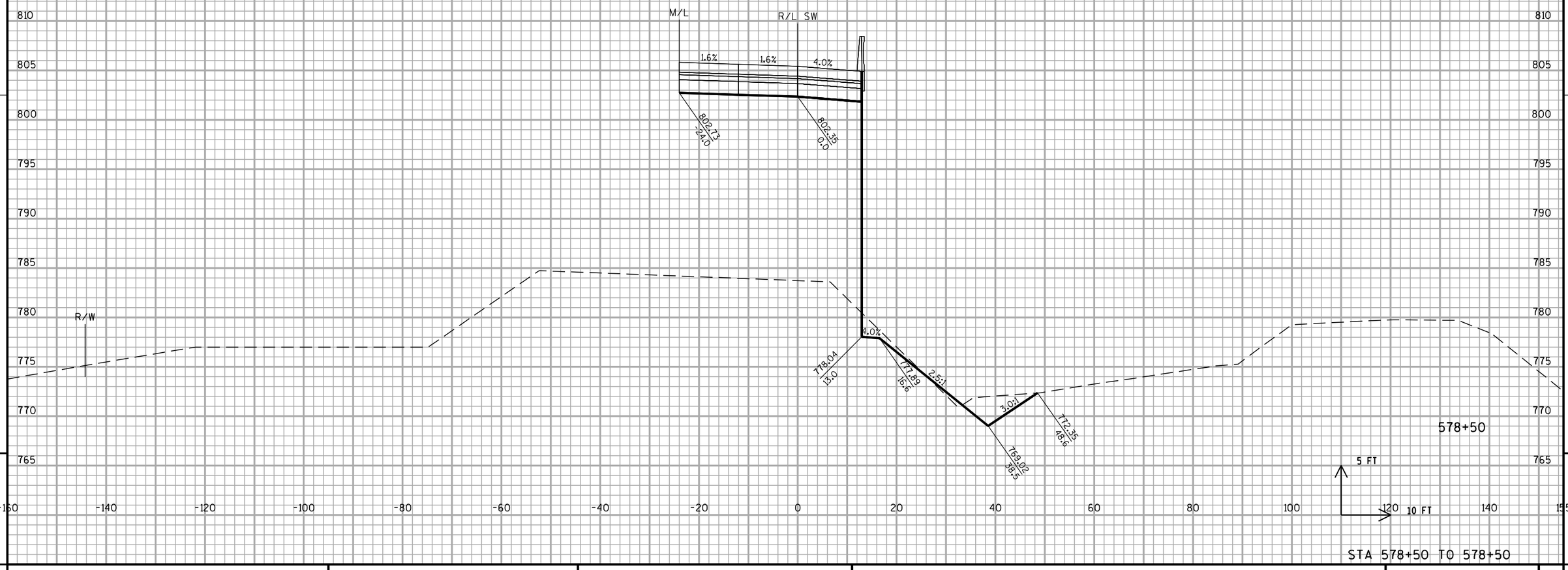
ALL WORK STAGE 1-3



STA 578+00 TO 578+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 1-3



STA 578+50 TO 578+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_SW.dgn PLOT DATE : 29-APR-2014 14:01 PLOT BY : MSCPLR PLOT NAME : 090303_xs_SW19 PLOT SCALE : 20:1

ALL WORK STAGE 1-3

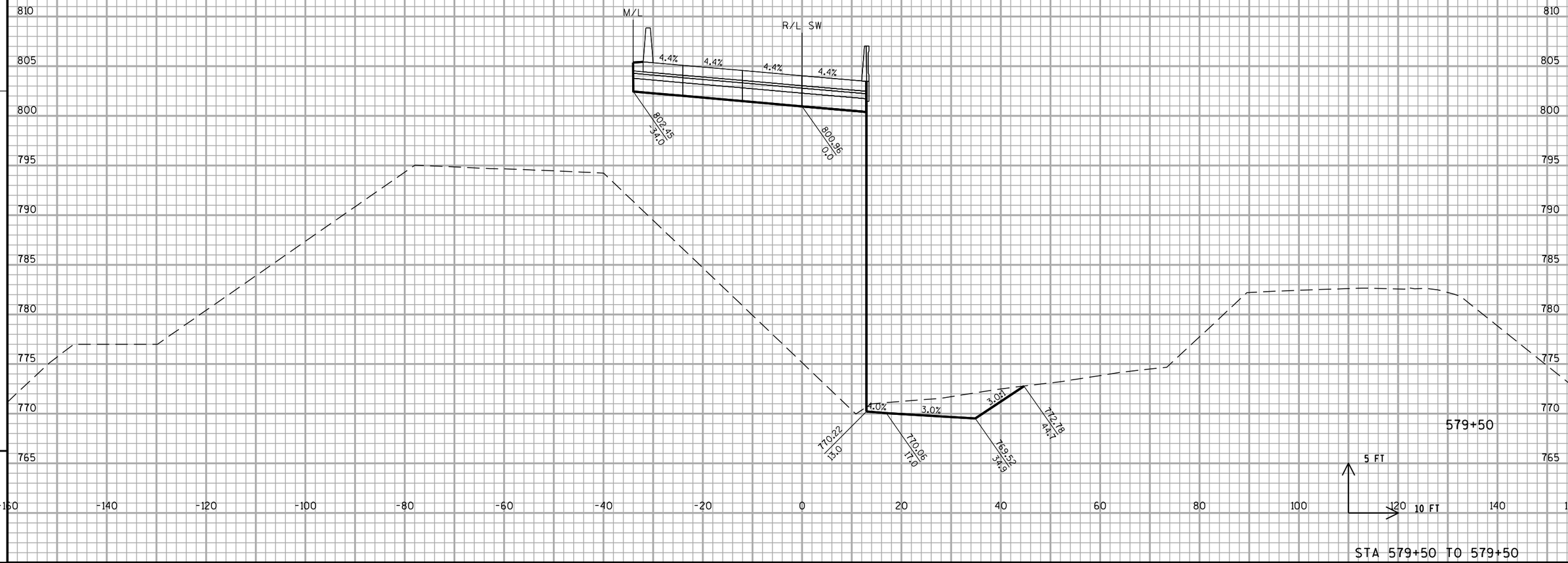


STA 579+00 TO 579+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_SW.dgn PLOT DATE : 29-APR-2014 14:01 PLOT BY : MSCPLR PLOT NAME : 090303_xs_SW20 PLOT SCALE : 20:1

ALL WORK STAGE 1-3

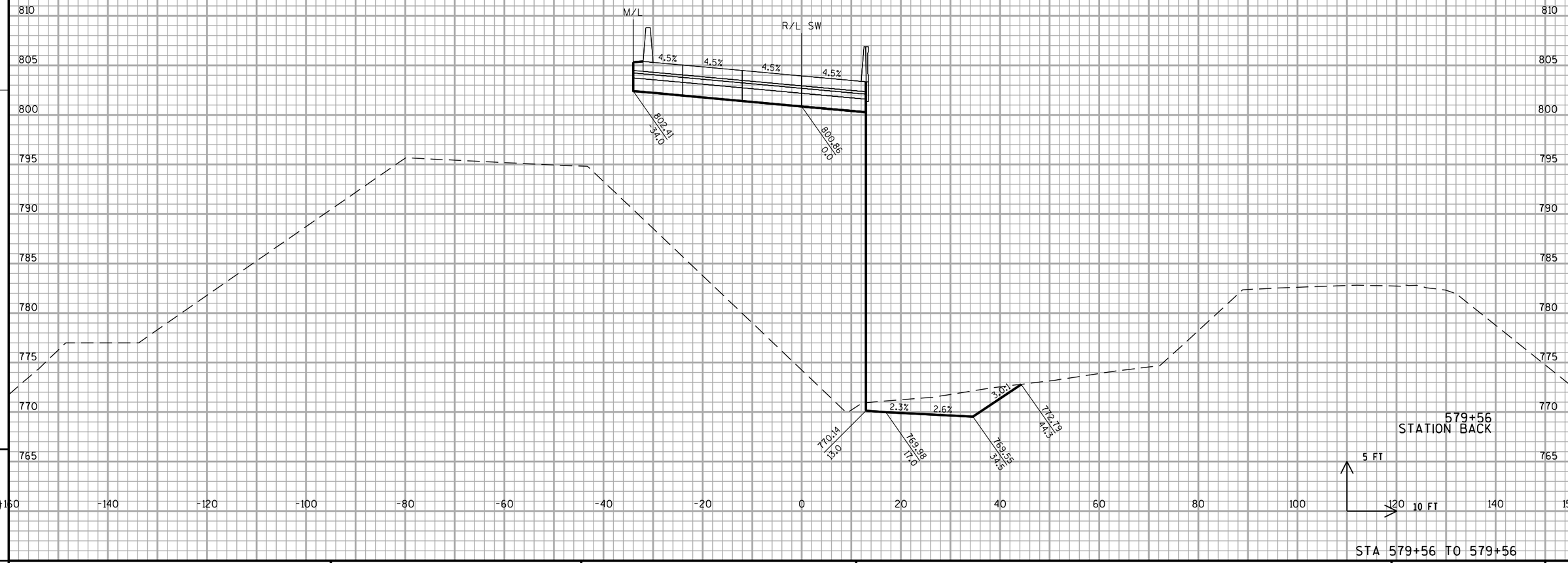


STA 579+50 TO 579+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw21 PLOT SCALE : 20:1

ALL WORK STAGE 1-3



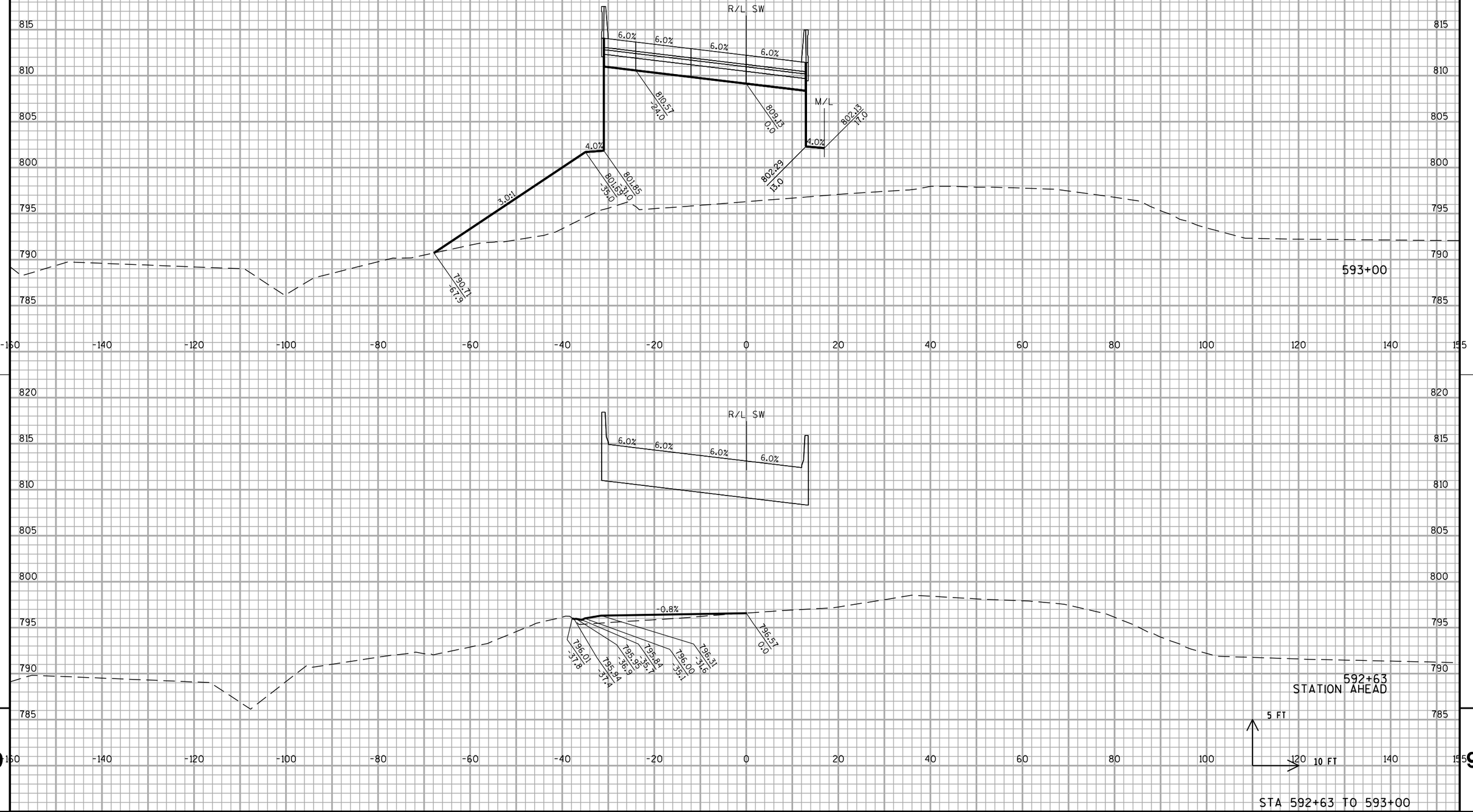
STA 579+56 TO 579+56

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw22 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2-4

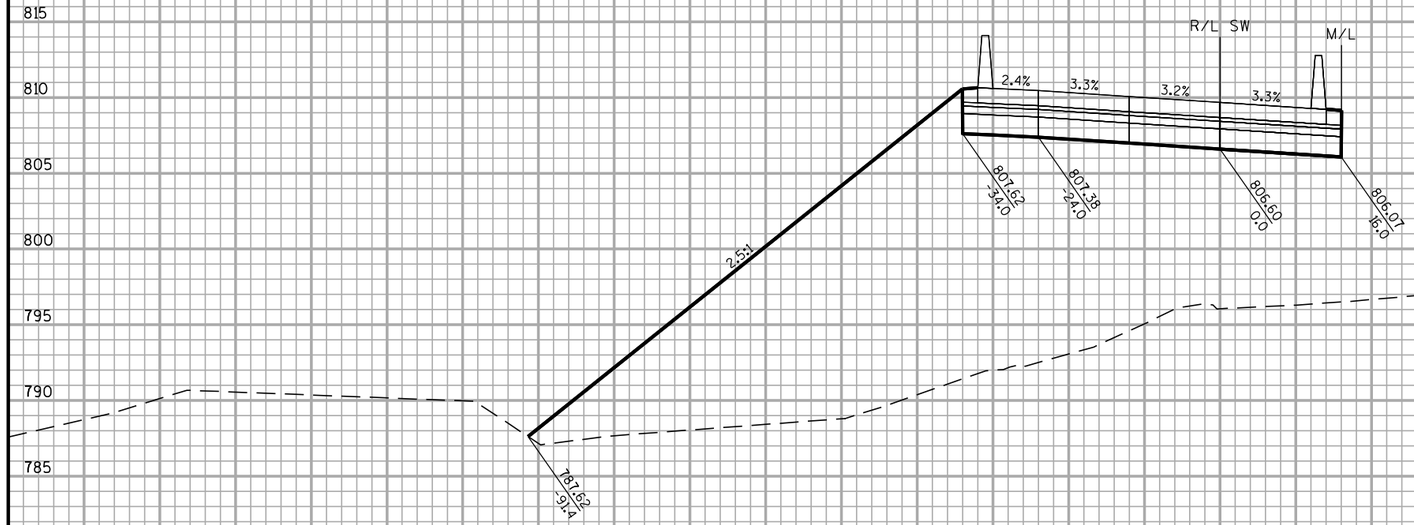


STA 592+63 TO 593+00

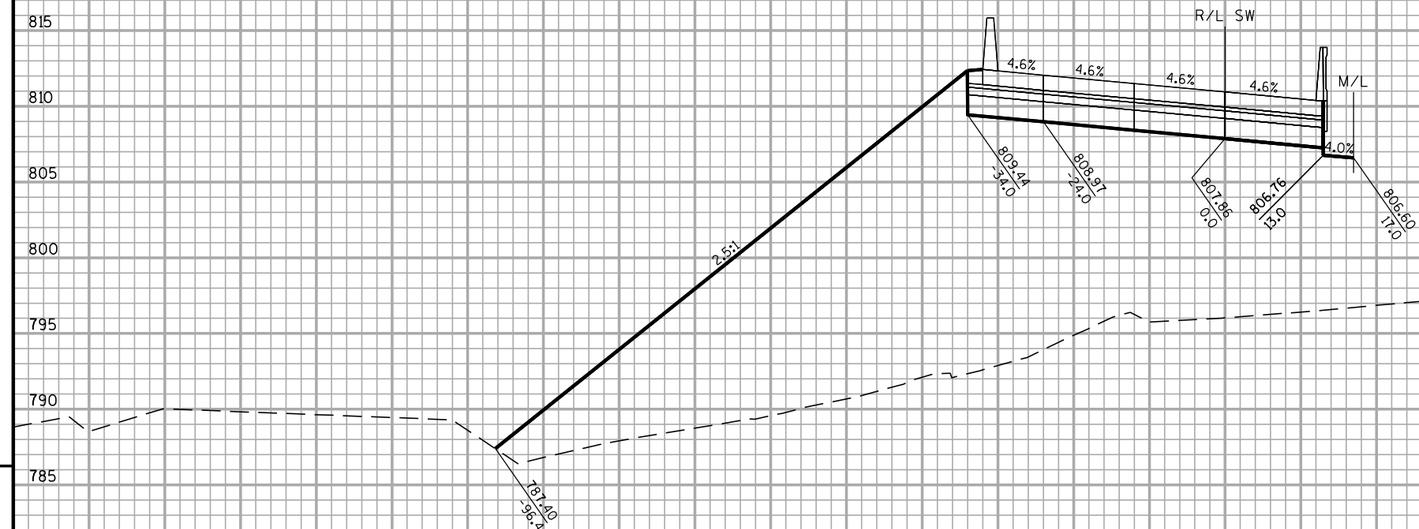
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw23 PLOT SCALE : 20:1

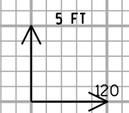
ALL WORK STAGE 2-4



594+00



593+50

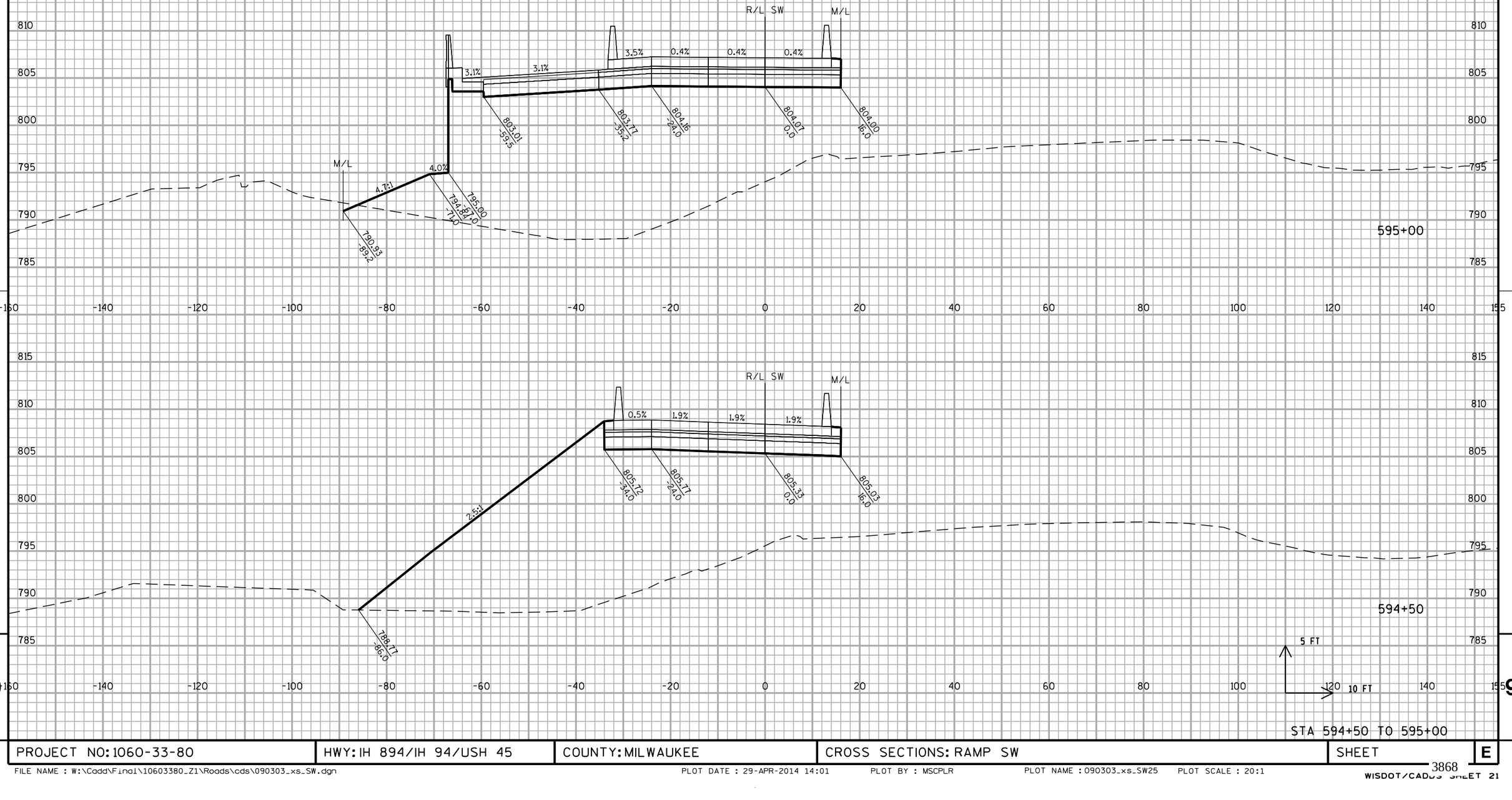


STA 593+50 TO 594+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw24 PLOT SCALE : 20:1

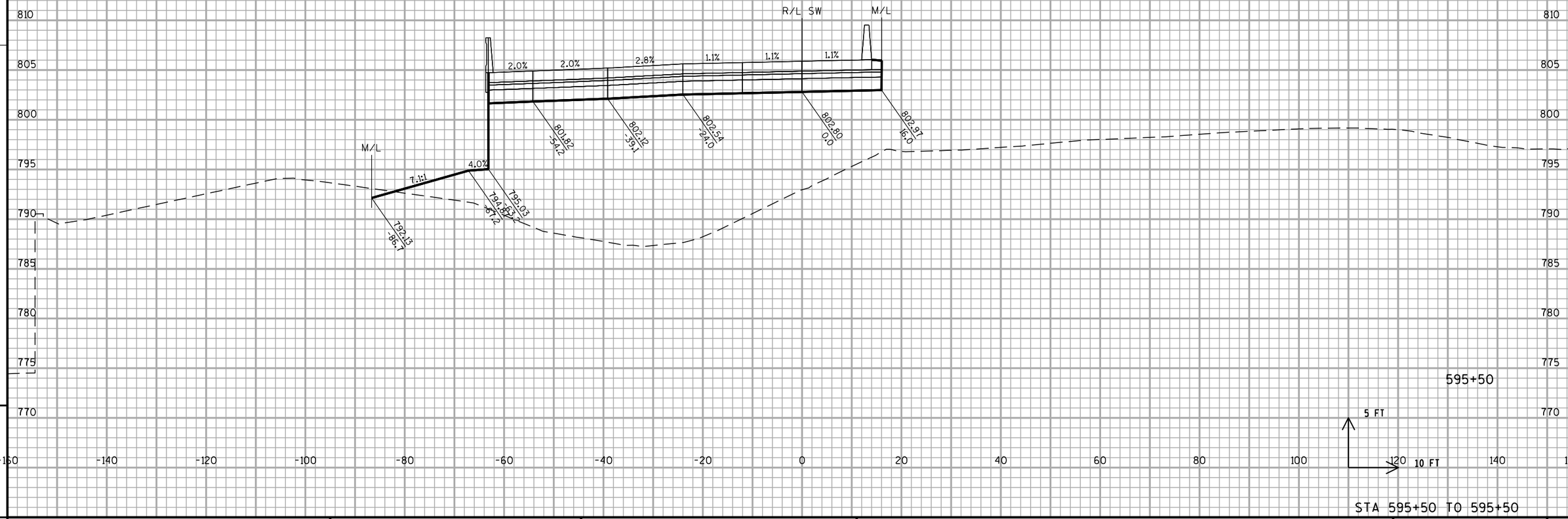
ALL WORK STAGE 2-4



STA 594+50 TO 595+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 2-4



9

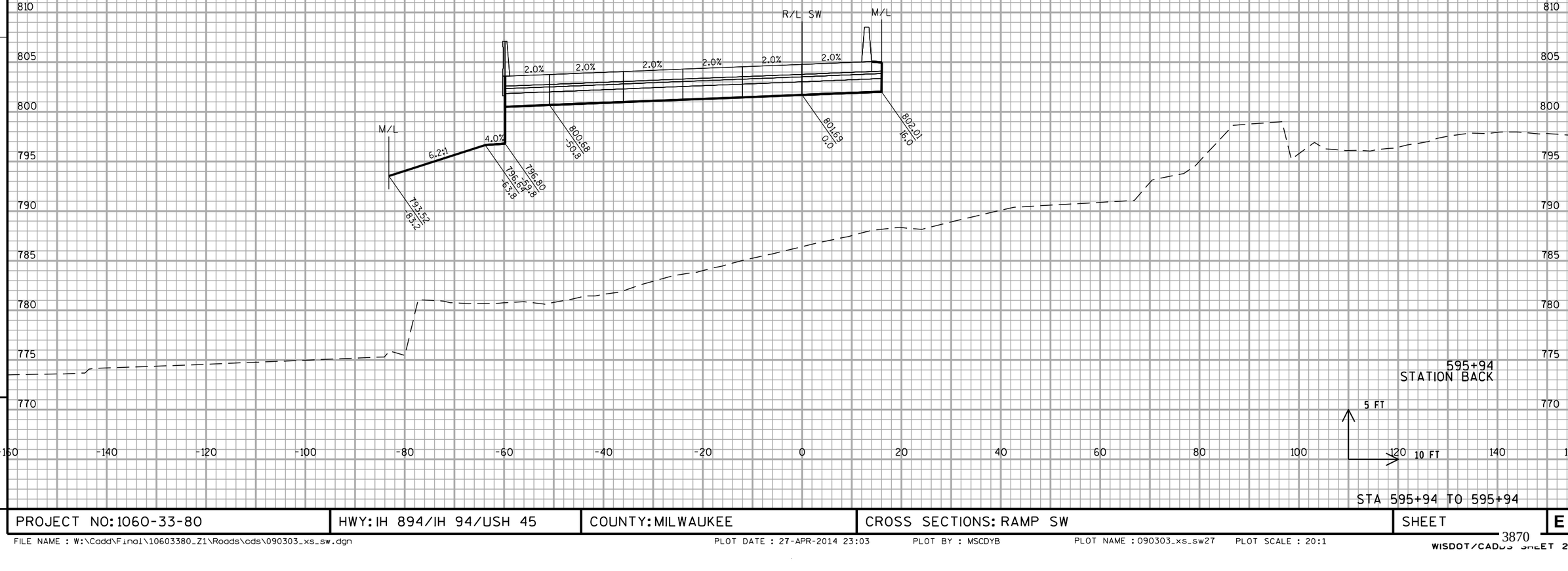
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

STA 595+50 TO 595+50

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw26 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

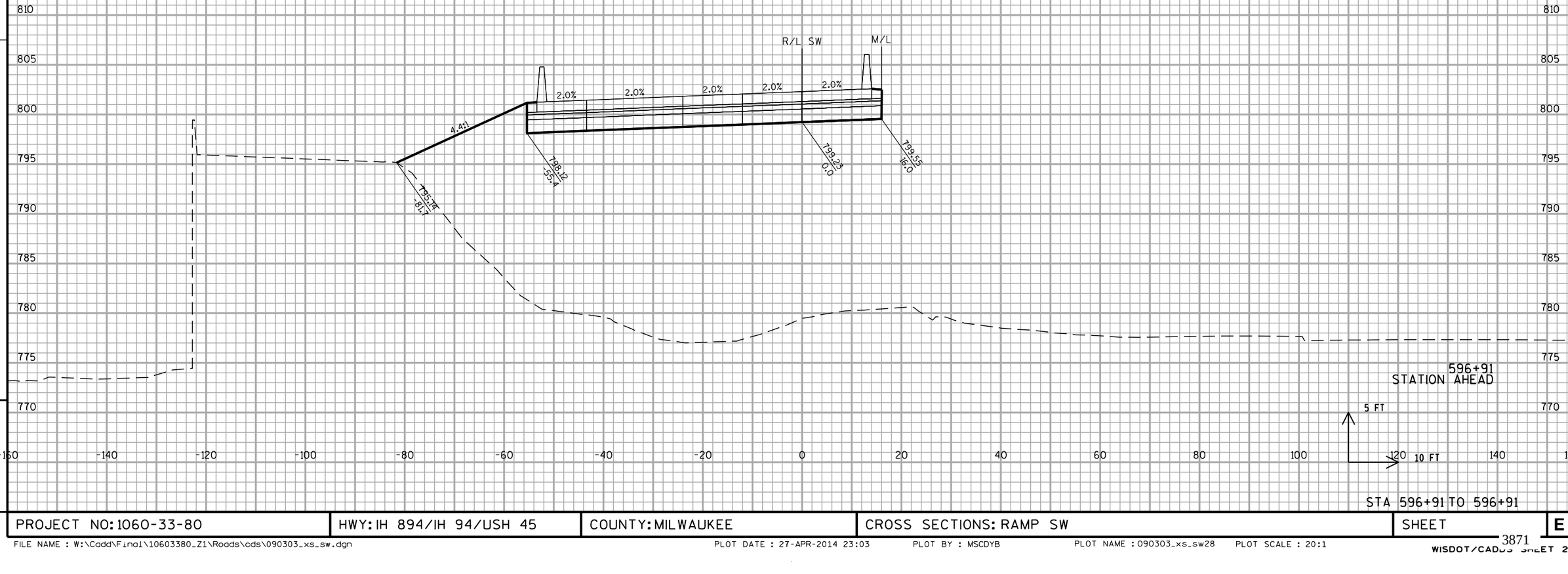
ALL WORK STAGE 2-4



STA 595+94 TO 595+94

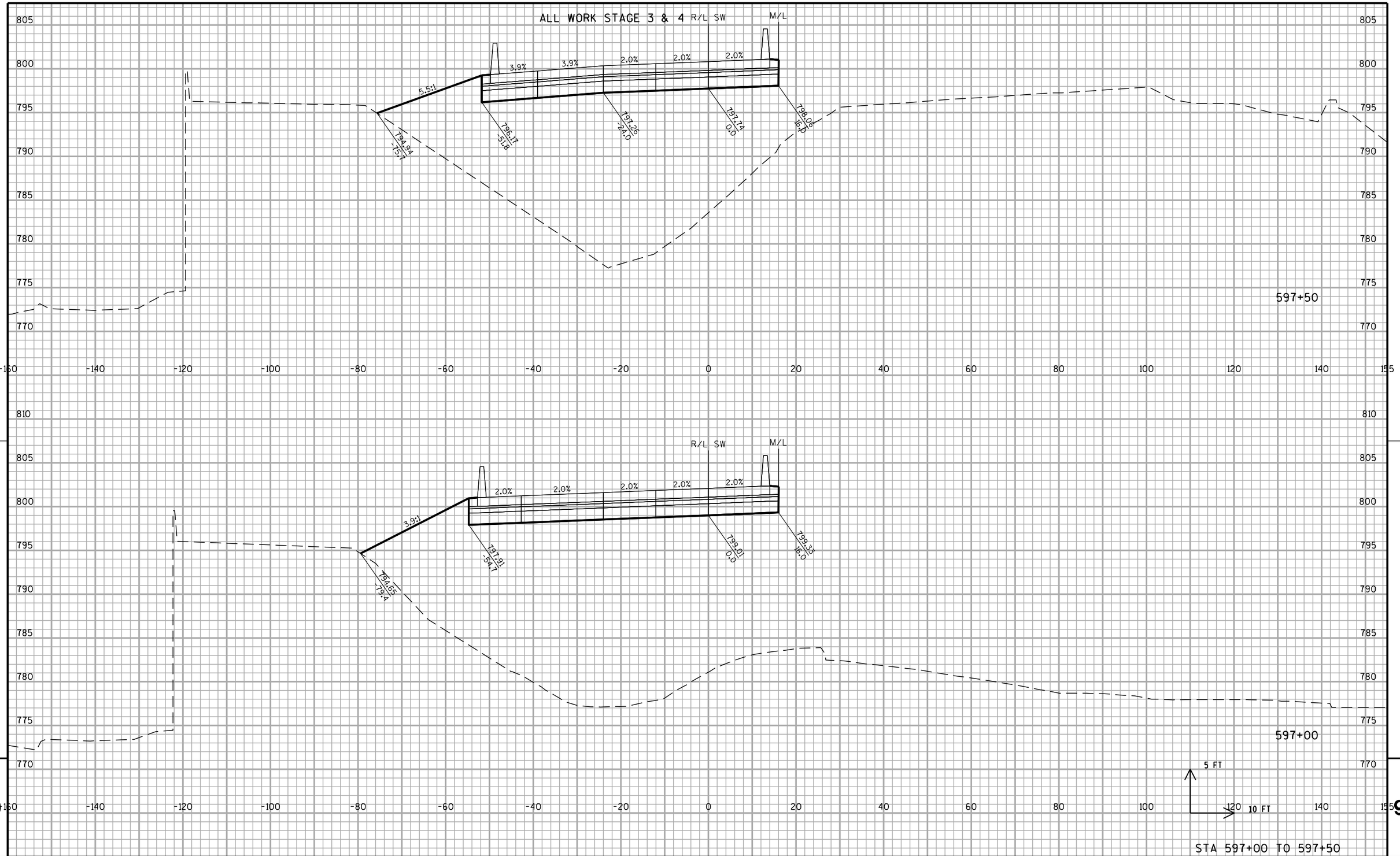
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 3 & 4



STA 596+91 TO 596+91

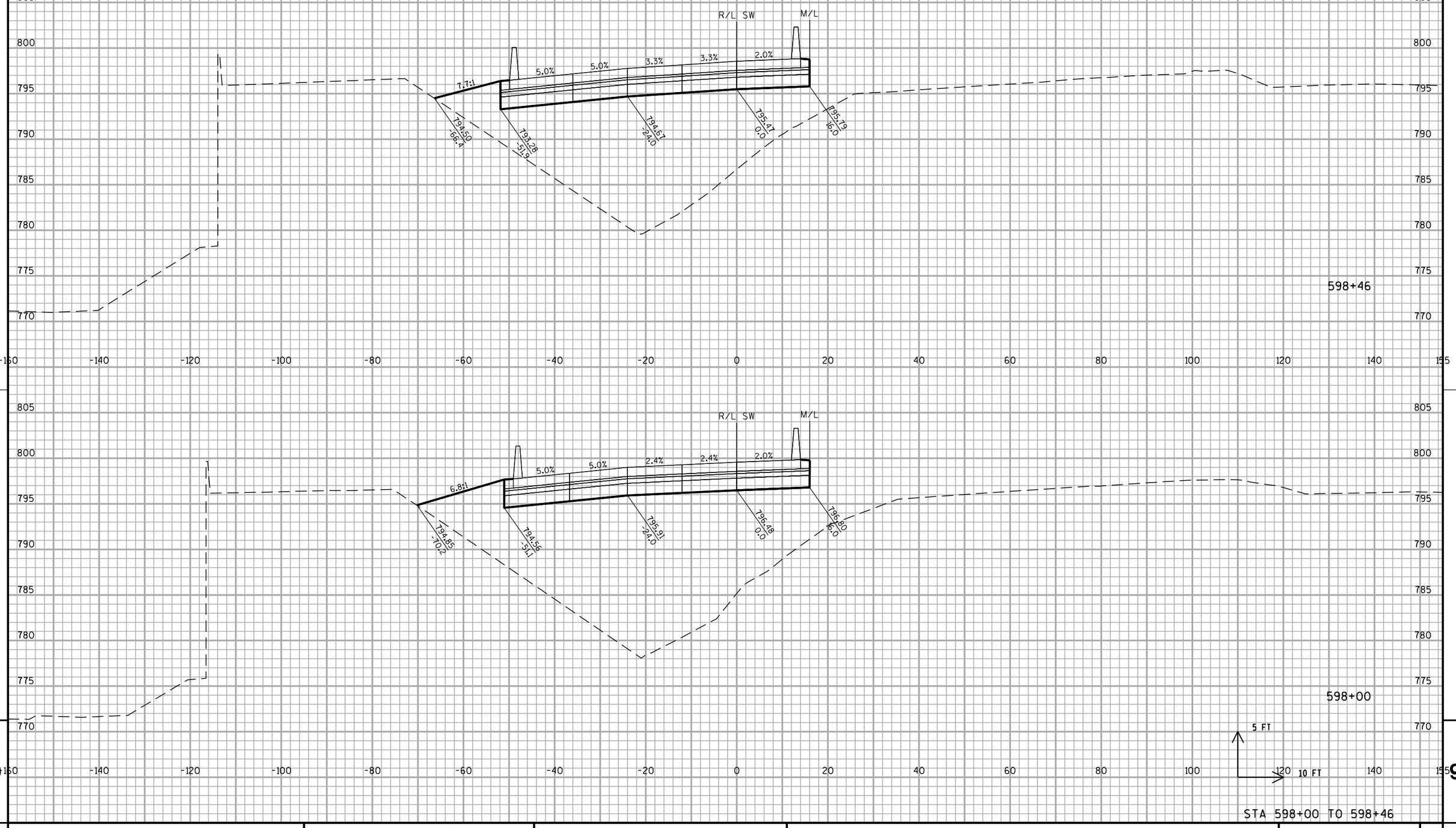
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E



STA 597+00 TO 597+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

ALL WORK STAGE 3 & 4



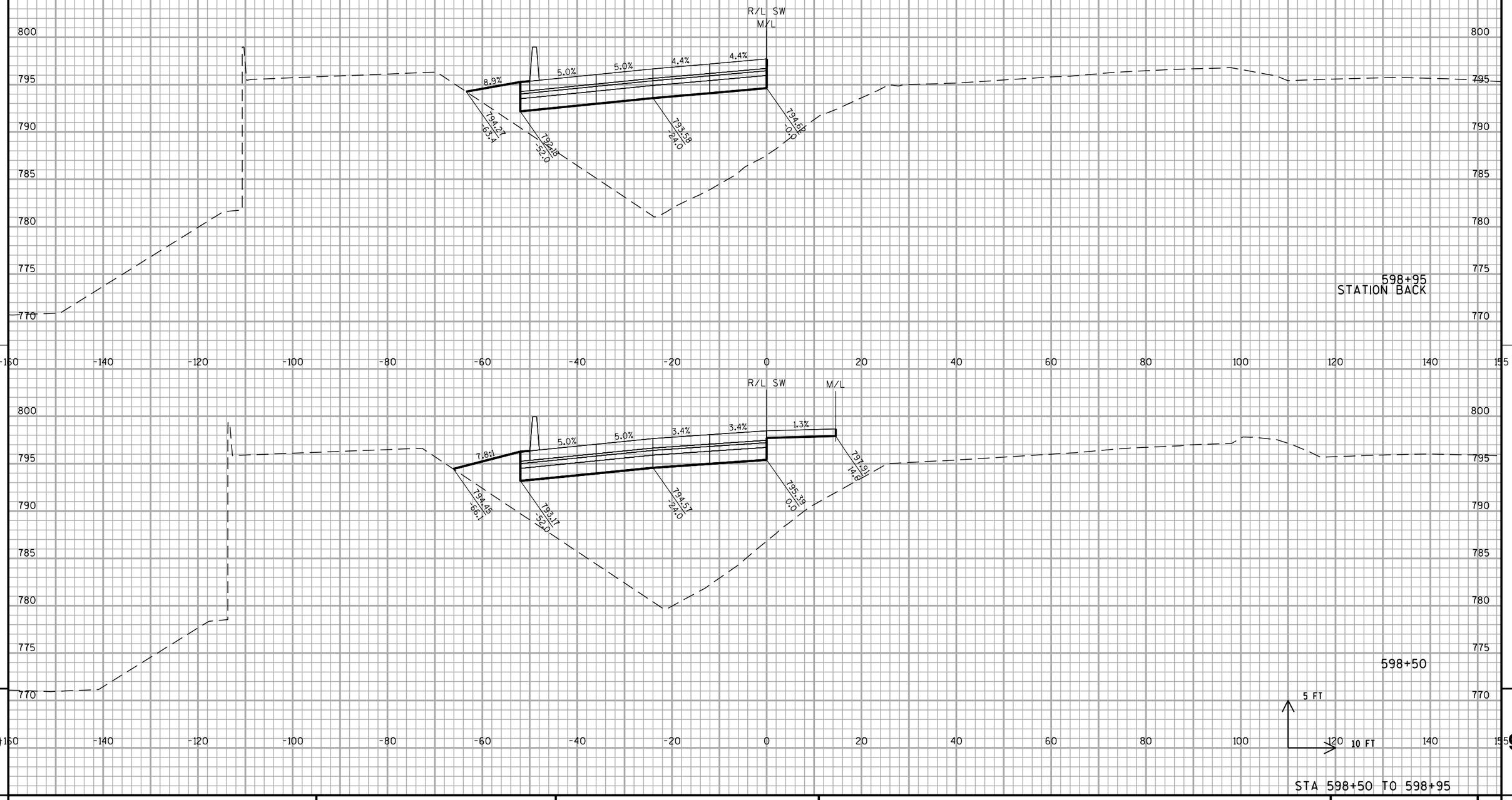
STA 598+00 TO 598+46

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw30 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3 & 4



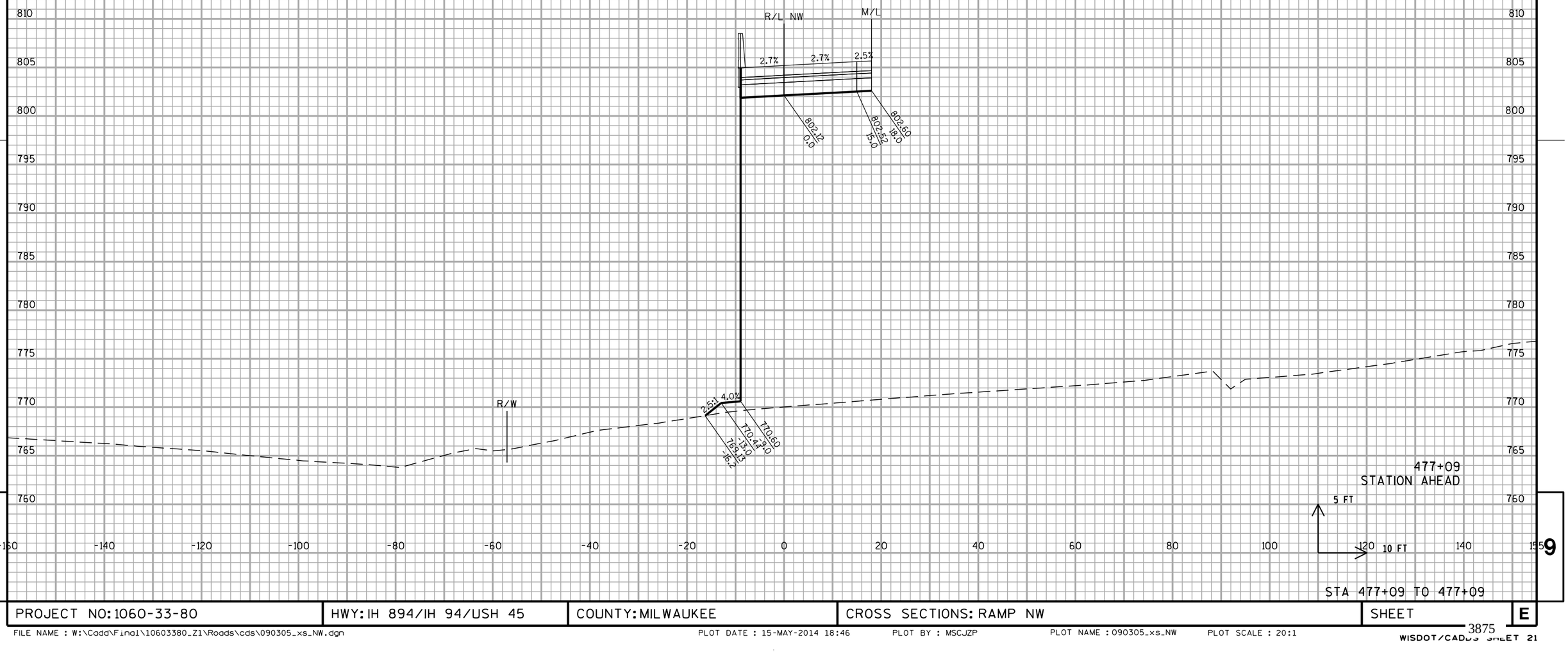
STA 598+50 TO 598+95

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090303_xs_sw.dgn PLOT DATE : 27-APR-2014 23:03 PLOT BY : MSCDYB PLOT NAME : 090303_xs_sw31 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1-3

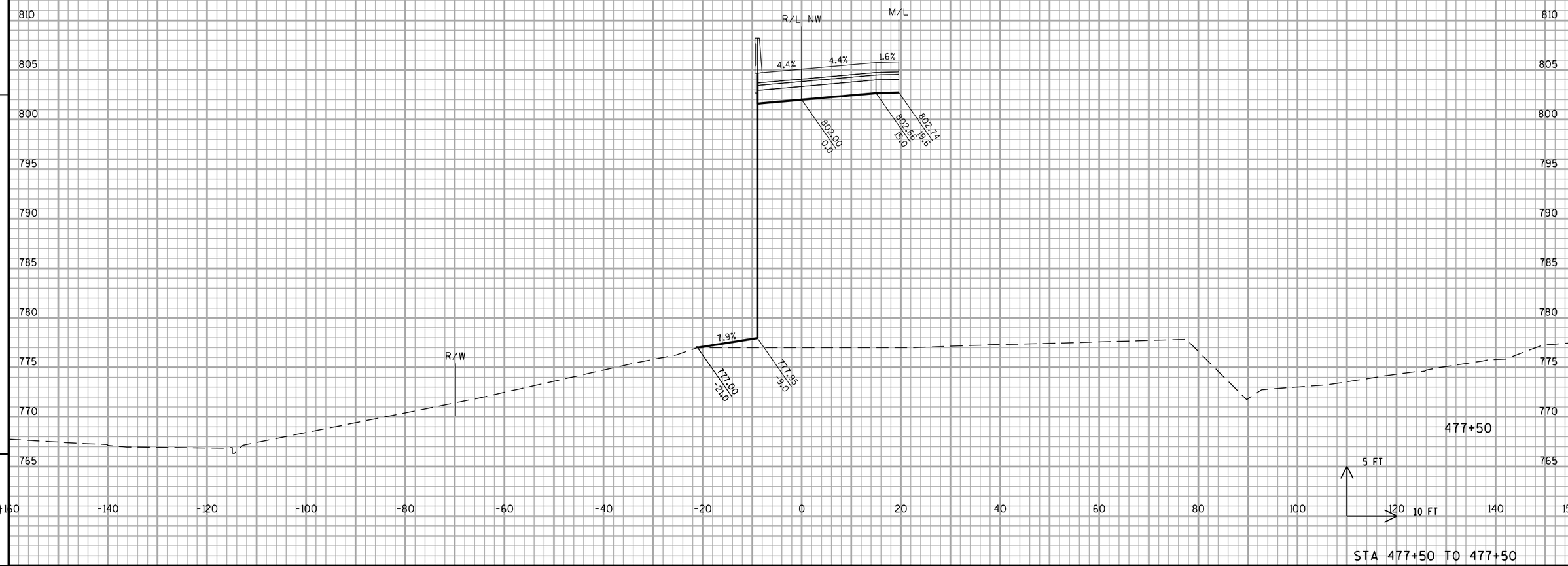


STA 477+09 TO 477+09

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 15-MAY-2014 18:46 PLOT BY : MSCJZP PLOT NAME : 090305_xs_NW PLOT SCALE : 20:1

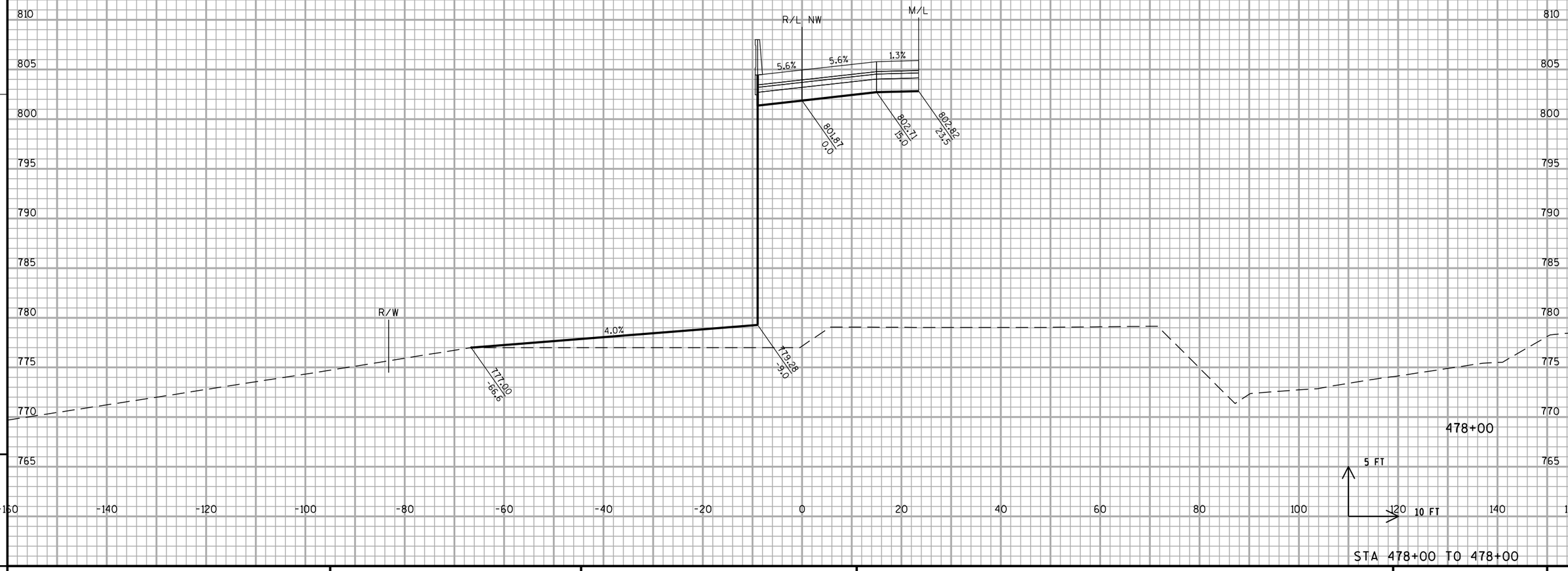
ALL WORK STAGE 1-3



STA 477+50 TO 477+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

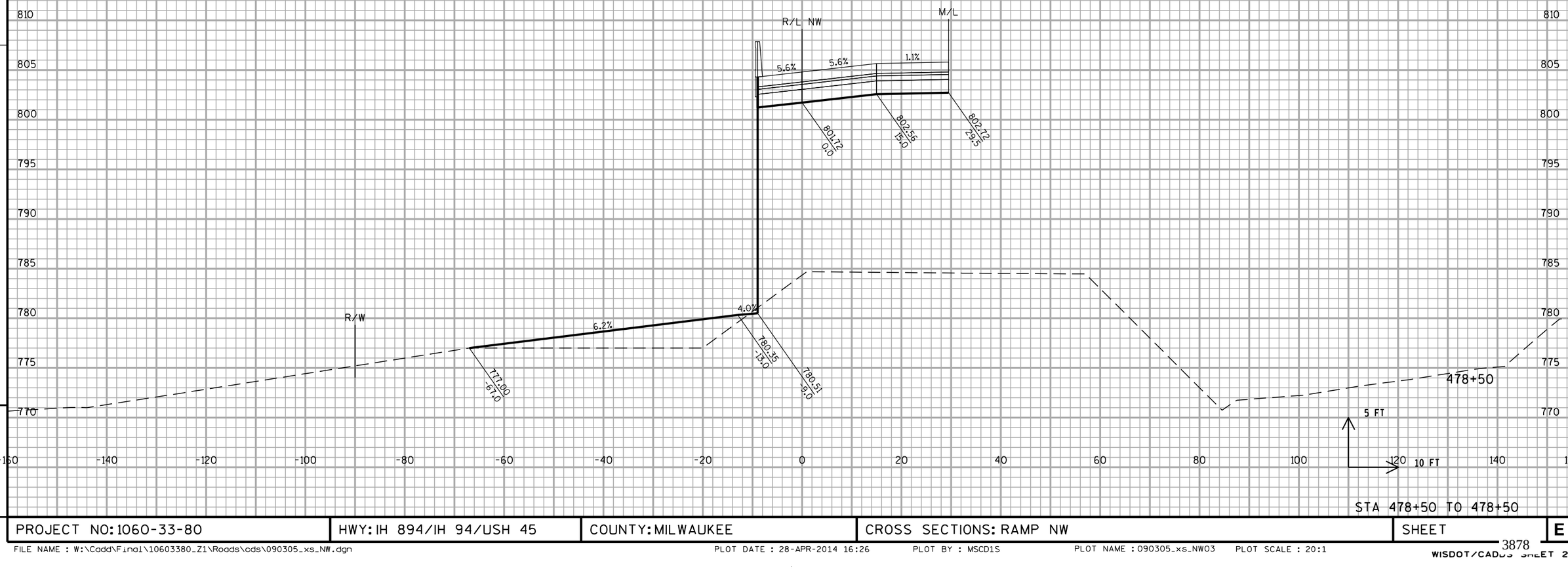
ALL WORK STAGE 1-3



STA 478+00 TO 478+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

ALL WORK STAGE 1-3

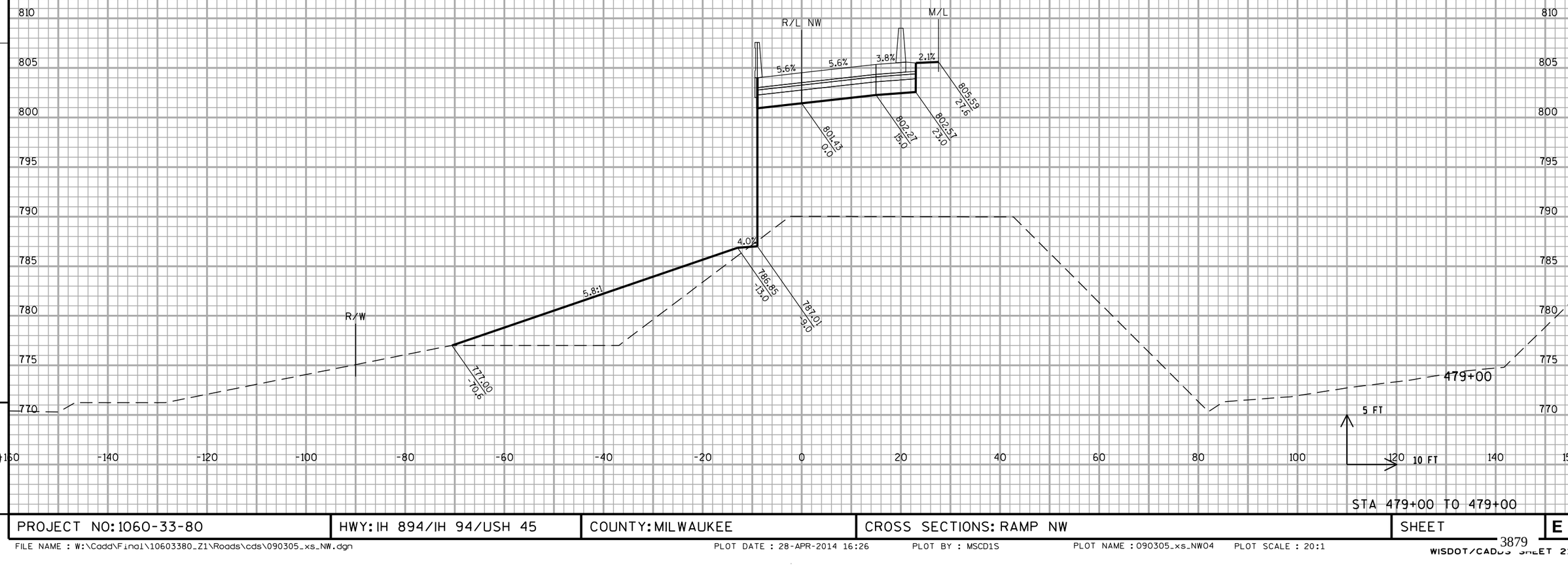


STA 478+50 TO 478+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW03 PLOT SCALE : 20:1

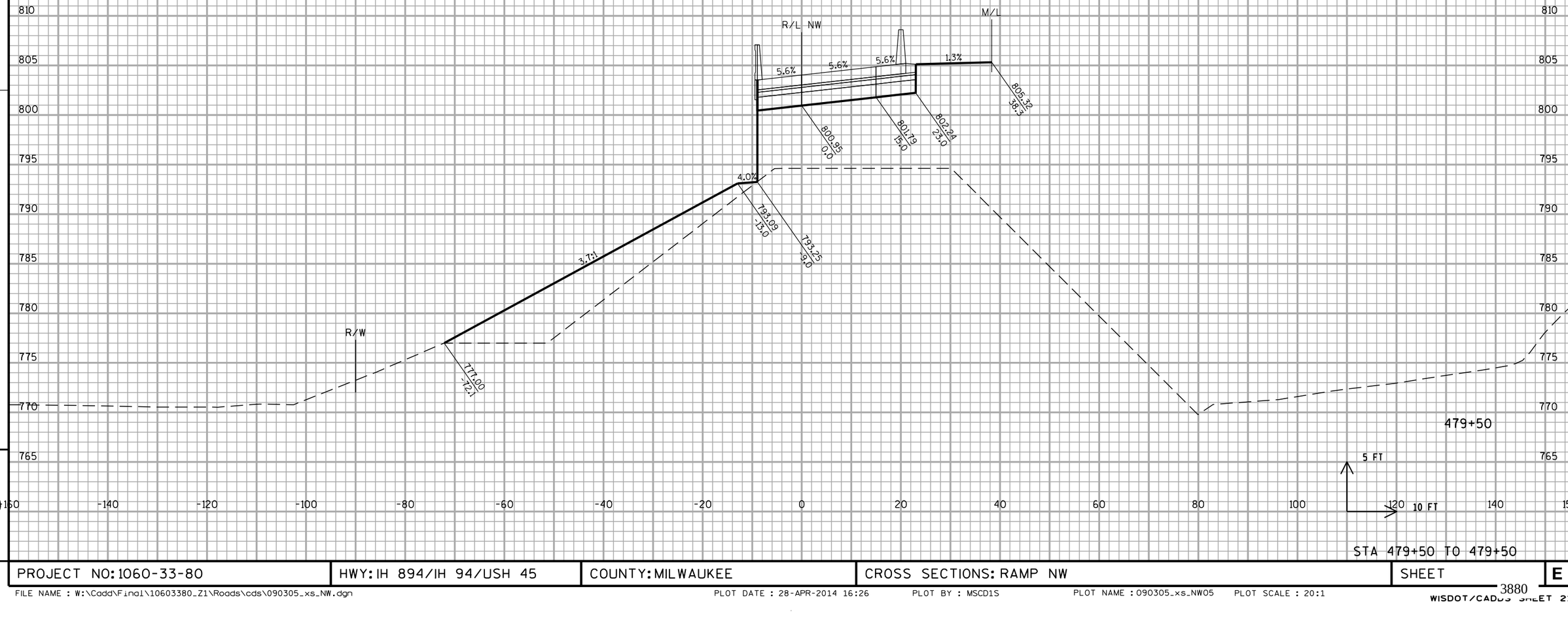
ALL WORK STAGE 1-3



STA 479+00 TO 479+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

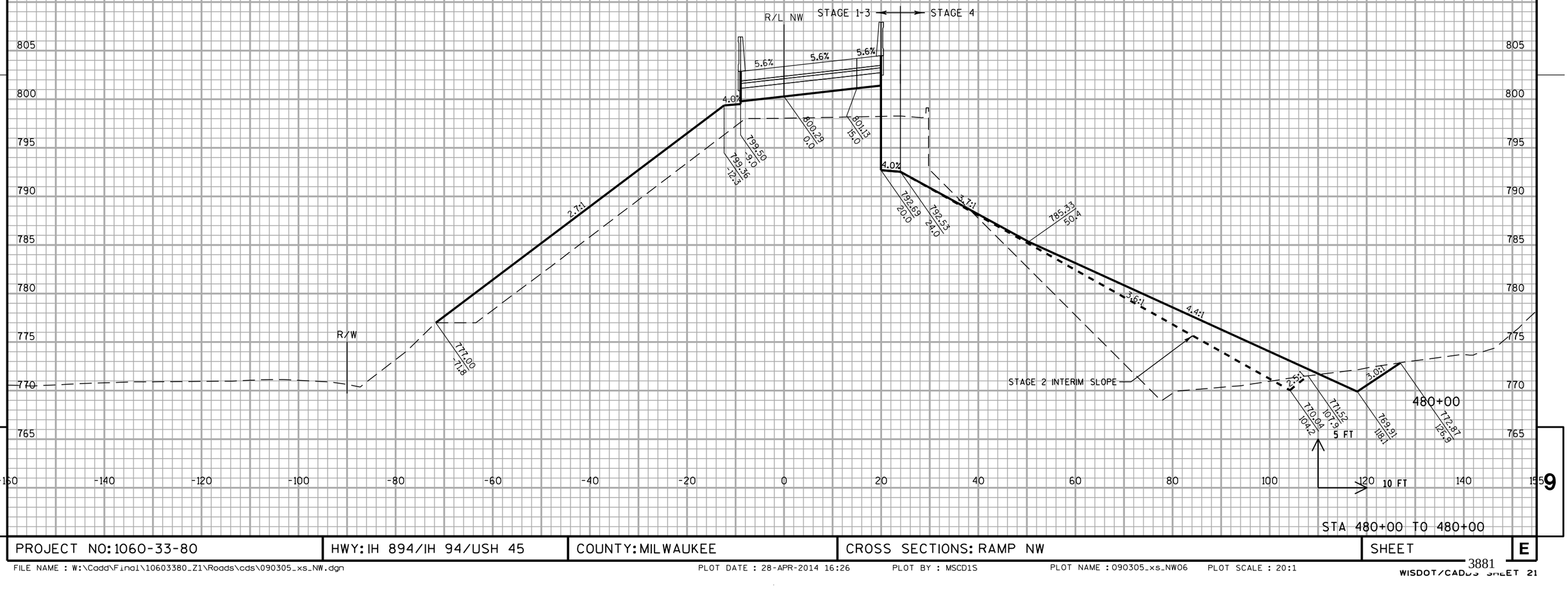
ALL WORK STAGE 1-3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW05 PLOT SCALE : 20:1

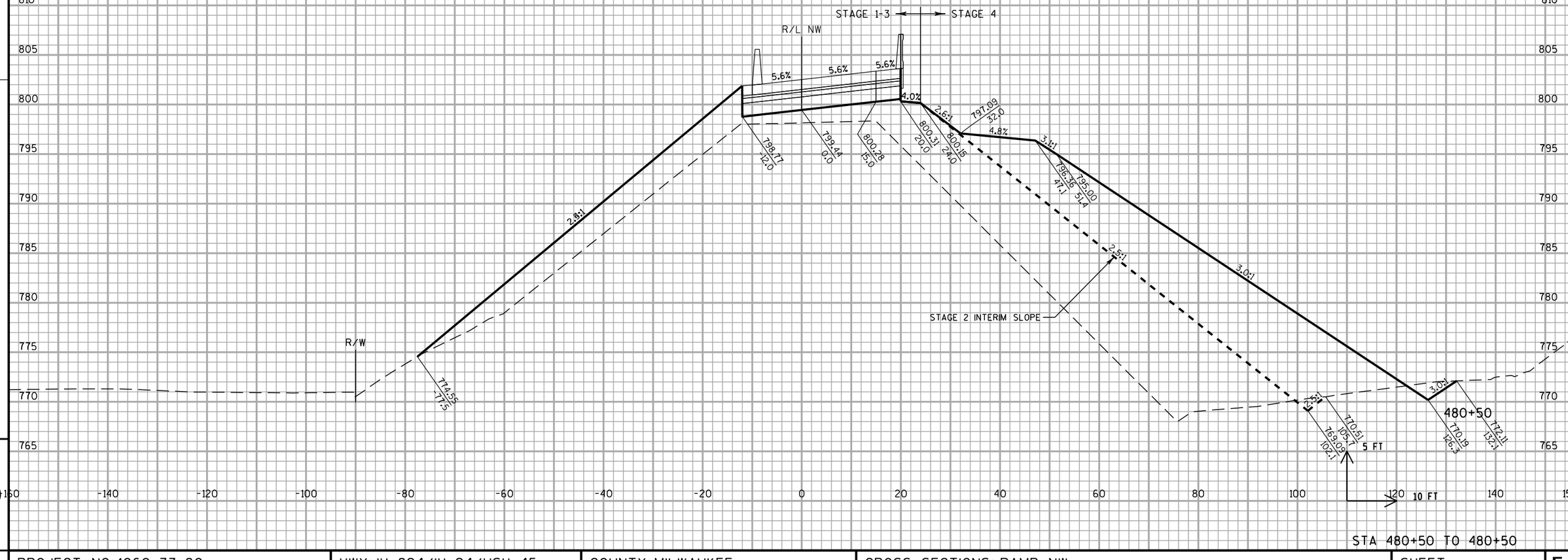
WISDOT/CADDS SHEET 21



STA 480+00 TO 480+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW06 PLOT SCALE : 20:1

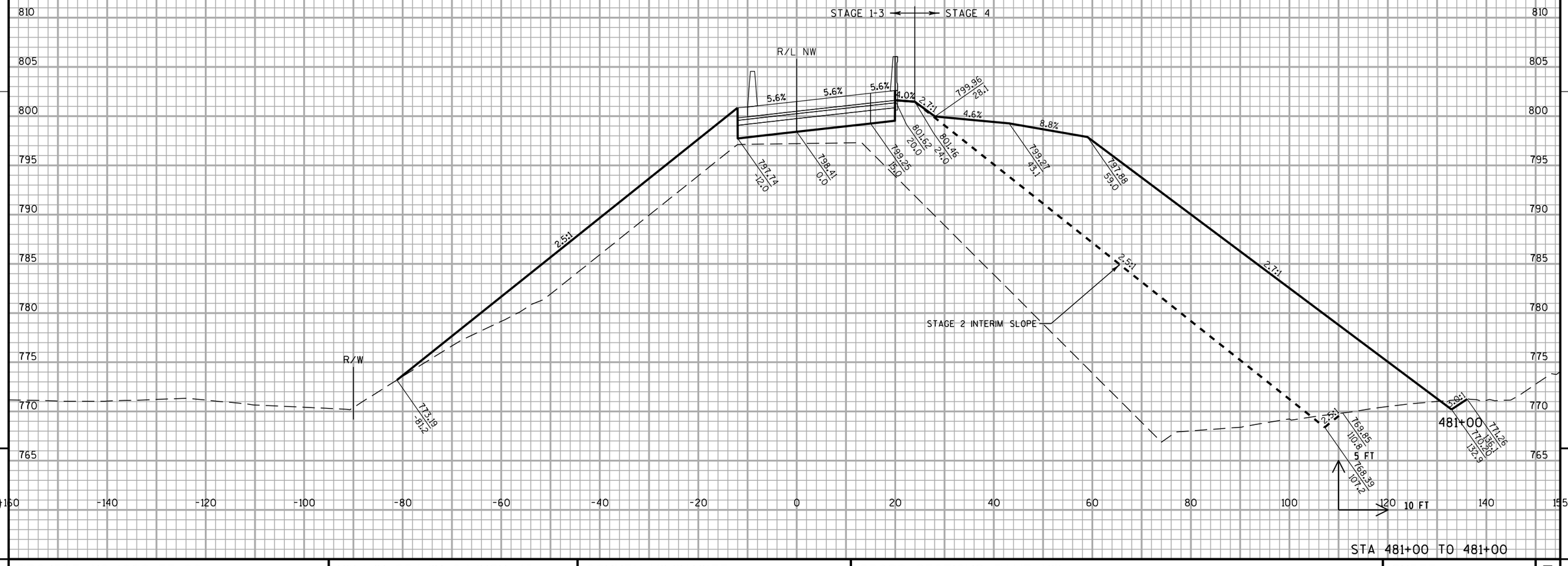


STA 480+50 TO 480+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW07 PLOT SCALE : 20:1

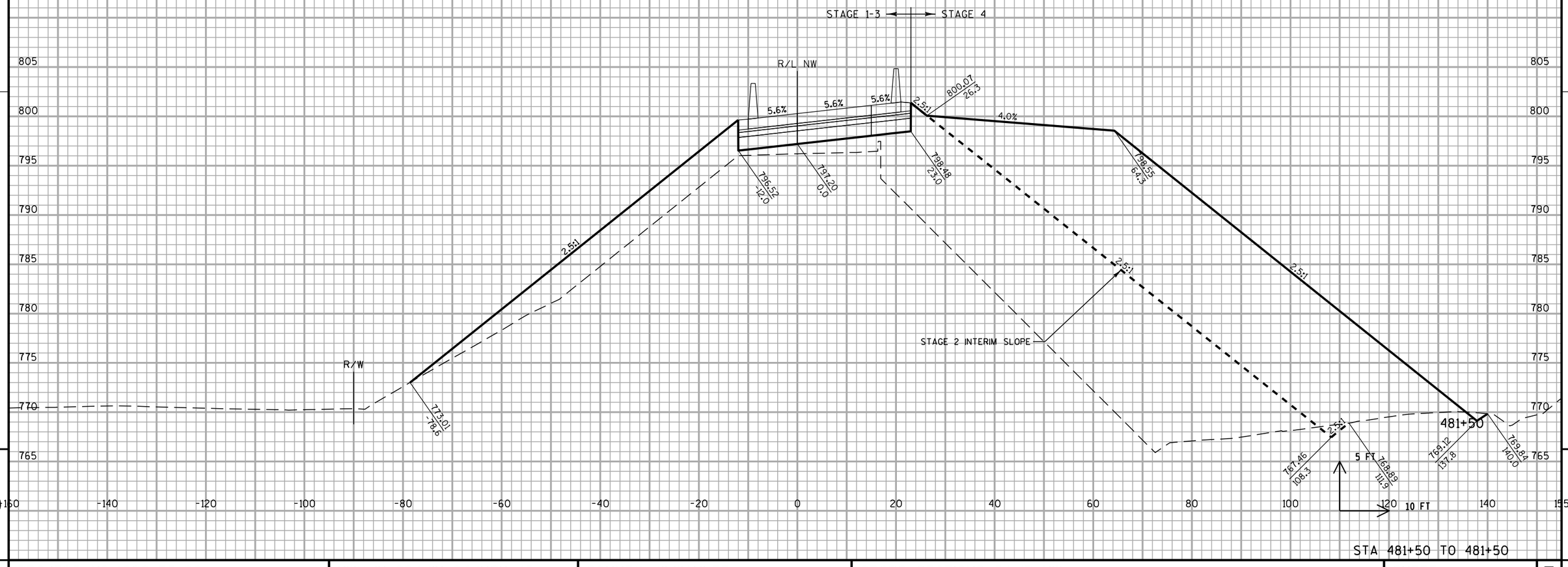
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW08 PLOT SCALE : 20:1

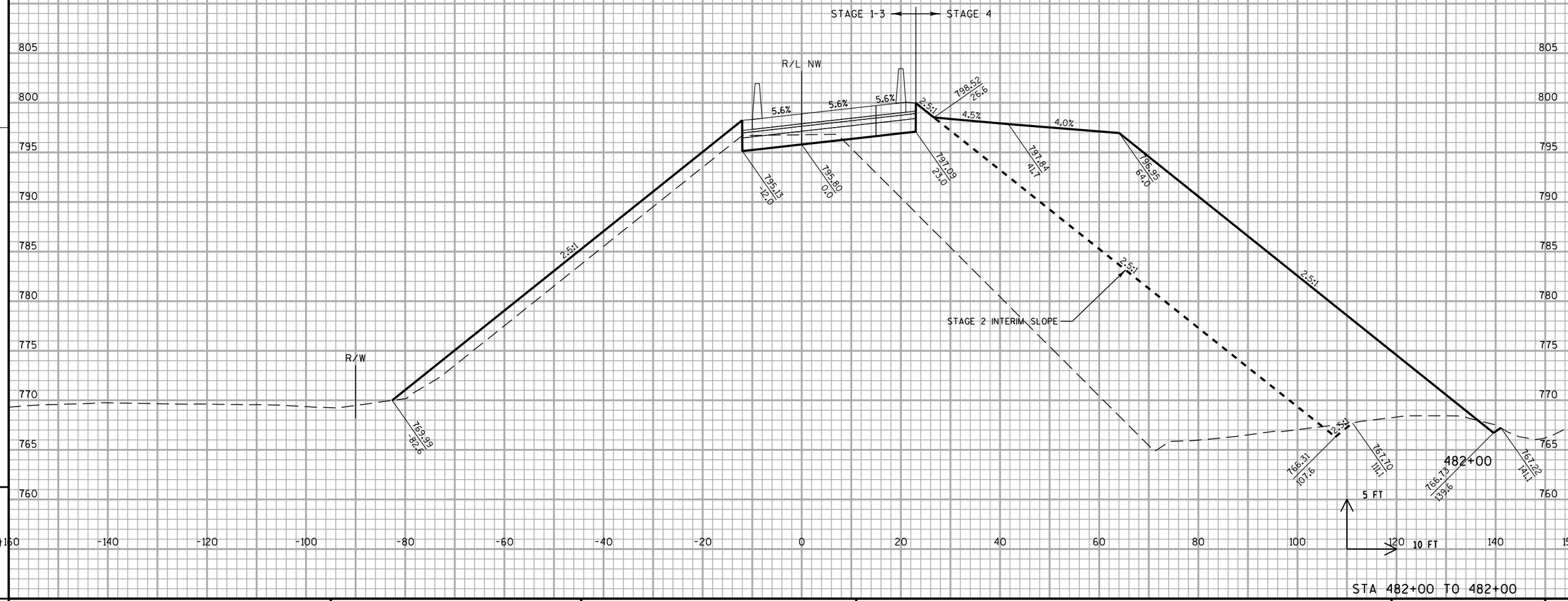
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW09 PLOT SCALE : 20:1

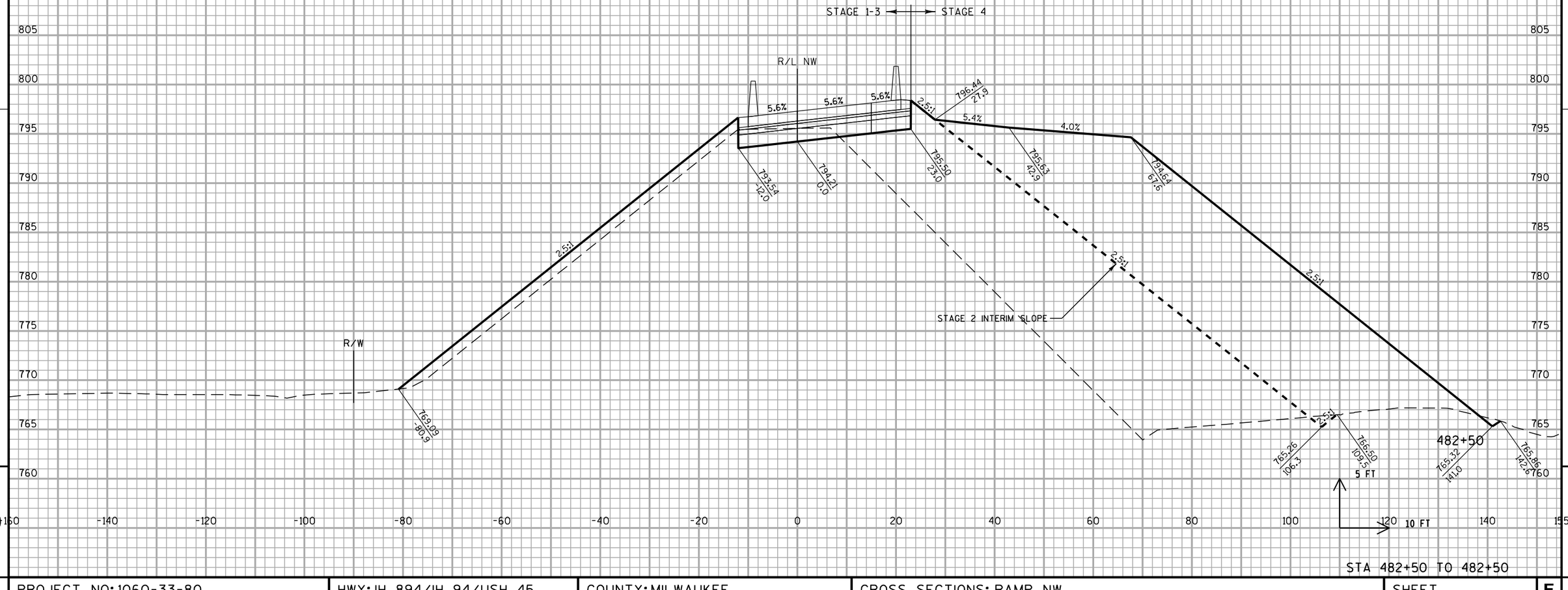
WISDOT/CADDS SHEET 21



STA 482+00 TO 482+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW10 PLOT SCALE : 20:1

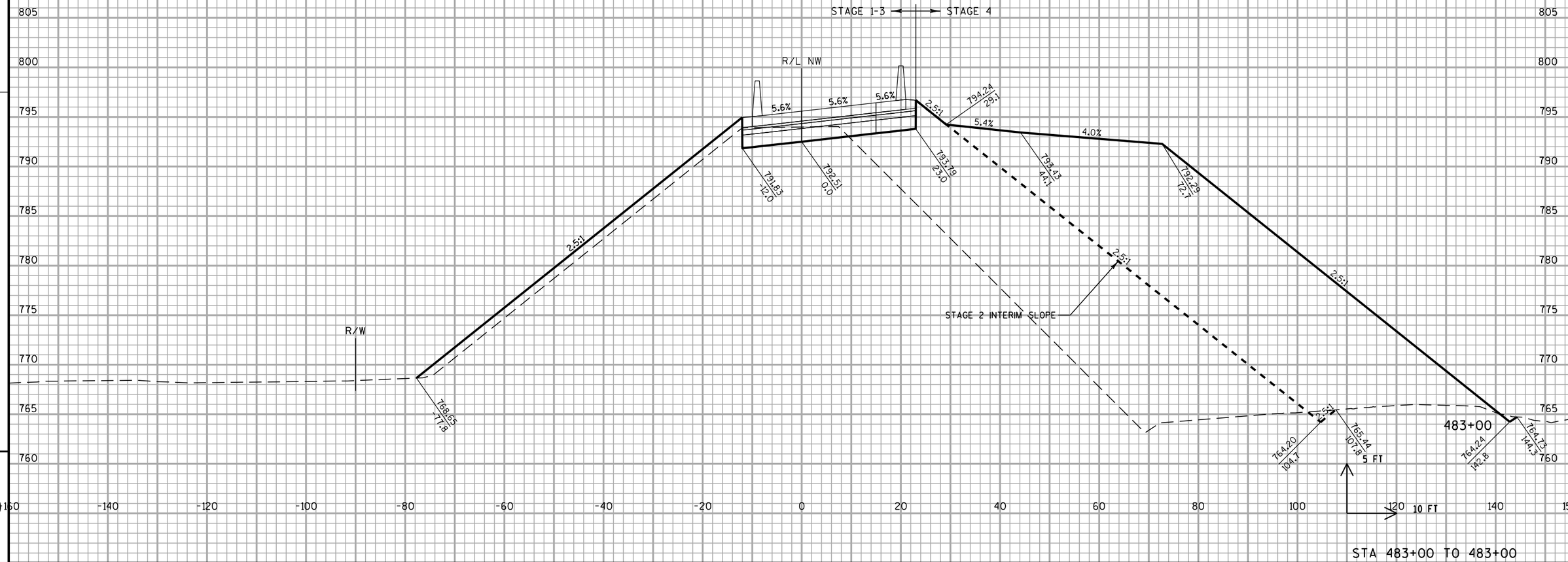


STA 482+50 TO 482+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

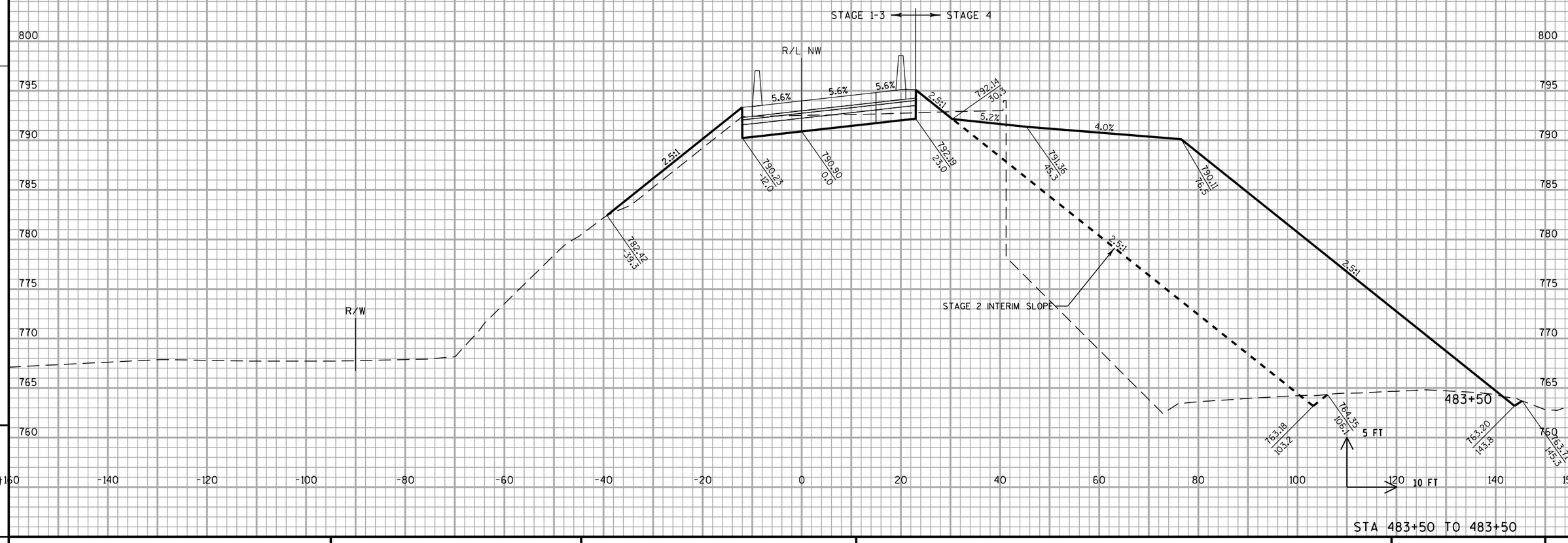
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



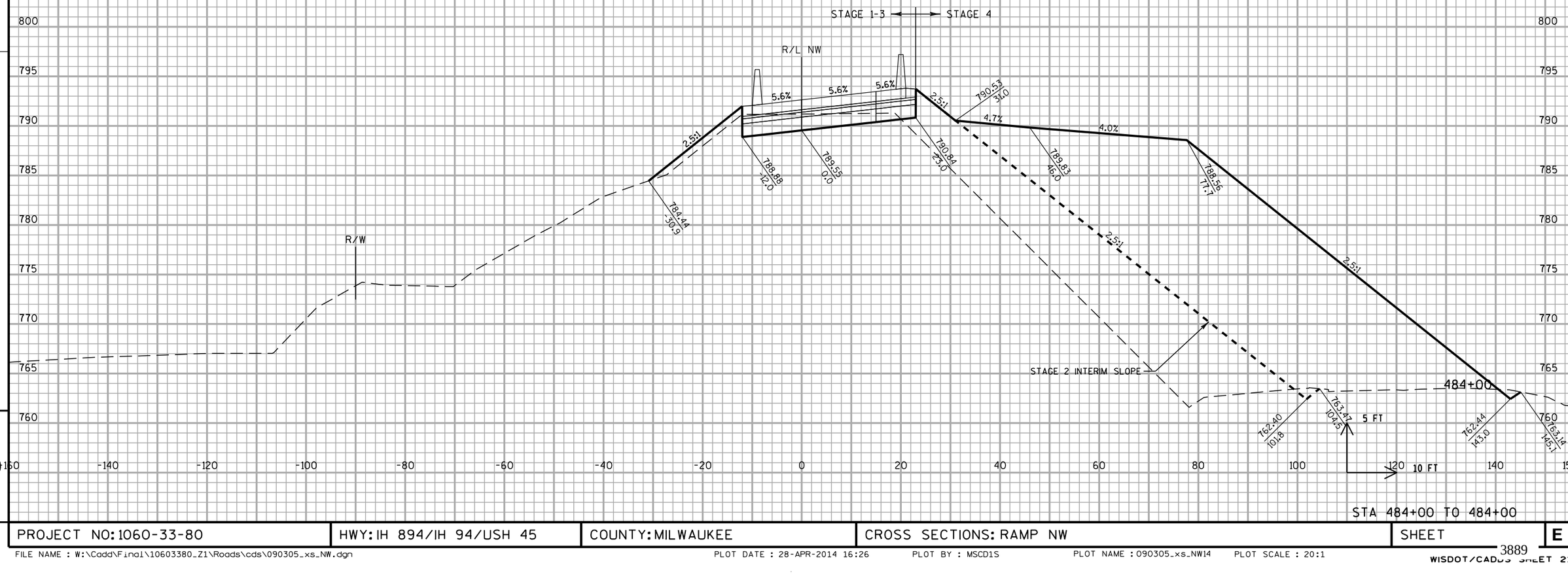
STA 483+00 TO 483+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



STA 483+50 TO 483+50

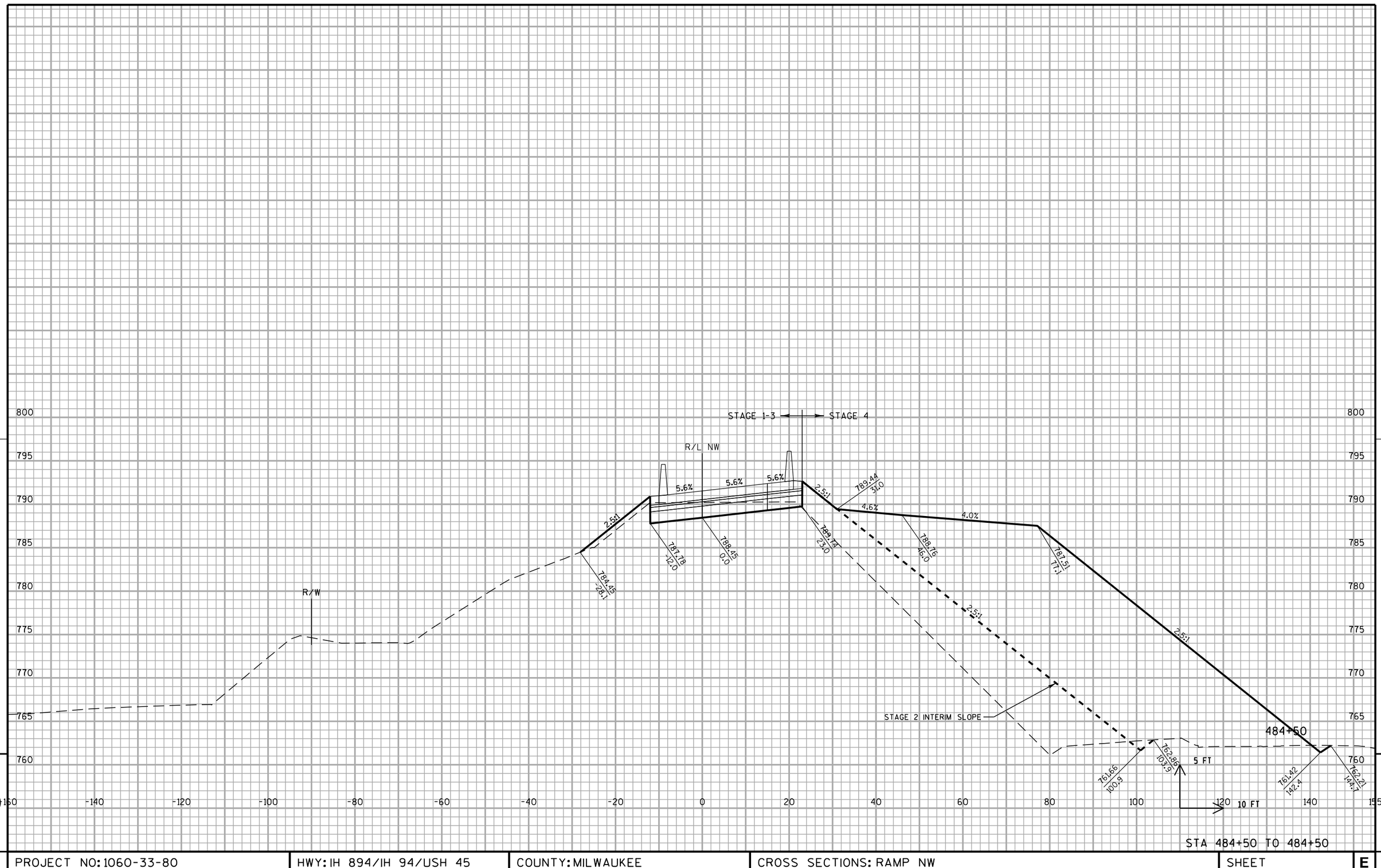
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



STA 484+00 TO 484+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW14 PLOT SCALE : 20:1

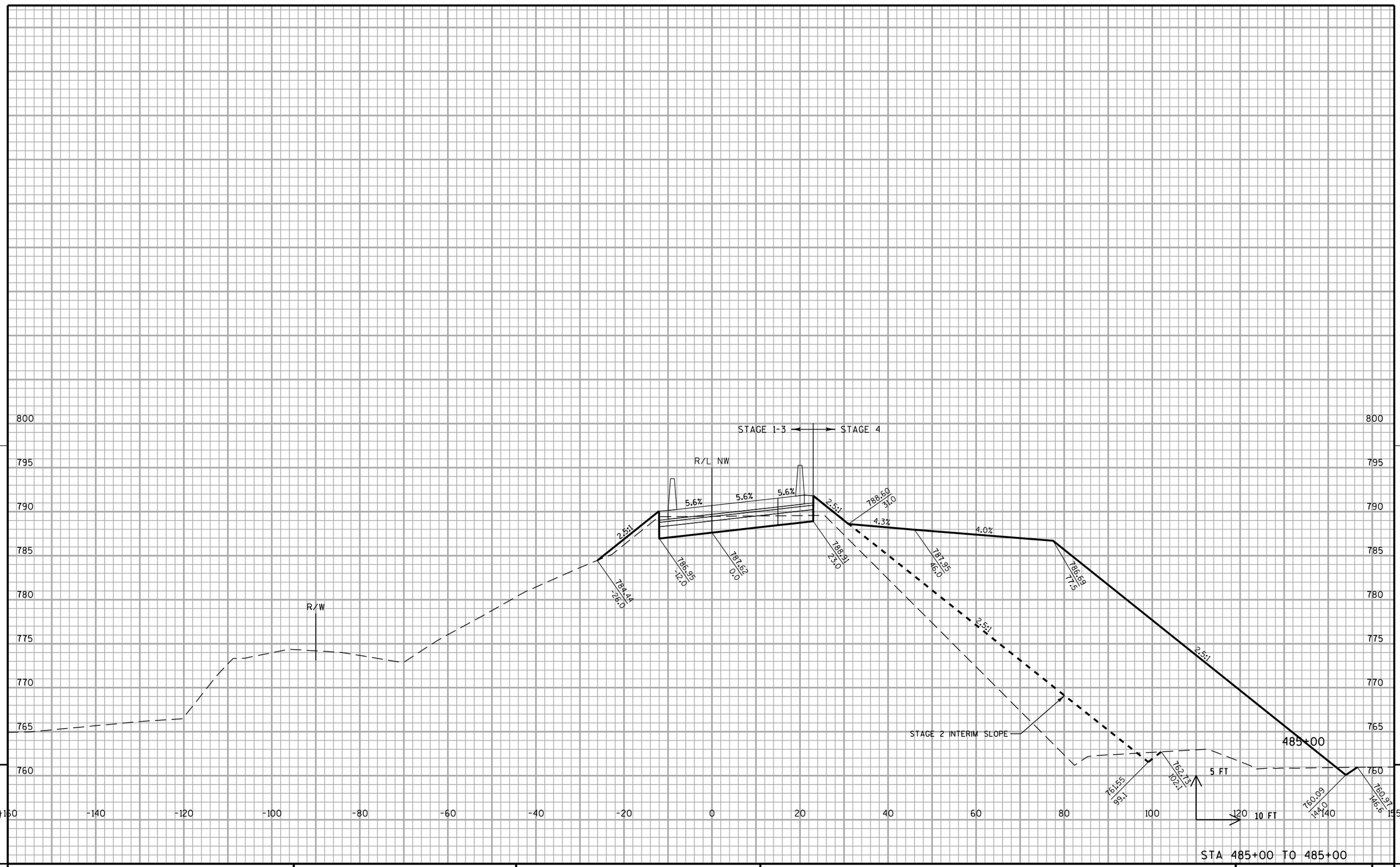


STA 484+50 TO 484+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW15 PLOT SCALE : 20:1

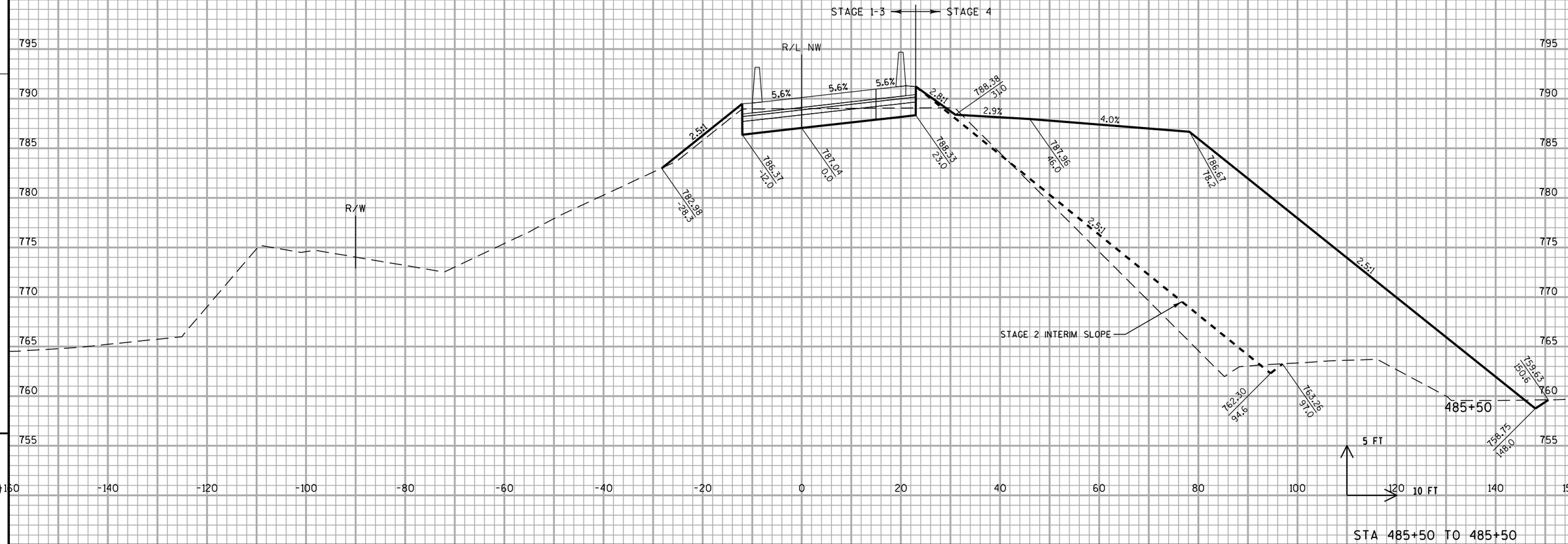
WISDOT/CADDS SHEET 21



STA 485+00 TO 485+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

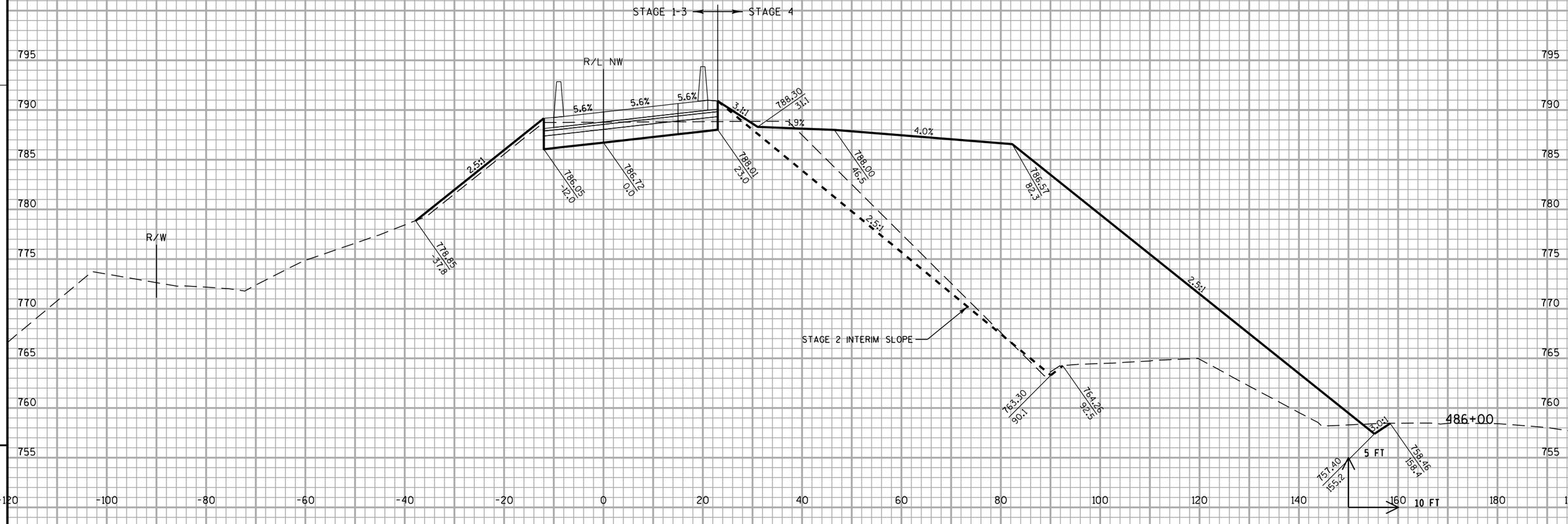
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STA 485+50 TO 485+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

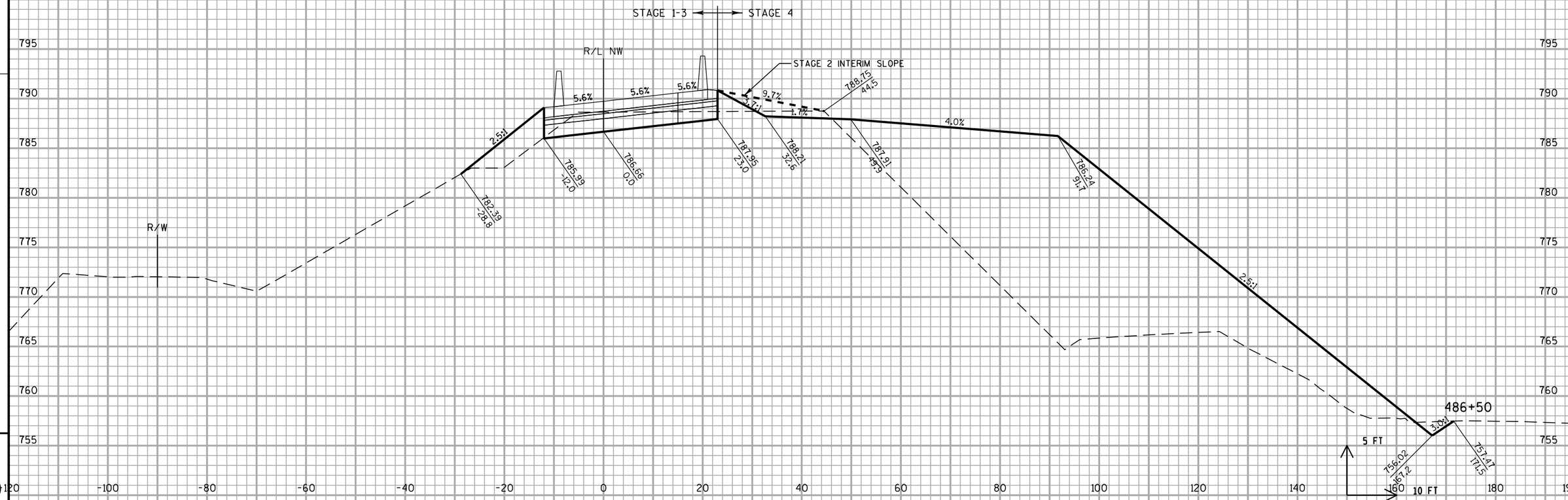
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW17 PLOT SCALE : 20:1



STA 486+00 TO 486+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

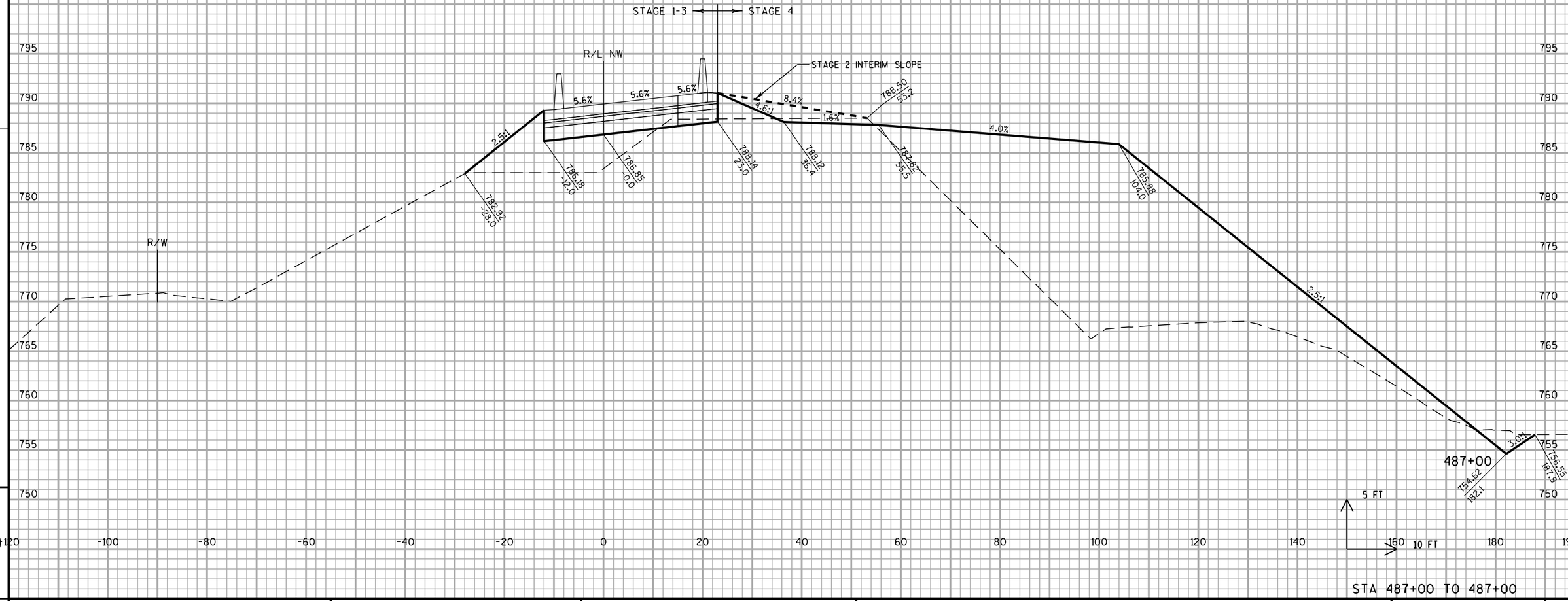
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW18 PLOT SCALE : 20:1



STA 486+50 TO 486+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

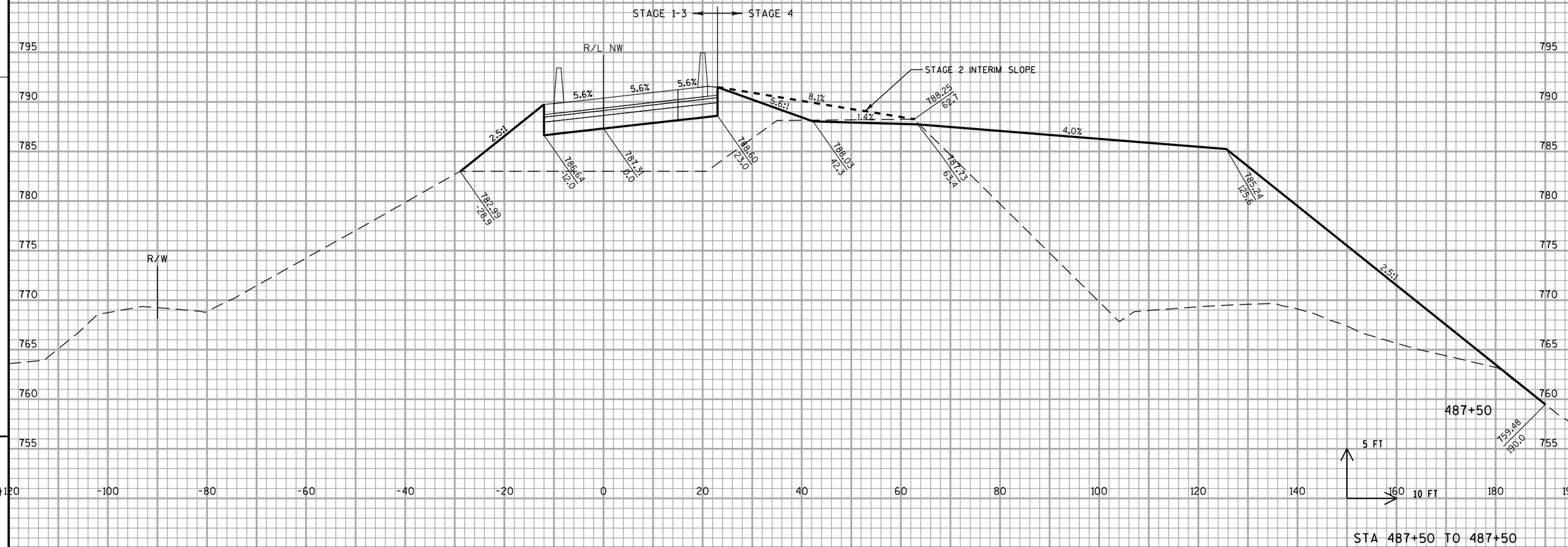
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW19 PLOT SCALE : 20:1



STA 487+00 TO 487+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

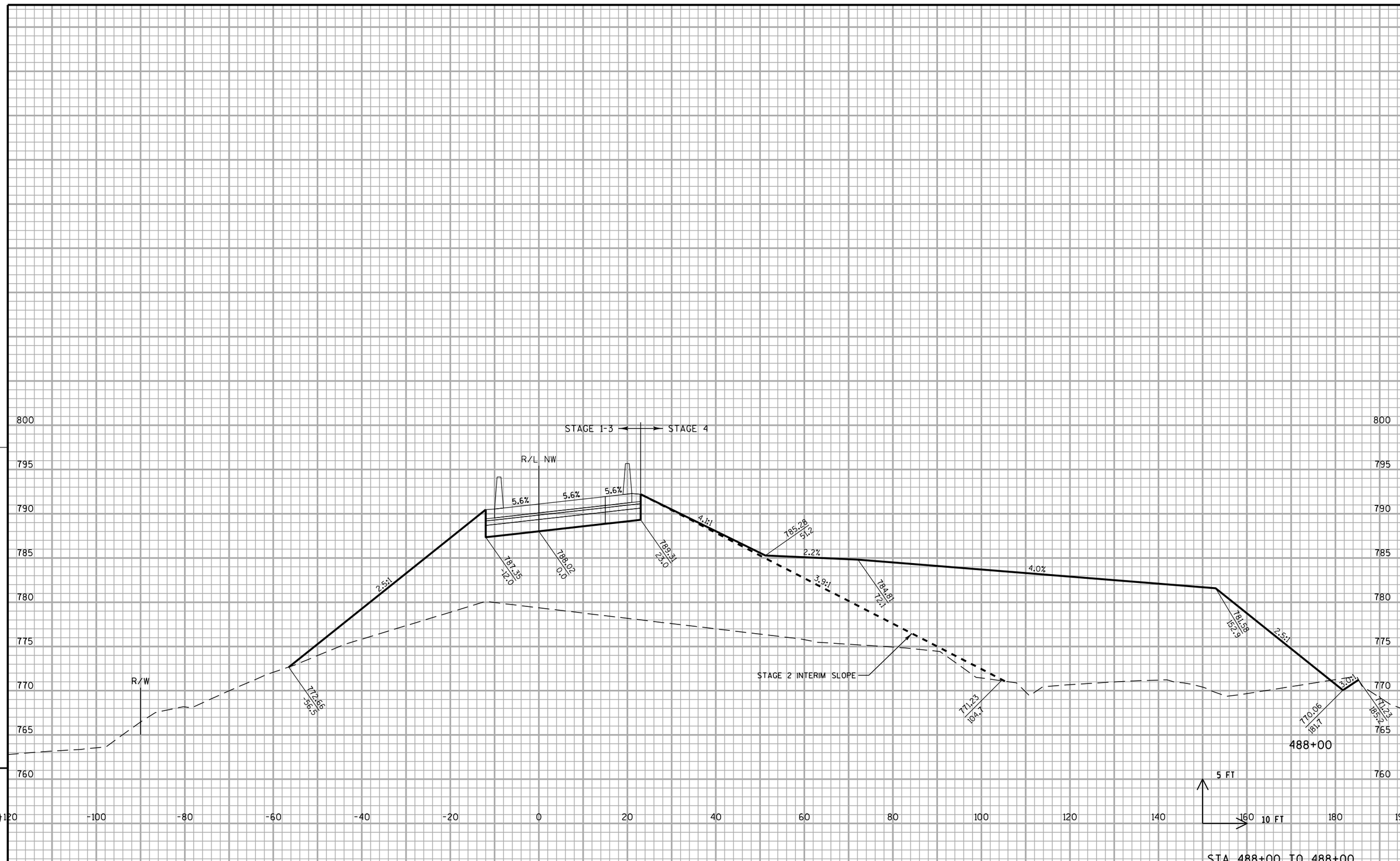
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW20 PLOT SCALE : 20:1



STA 487+50 TO 487+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

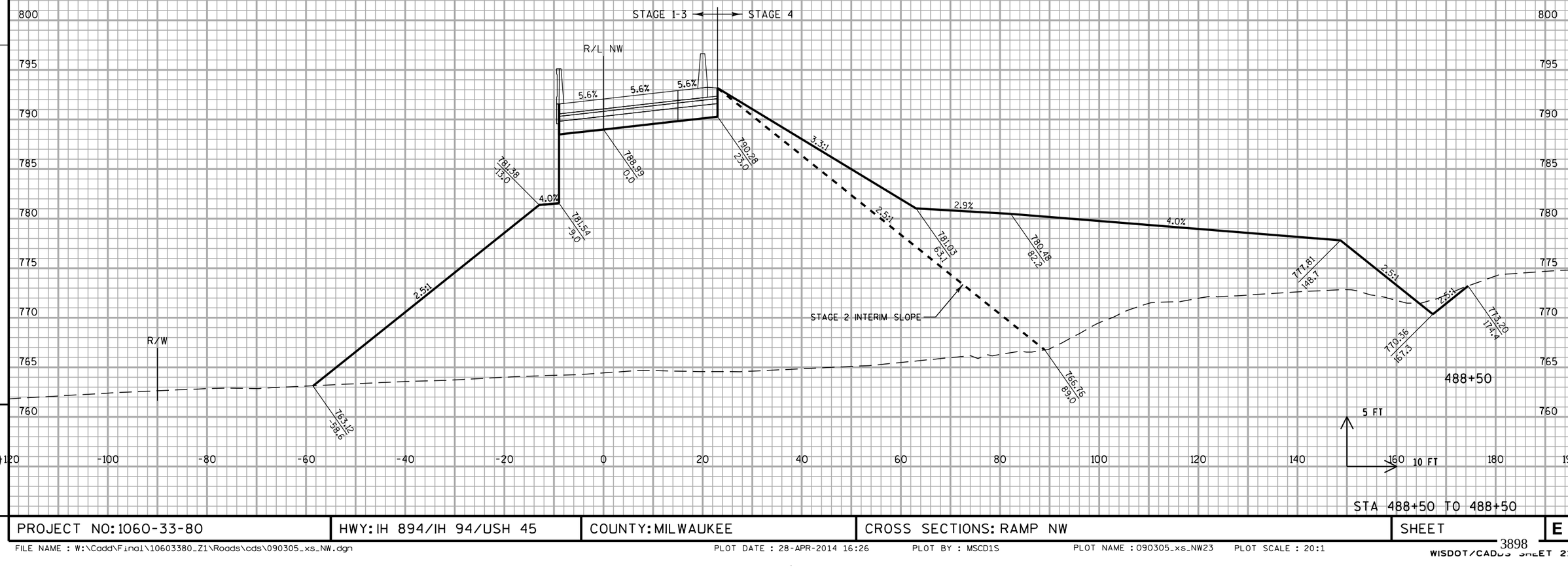
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW21 PLOT SCALE : 20:1



STA 488+00 TO 488+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

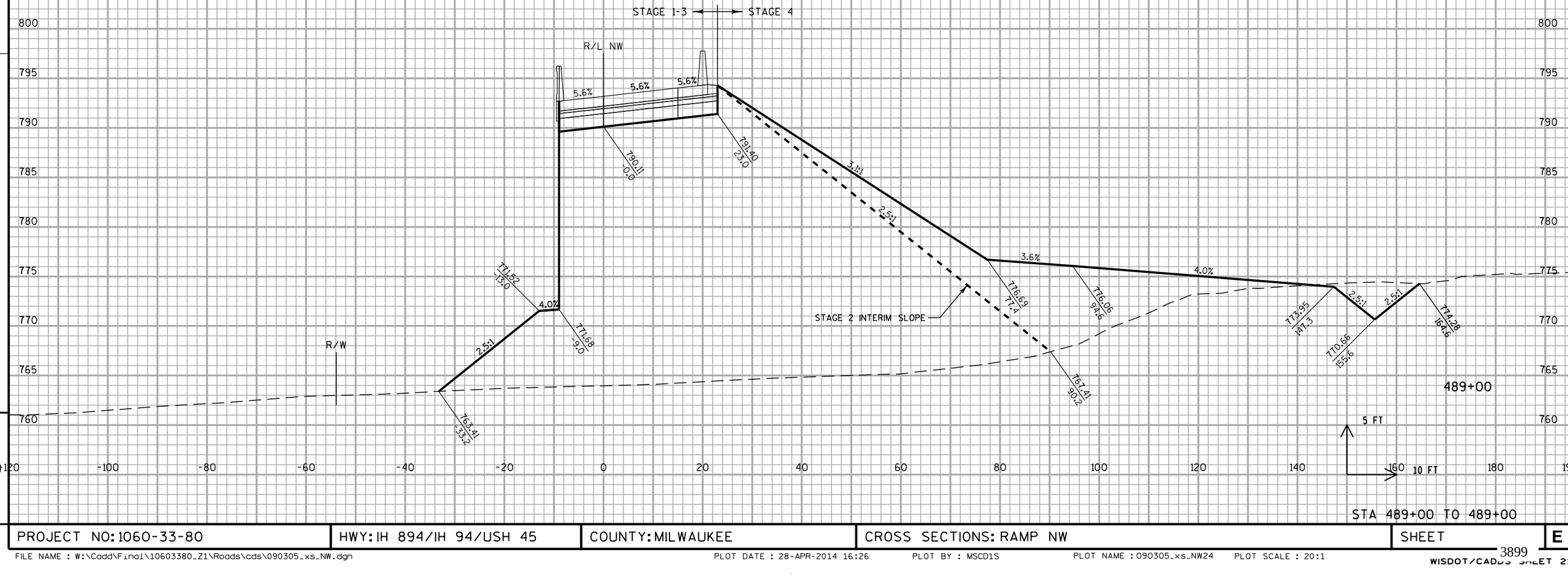
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STA 488+50 TO 488+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

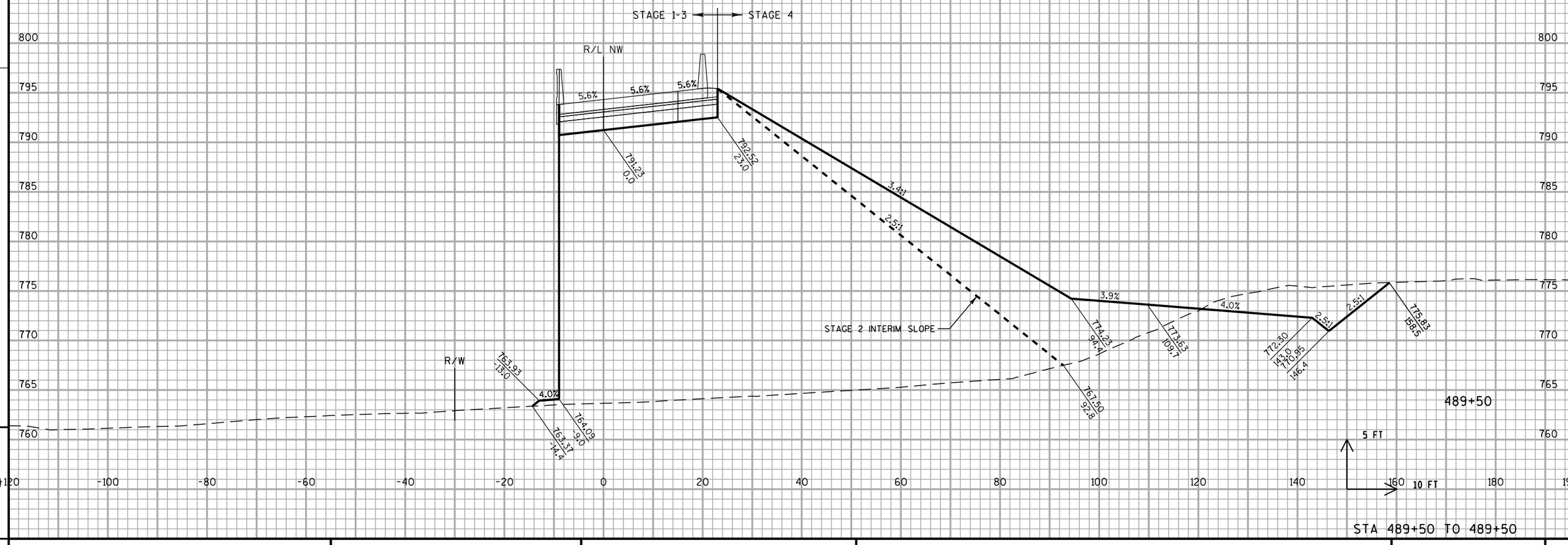
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW23 PLOT SCALE : 20:1



STA 489+00 TO 489+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

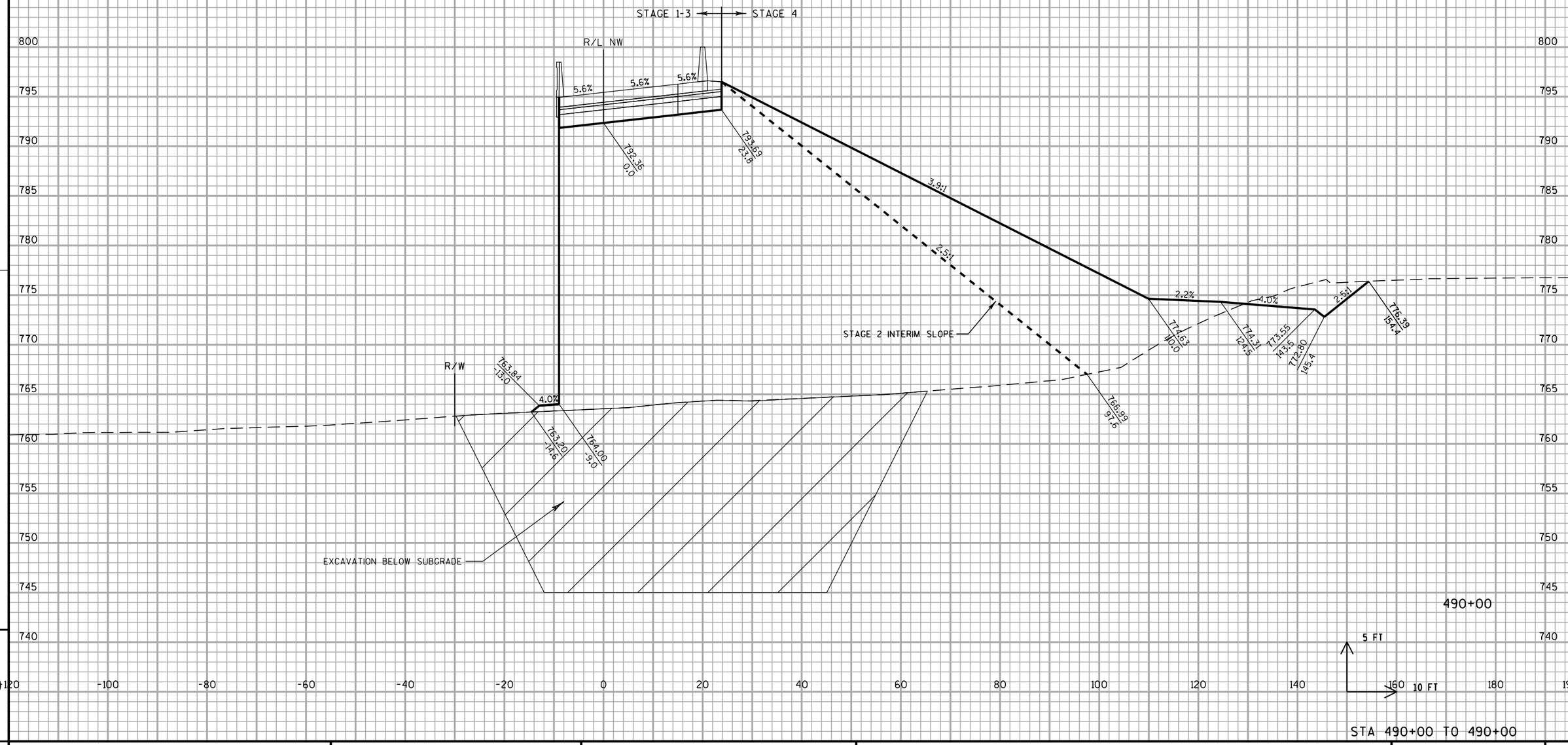
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW24 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

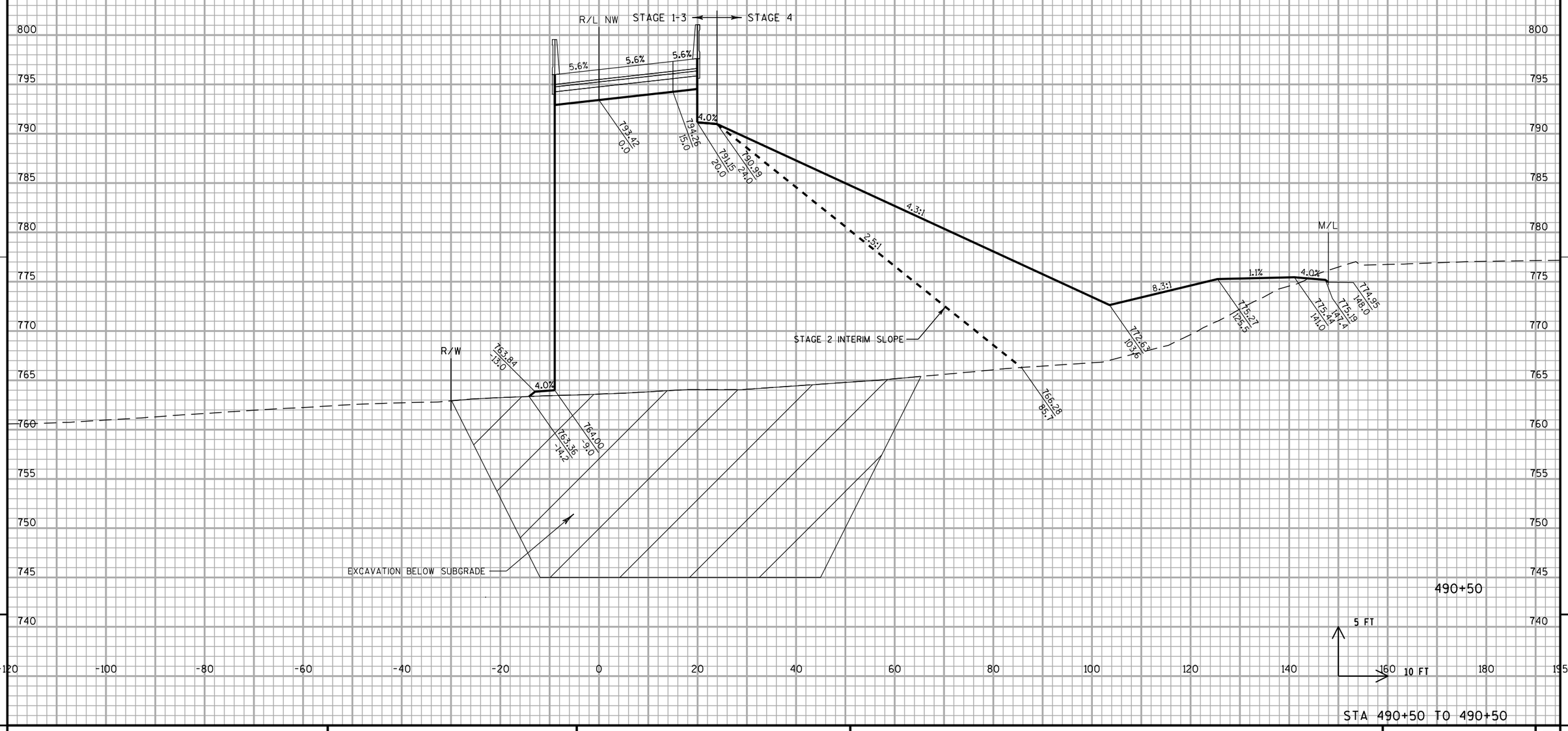
STA 489+50 TO 489+50

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW25 PLOT SCALE : 20:1



STA 490+00 TO 490+00

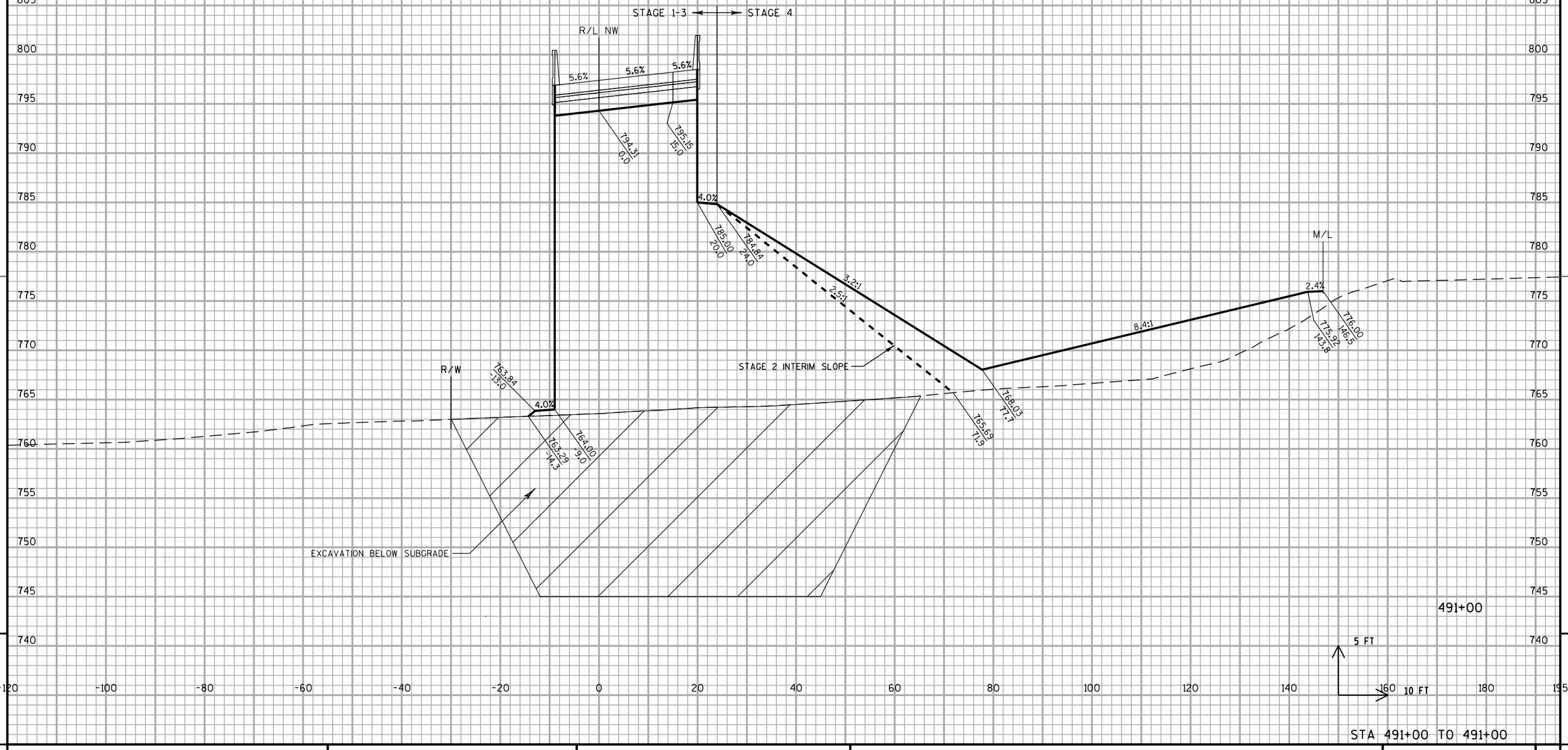
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



STA 490+50 TO 490+50

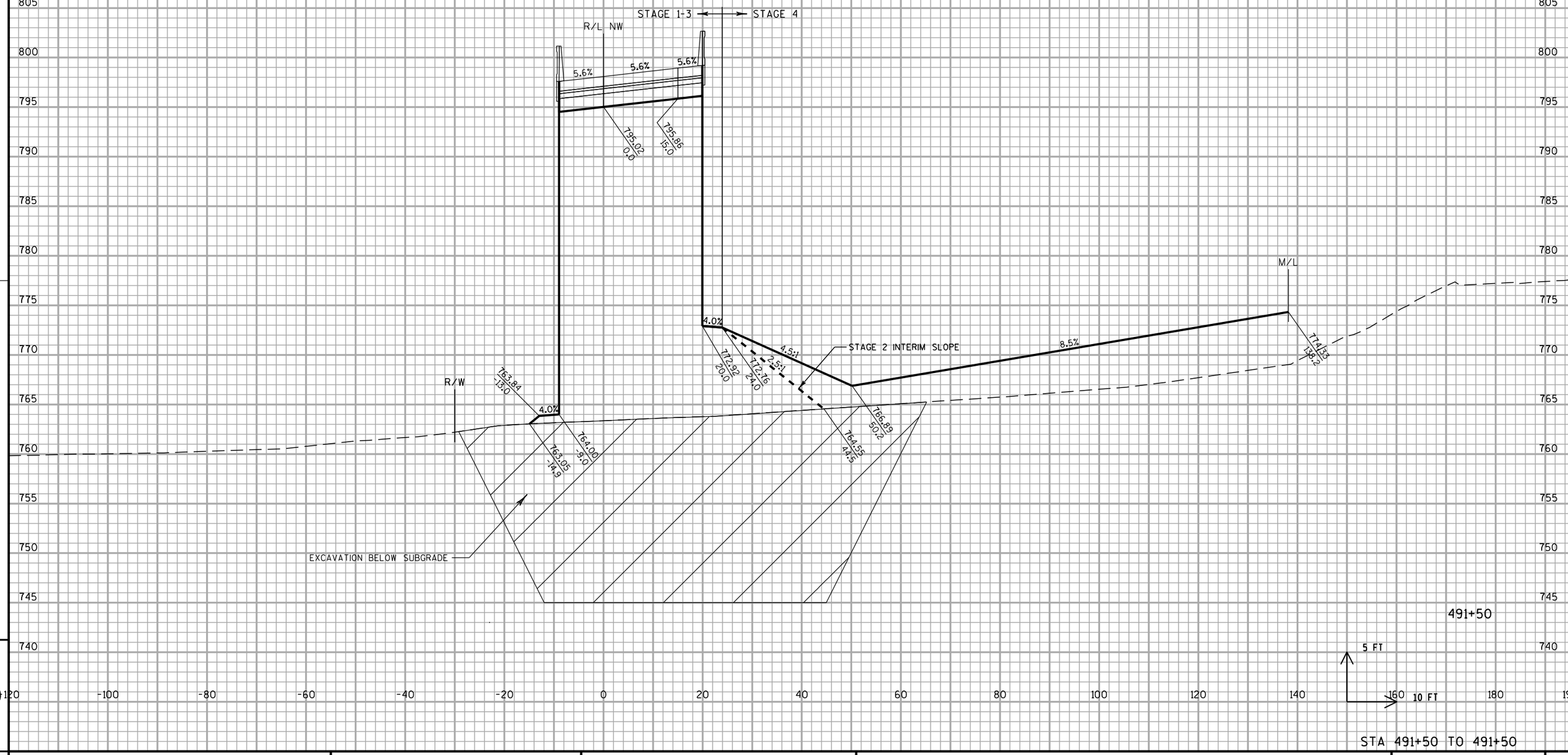
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW27 PLOT SCALE : 20:1



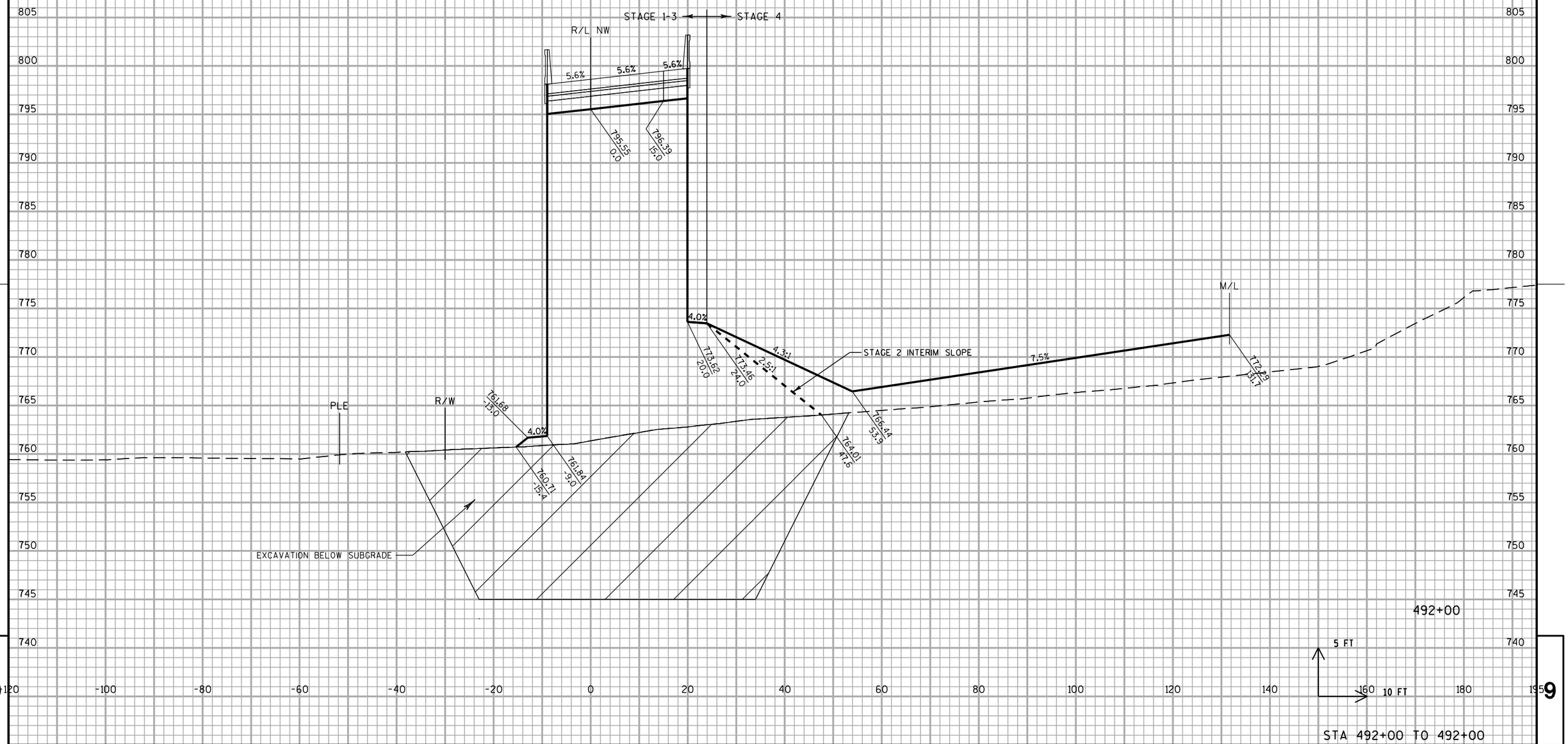
STA 491+00 TO 491+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



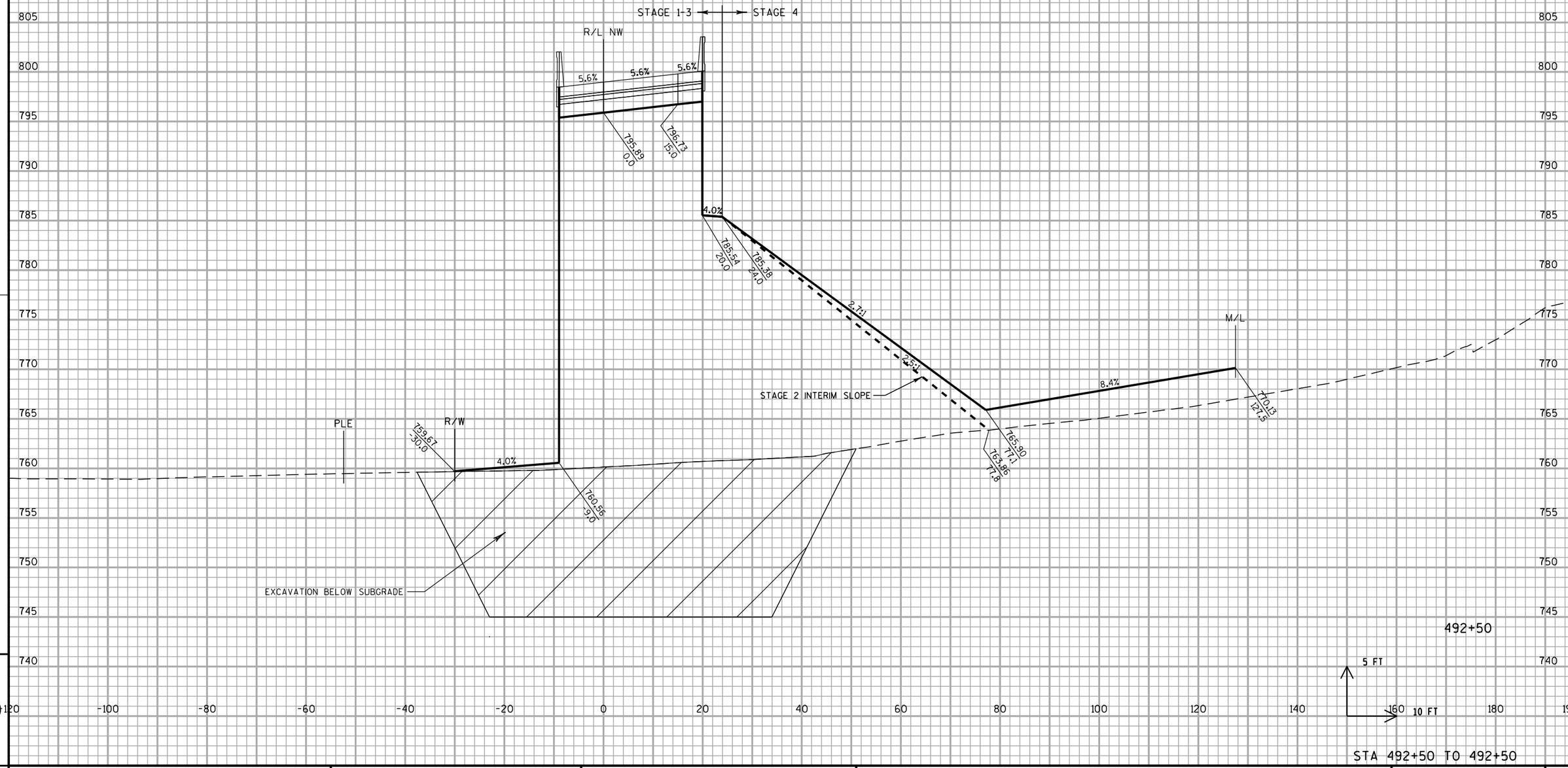
STA 491+50 TO 491+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



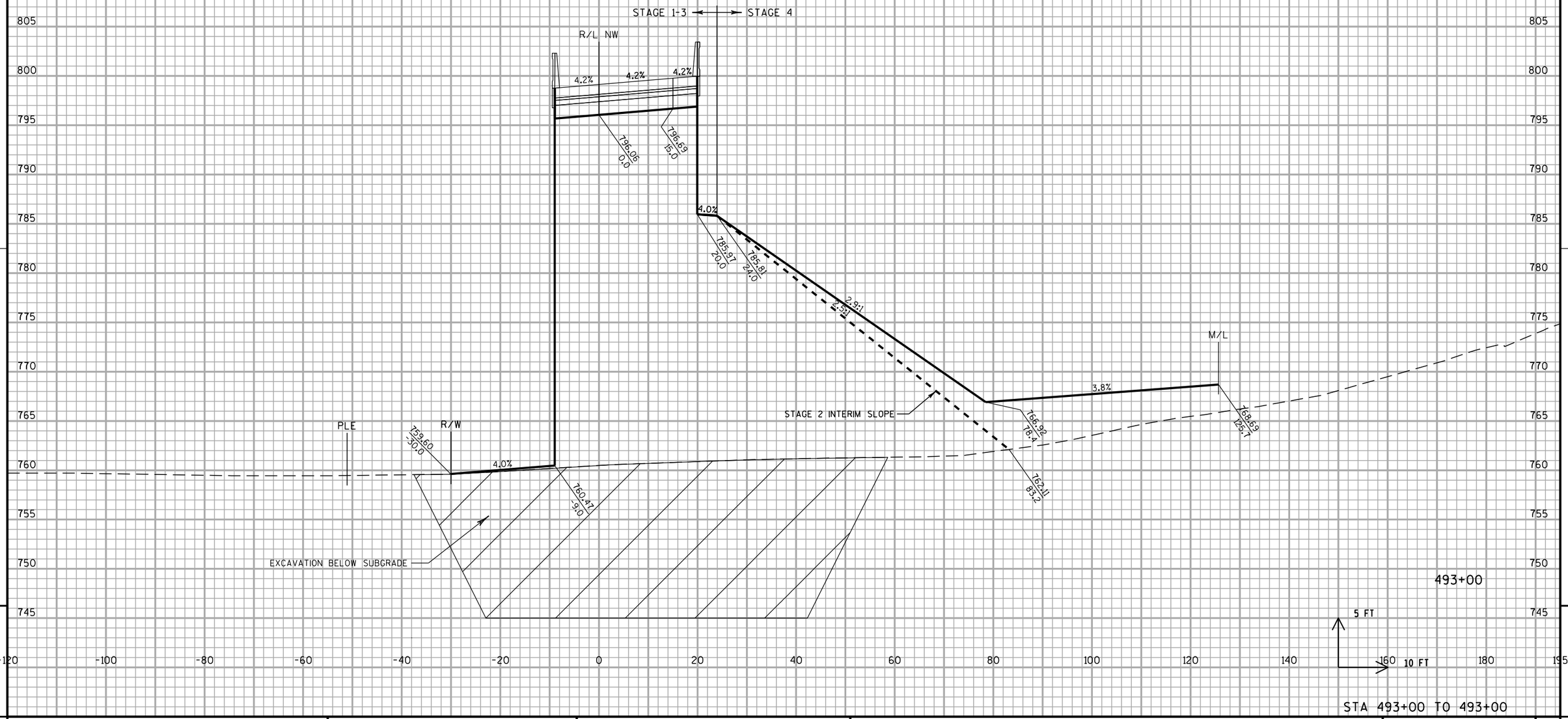
STA 492+00 TO 492+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



STA 492+50 TO 492+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E



9

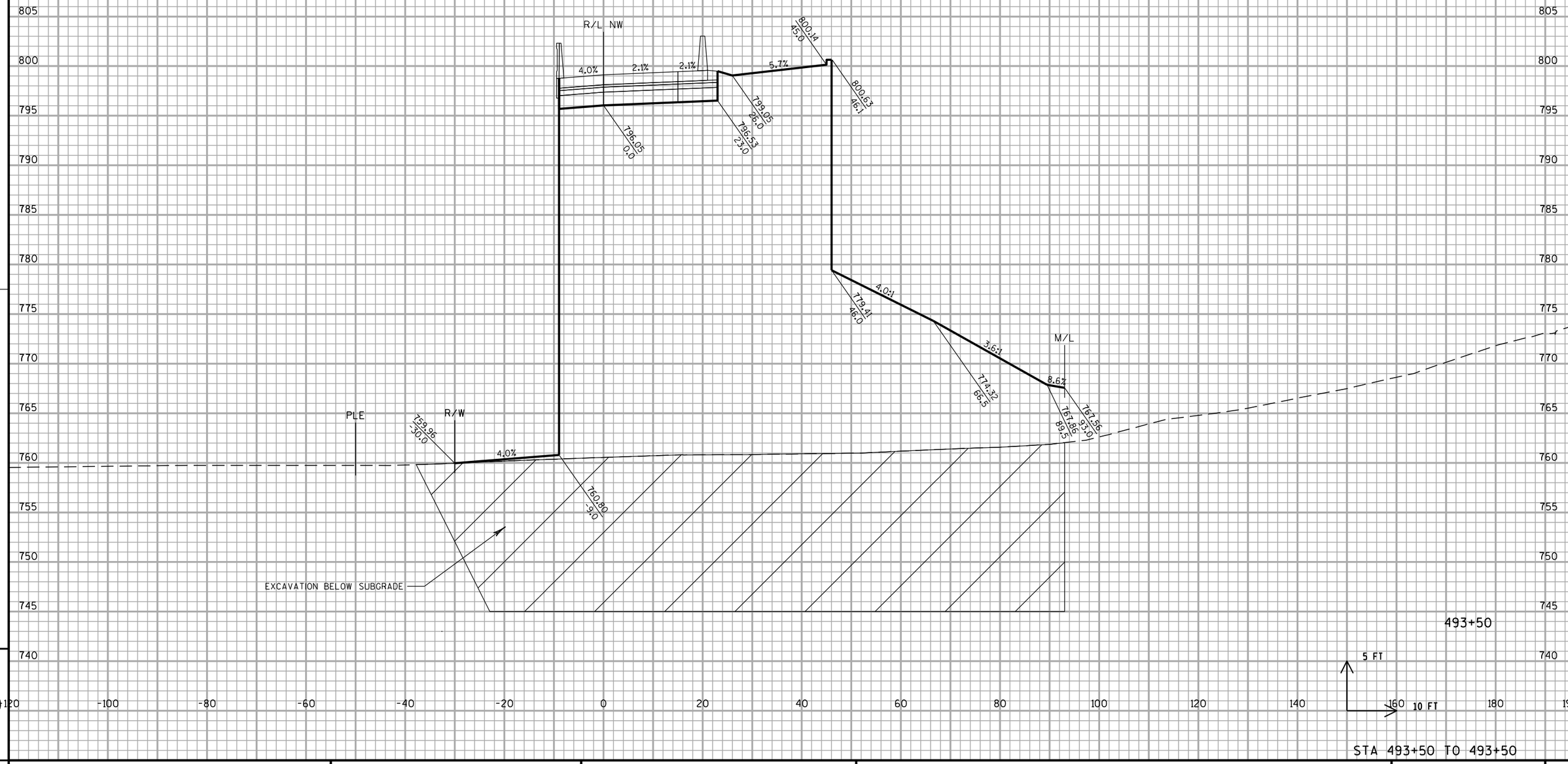
9

STA 493+00 TO 493+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW32 PLOT SCALE : 20:1

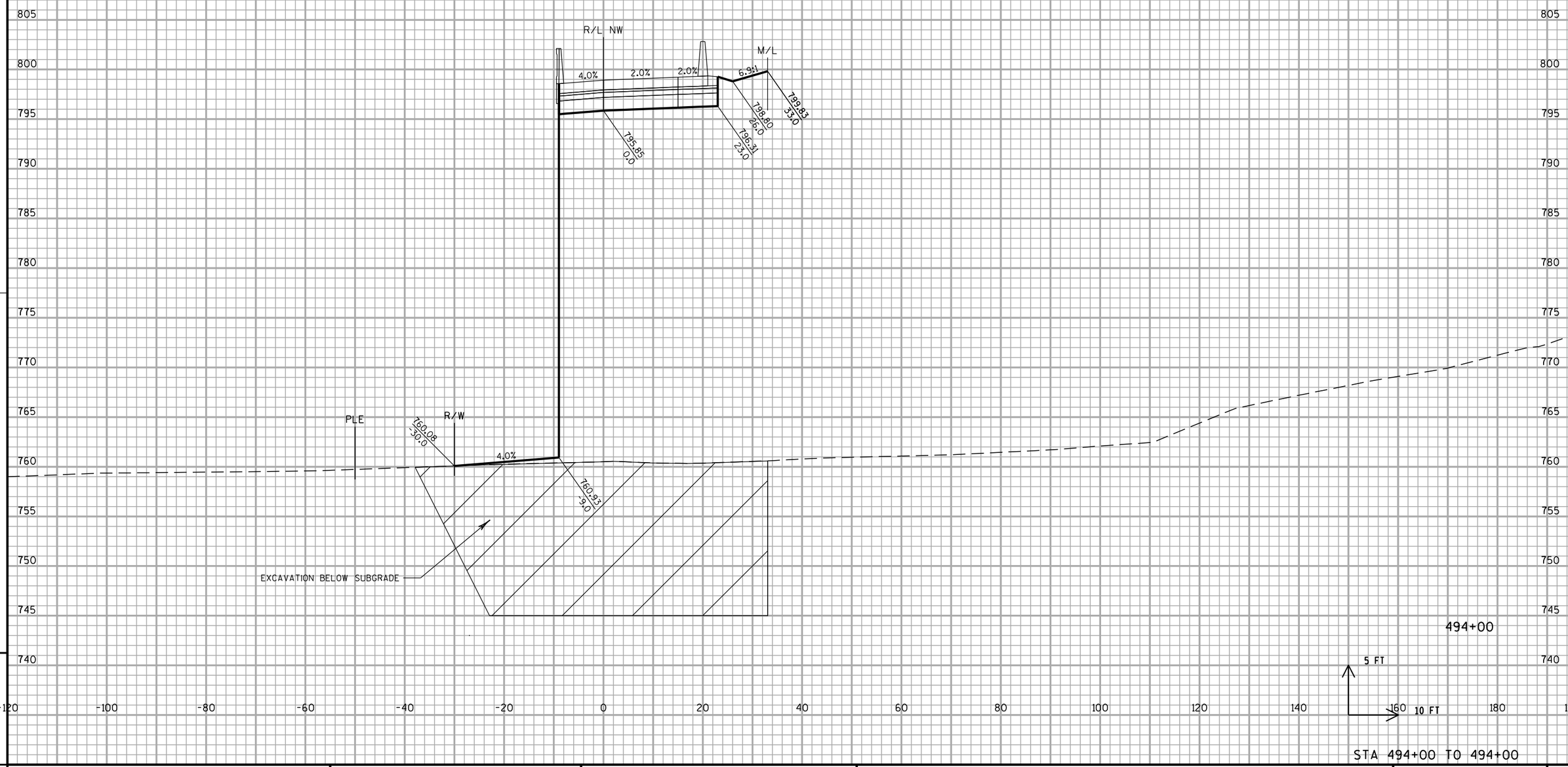
ALL WORK STAGE 1-3



STA 493+50 TO 493+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

ALL WORK STAGE 1-3

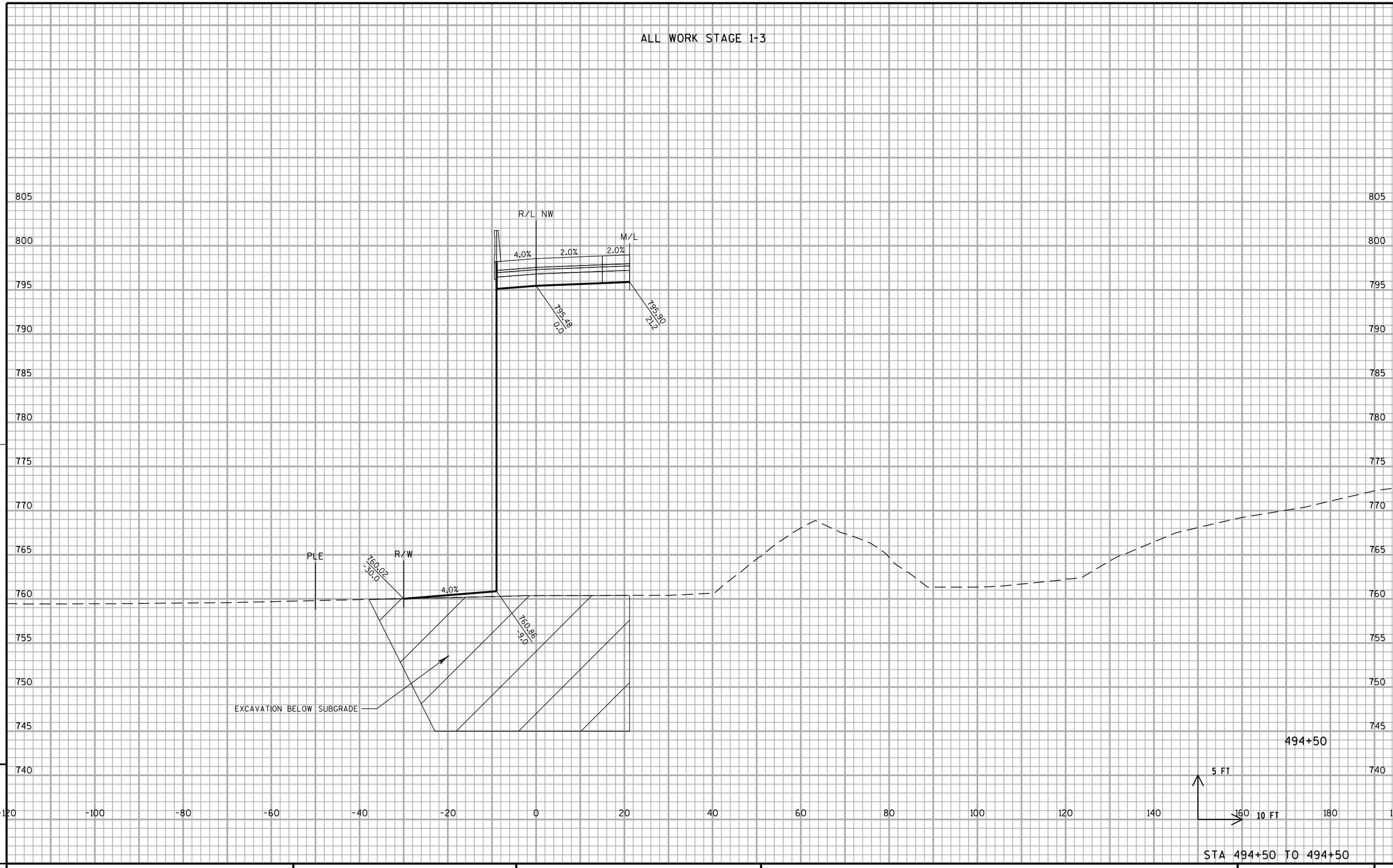


STA 494+00 TO 494+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090305_xs_NW.dgn PLOT DATE : 28-APR-2014 16:26 PLOT BY : MSCD1S PLOT NAME : 090305_xs_NW34 PLOT SCALE : 20:1

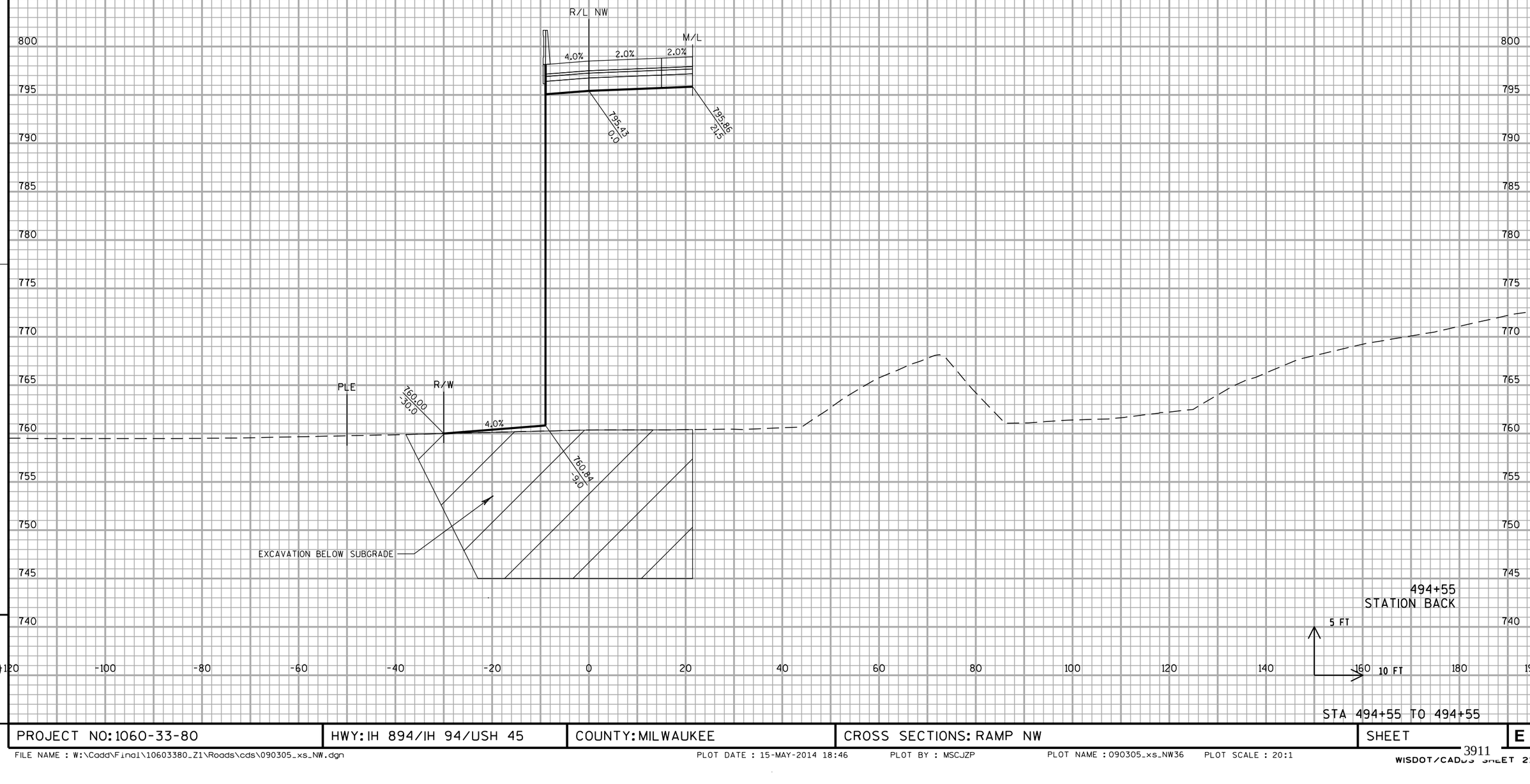
ALL WORK STAGE 1-3



STA 494+50 TO 494+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

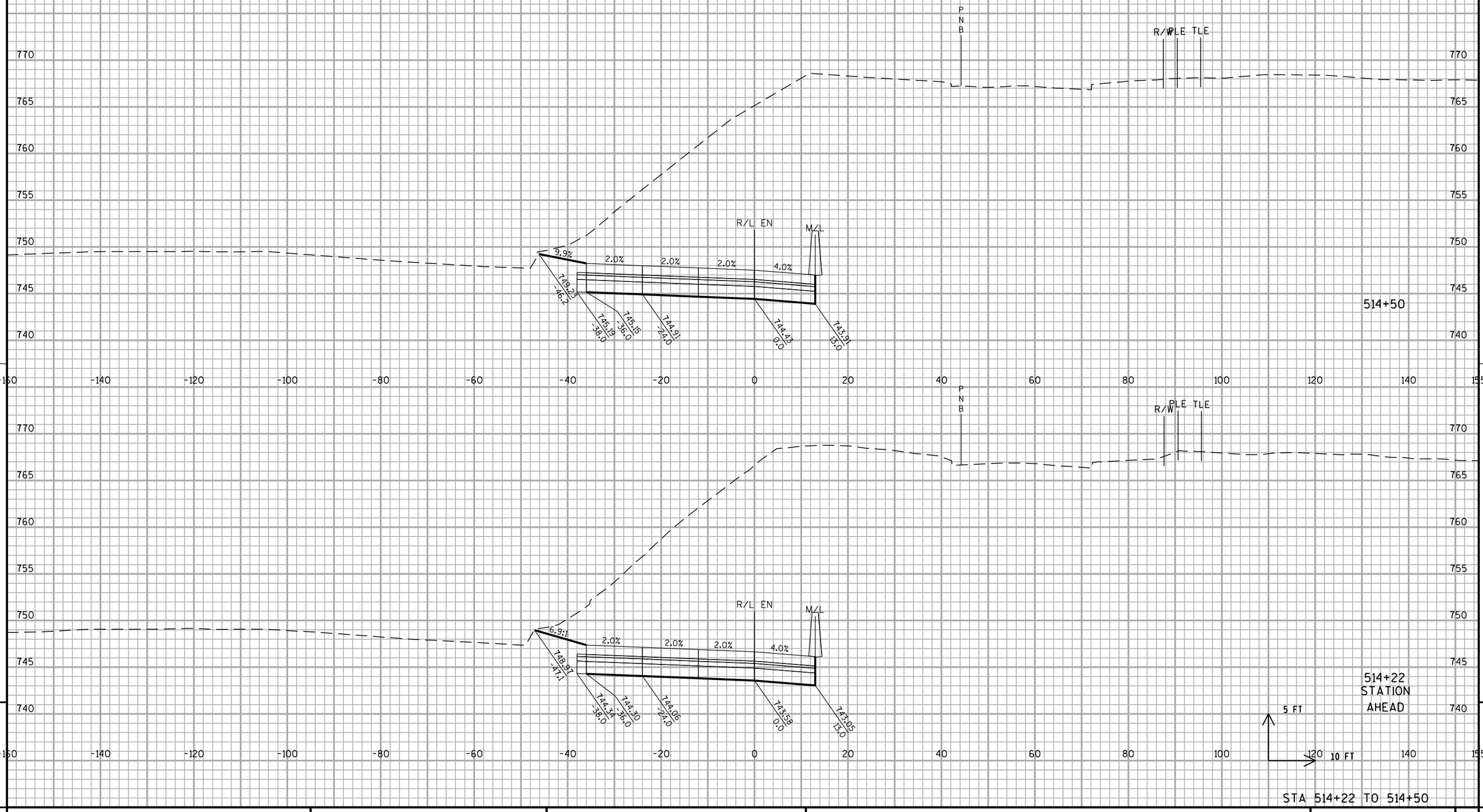
ALL WORK STAGE 1-3



STA 494+55 TO 494+55

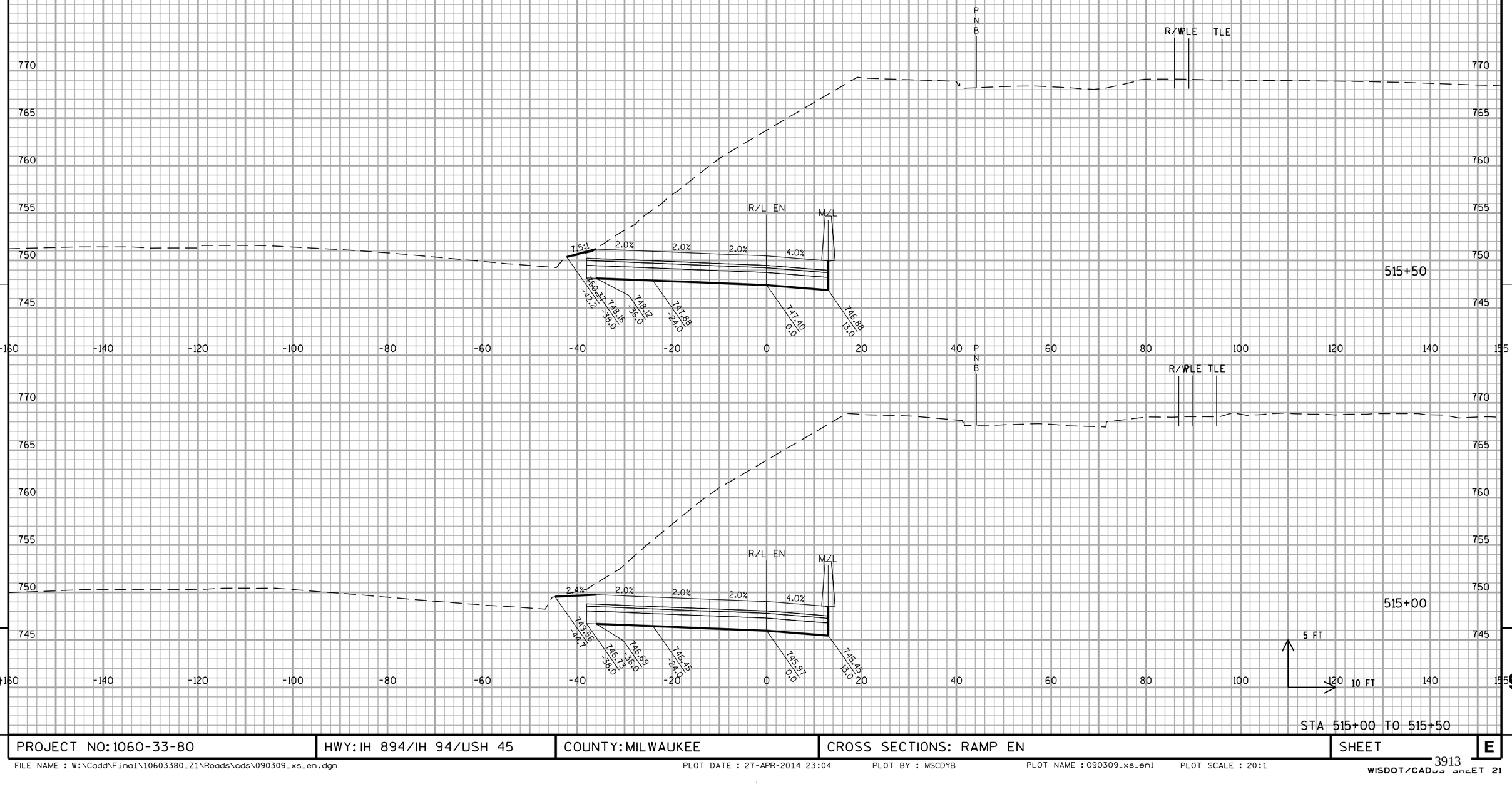
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN	SHEET	E

ALL WORK STAGE 2

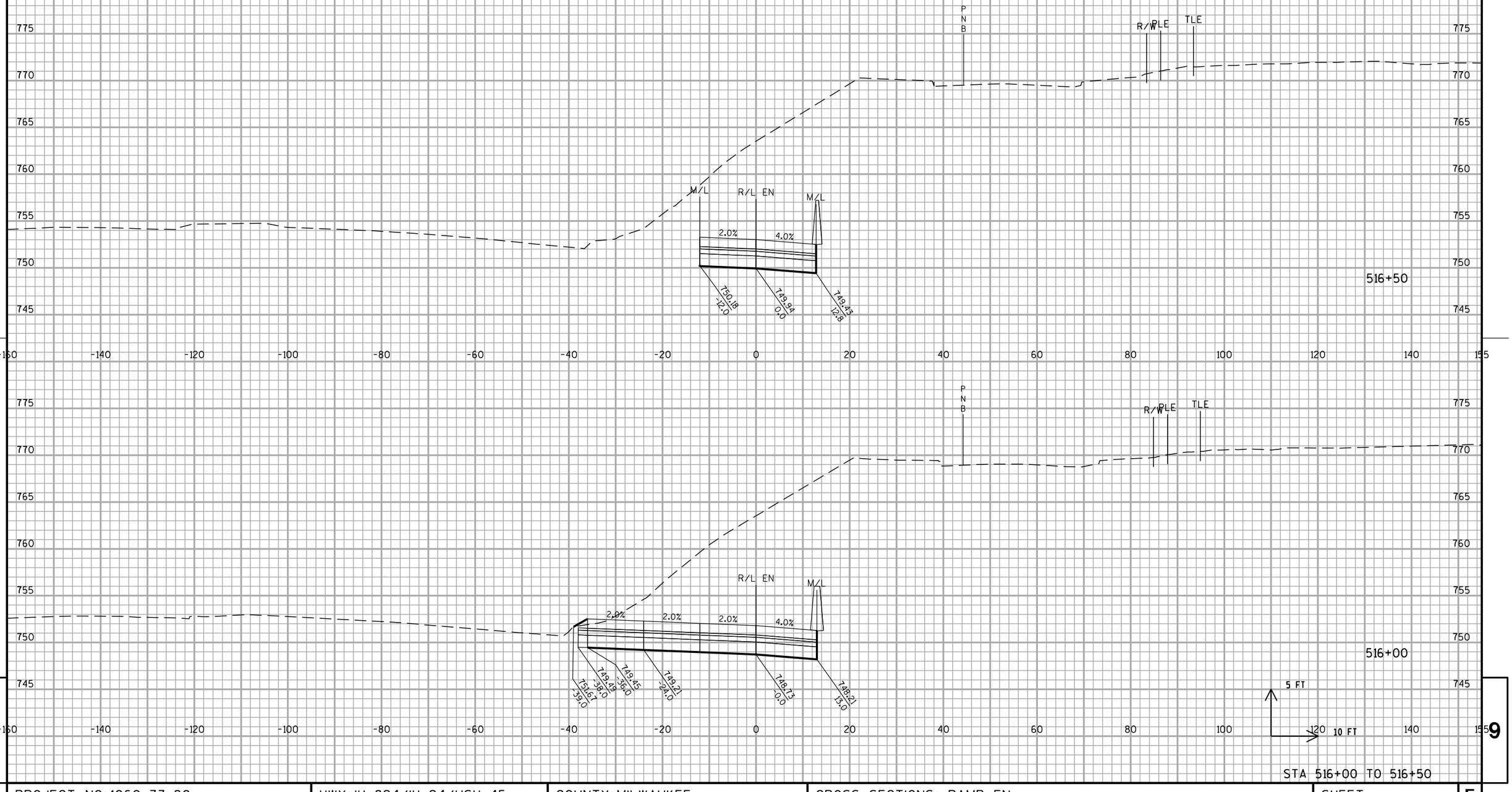


STA 515+00 TO 515+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090309_xs_en.dgn PLOT DATE : 27-APR-2014 23:04 PLOT BY : MSCDYB PLOT NAME : 090309_xs_en1 PLOT SCALE : 20:1

ALL WORK STAGE 2



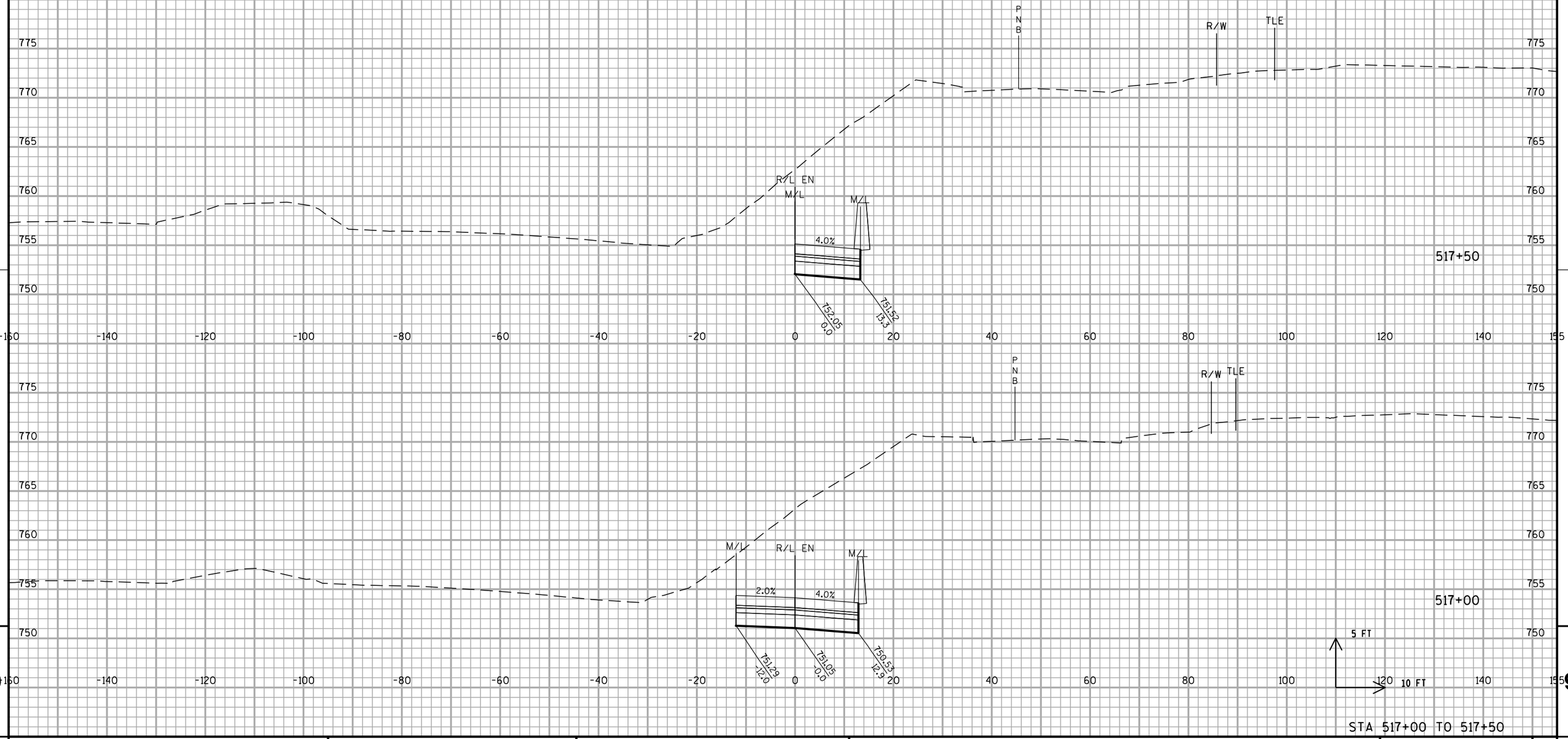
STA 516+00 TO 516+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090309_xs_en.dgn PLOT DATE : 27-APR-2014 23:04 PLOT BY : MSCDYB PLOT NAME : 090309_xs_en2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

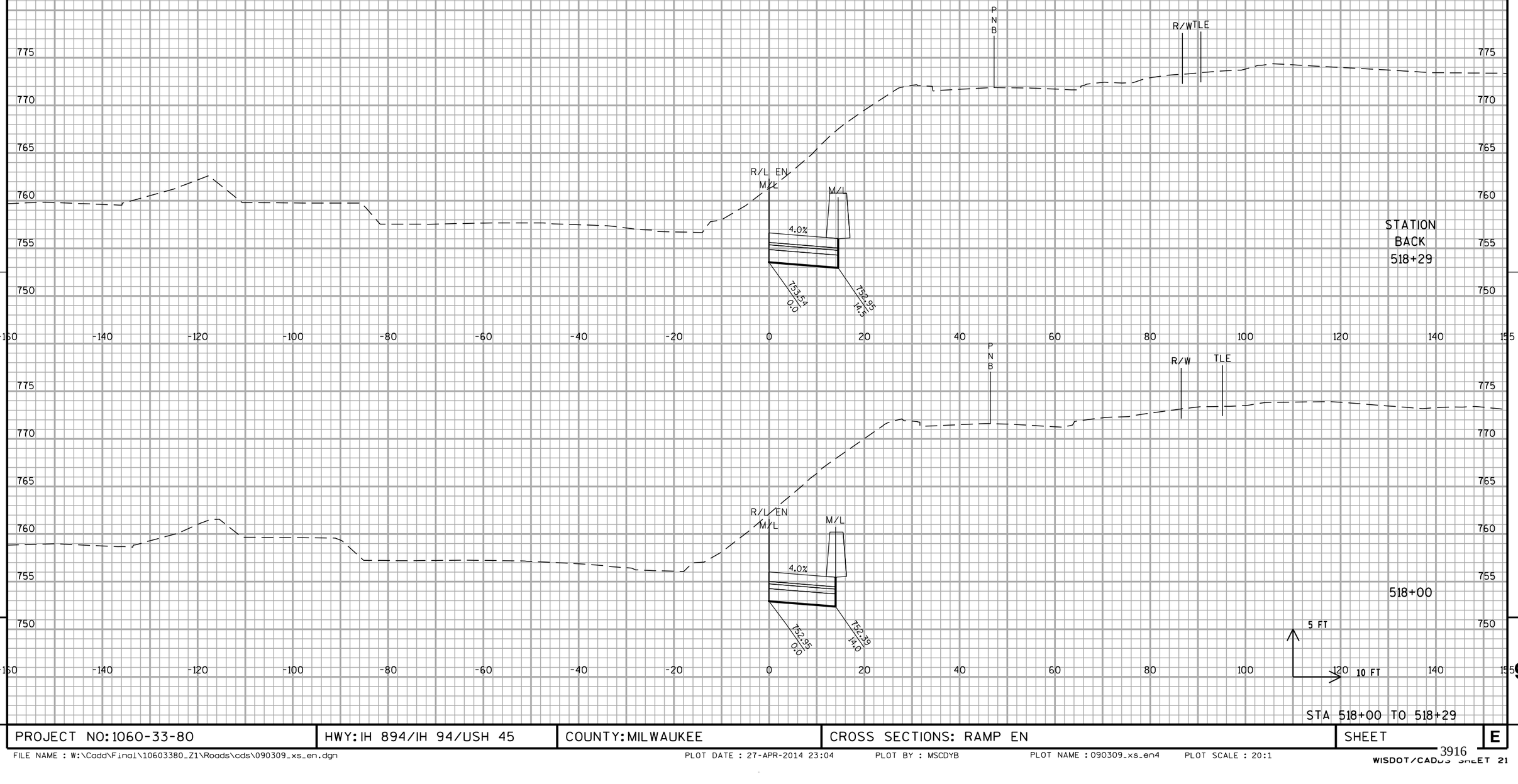


STA 517+00 TO 517+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090309_xs_en.dgn PLOT DATE : 27-APR-2014 23:04 PLOT BY : MSCDYB PLOT NAME : 090309_xs_en3 PLOT SCALE : 20:1

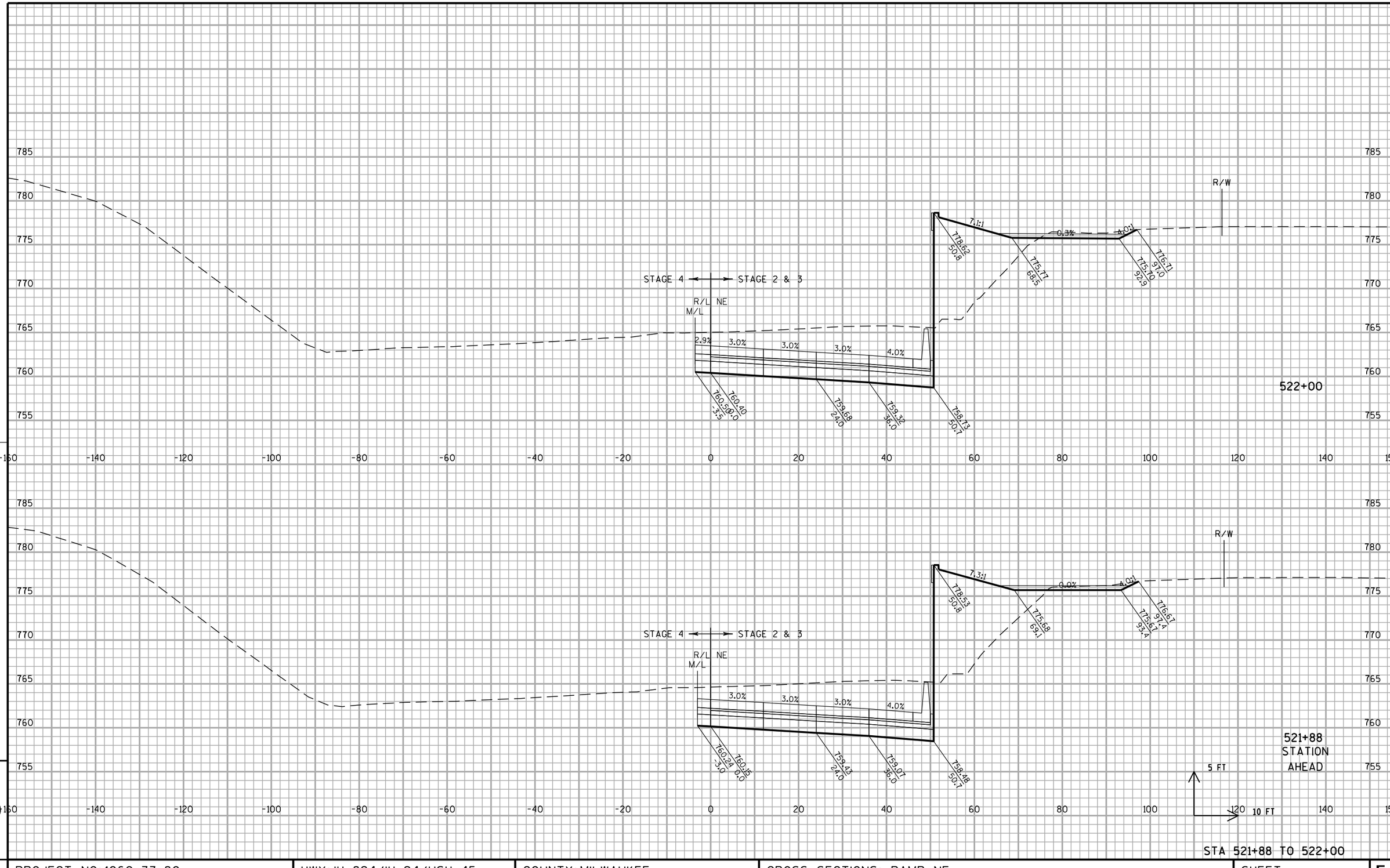
ALL WORK STAGE 2



STA 518+00 TO 518+29

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090309_xs_en.dgn PLOT DATE : 27-APR-2014 23:04 PLOT BY : MSCDYB PLOT NAME : 090309_xs_en4 PLOT SCALE : 20:1

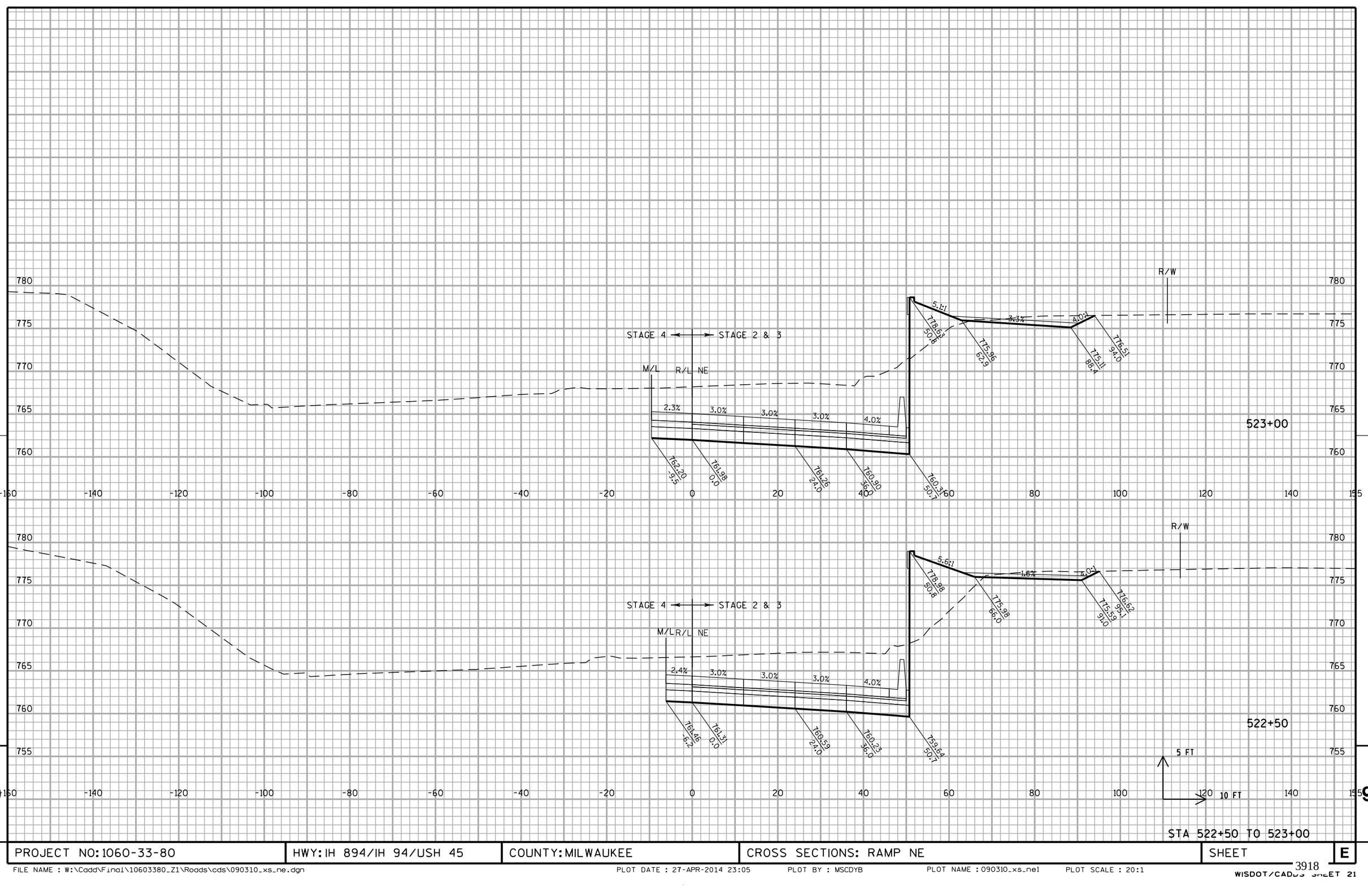


9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne PLOT SCALE : 20:1

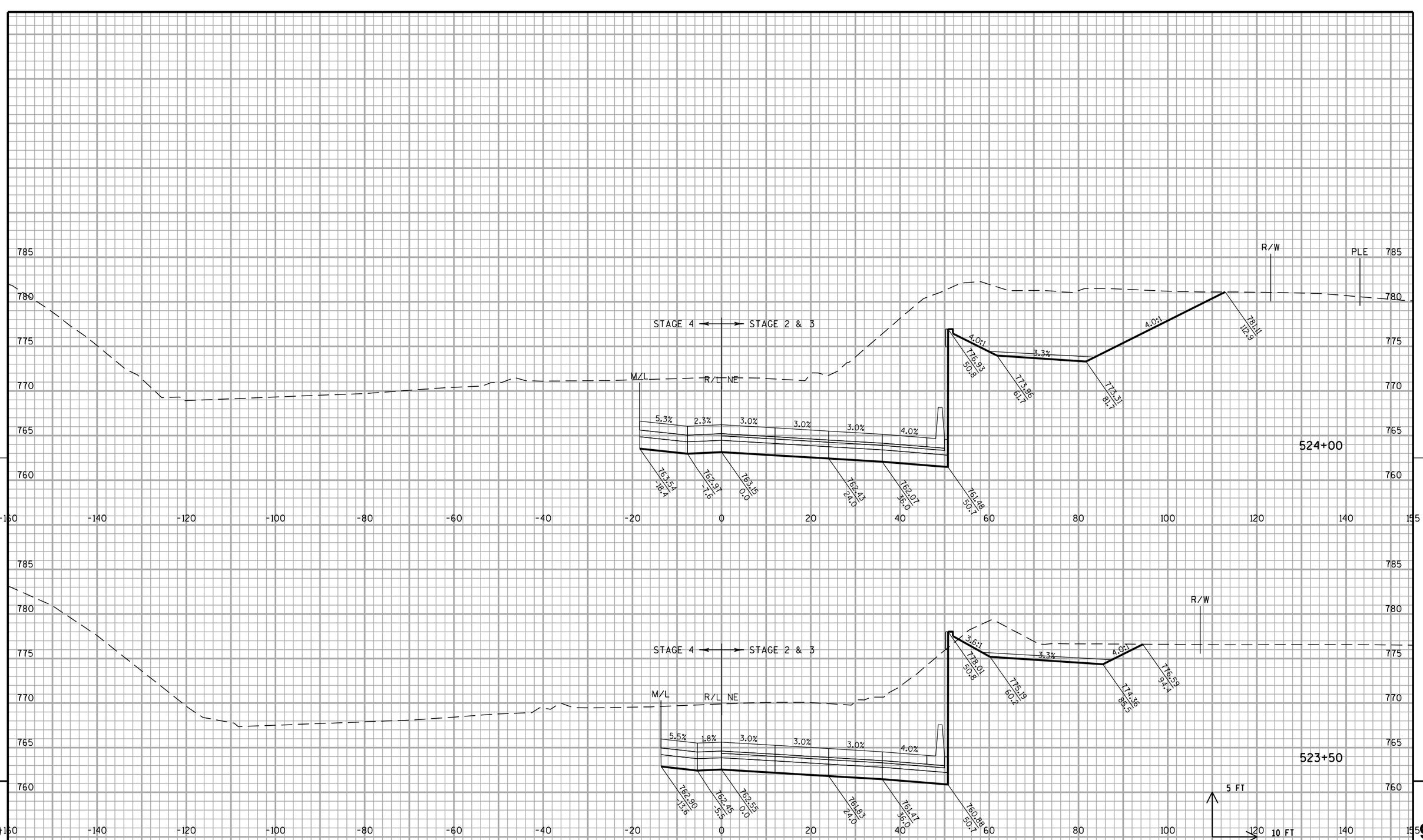
WISDOT/CADDS SHEET 21



9

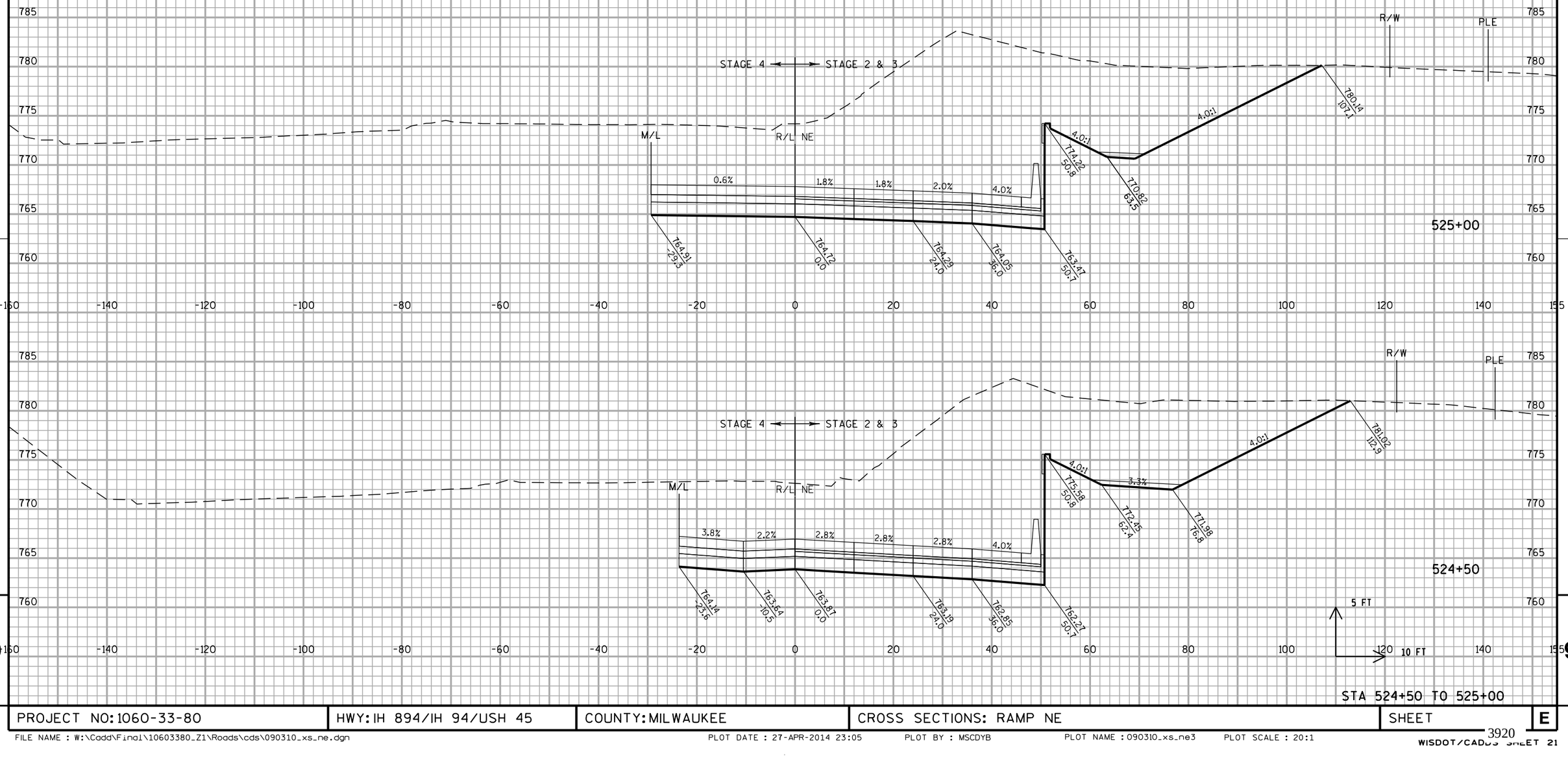
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

STA 522+50 TO 523+00



STA 523+50 TO 524+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E



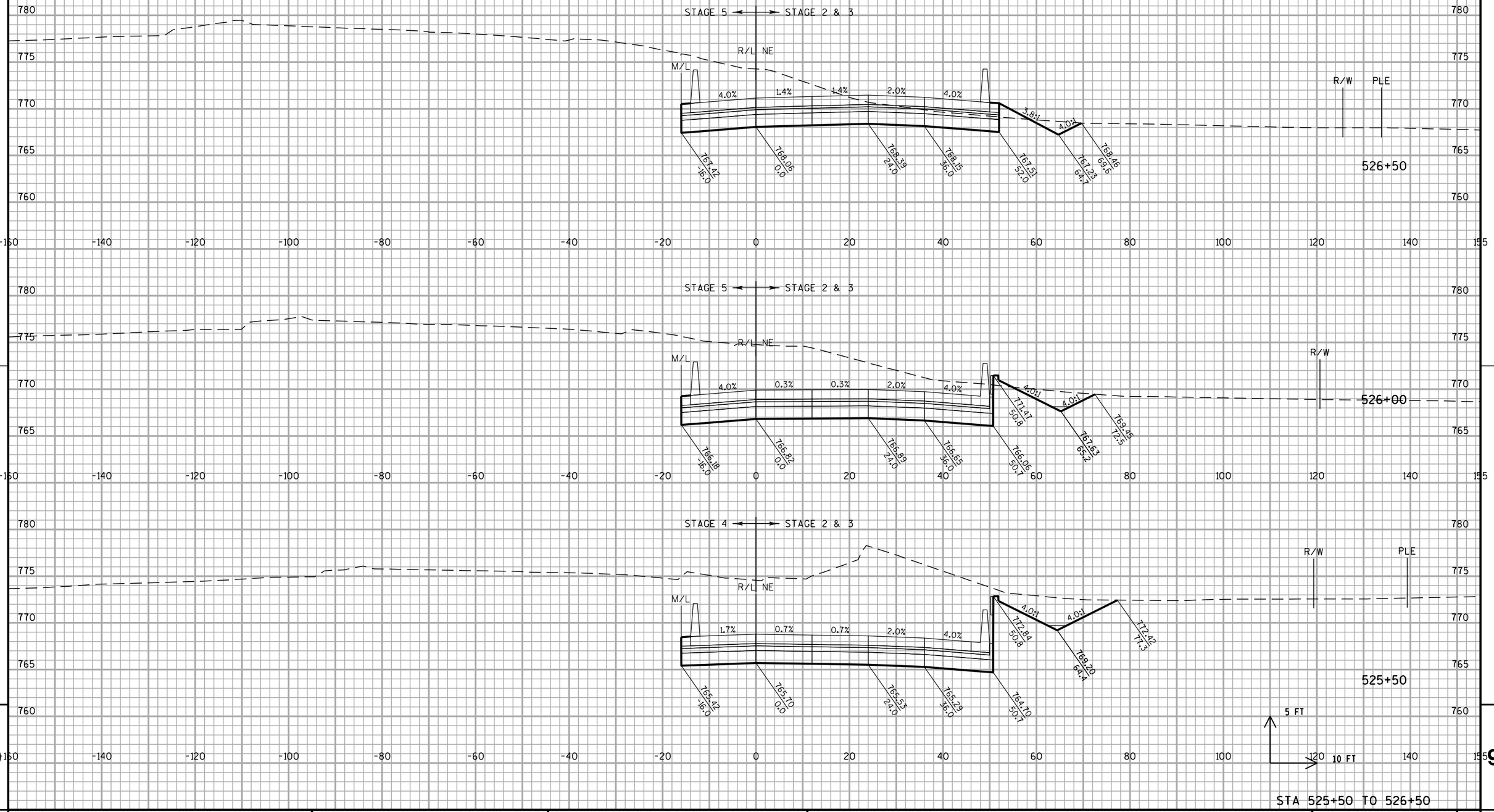
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

STA 524+50 TO 525+00

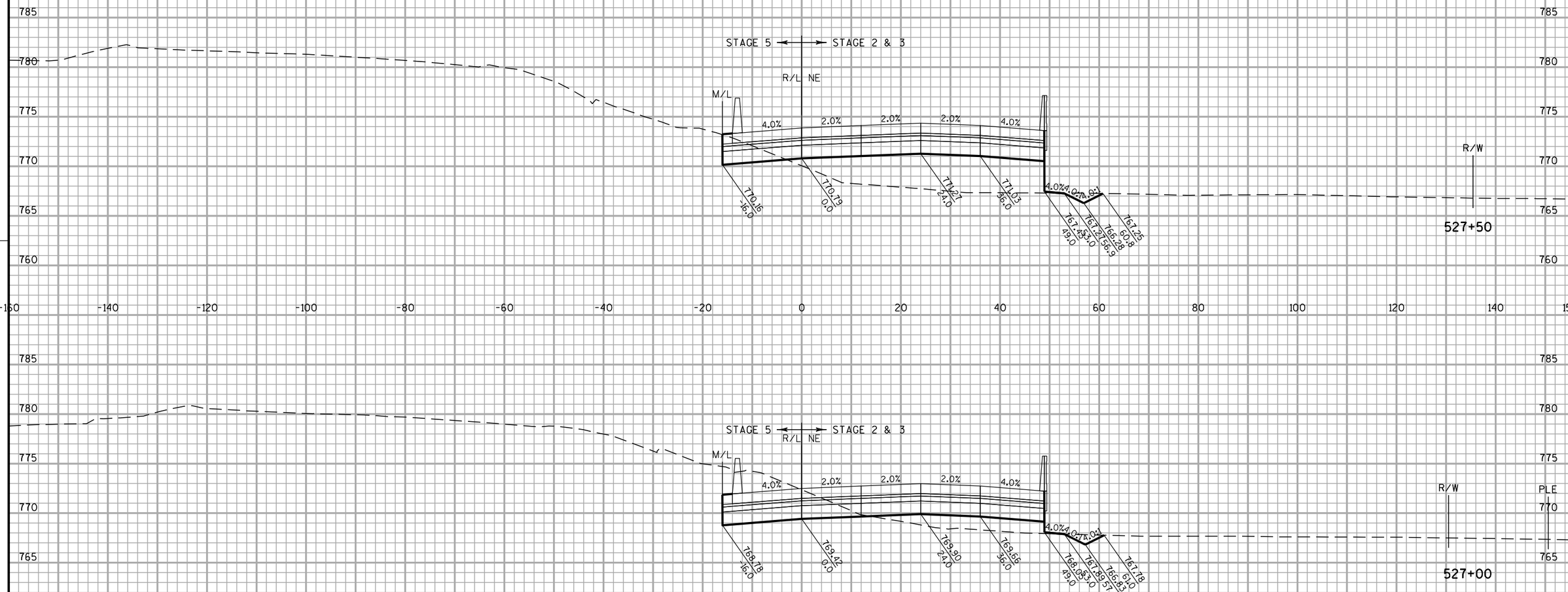
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FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne3 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

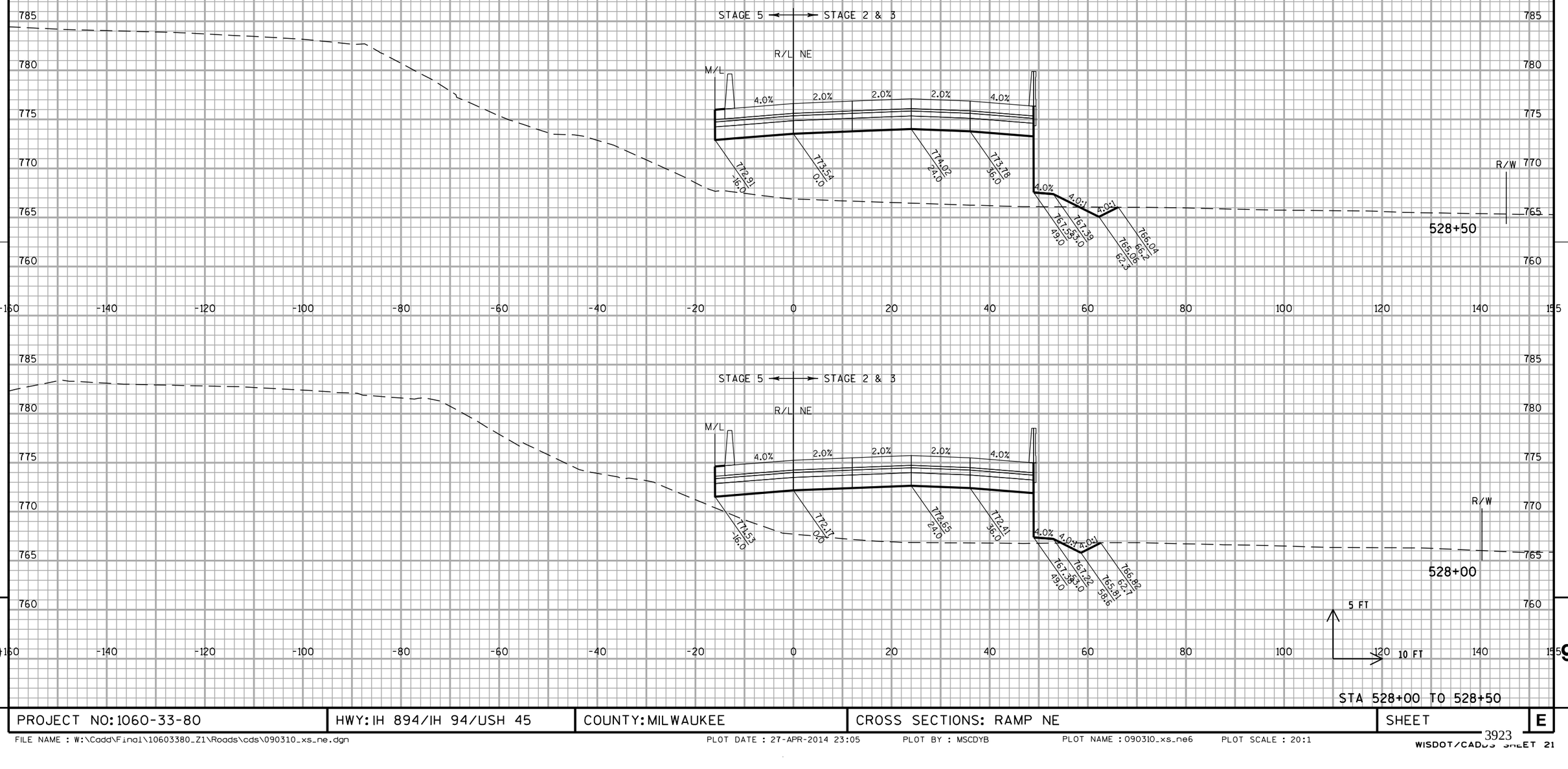
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne4 PLOT SCALE : 20:1



STA 527+00 TO 527+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne5 PLOT SCALE : 20:1

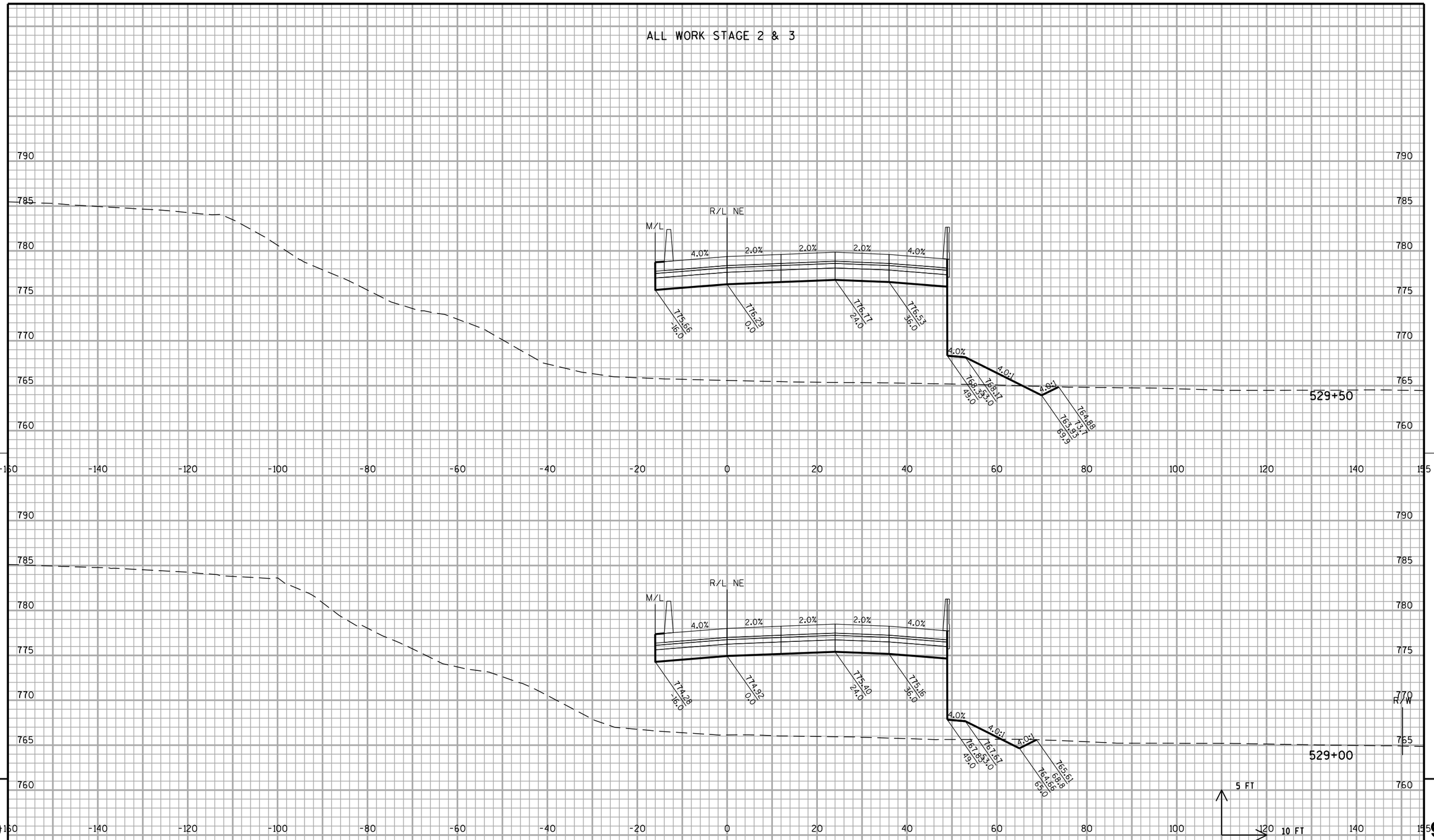


STA 528+00 TO 528+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne6 PLOT SCALE : 20:1

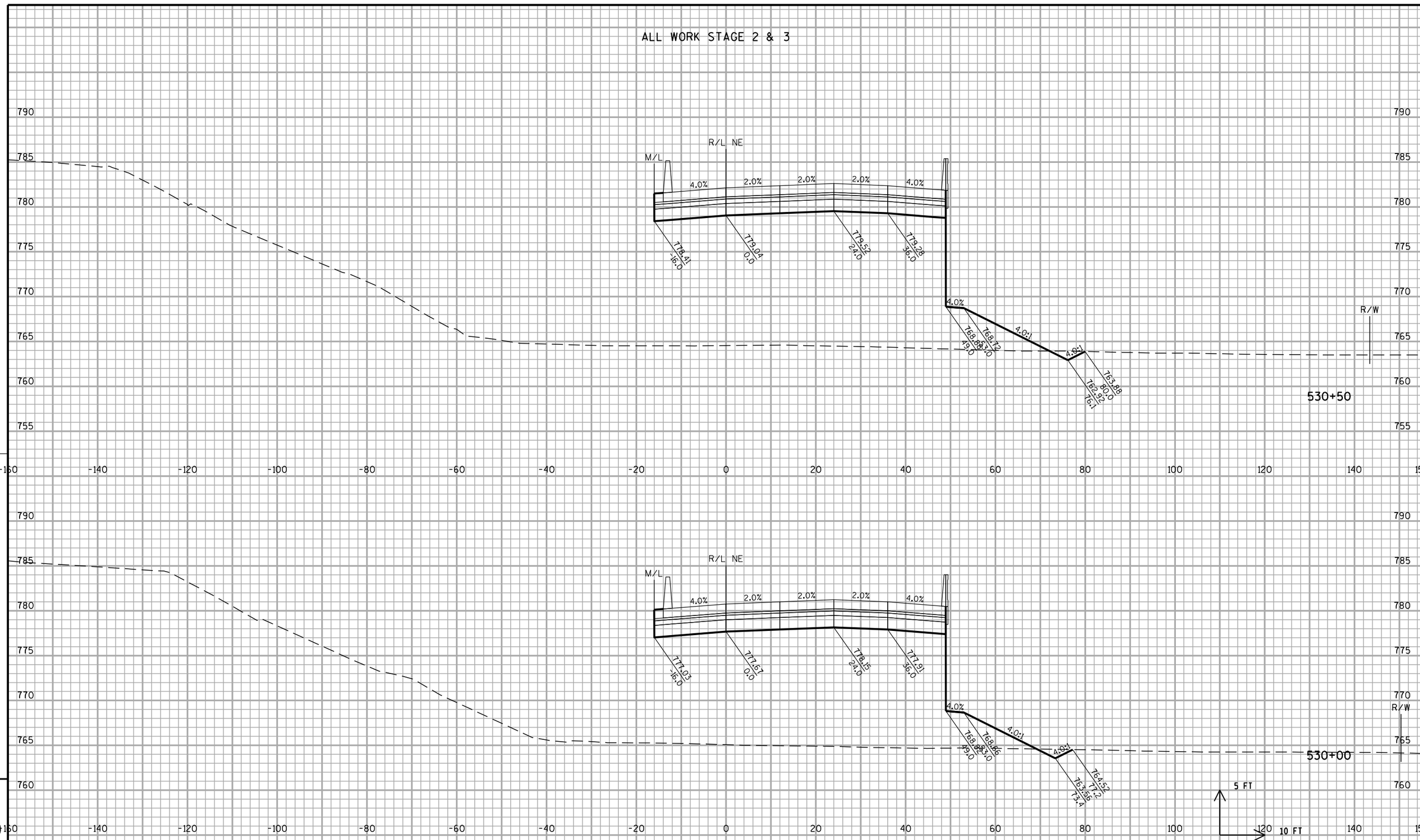
ALL WORK STAGE 2 & 3



9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

ALL WORK STAGE 2 & 3

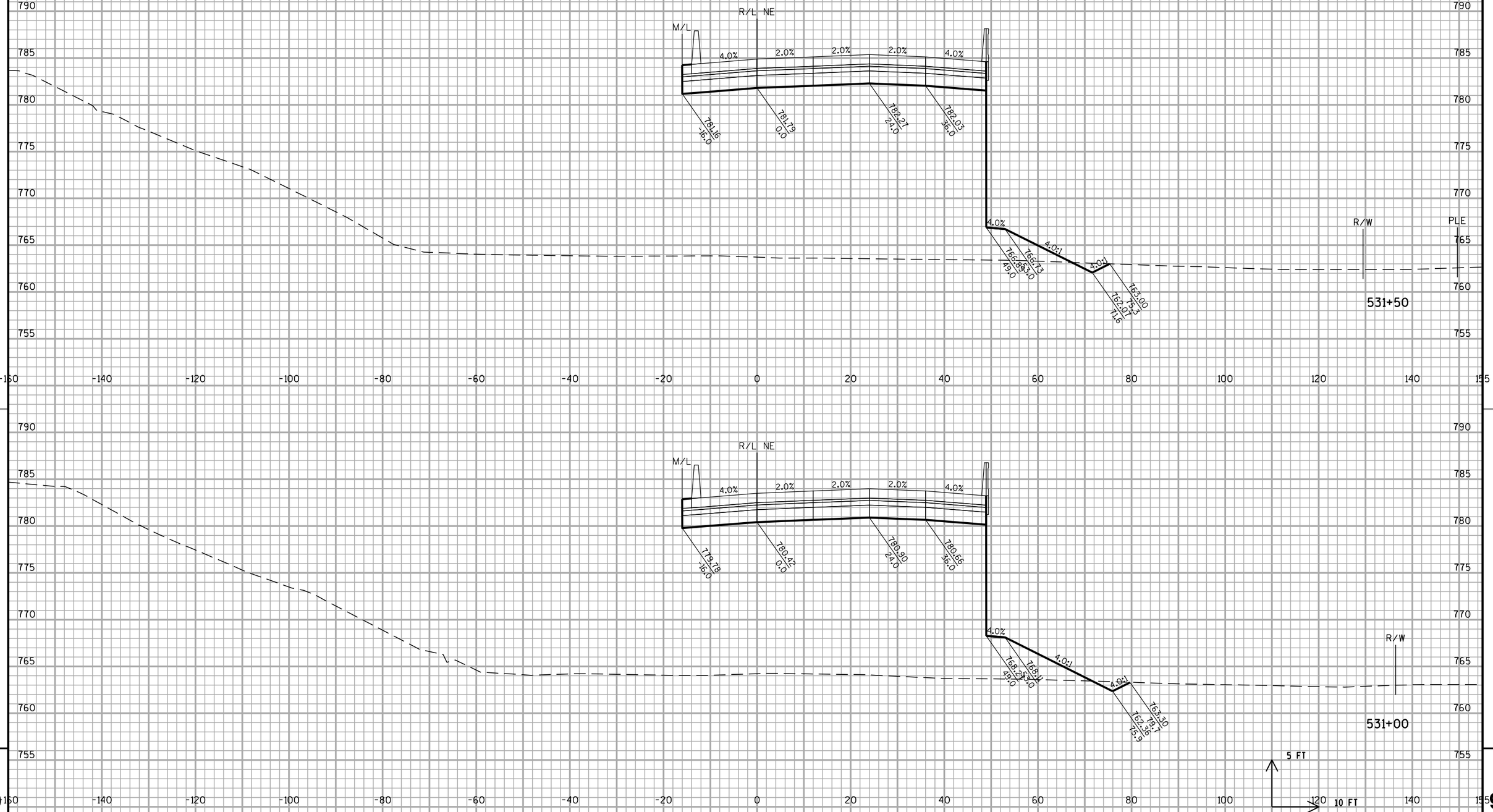


STA 530+00 TO 530+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne8 PLOT SCALE : 20:1

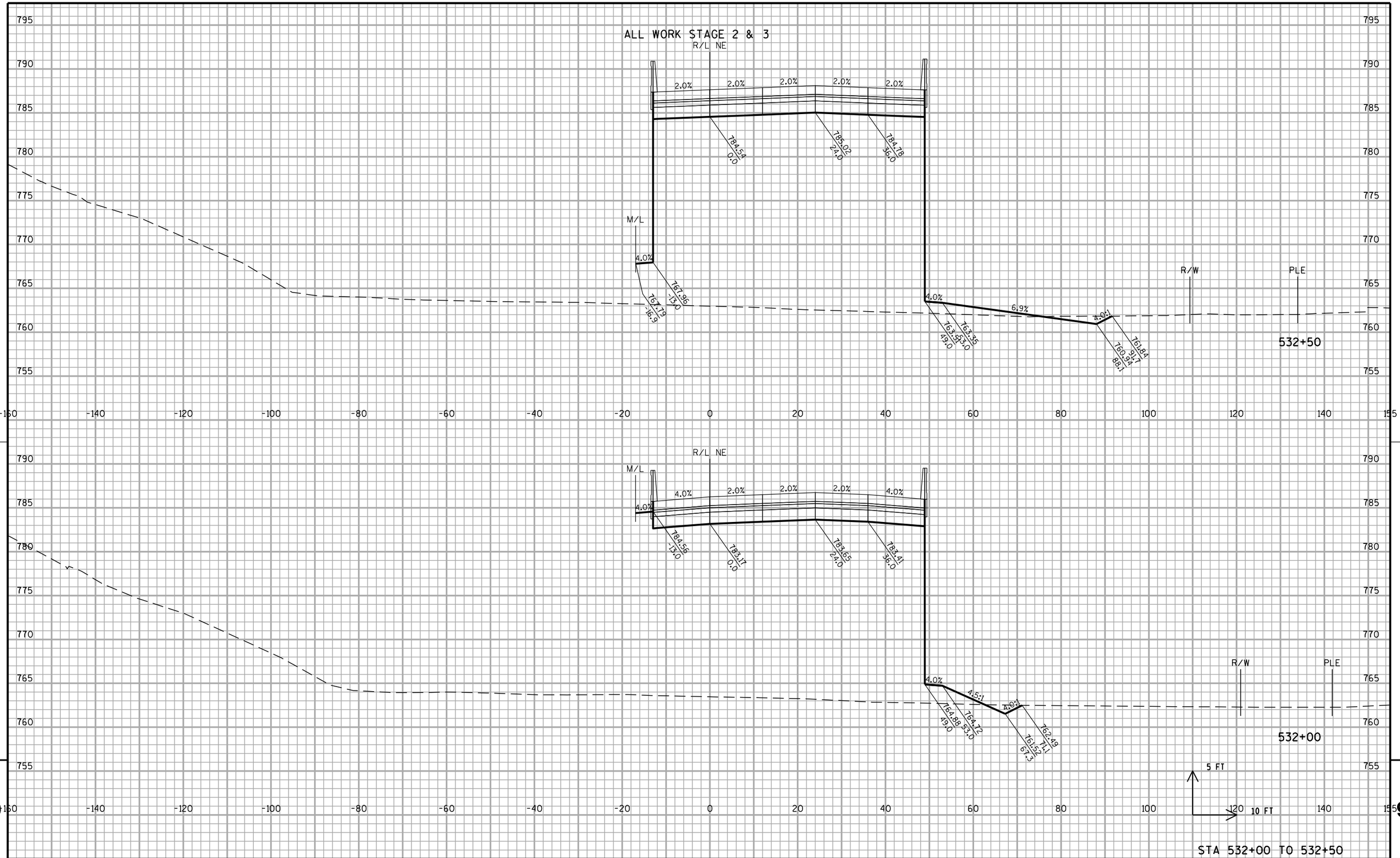
ALL WORK STAGE 2 & 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

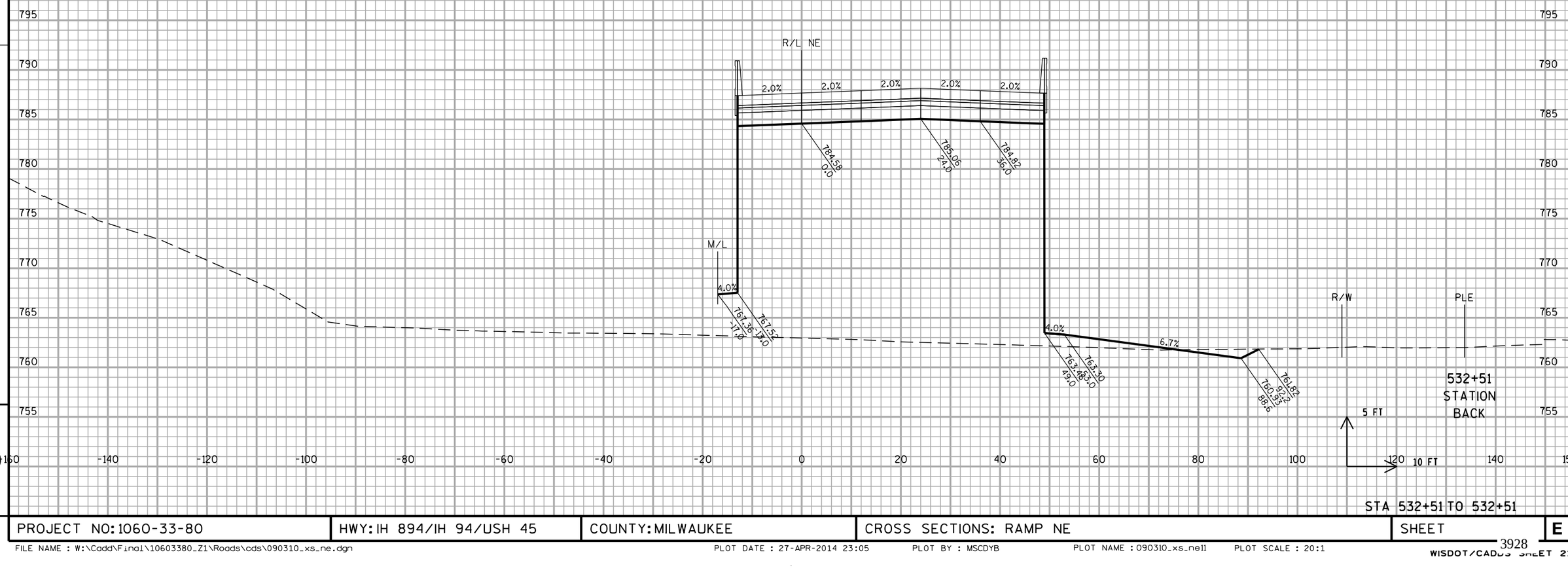
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

ALL WORK STAGE 2 & 3

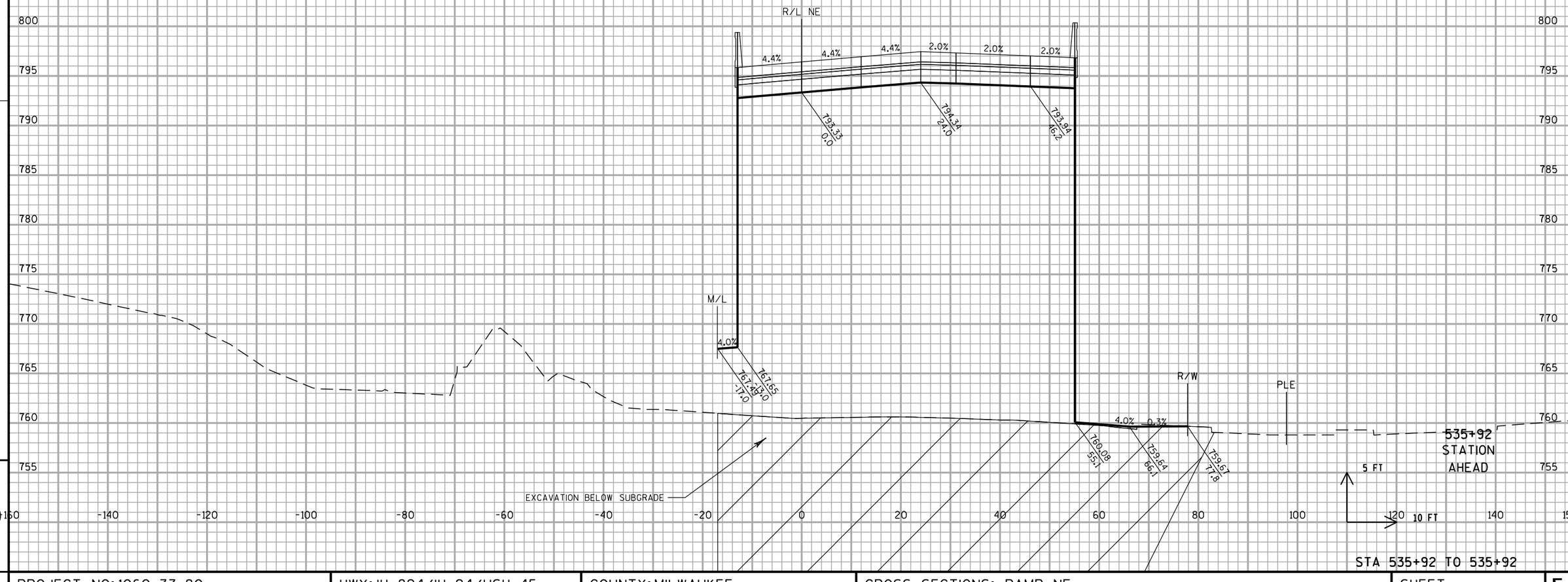


STA 532+51 TO 532+51

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne11 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3

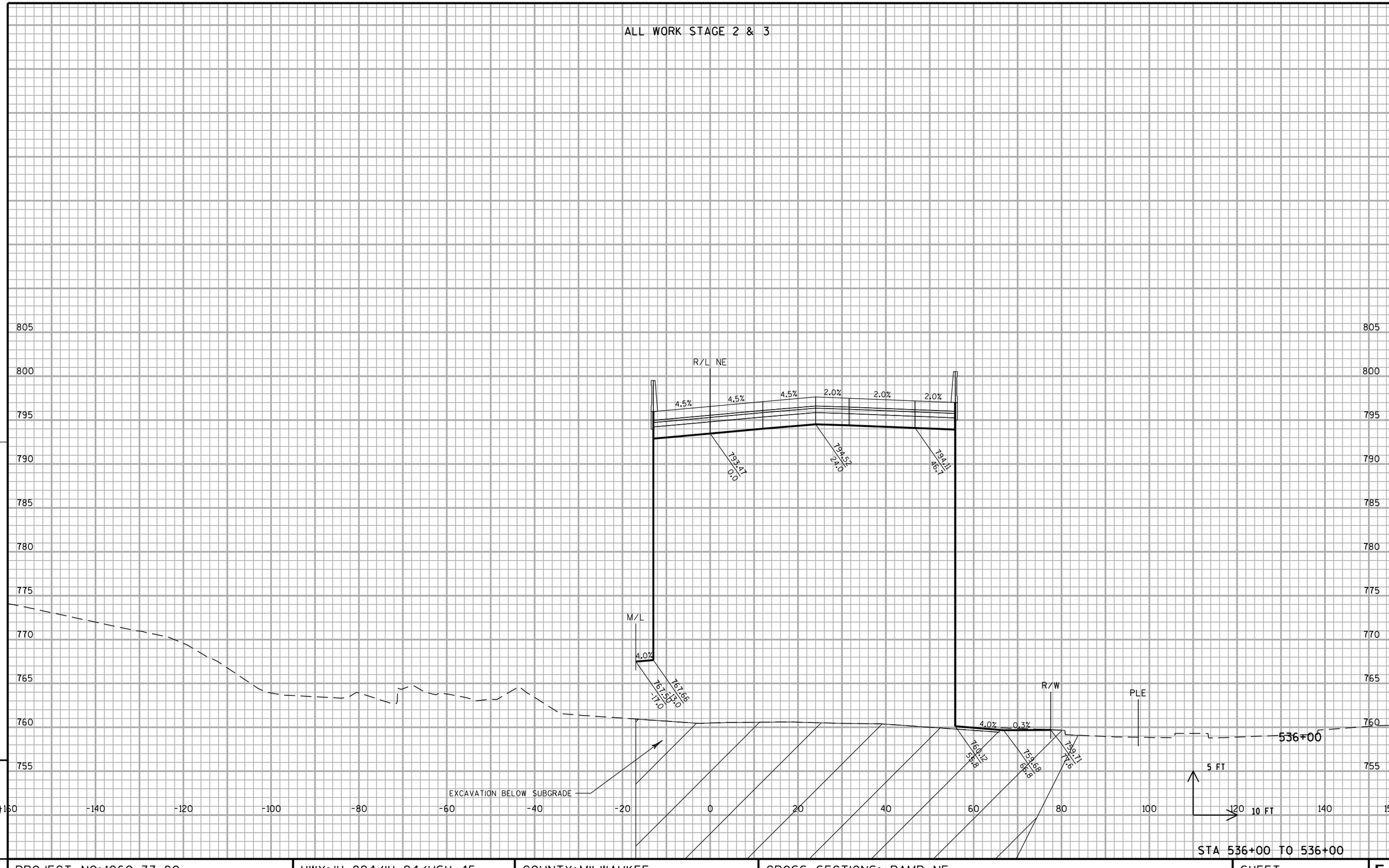


STA 535+92 TO 535+92

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne12 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3

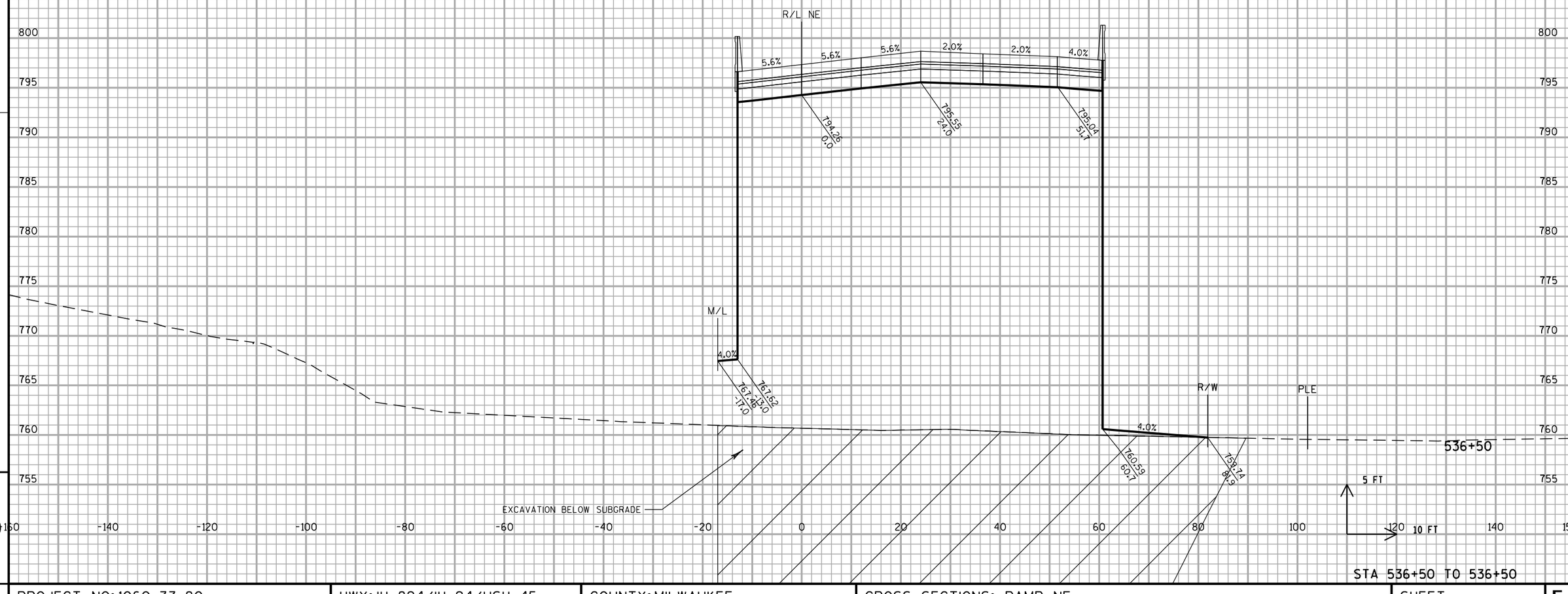


STA 536+00 TO 536+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne13 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3

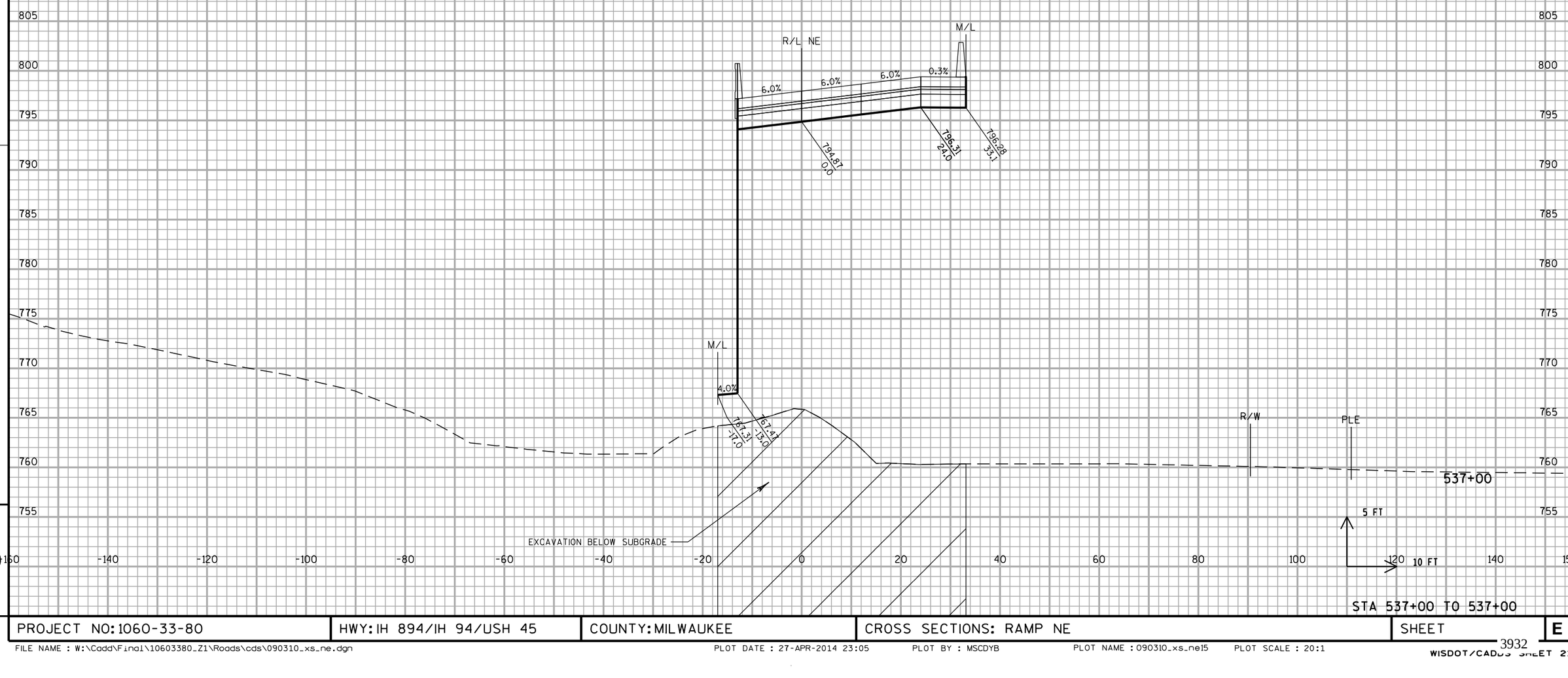


STA 536+50 TO 536+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne14 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3

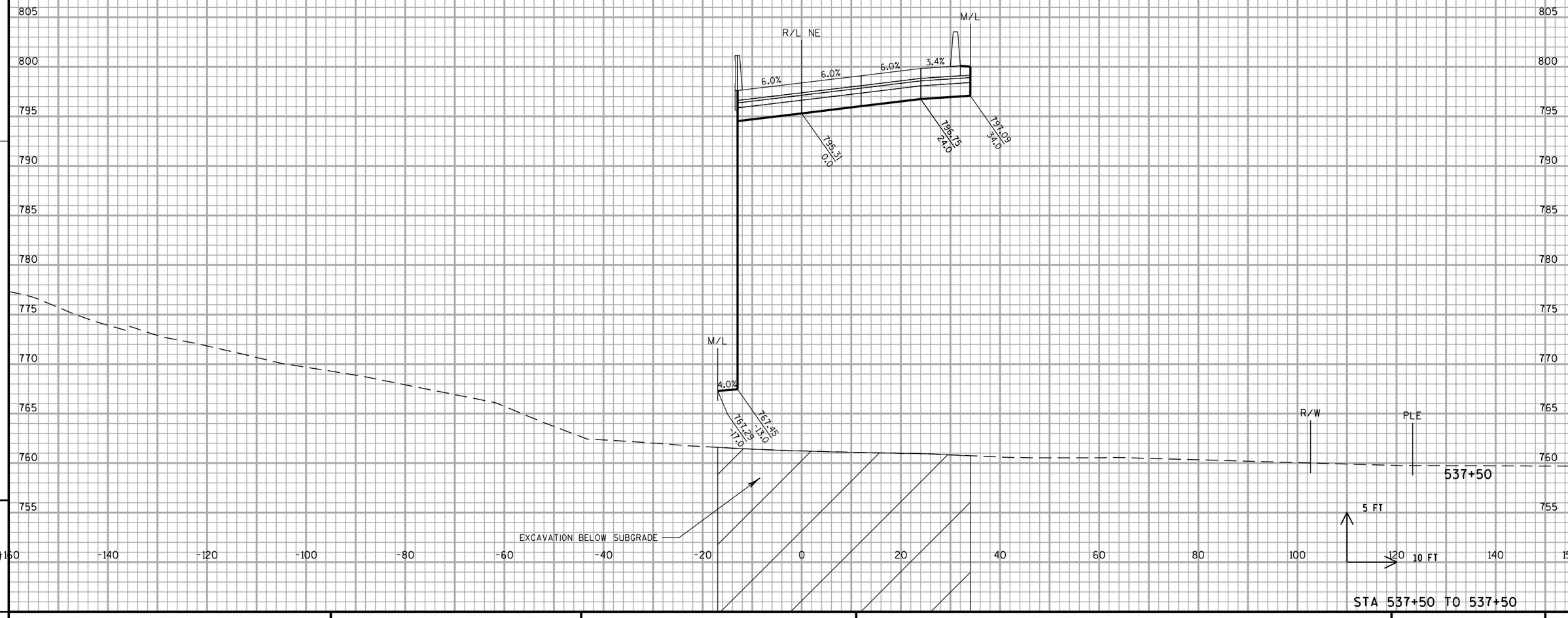


STA 537+00 TO 537+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne15 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3

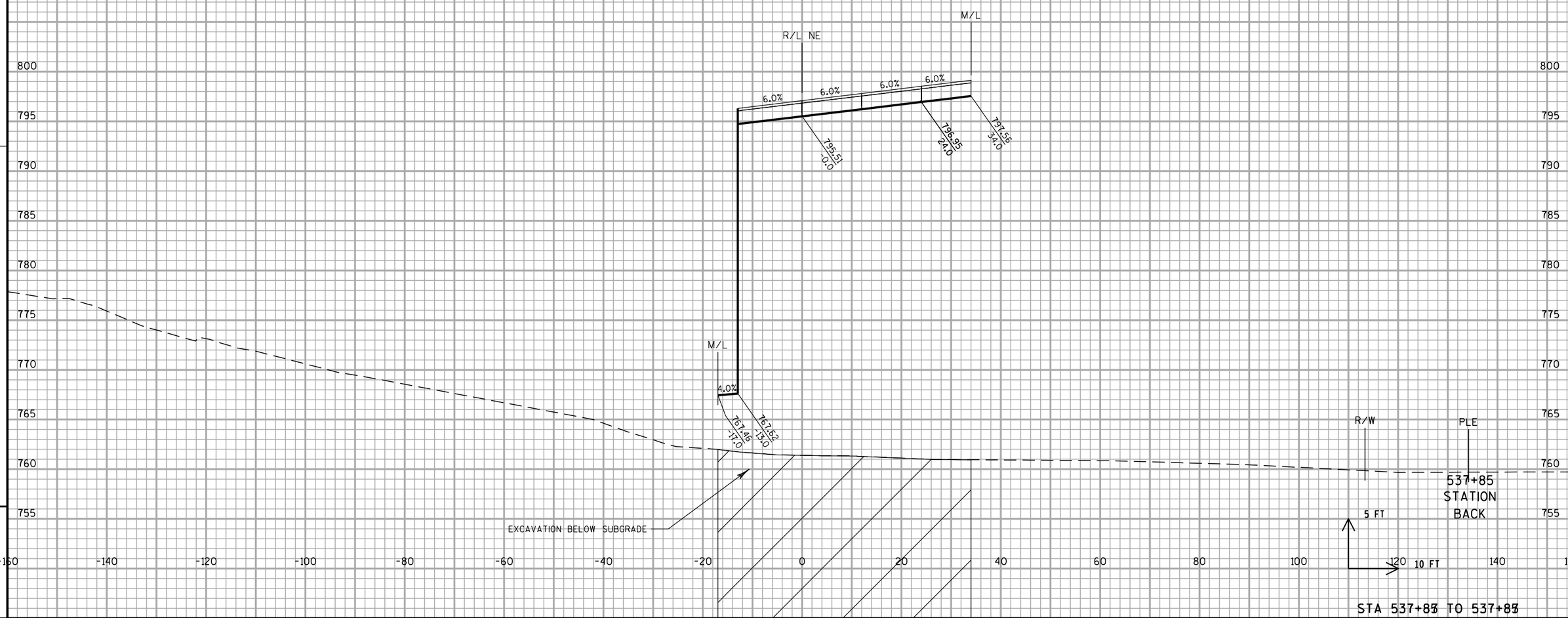


STA 537+50 TO 537+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne16 PLOT SCALE : 20:1

ALL WORK STAGE 2 & 3



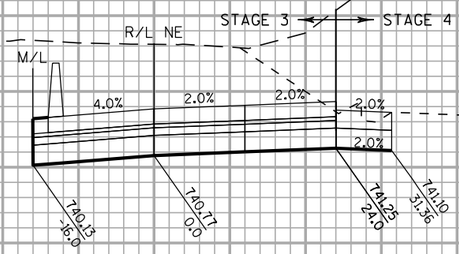
STA 537+85 TO 537+85

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

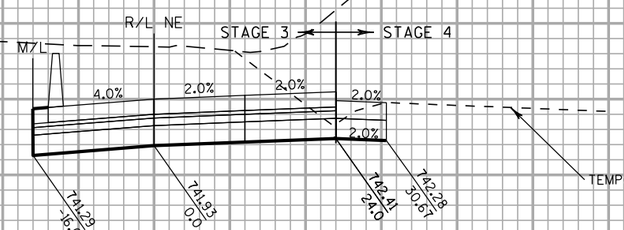
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne17 PLOT SCALE : 20:1

770
765
760
755
750
745
740
735

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155



562+00



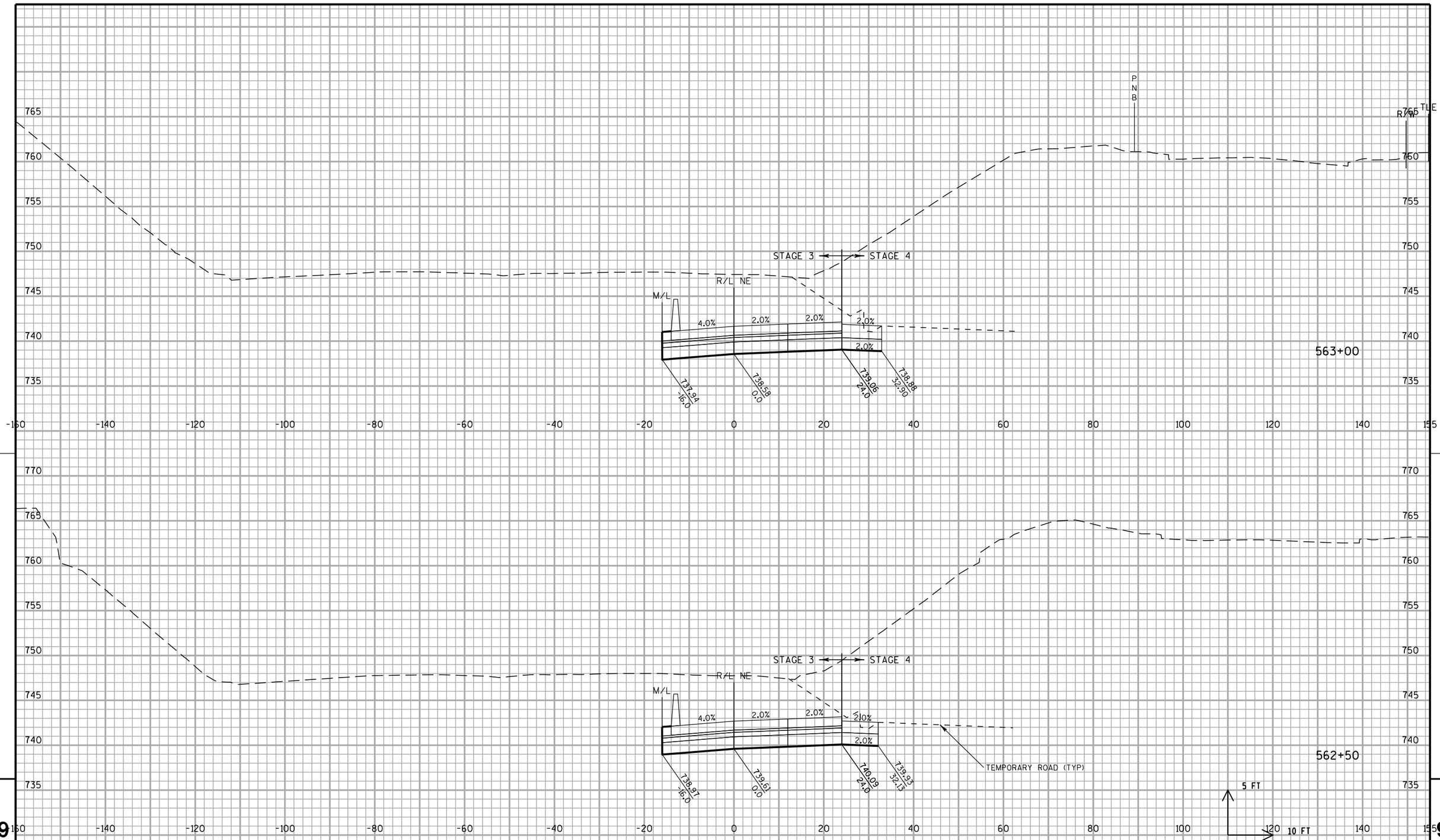
561+55
STATION
AHEAD

5 FT
10 FT

STA 561+55 TO 562+00

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E



9

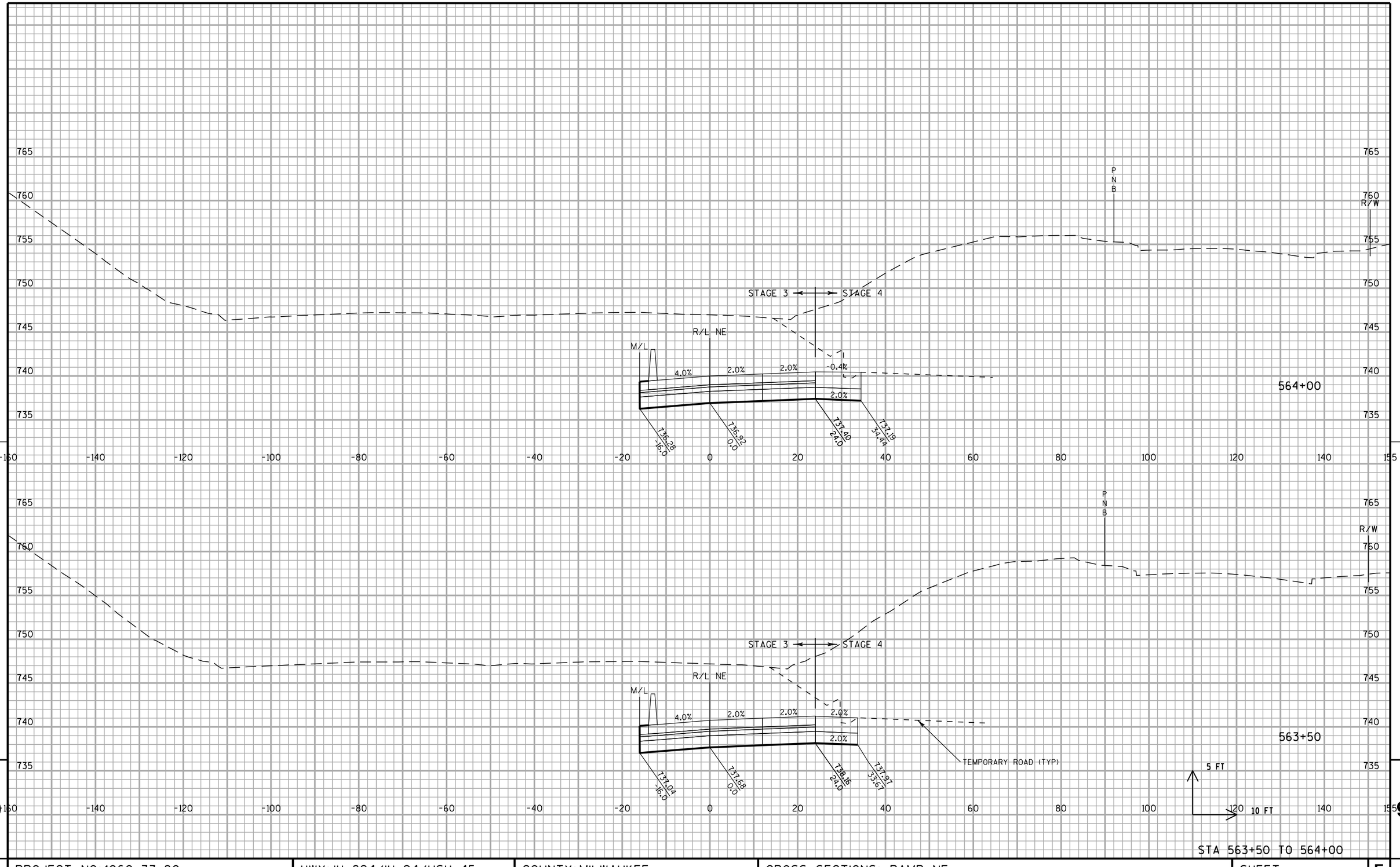
9

STA 562+50 TO 563+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne19 PLOT SCALE : 20:1

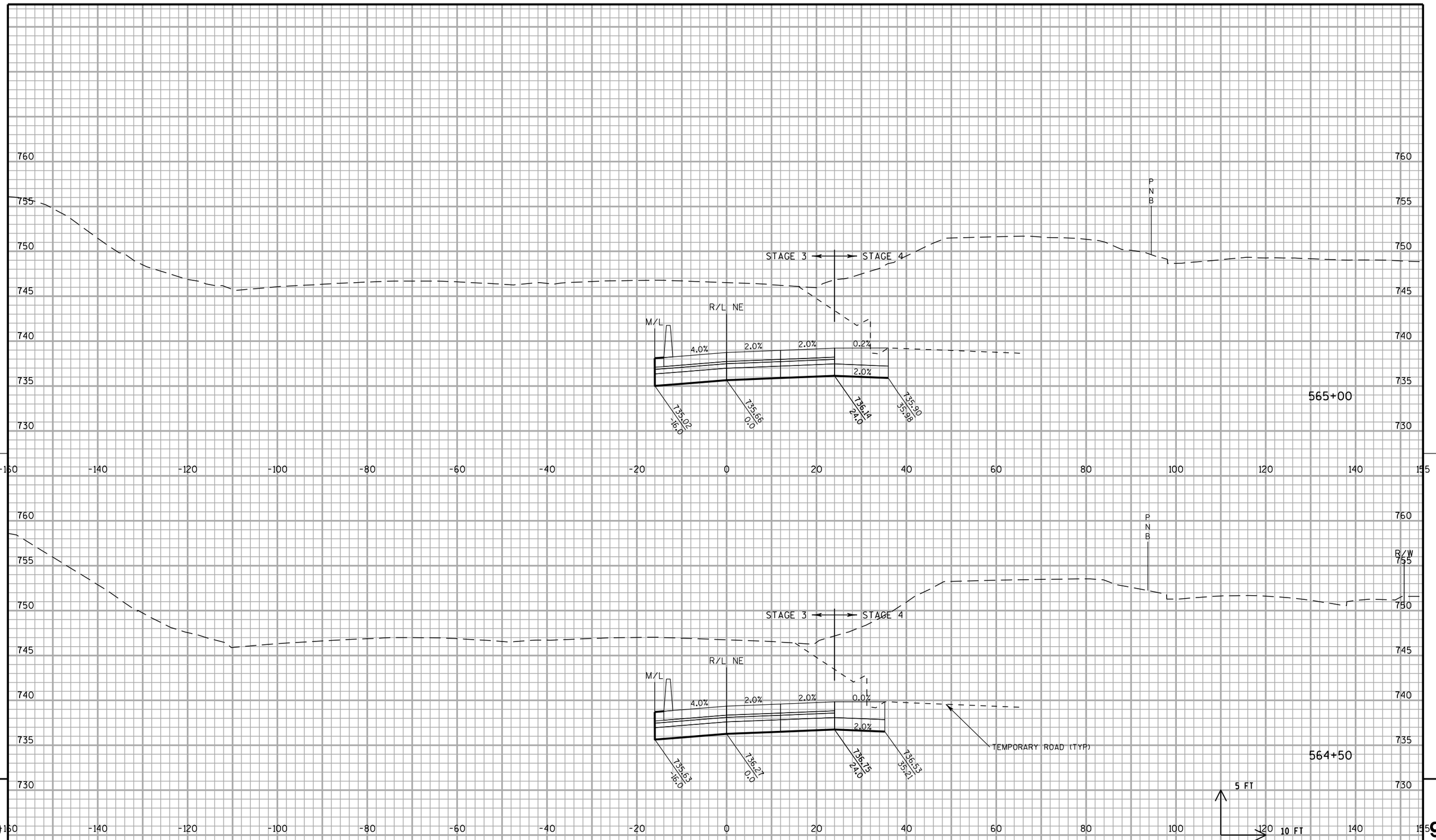
WISDOT/CADDS SHEET 21



STA 563+50 TO 564+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

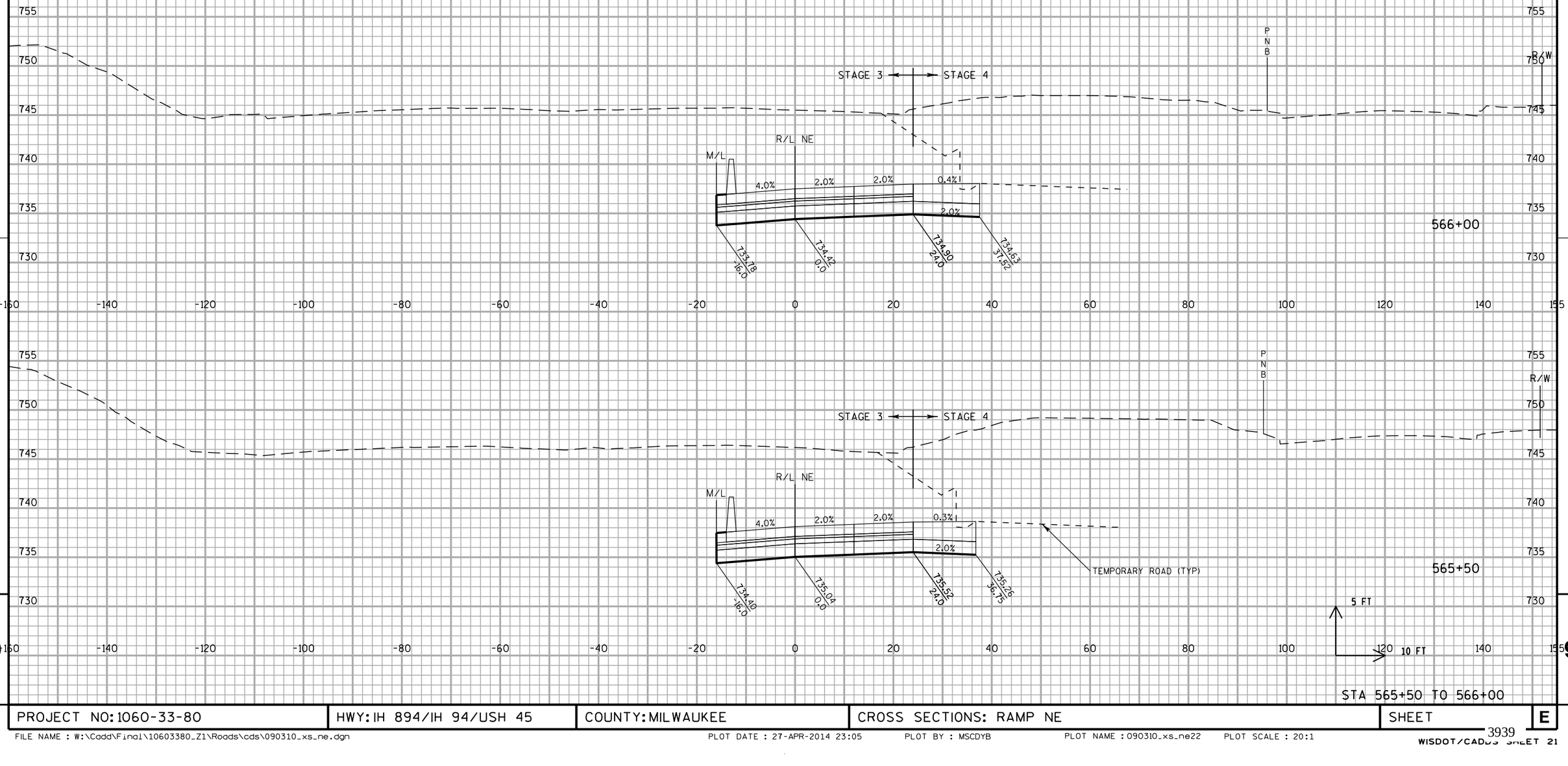
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9

PROJECT NO: 1060-33-80 | HWY: IH 894/IH 94/USH 45 | COUNTY: MILWAUKEE | CROSS SECTIONS: RAMP NE | SHEET E

STA 564+50 TO 565+00



STA 565+50 TO 566+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

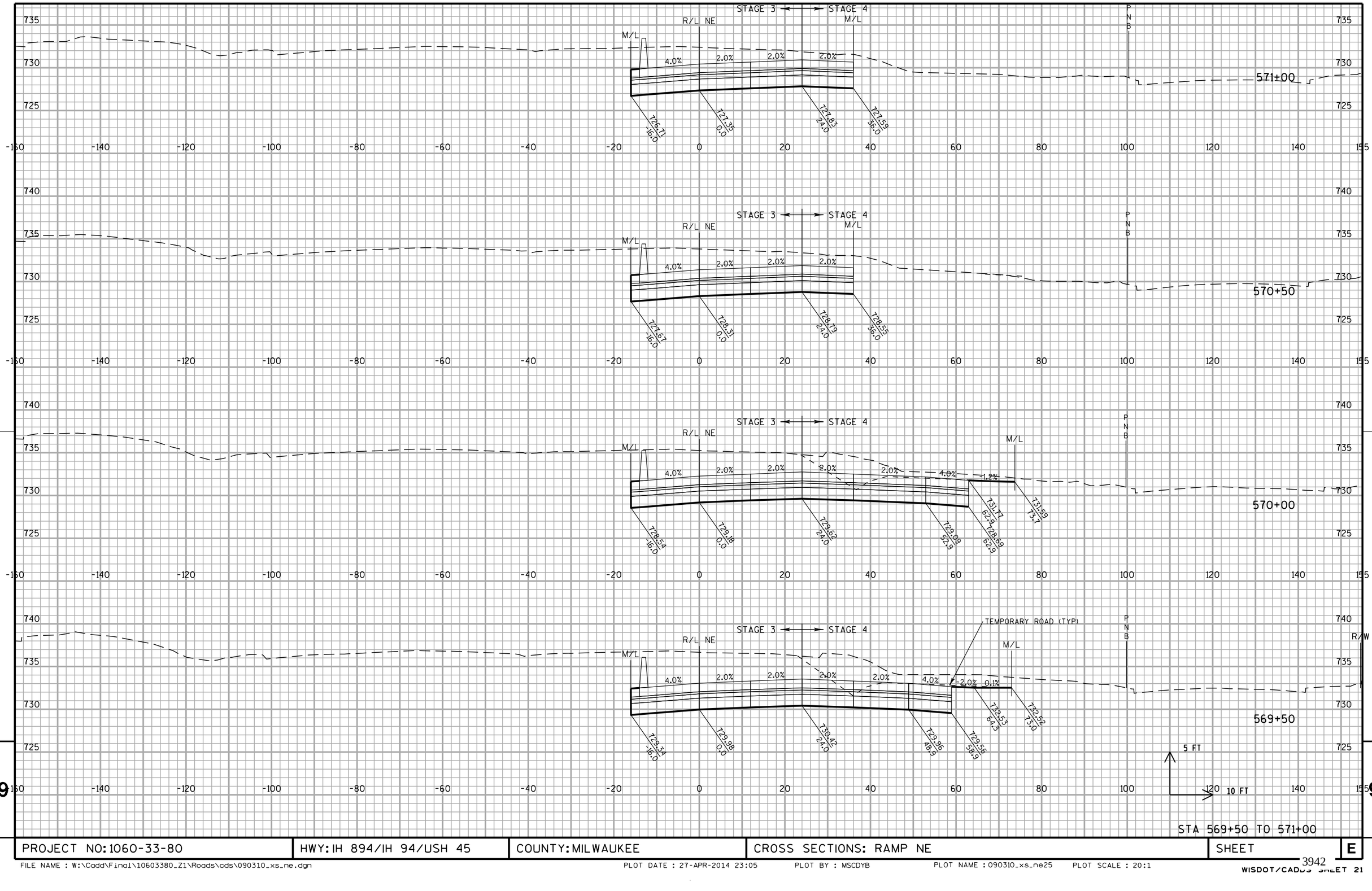
STA 566+50 TO 567+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne23 PLOT SCALE : 20:1

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

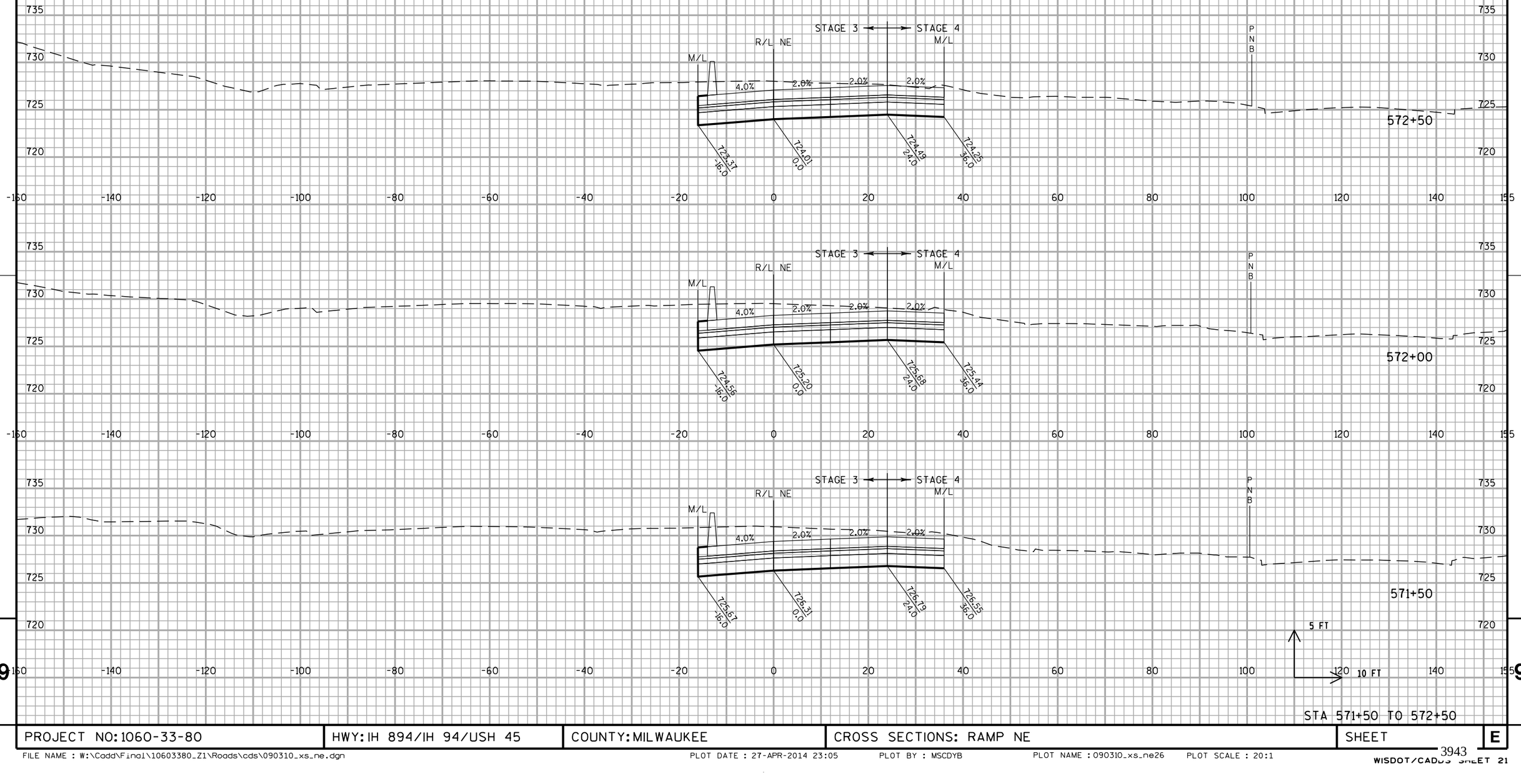
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne24 PLOT SCALE : 20:1



STA 569+50 TO 571+00

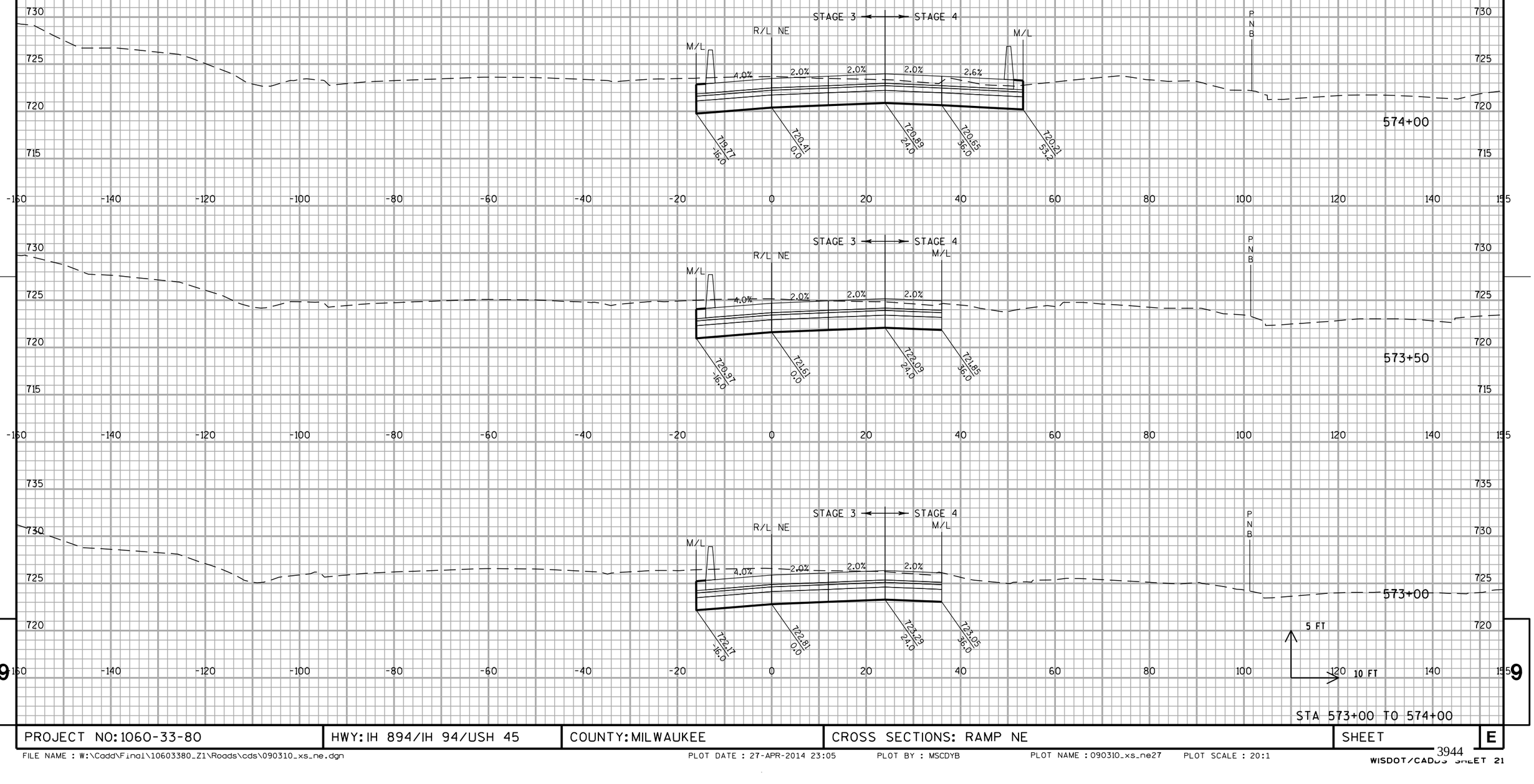
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

9 9



STA 571+50 TO 572+50

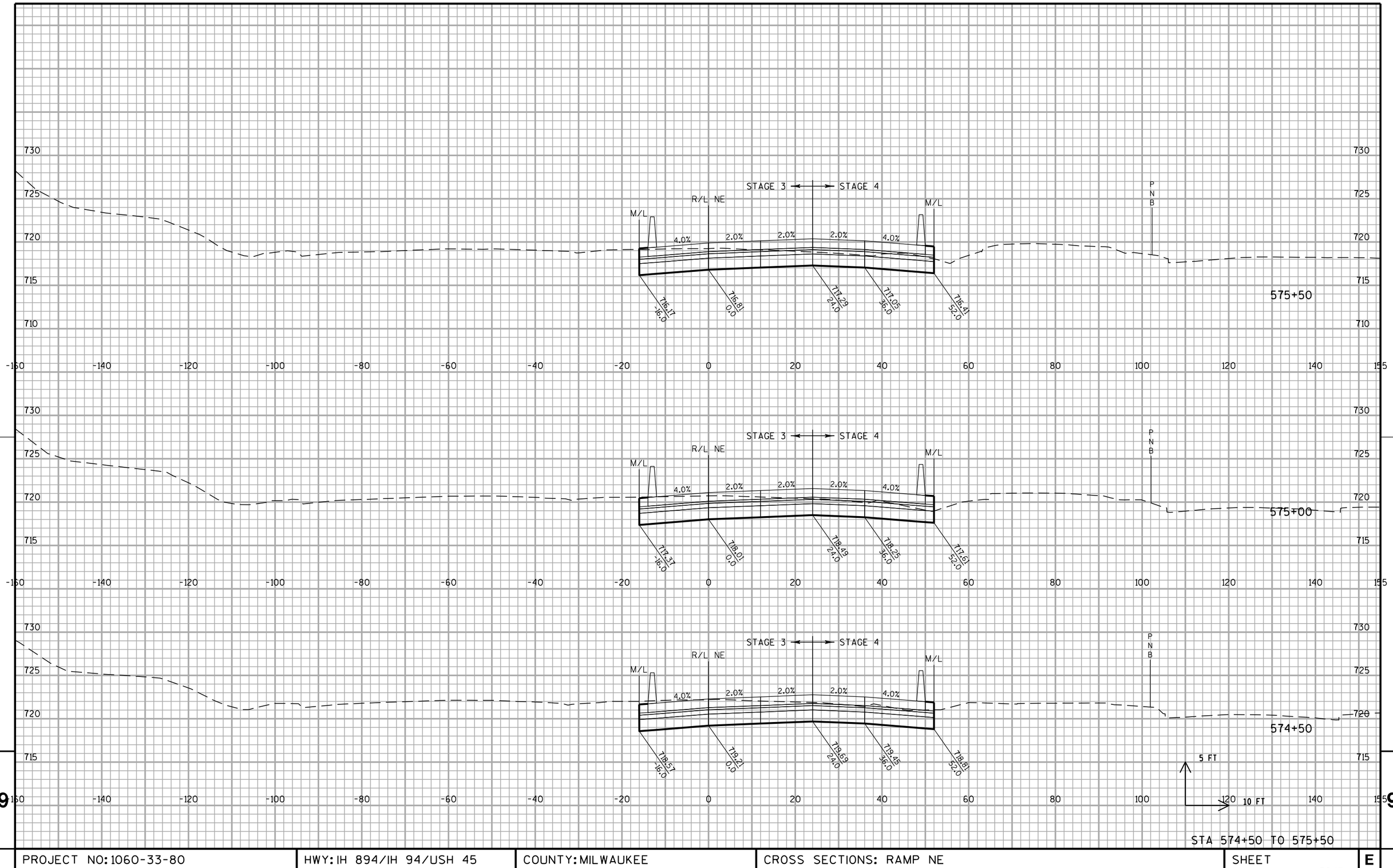
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E



STA 573+00 TO 574+00

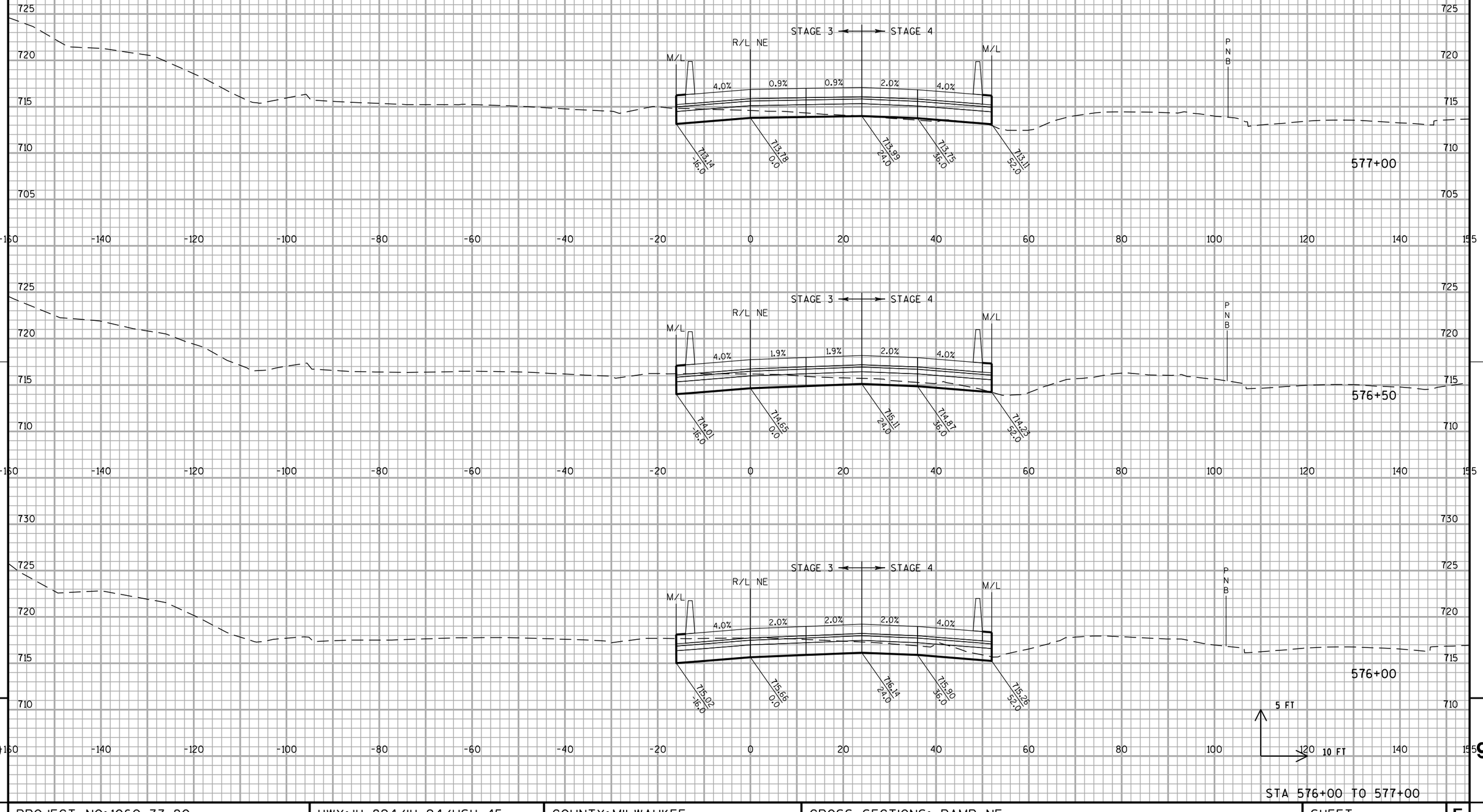
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne27 PLOT SCALE : 20:1



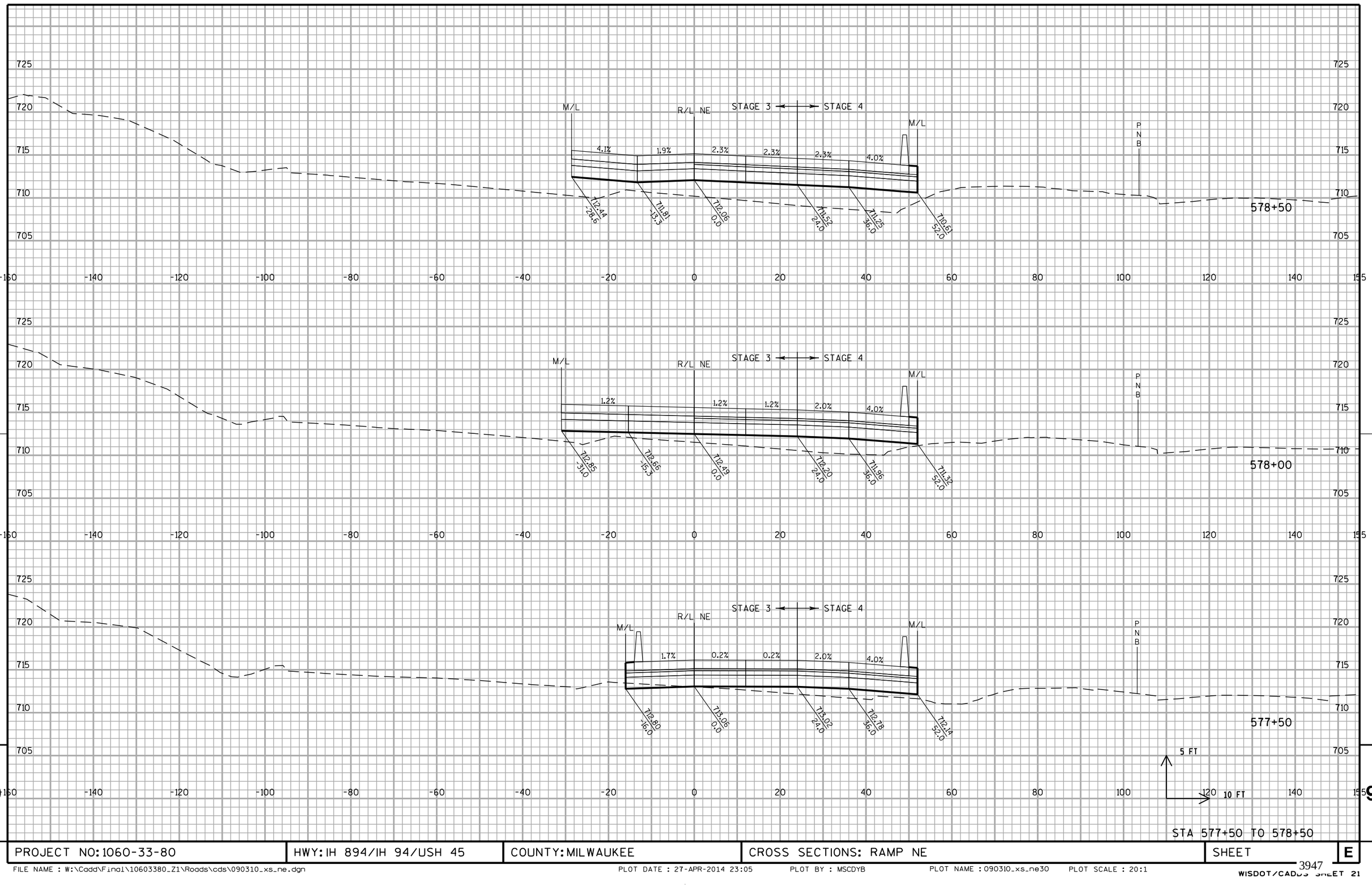
STA 574+50 TO 575+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

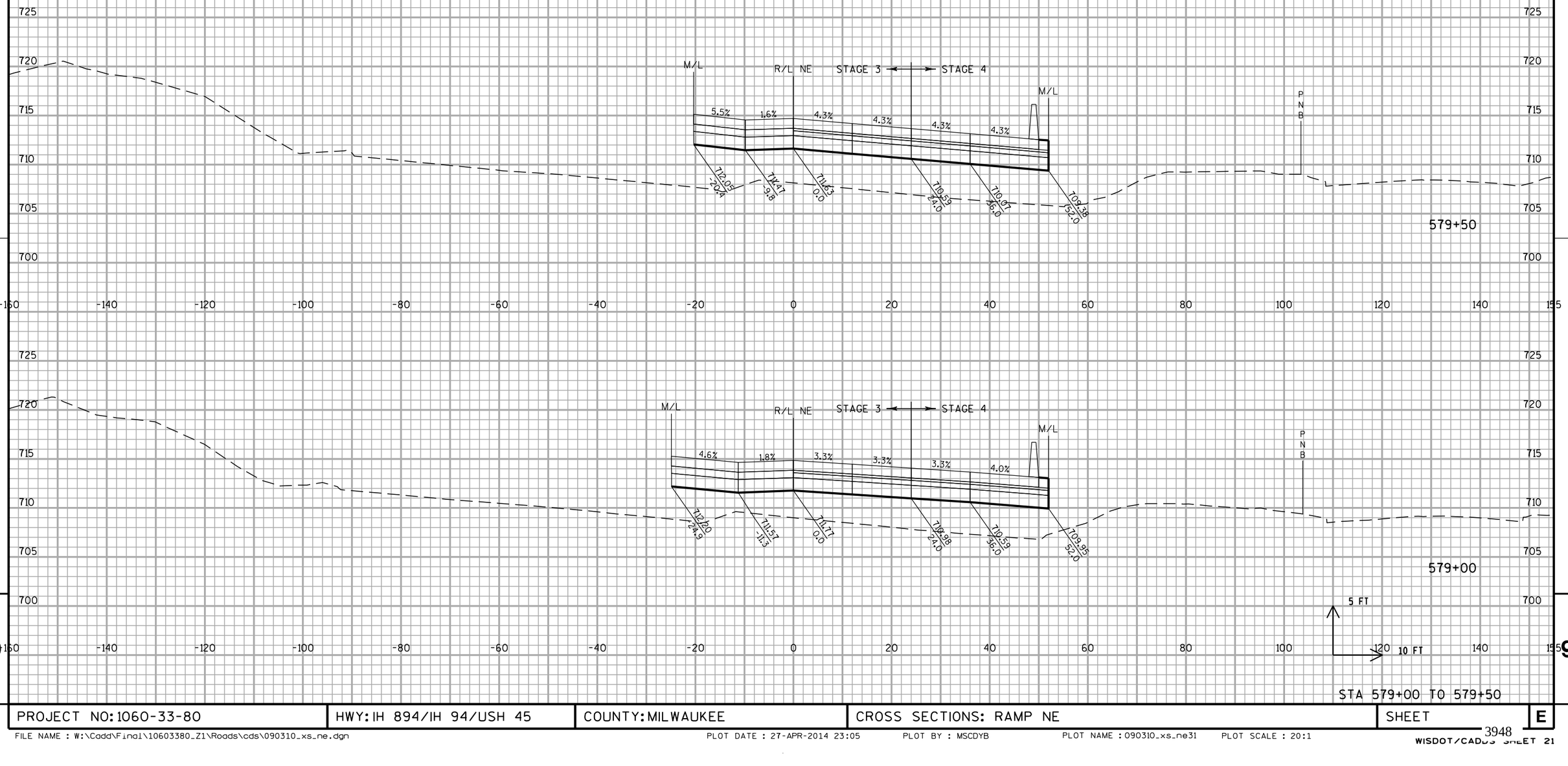
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne29 PLOT SCALE : 20:1



STA 577+50 TO 578+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

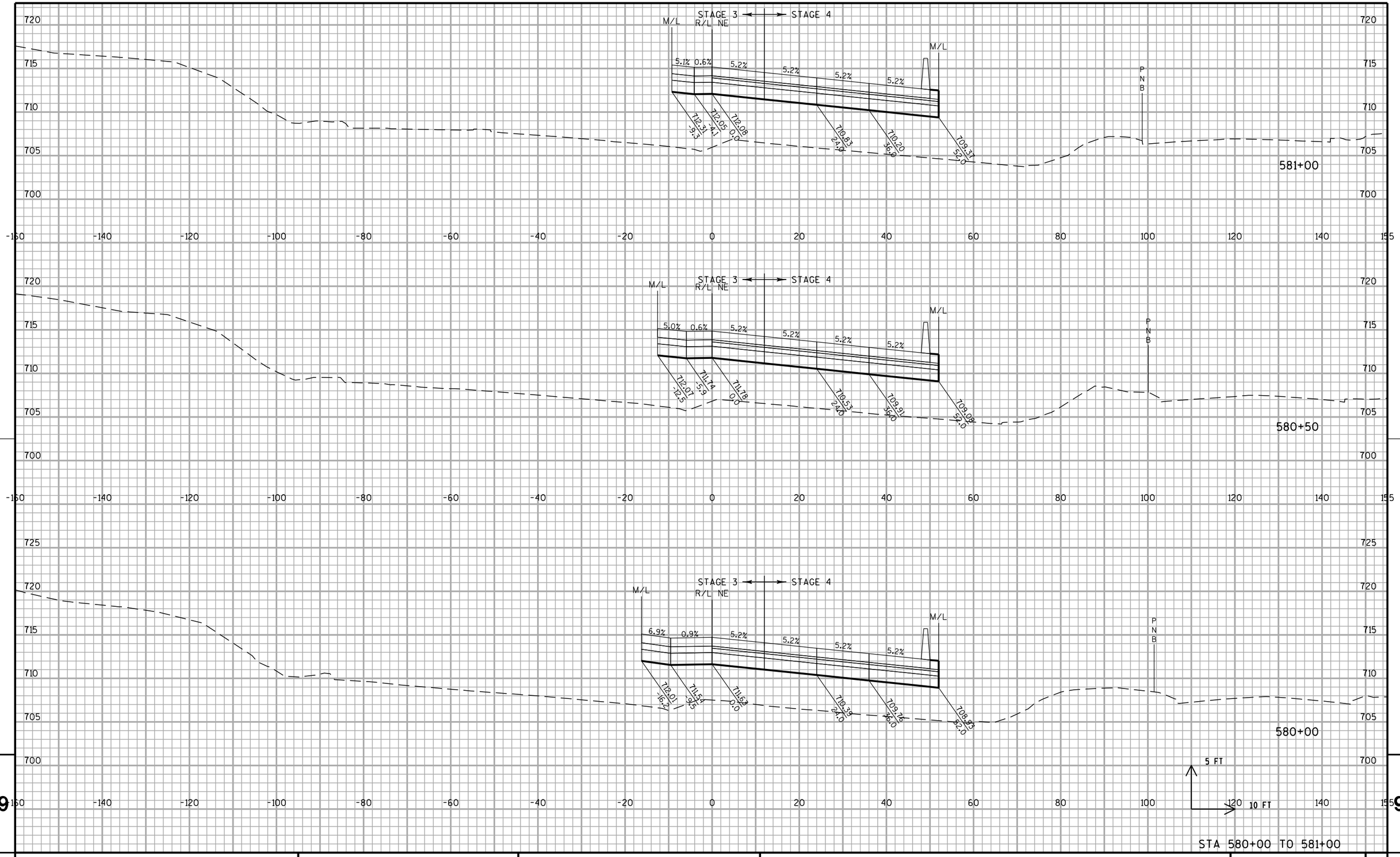
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090310_xs_ne.dgn PLOT DATE : 27-APR-2014 23:05 PLOT BY : MSCDYB PLOT NAME : 090310_xs_ne30 PLOT SCALE : 20:1



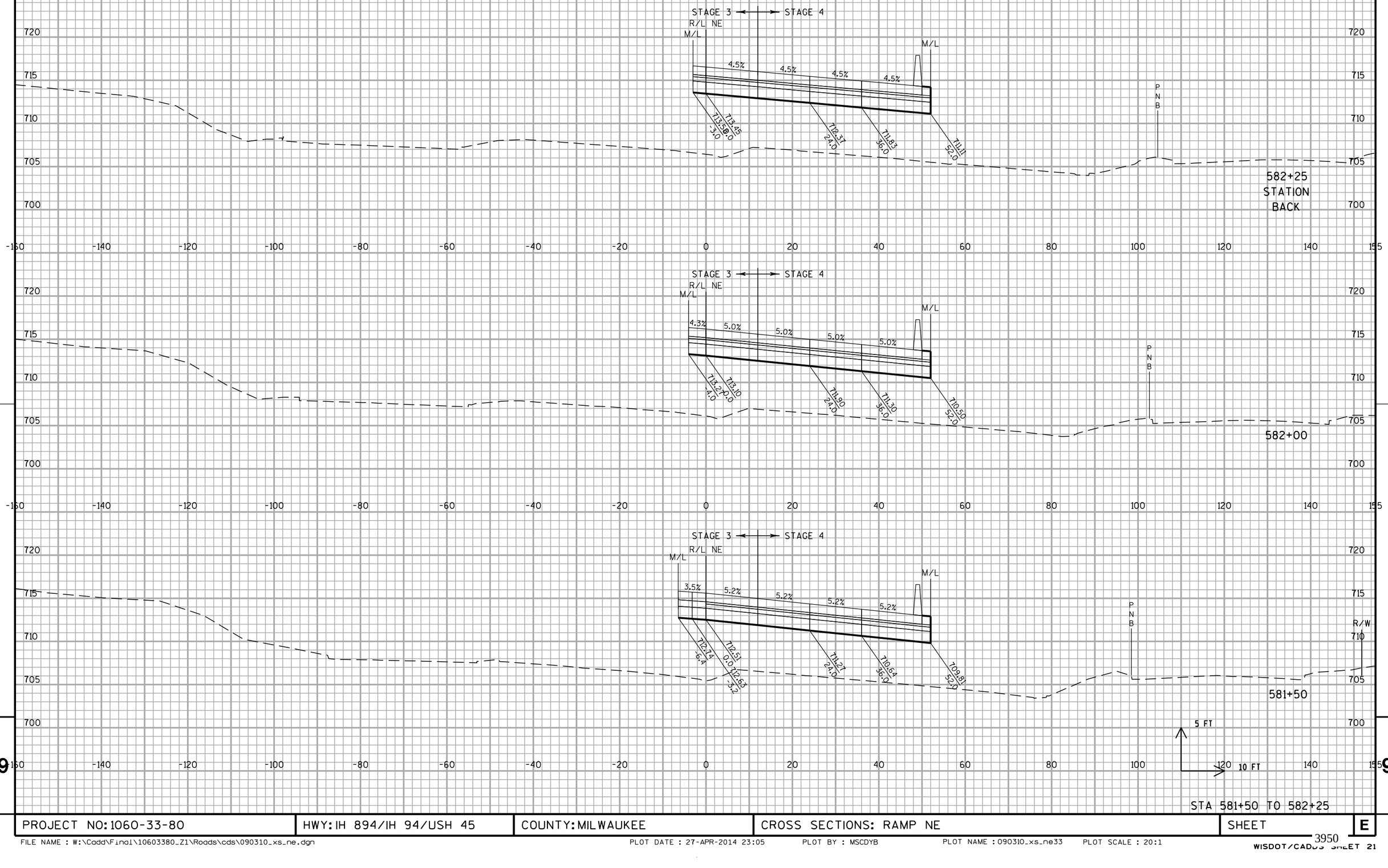
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

STA 579+00 TO 579+50



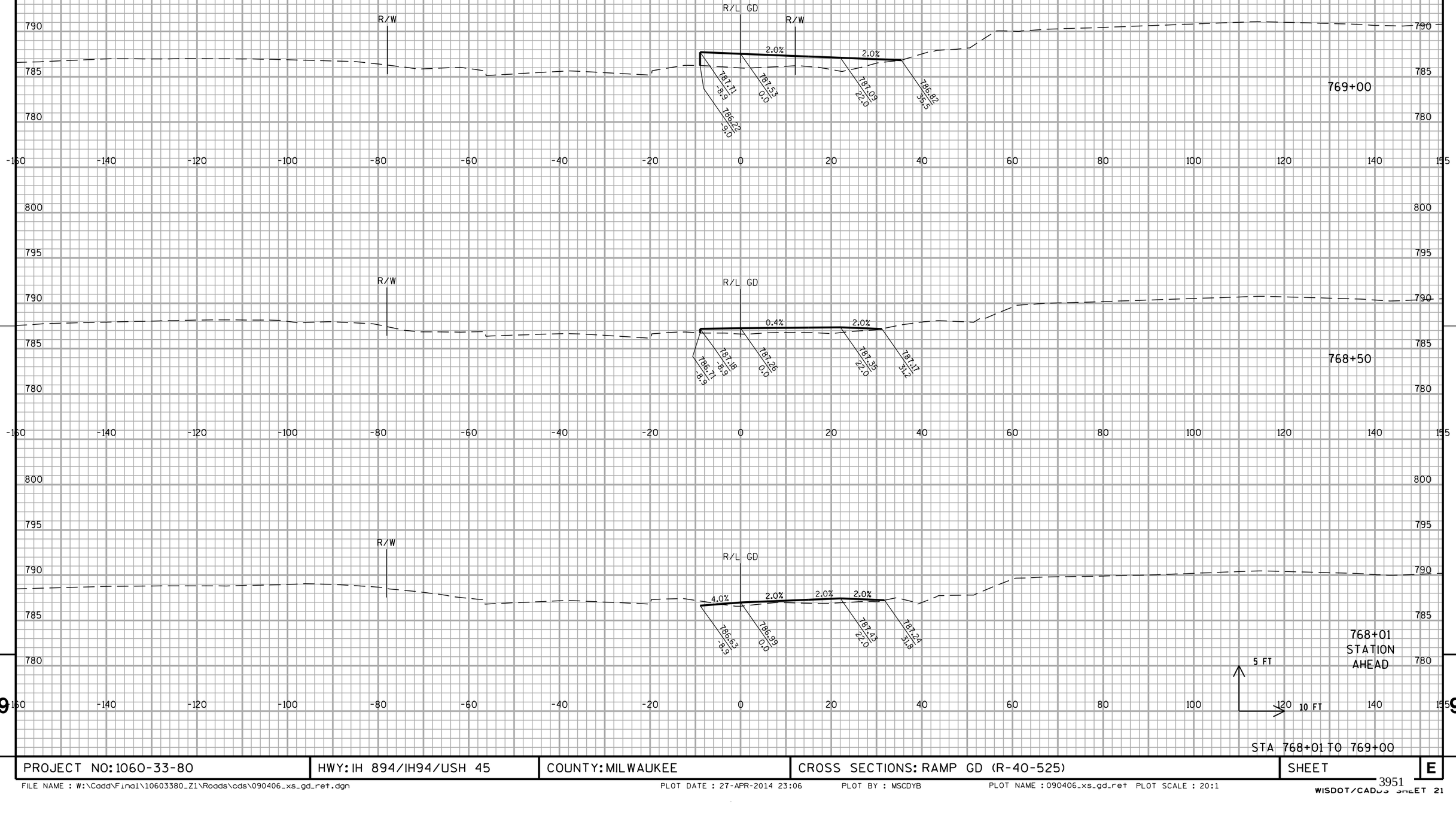
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E



STA 581+50 TO 582+25

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NE	SHEET	E

ALL WORK STAGE 2



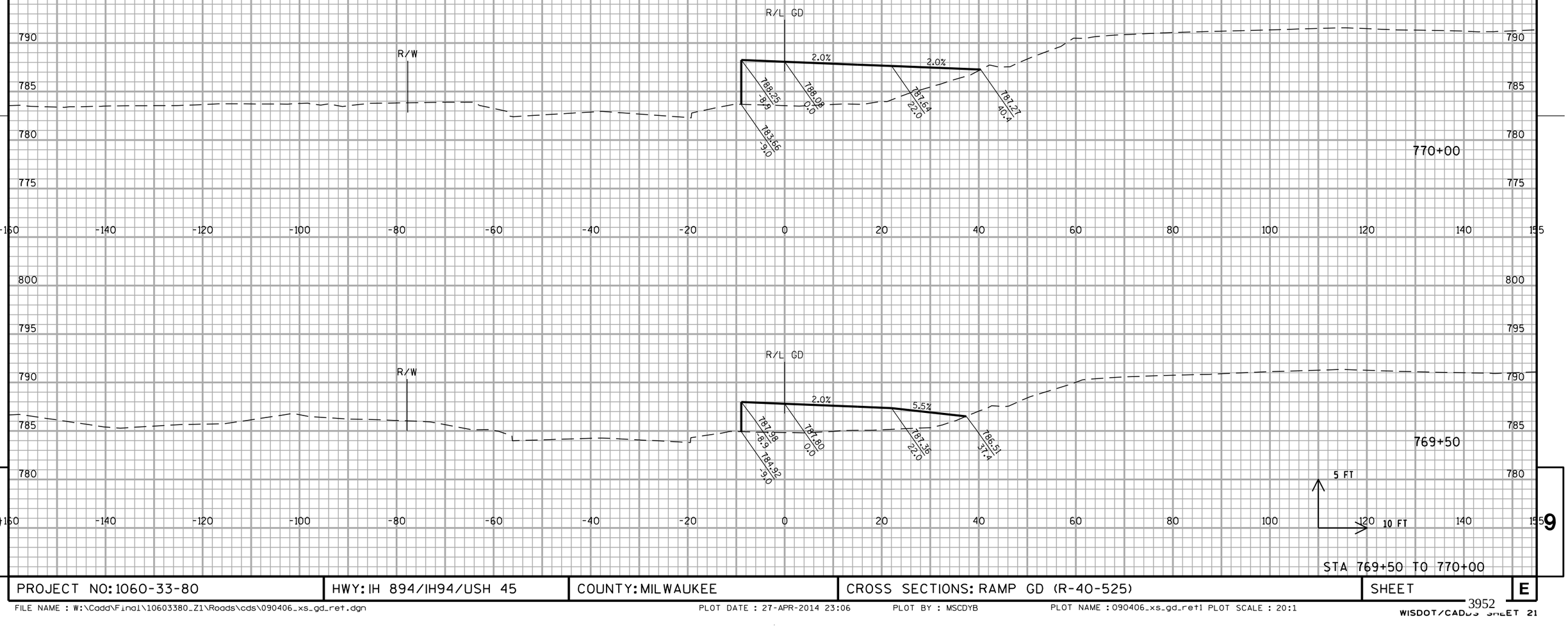
STA 768+01 TO 769+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

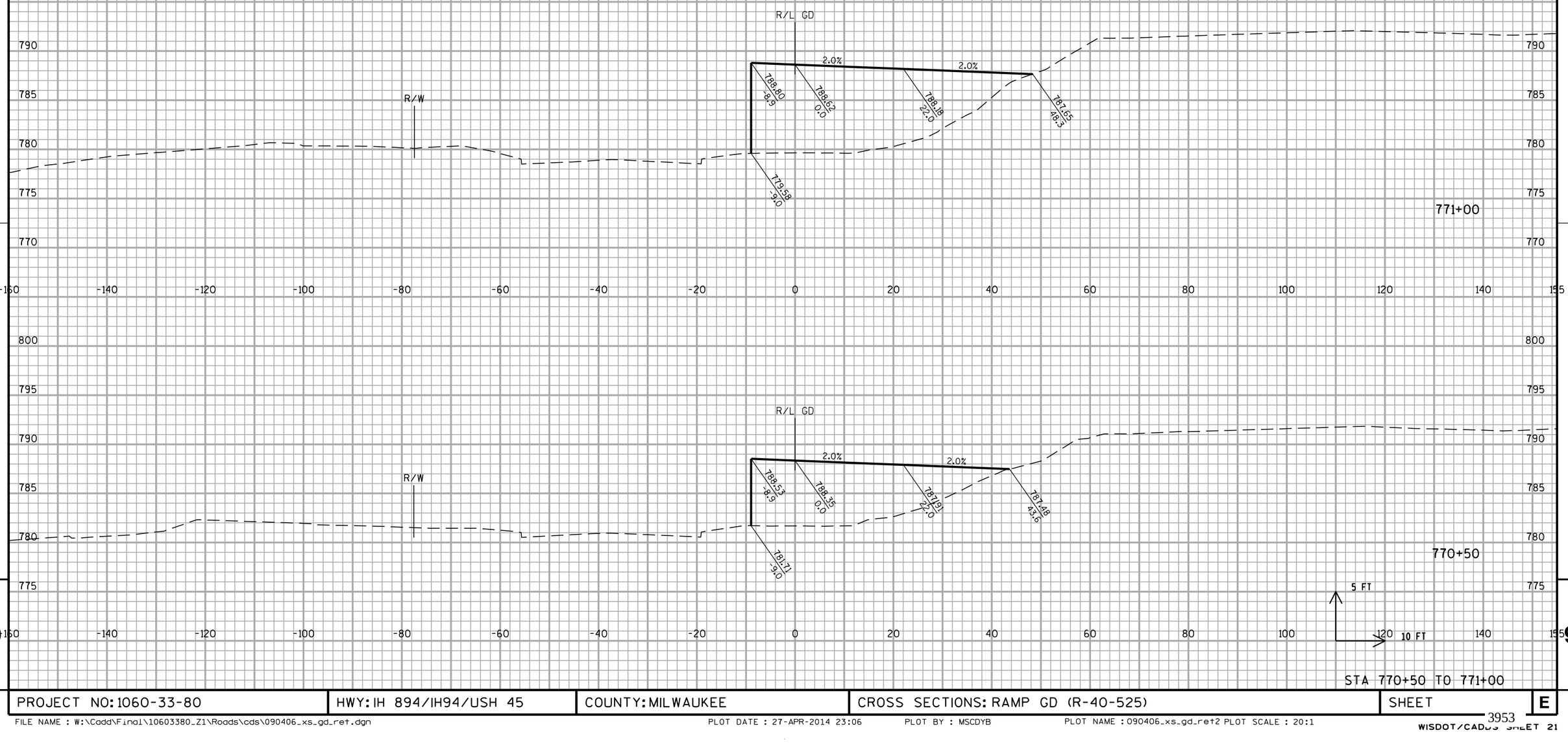


STA 769+50 TO 770+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret1 PLOT SCALE : 20:1

ALL WORK STAGE 2



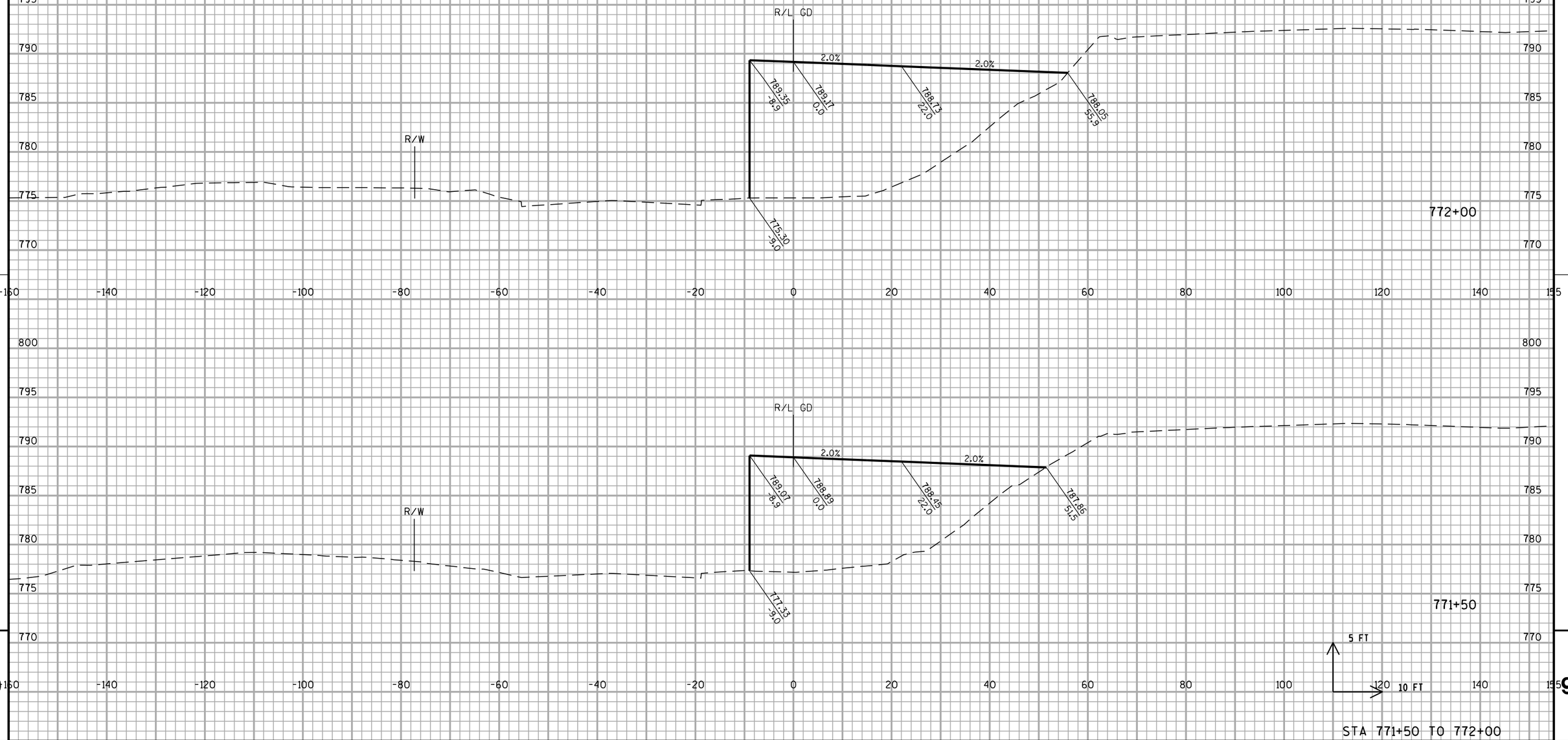
STA 770+50 TO 771+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

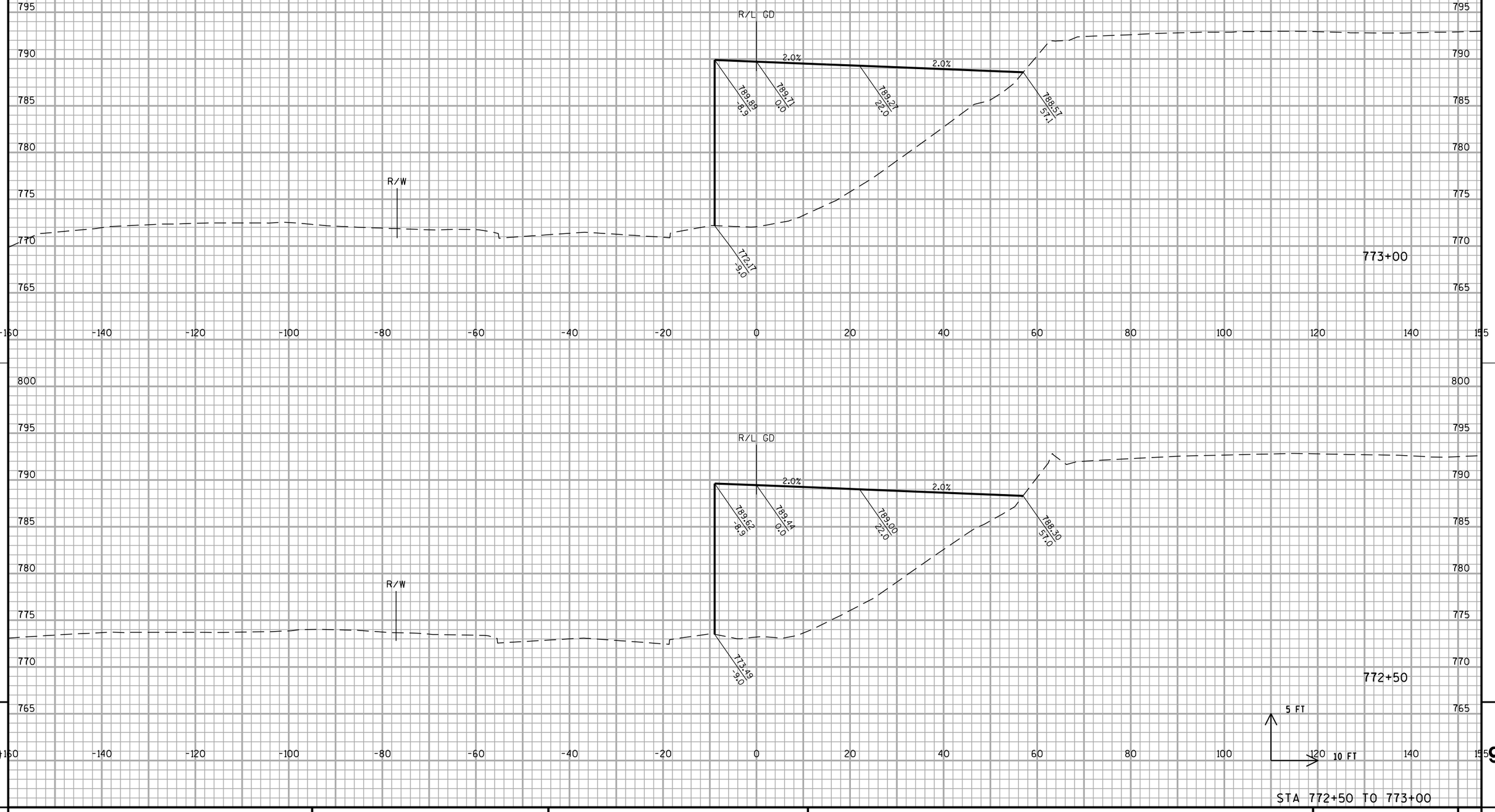
ALL WORK STAGE 2



STA 771+50 TO 772+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

ALL WORK STAGE 2

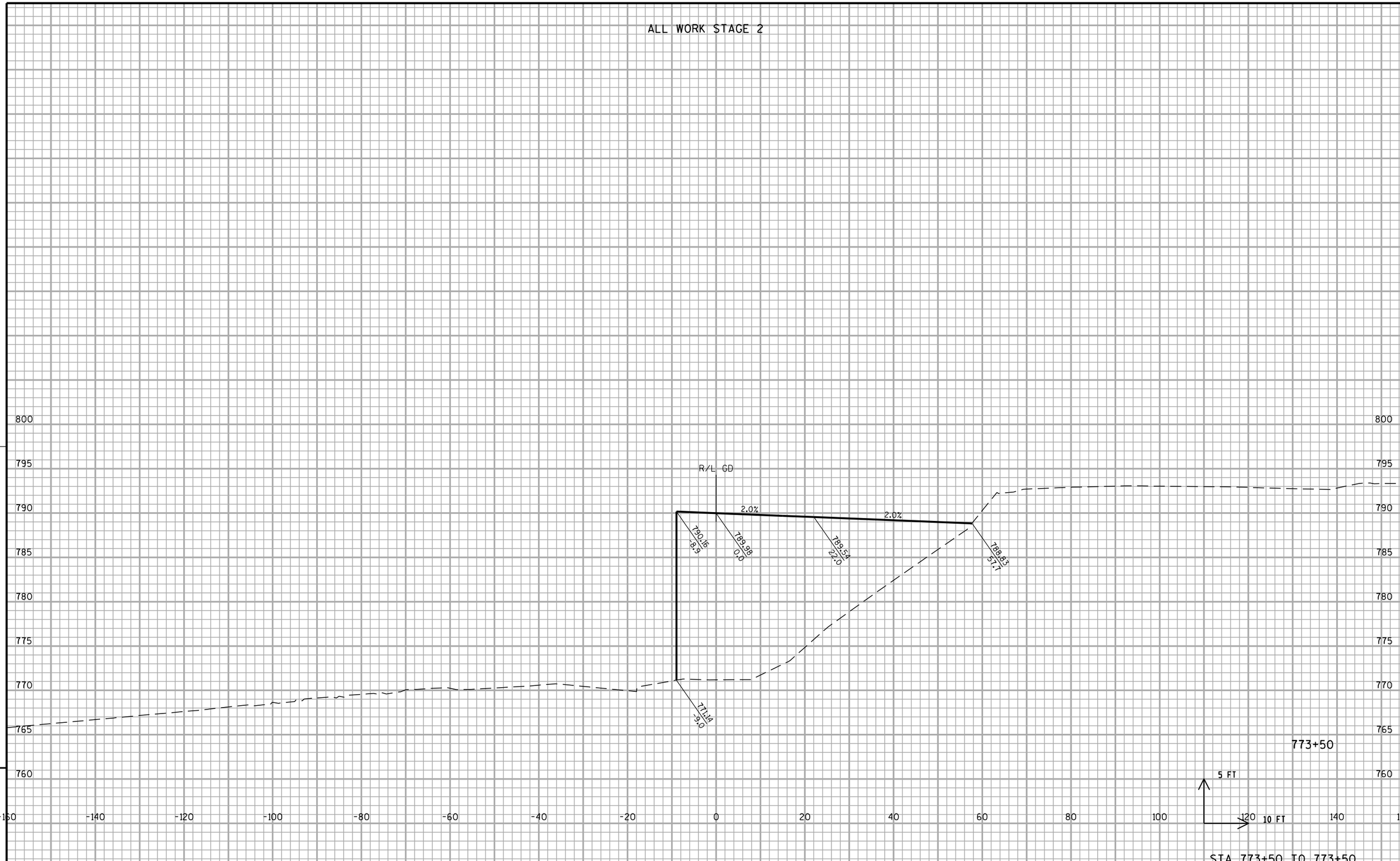


STA 772+50 TO 773+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

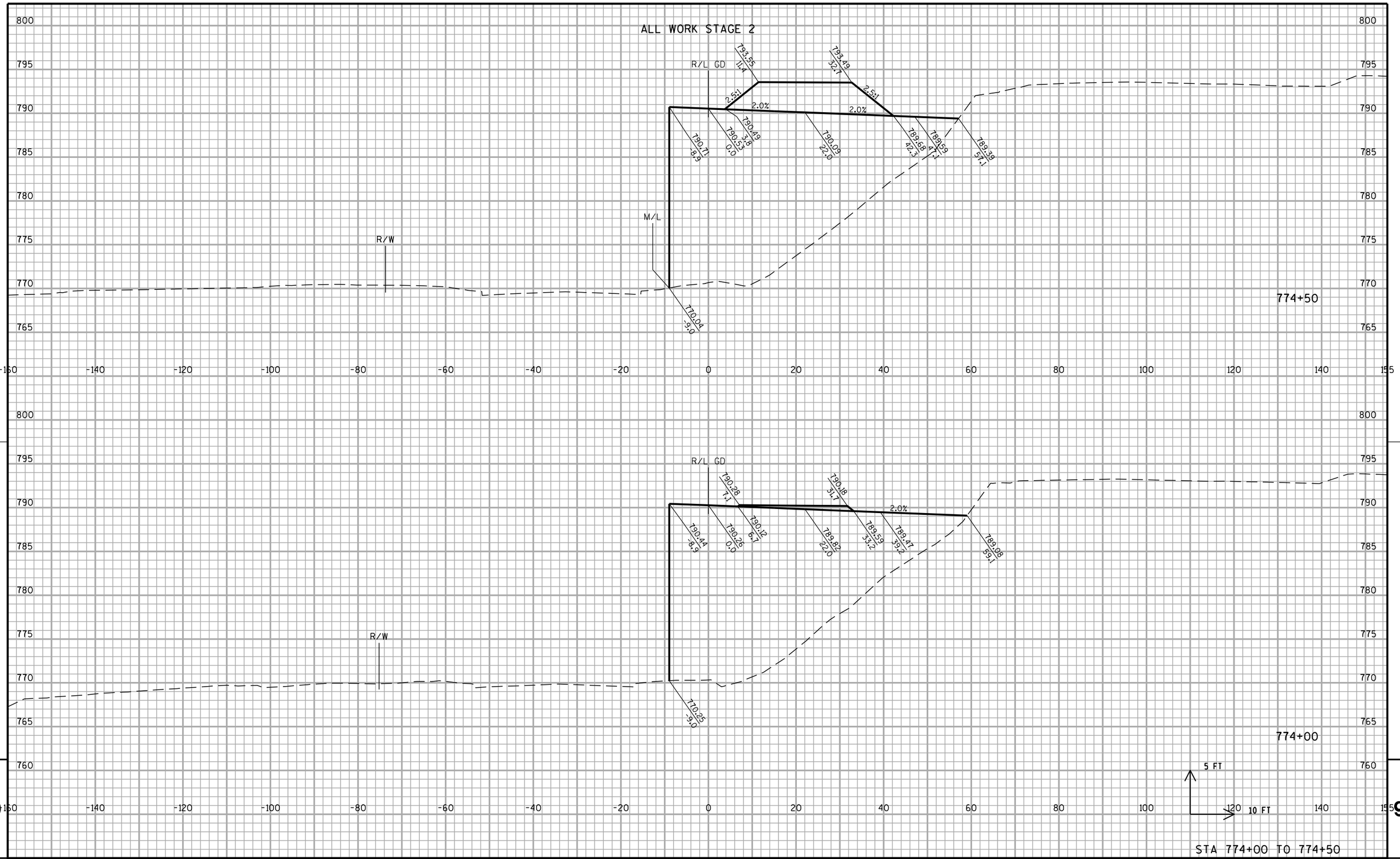
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret4 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 773+50 TO 773+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

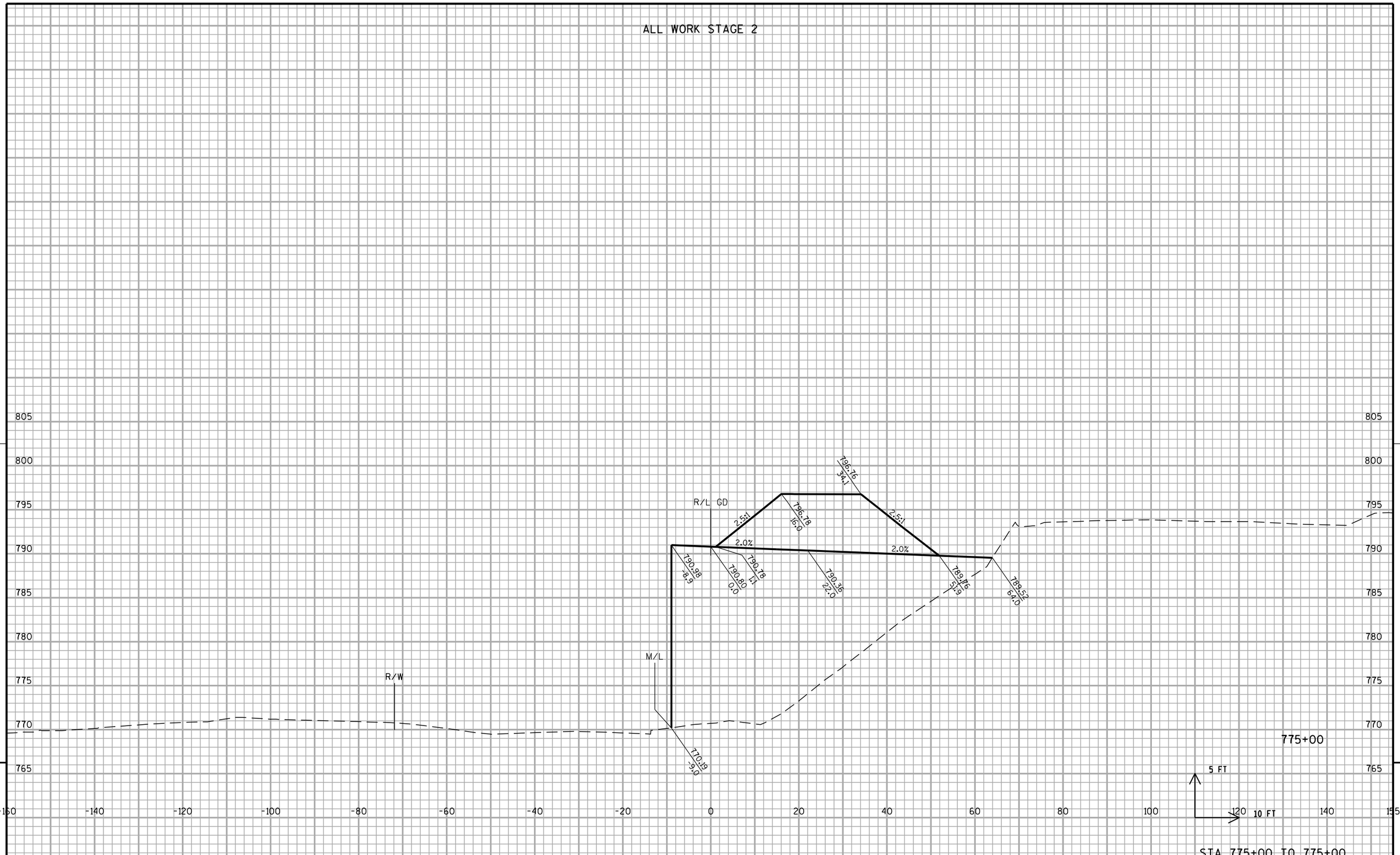


STA 774+00 TO 774+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret6 PLOT SCALE : 20:1

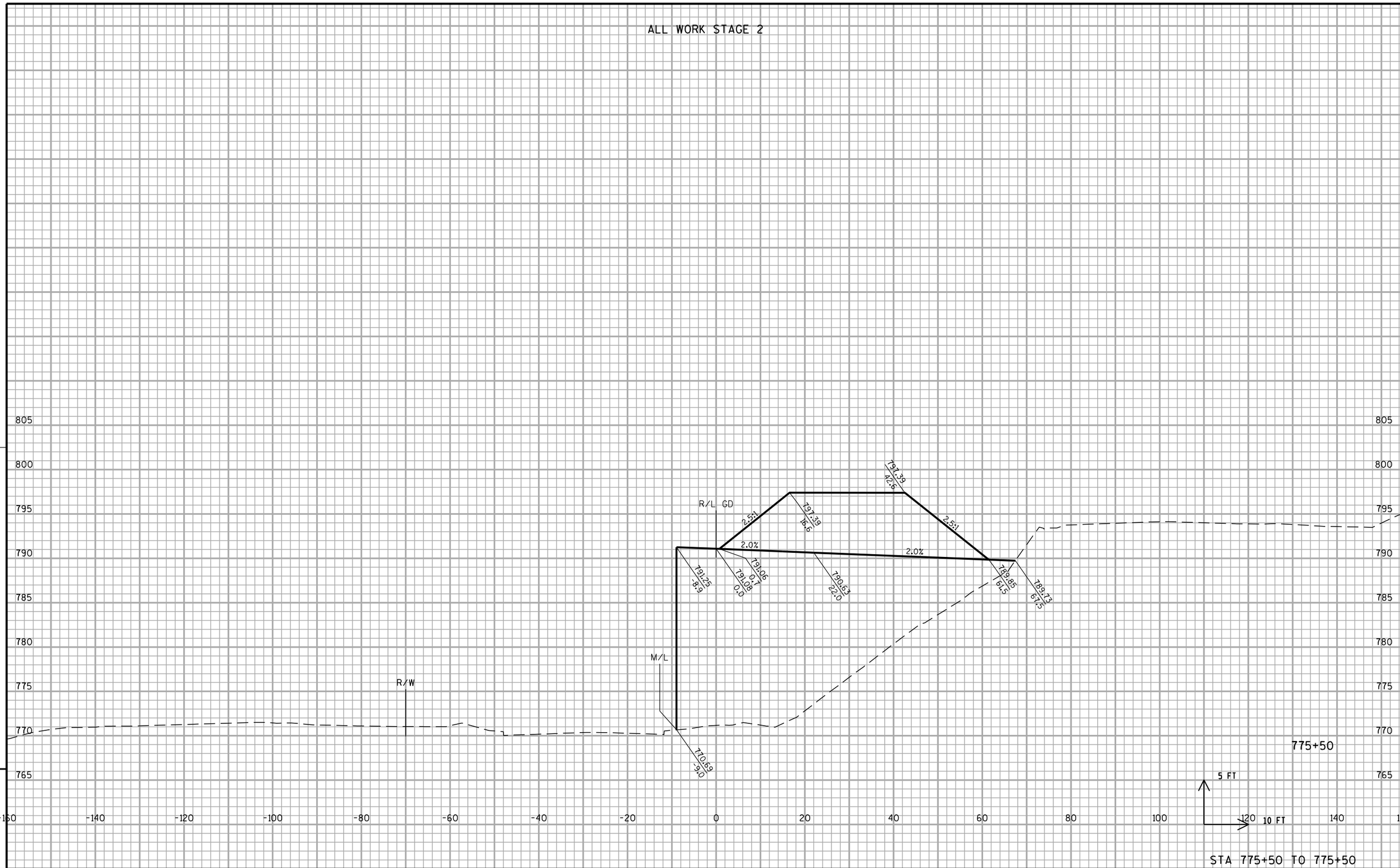
ALL WORK STAGE 2



STA 775+00 TO 775+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

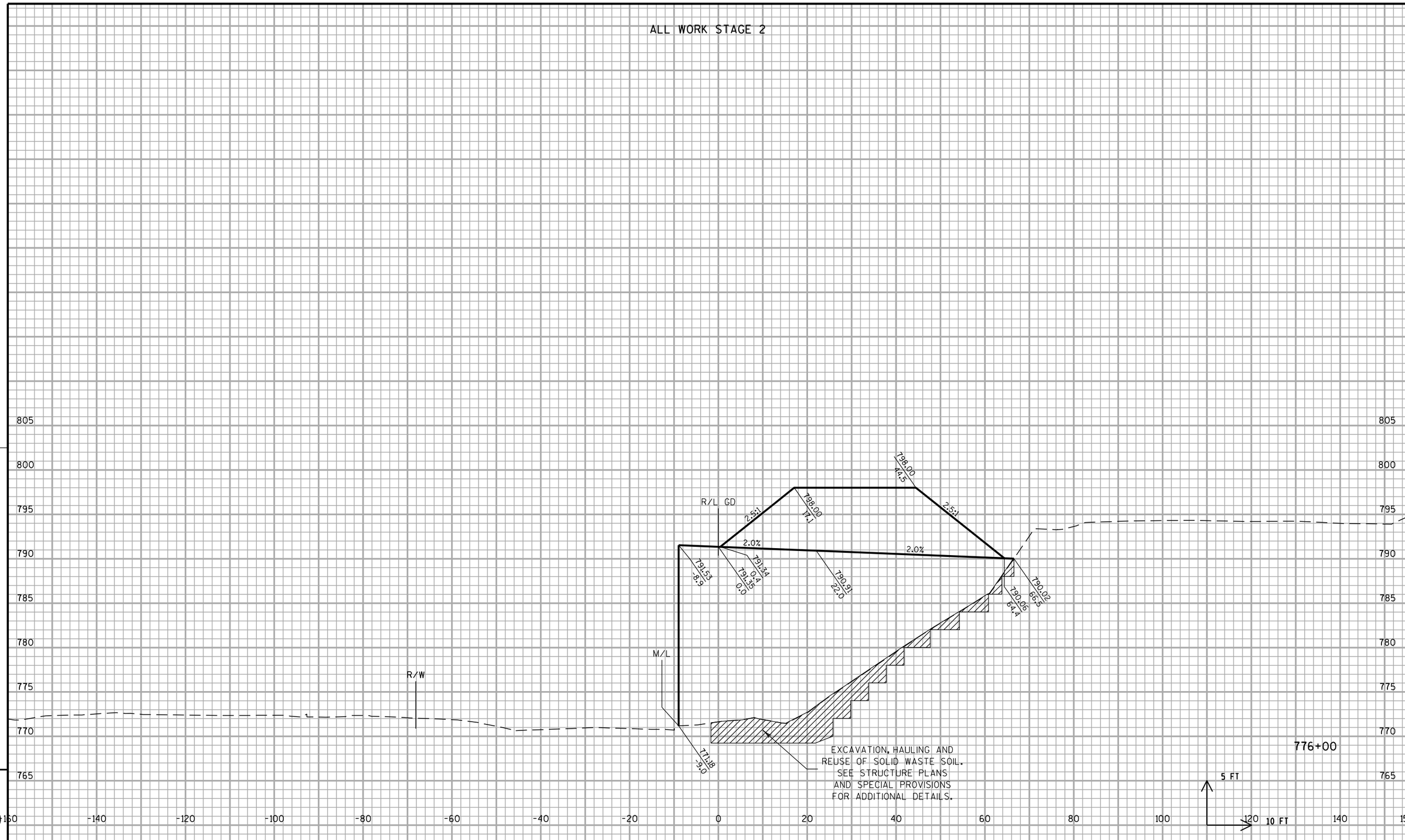
ALL WORK STAGE 2



STA 775+50 TO 775+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

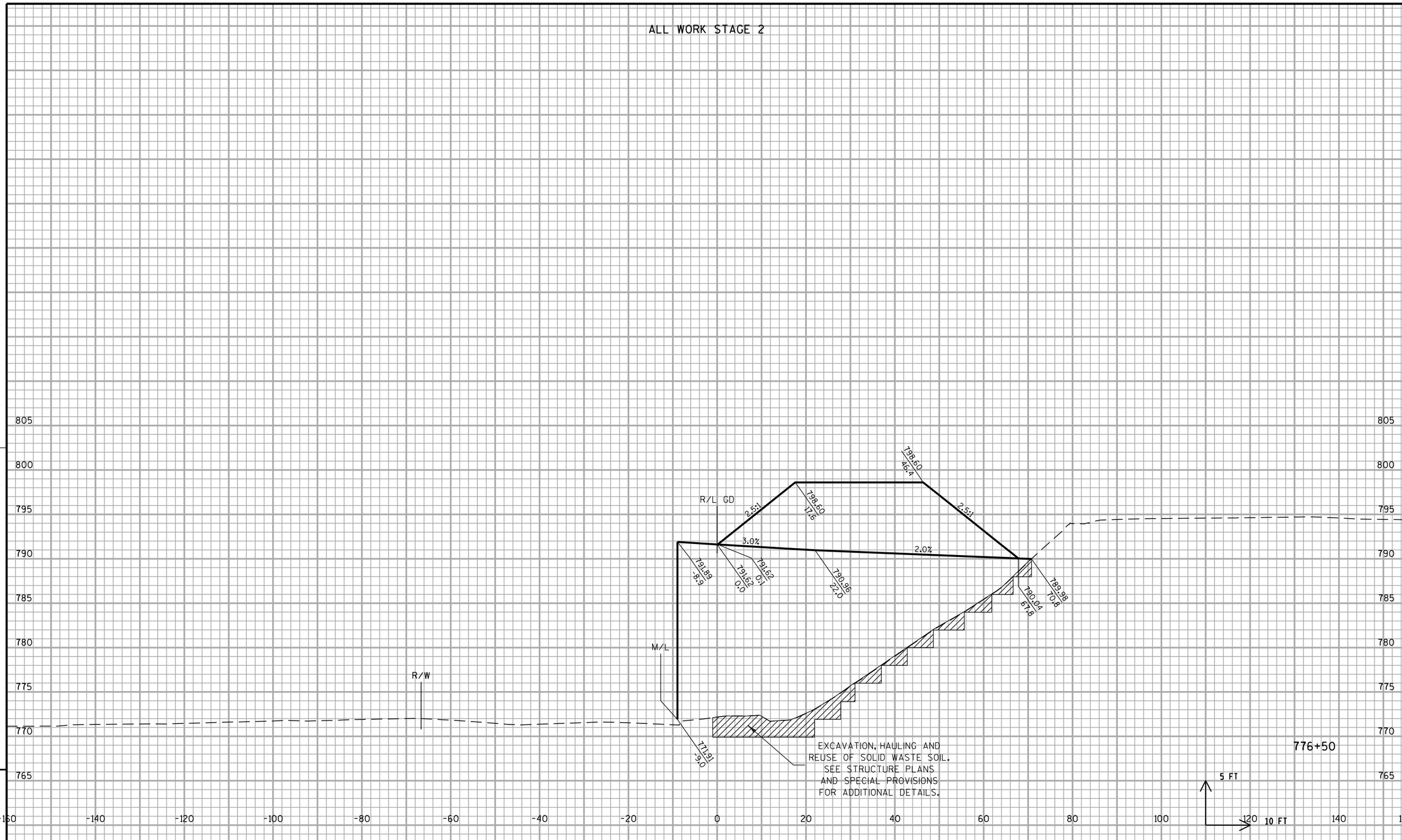
ALL WORK STAGE 2



STA 776+00 TO 776+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

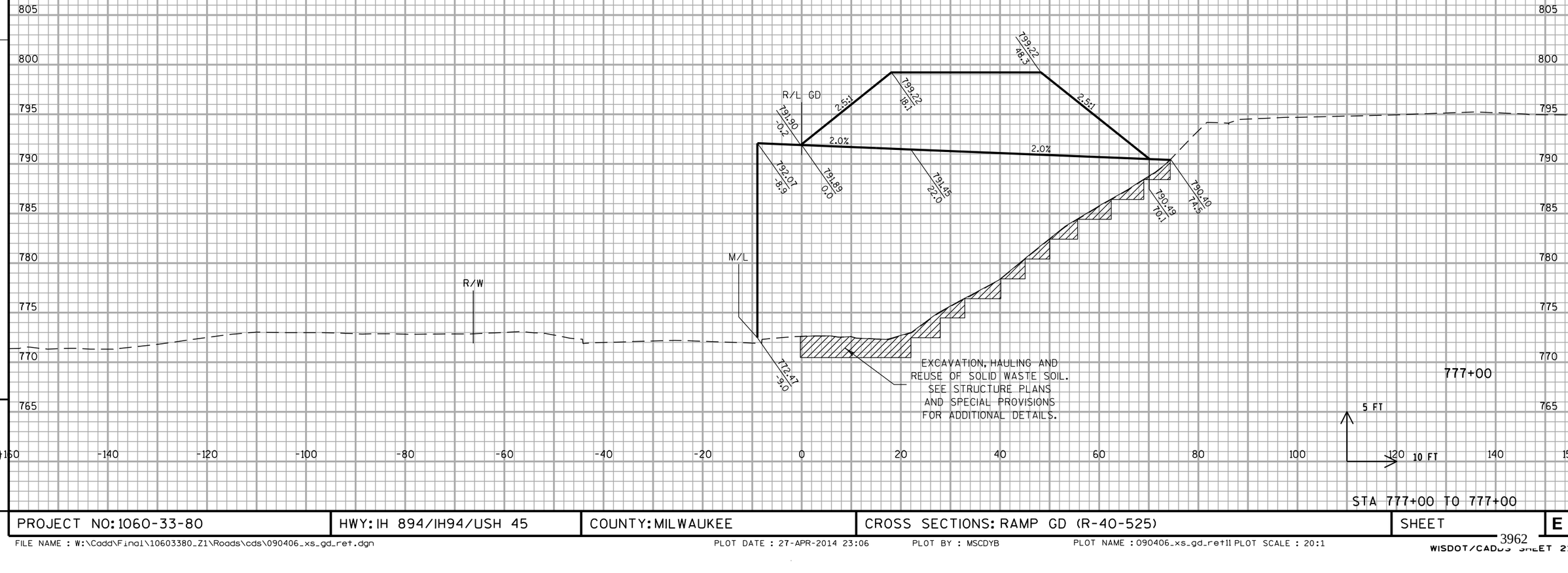
ALL WORK STAGE 2



STA 776+50 TO 776+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

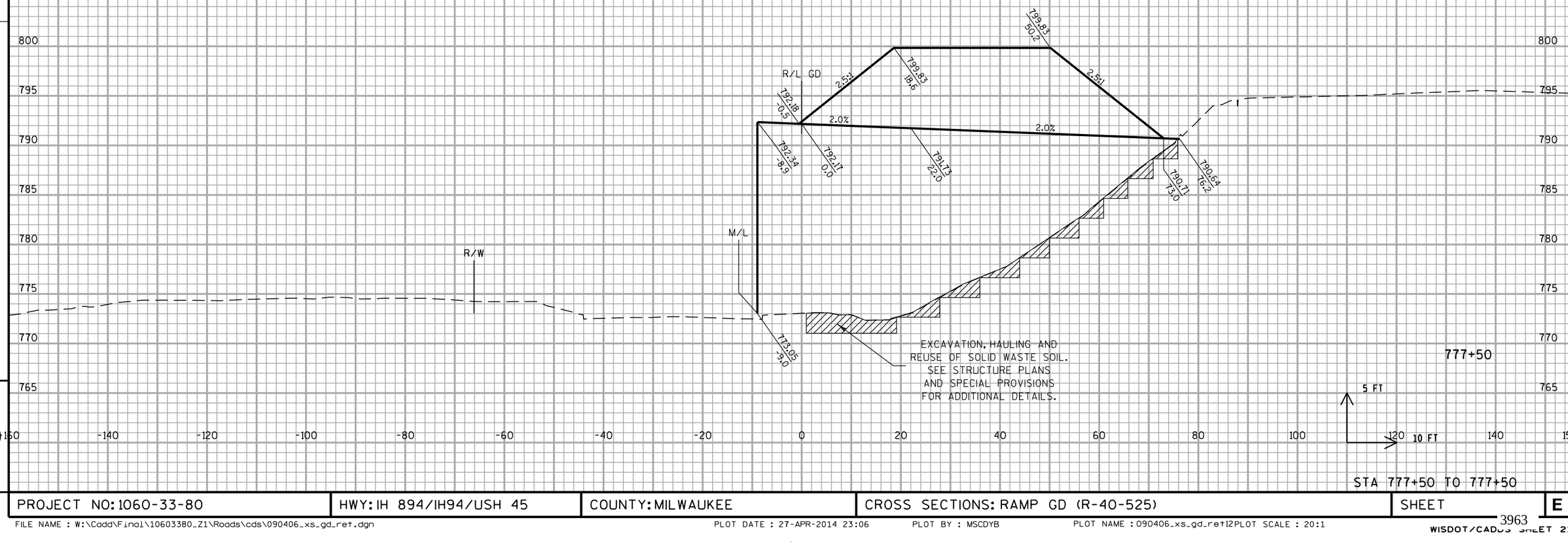
ALL WORK STAGE 2



STA 777+00 TO 777+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

ALL WORK STAGE 2

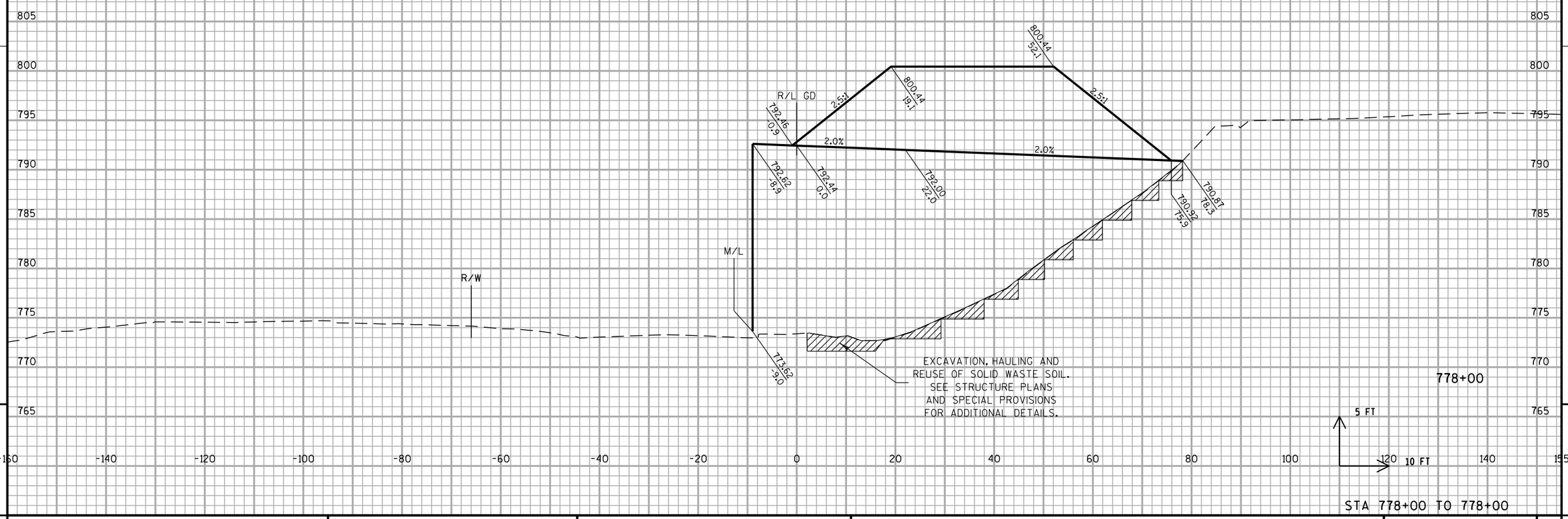


STA 777+50 TO 777+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret12PLOT SCALE : 20:1

ALL WORK STAGE 2



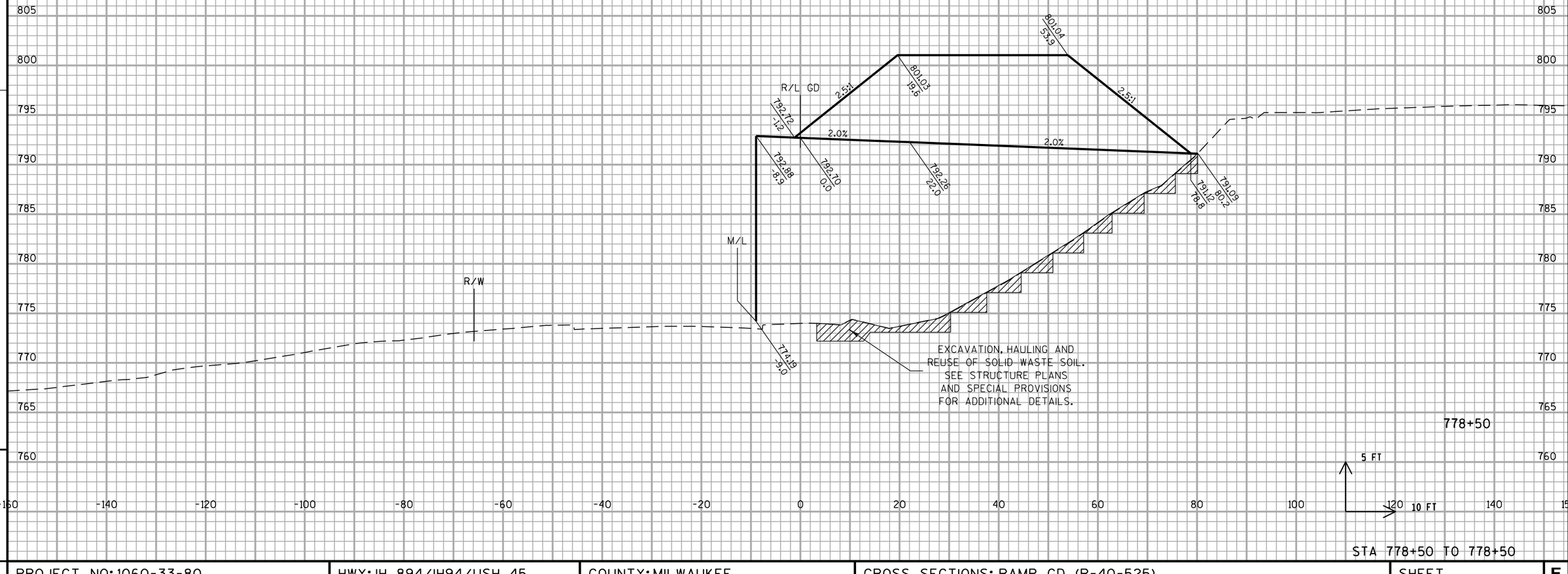
STA 778+00 TO 778+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret13PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

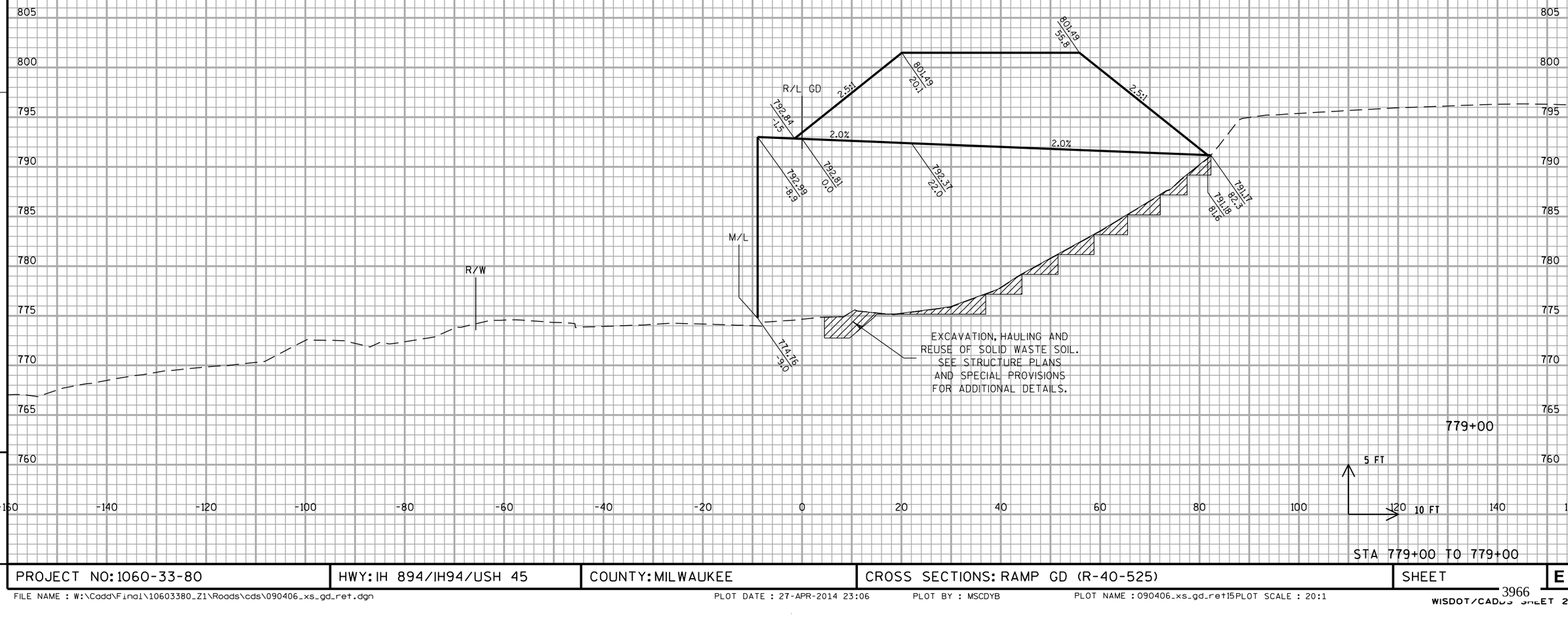
ALL WORK STAGE 2



STA 778+50 TO 778+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

ALL WORK STAGE 2

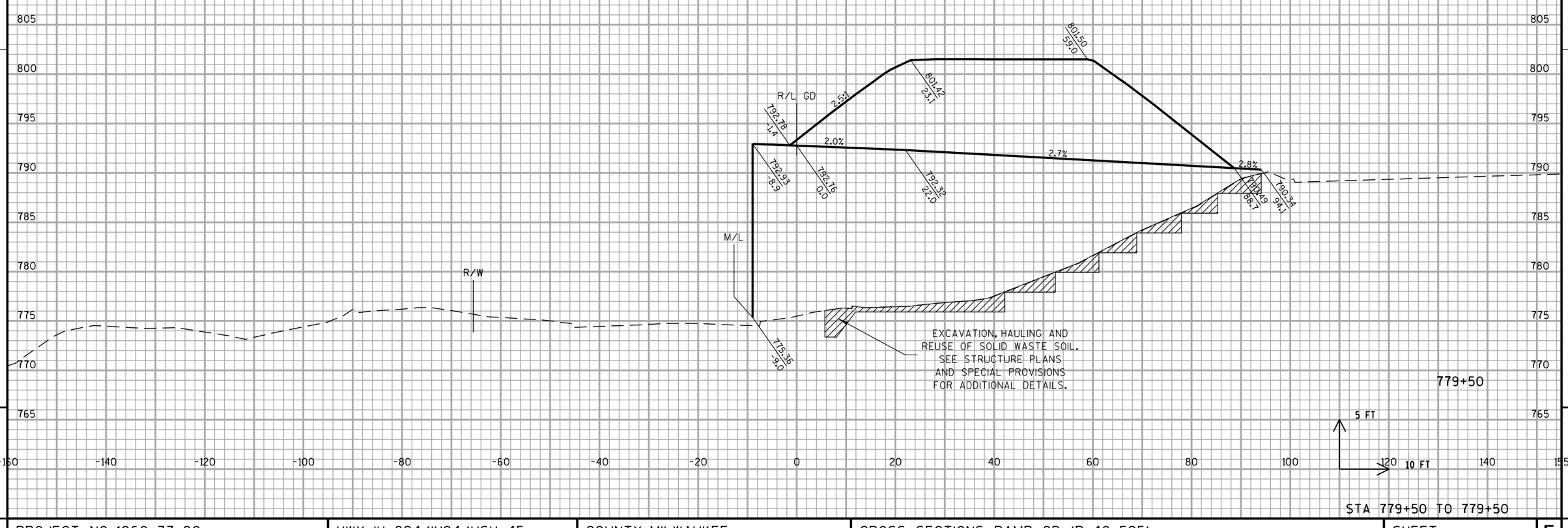


STA 779+00 TO 779+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret15PLOT SCALE : 20:1

ALL WORK STAGE 2

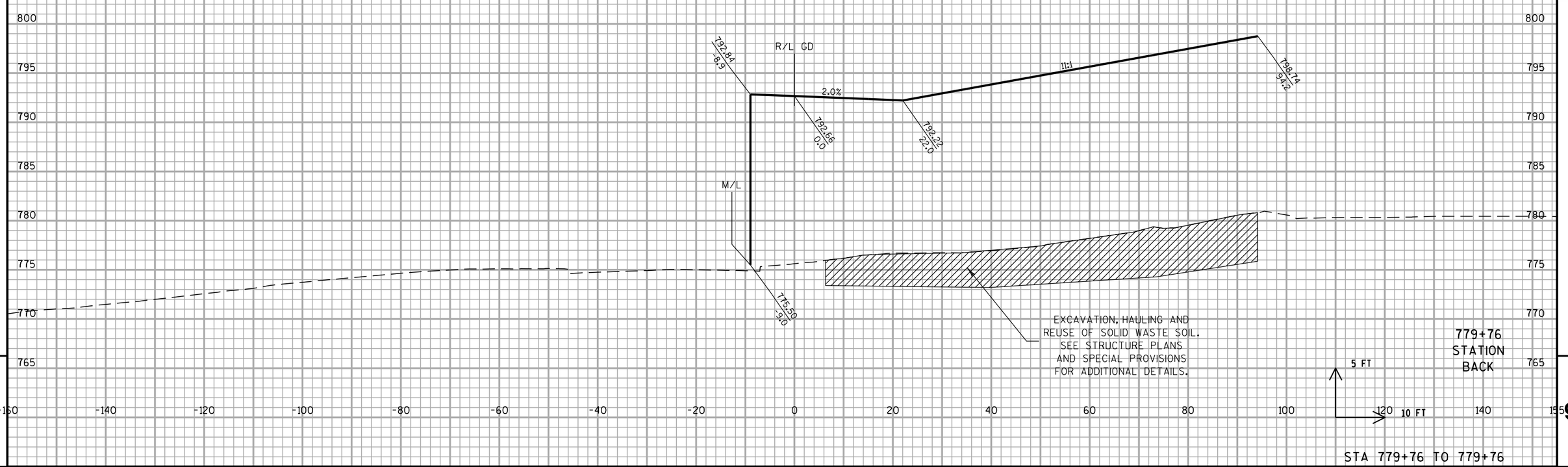


STA 779+50 TO 779+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret16 PLOT SCALE : 20:1

ALL WORK STAGE 2

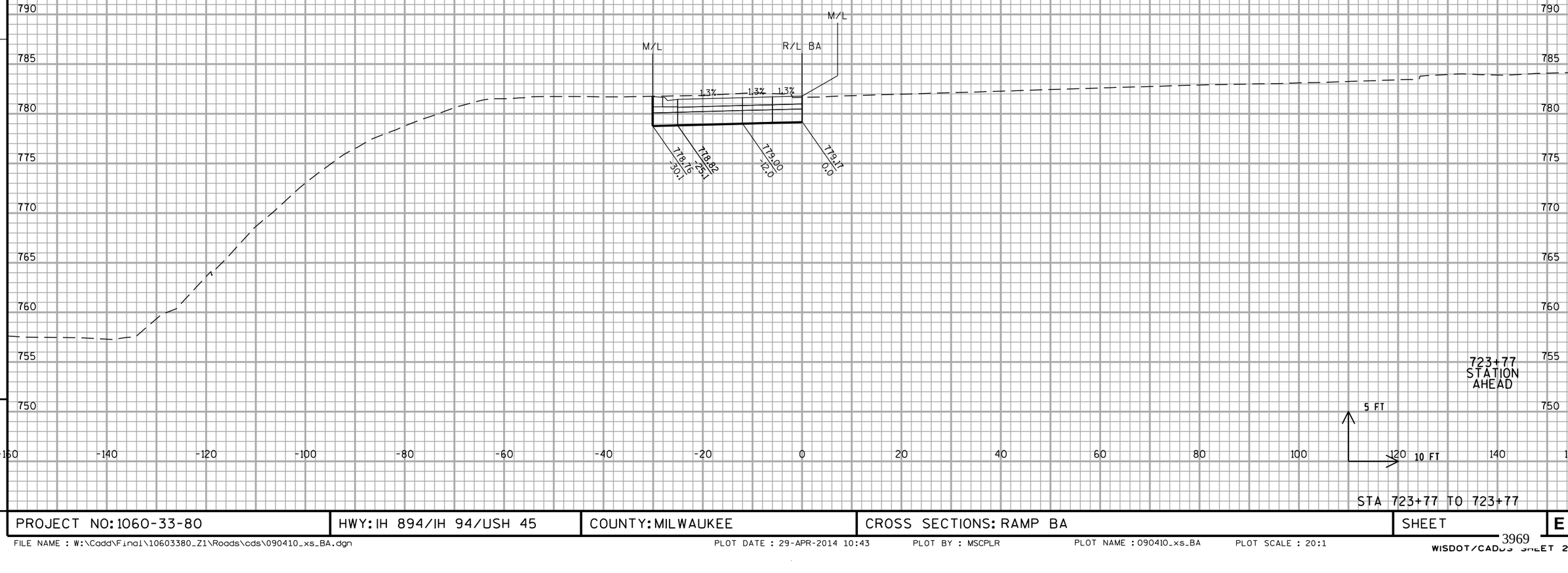


STA 779+76 TO 779+76

PROJECT NO: 1060-33-80	HWY: IH 894/IH94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP GD (R-40-525)	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090406_xs_gd_ret.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090406_xs_gd_ret17 PLOT SCALE : 20:1

ALL WORK STAGE 1

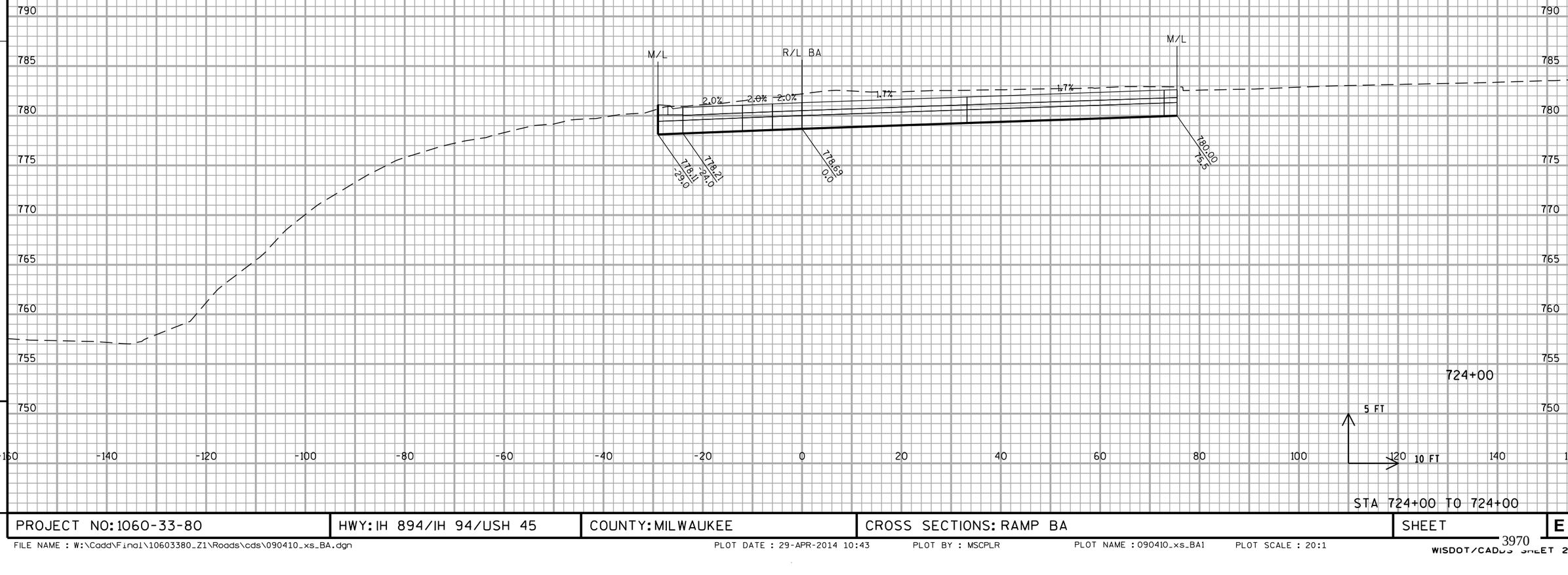


STA 723+77 TO 723+77

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090410_xs_BA.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090410_xs_BA PLOT SCALE : 20:1

ALL WORK STAGE 1



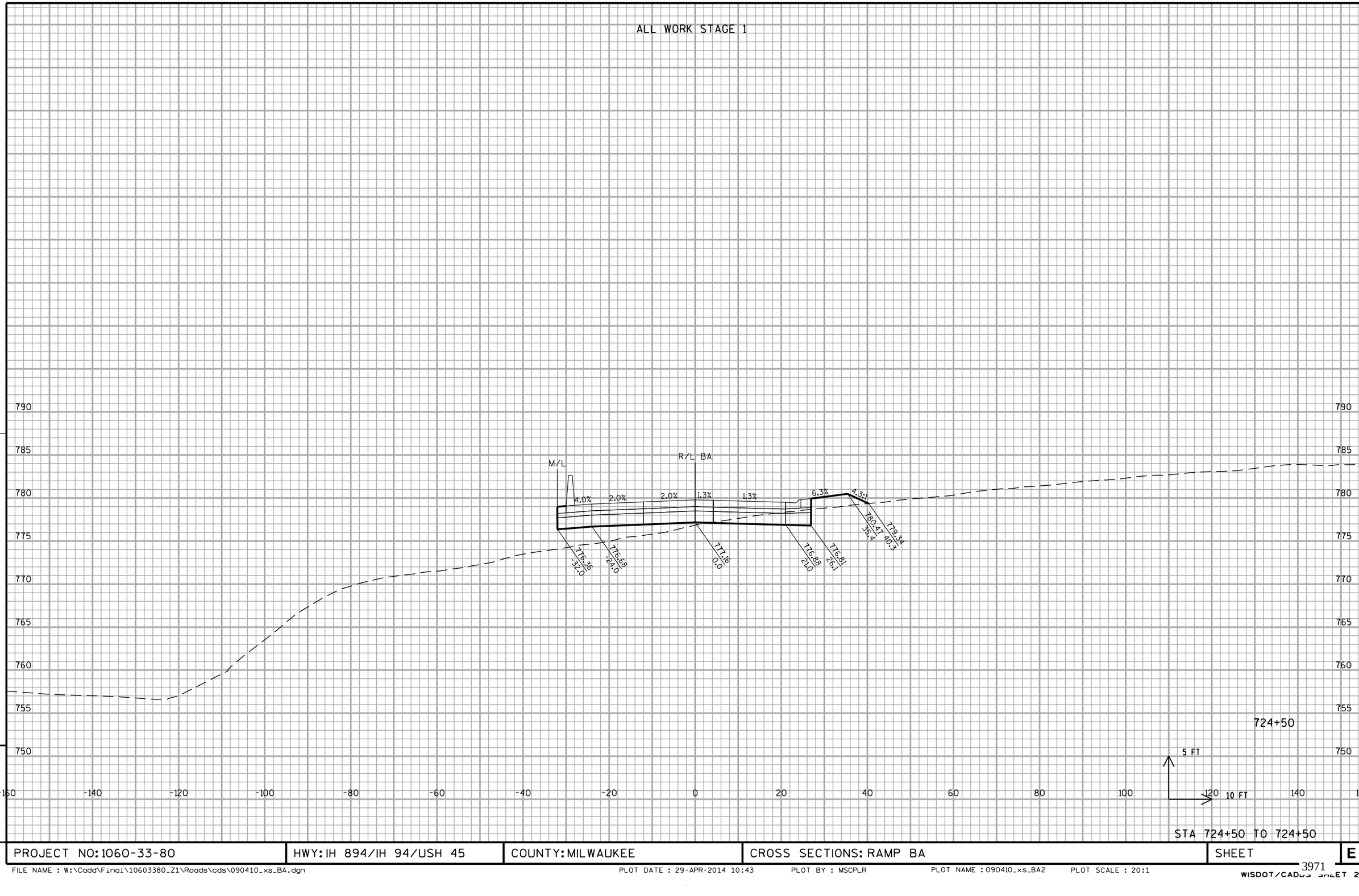
STA 724+00 TO 724+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090410_xs_BA.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090410_xs_BA1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

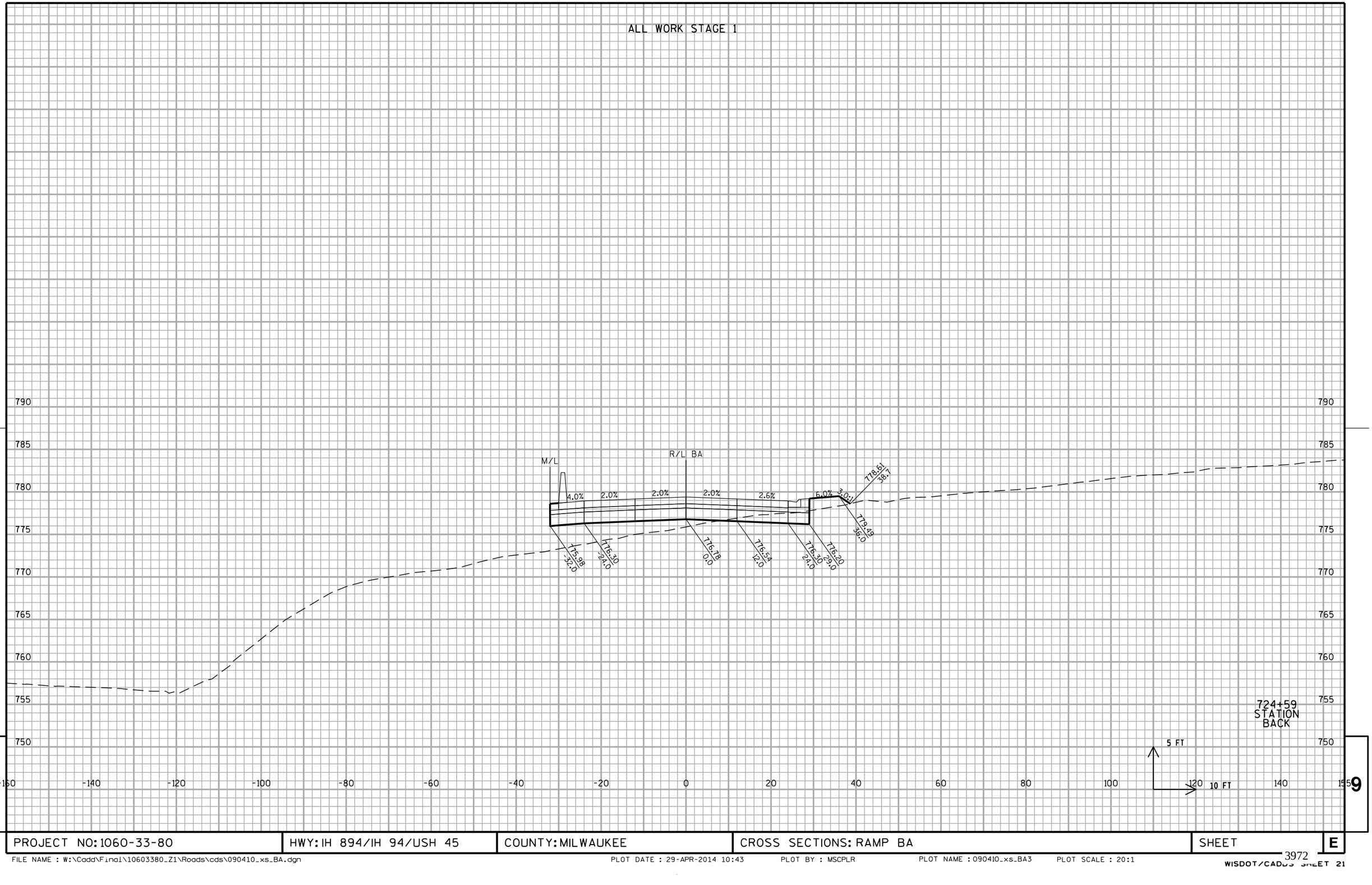
ALL WORK STAGE 1



STA 724+50 TO 724+50

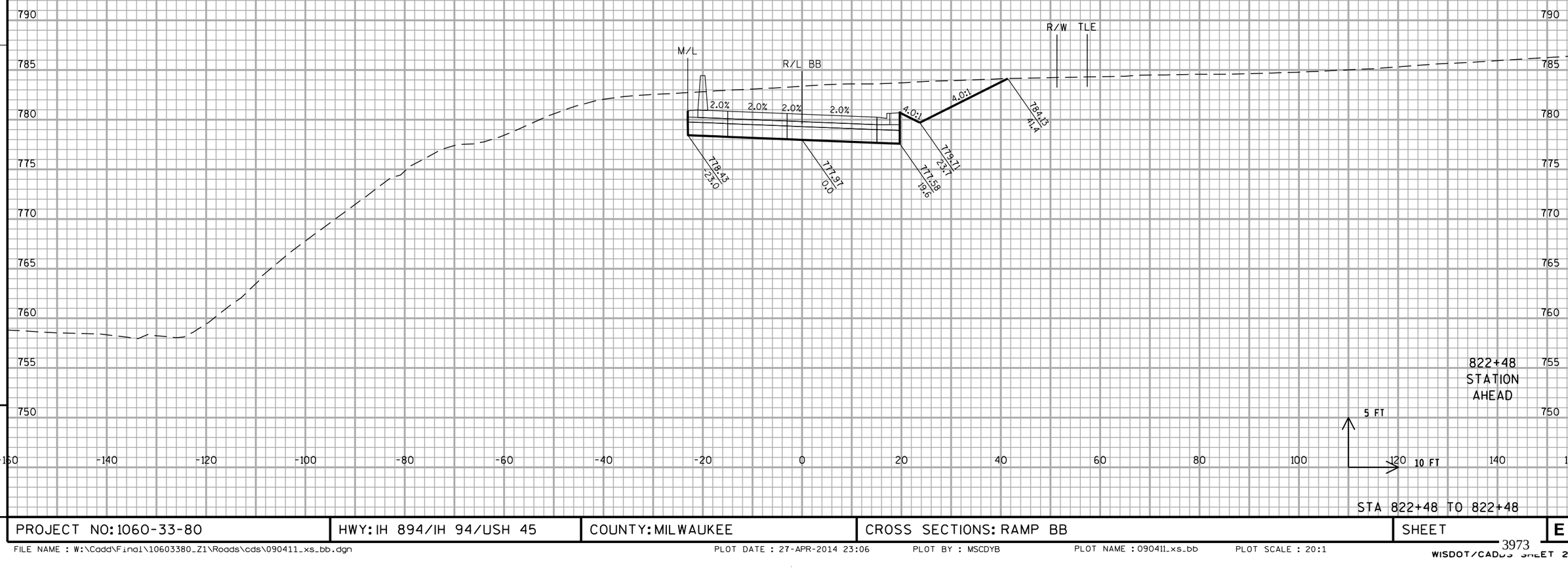
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA	SHEET	E

ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA	SHEET	E

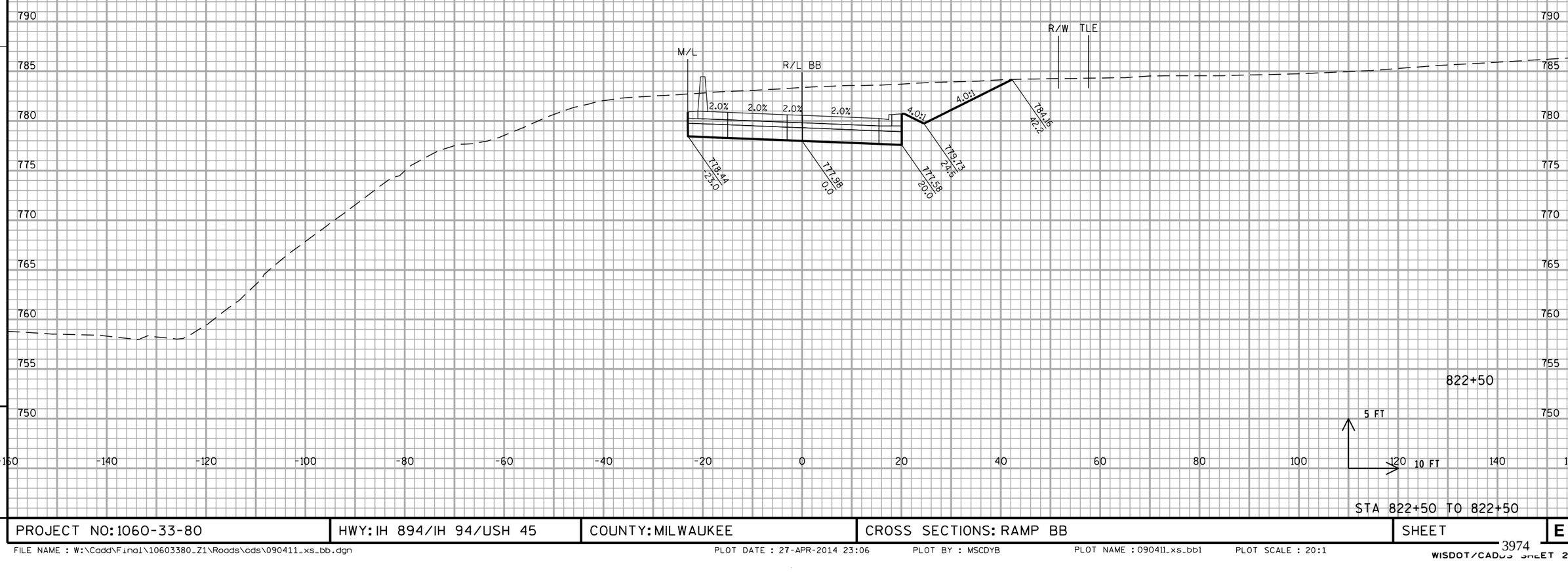
ALL WORK STAGE 2



STA 822+48 TO 822+48

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BB	SHEET	E

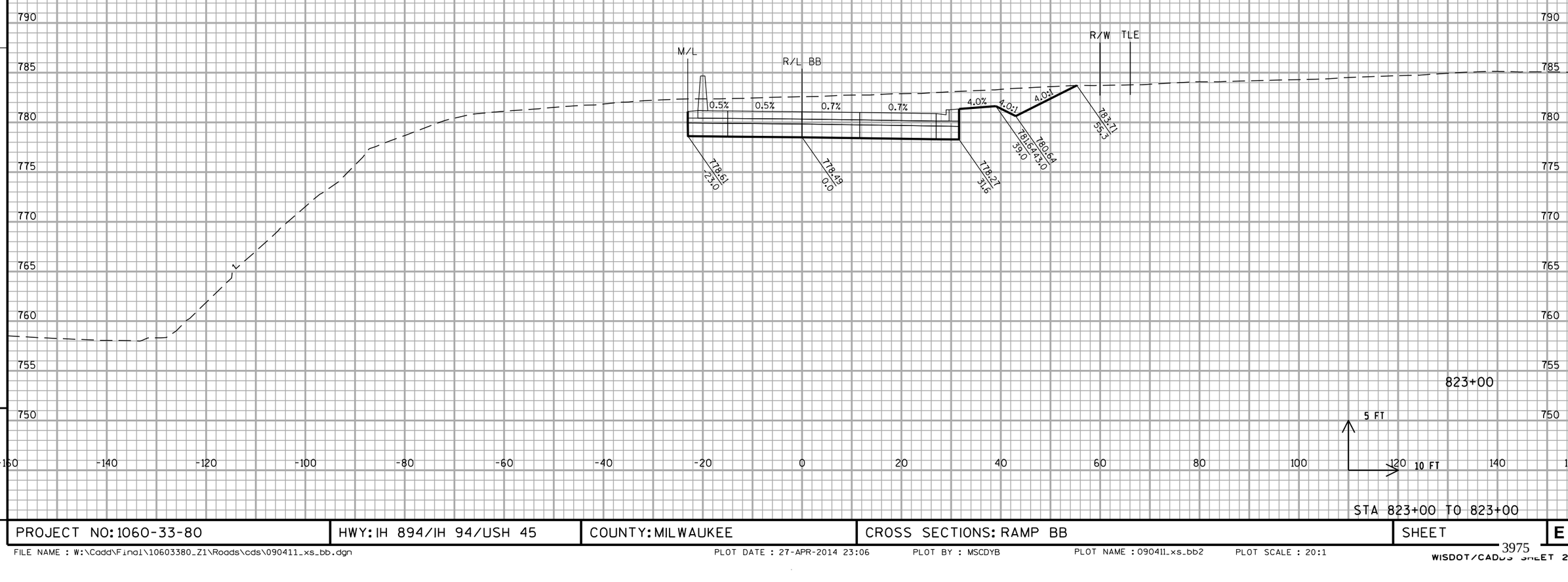
ALL WORK STAGE 2



STA 822+50 TO 822+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BB	SHEET	E

ALL WORK STAGE 2



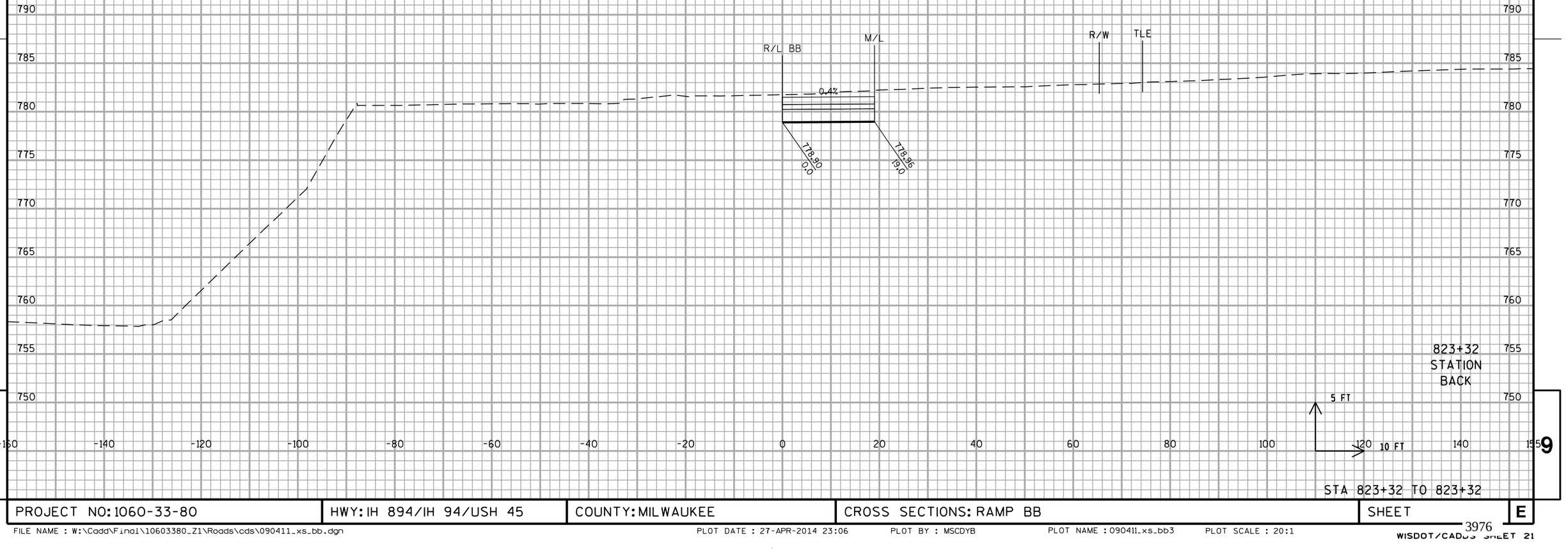
STA 823+00 TO 823+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090411_xs_bb.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090411_xs_bb2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

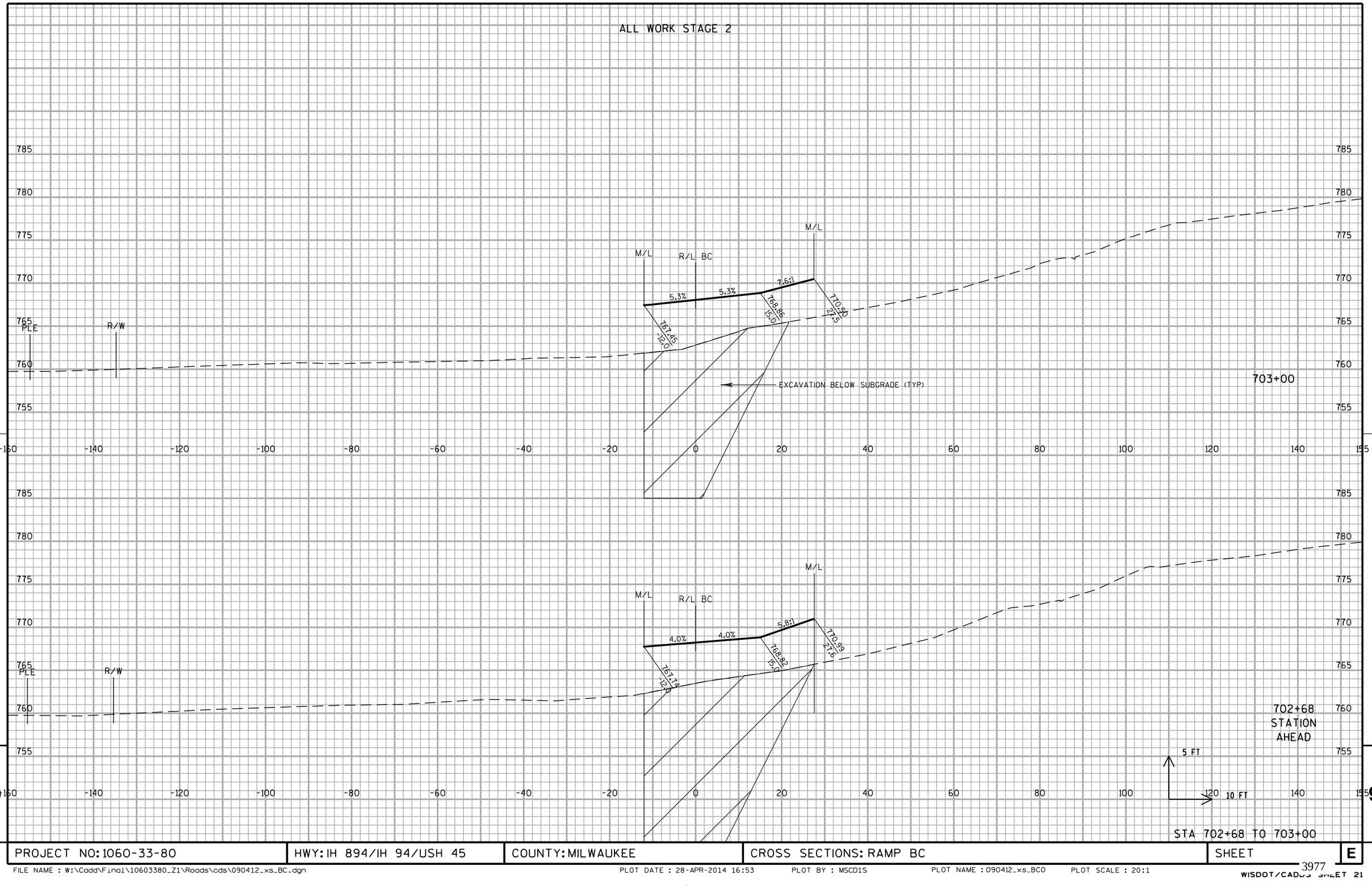


STA 823+32 TO 823+32

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090411_xs_bb.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090411_xs_bb3 PLOT SCALE : 20:1

ALL WORK STAGE 2

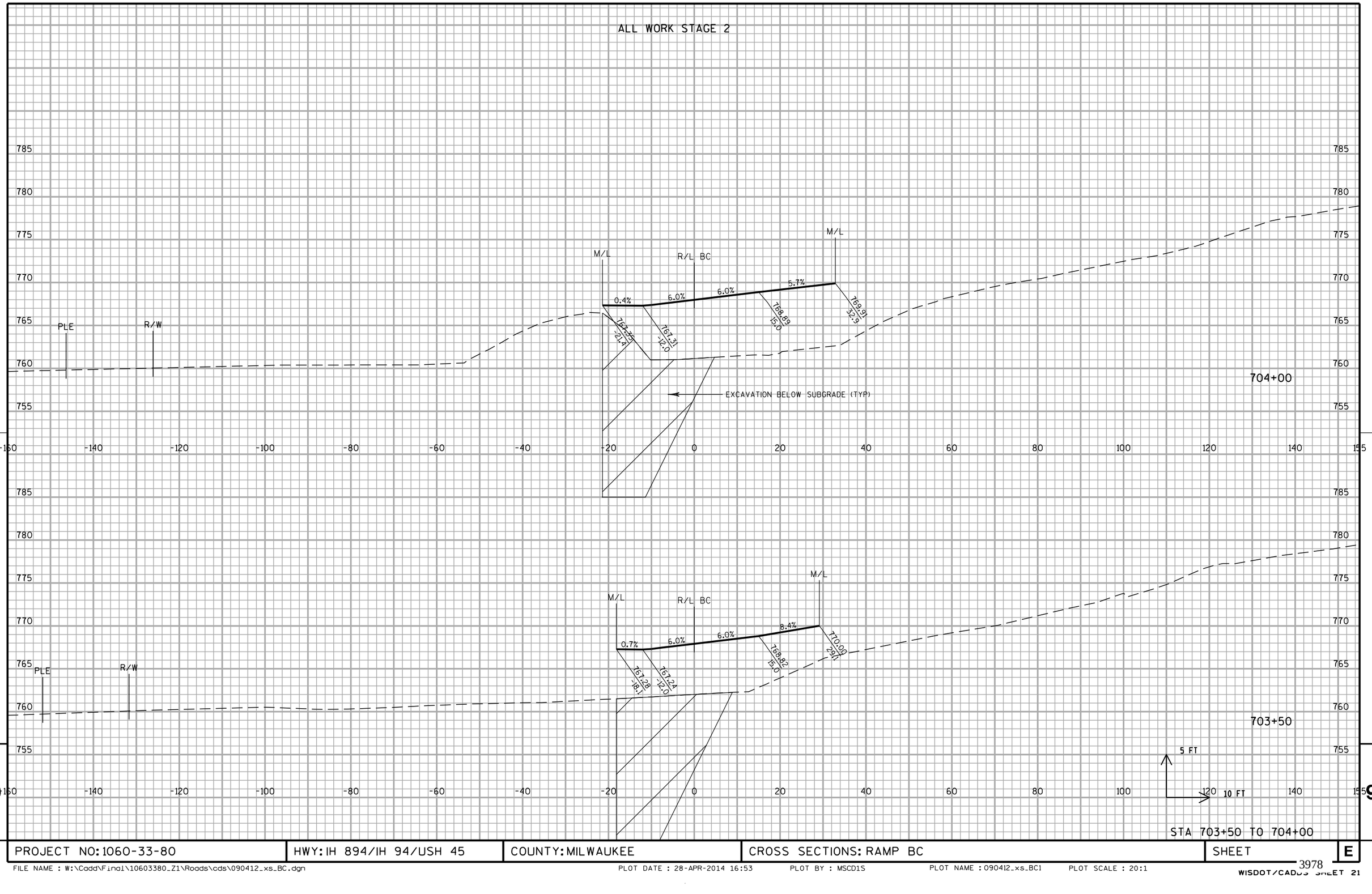


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

STA 702+68 TO 703+00

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC0 PLOT SCALE : 20:1

ALL WORK STAGE 2

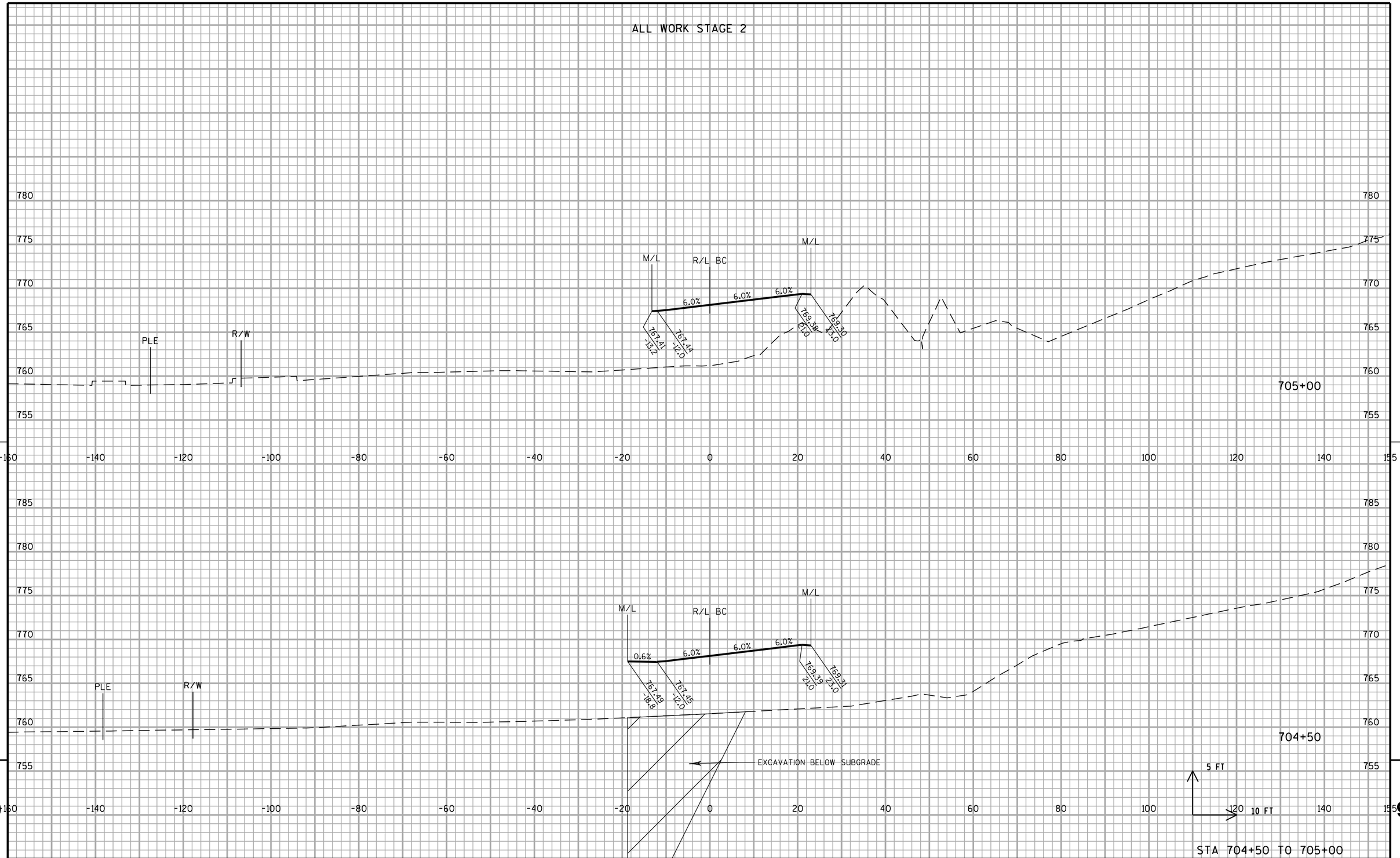


STA 703+50 TO 704+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC1 PLOT SCALE : 20:1

ALL WORK STAGE 2

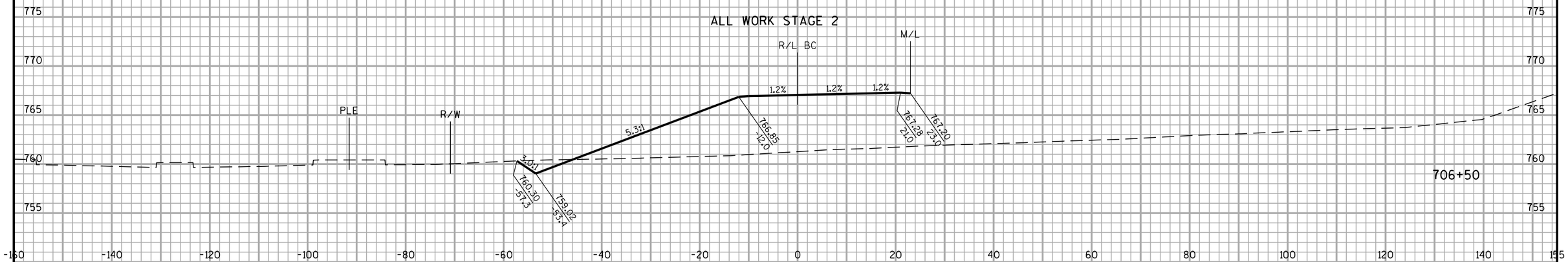


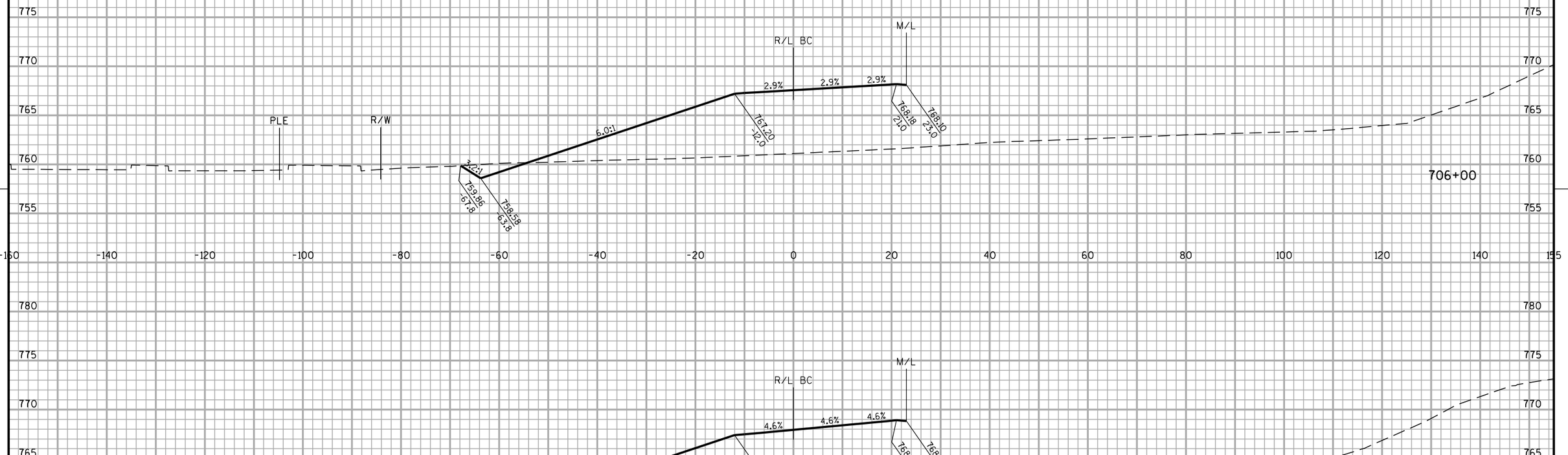
STA 704+50 TO 705+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC2 PLOT SCALE : 20:1

ALL WORK STAGE 2





STA 705+50 TO 706+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

ALL WORK STAGE 2

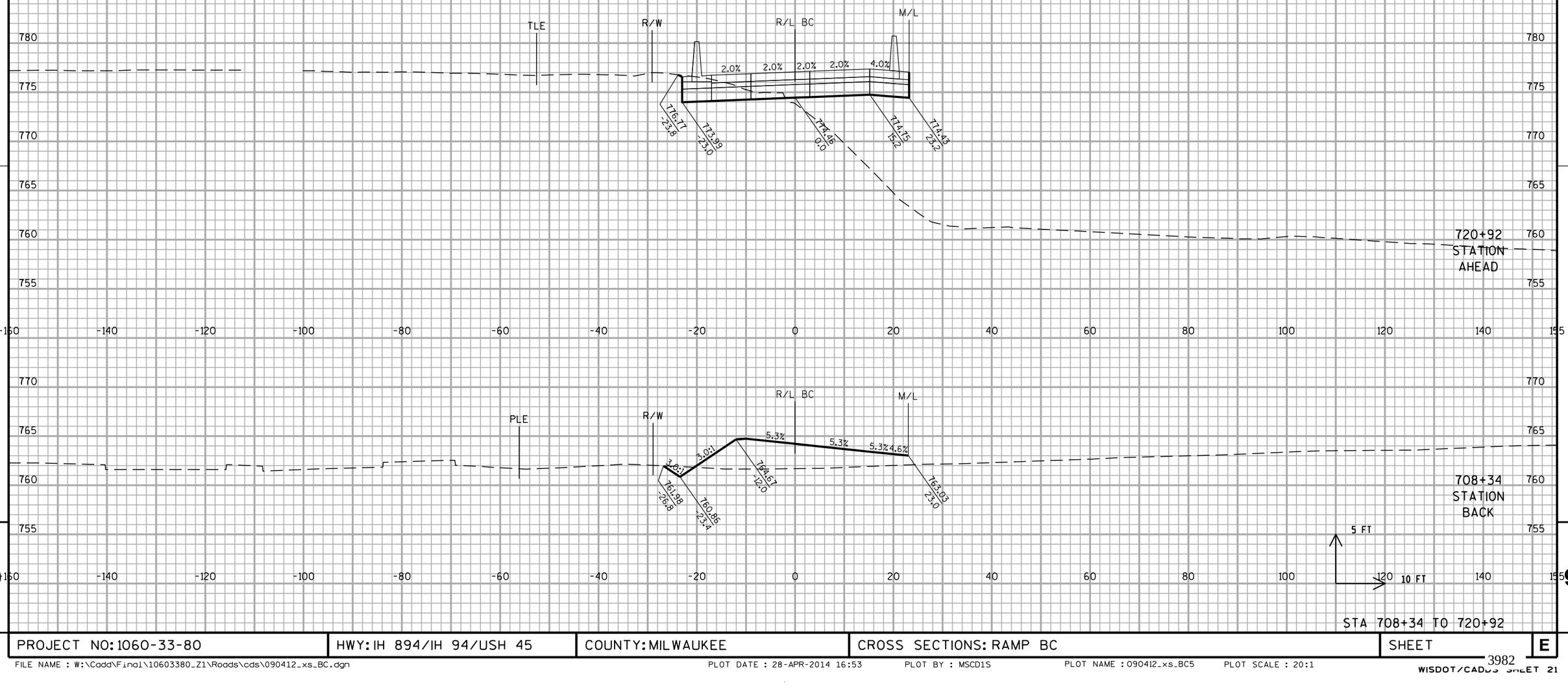
STA 707+00 TO 708+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

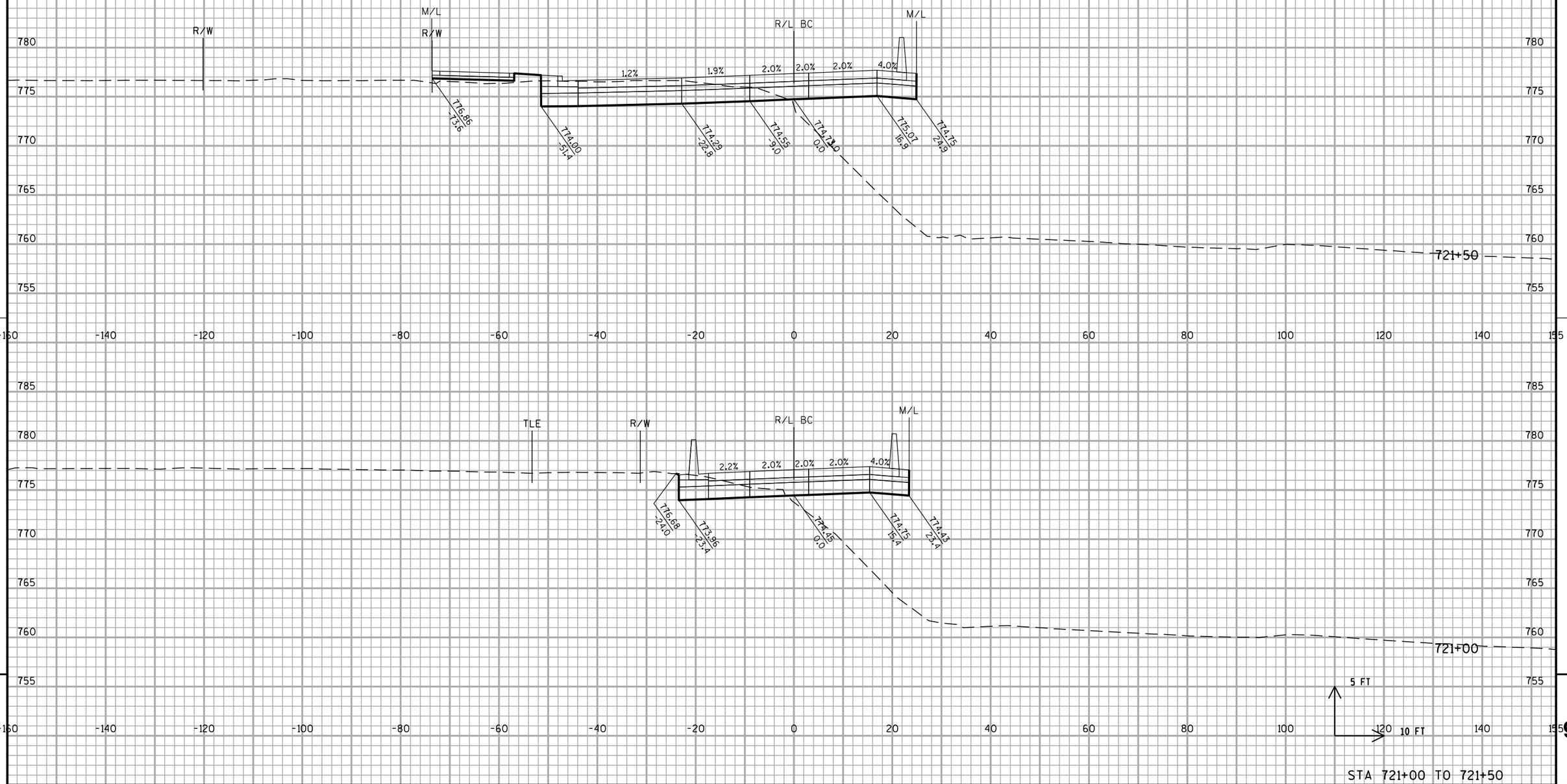


STA 708+34 TO 720+92

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC5 PLOT SCALE : 20:1

ALL WORK STAGE 2



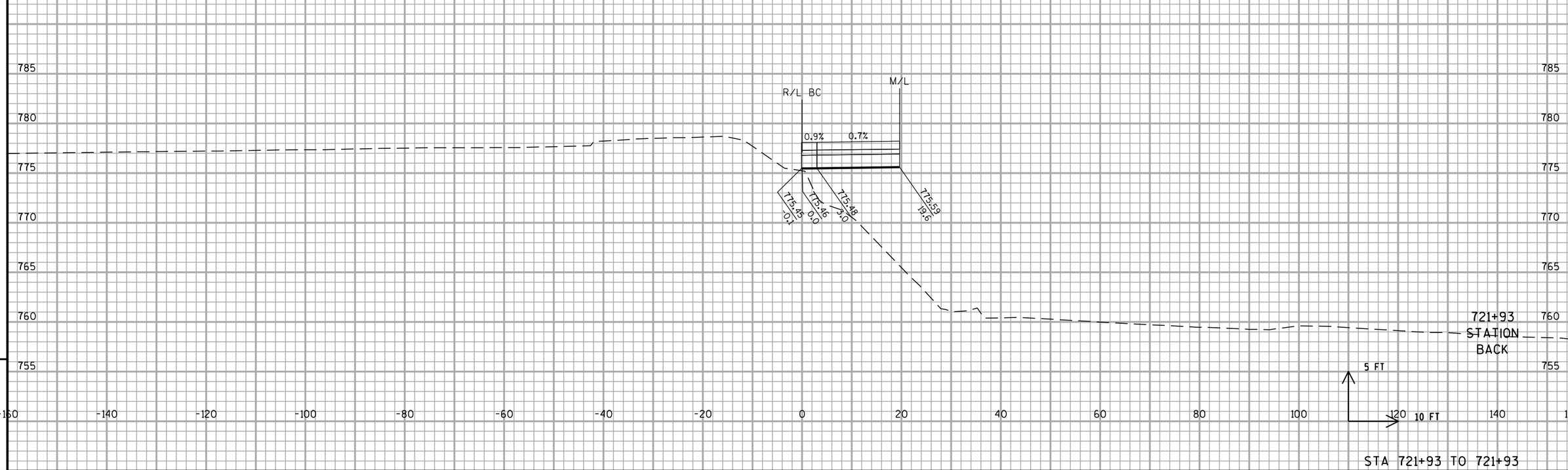
STA 721+00 TO 721+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



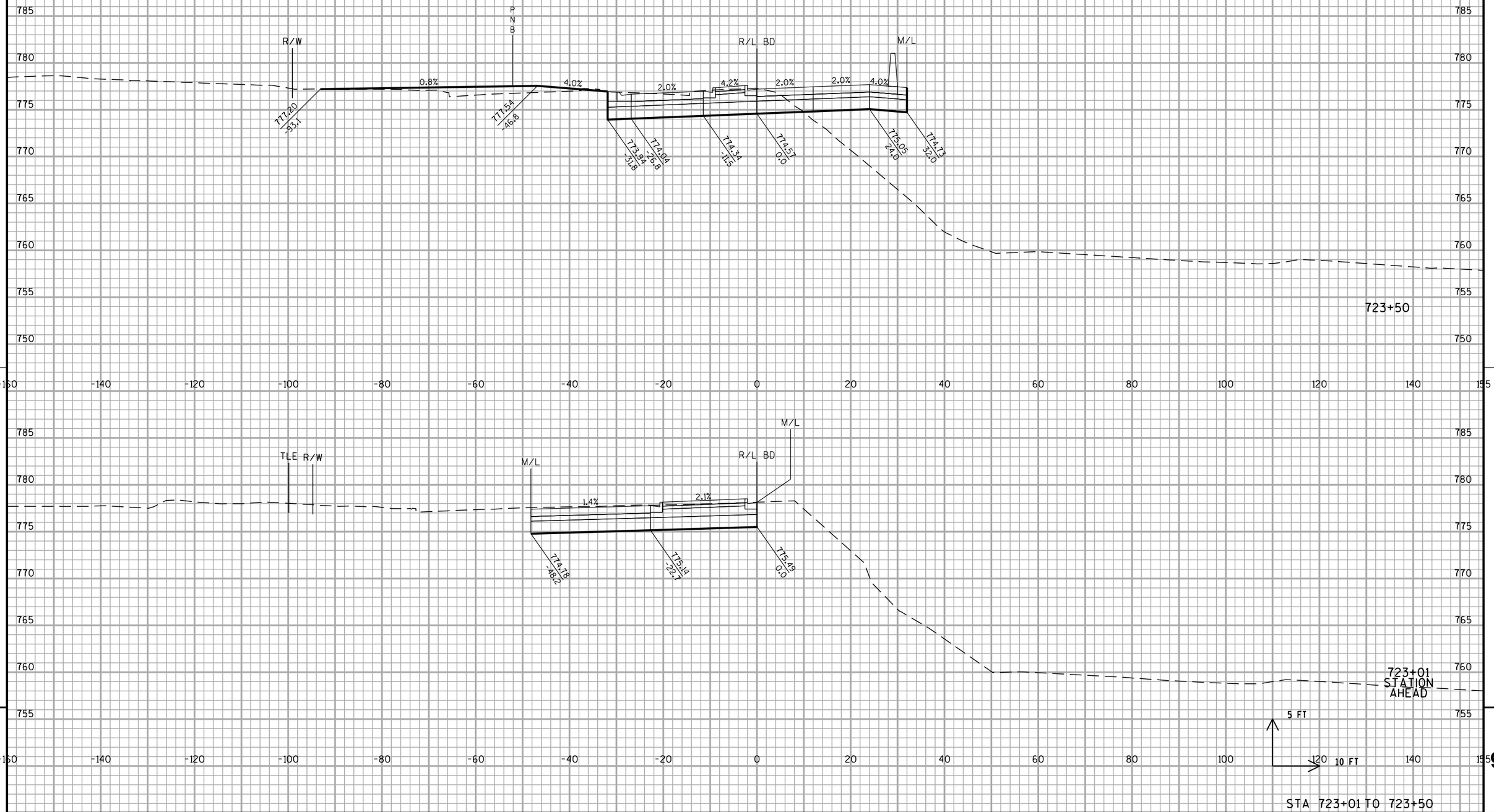
STA 721+93 TO 721+93

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090412_xs_BC.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090412_xs_BC7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



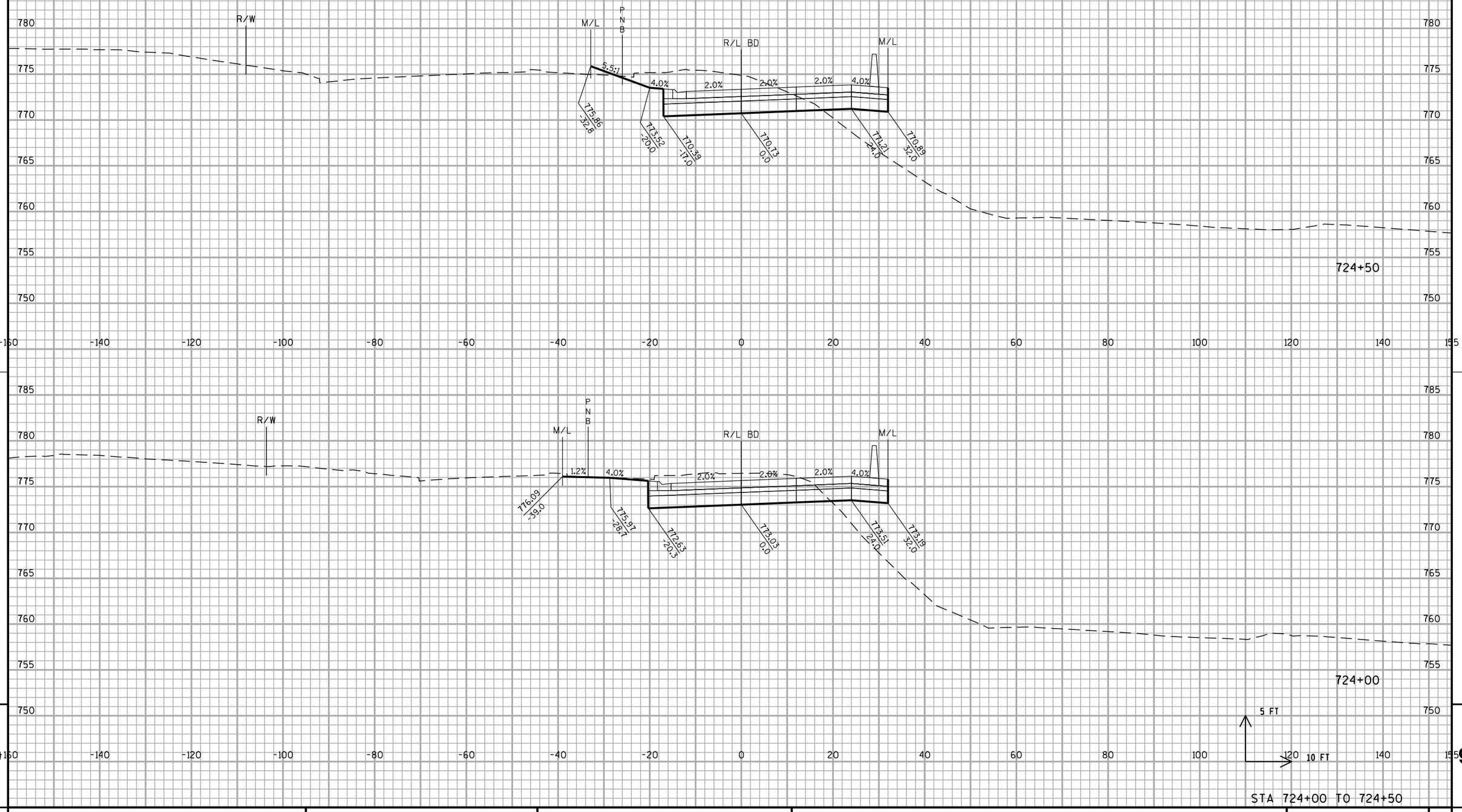
STA 723+01 TO 723+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

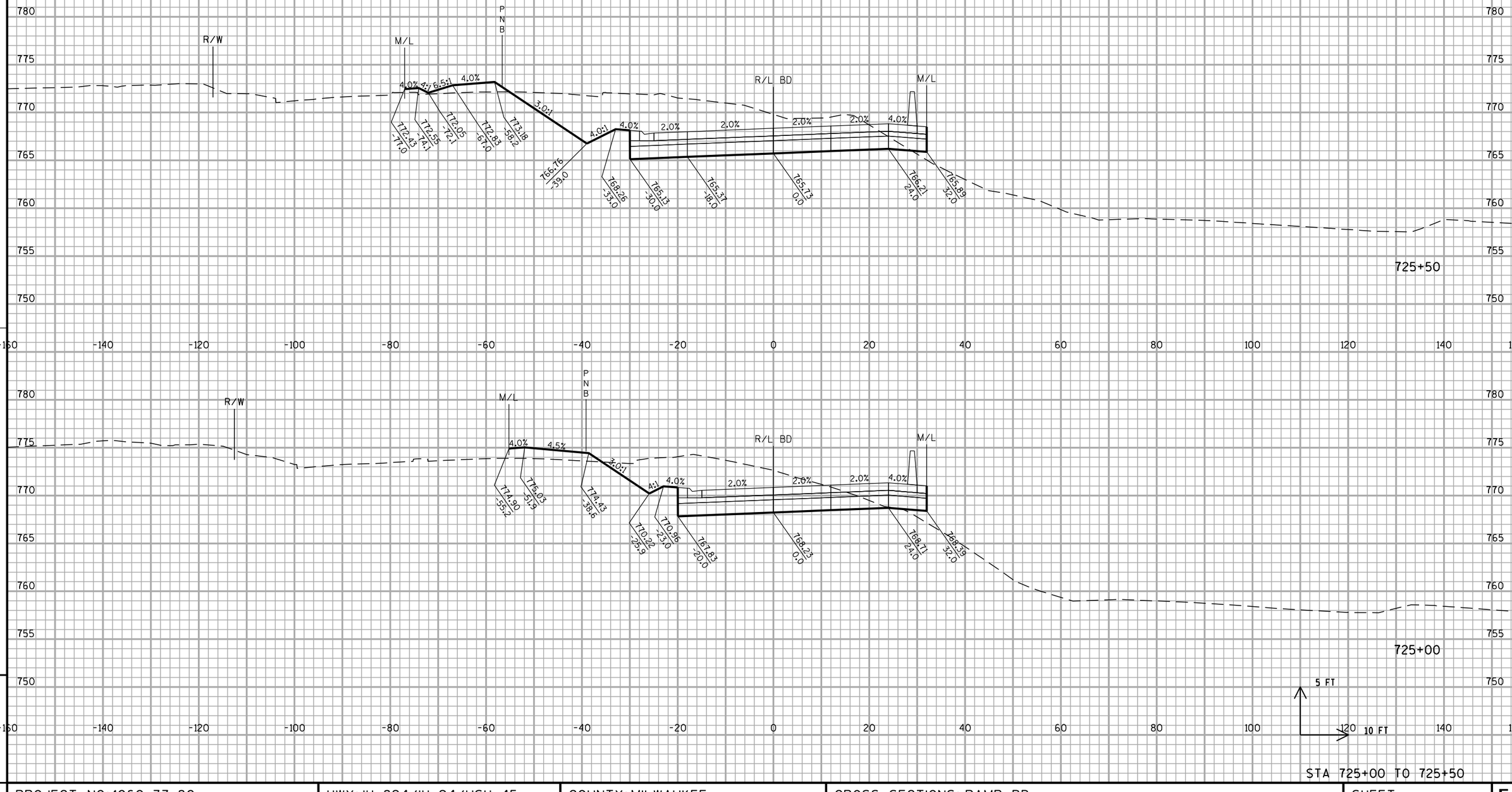


STA 724+00 TO 724+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd1 PLOT SCALE : 20:1

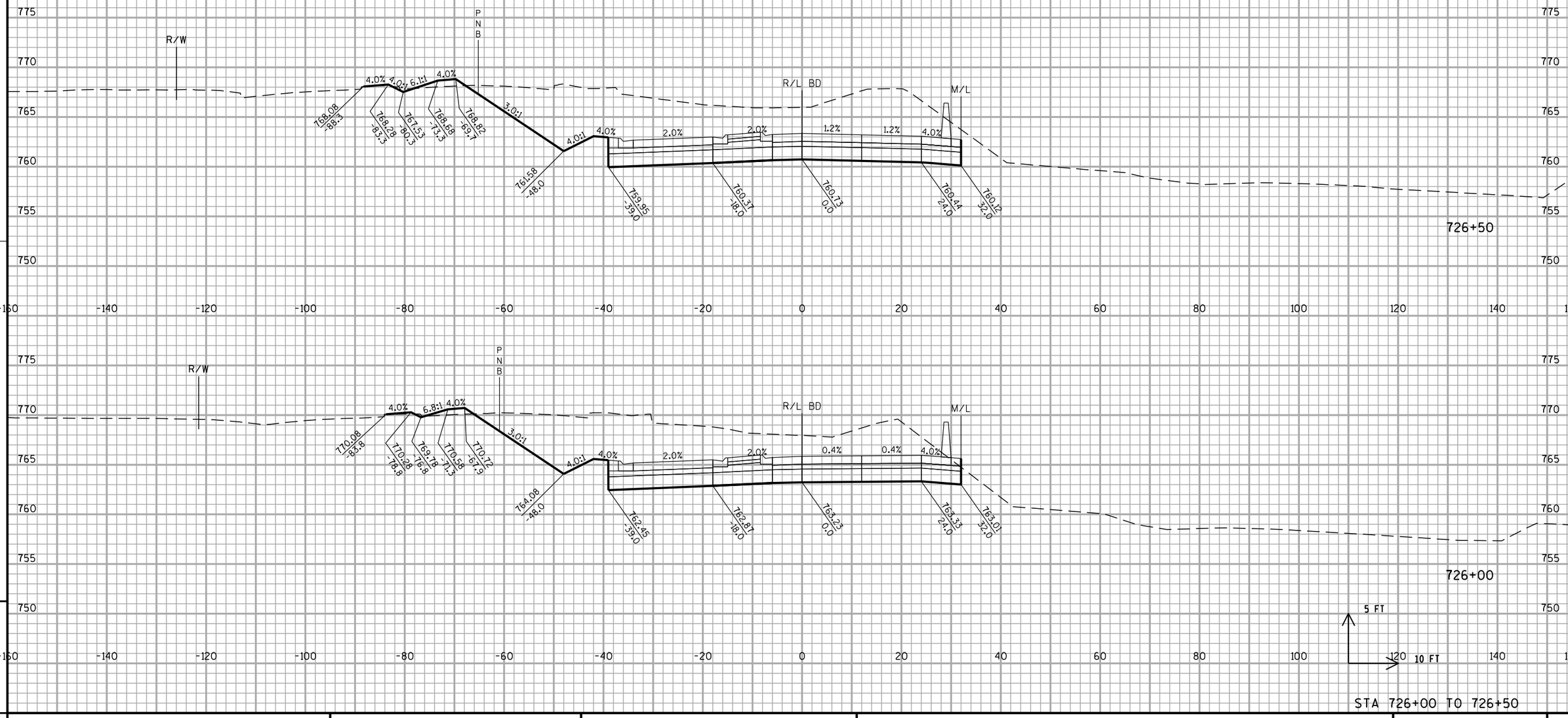
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

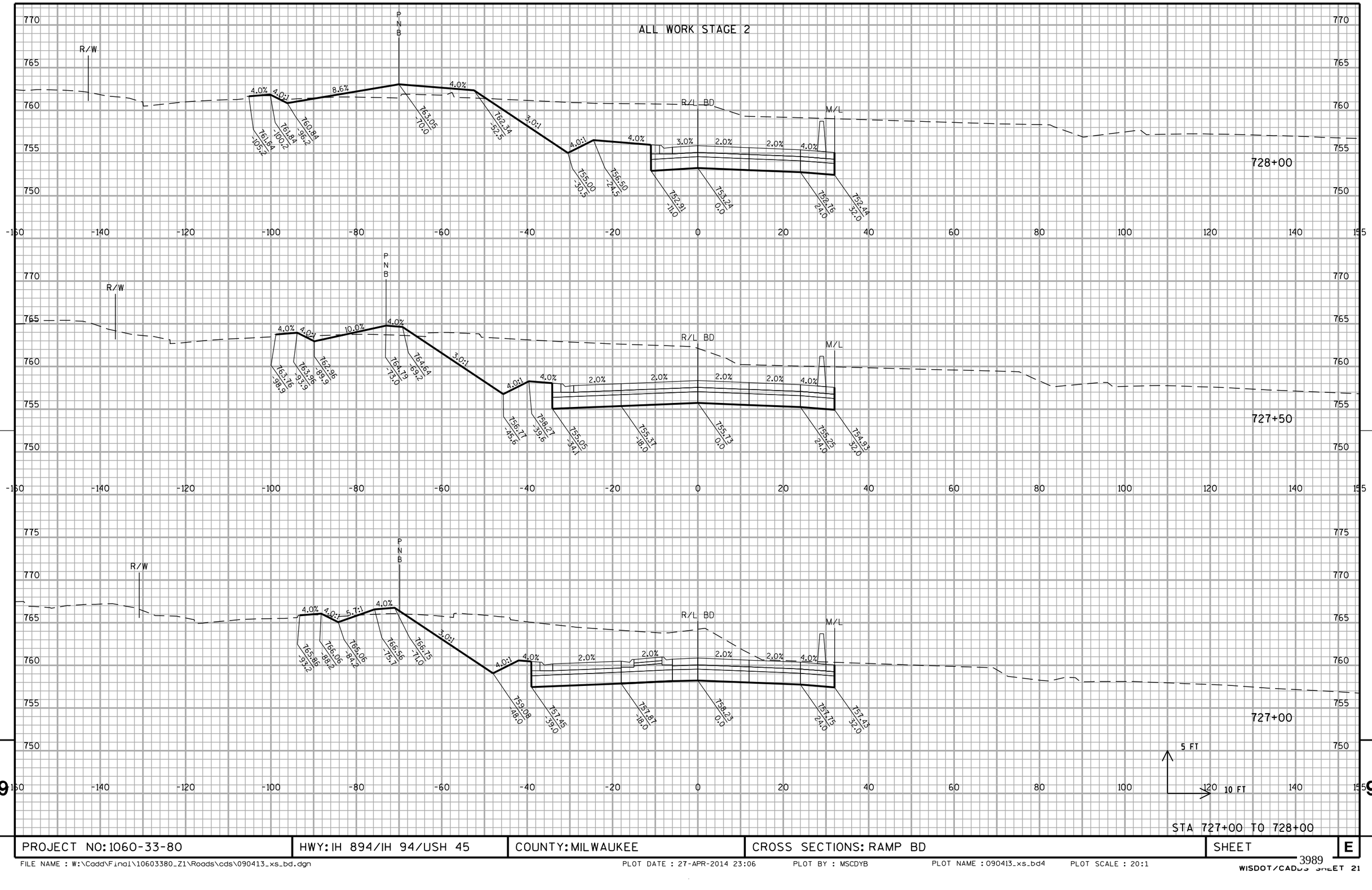
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd2 PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

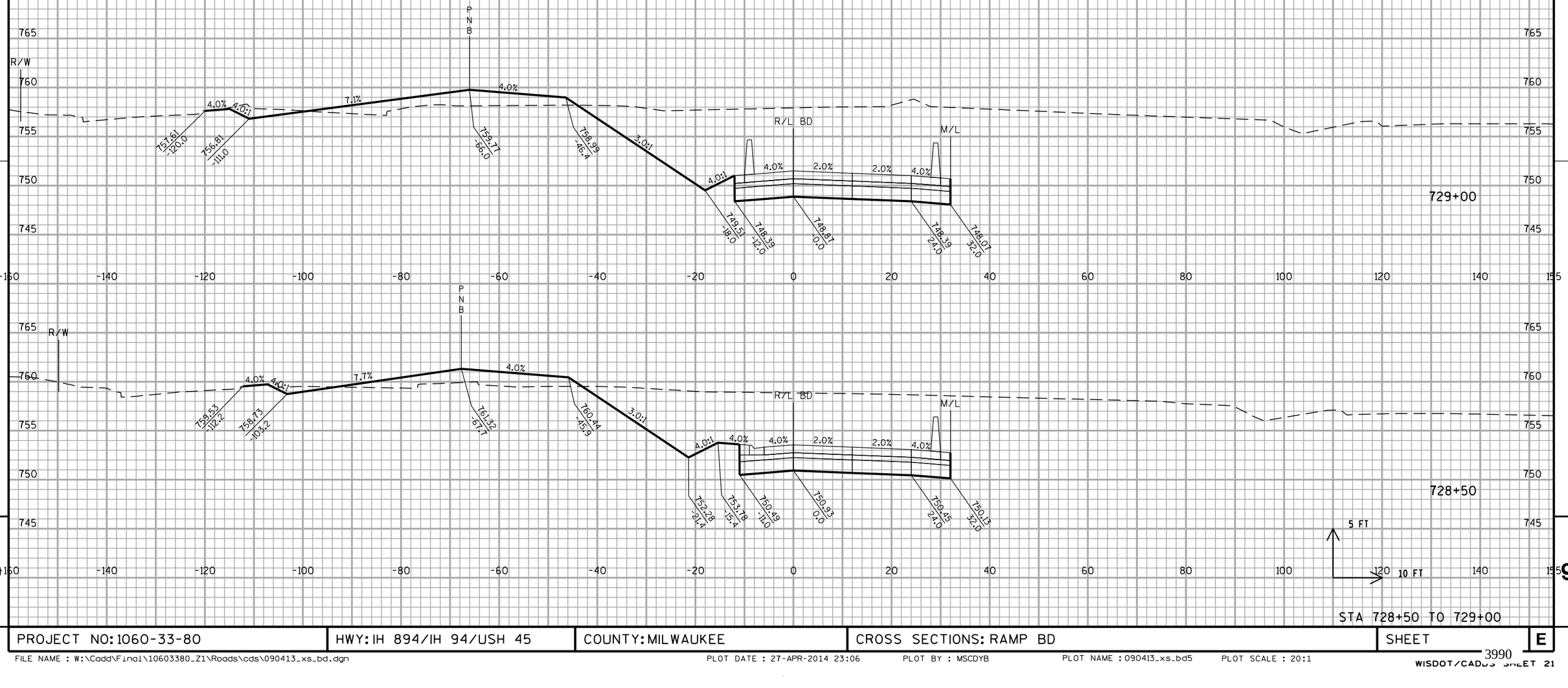
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd4 PLOT SCALE : 20:1

ALL WORK STAGE 2

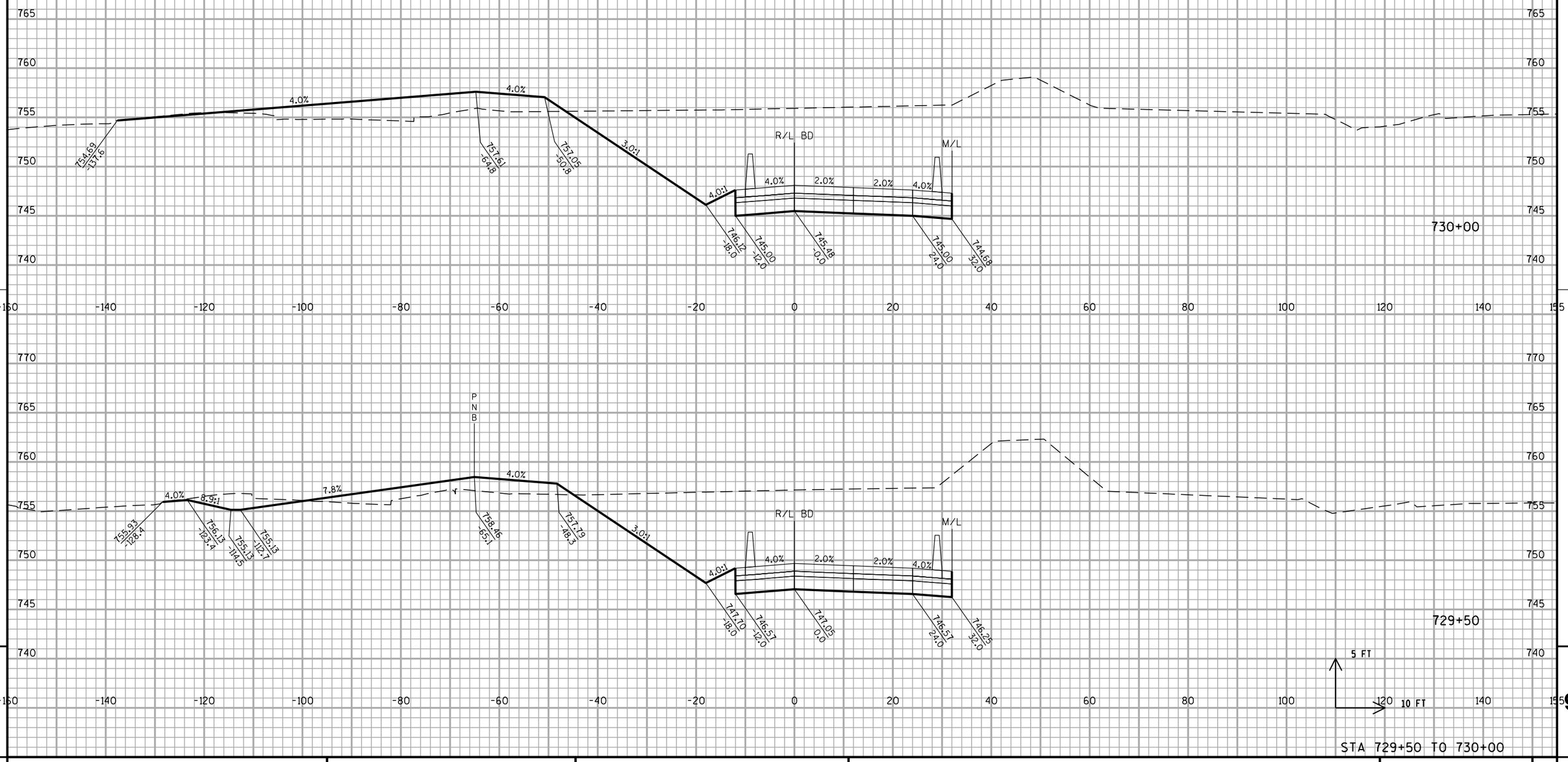


STA 728+50 TO 729+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd5 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 729+50 TO 730+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd6 PLOT SCALE : 20:1

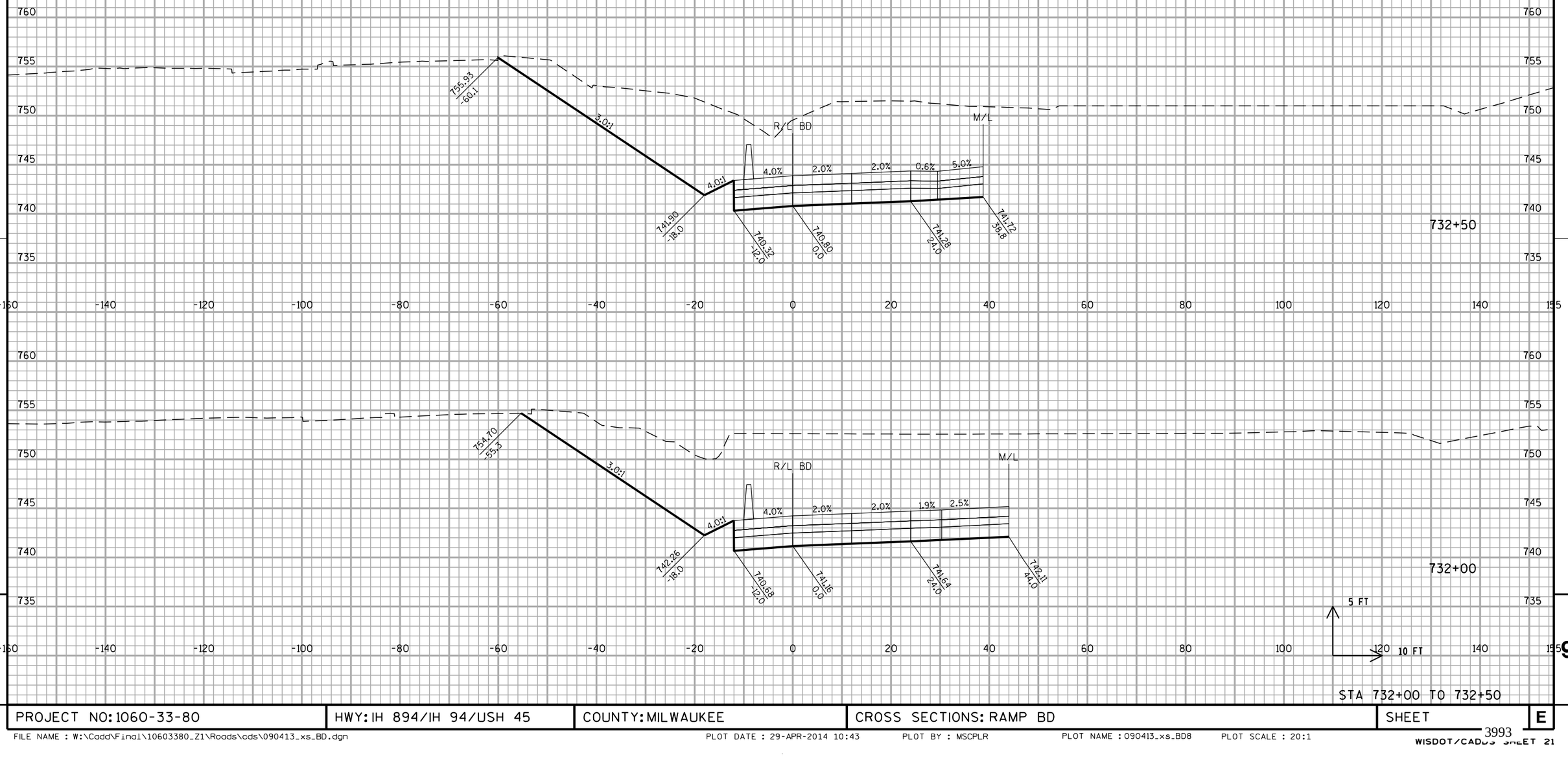
ALL WORK STAGE 2

STA 730+50 TO 731+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_bd.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090413_xs_bd7 PLOT SCALE : 20:1

ALL WORK STAGE 3

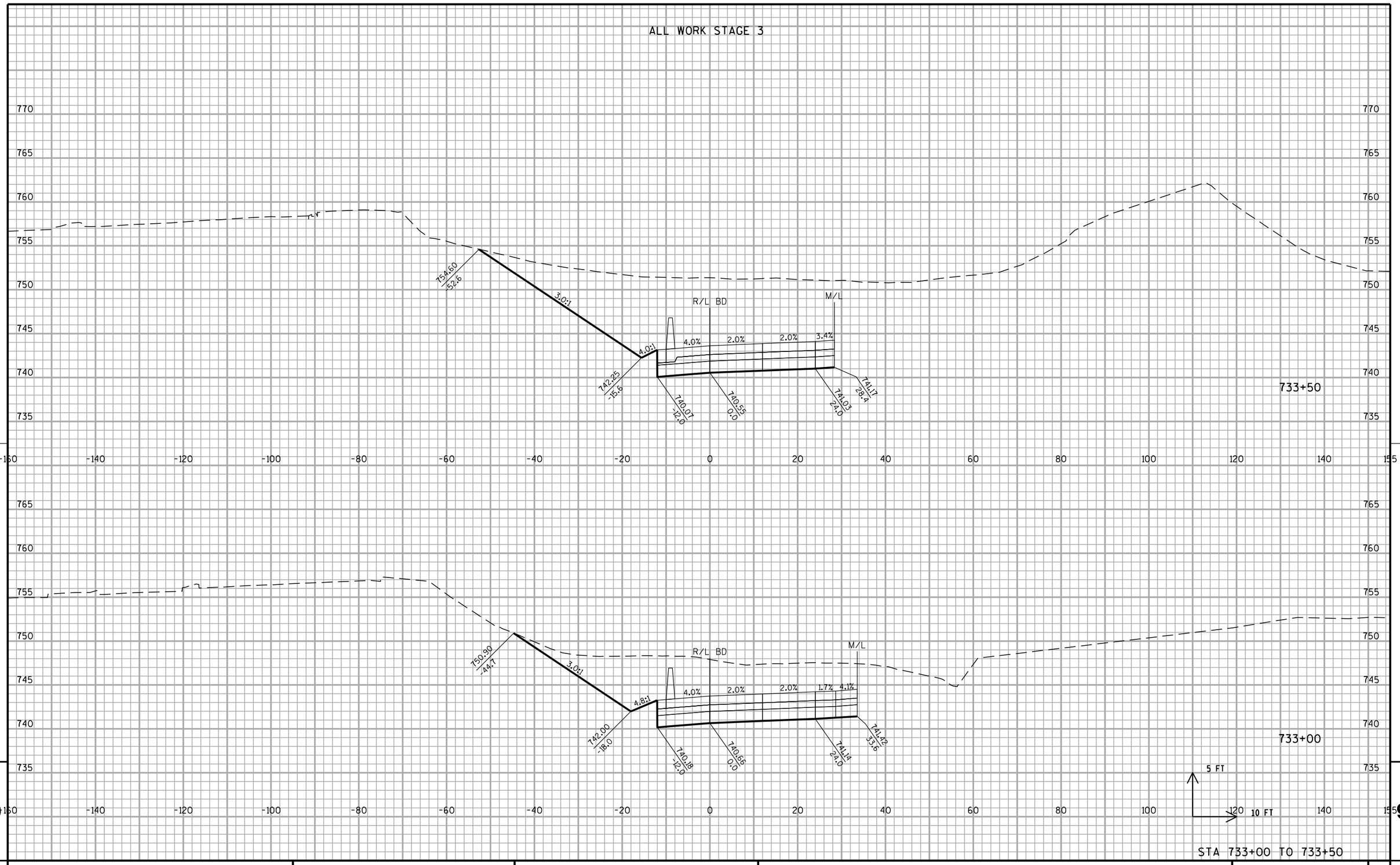


STA 732+00 TO 732+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_BD.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090413_xs_BD8 PLOT SCALE : 20:1

ALL WORK STAGE 3



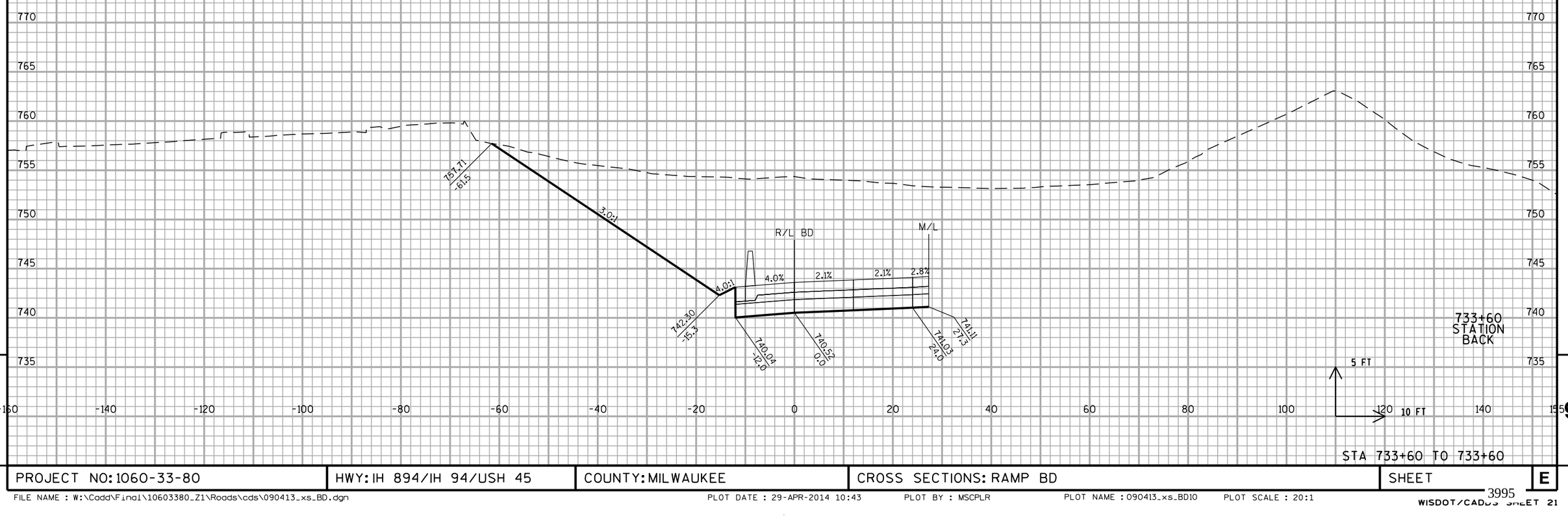
STA 733+00 TO 733+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_BD.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090413_xs_BD9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

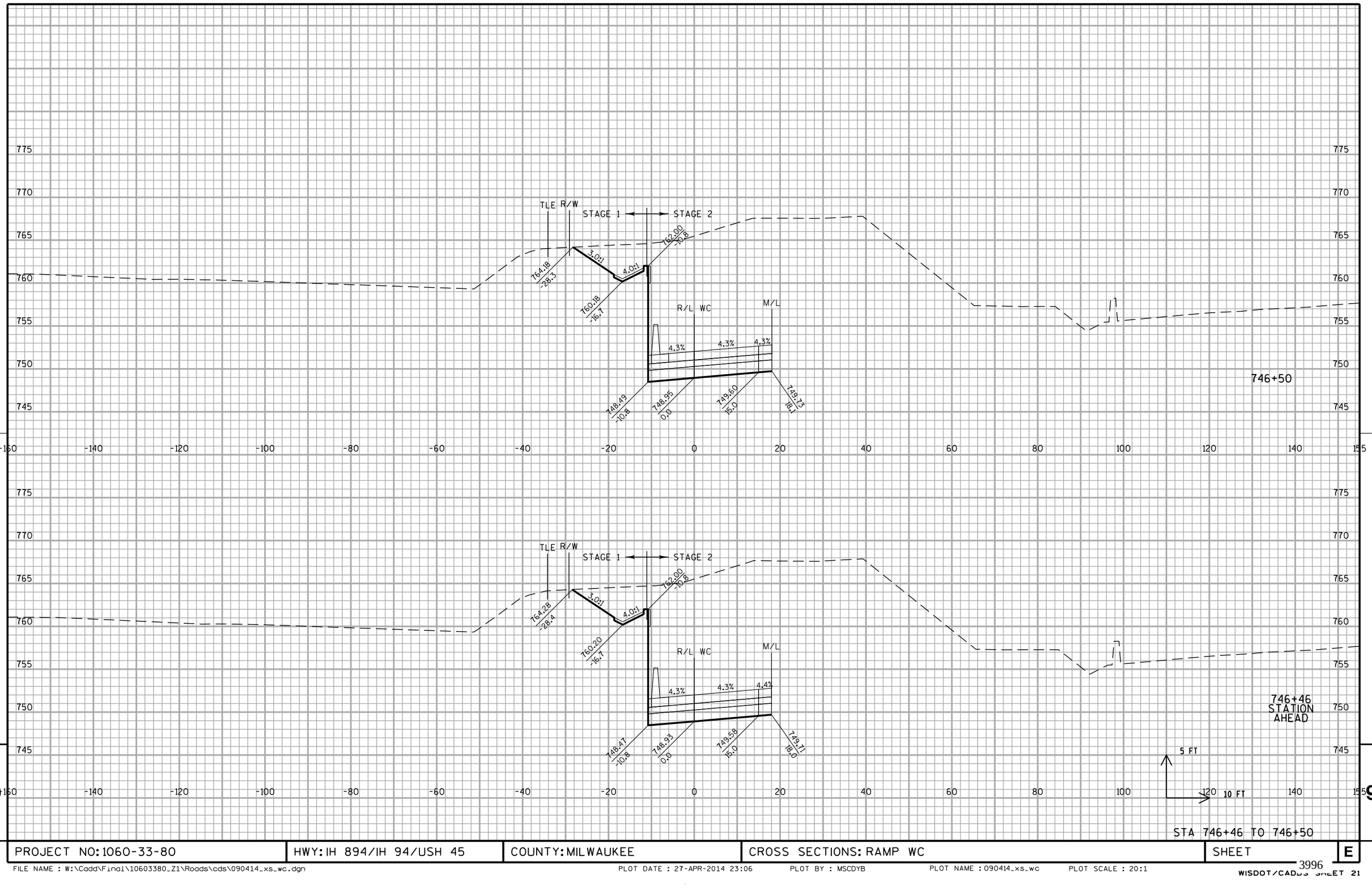
ALL WORK STAGE 3



STA 733+60 TO 733+60

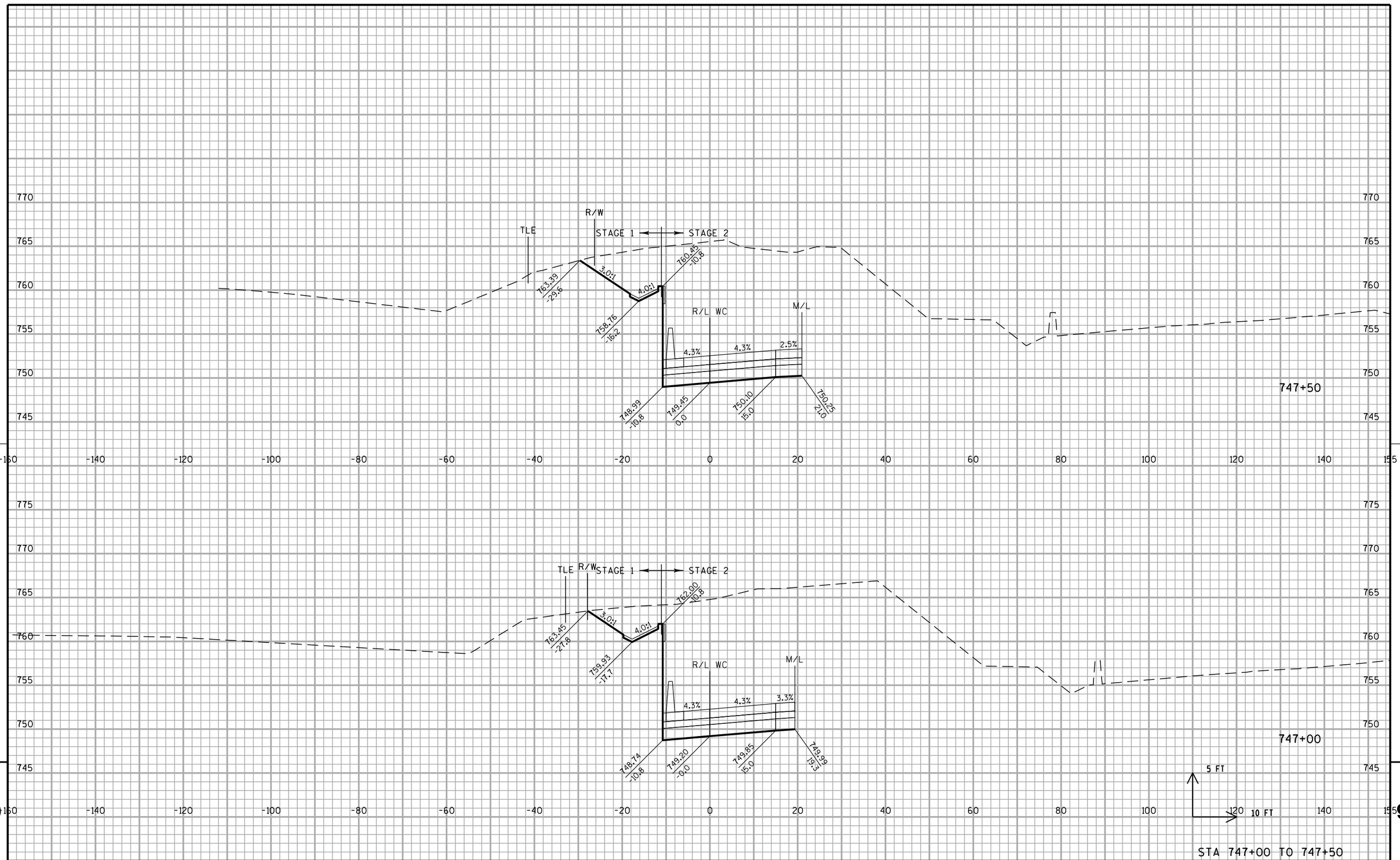
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090413_xs_BD.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090413_xs_BD10 PLOT SCALE : 20:1



STA 746+46 TO 746+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

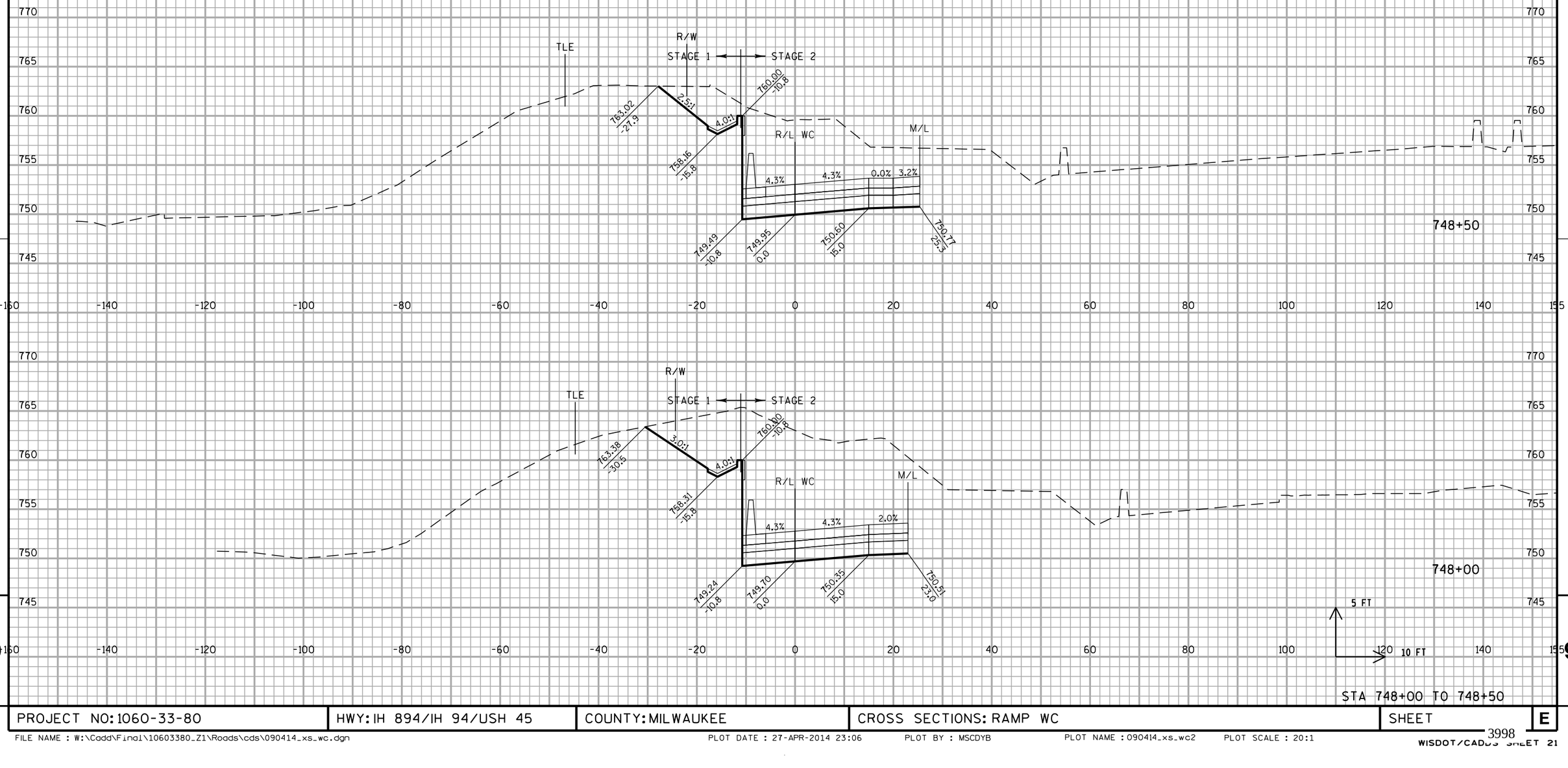


STA 747+00 TO 747+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090414_xs_wc.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090414_xs_wc1 PLOT SCALE : 20:1

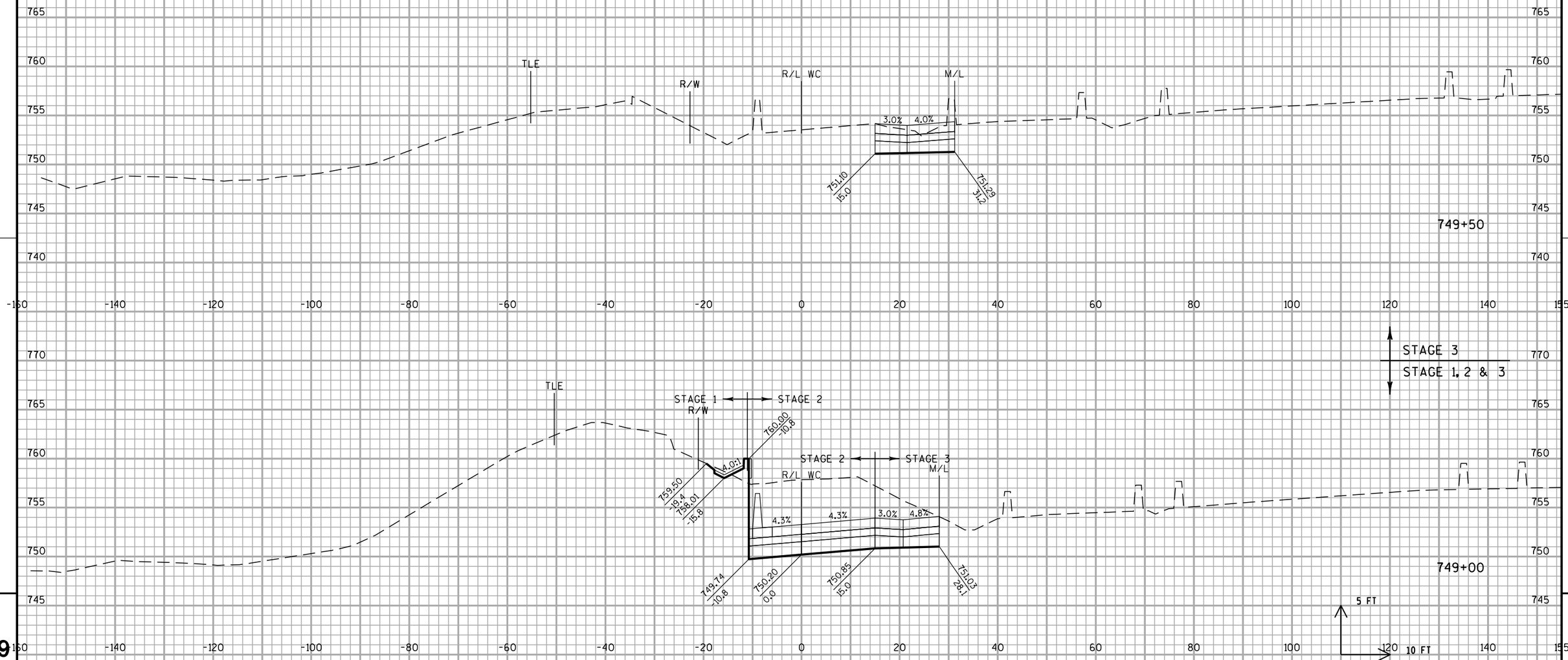
WISDOT/CADDS SHEET 21



STA 748+00 TO 748+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

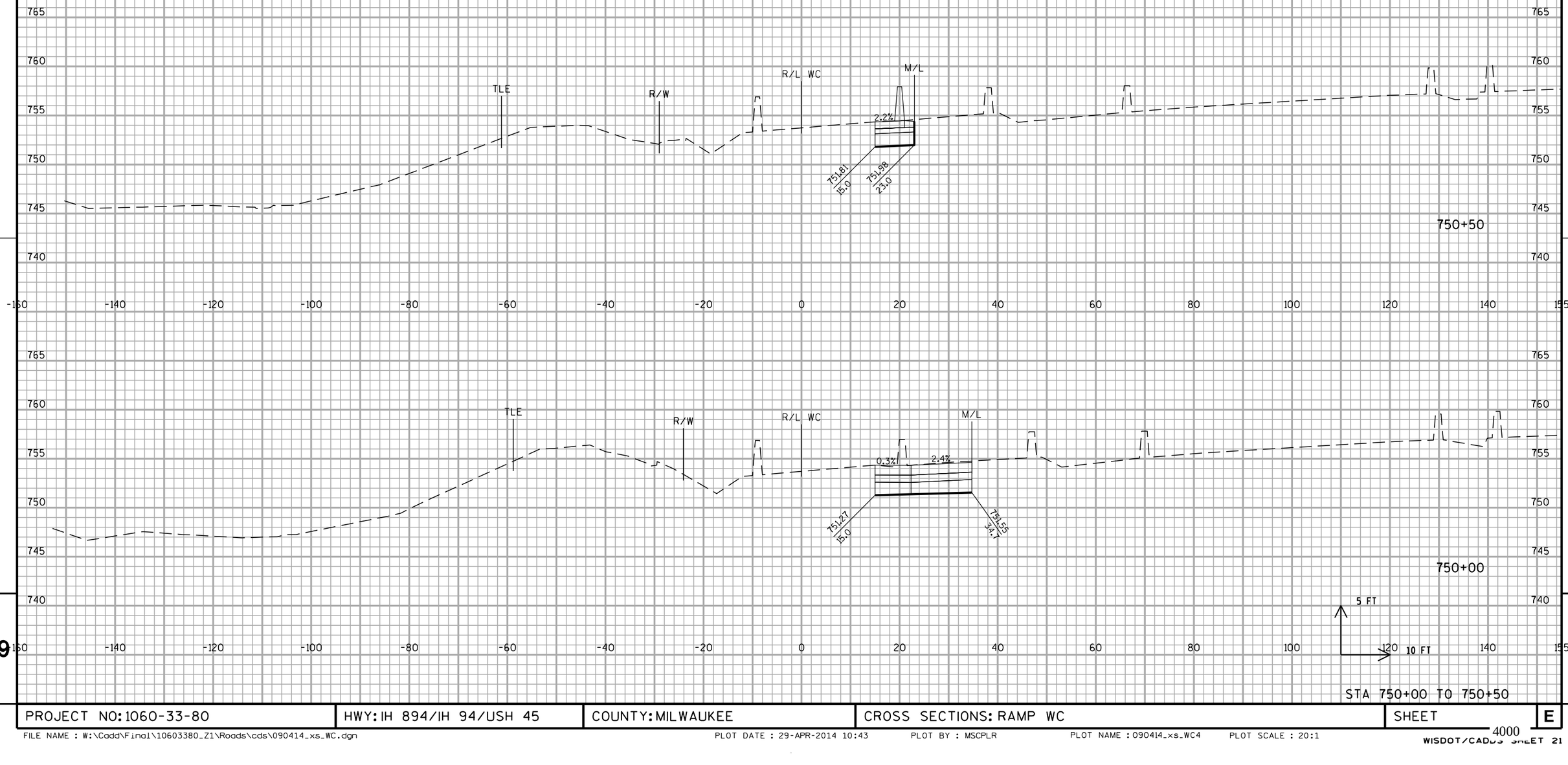
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090414_xs_wc.dgn PLOT DATE : 27-APR-2014 23:06 PLOT BY : MSCDYB PLOT NAME : 090414_xs_wc2 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090414_xs_WC.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090414_xs_WC3 PLOT SCALE : 20:1

ALL WORK STAGE 3



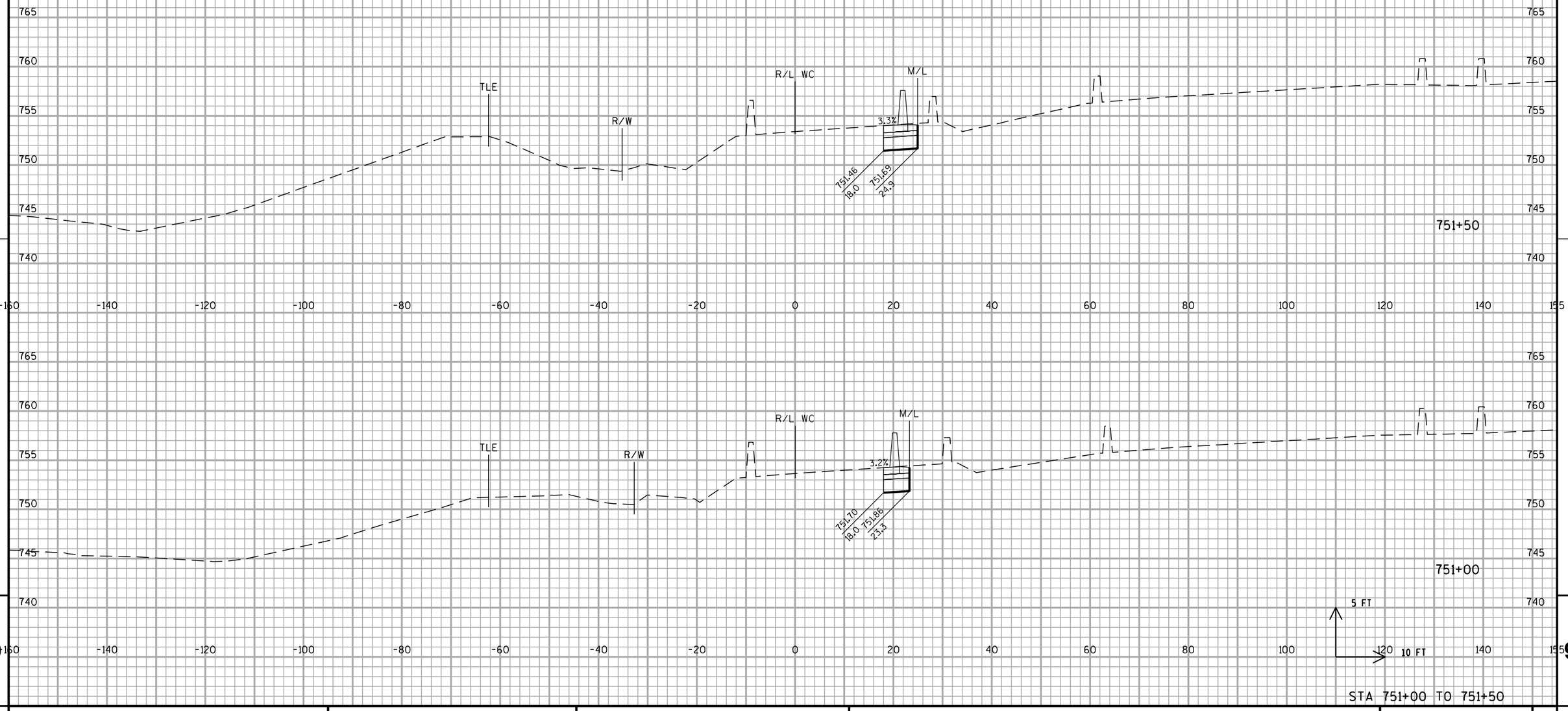
STA 750+00 TO 750+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090414_xs_WC.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090414_xs_WC4 PLOT SCALE : 20:1

ALL WORK STAGE 3

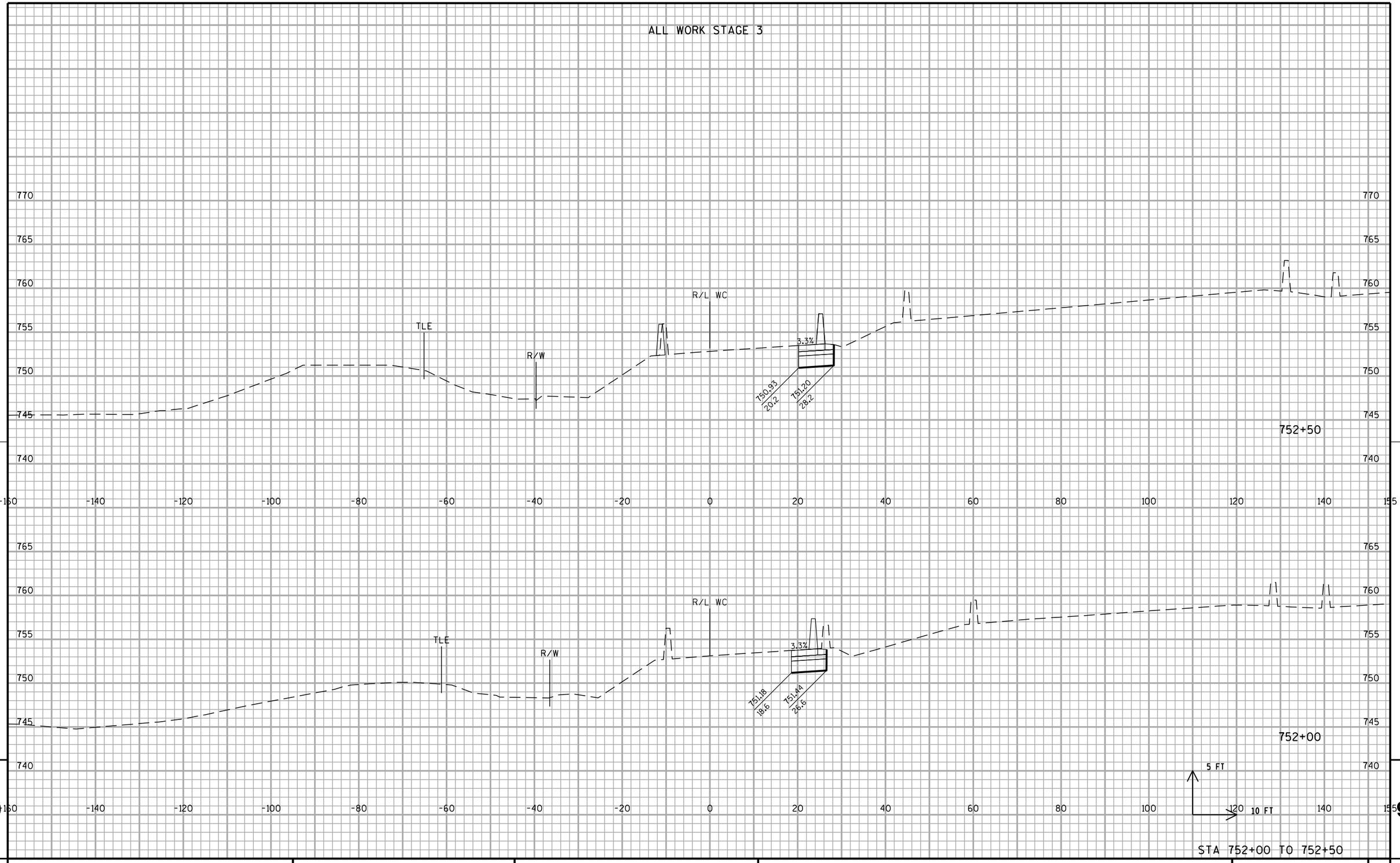


STA 751+00 TO 751+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090414_xs_WC.dgn PLOT DATE : 29-APR-2014 10:43 PLOT BY : MSCPLR PLOT NAME : 090414_xs_WC5 PLOT SCALE : 20:1

ALL WORK STAGE 3



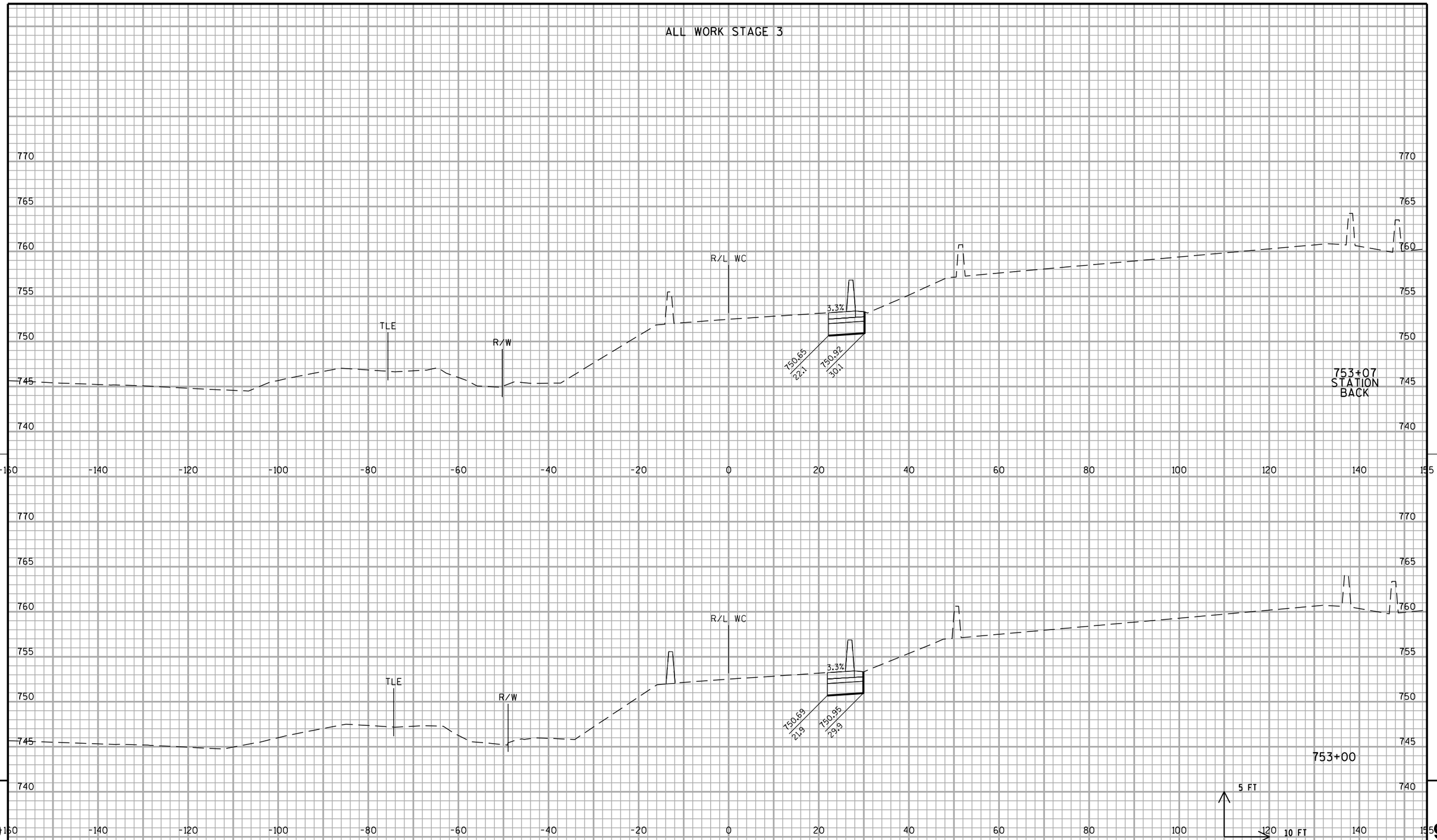
STA 752+00 TO 752+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E

9 9

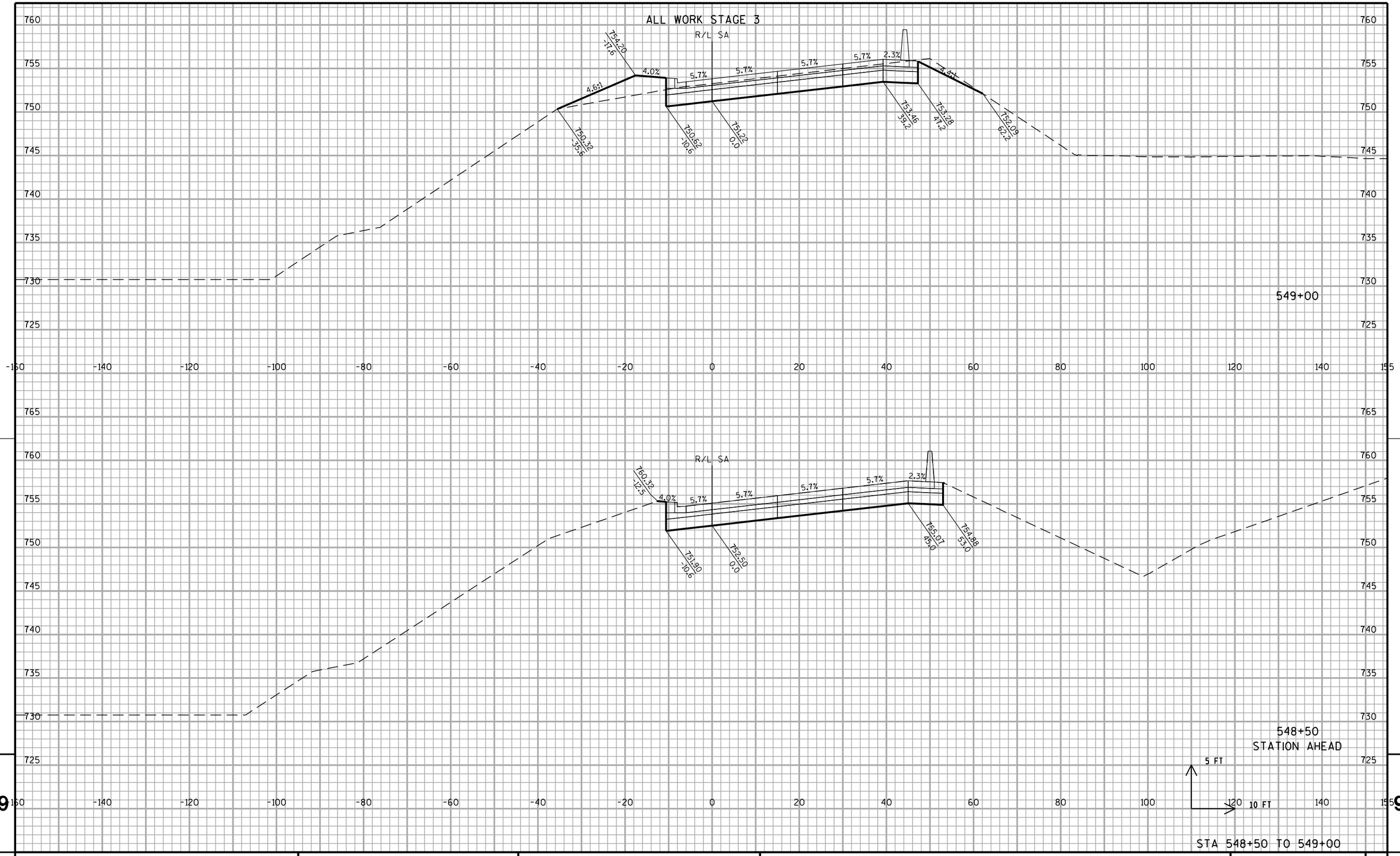
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ALL WORK STAGE 3



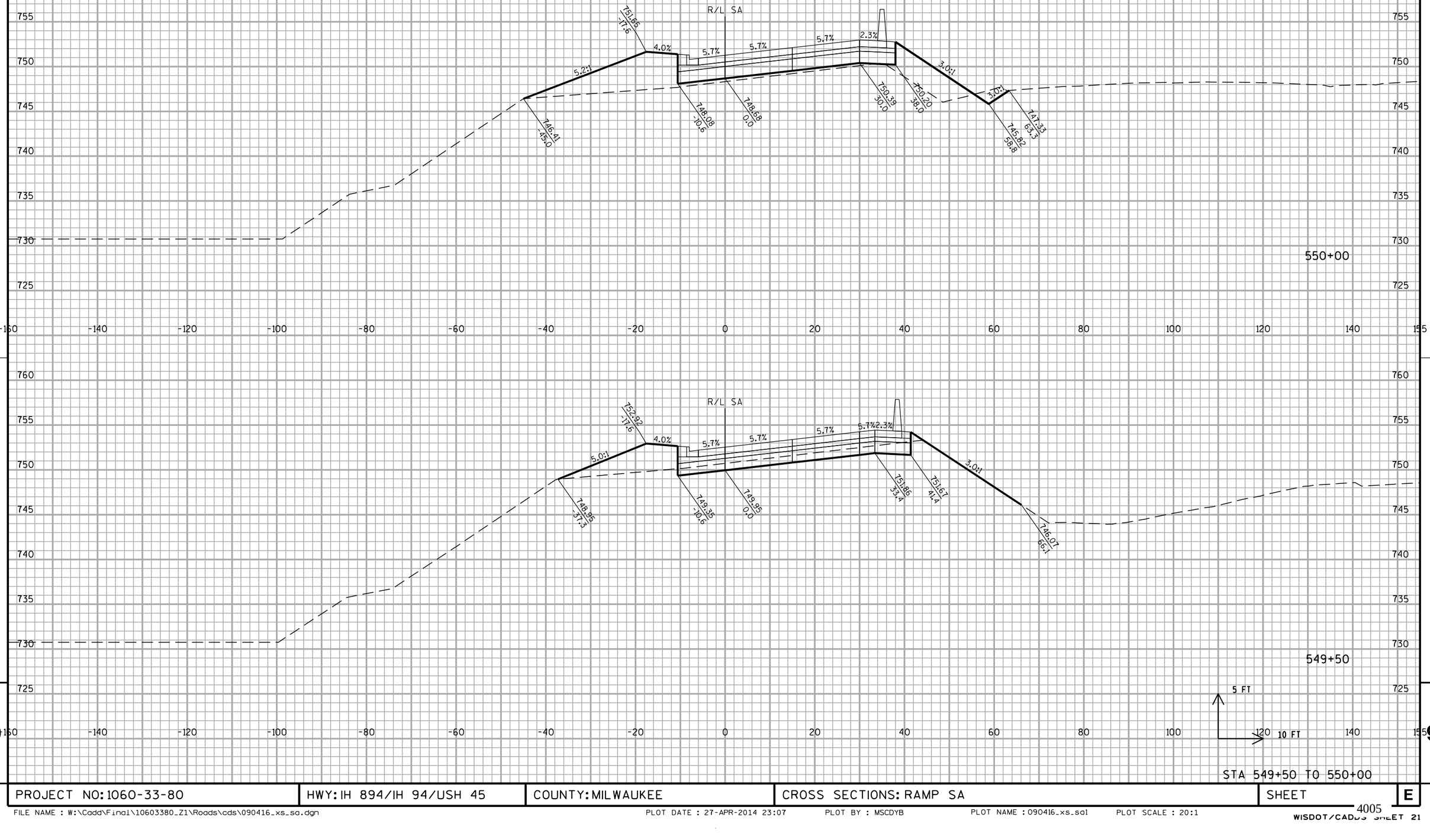
STA 753+00 TO 753+07

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WC	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

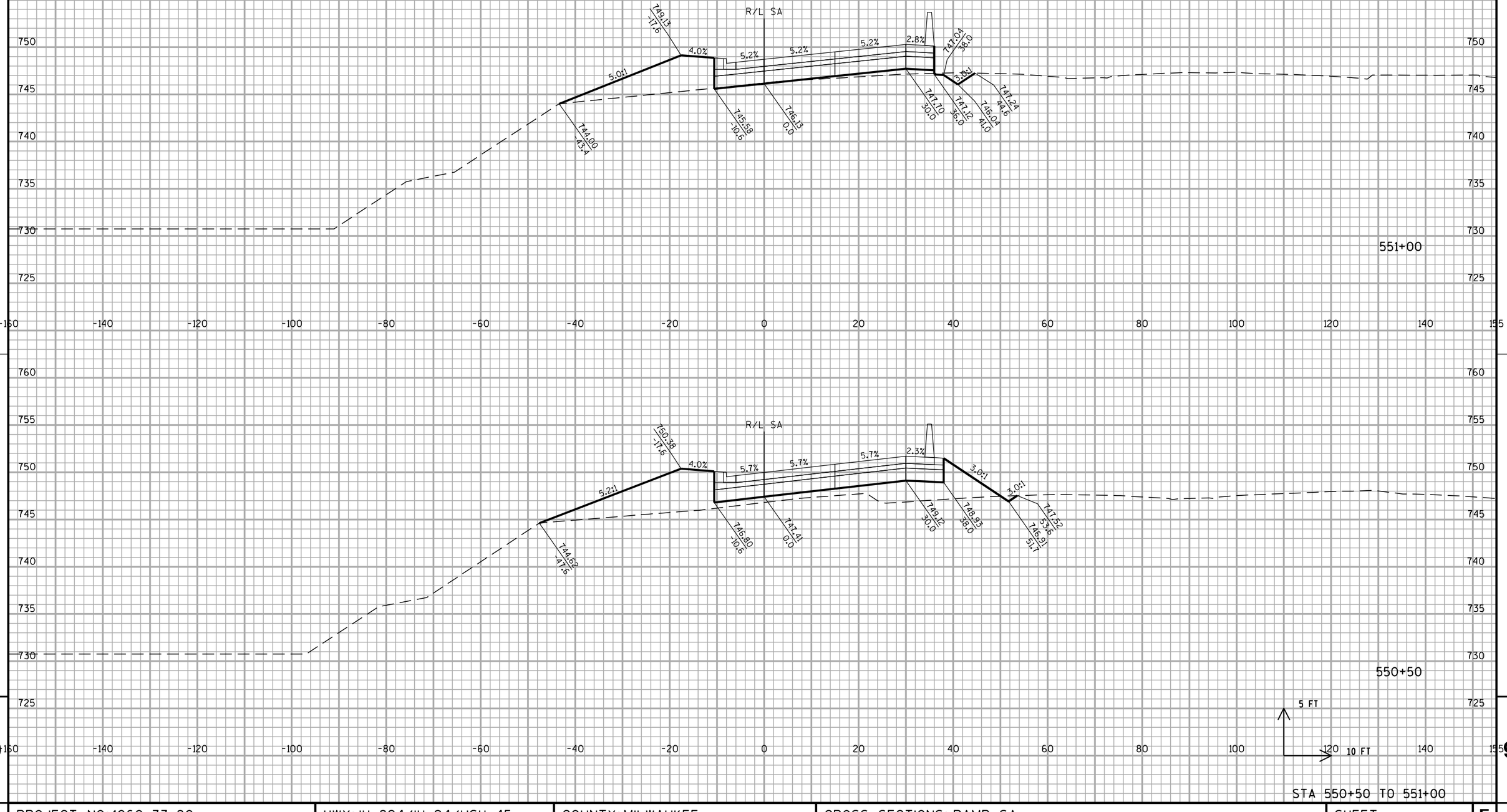
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa1 PLOT SCALE : 20:1

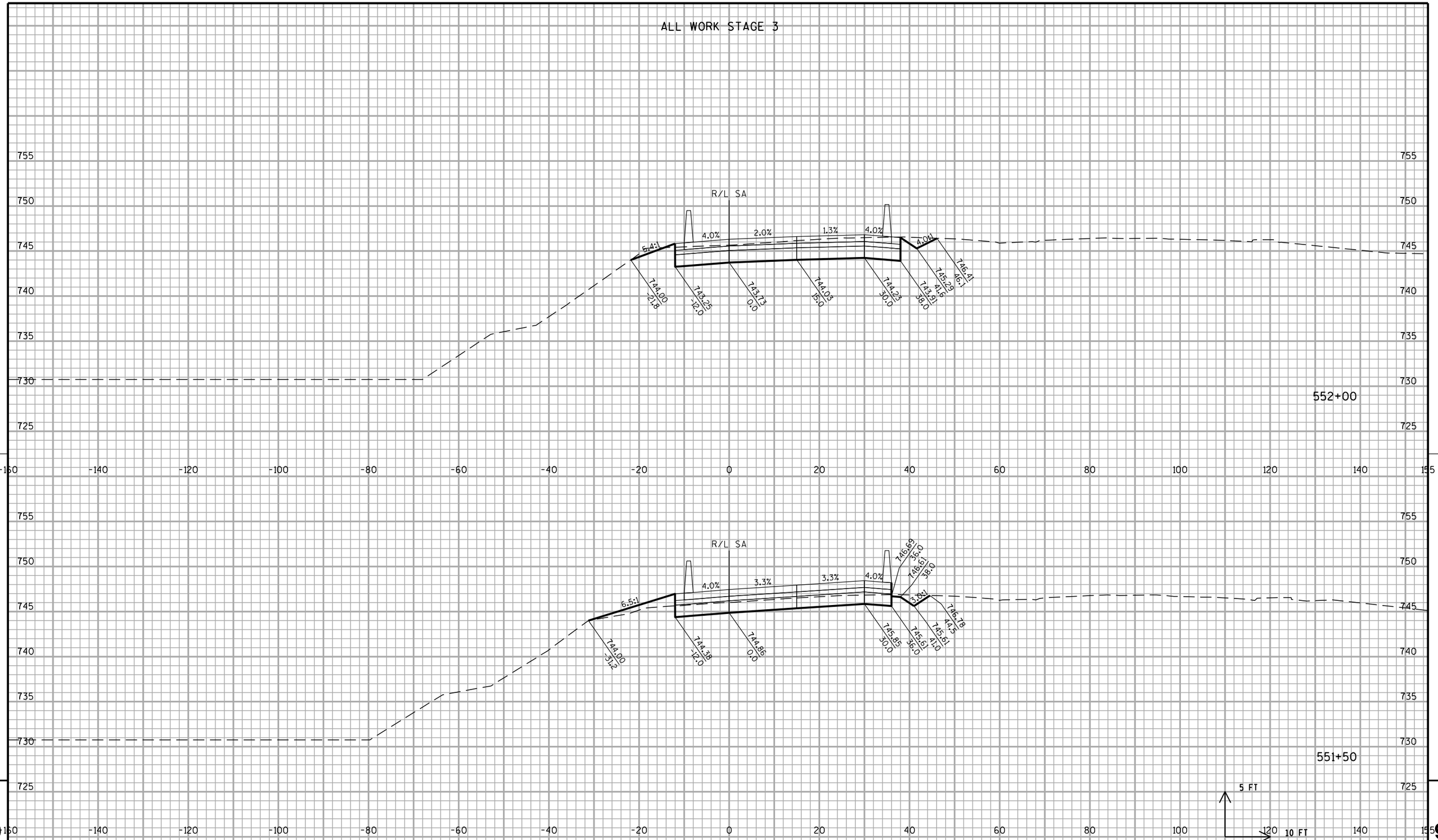
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa2 PLOT SCALE : 20:1

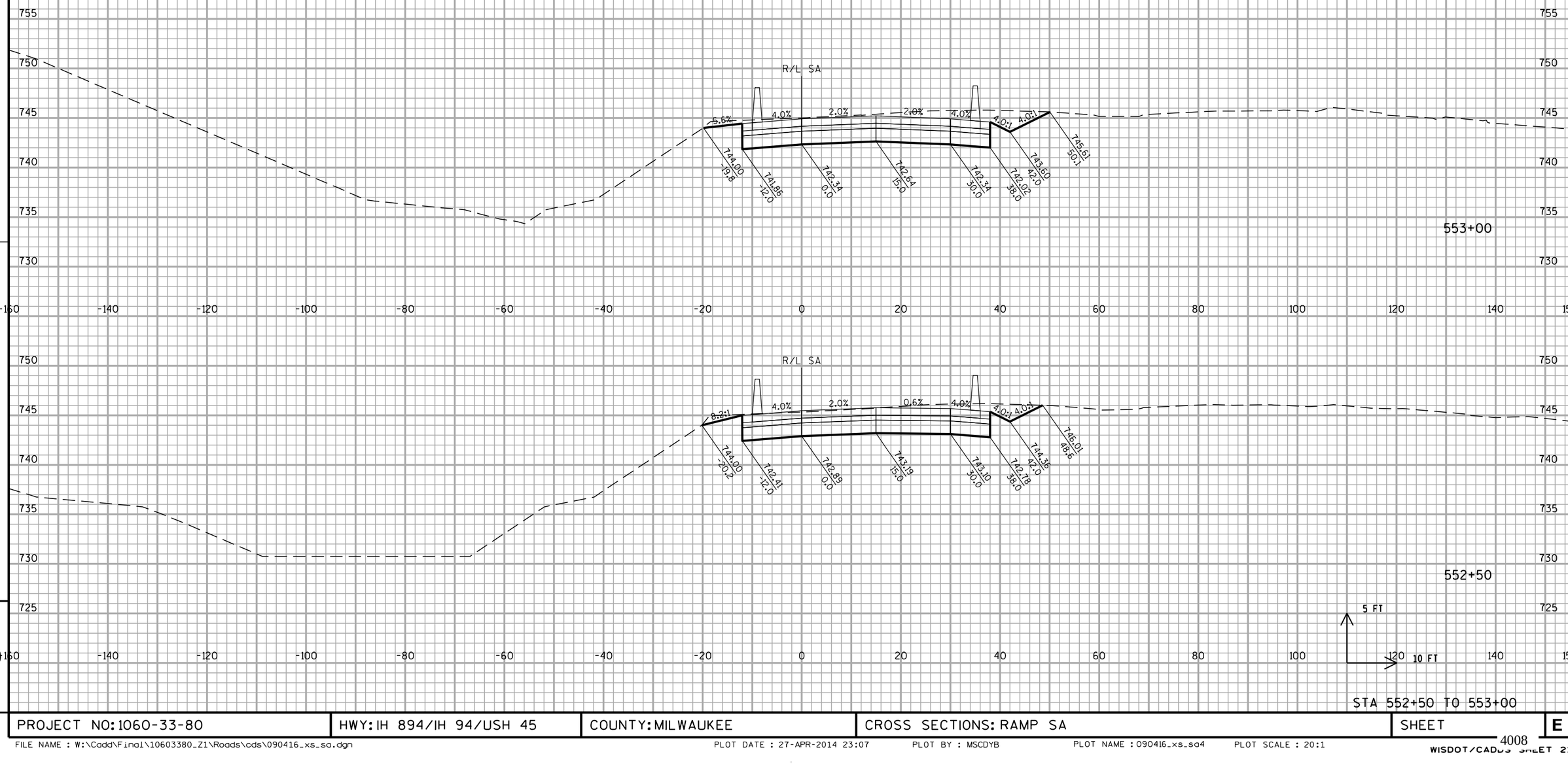
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa3 PLOT SCALE : 20:1

ALL WORK STAGE 3

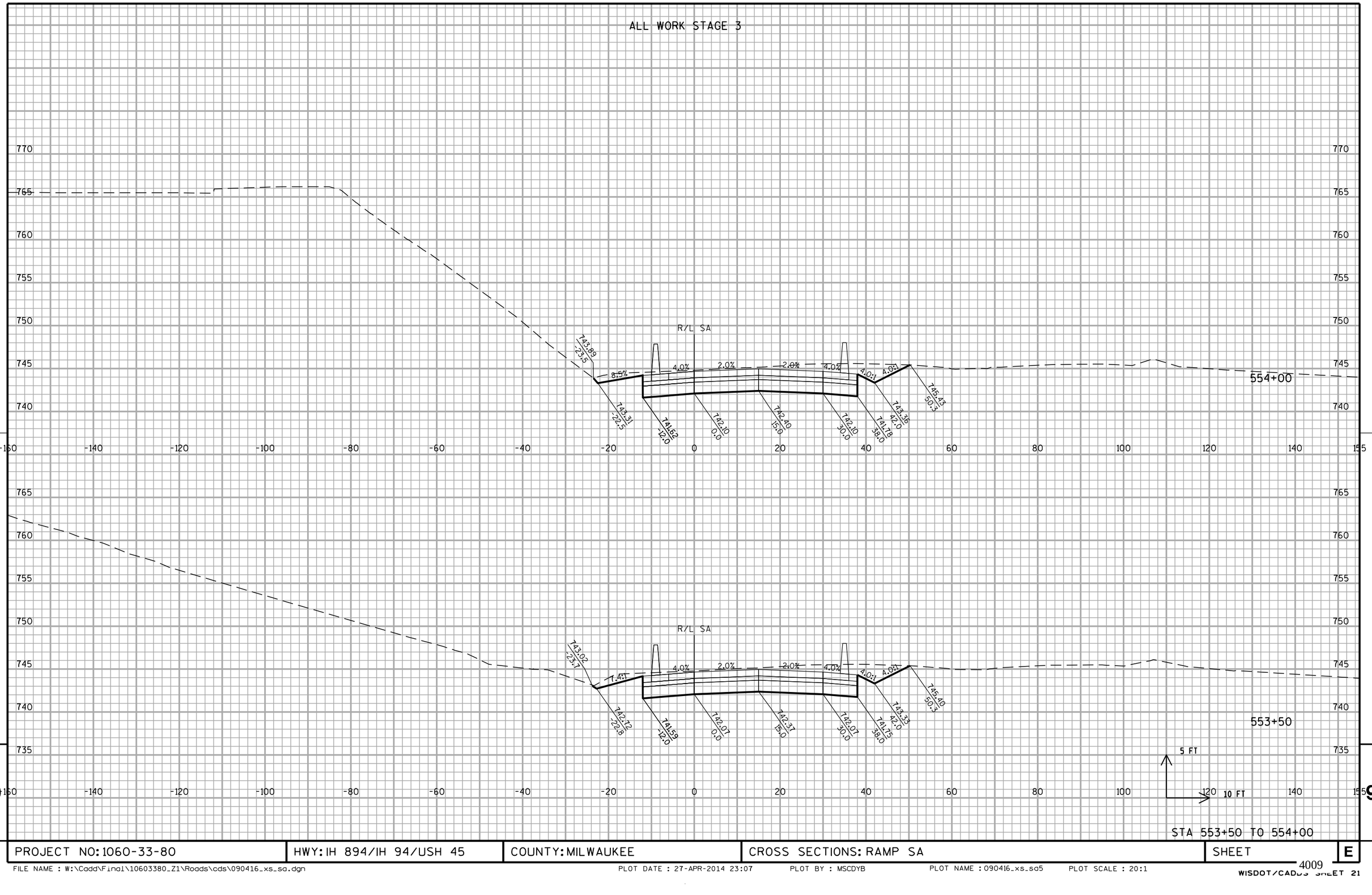


STA 552+50 TO 553+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa4 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

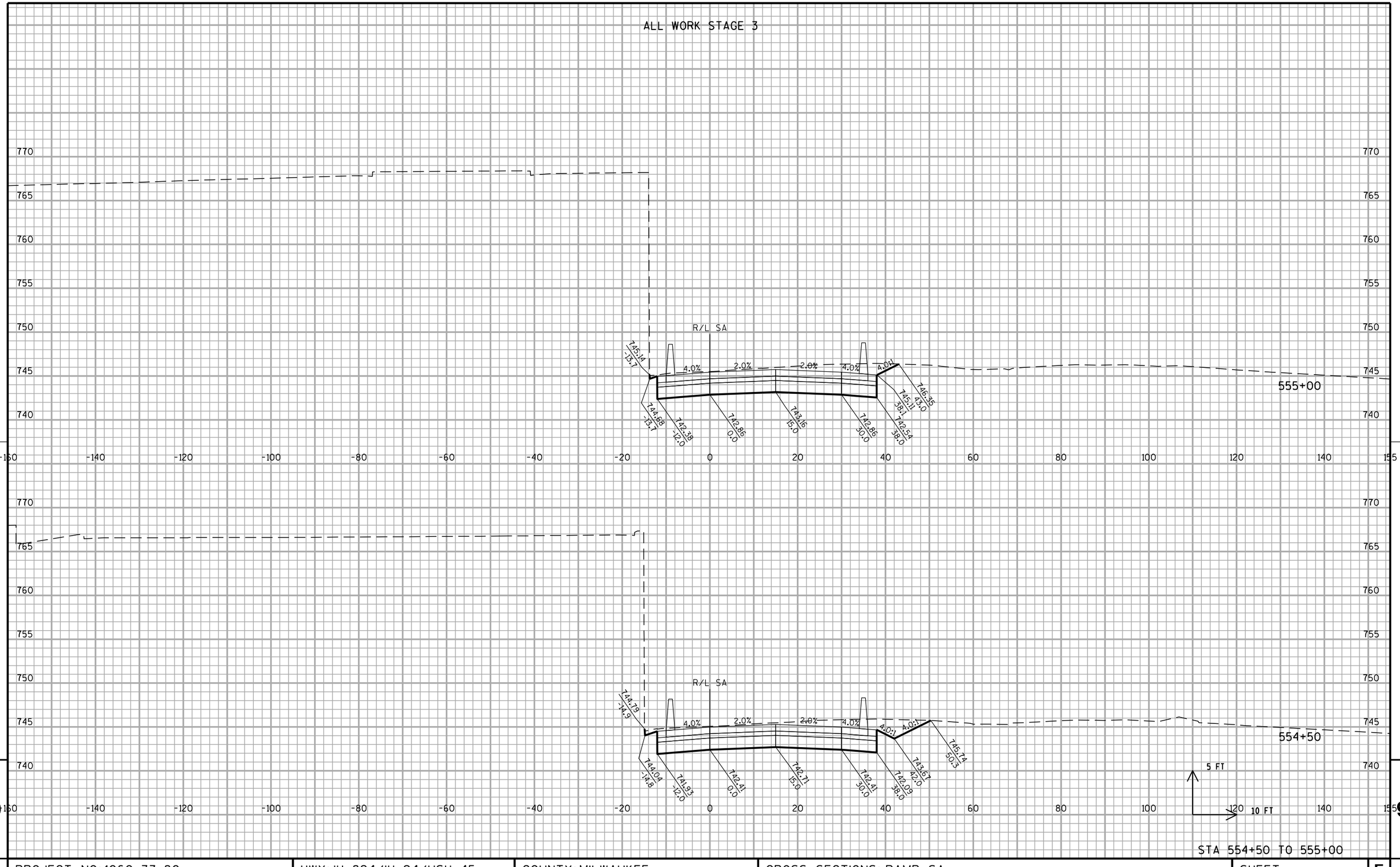


STA 553+50 TO 554+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa5 PLOT SCALE : 20:1

ALL WORK STAGE 3

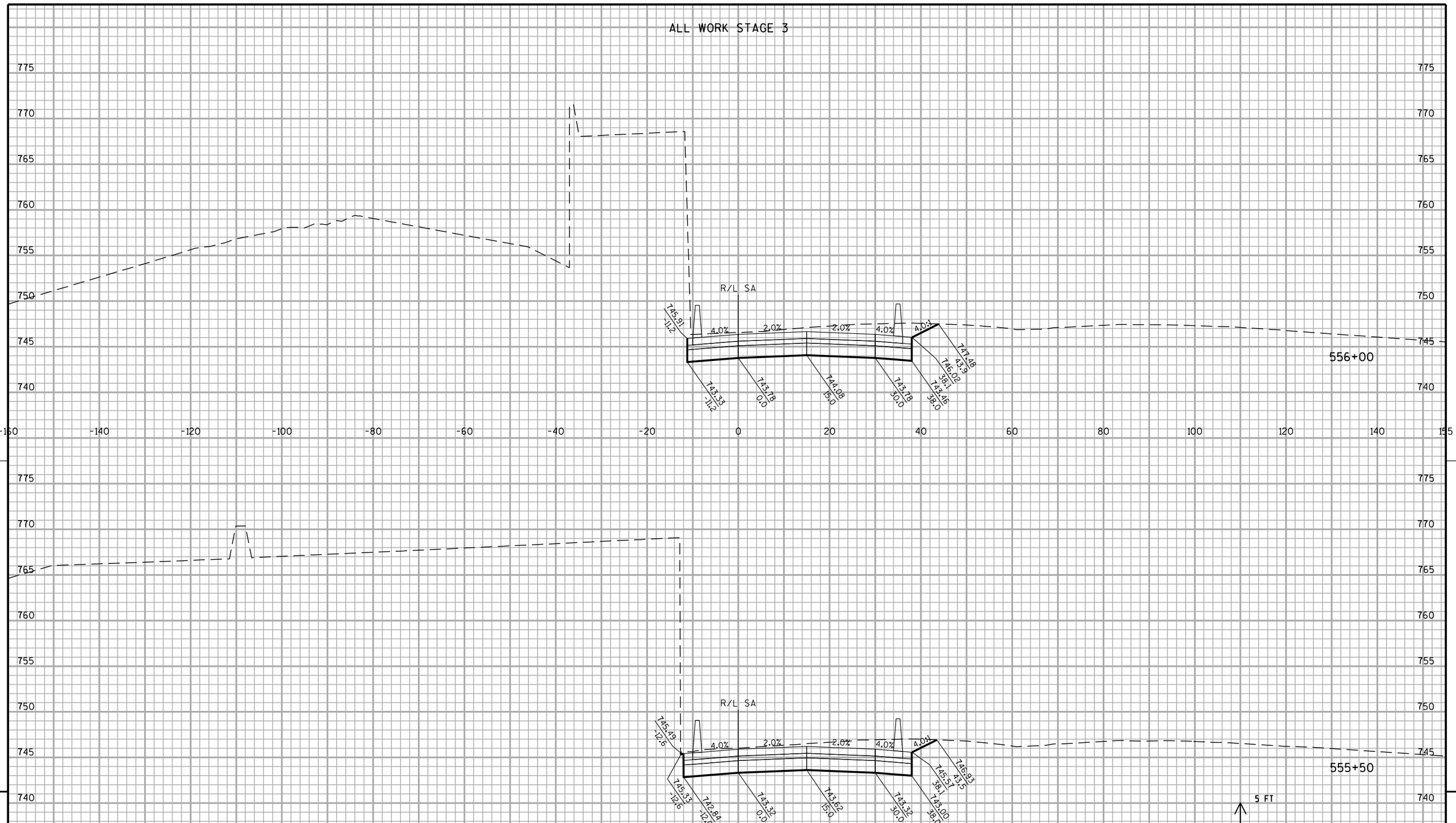


STA 554+50 TO 555+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa6 PLOT SCALE : 20:1

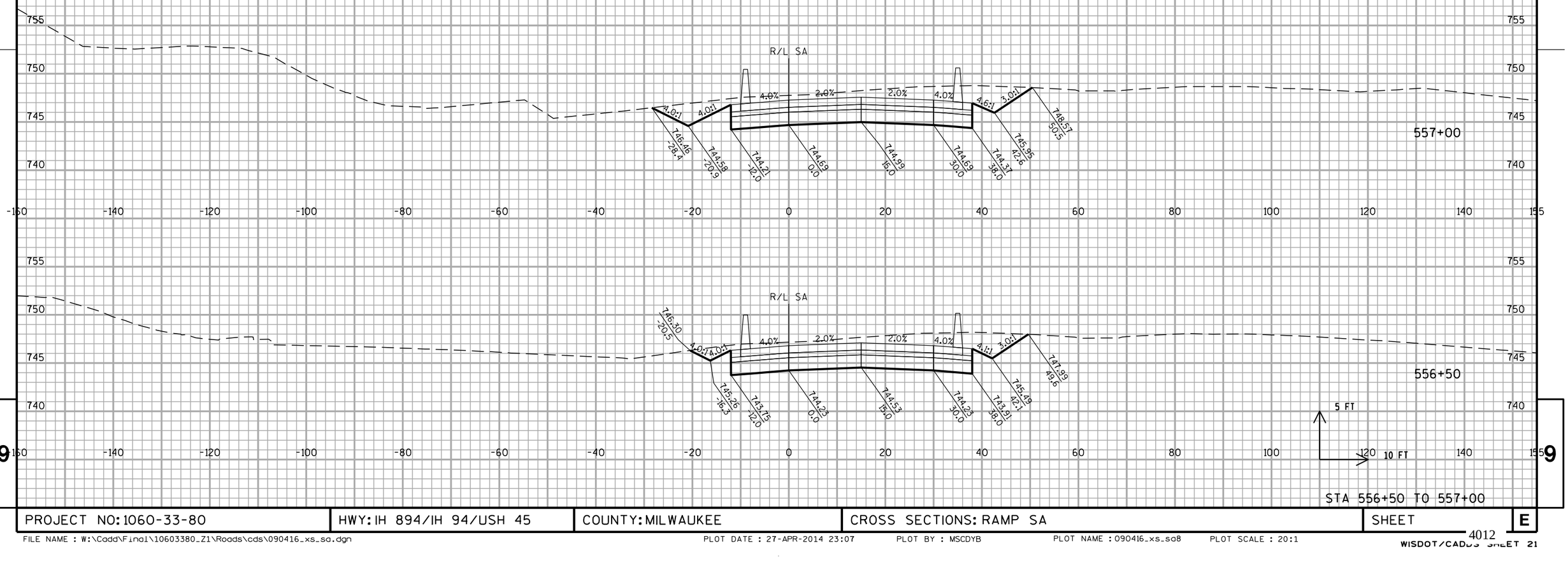
ALL WORK STAGE 3



STA 555+50 TO 556+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

ALL WORK STAGE 3



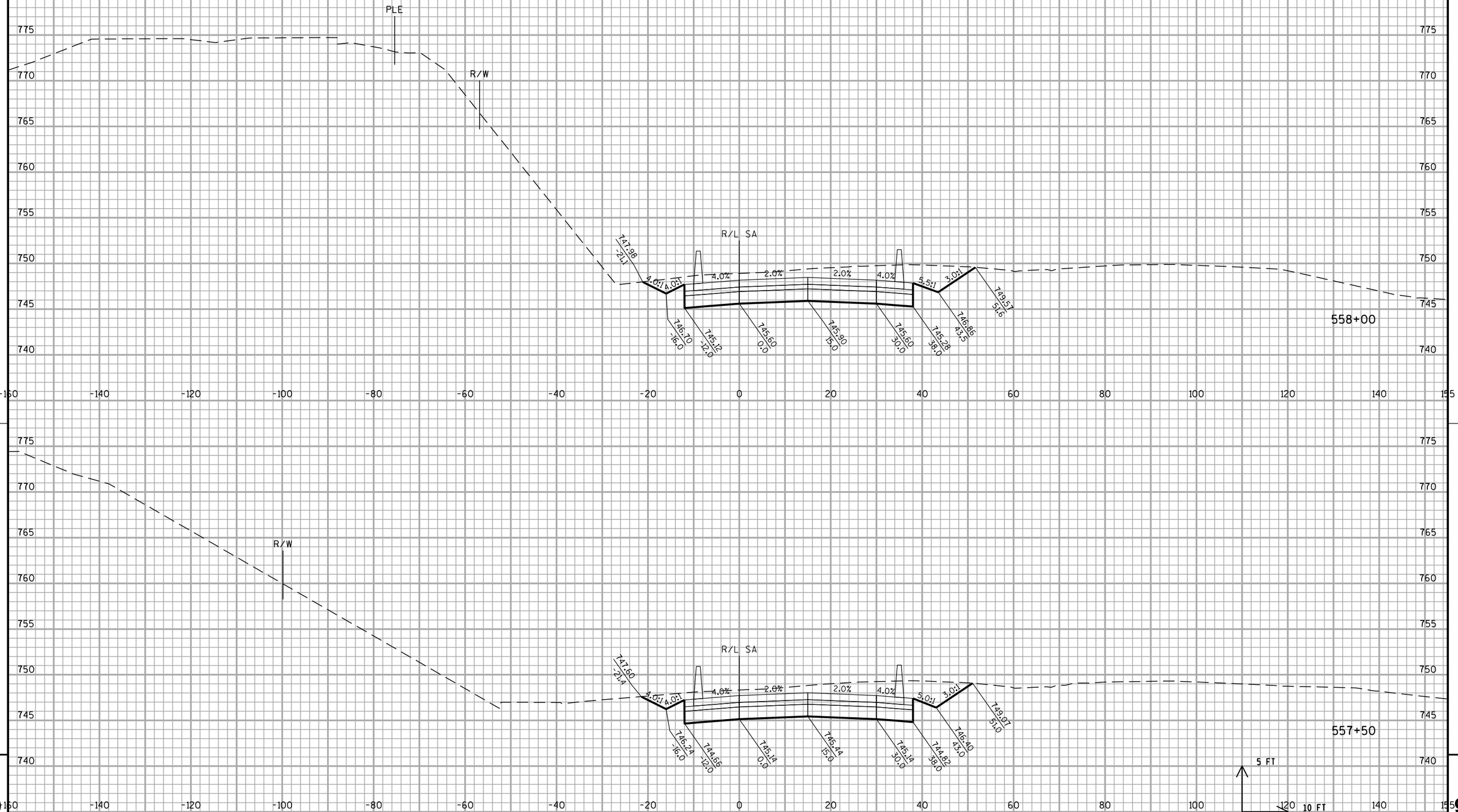
STA 556+50 TO 557+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



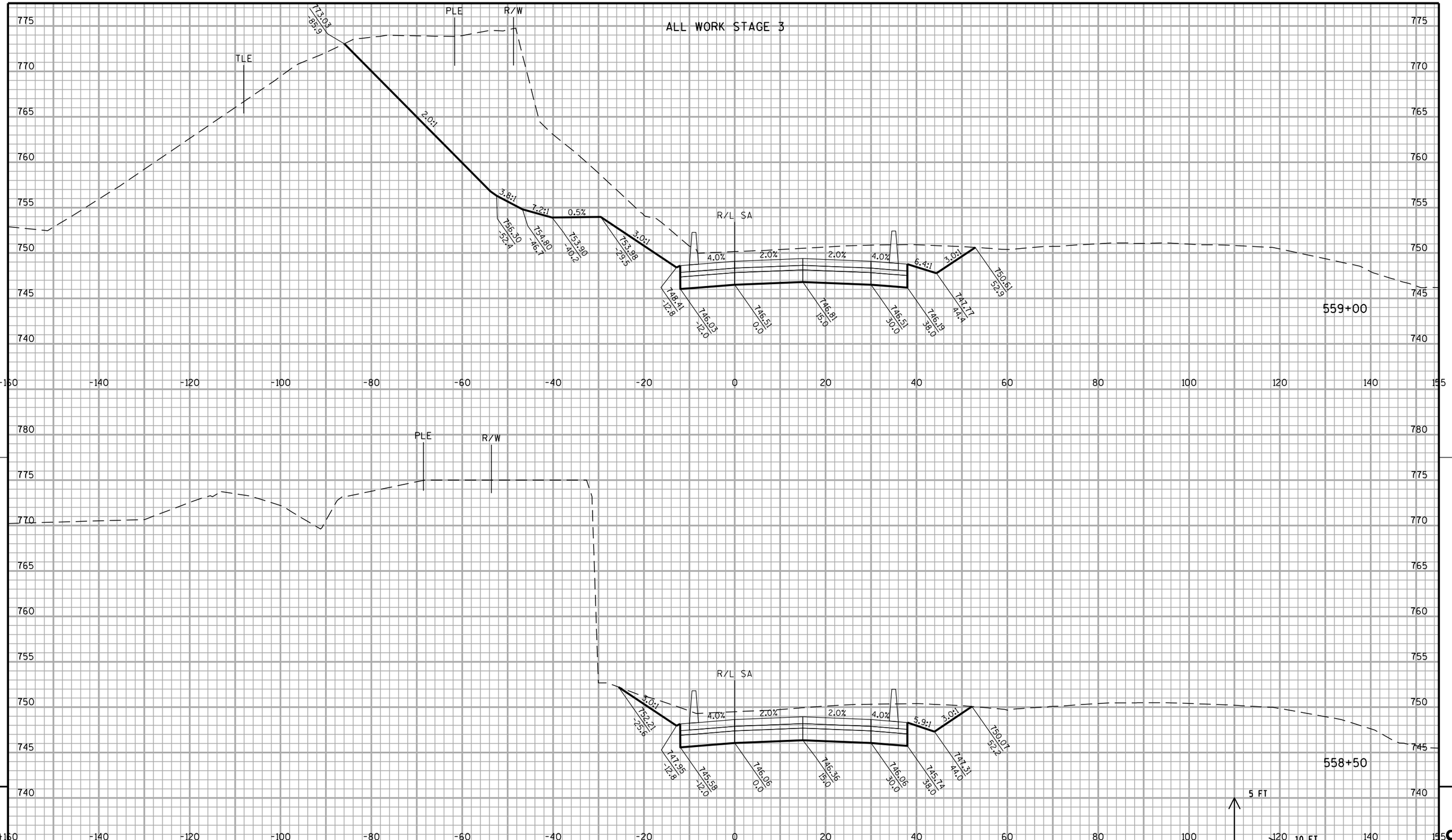
STA 557+50 TO 558+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

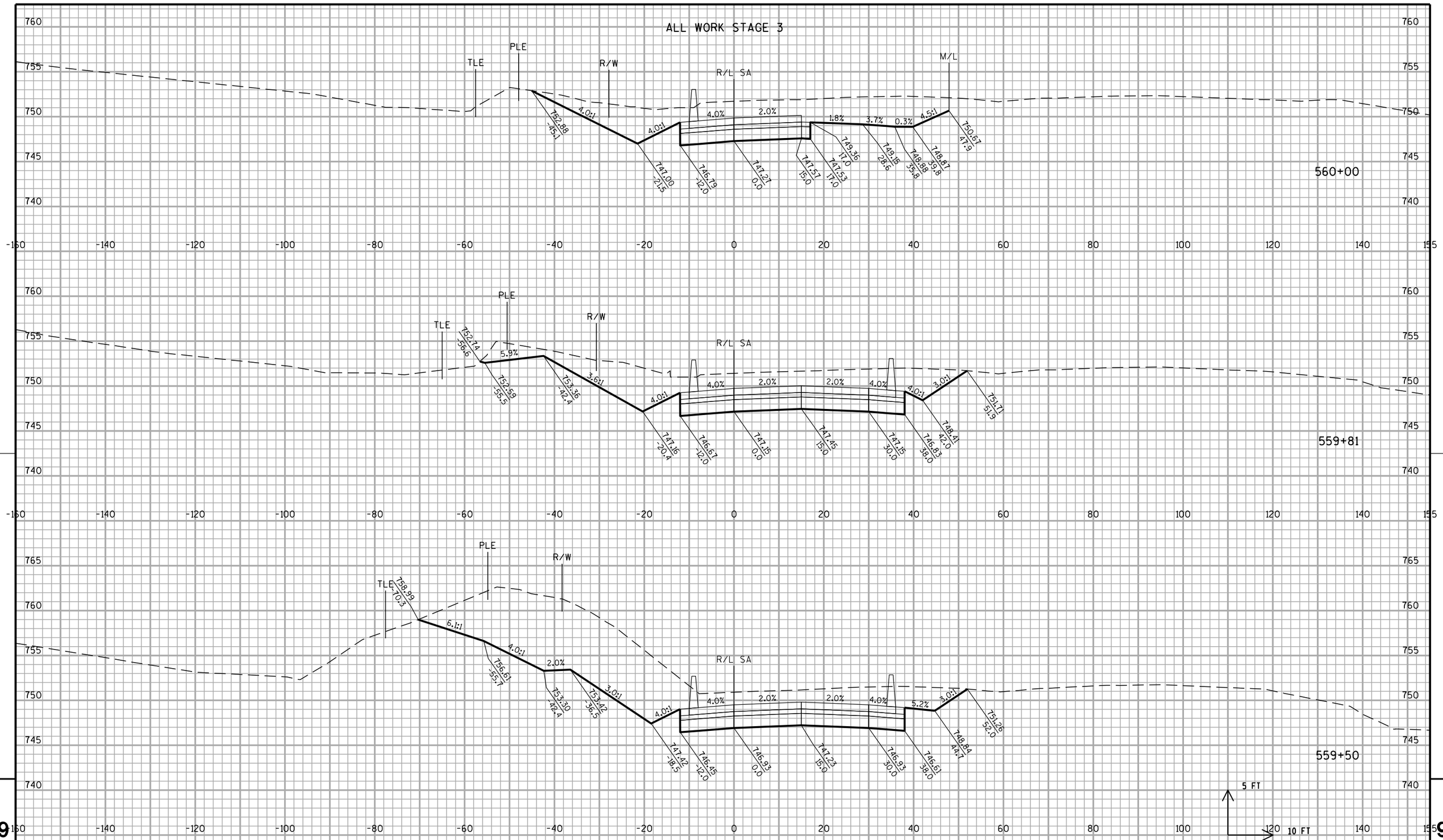
ALL WORK STAGE 3



STA 558+50 TO 559+00

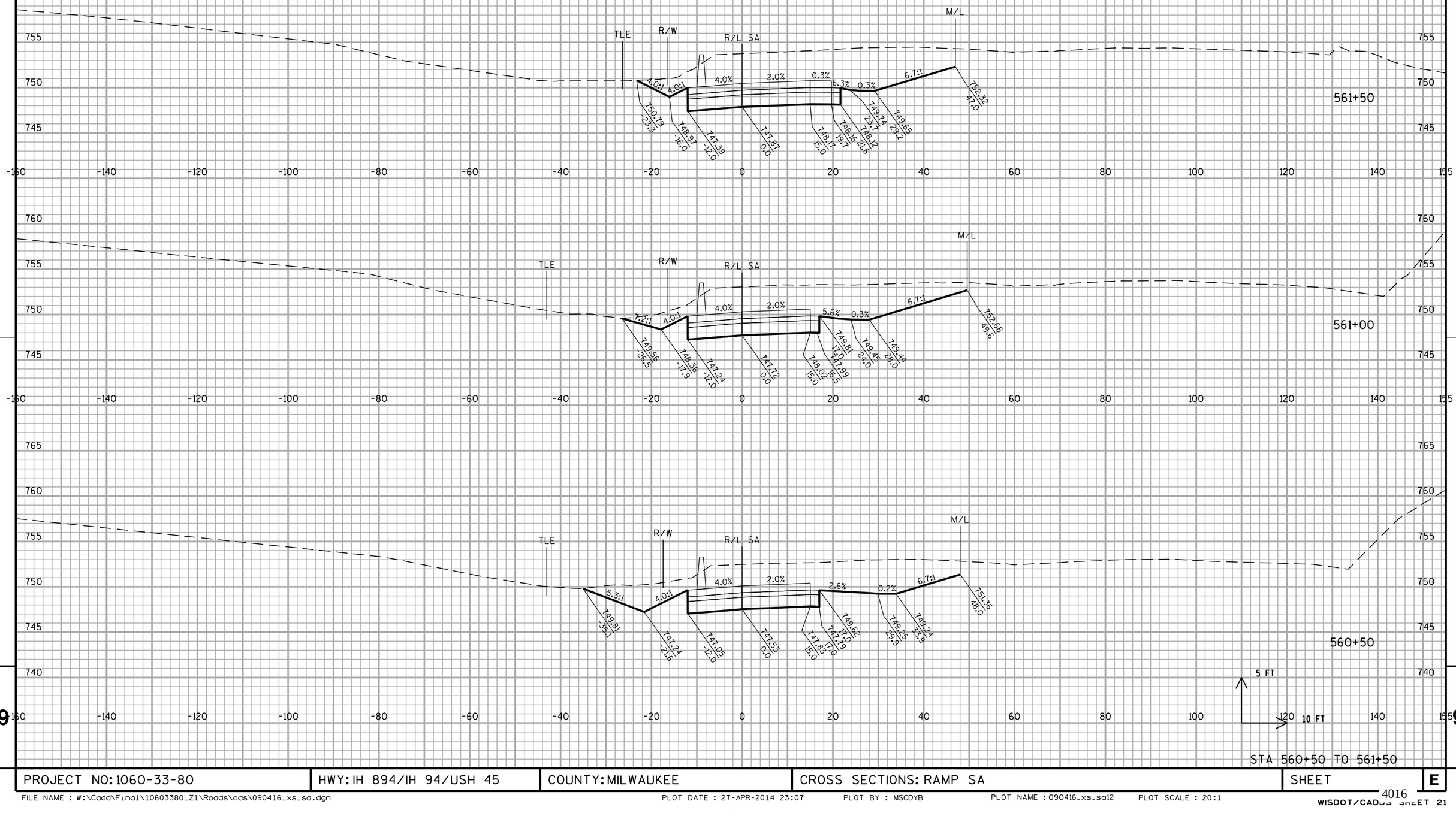
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa10 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

ALL WORK STAGE 3



STA 560+50 TO 561+50

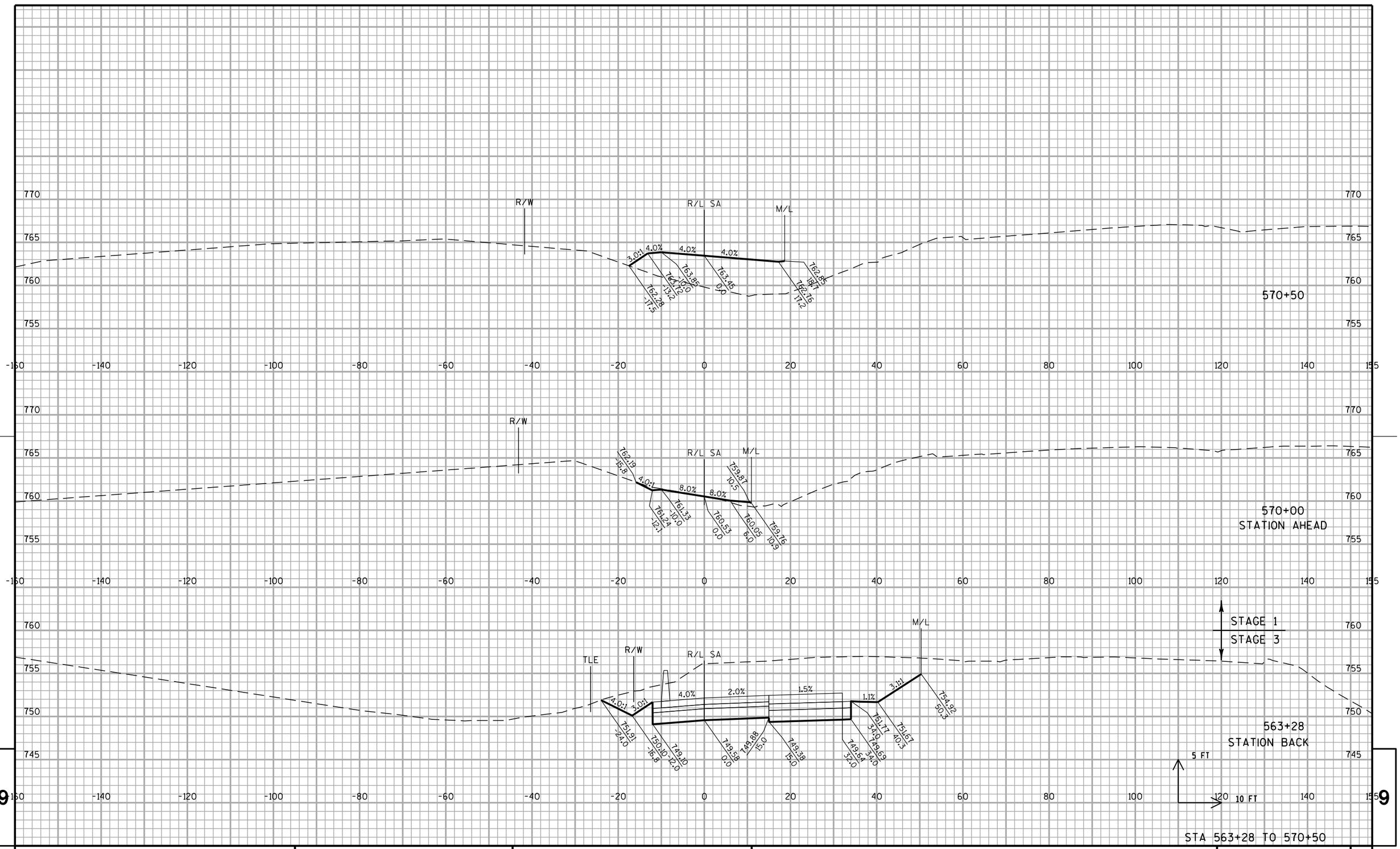
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa12 PLOT SCALE : 20:1

ALL WORK STAGE 3

STA 562+00 TO 563+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

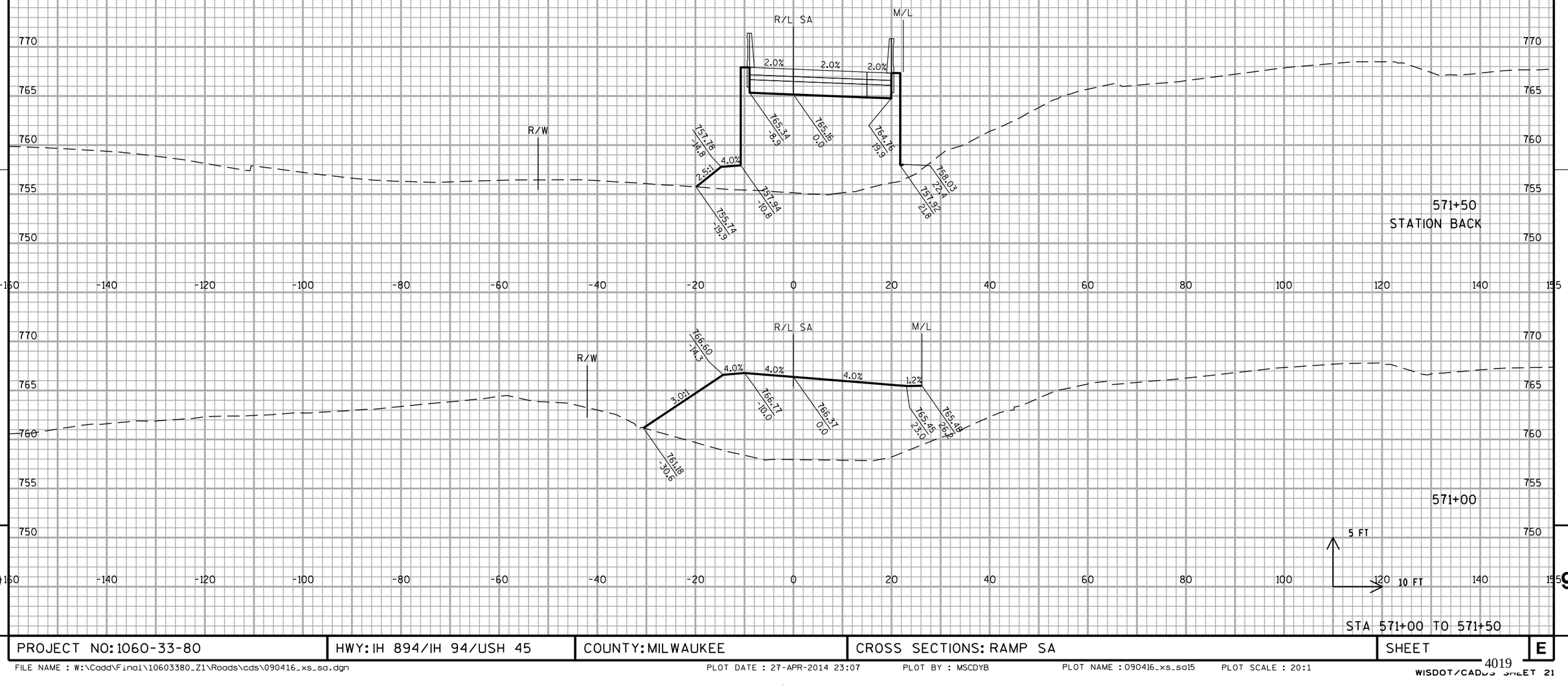


STA 563+28 TO 570+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_SA.dgn PLOT DATE : 29-APR-2014 13:34 PLOT BY : MSCPLR PLOT NAME : 090416_xs_SA14 PLOT SCALE : 20:1

ALL WORK STAGE 1

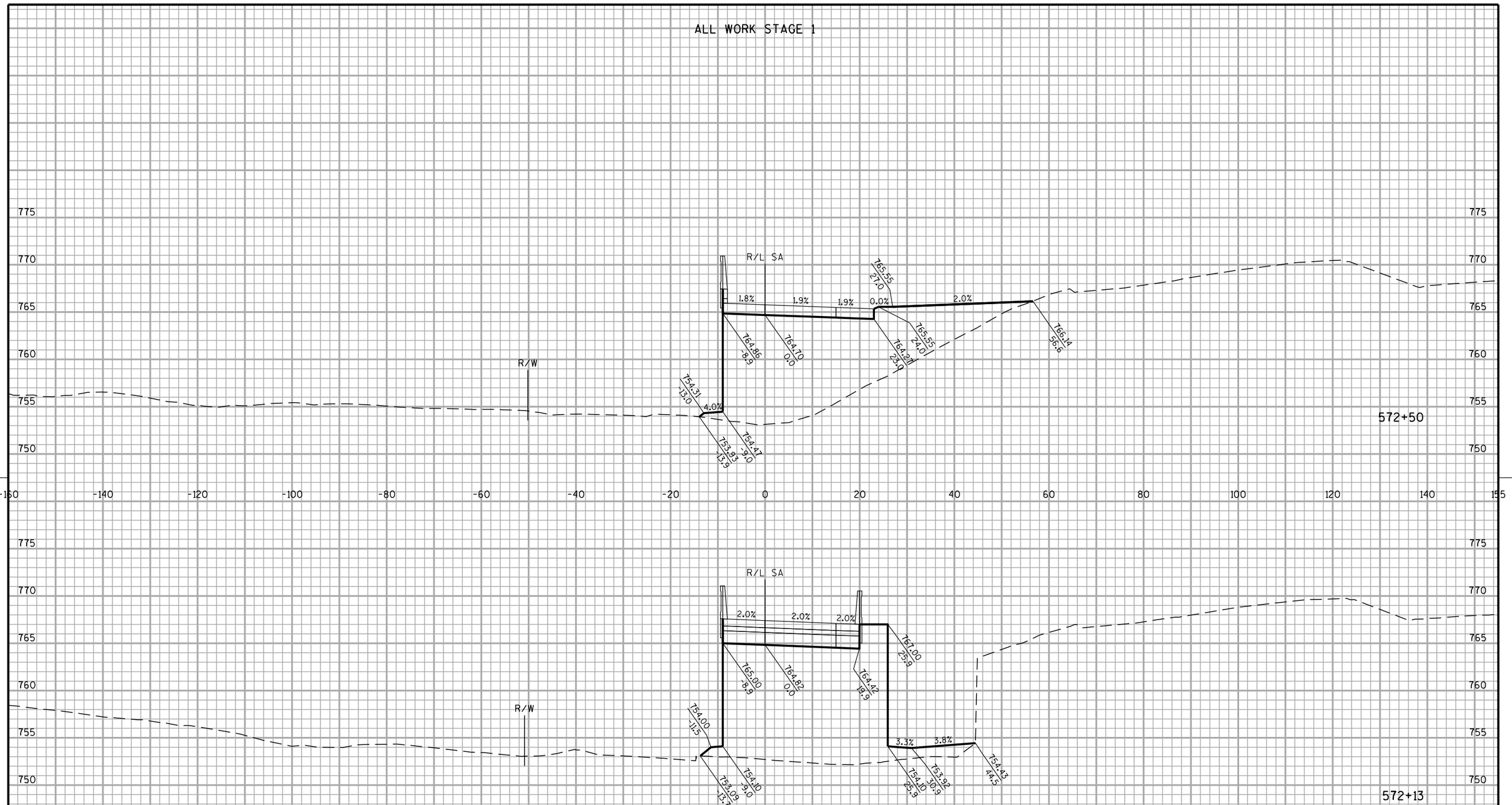


STA 571+00 TO 571+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa15 PLOT SCALE : 20:1

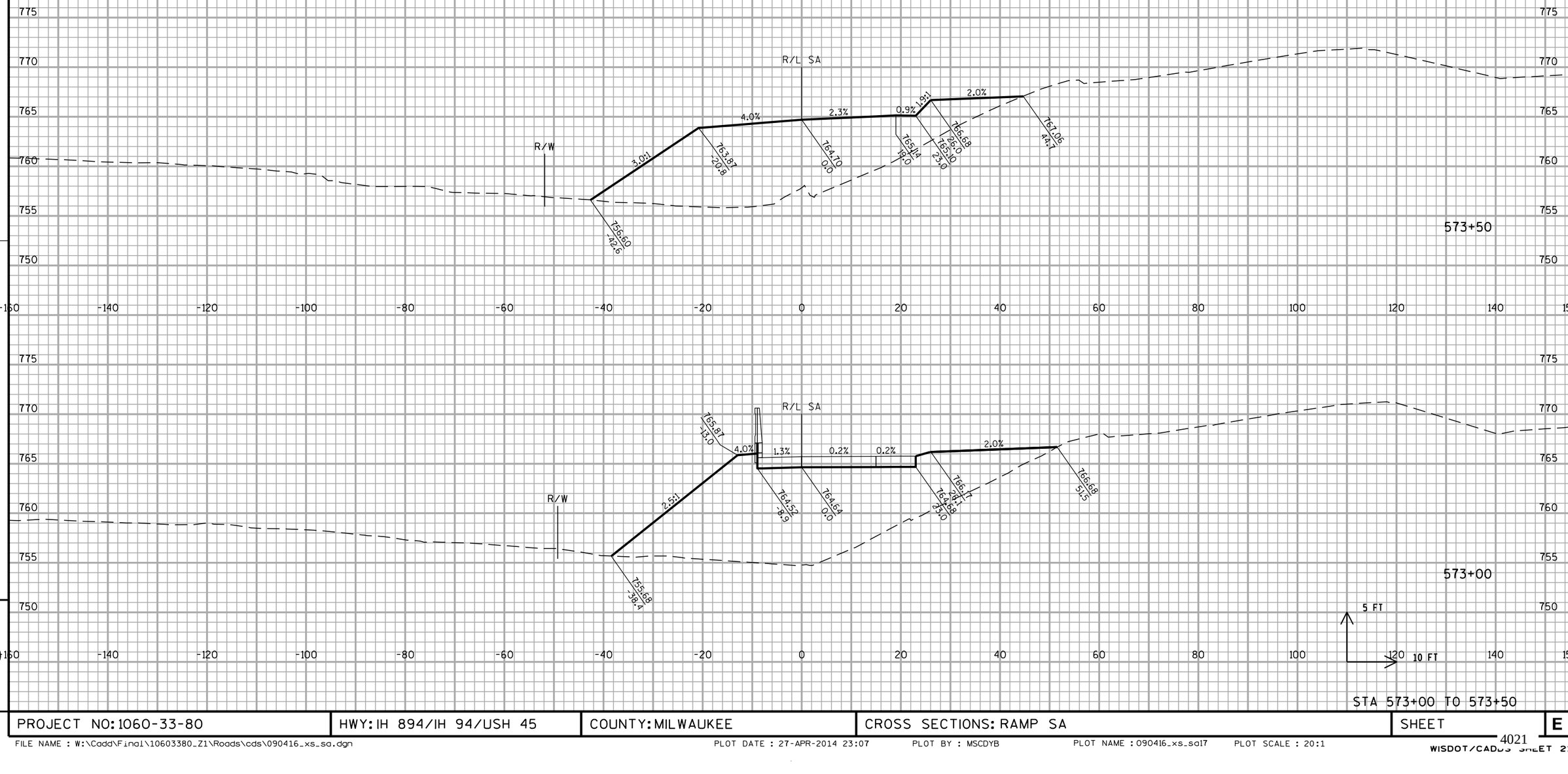
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa16 PLOT SCALE : 20:1

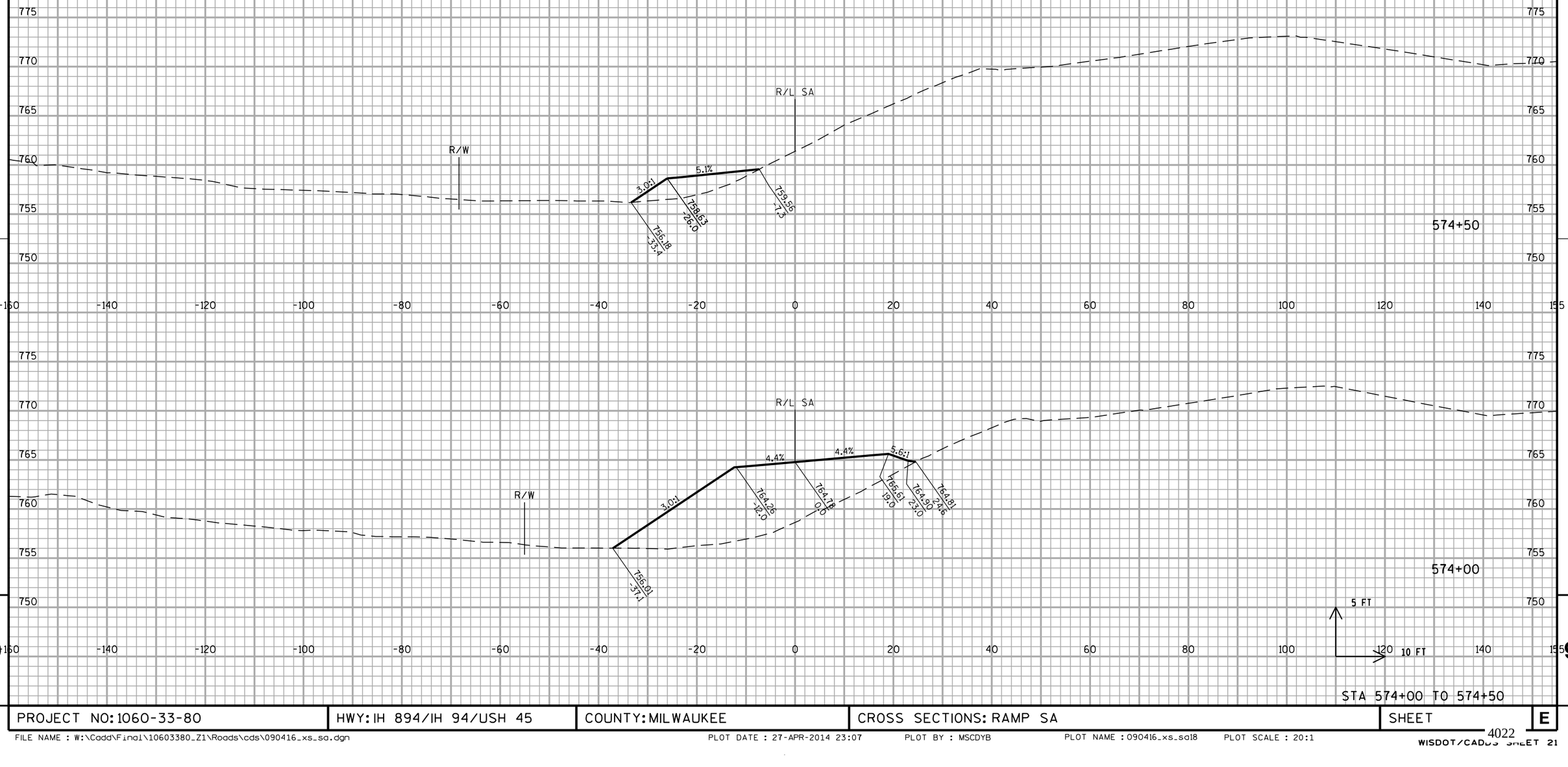
ALL WORK STAGE 1



STA 573+00 TO 573+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

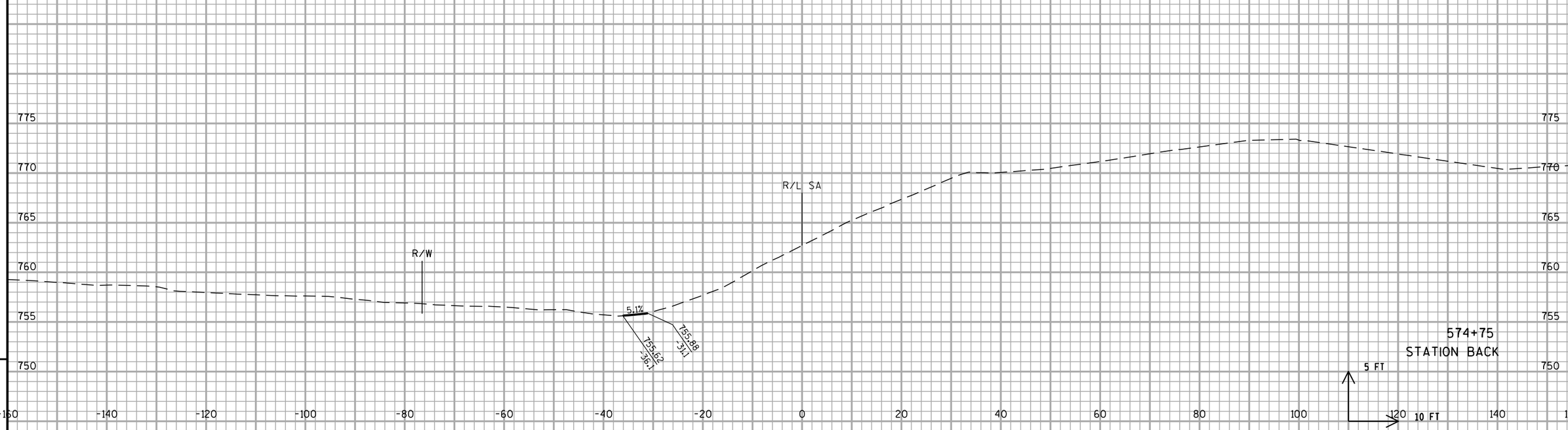
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090416_xs_sa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090416_xs_sa18 PLOT SCALE : 20:1

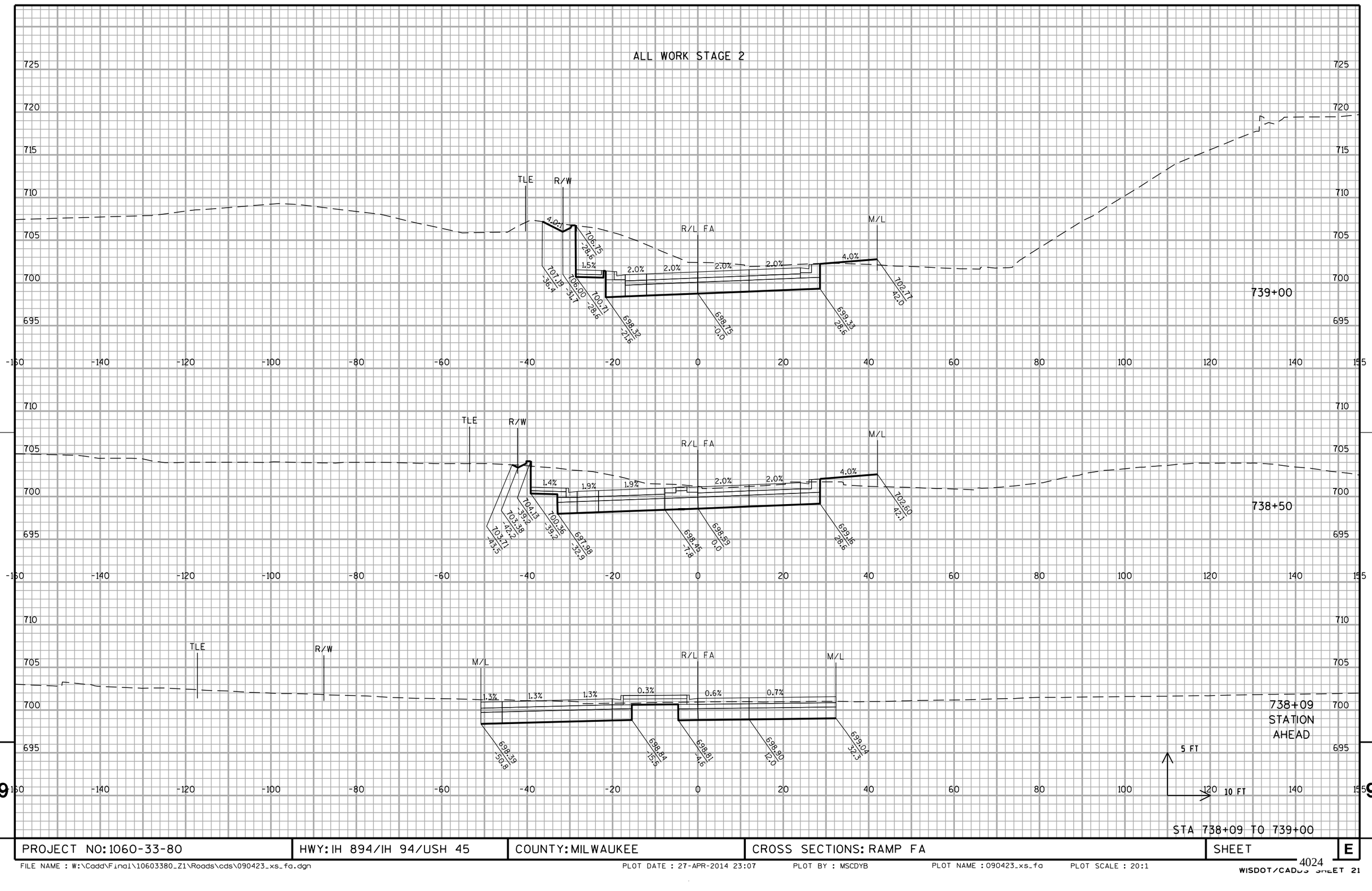
ALL WORK STAGE 1



STA 574+75 TO 574+75

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SA	SHEET	E

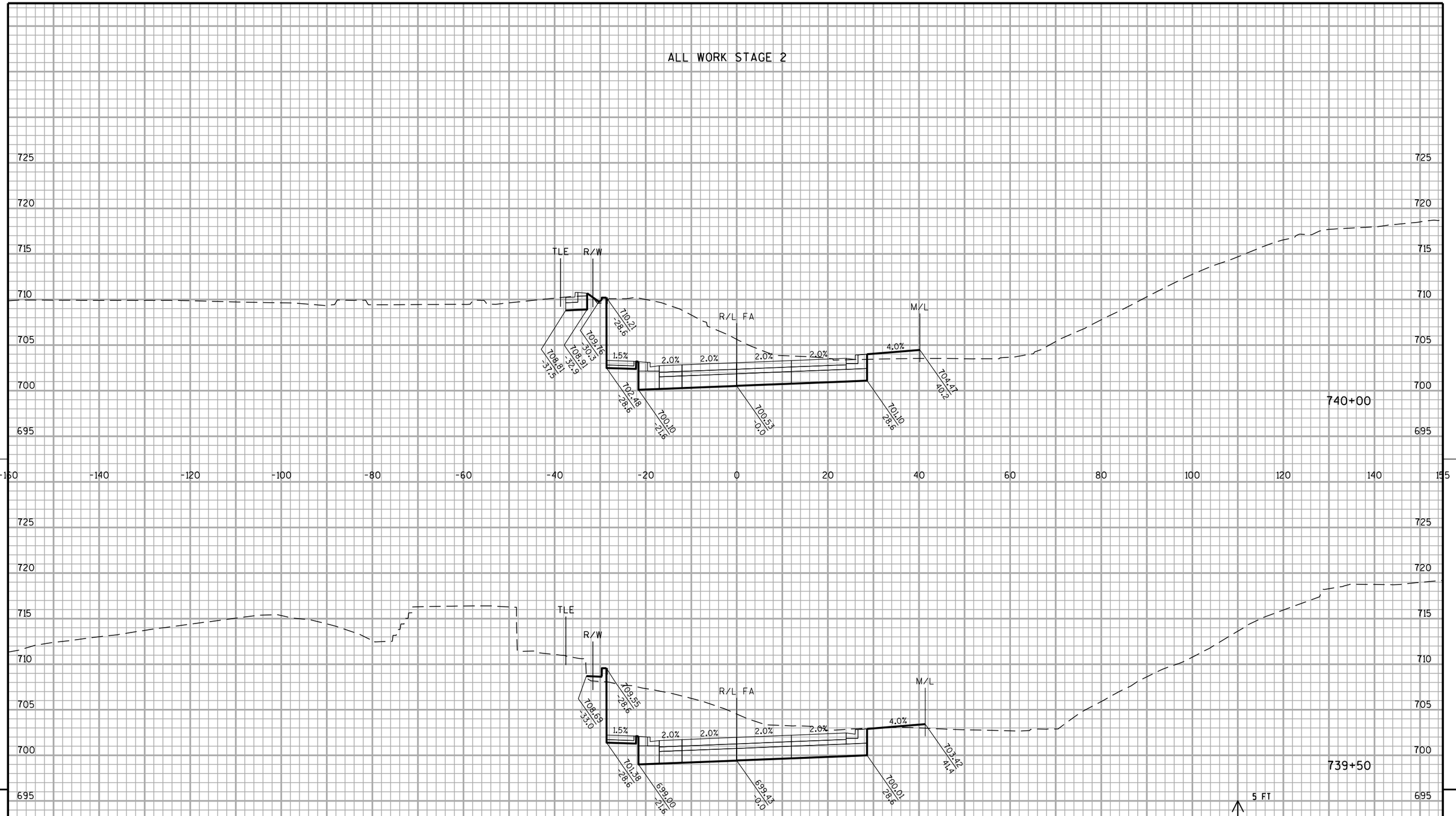
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa PLOT SCALE : 20:1

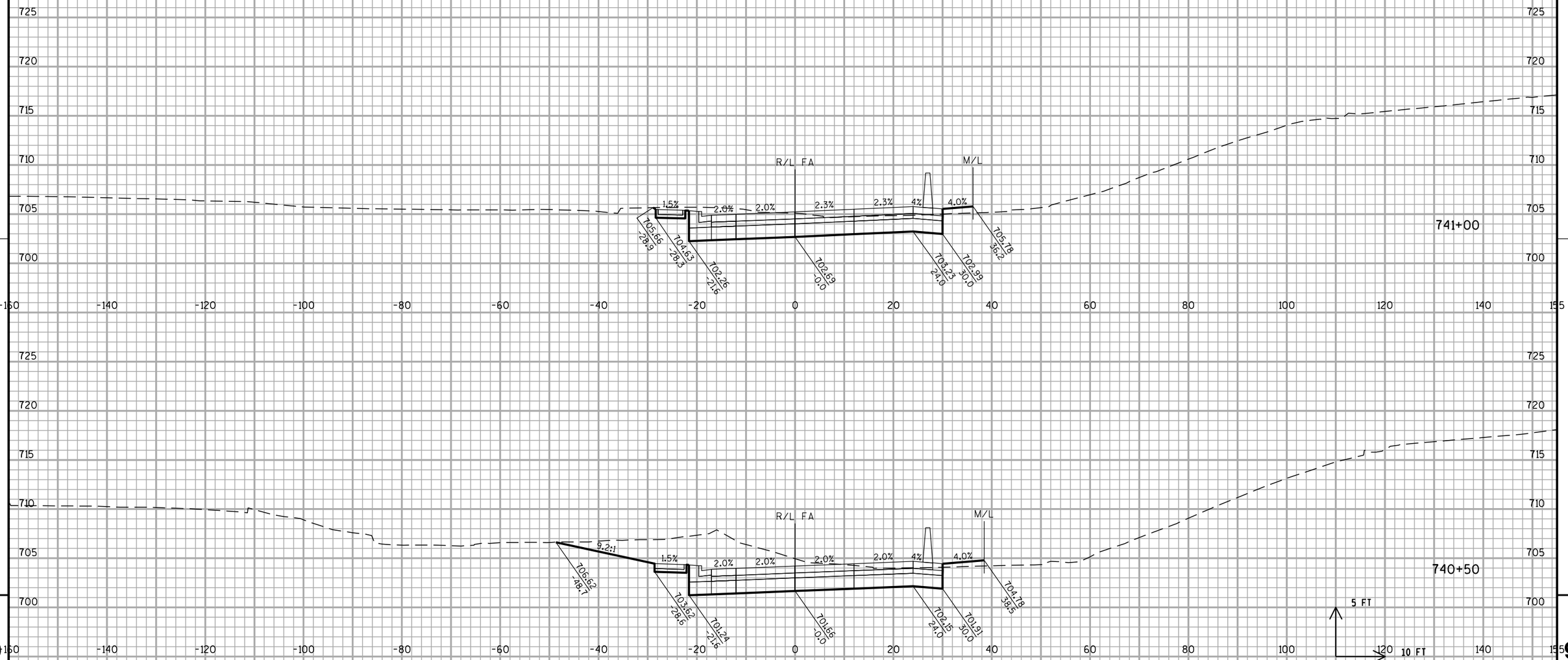
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa1 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 740+50 TO 741+00

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

ALL WORK STAGE 2

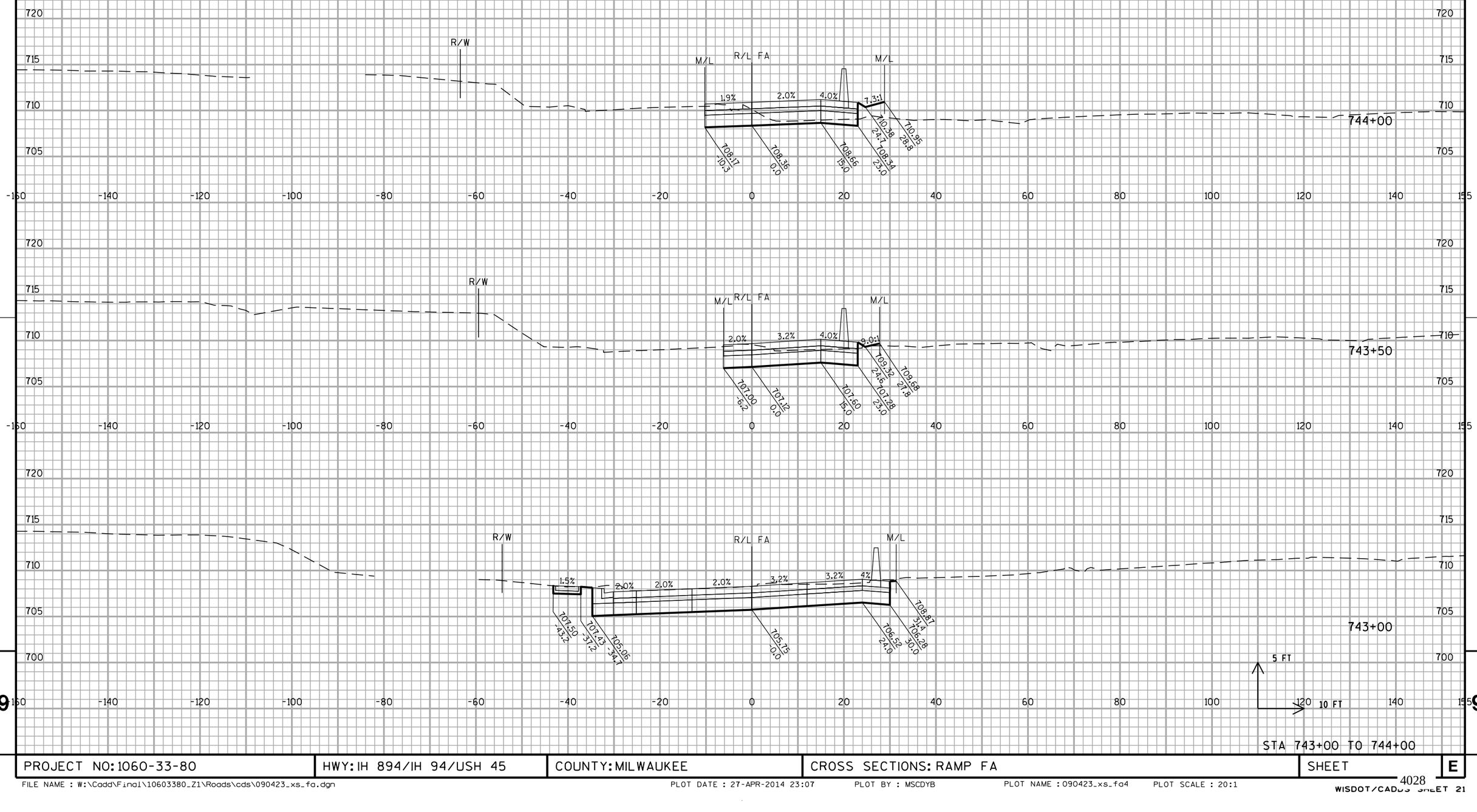
STA 741+50 TO 742+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_FA.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090423_xs_FA3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

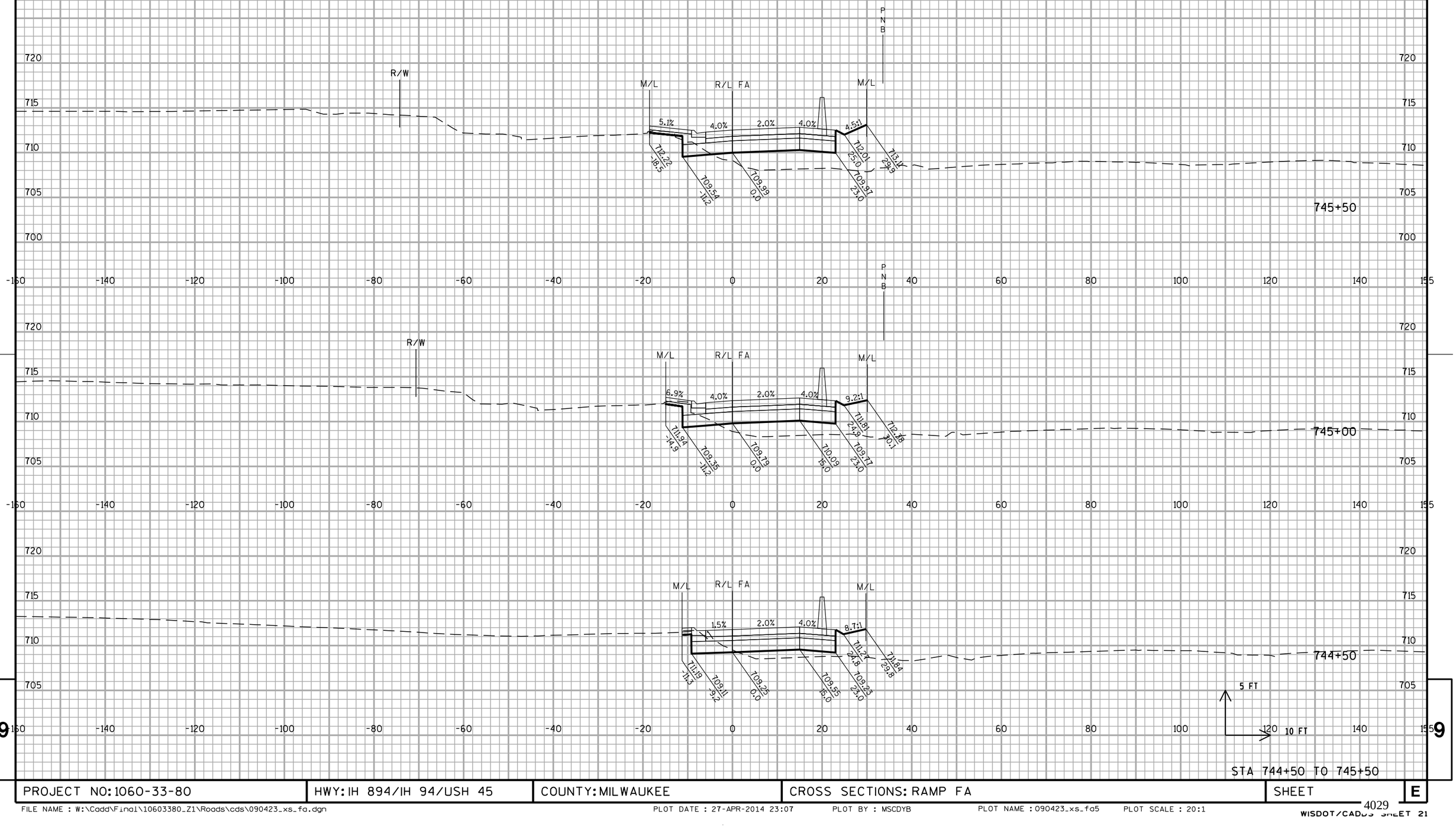
ALL WORK STAGE 2



STA 743+00 TO 744+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

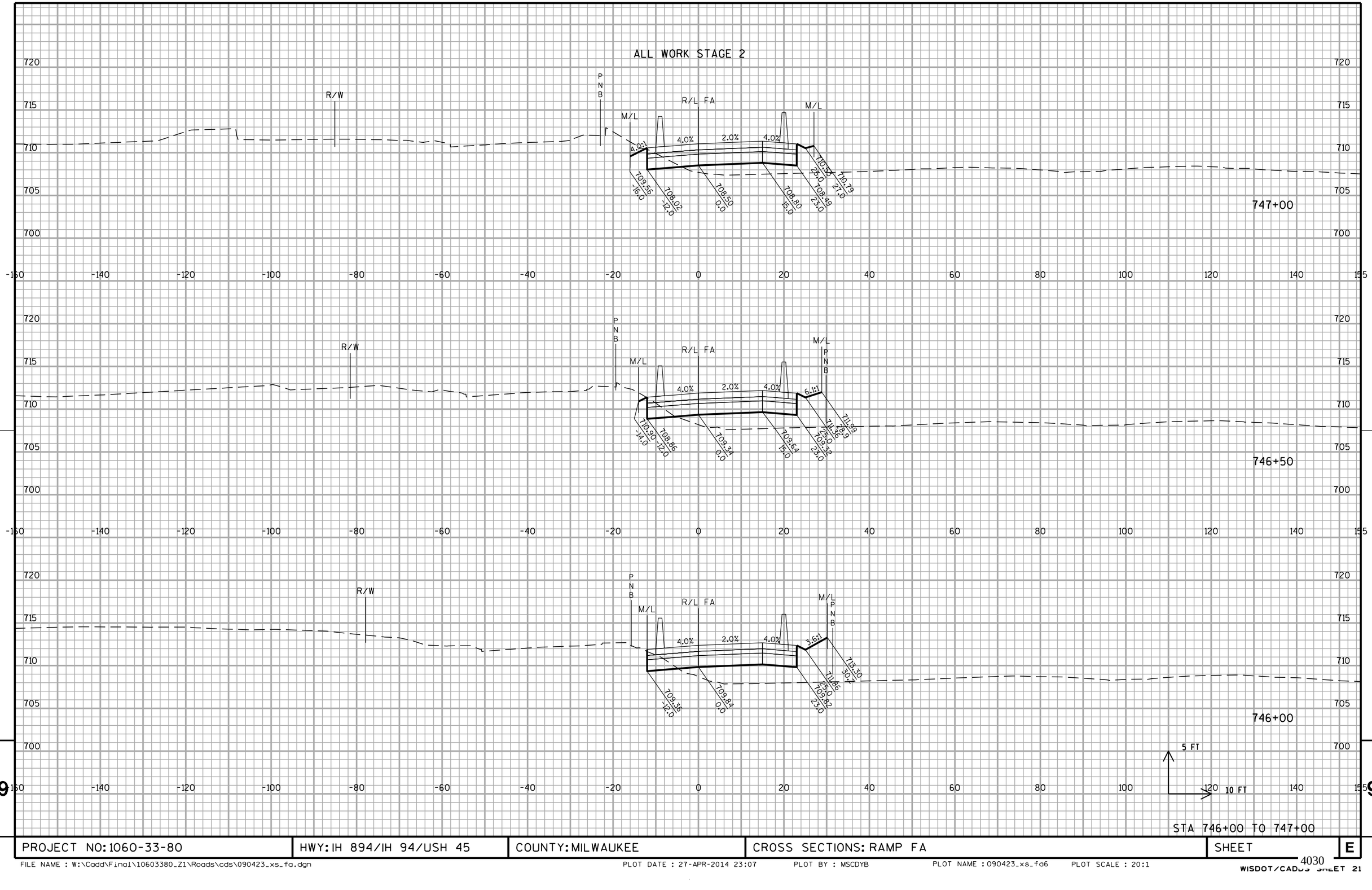
ALL WORK STAGE 2



STA 744+50 TO 745+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

ALL WORK STAGE 2

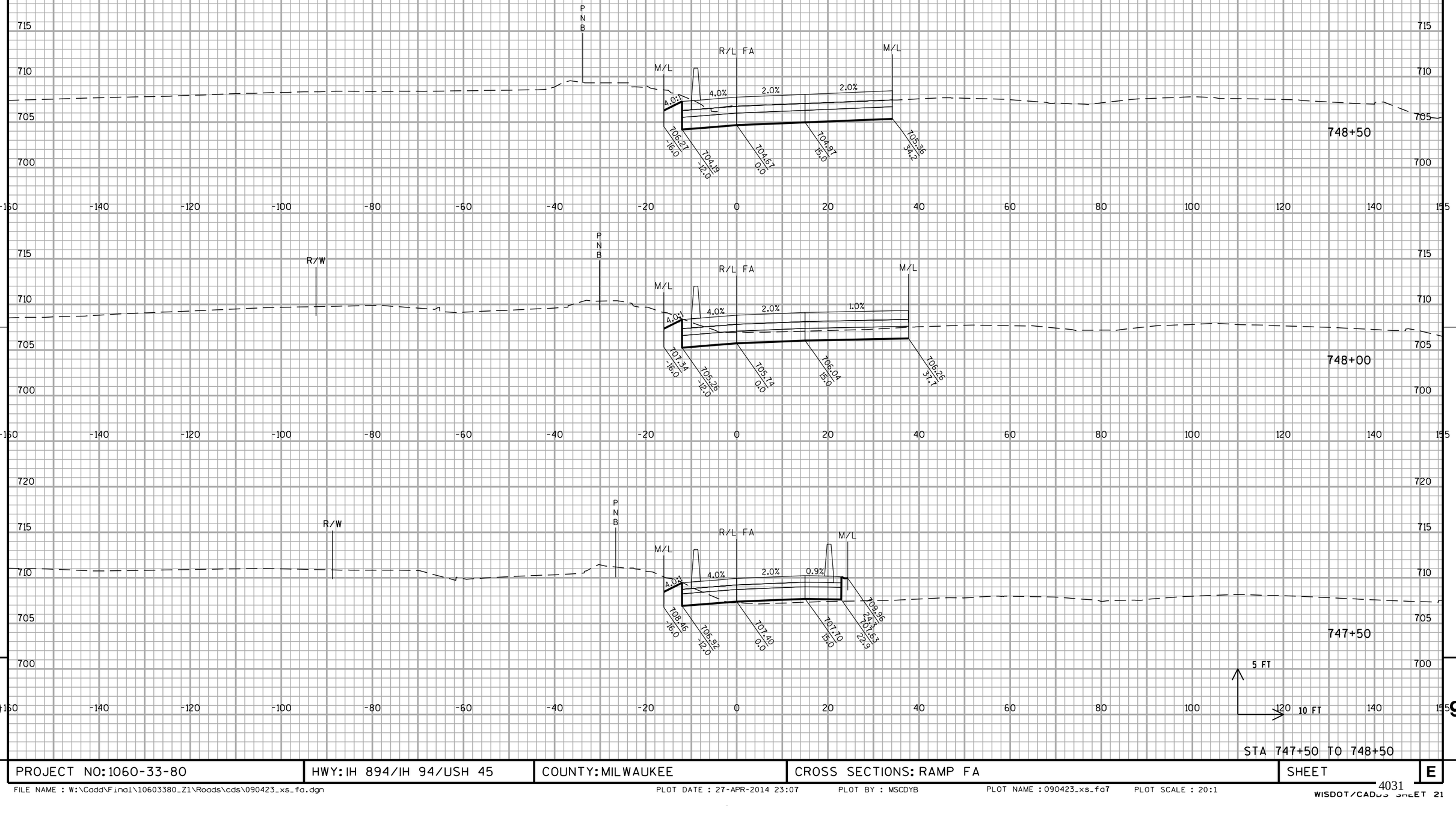


STA 746+00 TO 747+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa6 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 747+50 TO 748+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa7 PLOT SCALE : 20:1

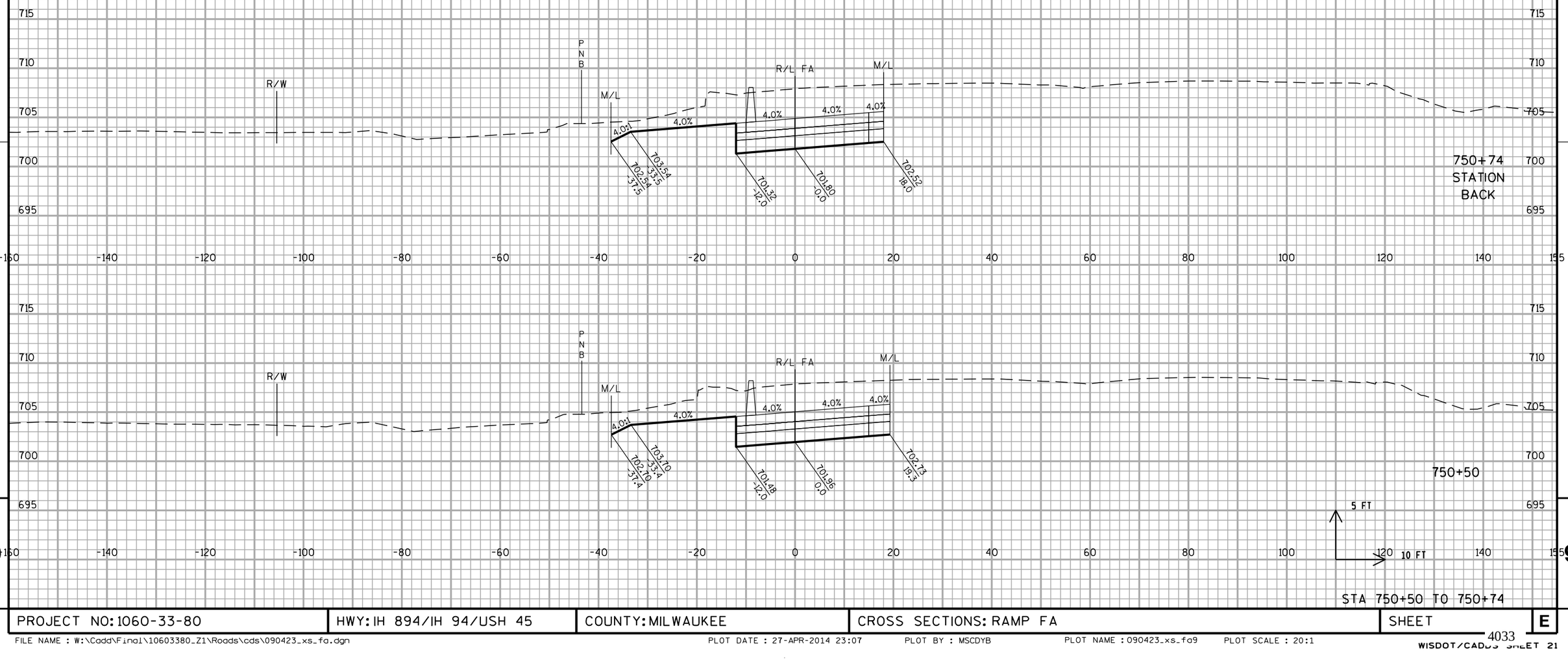
ALL WORK STAGE 2

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



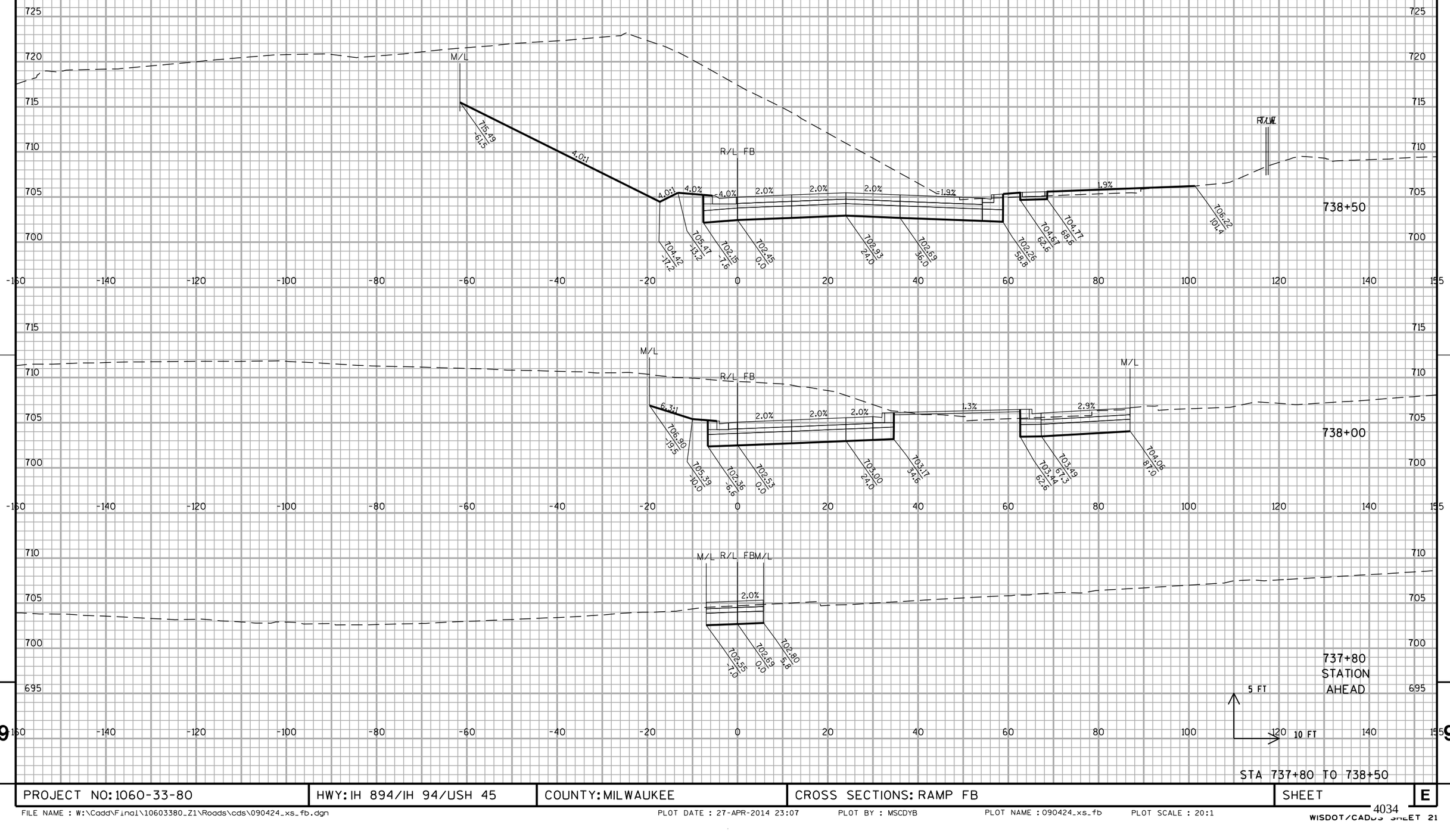
STA 750+50 TO 750+74

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090423_xs_fa.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090423_xs_fa9 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



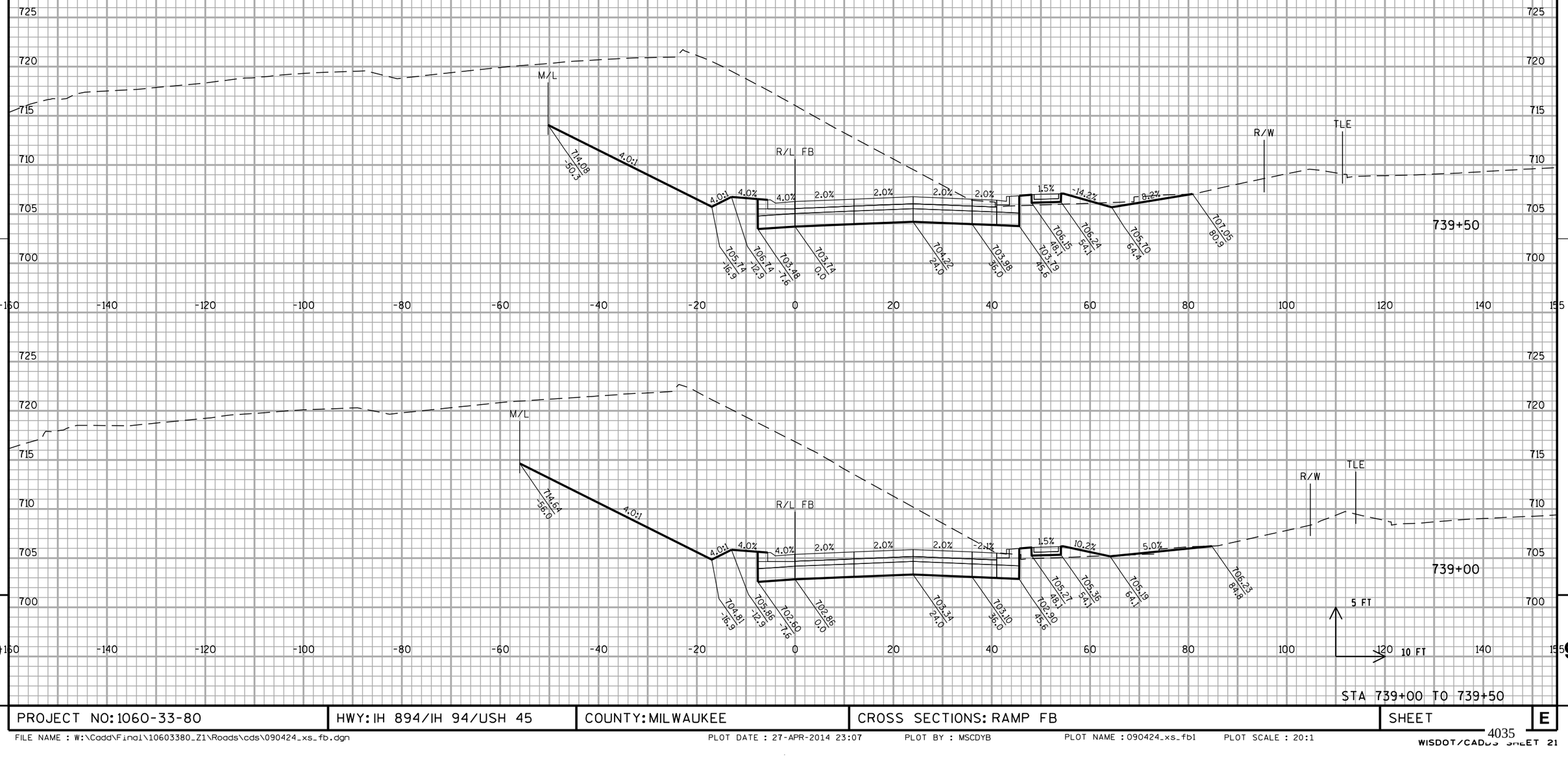
STA 737+80 TO 738+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

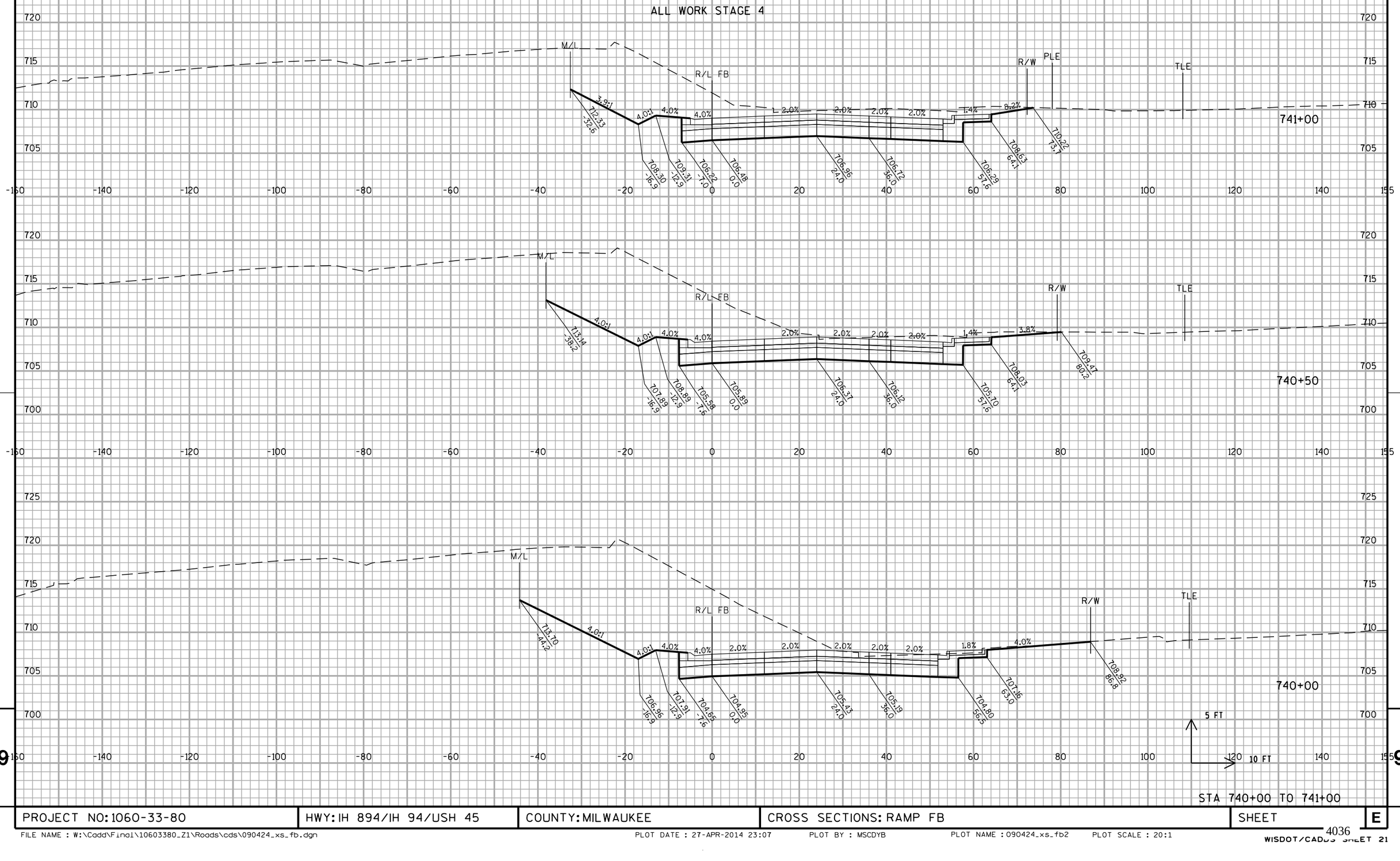
ALL WORK STAGE 4



STA 739+00 TO 739+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

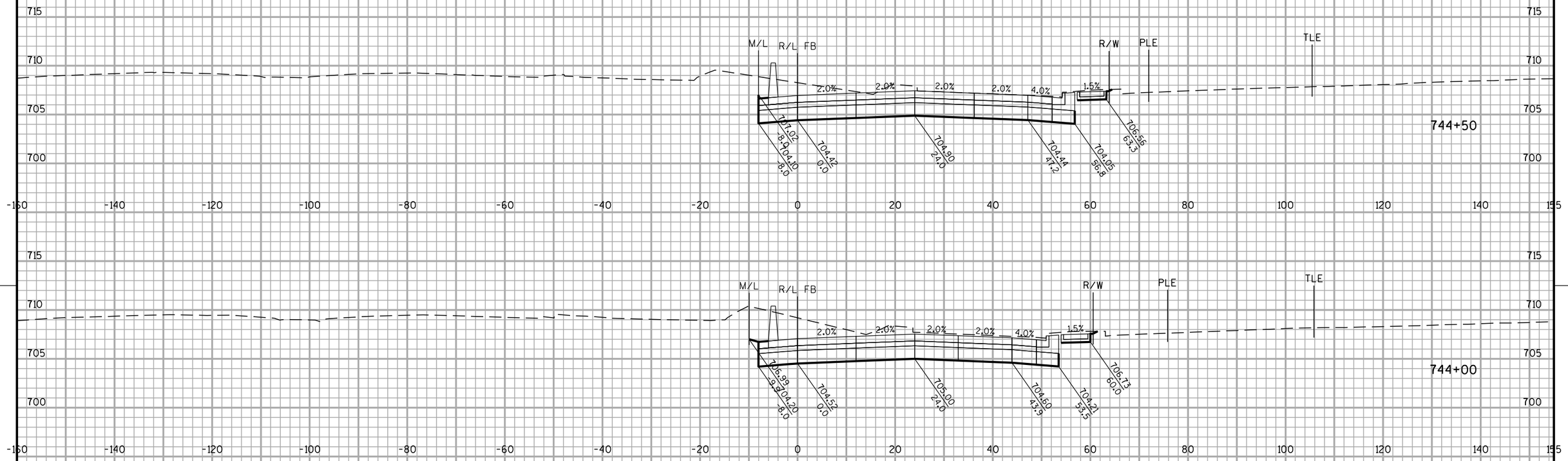
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb2 PLOT SCALE : 20:1

STA 741+50 TO 743+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

9 9

ALL WORK STAGE 4



STA 743+50 TO 744+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

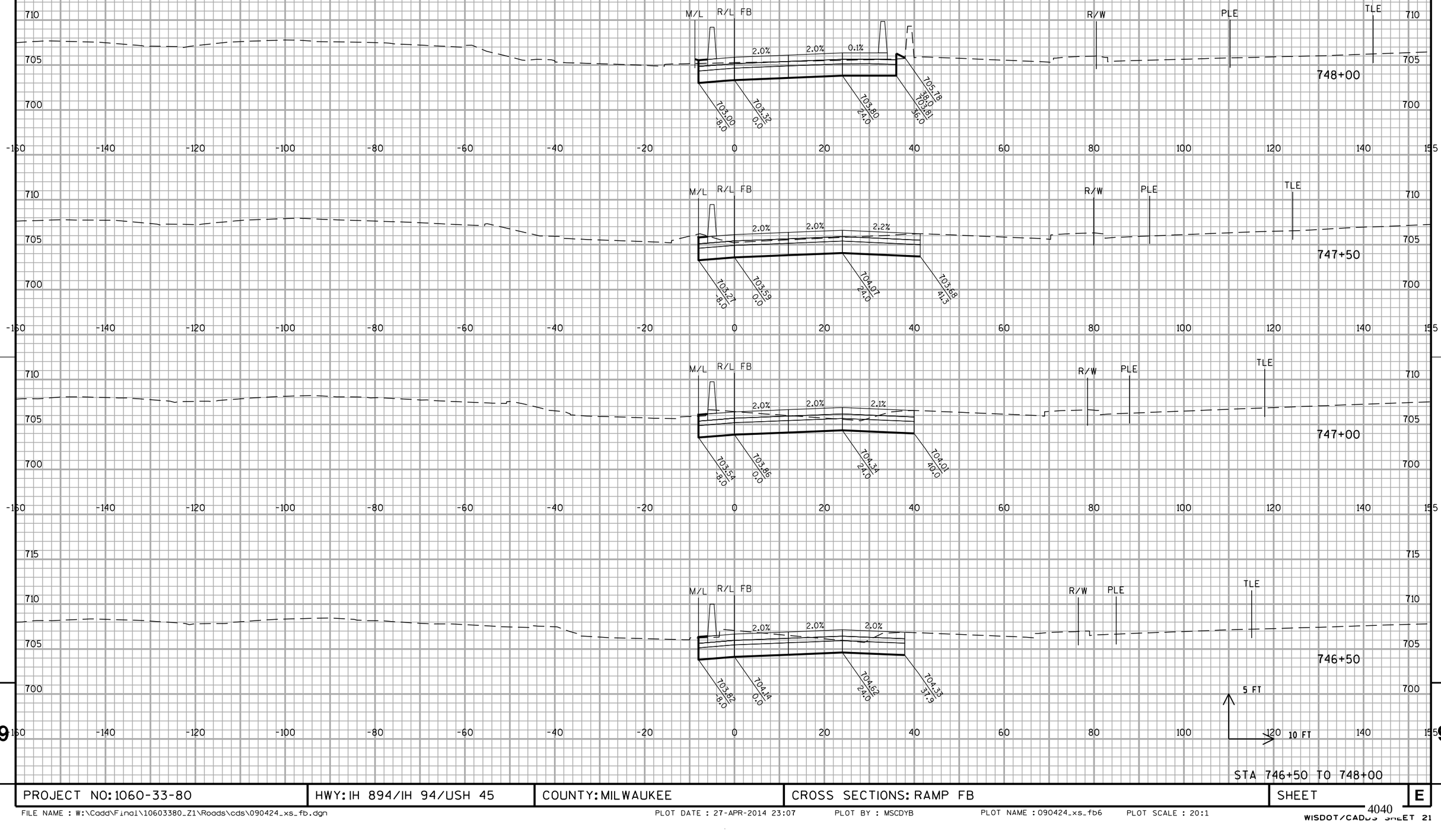
ALL WORK STAGE 4

STA 745+00 TO 746+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb5 PLOT SCALE : 20:1

ALL WORK STAGE 4



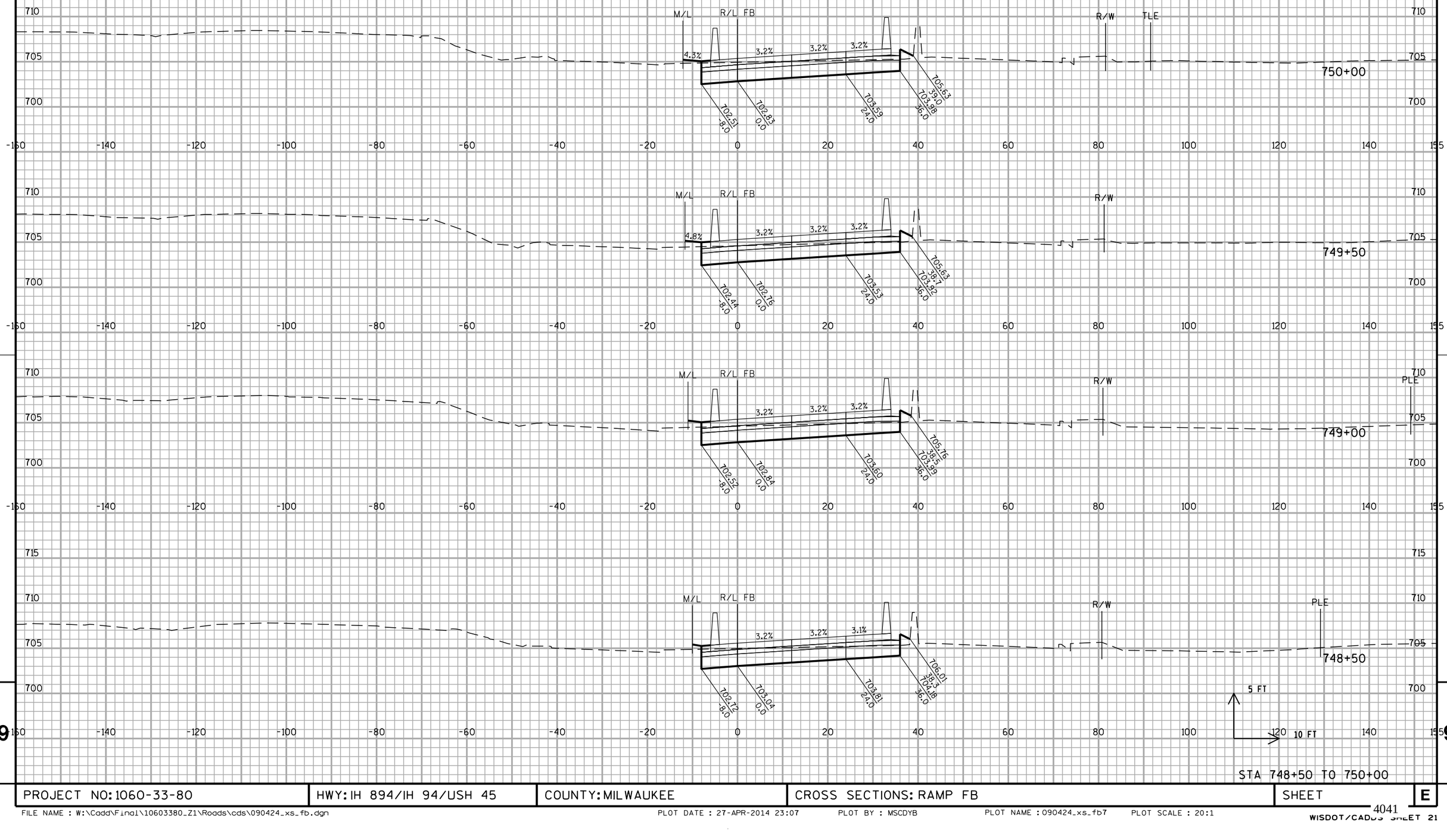
STA 746+50 TO 748+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

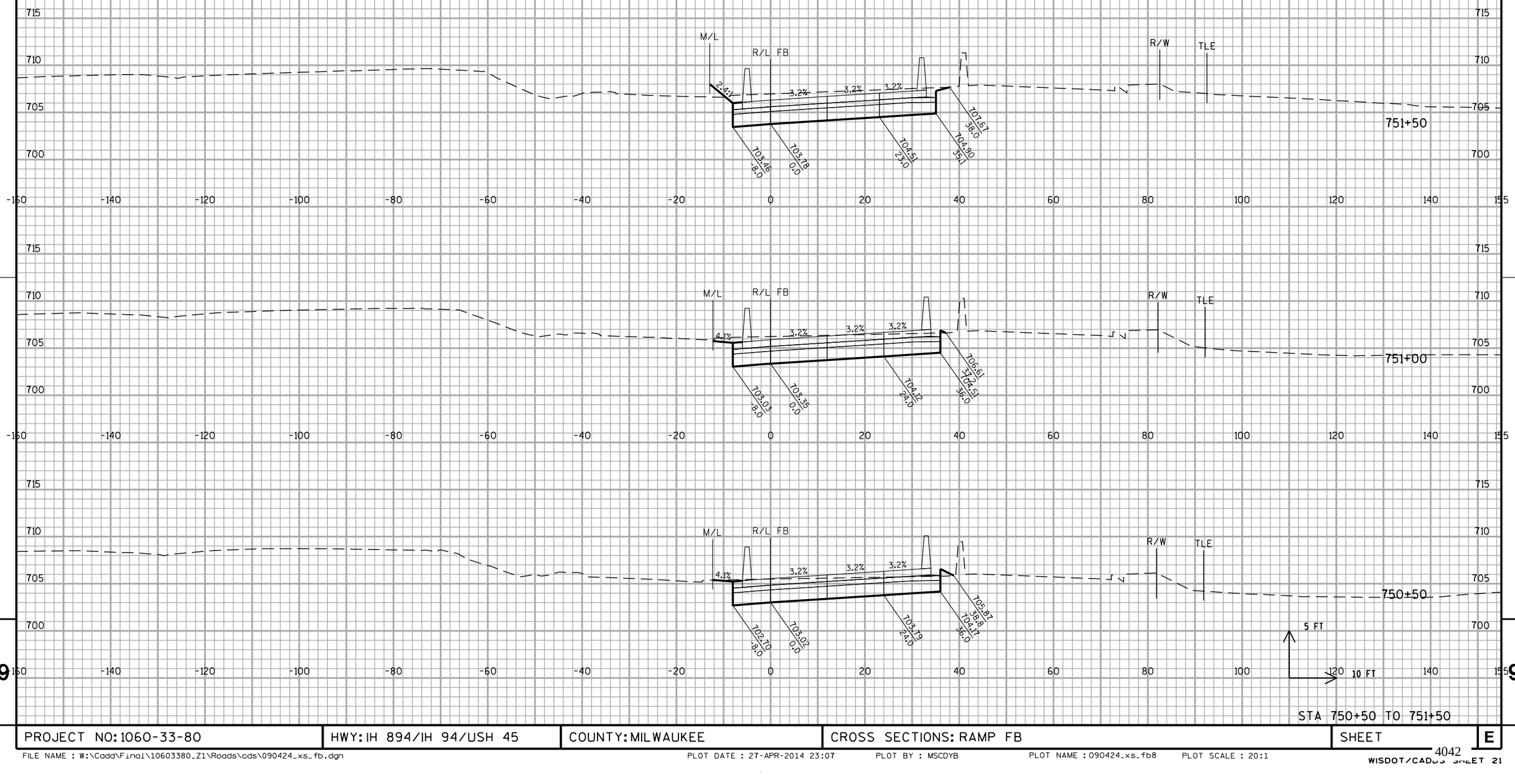


STA 748+50 TO 750+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb7 PLOT SCALE : 20:1

ALL WORK STAGE 4



STA 750+50 TO 751+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb8 PLOT SCALE : 20:1

ALL WORK STAGE 4

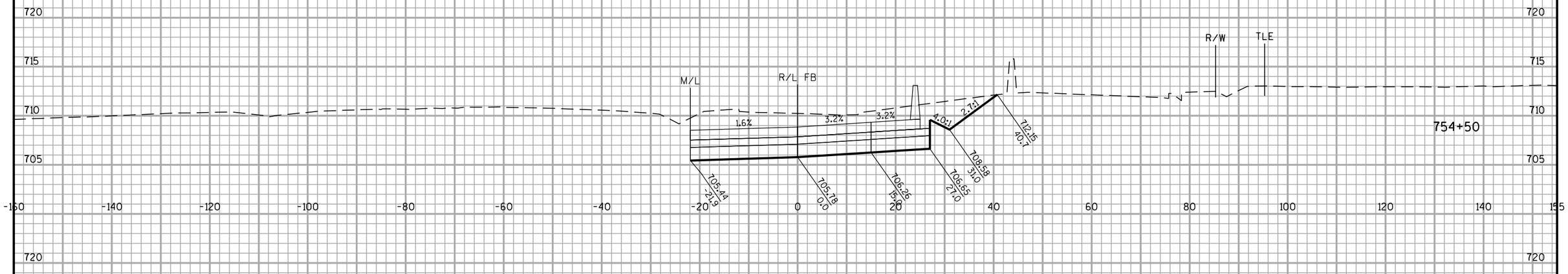
STA 752+00 TO 753+00

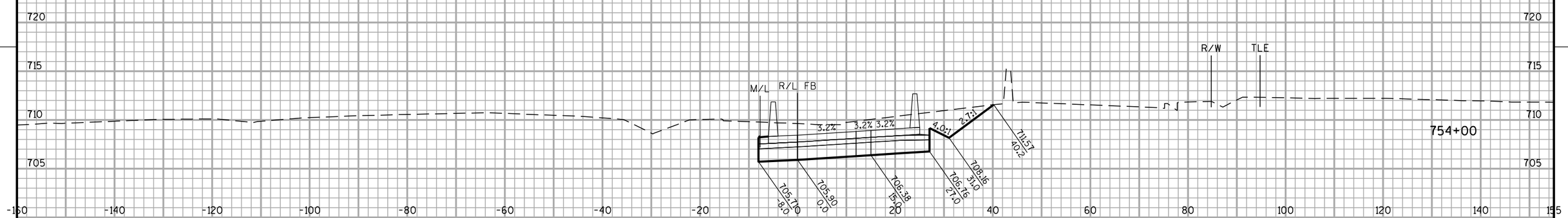
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

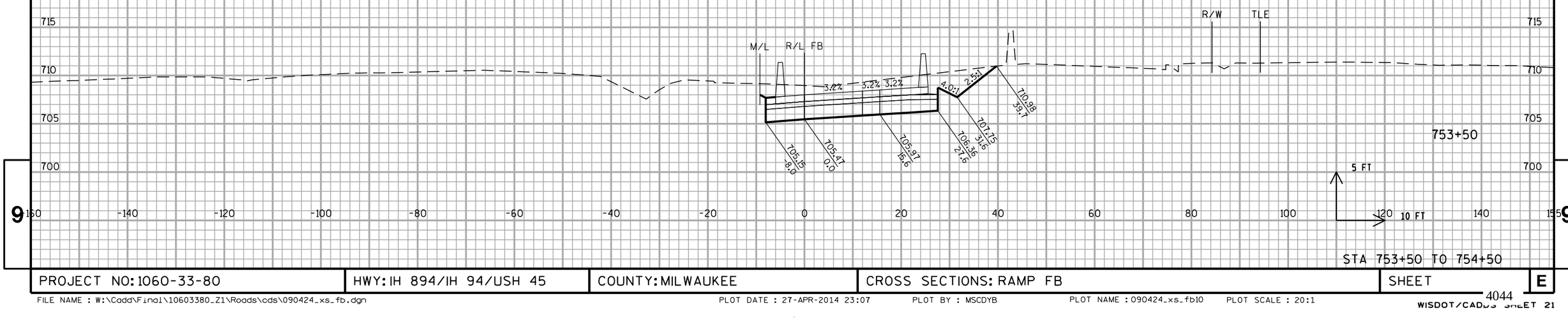
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WISDOT/CADDS SHEET 21

ALL WORK STAGE 4







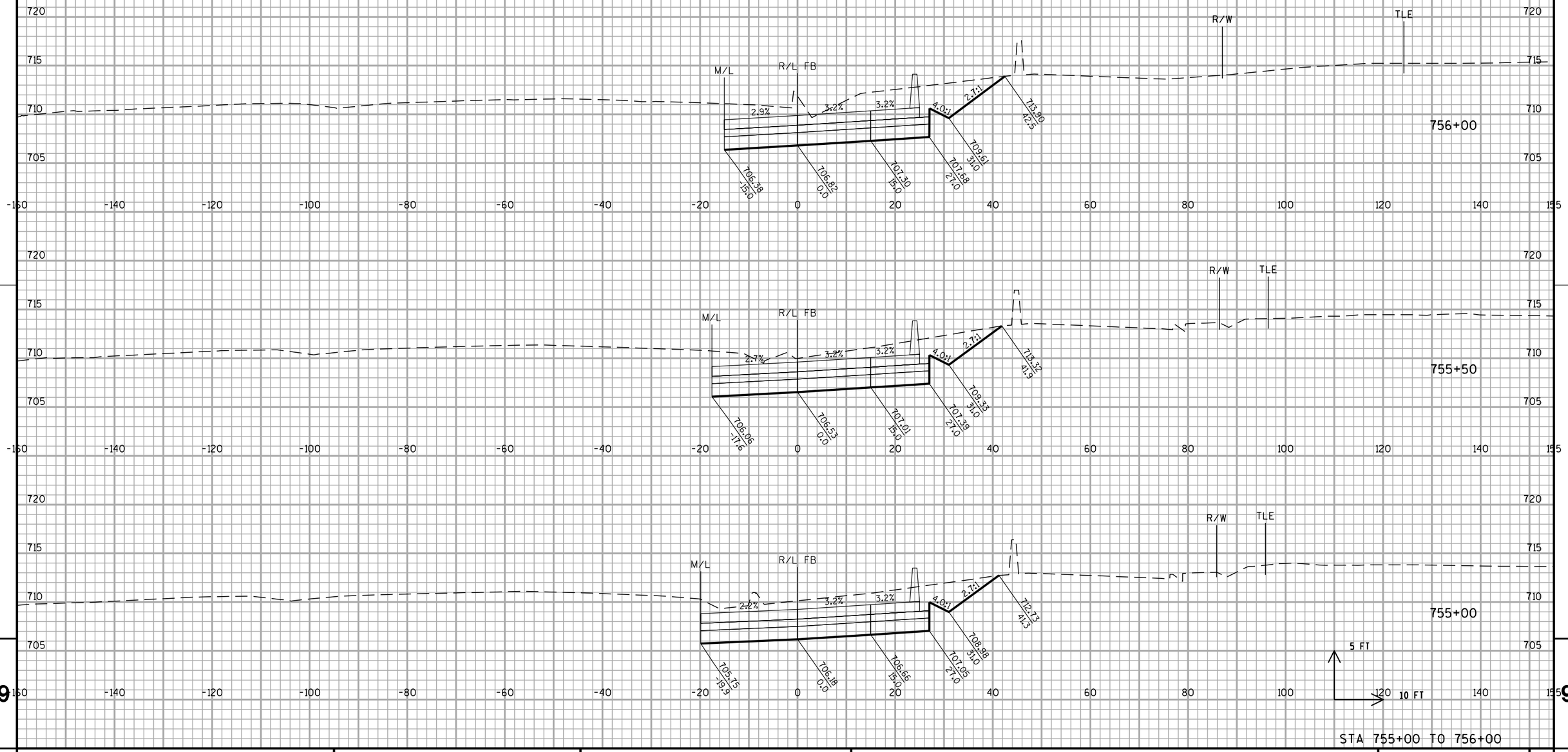
STA 753+50 TO 754+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

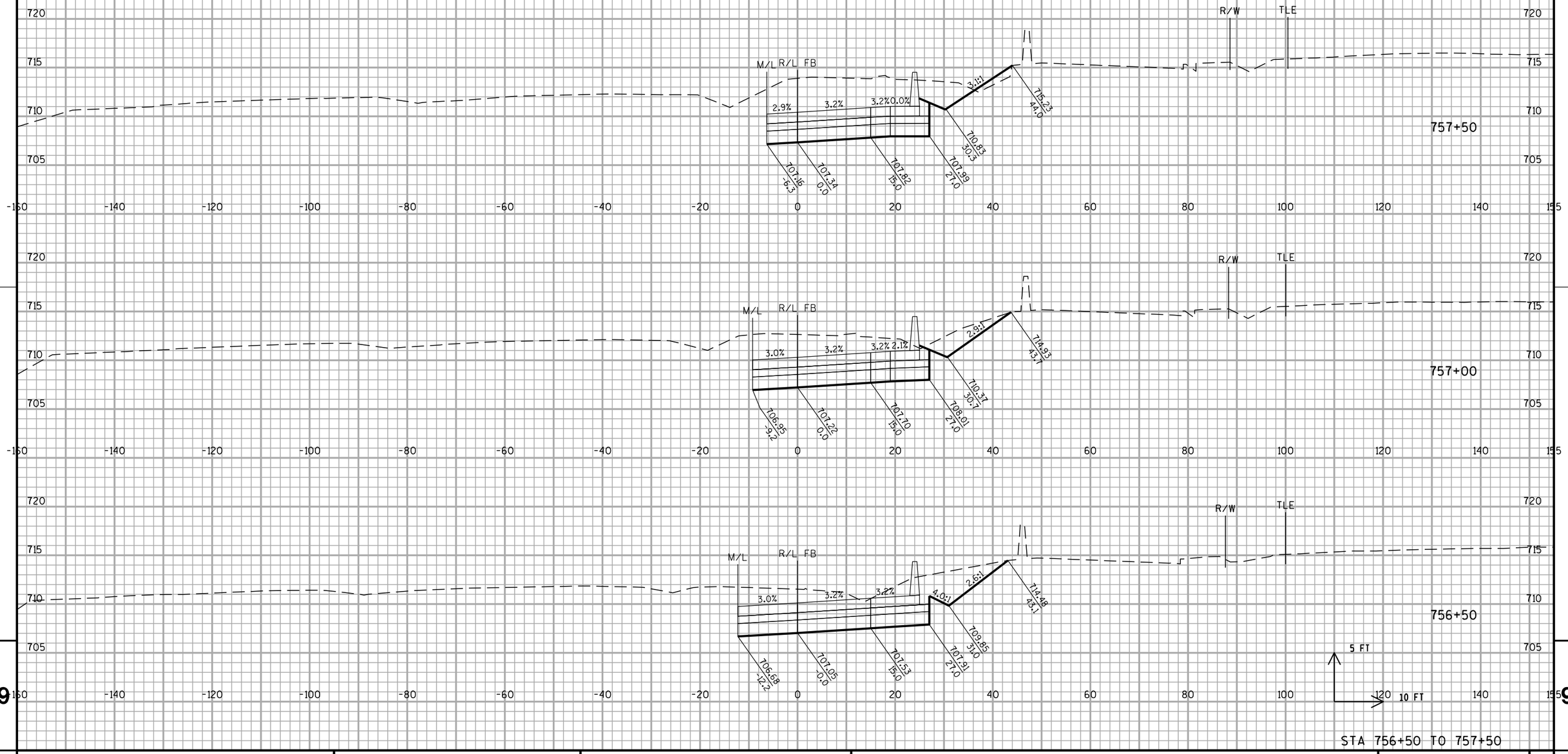


STA 755+00 TO 756+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090424_xs_fb.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090424_xs_fb11 PLOT SCALE : 20:1

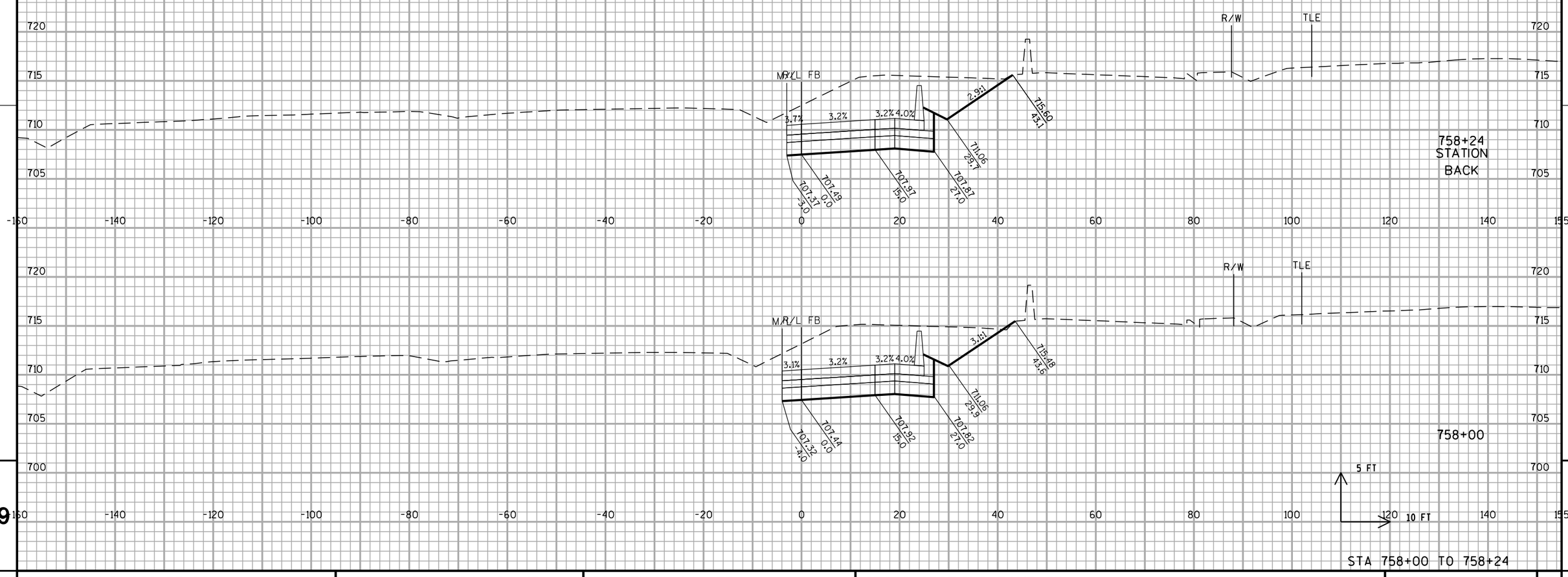
ALL WORK STAGE 4



STA 756+50 TO 757+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

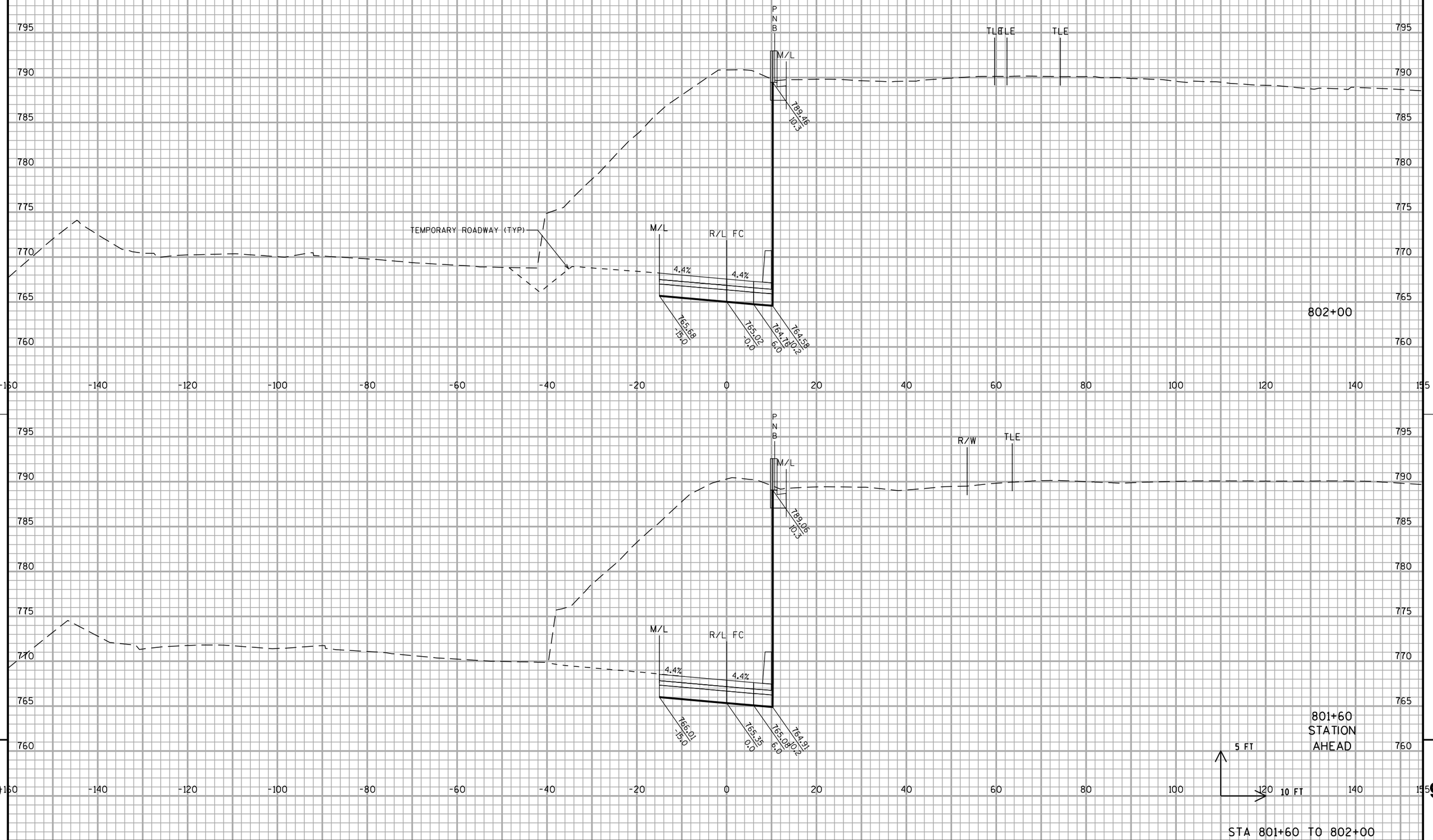
ALL WORK STAGE 4



STA 758+00 TO 758+24

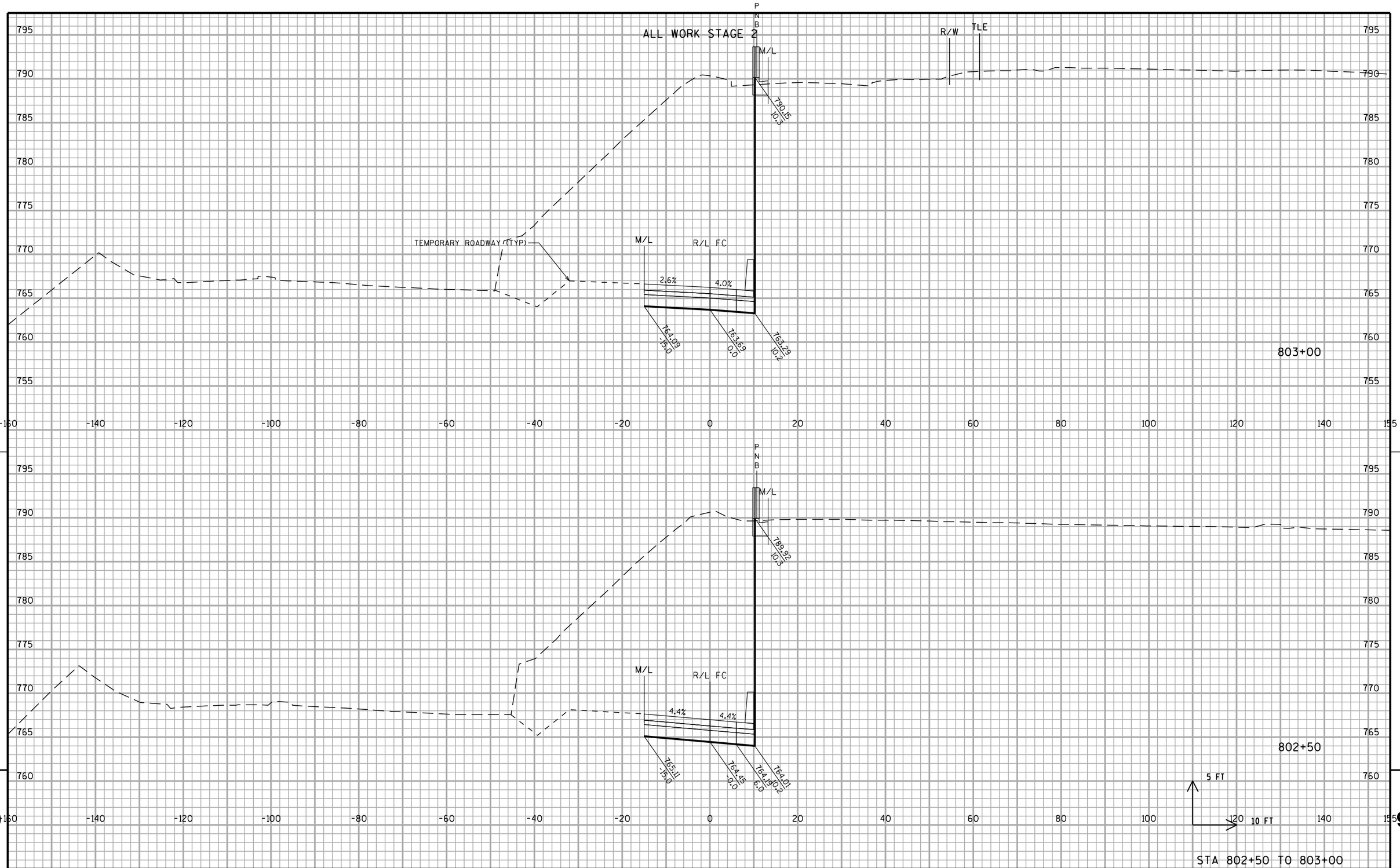
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FB	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc PLOT SCALE : 20:1

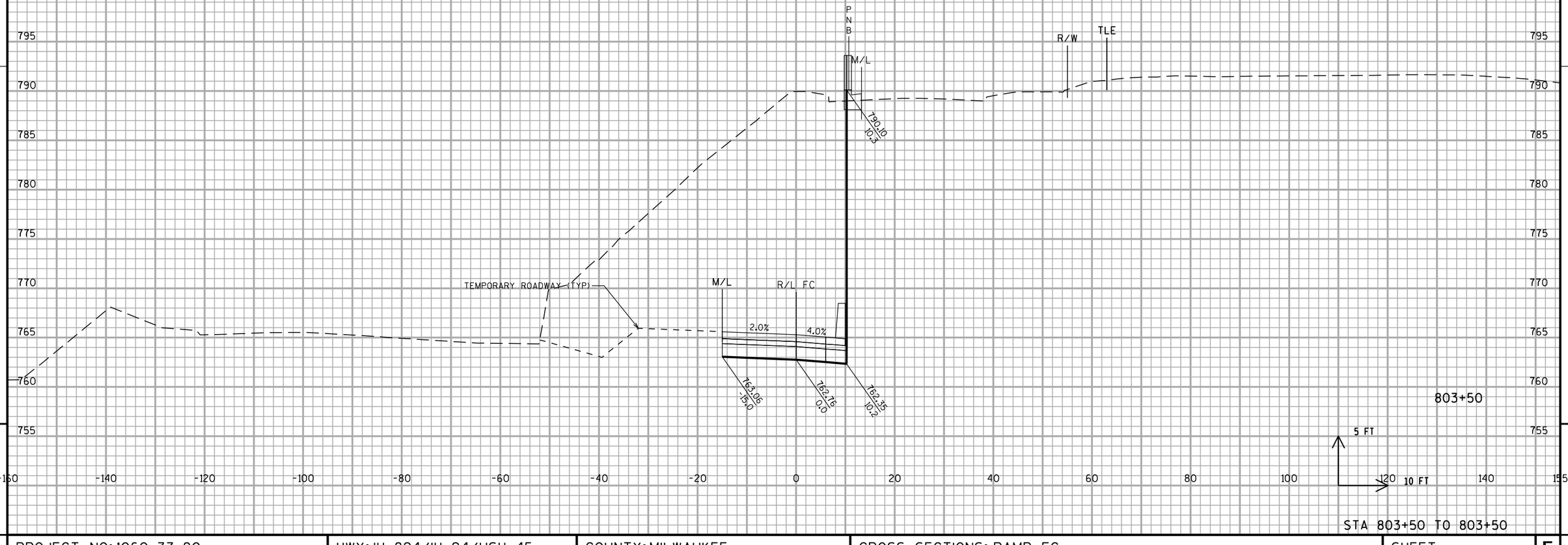


STA 802+50 TO 803+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fcl PLOT SCALE : 20:1

ALL WORK STAGE 2

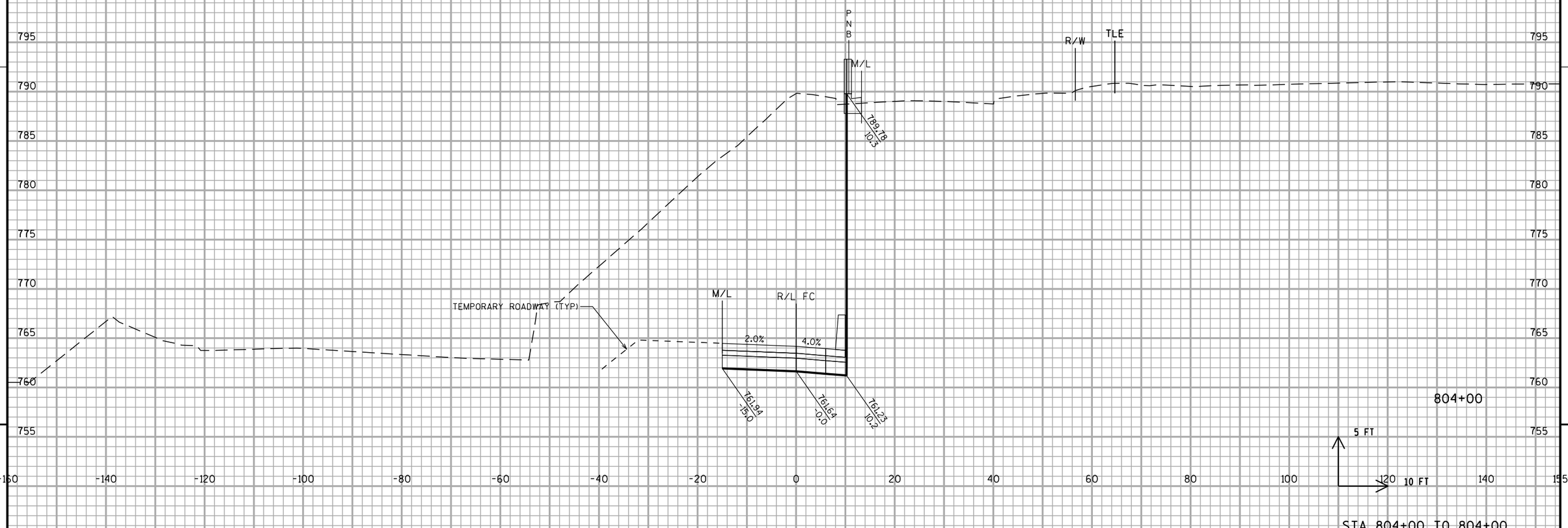


STA 803+50 TO 803+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc2 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 804+00 TO 804+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc3 PLOT SCALE : 20:1

ALL WORK STAGE 2

805+00

TEMPORARY ROADWAY (TYP)

M/L

R/L FC

2.0%

4.0%

788.34
10.3

759.15
-15.0

758.85
0.0

759.44
10.2

804+50

P
N
B

R/W

TLE

789.19
10.3

760.63
-15.0

760.33
0.0

759.92
10.2

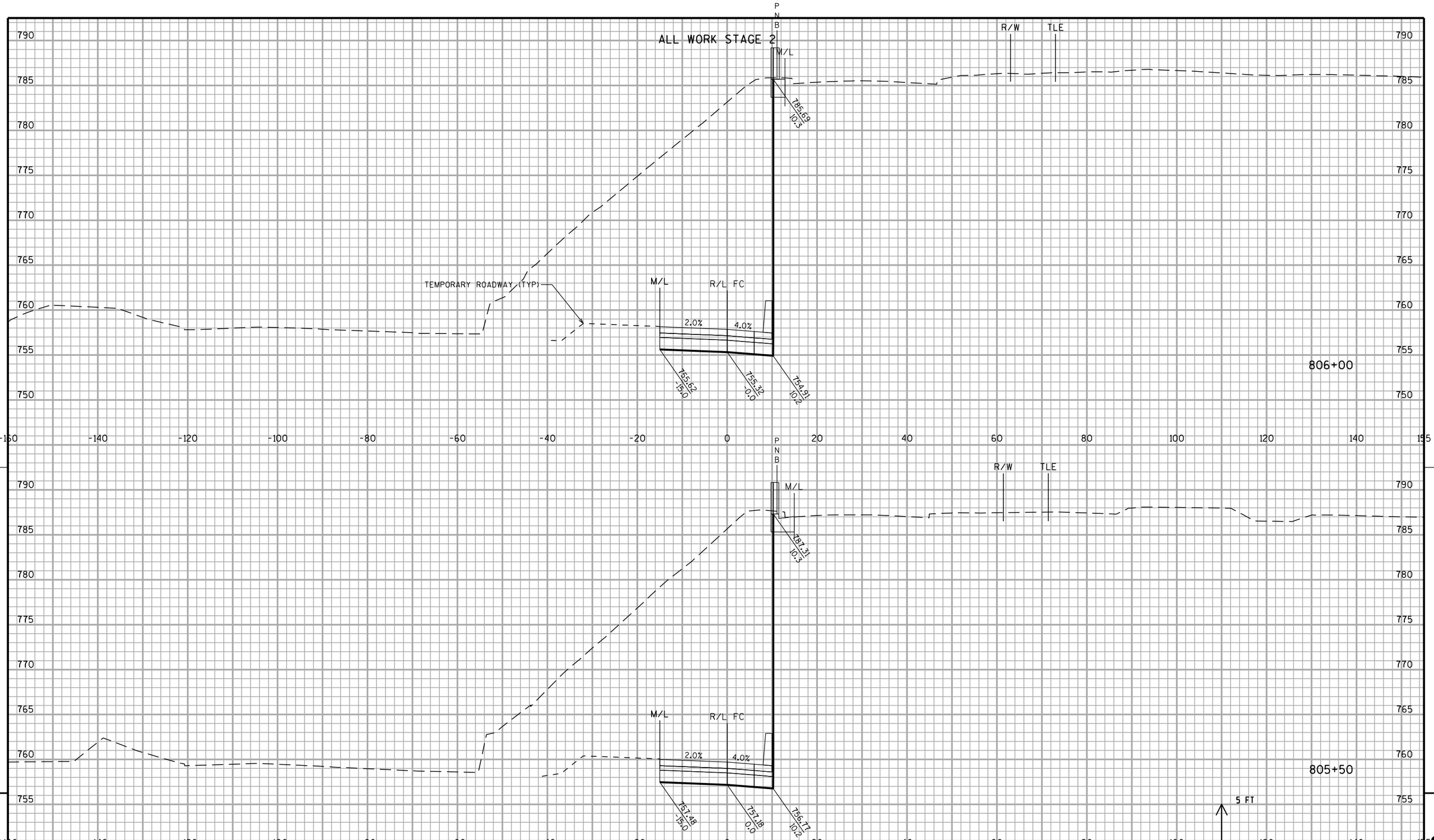
5 FT

10 FT

STA 804+50 TO 805+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc4 PLOT SCALE : 20:1



9

9

STA 805+50 TO 806+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc5 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

P
N
B

M/L

R/W

TLE

780.62
10.3

TEMPORARY ROADWAY (TYP)

M/L

R/L FC

2.0%

4.0%

751.63
-15.0

751.33
0.0

750.92
10.2

807+00

785
780
775
770
765
760
755
750
790

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

P
N
B

M/L

R/W

TLE

783.40
10.3

M/L

R/L FC

2.0%

4.0%

753.63
-15.0

753.33
0.0

752.92
10.2

806+50

5 FT

10 FT

STA 806+50 TO 807+00

9

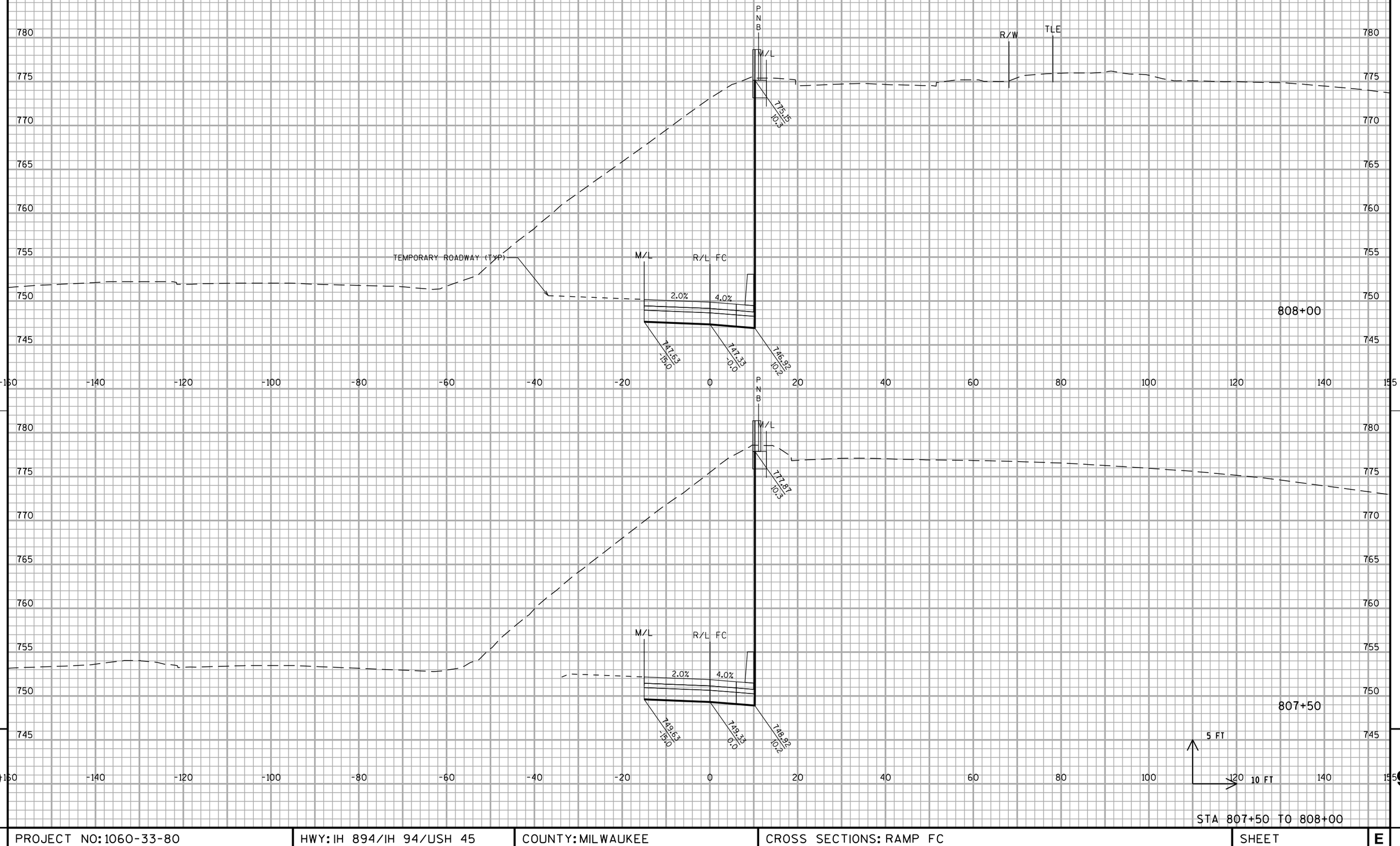
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

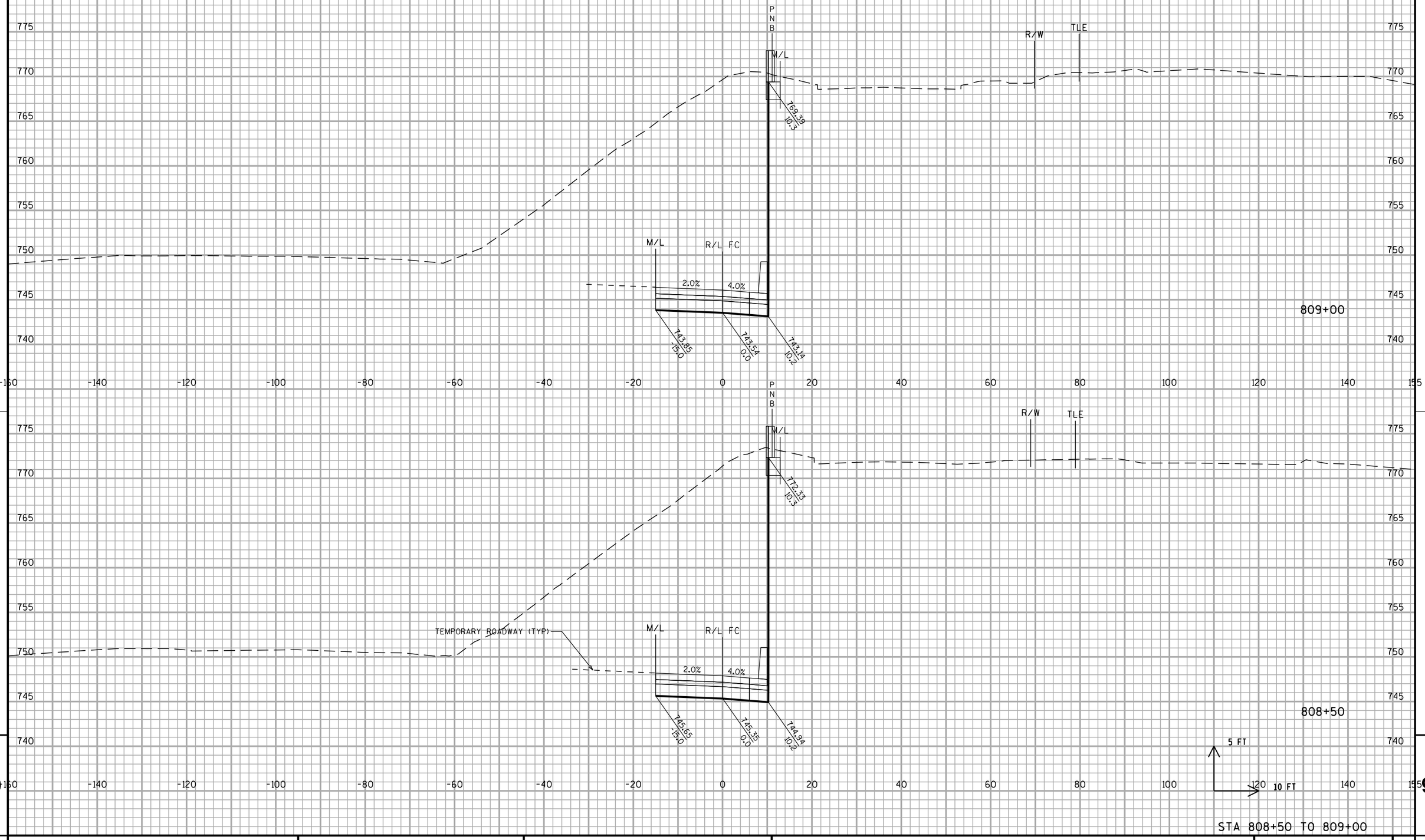
ALL WORK STAGE 2



STA 807+50 TO 808+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

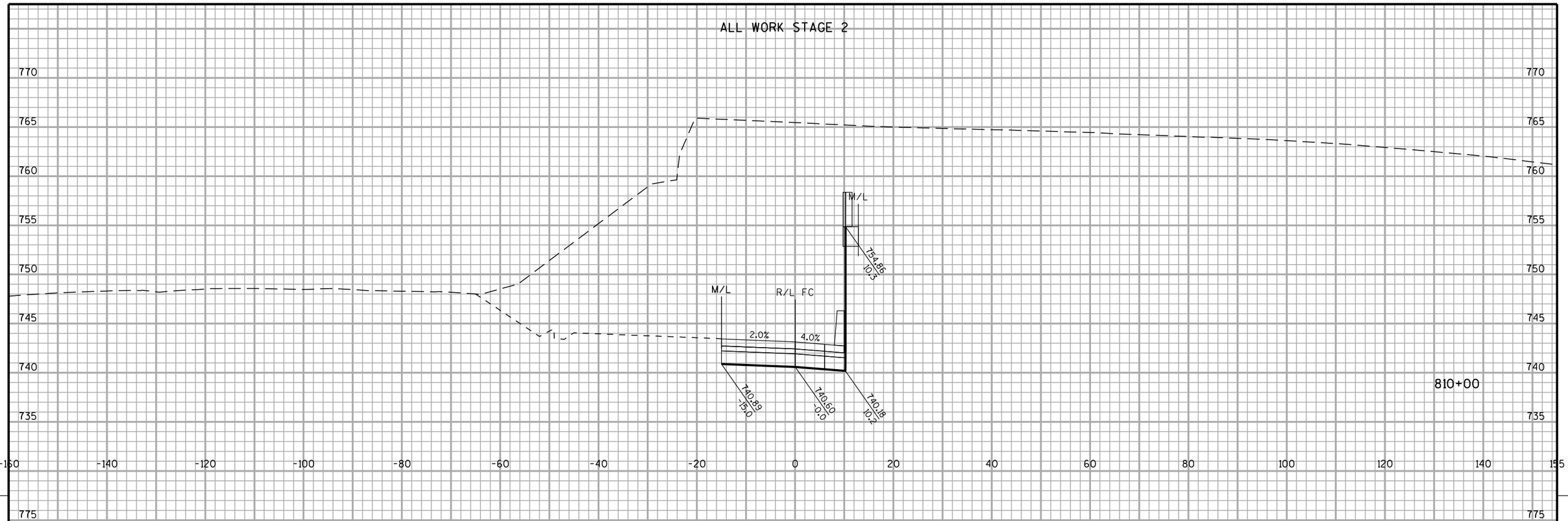
ALL WORK STAGE 2

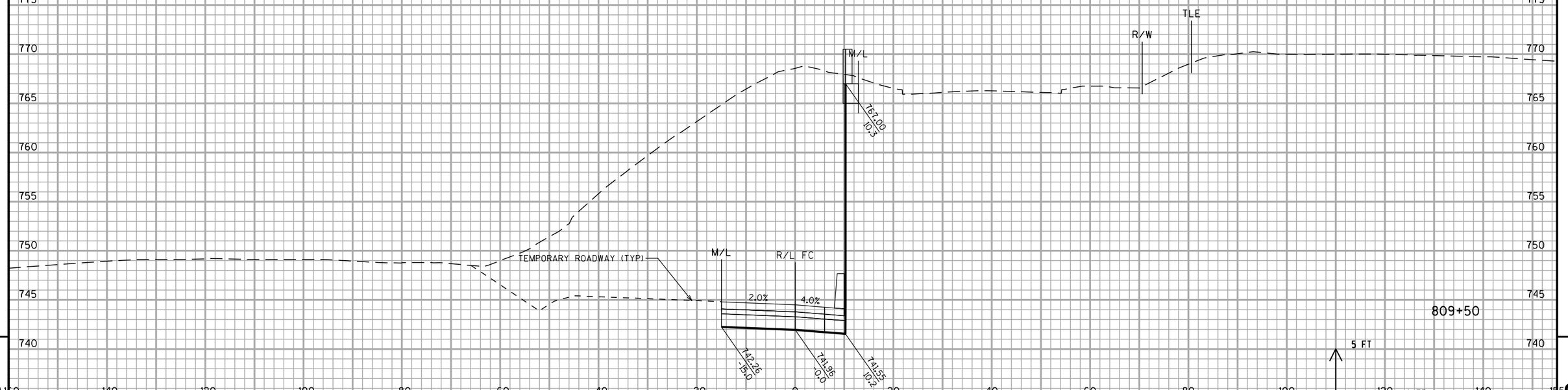


STA 808+50 TO 809+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 2



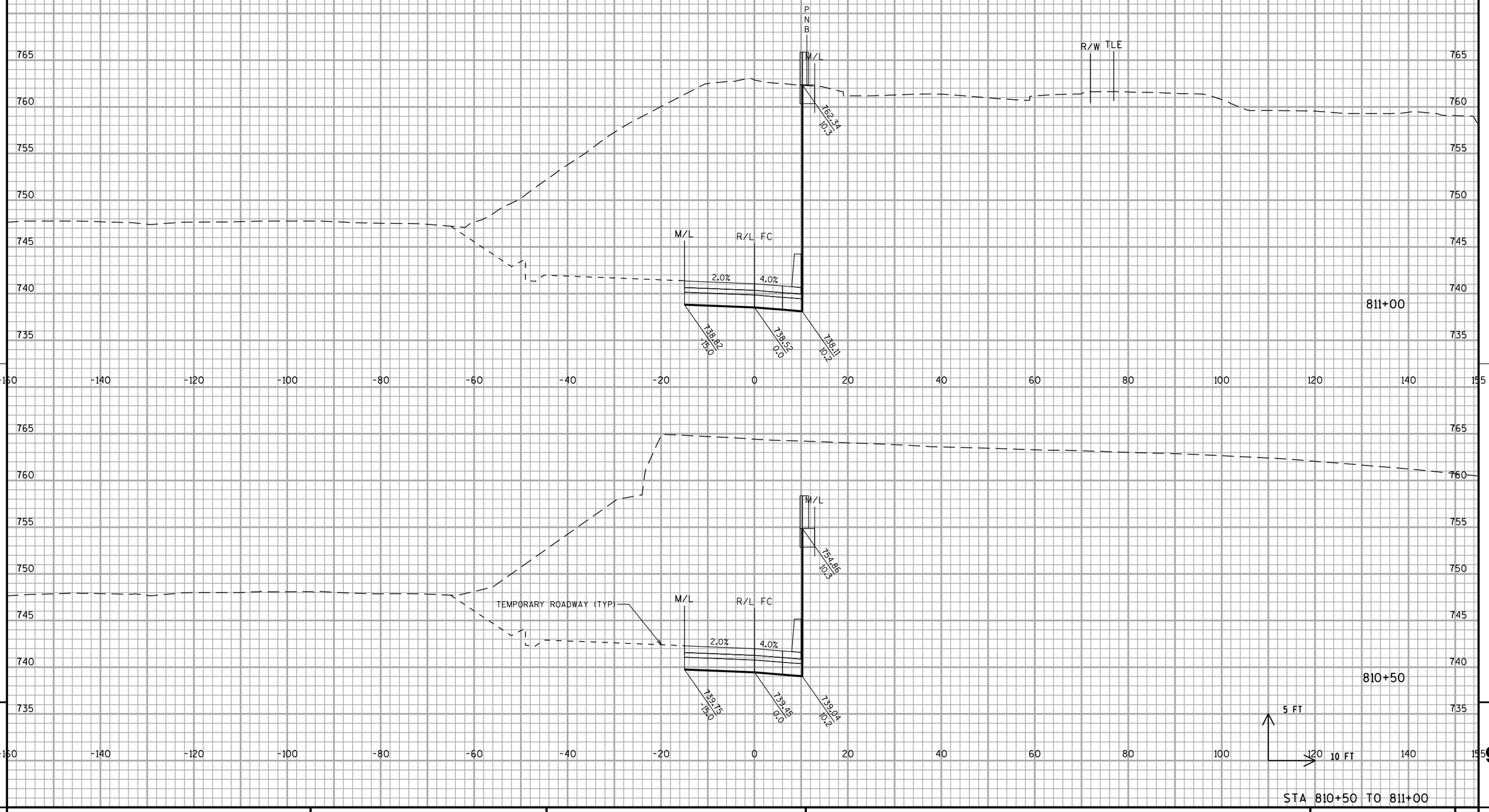


STA 809+50 TO 810+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc9 PLOT SCALE : 20:1

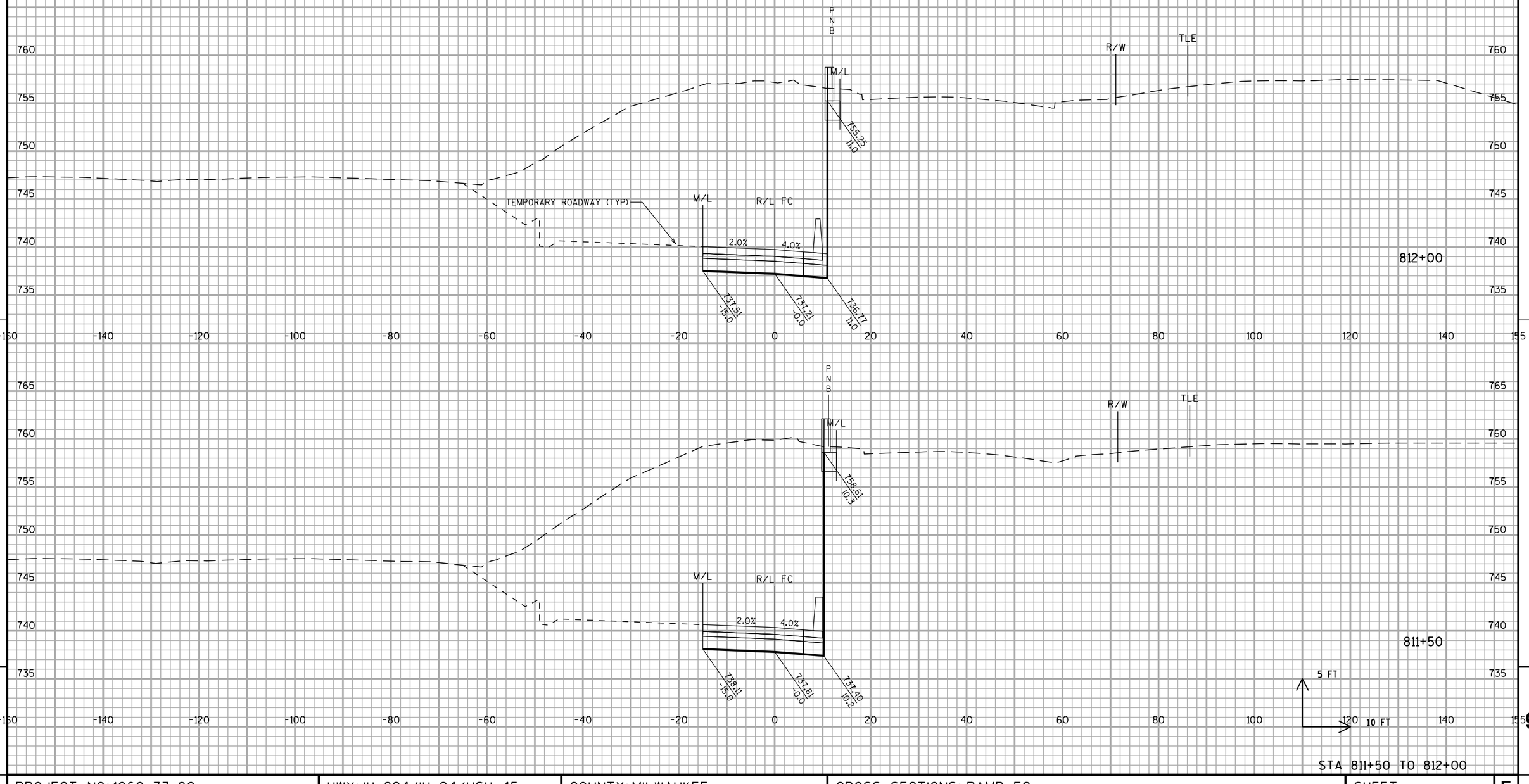
ALL WORK STAGE 2



STA 810+50 TO 811+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 2

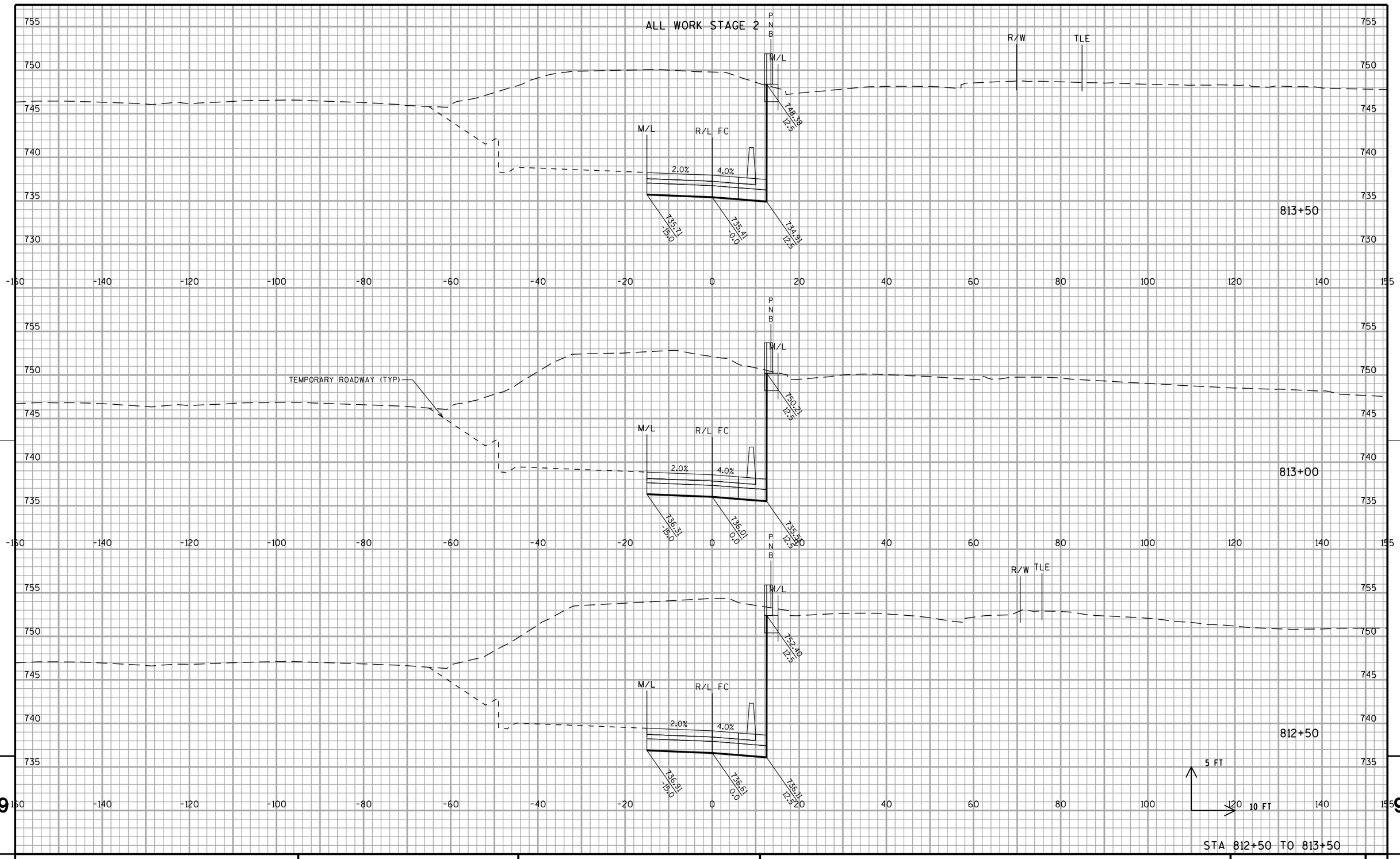


STA 811+50 TO 812+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc11 PLOT SCALE : 20:1

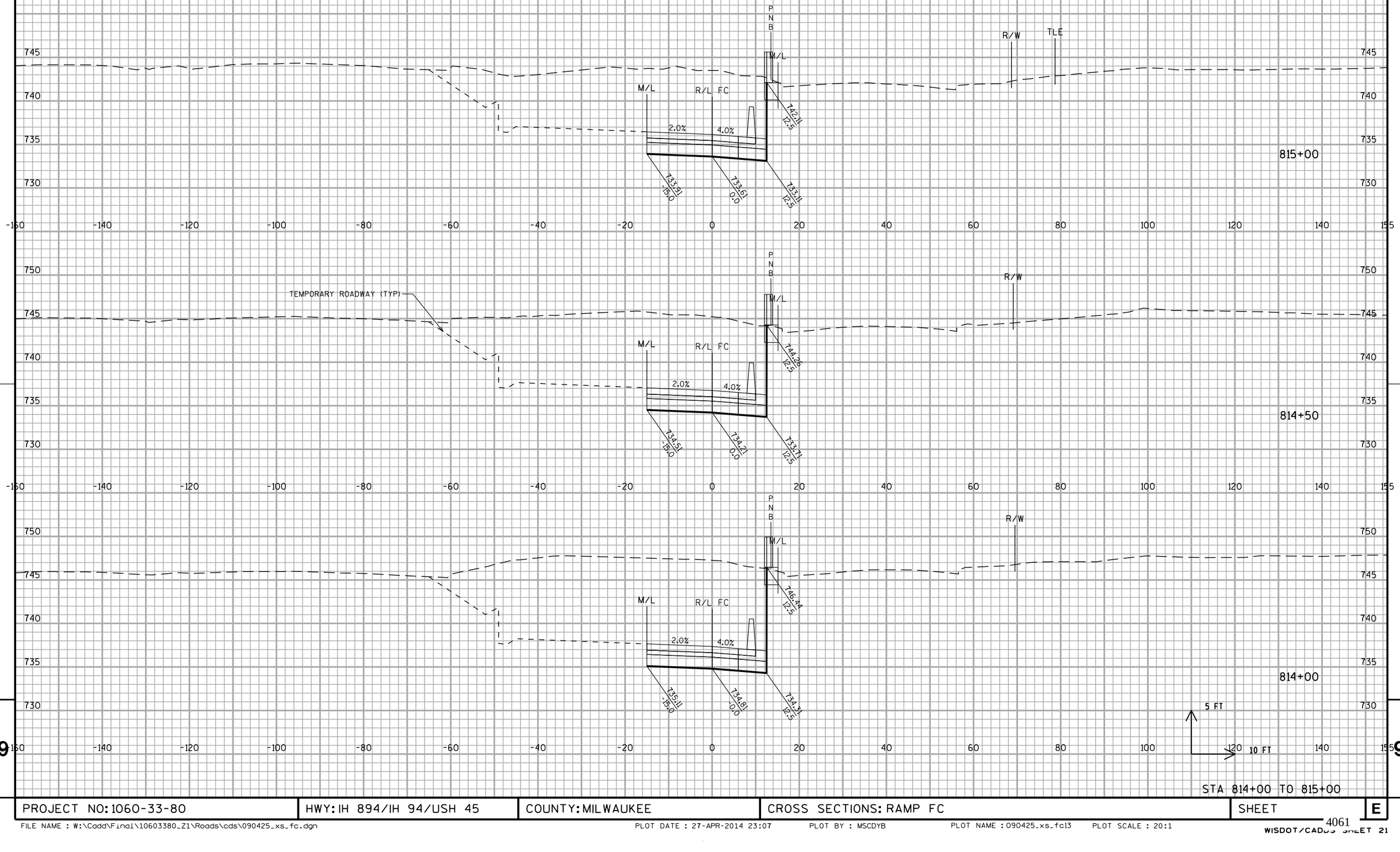
ALL WORK STAGE 2



STA 812+50 TO 813+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 2



STA 814+00 TO 815+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc13 PLOT SCALE : 20:1

ALL WORK STAGE 2

STA 815+50 TO 816+50

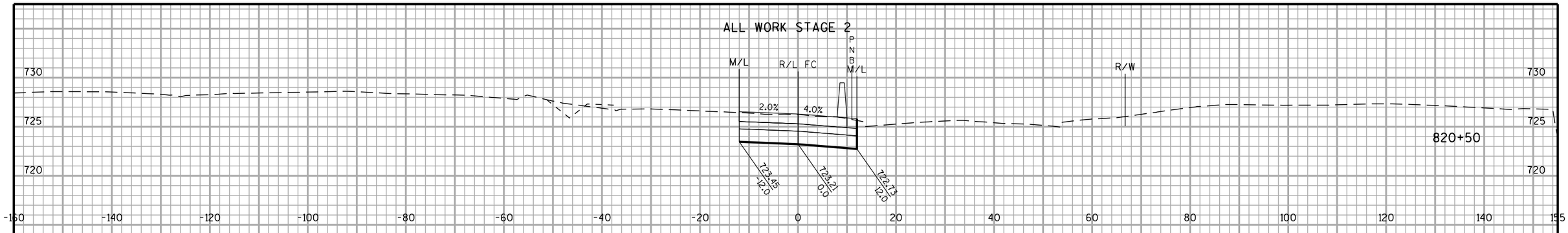
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

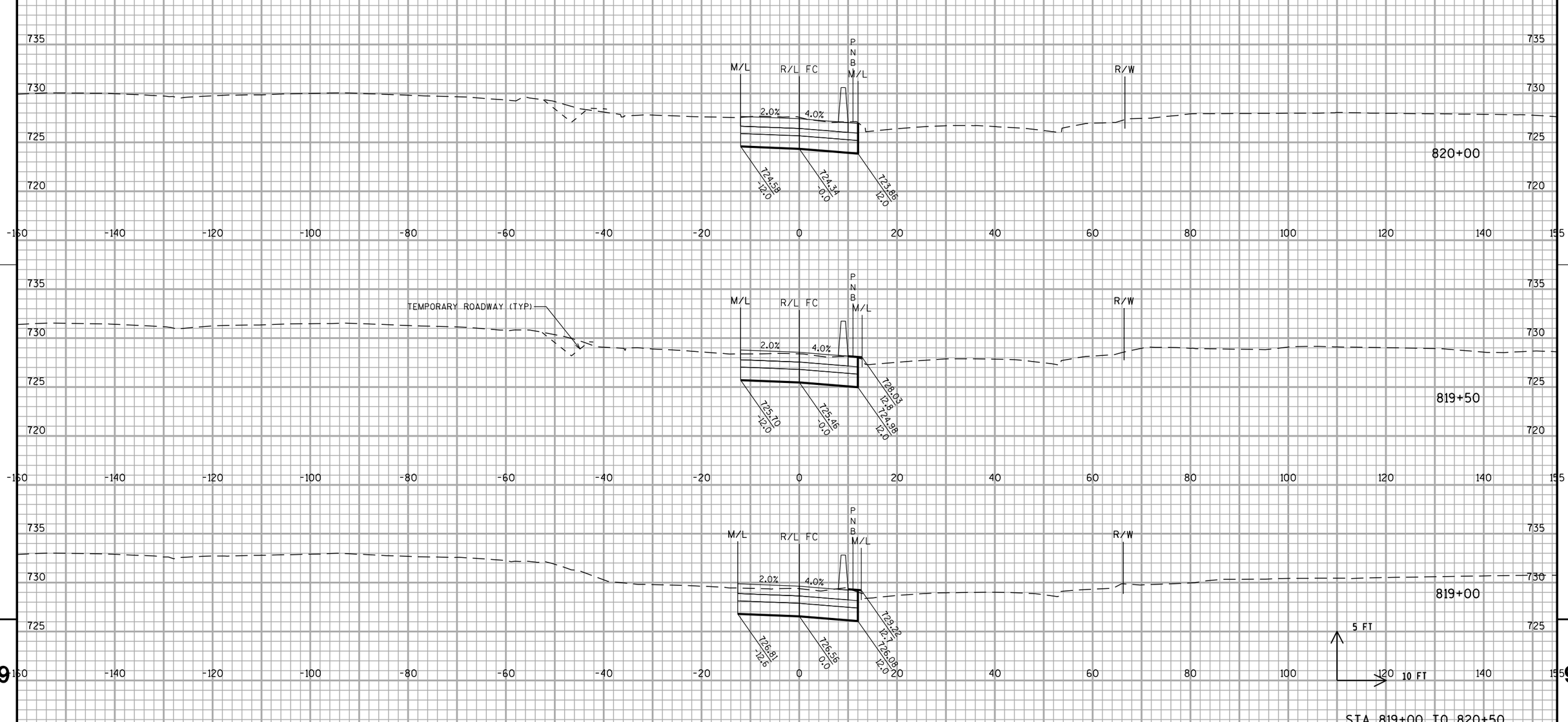
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ALL WORK STAGE 2

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 2



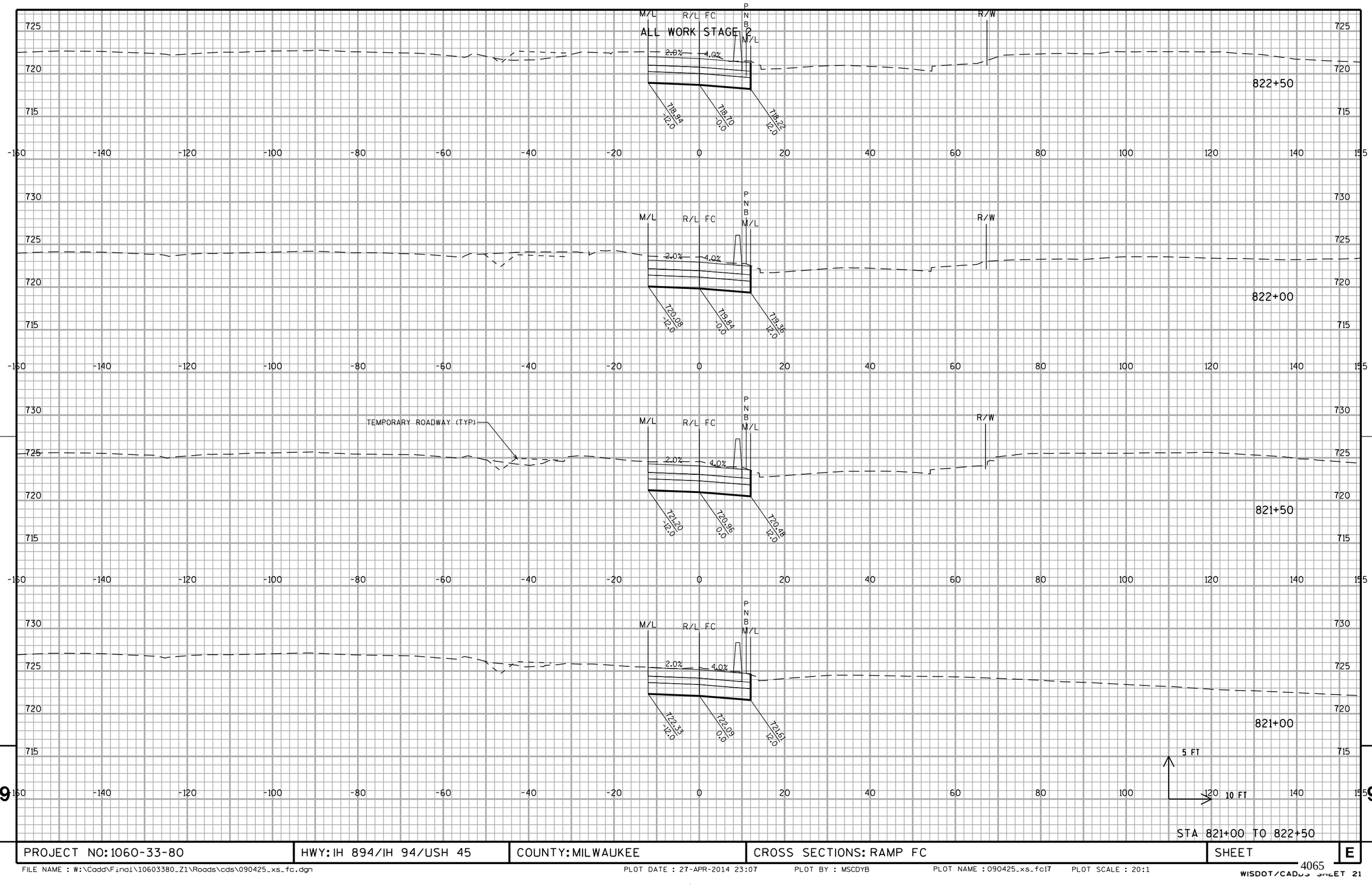


STA 819+00 TO 820+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

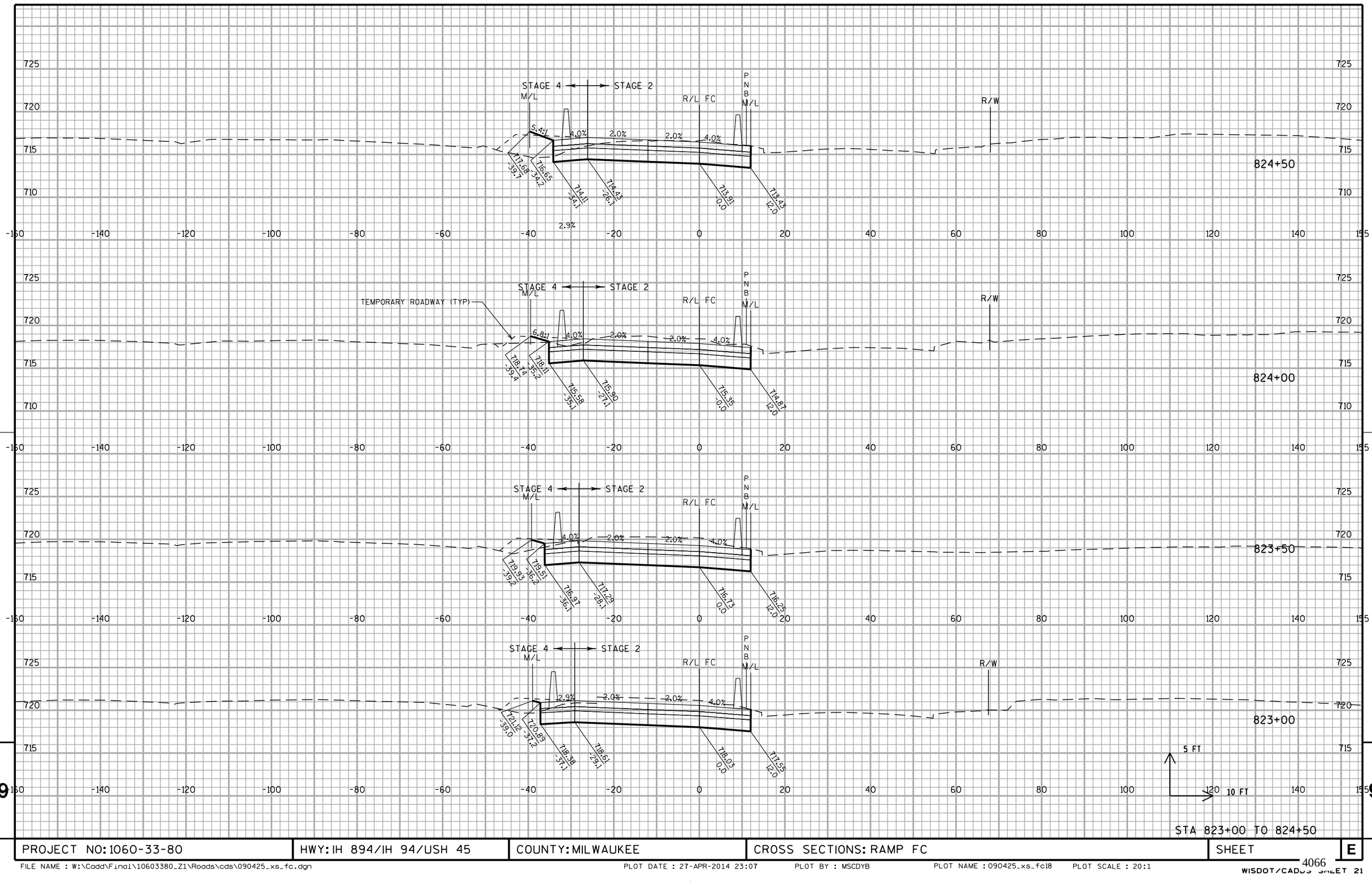
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ALL WORK STAGE 2



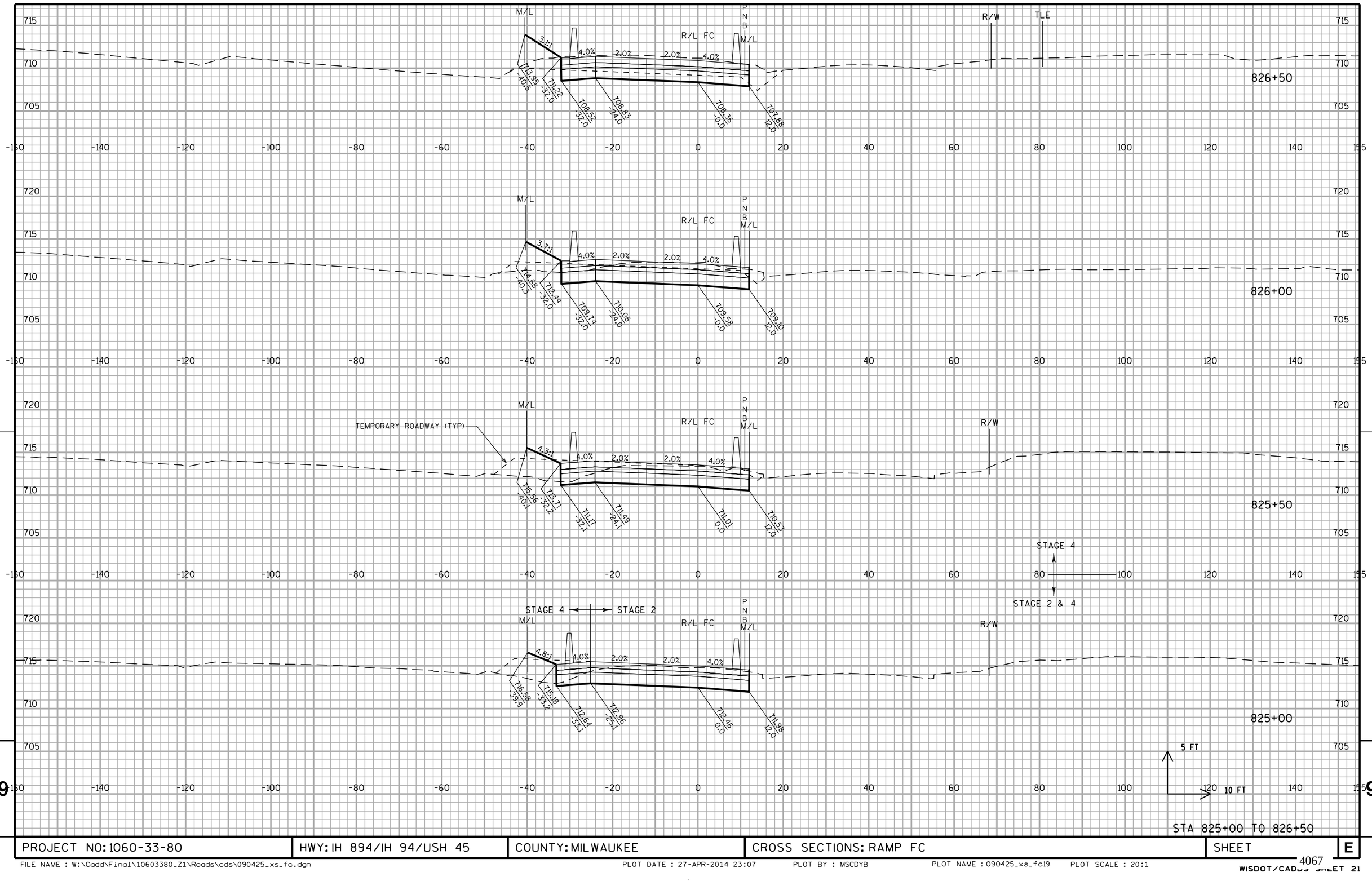
STA 821+00 TO 822+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E



STA 823+00 TO 824+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E



STA 825+00 TO 826+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 4

STA 827+00 TO 828+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 4

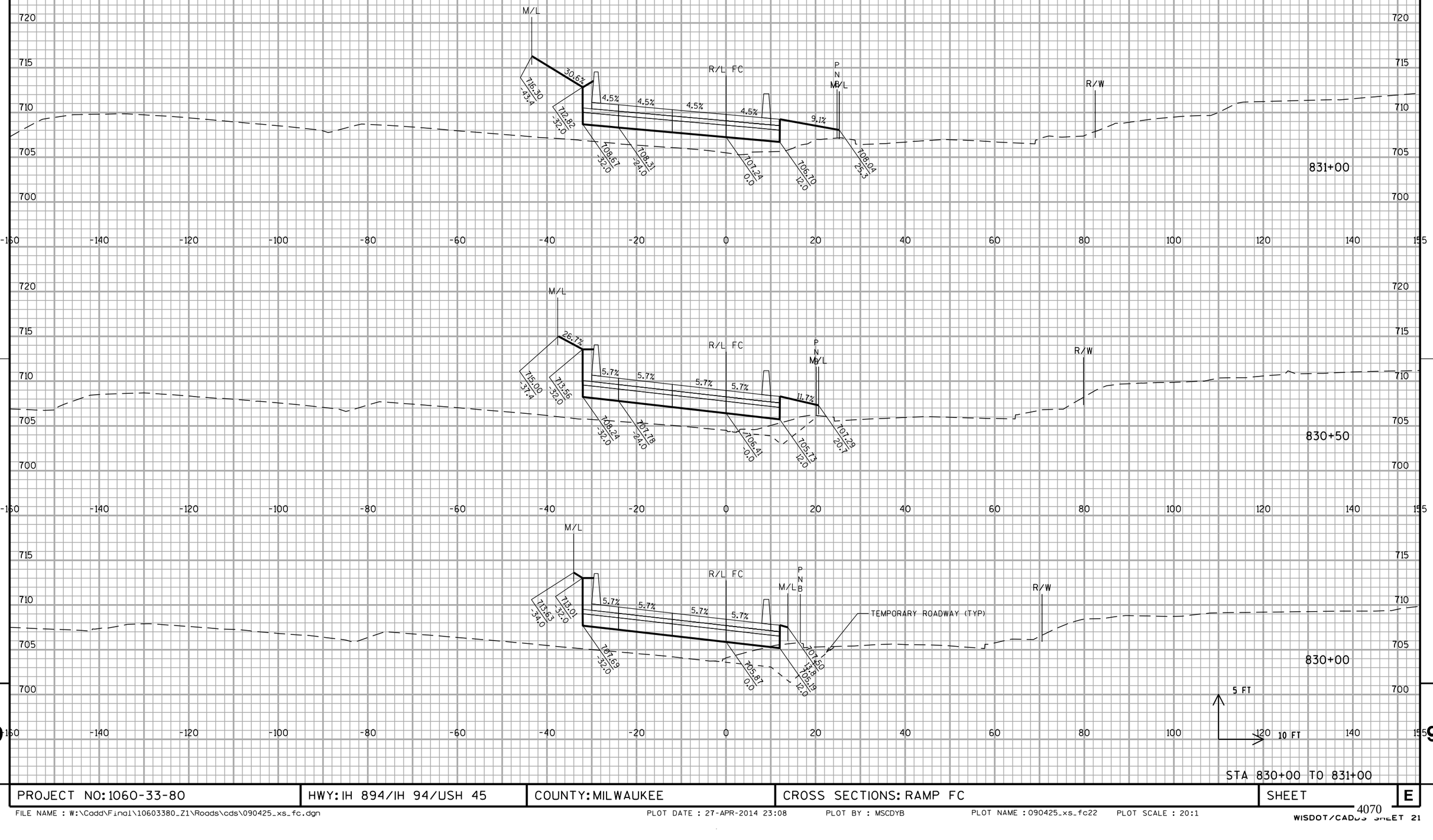
STA 828+50 TO 829+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:07 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc21 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

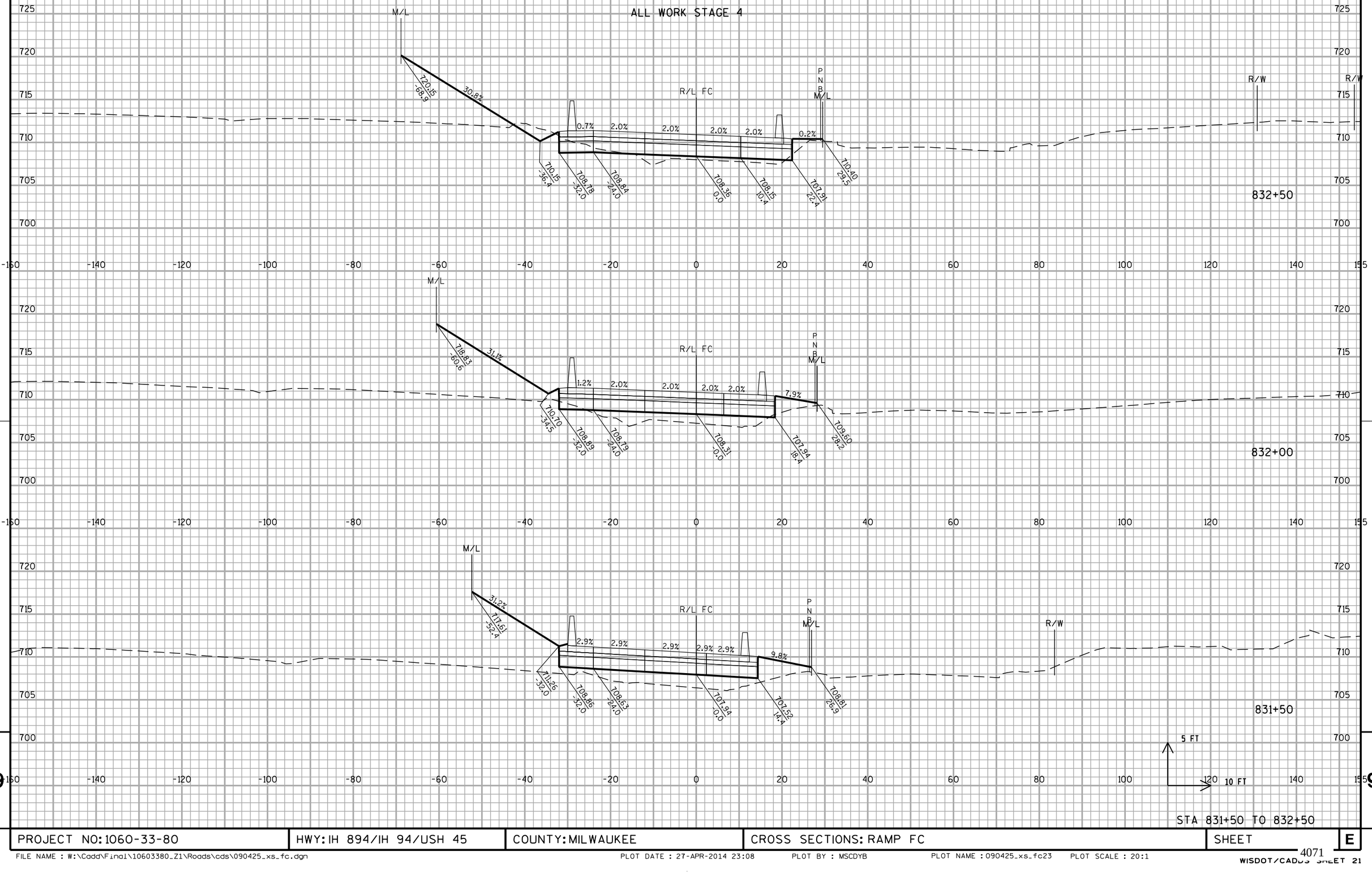
ALL WORK STAGE 4



STA 830+00 TO 831+00

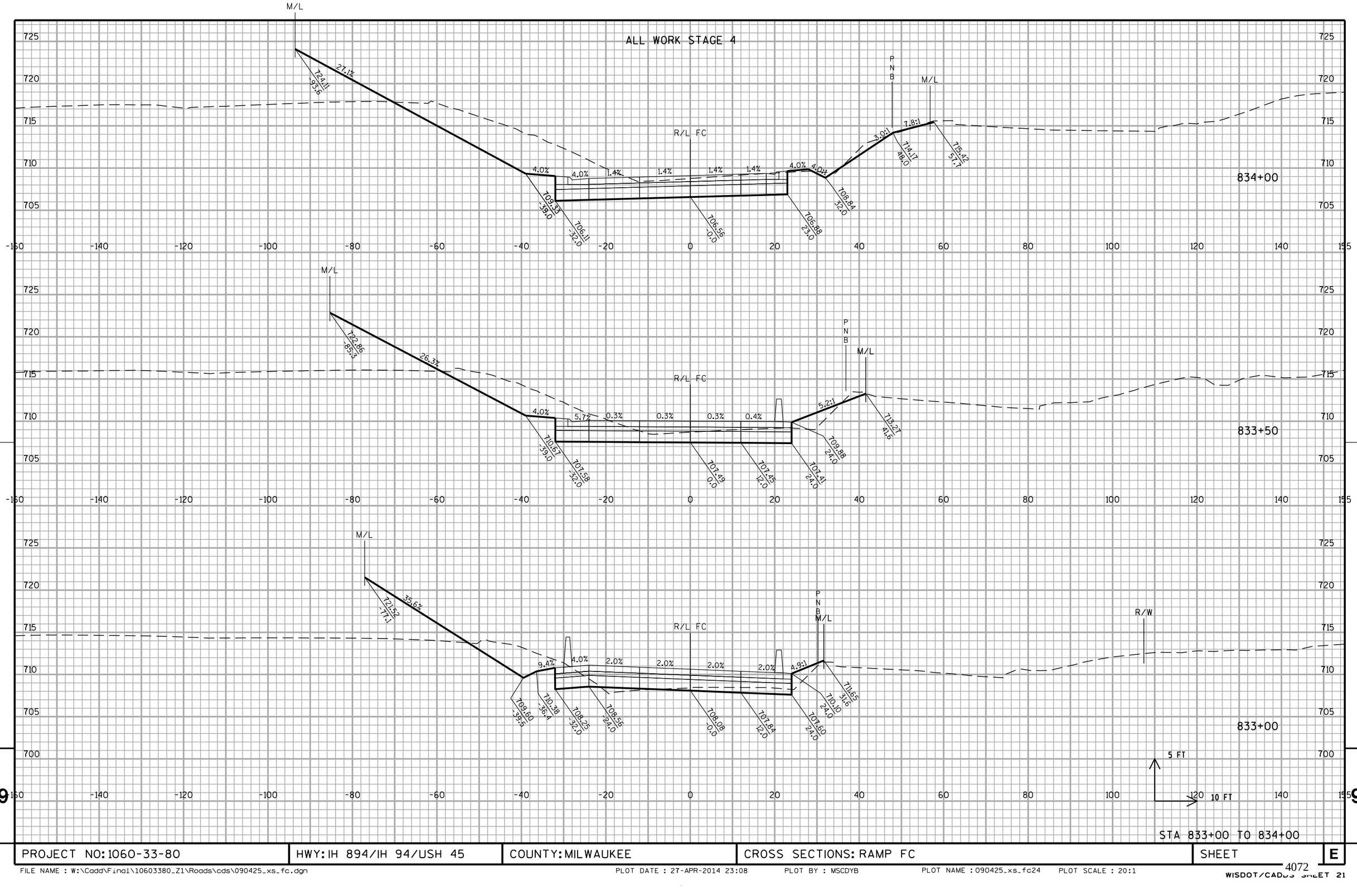
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

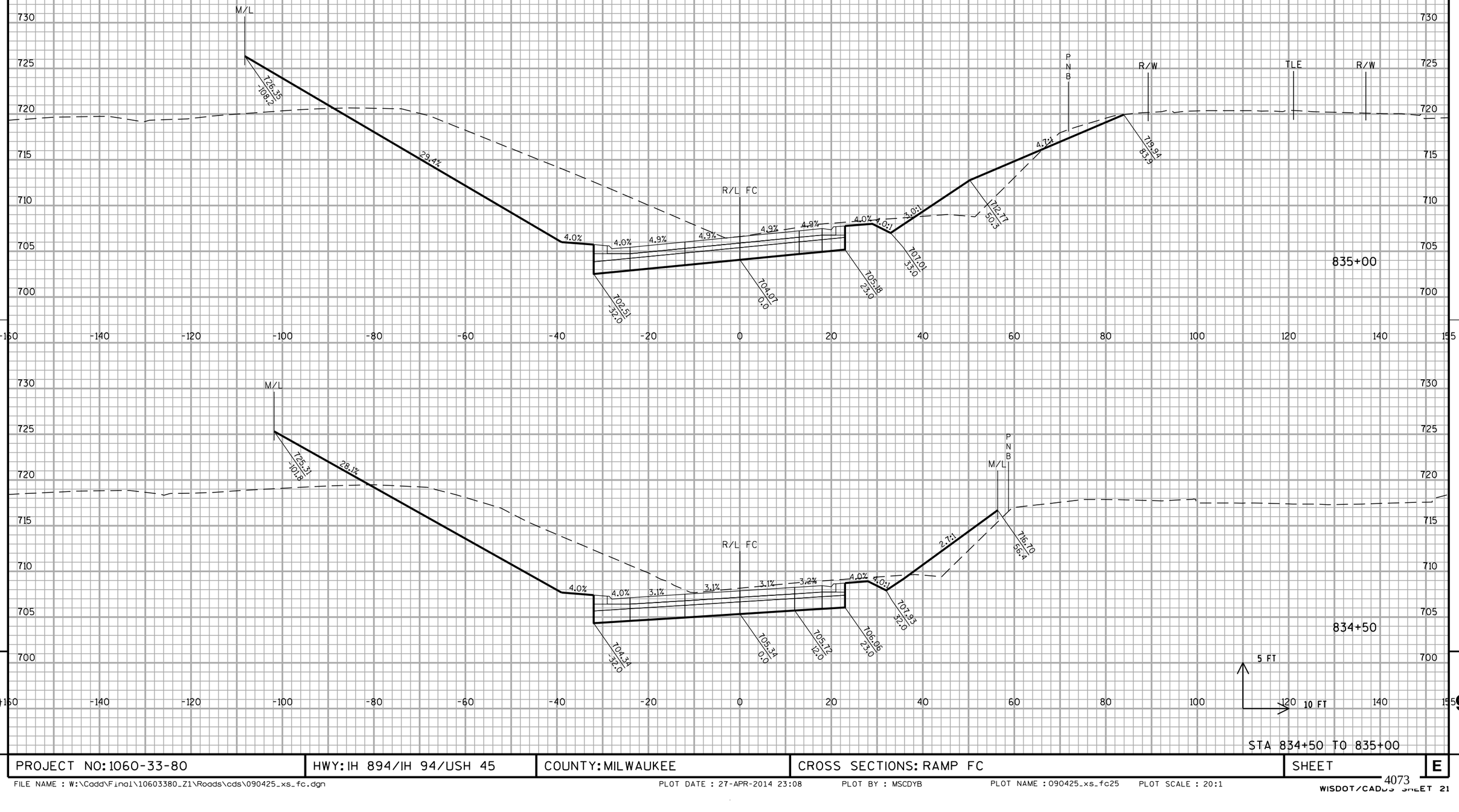
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc23 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc24 PLOT SCALE : 20:1

ALL WORK STAGE 4

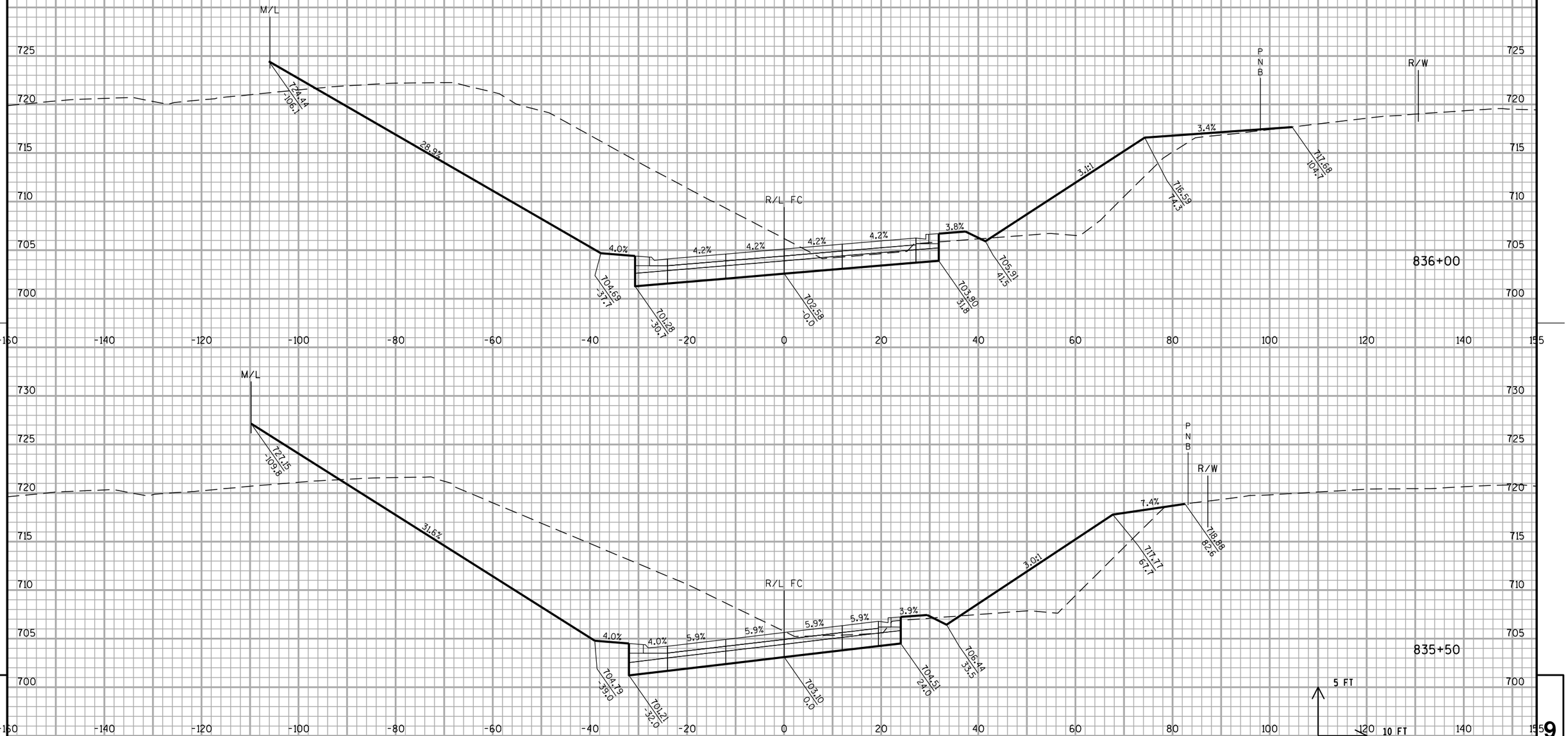


STA 834+50 TO 835+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc25 PLOT SCALE : 20:1

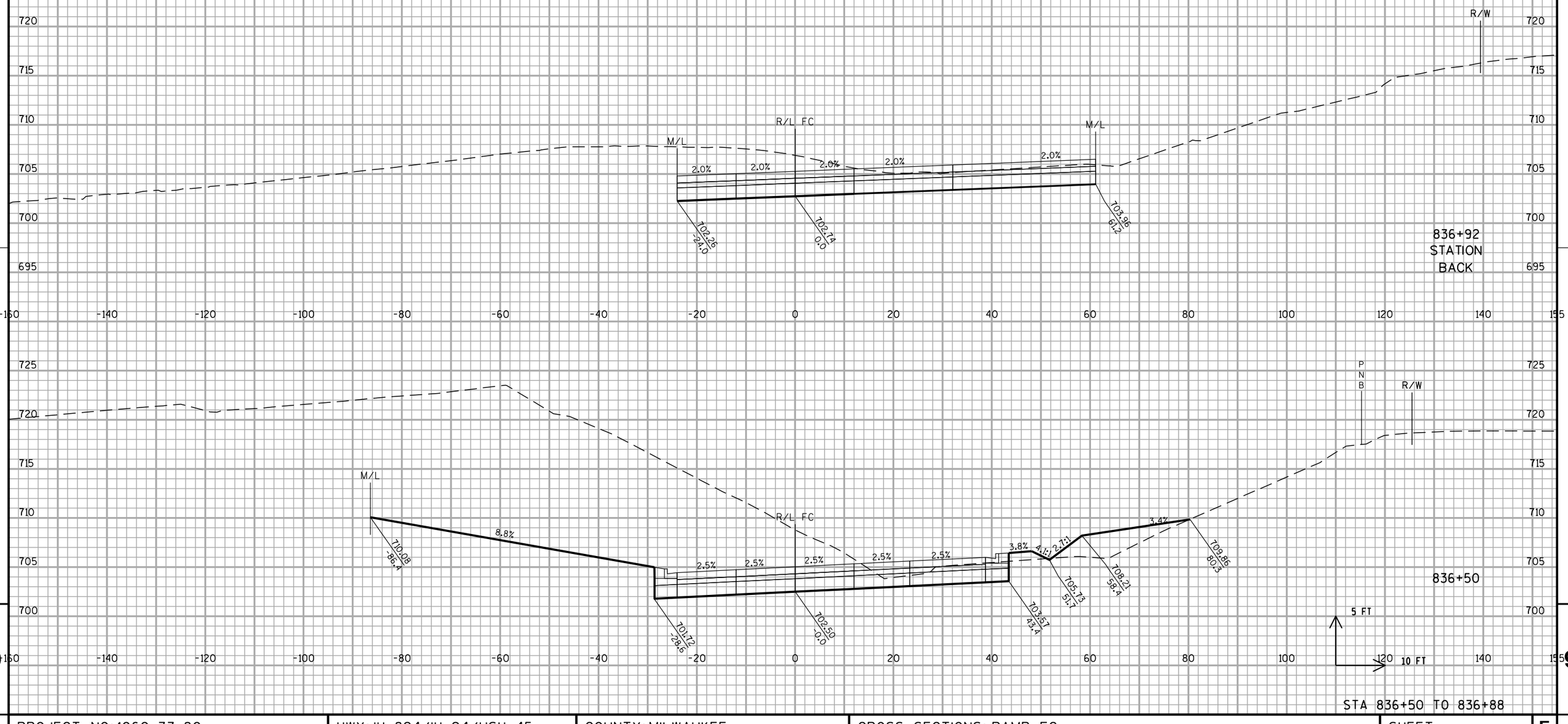
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc26 PLOT SCALE : 20:1

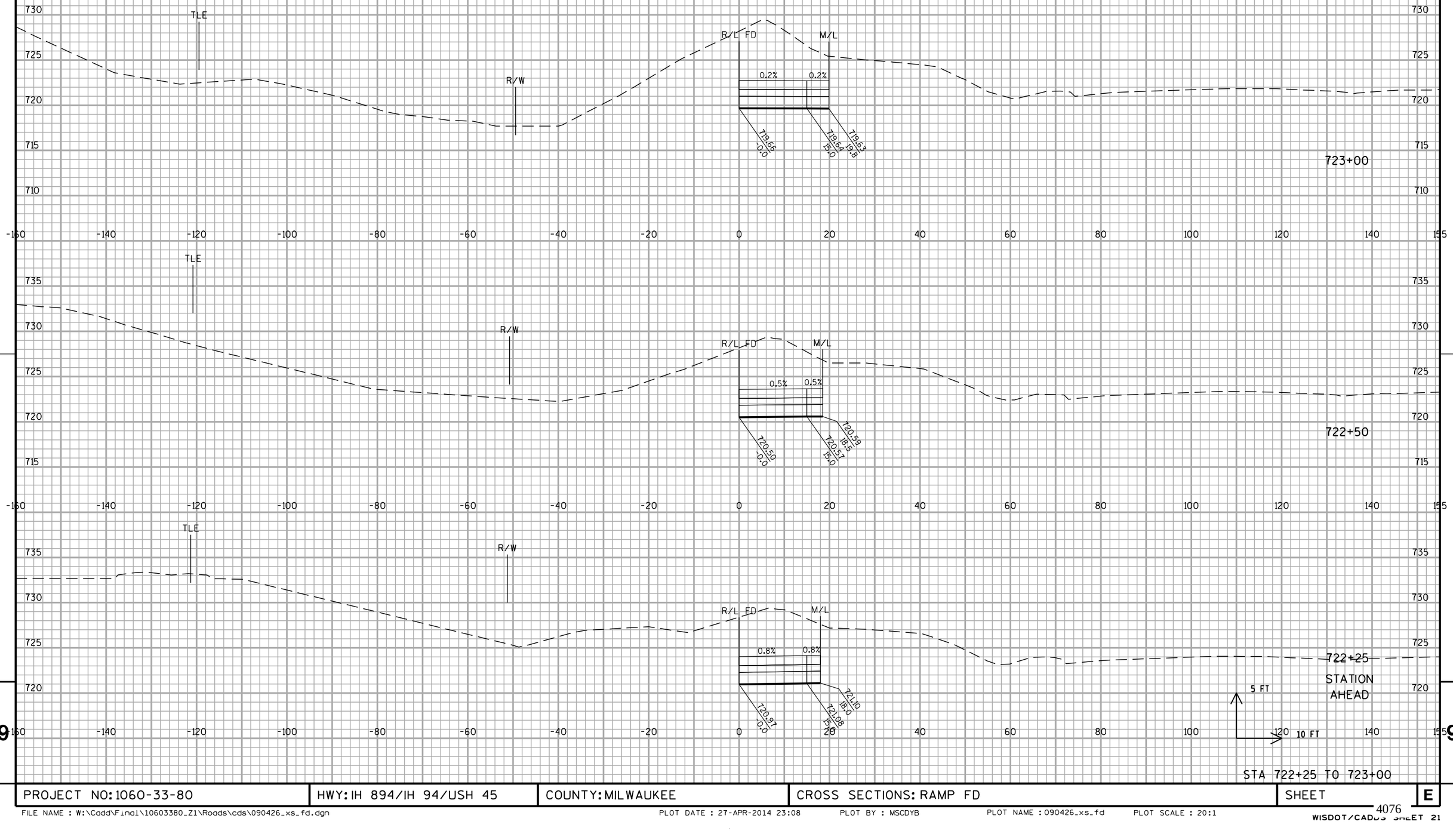
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090425_xs_fc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090425_xs_fc27 PLOT SCALE : 20:1

ALL WORK STAGE 2

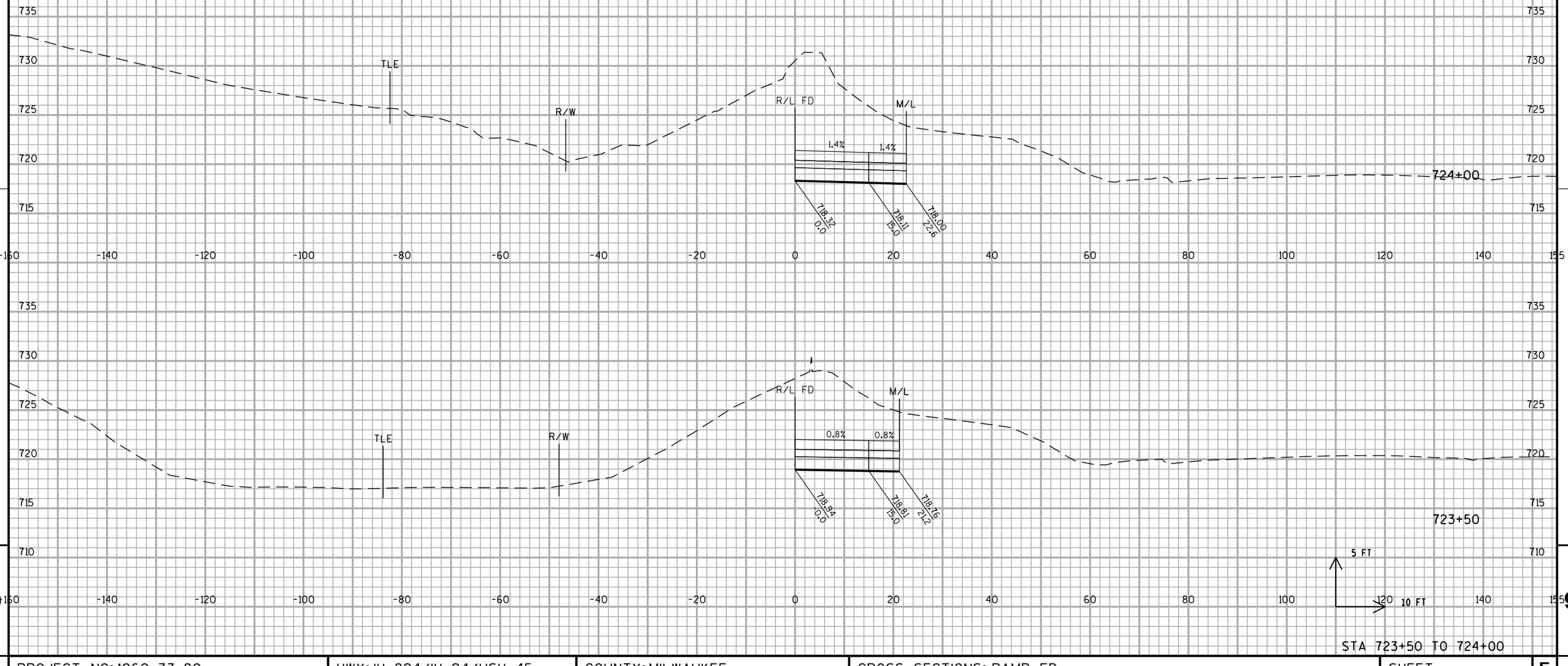


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

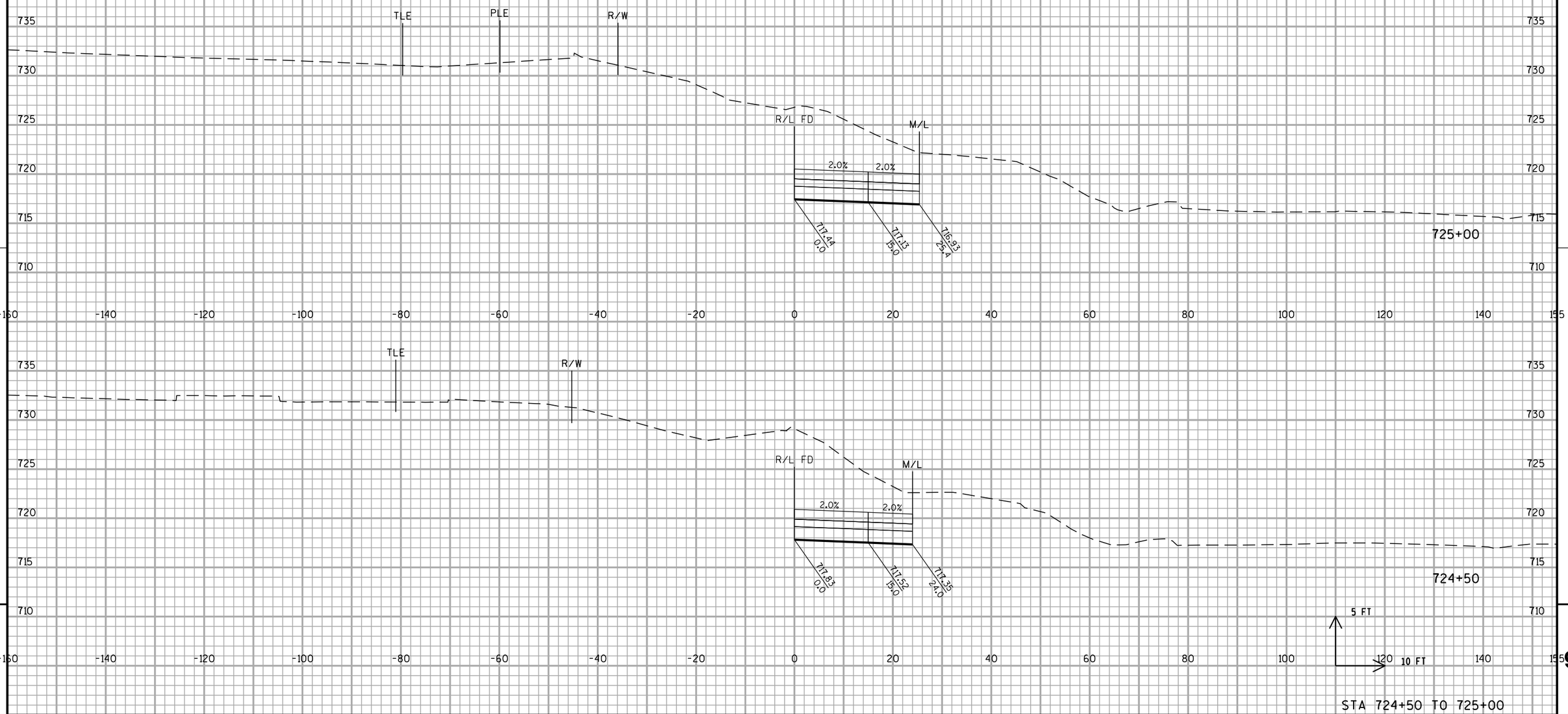


STA 723+50 TO 724+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

9 9

ALL WORK STAGE 2



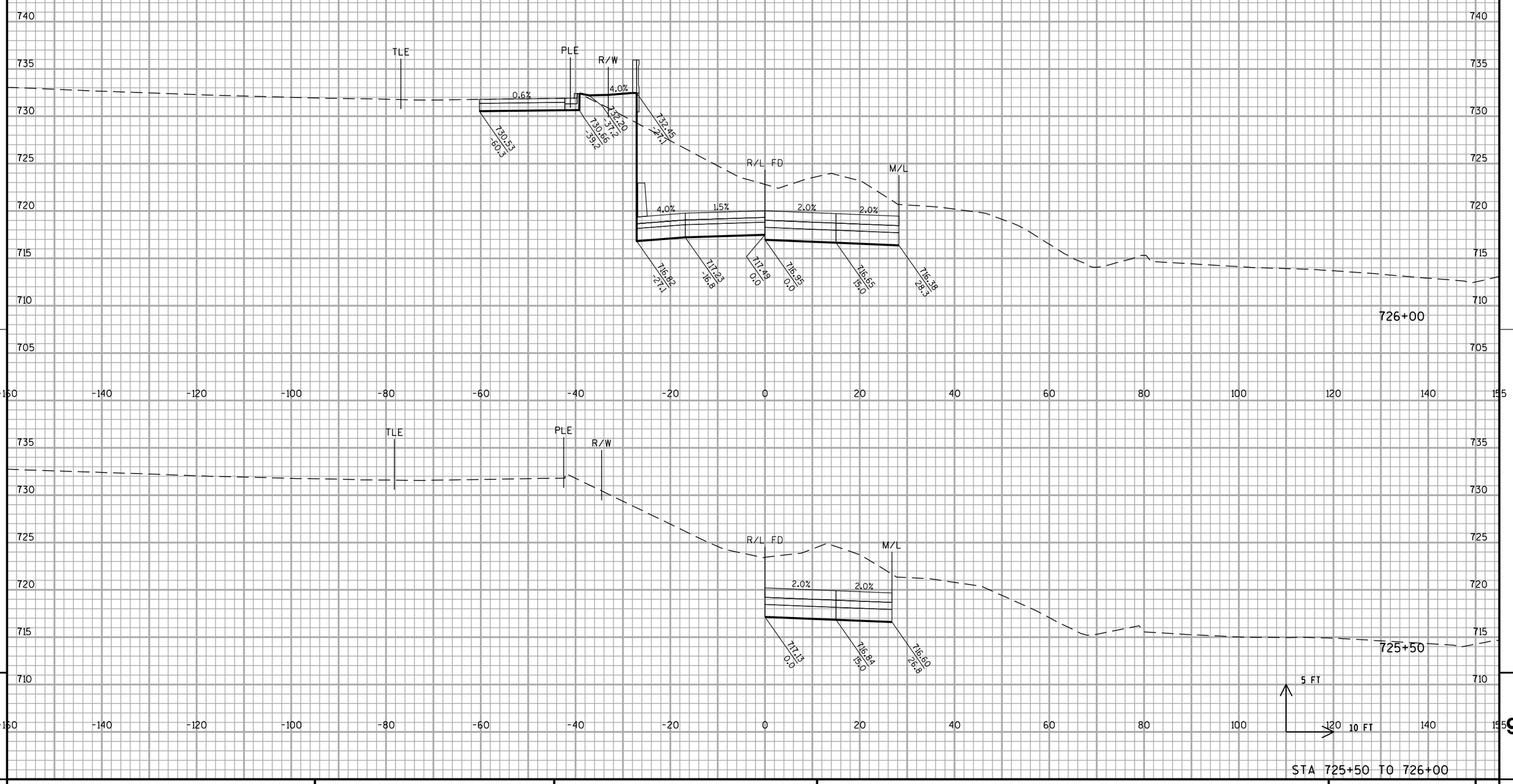
STA 724+50 TO 725+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd2 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

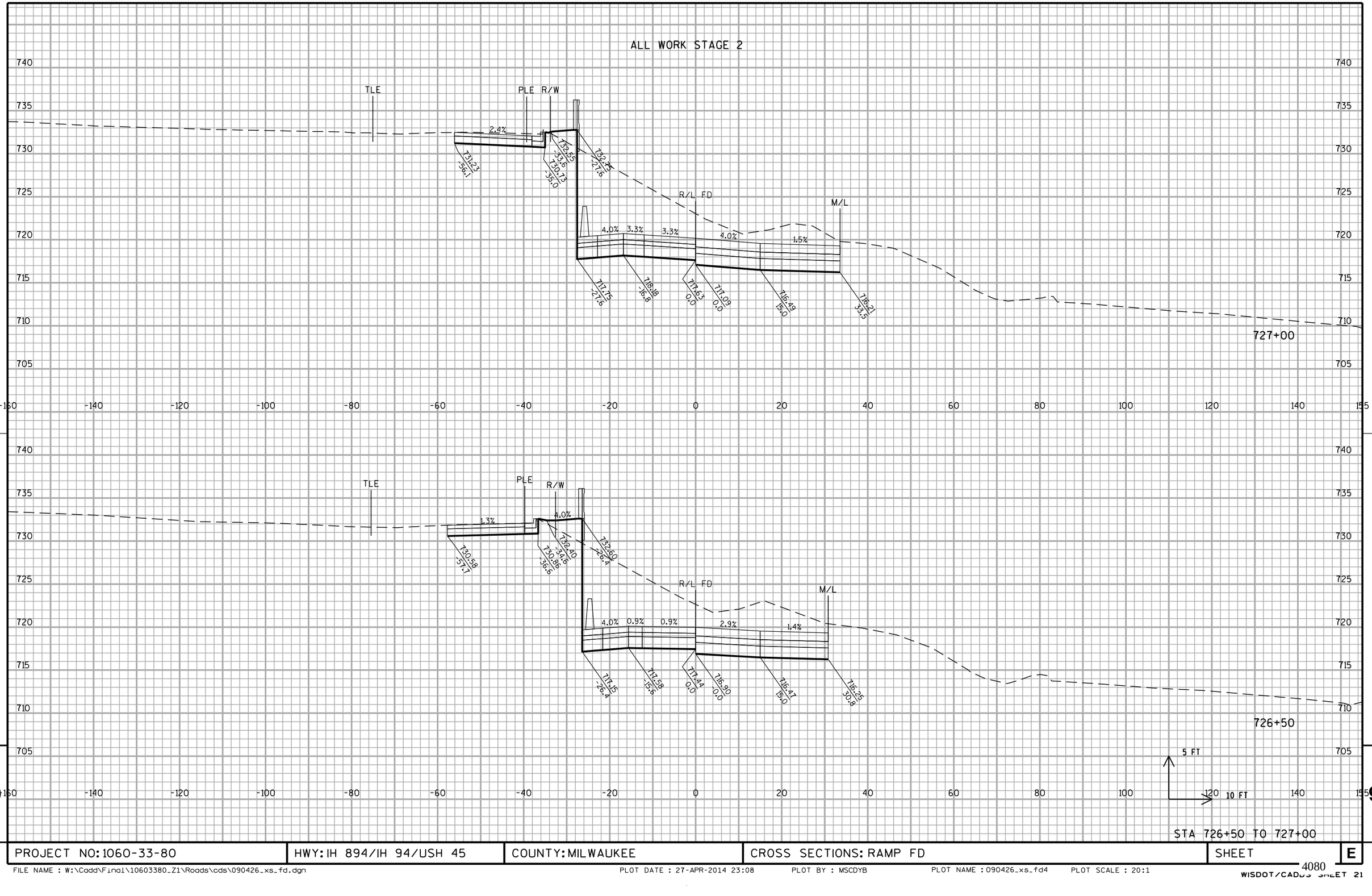


STA 725+50 TO 726+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd3 PLOT SCALE : 20:1

ALL WORK STAGE 2

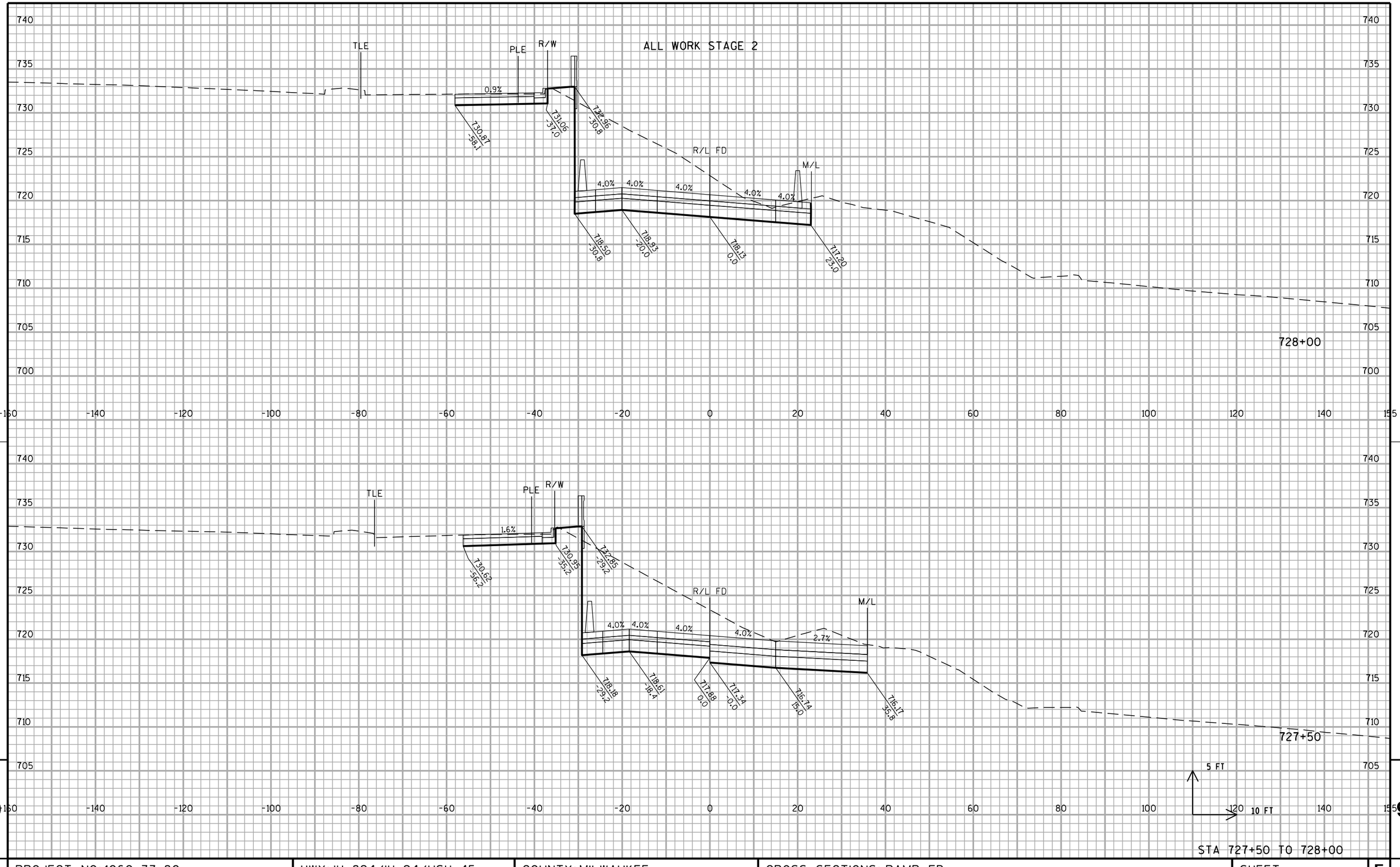


STA 726+50 TO 727+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd4 PLOT SCALE : 20:1

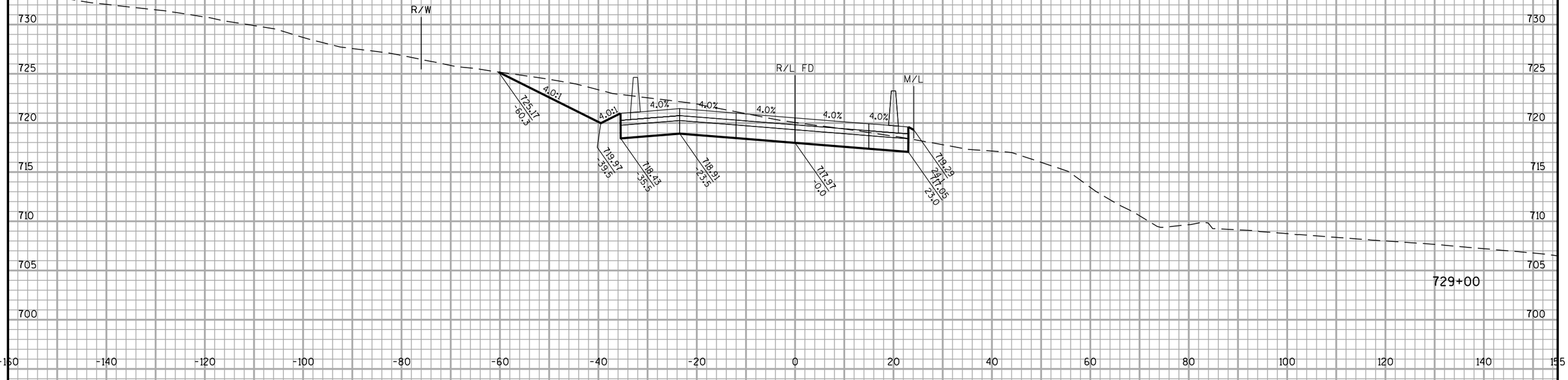
WISDOT/CADDS SHEET 21

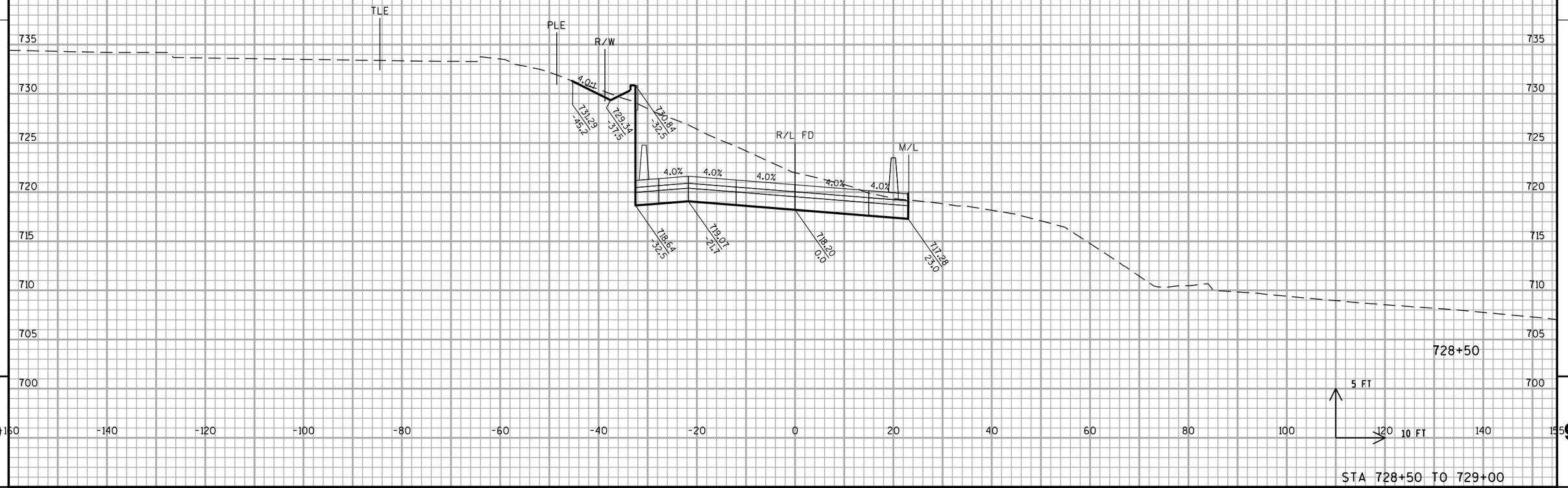


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd5 PLOT SCALE : 20:1

ALL WORK STAGE 2



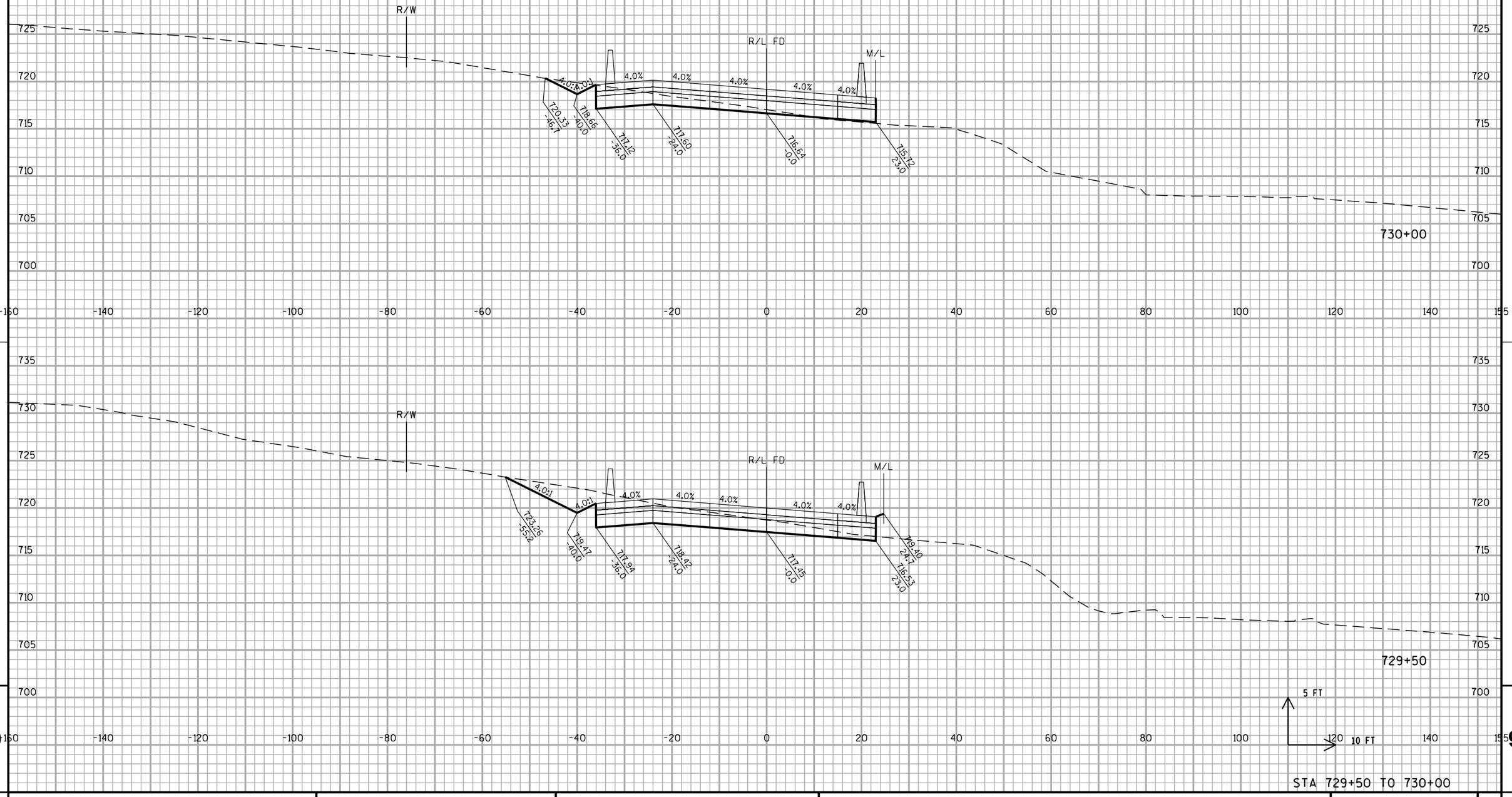


STA 728+50 TO 729+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd6 PLOT SCALE : 20:1

ALL WORK STAGE 2



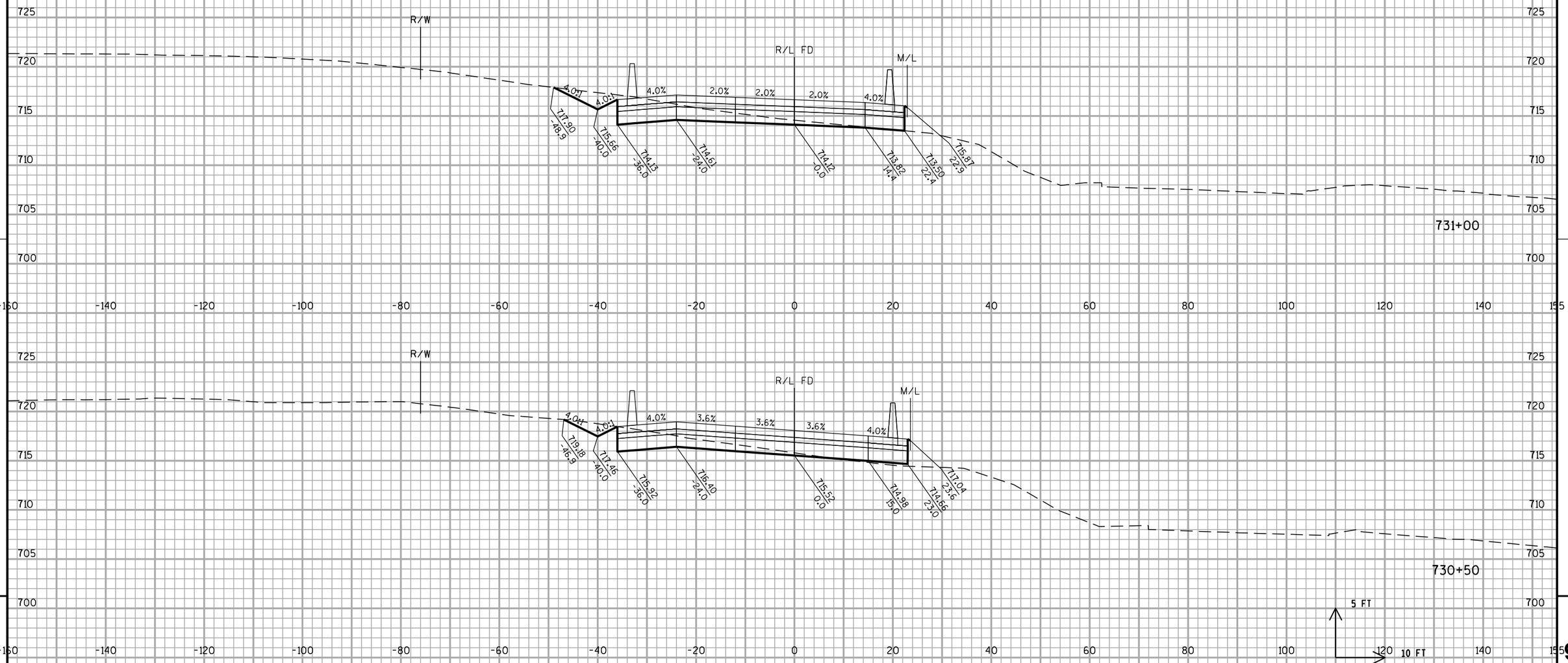
STA 729+50 TO 730+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

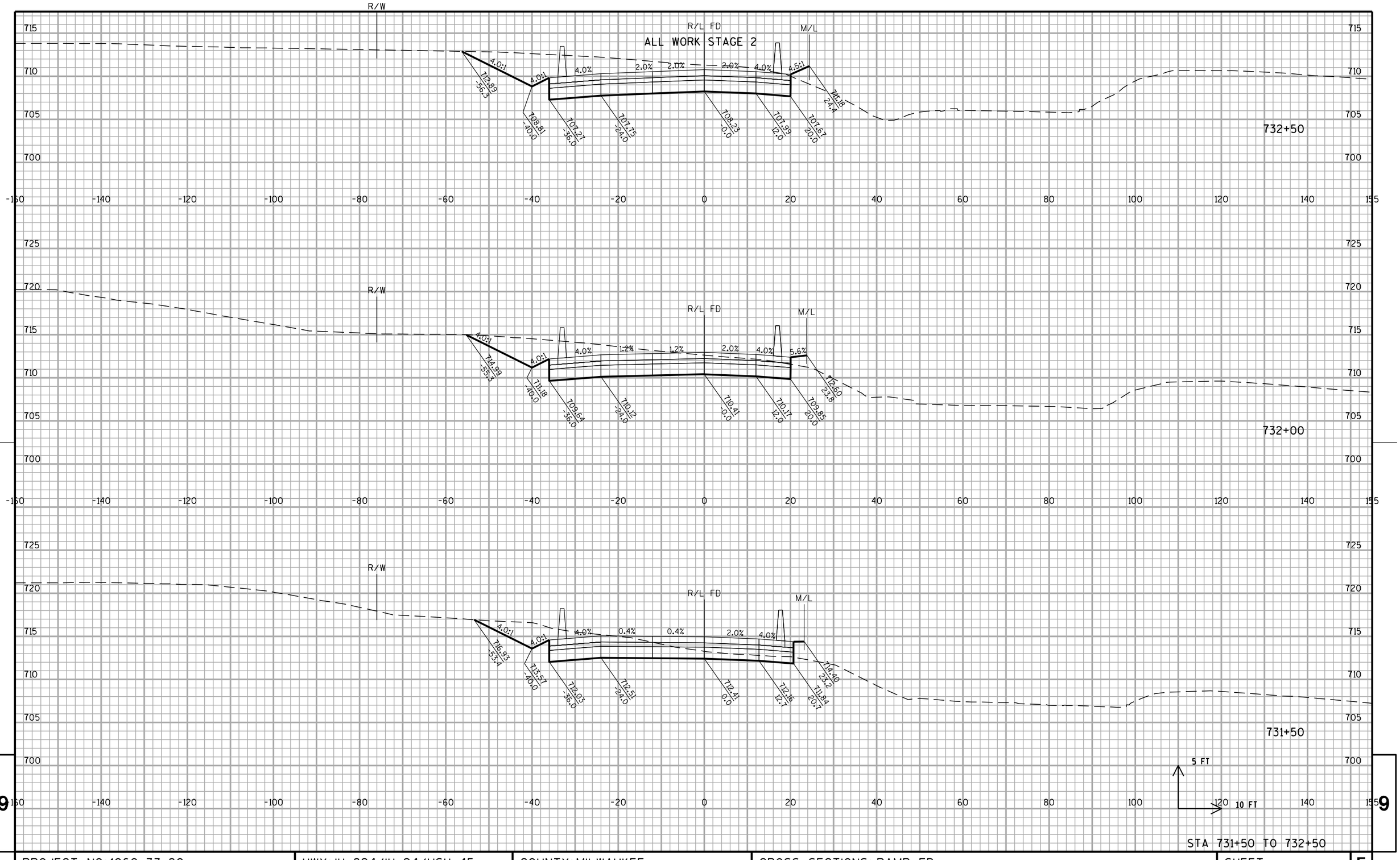
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



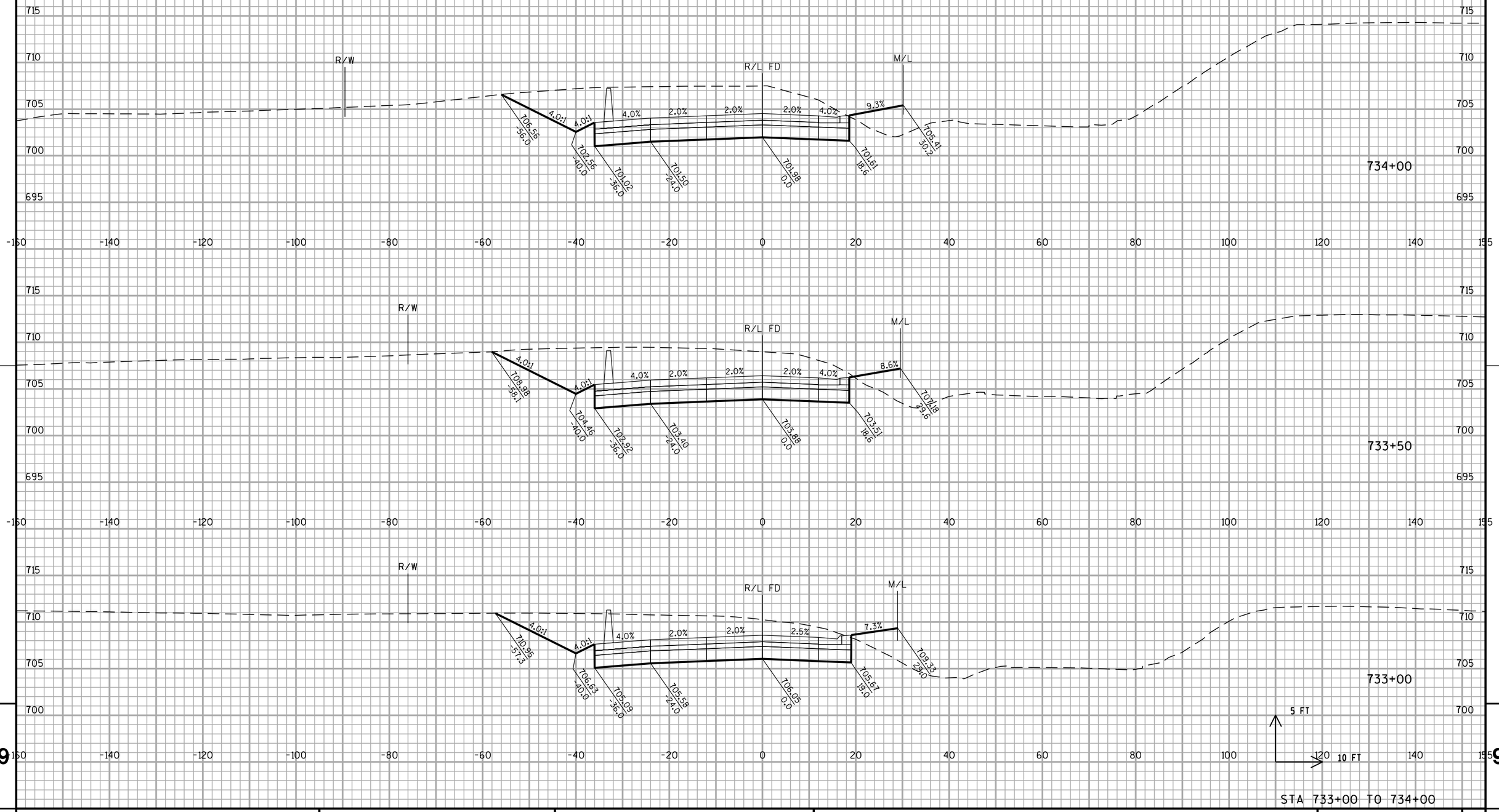
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd9 PLOT SCALE : 20:1

ALL WORK STAGE 2

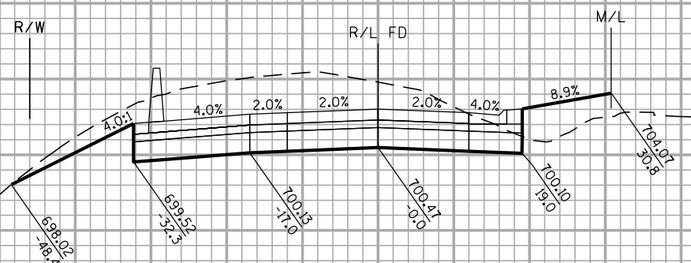


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

ALL WORK STAGE 2



735+00



734+50

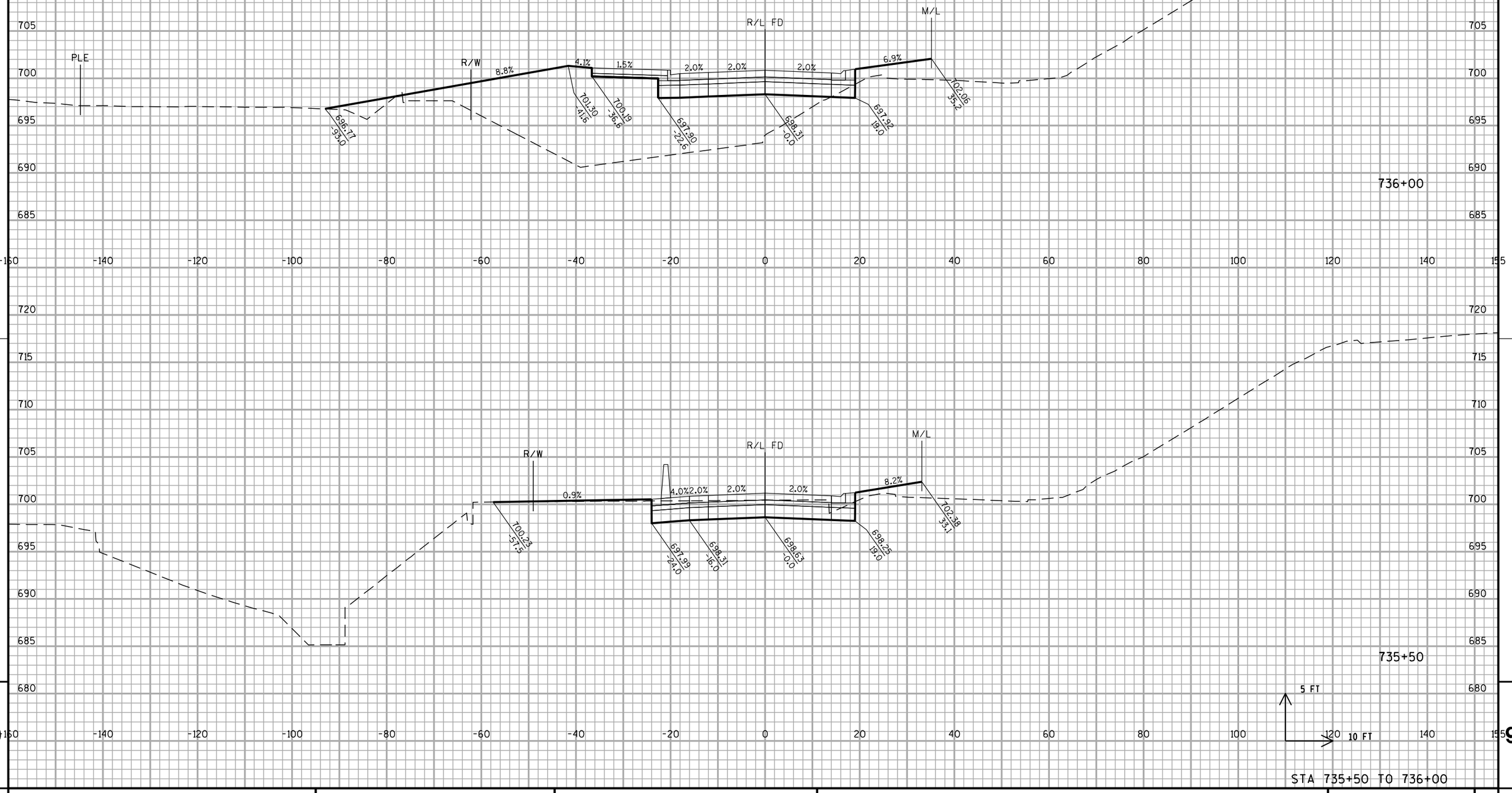
5 FT
10 FT

STA 734+50 TO 735+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd11 PLOT SCALE : 20:1

ALL WORK STAGE 2



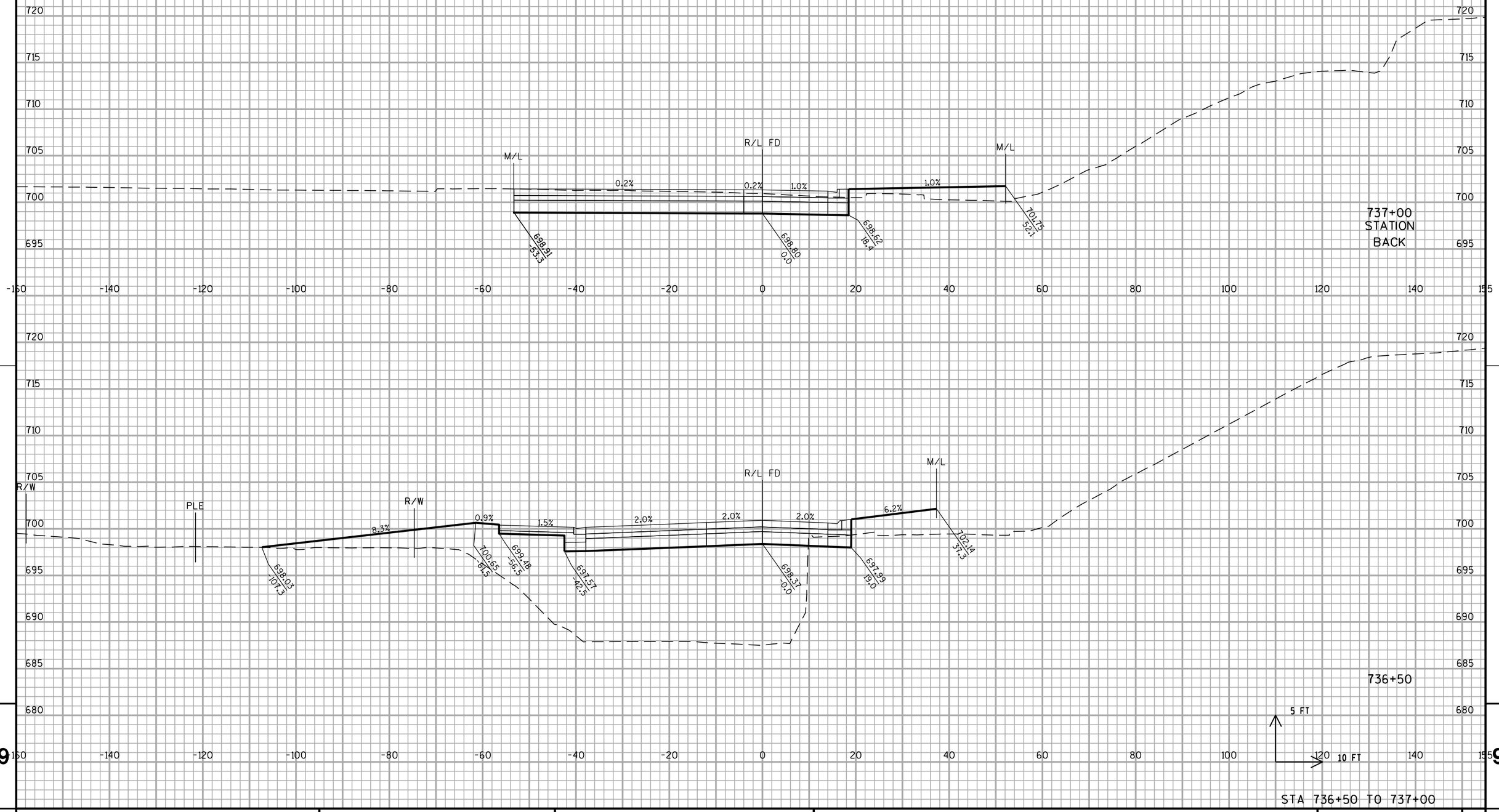
STA 735+50 TO 736+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

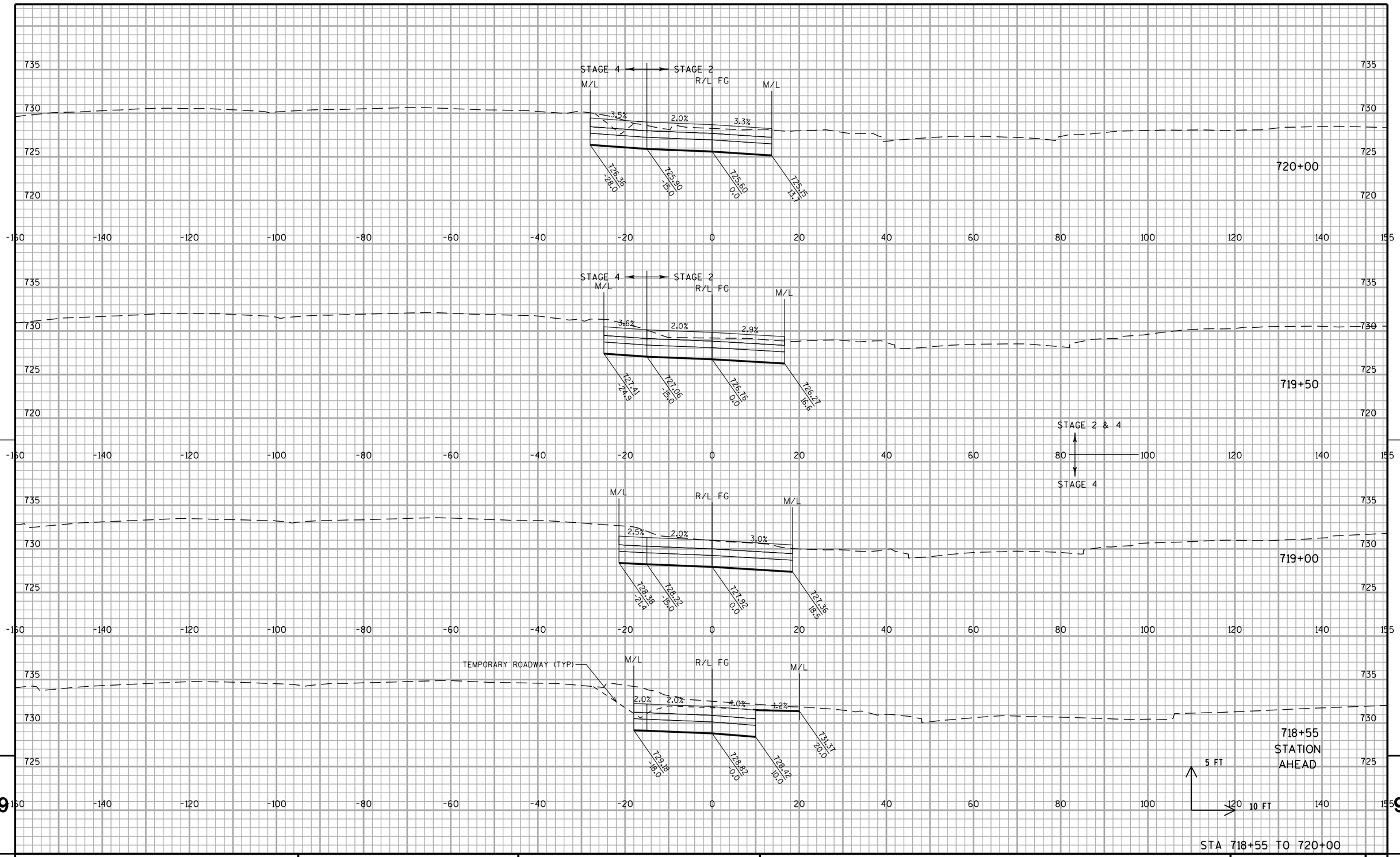
ALL WORK STAGE 2



STA 736+50 TO 737+00

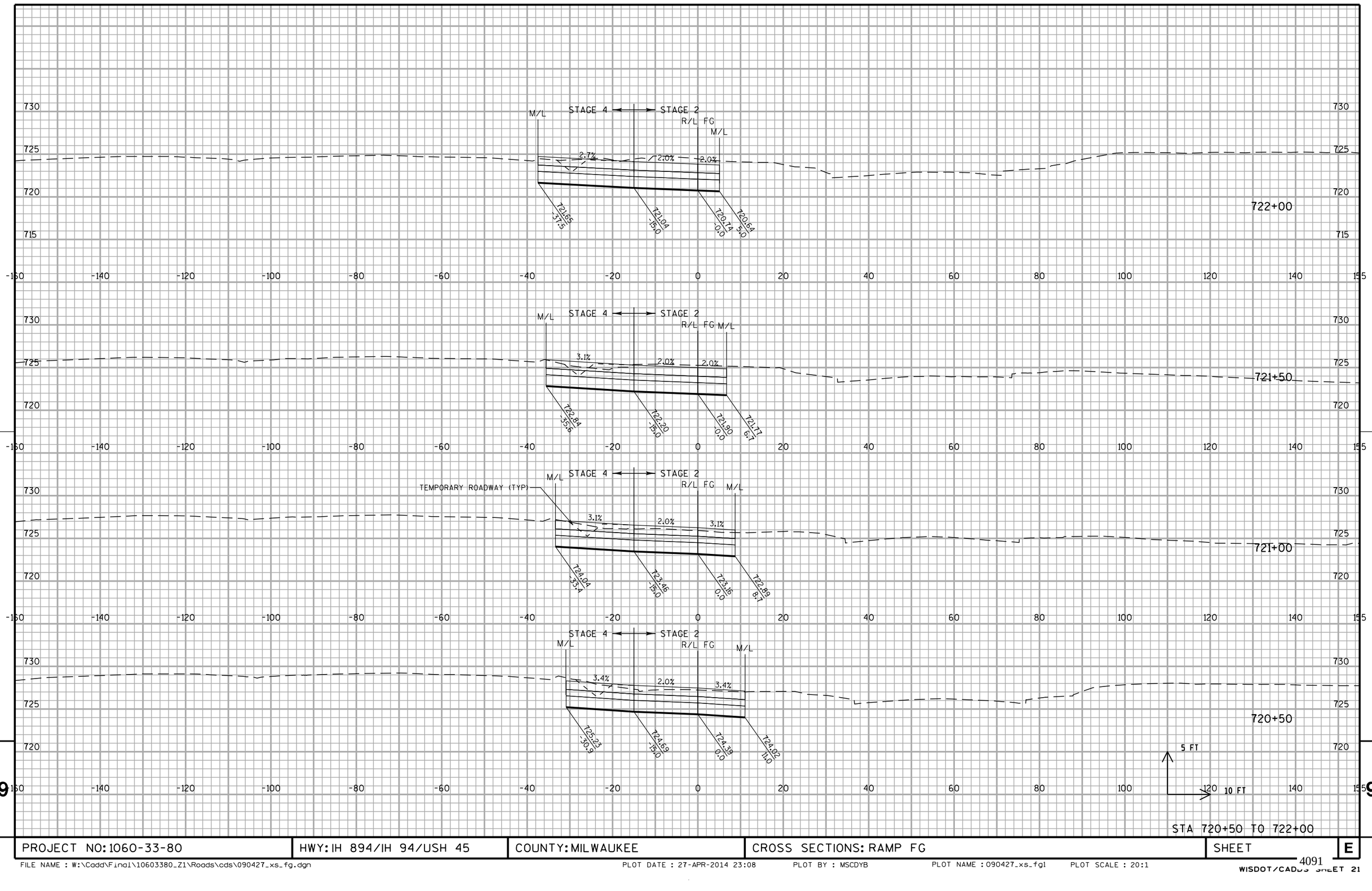
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090426_xs_fd.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090426_xs_fd13 PLOT SCALE : 20:1



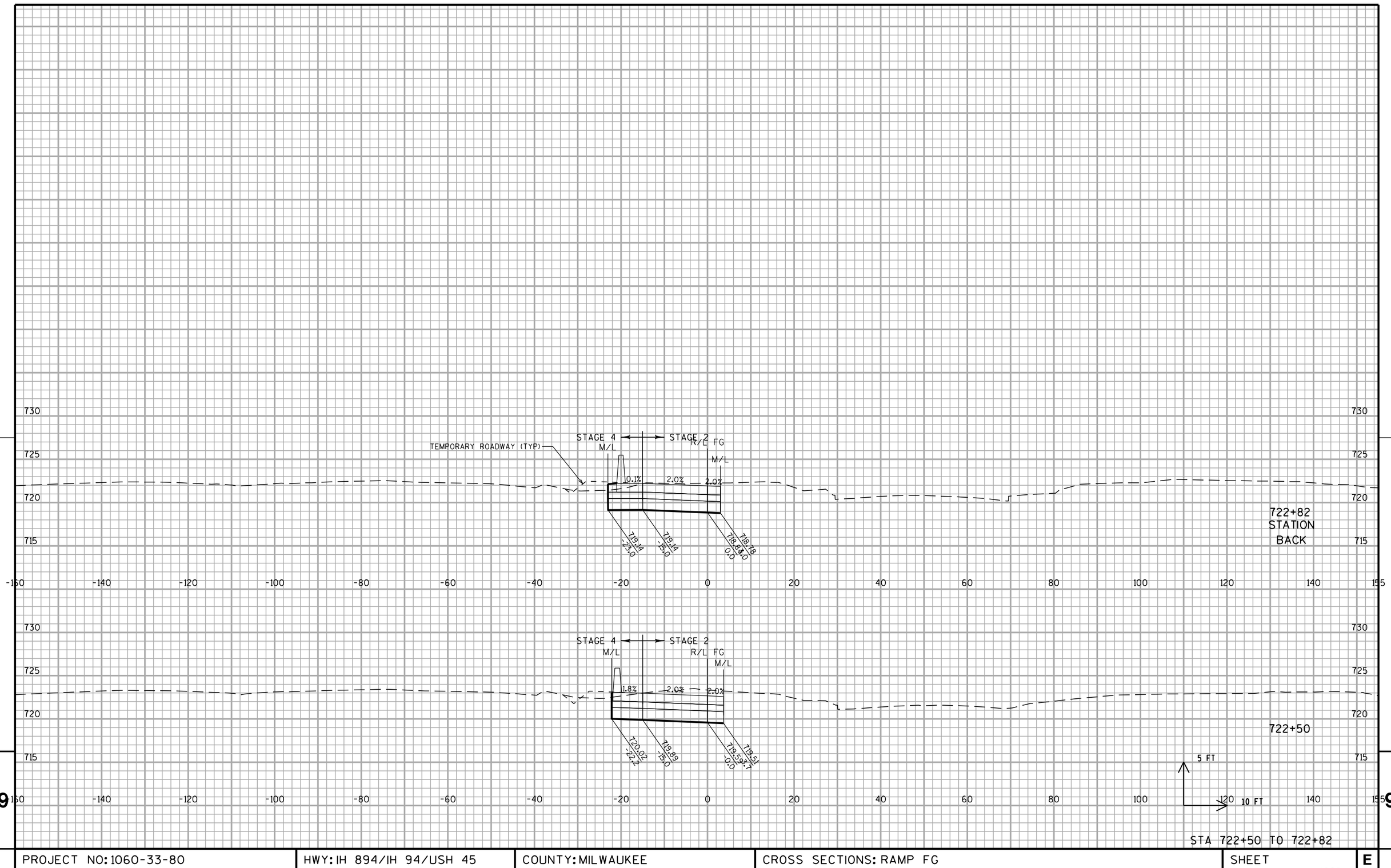
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FG	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090427_xs_fg.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090427_xs_fg PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FG	SHEET	E

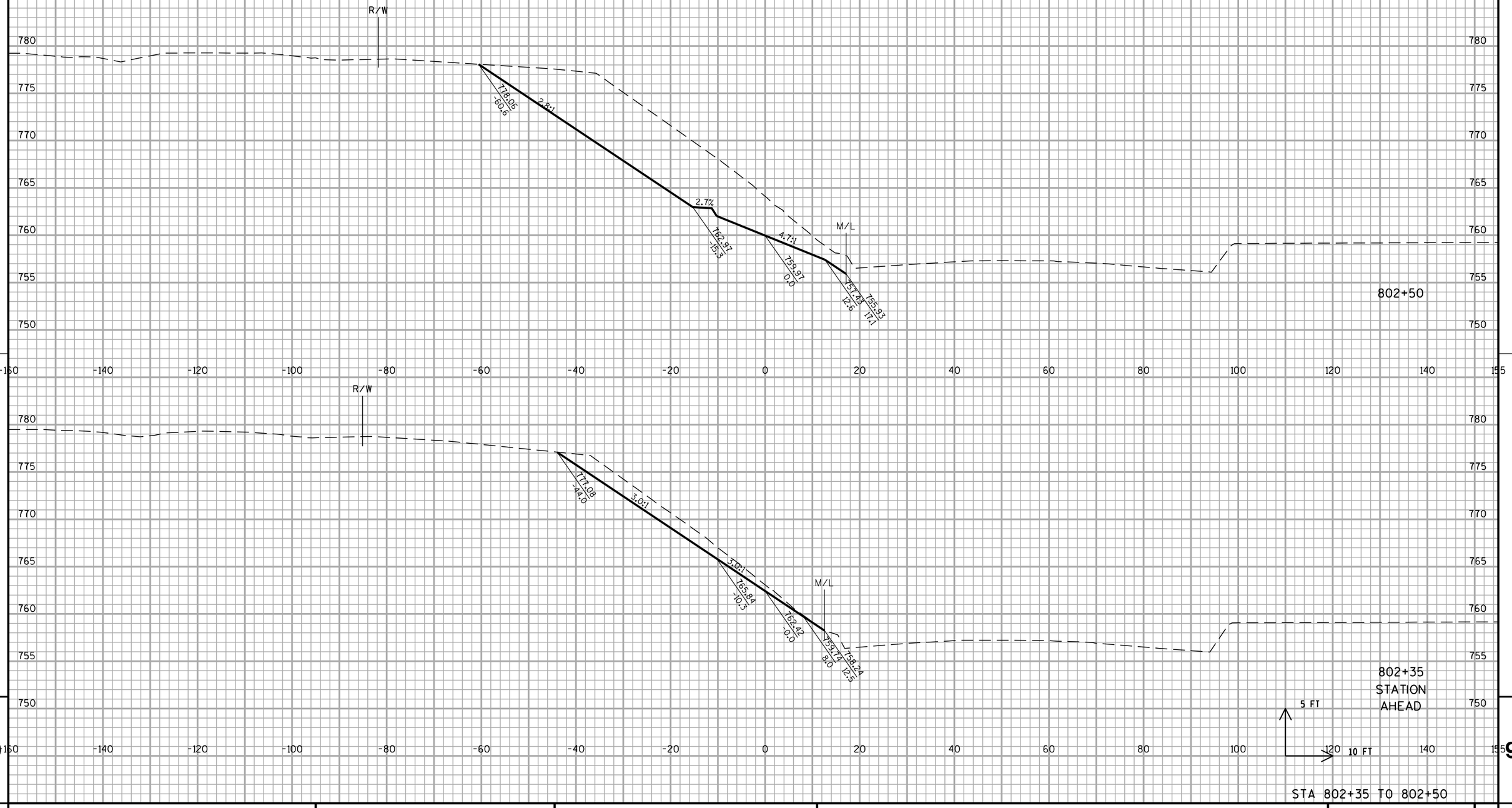
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090427_xs_fg.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090427_xs_fg1 PLOT SCALE : 20:1



STA 722+50 TO 722+82

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FG	SHEET	E

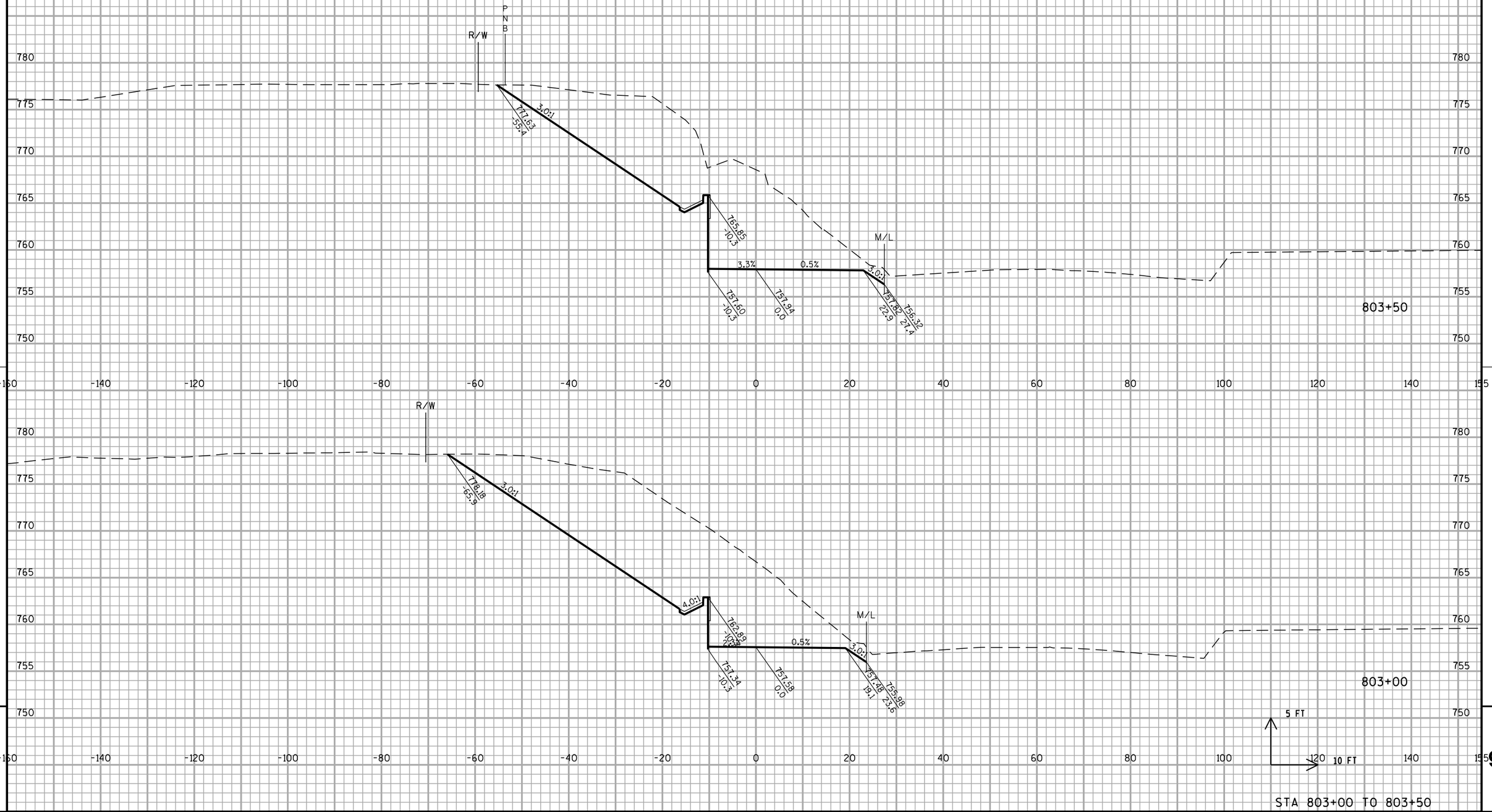
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh PLOT SCALE : 20:1

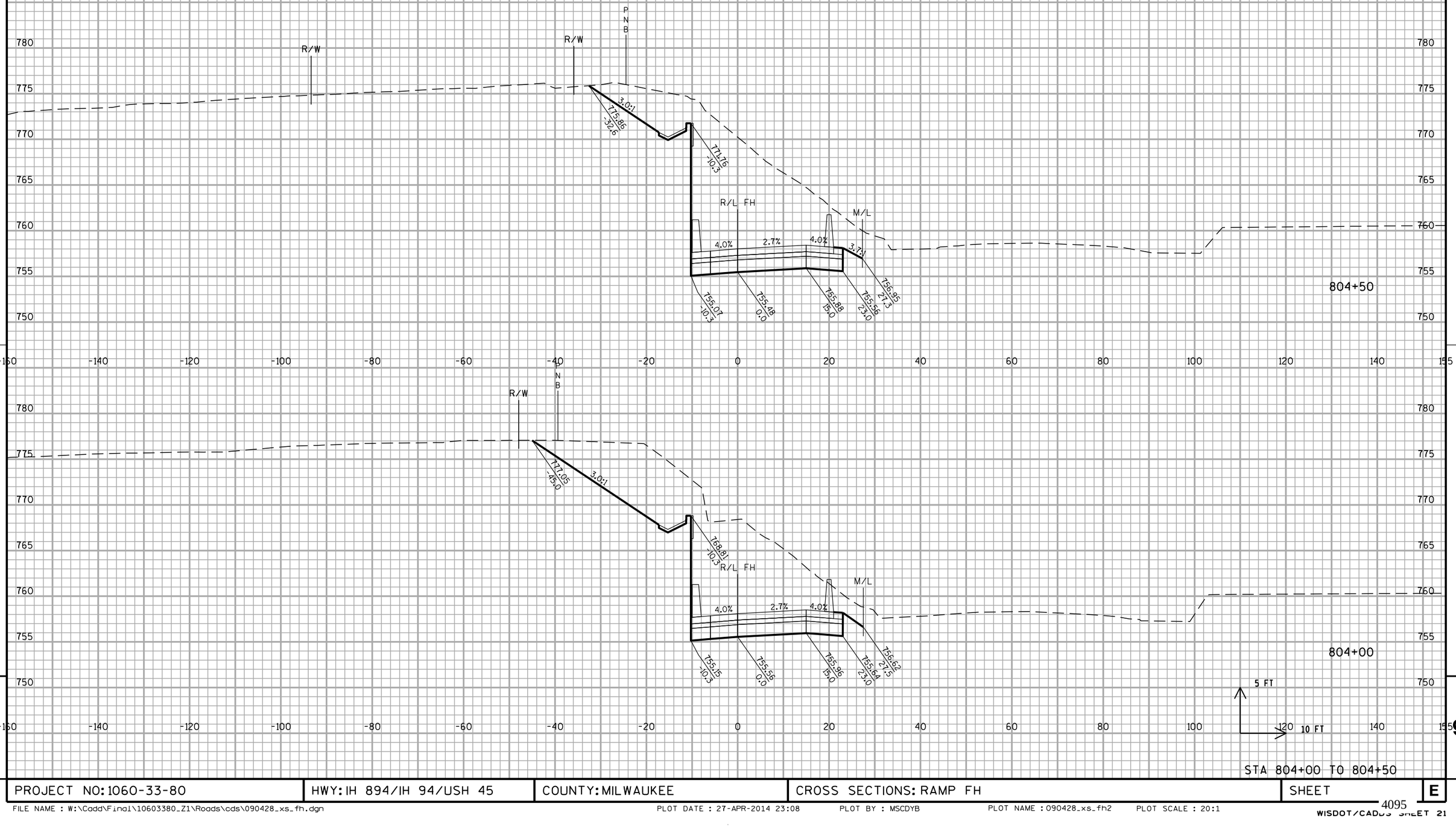
ALL WORK STAGE 2



STA 803+00 TO 803+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

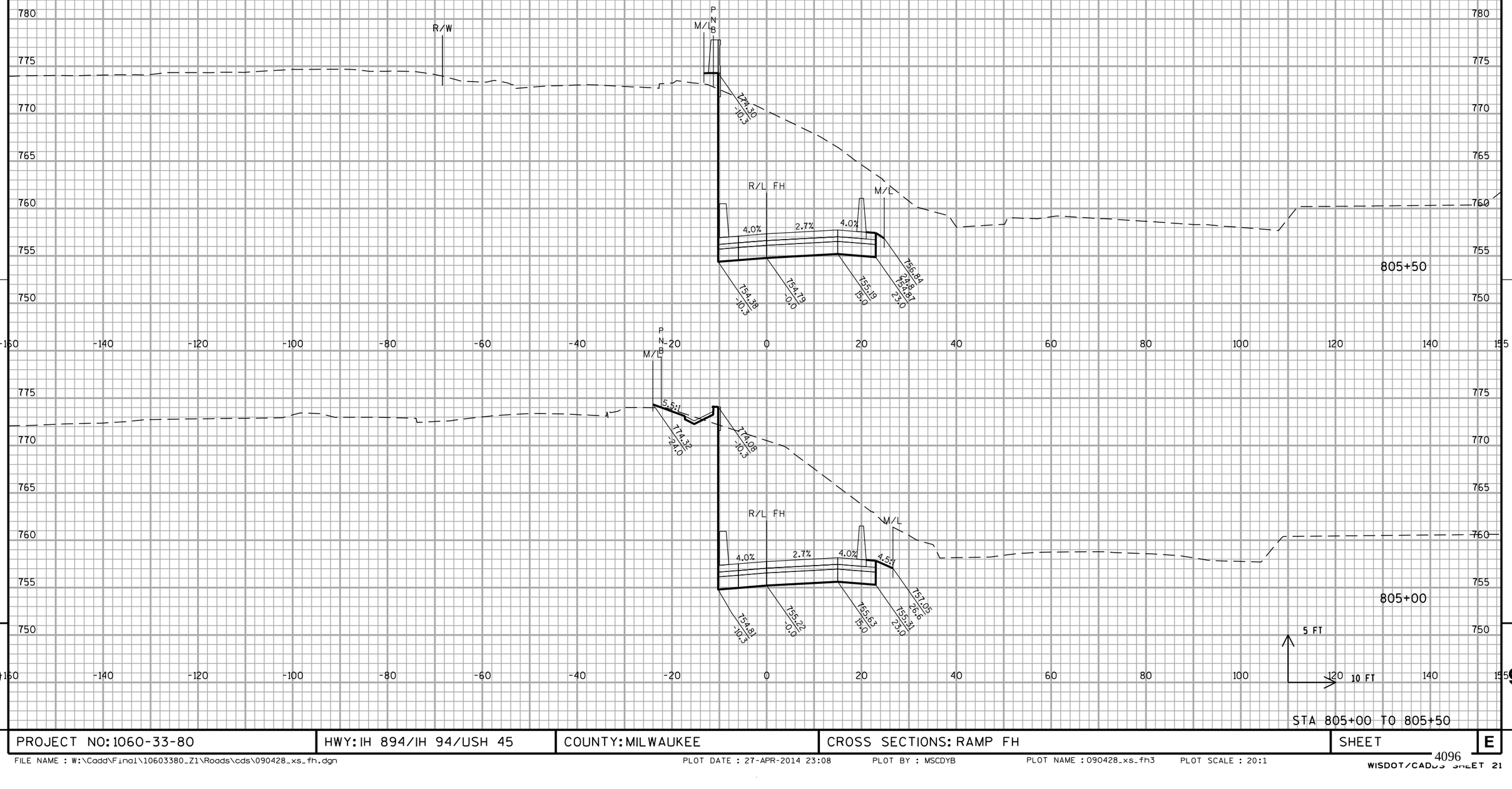
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh2 PLOT SCALE : 20:1

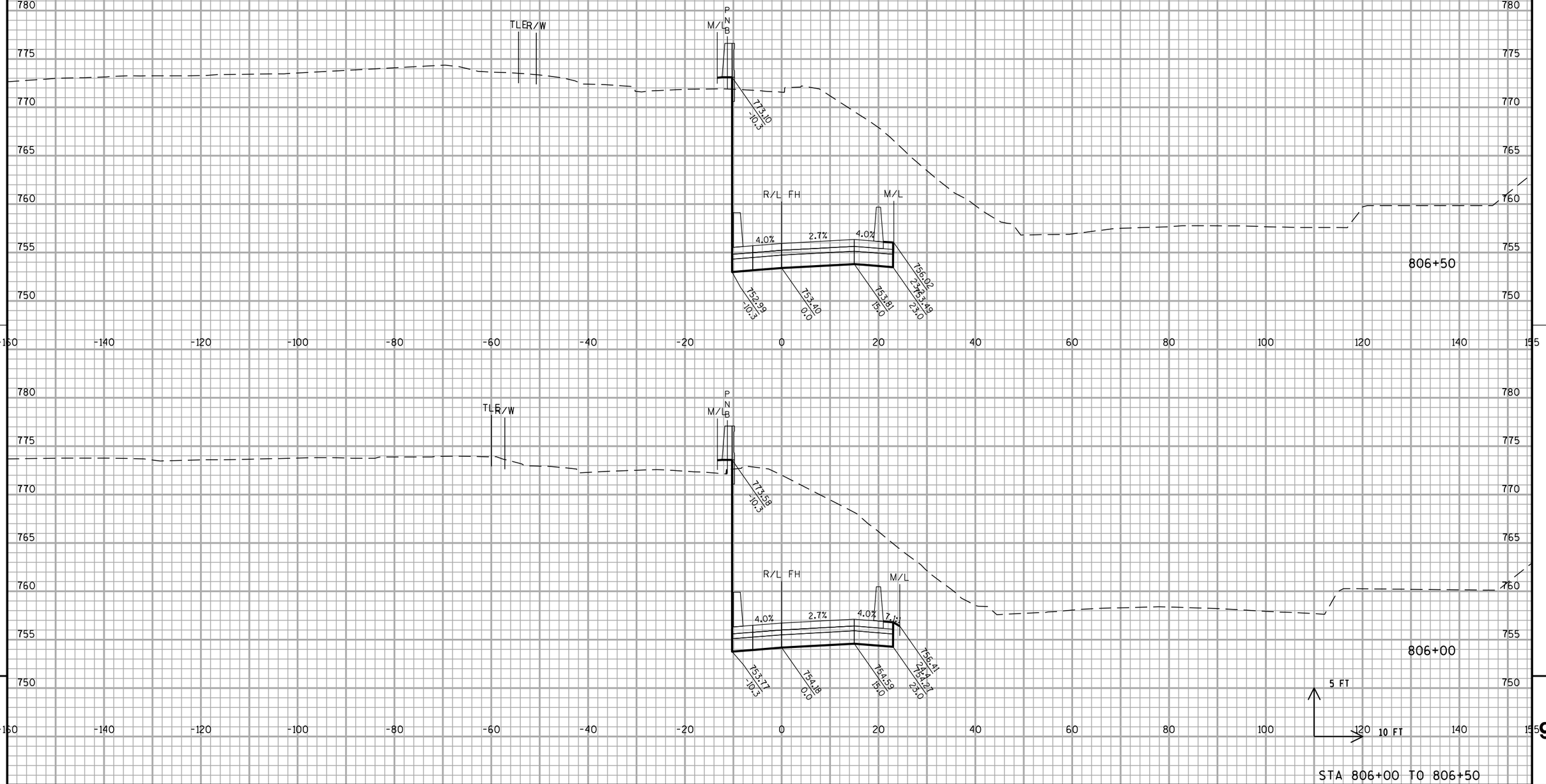
ALL WORK STAGE 2



STA 805+00 TO 805+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2



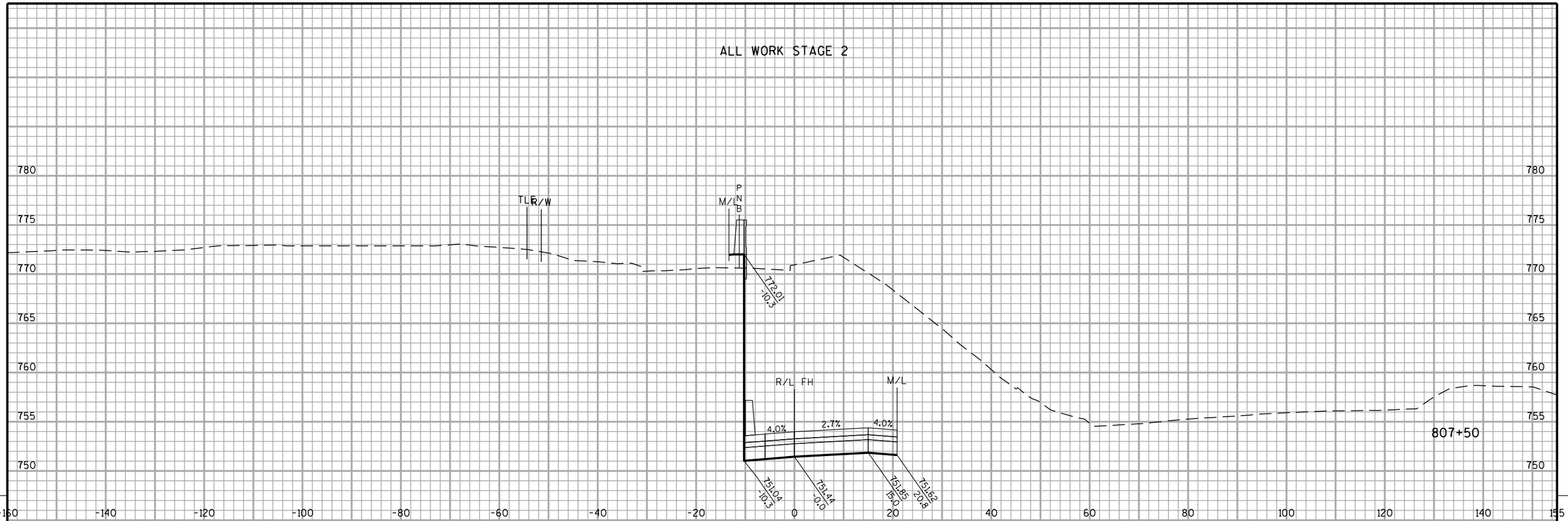
STA 806+00 TO 806+50

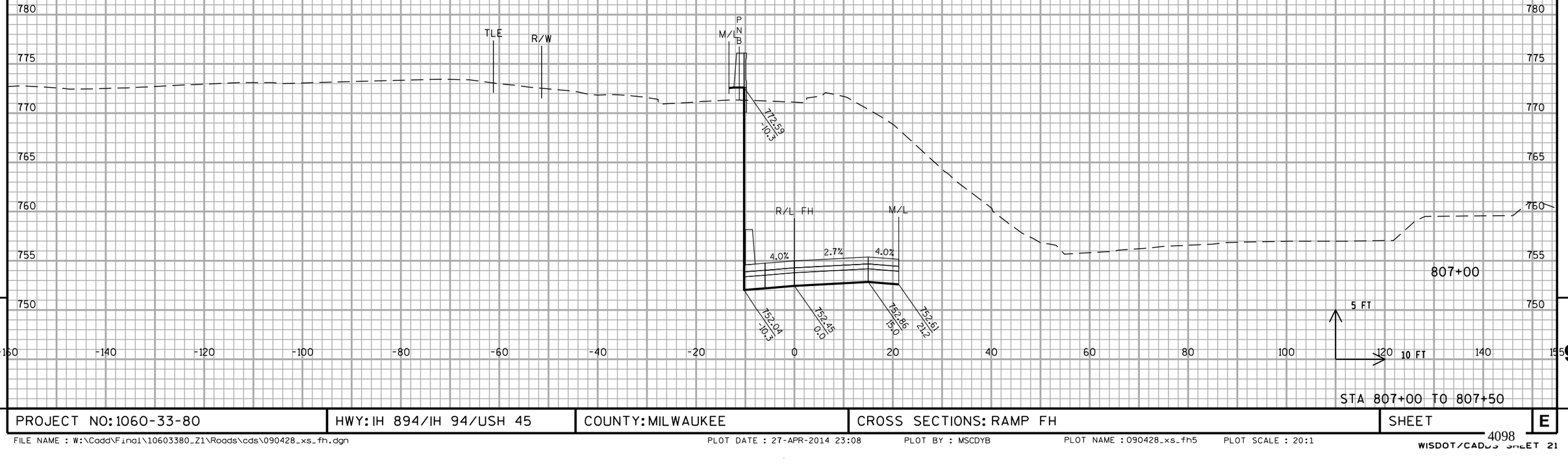
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2





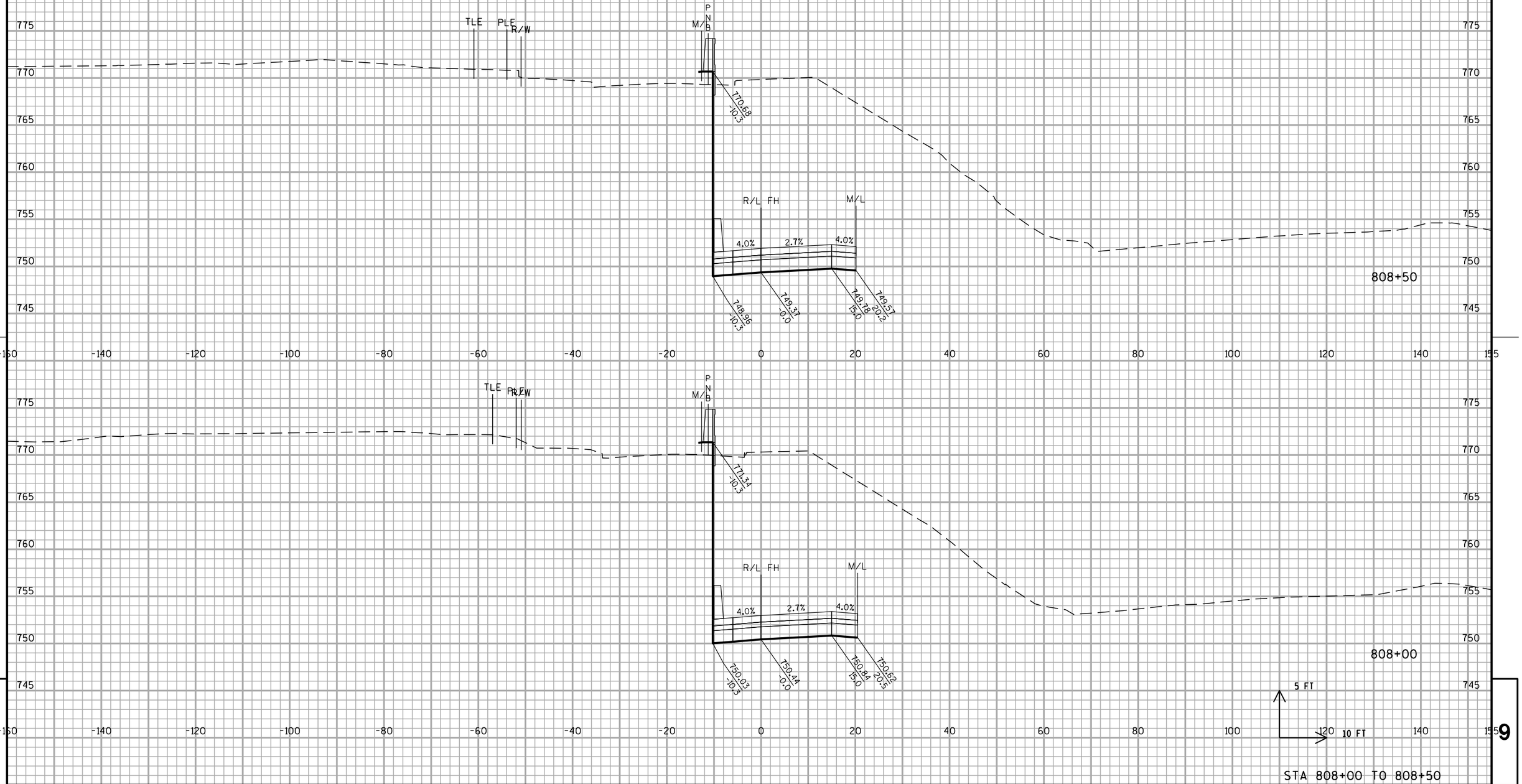
STA 807+00 TO 807+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

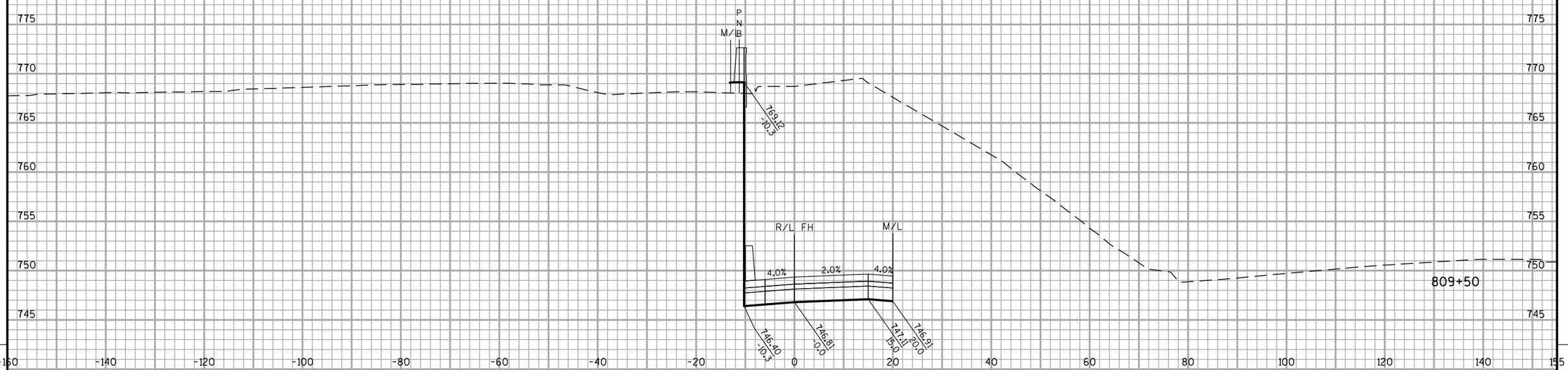
ALL WORK STAGE 2

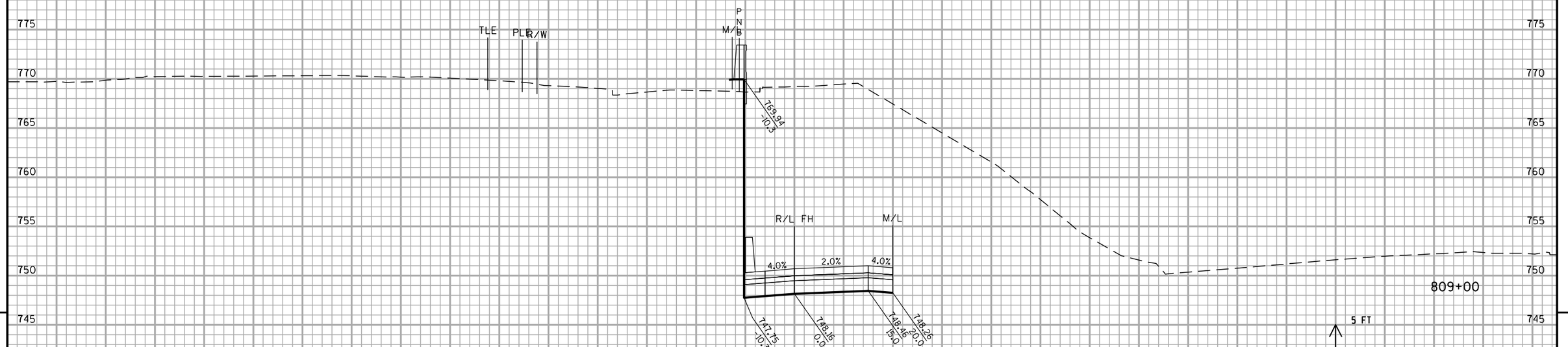


STA 808+00 TO 808+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2





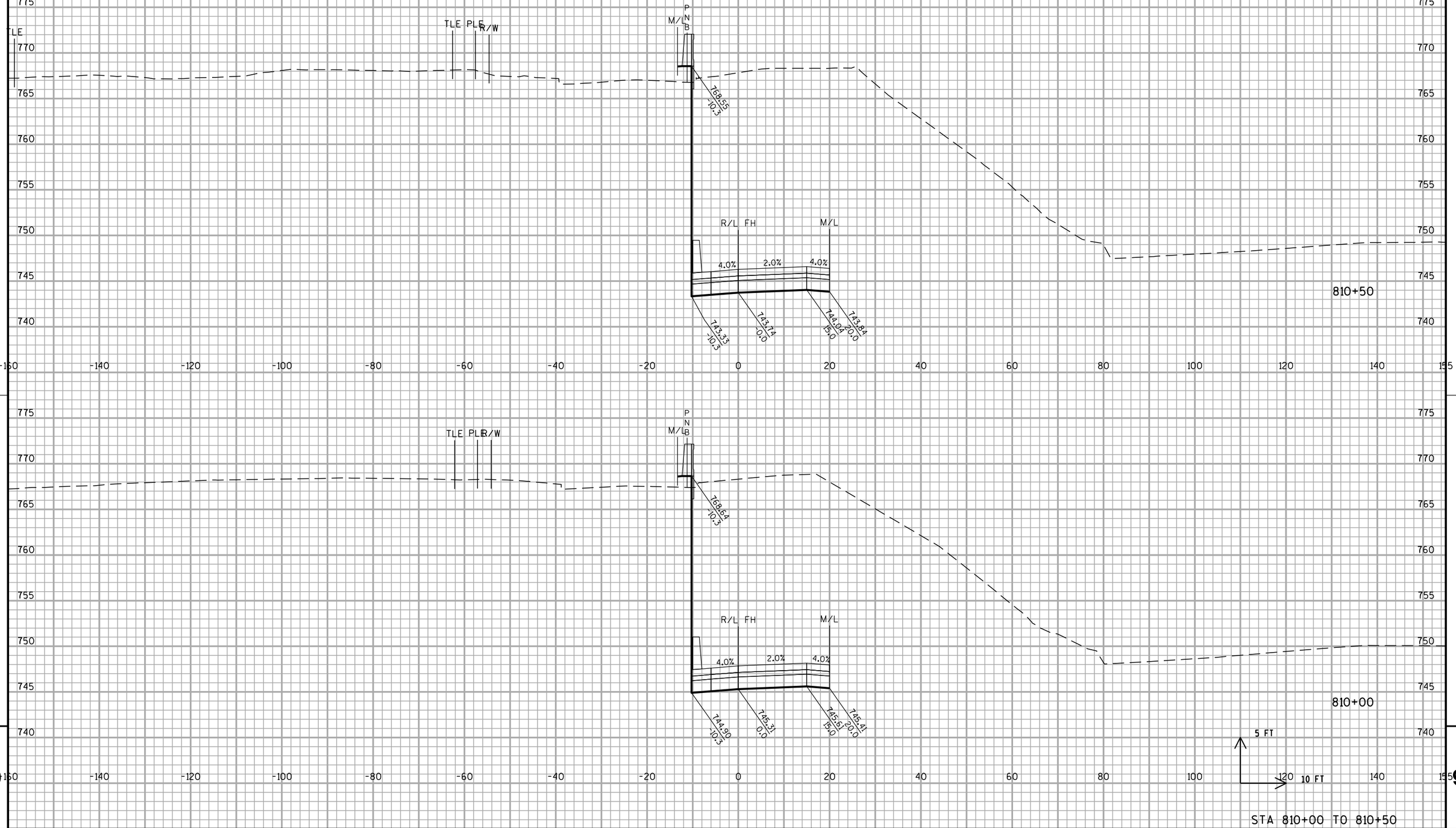
STA 809+00 TO 809+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

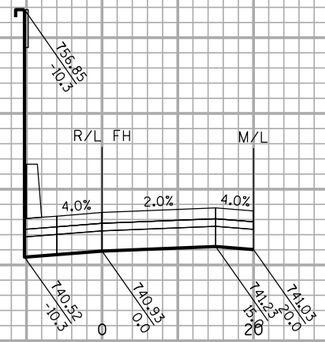


STA 810+00 TO 810+50

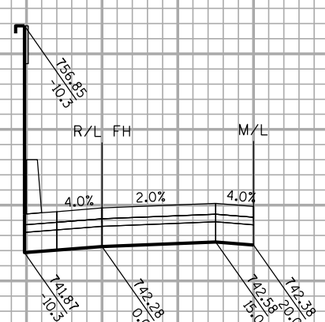
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh8 PLOT SCALE : 20:1

ALL WORK STAGE 2



811+50



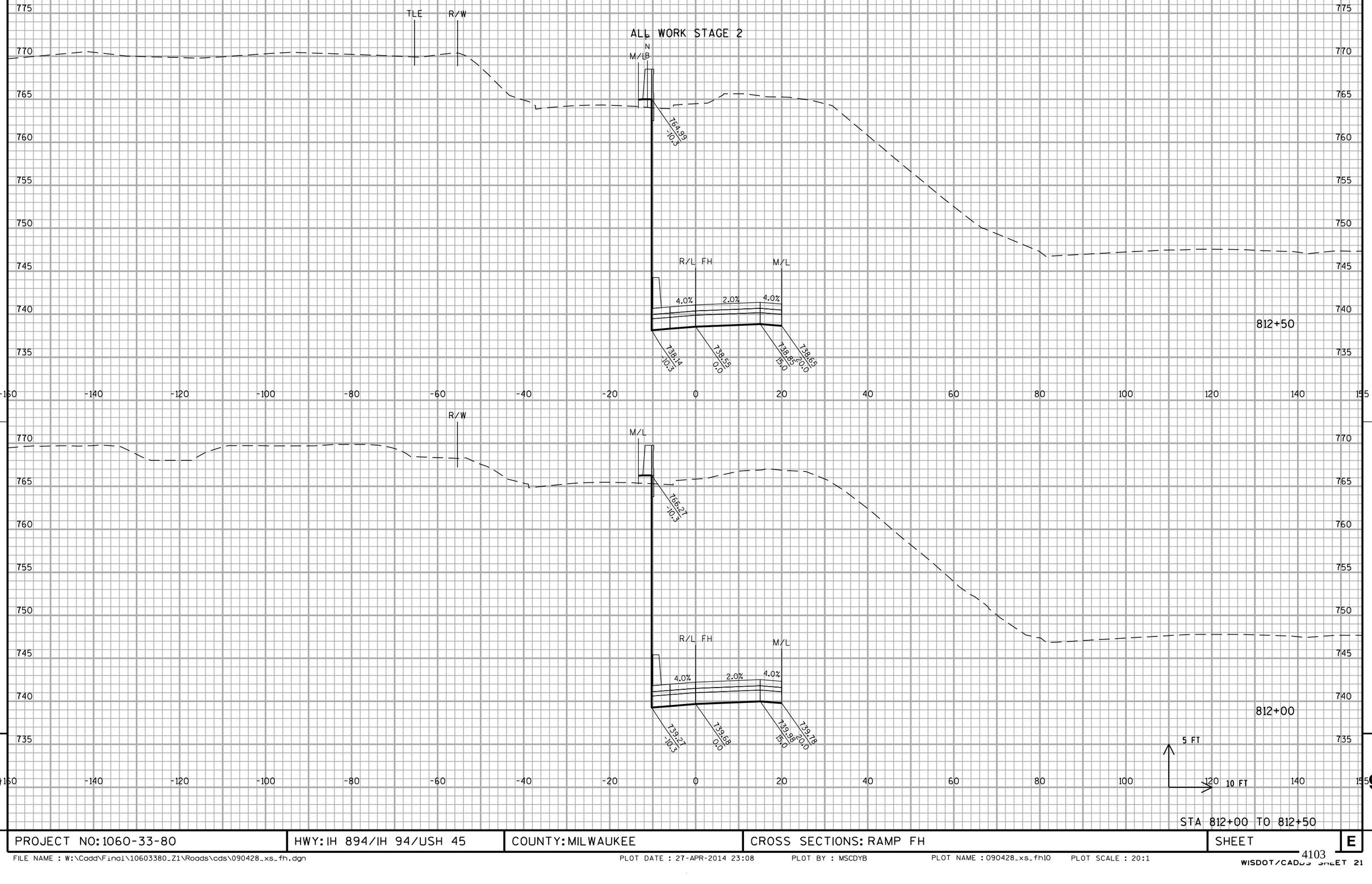
811+00

5 FT
10 FT

STA 811+00 TO 811+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2



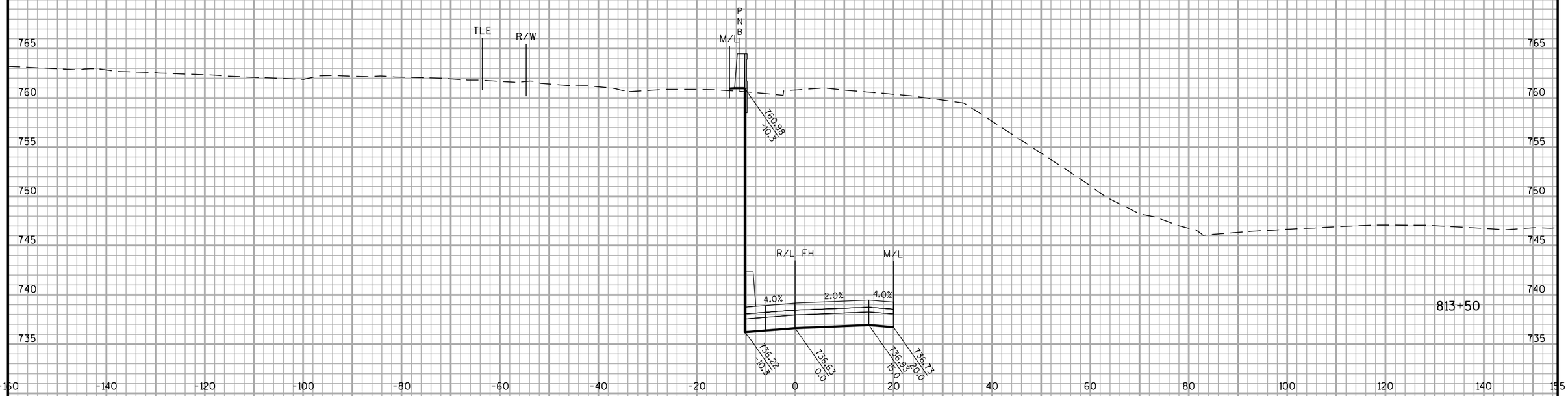
STA 812+00 TO 812+50

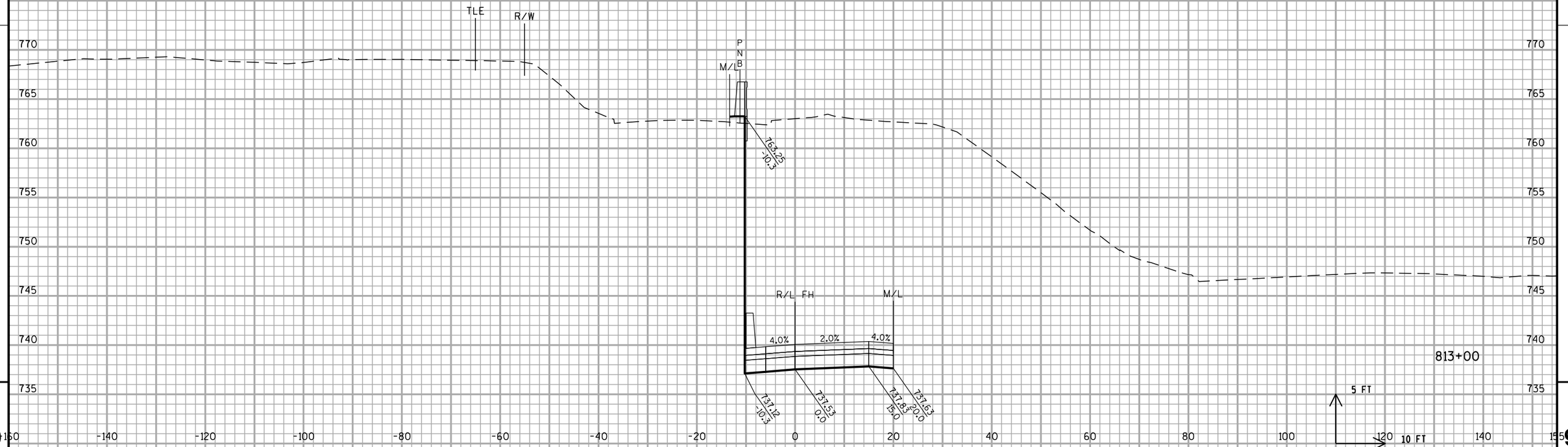
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

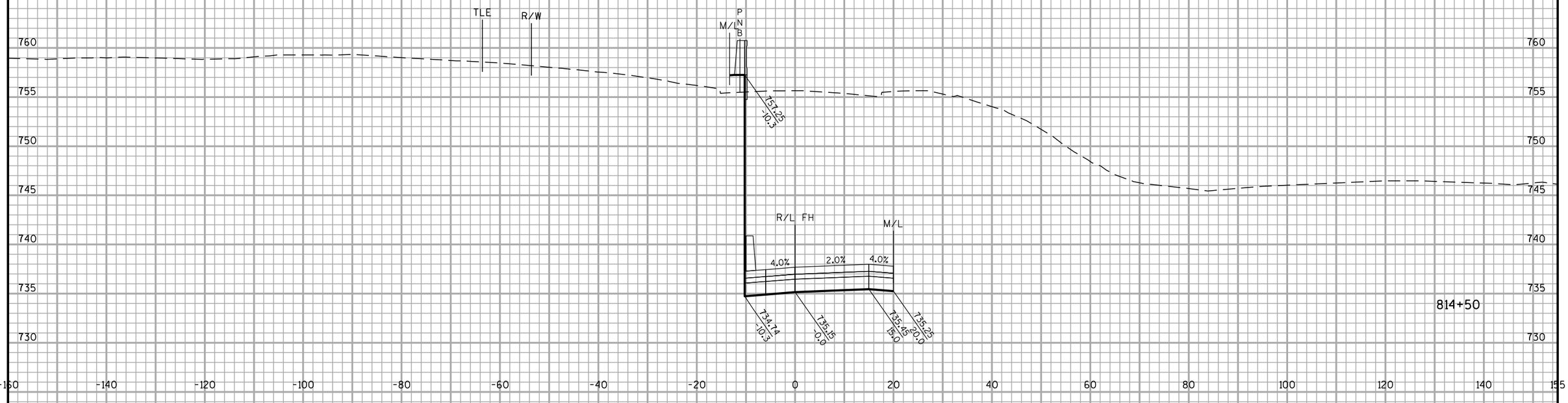


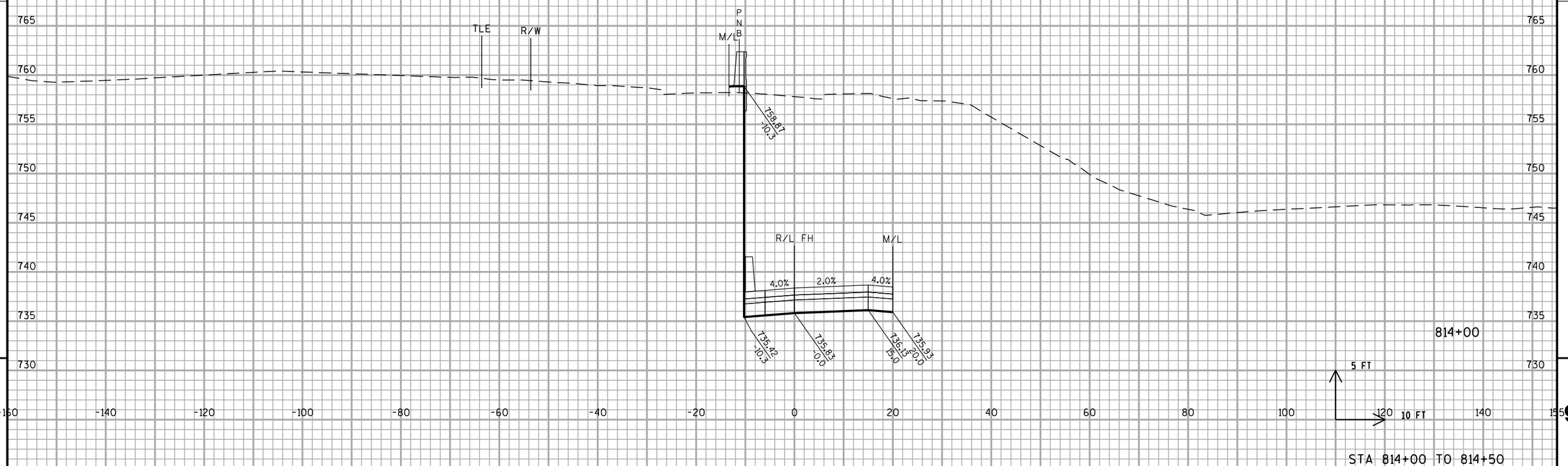


STA 813+00 TO 813+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2



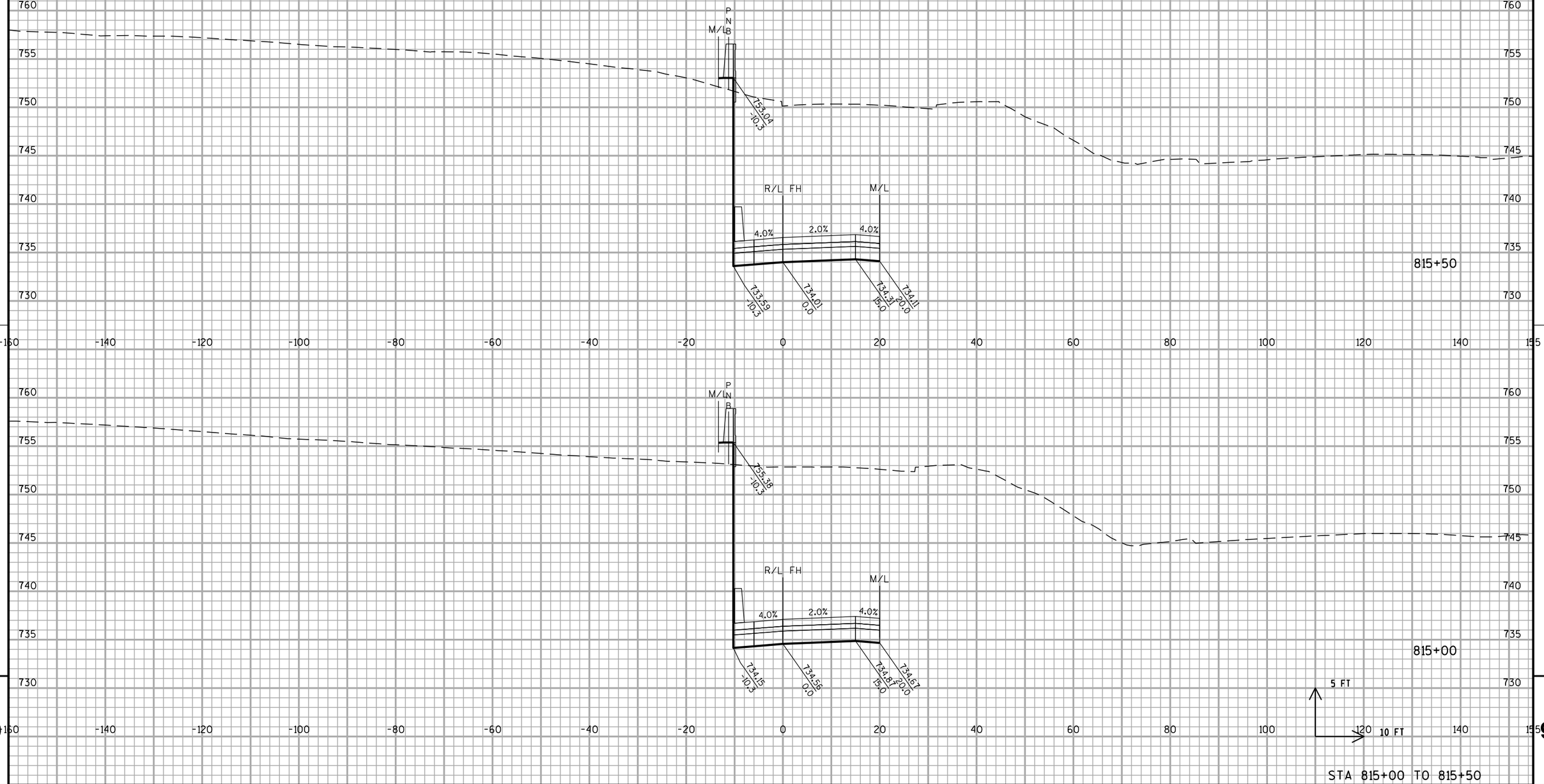


STA 814+00 TO 814+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh12 PLOT SCALE : 20:1

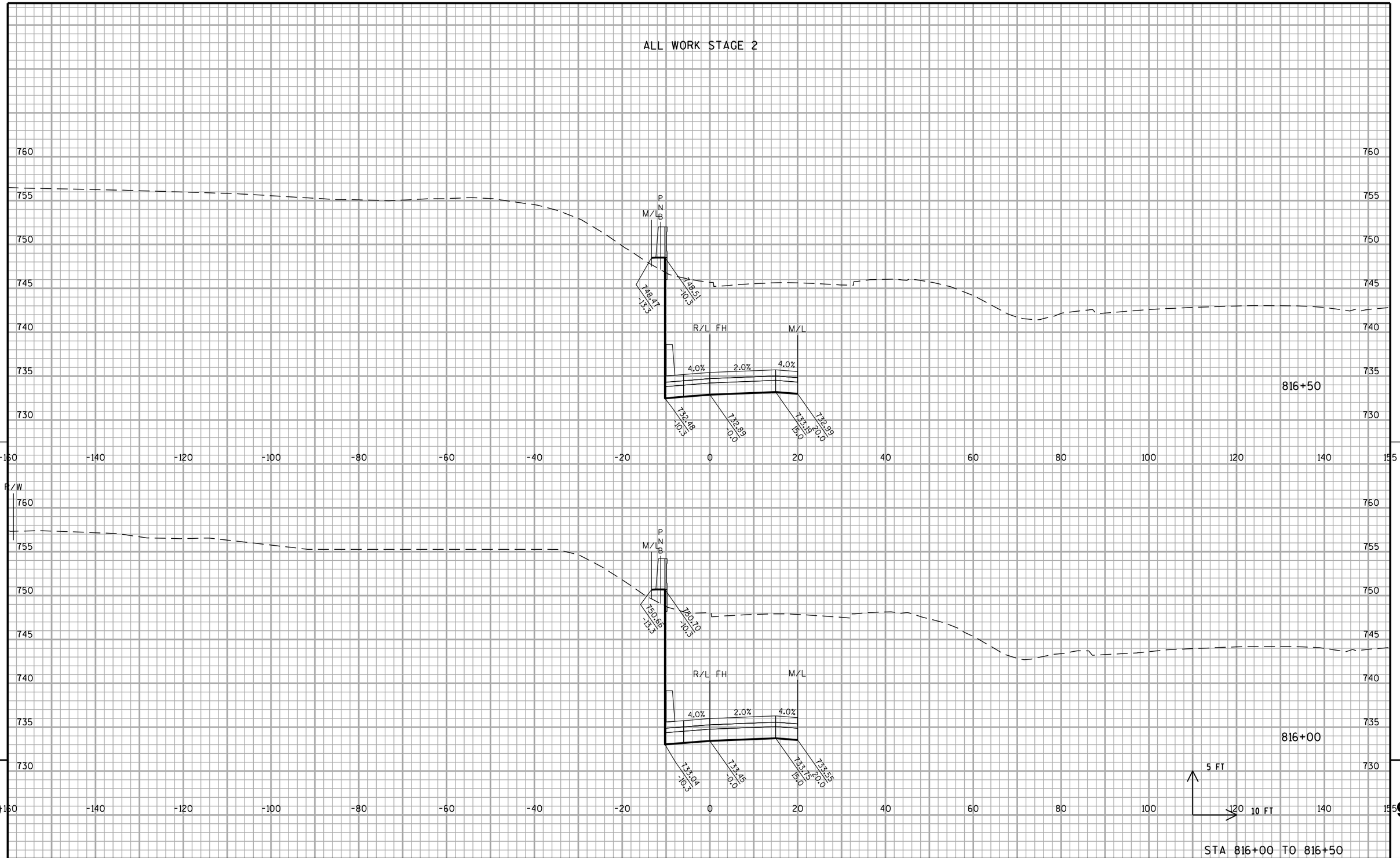
ALL WORK STAGE 2



STA 815+00 TO 815+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2

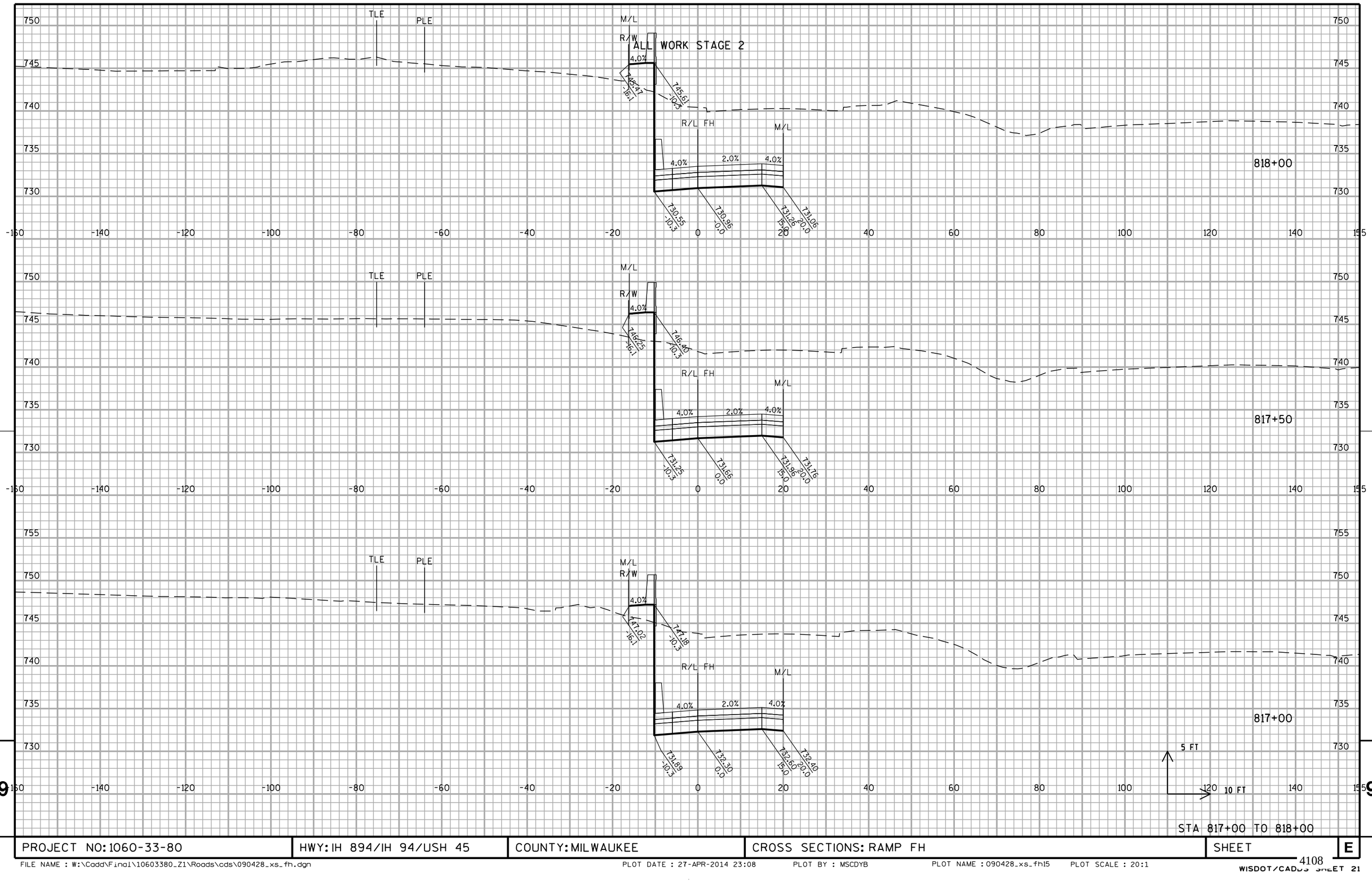


STA 816+00 TO 816+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh14 PLOT SCALE : 20:1

ALL WORK STAGE 2

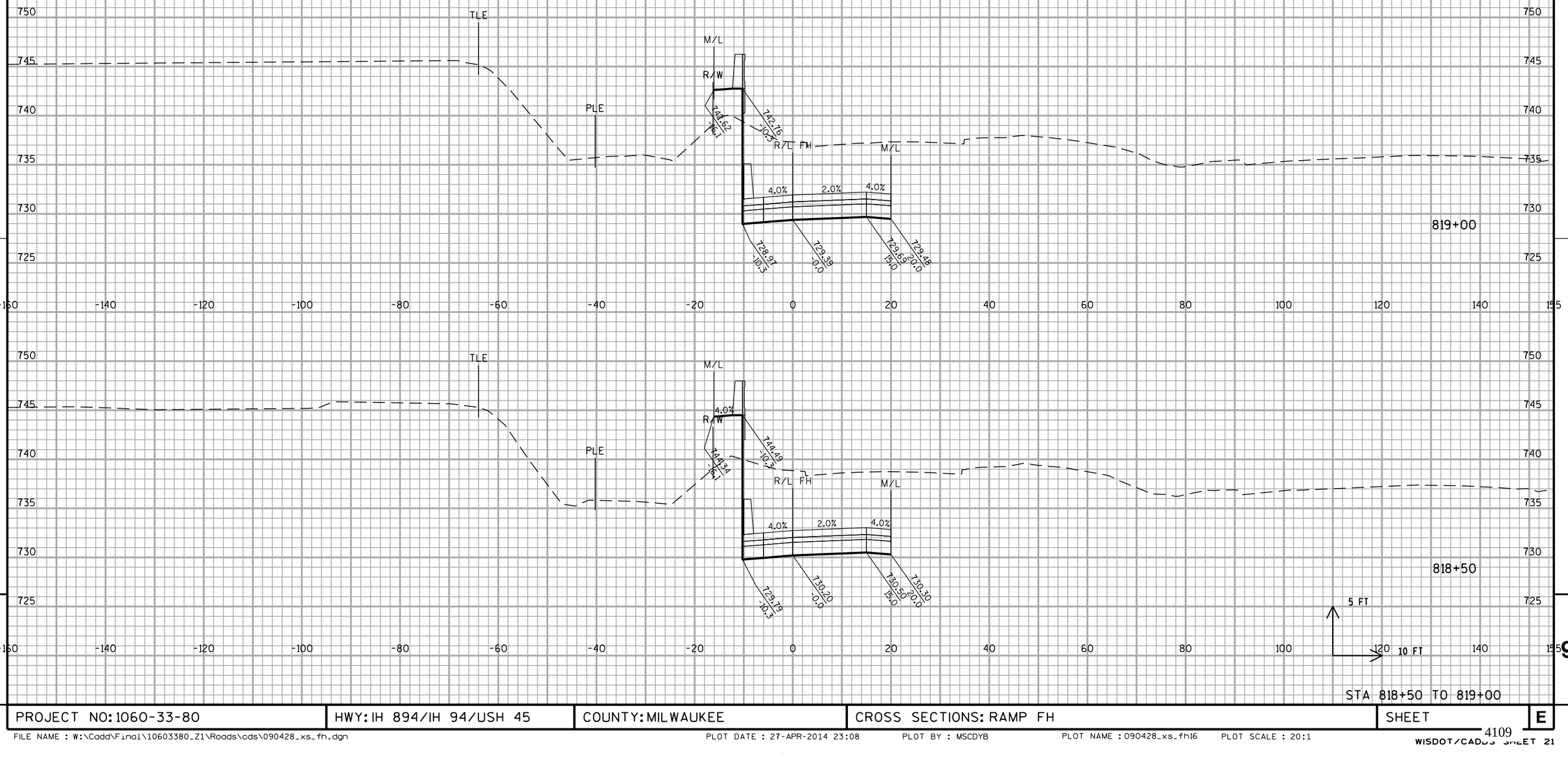


STA 817+00 TO 818+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh15 PLOT SCALE : 20:1

ALL WORK STAGE 2

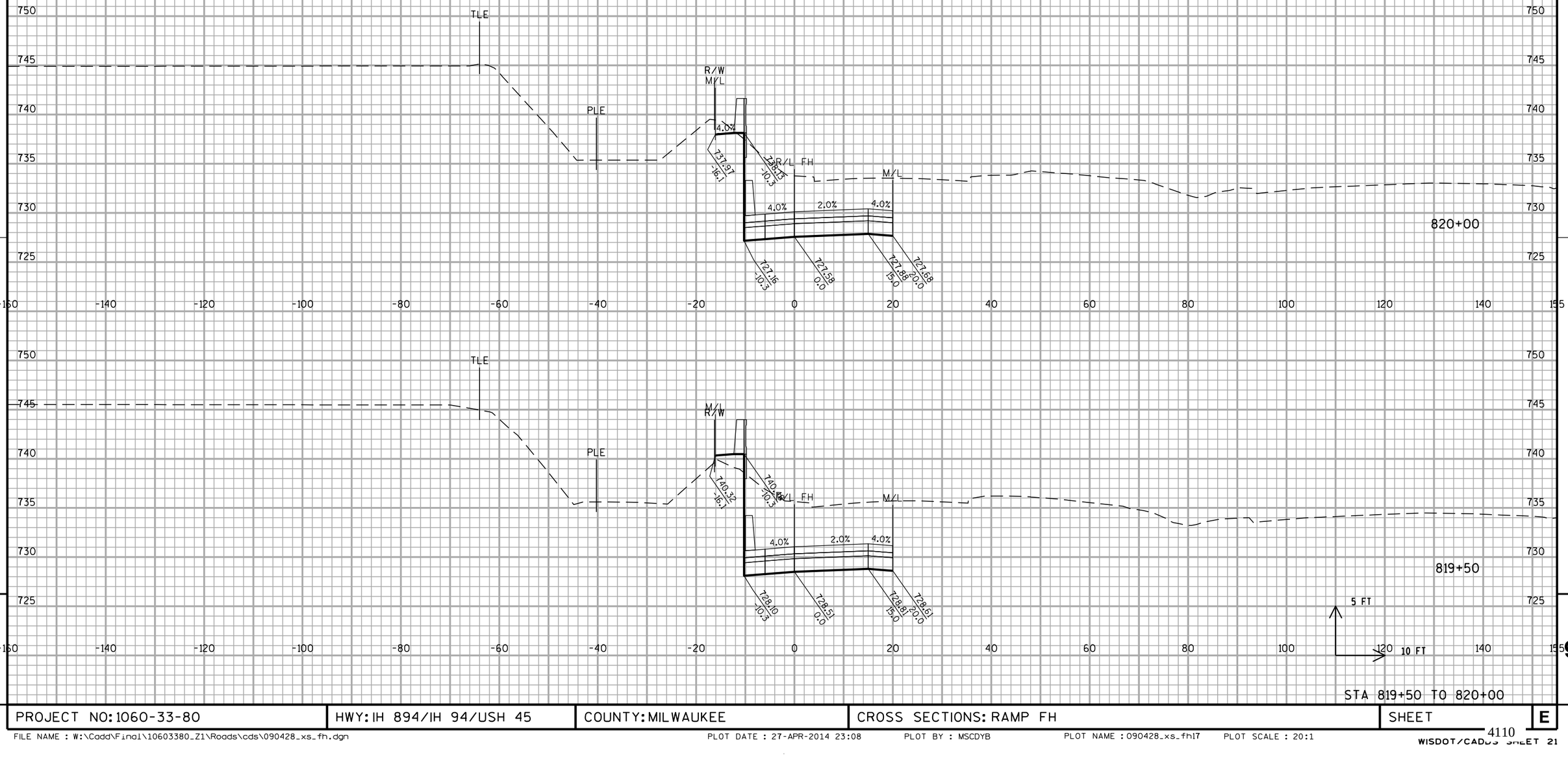


STA 818+50 TO 819+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh16 PLOT SCALE : 20:1

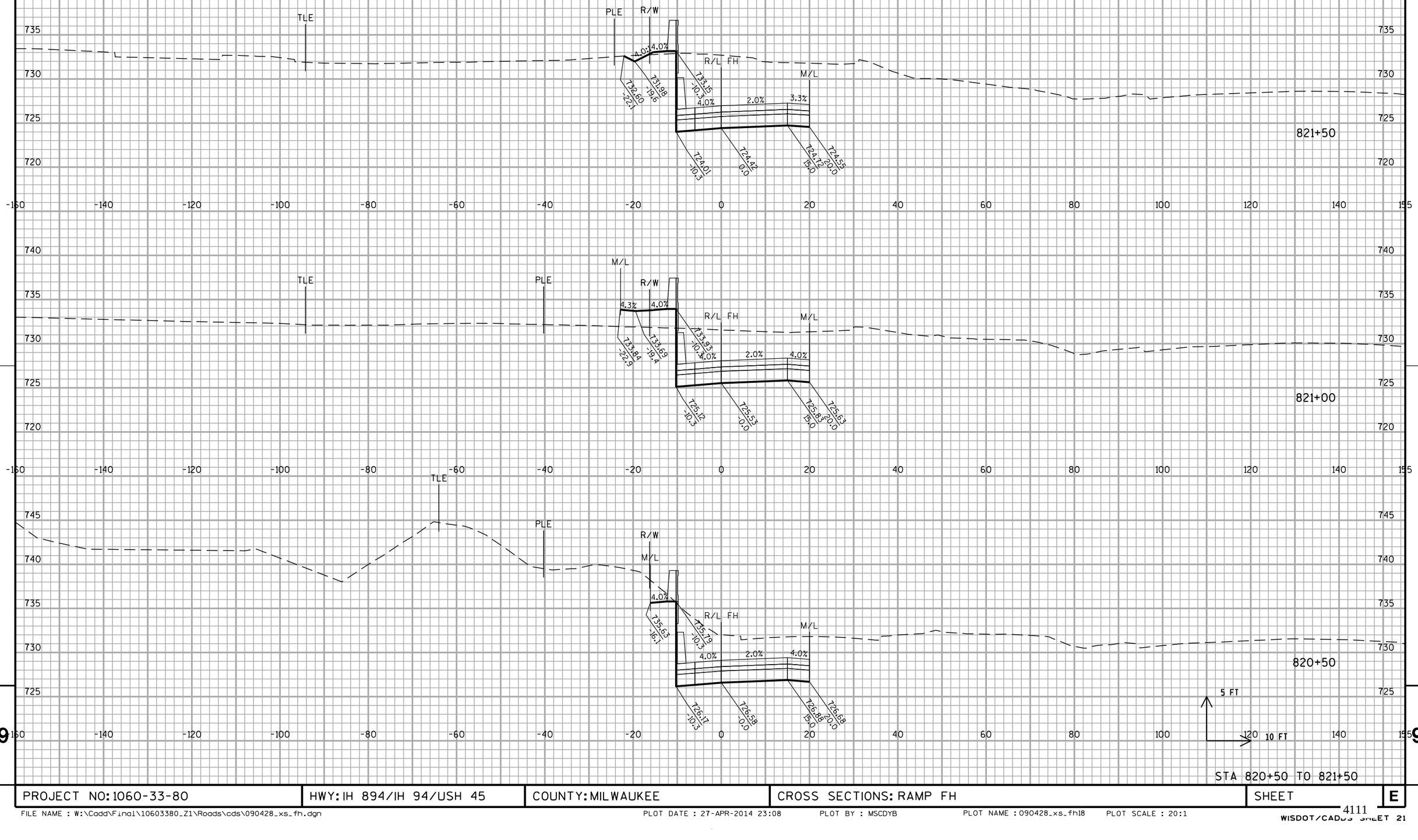
ALL WORK STAGE 2



STA 819+50 TO 820+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

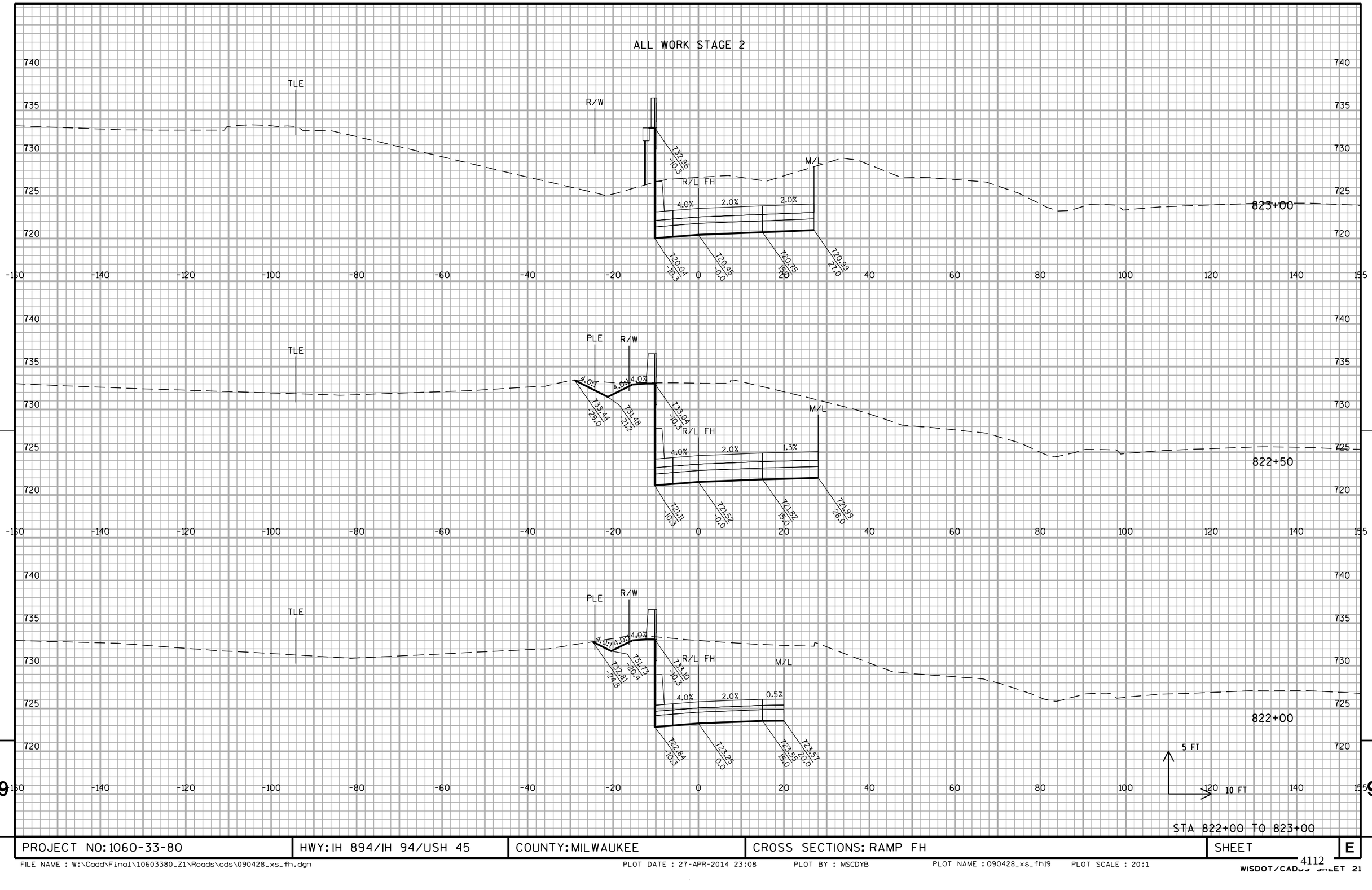
ALL WORK STAGE 2



STA 820+50 TO 821+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

ALL WORK STAGE 2



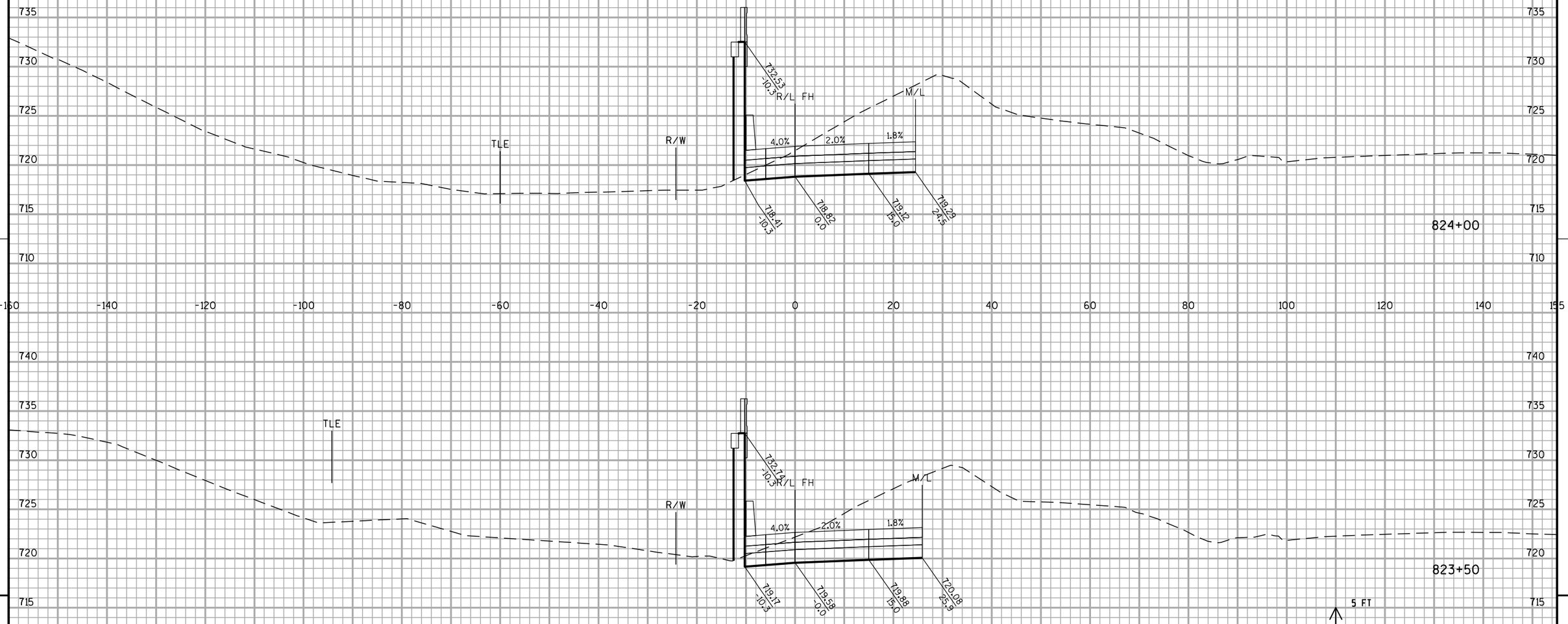
STA 822+00 TO 823+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090428_xs_fh.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090428_xs_fh19 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

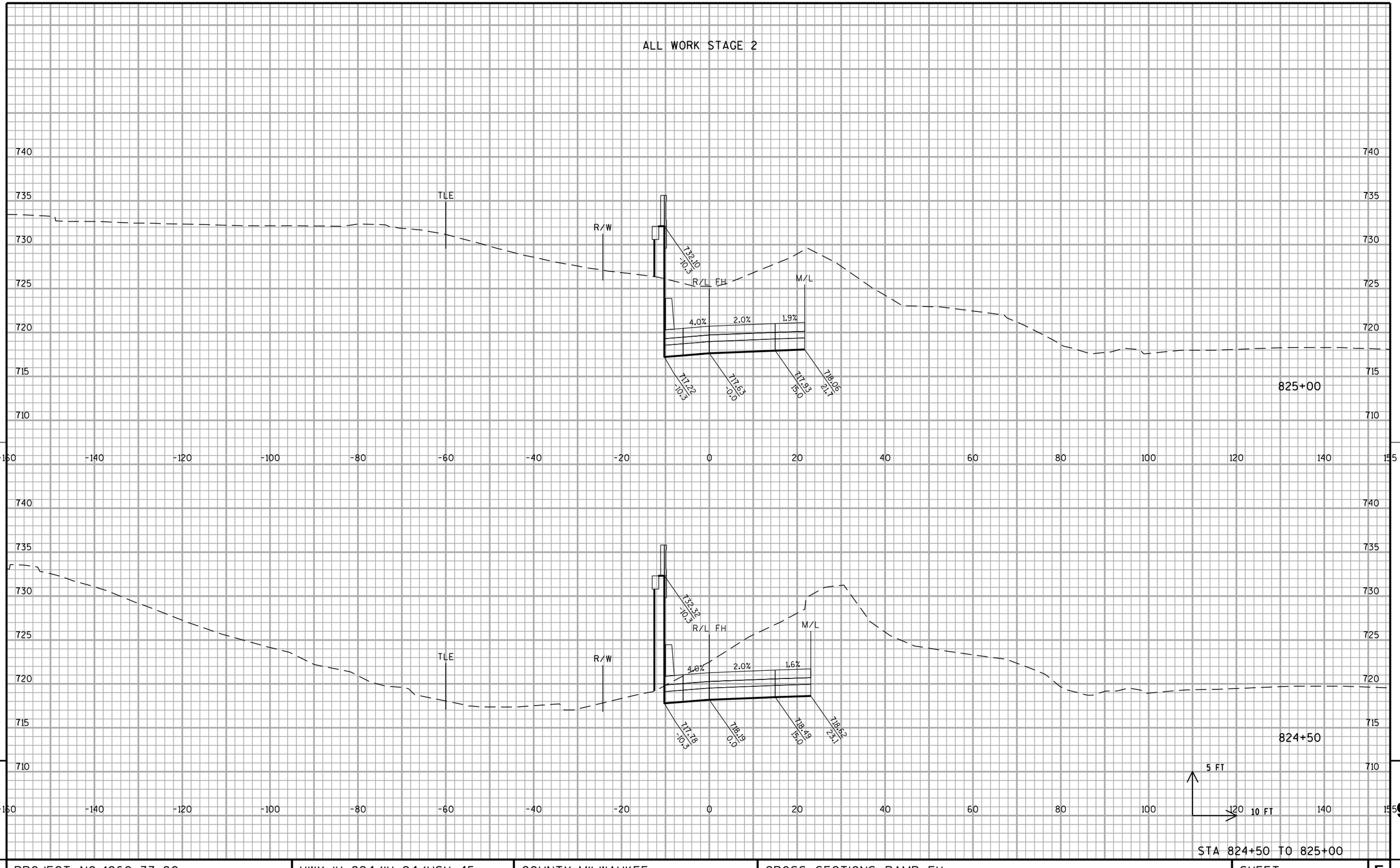
ALL WORK STAGE 2



STA 823+50 TO 824+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

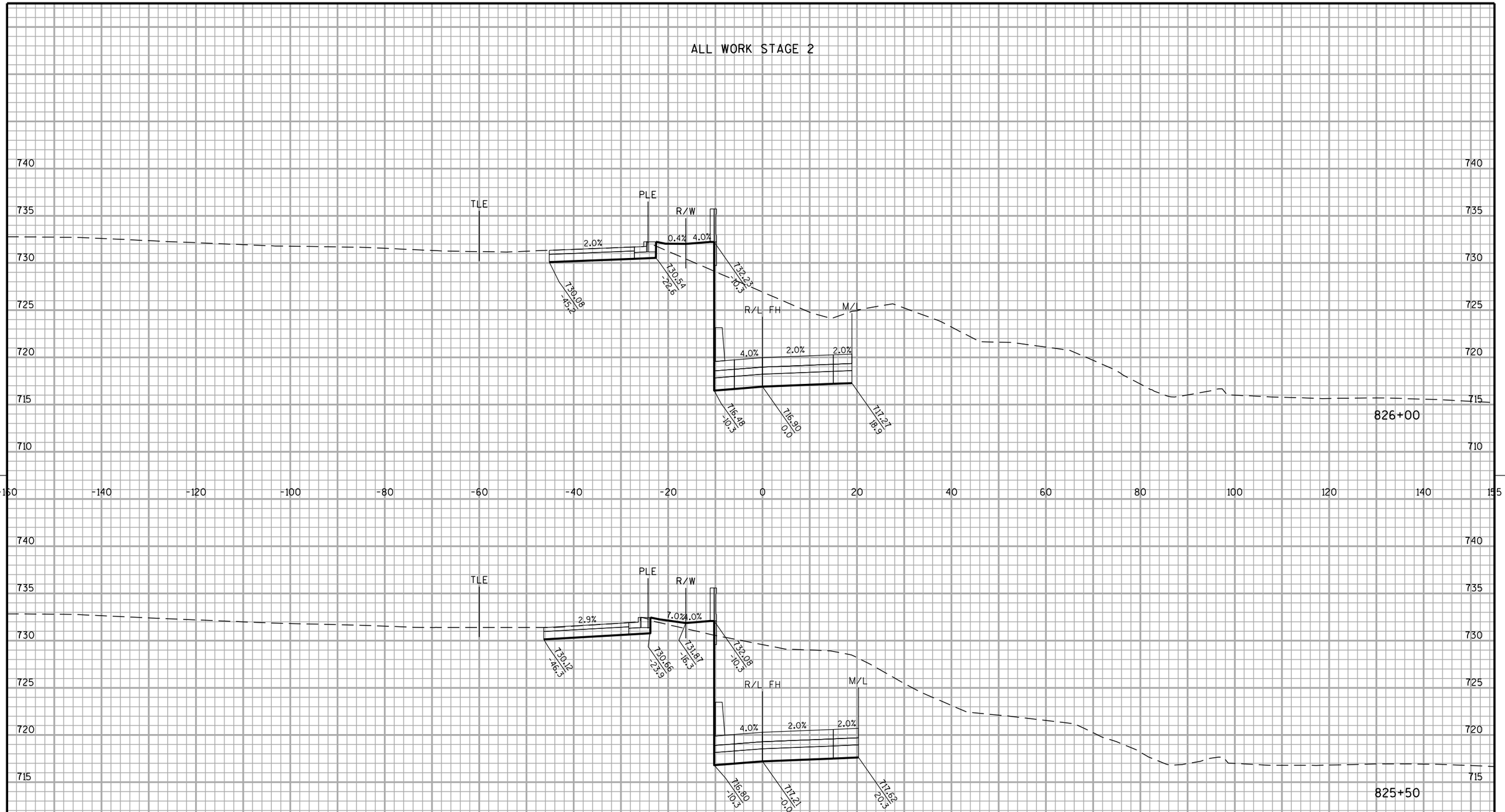
ALL WORK STAGE 2



STA 824+50 TO 825+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

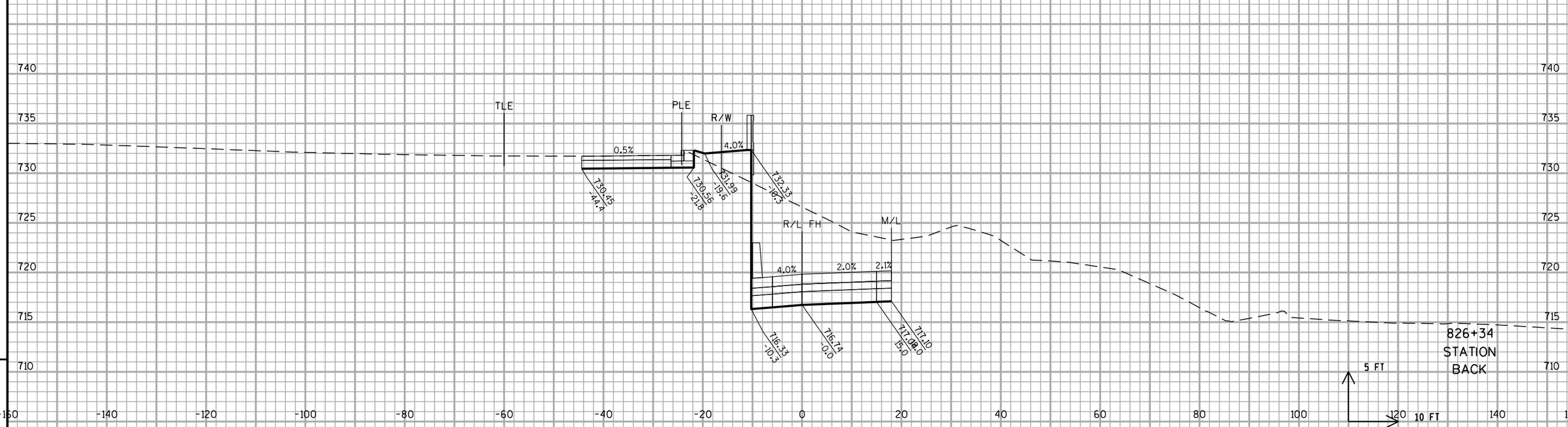
ALL WORK STAGE 2



9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

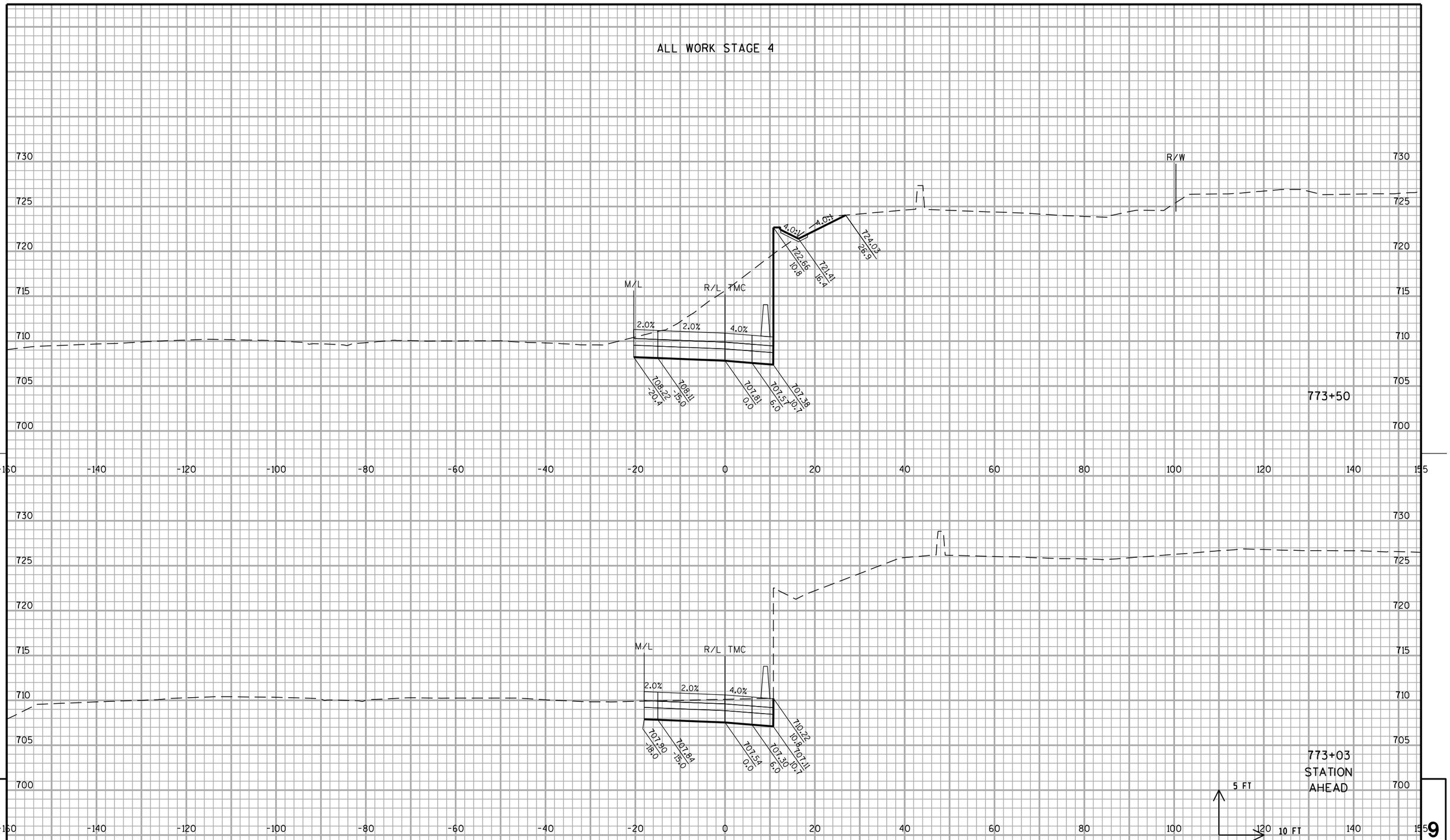
ALL WORK STAGE 2



STA 826+34 TO 826+34

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FH	SHEET	E

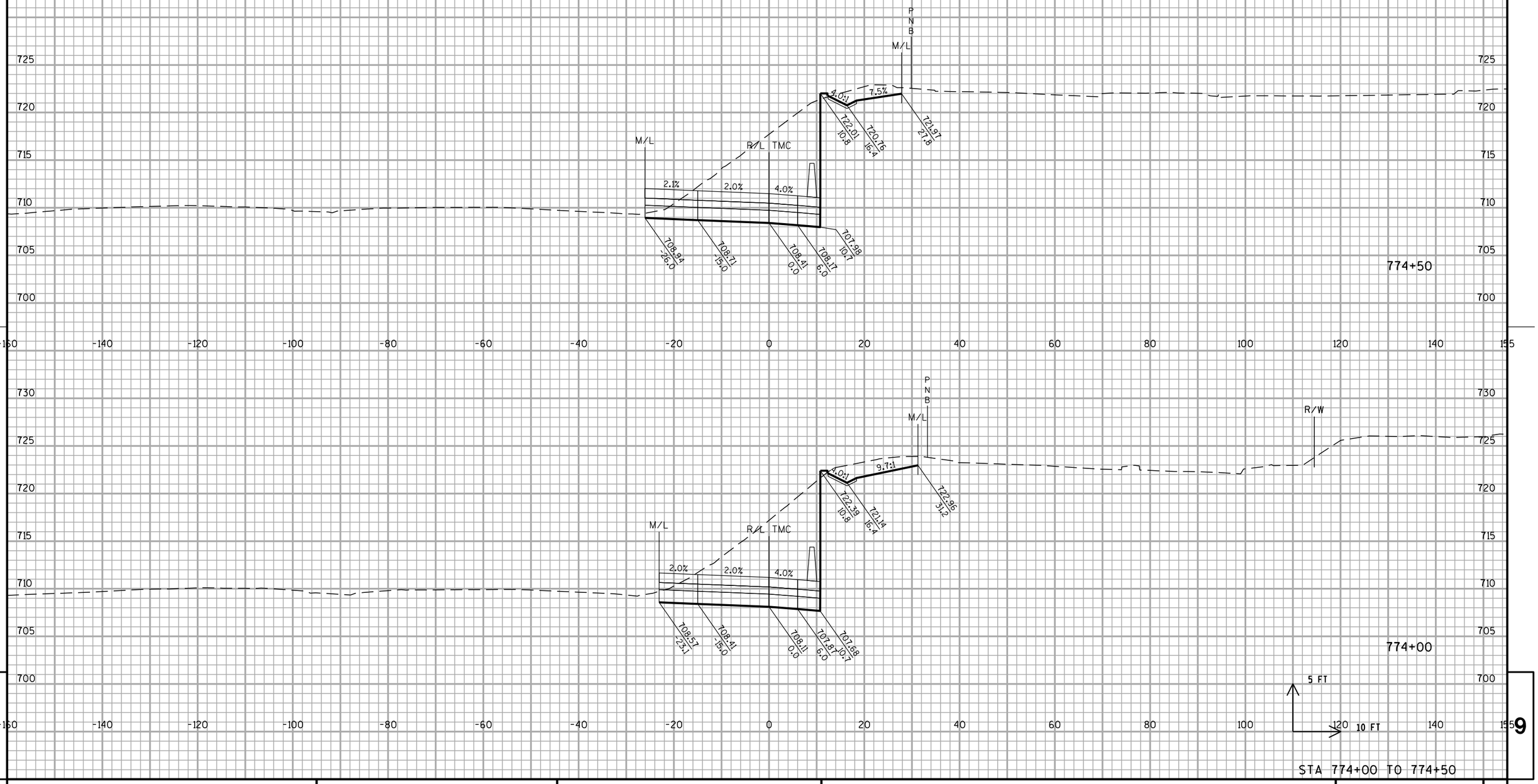
ALL WORK STAGE 4



STA 773+03 TO 773+50

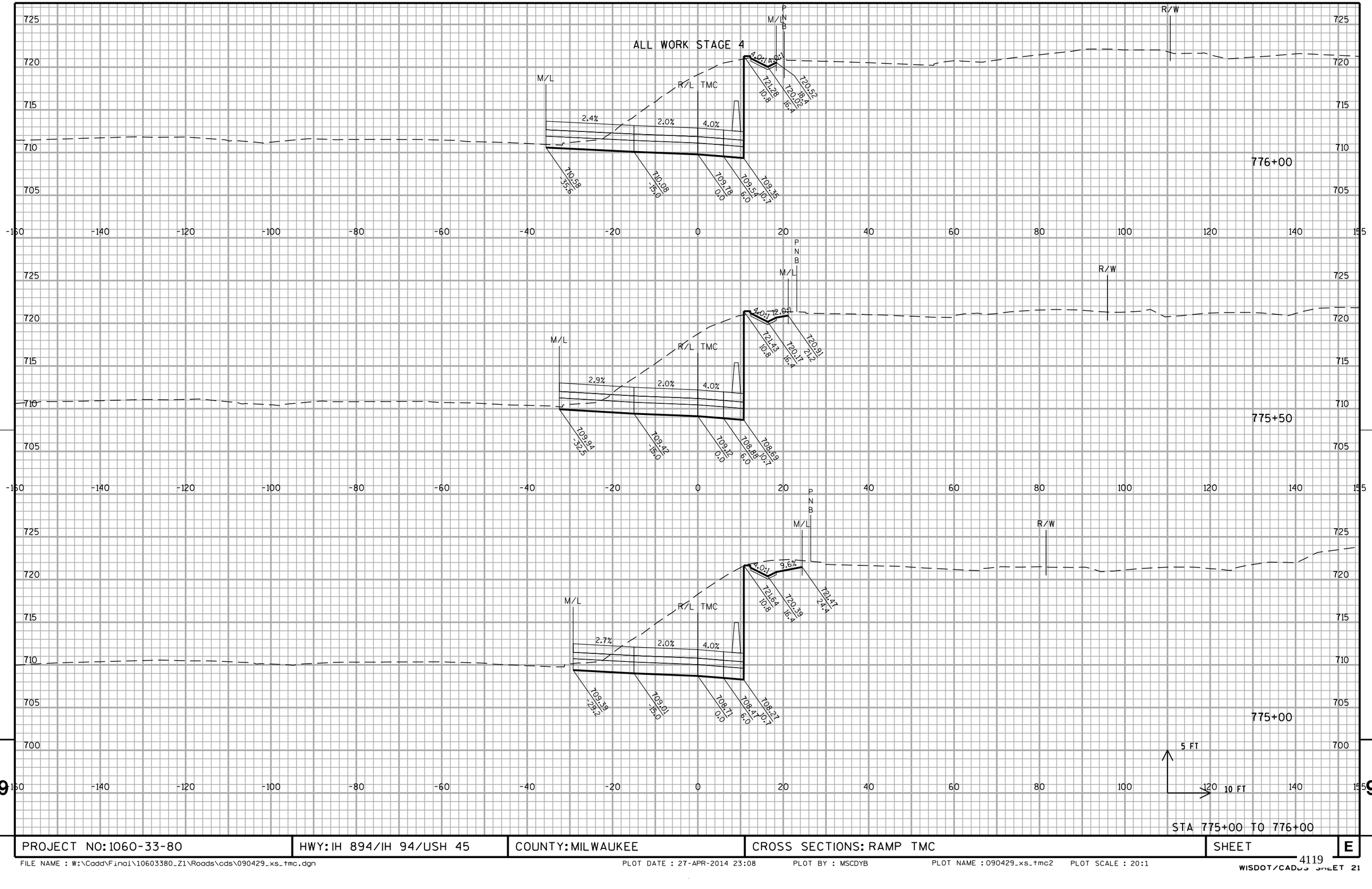
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

ALL WORK STAGE 4



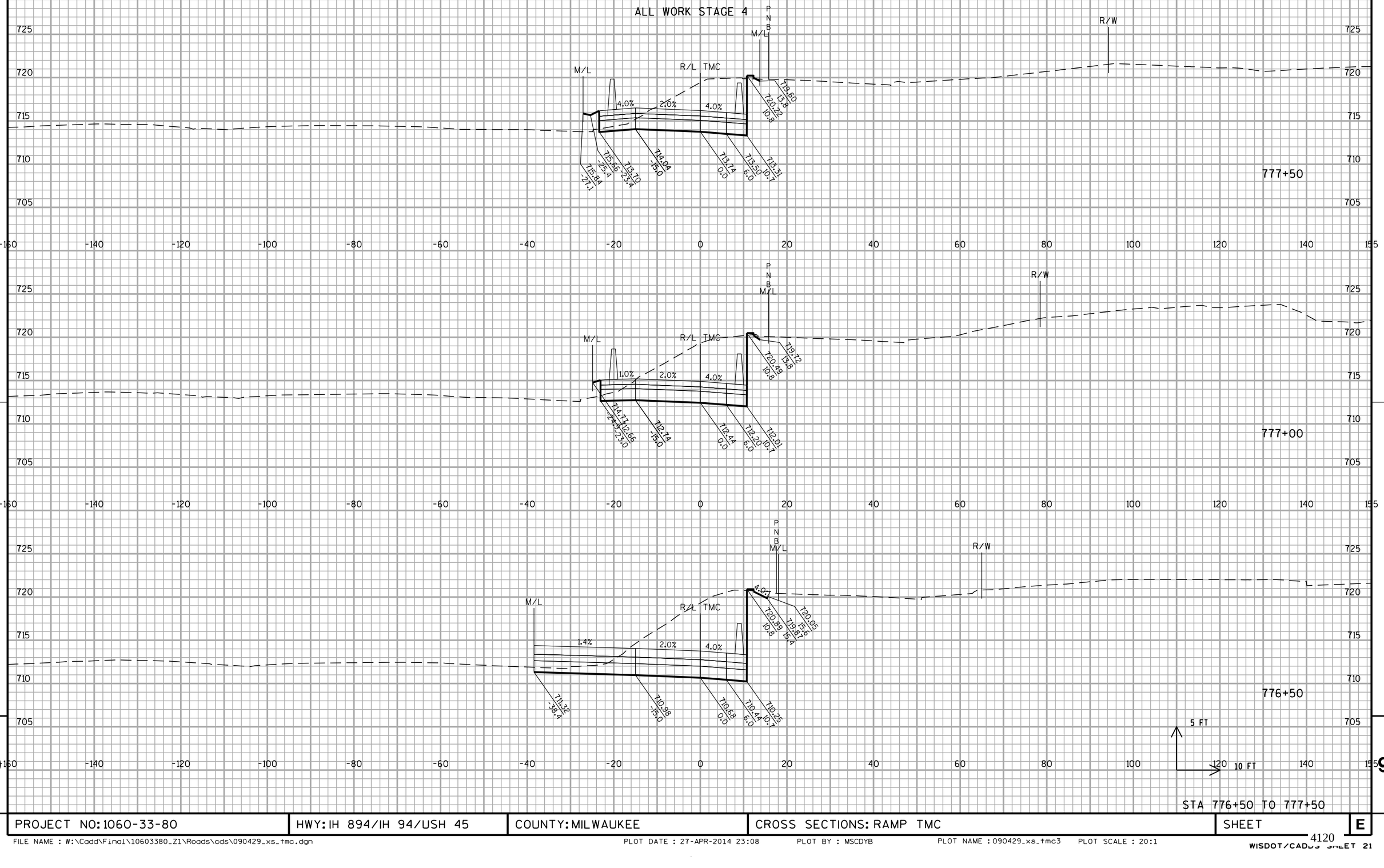
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090429_xs_tmc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090429_xs_tmc1 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

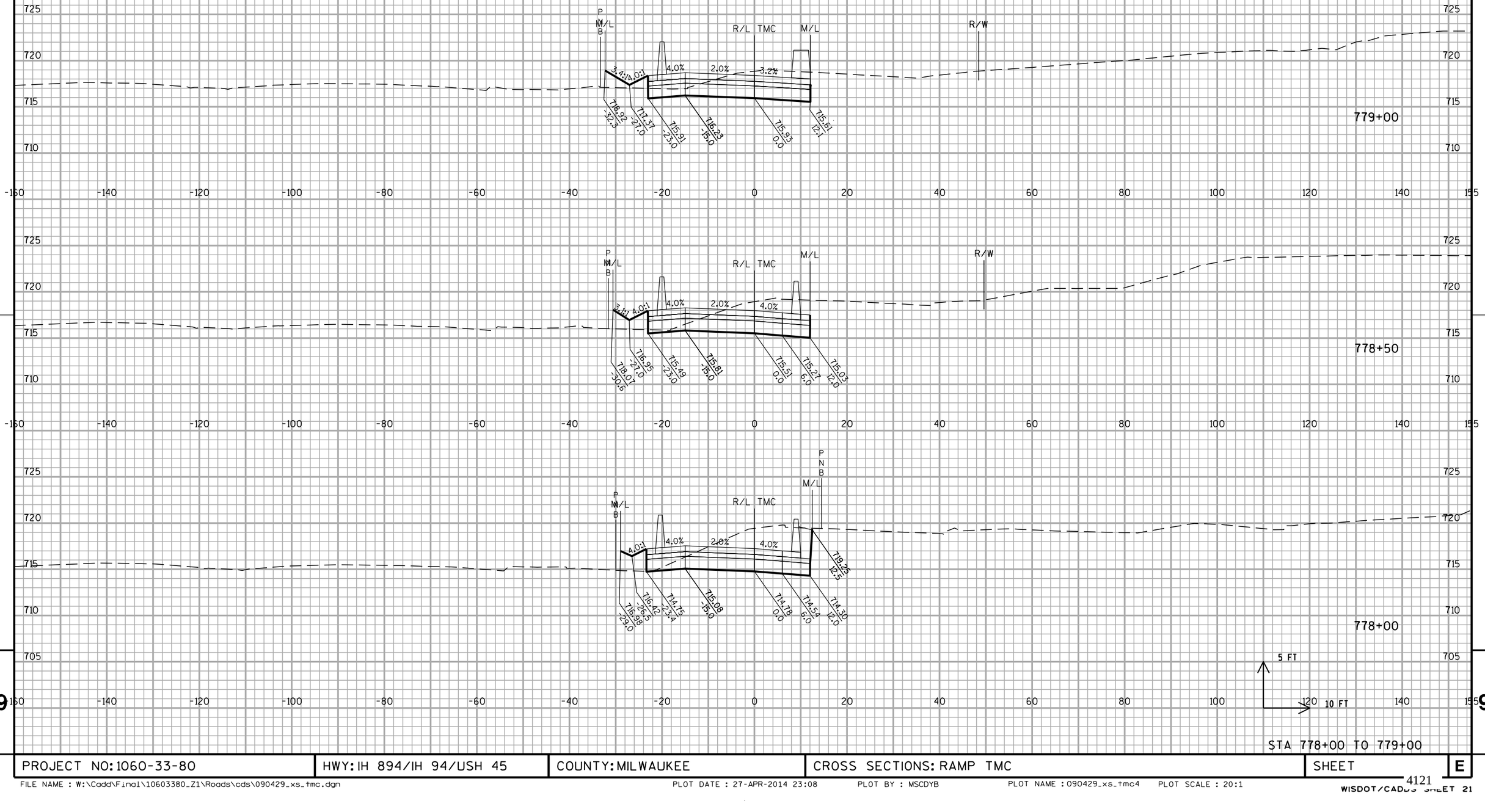
ALL WORK STAGE 4



STA 776+50 TO 777+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

ALL WORK STAGE 4



STA 778+00 TO 779+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

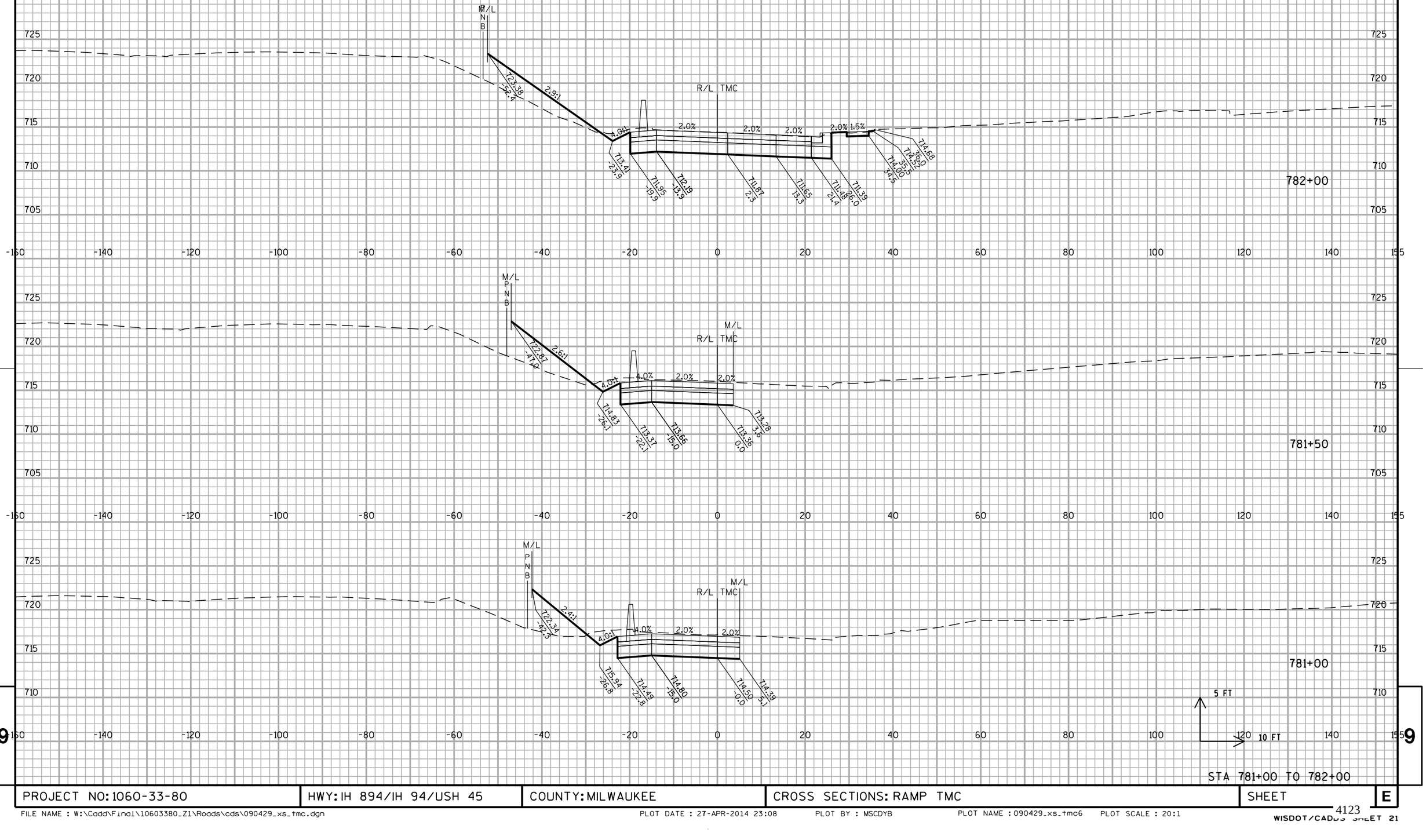
ALL WORK STAGE 4

STA 779+50 TO 780+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090429_xs_tmc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090429_xs_tmc5 PLOT SCALE : 20:1

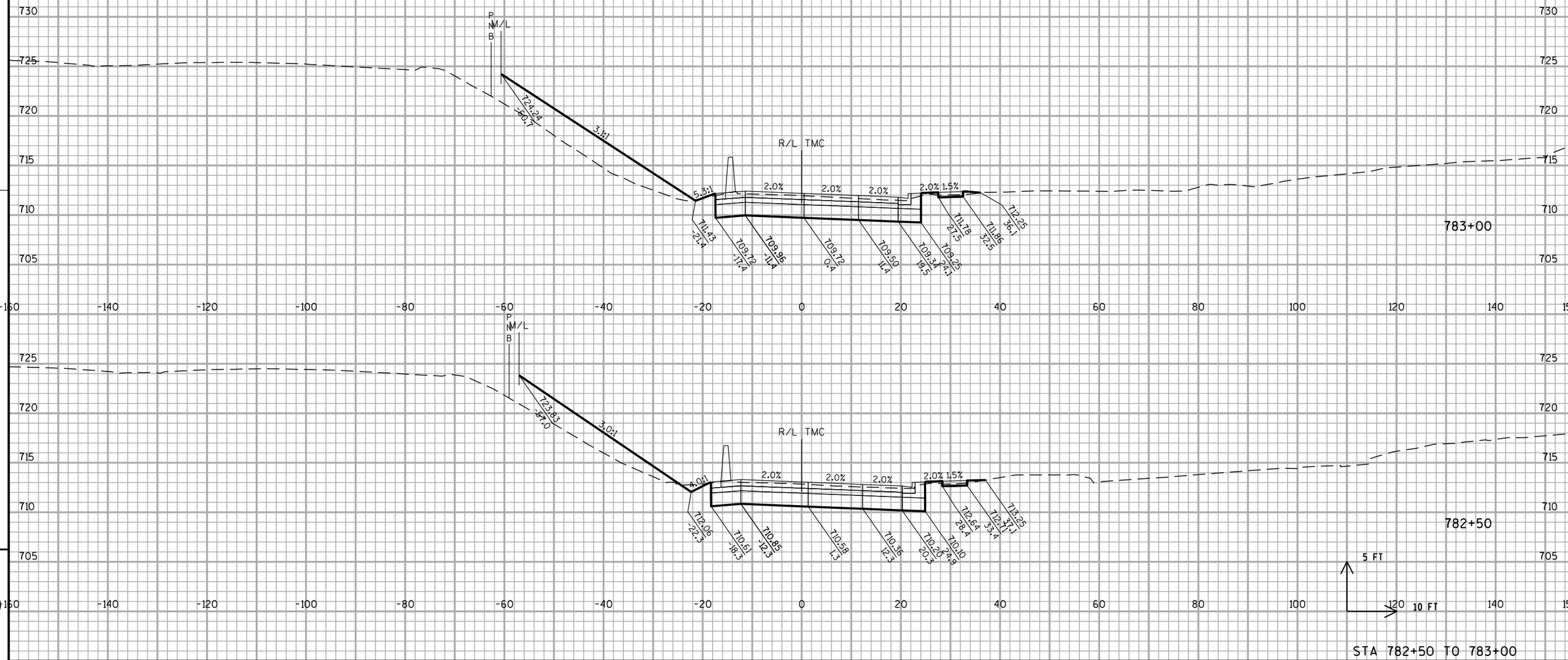
ALL WORK STAGE 4



STA 781+00 TO 782+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

ALL WORK STAGE 4



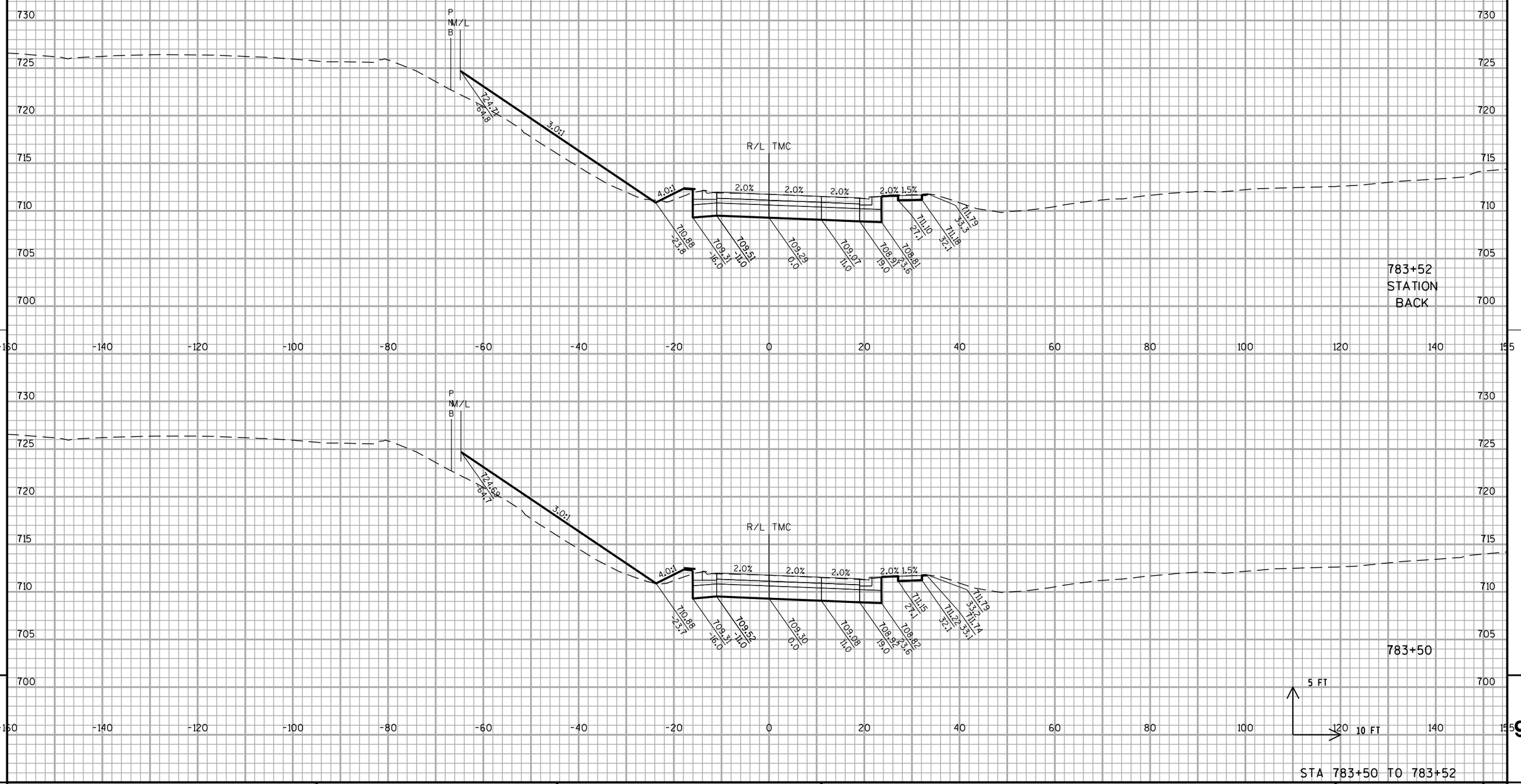
STA 782+50 TO 783+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090429_xs_tmc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090429_xs_tmc7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

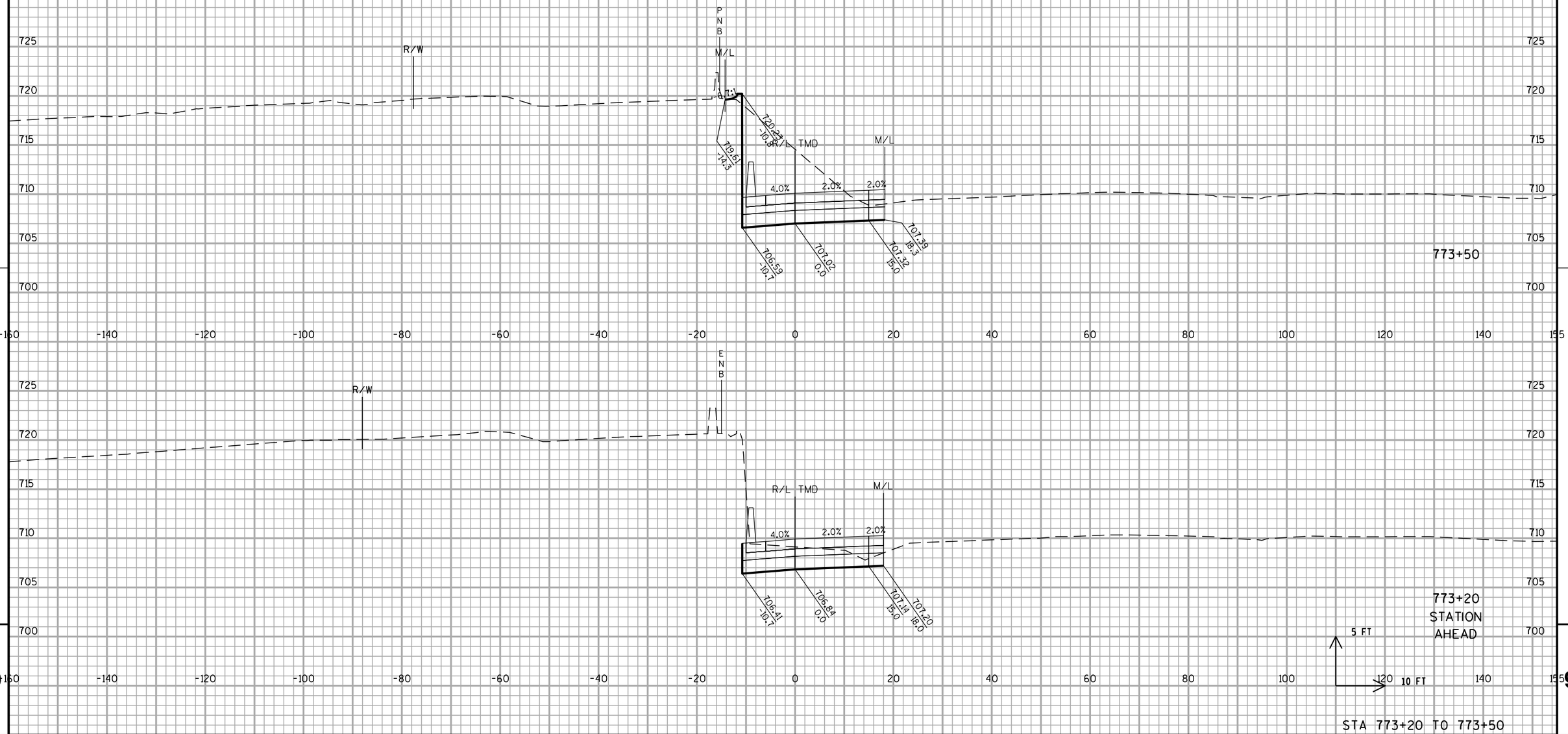
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090429_xs_tmc.dgn PLOT DATE : 27-APR-2014 23:08 PLOT BY : MSCDYB PLOT NAME : 090429_xs_tmc8 PLOT SCALE : 20:1

ALL WORK STAGE 2

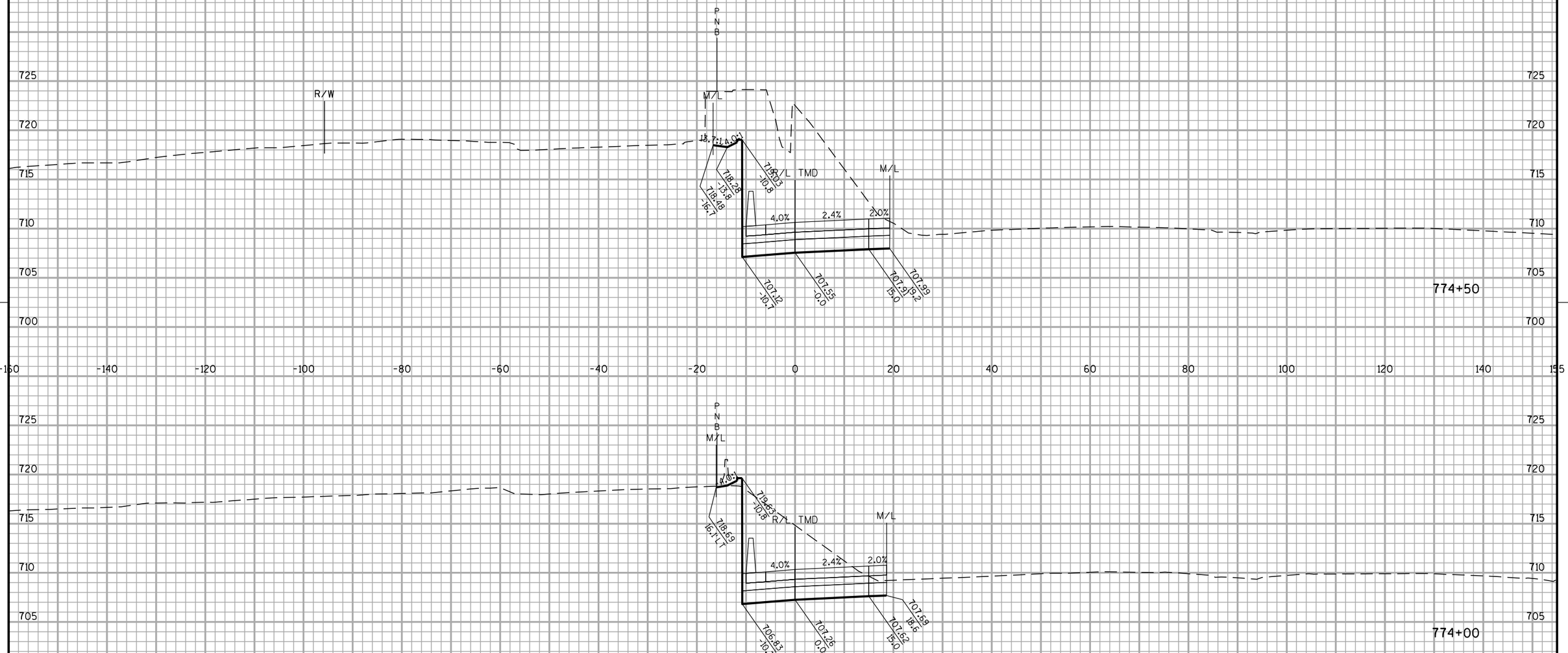


STA 773+20 TO 773+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd PLOT SCALE : 20:1

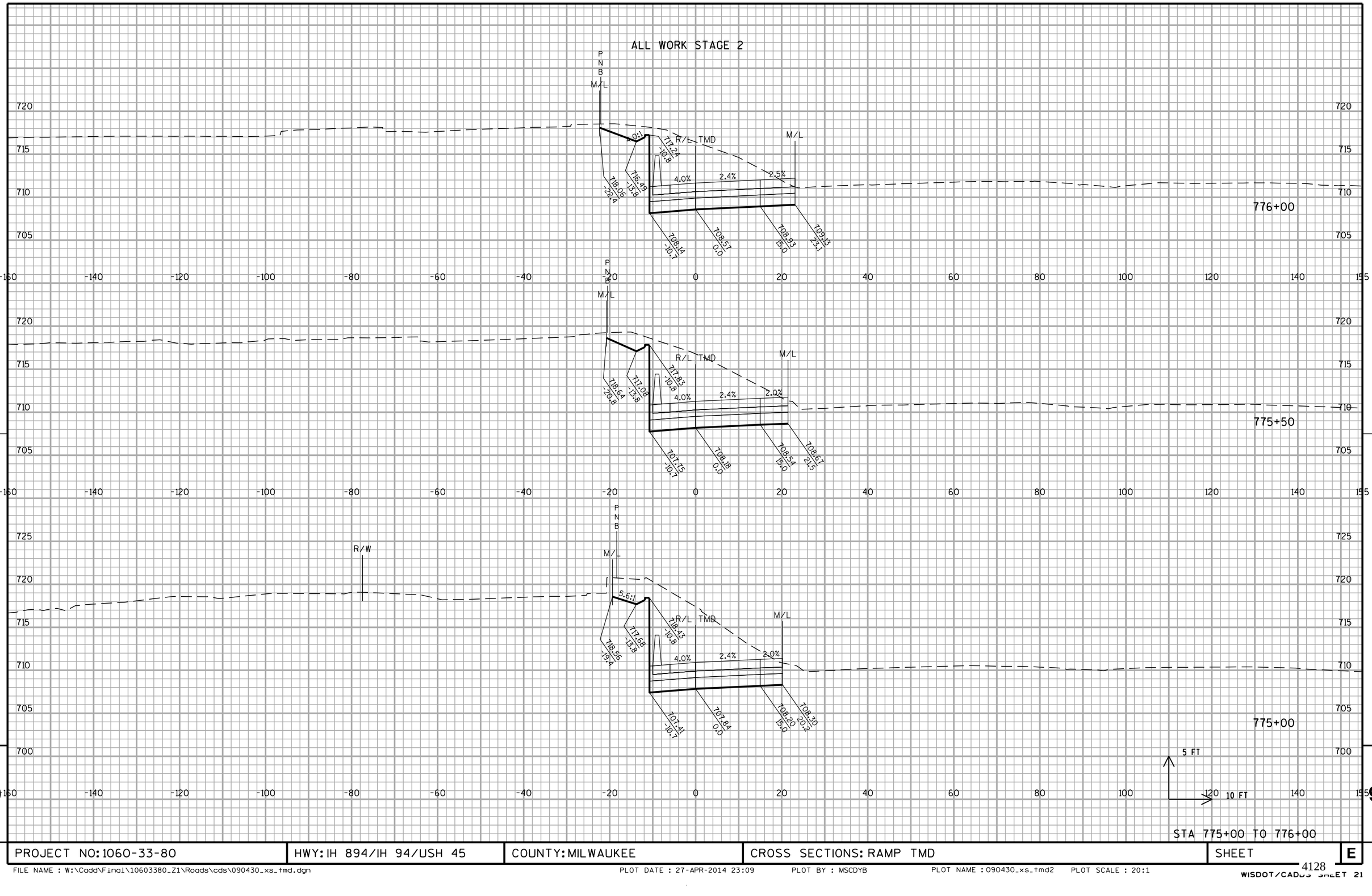
ALL WORK STAGE 2



STA 774+00 TO 774+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

ALL WORK STAGE 2



STA 775+00 TO 776+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd2 PLOT SCALE : 20:1

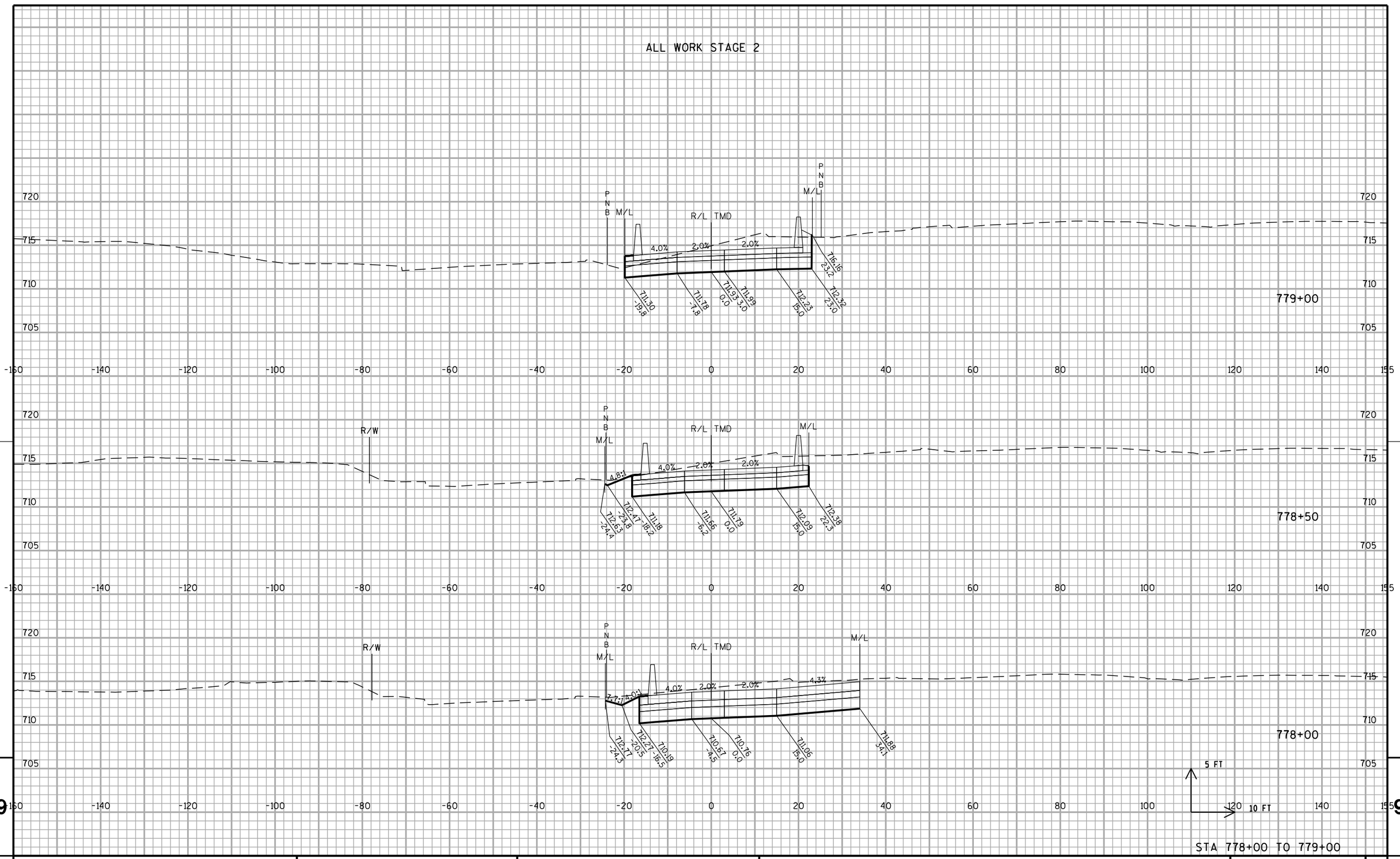
ALL WORK STAGE 2

STA 776+50 TO 777+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd3 PLOT SCALE : 20:1

ALL WORK STAGE 2

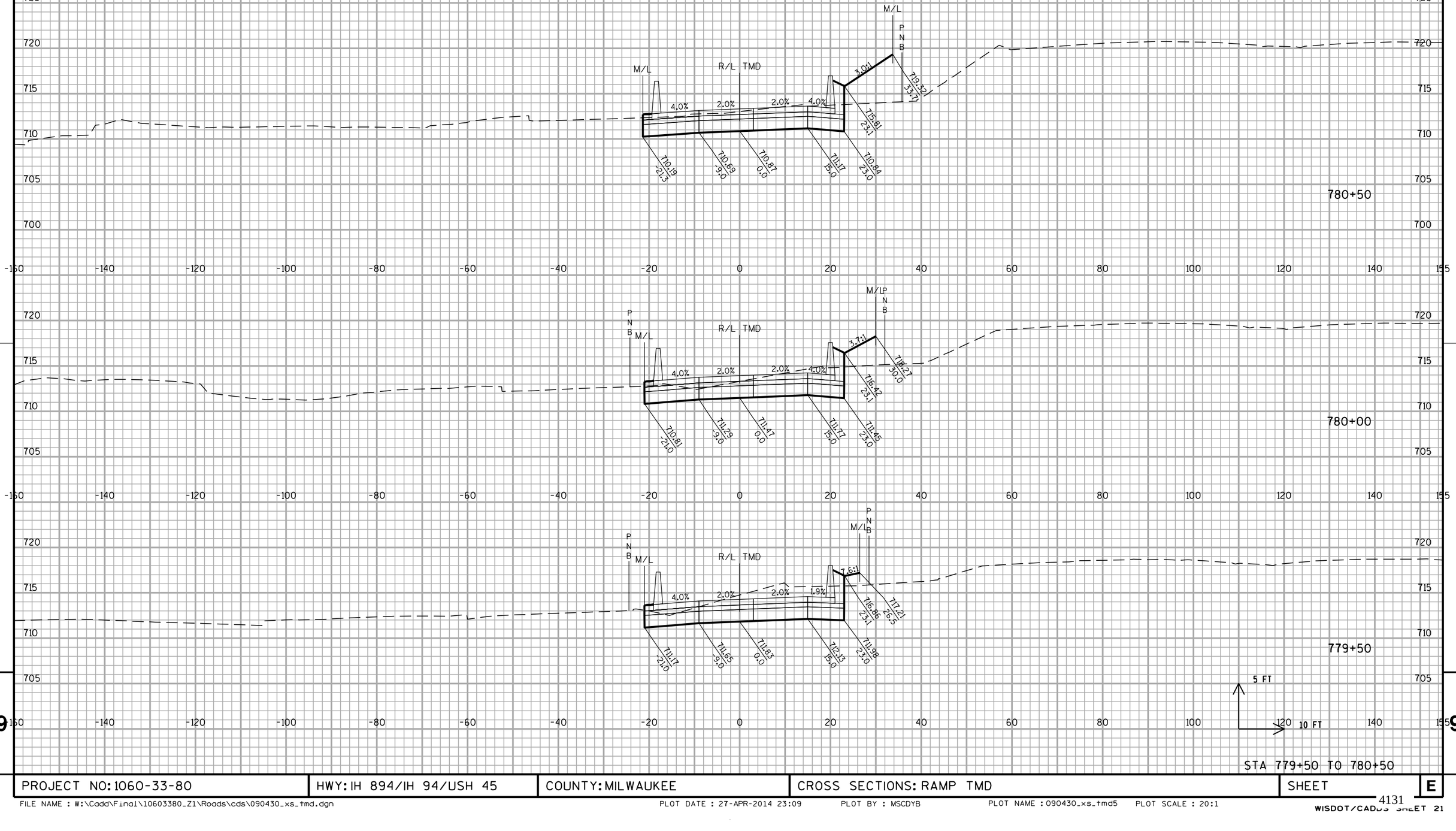


STA 778+00 TO 779+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd4 PLOT SCALE : 20:1

ALL WORK STAGE 2

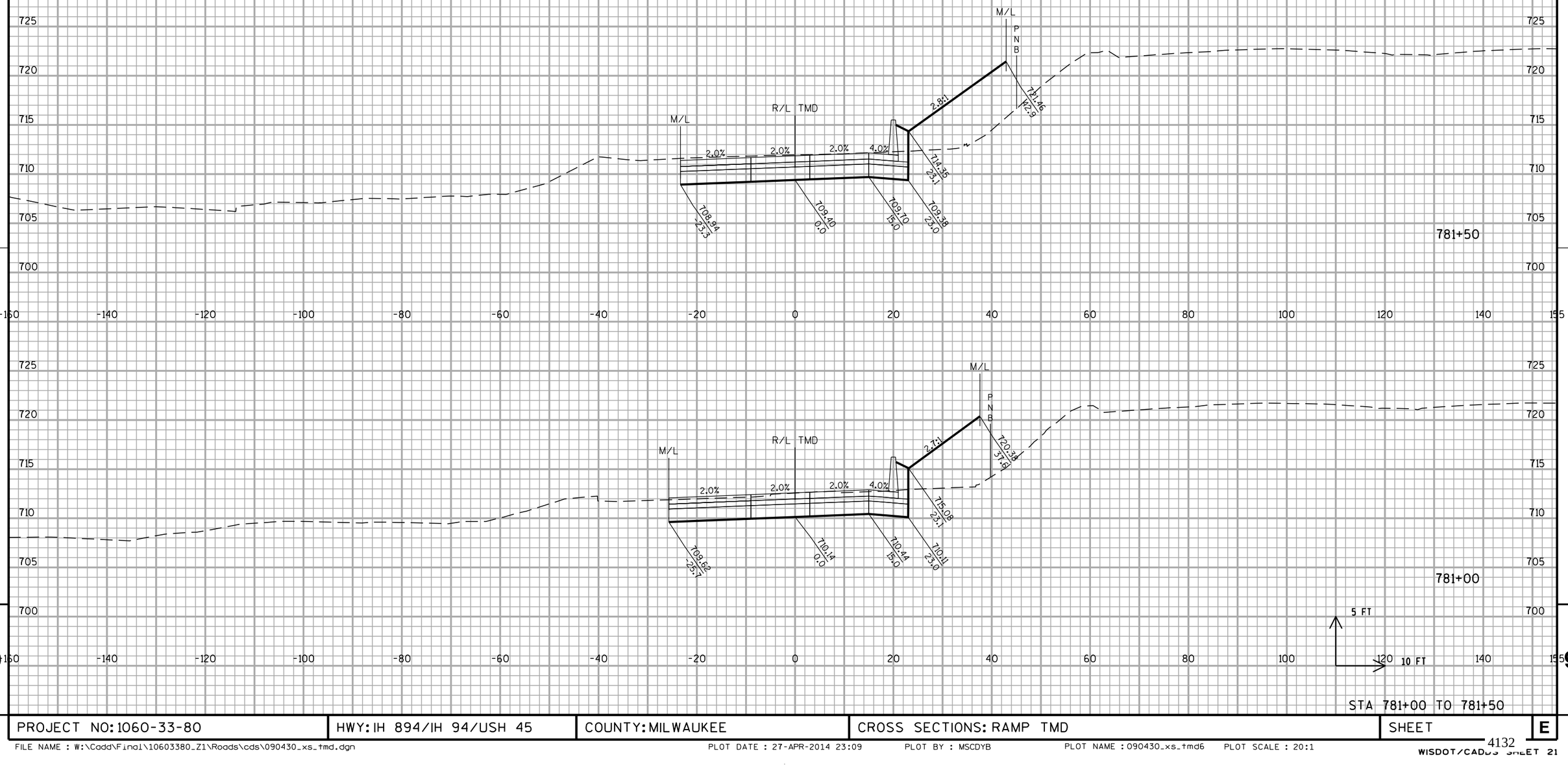


STA 779+50 TO 780+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd5 PLOT SCALE : 20:1

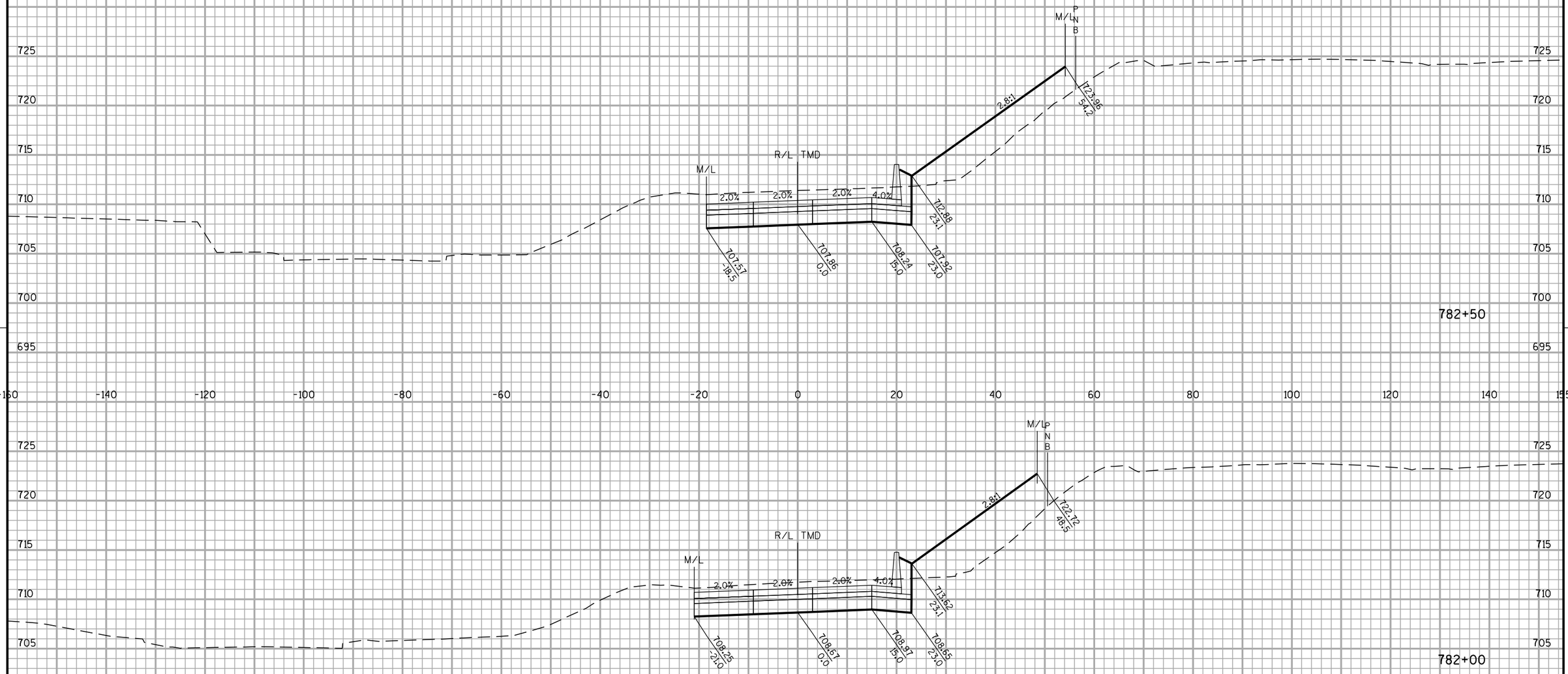
ALL WORK STAGE 2



STA 781+00 TO 781+50

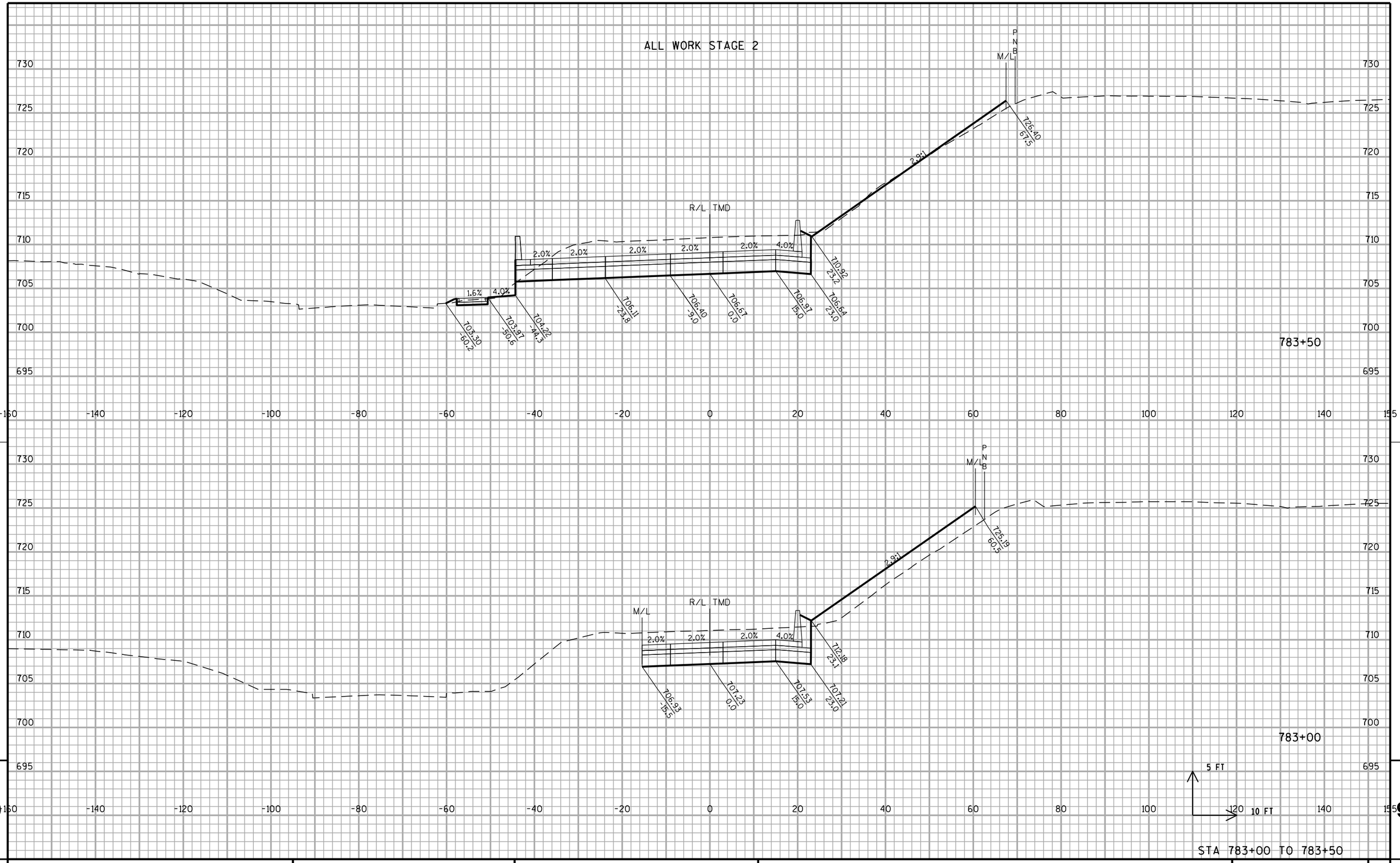
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

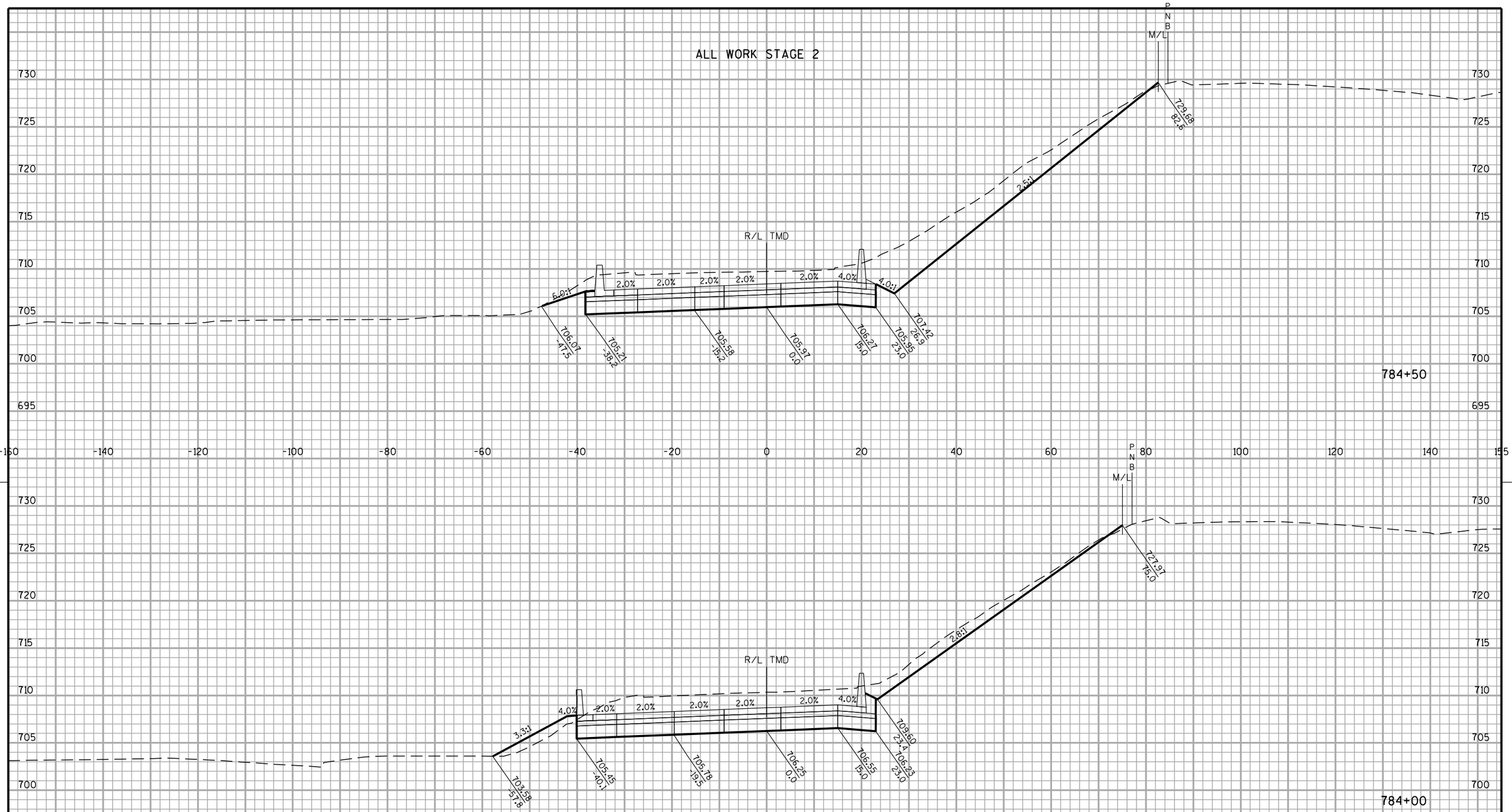
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_TMD.dgn PLOT DATE : 29-APR-2014 09:21 PLOT BY : MSCDYB PLOT NAME : 090430_xs_TMD7 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd8 PLOT SCALE : 20:1

ALL WORK STAGE 2

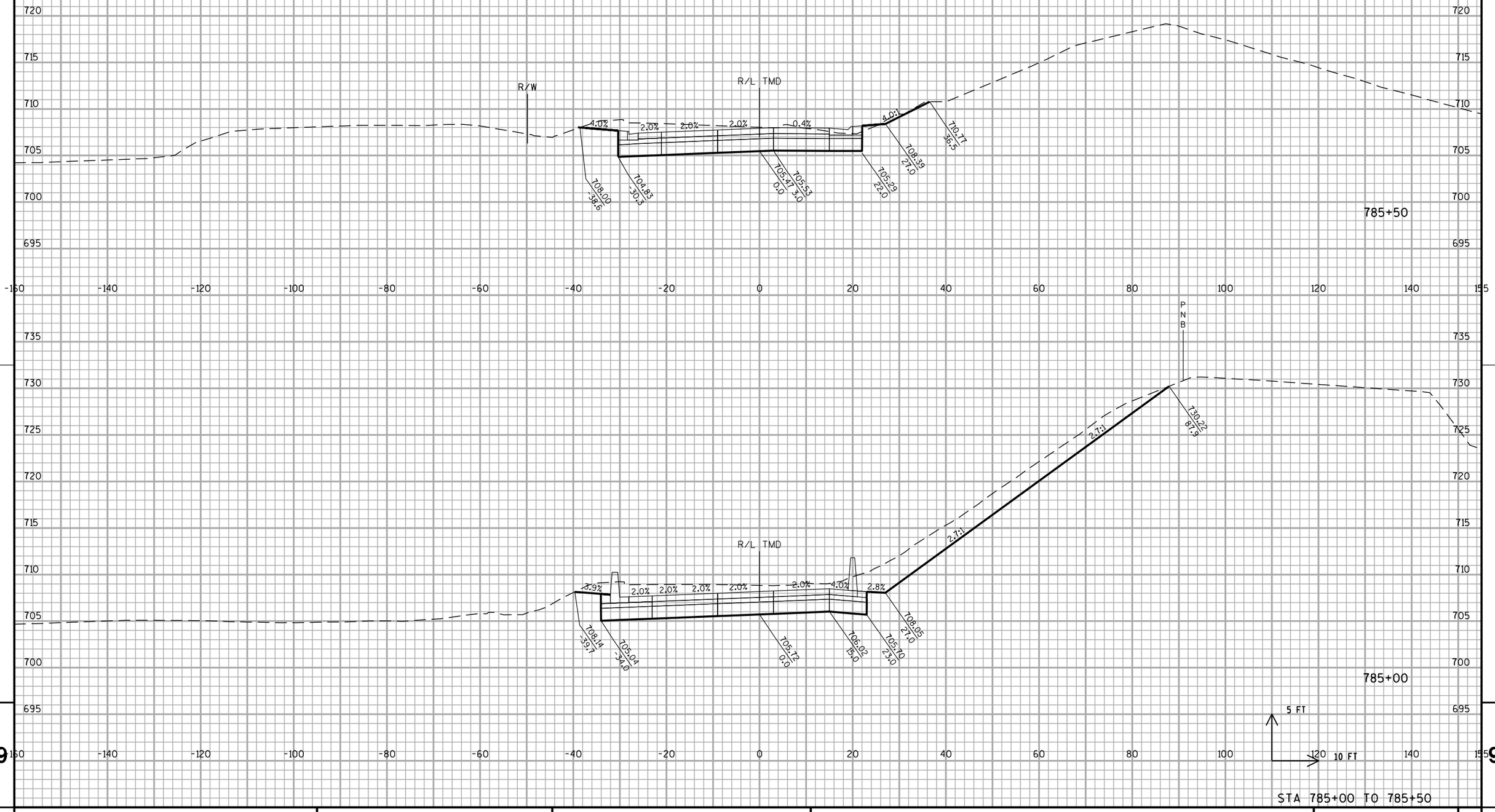


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

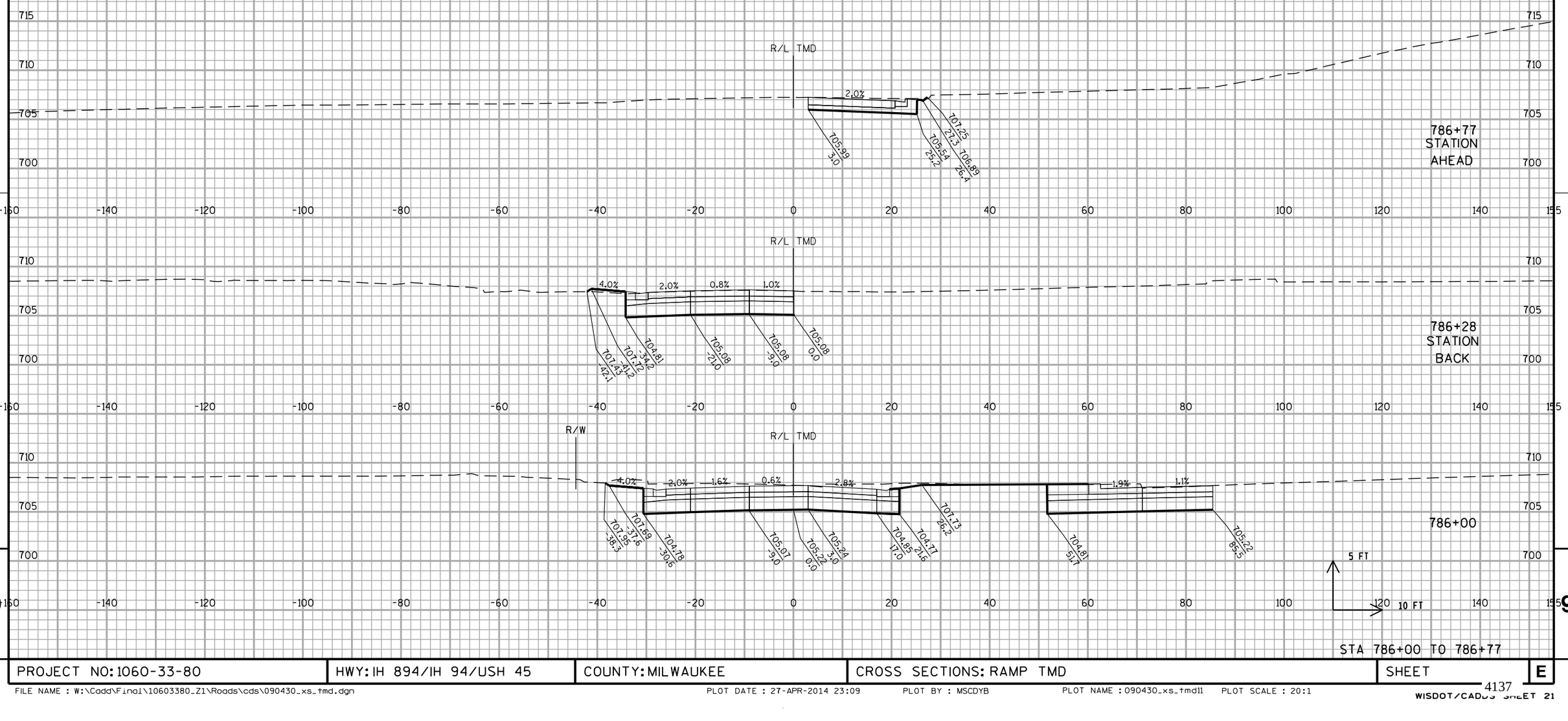


STA 785+00 TO 785+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

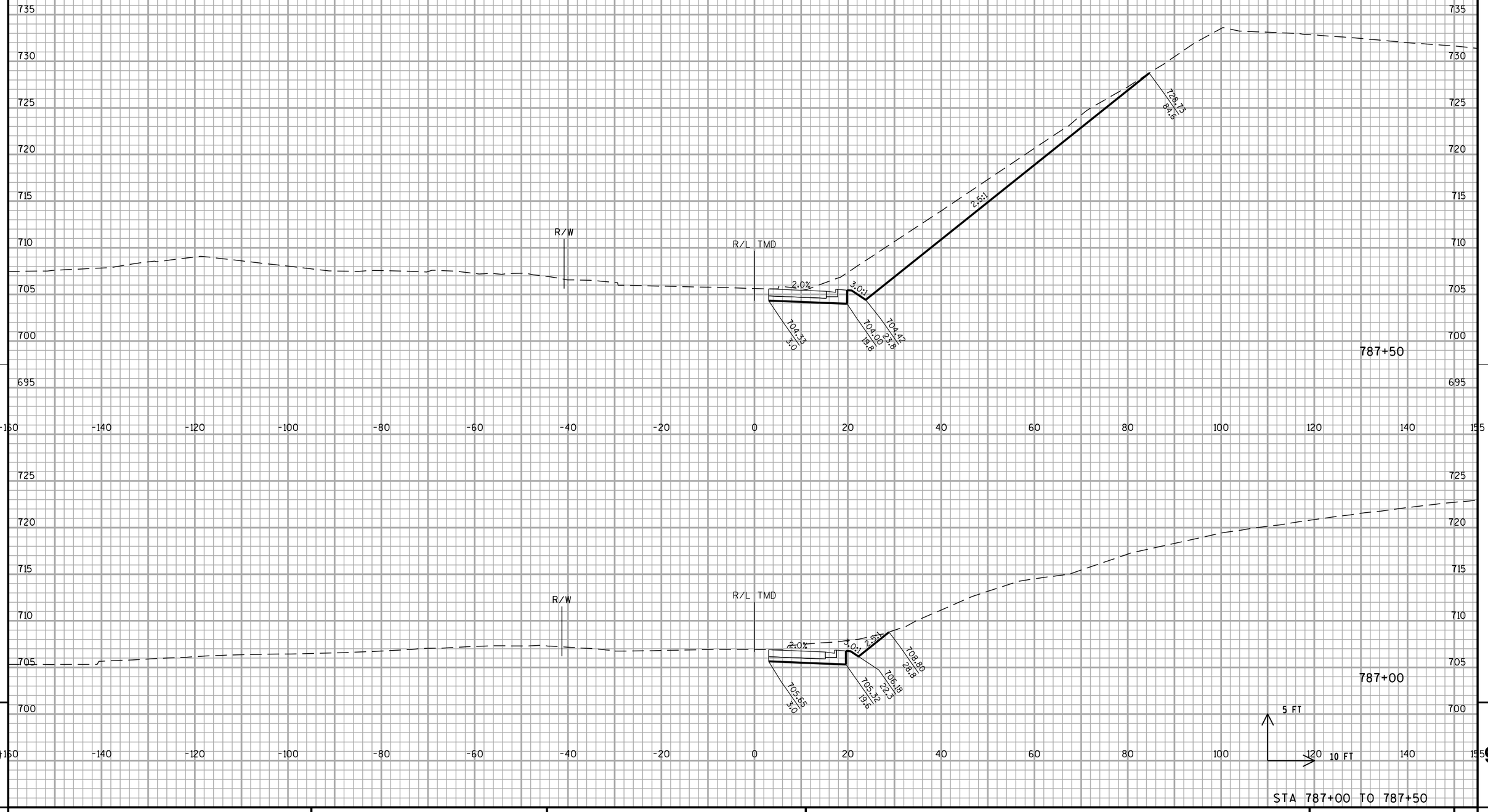
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd10 PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

ALL WORK STAGE 2

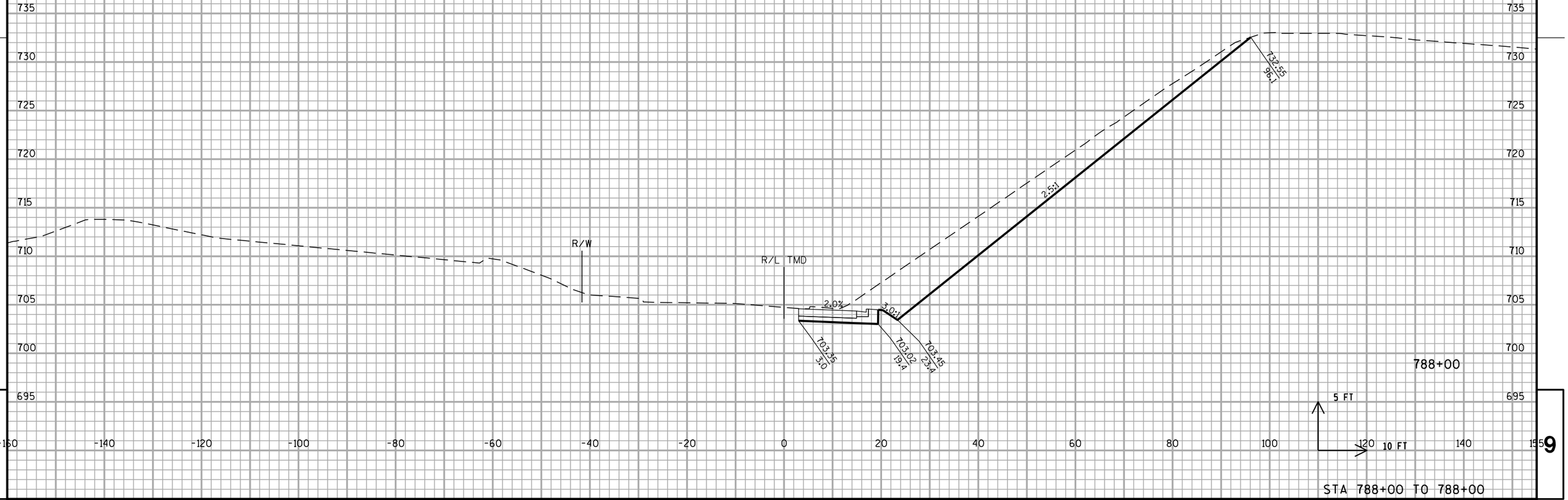


STA 787+00 TO 787+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd12 PLOT SCALE : 20:1

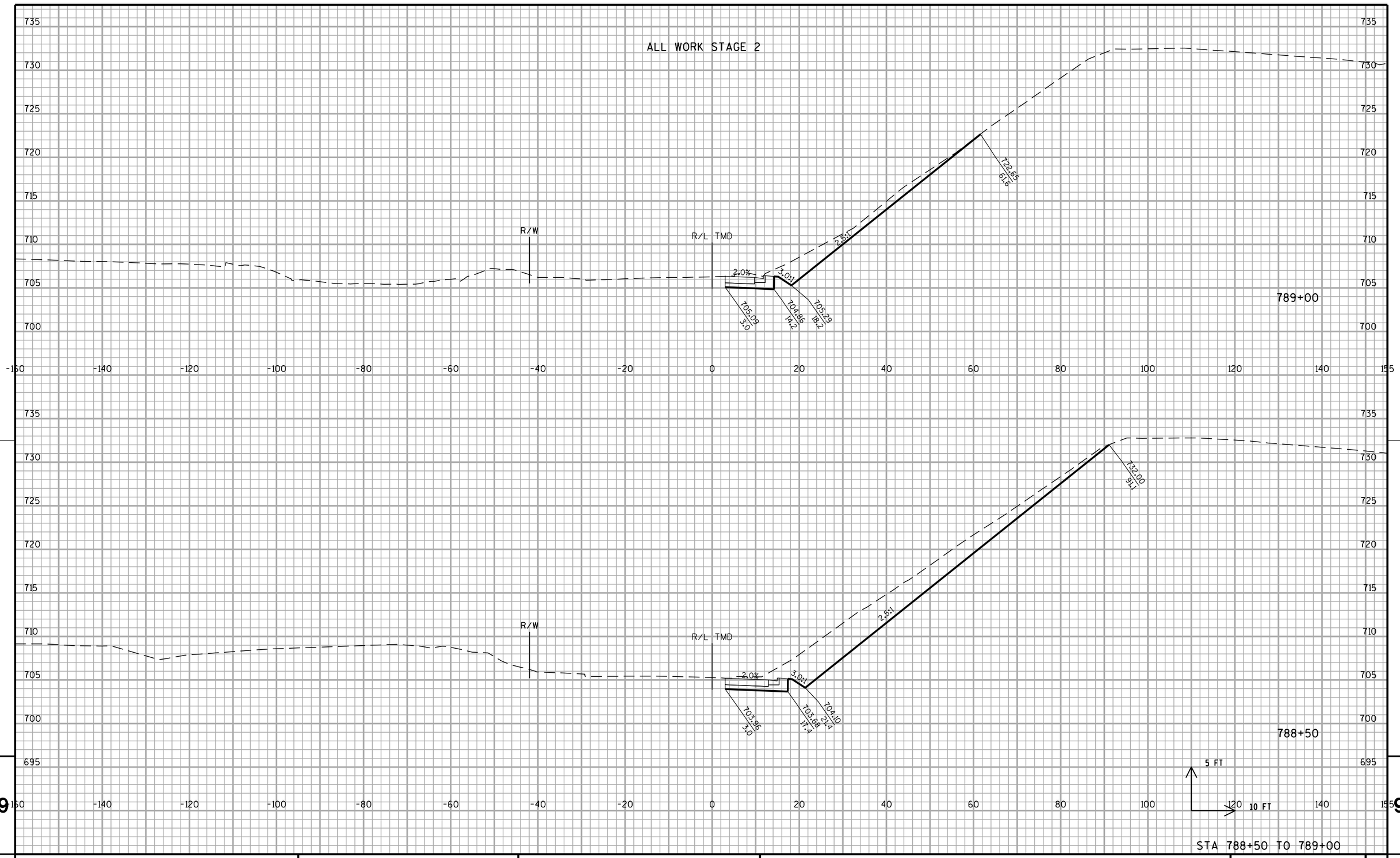
ALL WORK STAGE 2



STA 788+00 TO 788+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd13 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

735
730
725
720
715
710
705
700
695

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160

R/L TMD

2.0%
3.0%
4.5%
708.11
11.0
706.23
12.3
705.26
9.9
705.40
5.0

789+50

5 FT
10 FT

STA 789+50 TO 789+50

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd15 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

735
730
725
720
715
710
705
700
695

R/L TMD

2.0%

705.26
3.0
706.17
7.9
706.86
9.4
706.59
8.9

789+75
STATION
BACK

5 FT
10 FT

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160

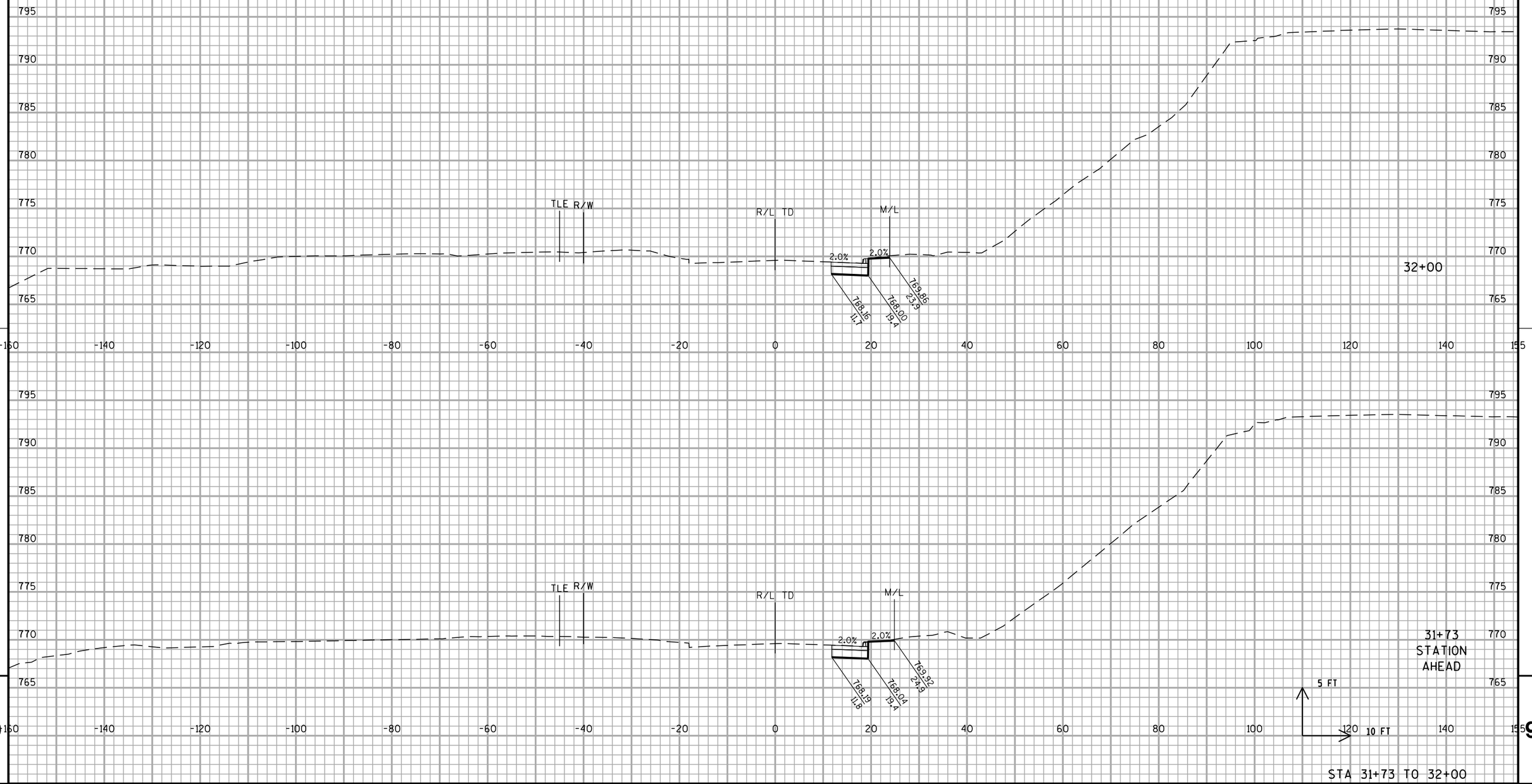
STA 789+75 TO 789+75

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP TMD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090430_xs_tmd.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090430_xs_tmd16 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



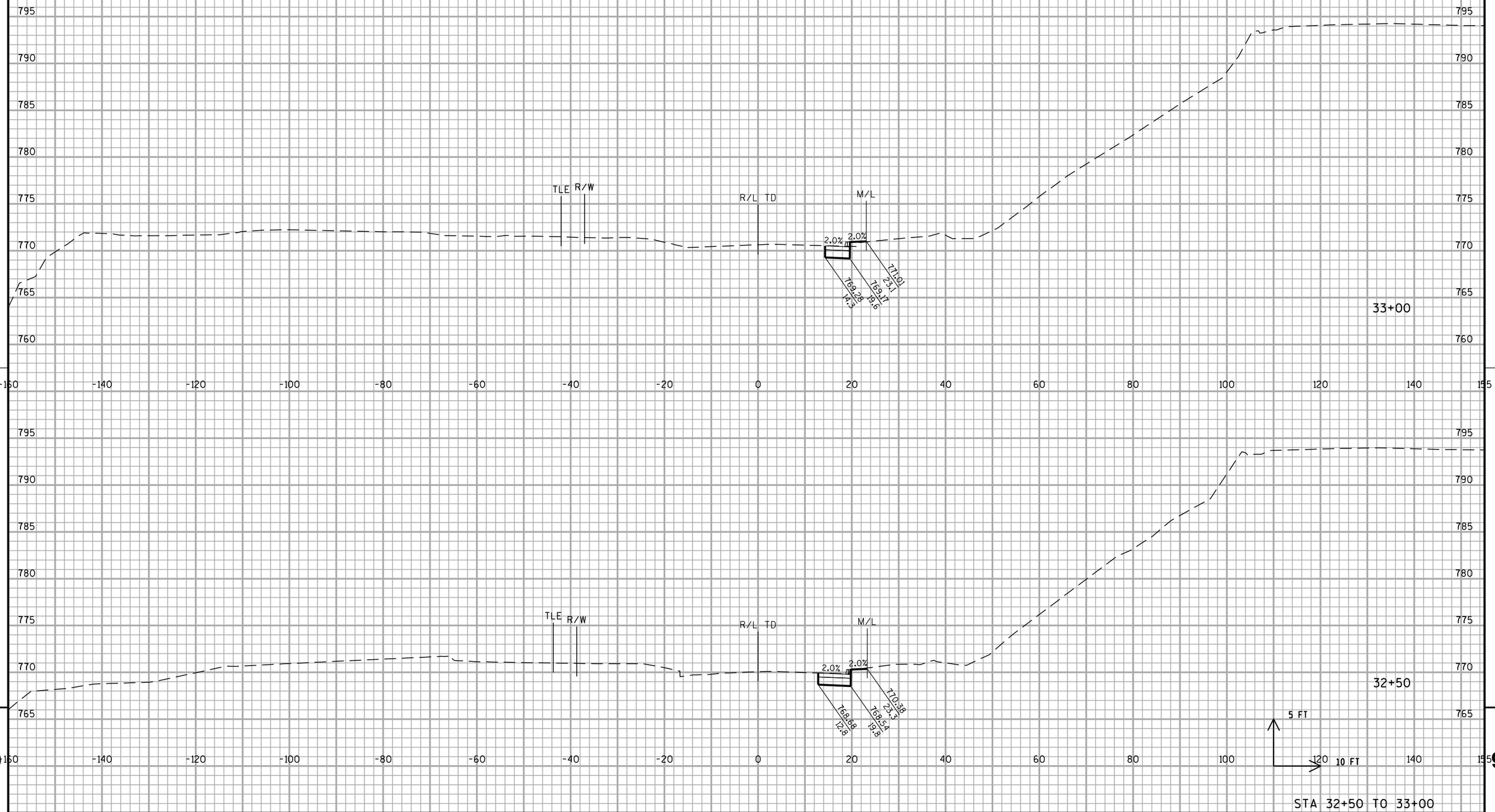
STA 31+73 TO 32+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090503_xs_TD.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090503_xs_TDO PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

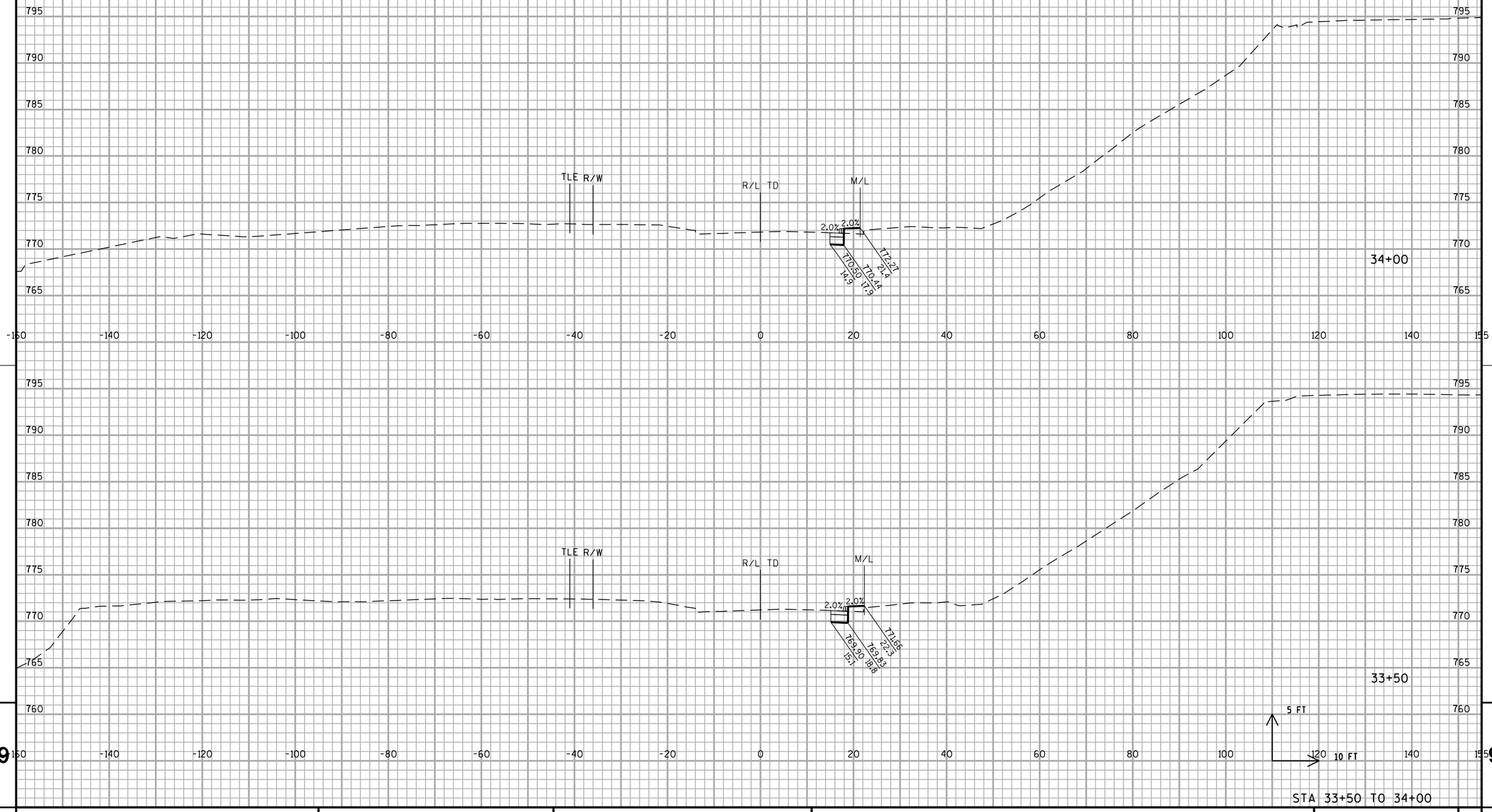


STA 32+50 TO 33+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090503_xs_TD.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090503_xs_TD1 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

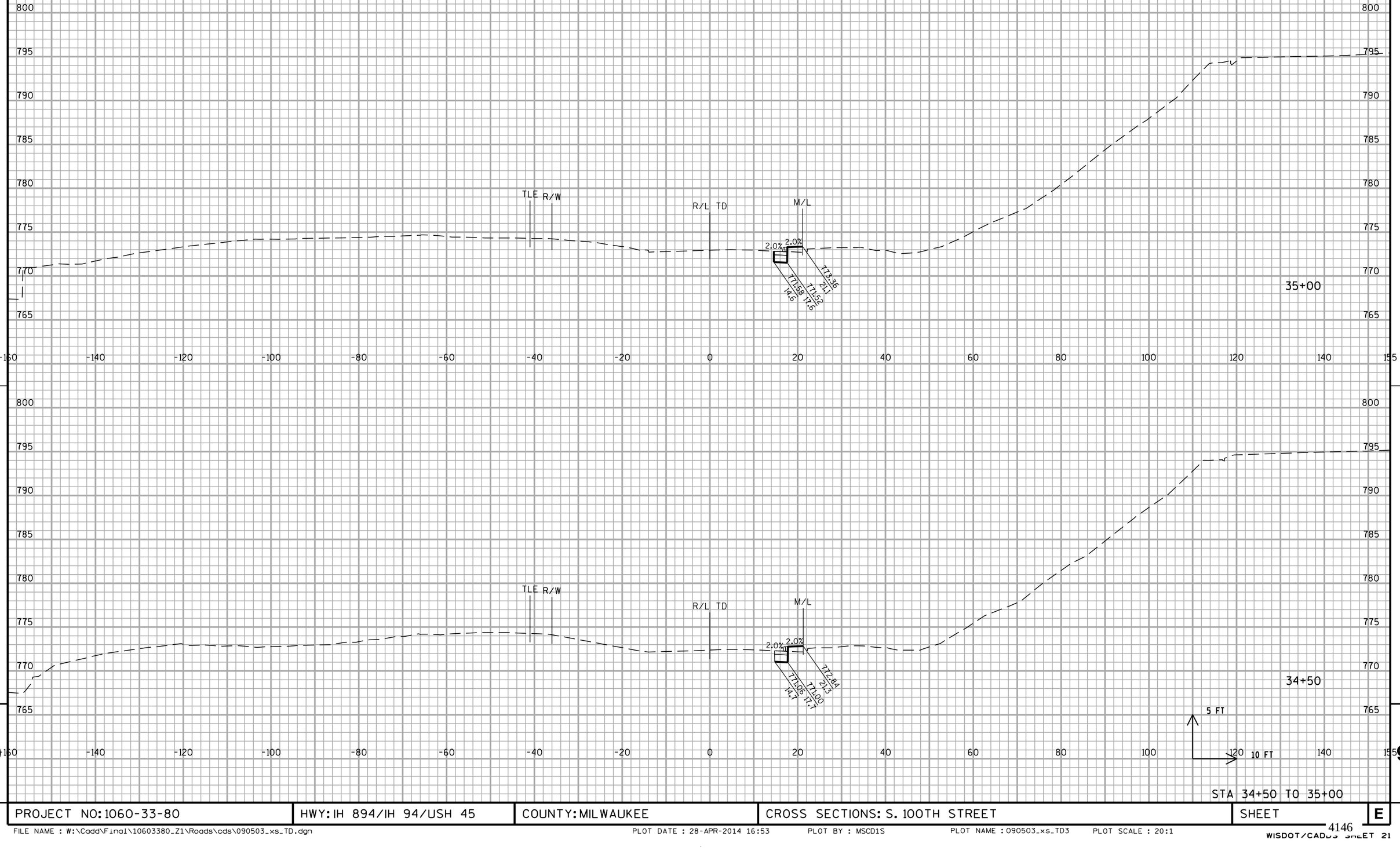
ALL WORK STAGE 2



STA 33+50 TO 34+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

ALL WORK STAGE 2

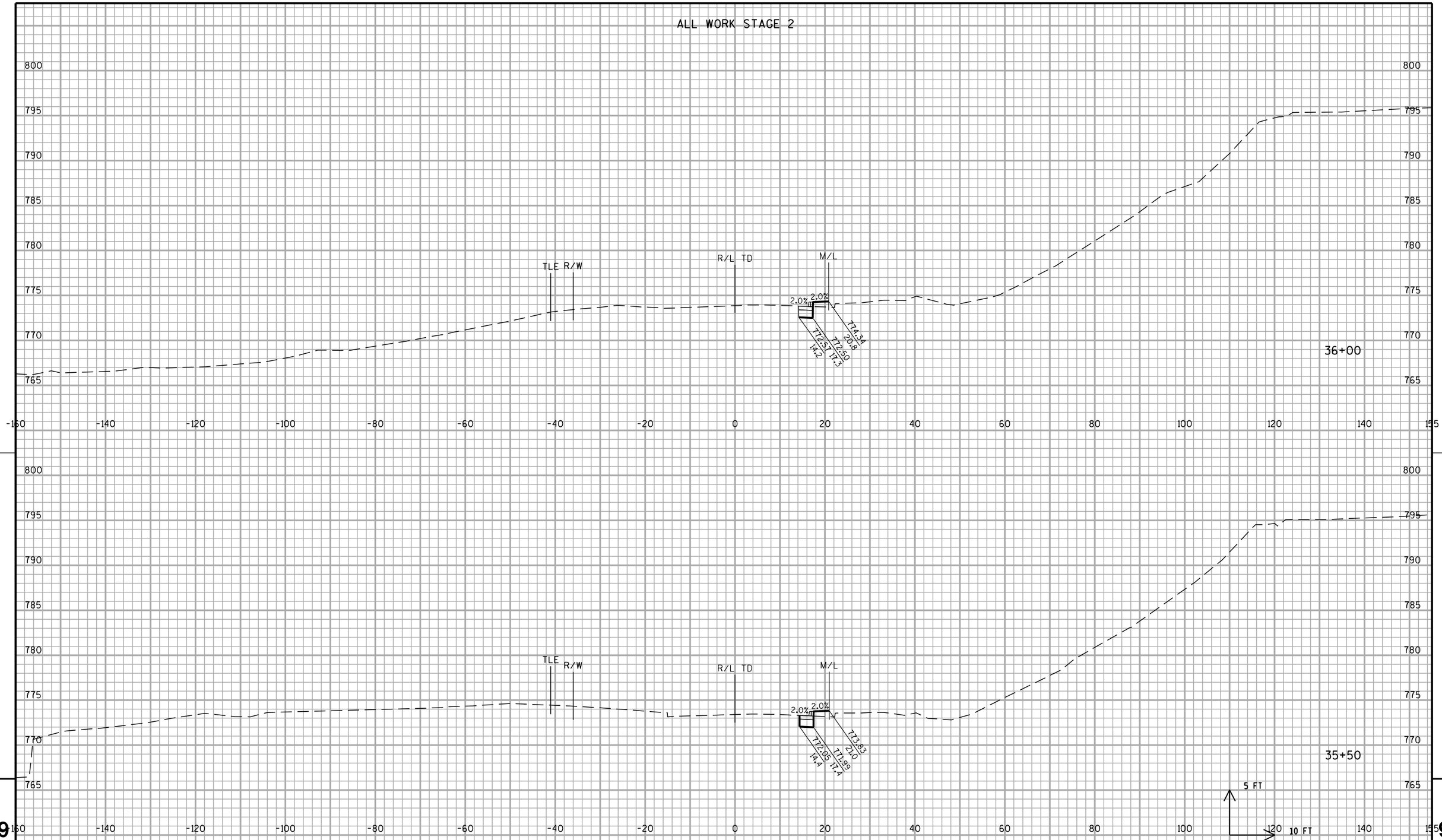


STA 34+50 TO 35+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090503_xs_TD.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090503_xs_TD3 PLOT SCALE : 20:1

ALL WORK STAGE 2

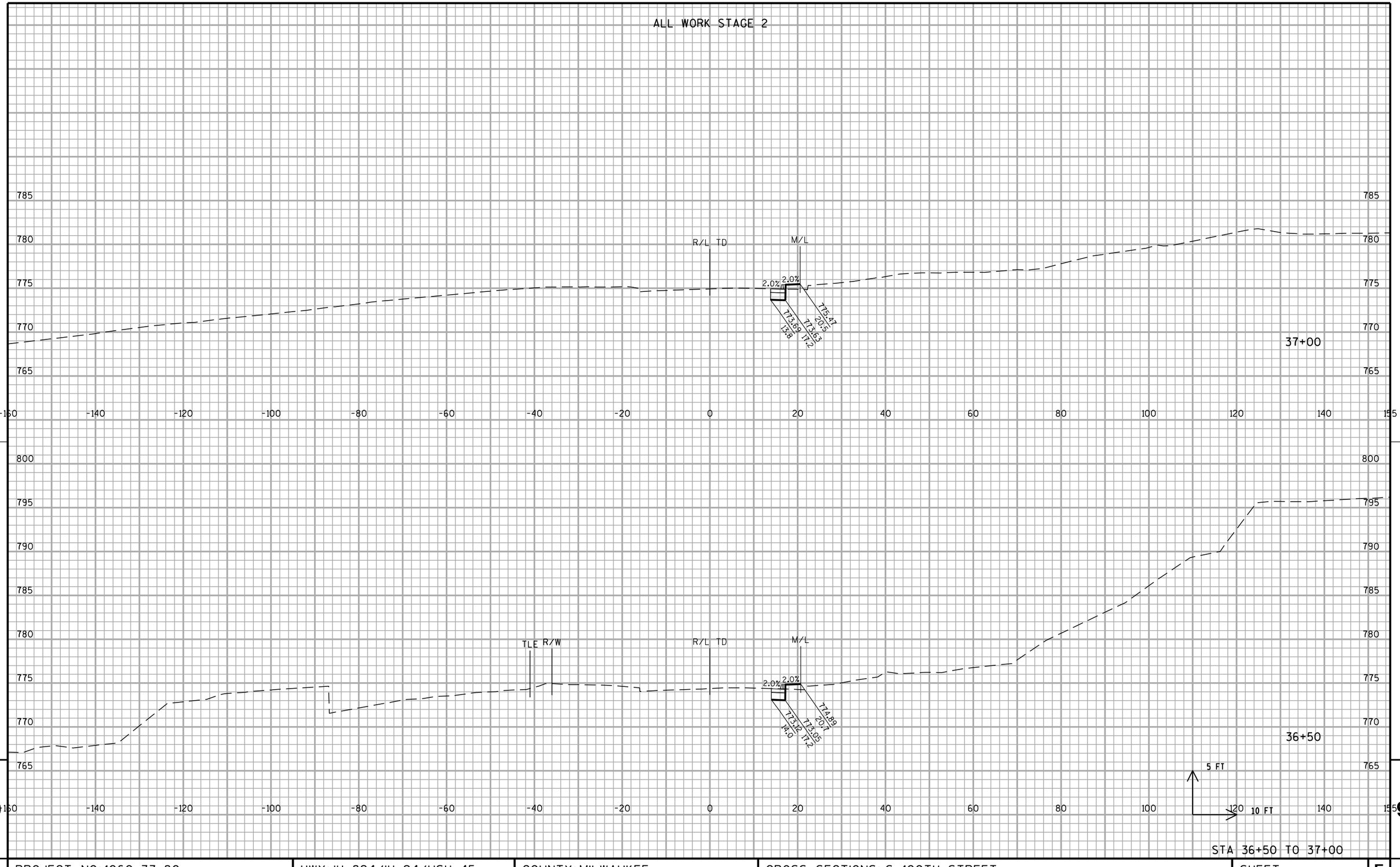


STA 35+50 TO 36+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090503_xs_TD.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090503_xs_TD4 PLOT SCALE : 20:1

ALL WORK STAGE 2

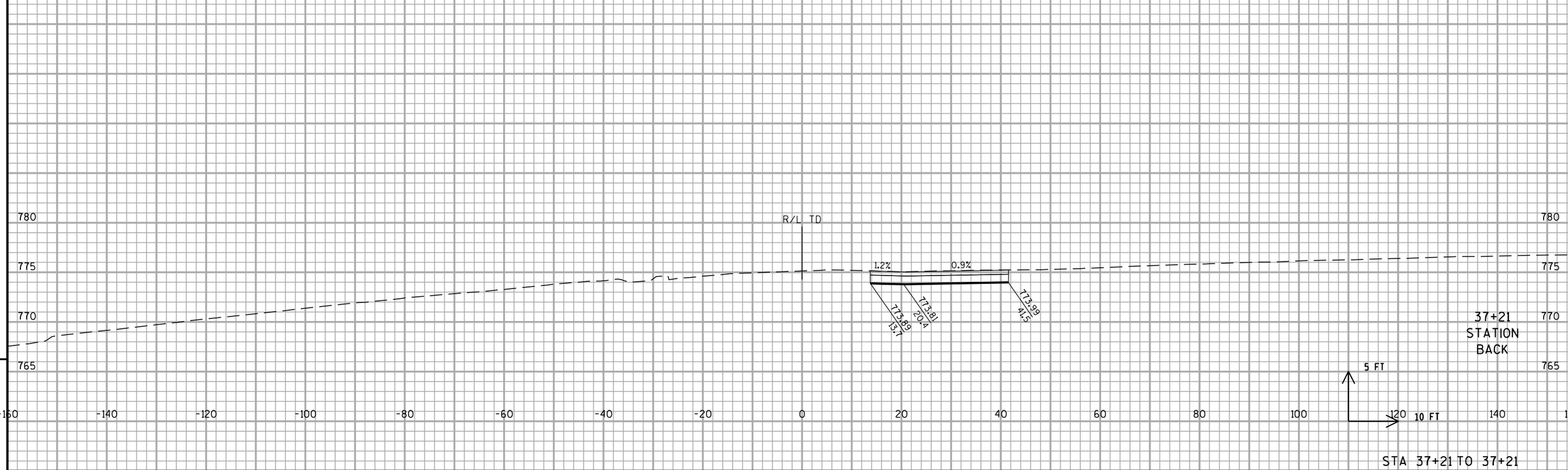


STA 36+50 TO 37+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090503_xs_TD.dgn PLOT DATE : 28-APR-2014 16:53 PLOT BY : MSCD1S PLOT NAME : 090503_xs_TD5 PLOT SCALE : 20:1

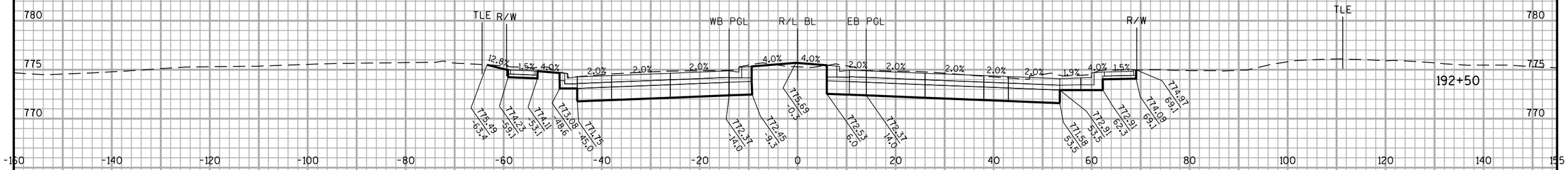
ALL WORK STAGE 2



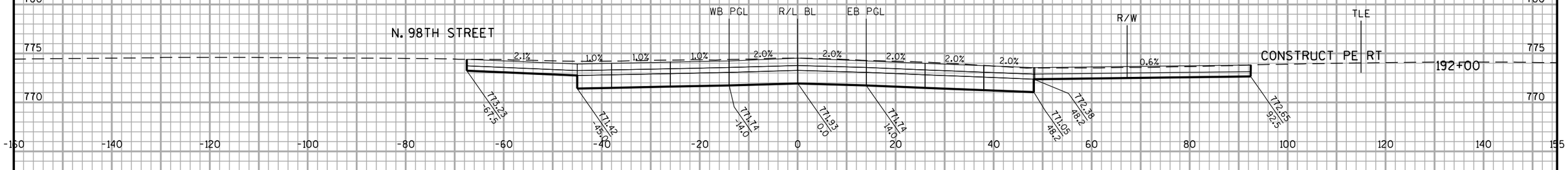
STA 37+21 TO 37+21

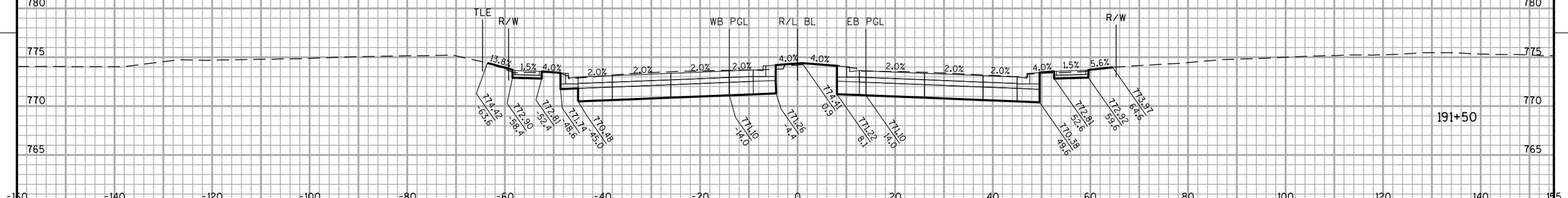
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 100TH STREET	SHEET	E

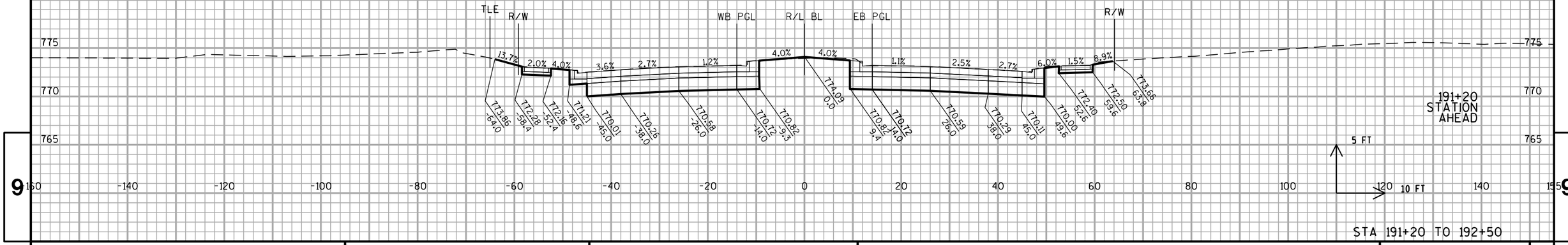
ALL WORK STAGE 1



N. 98TH STREET







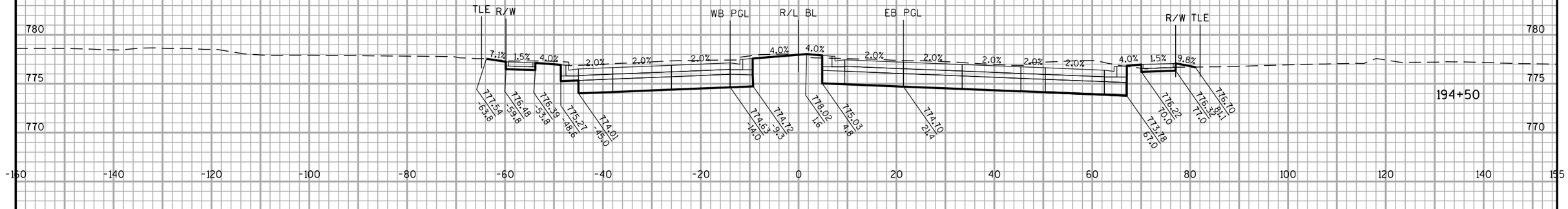
STA 191+20 TO 192+50

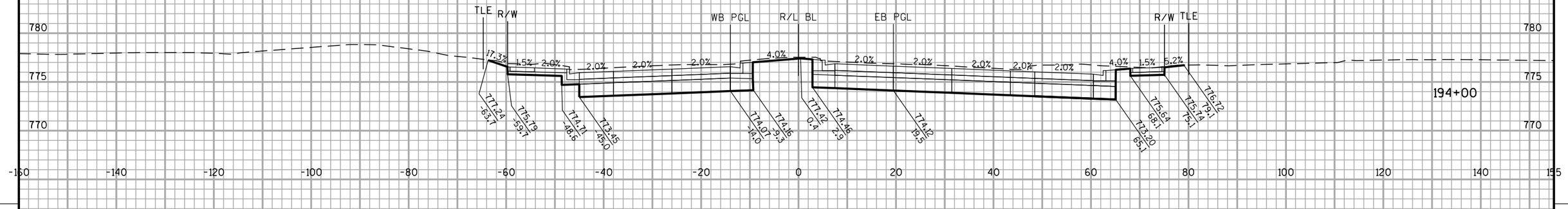
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

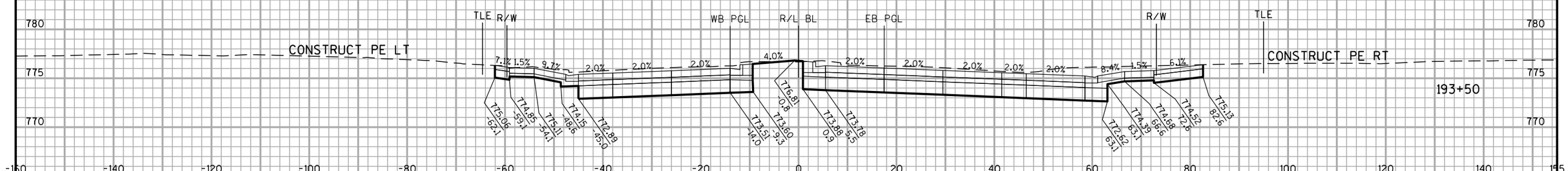
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw PLOT SCALE : 20:1

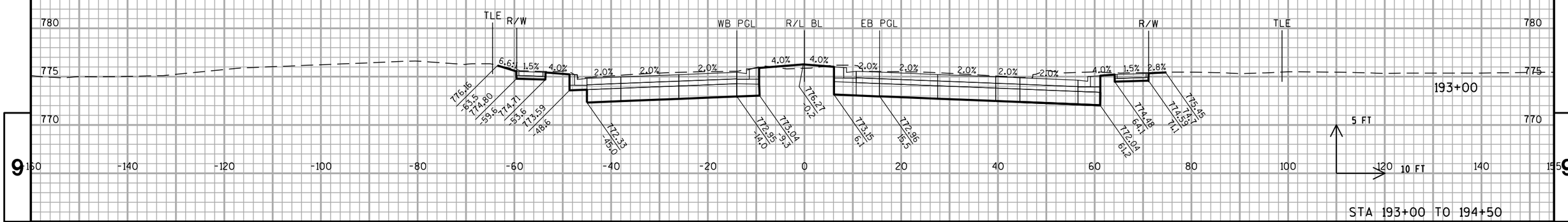
WISDOT/CADDS SHEET 21

ALL WORK STAGE 1









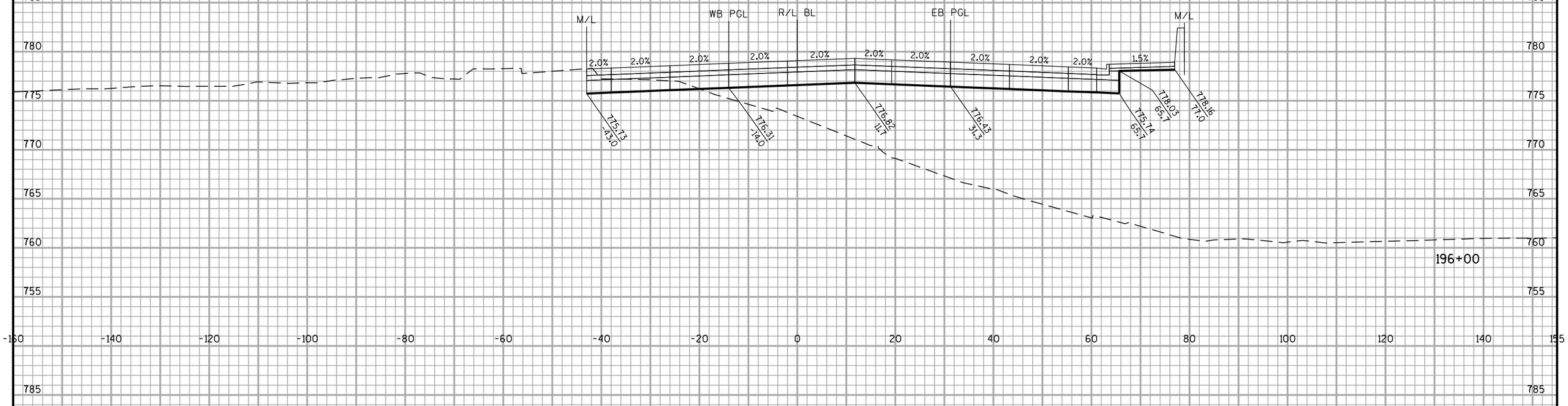
STA 193+00 TO 194+50

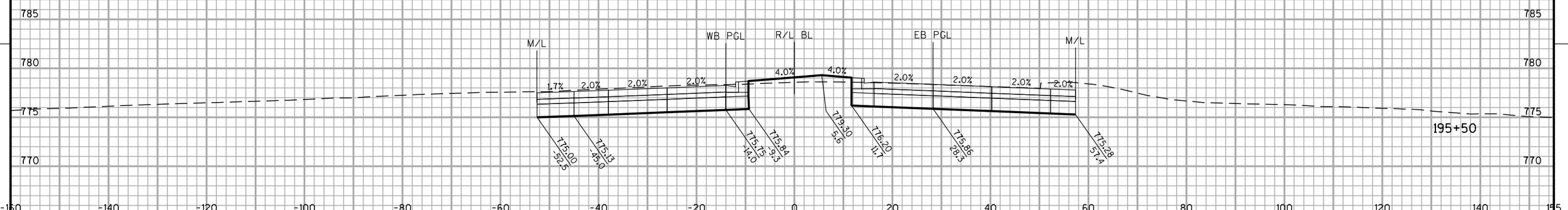
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

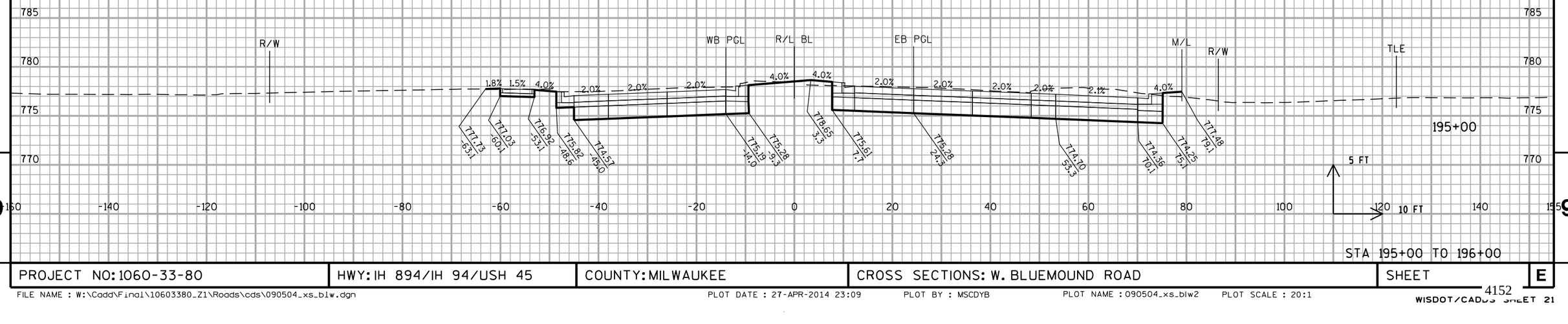
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1





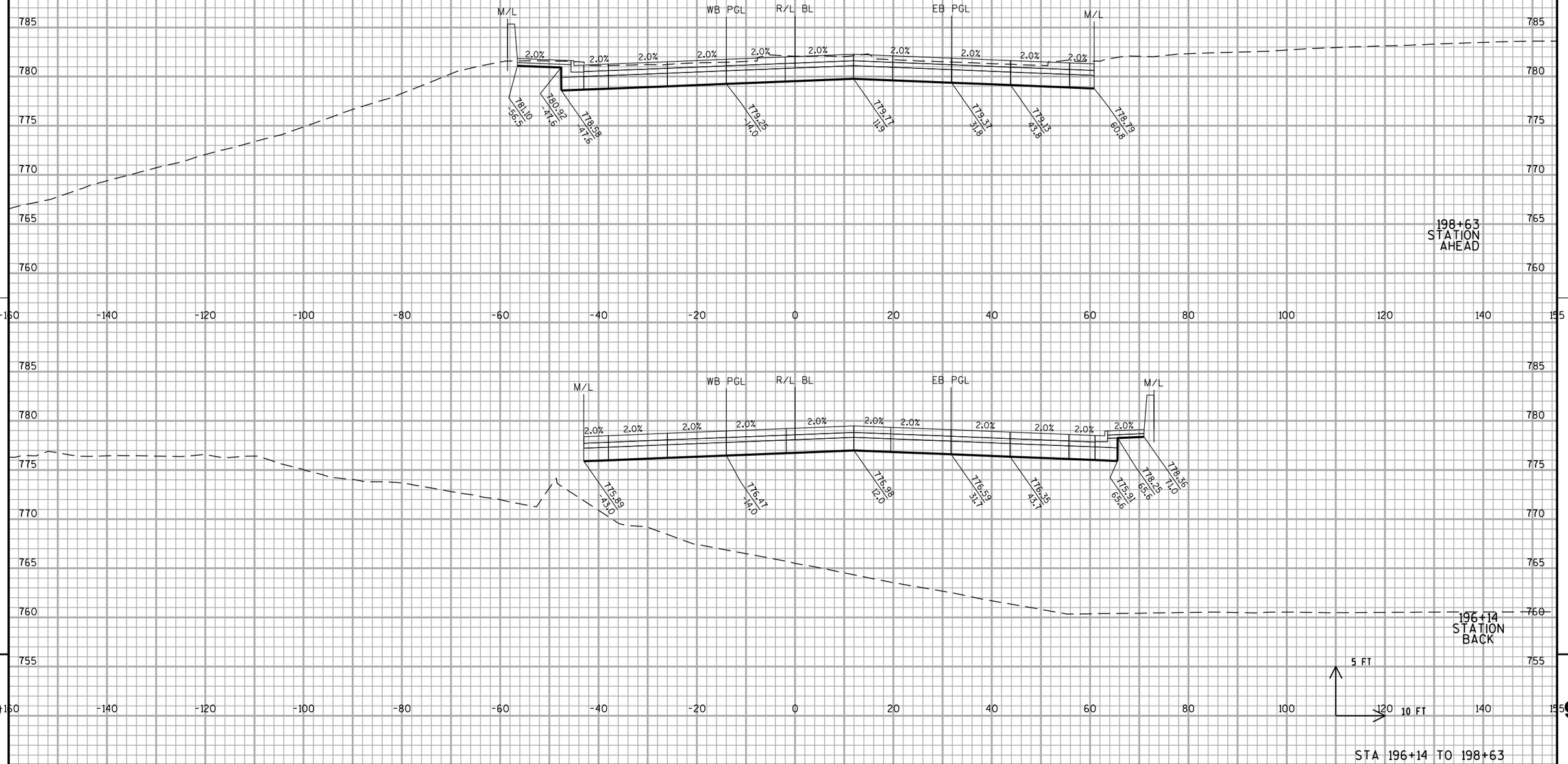


STA 195+00 TO 196+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw2 PLOT SCALE : 20:1

ALL WORK STAGE 1

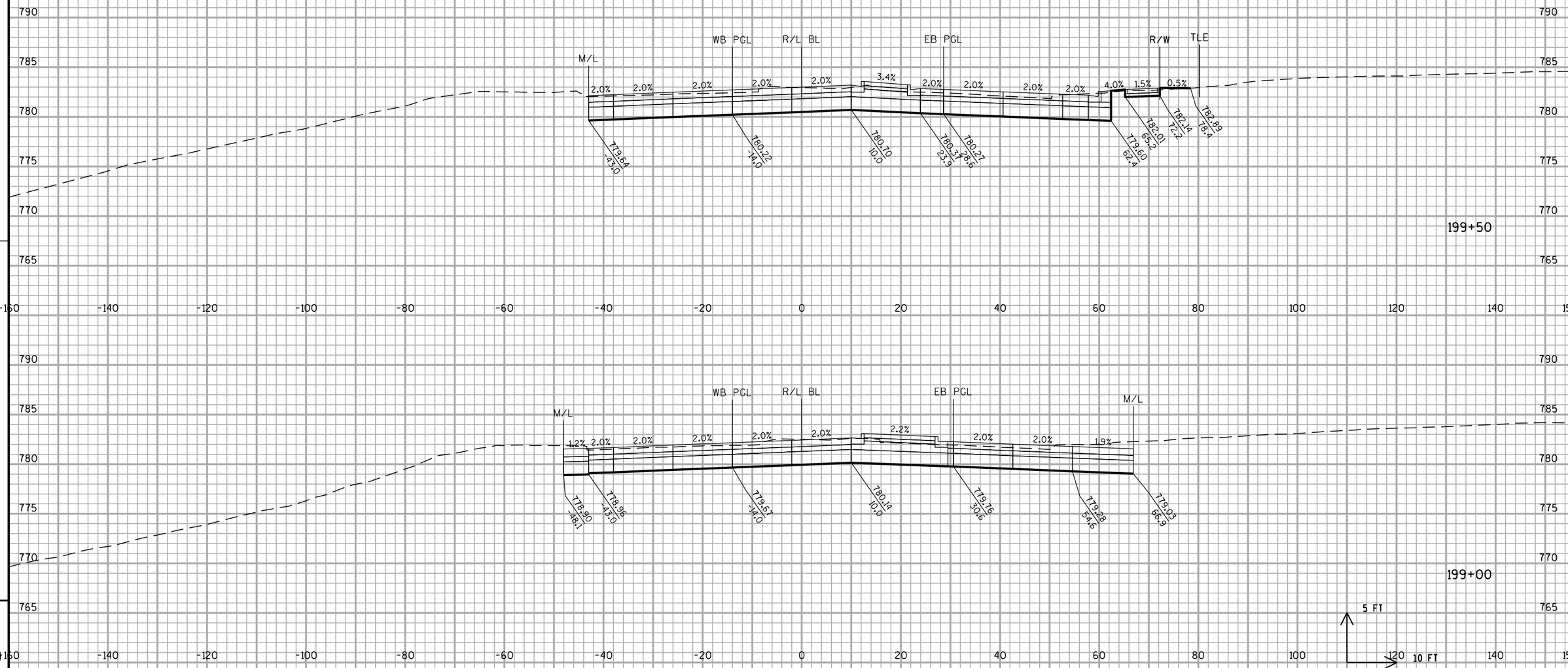


STA 196+14 TO 198+63

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw3 PLOT SCALE : 20:1

ALL WORK STAGE 1

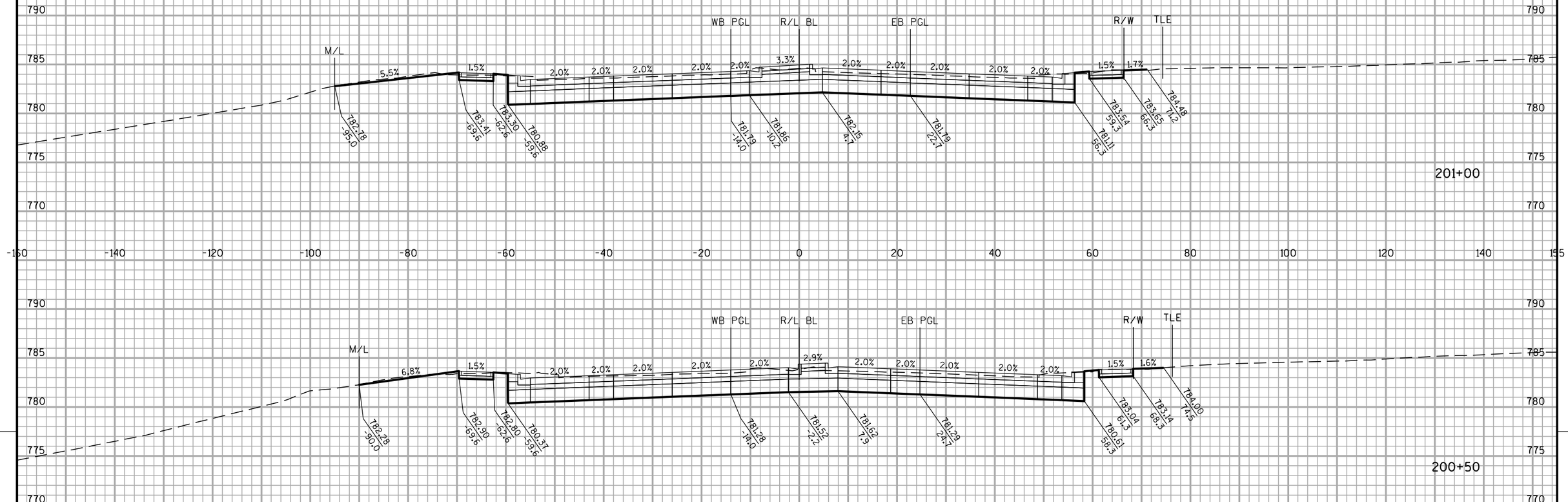


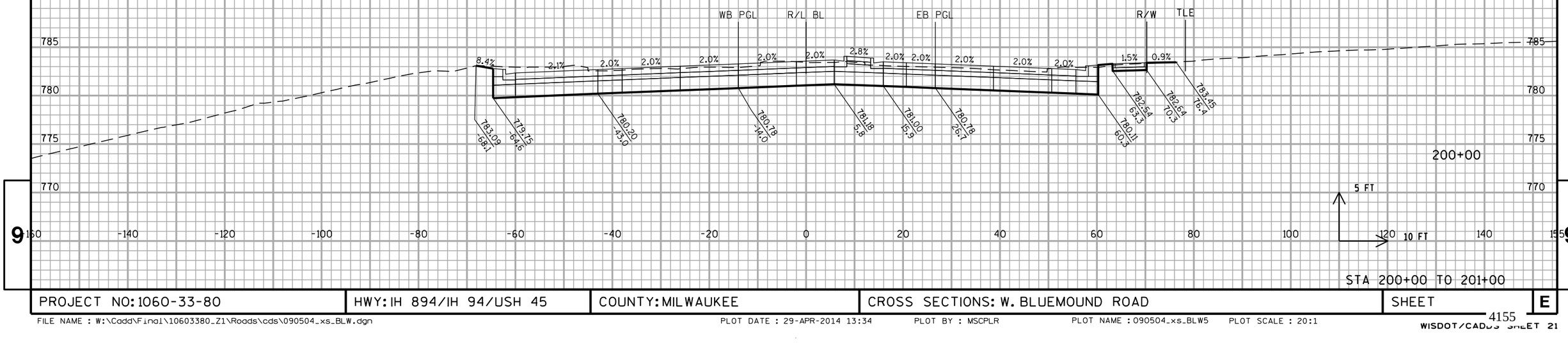
STA 199+00 TO 199+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw4 PLOT SCALE : 20:1

ALL WORK STAGE 1





STA 200+00 TO 201+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

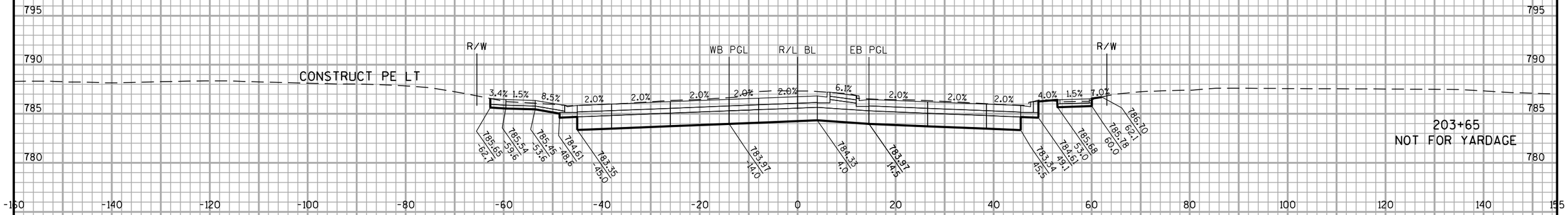
ALL WORK STAGE 1

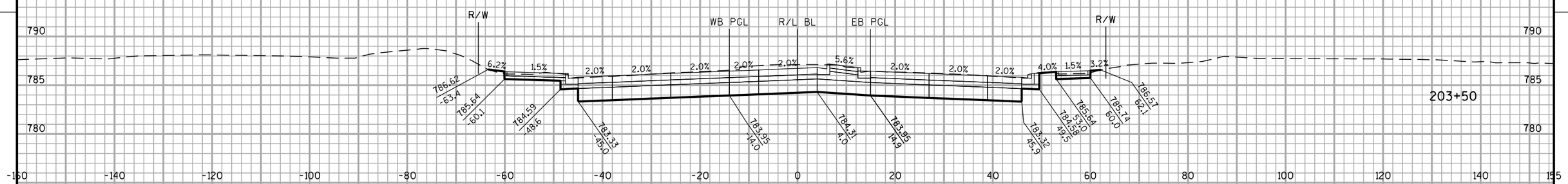
STA 201+50 TO 202+50

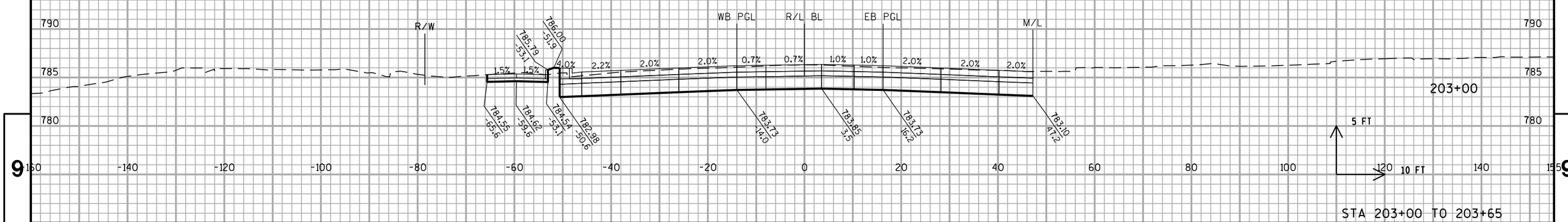
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_BLW.dgn PLOT DATE : 29-APR-2014 13:34 PLOT BY : MSCPLR PLOT NAME : 090504_xs_BLW6 PLOT SCALE : 20:1

ALL WORK STAGE 1







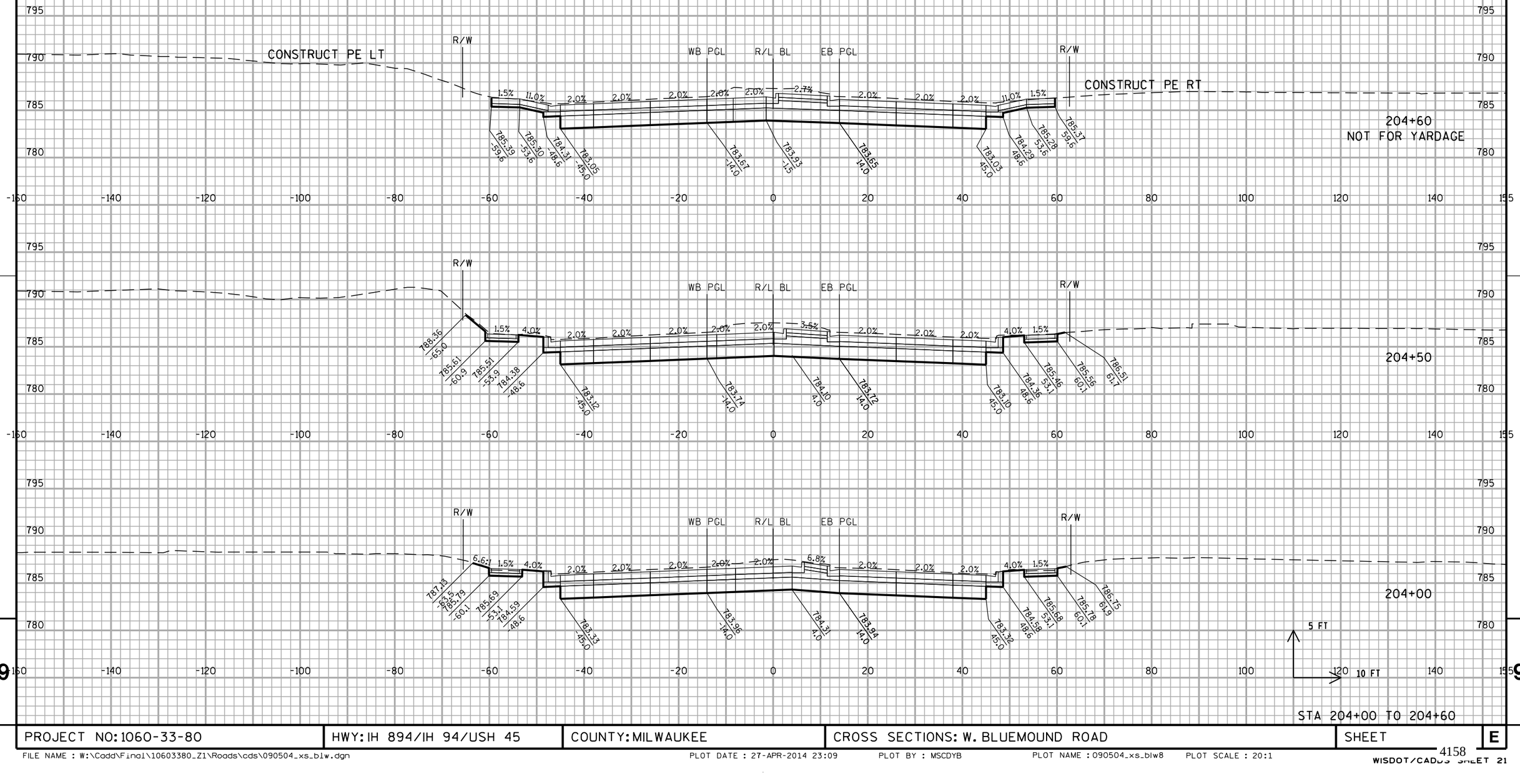
STA 203+00 TO 203+65

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

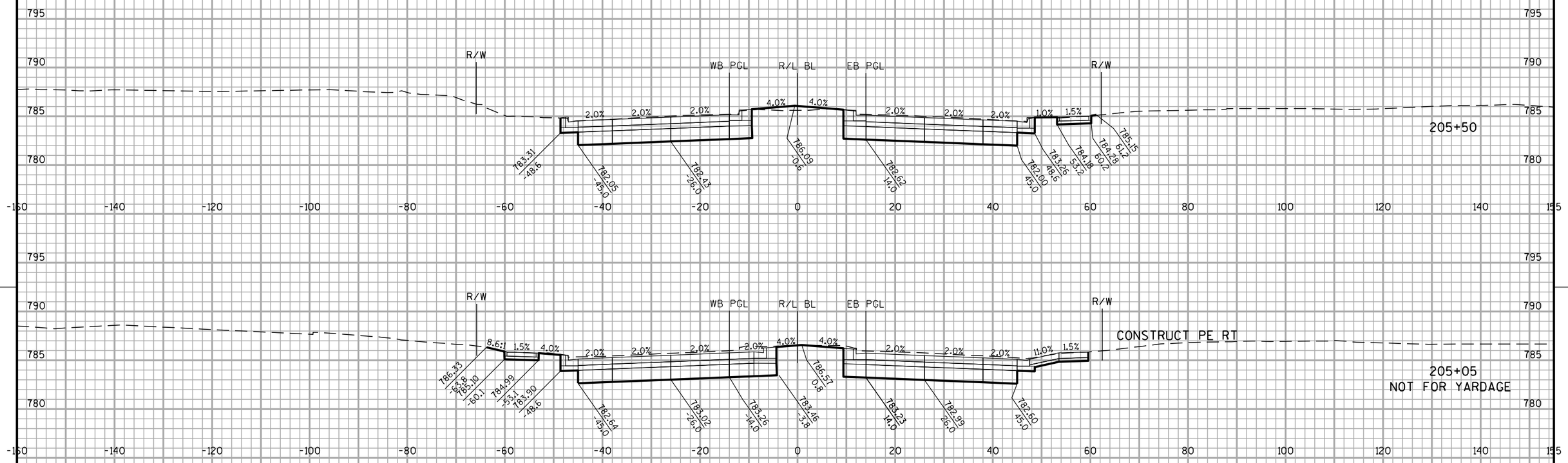
ALL WORK STAGE 1

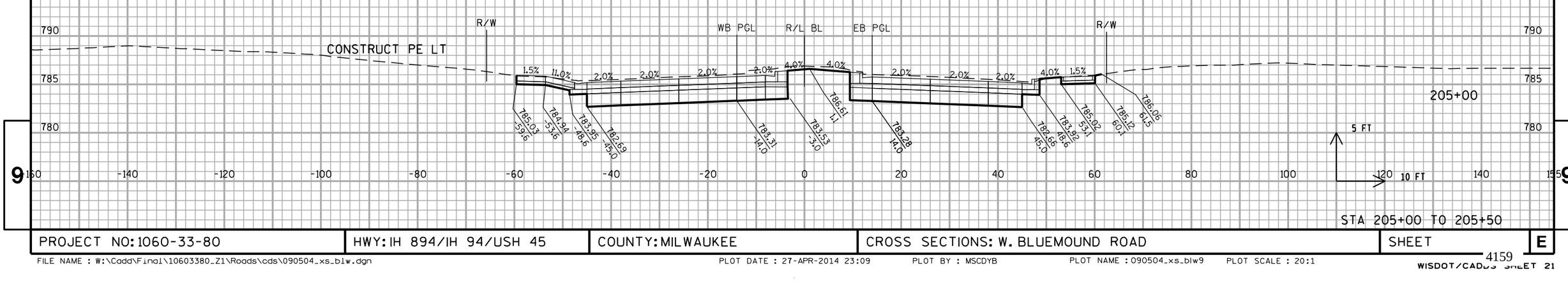


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw8 PLOT SCALE : 20:1

ALL WORK STAGE 1



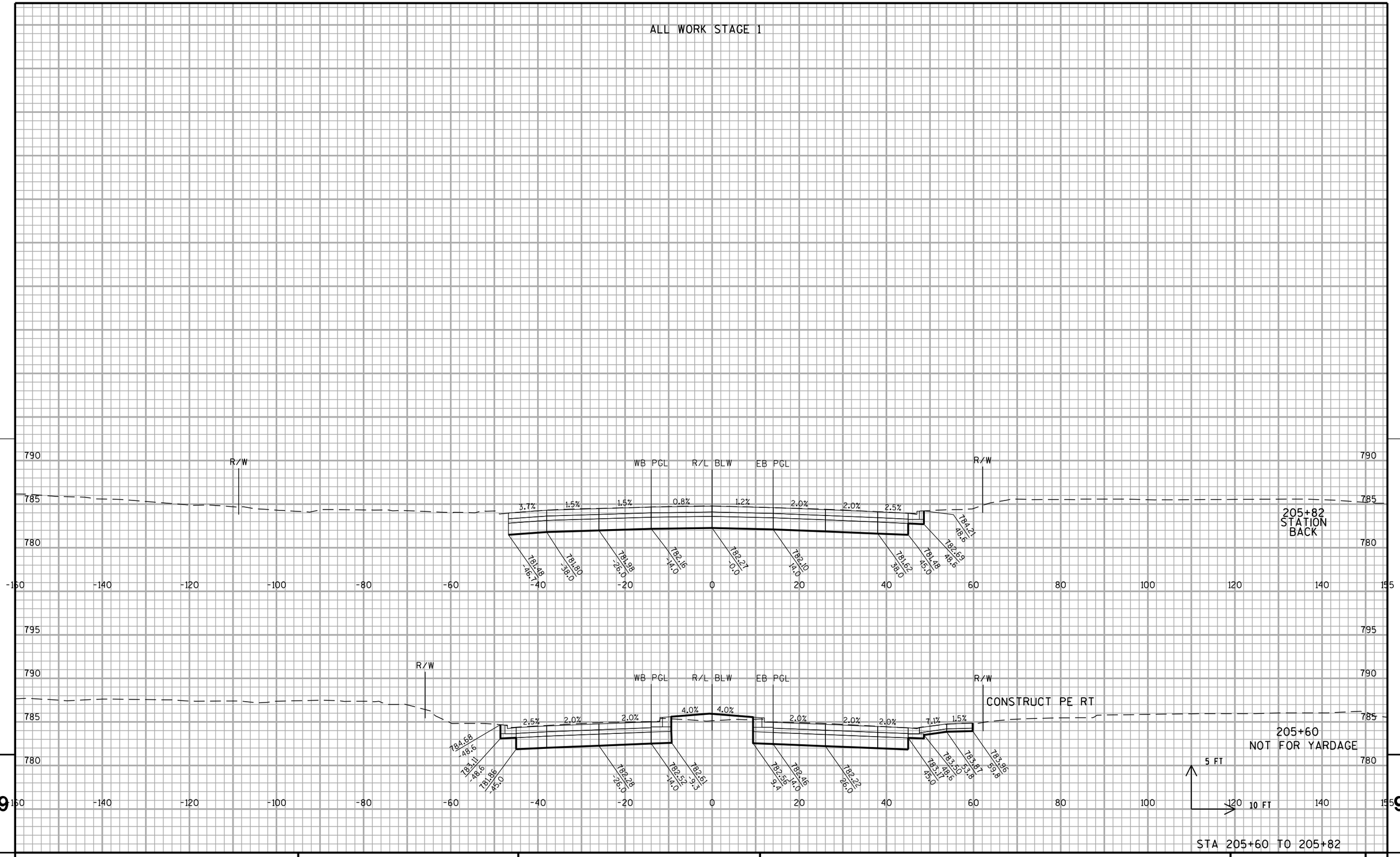


STA 205+00 TO 205+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw9 PLOT SCALE : 20:1

ALL WORK STAGE 1

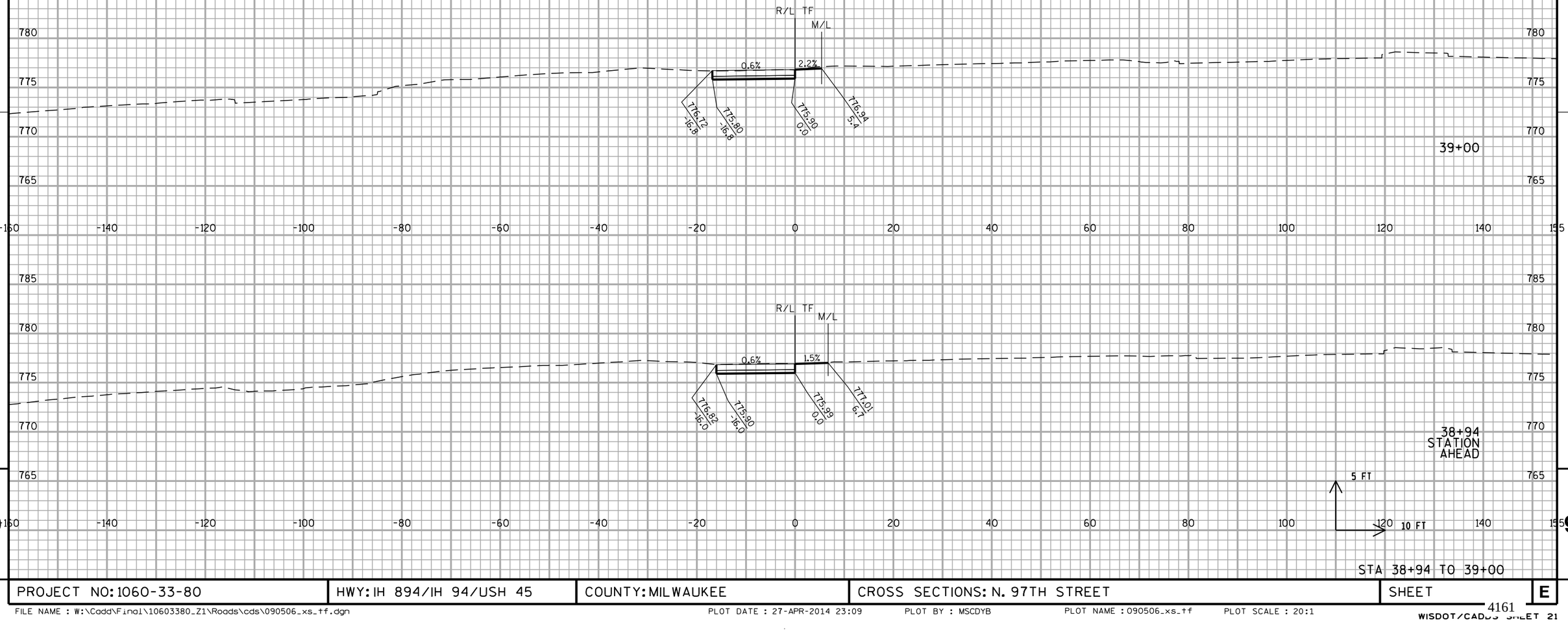


STA 205+60 TO 205+82

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090504_xs_blw.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090504_xs_blw10 PLOT SCALE : 20:1

ALL WORK STAGE 2

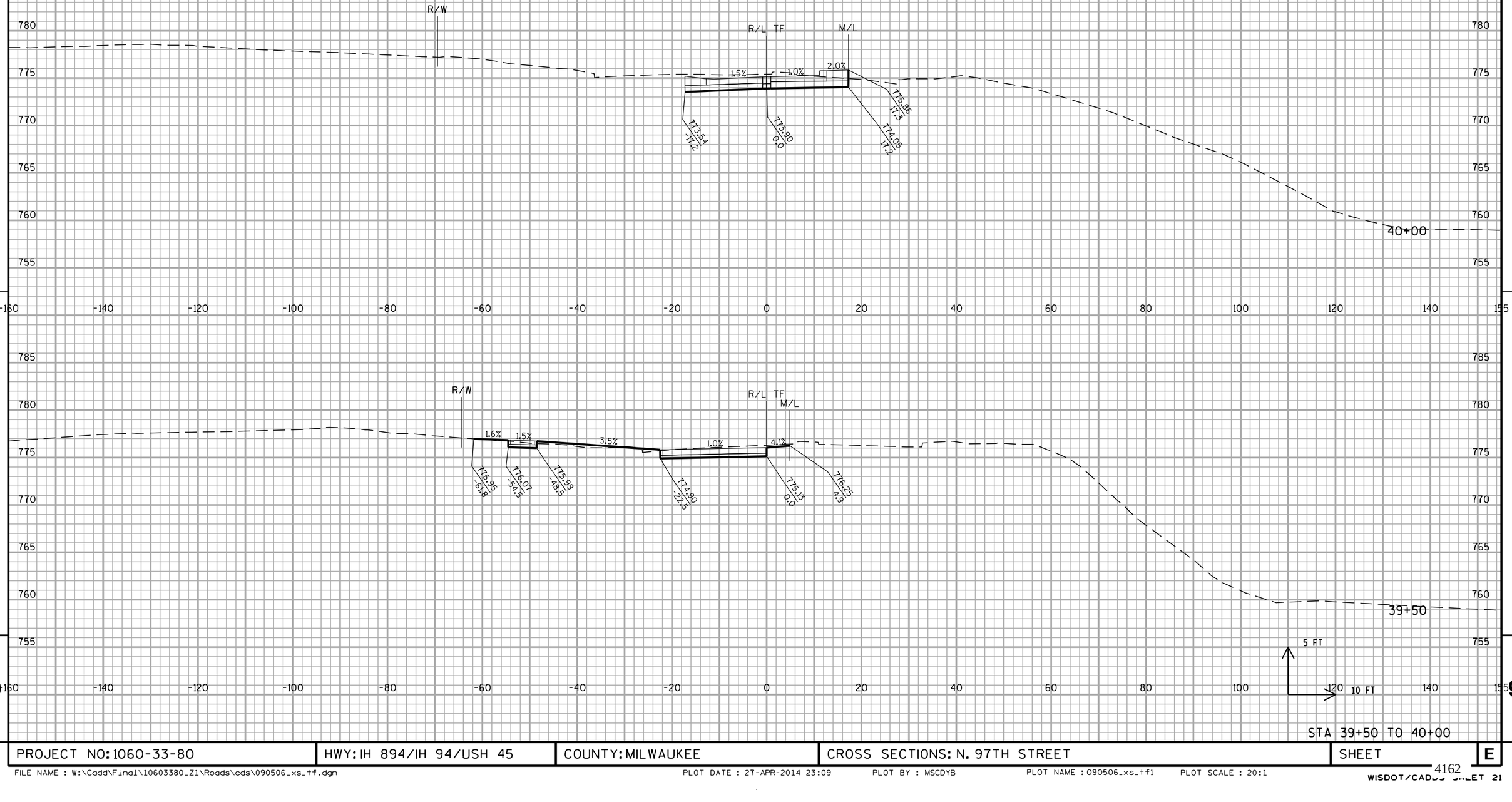


STA 38+94 TO 39+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 97TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090506_xs_tf.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090506_xs_tf PLOT SCALE : 20:1

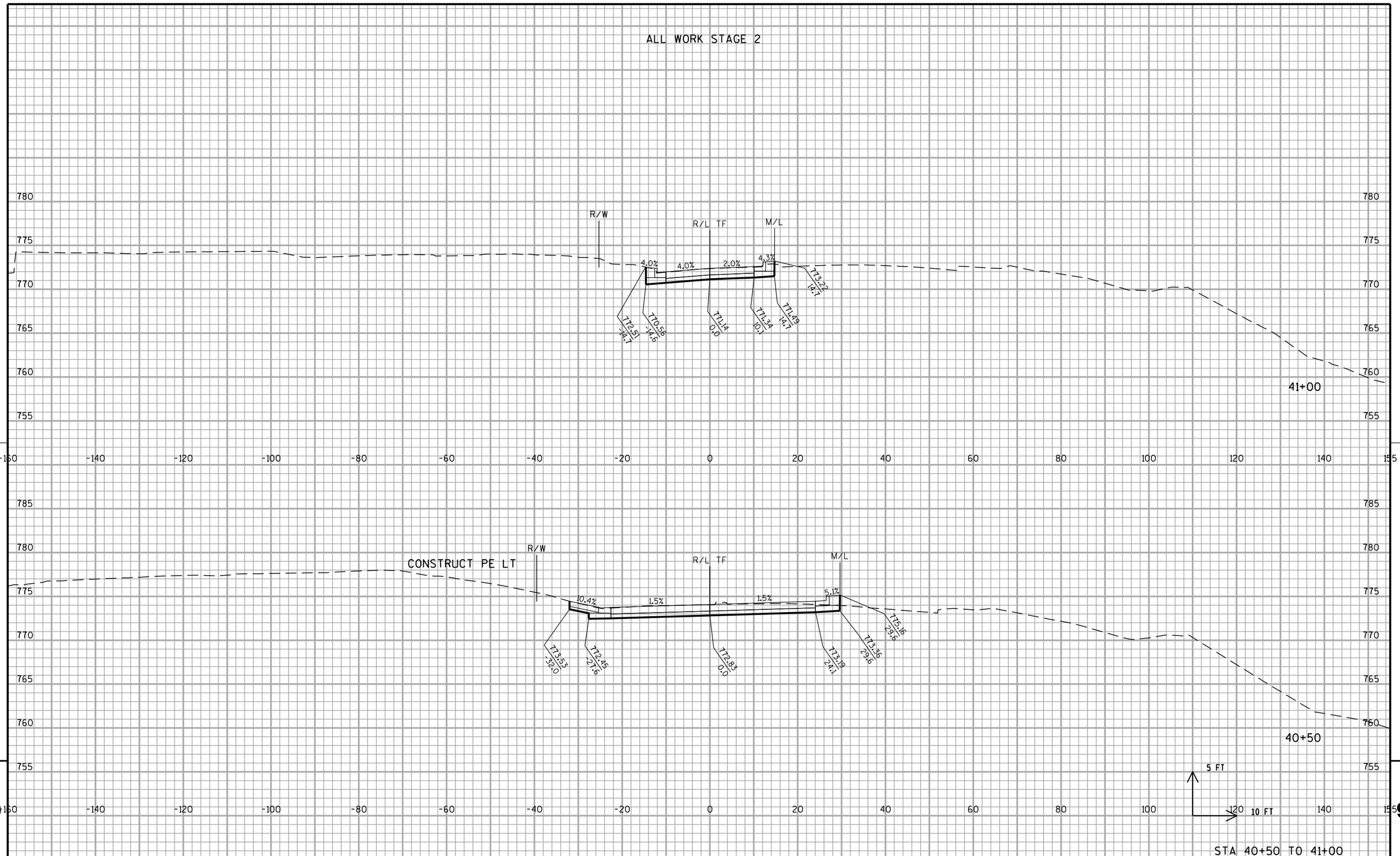
ALL WORK STAGE 2



STA 39+50 TO 40+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 97TH STREET	SHEET	E

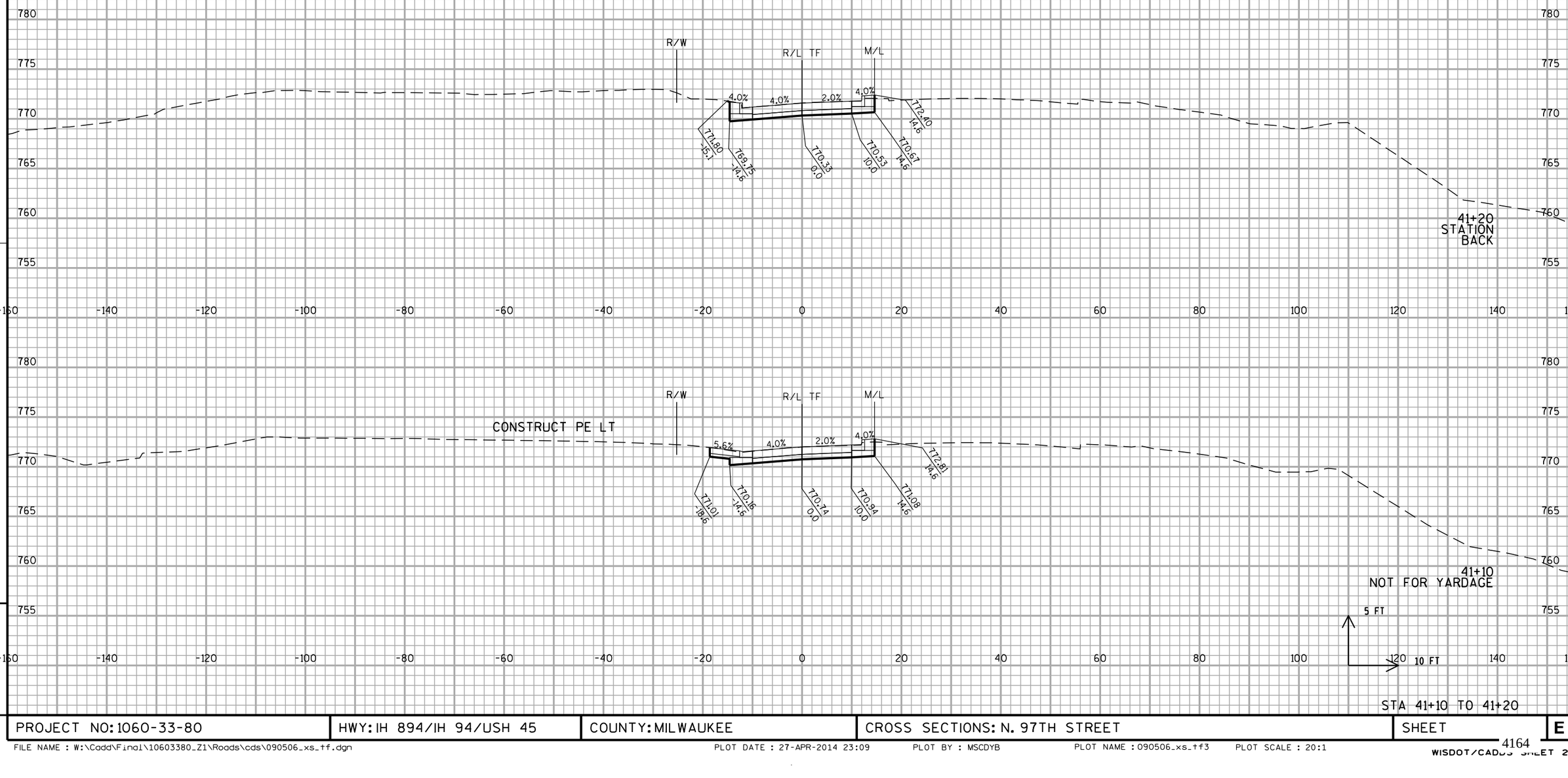
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 97TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090506_xs_tf.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090506_xs_tf2 PLOT SCALE : 20:1

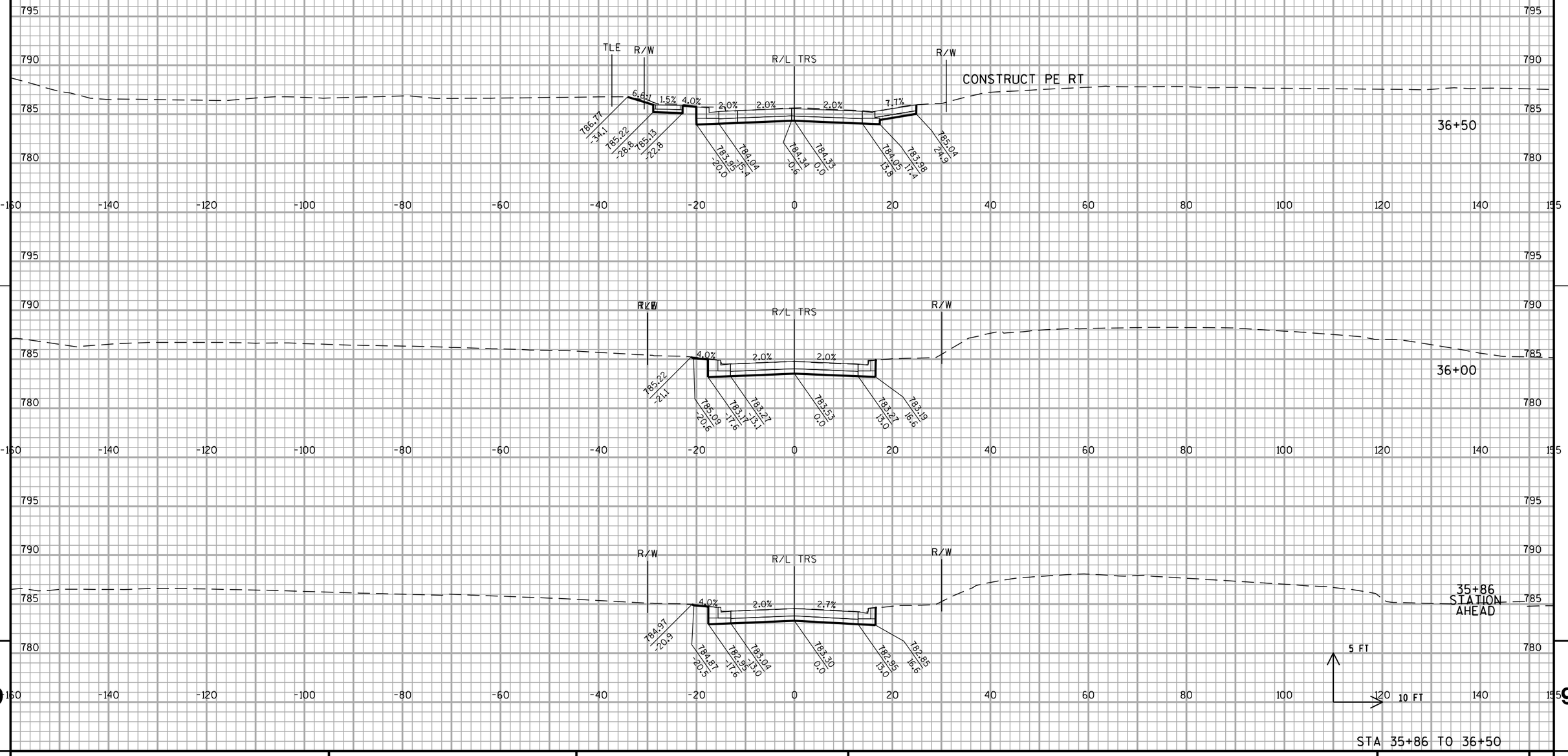
ALL WORK STAGE 2



STA 41+10 TO 41+20

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 97TH STREET	SHEET	E

ALL WORK STAGE 1

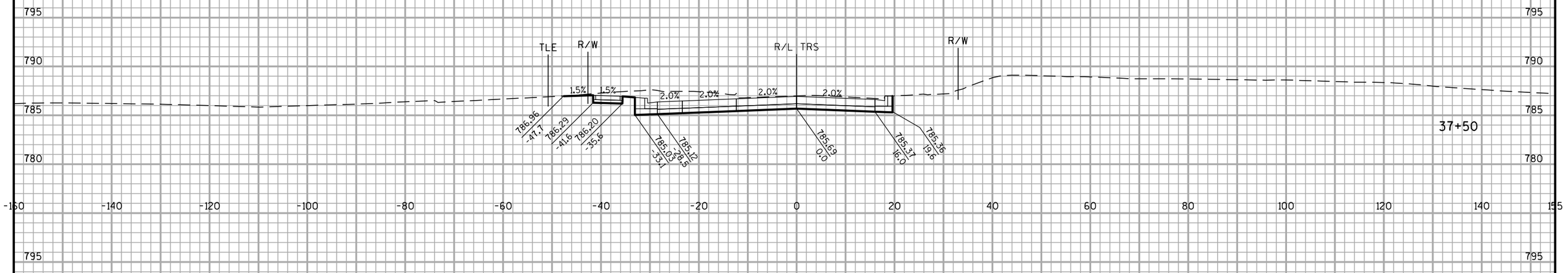


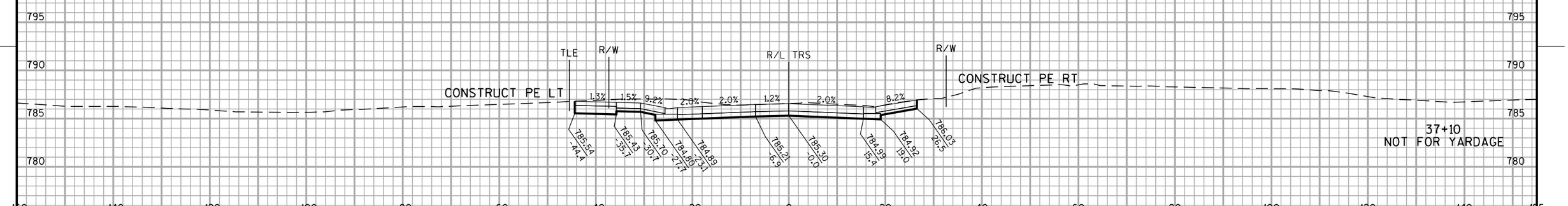
STA 35+86 TO 36+50

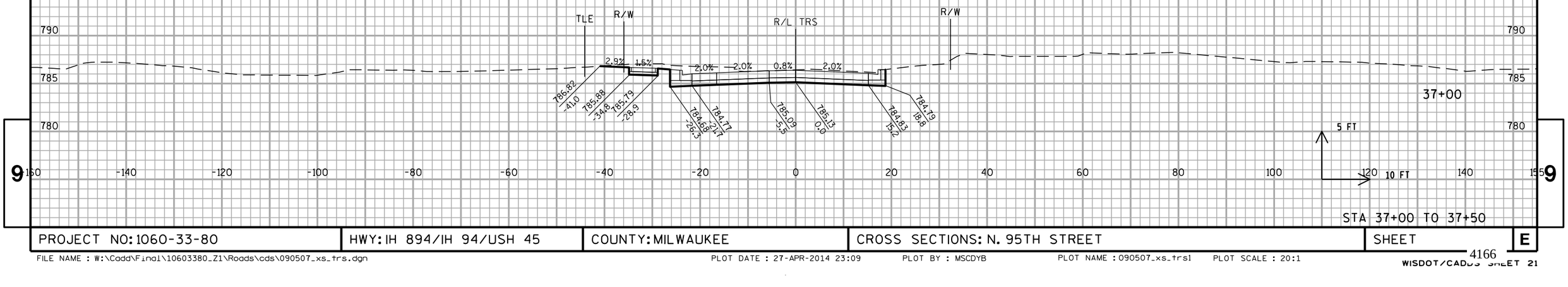
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090507_xs_trs.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090507_xs_trs PLOT SCALE : 20:1

ALL WORK STAGE 1





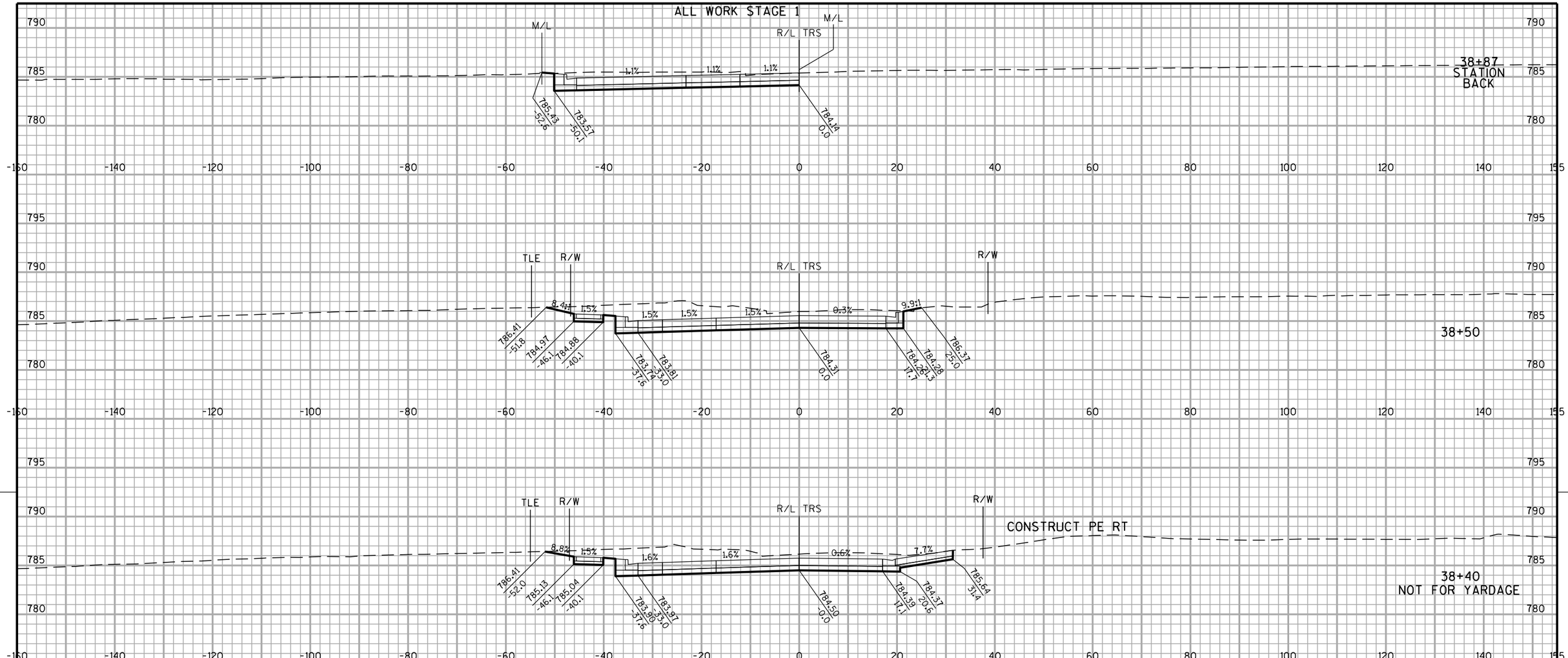


STA 37+00 TO 37+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090507_xs_trs.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090507_xs_trs1 PLOT SCALE : 20:1

ALL WORK STAGE 1

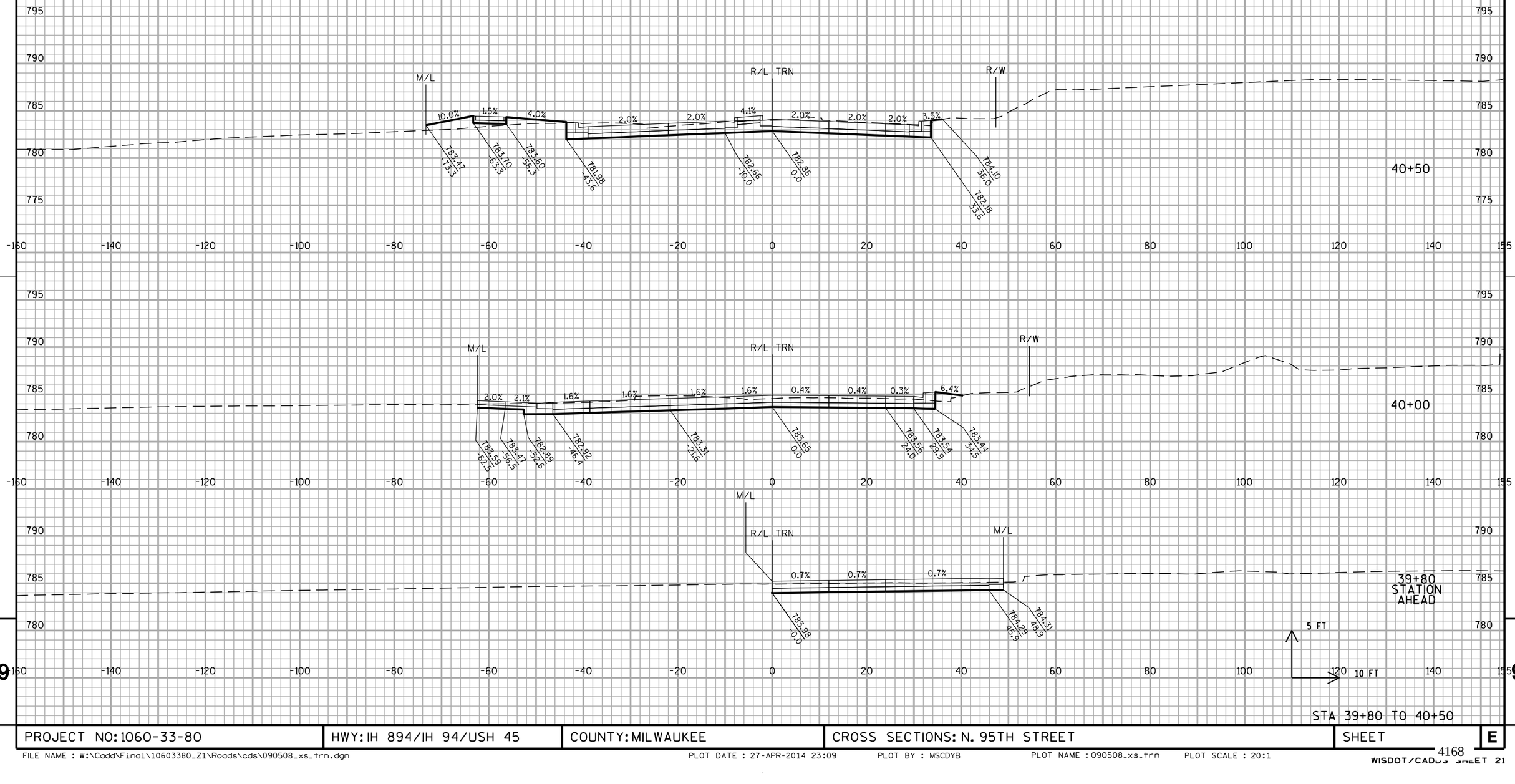


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090507_xs_trs.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090507_xs_trs2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



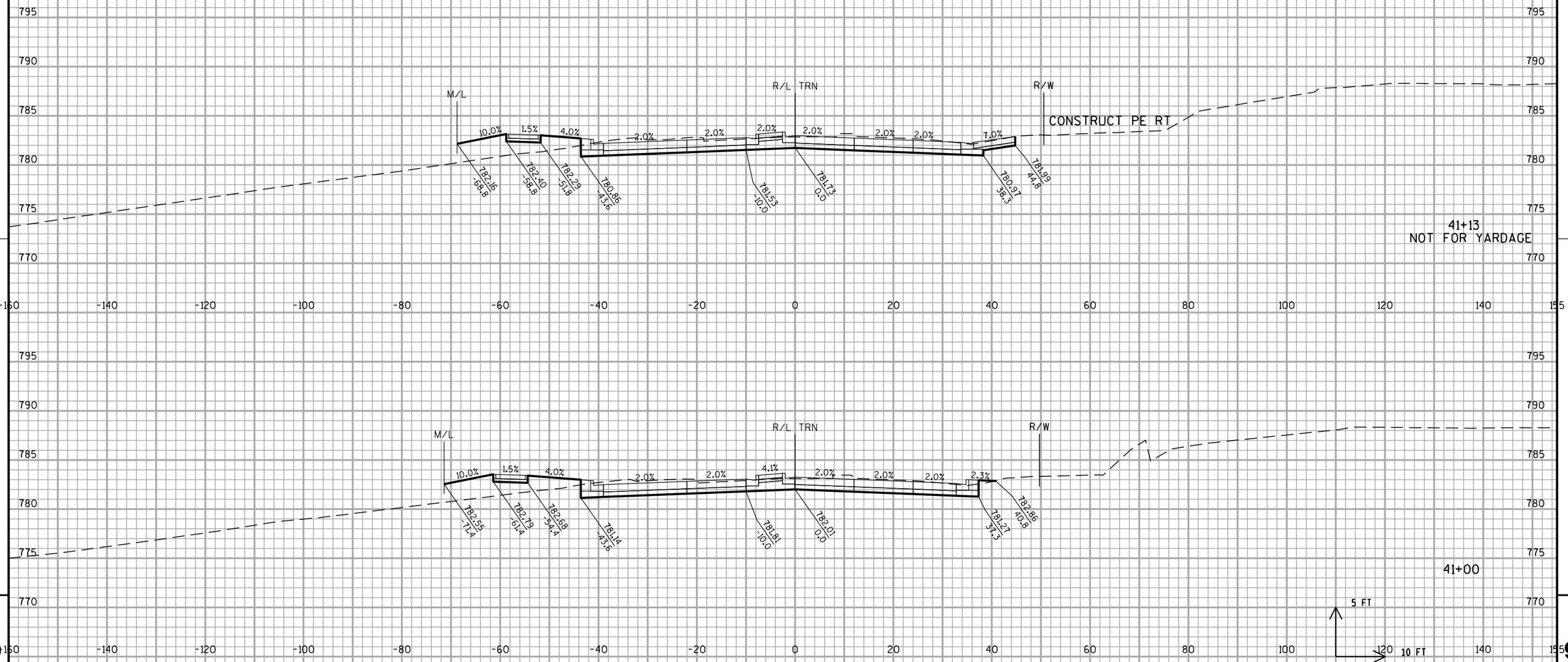
STA 39+80 TO 40+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

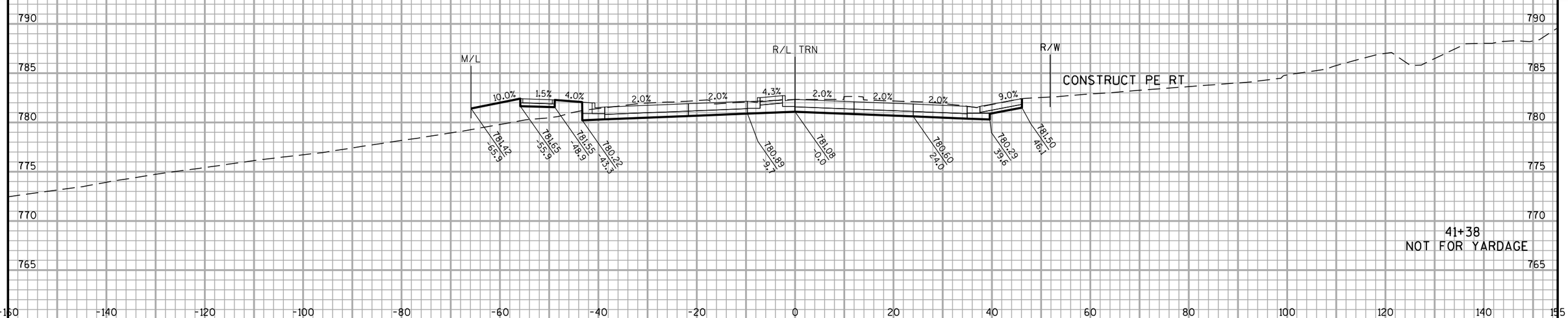
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trnl PLOT SCALE : 20:1

ALL WORK STAGE 1



5 FT

10 FT

STA 41+38 TO 41+38

9

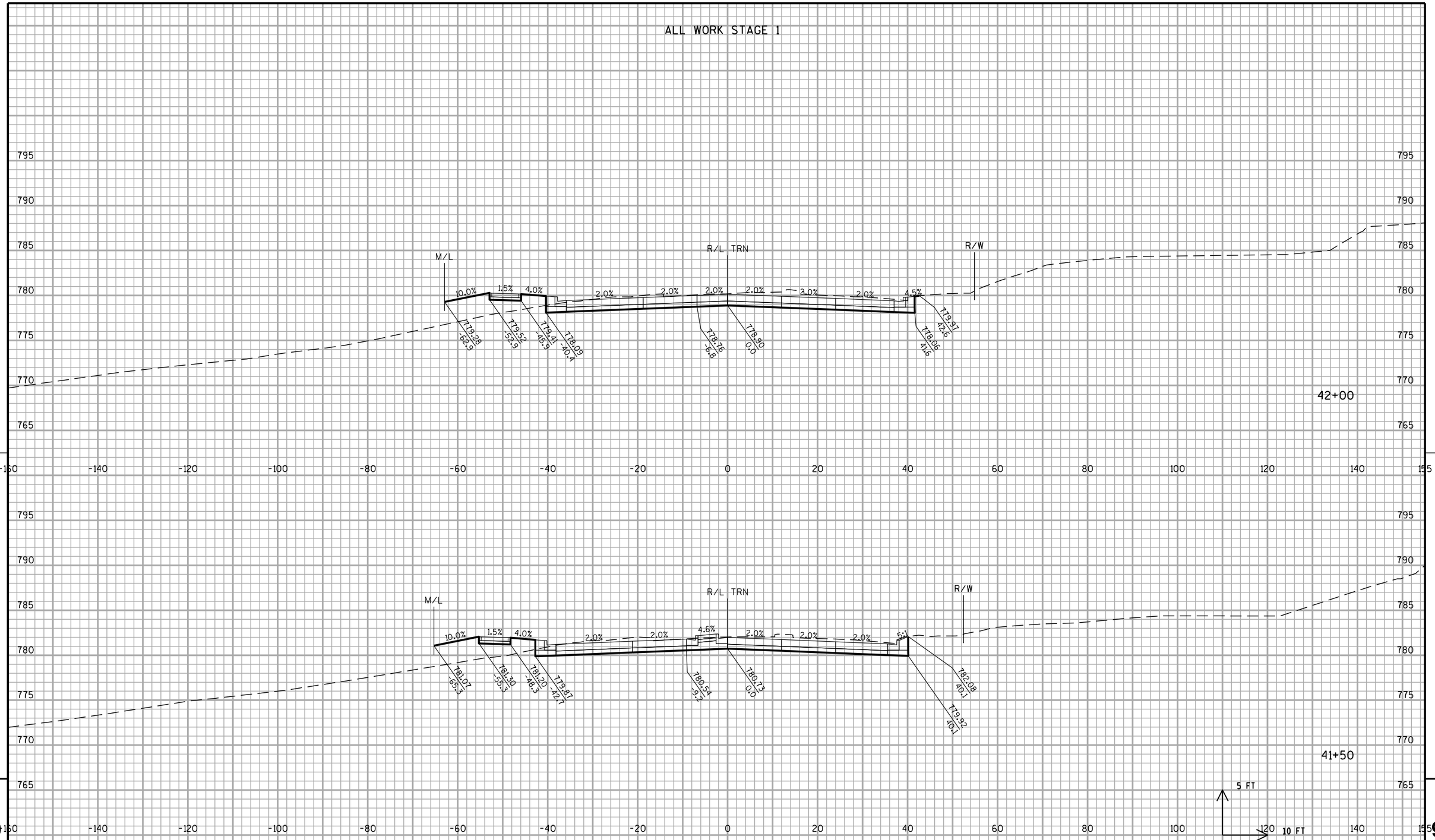
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

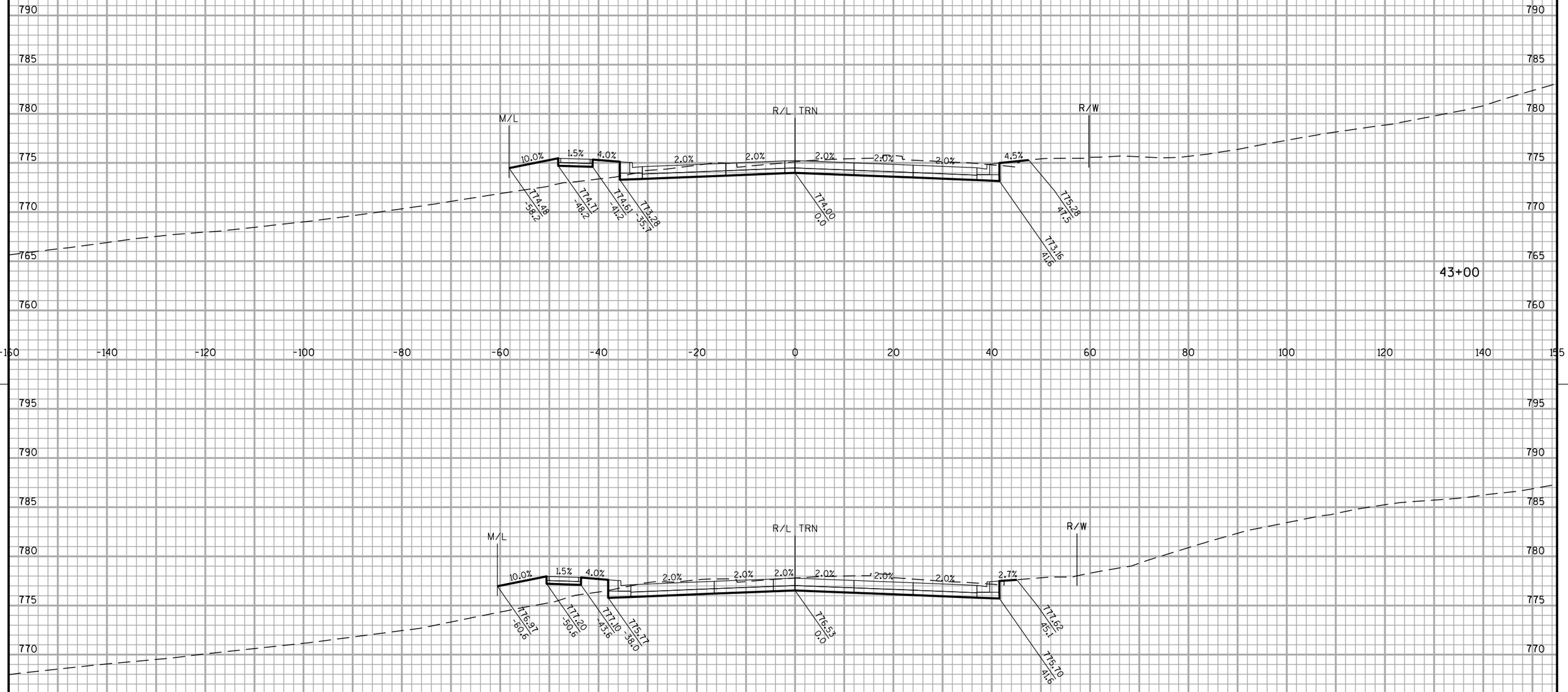


STA 41+50 TO 42+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn3 PLOT SCALE : 20:1

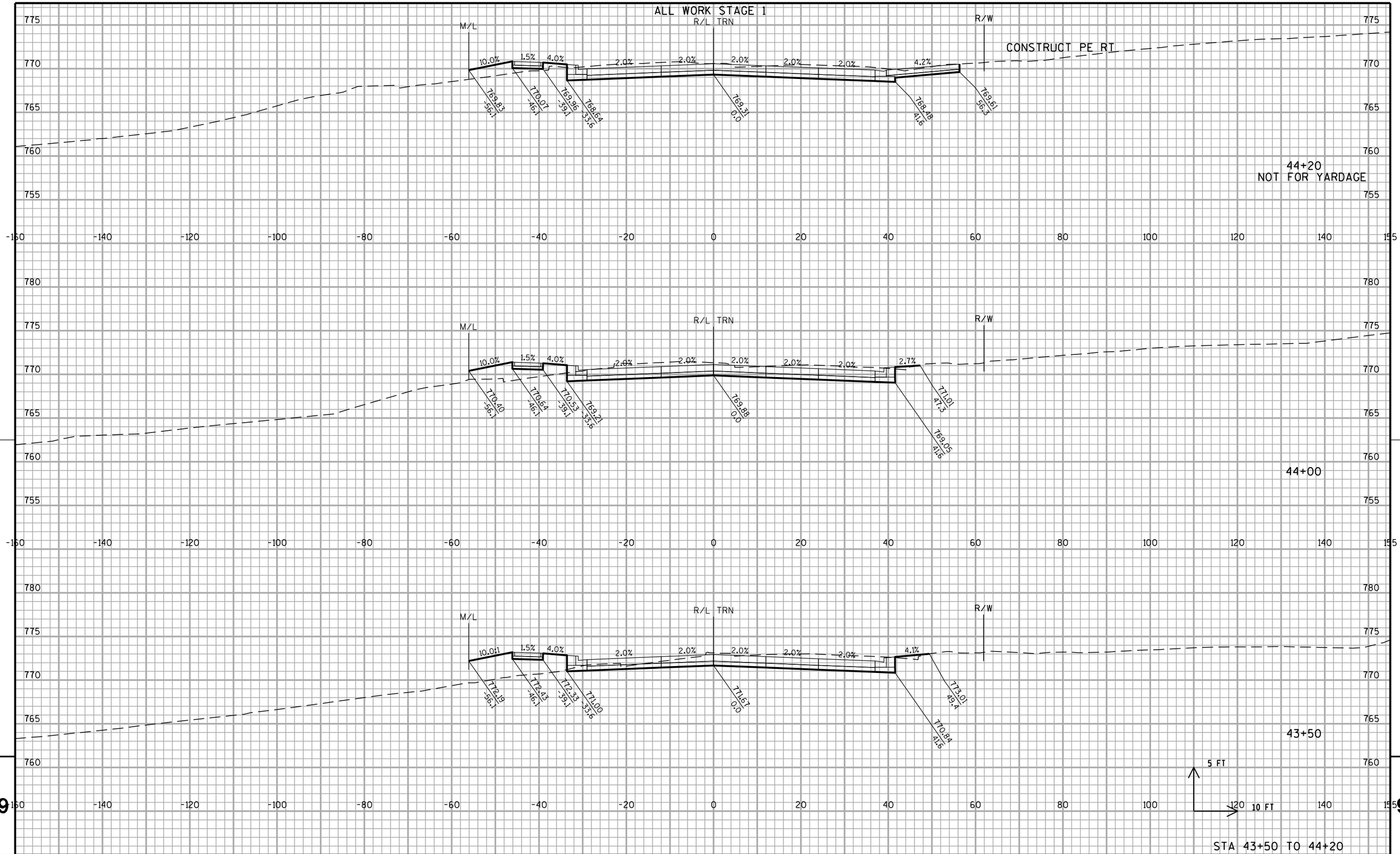
ALL WORK STAGE 1



STA 42+50 TO 43+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

ALL WORK STAGE 1

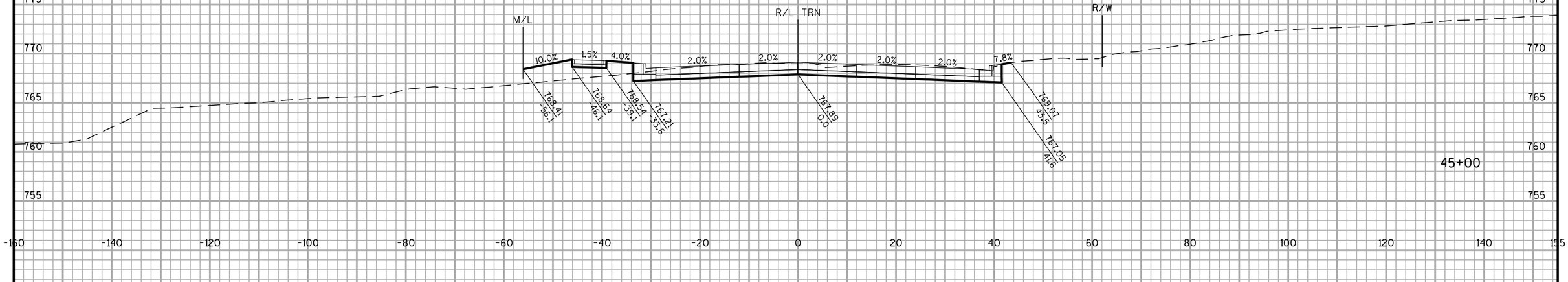


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

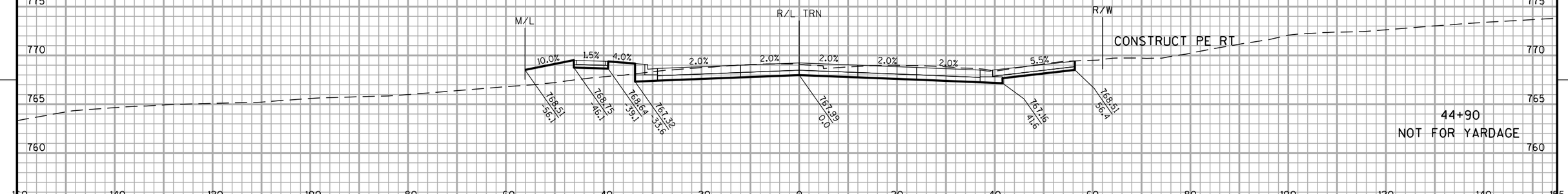
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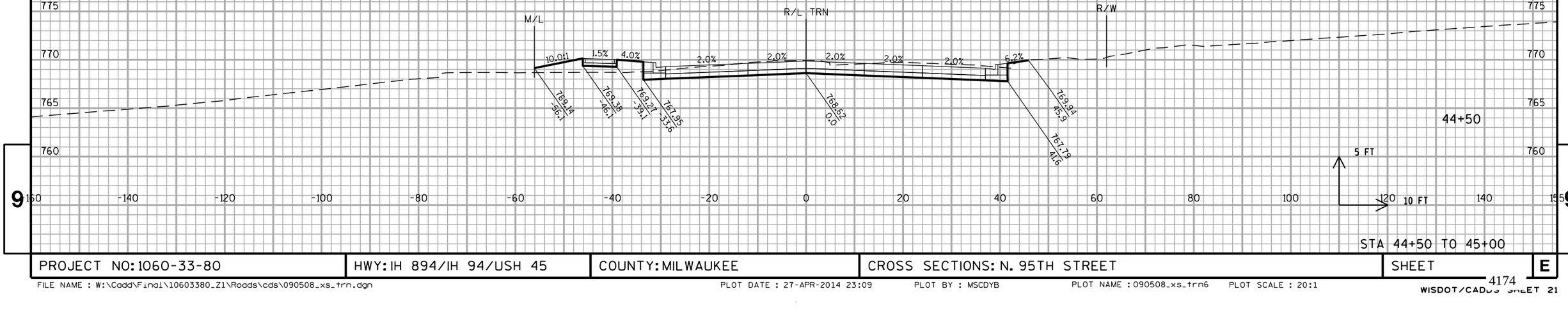
WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



CONSTRUCT PE RT



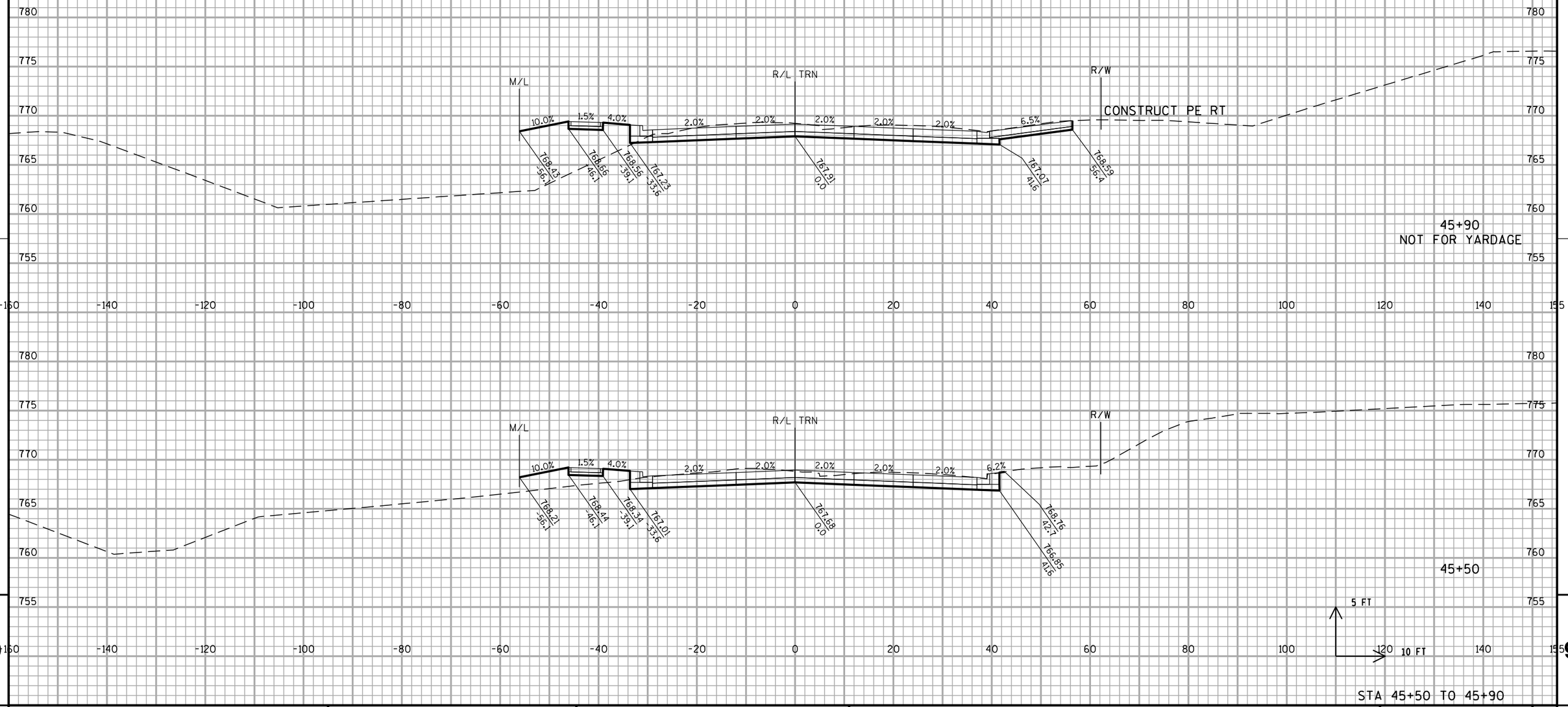


STA 44+50 TO 45+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn6 PLOT SCALE : 20:1

ALL WORK STAGE 1

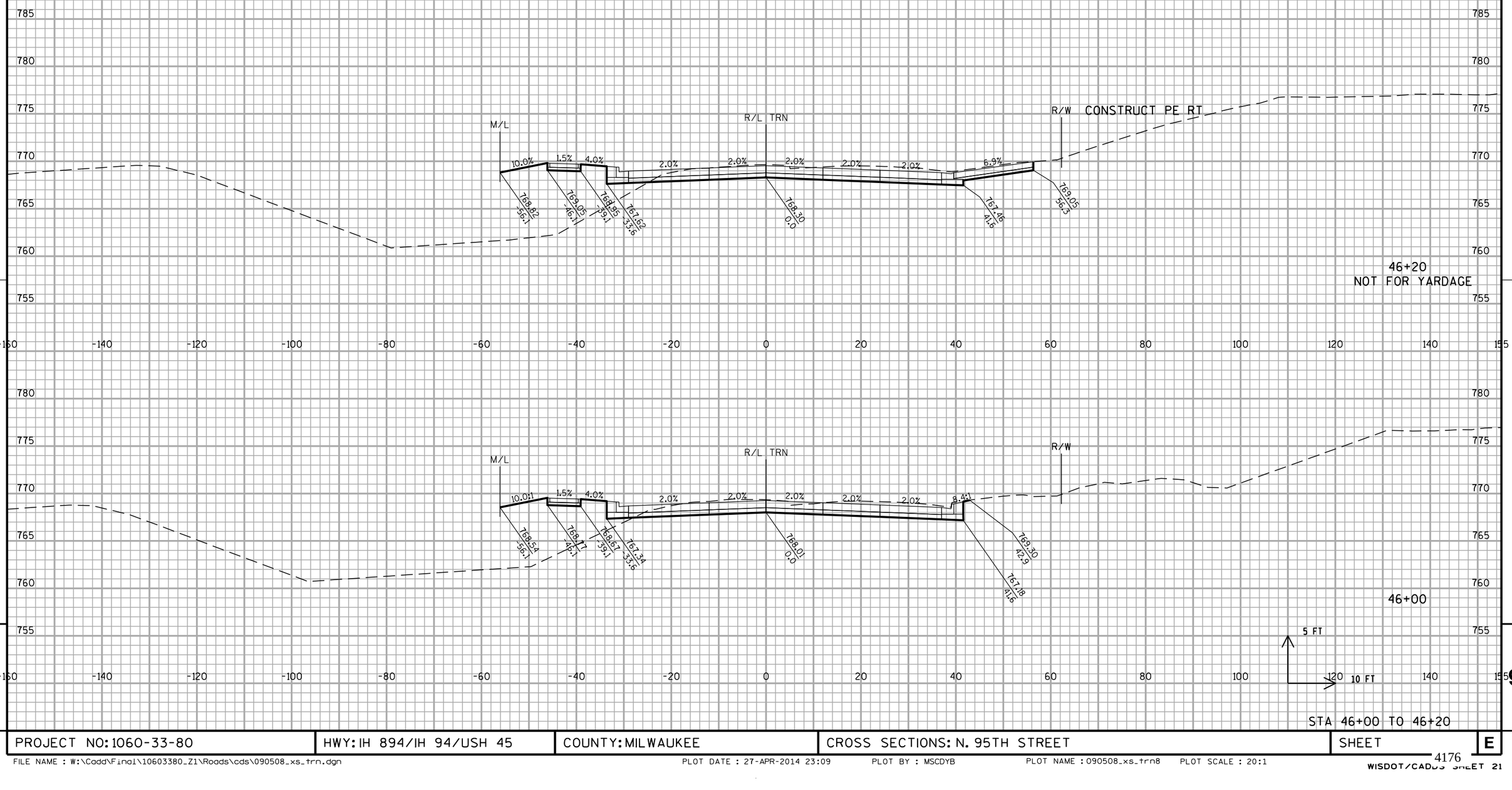


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



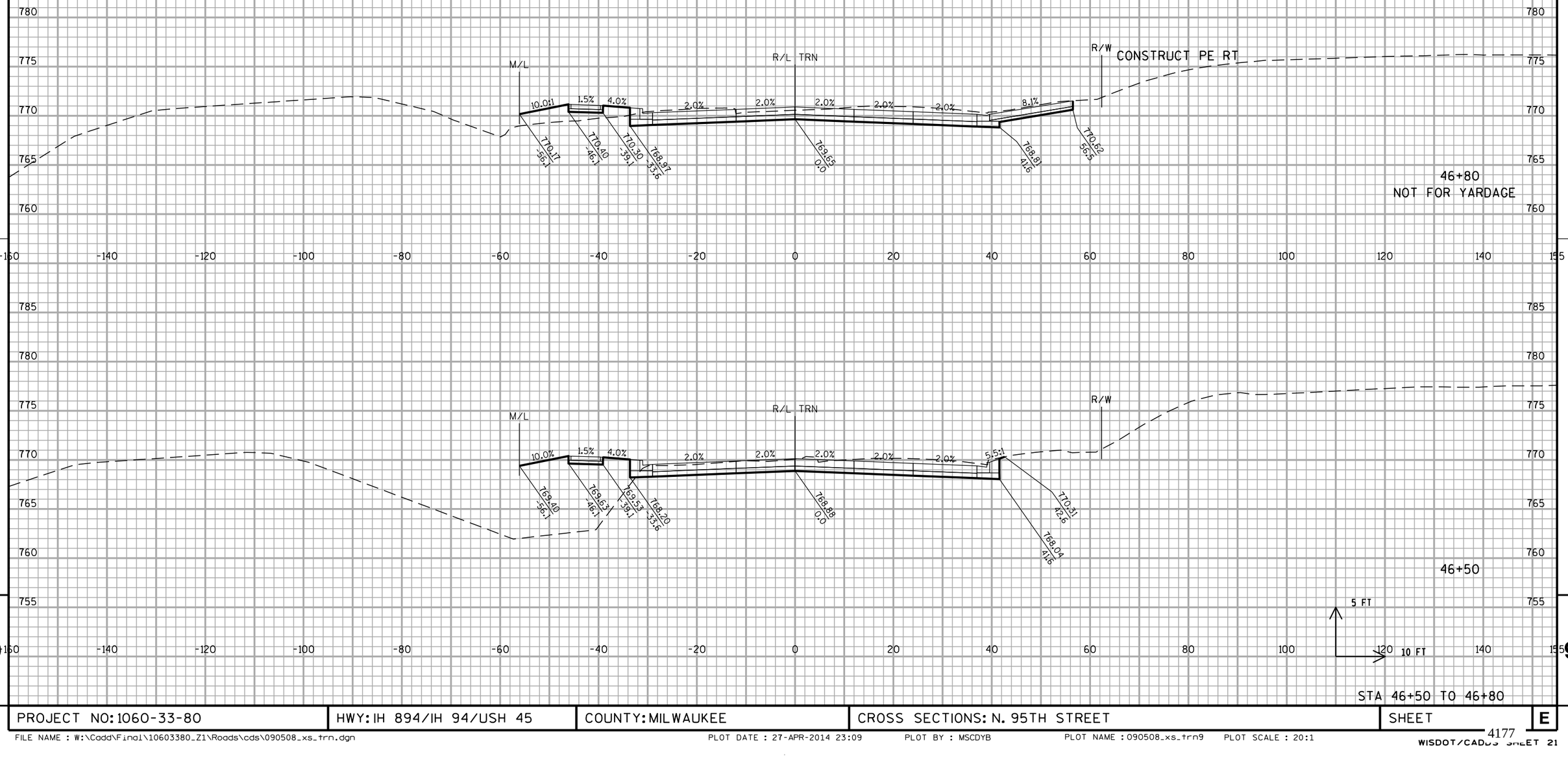
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

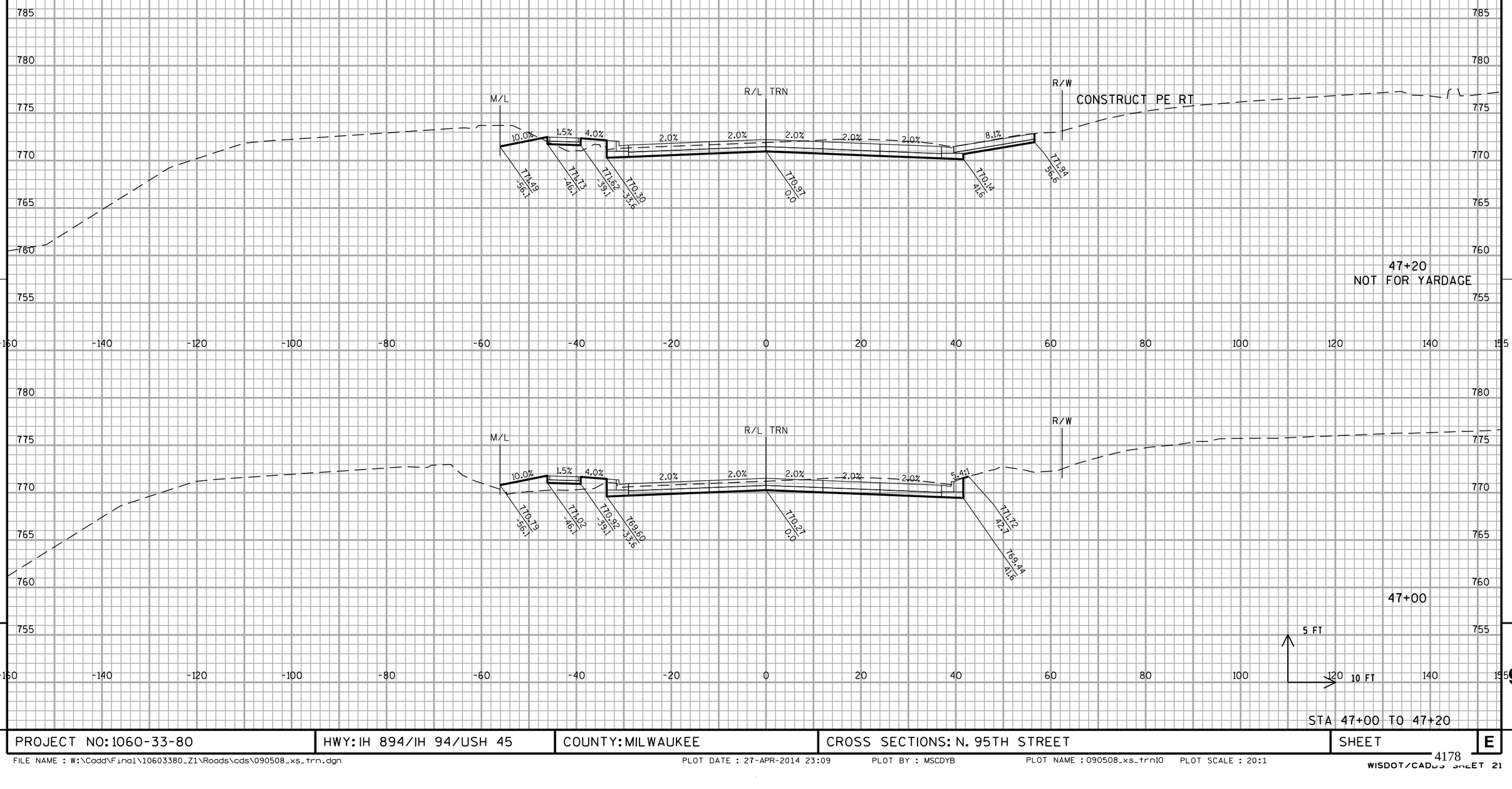
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

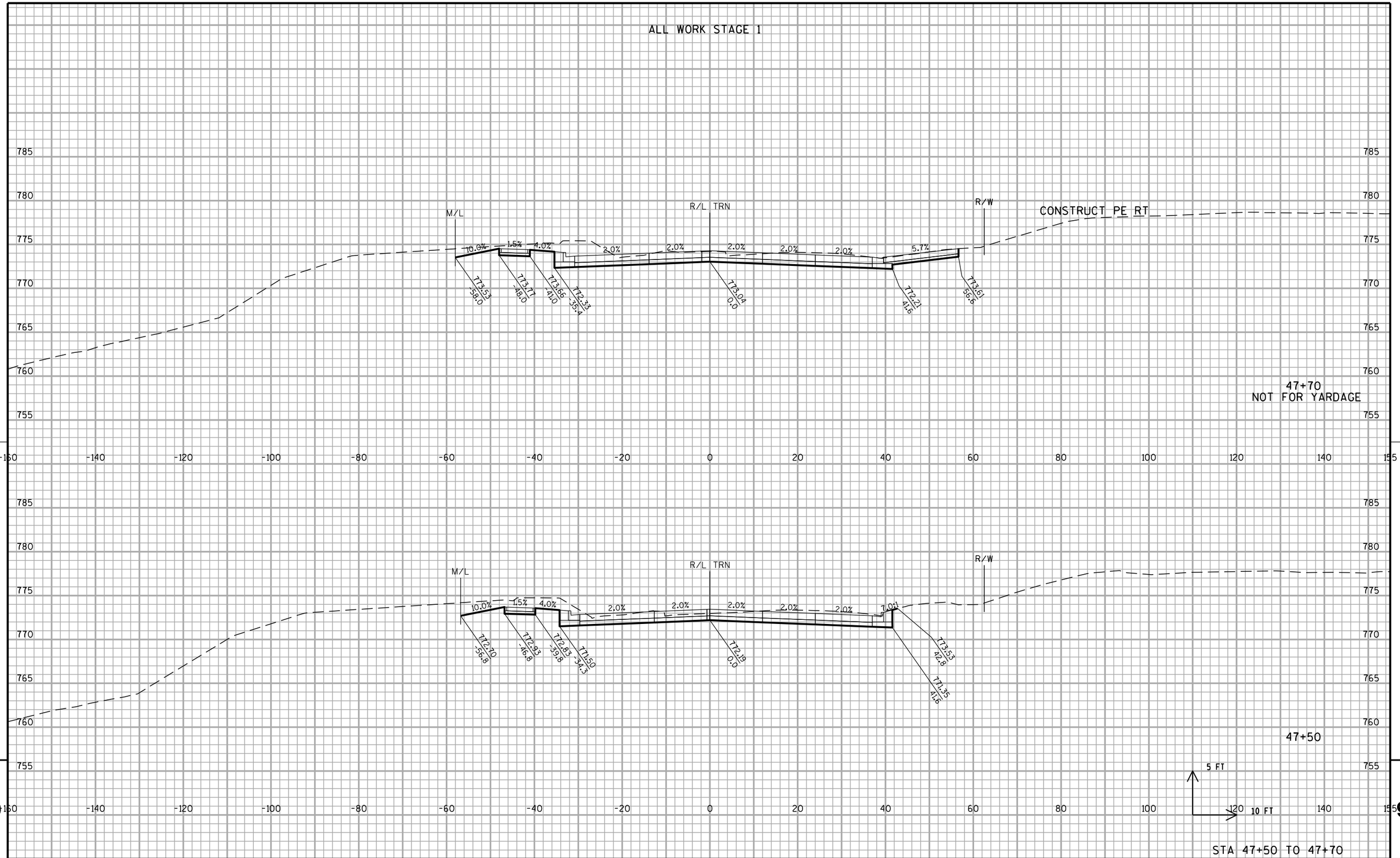
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ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

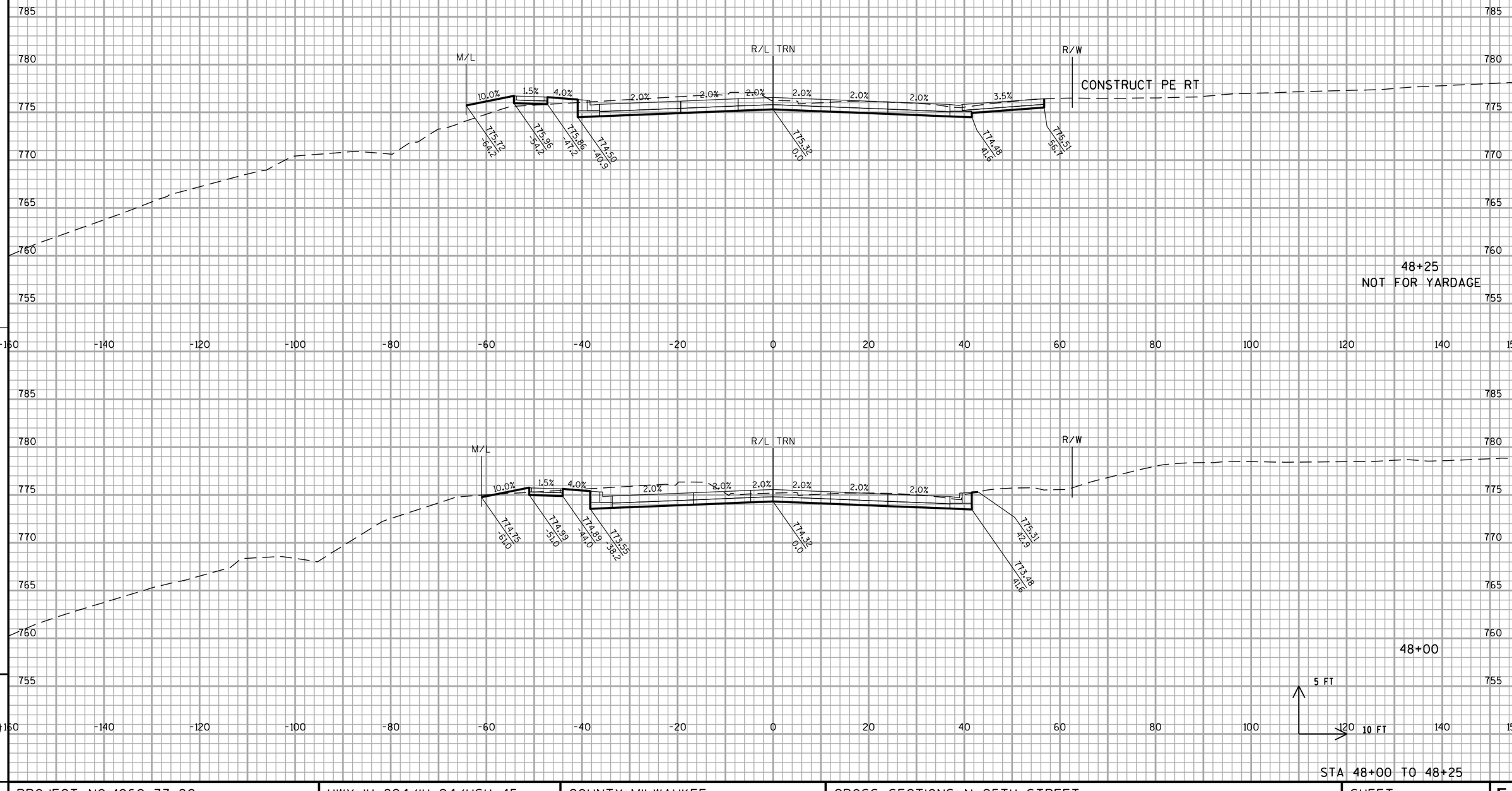
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn11 PLOT SCALE : 20:1

ALL WORK STAGE 1



48+25
NOT FOR YARDAGE

48+00

5 FT
10 FT

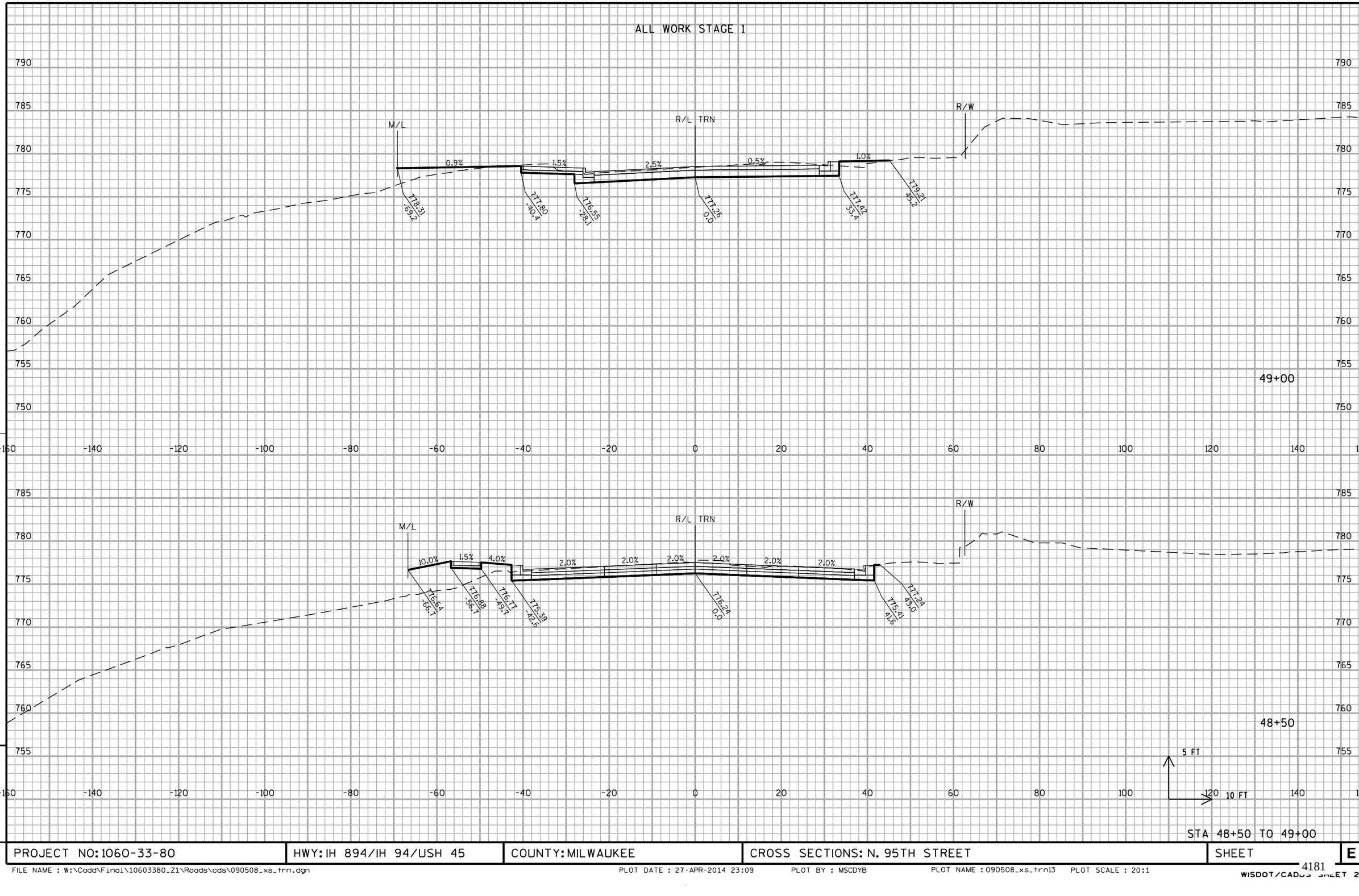
STA 48+00 TO 48+25

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090508_xs_trn.dgn PLOT DATE : 27-APR-2014 23:09 PLOT BY : MSCDYB PLOT NAME : 090508_xs_trn12 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

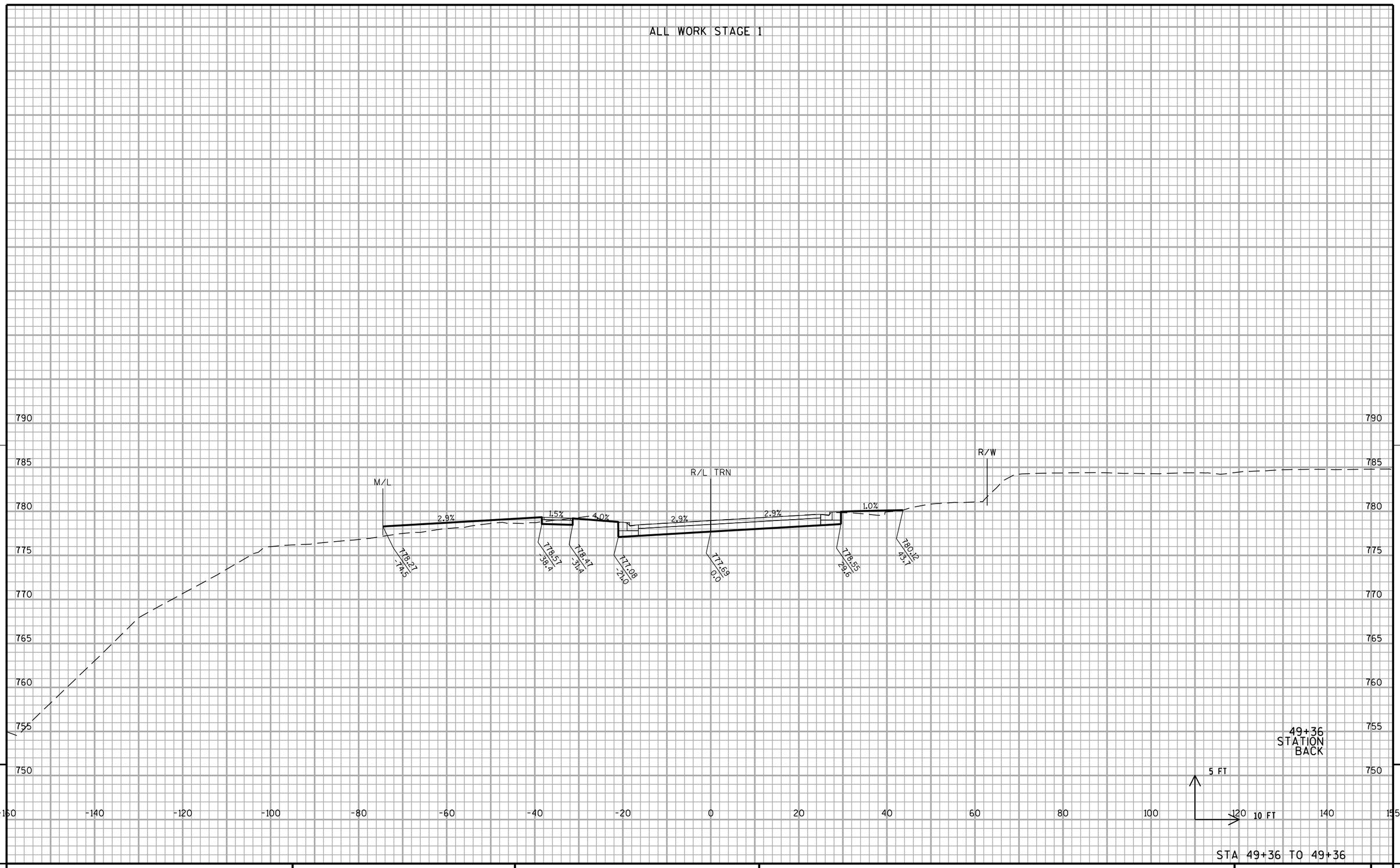
ALL WORK STAGE 1



STA 48+50 TO 49+00

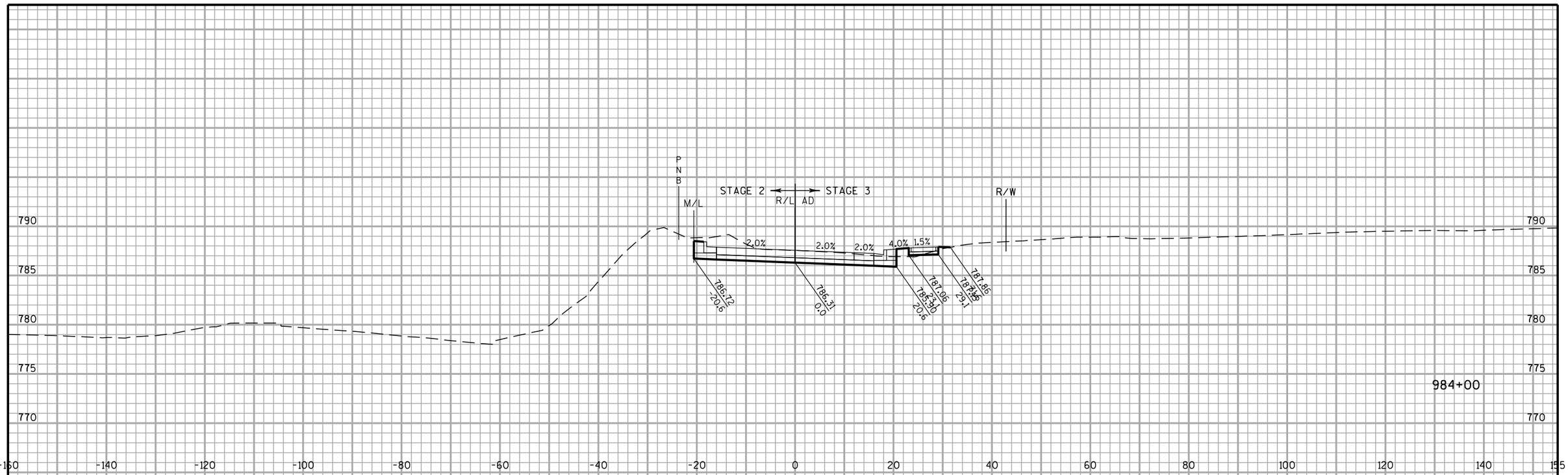
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E

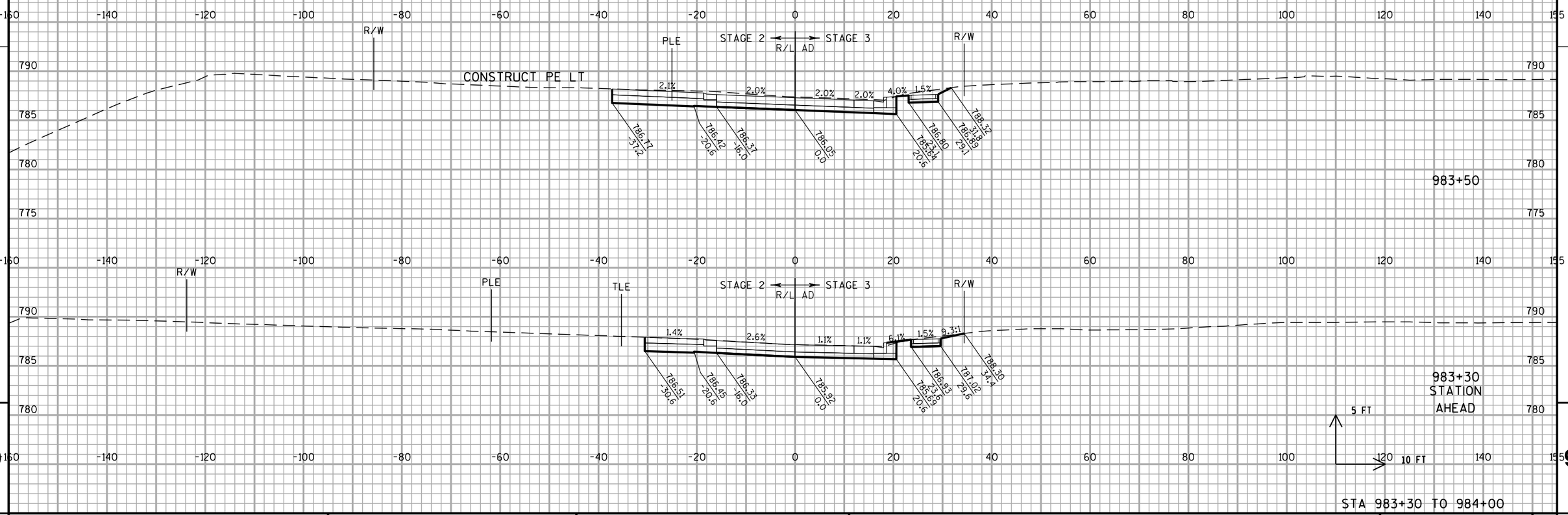
ALL WORK STAGE 1



STA 49+36 TO 49+36

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: N. 95TH STREET	SHEET	E



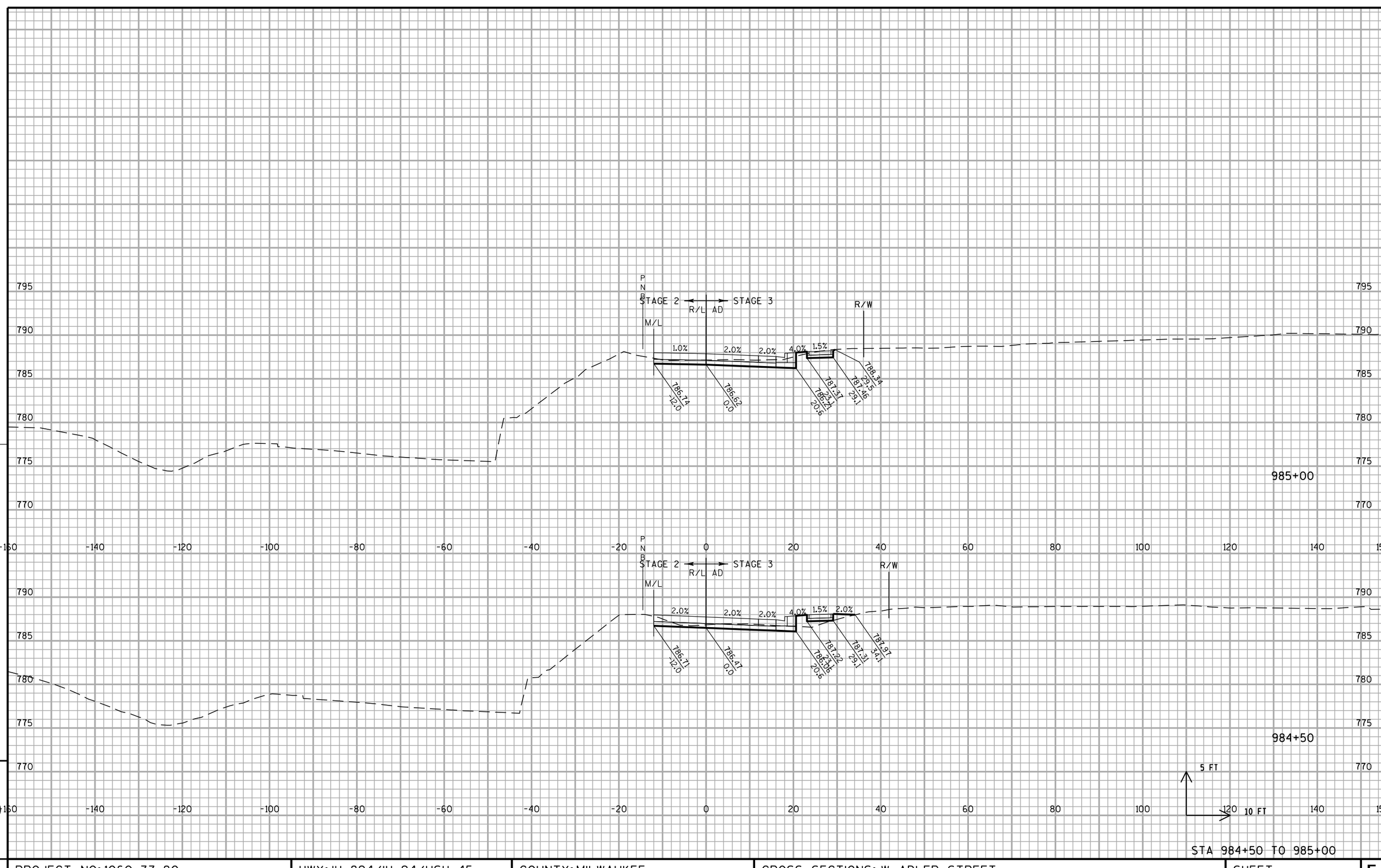


9

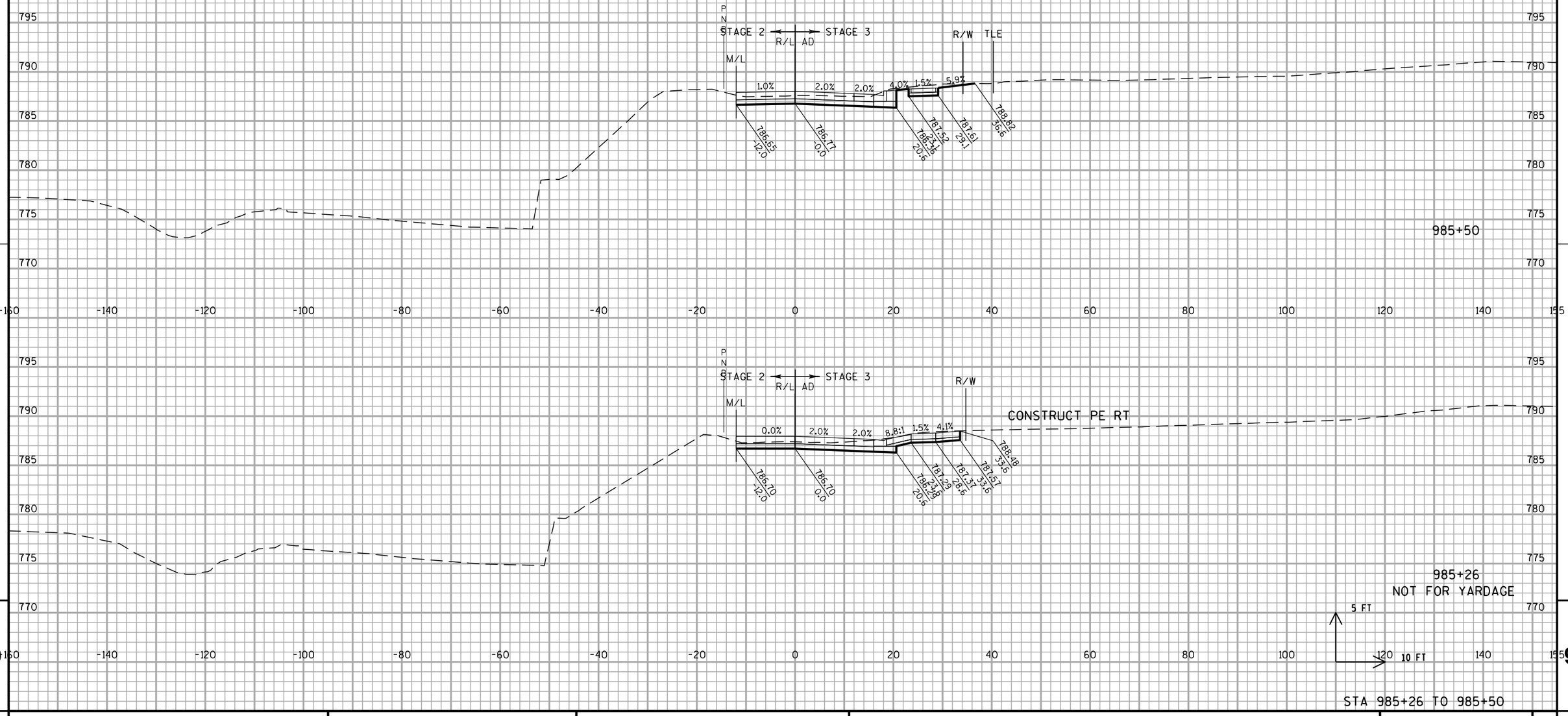
9

STA 983+30 TO 984+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

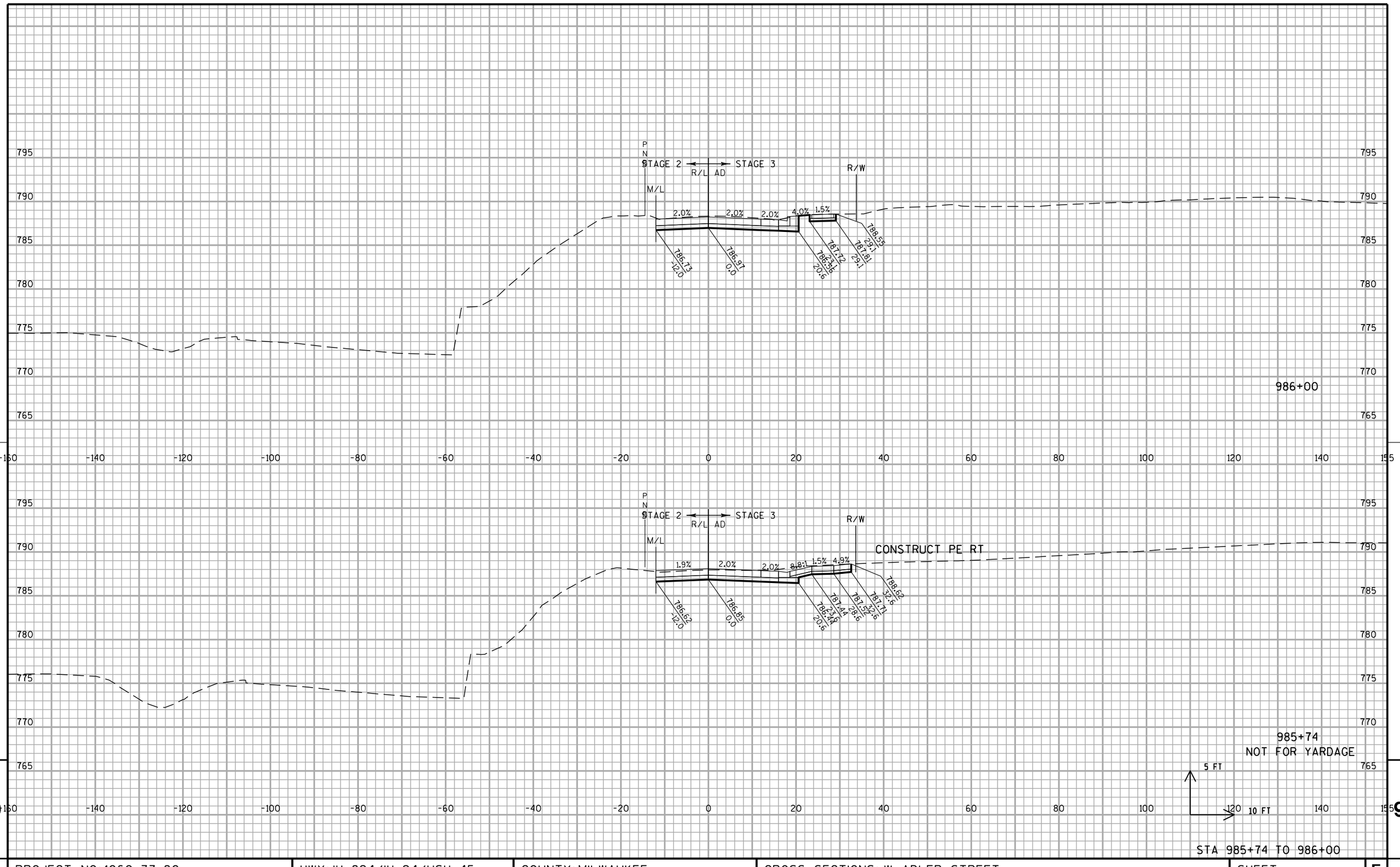


9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

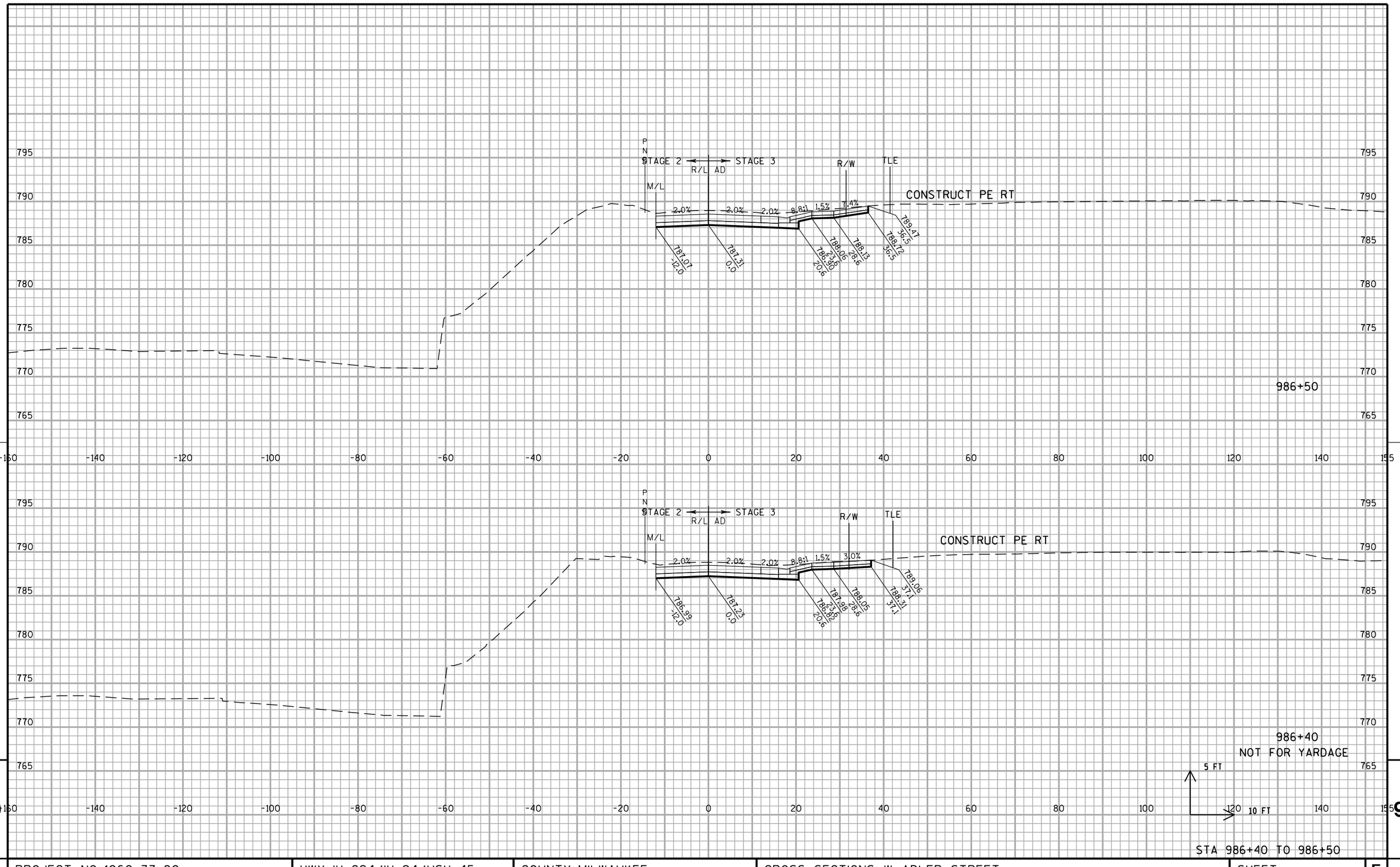
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

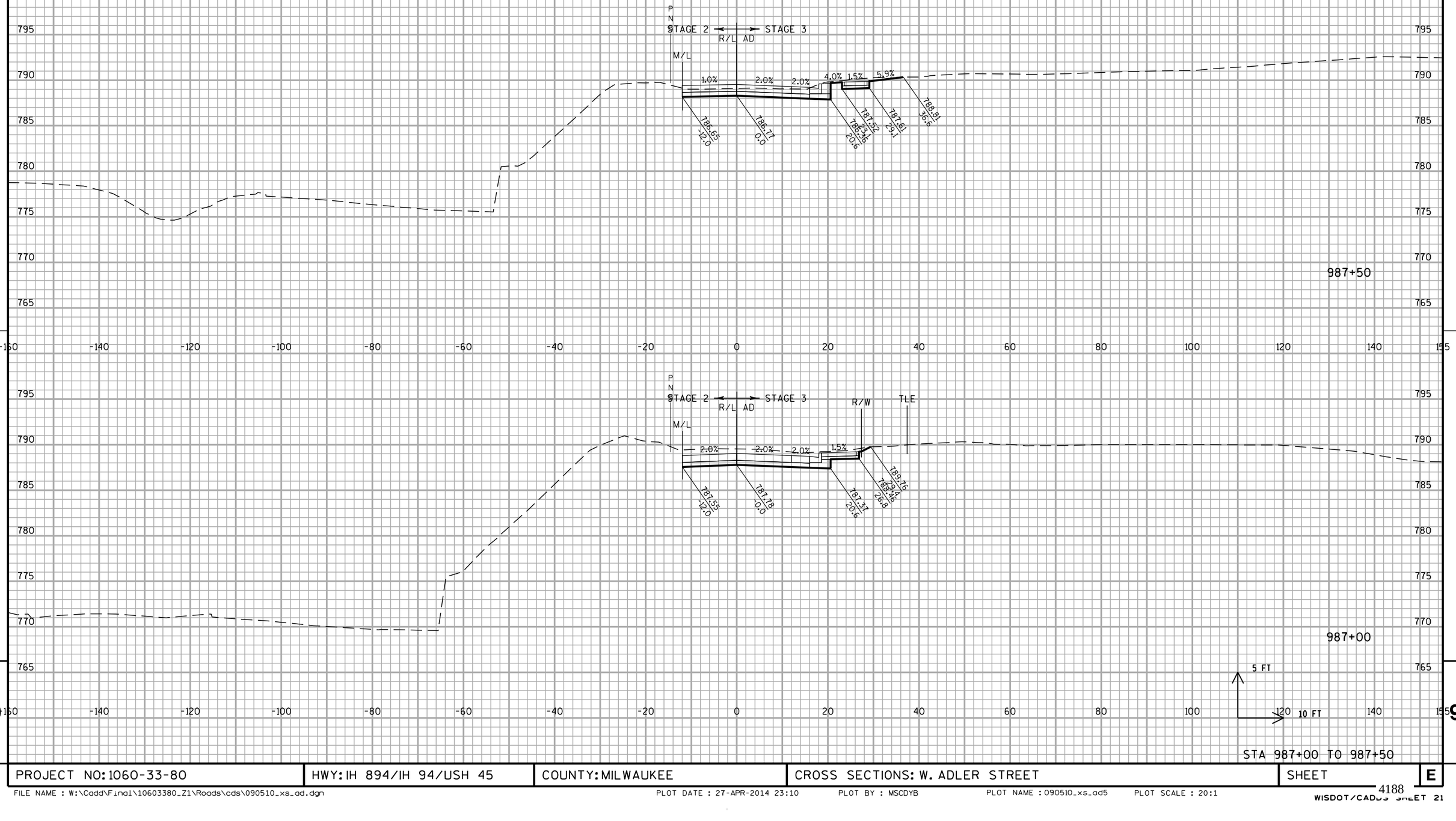
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad4 PLOT SCALE : 20:1



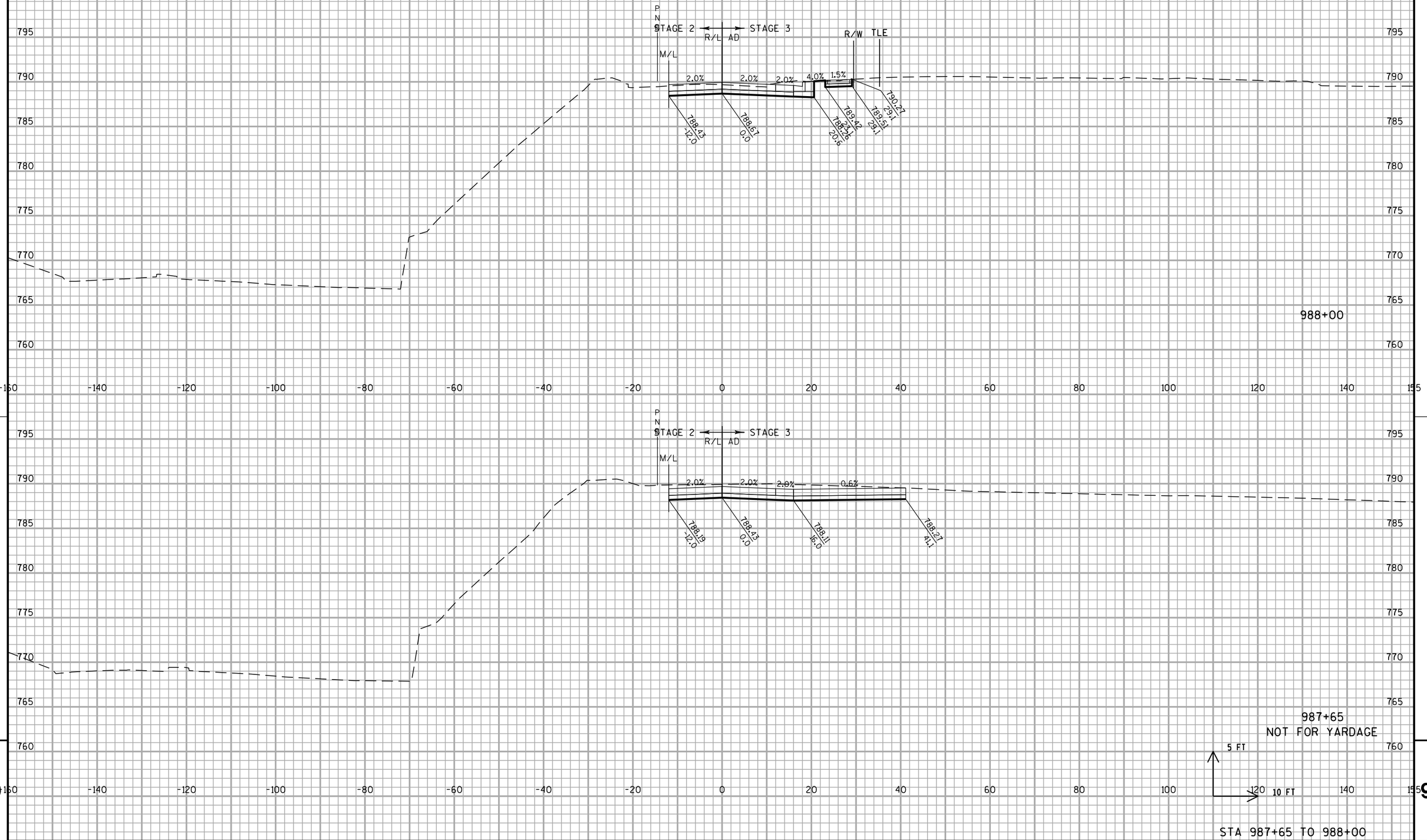
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

STA 987+00 TO 987+50

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad5 PLOT SCALE : 20:1



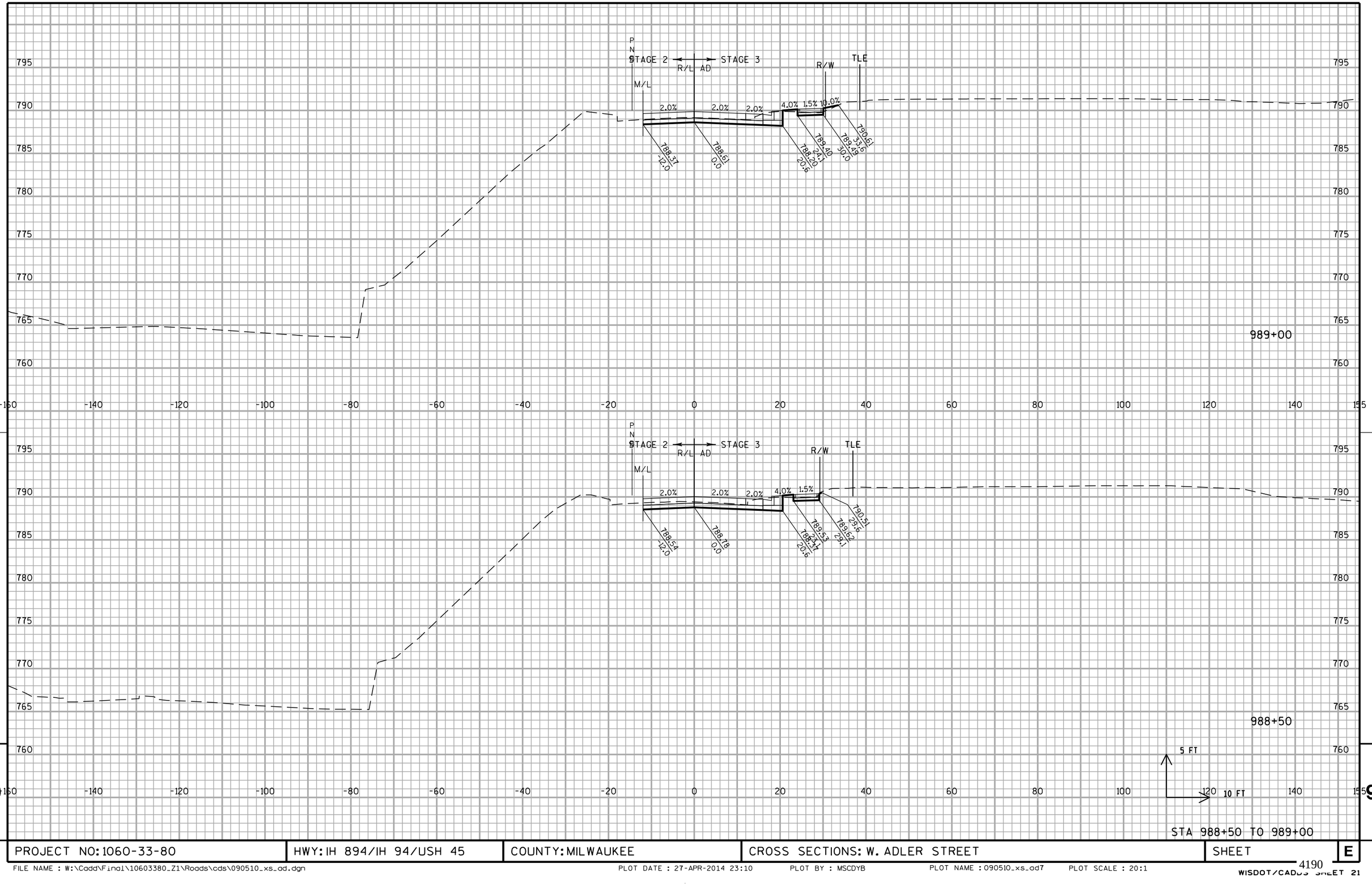
STA 987+65 TO 988+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

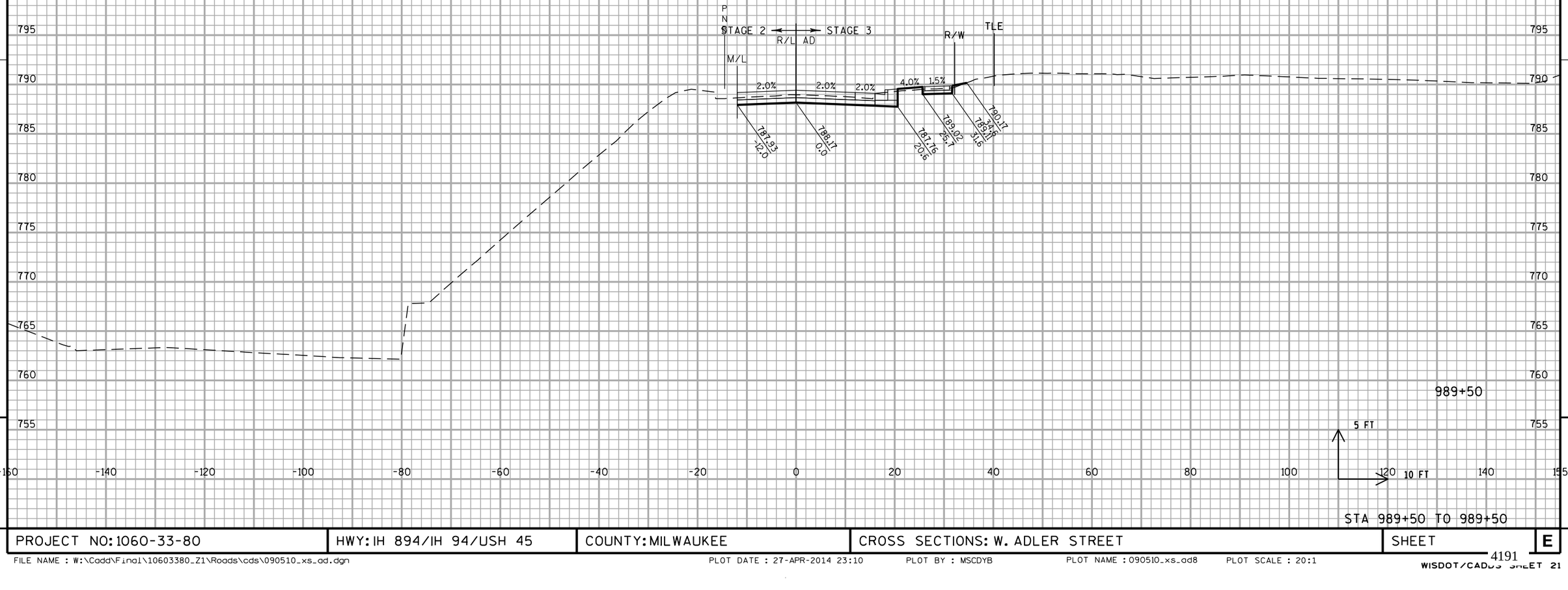


9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

STA 988+50 TO 989+00

9

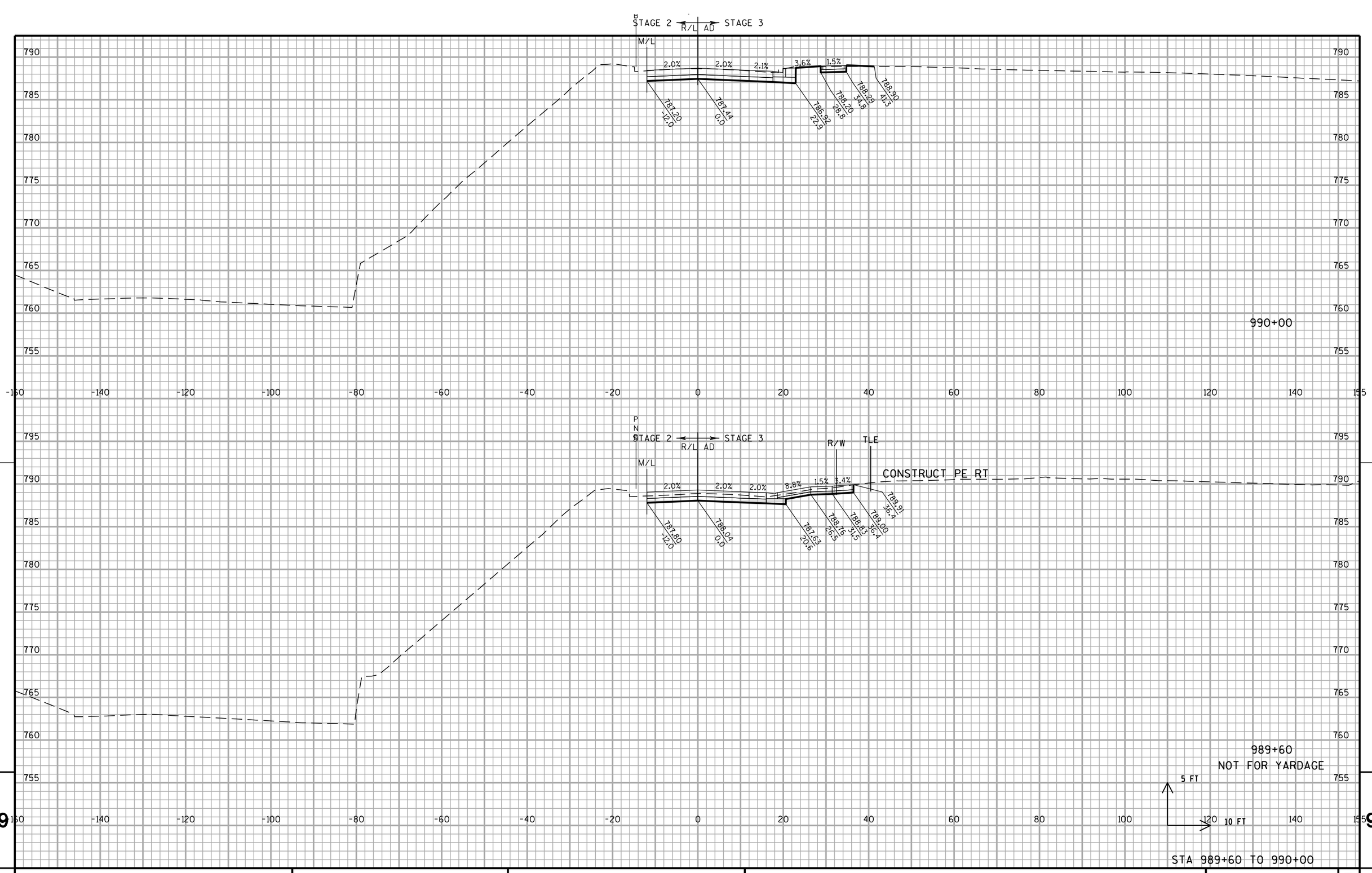


STA 989+50 TO 989+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad8 PLOT SCALE : 20:1

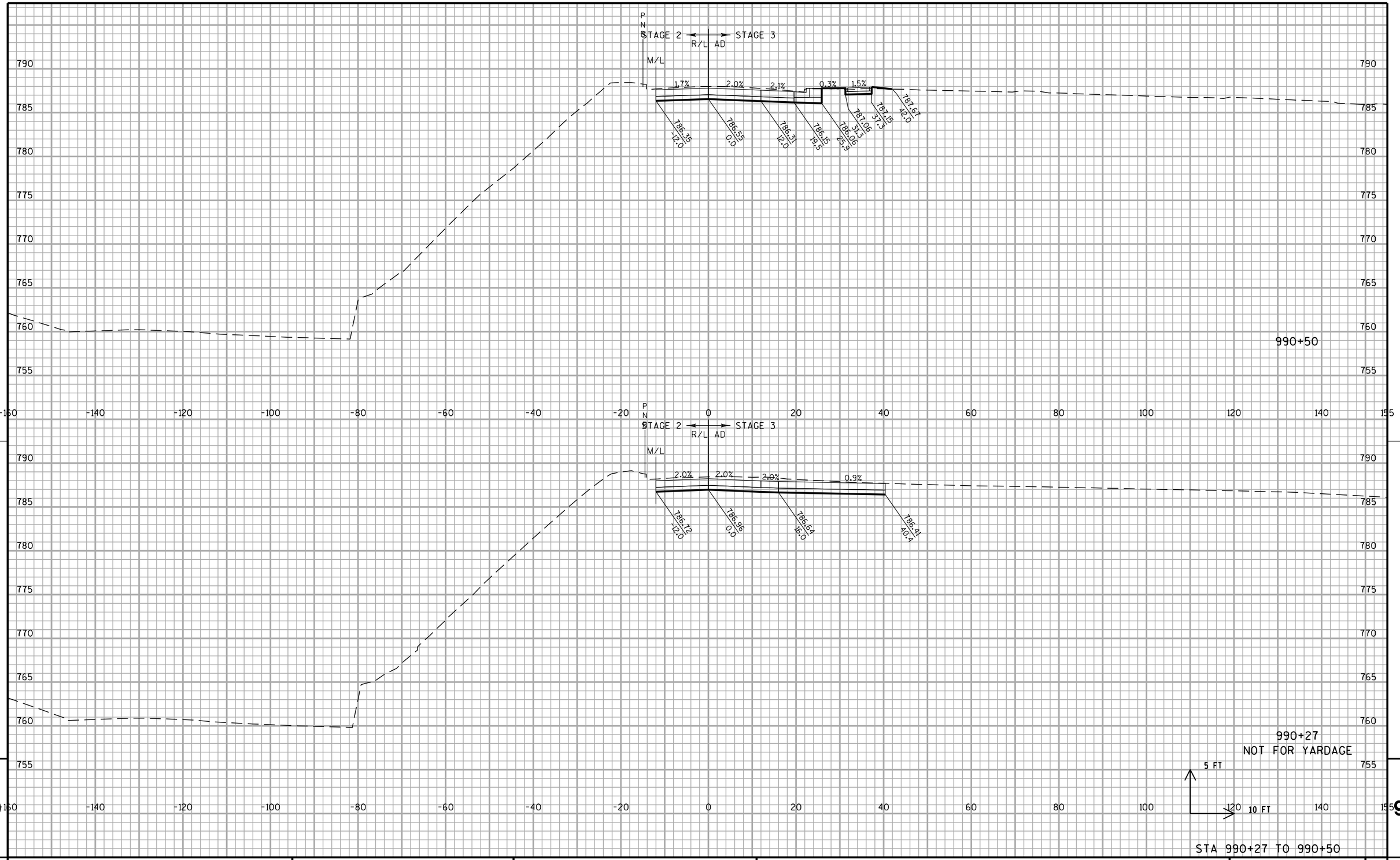
WISDOT/CADDS SHEET 21



STA 989+60 TO 990+00

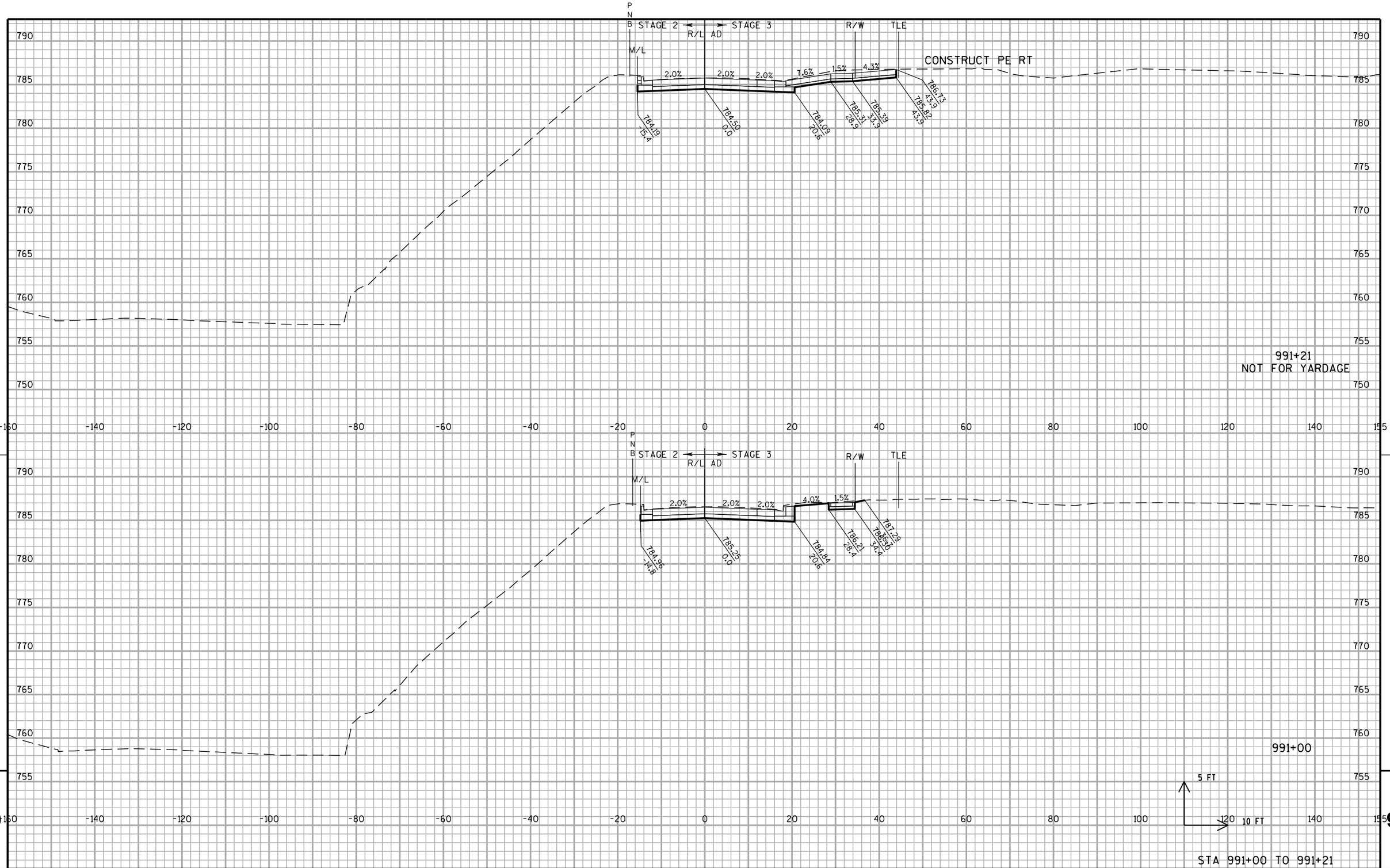
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad9 PLOT SCALE : 20:1

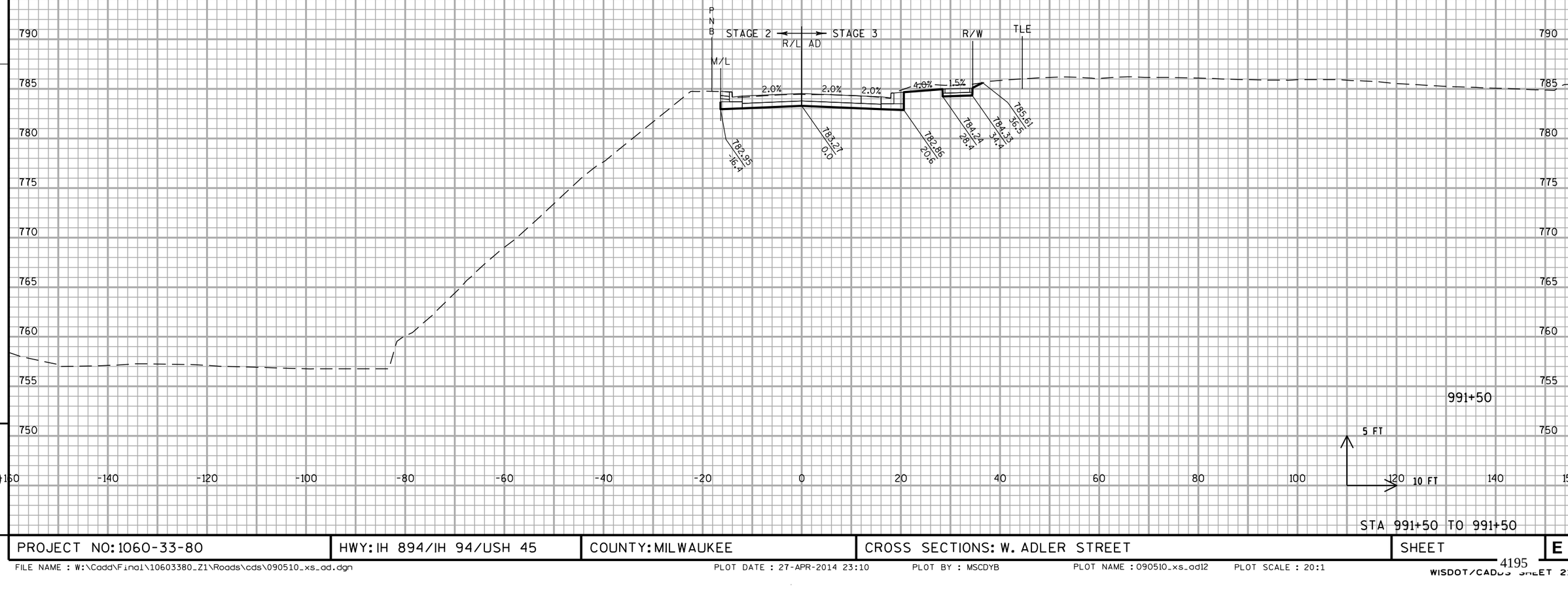


STA 990+27 TO 990+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



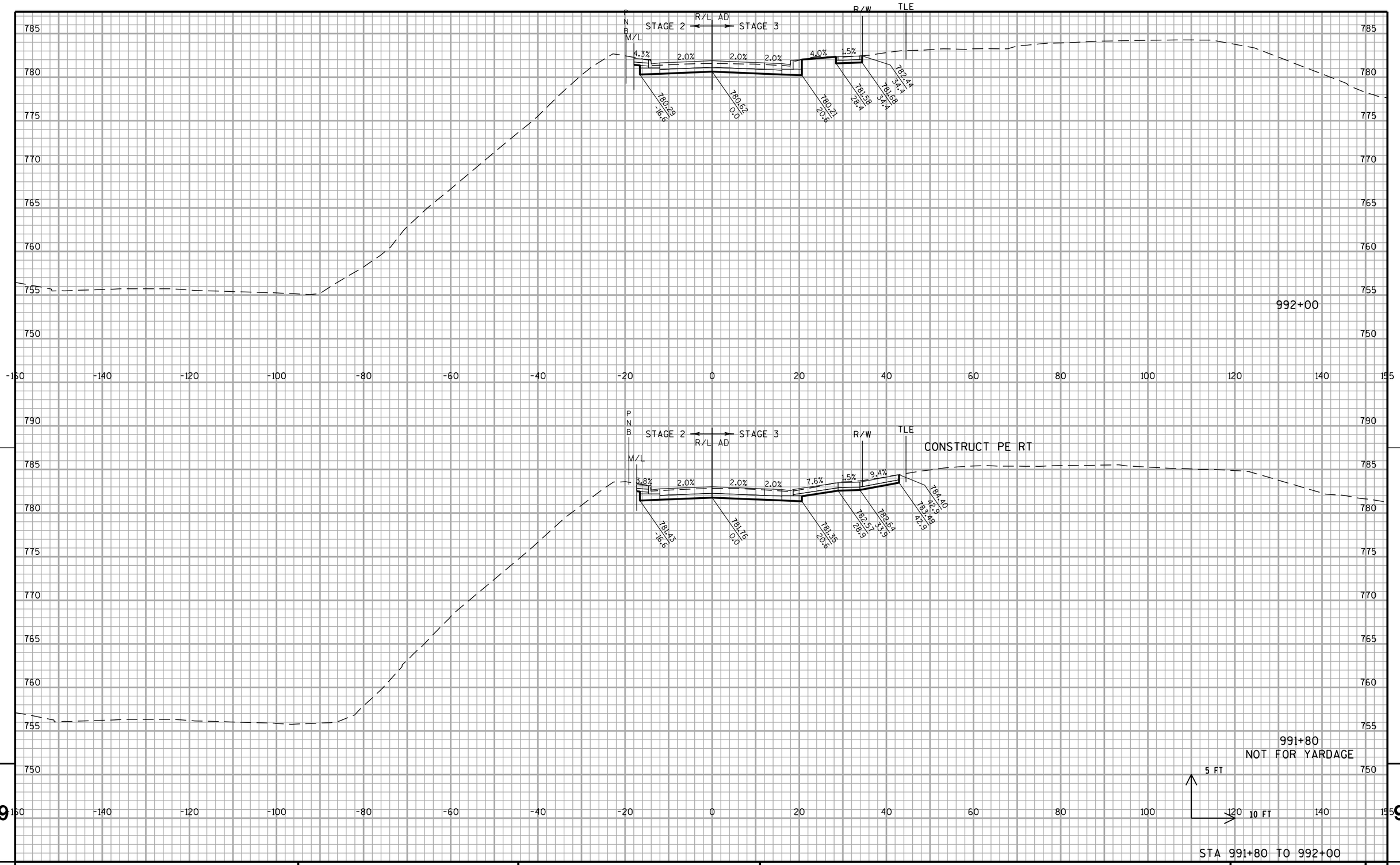
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

STA 991+50 TO 991+50

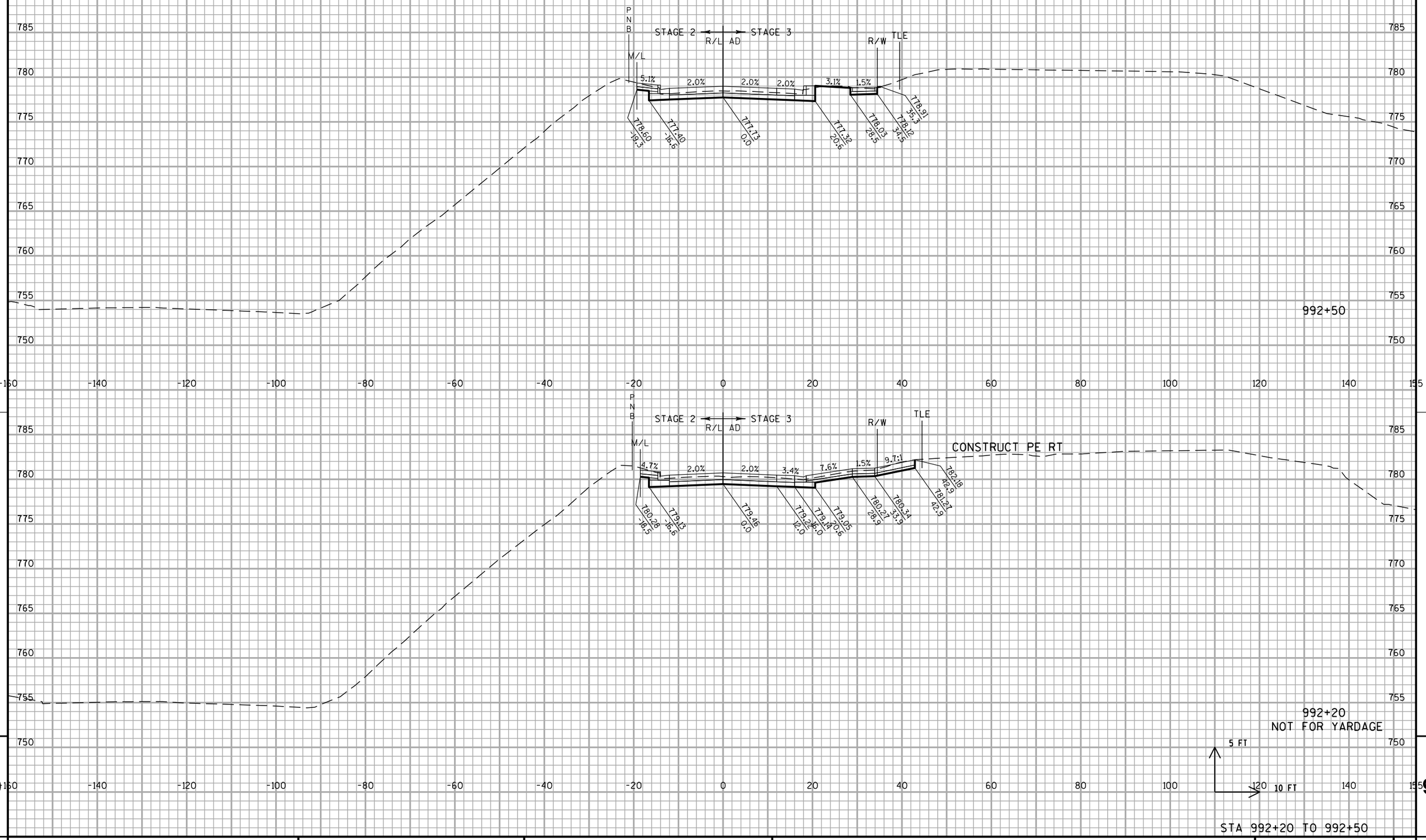
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STA 991+80 TO 992+00

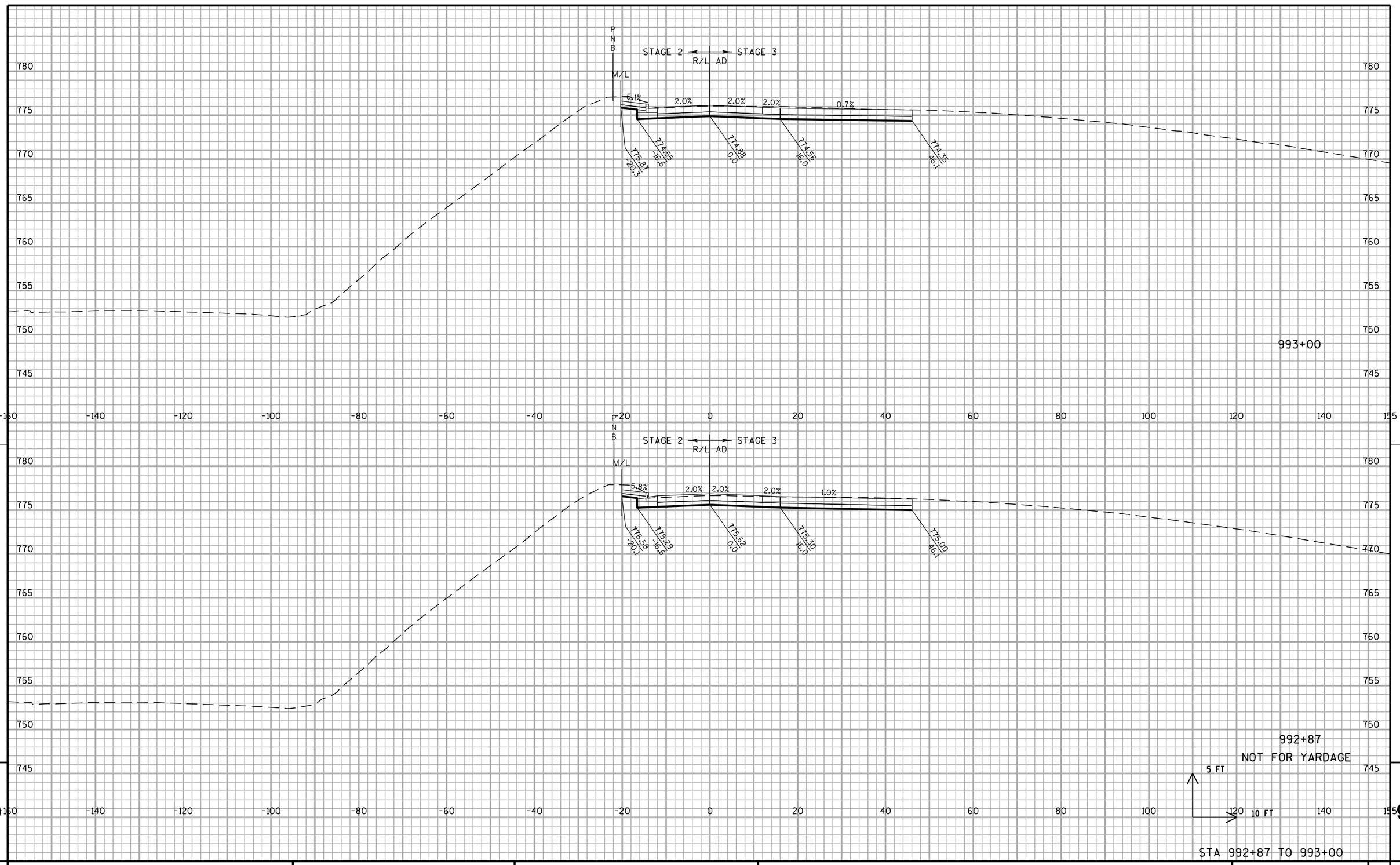
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

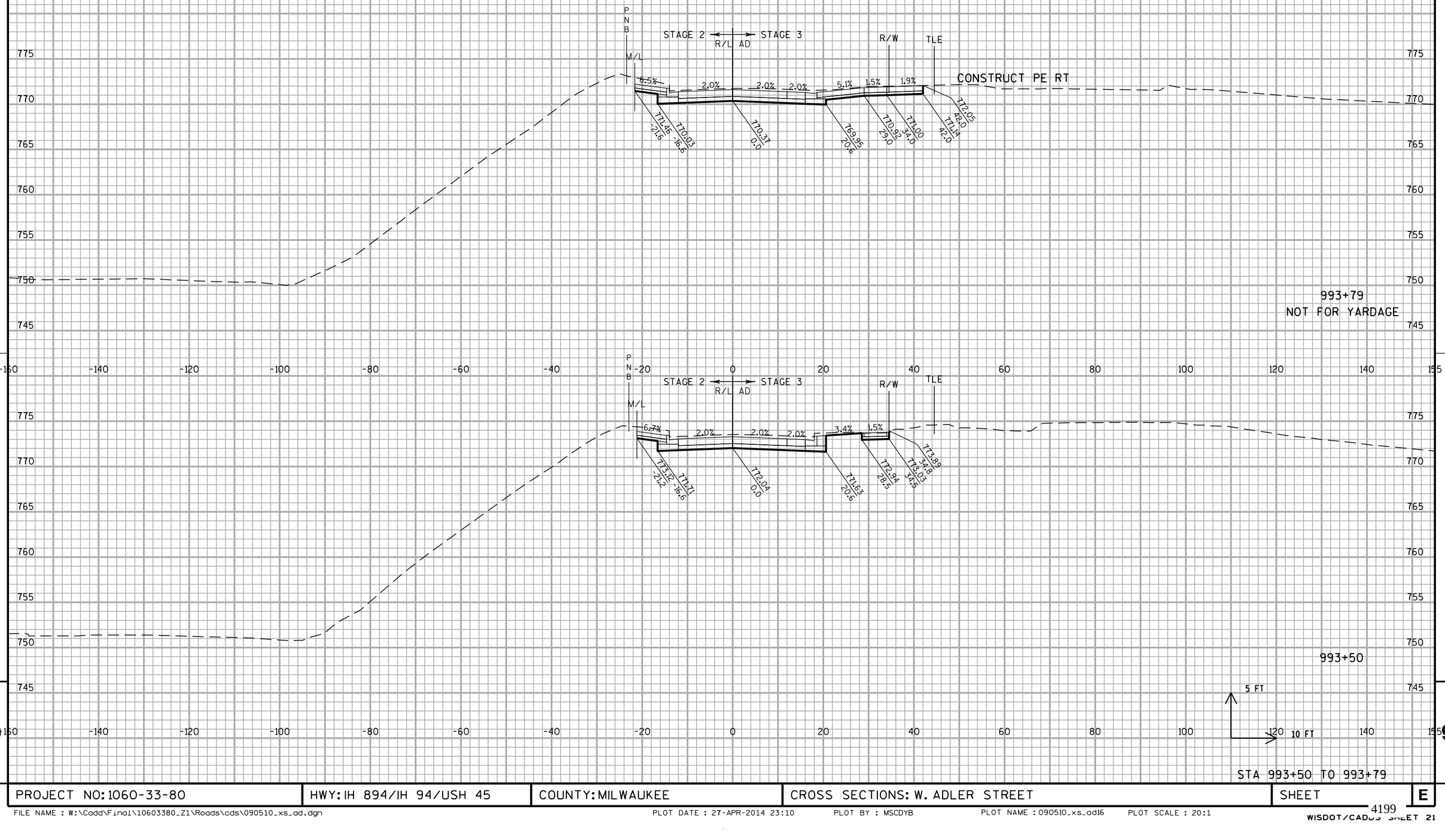
STA 992+20 TO 992+50

9 9



STA 992+87 TO 993+00

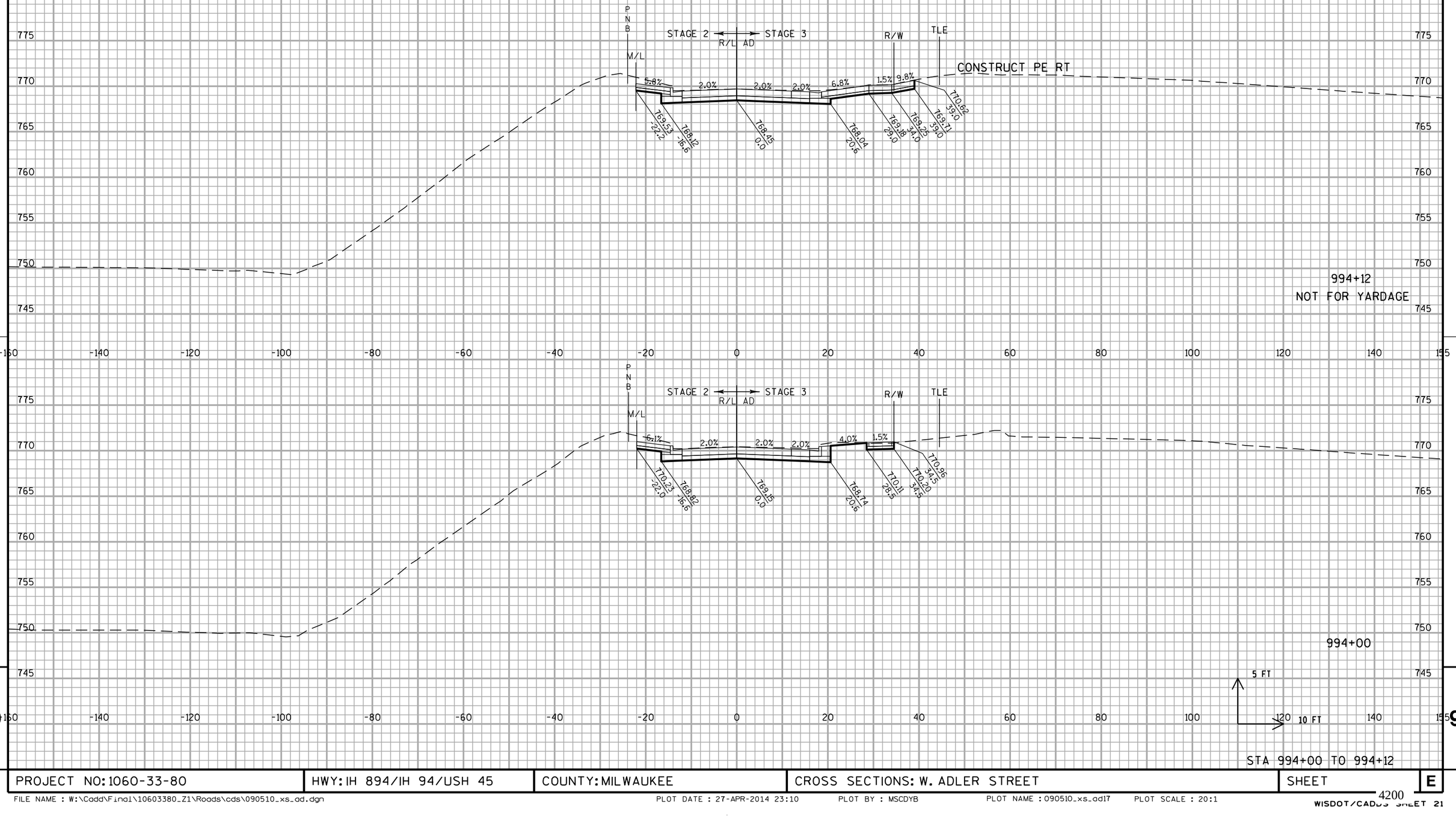
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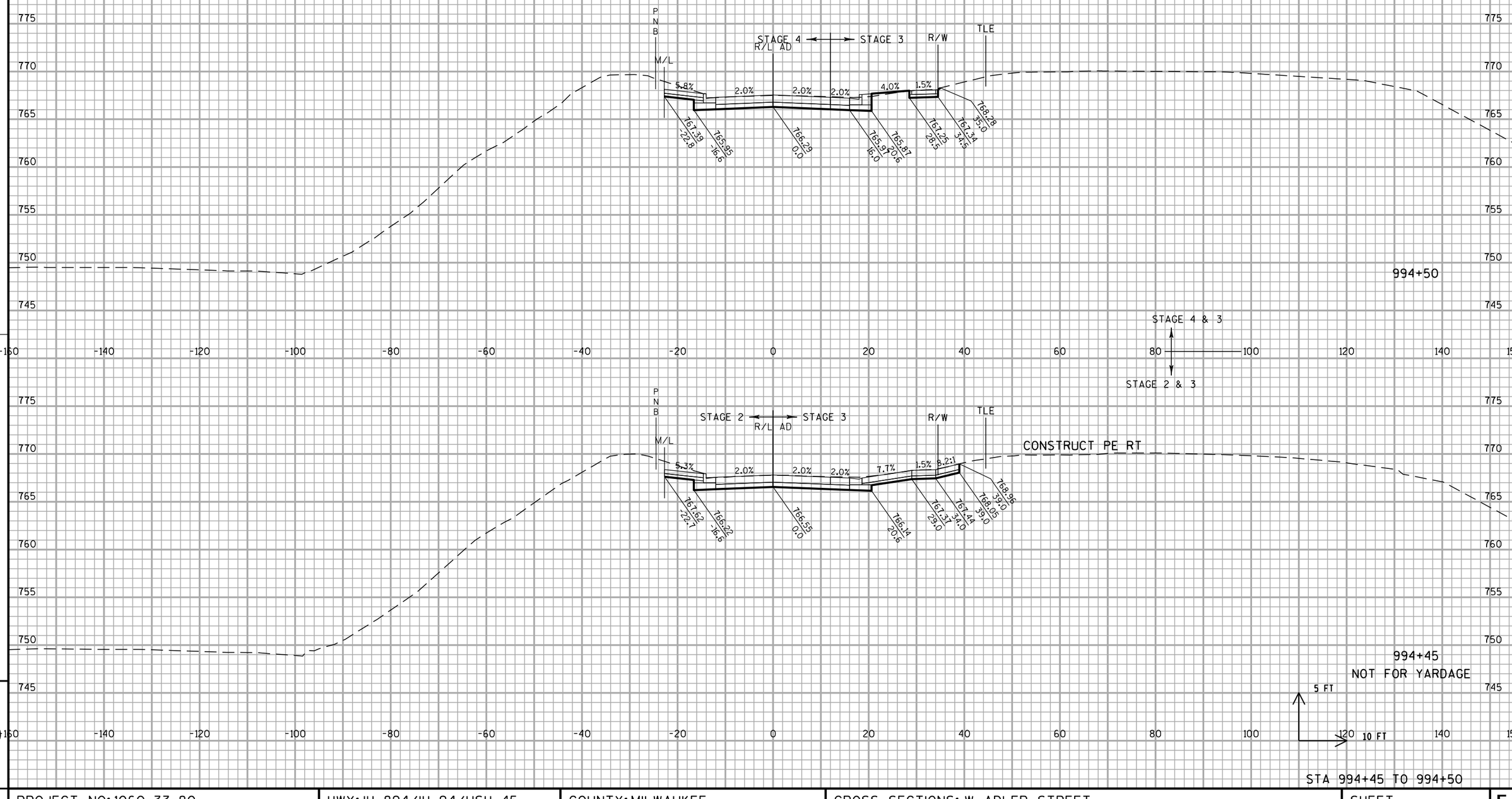
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

STA 993+50 TO 993+79

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad16 PLOT SCALE : 20:1



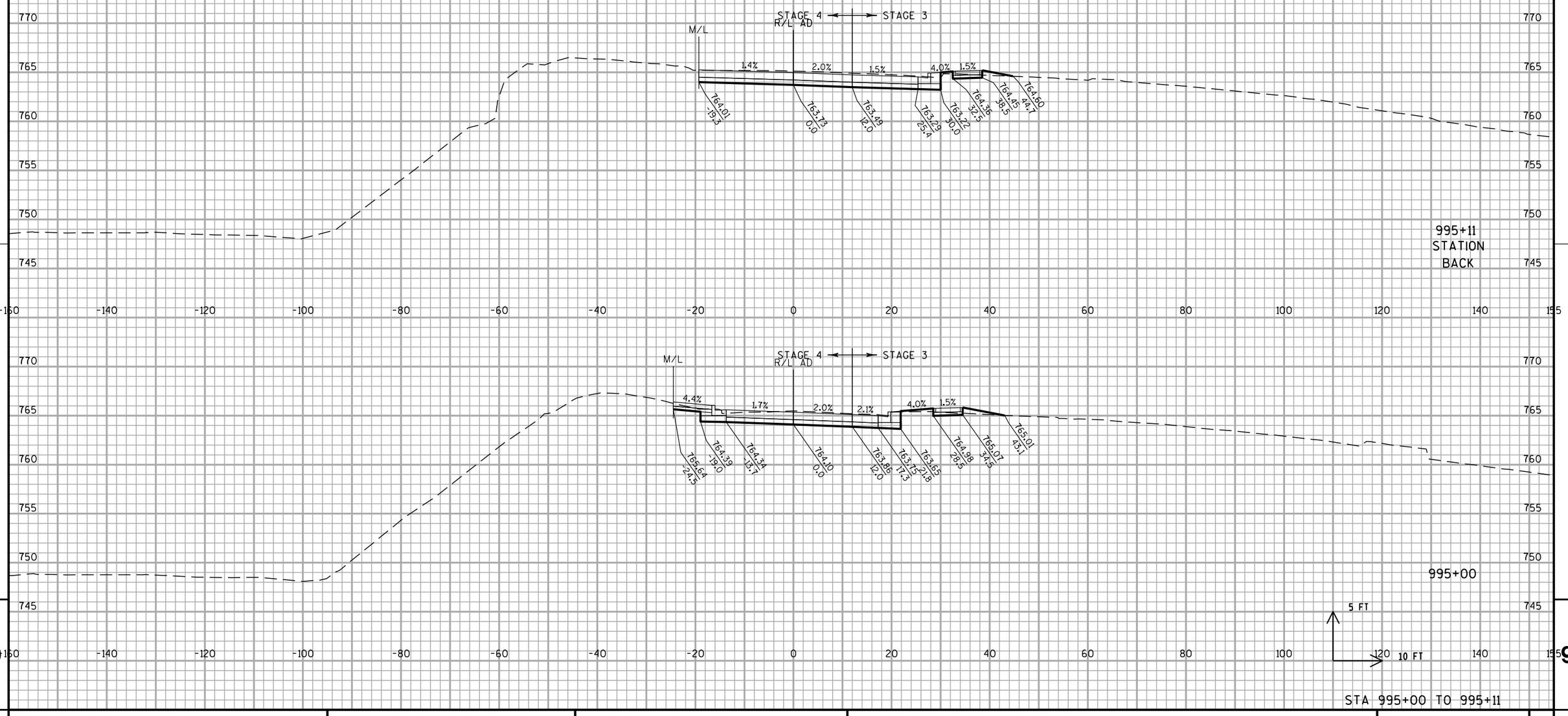
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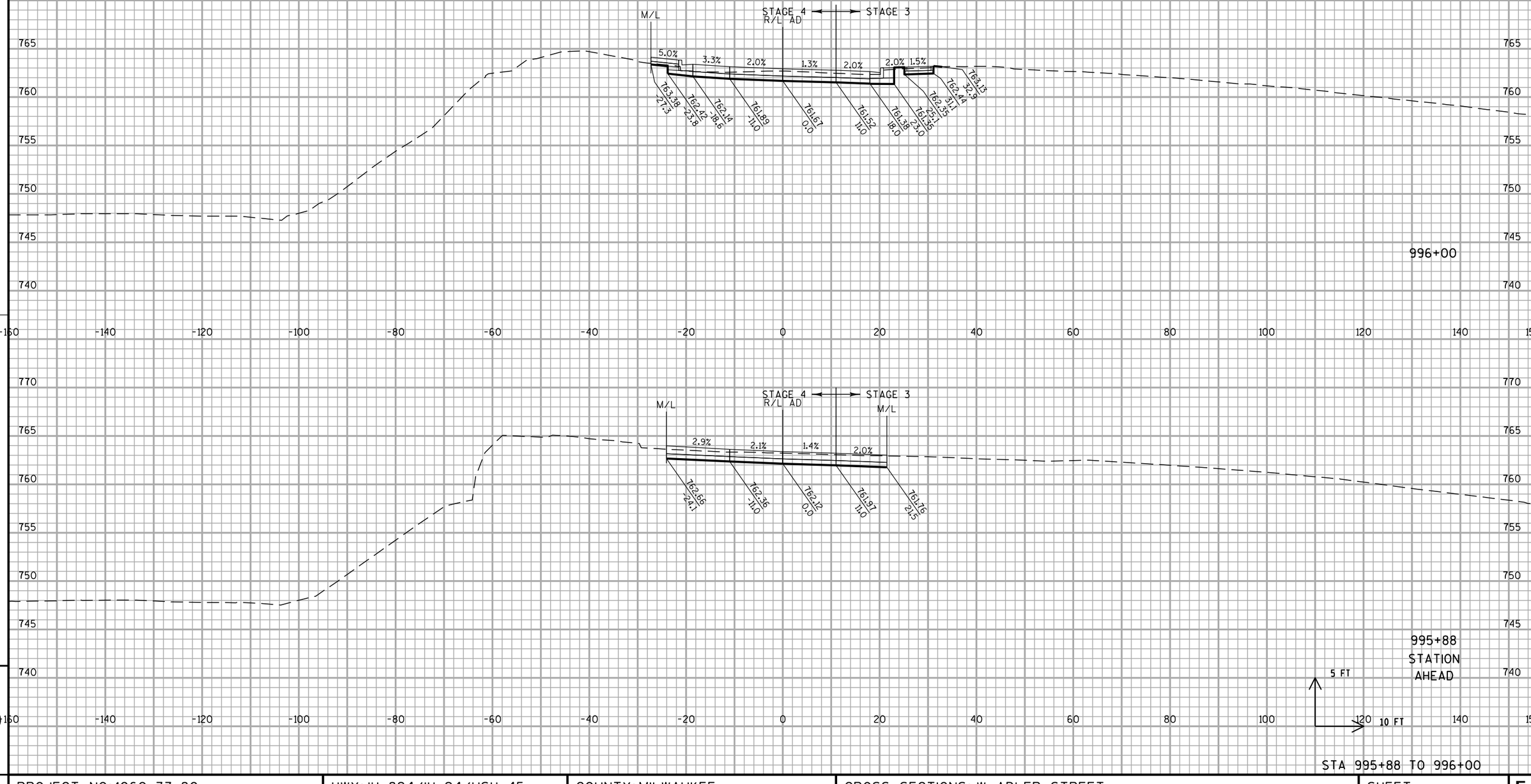
STA 994+45 TO 994+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

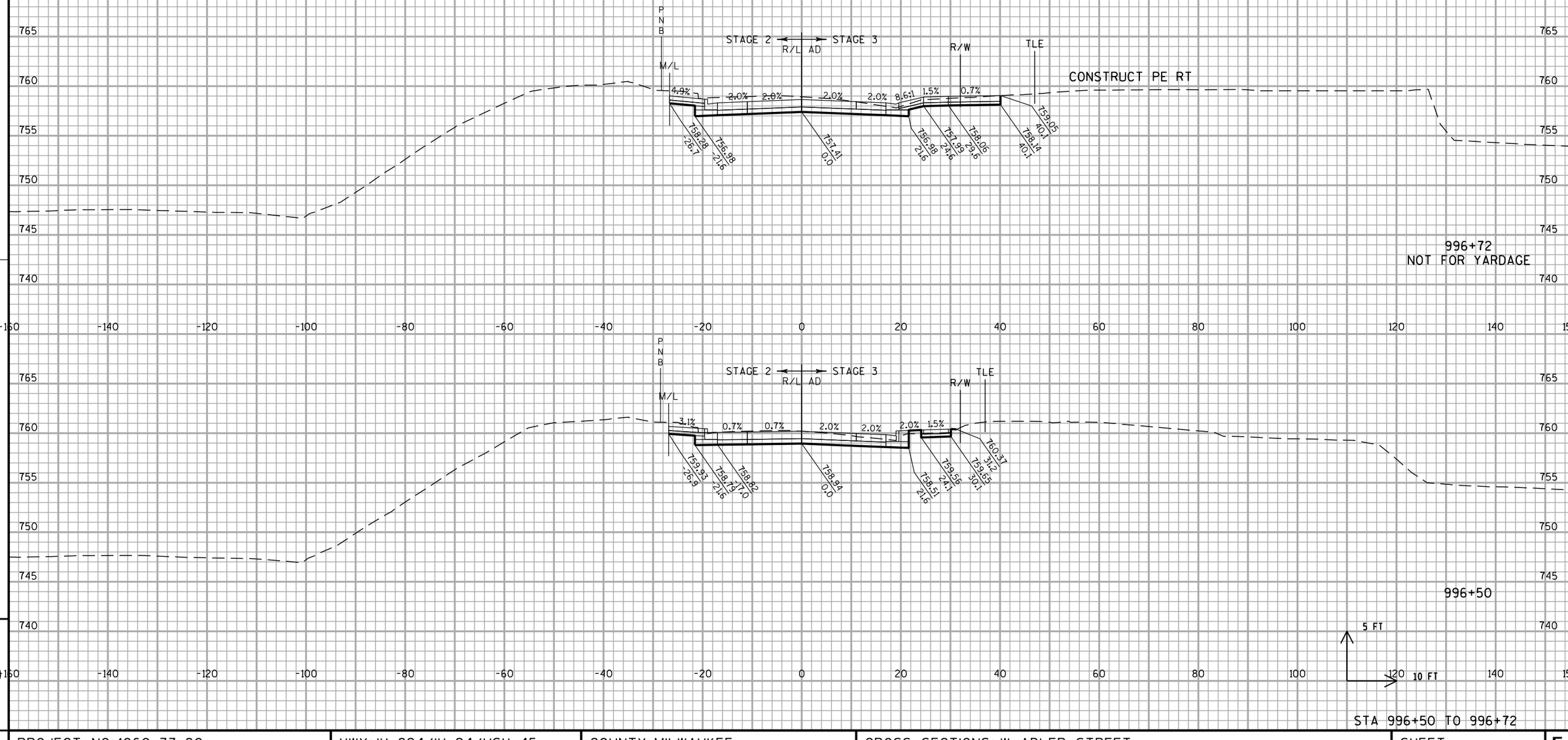
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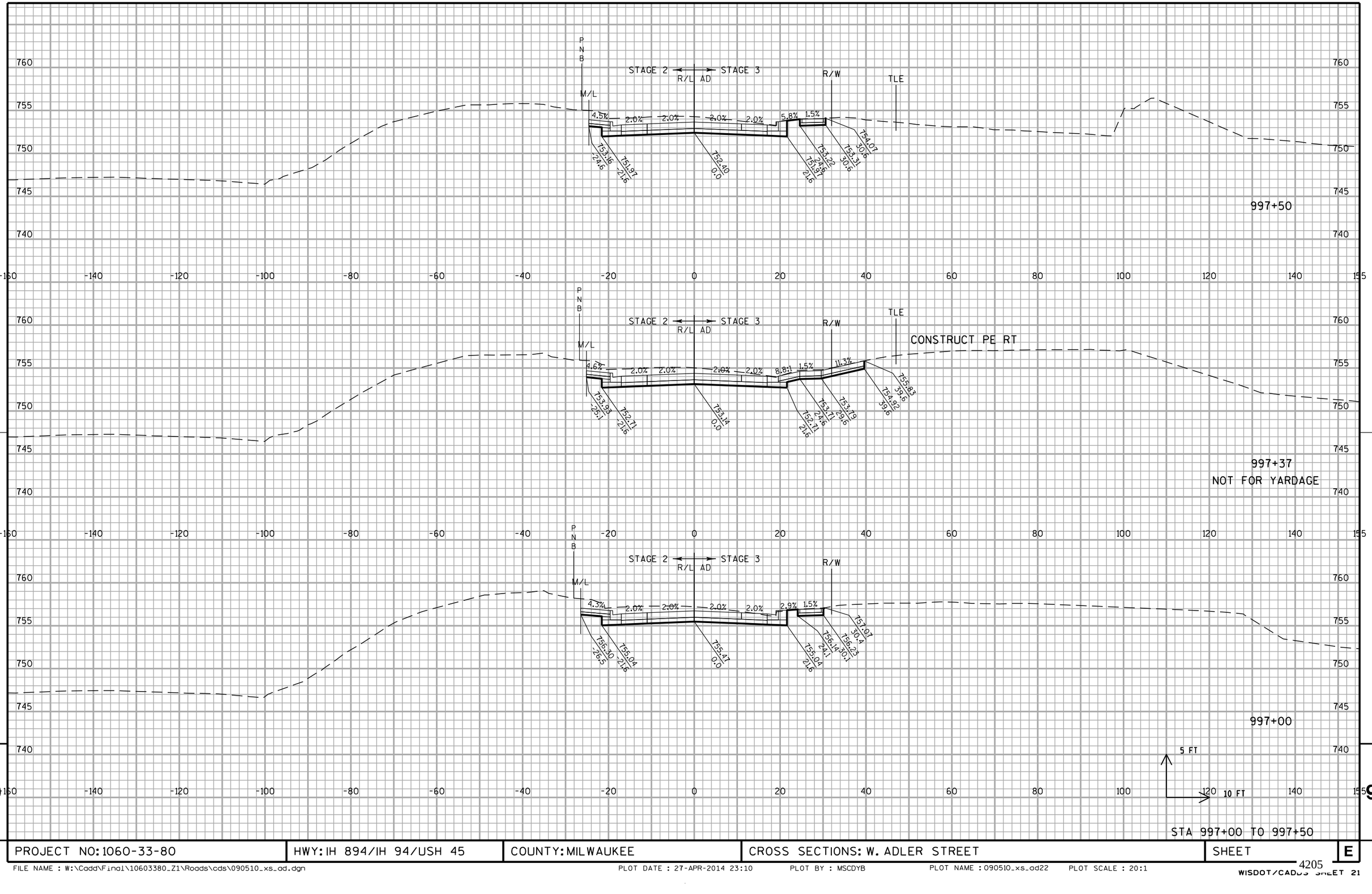
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

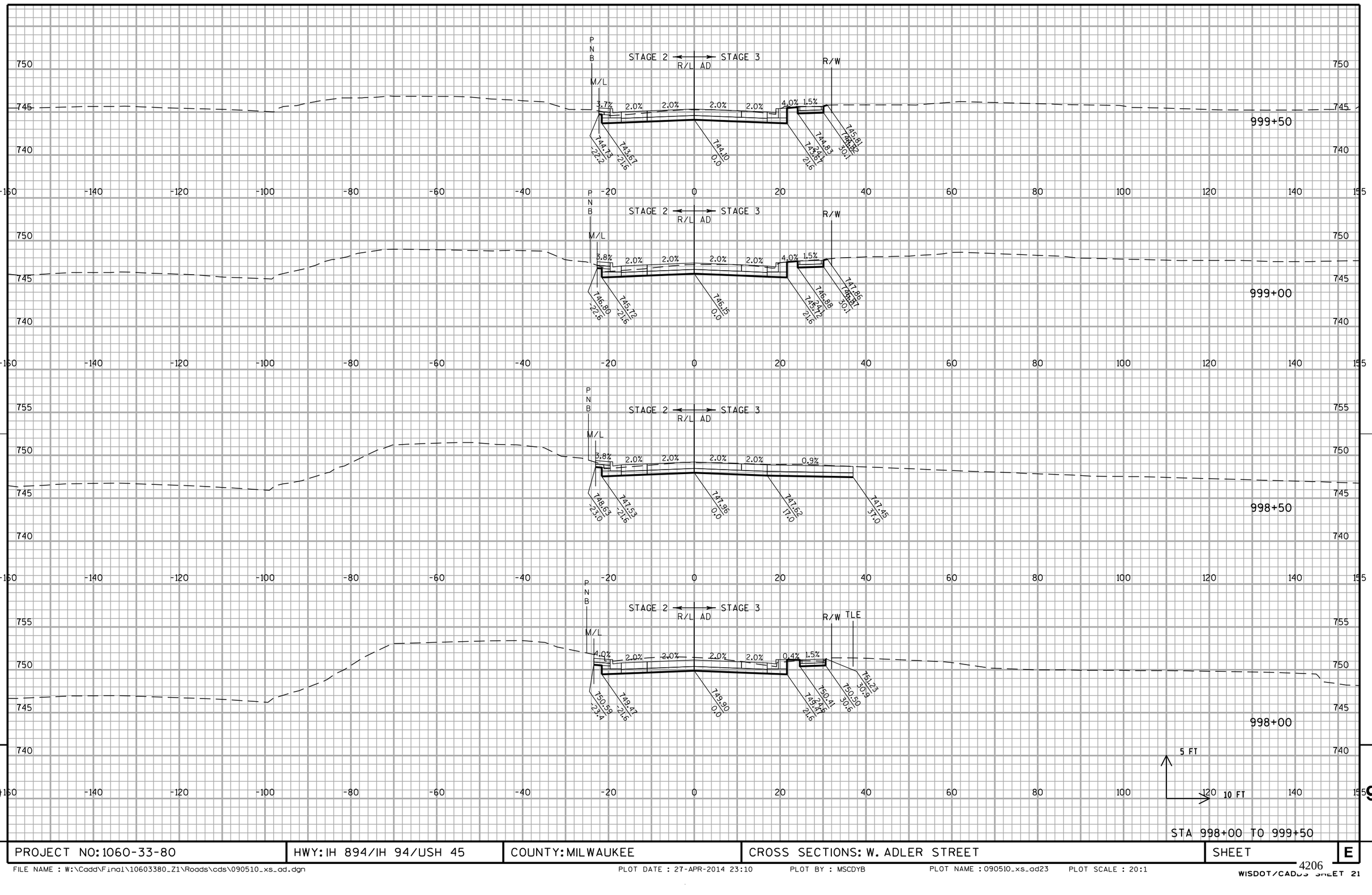


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad22 PLOT SCALE : 20:1

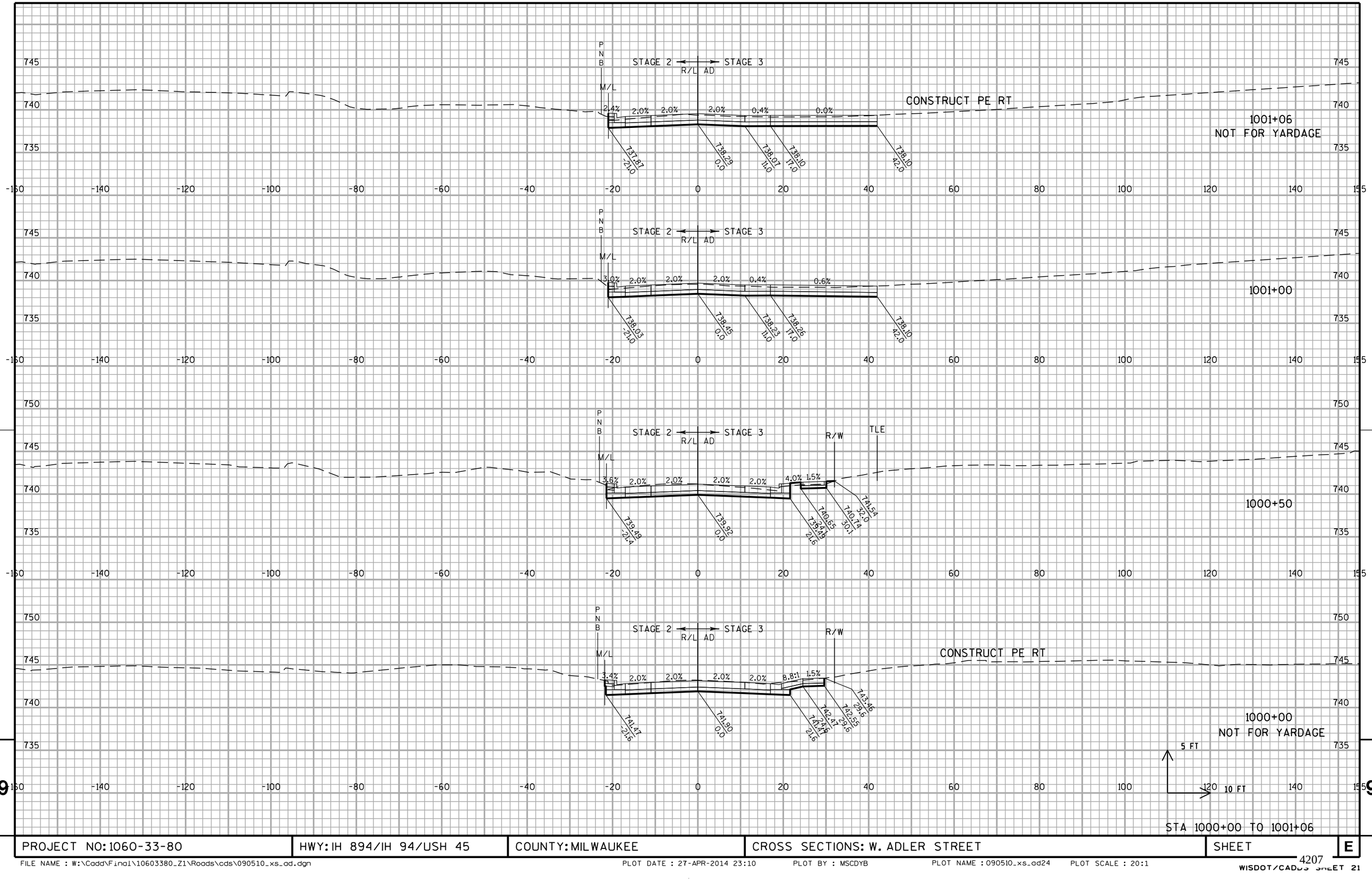


9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

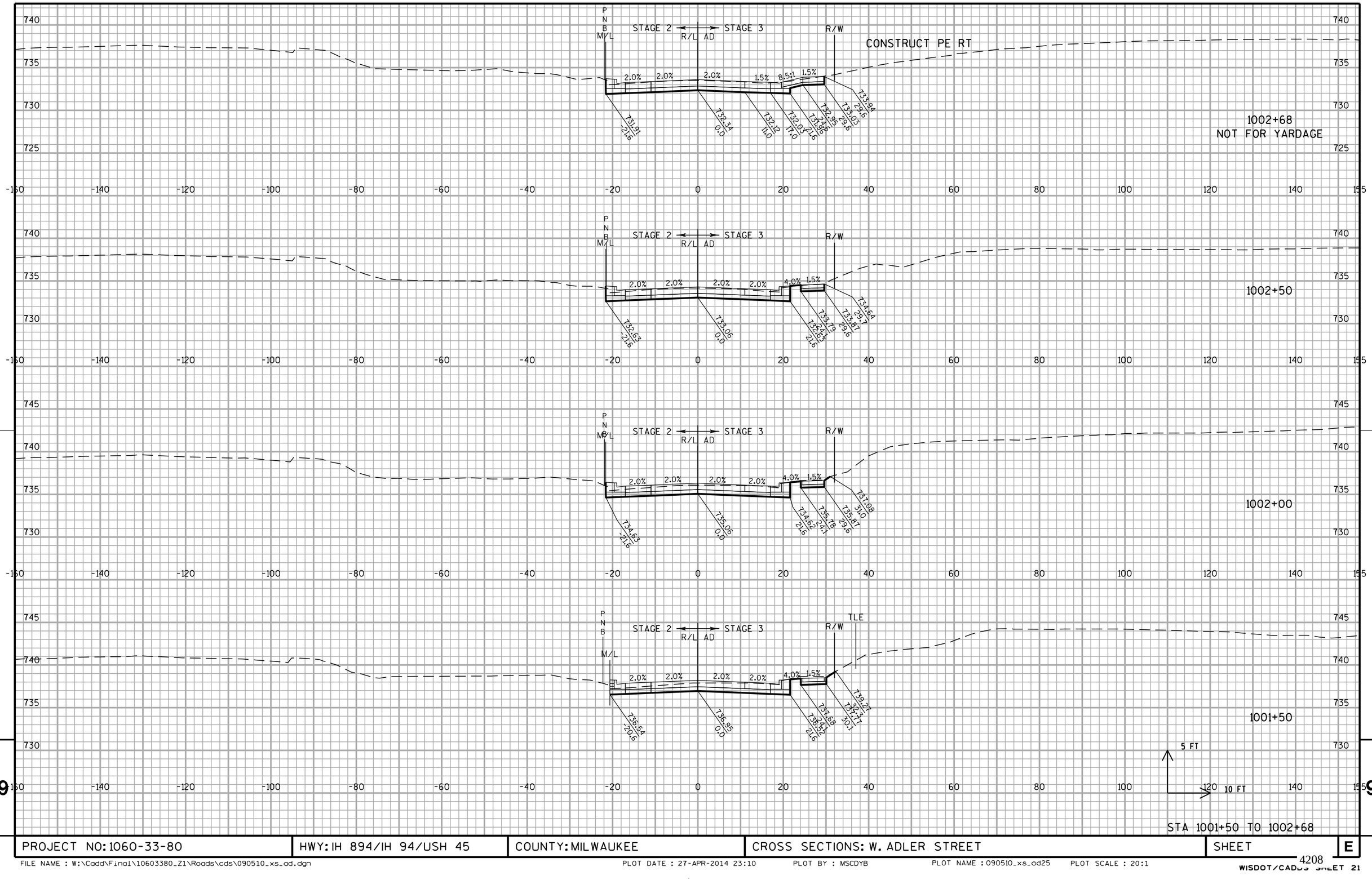
STA 998+00 TO 999+50

9



STA 1000+00 TO 1001+06

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



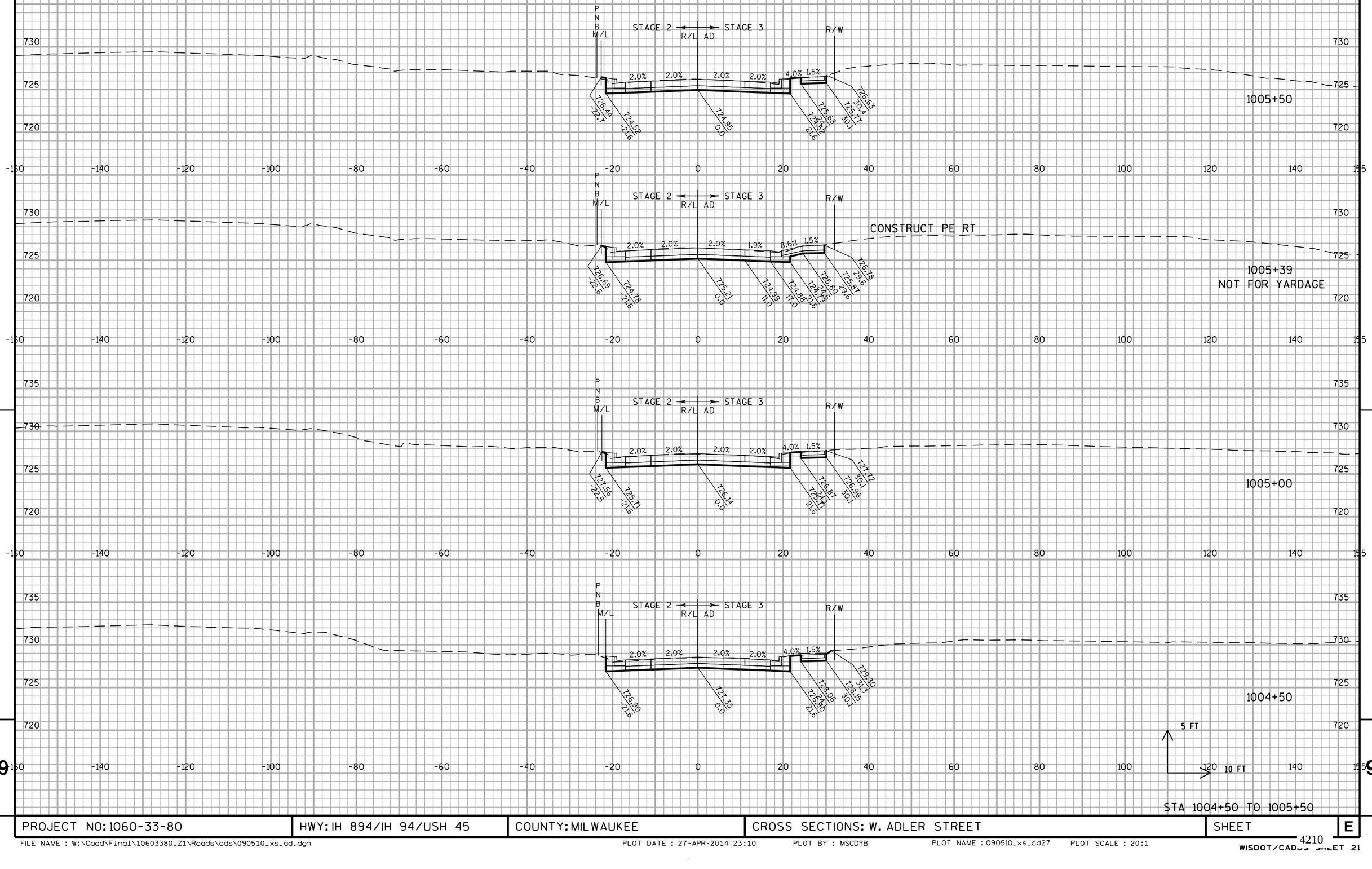
STA 1001+50 TO 1002+68

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

9 9

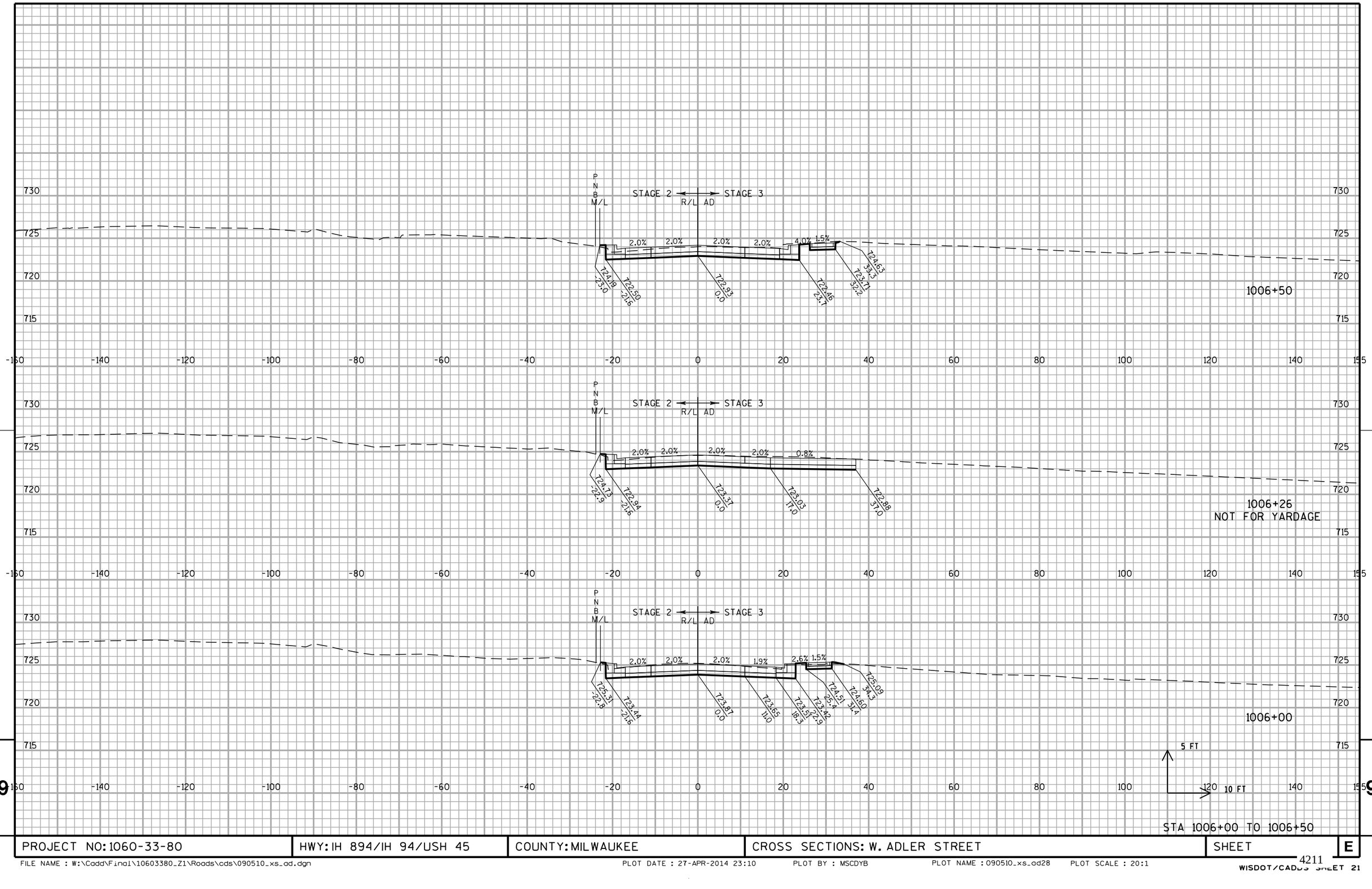
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FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad26 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad27 PLOT SCALE : 20:1

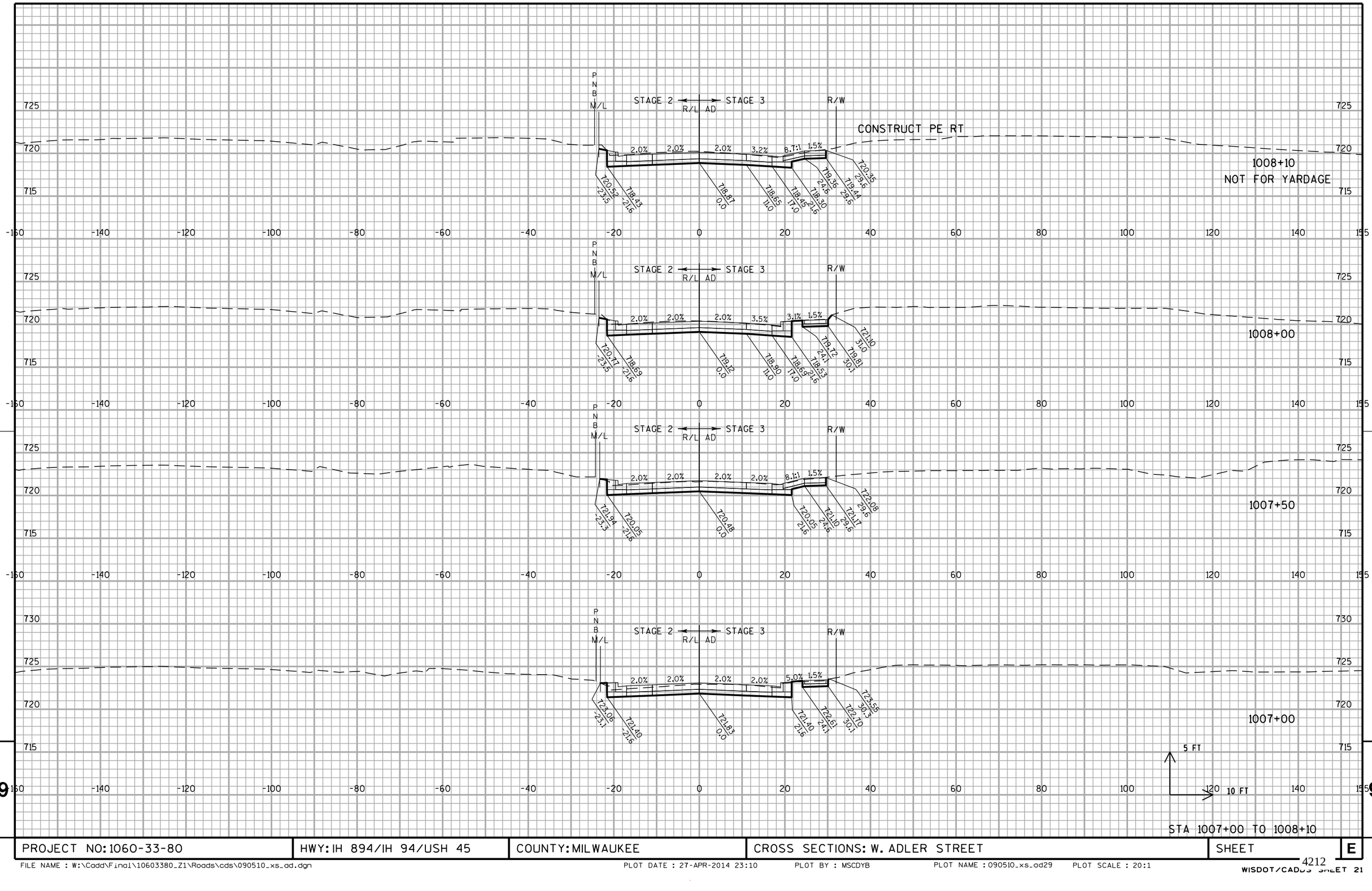


STA 1006+00 TO 1006+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

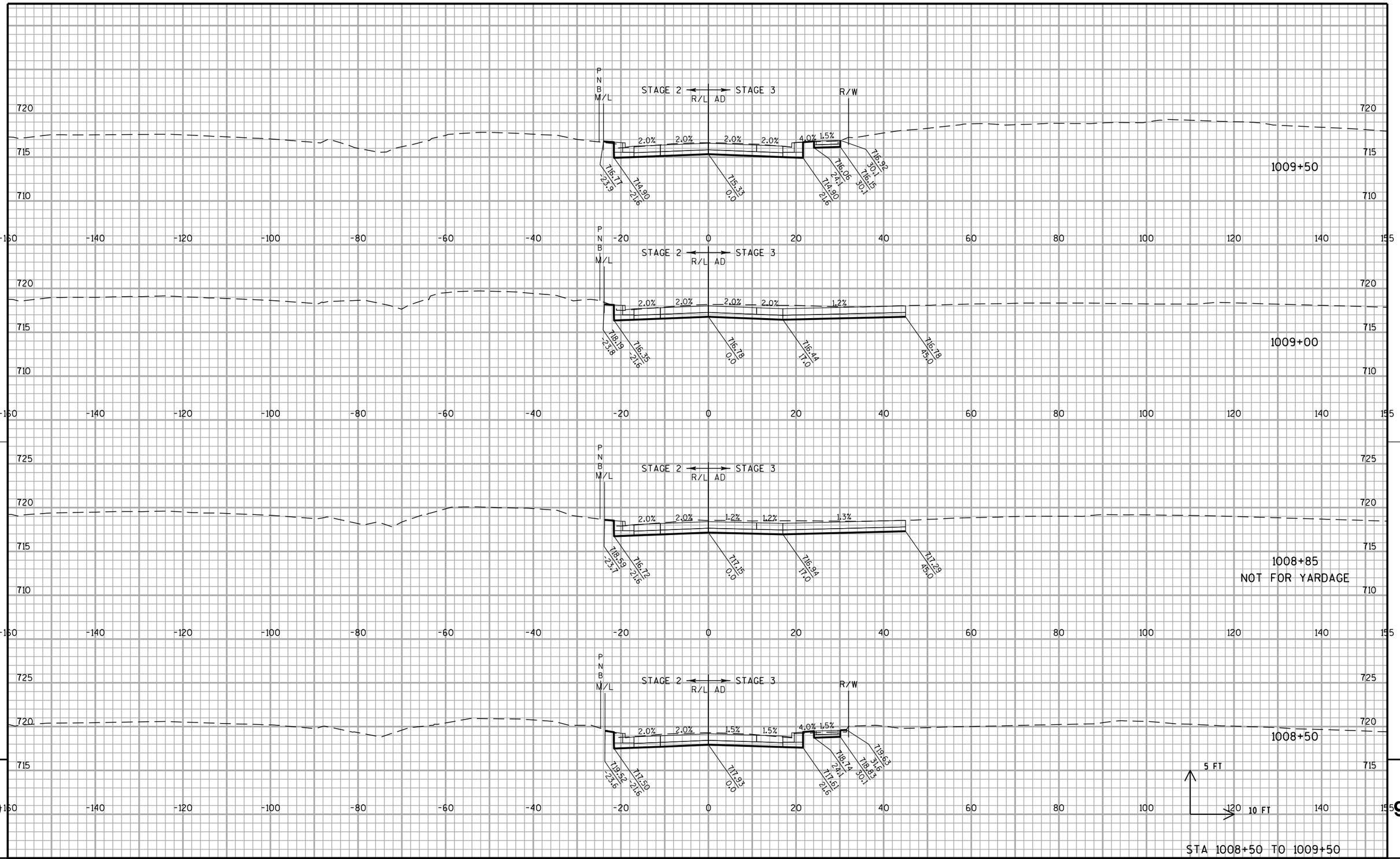
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WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

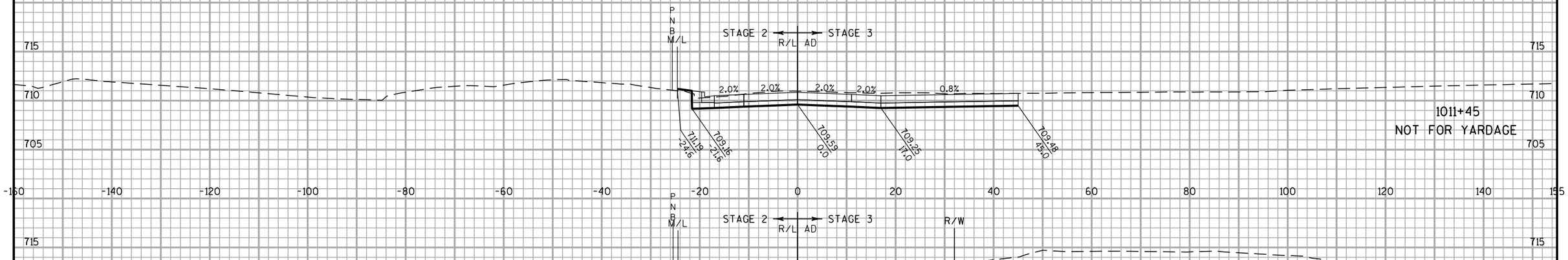
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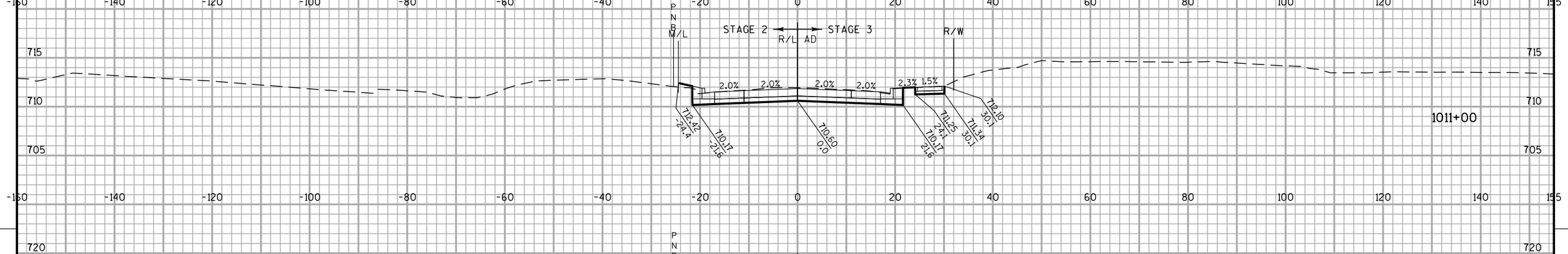


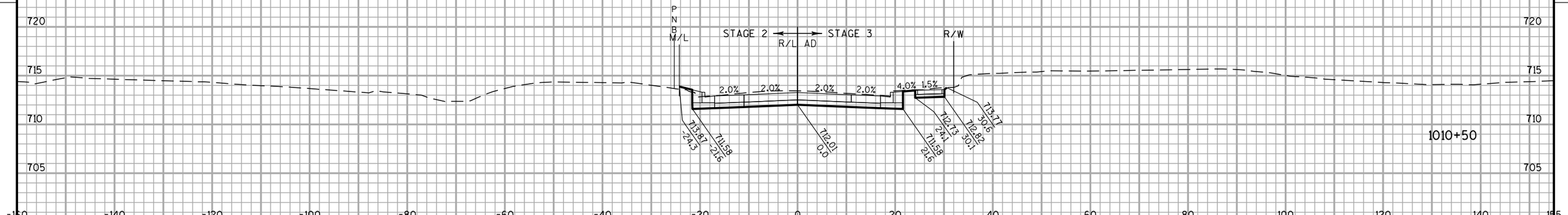
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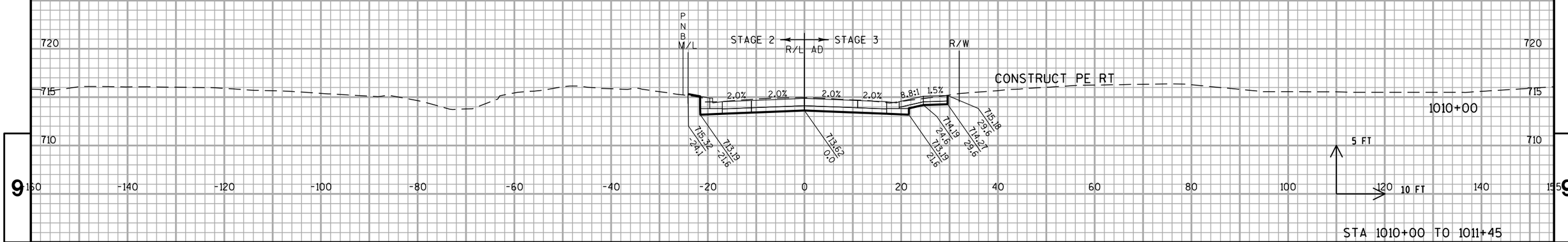
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WISDOT/CADDS SHEET 21





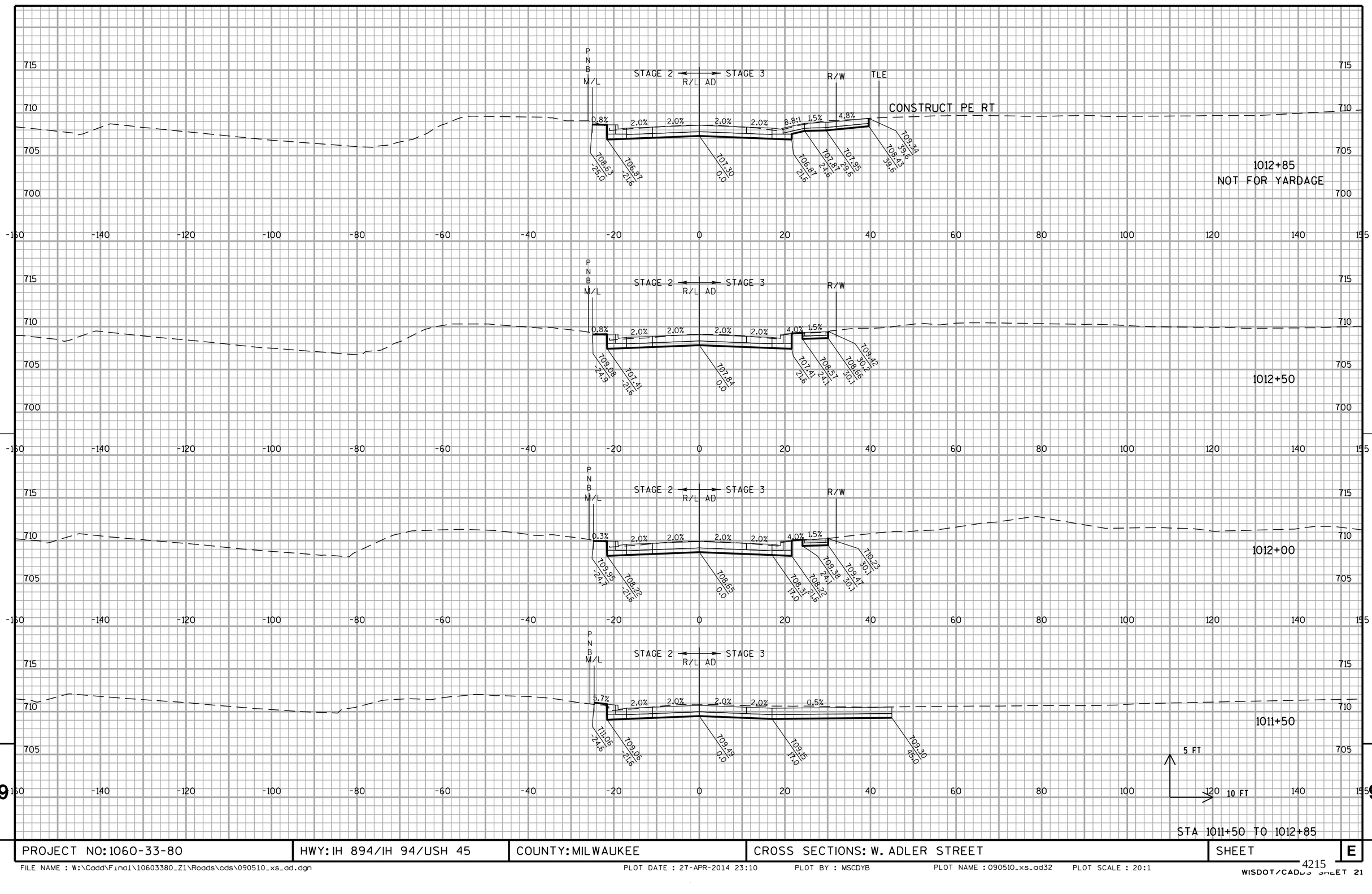




STA 1010+00 TO 1011+45

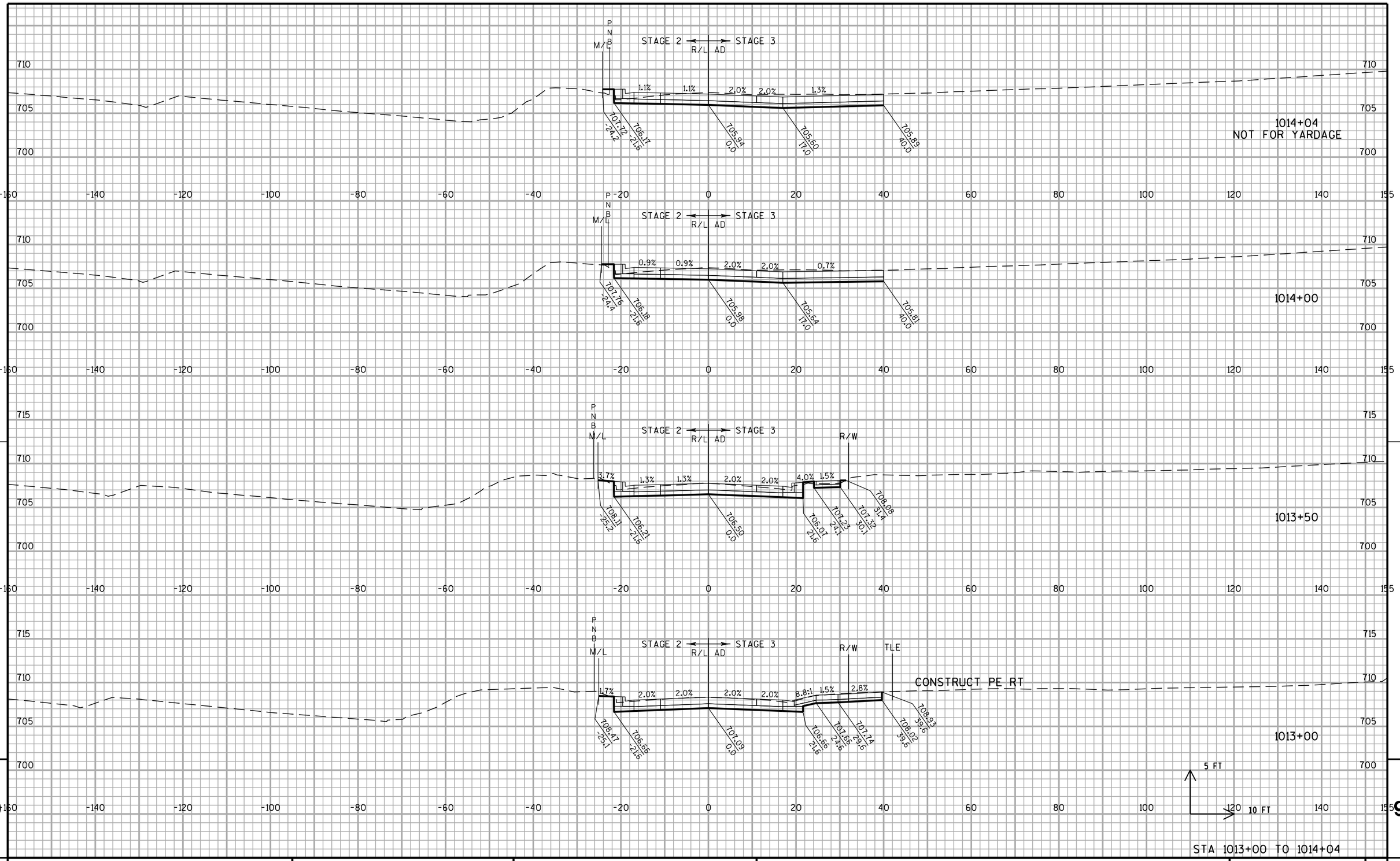
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad31 PLOT SCALE : 20:1



9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

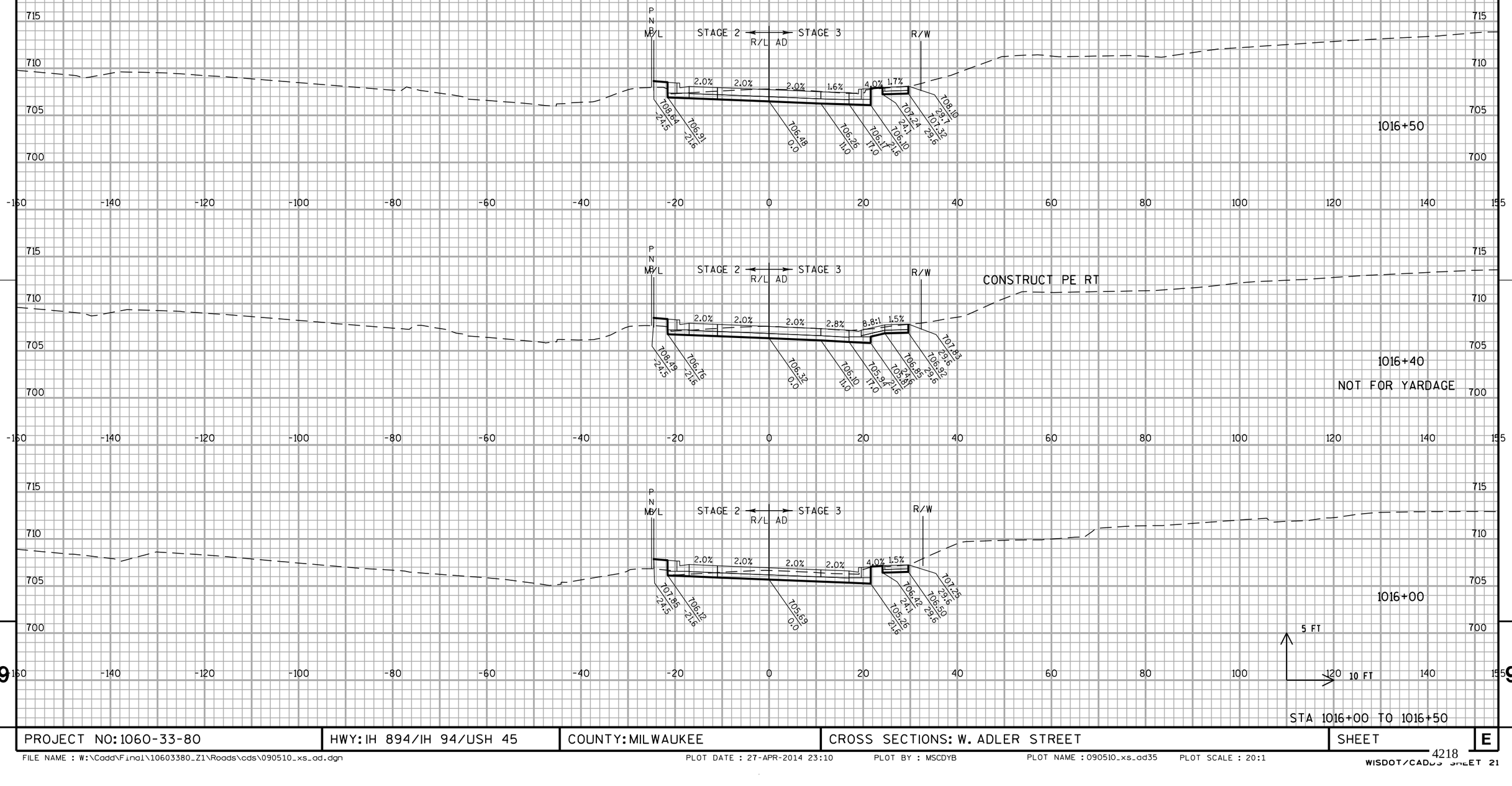


STA 1013+00 TO 1014+04

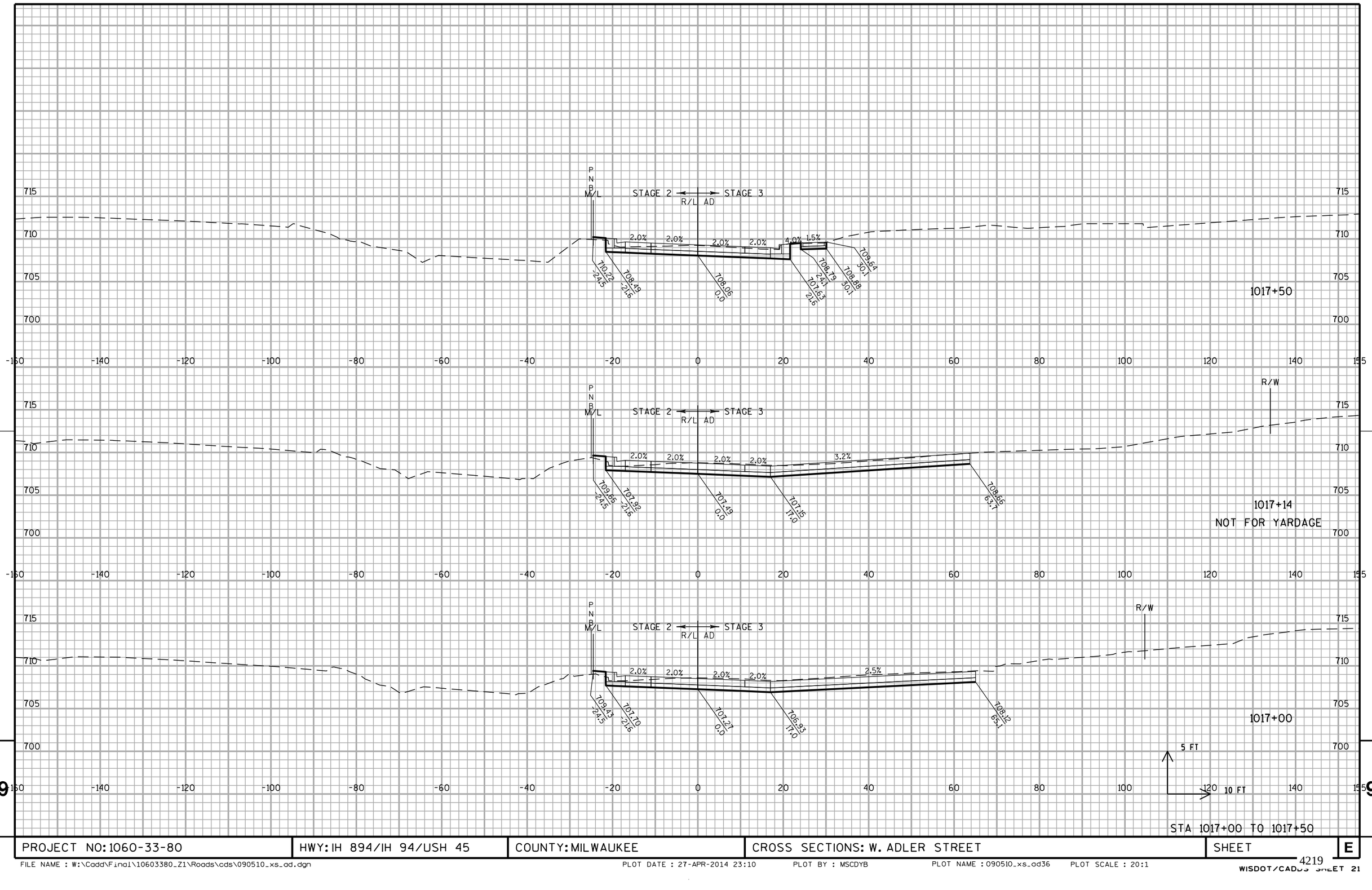
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9 9

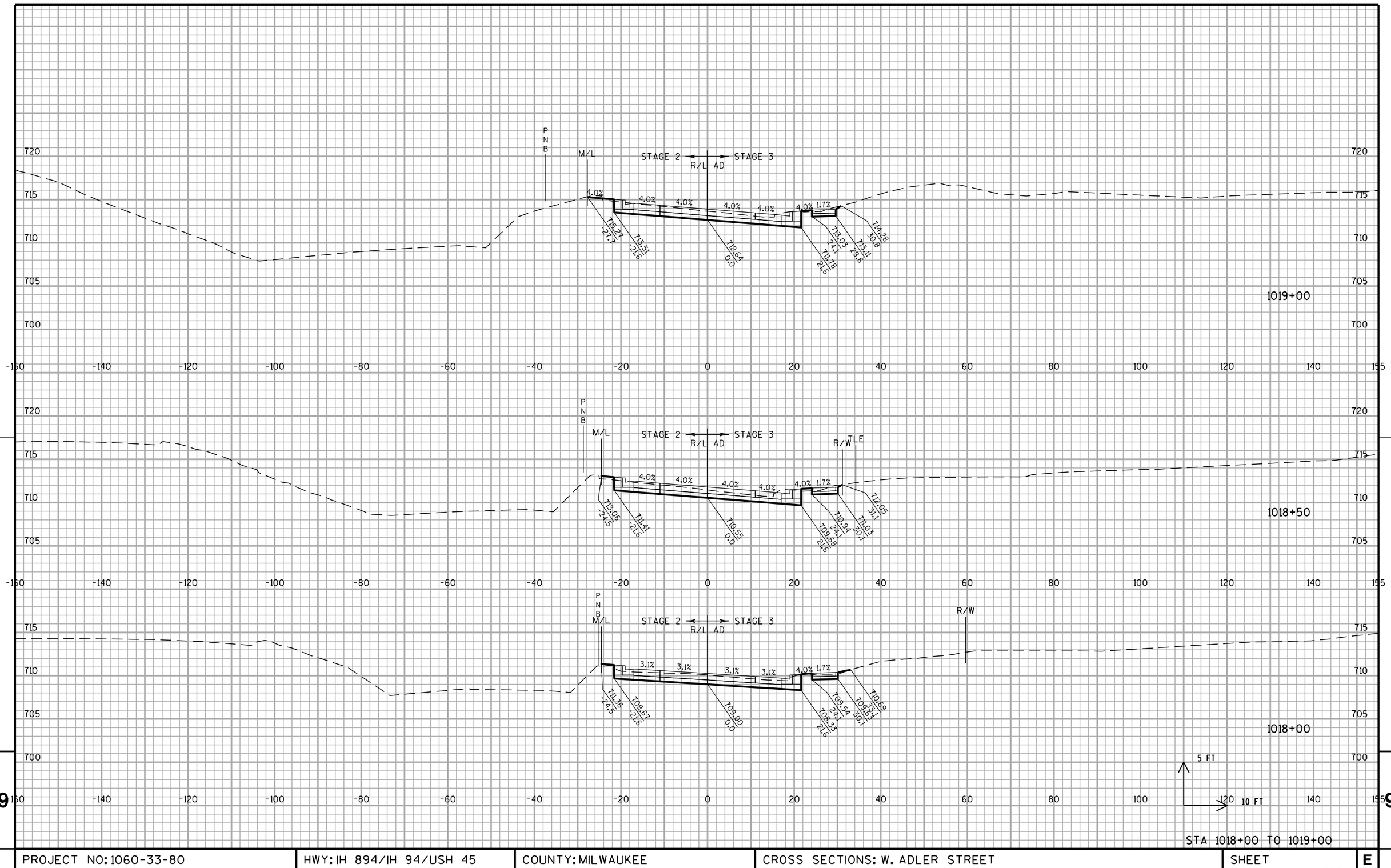
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



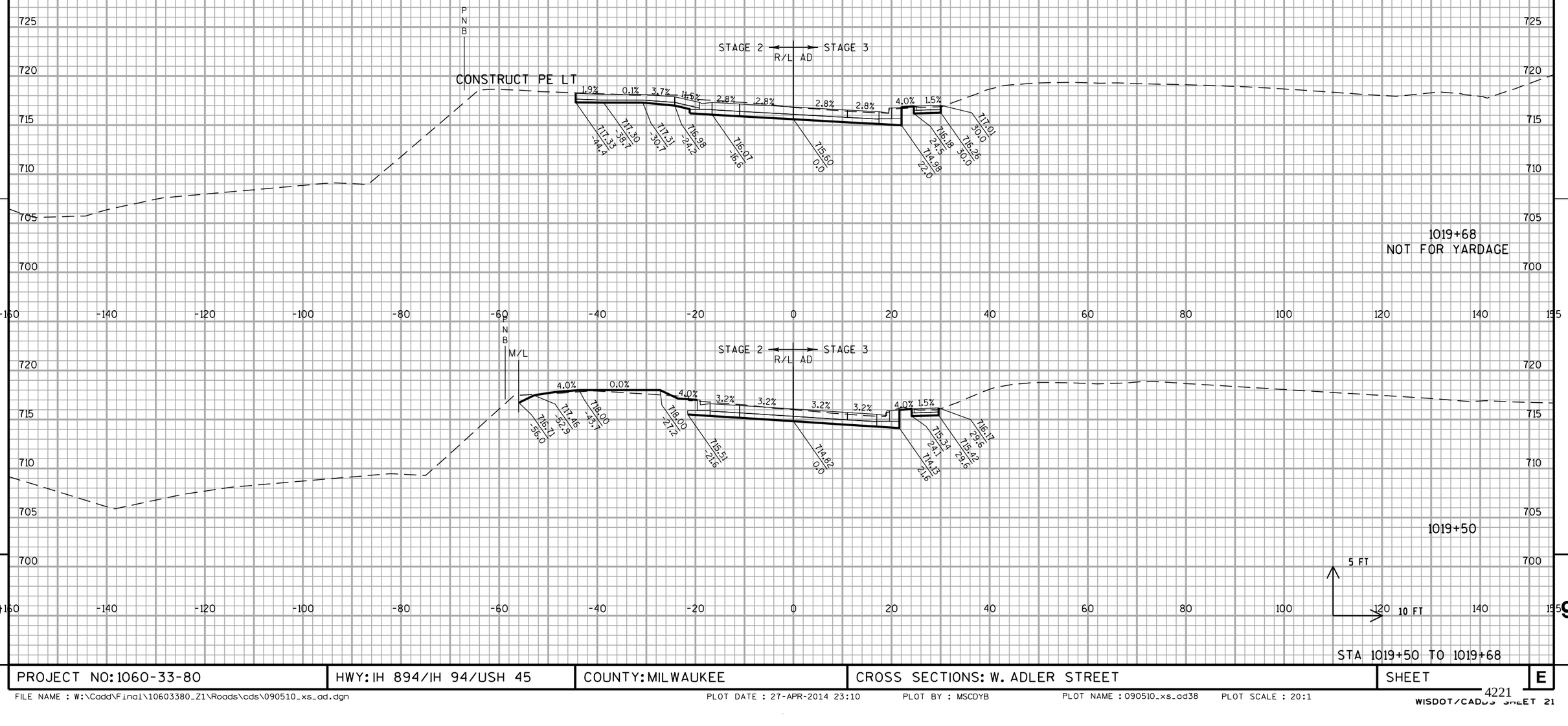
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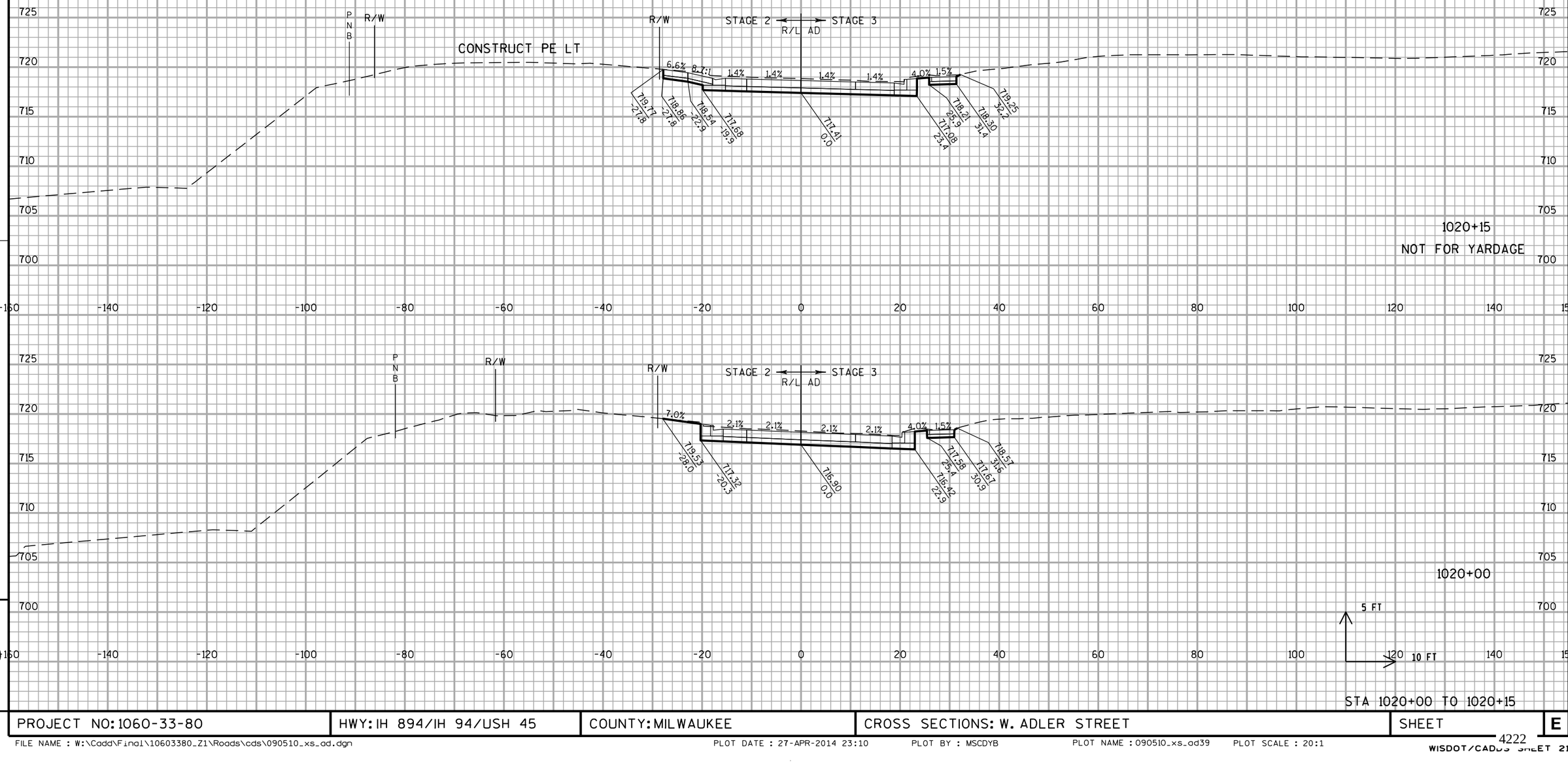
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad37 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

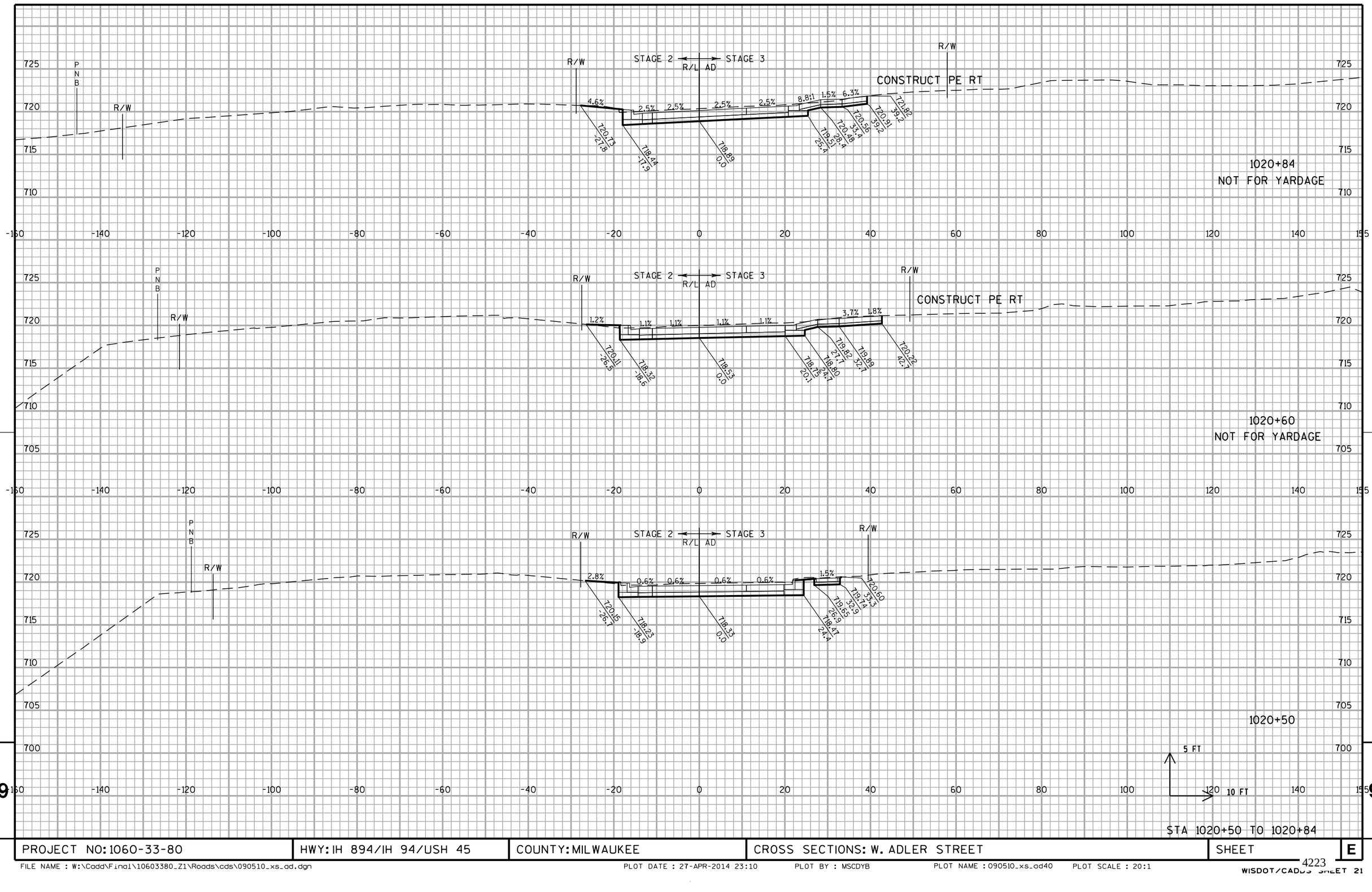


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



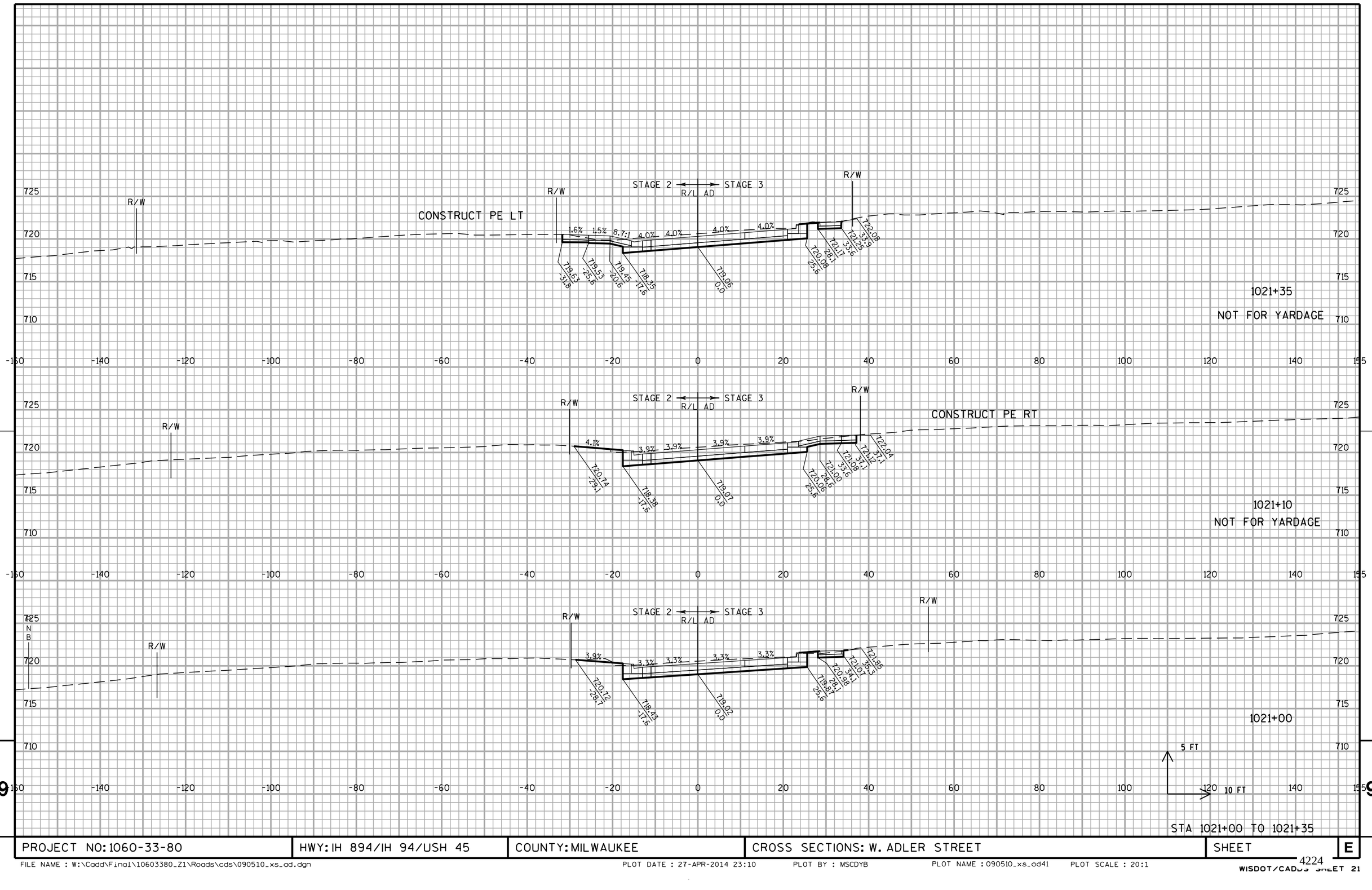
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FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad39 PLOT SCALE : 20:1

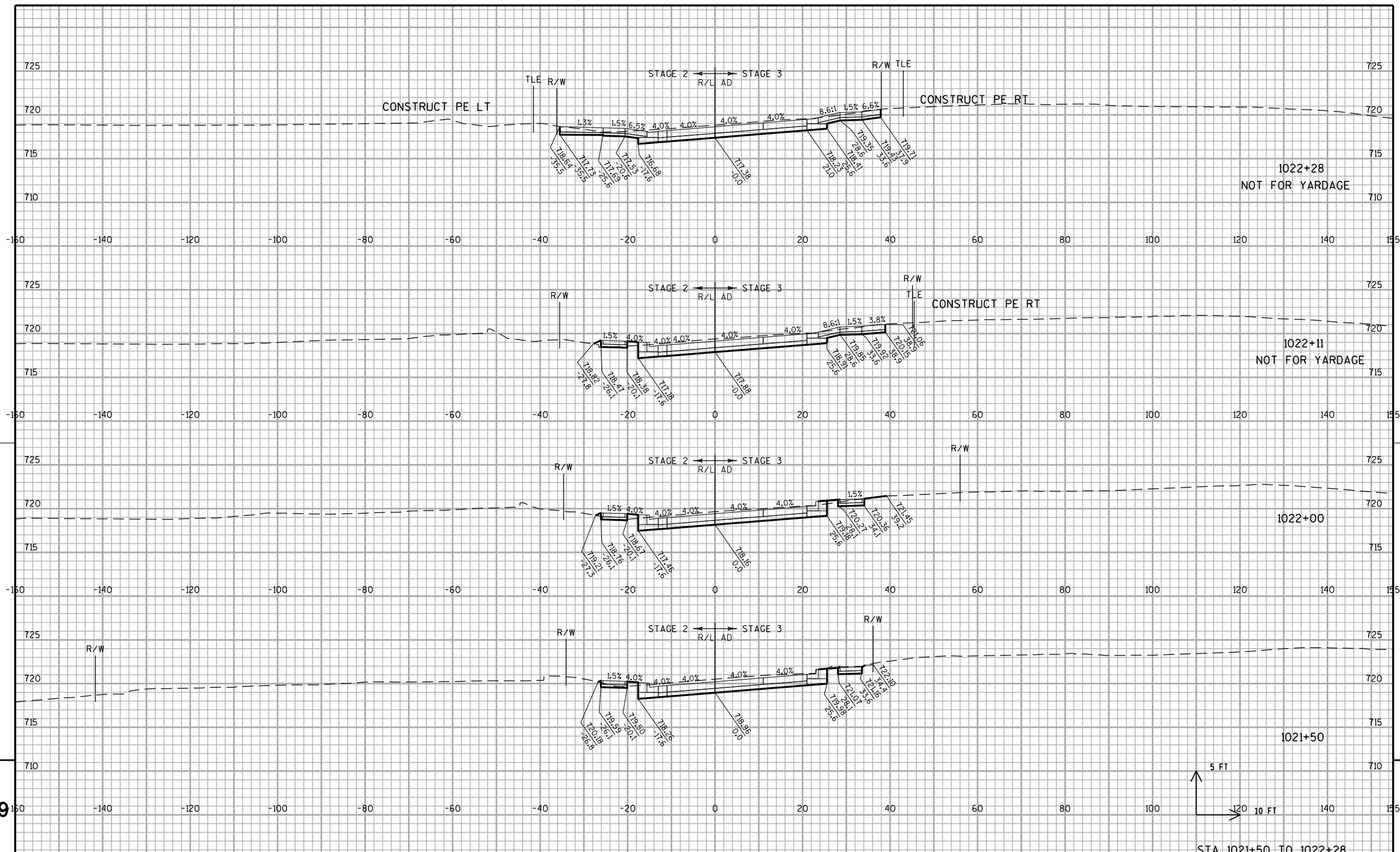


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

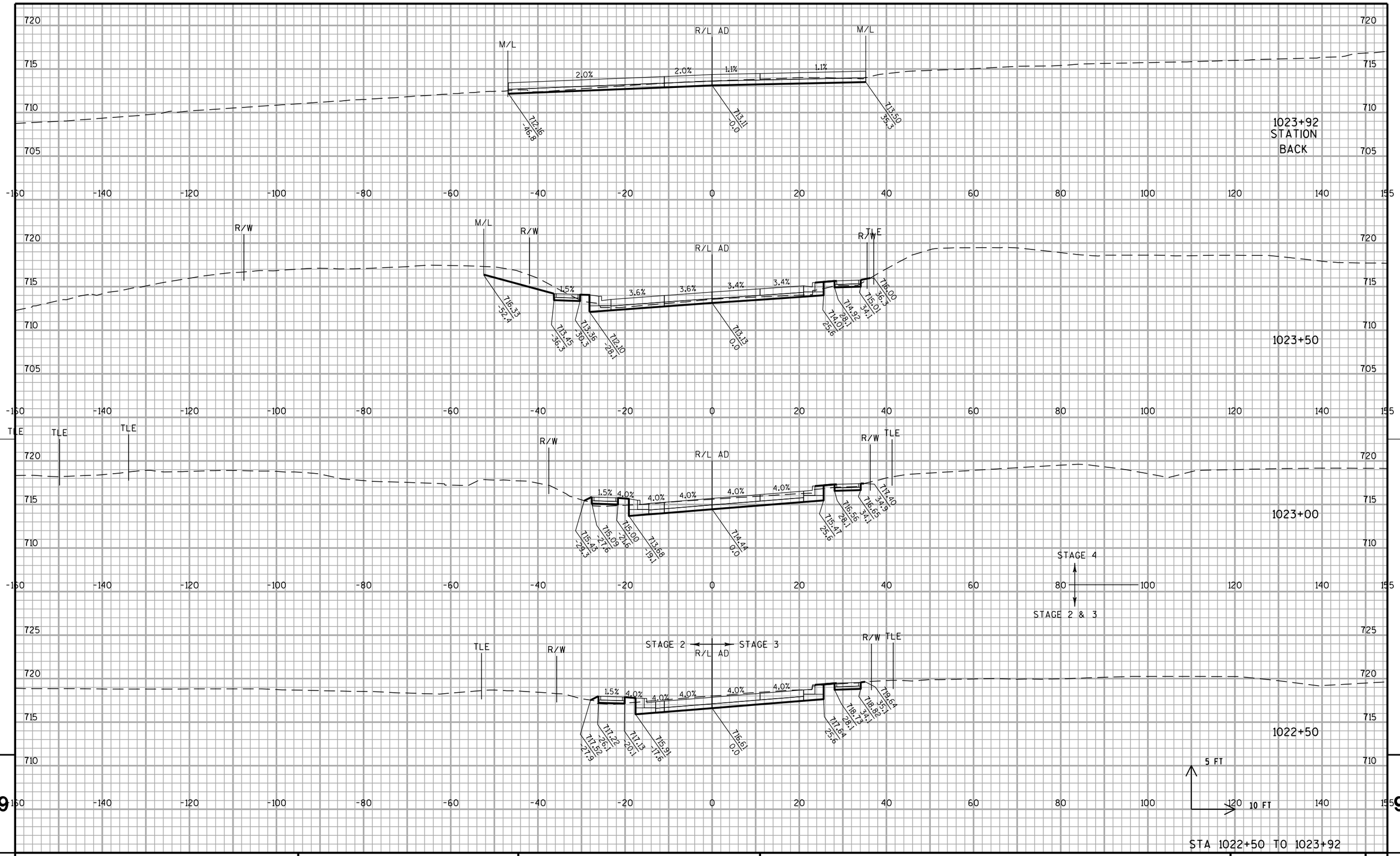
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad40 PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



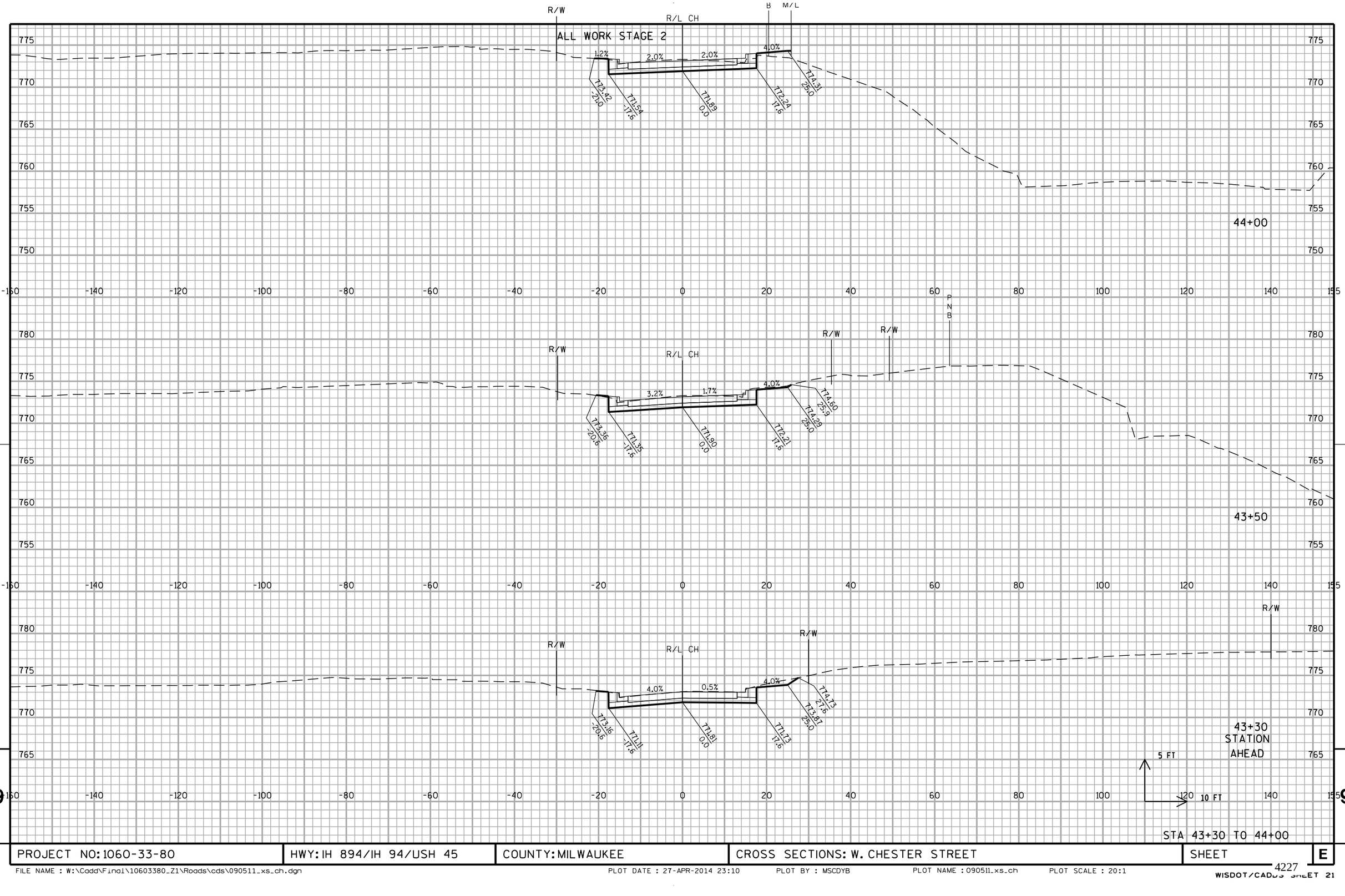
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. ADLER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090510_xs_ad.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090510_xs_ad43 PLOT SCALE : 20:1

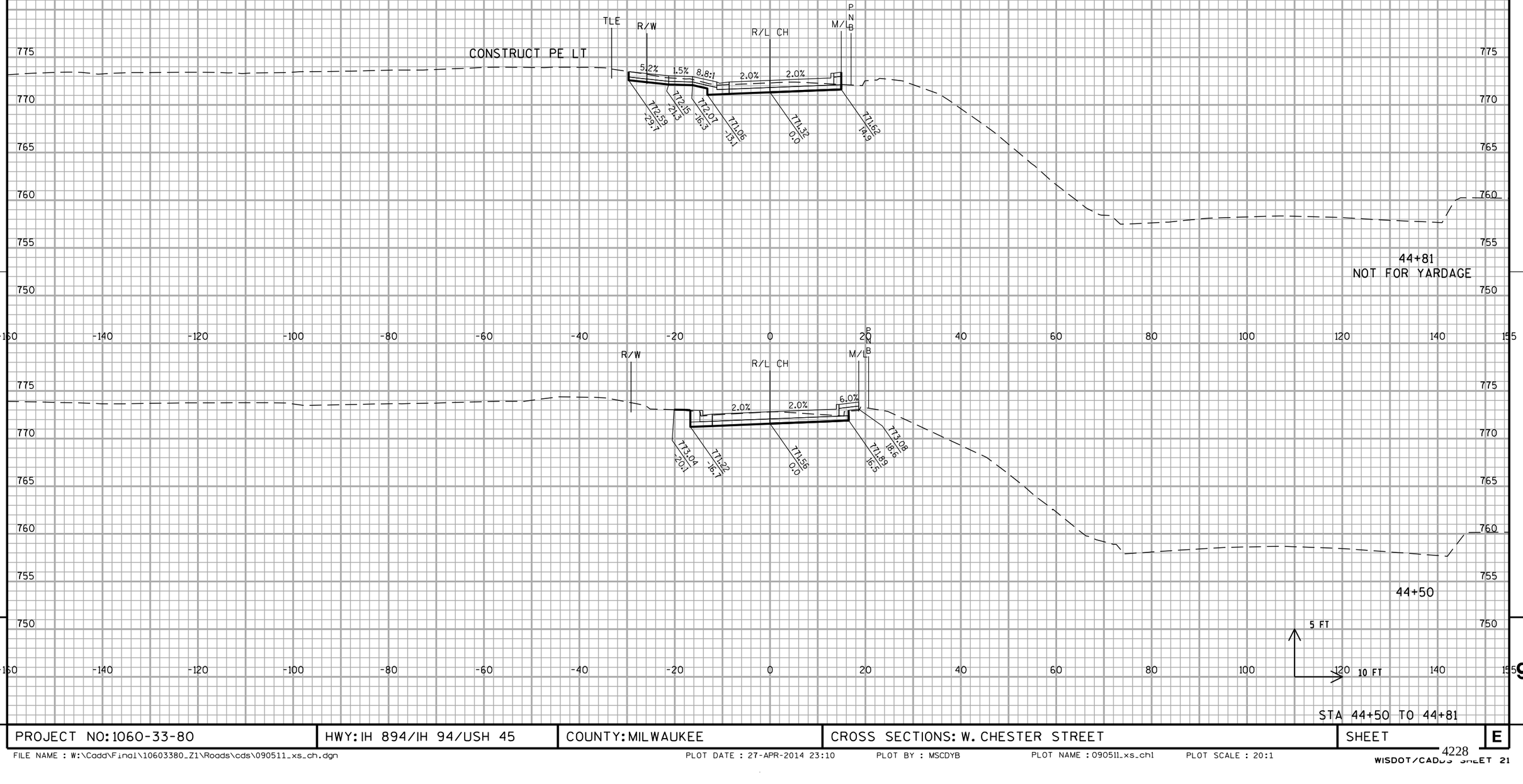
ALL WORK STAGE 2



STA 43+30 TO 44+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

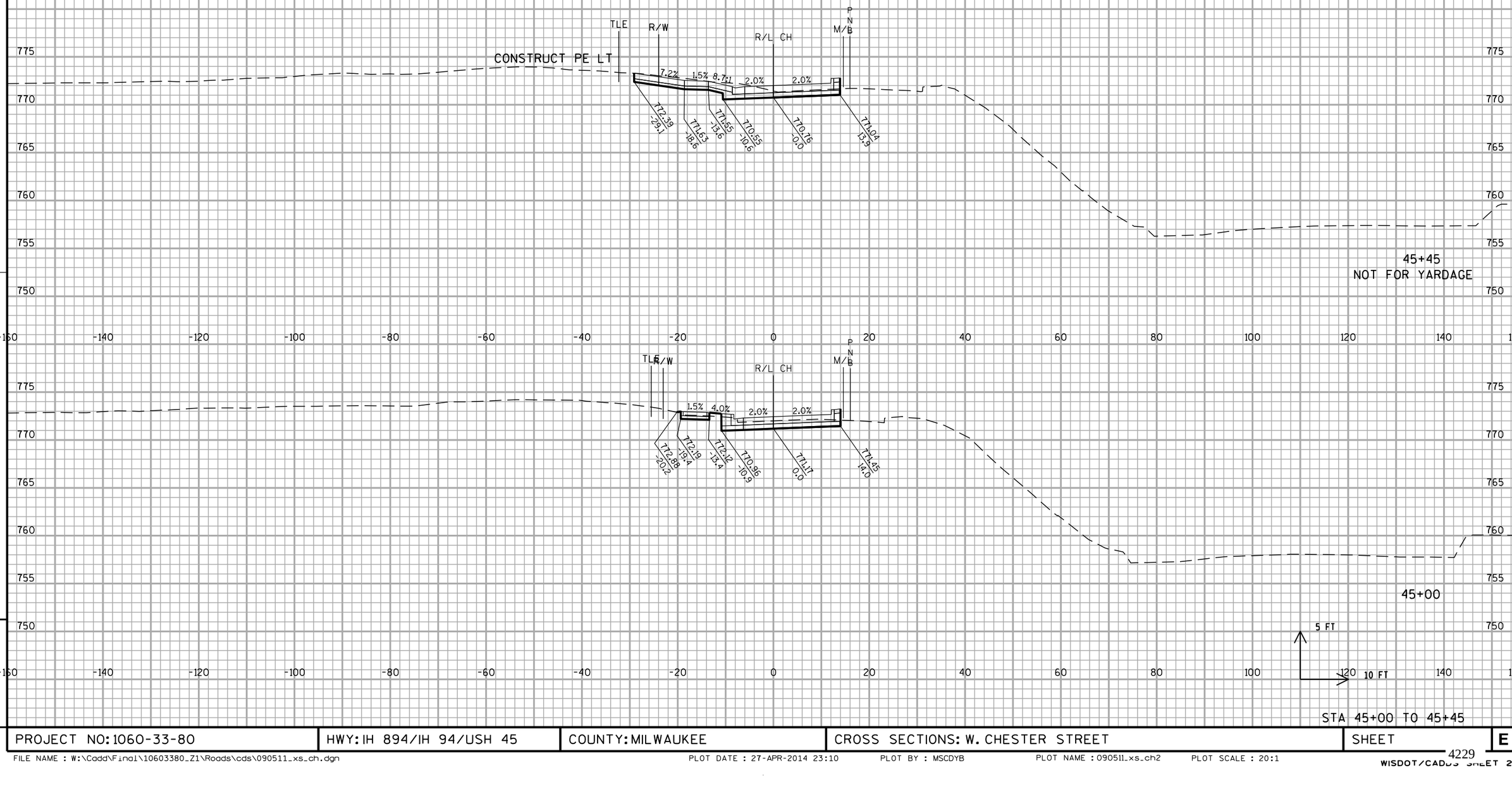
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch1 PLOT SCALE : 20:1

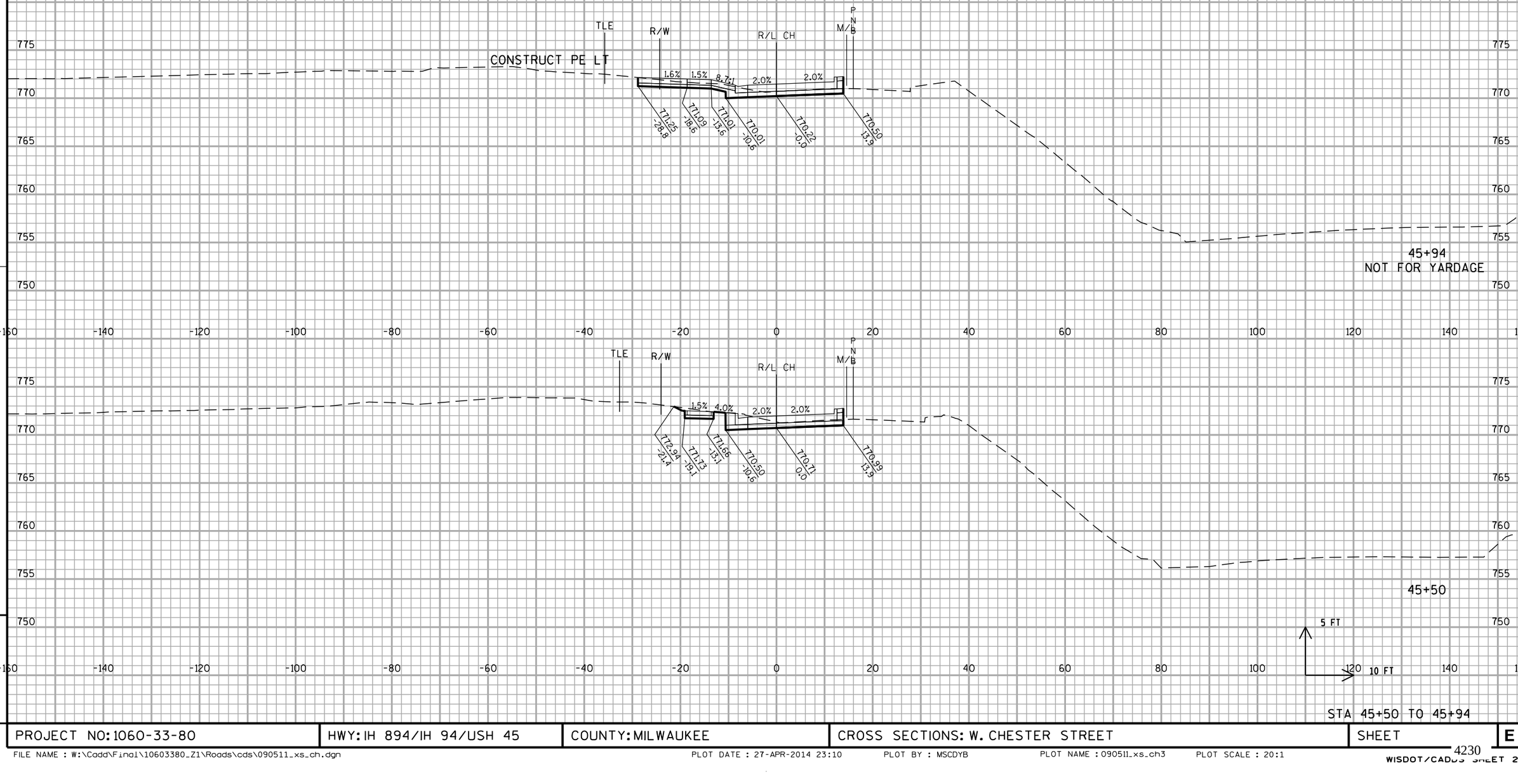
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

9 9

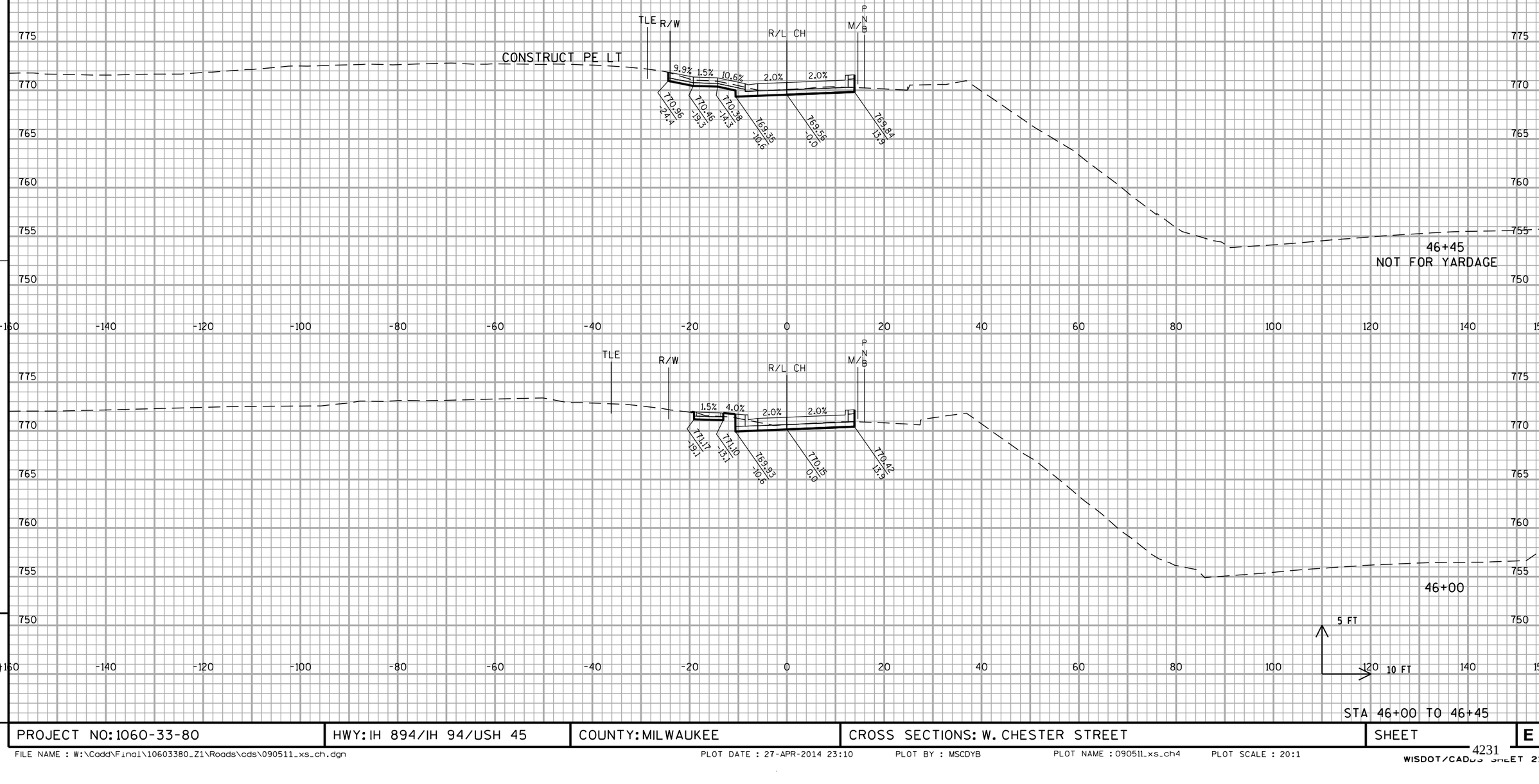
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch3 PLOT SCALE : 20:1

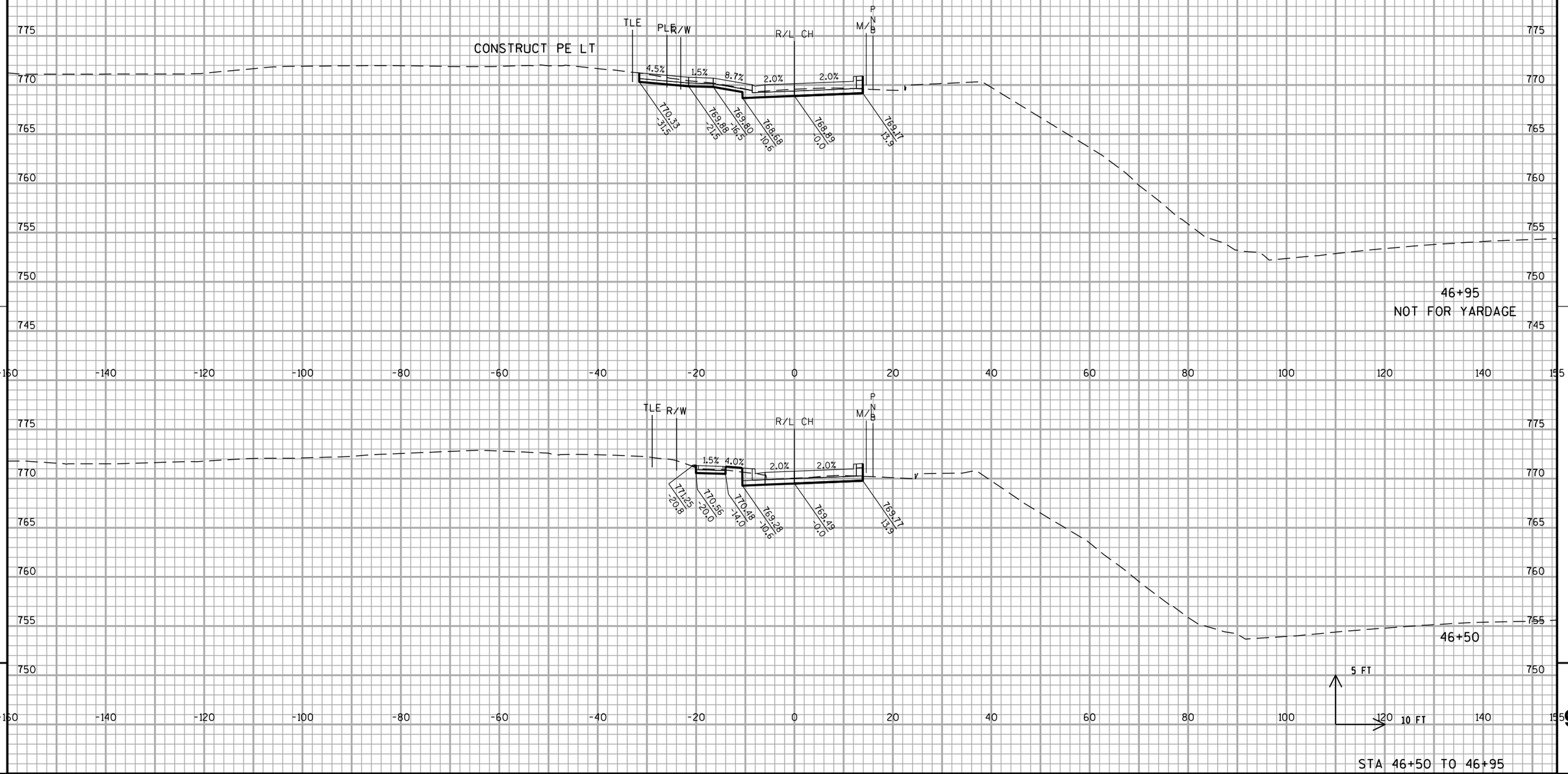
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch4 PLOT SCALE : 20:1

ALL WORK STAGE 2

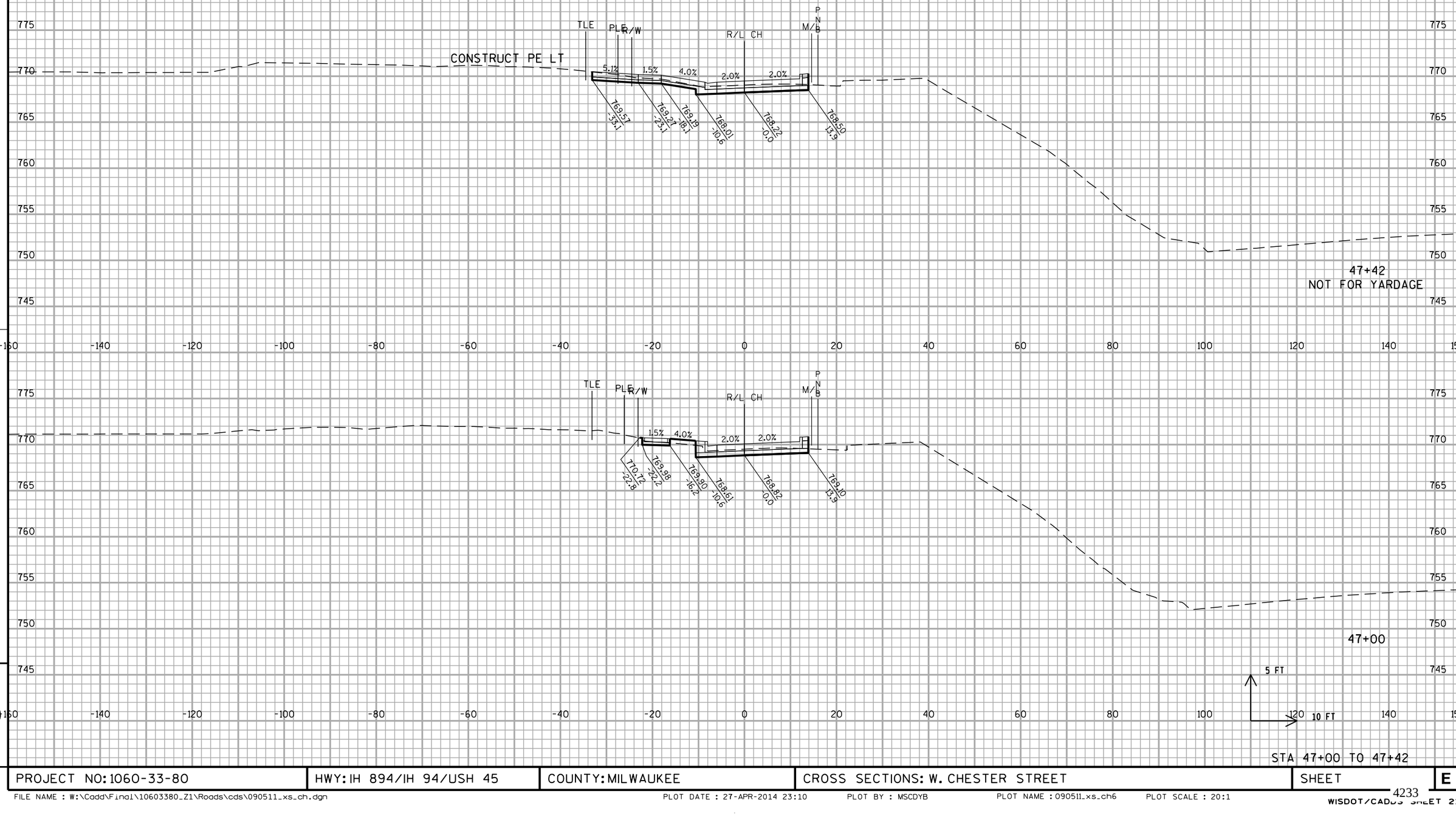


STA 46+50 TO 46+95

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch5 PLOT SCALE : 20:1

ALL WORK STAGE 2

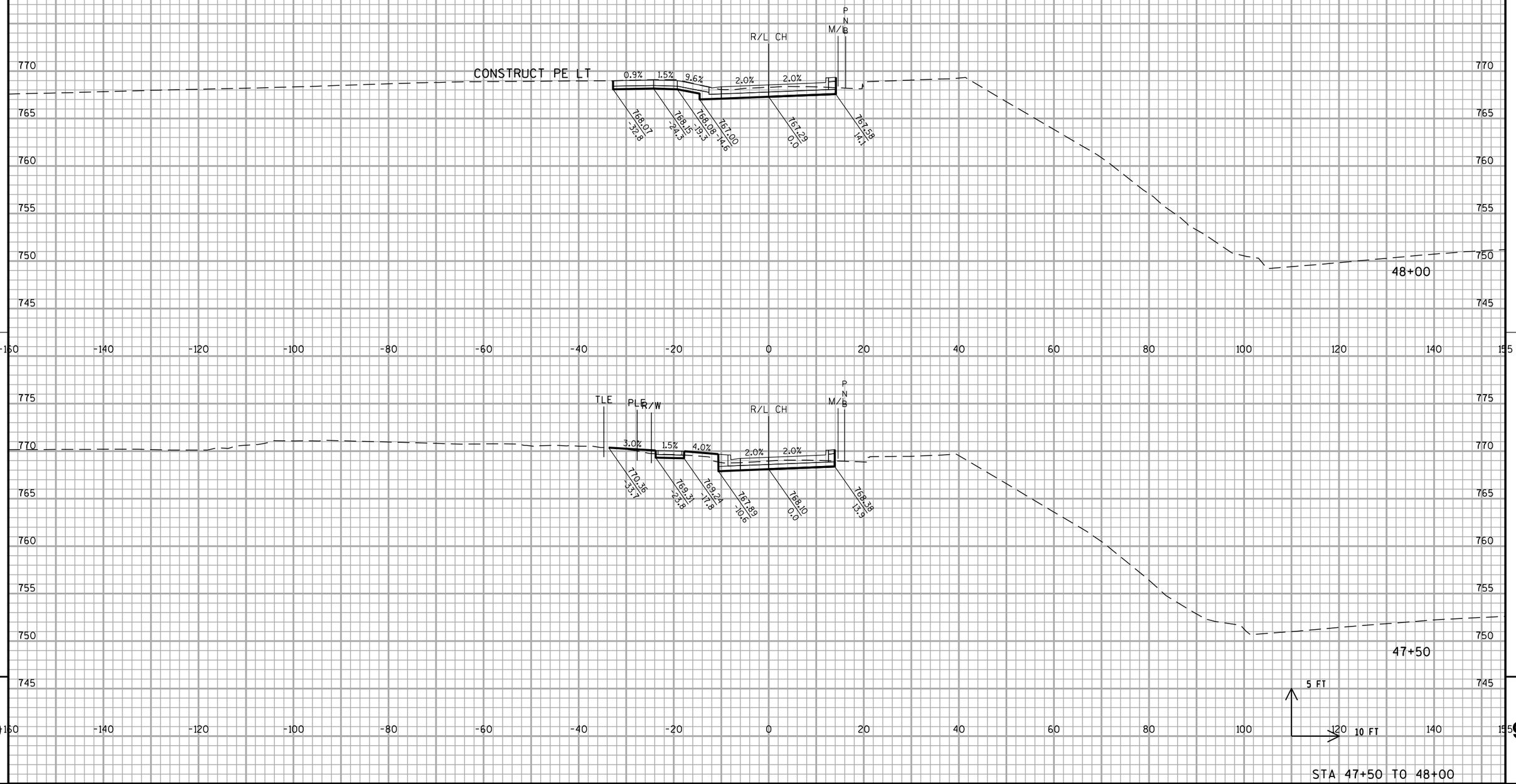


STA 47+00 TO 47+42

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch6 PLOT SCALE : 20:1

ALL WORK STAGE 2

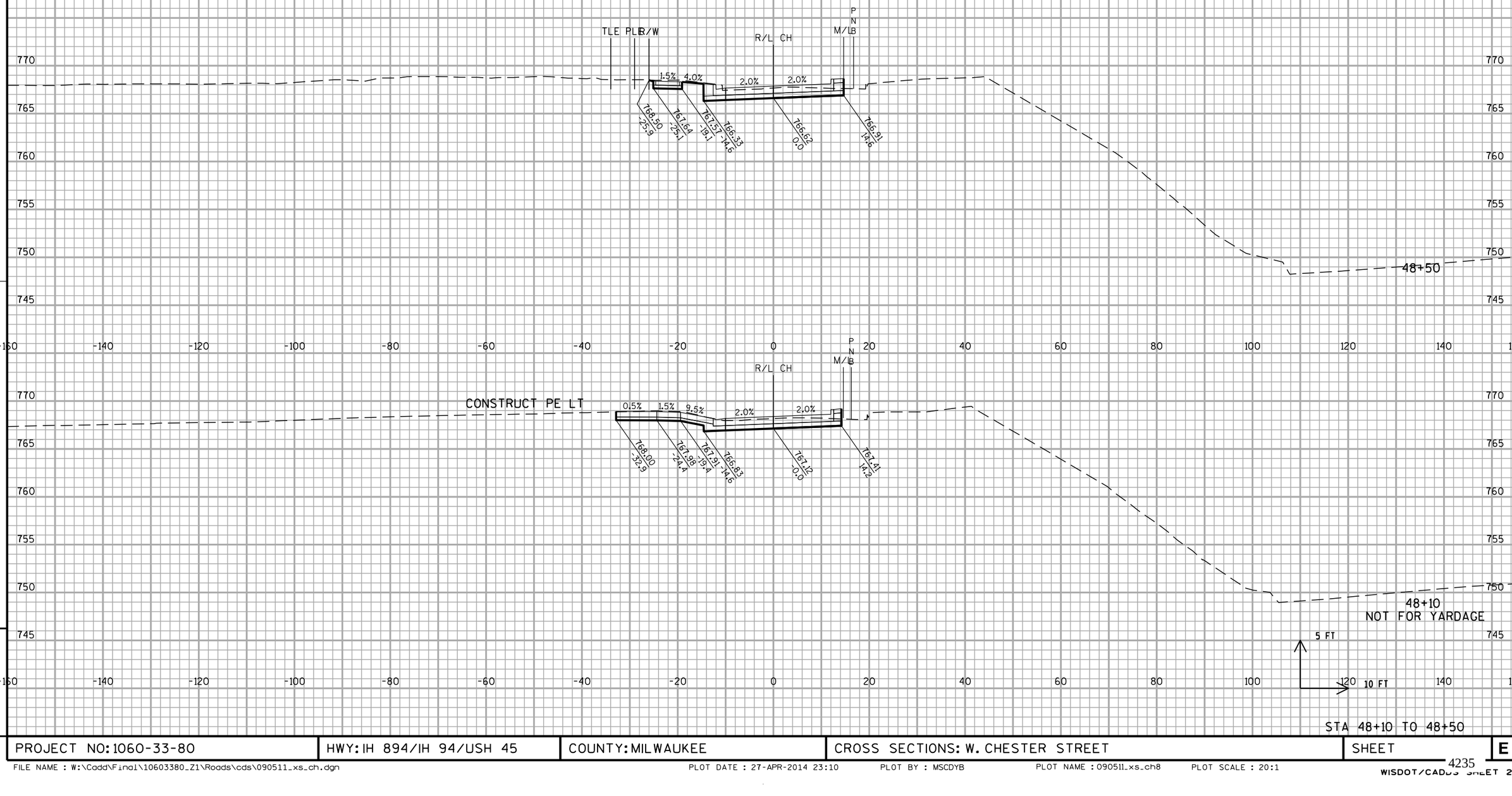


STA 47+50 TO 48+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

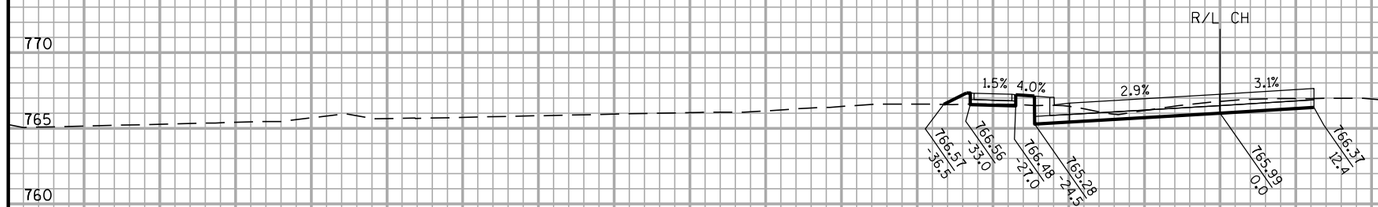
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch7 PLOT SCALE : 20:1

ALL WORK STAGE 2

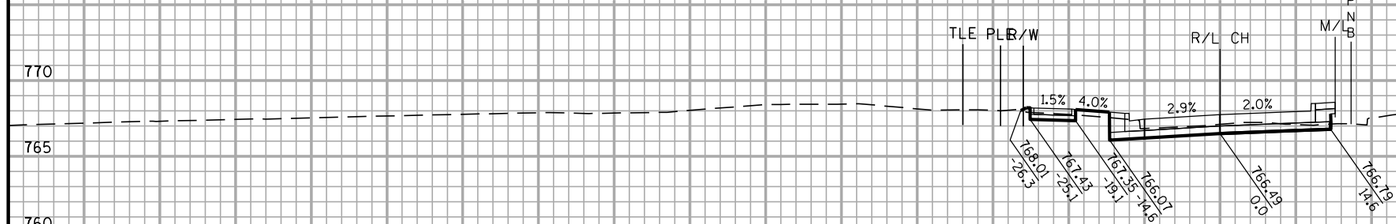


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

ALL WORK STAGE 2



49+50



49+00

5 FT
10 FT

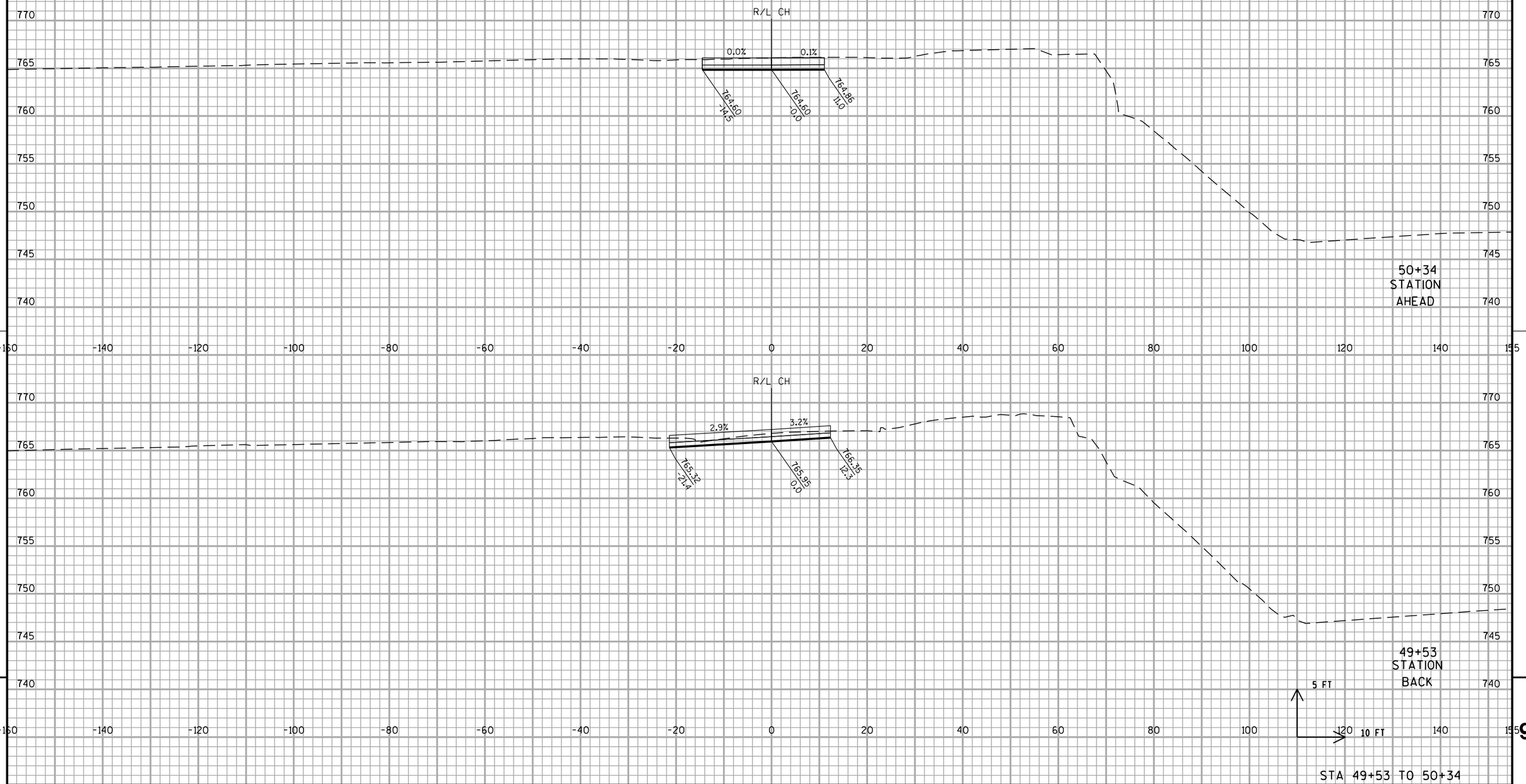
STA 49+00 TO 49+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



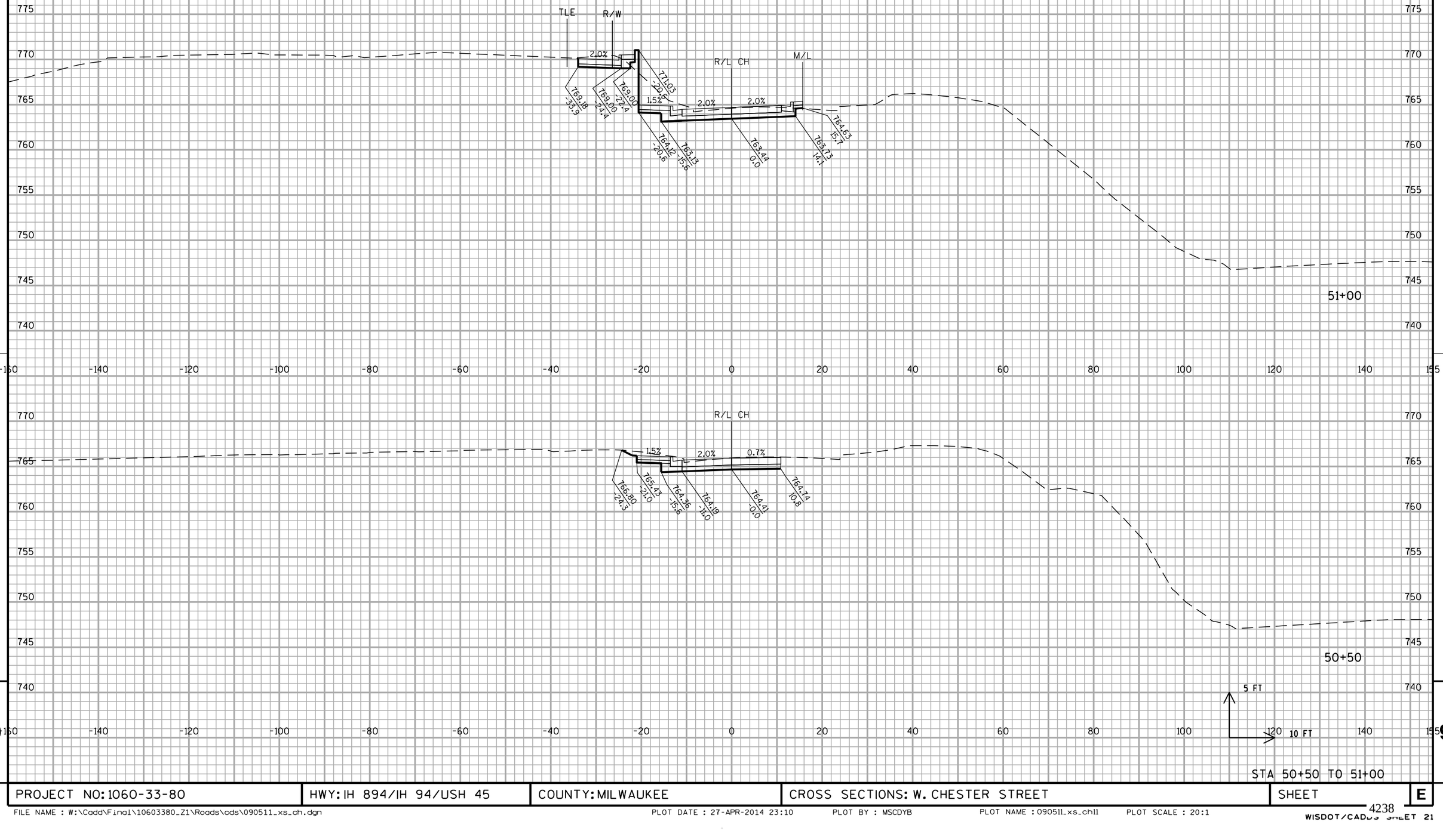
STA 49+53 TO 50+34

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



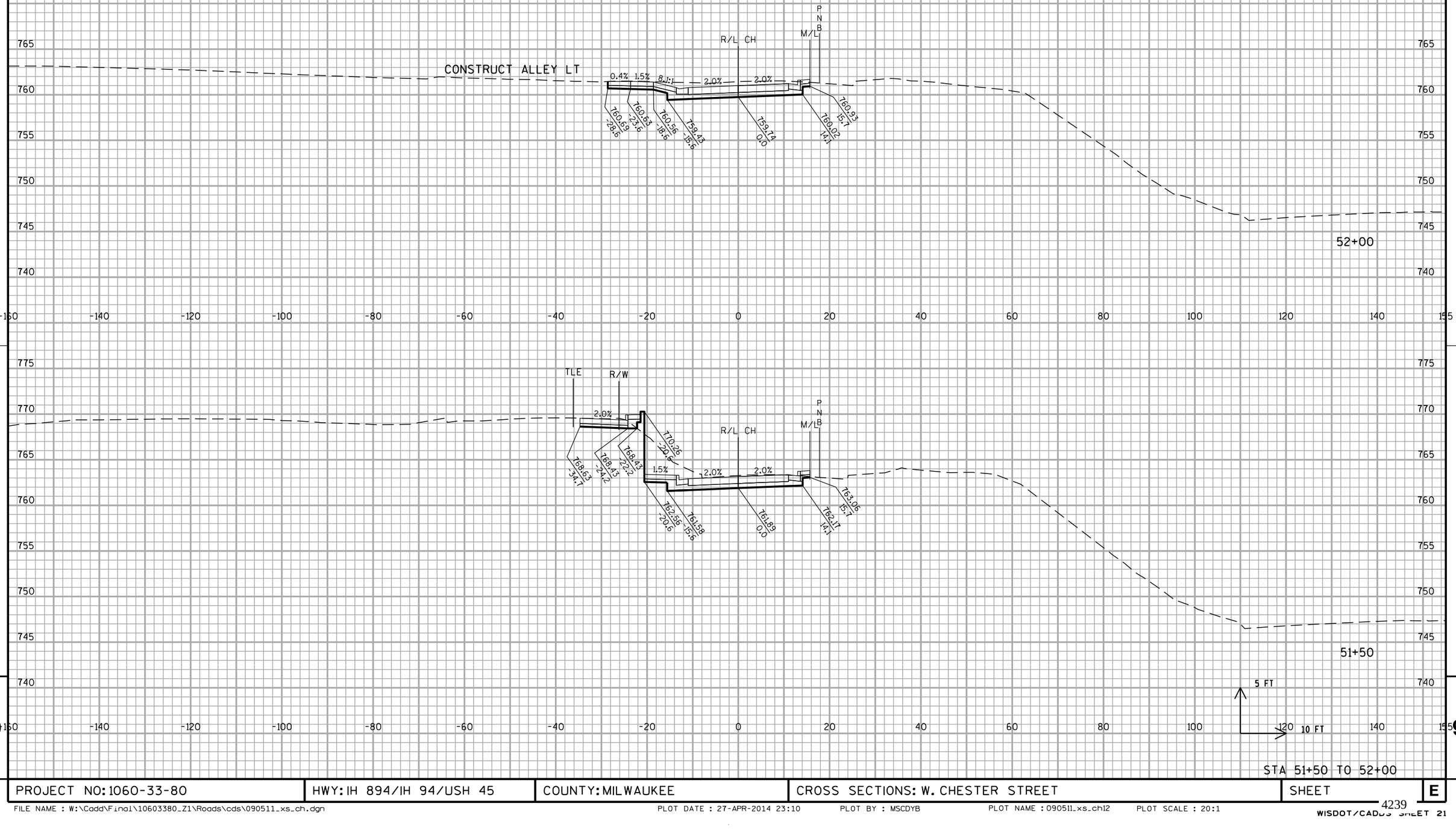
STA 50+50 TO 51+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

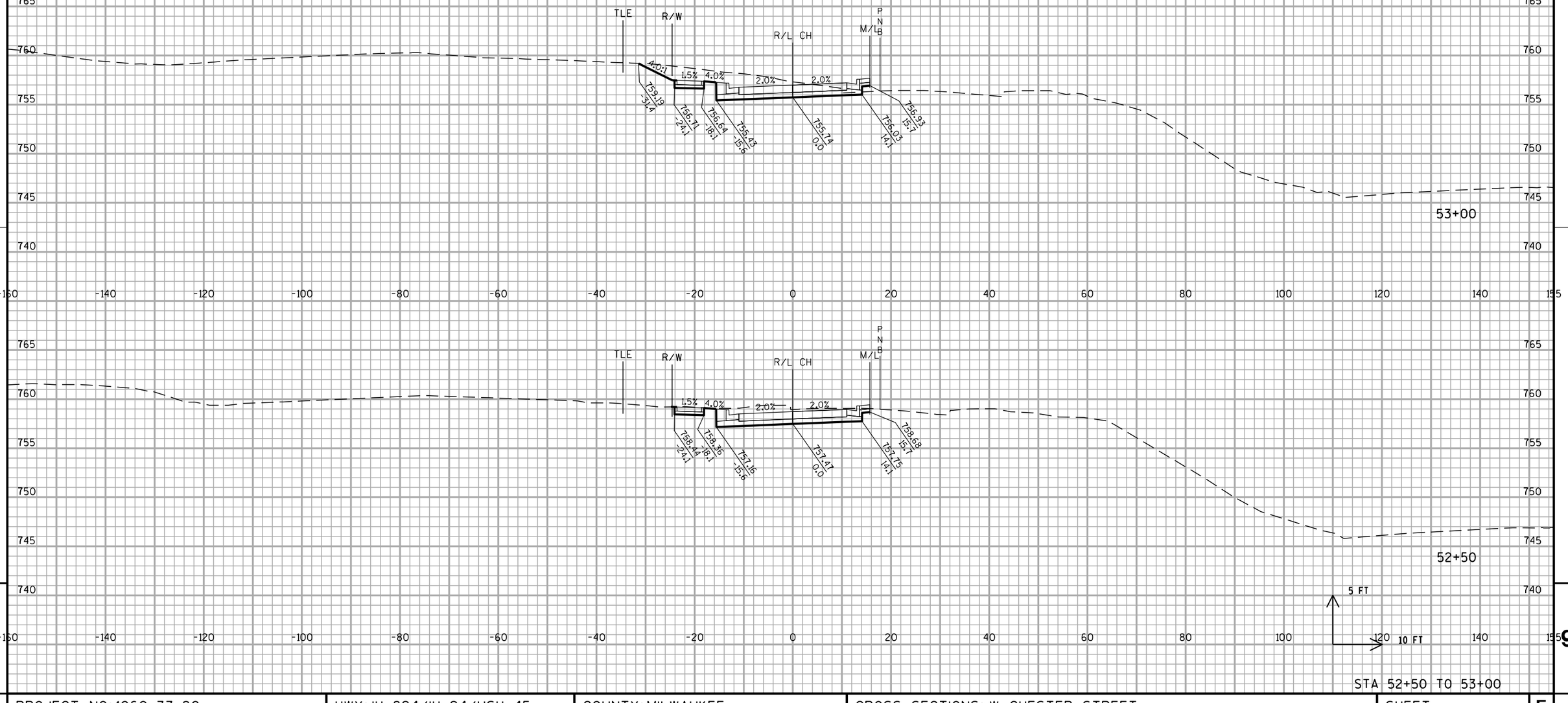


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

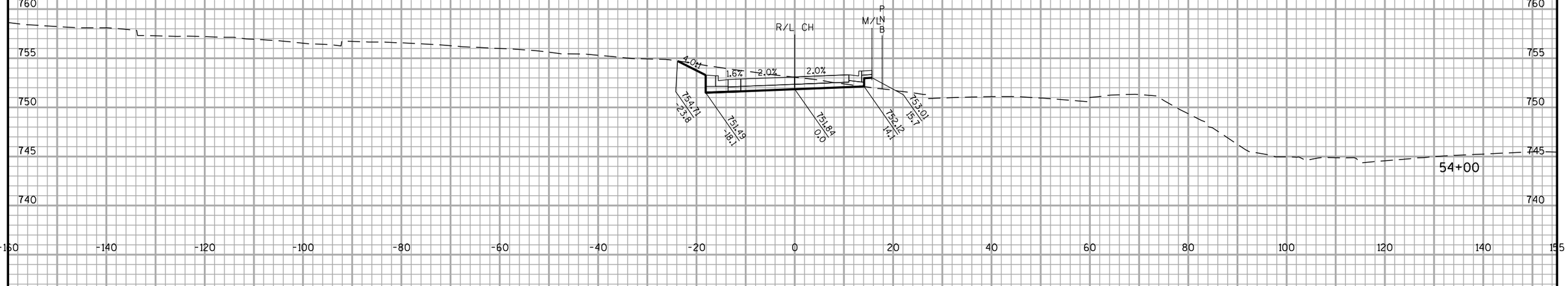
ALL WORK STAGE 2



STA 52+50 TO 53+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

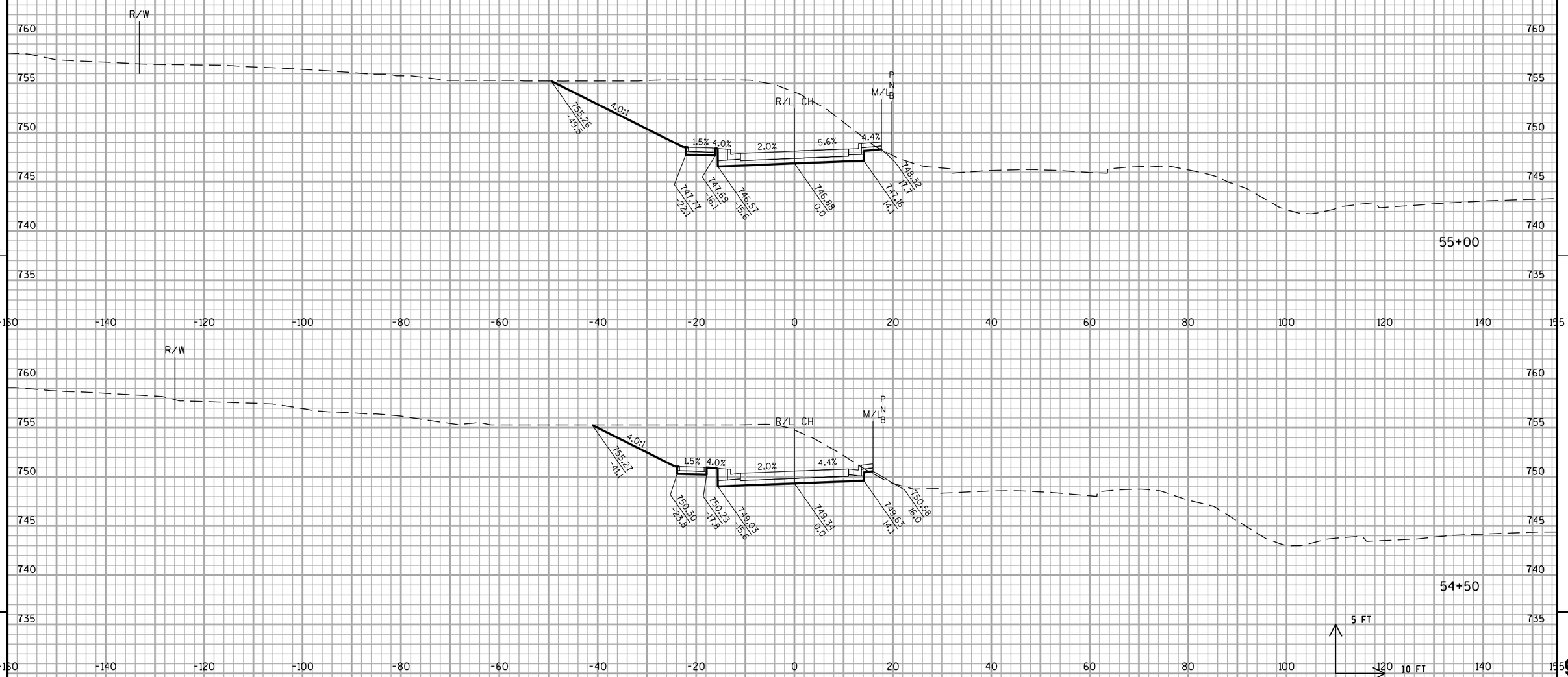
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch14 PLOT SCALE : 20:1

ALL WORK STAGE 2

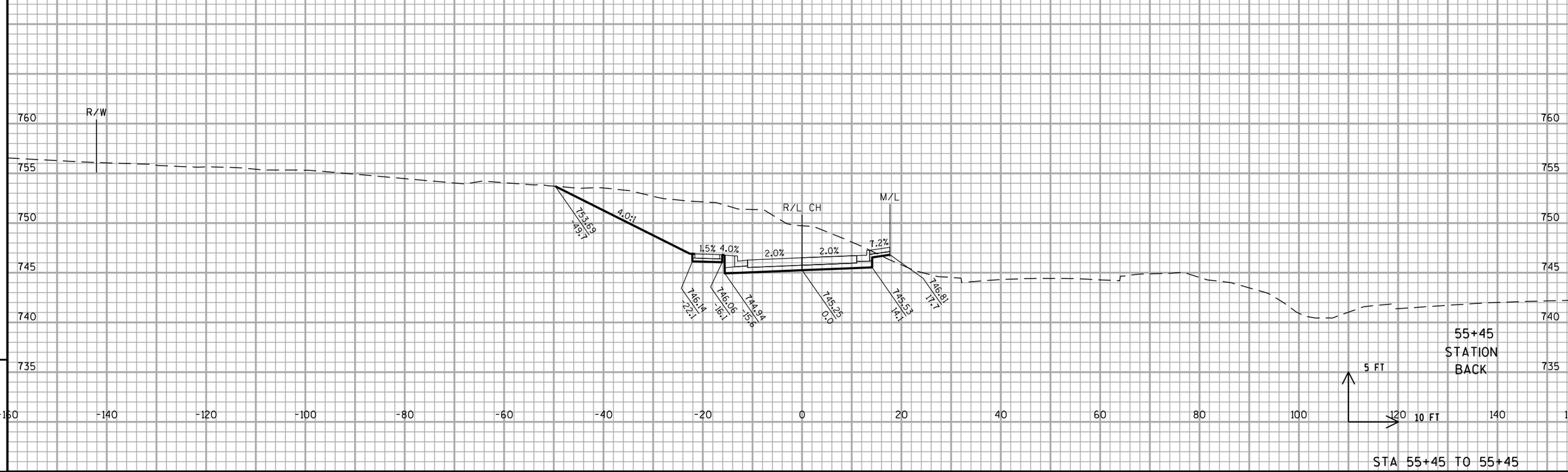


STA 54+50 TO 55+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch15 PLOT SCALE : 20:1

ALL WORK STAGE 2

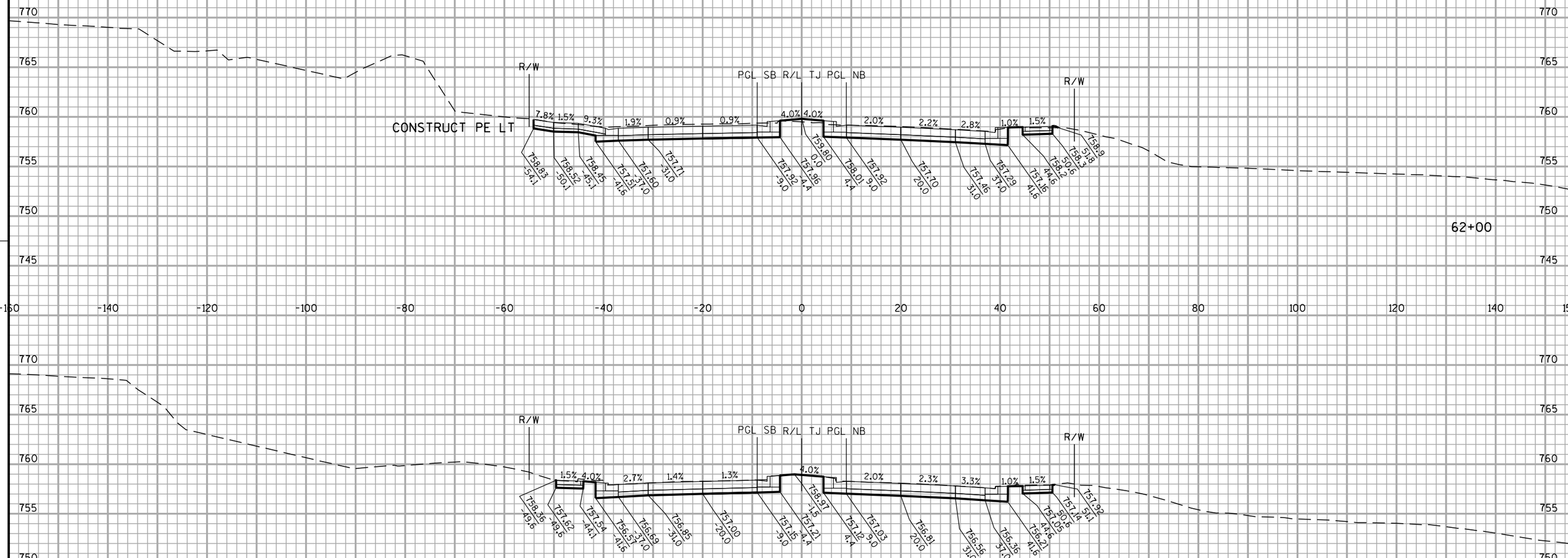


STA 55+45 TO 55+45

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. CHESTER STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090511_xs_ch.dgn PLOT DATE : 27-APR-2014 23:10 PLOT BY : MSCDYB PLOT NAME : 090511_xs_ch16 PLOT SCALE : 20:1

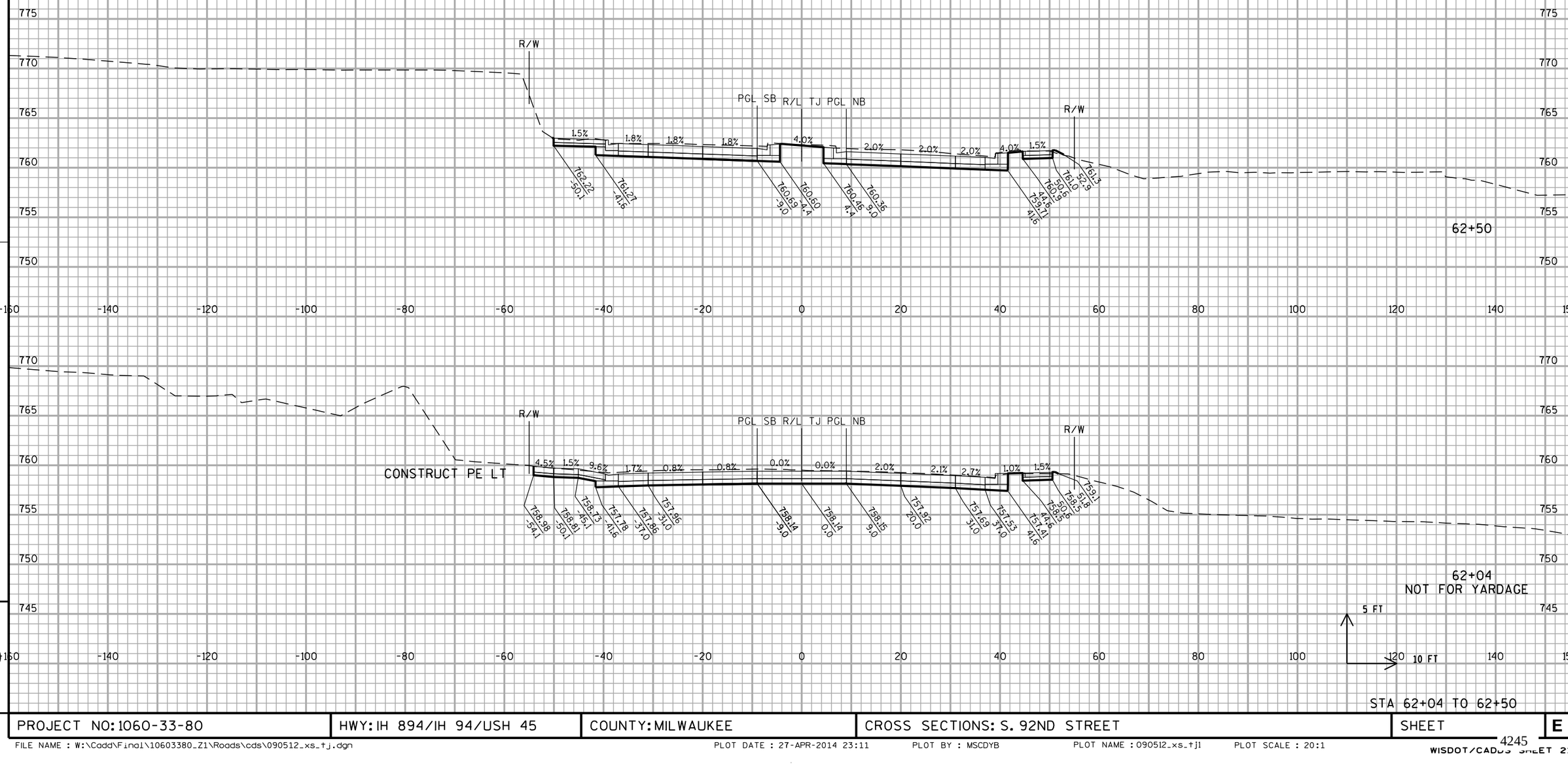
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

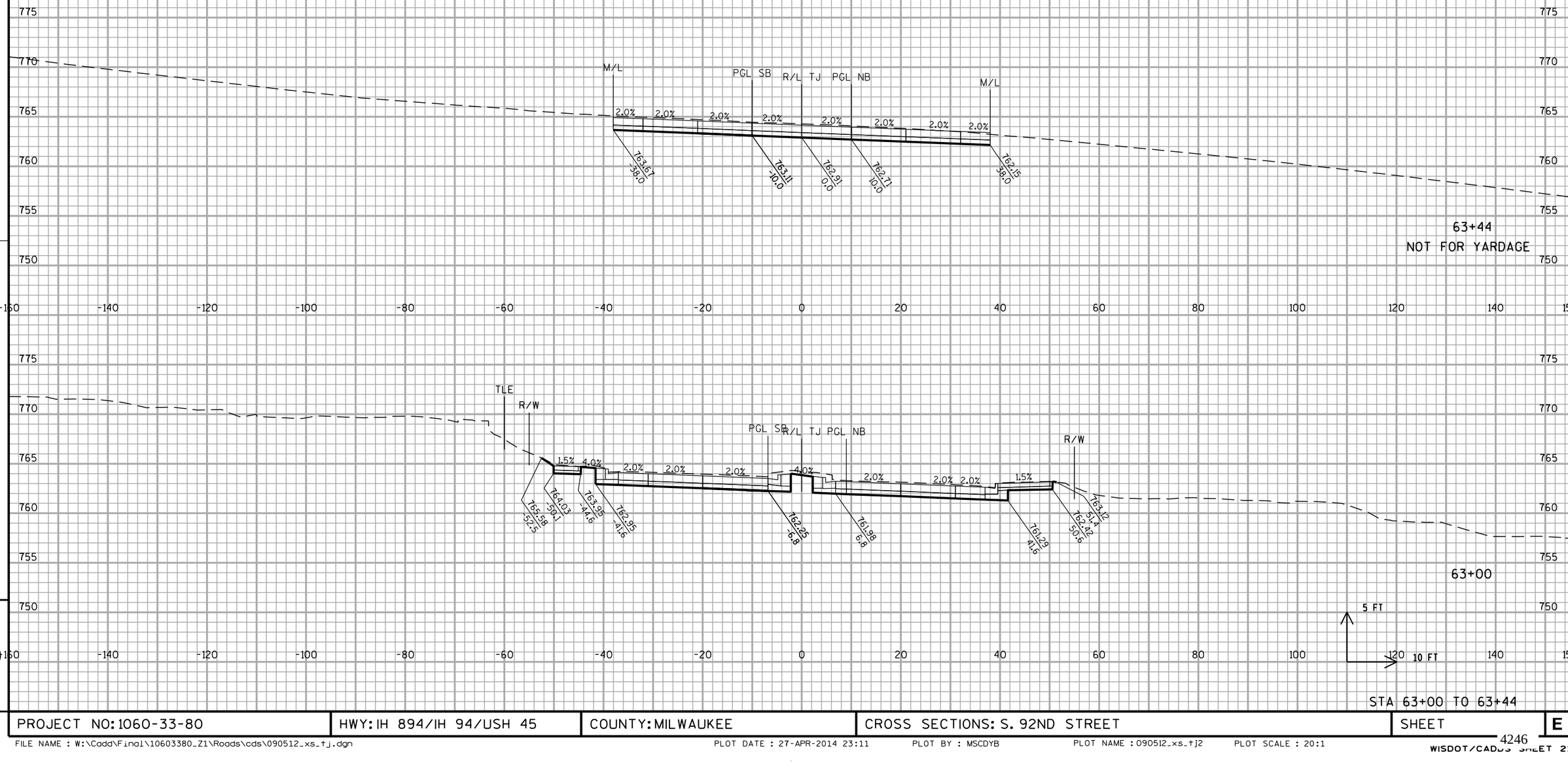
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090512_xs_tj.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090512_xs_tj PLOT SCALE : 20:1

ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

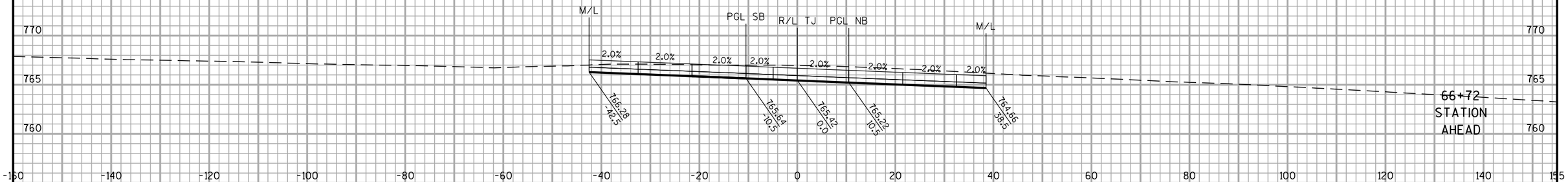
ALL WORK STAGE 3



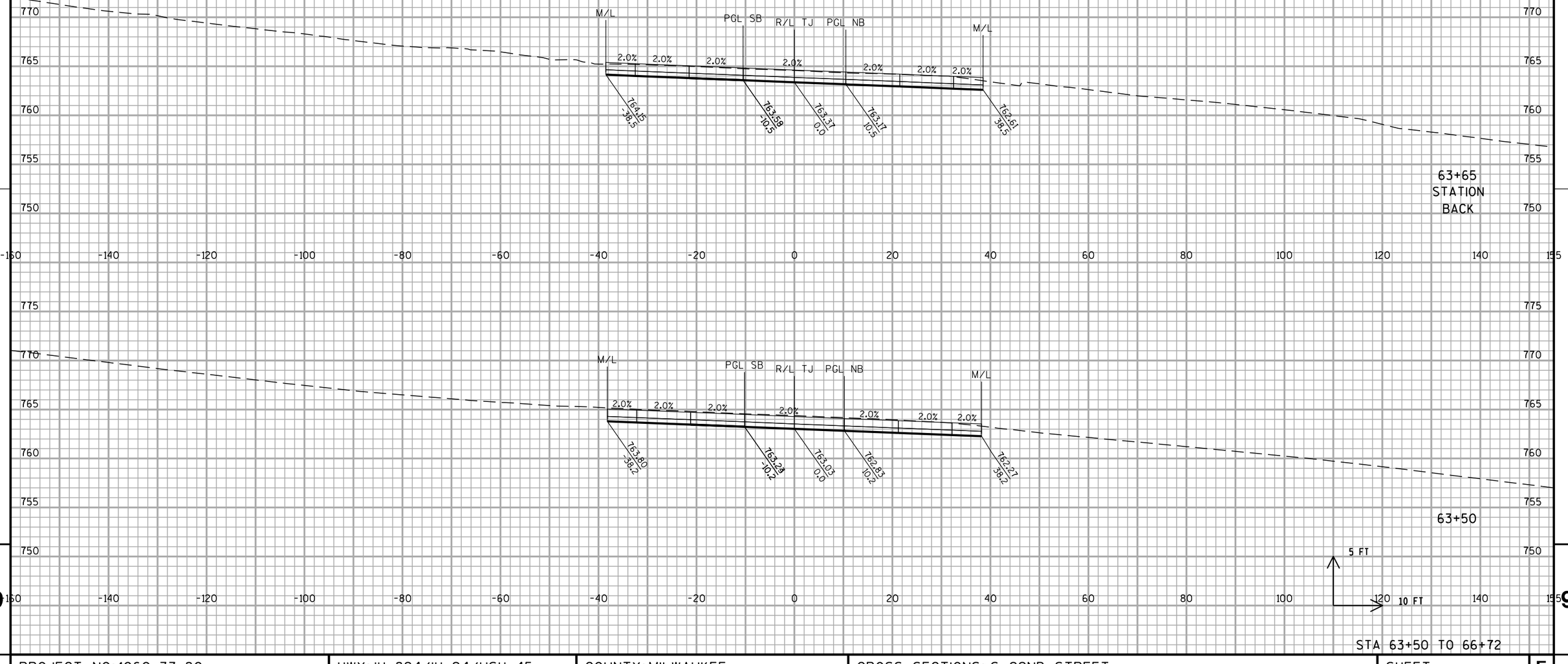
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090512_xs_tj.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090512_xs_tj2 PLOT SCALE : 20:1

ALL WORK STAGE 2



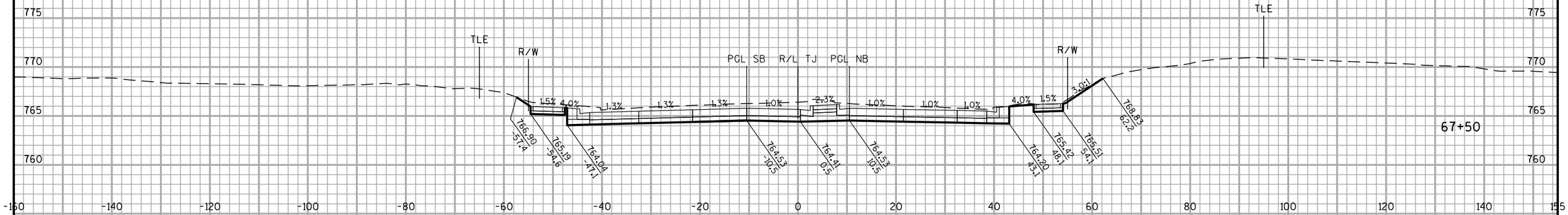
ALL WORK STAGE 3

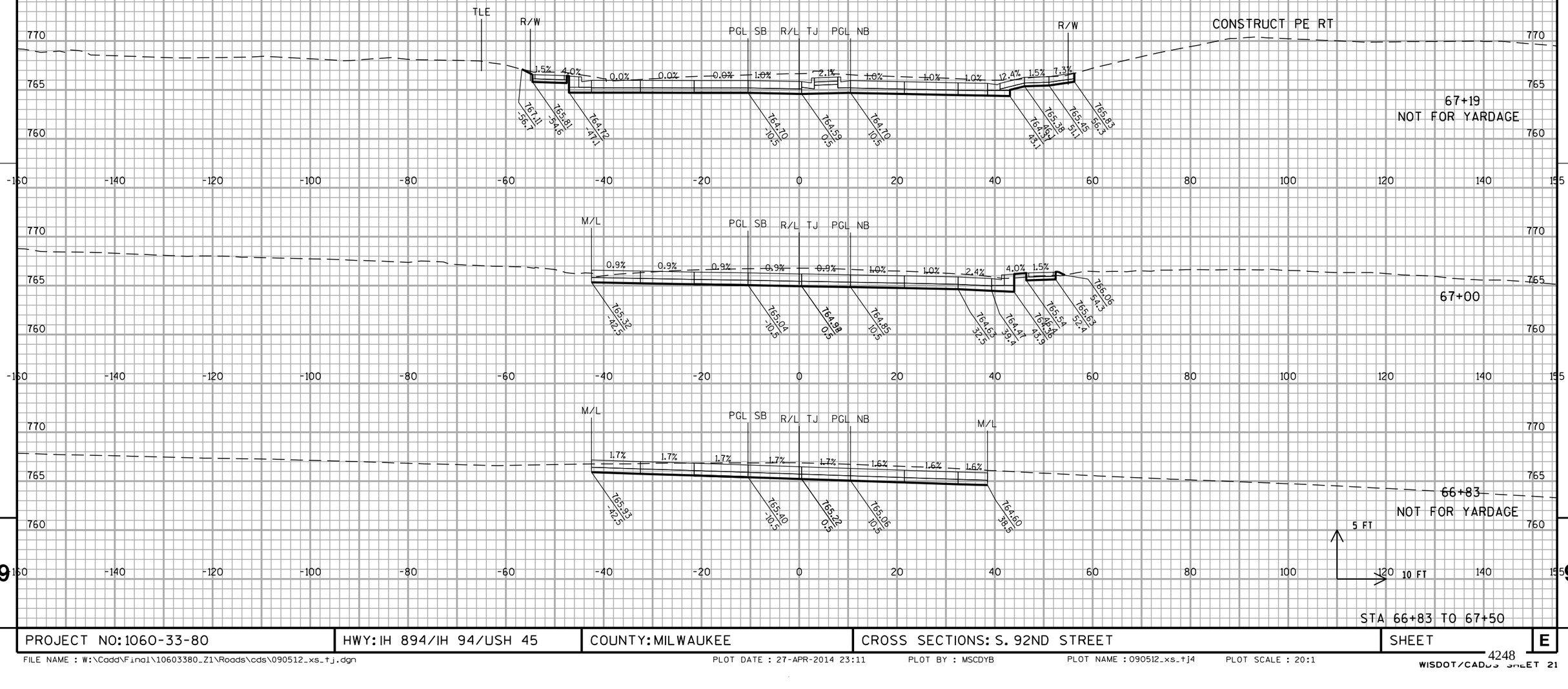


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090512_xs_tj.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090512_xs_tj3 PLOT SCALE : 20:1

ALL WORK STAGE 2





STA 66+83 TO 67+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090512_xs_tj.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090512_xs_tj4 PLOT SCALE : 20:1

ALL WORK STAGE 2

69+00

68+50

68+00

CONSTRUCT PE RT

67+76

NOT FOR YARDAGE

5 FT

10 FT

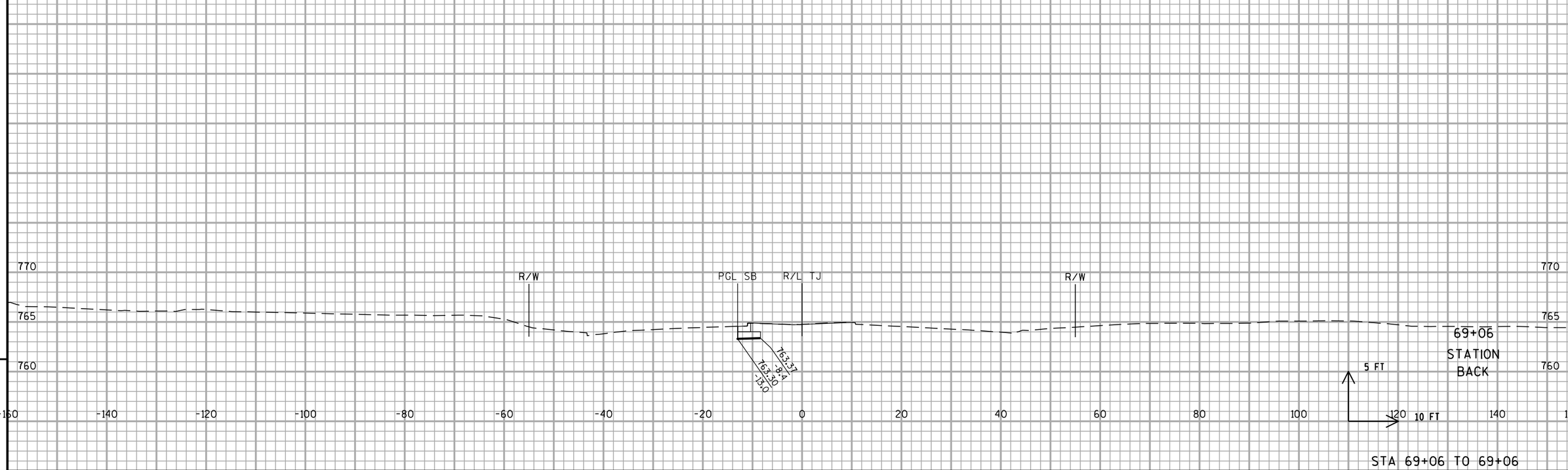
STA 67+76 TO 69+00

9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

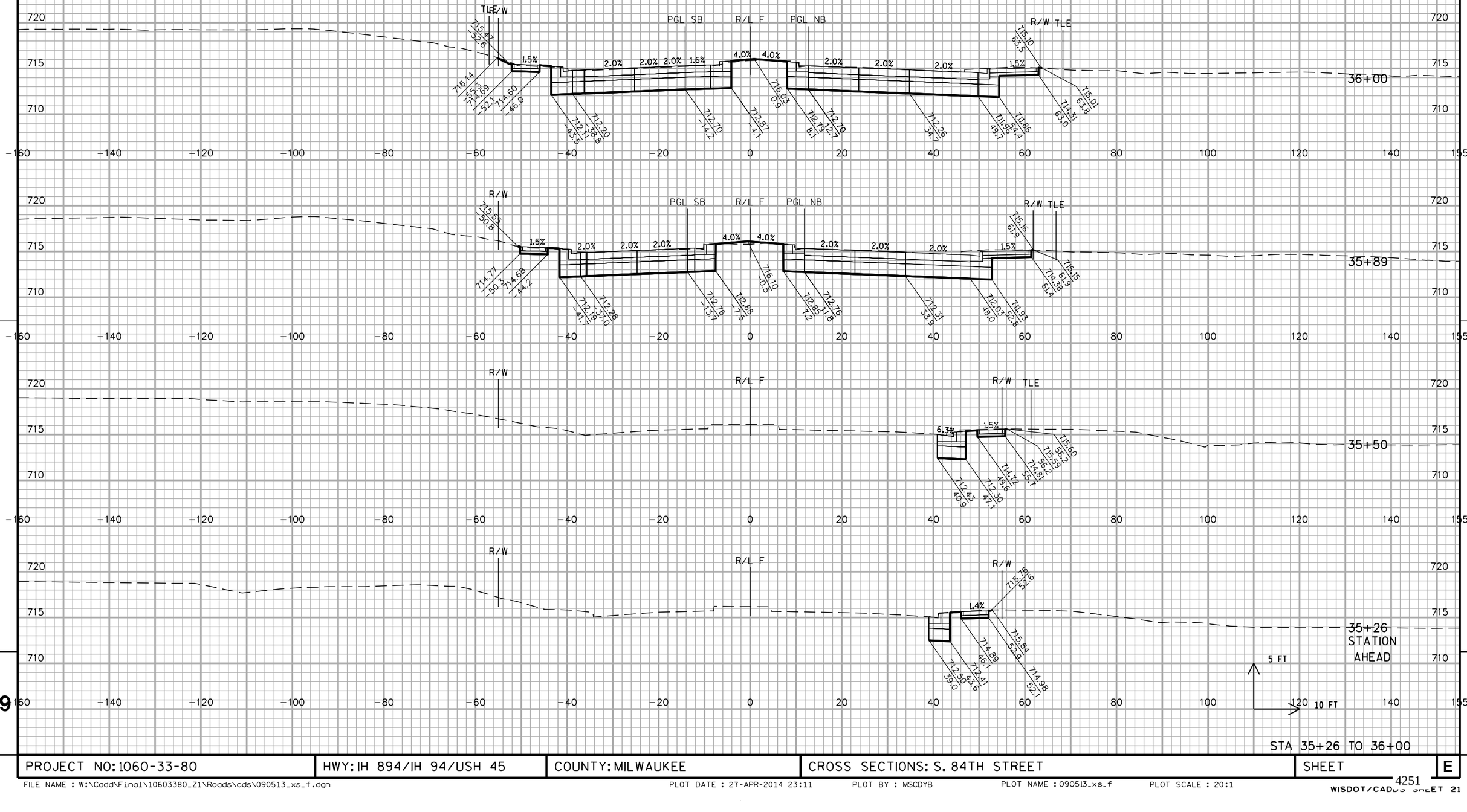
ALL WORK STAGE 2



STA 69+06 TO 69+06

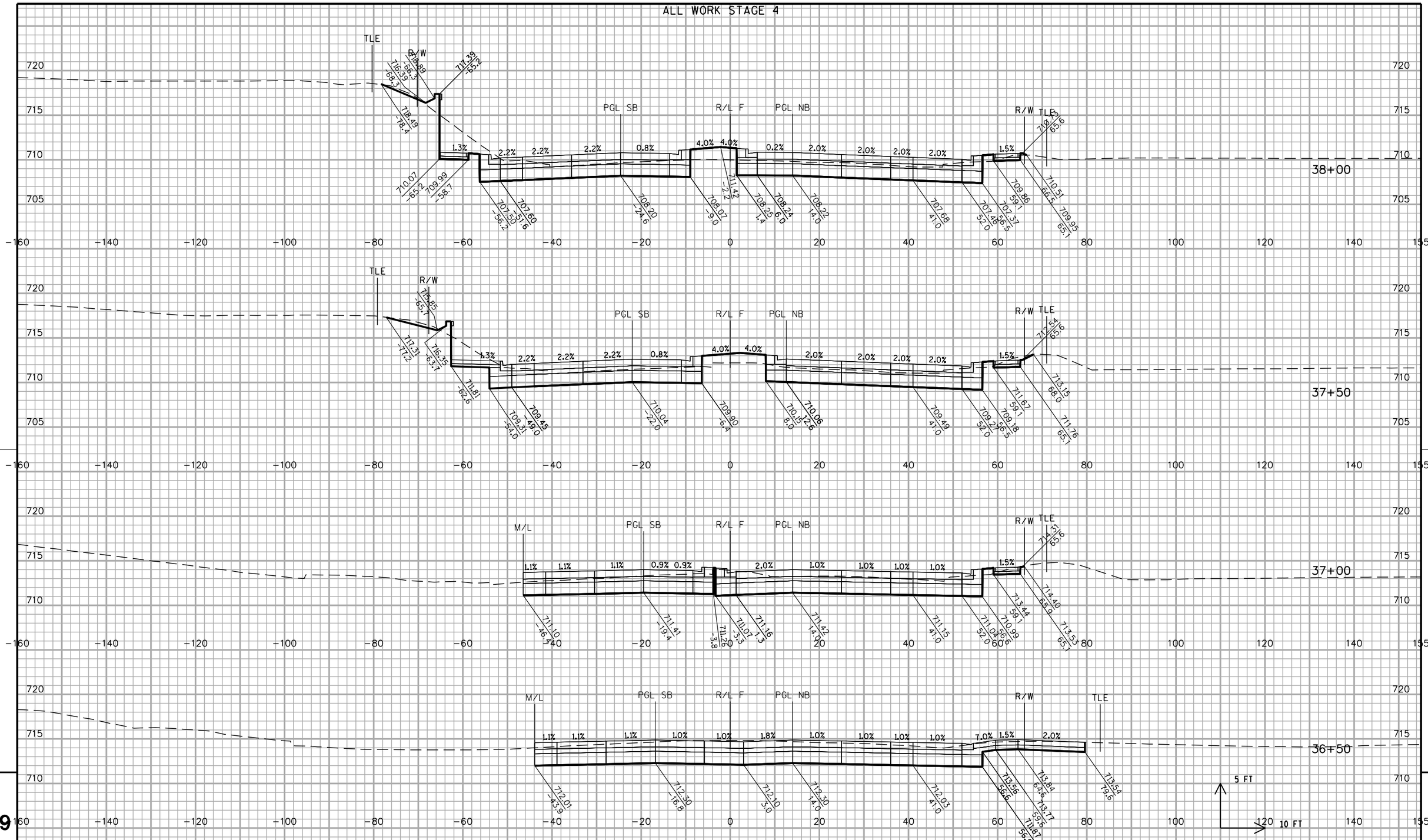
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 92ND STREET	SHEET	E

ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

ALL WORK STAGE 4



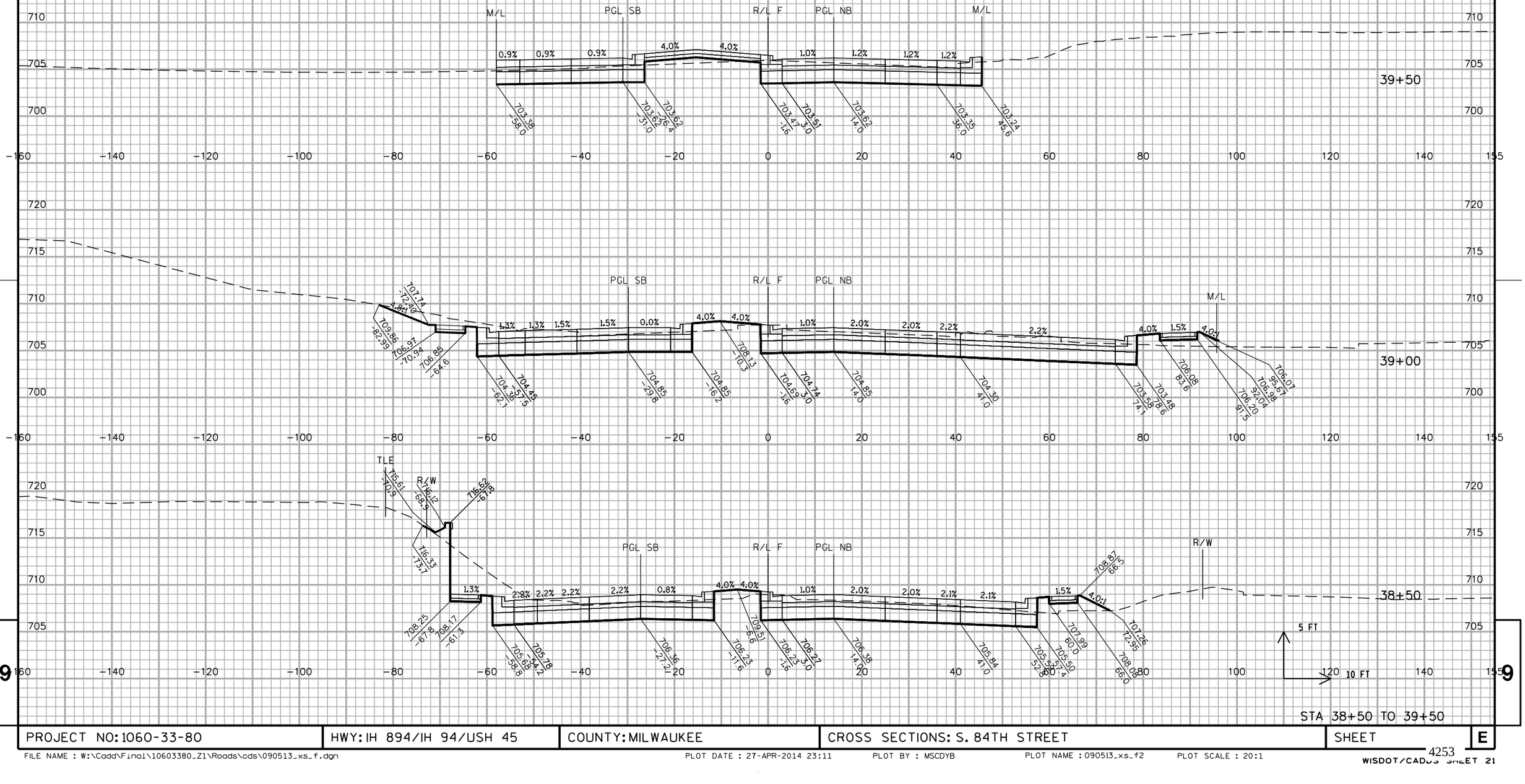
STA 36+50 TO 38+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090513_xs_f.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090513_xs_f1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

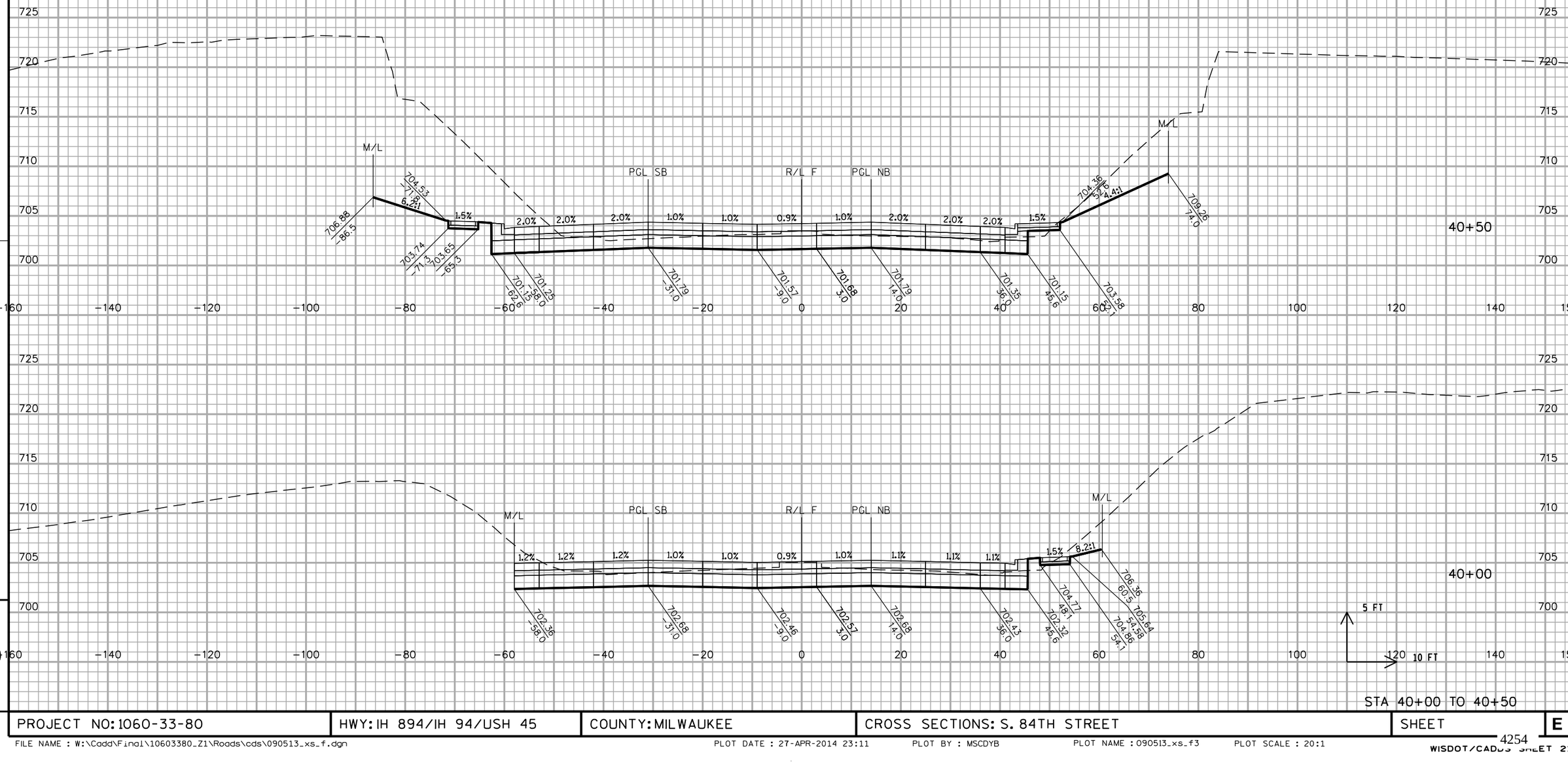


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090513_xs_f.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090513_xs_f2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

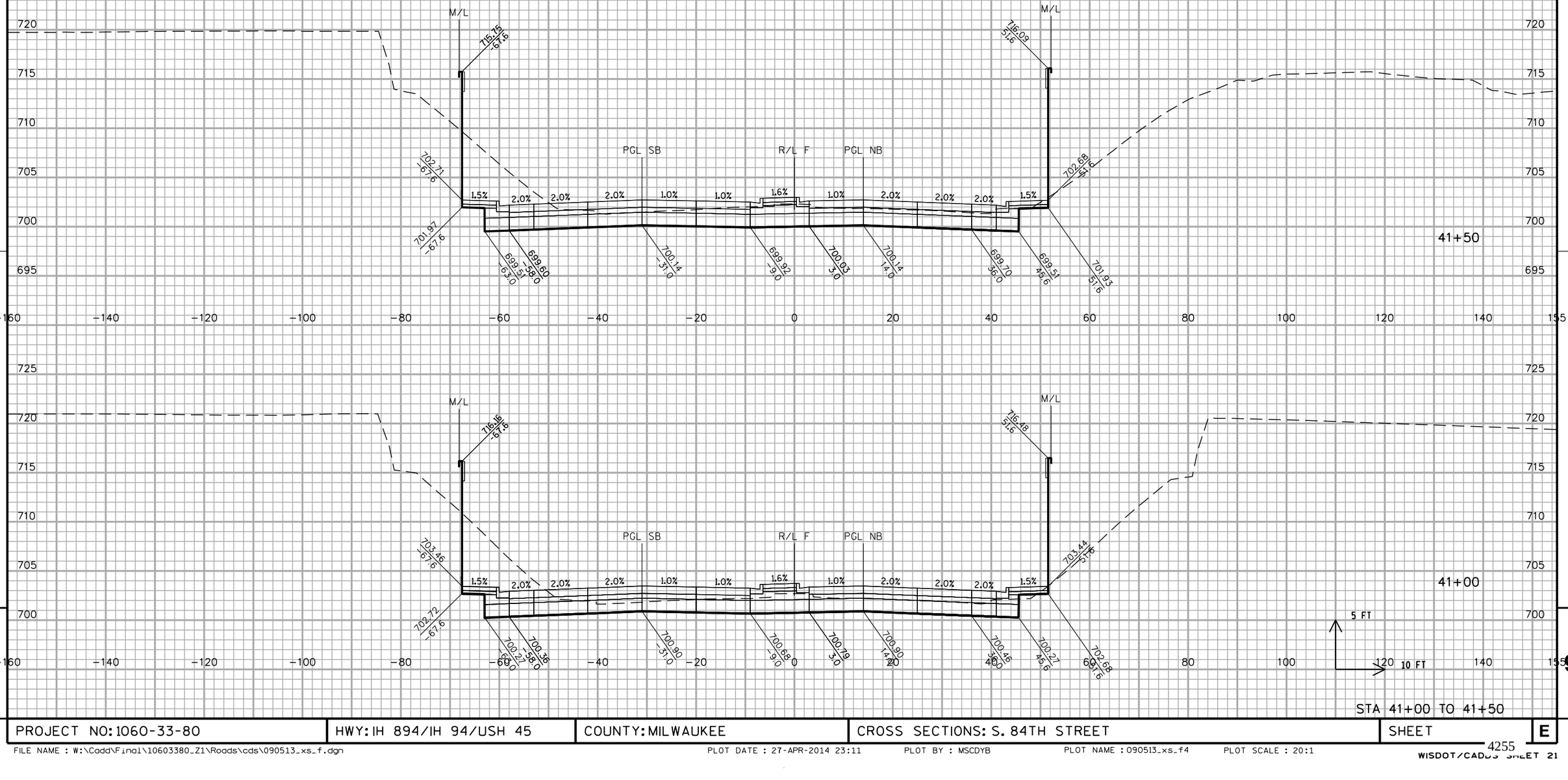
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

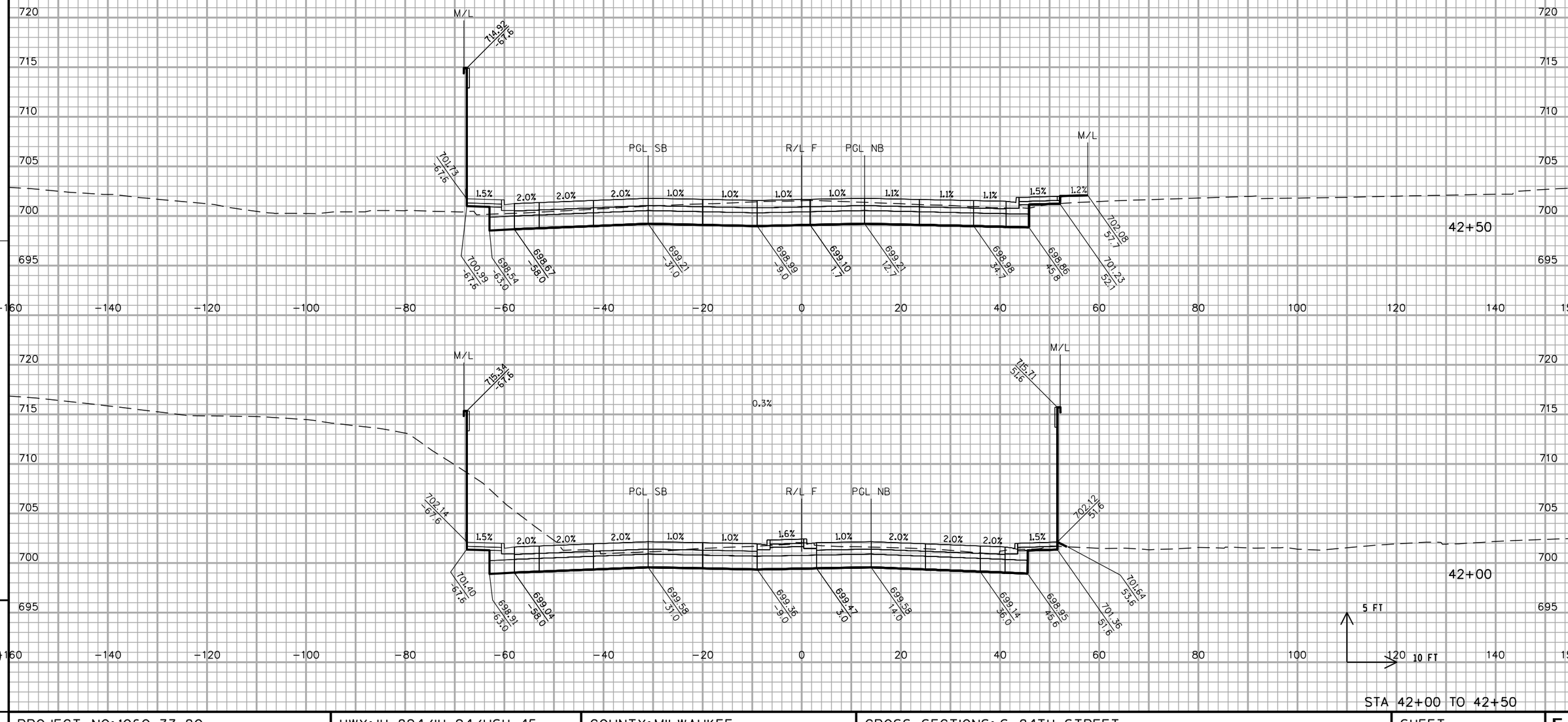
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090513_xs_f.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090513_xs_f3 PLOT SCALE : 20:1

ALL WORK STAGE 4



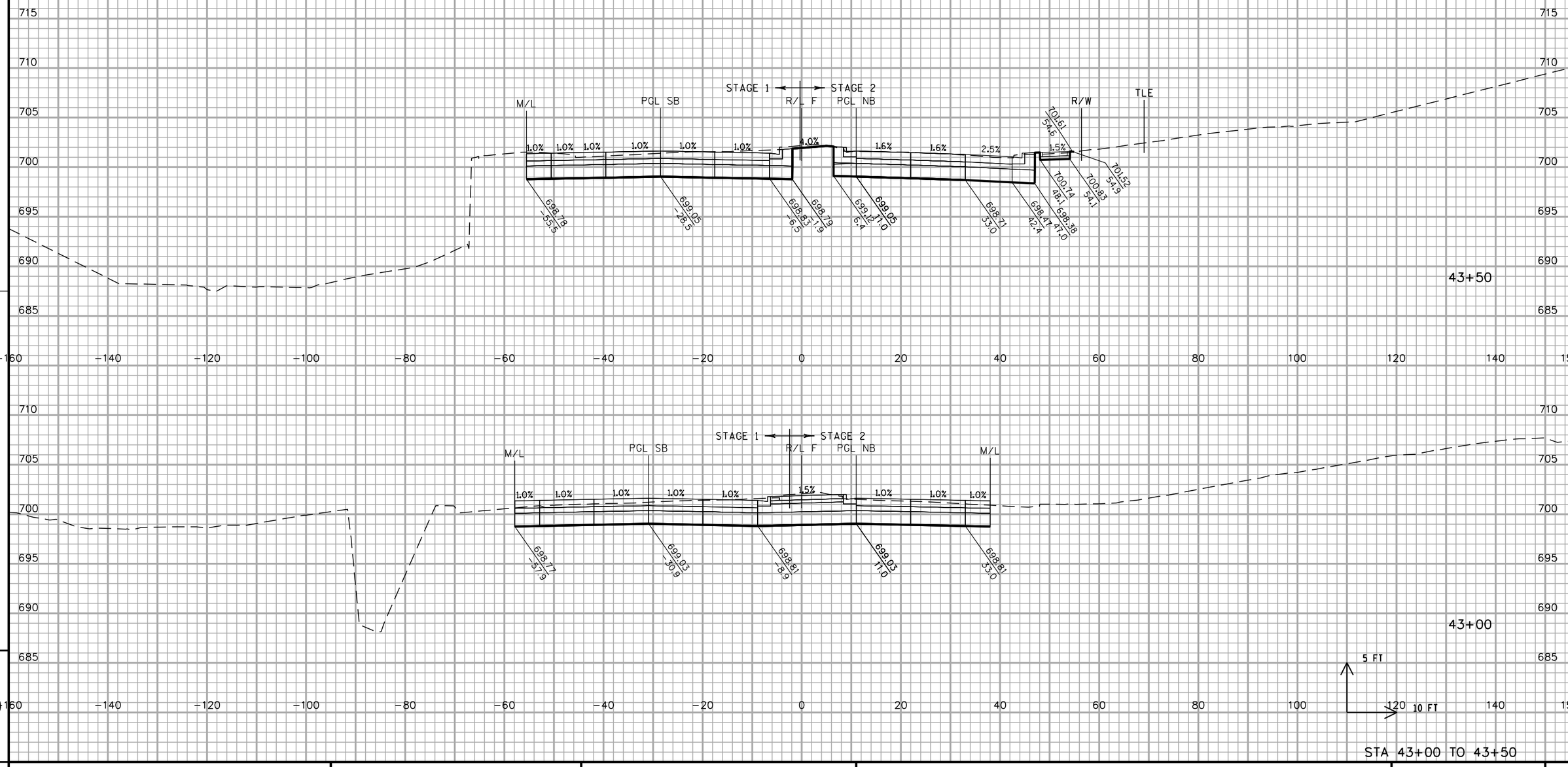
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

ALL WORK STAGE 4

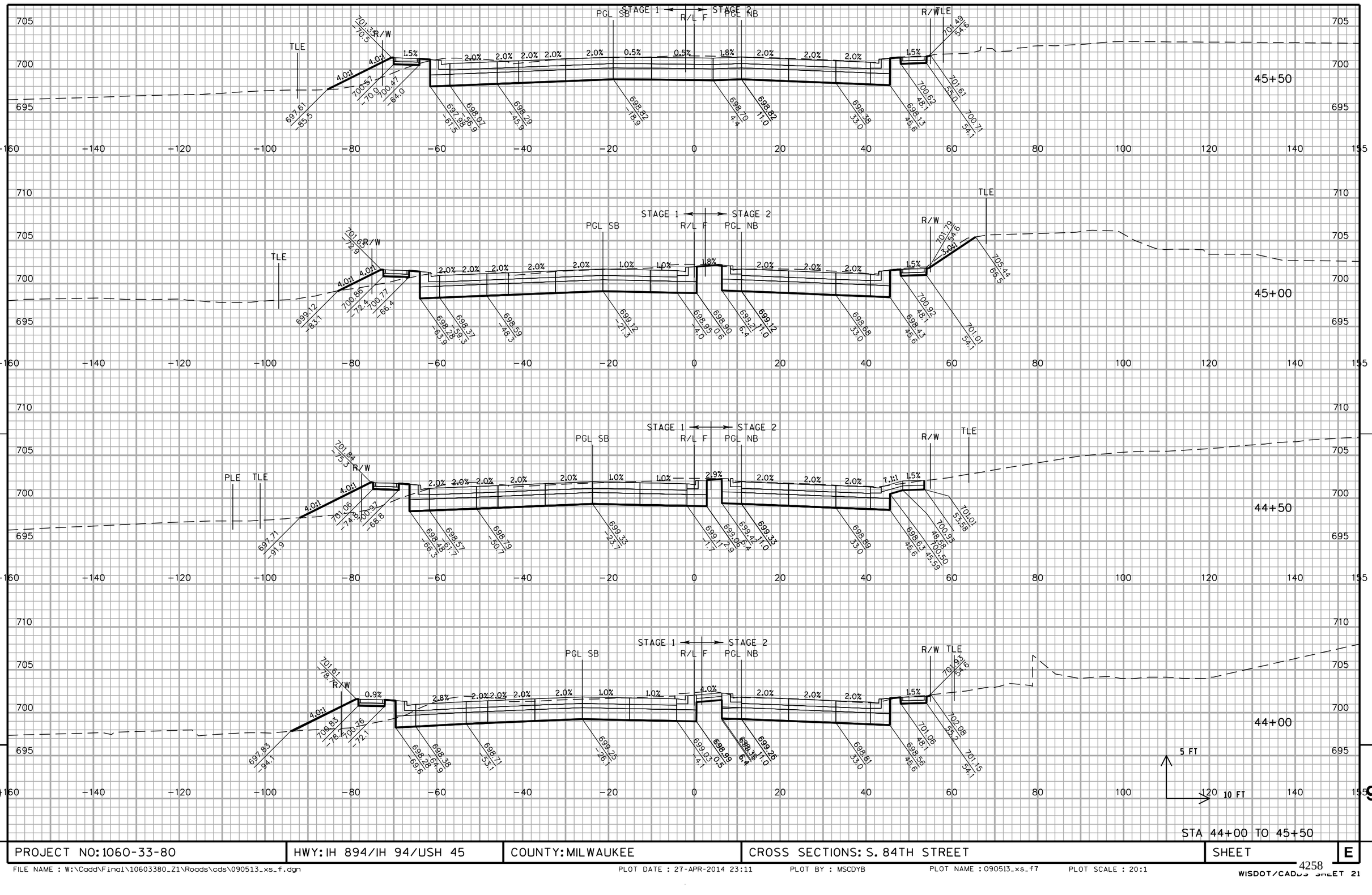


STA 42+00 TO 42+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E



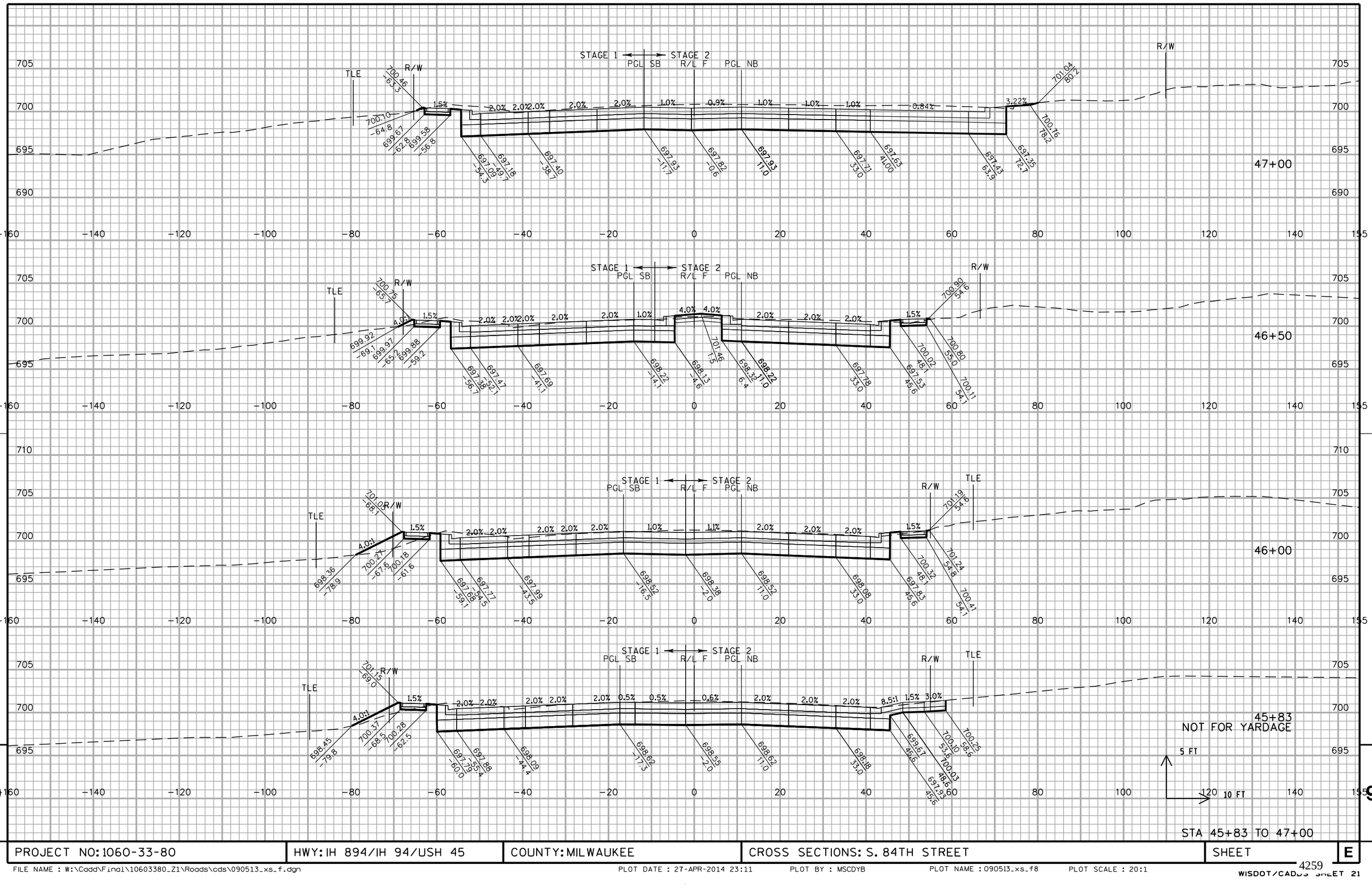
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E



STA 44+00 TO 45+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

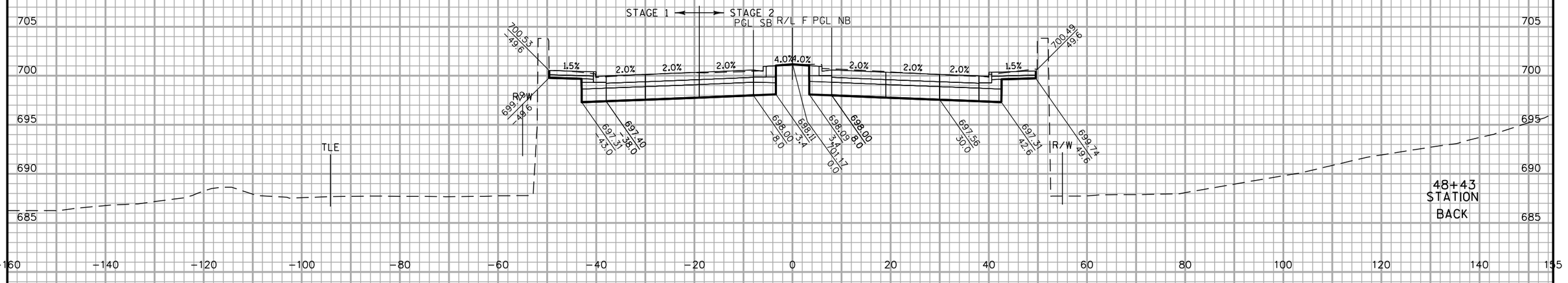
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090513_xs_f.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090513_xs_f7 PLOT SCALE : 20:1

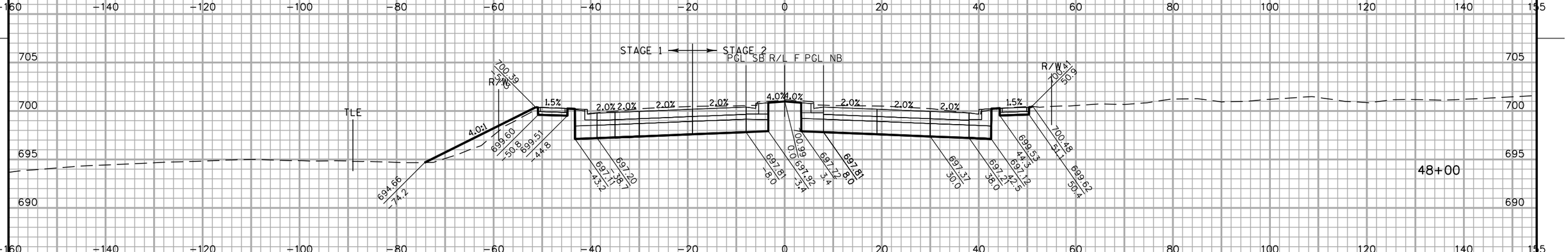


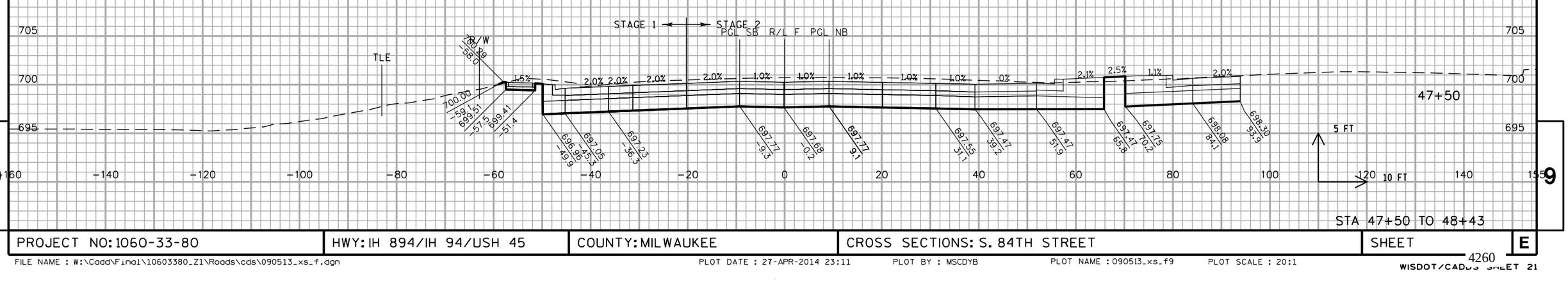
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090513_xs_f.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090513_xs_f8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21







STA 47+50 TO 48+43

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

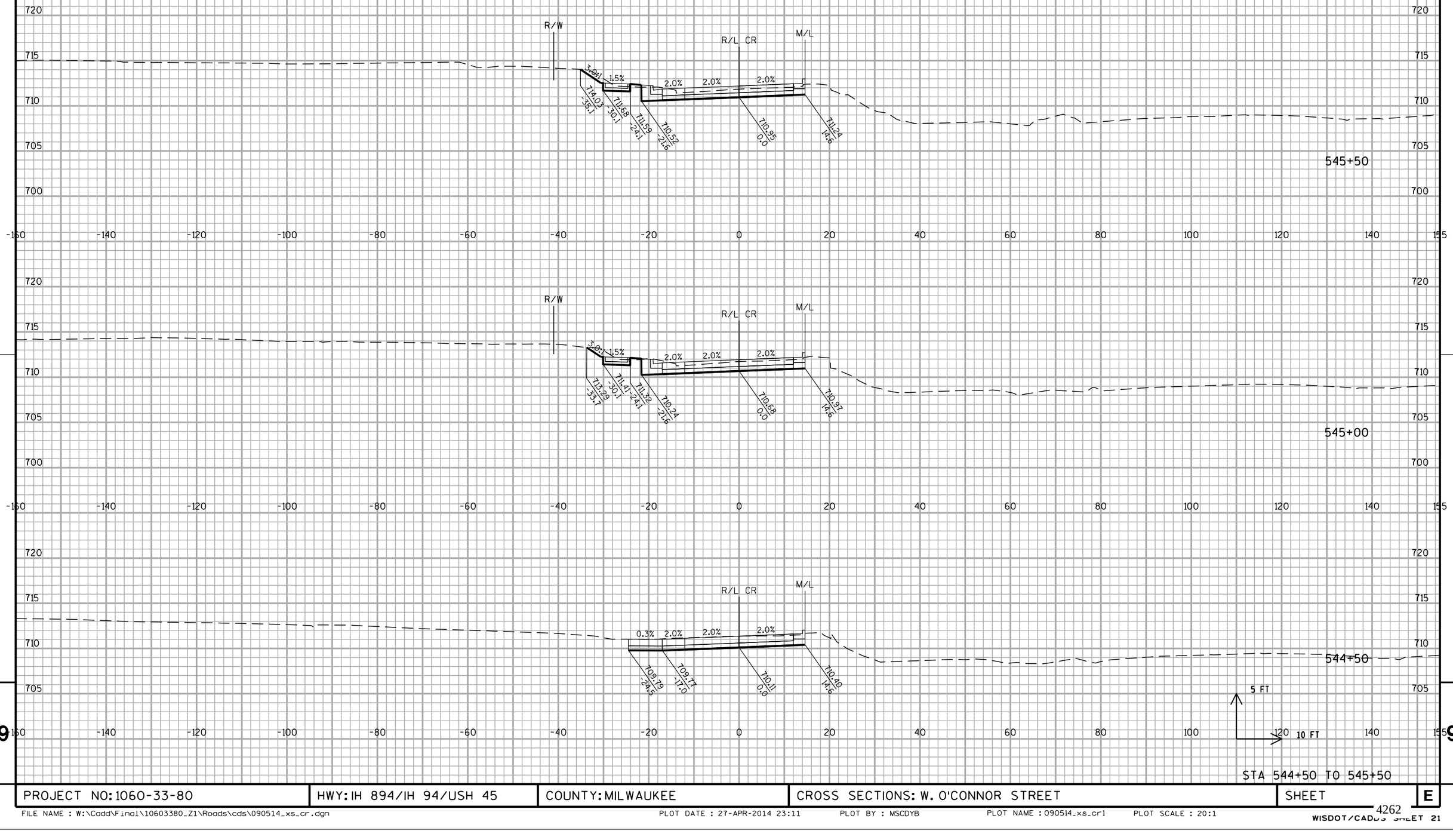
ALL WORK STAGE 2

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

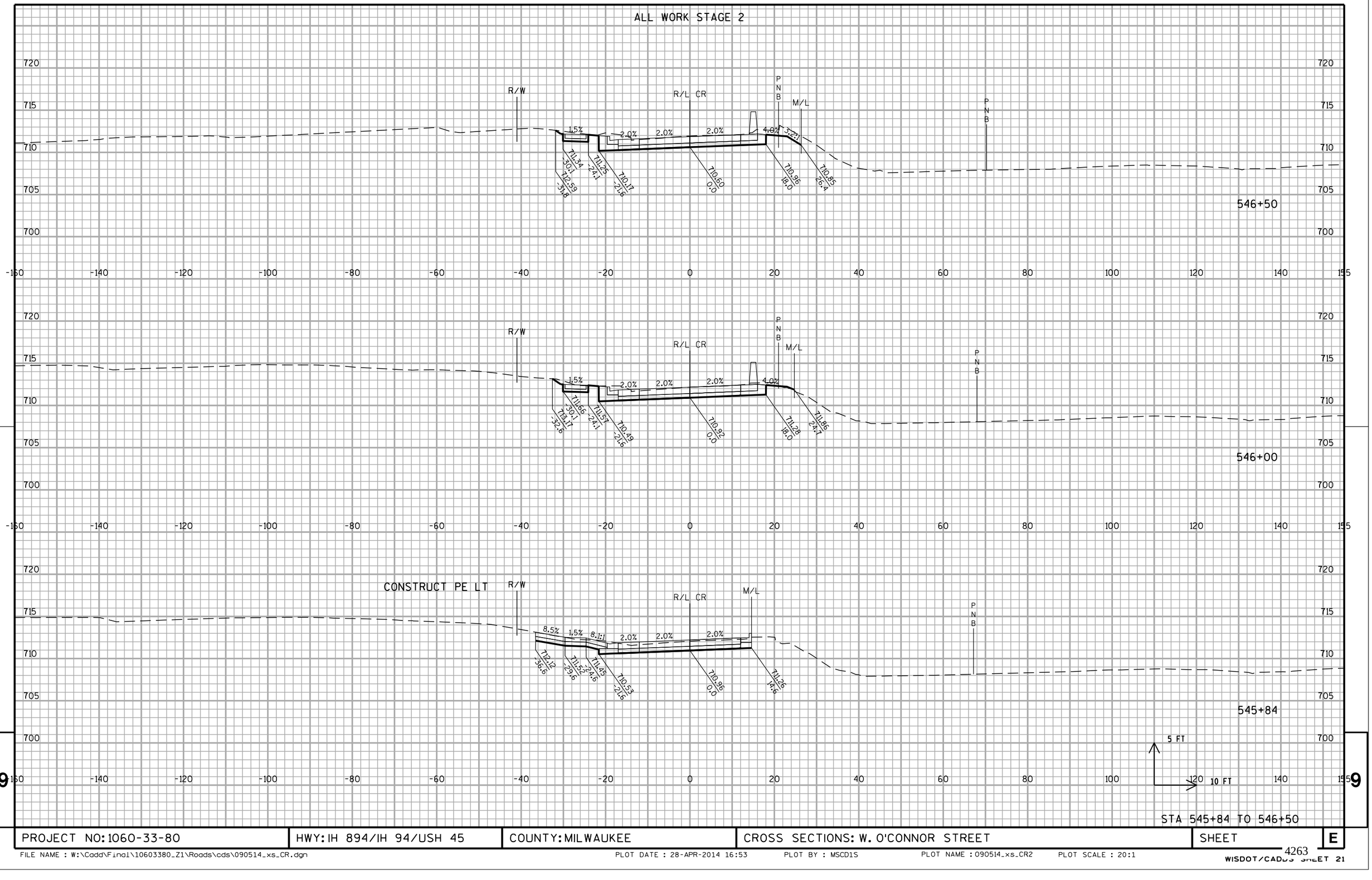
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr1 PLOT SCALE : 20:1

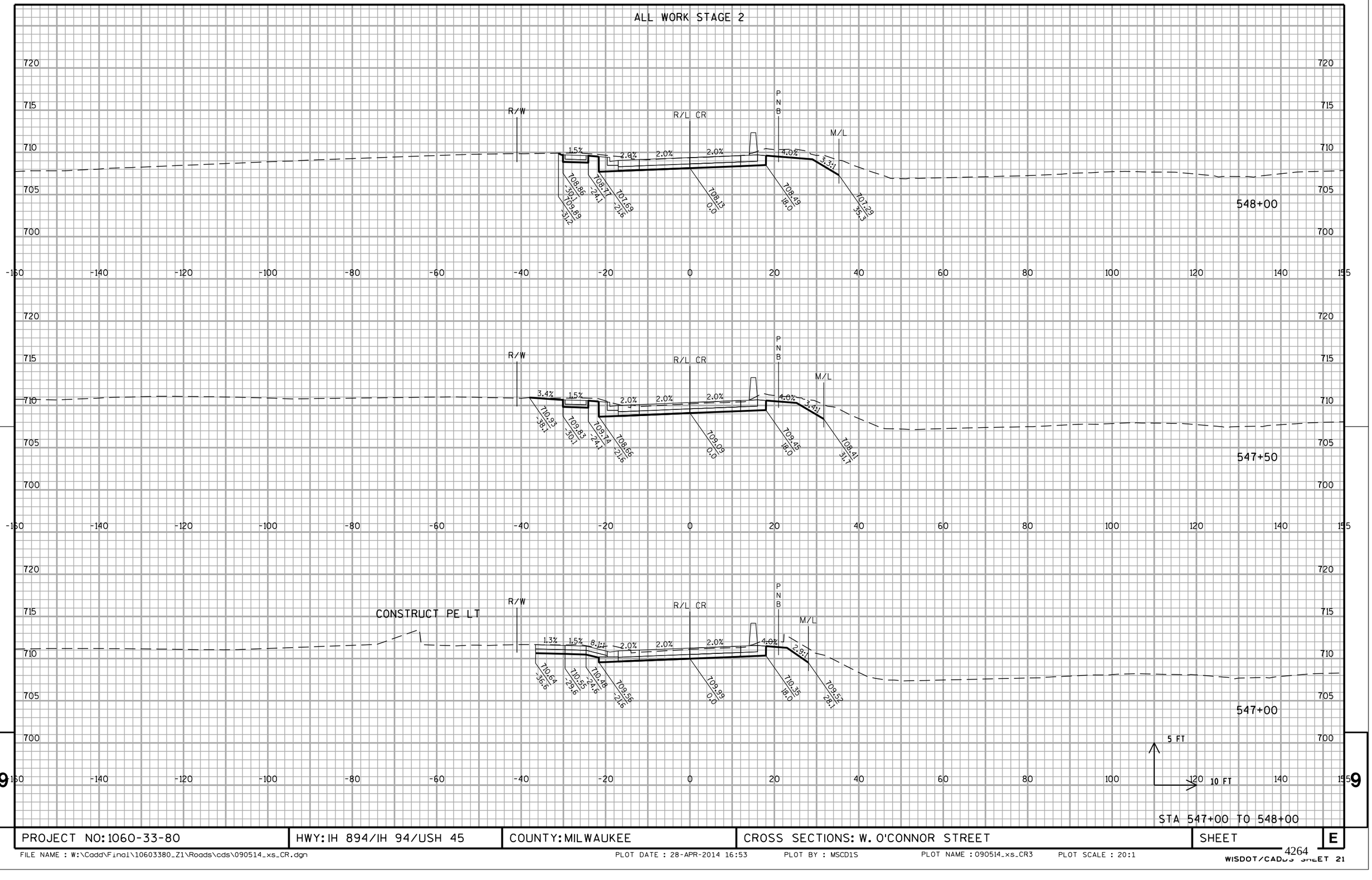
ALL WORK STAGE 2



STA 545+84 TO 546+50

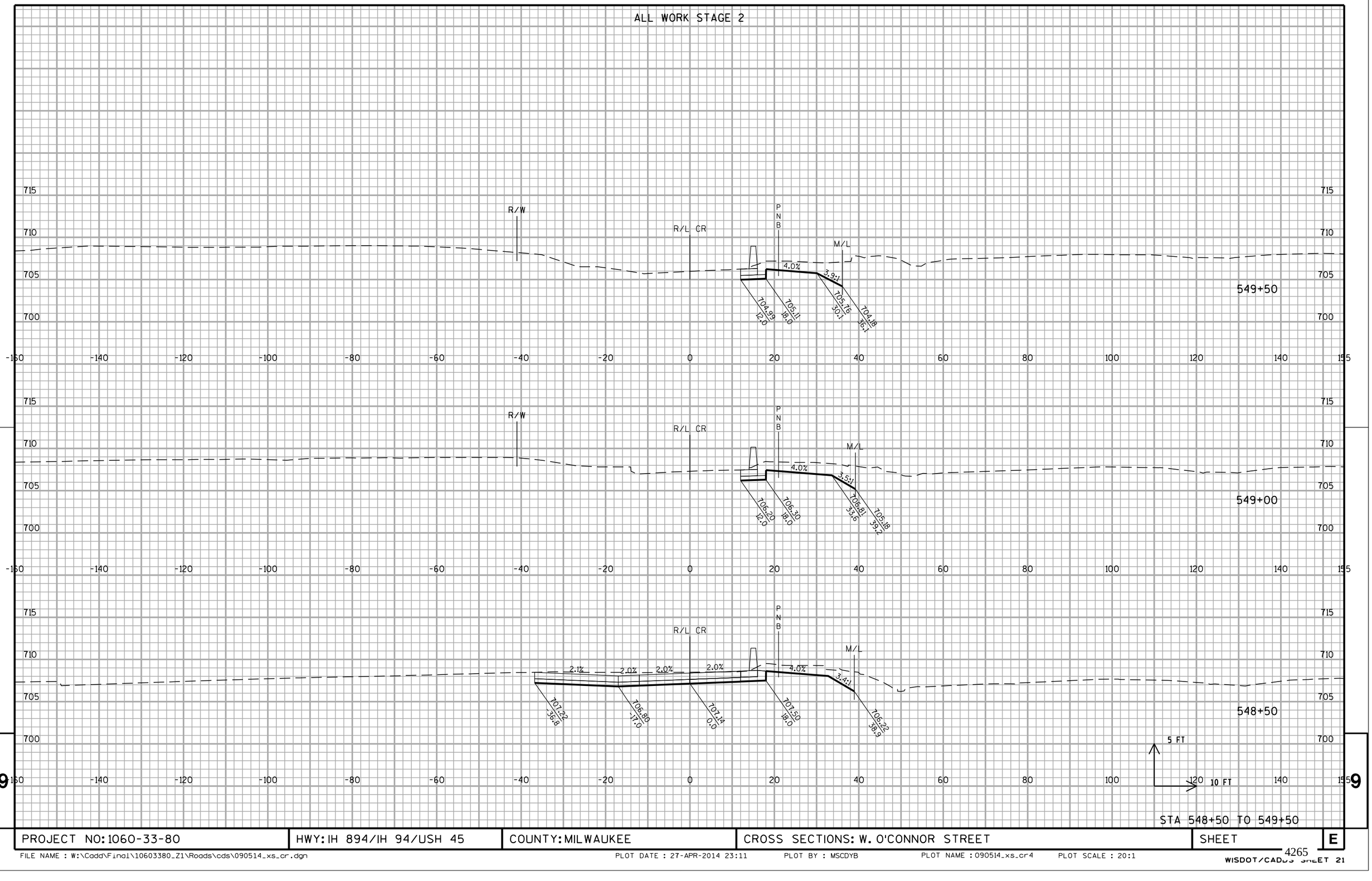
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK STAGE 2



STA 548+50 TO 549+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr4 PLOT SCALE : 20:1

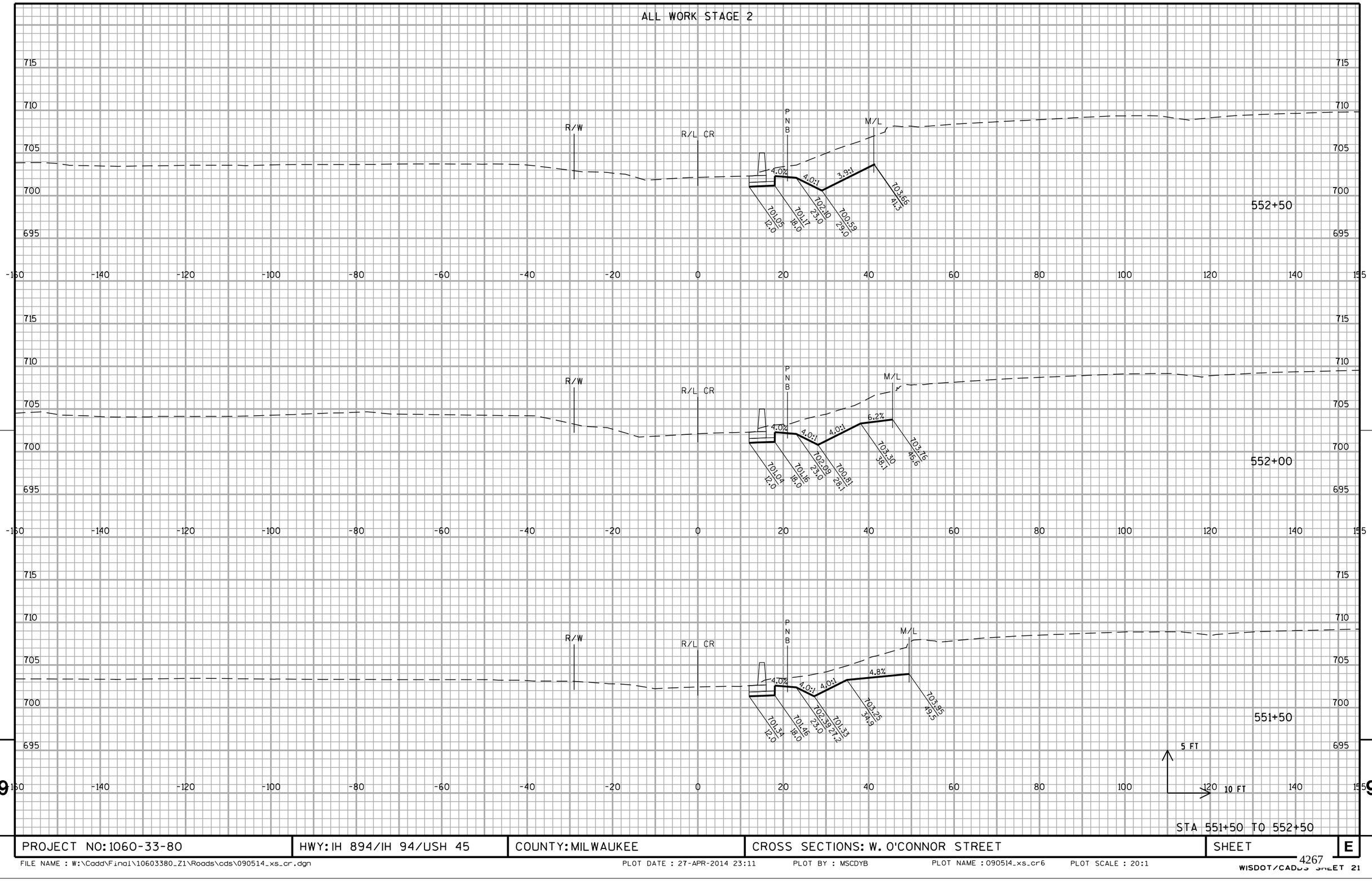
ALL WORK STAGE 2

STA 550+00 TO 551+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr5 PLOT SCALE : 20:1

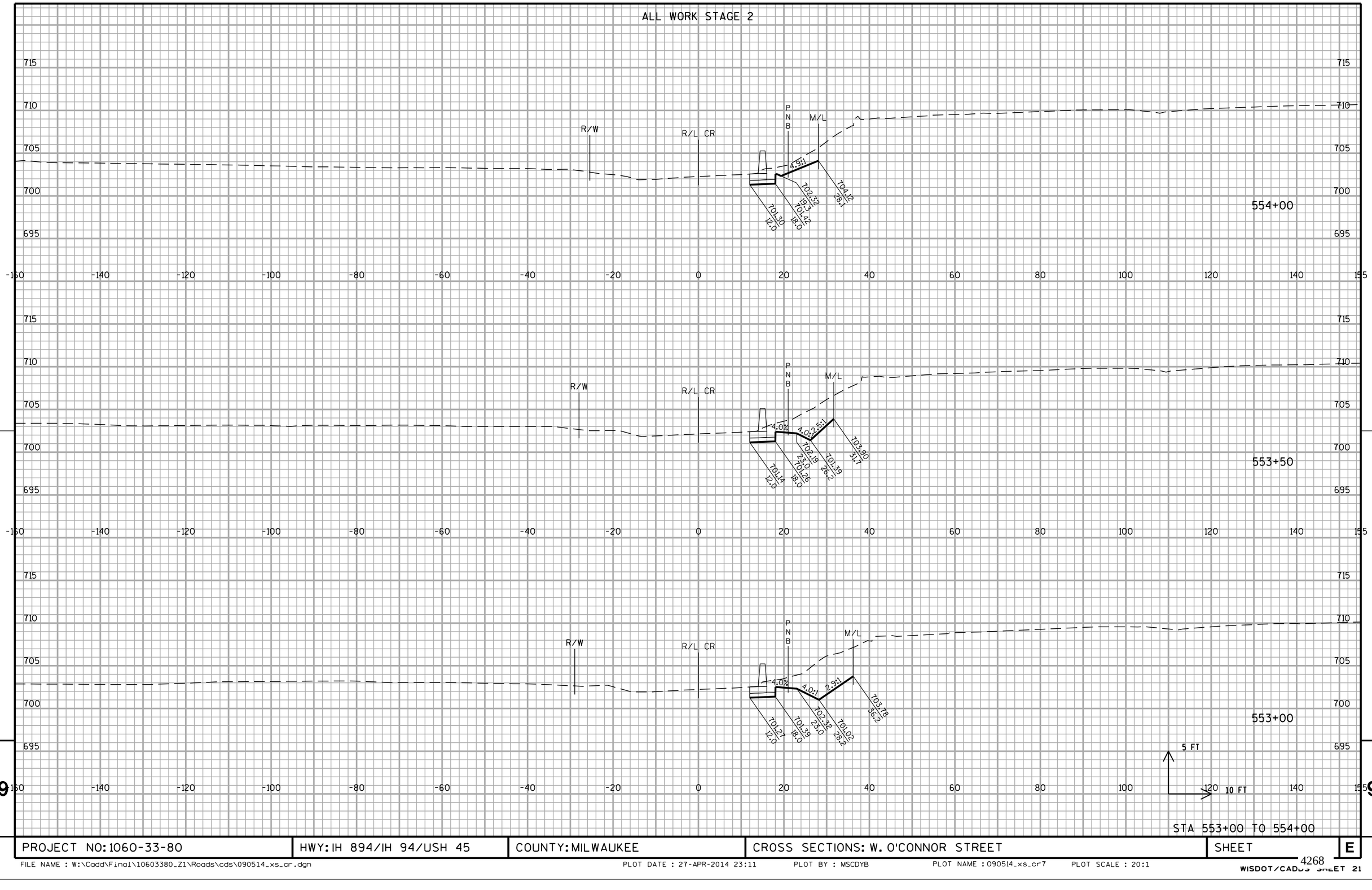
ALL WORK STAGE 2



STA 551+50 TO 552+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK STAGE 2



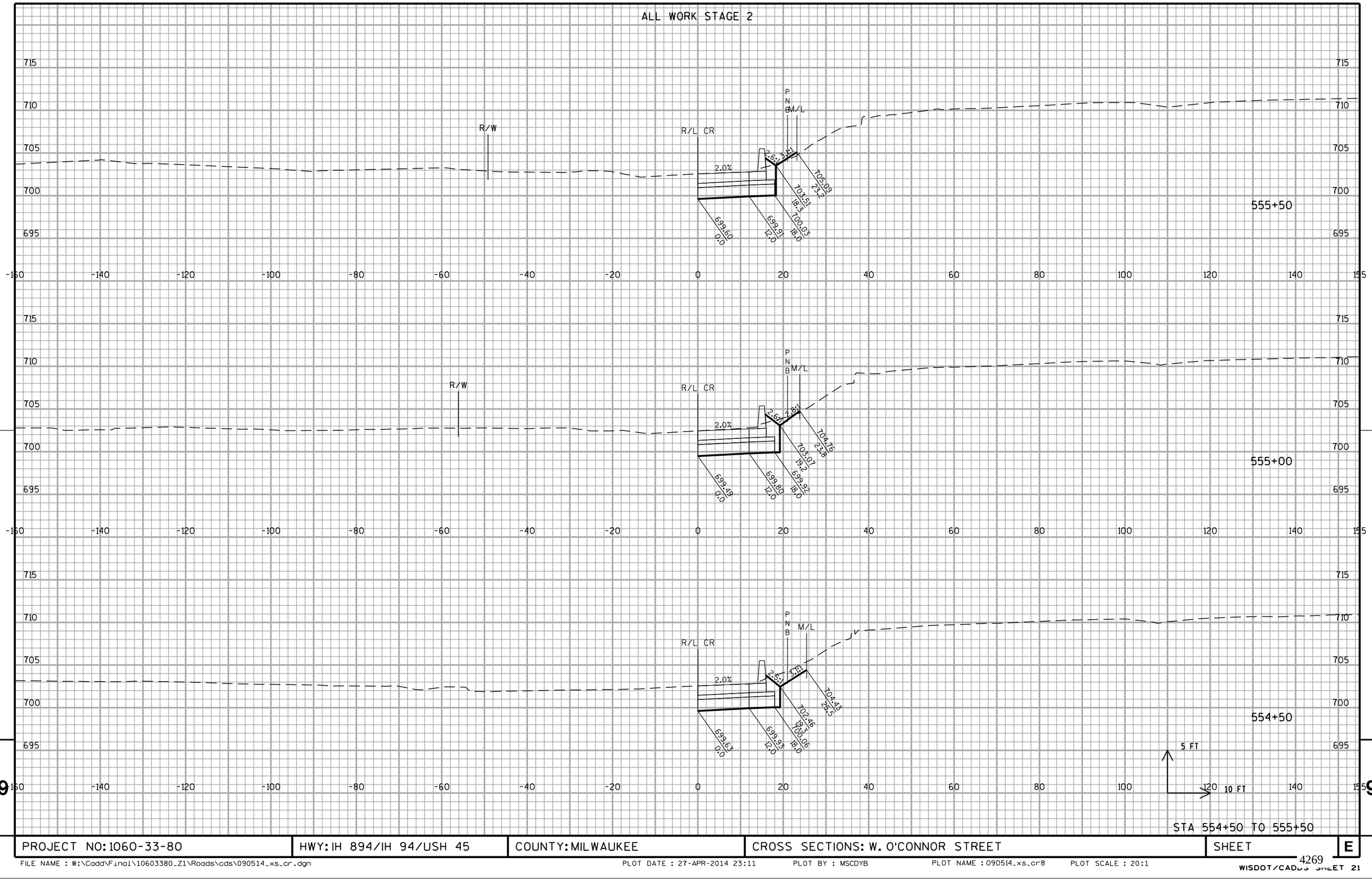
STA 553+00 TO 554+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

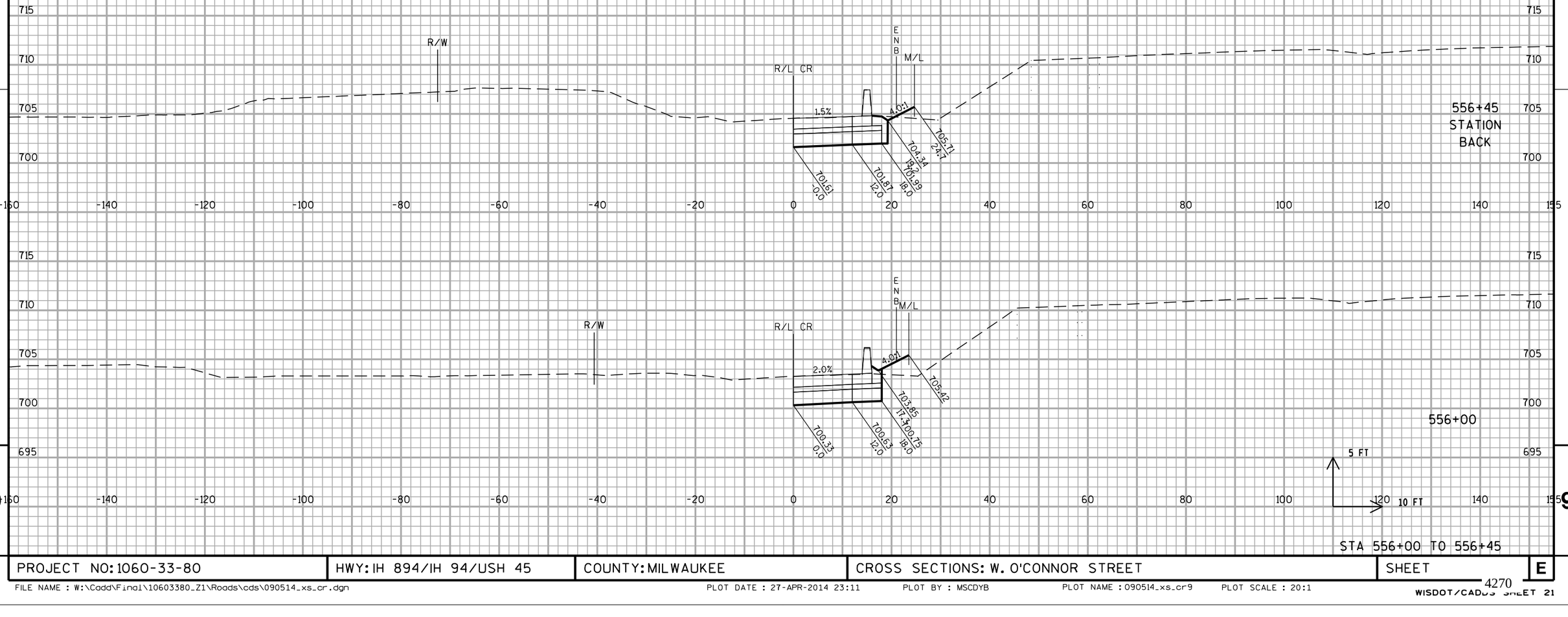


STA 554+50 TO 555+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_cr.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090514_xs_cr8 PLOT SCALE : 20:1

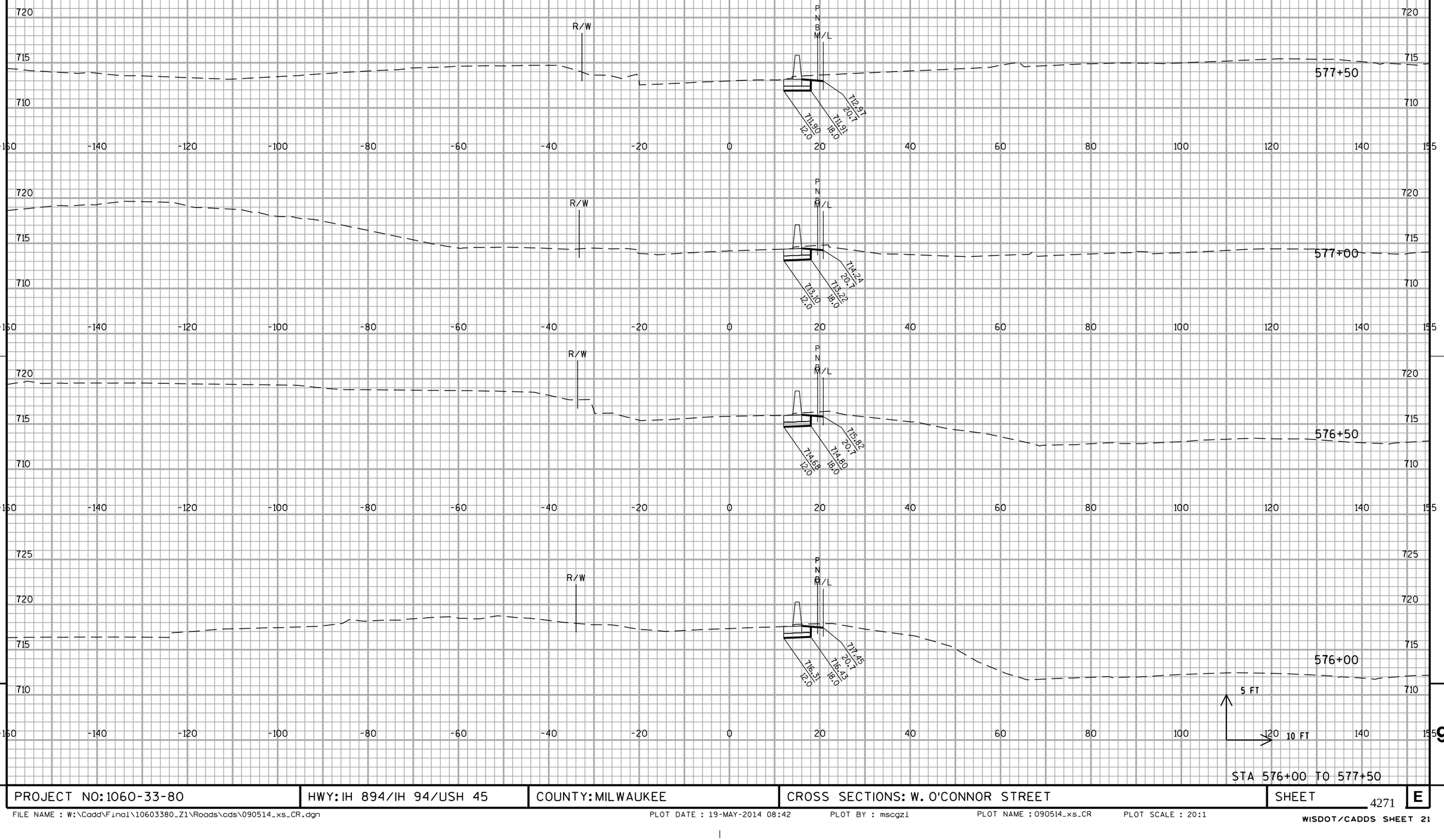
ALL WORK STAGE 2



STA 556+00 TO 556+45

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK STAGE 2



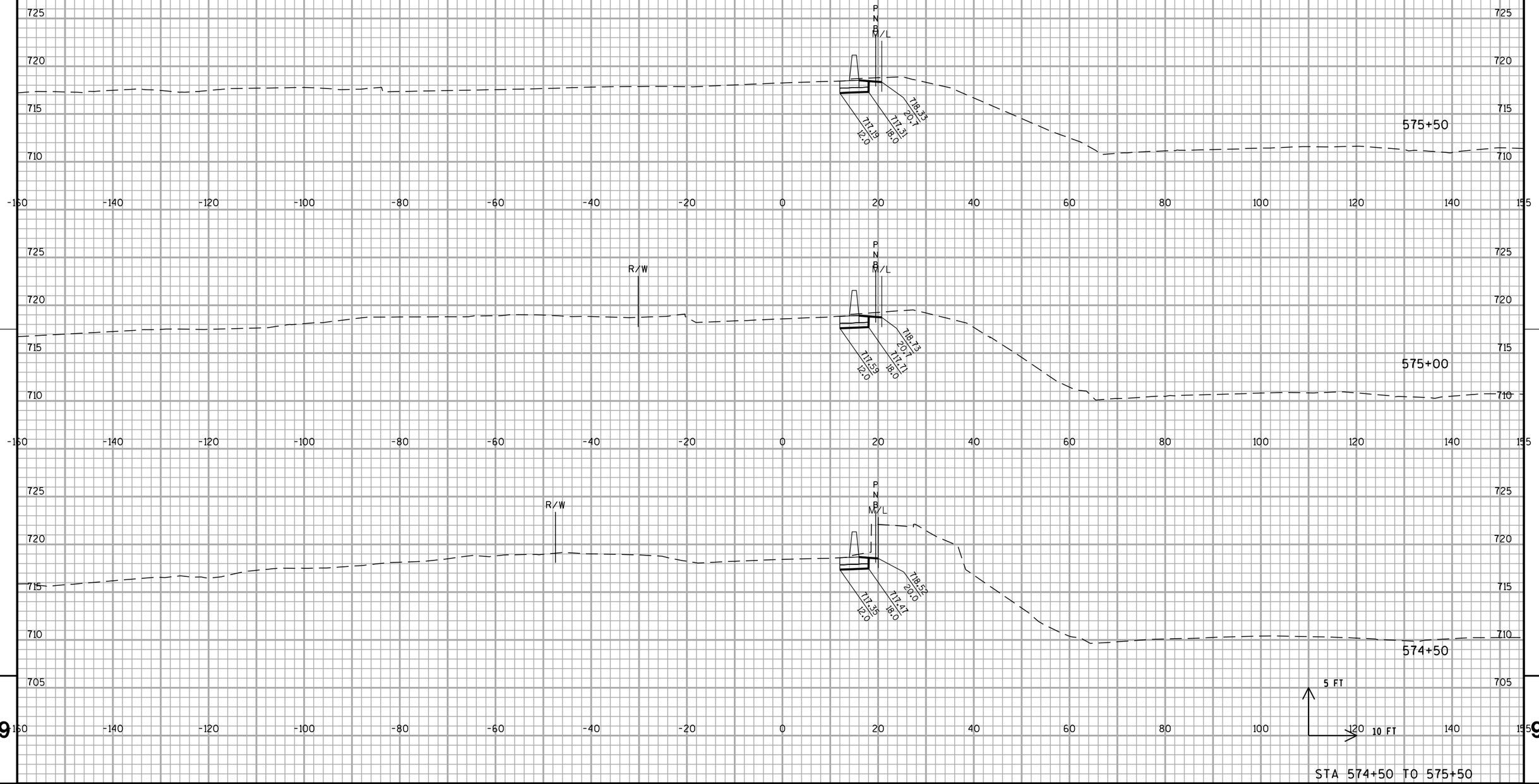
STA 576+00 TO 577+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET 4271	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_CR.dgn PLOT DATE : 19-MAY-2014 08:42 PLOT BY : mscgz1 PLOT NAME : 090514_xs_CR PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

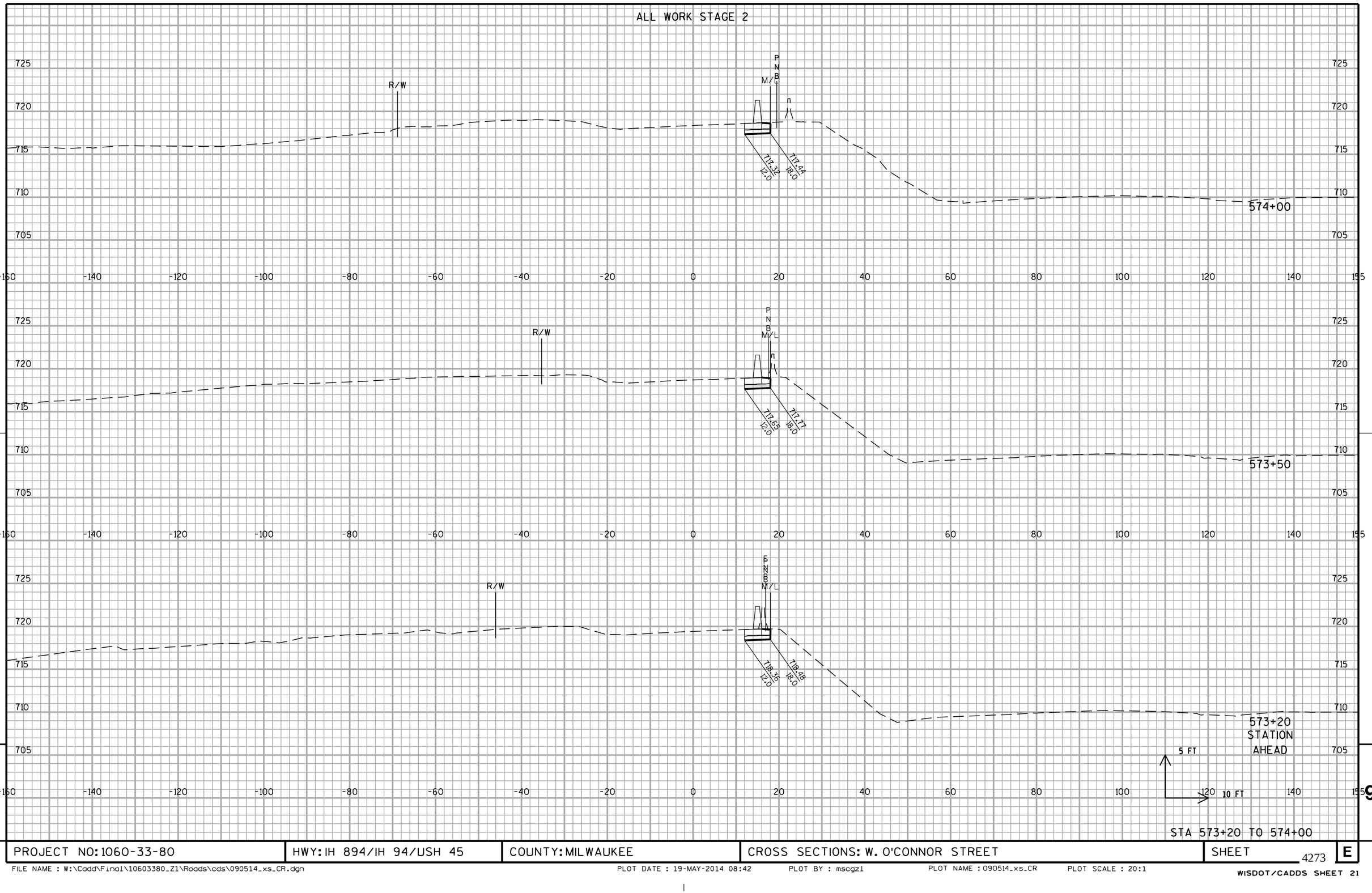
ALL WORK STAGE 2



STA 574+50 TO 575+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET 4272	E

ALL WORK STAGE 2



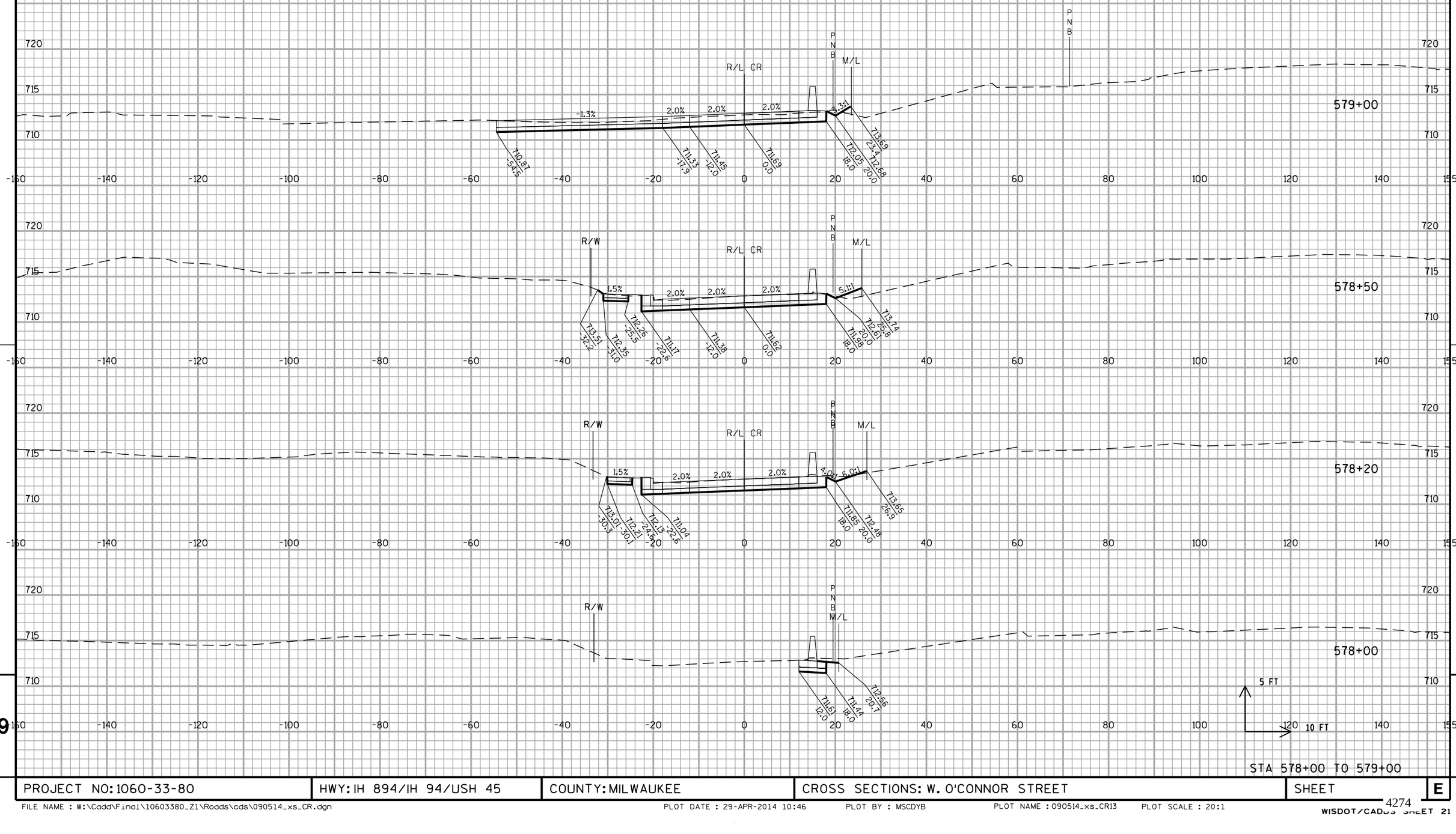
STA 573+20 TO 574+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET 4273	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_CR.dgn PLOT DATE : 19-MAY-2014 08:42 PLOT BY : mscgz1 PLOT NAME : 090514_xs_CR PLOT SCALE : 20:1

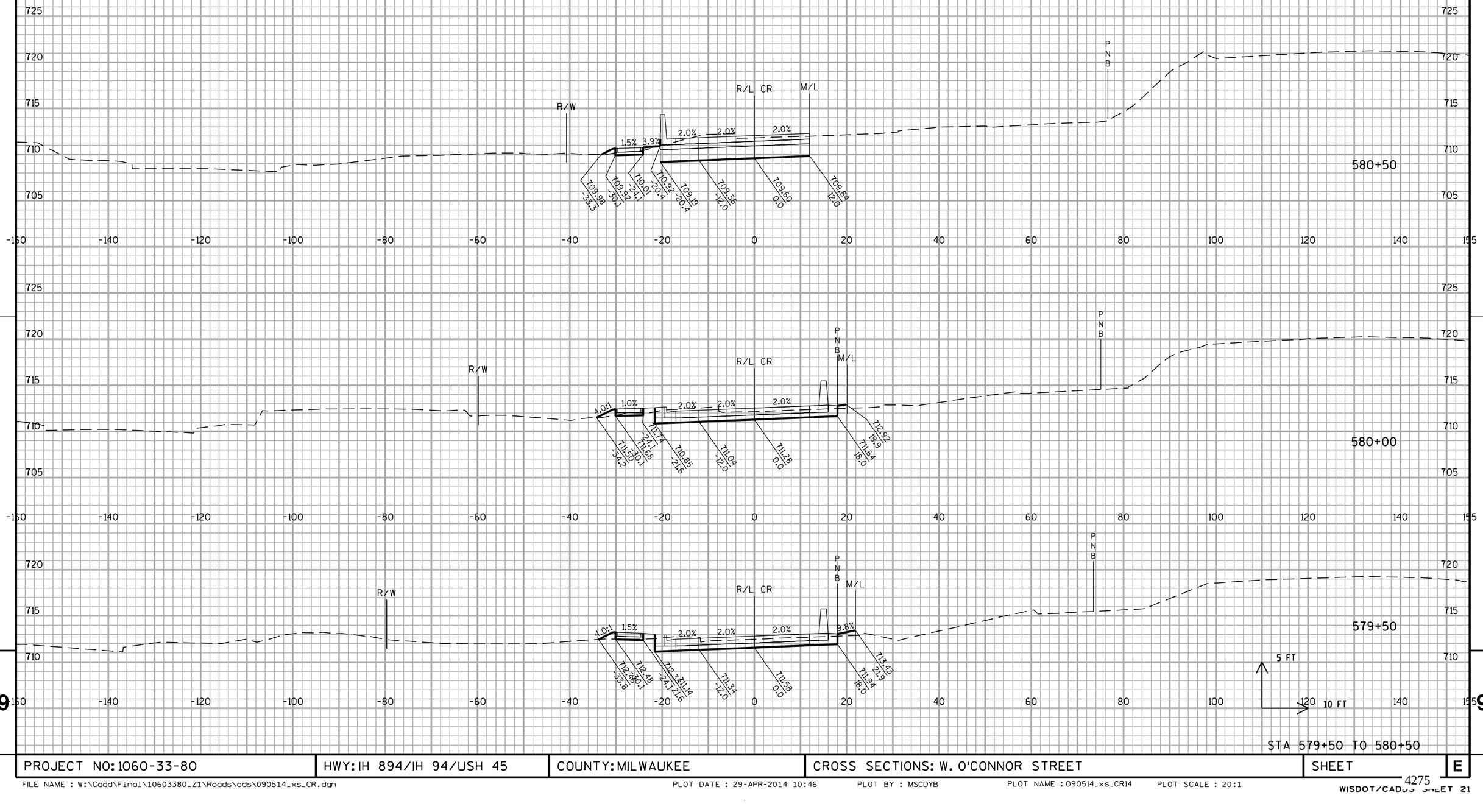
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK STAGE 2



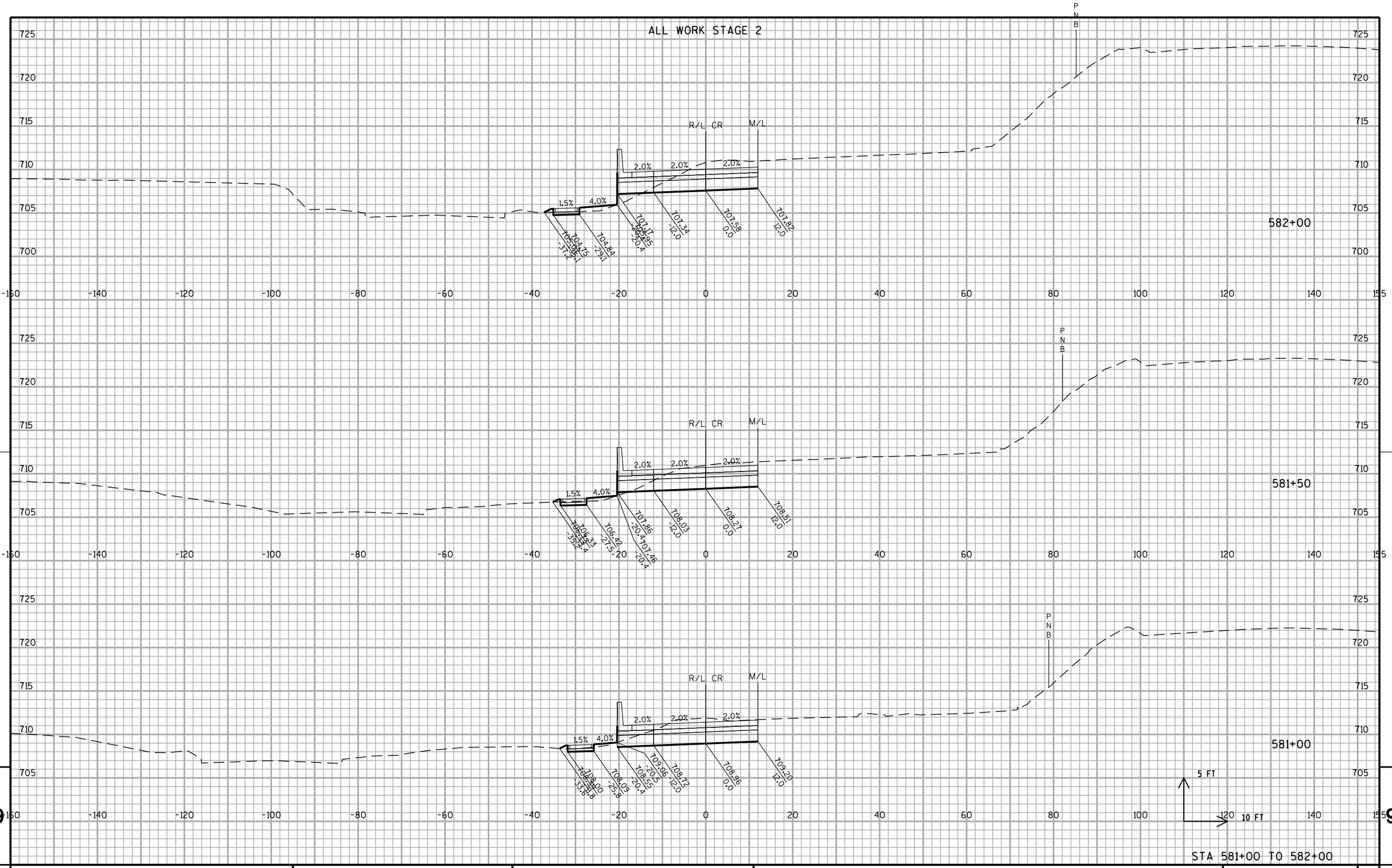
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_CR.dgn PLOT DATE : 29-APR-2014 10:46 PLOT BY : MSCDYB PLOT NAME : 090514_xs_CR14 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

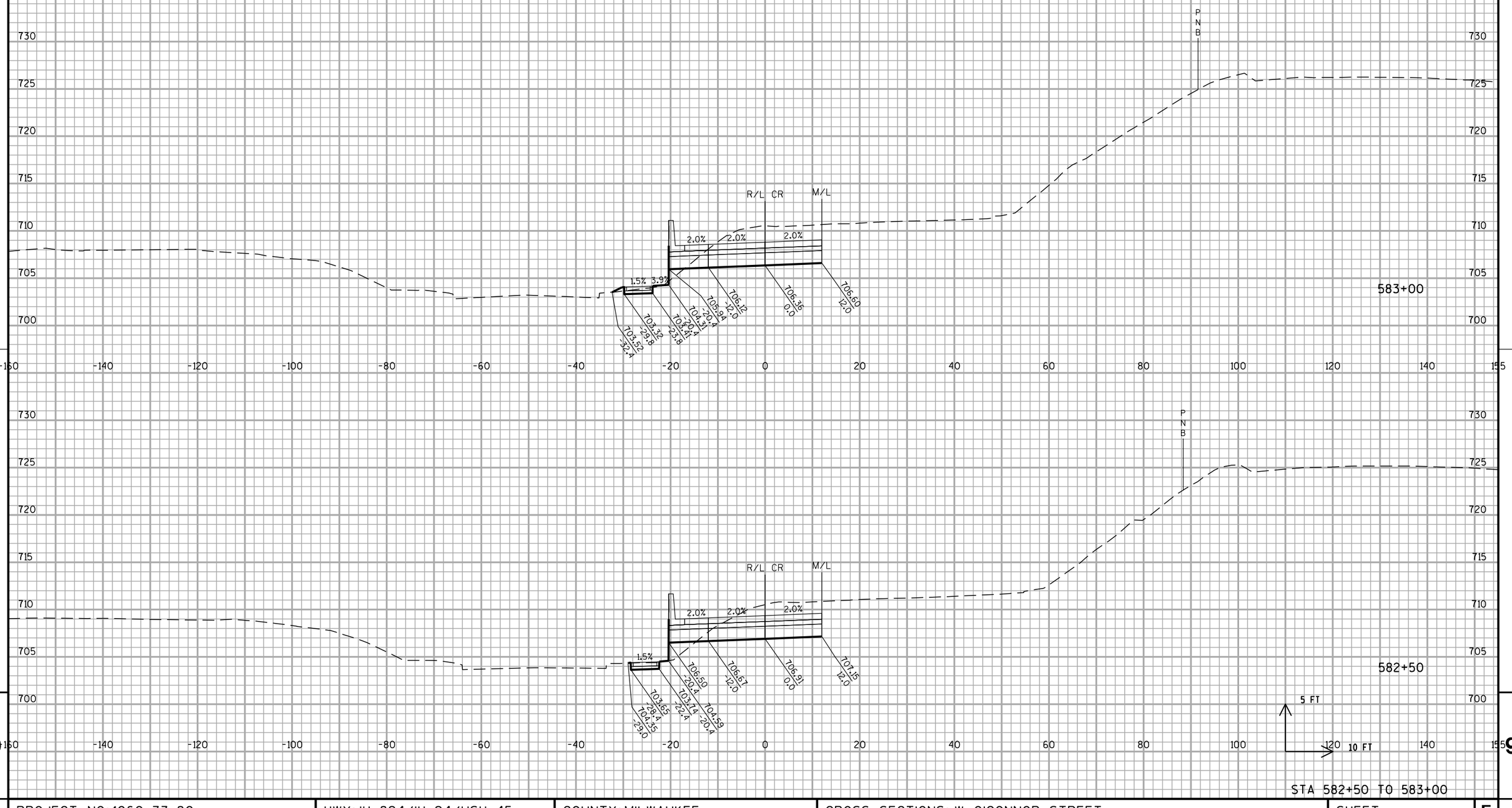


STA 581+00 TO 582+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090514_xs_CR.dgn PLOT DATE : 29-APR-2014 10:47 PLOT BY : MSCDYB PLOT NAME : 090514_xs_CR15 PLOT SCALE : 20:1

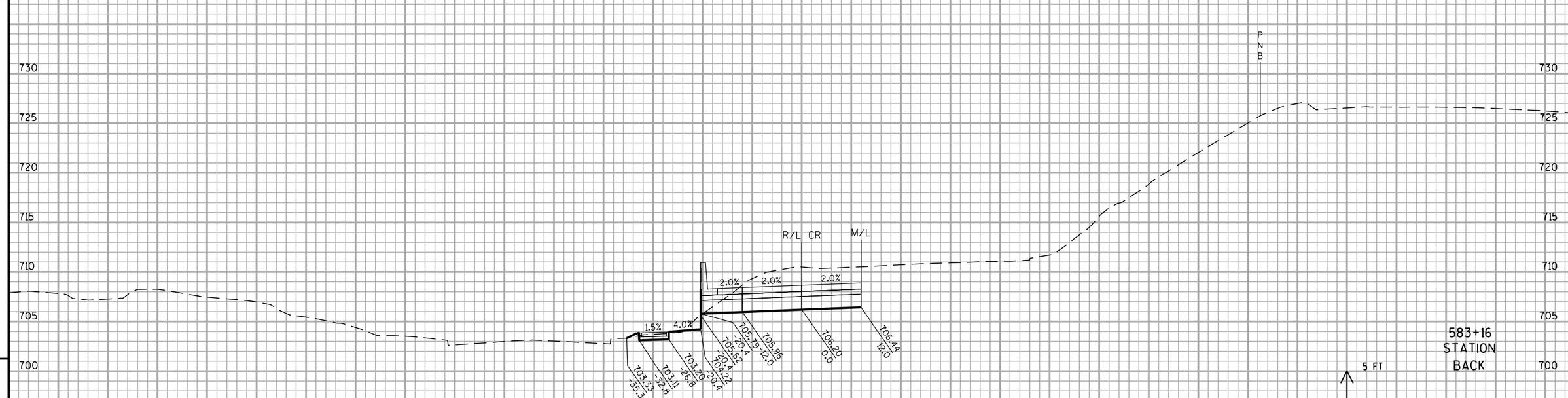
ALL WORK STAGE 2



STA 582+50 TO 583+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

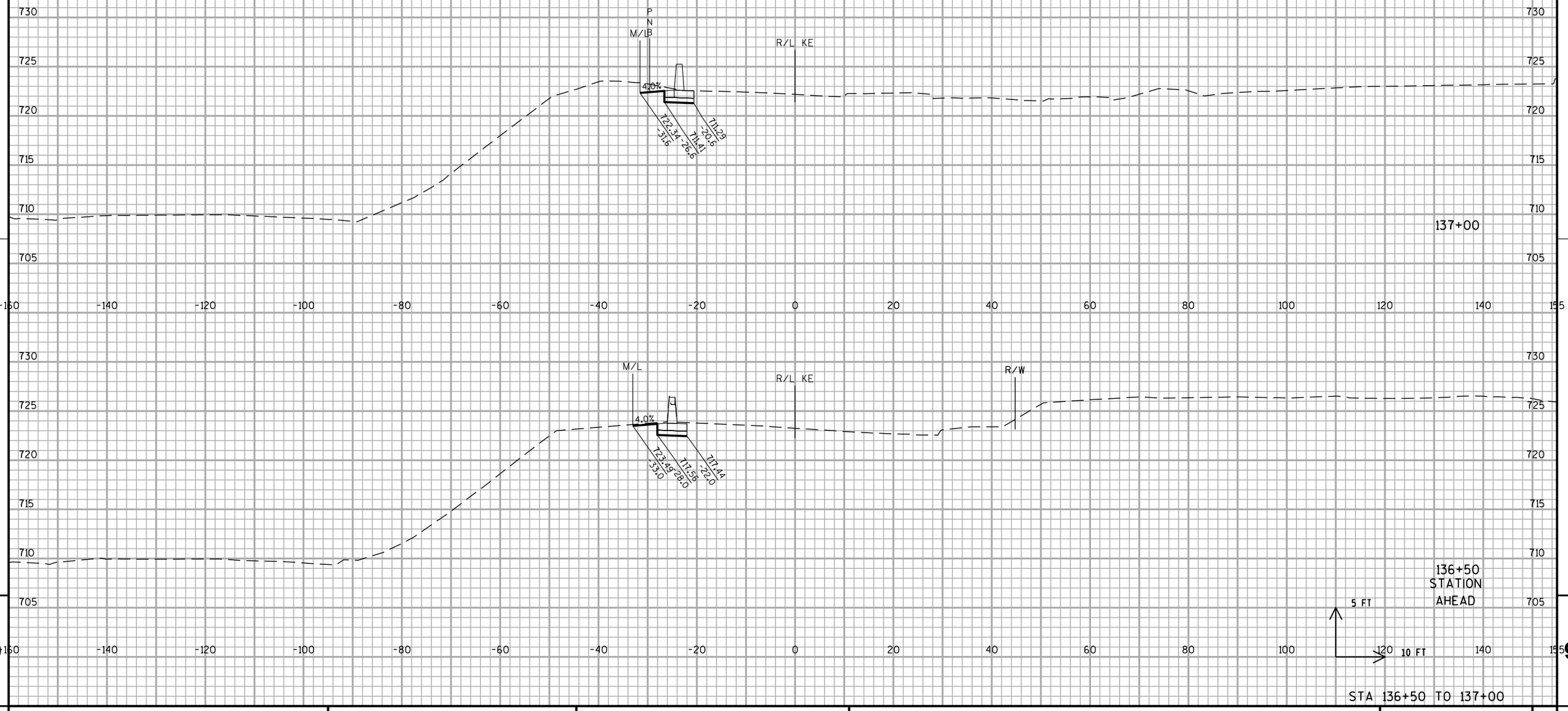
ALL WORK STAGE 2



STA 583+16 TO 583+16

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

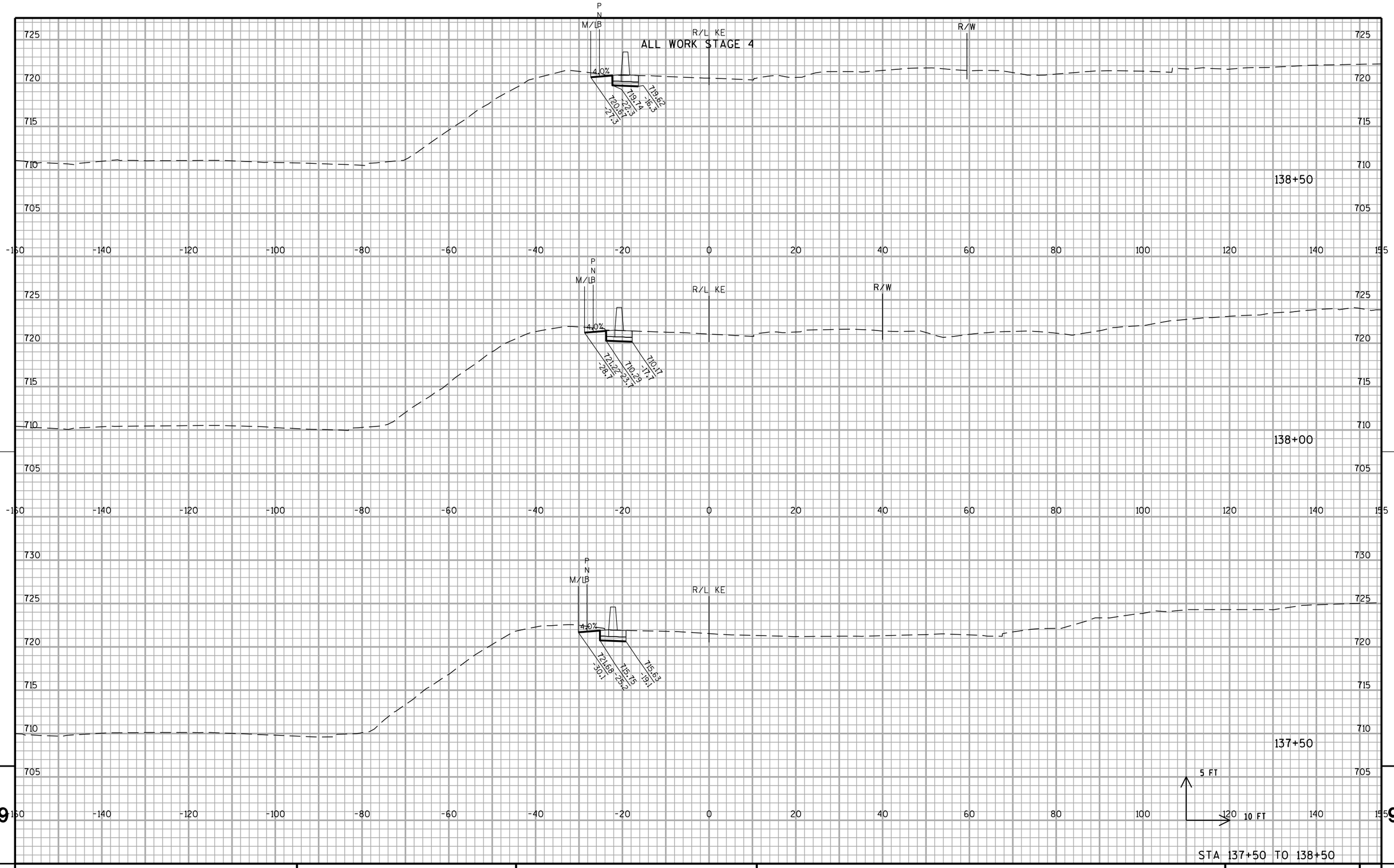
ALL WORK STAGE 4



STA 136+50 TO 137+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

ALL WORK STAGE 4



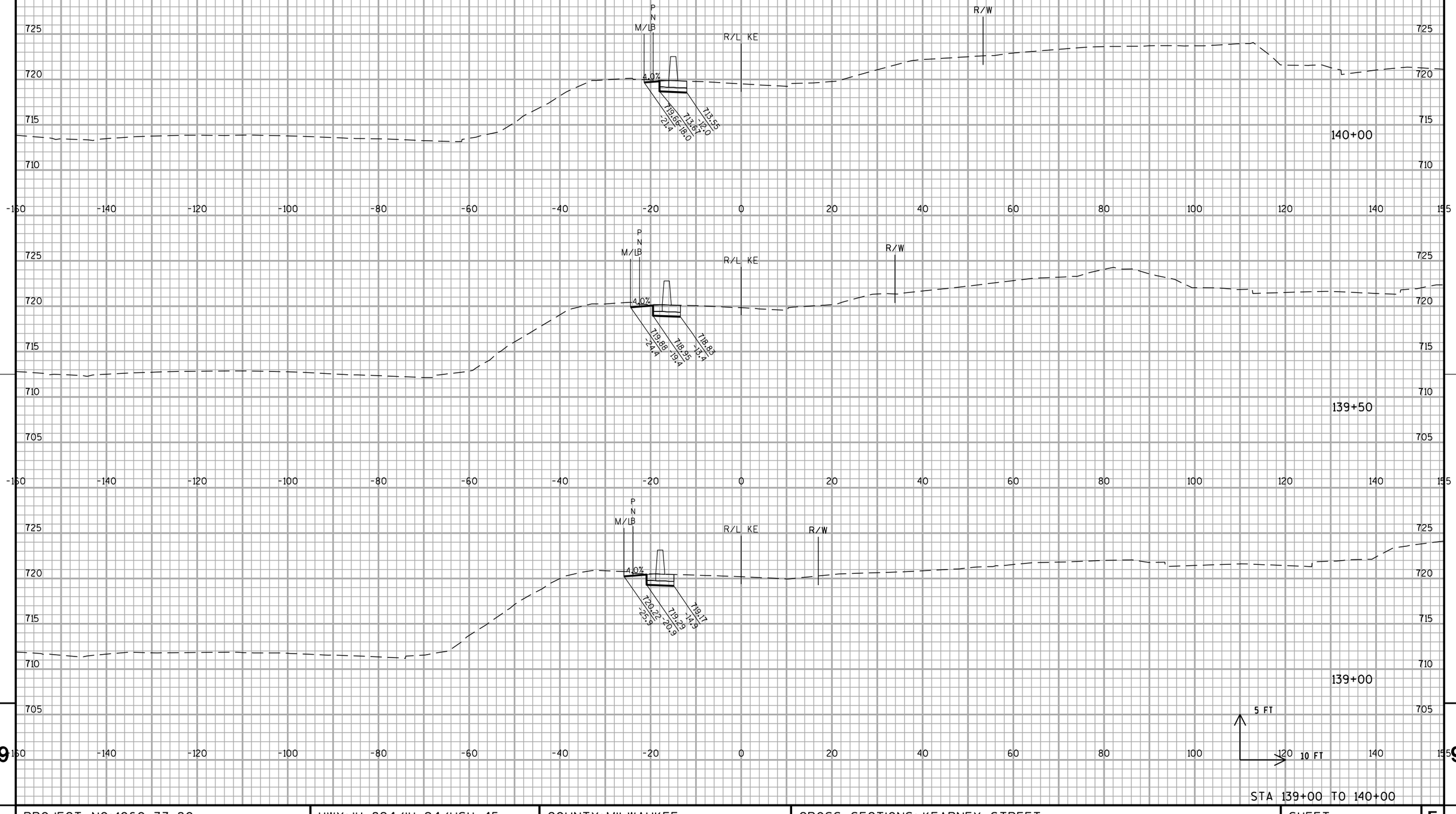
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

STA 137+50 TO 138+50

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090515_xs_KE.dgn PLOT DATE : 29-APR-2014 10:13 PLOT BY : MSCDYB PLOT NAME : 090515_xs_KE1 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

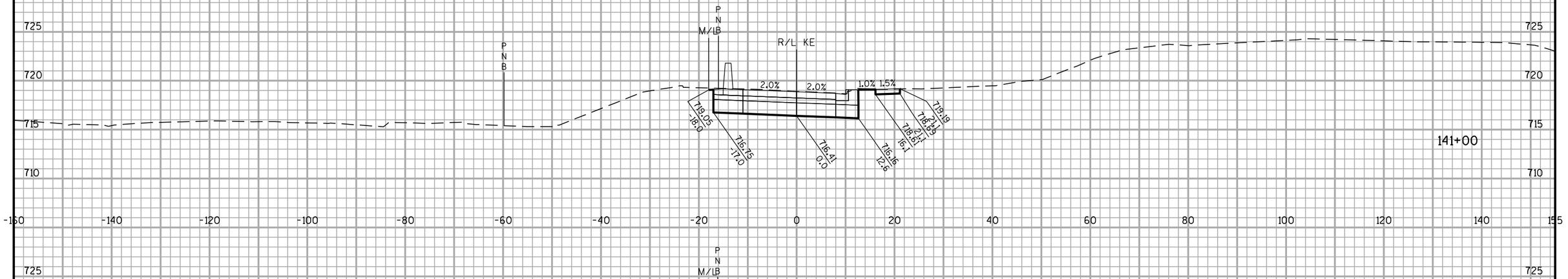


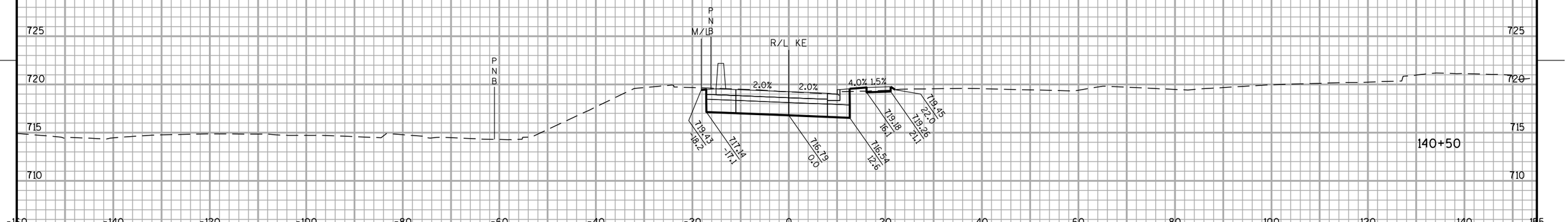
STA 139+00 TO 140+00

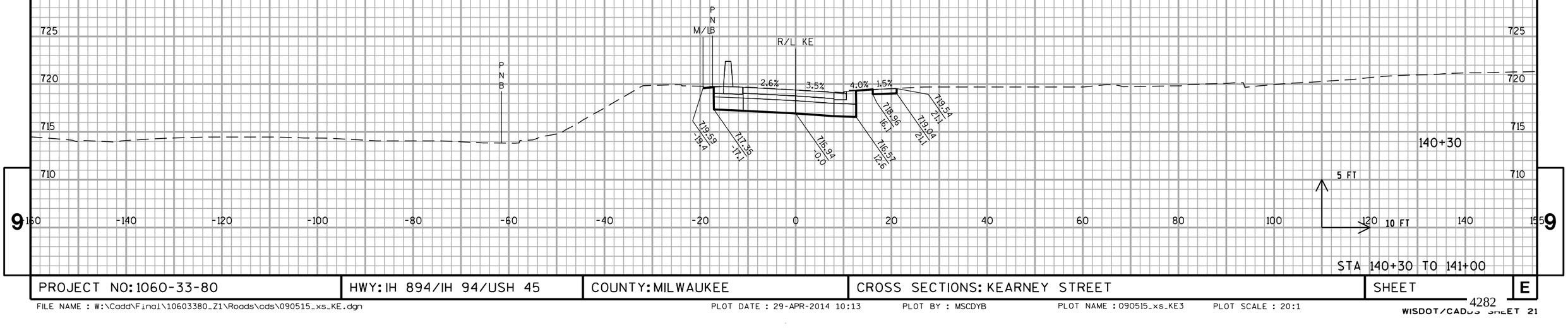
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

9 9

ALL WORK STAGE 4





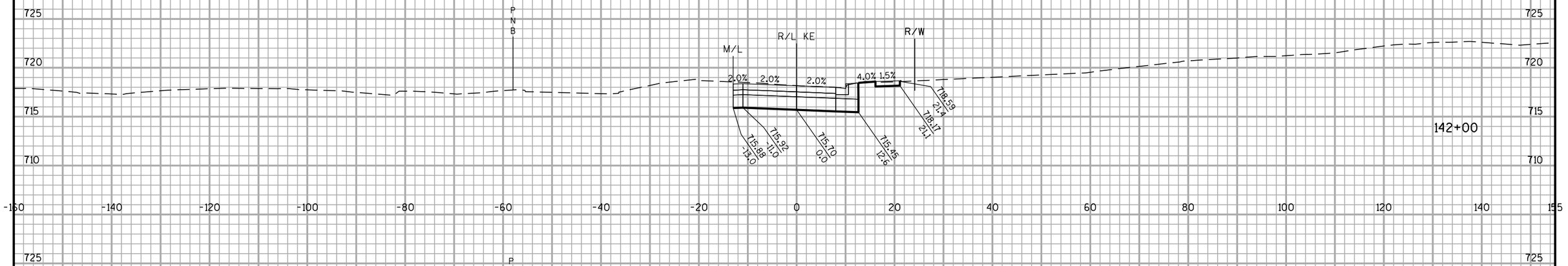


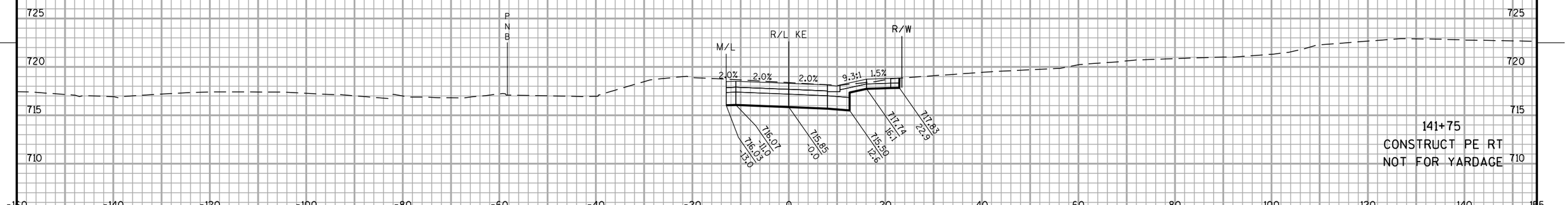
STA 140+30 TO 141+00

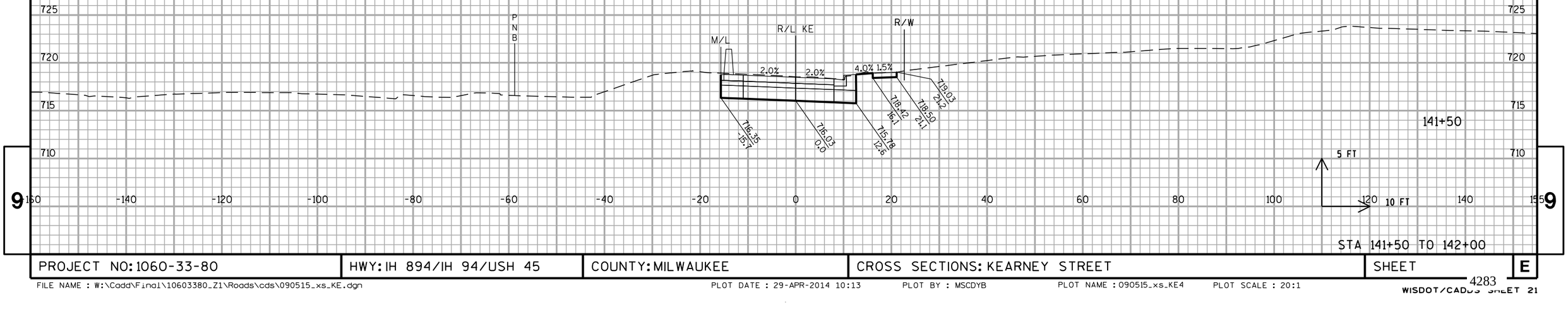
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

9 9

ALL WORK STAGE 4







9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

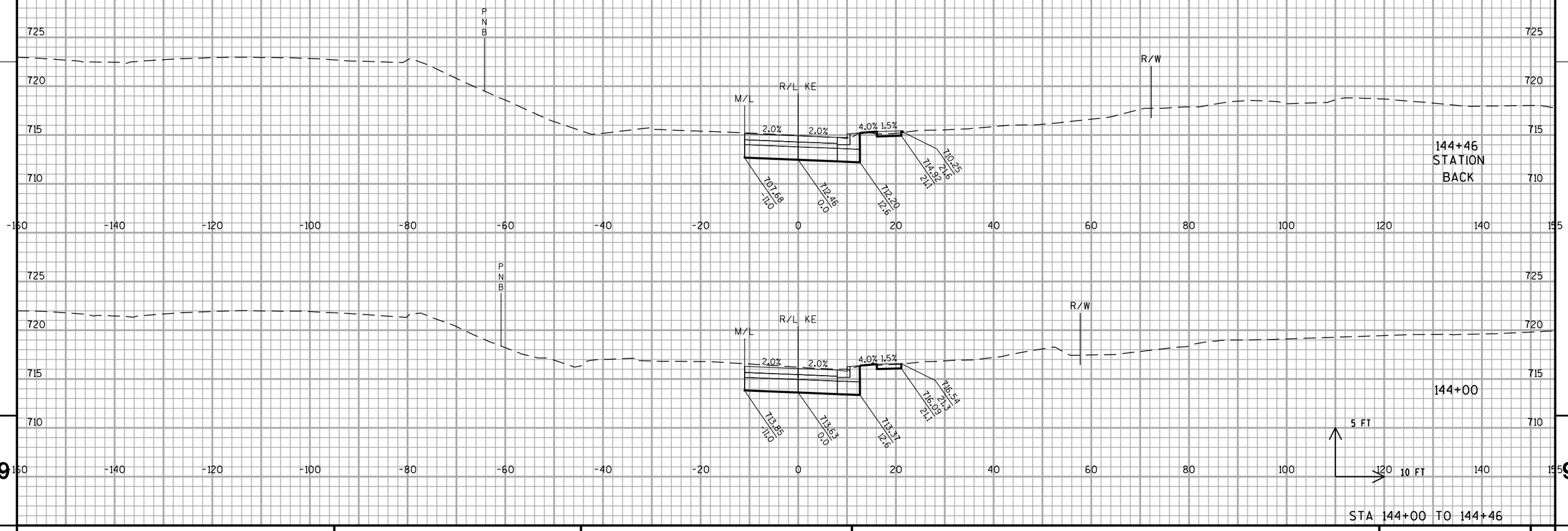
STA 141+50 TO 142+00

ALL WORK STAGE 4

STA 142+50 TO 143+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

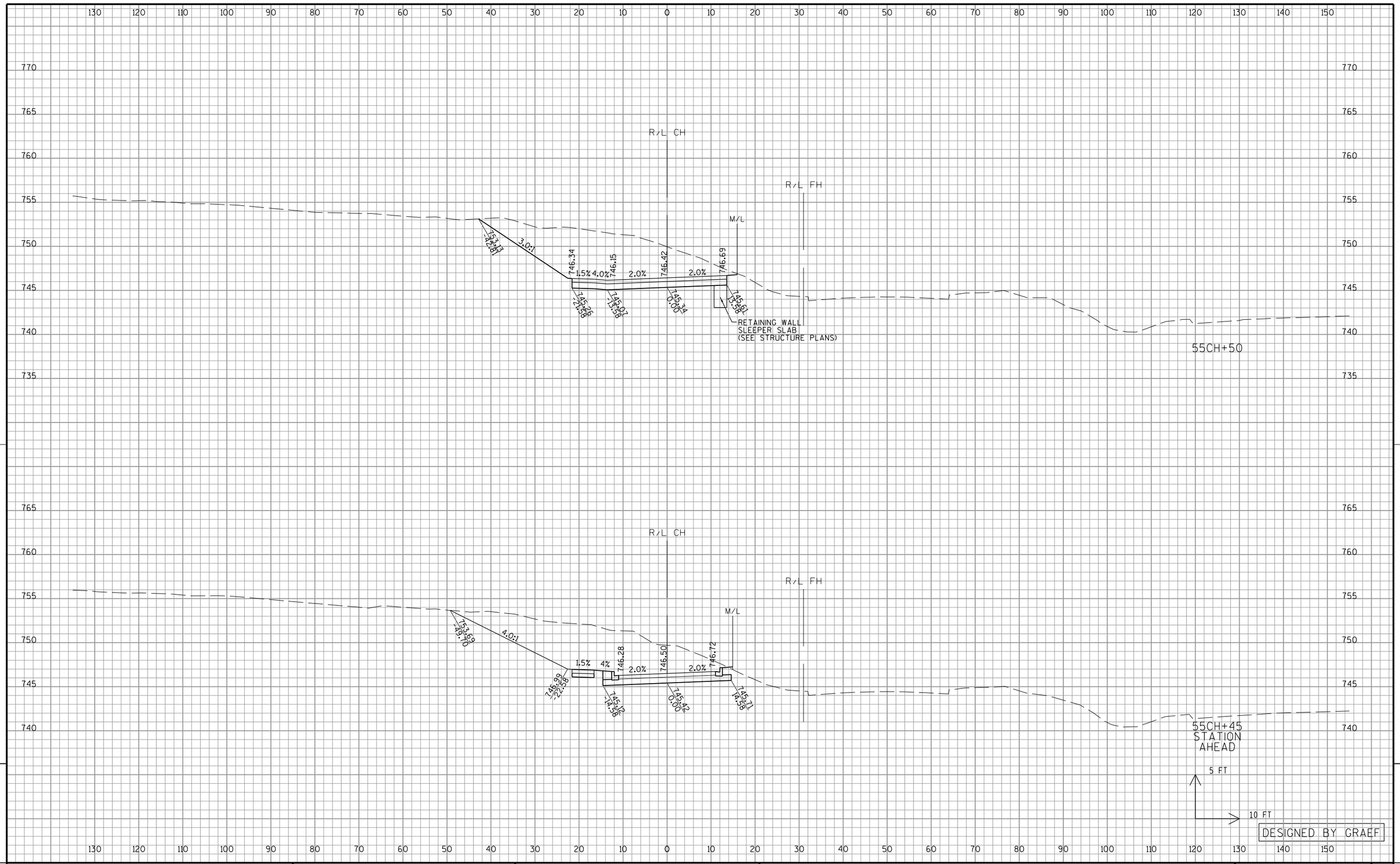
ALL WORK STAGE 4



STA 144+00 TO 144+46

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090515_xs_KE.dgn PLOT DATE : 29-APR-2014 10:13 PLOT BY : MSCDYB PLOT NAME : 090515_xs_KE6 PLOT SCALE : 20:1



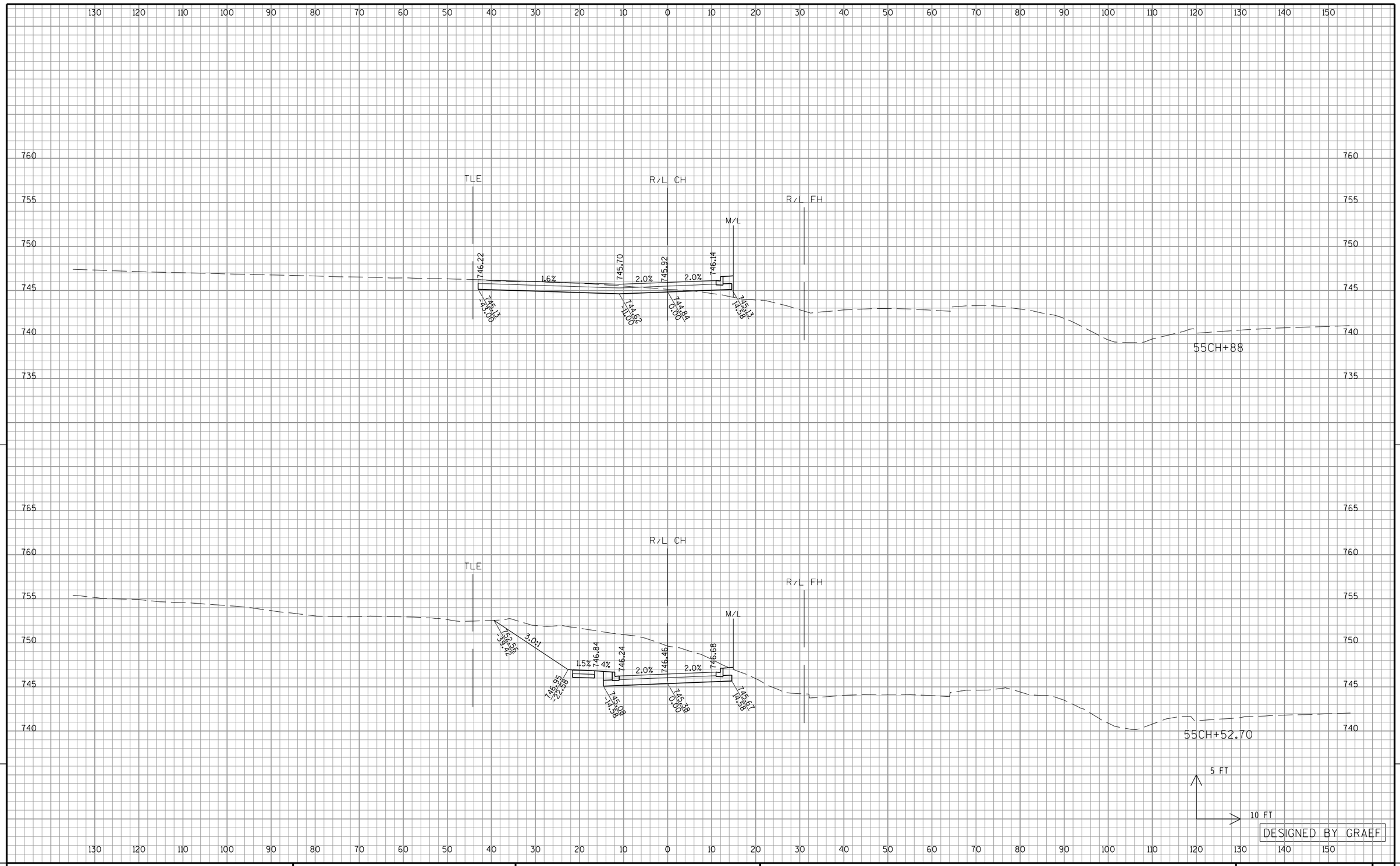
9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4286 E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

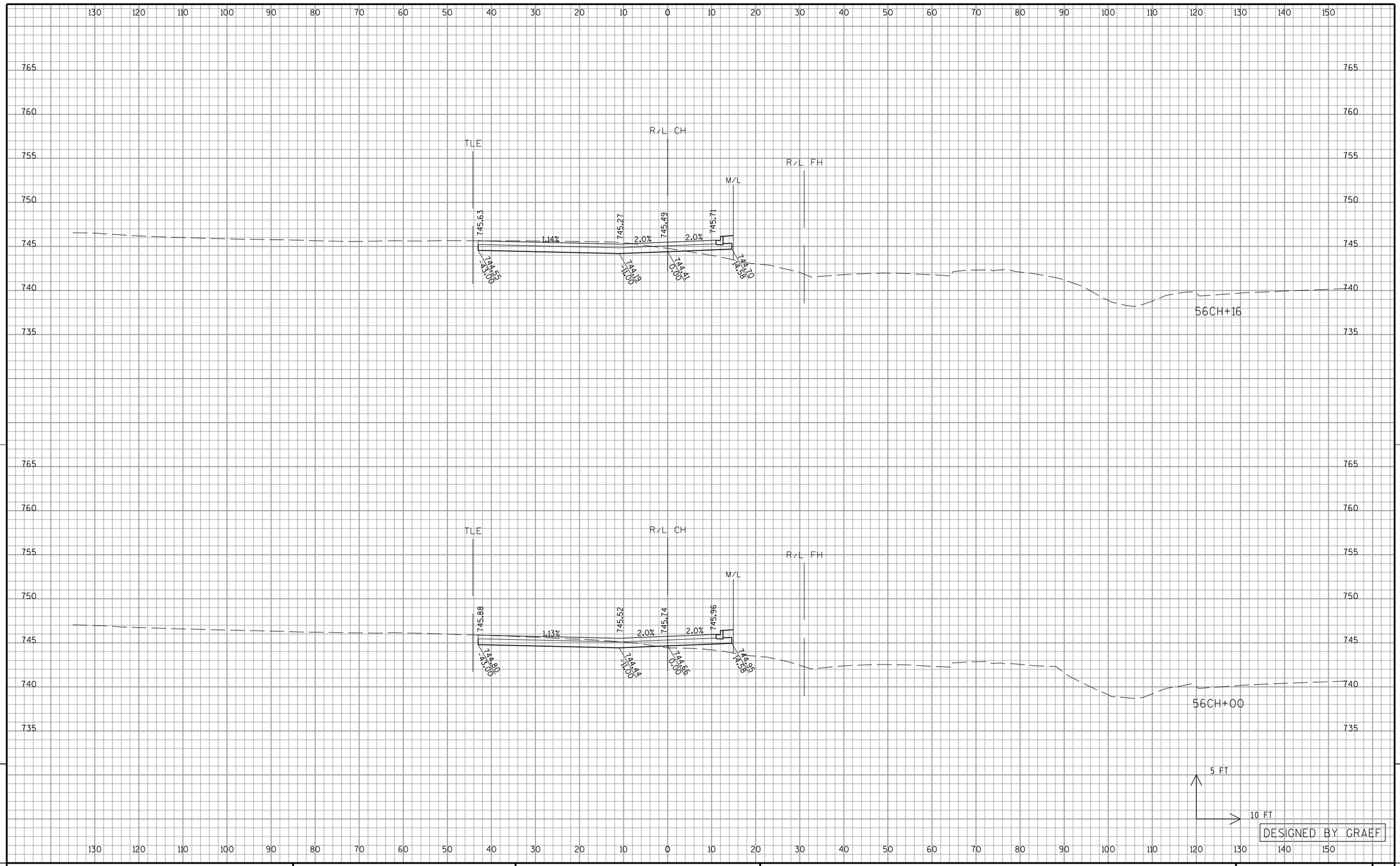
WISDOT/CADDS SHEET 21



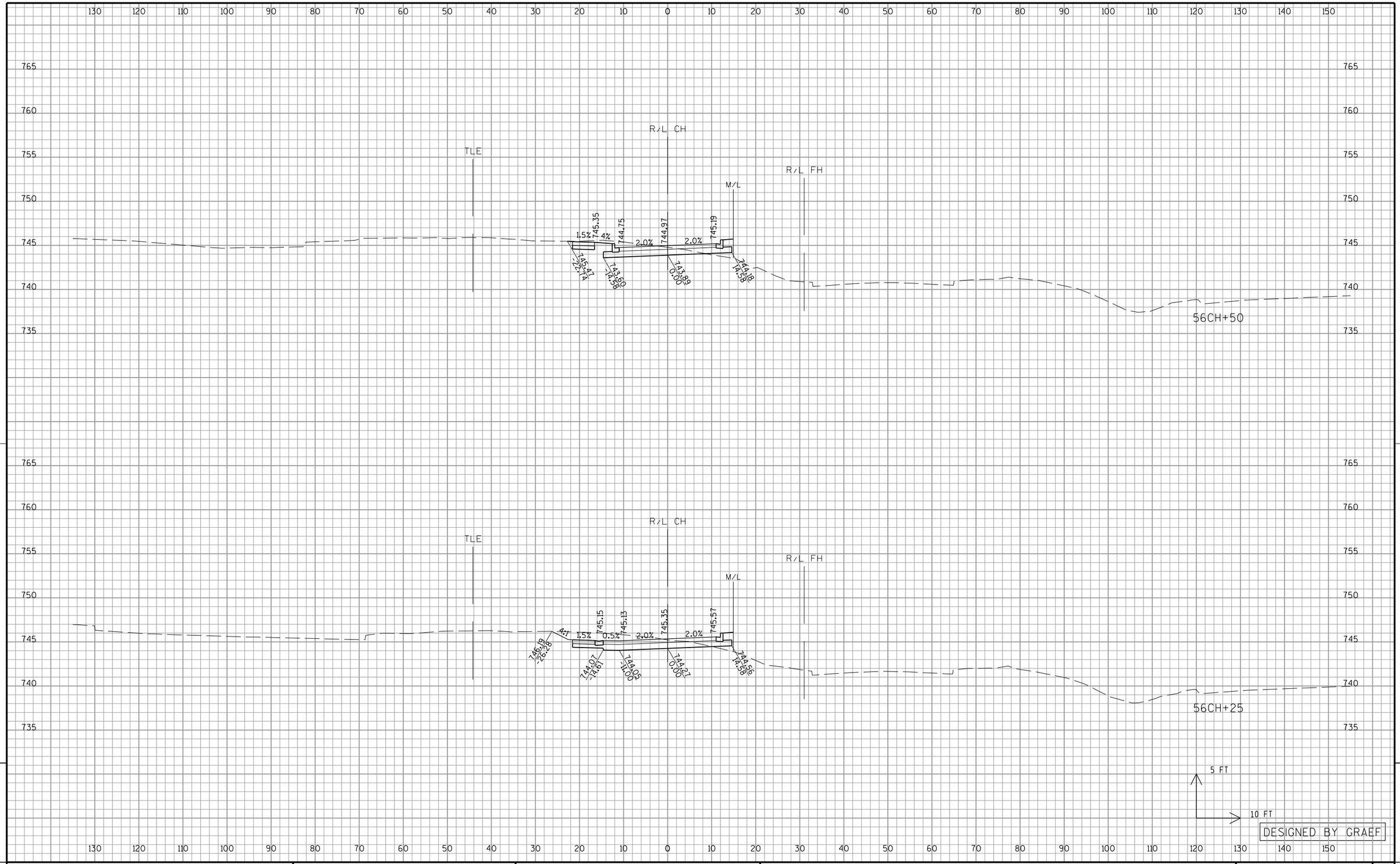
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4287	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn | PLOT DATE : 4/27/2014 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4288	E



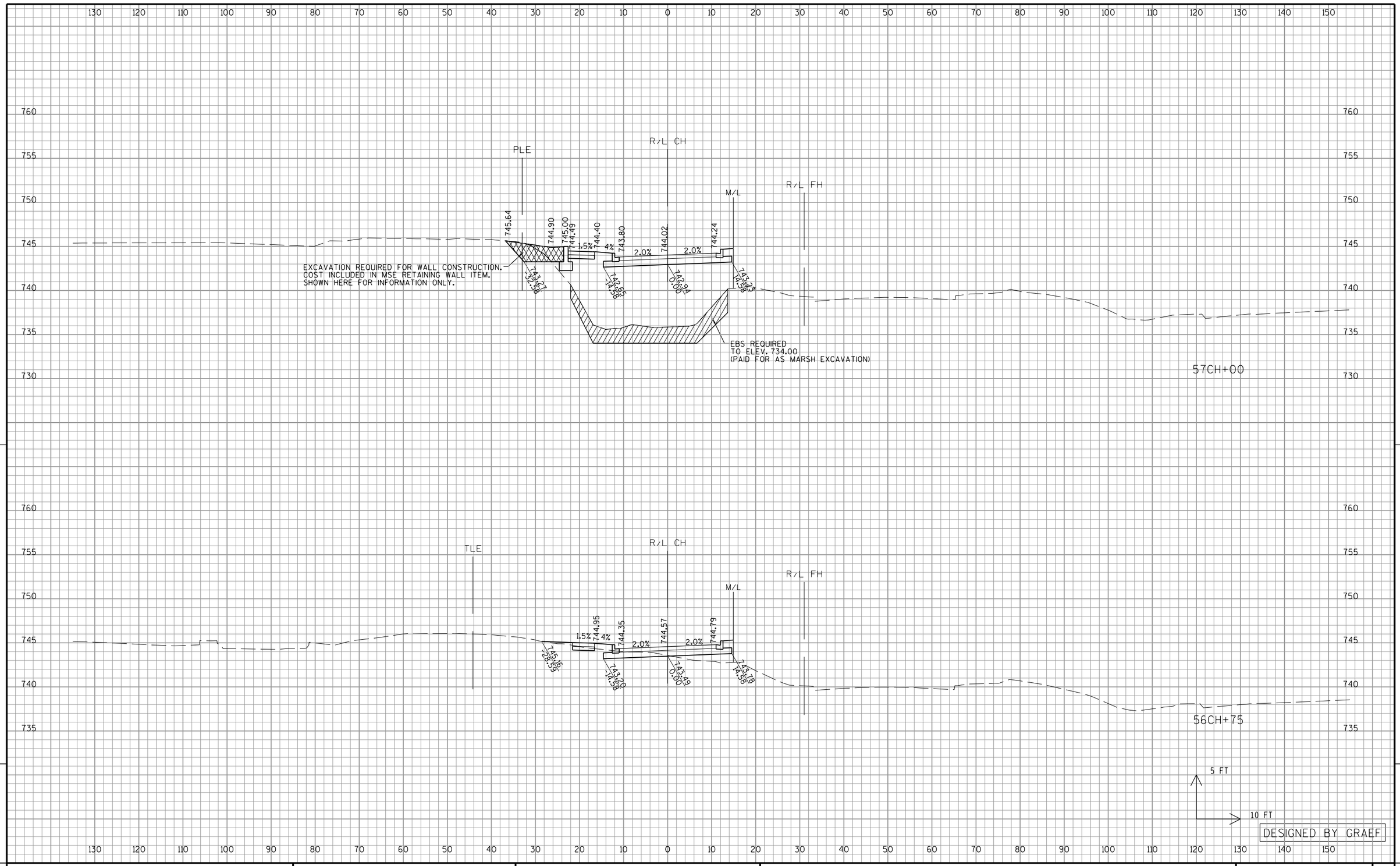
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4289	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



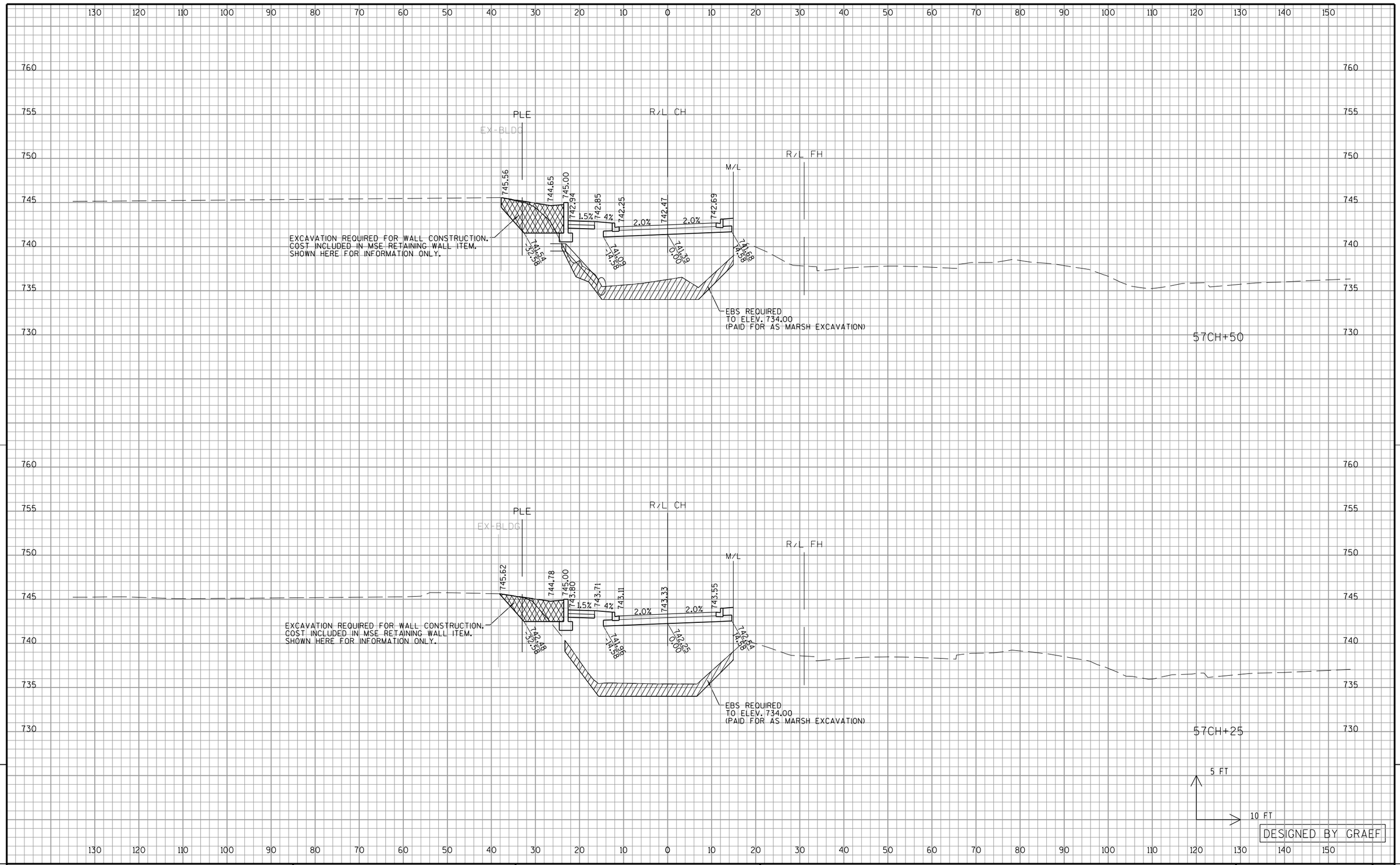
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4290	E

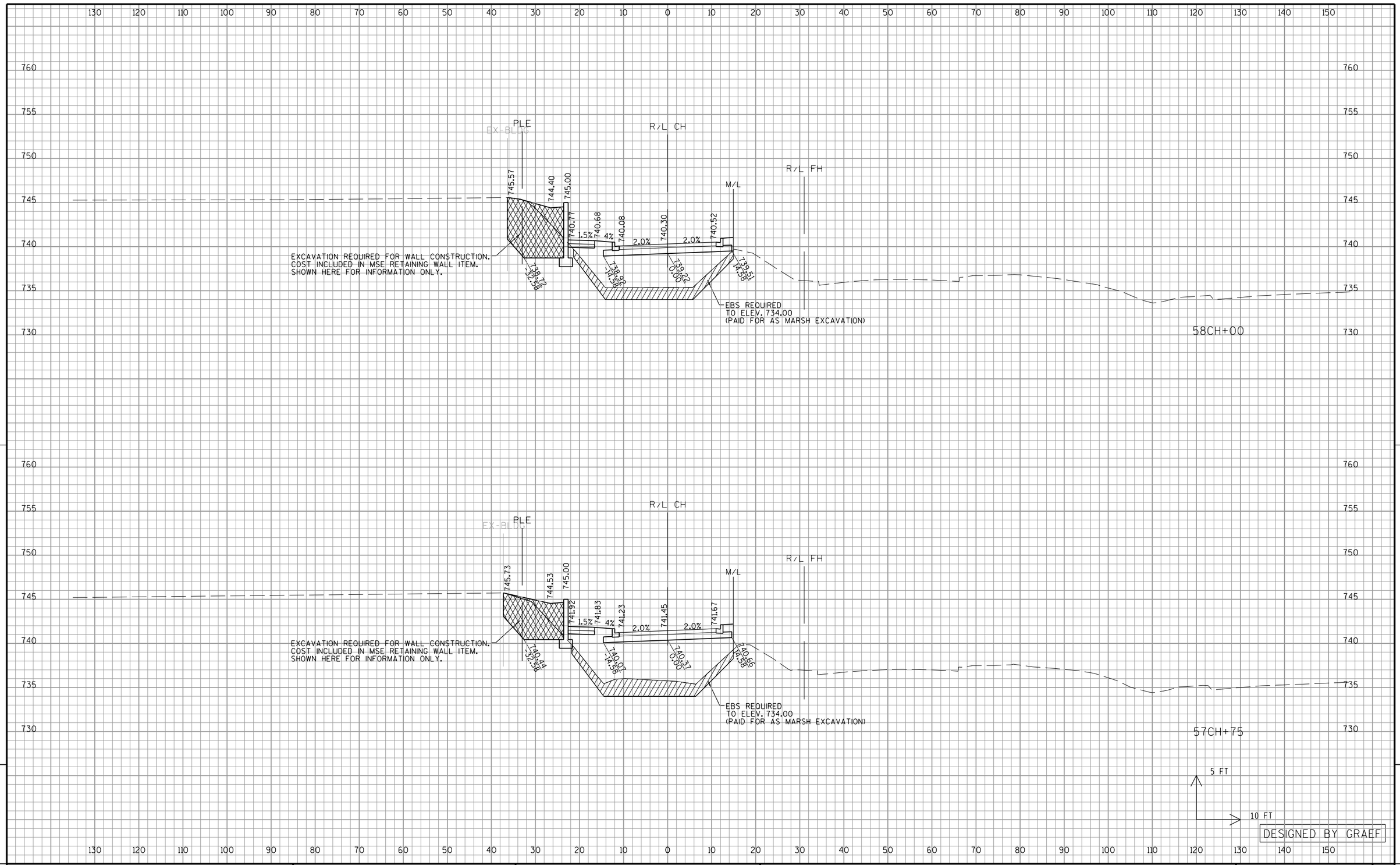
FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



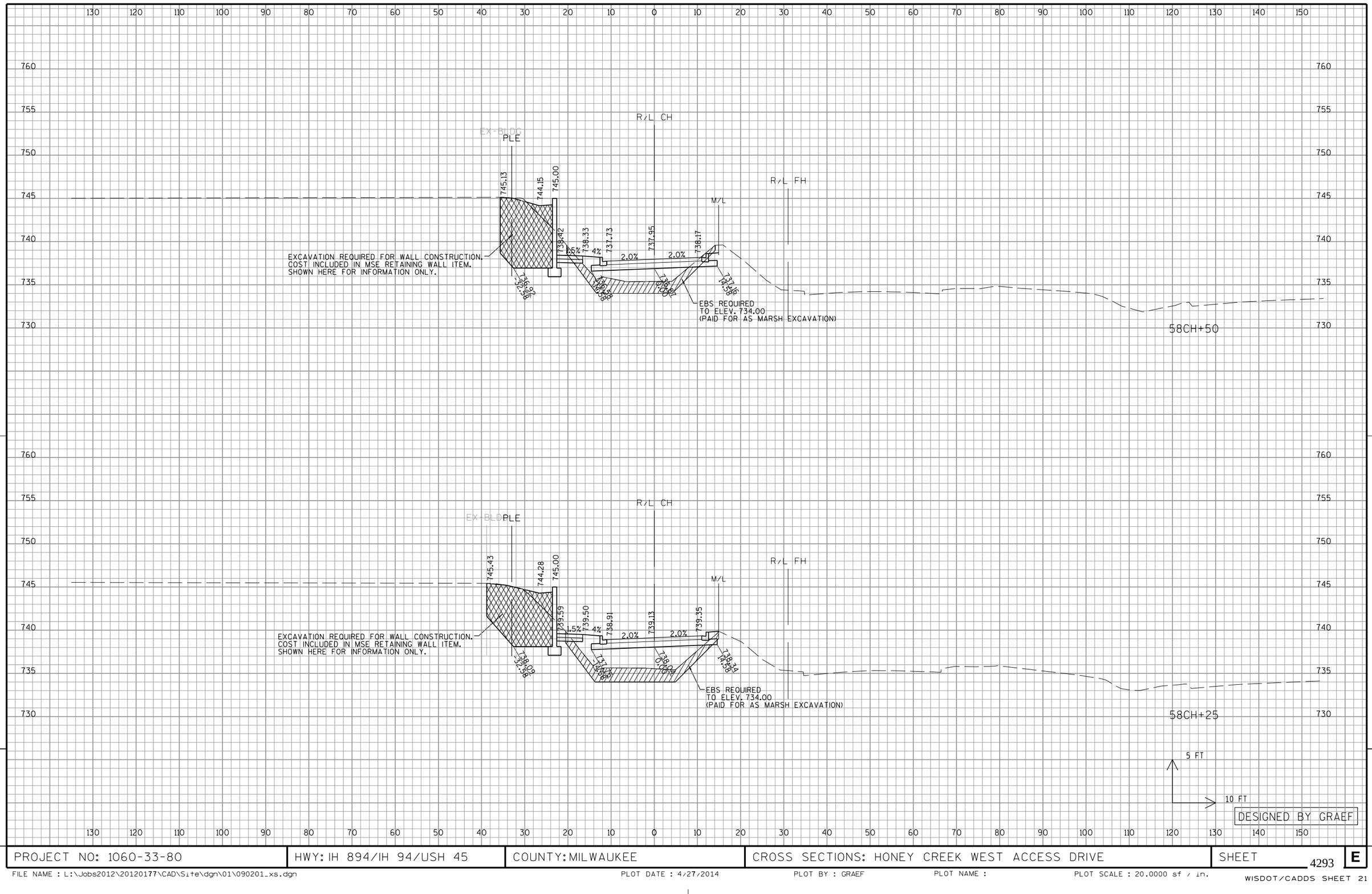
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4291	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21

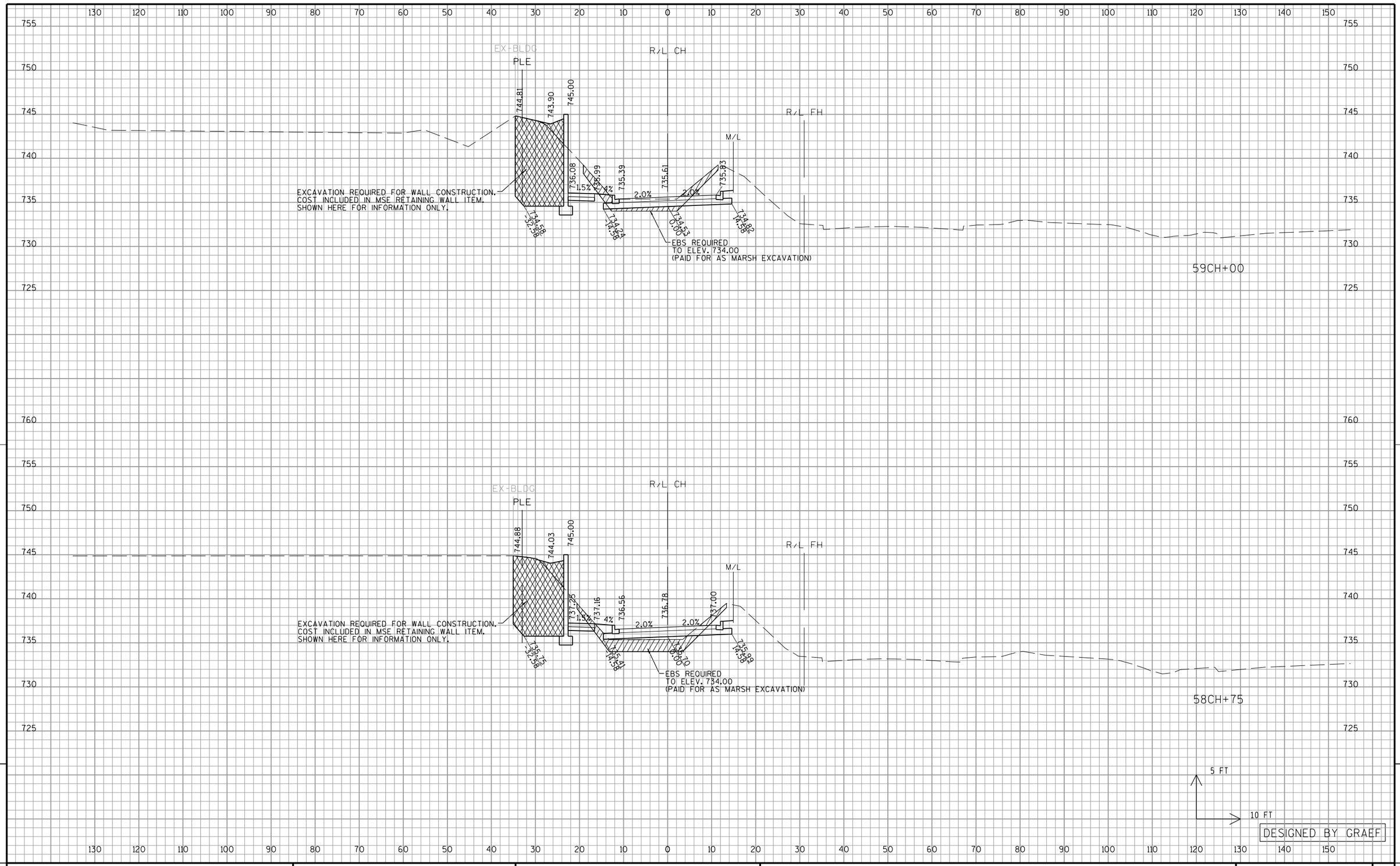


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4292	E

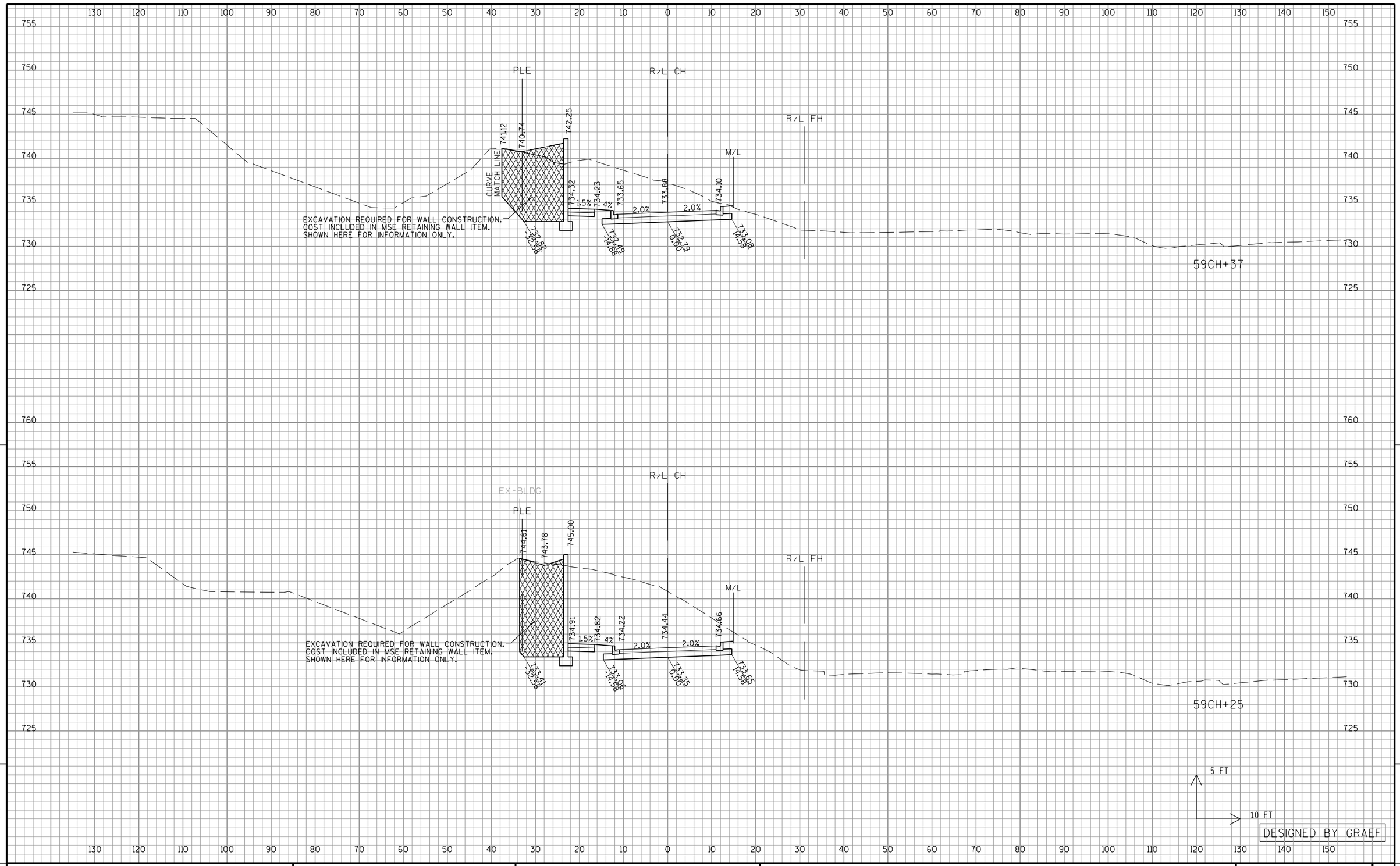
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PLOT DATE : 4/27/2014
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



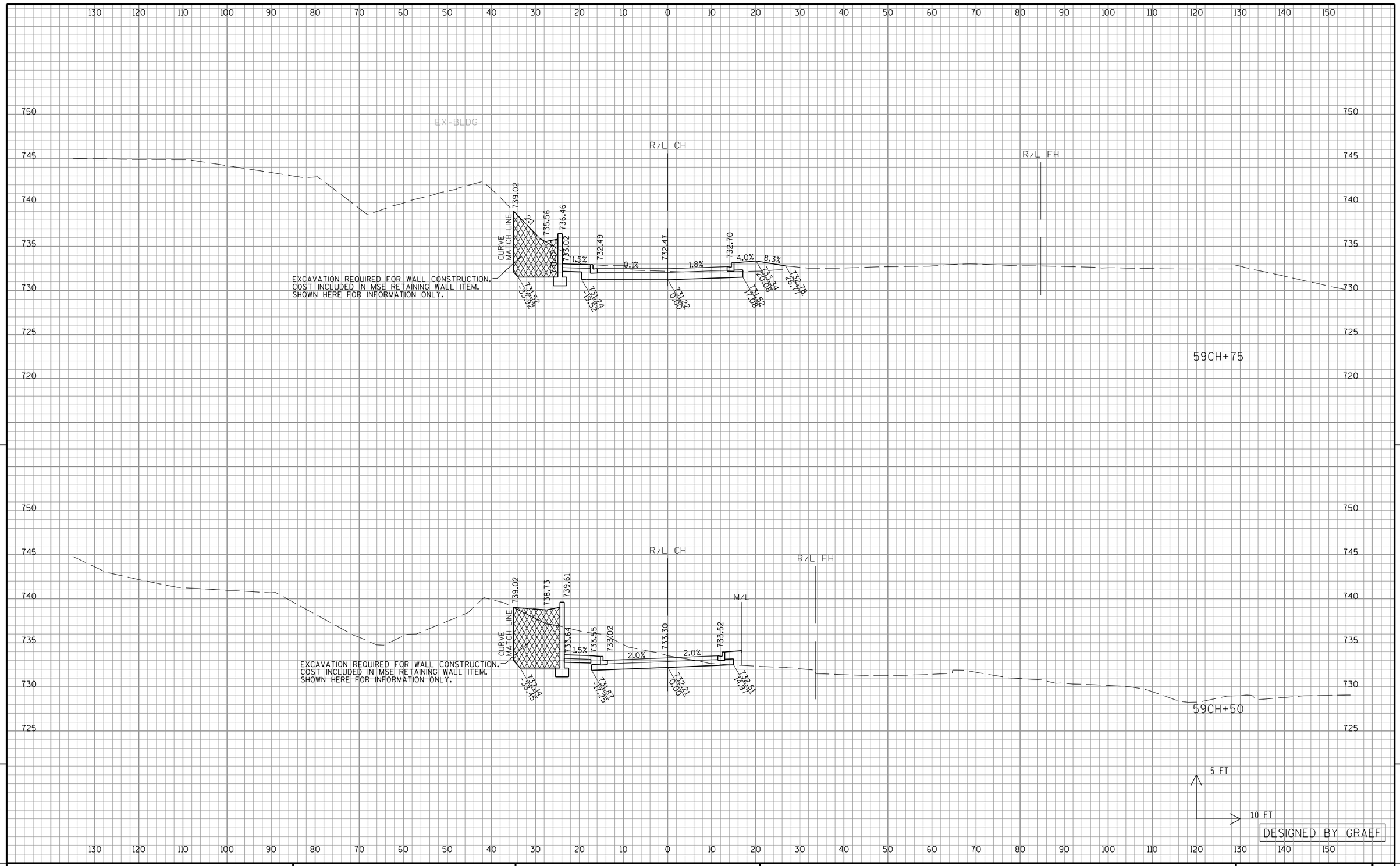
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4293	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4294	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4295	E



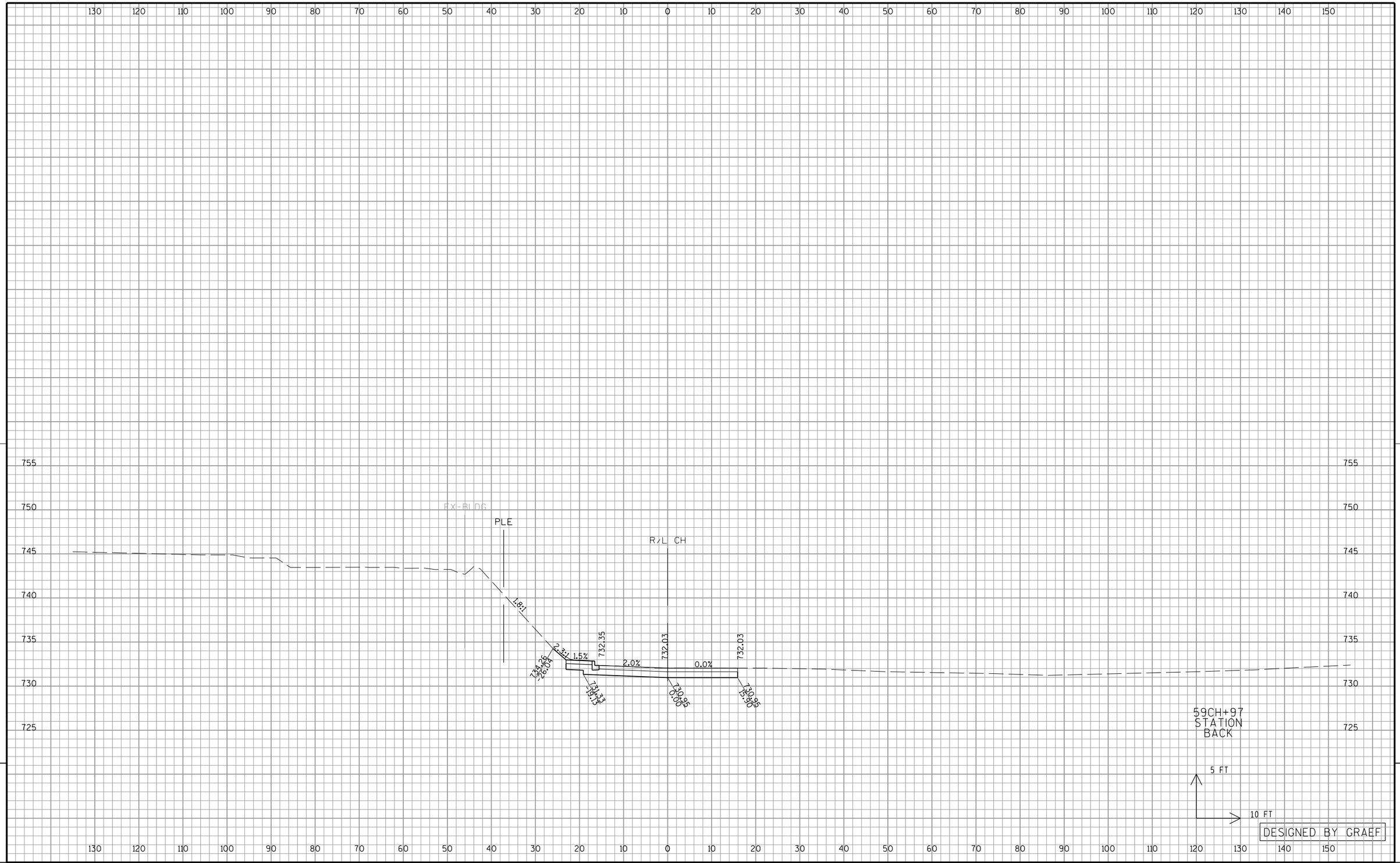
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4296	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



9

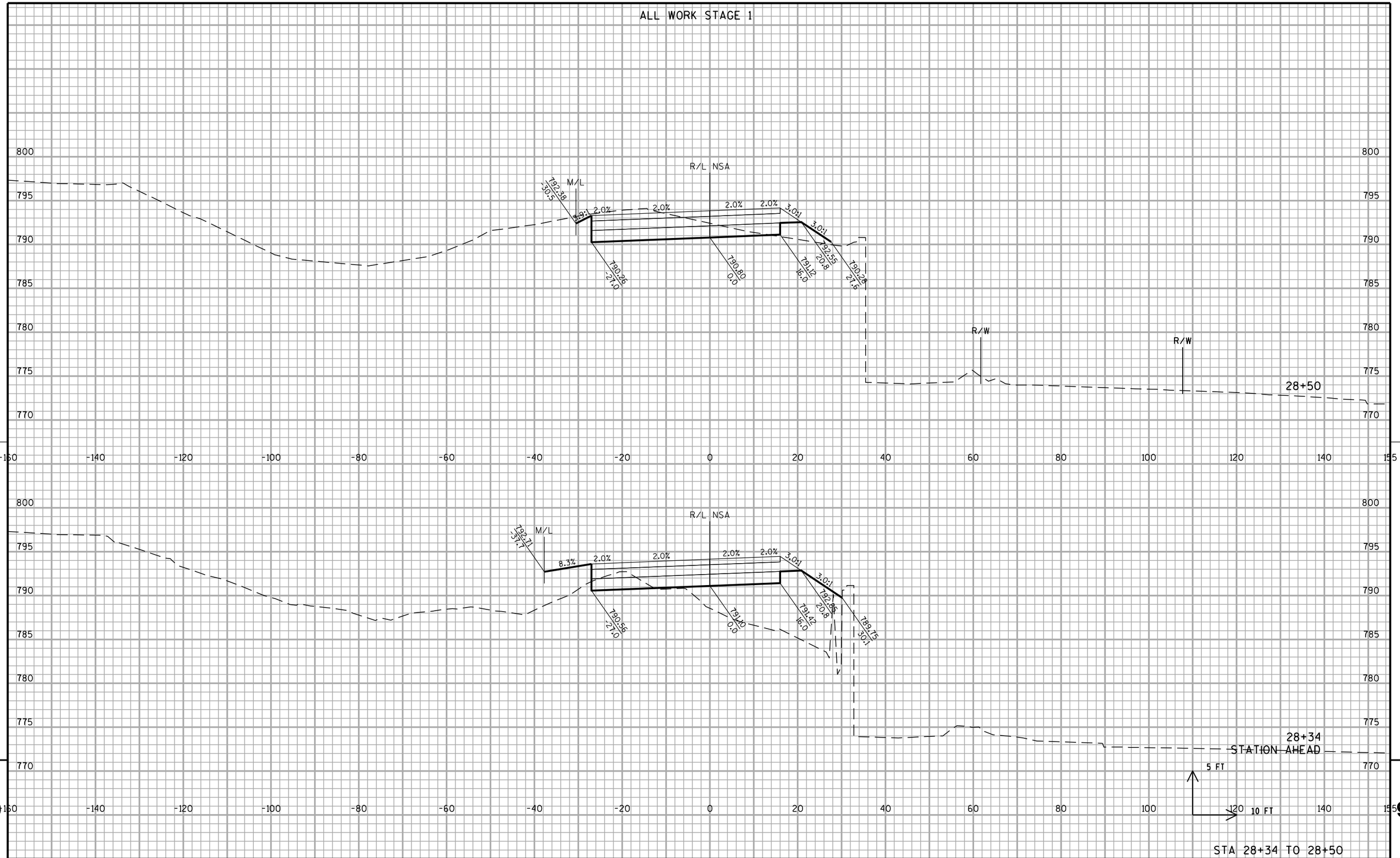
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK WEST ACCESS DRIVE	SHEET 4297	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\01\090201_xs.dgn PLOT DATE : 4/27/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



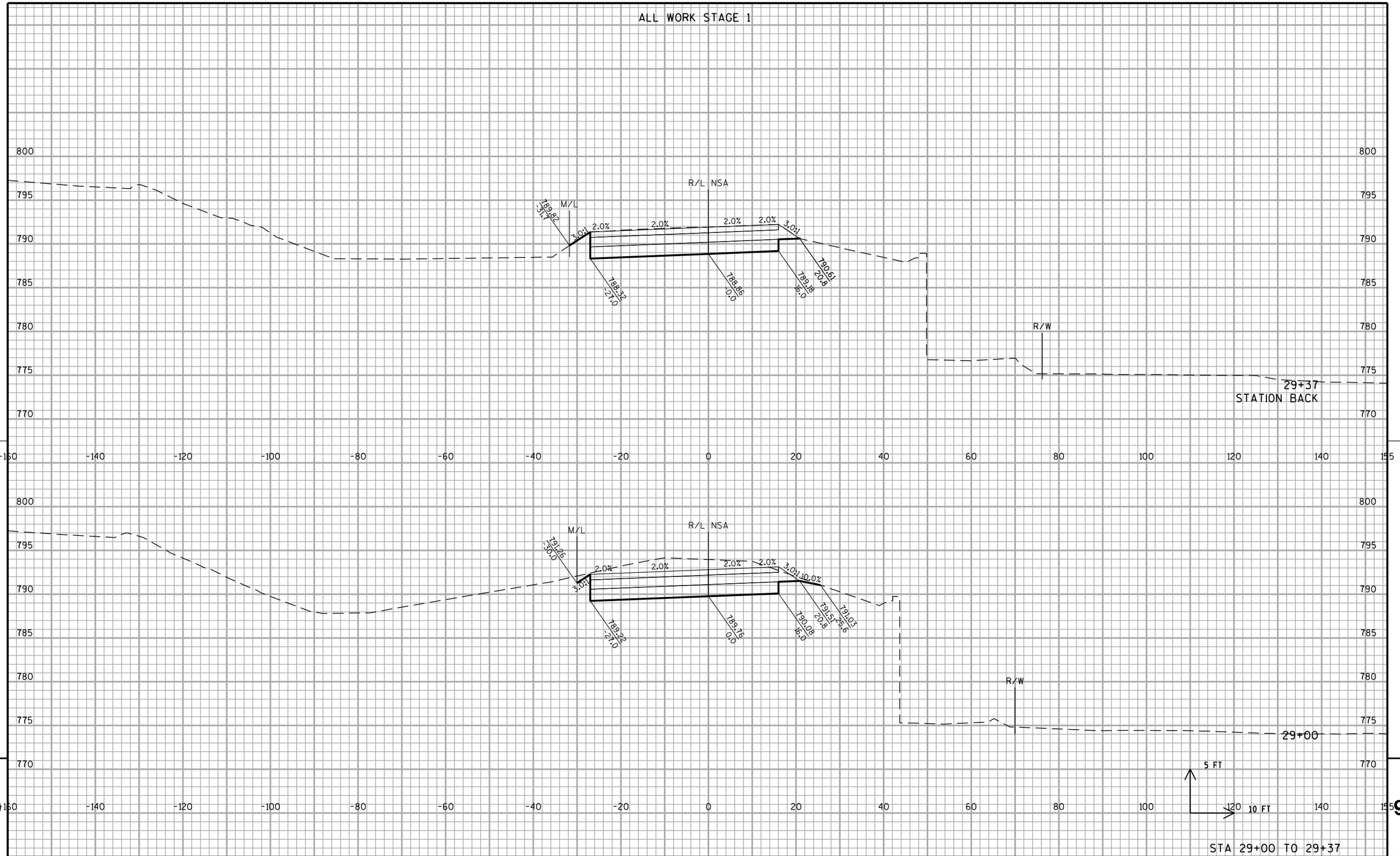
STA 28+34 TO 28+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/US 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



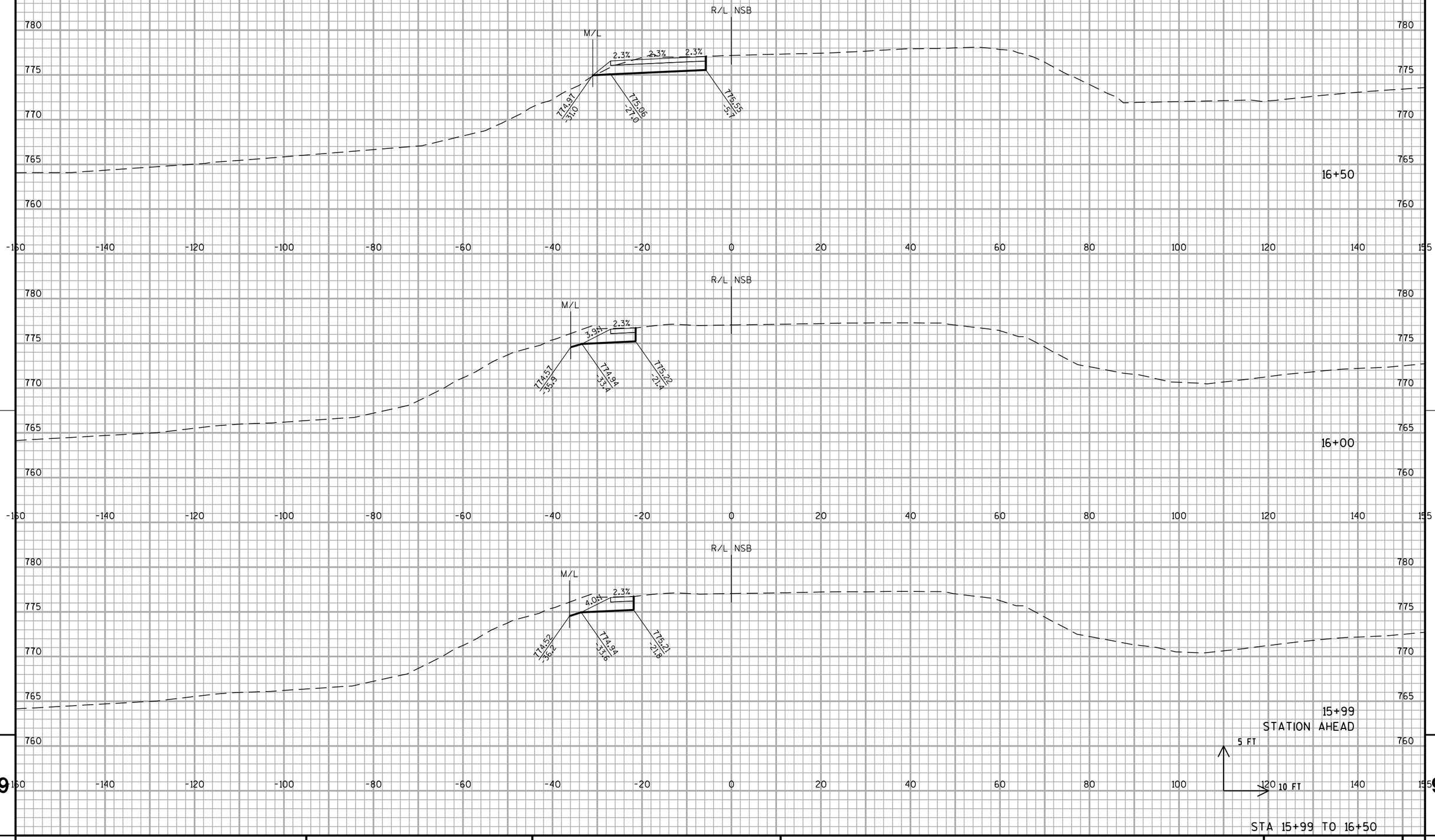
STA 29+00 TO 29+37

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/US 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 27-APR-2014 23:11 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

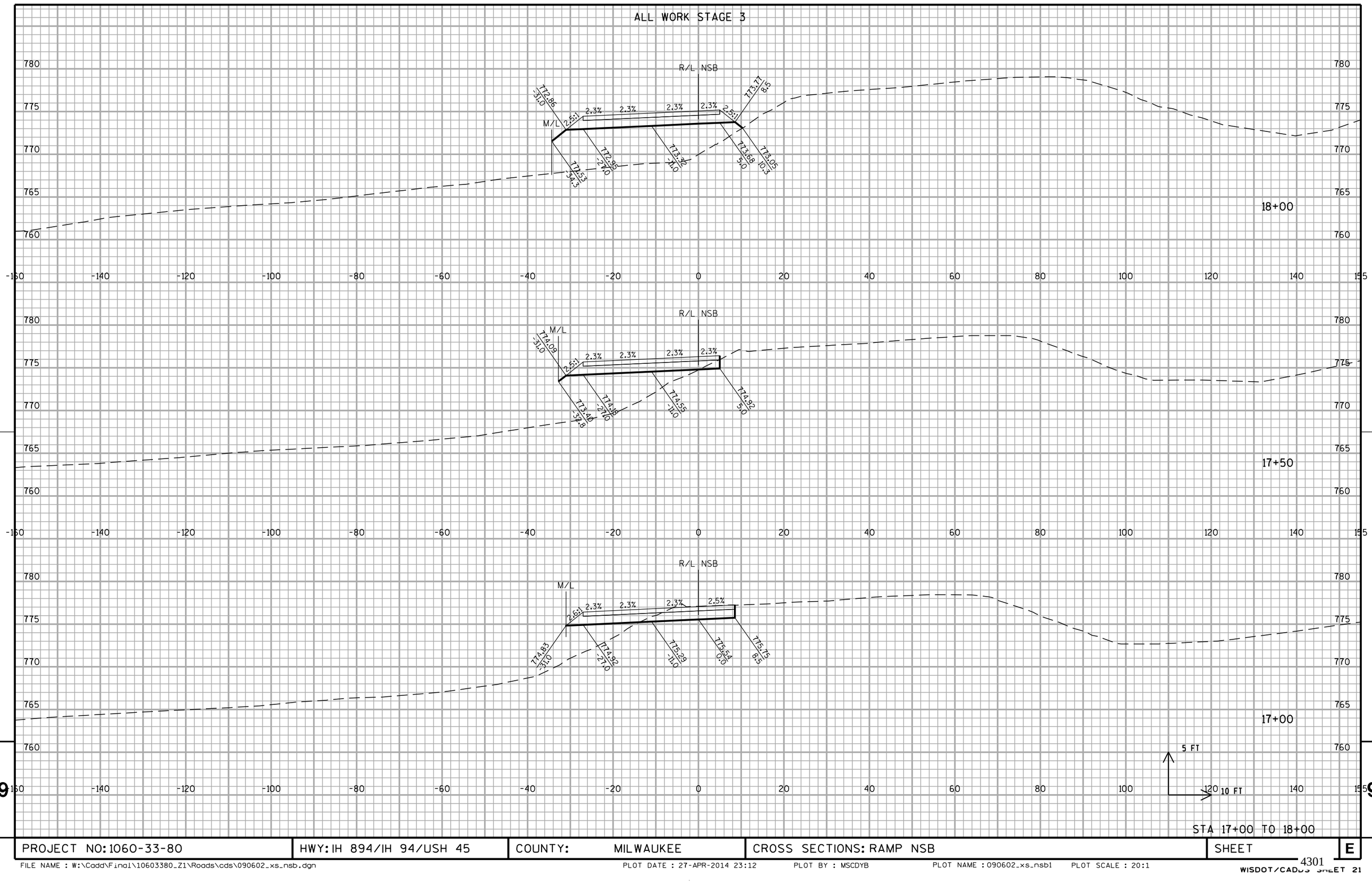


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

STA 15+99 TO 16+50

9 9

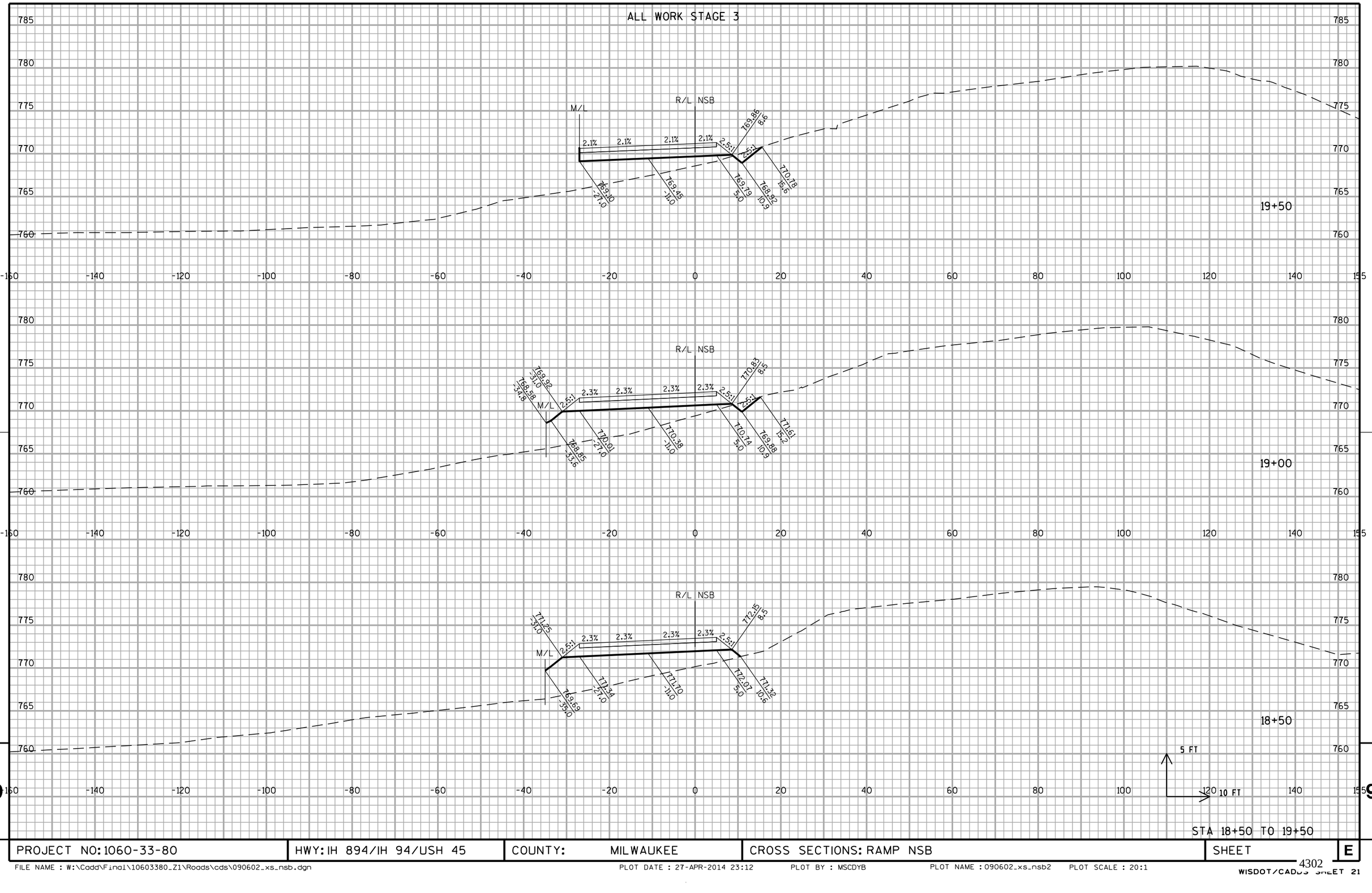
ALL WORK STAGE 3



STA 17+00 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

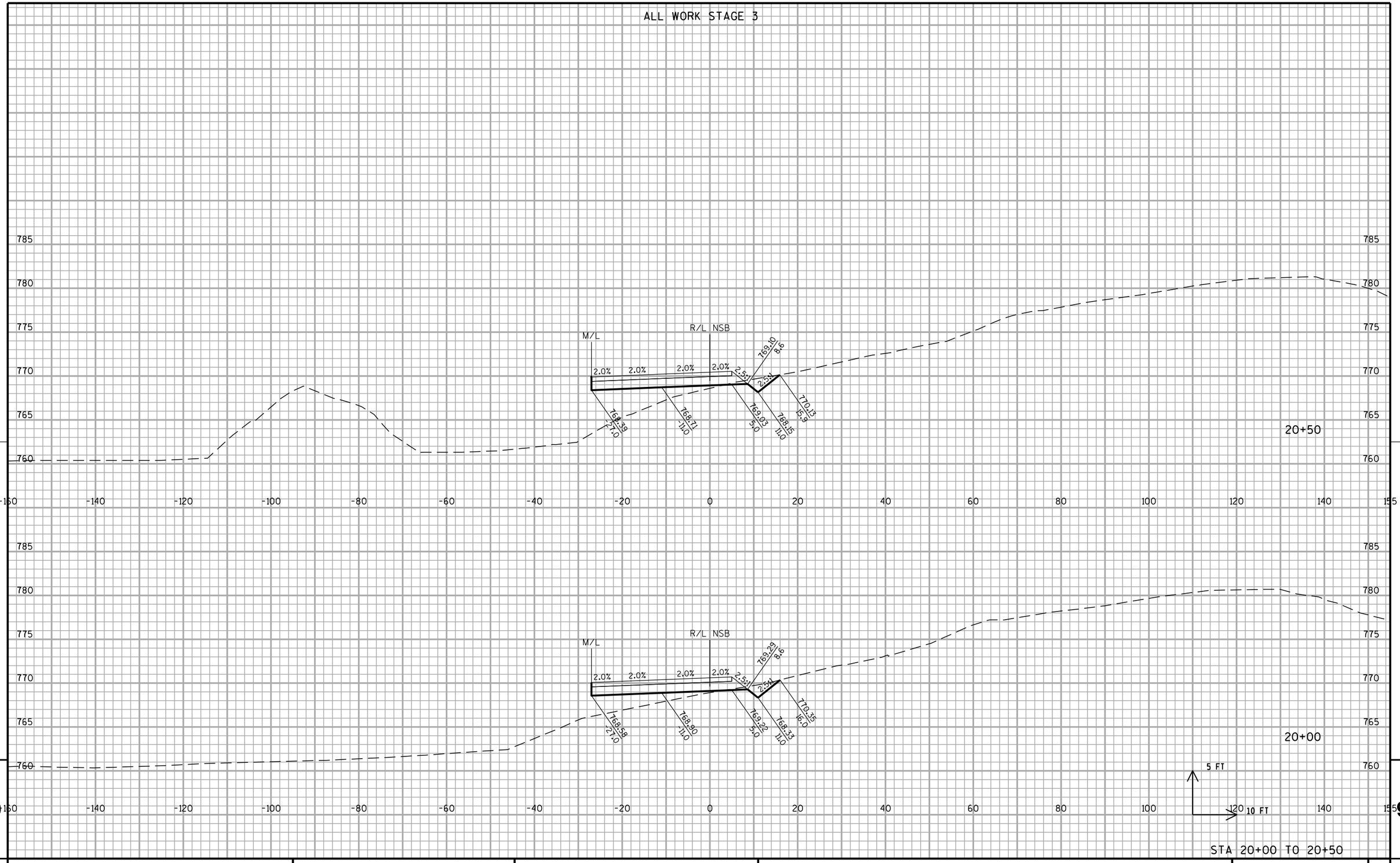
ALL WORK STAGE 3



STA 18+50 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

ALL WORK STAGE 3

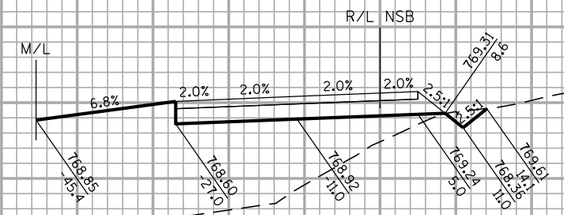


STA 20+00 TO 20+50

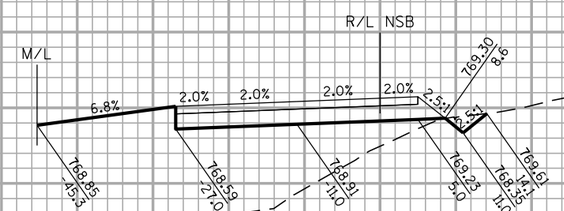
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb3 PLOT SCALE : 20:1

ALL WORK STAGE 3



21+01
STATION BACK



21+00

5 FT
10 FT

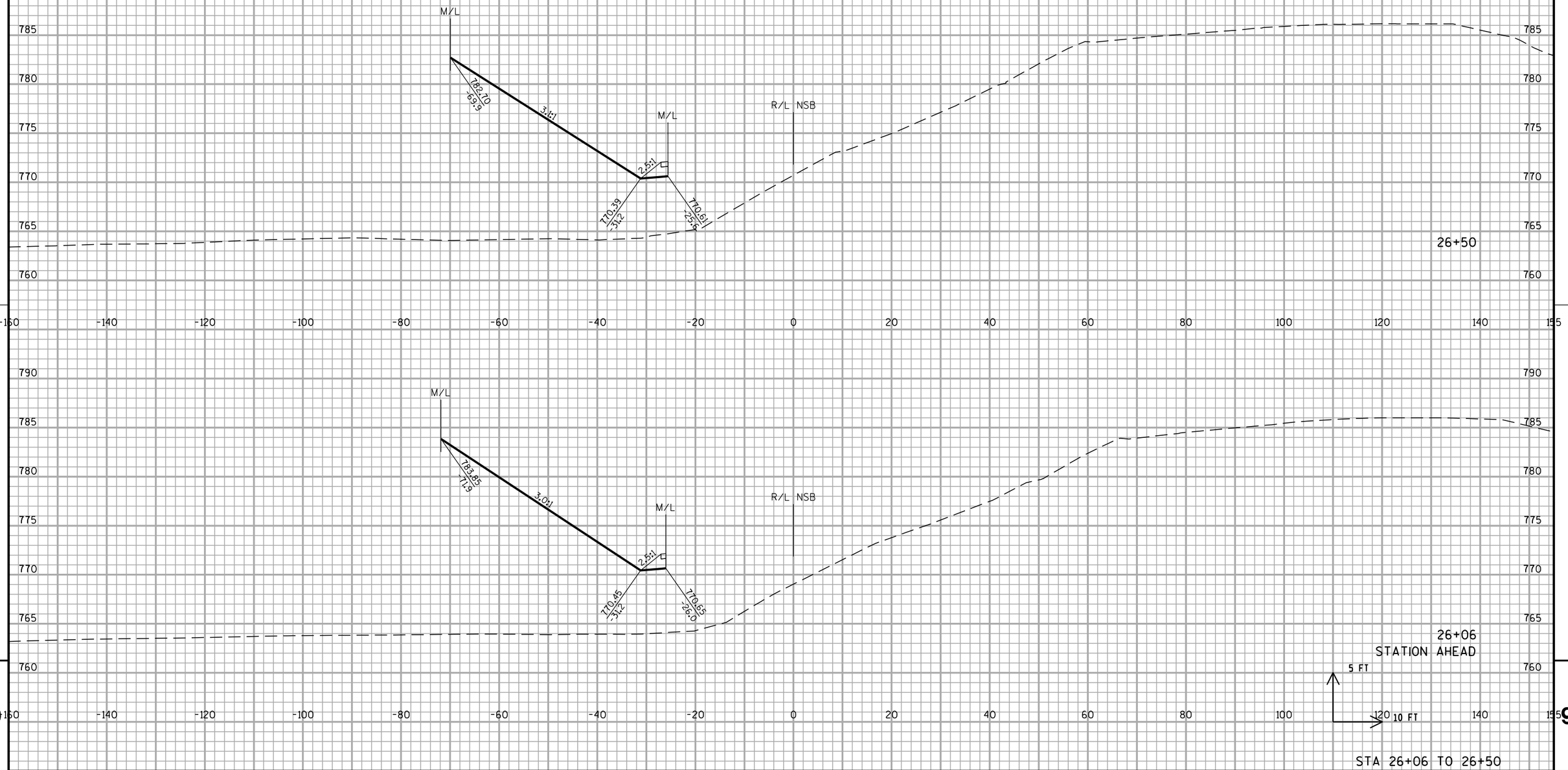
STA 21+00 TO 21+01

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

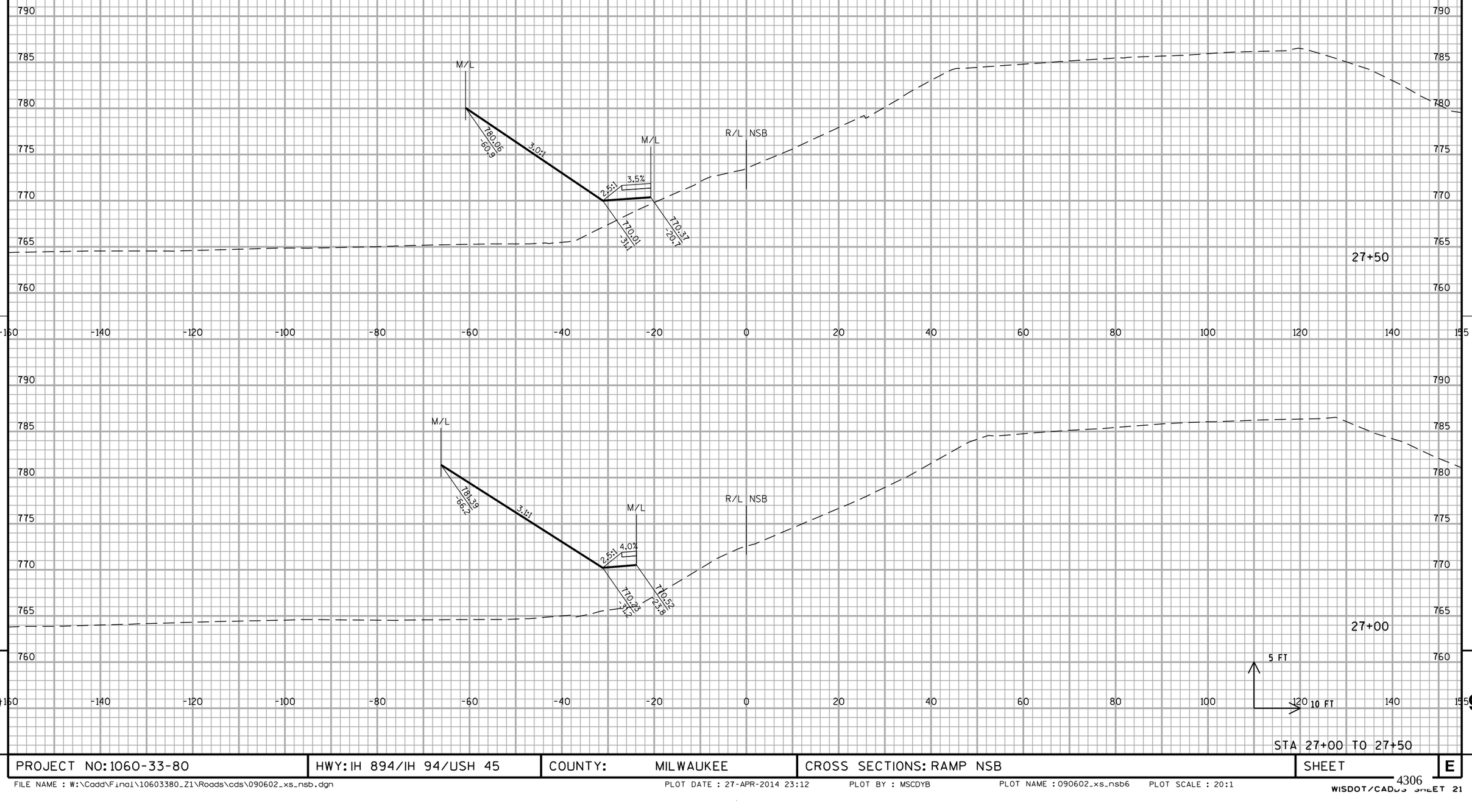


STA 26+06 TO 26+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb5 PLOT SCALE : 20:1

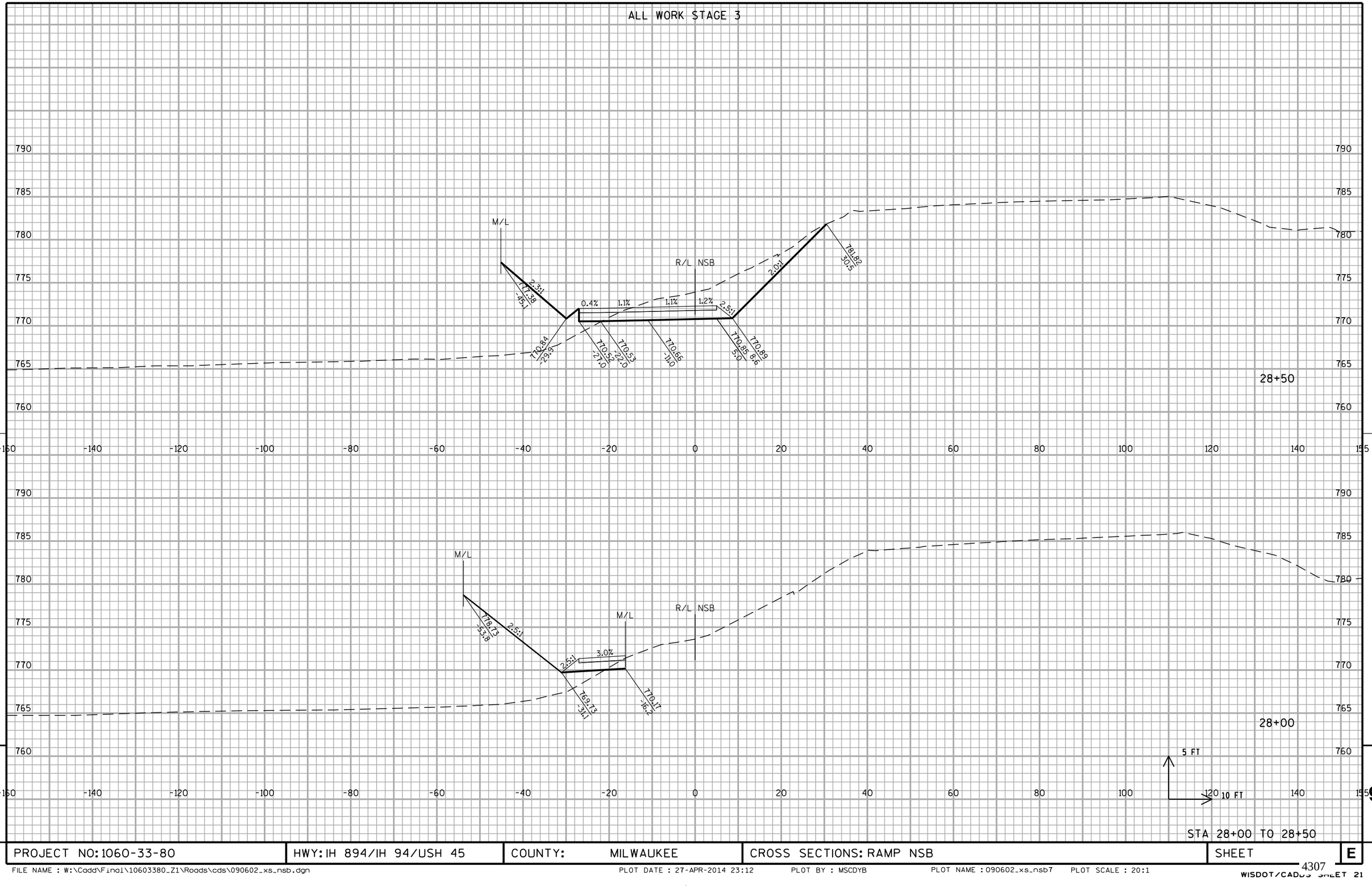
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb6 PLOT SCALE : 20:1

ALL WORK STAGE 3



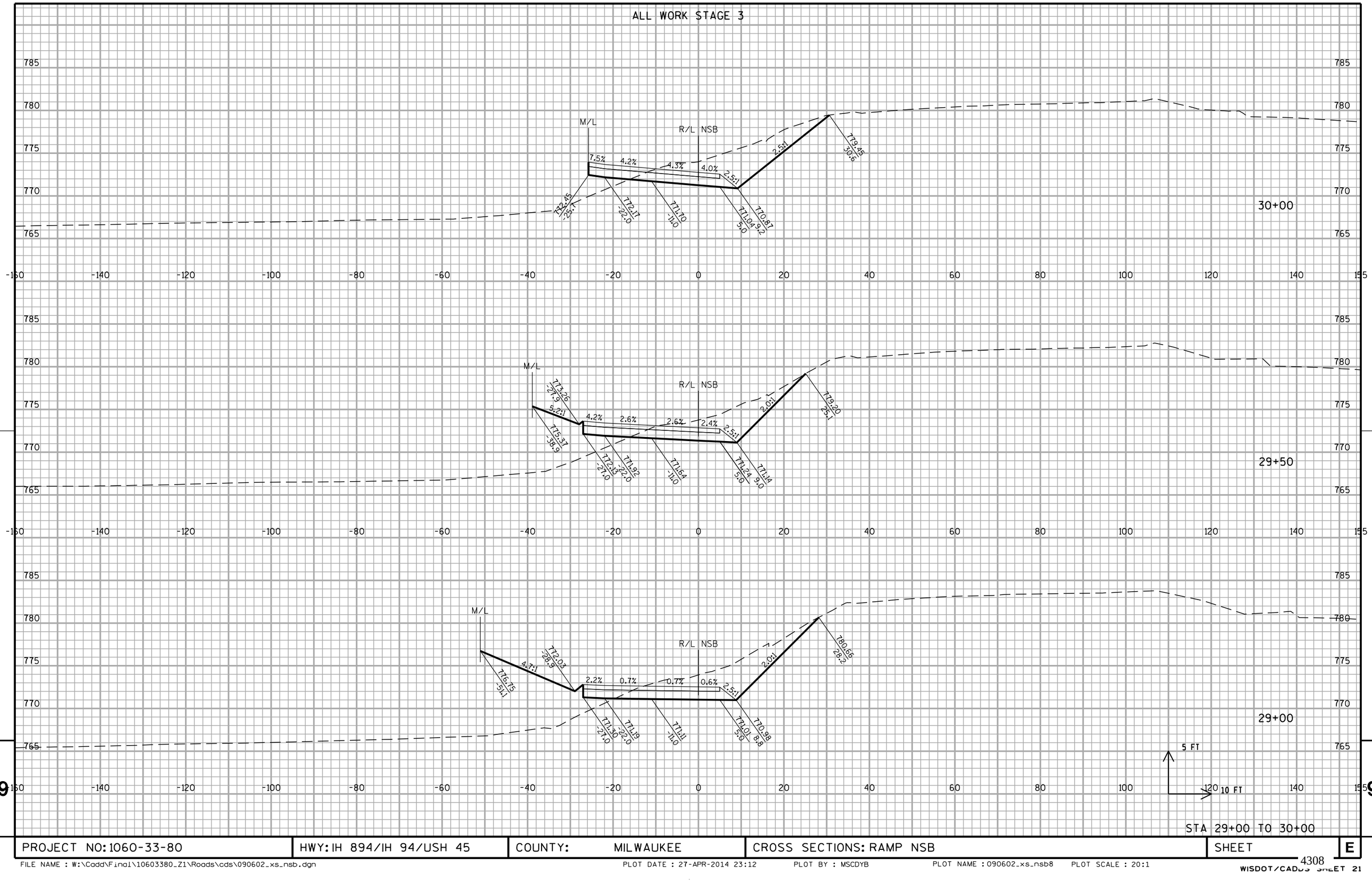
STA 28+00 TO 28+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



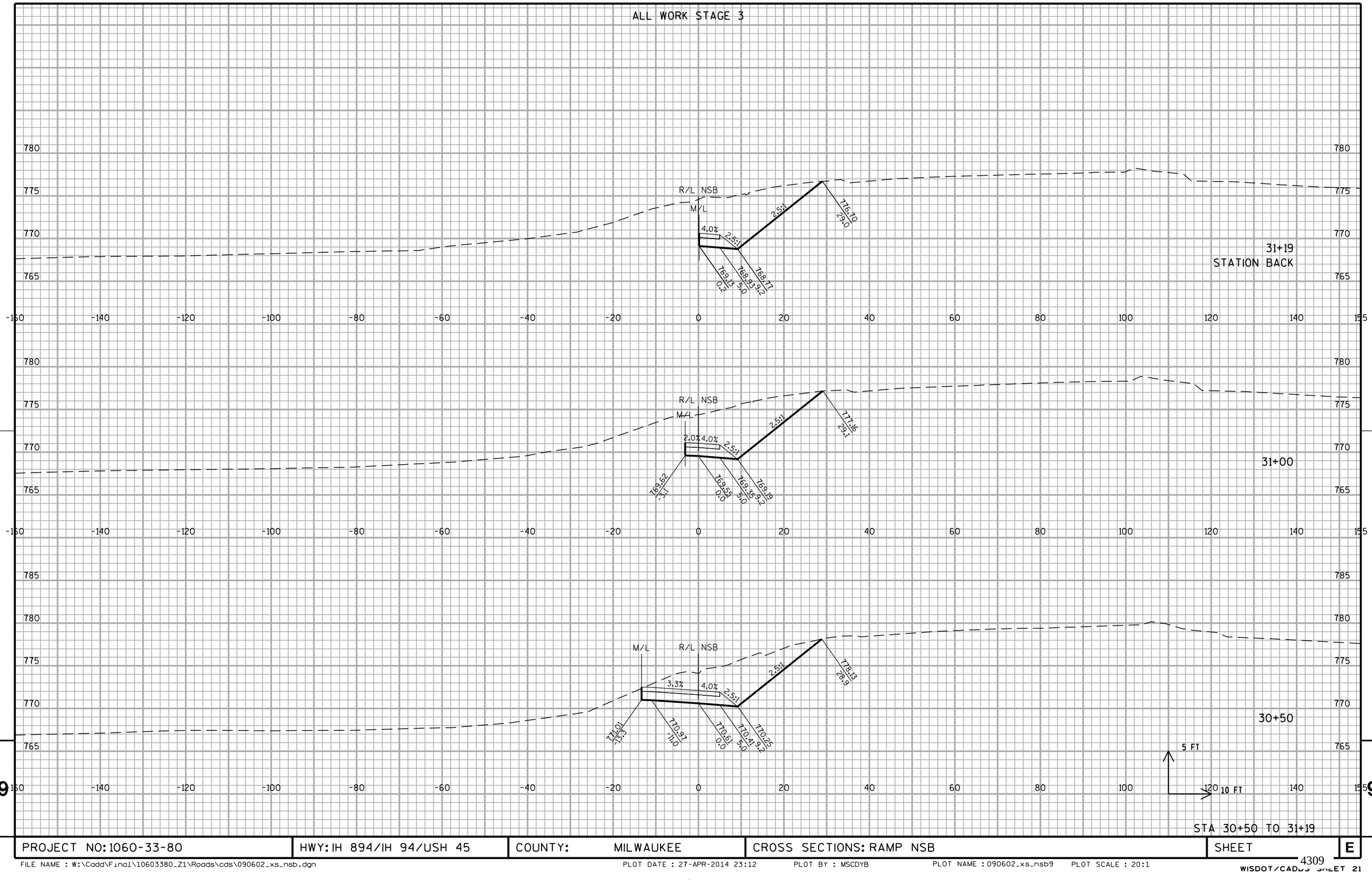
STA 29+00 TO 30+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090602_xs_nsb.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090602_xs_nsb8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

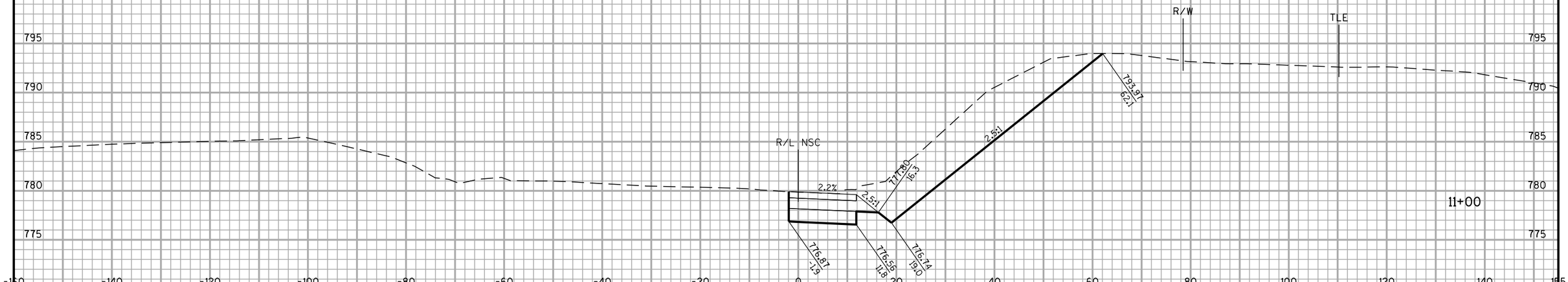
ALL WORK STAGE 3

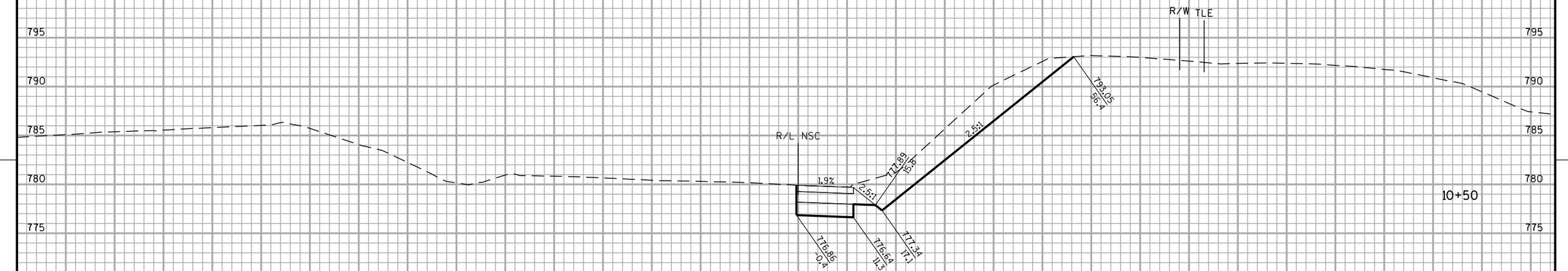


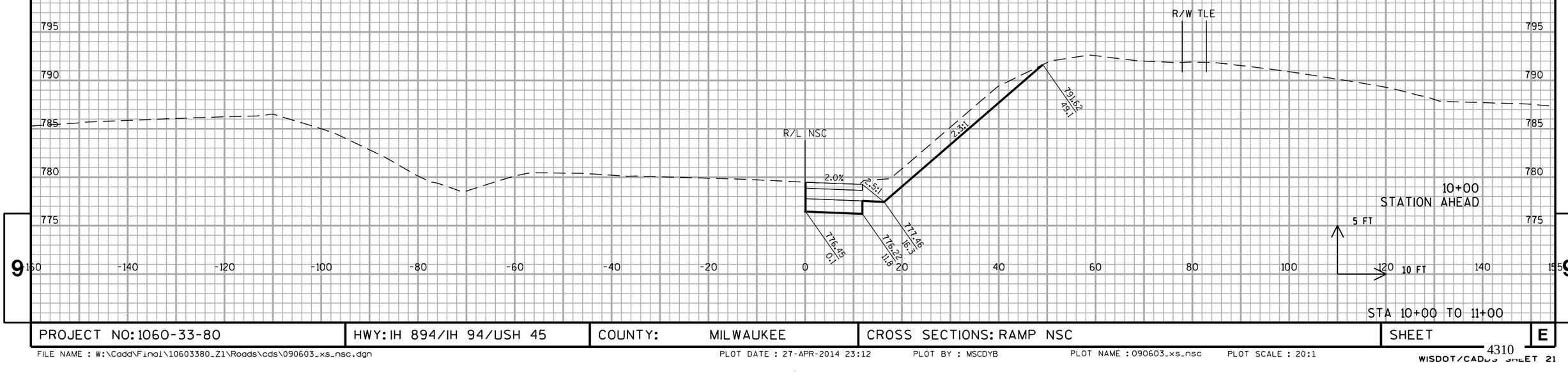
STA 30+50 TO 31+19

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSB	SHEET	E

ALL WORK STAGE 1





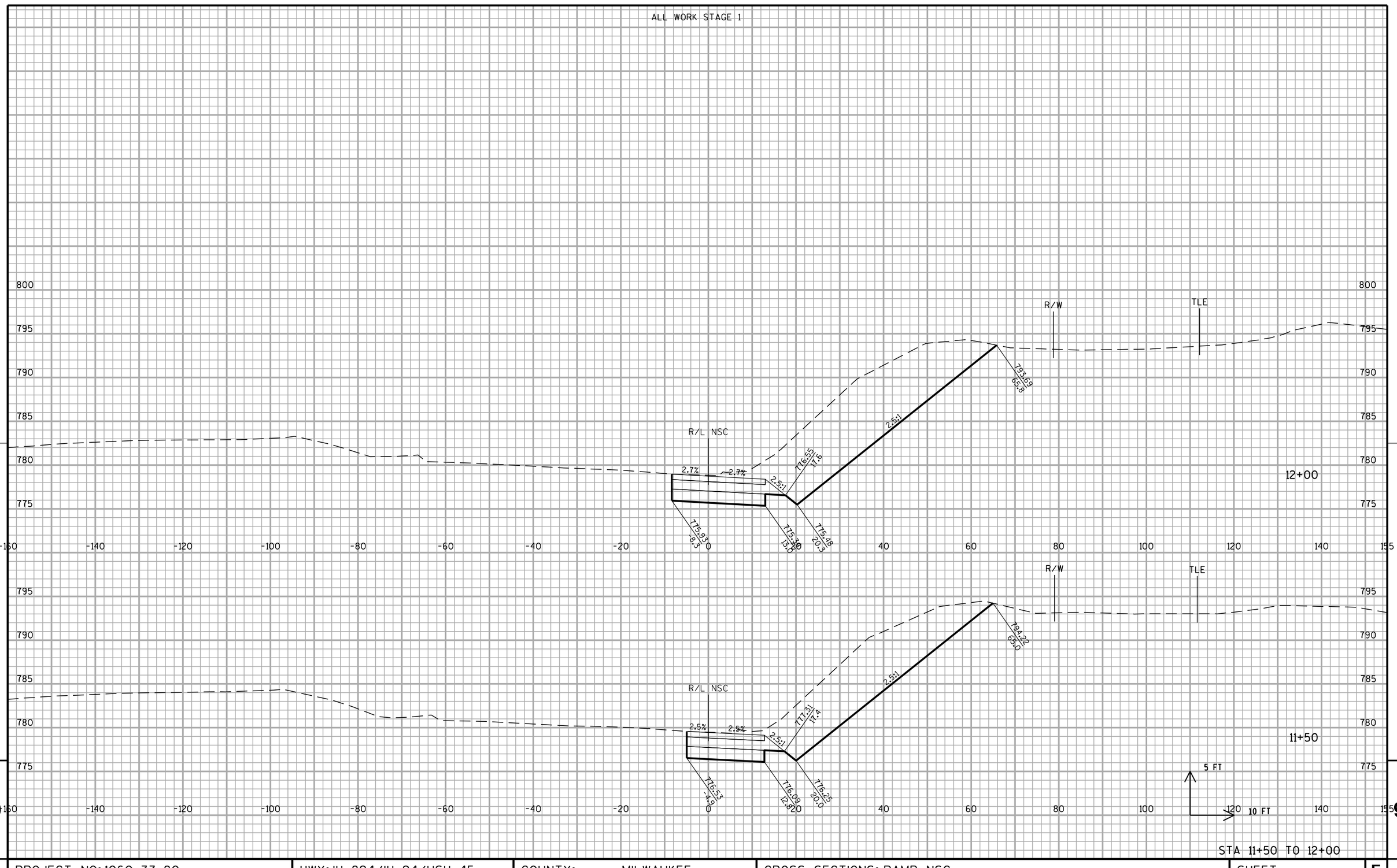


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



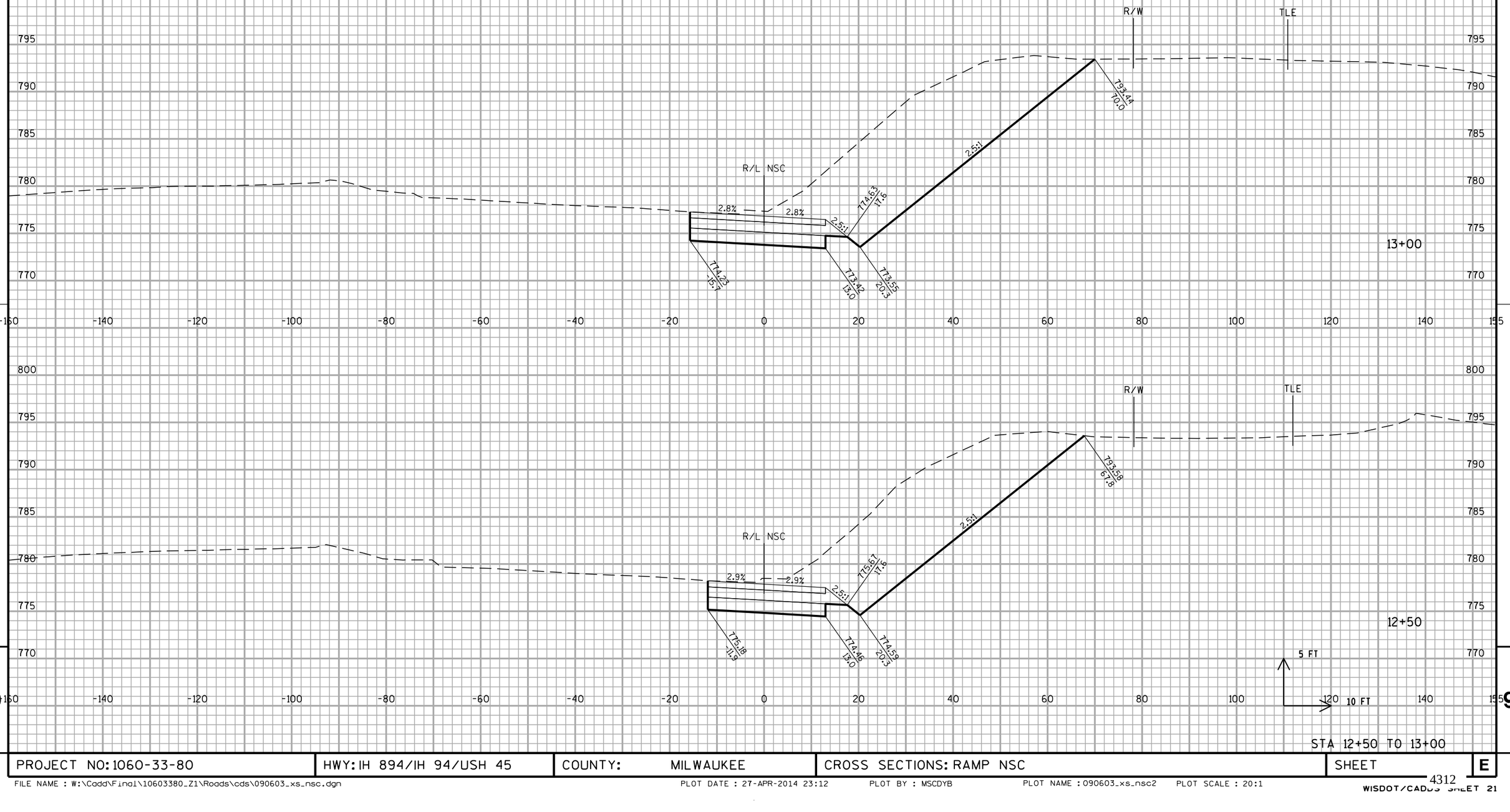
STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

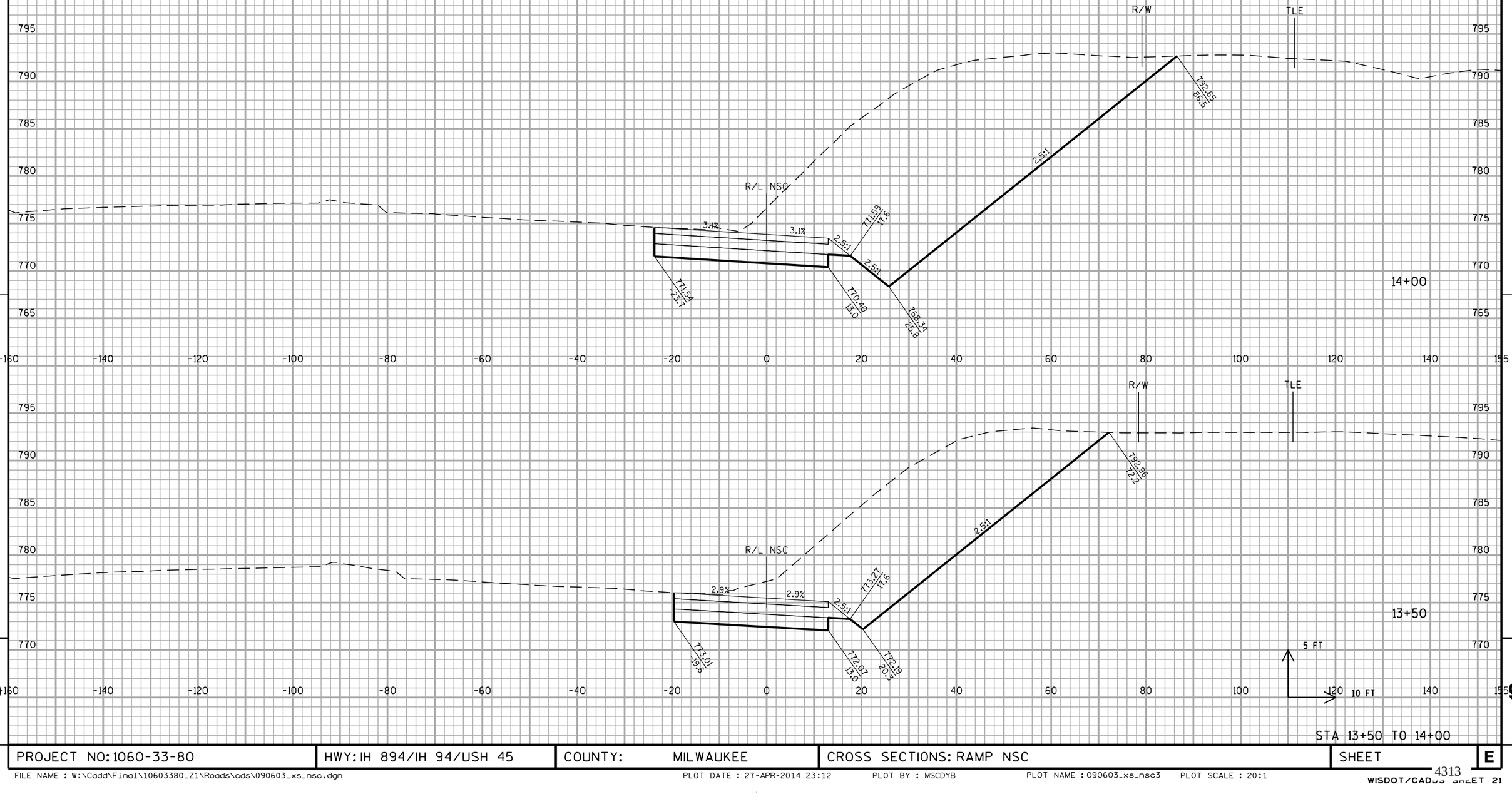


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc2 PLOT SCALE : 20:1

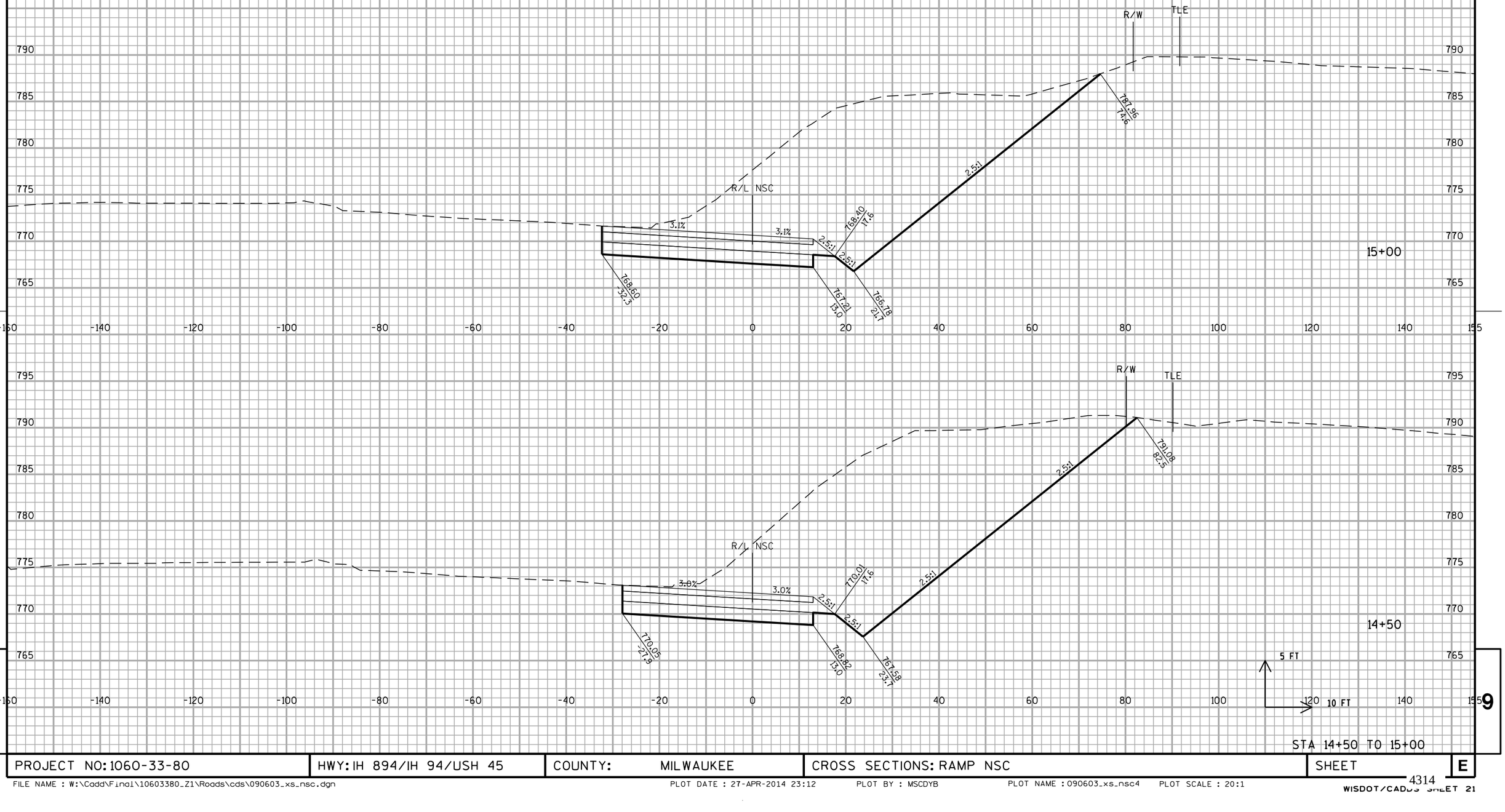
ALL WORK STAGE 1



STA 13+50 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

ALL WORK STAGE 1



9 9

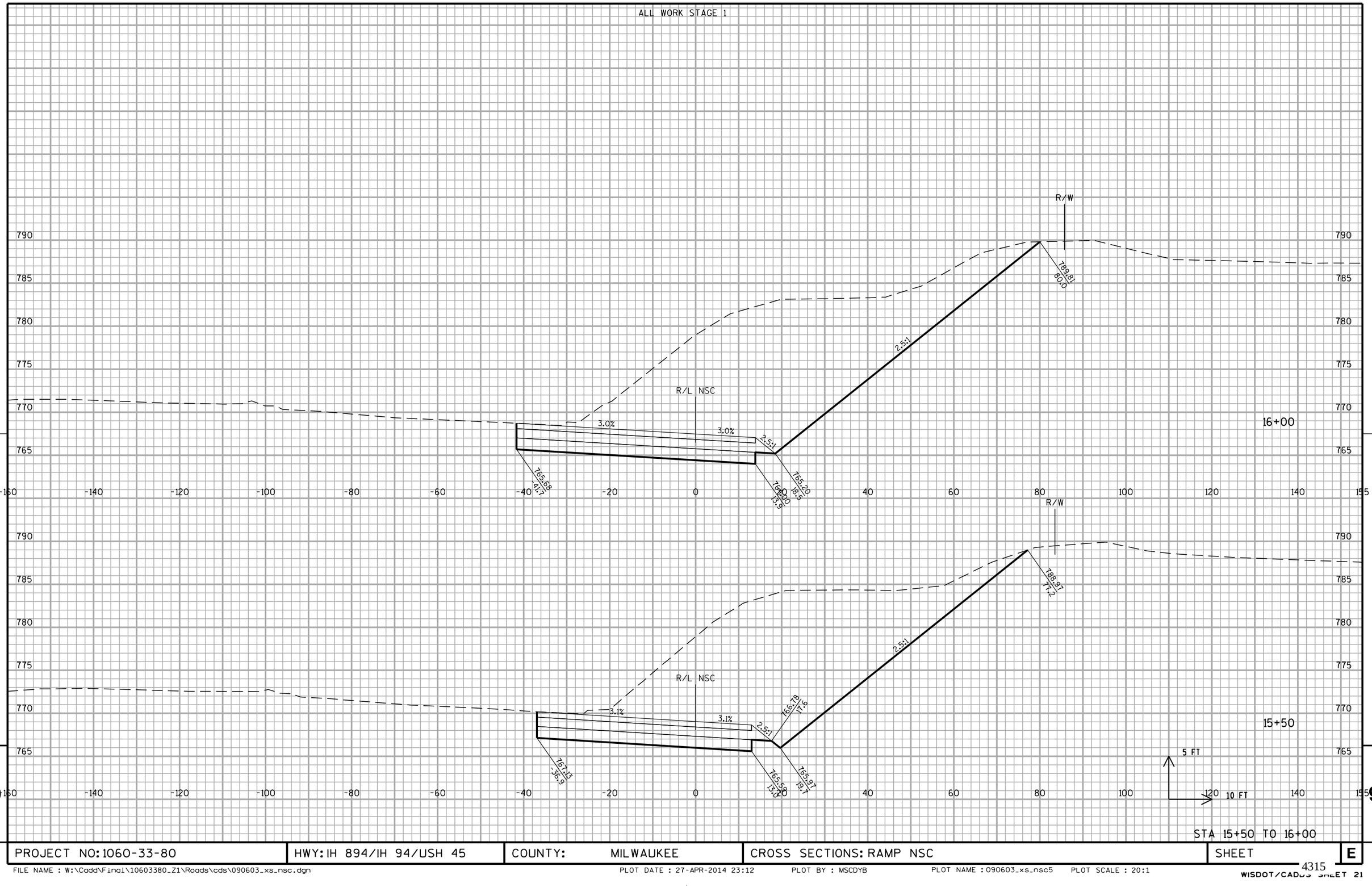
STA 14+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

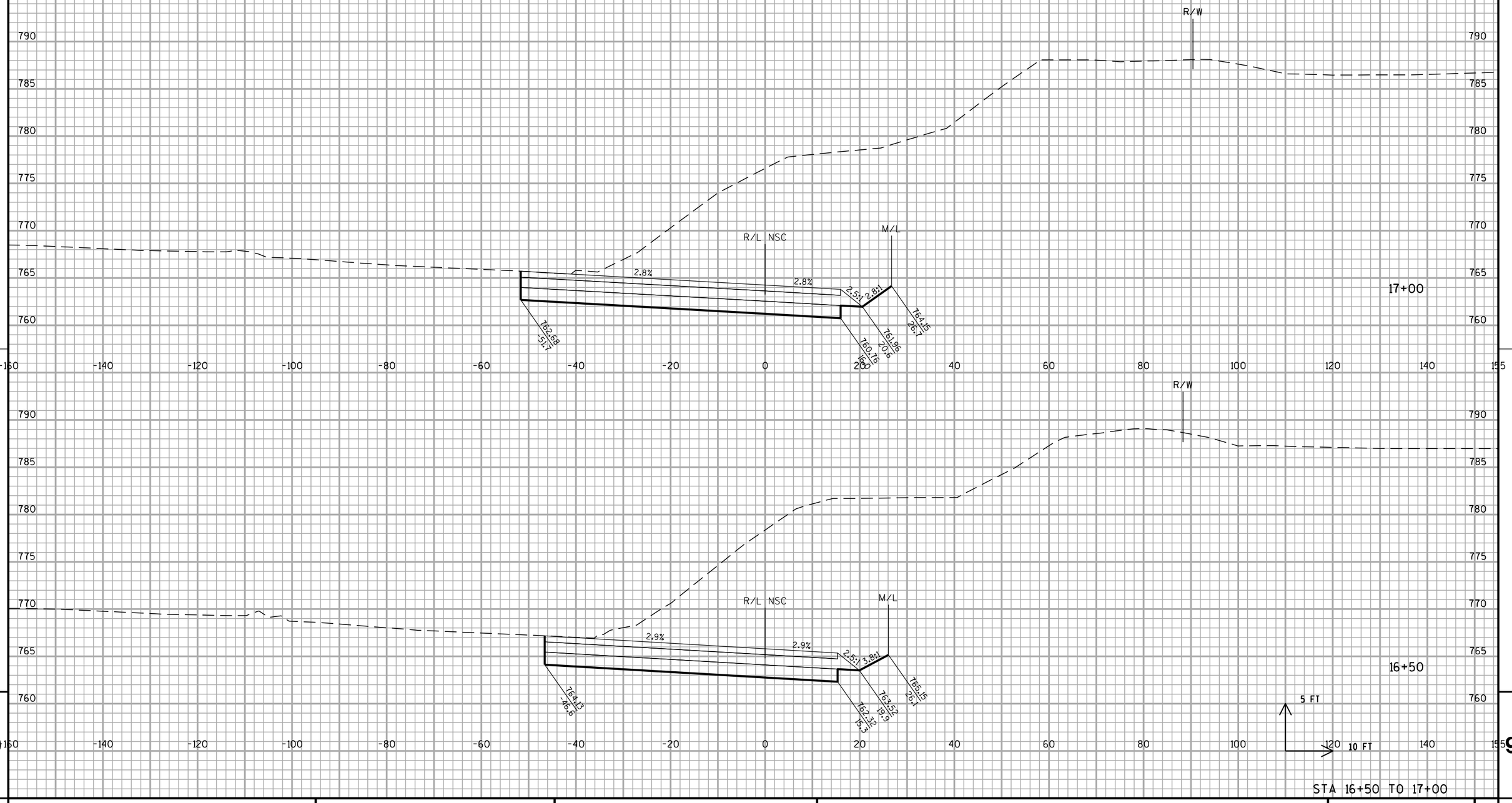


STA 15+50 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc5 PLOT SCALE : 20:1

ALL WORK STAGE 1



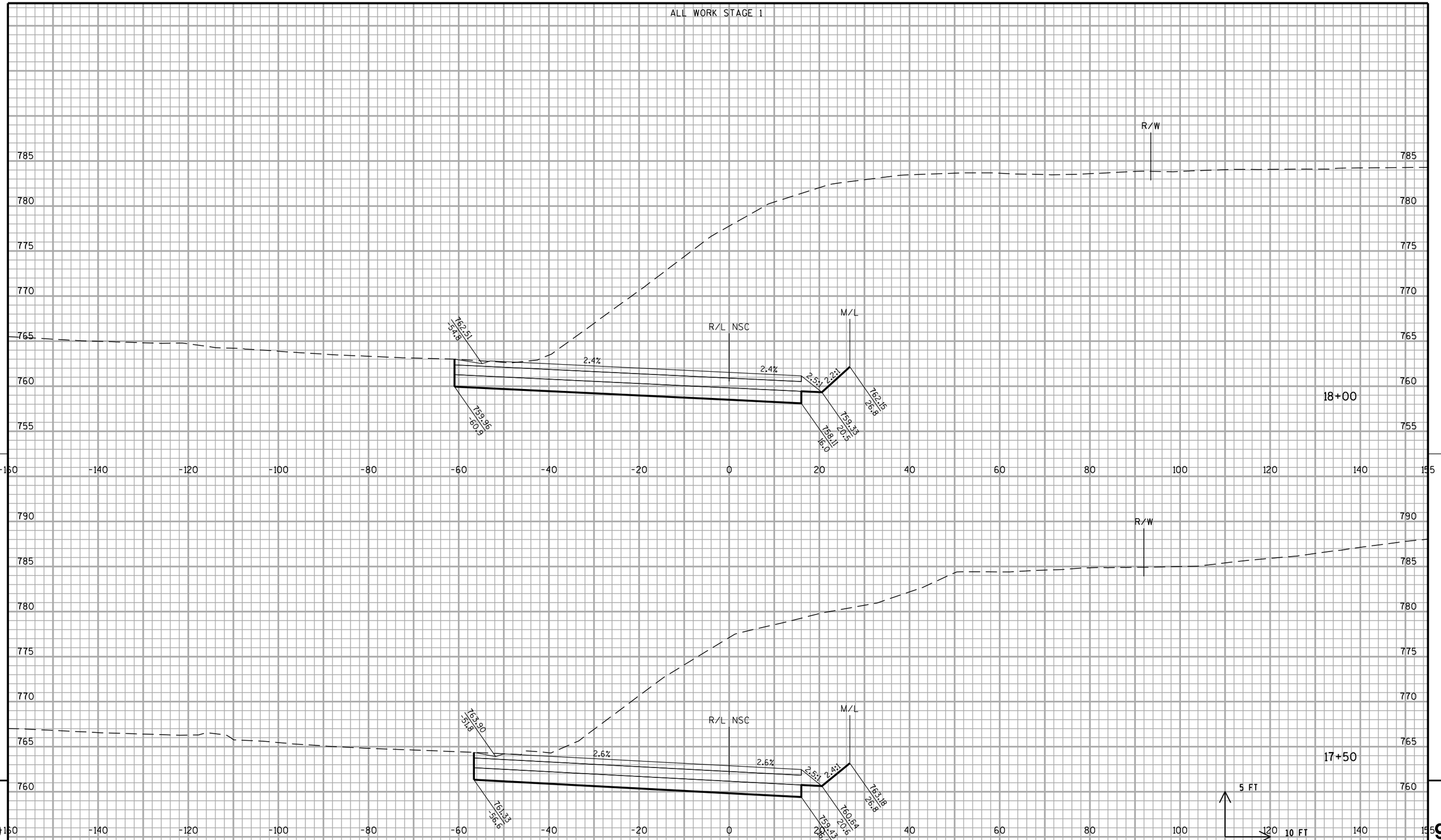
STA 16+50 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



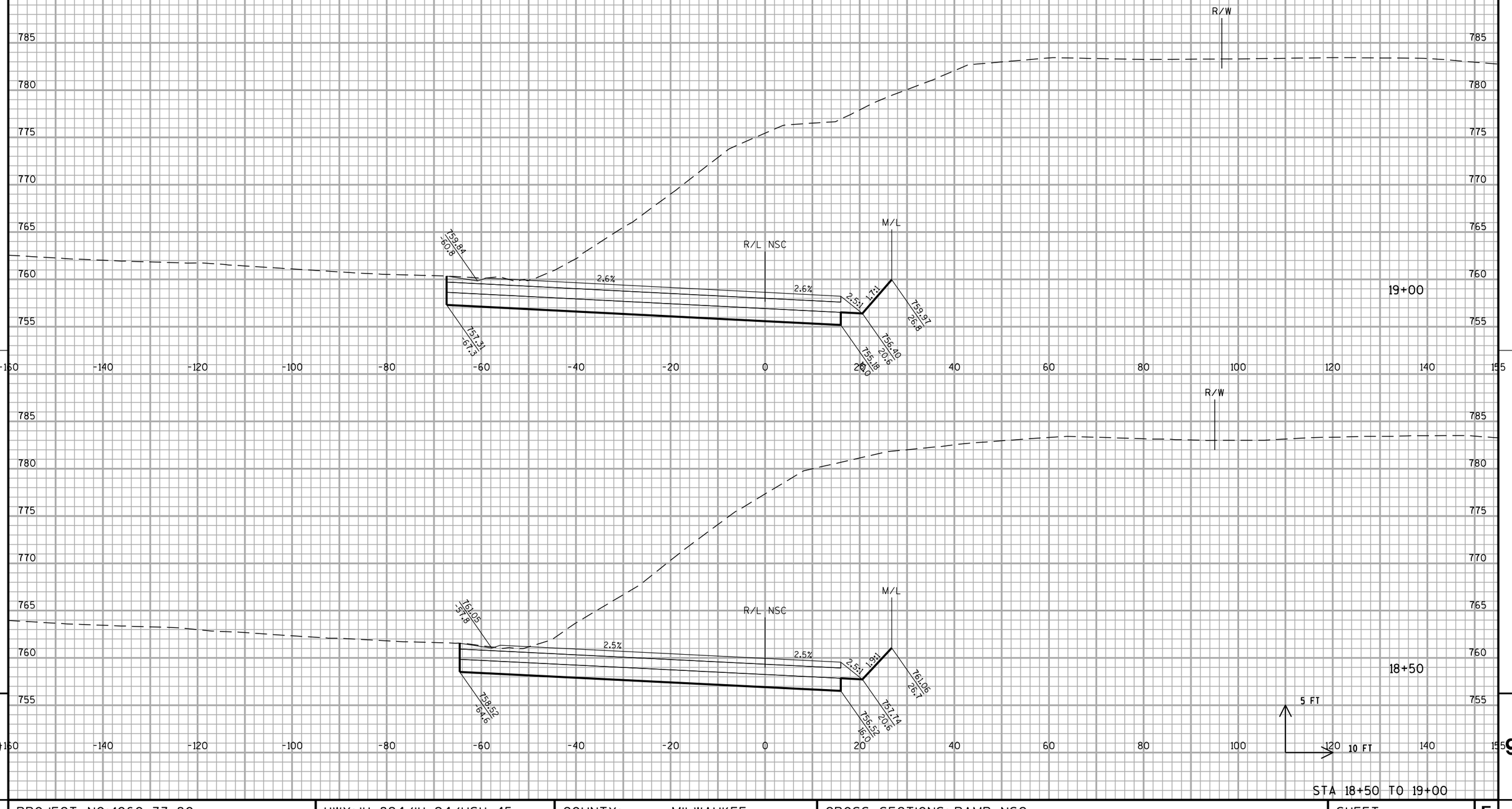
9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



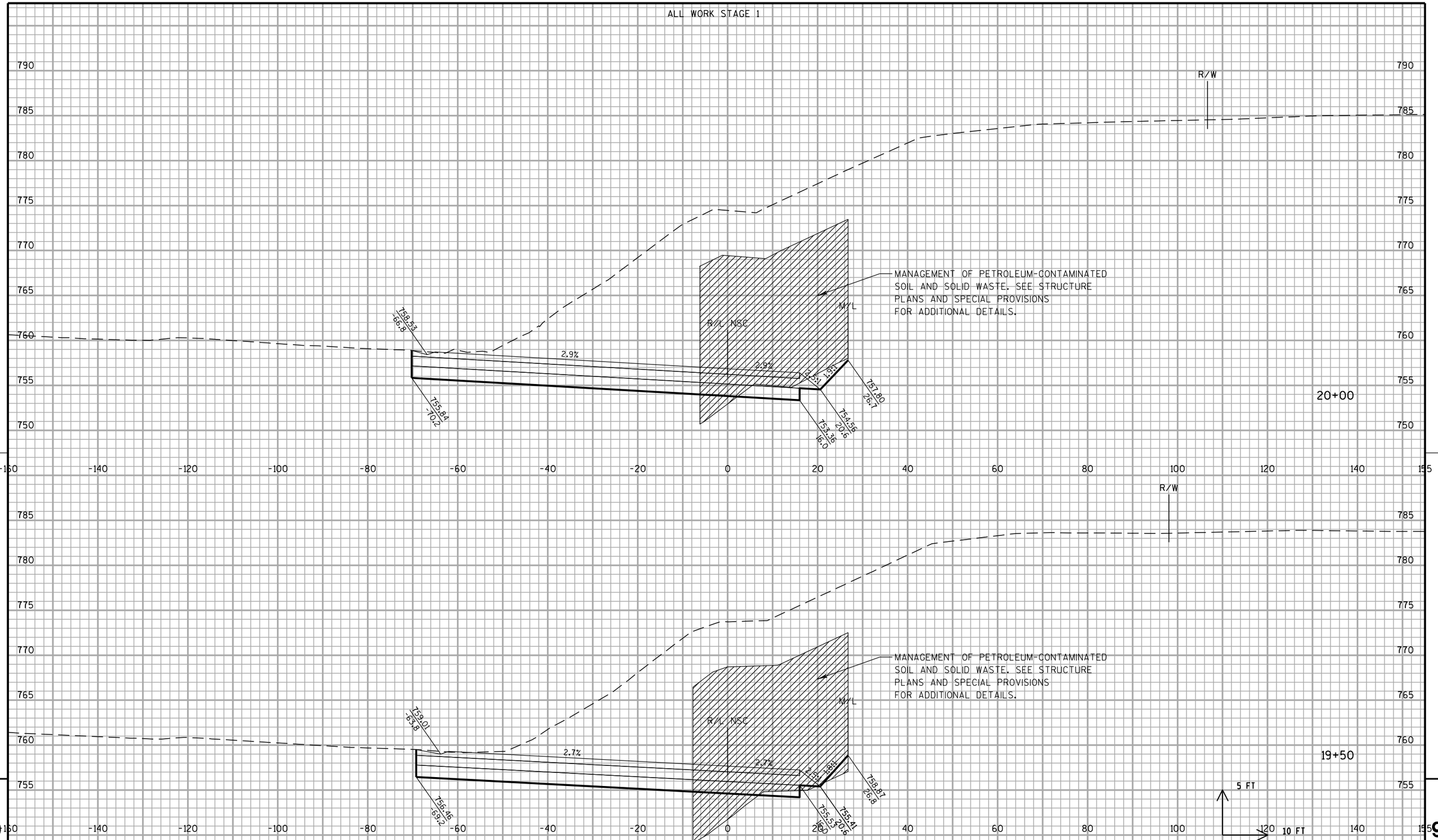
STA 18+50 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

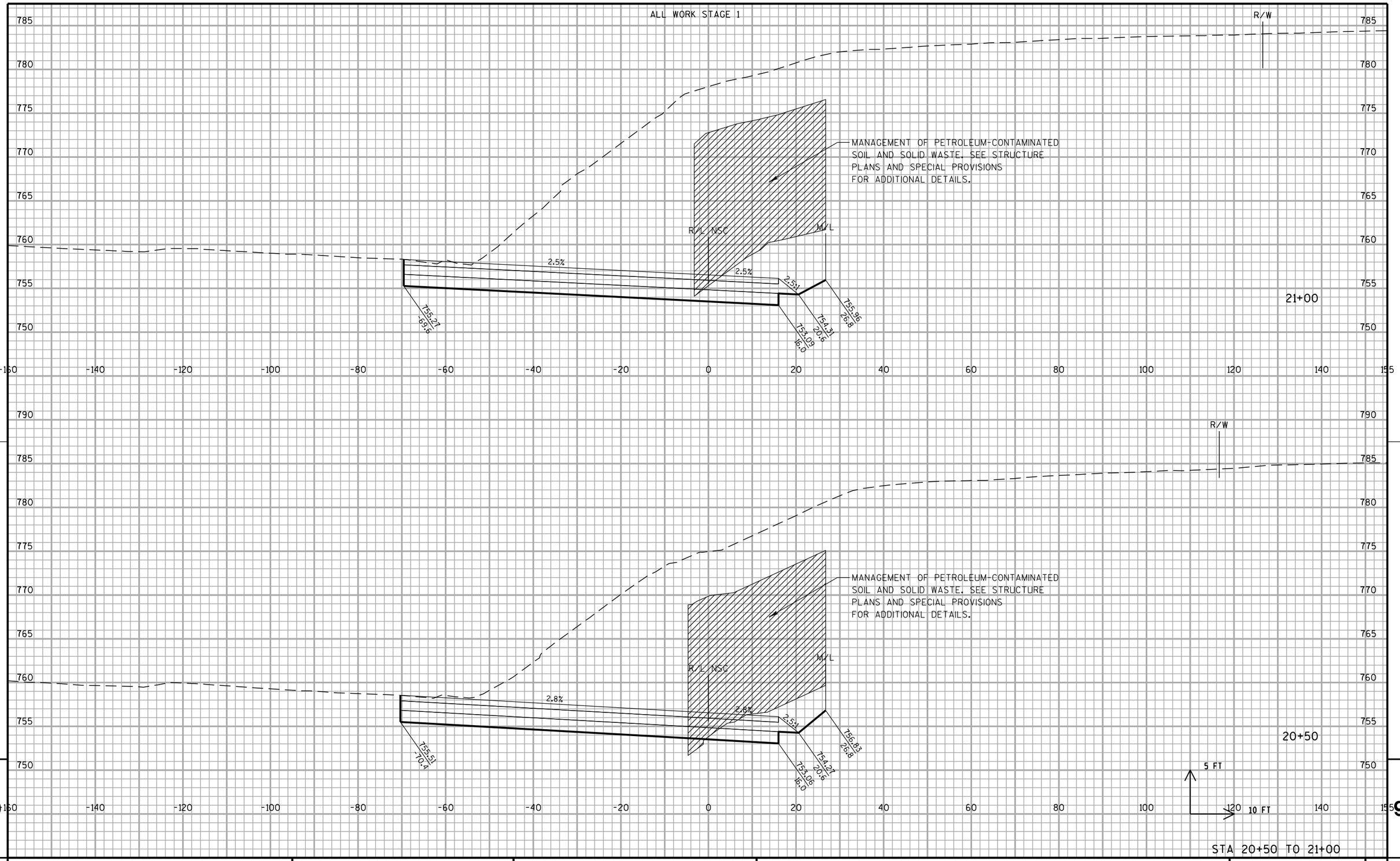
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc9 PLOT SCALE : 20:1

ALL WORK STAGE 1



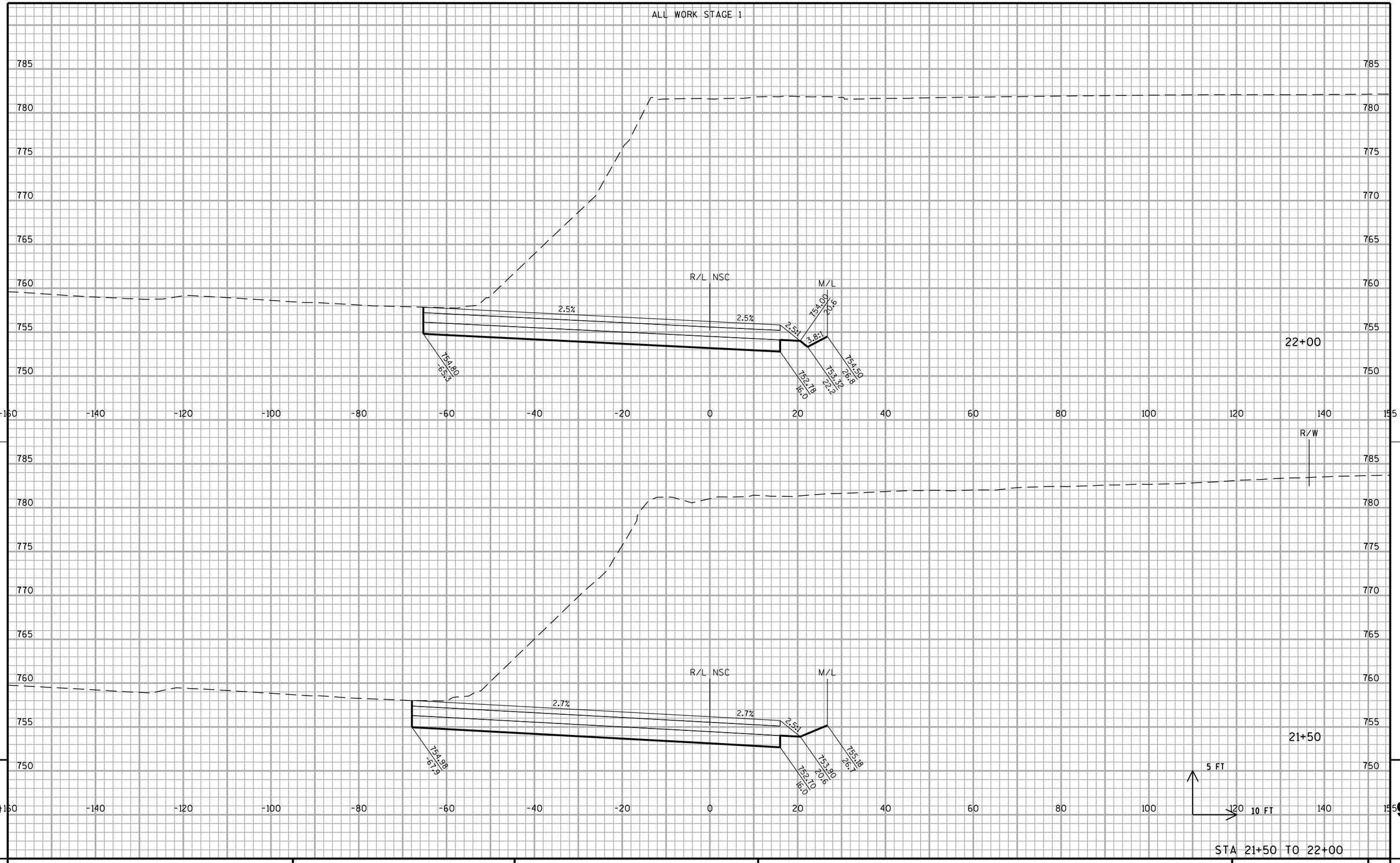
STA 20+50 TO 21+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



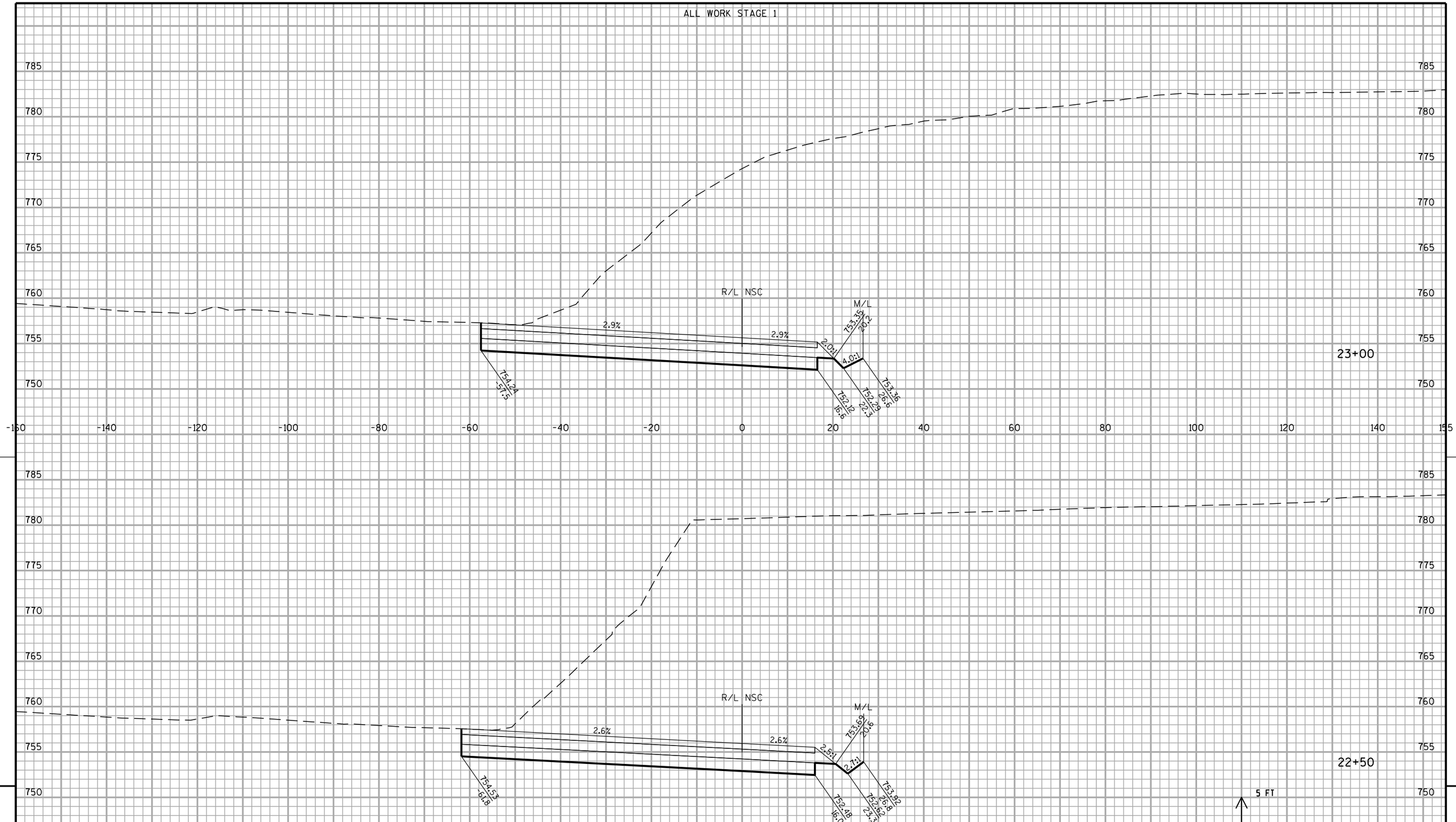
STA 21+50 TO 22+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



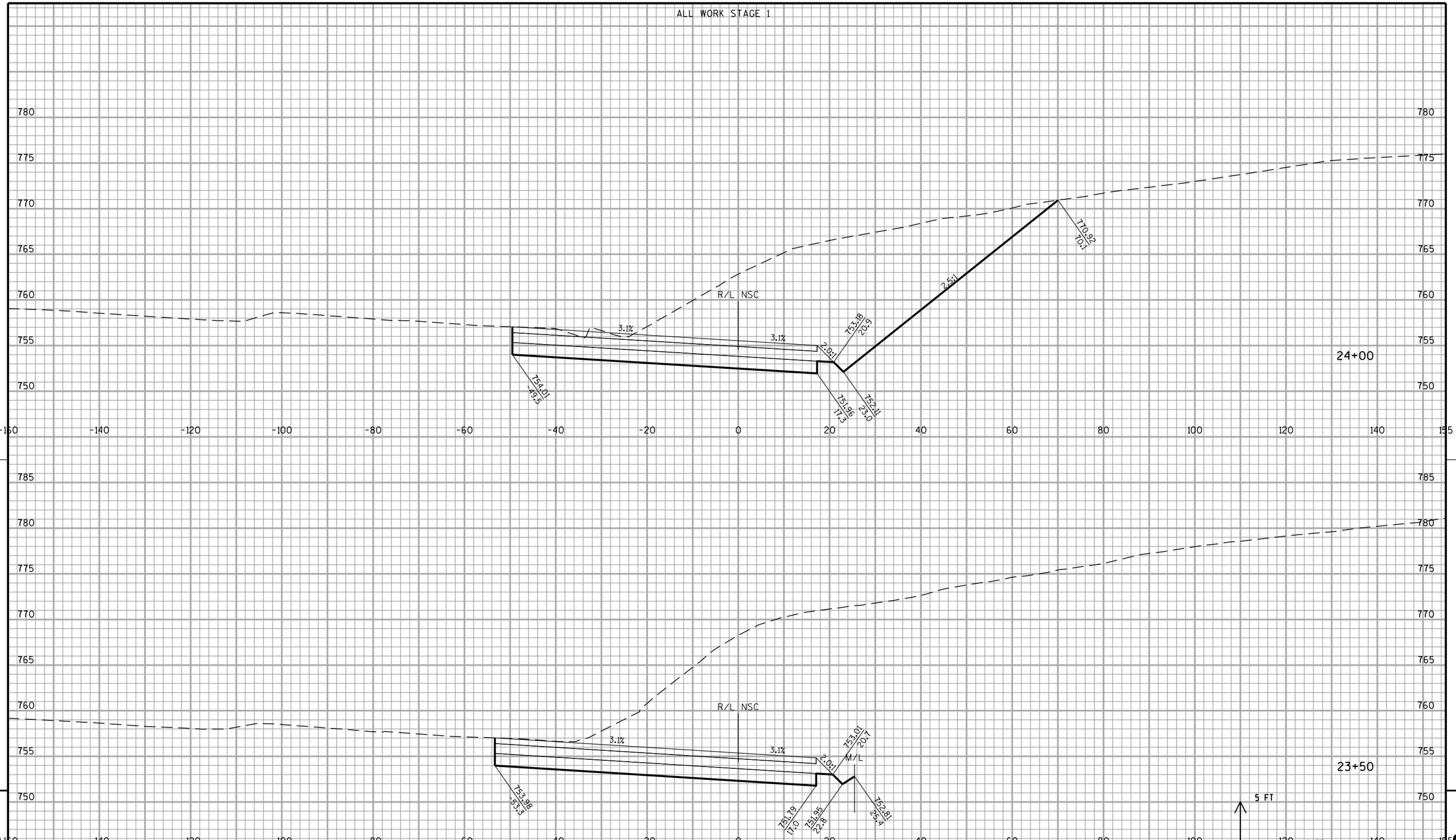
STA 22+50 TO 23+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

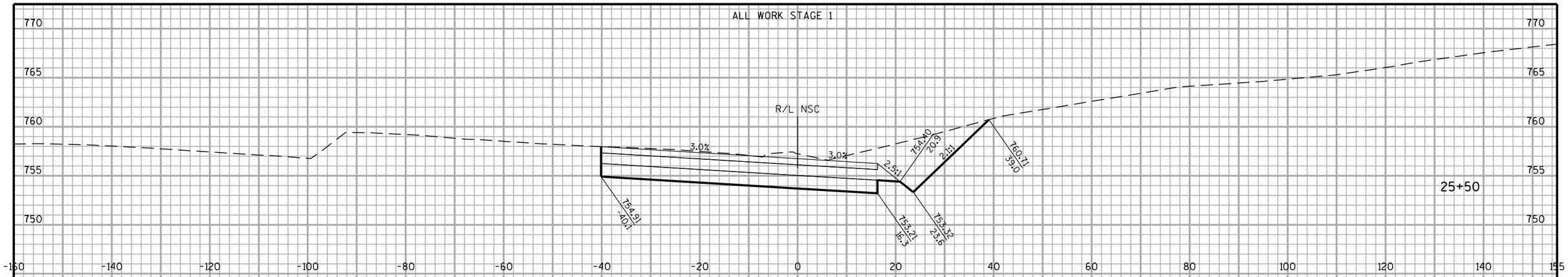


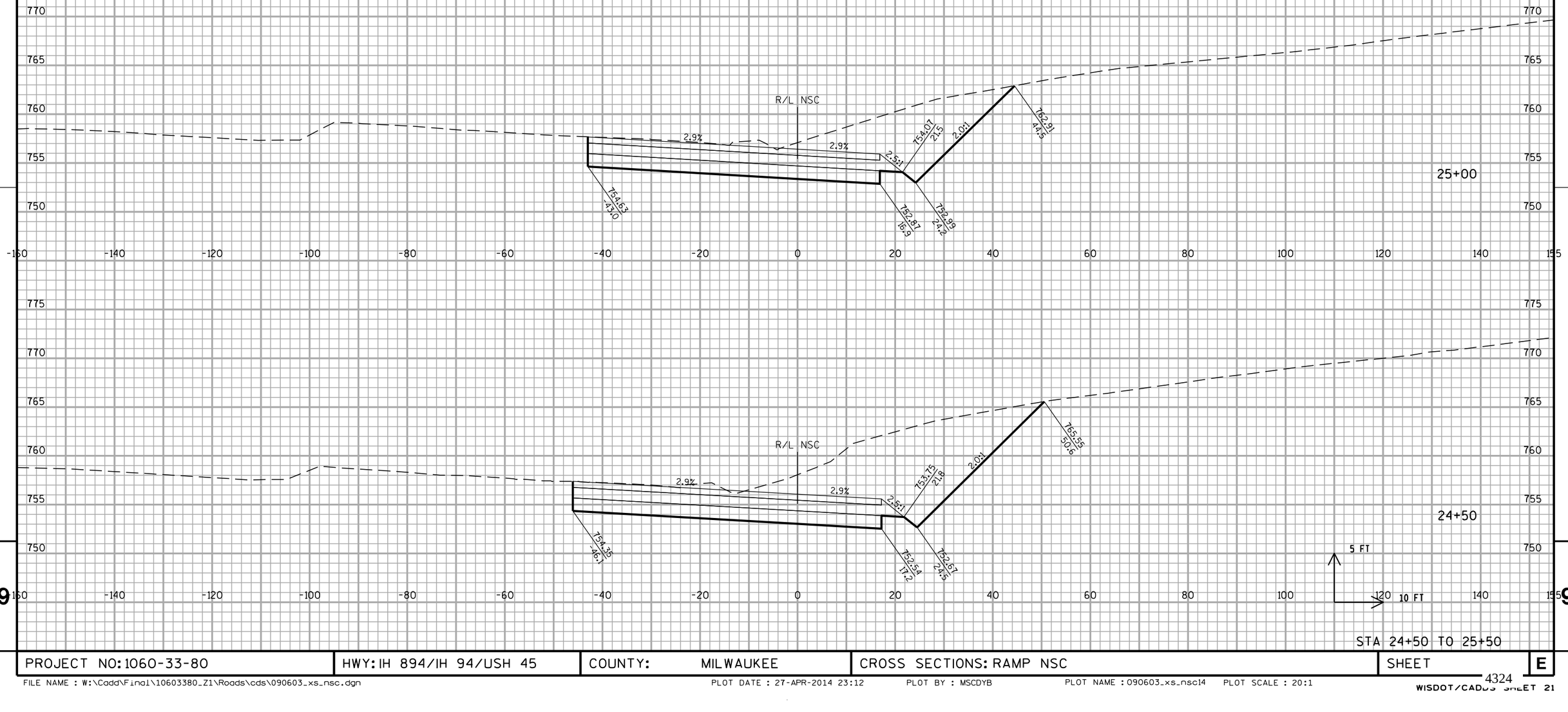
STA 23+50 TO 24+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc13 PLOT SCALE : 20:1

ALL WORK STAGE 1

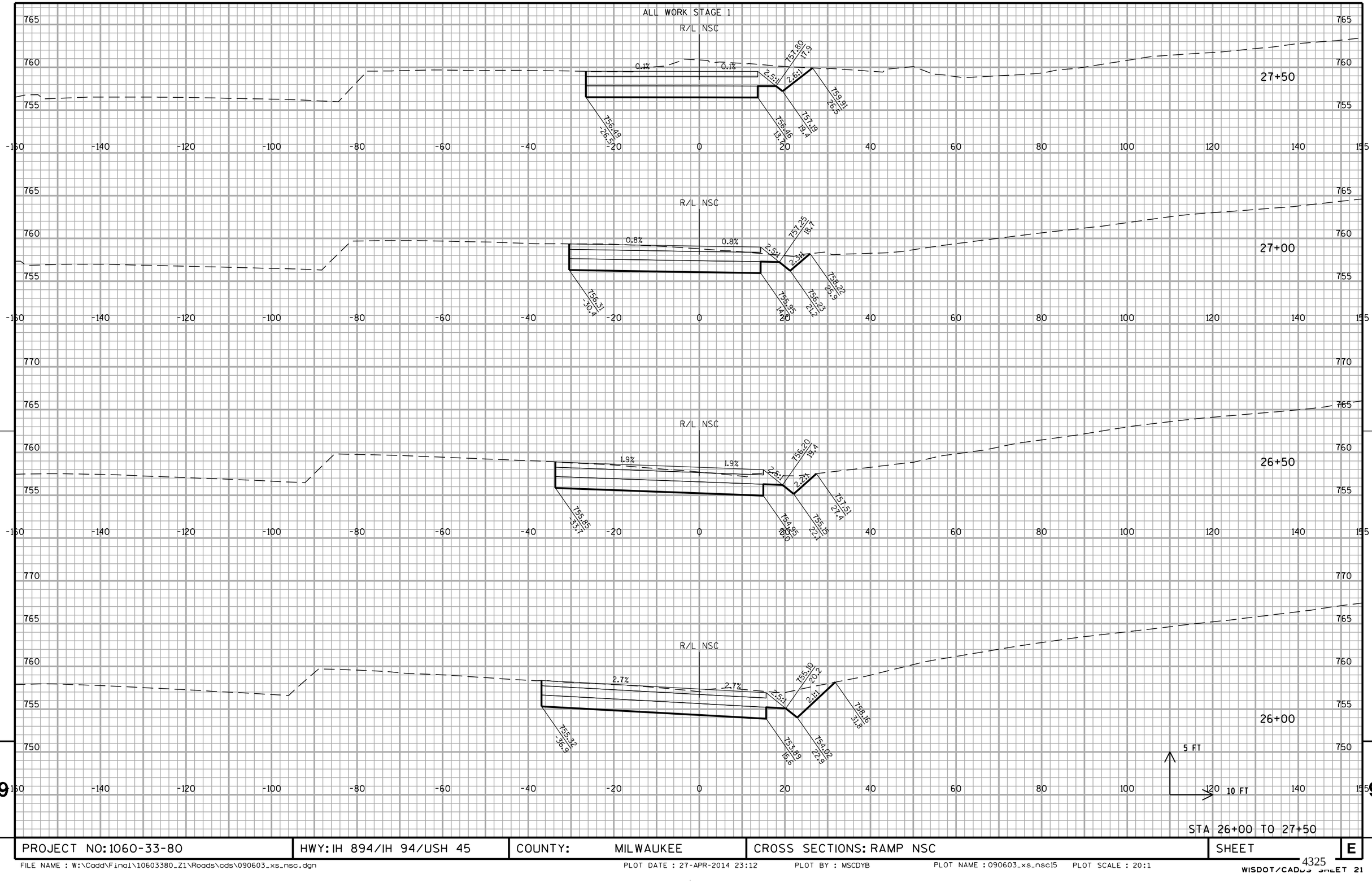




STA 24+50 TO 25+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

ALL WORK STAGE 1



STA 26+00 TO 27+50

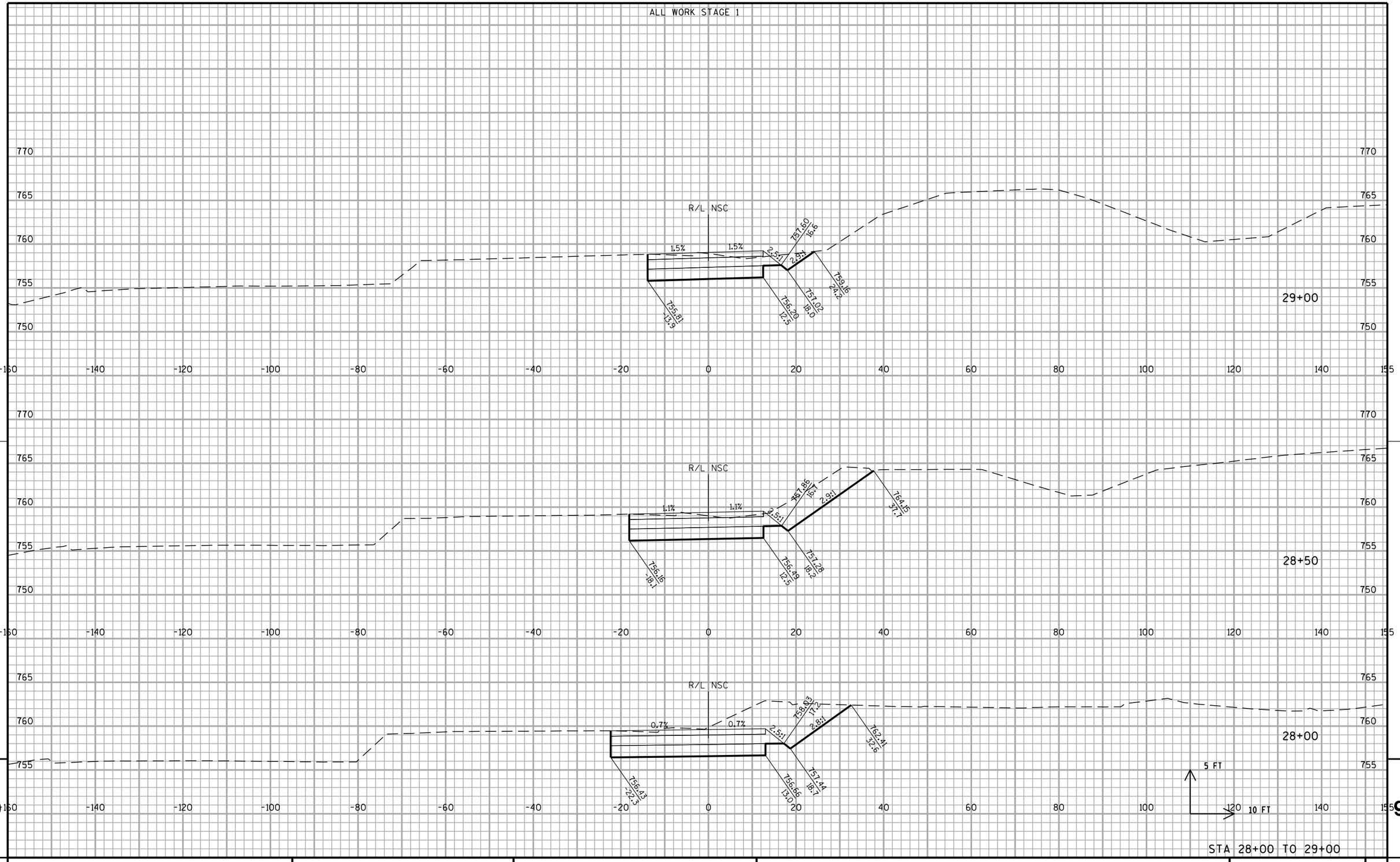
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc15 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



STA 28+00 TO 29+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

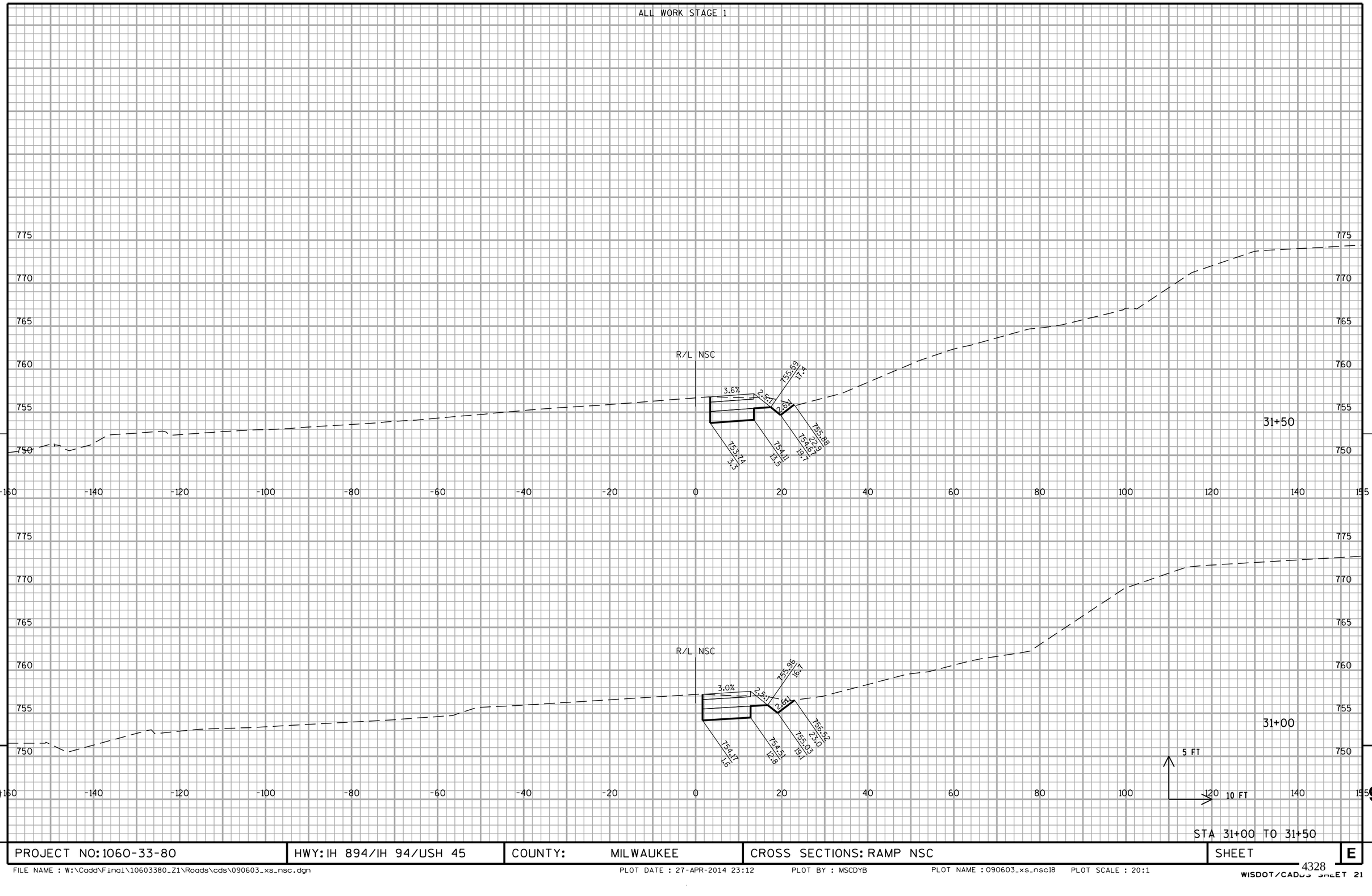
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc16 PLOT SCALE : 20:1

ALL WORK STAGE 1

STA 29+50 TO 30+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

ALL WORK STAGE 1



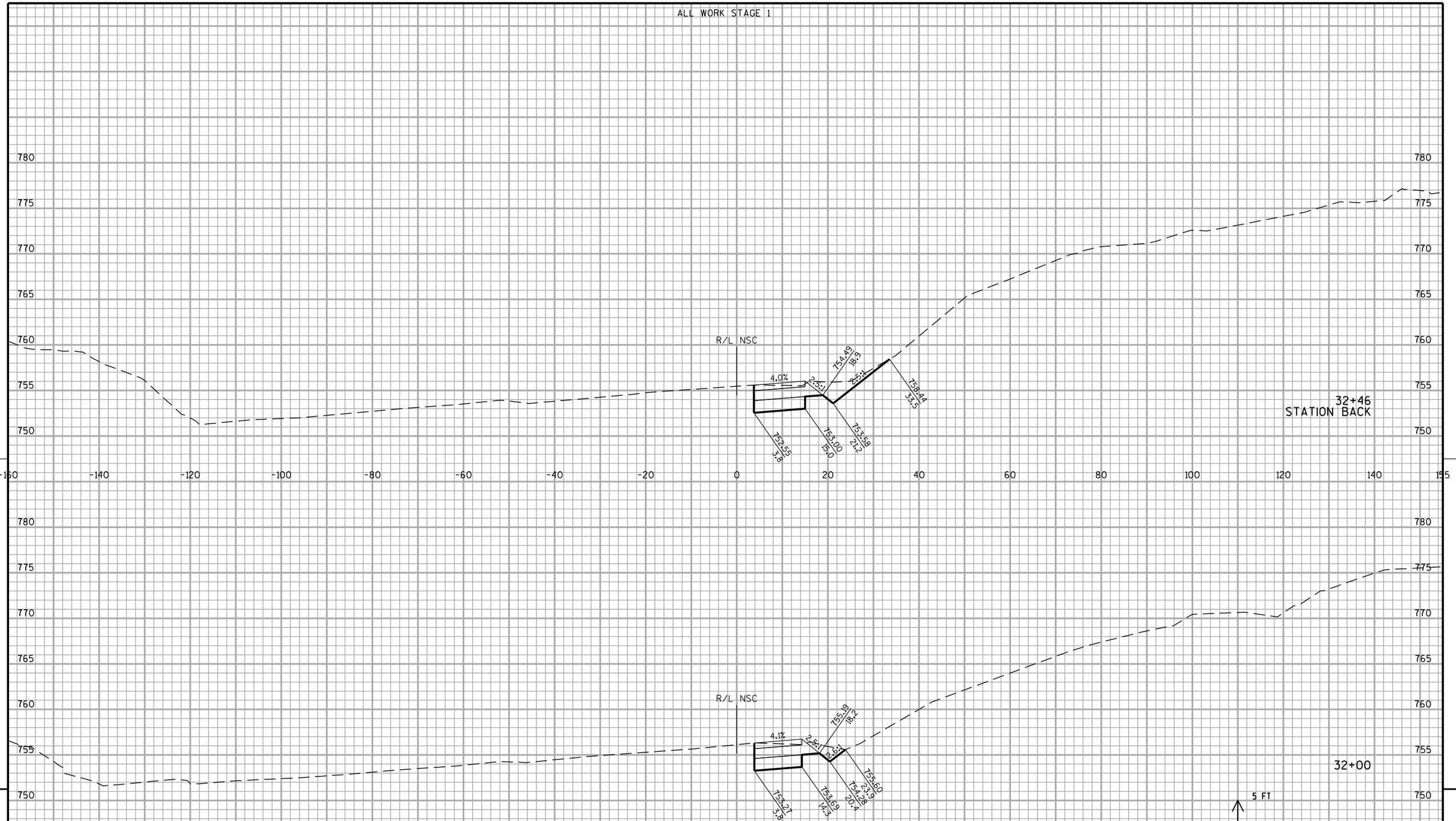
9 9

STA 31+00 TO 31+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc18 PLOT SCALE : 20:1

ALL WORK STAGE 1

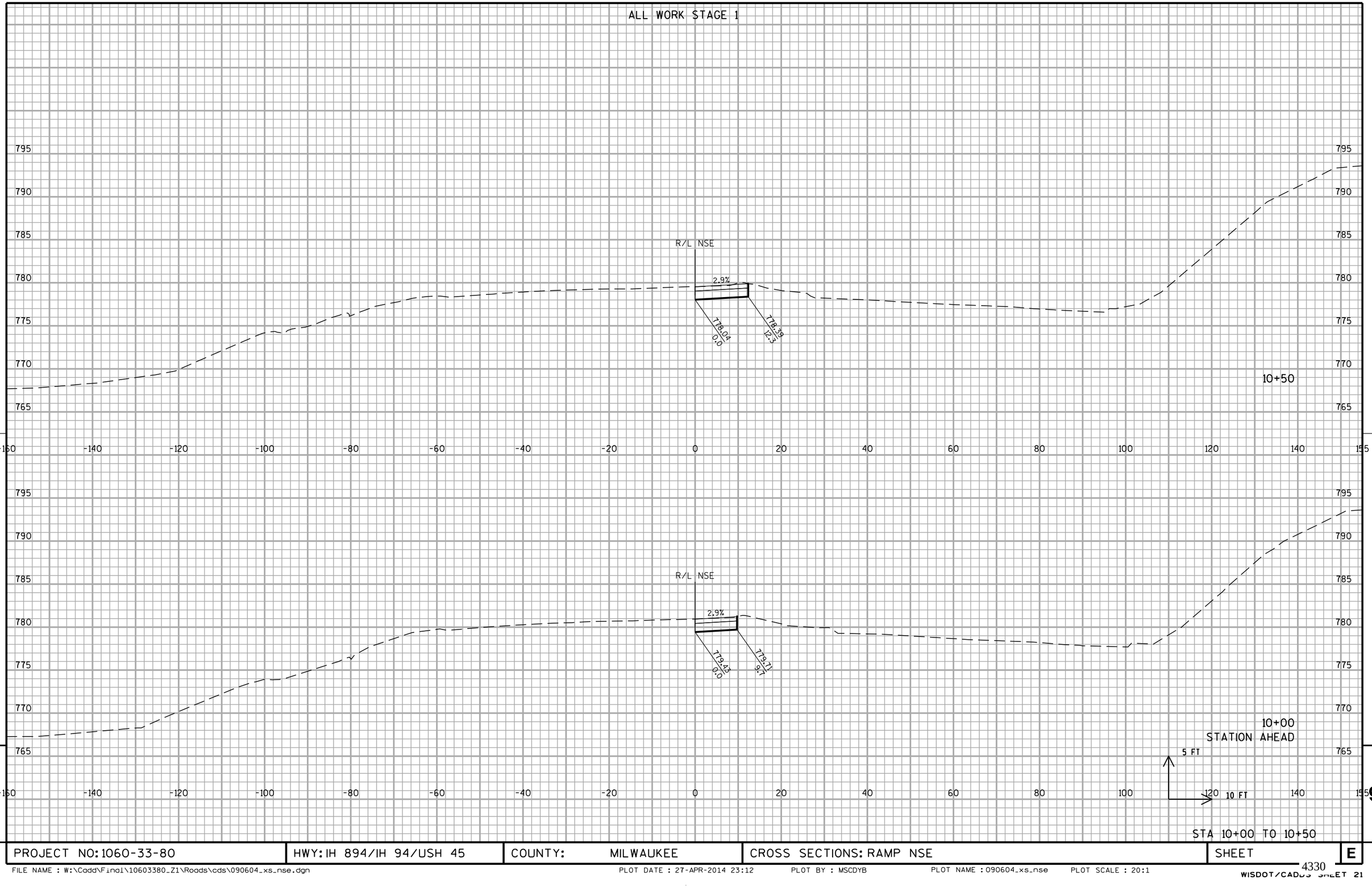


STA 32+00 TO 32+46

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090603_xs_nsc.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090603_xs_nsc19 PLOT SCALE : 20:1

ALL WORK STAGE 1

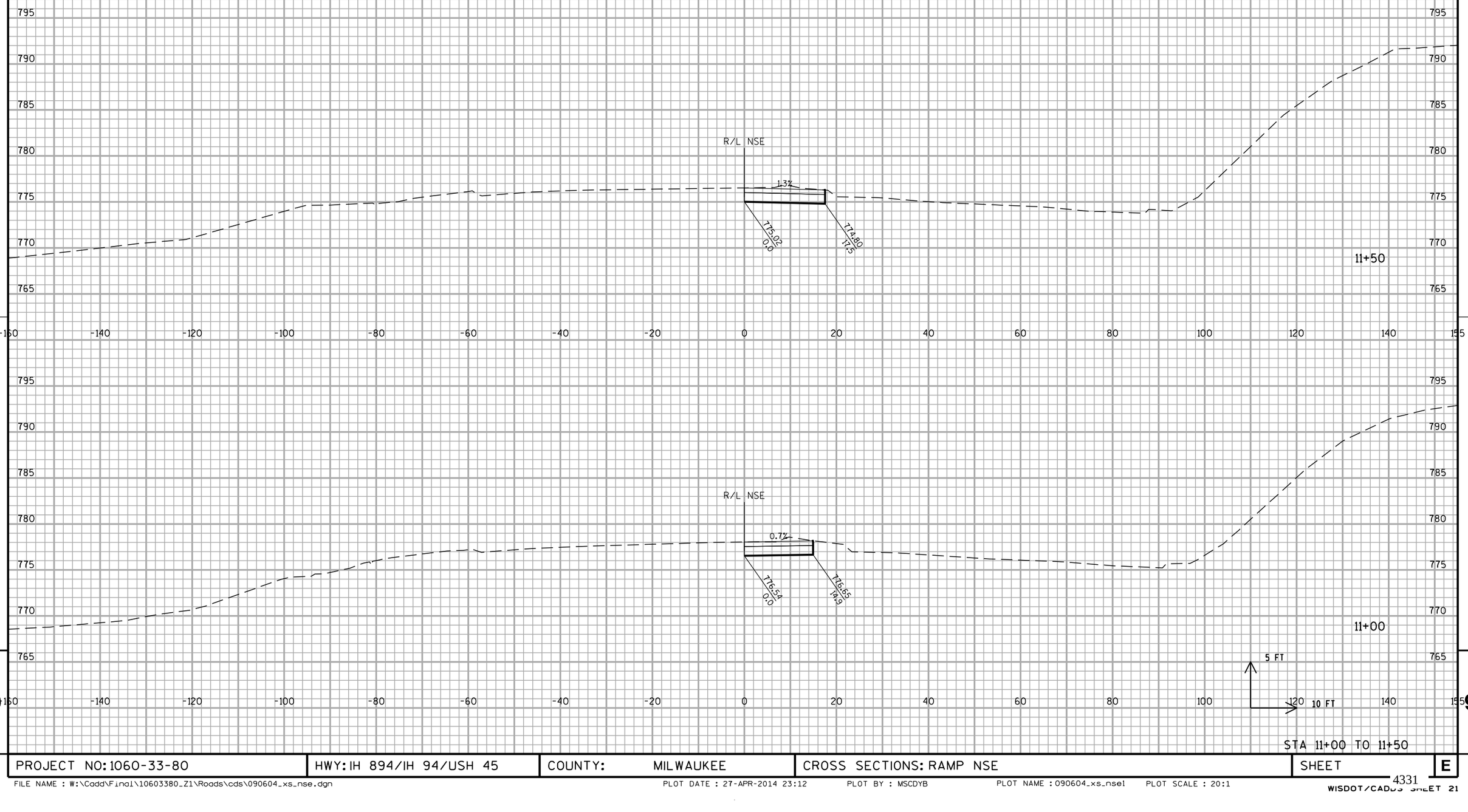


STA 10+00 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse PLOT SCALE : 20:1

ALL WORK STAGE 1



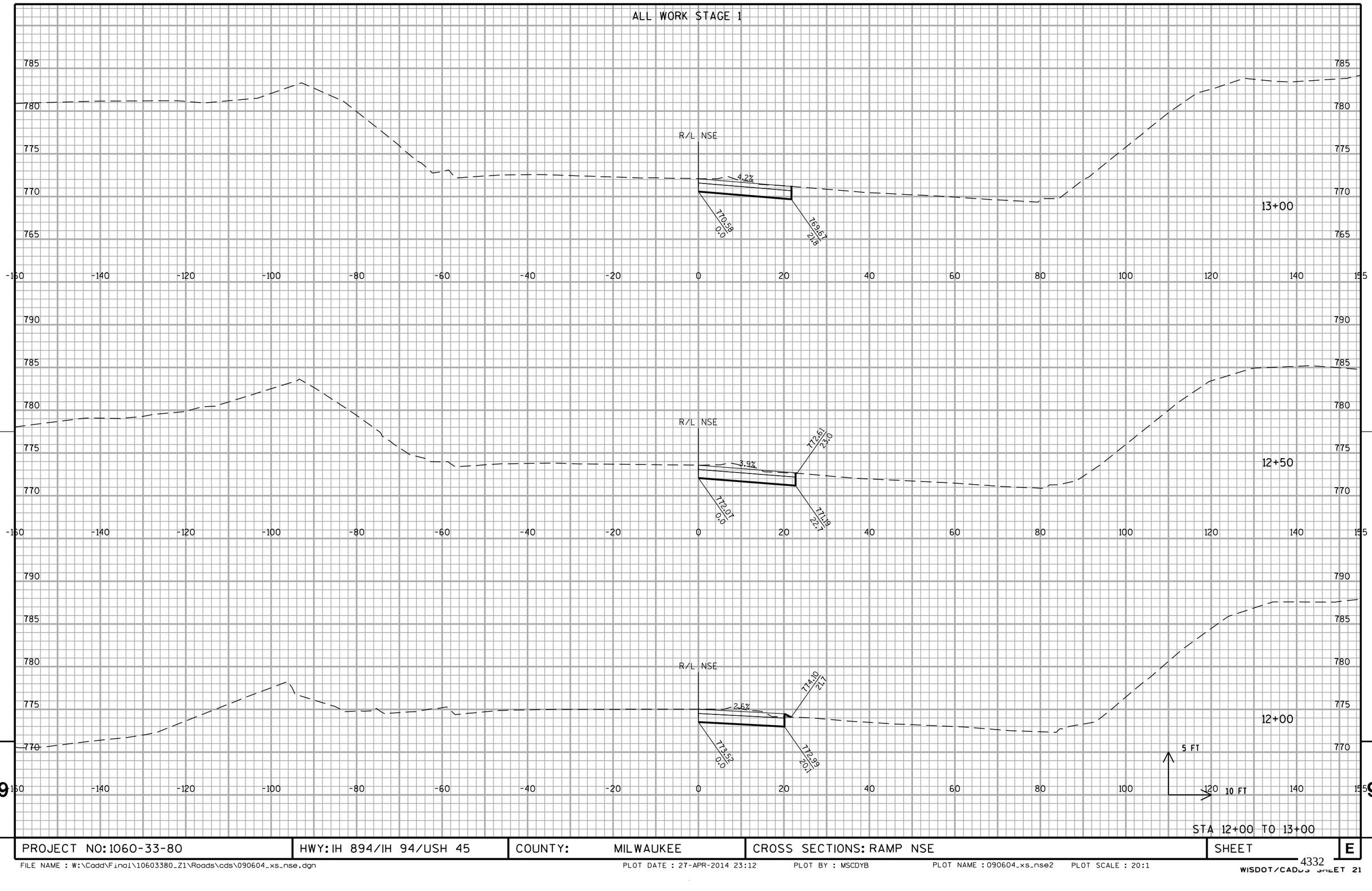
STA 11+00 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



STA 12+00 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse2 PLOT SCALE : 20:1

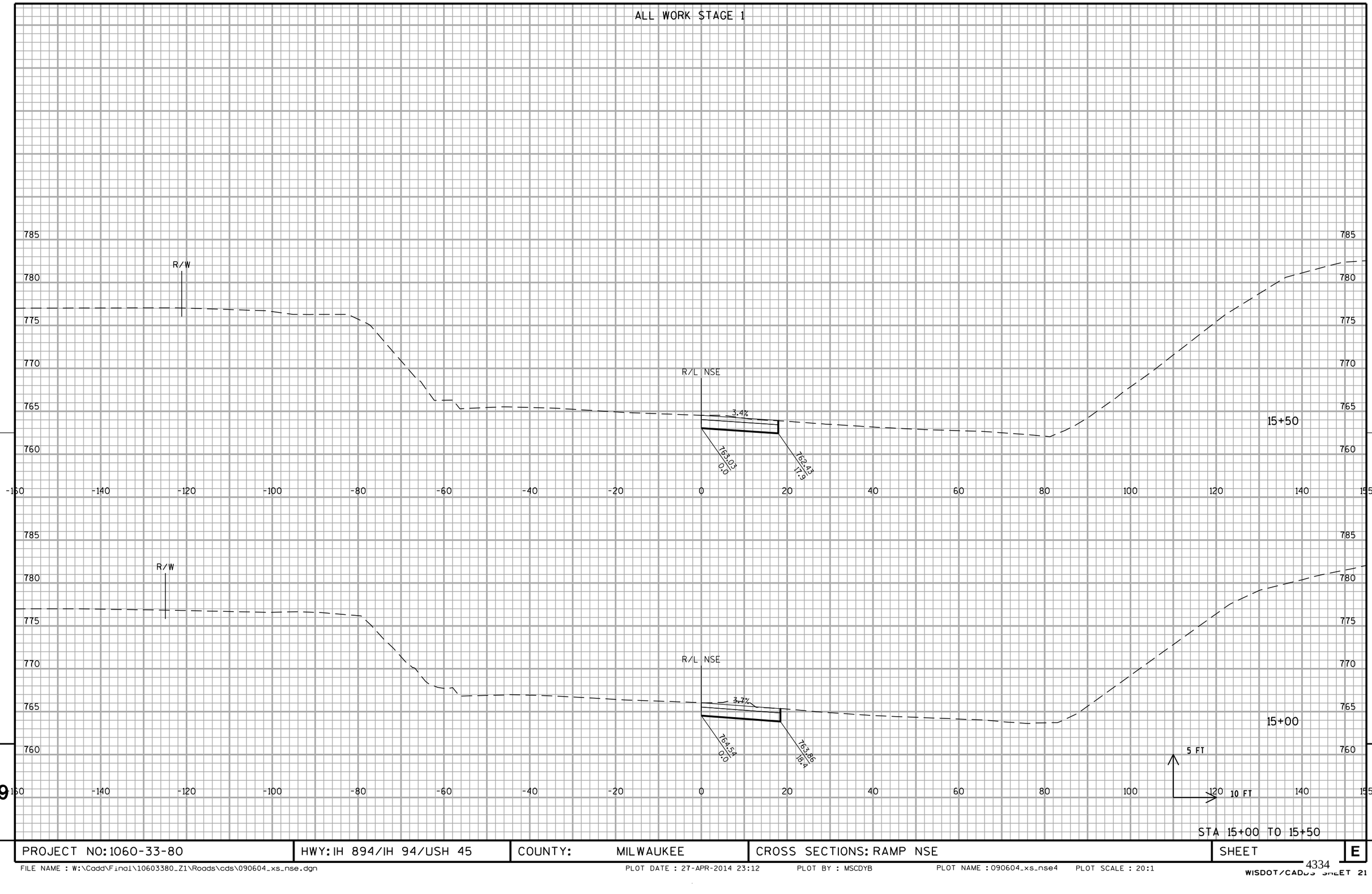
ALL WORK STAGE 1

STA 13+50 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

9 9

ALL WORK STAGE 1

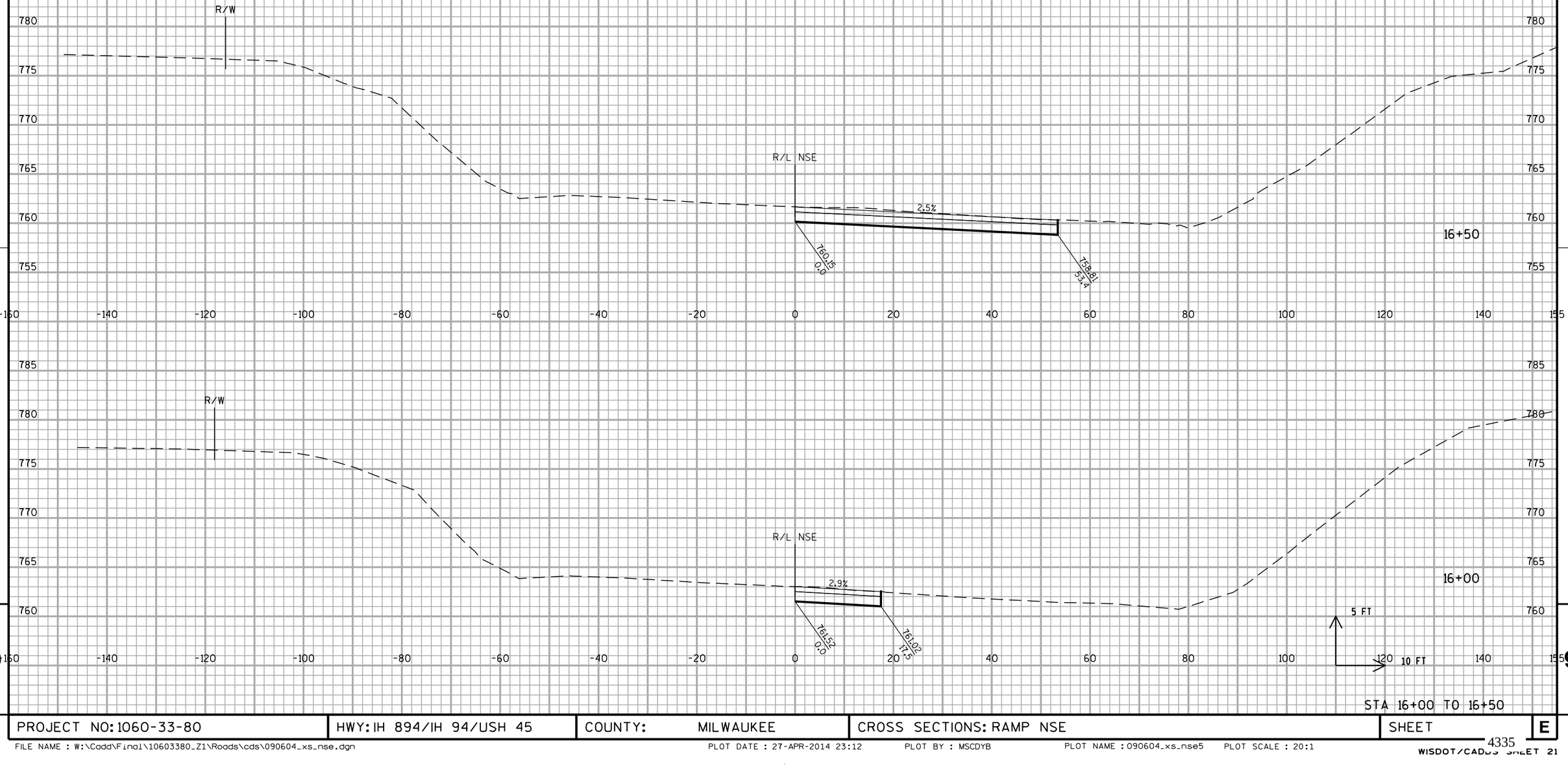


STA 15+00 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse4 PLOT SCALE : 20:1

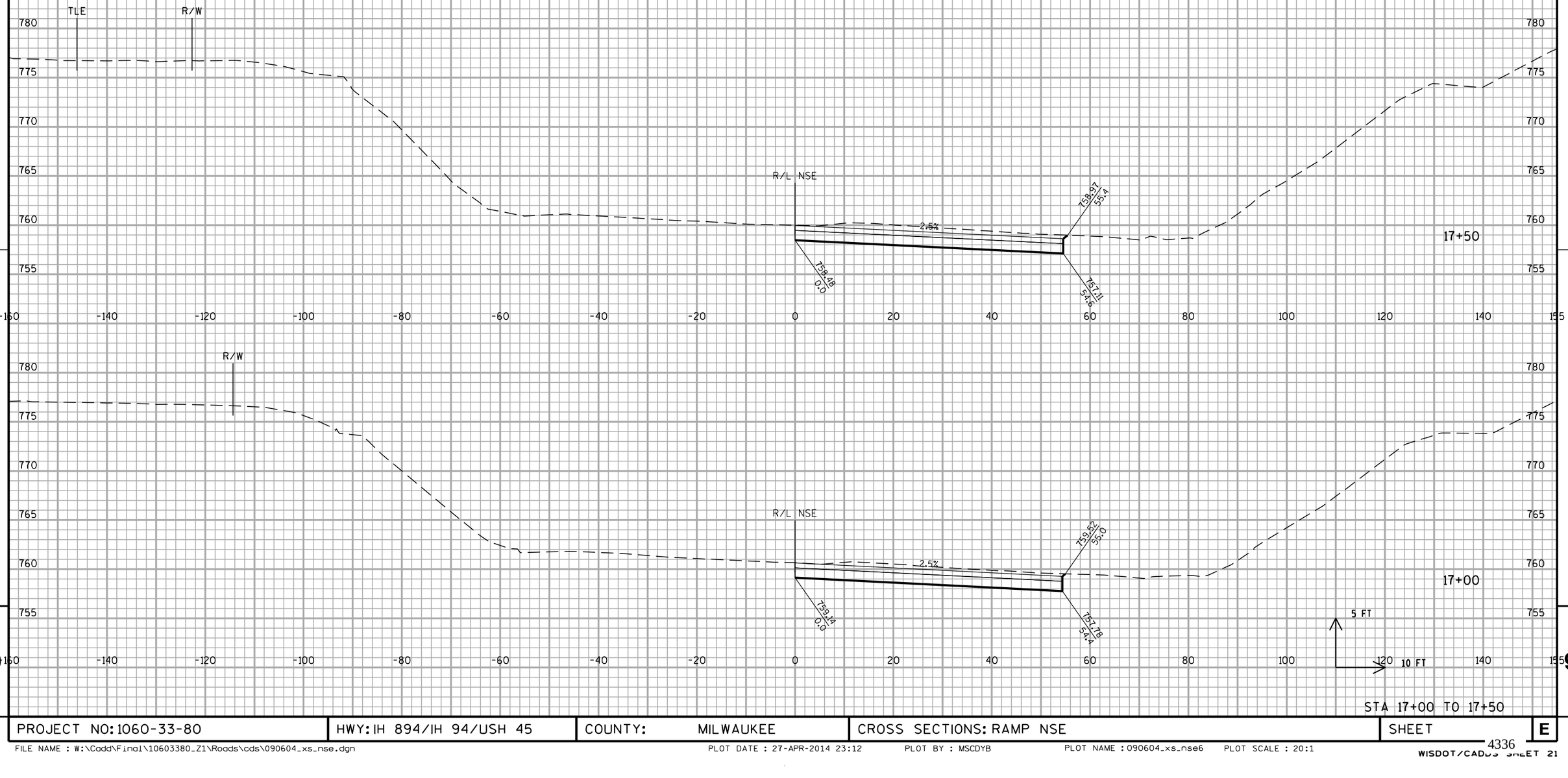
ALL WORK STAGE 1



STA 16+00 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

ALL WORK STAGE 1



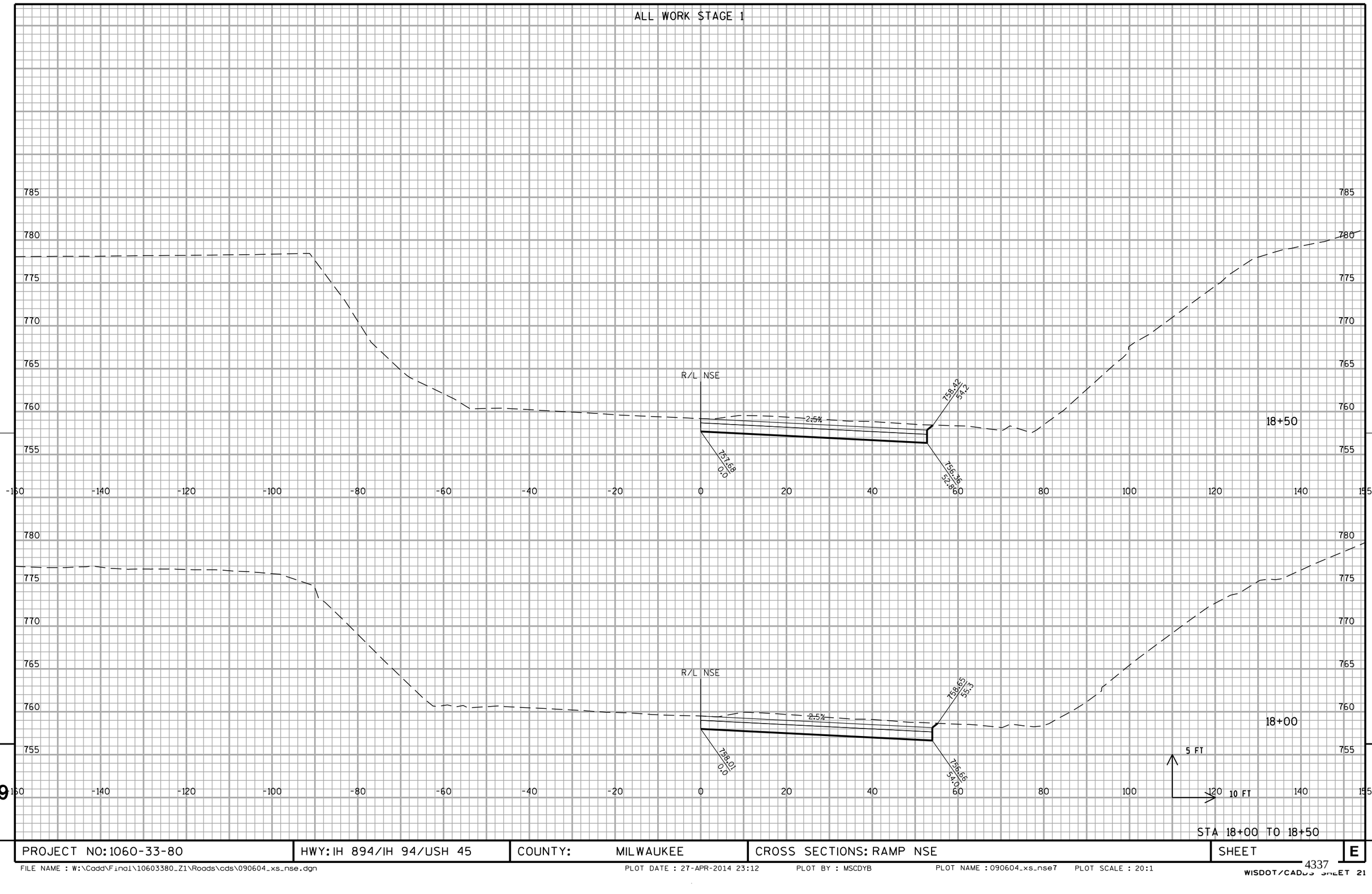
STA 17+00 TO 17+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



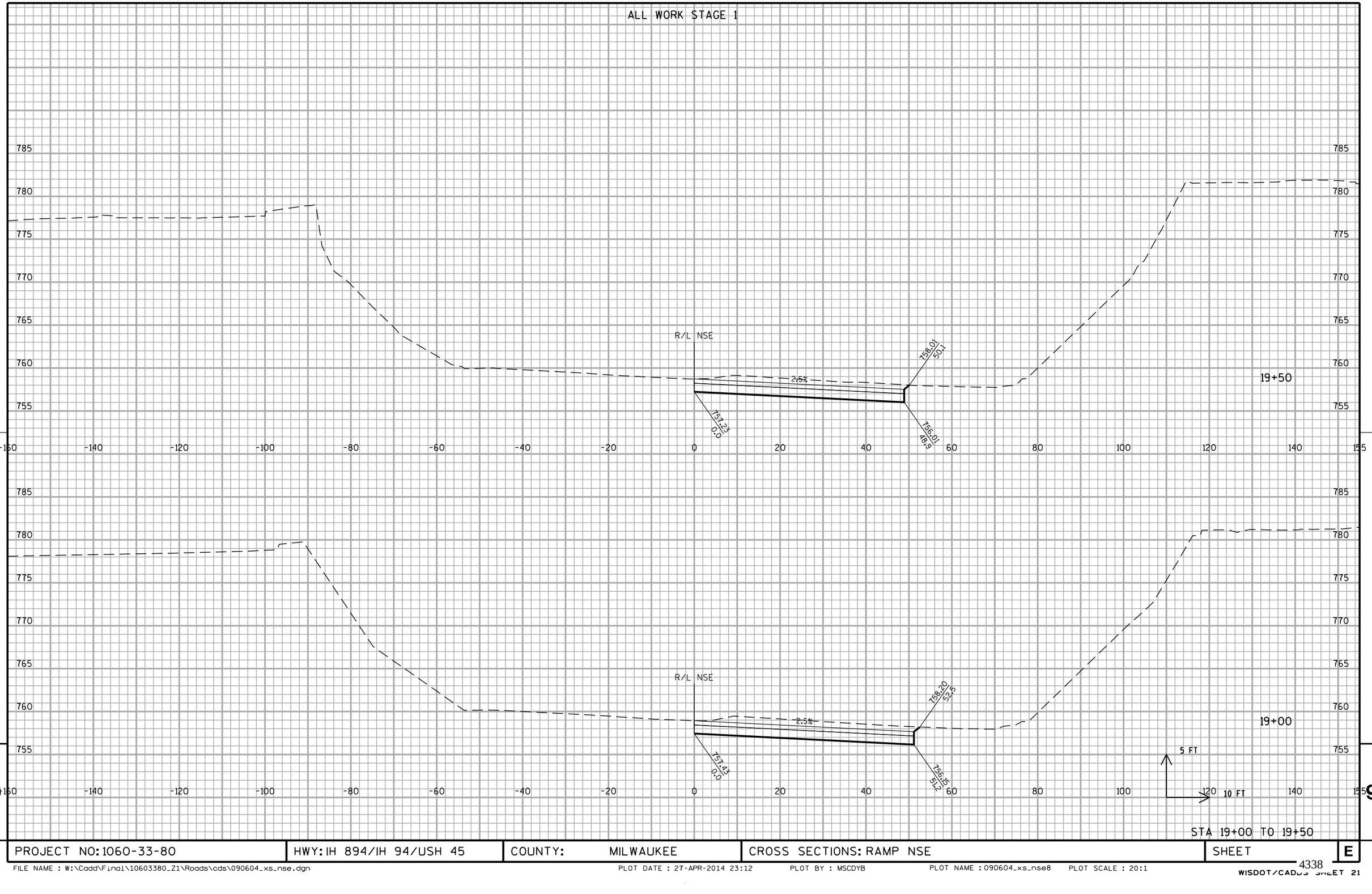
STA 18+00 TO 18+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



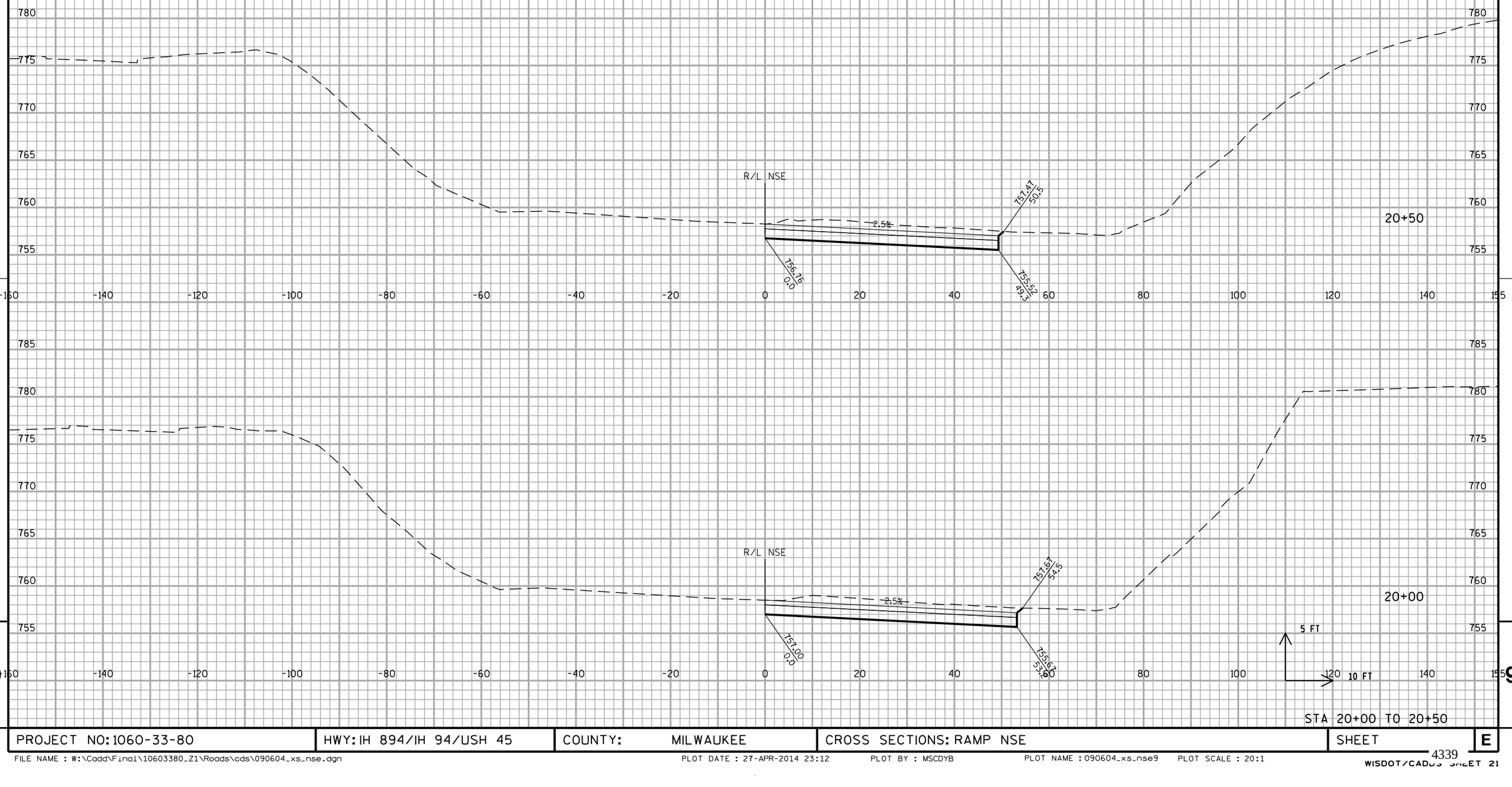
STA 19+00 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



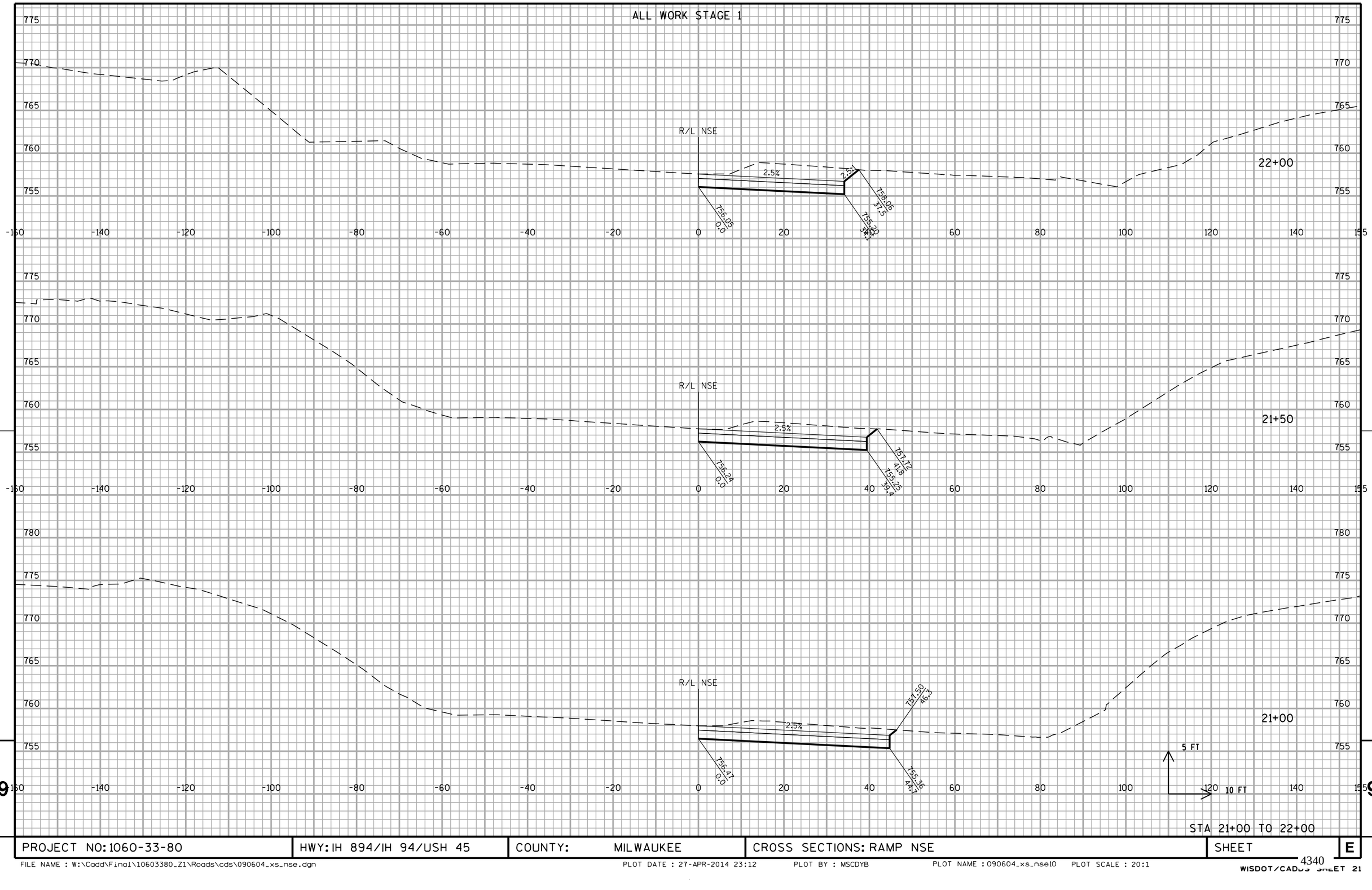
STA 20+00 TO 20+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse9 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

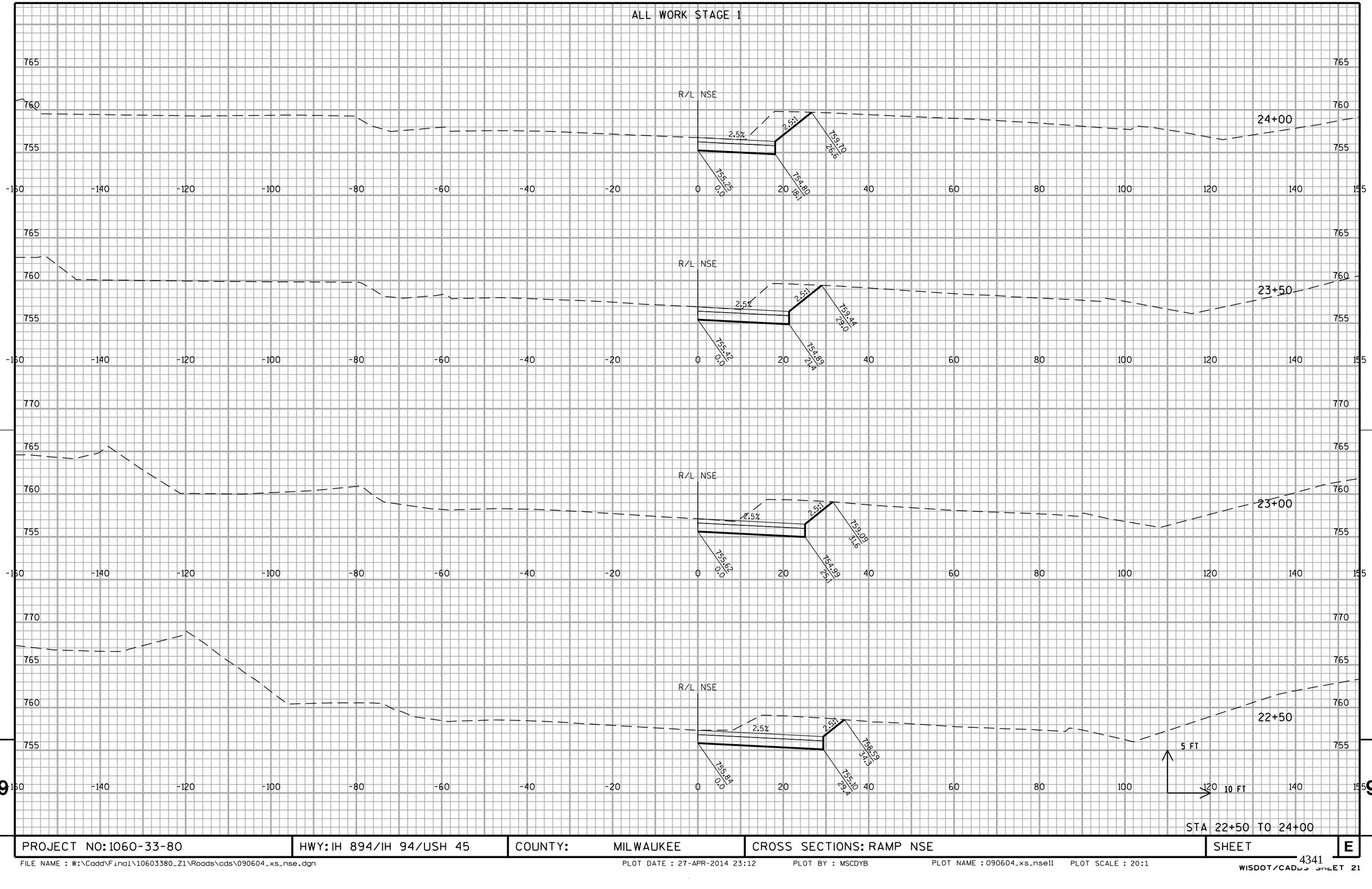
ALL WORK STAGE 1



STA 21+00 TO 22+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET E

ALL WORK STAGE 1



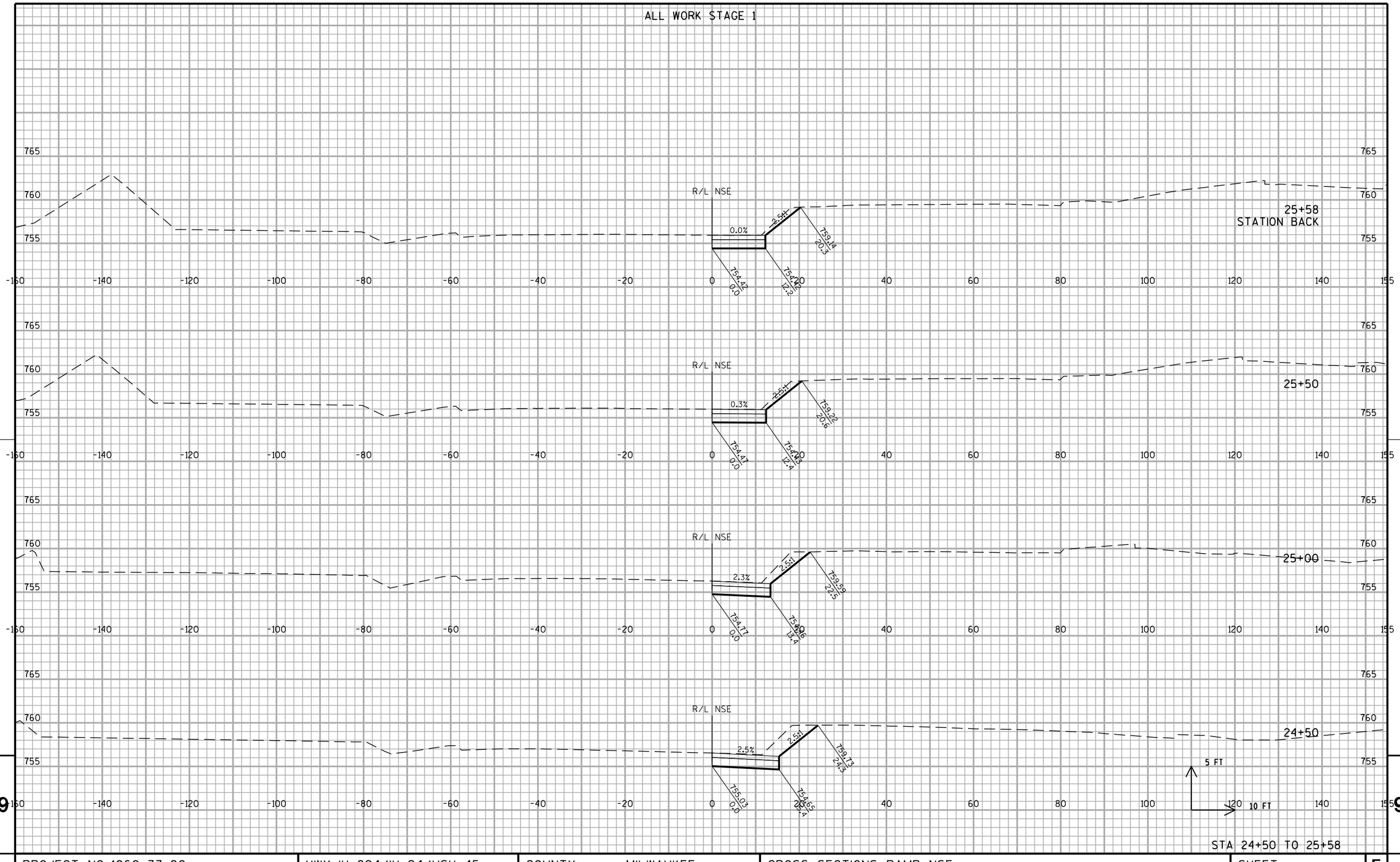
STA 22+50 TO 24+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



STA 24+50 TO 25+58

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090604_xs_nse.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090604_xs_nse12 PLOT SCALE : 20:1

ALL WORK STAGE 4

STA 11+75 TO 13+00

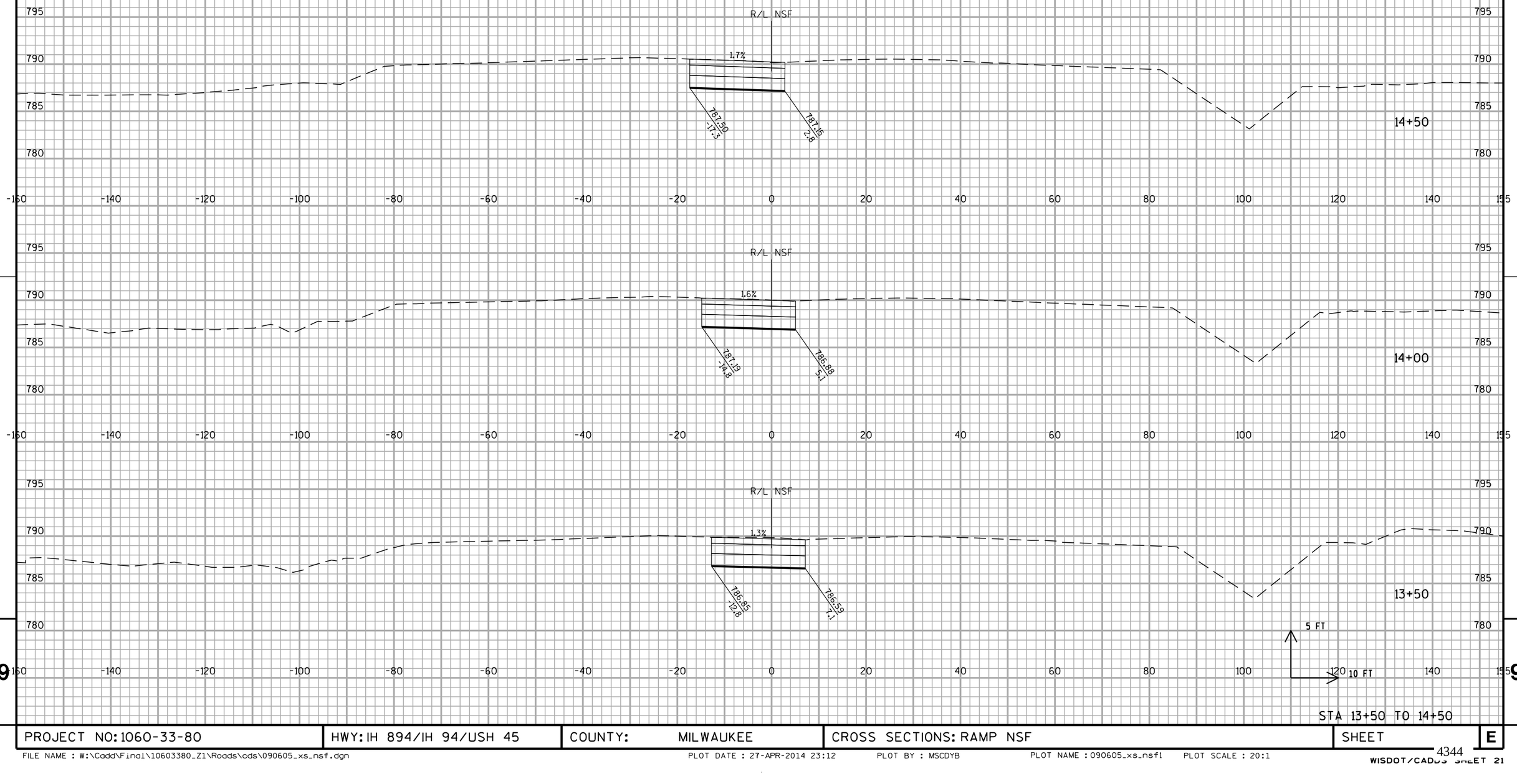
9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf PLOT SCALE : 20:1

ALL WORK STAGE 4

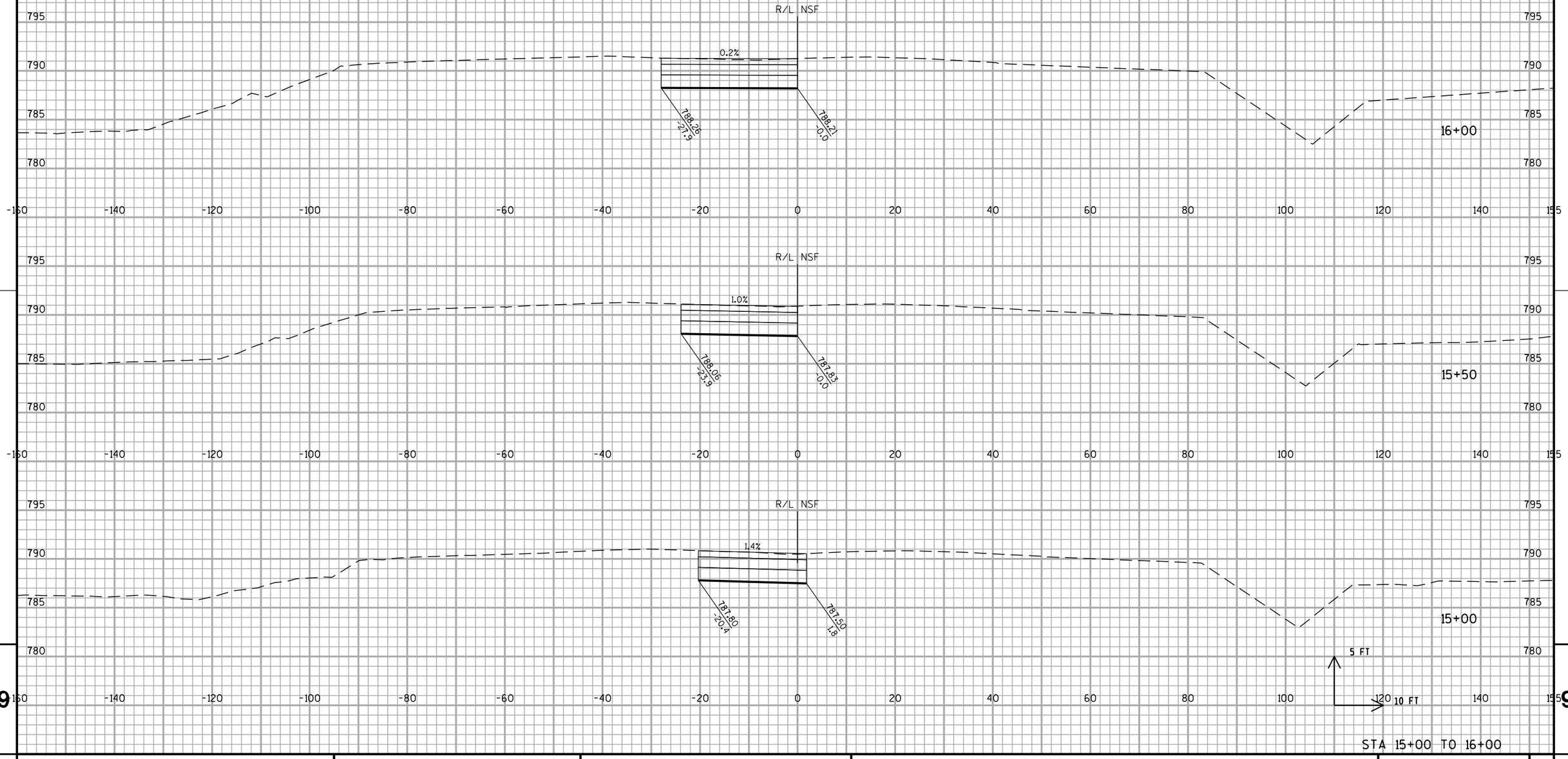


STA 13+50 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf1 PLOT SCALE : 20:1

ALL WORK STAGE 4



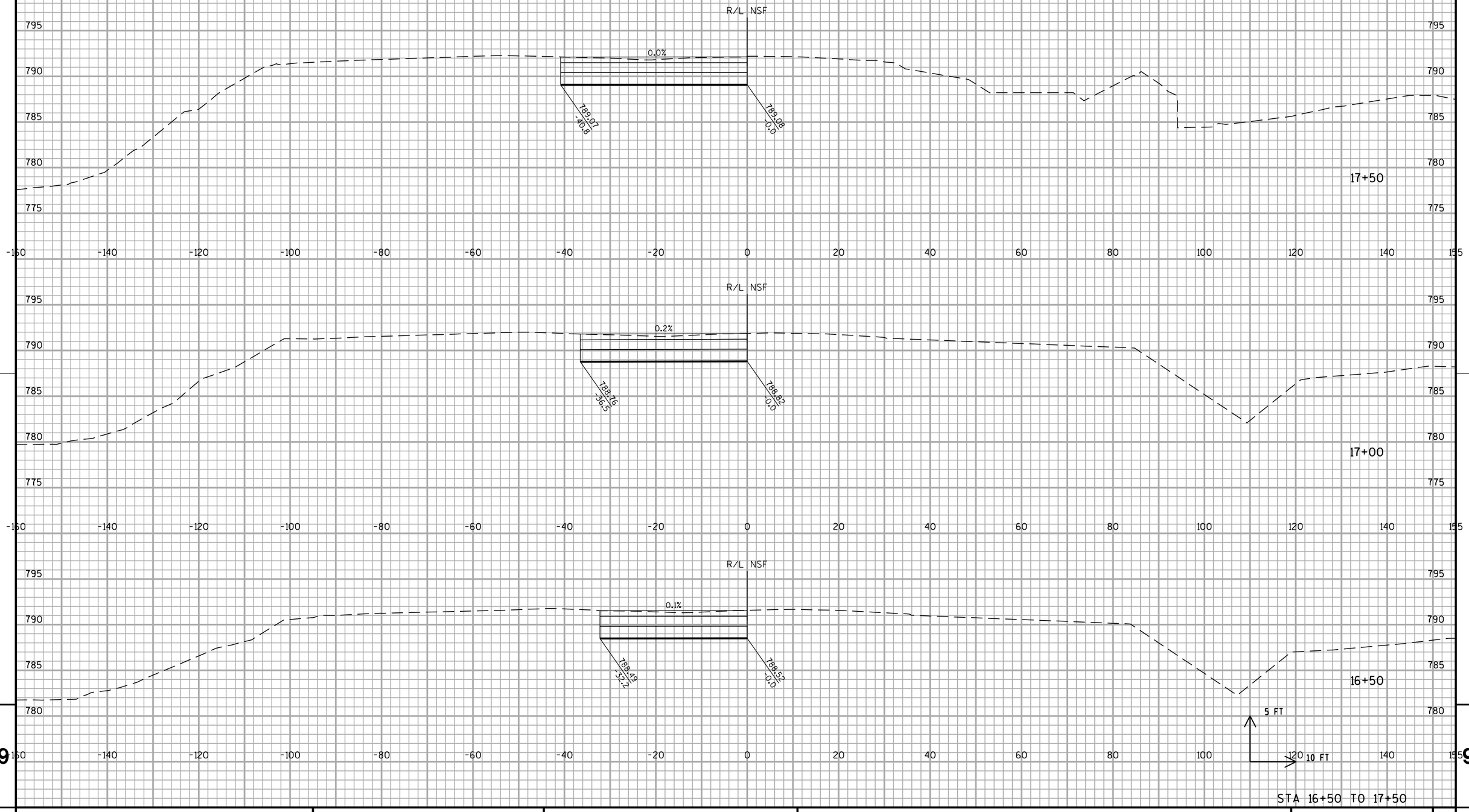
STA 15+00 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

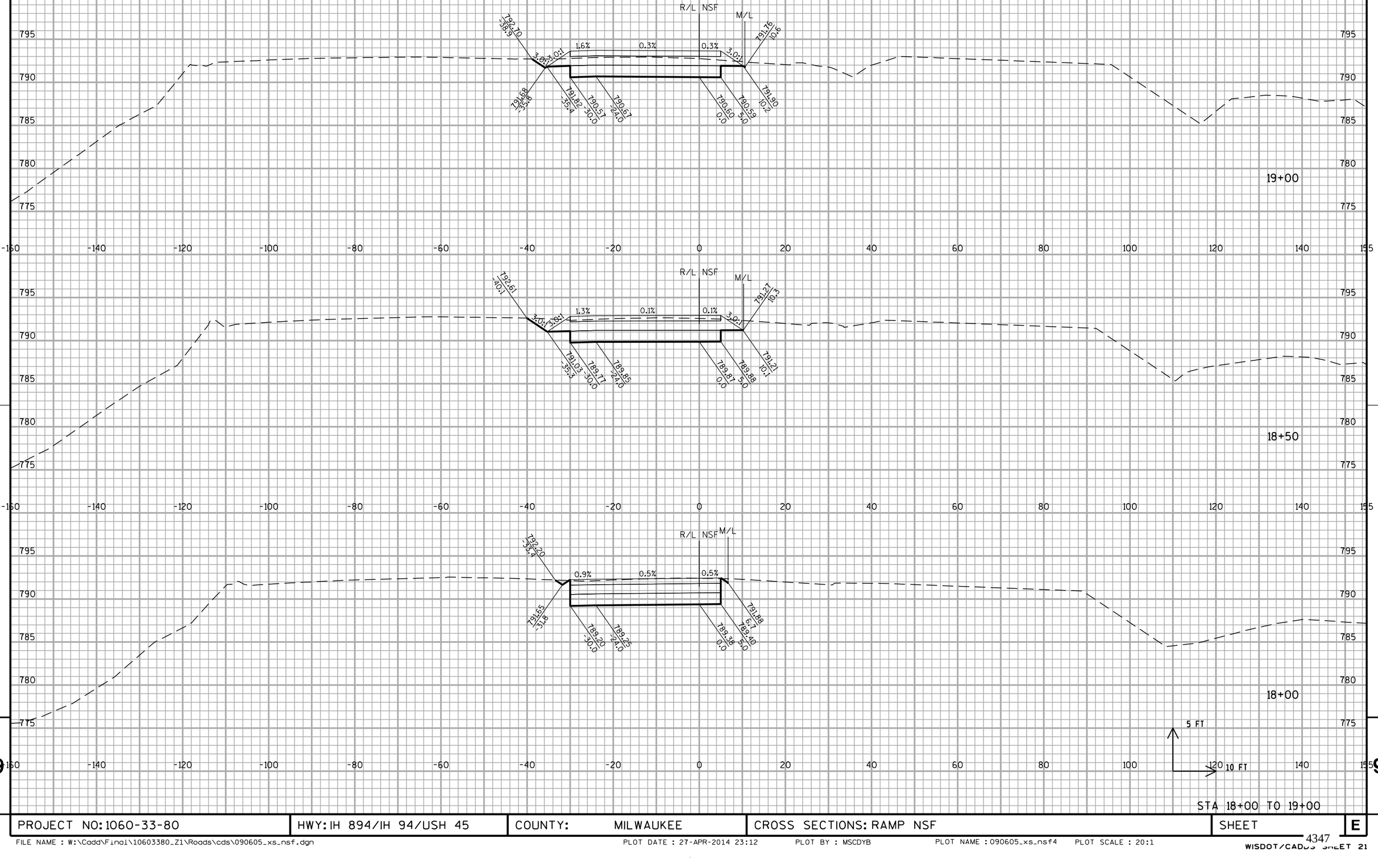


STA 16+50 TO 17+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf3 PLOT SCALE : 20:1

ALL WORK STAGE 4

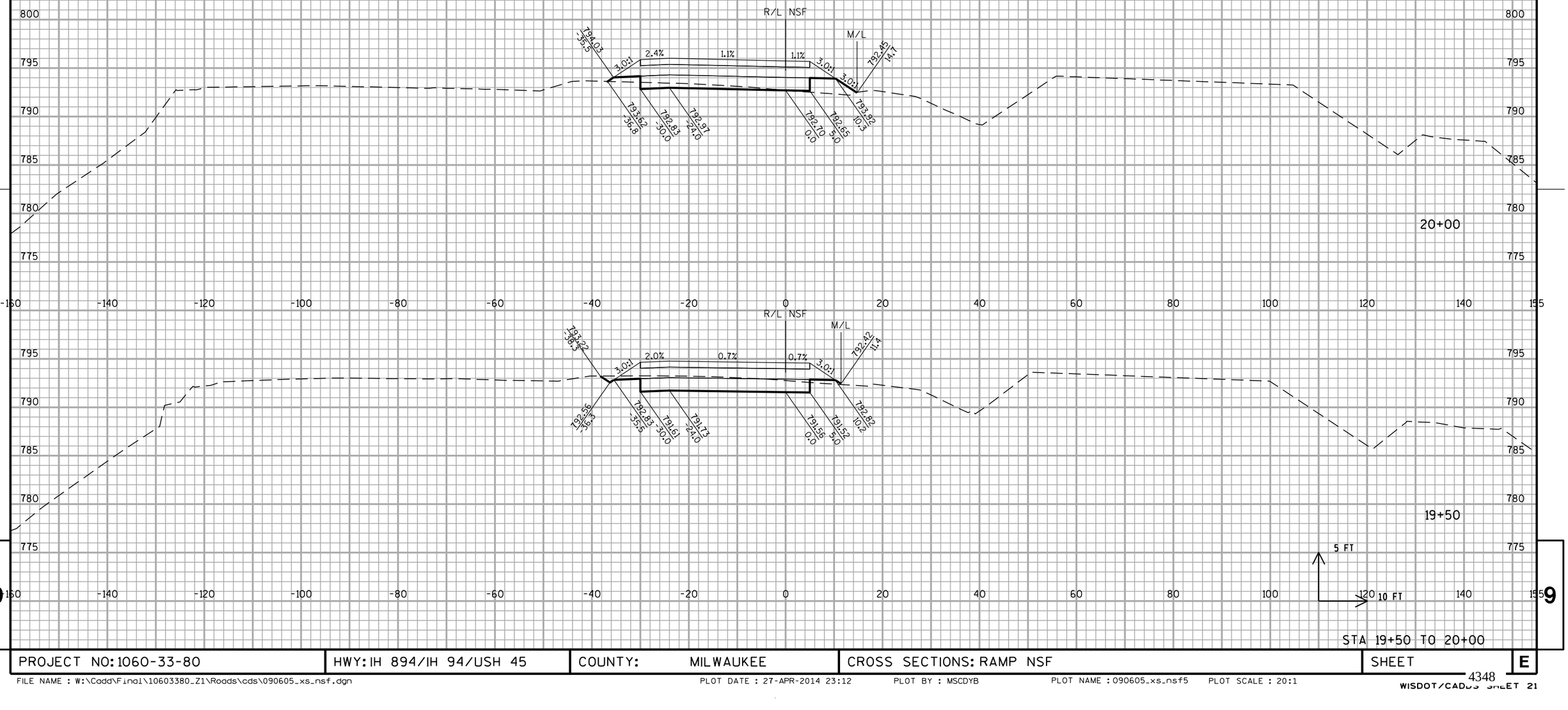


STA 18+00 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf4 PLOT SCALE : 20:1

ALL WORK STAGE 4

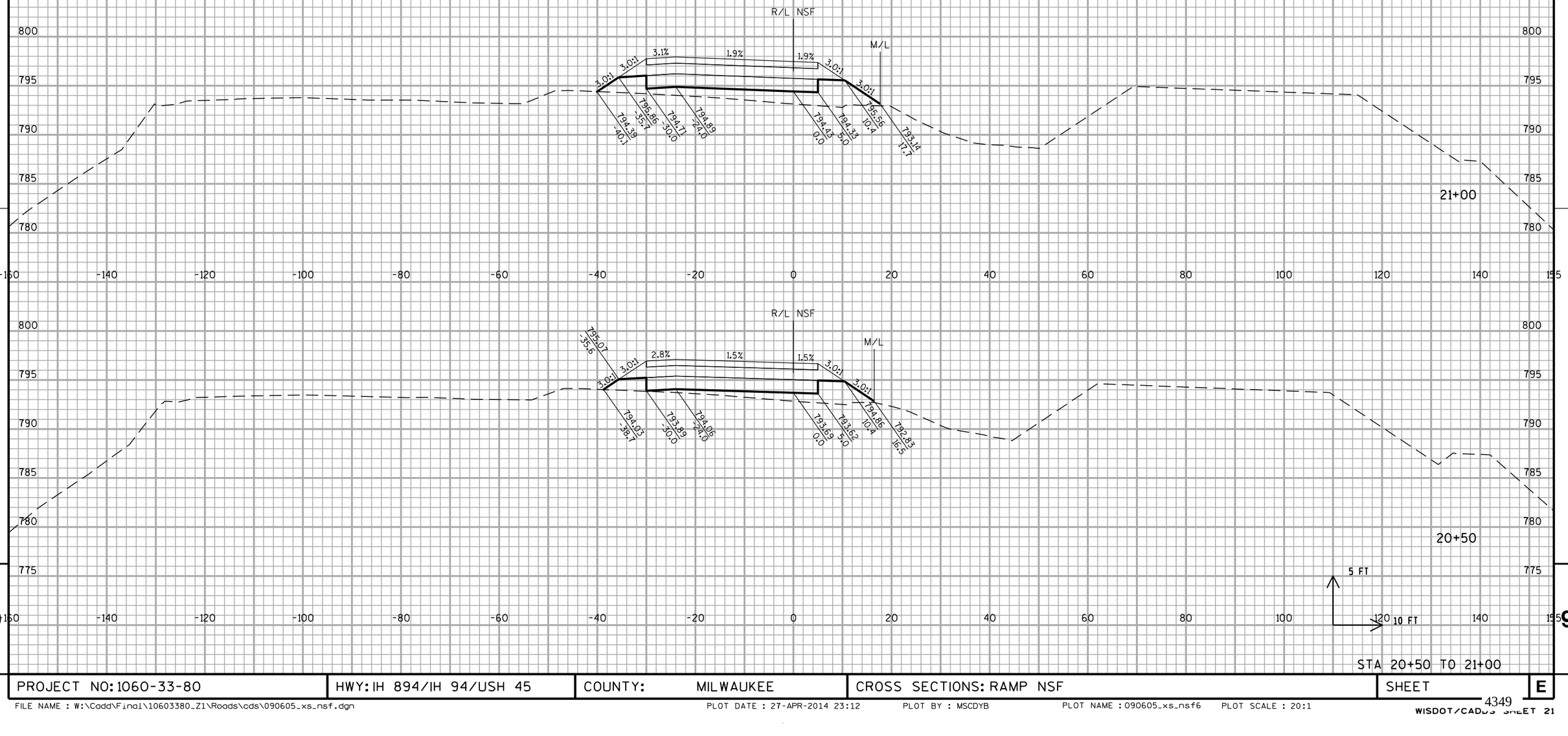


STA 19+50 TO 20+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf5 PLOT SCALE : 20:1

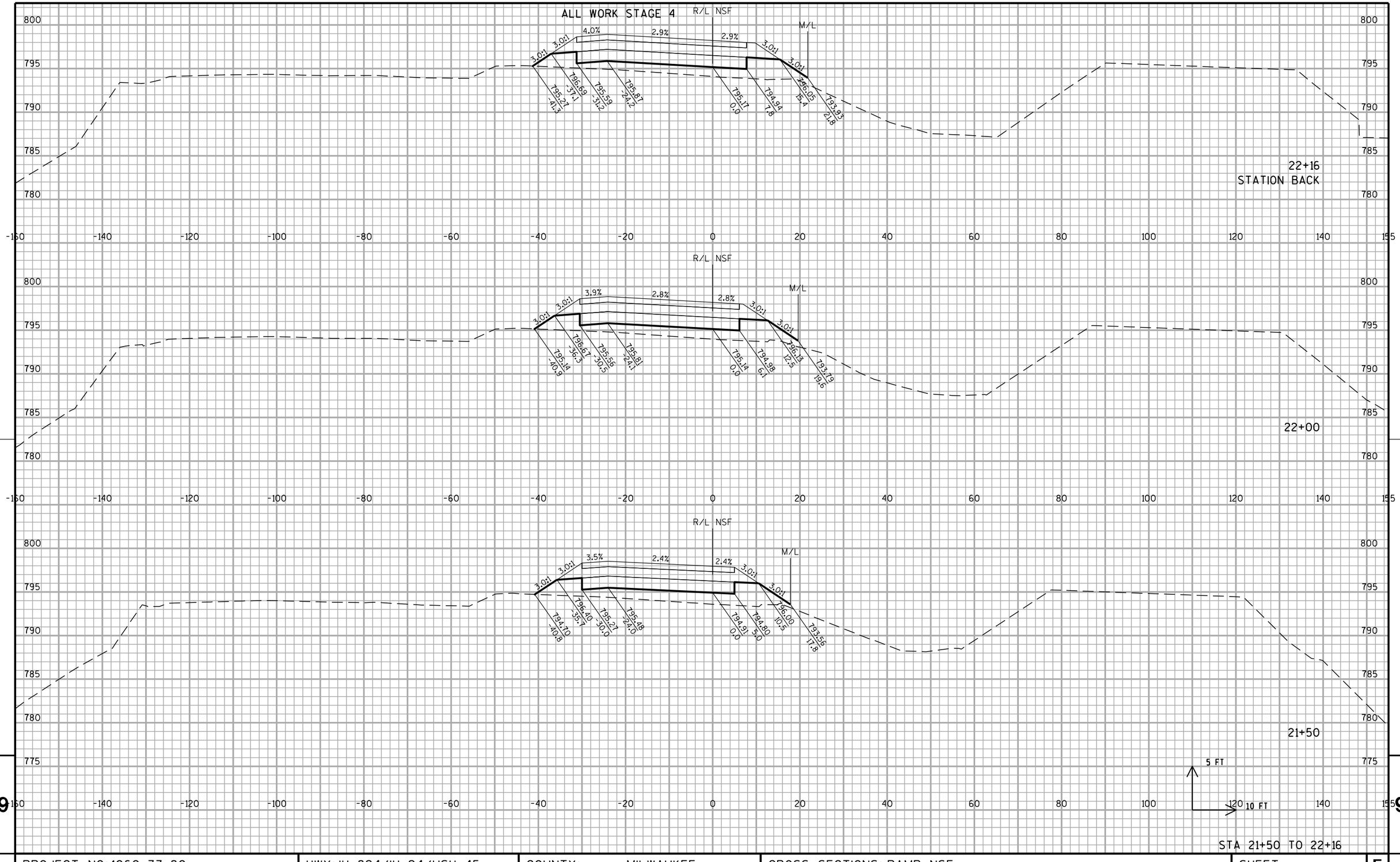
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf6 PLOT SCALE : 20:1

ALL WORK STAGE 4



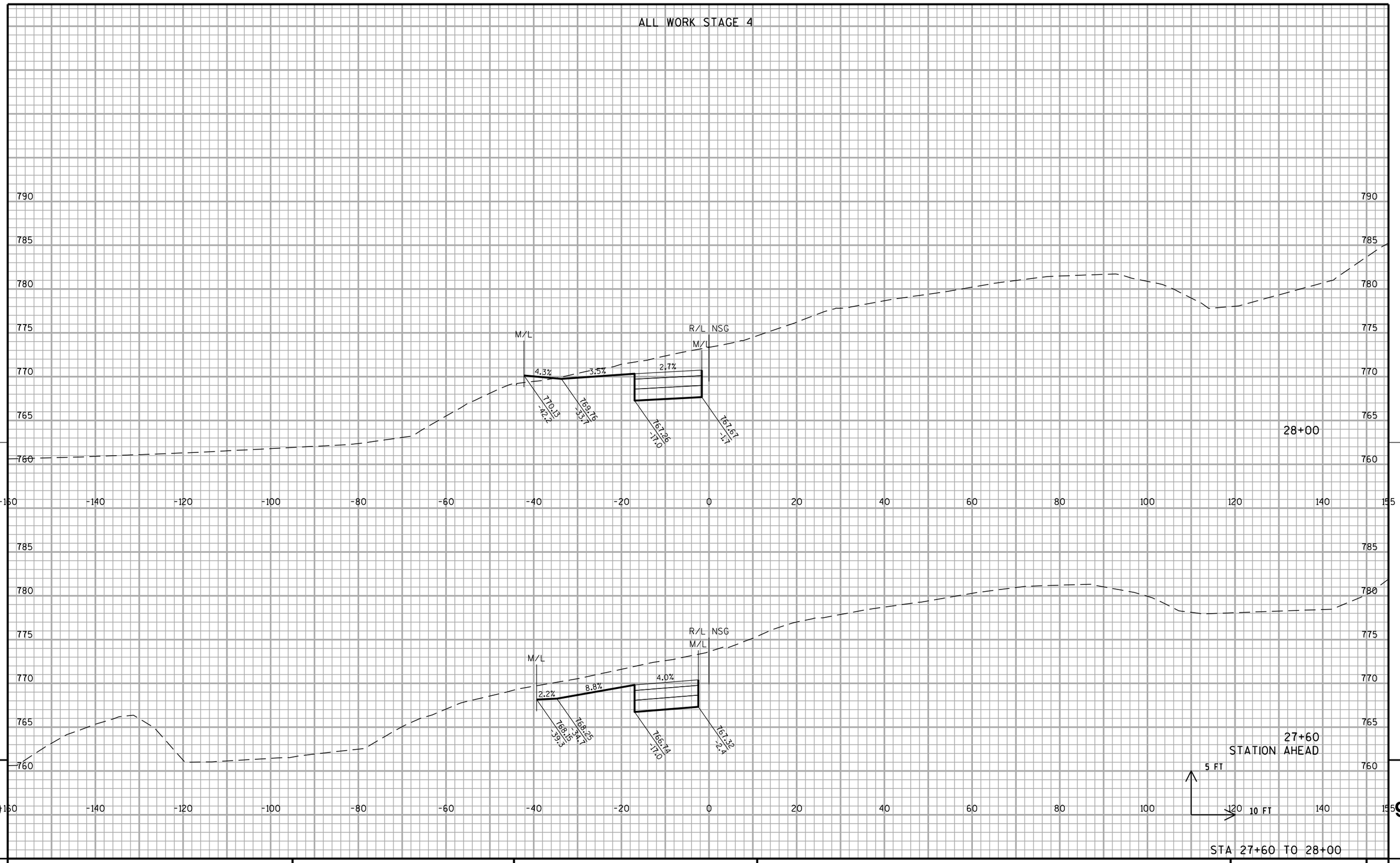
STA 21+50 TO 22+16

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSF	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090605_xs_nsf.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090605_xs_nsf7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



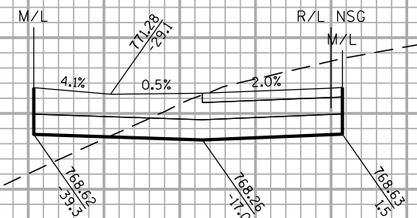
STA 27+60 TO 28+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

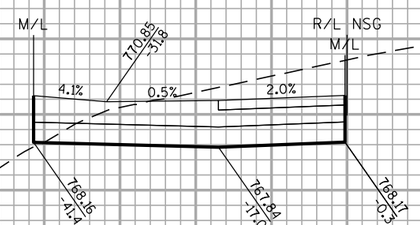
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



29+00



28+50

5 FT
10 FT

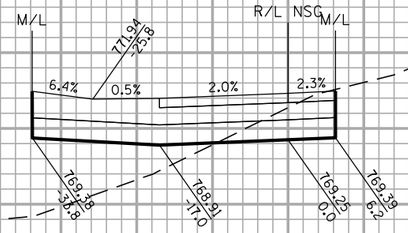
STA 28+50 TO 29+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

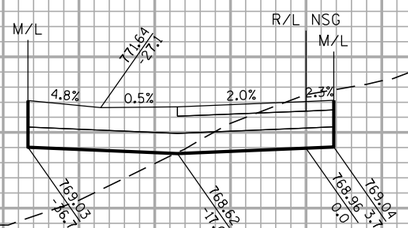
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



30+00



29+50

5 FT
10 FT

STA 29+50 TO 30+00

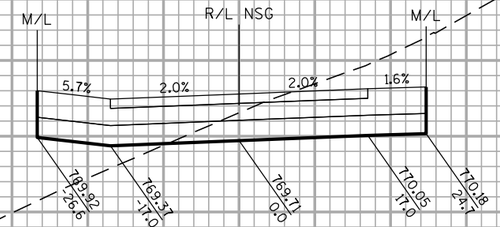
9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

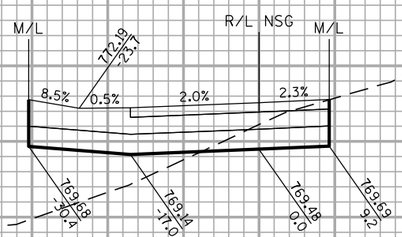
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



31+00



30+50

5 FT
10 FT

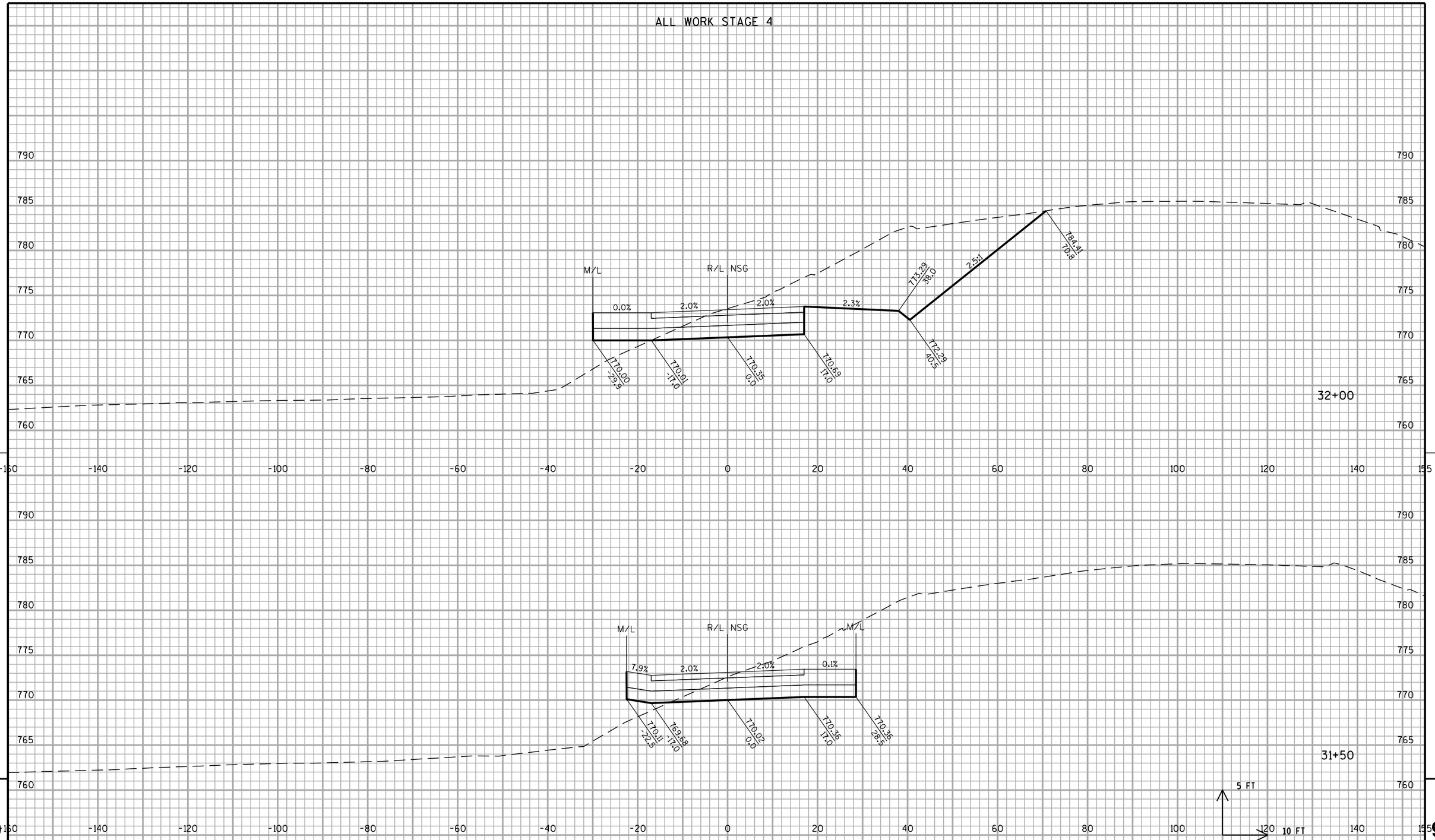
STA 30+50 TO 31+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



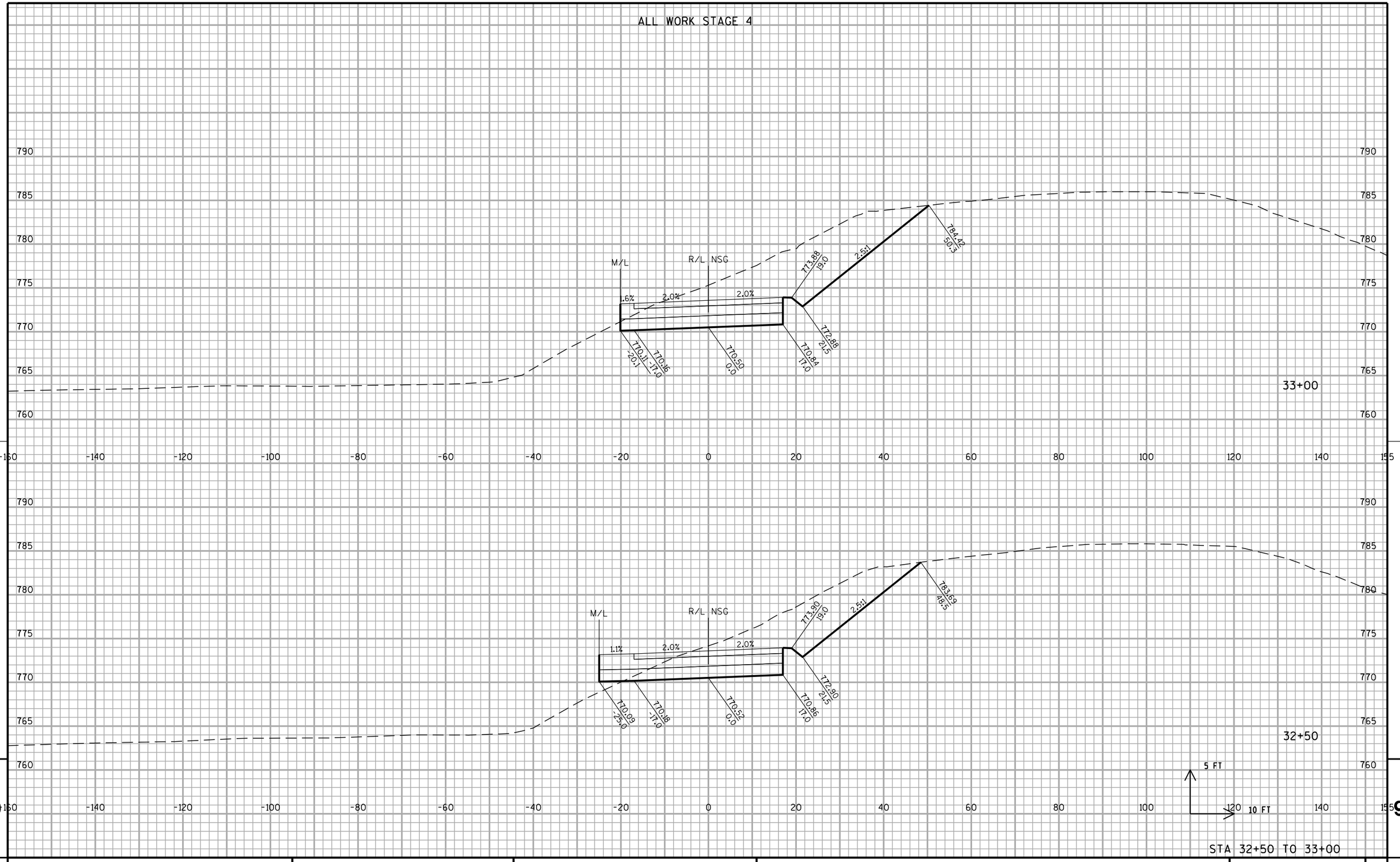
STA 31+50 TO 32+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

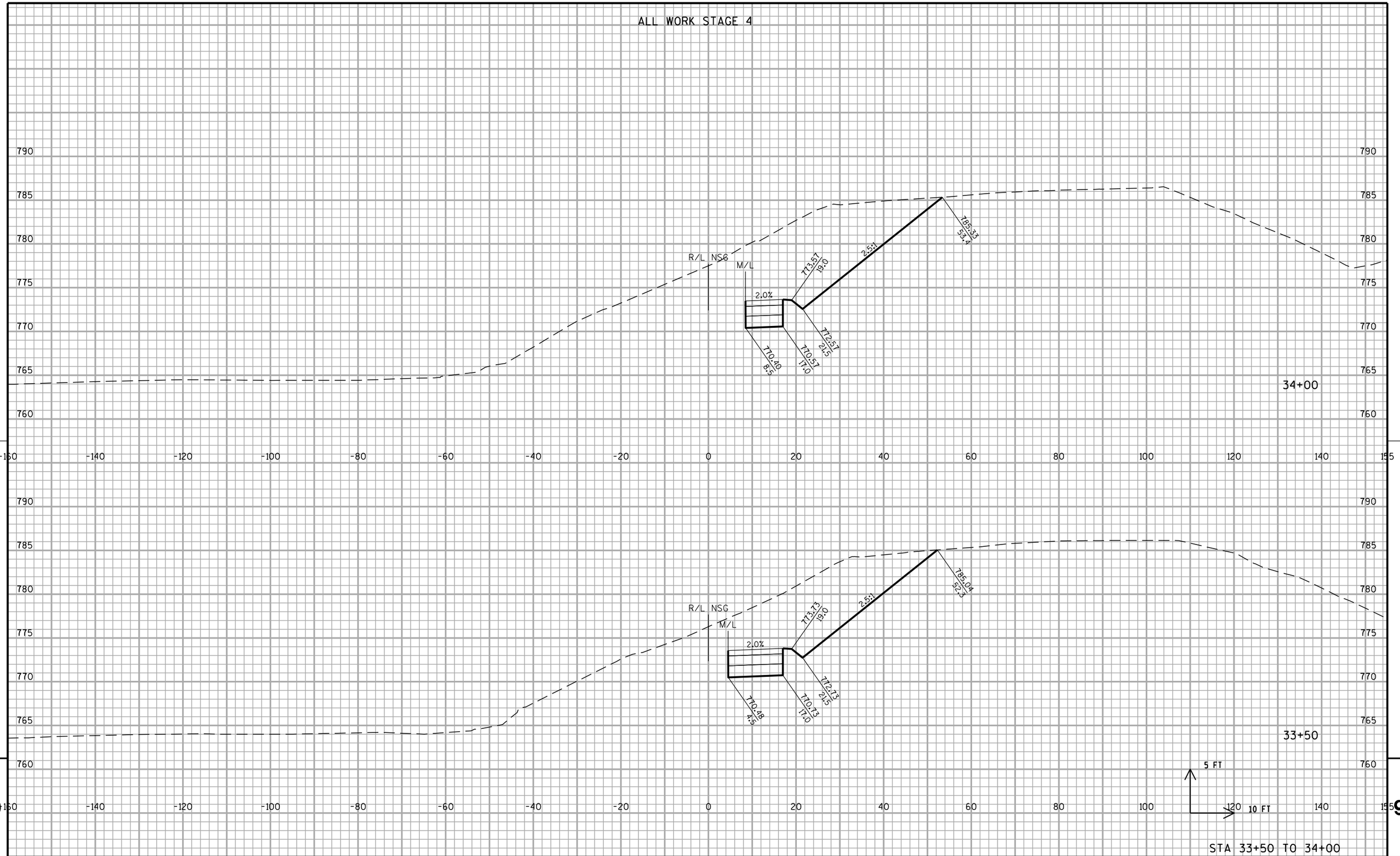


STA 32+50 TO 33+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg5 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 4



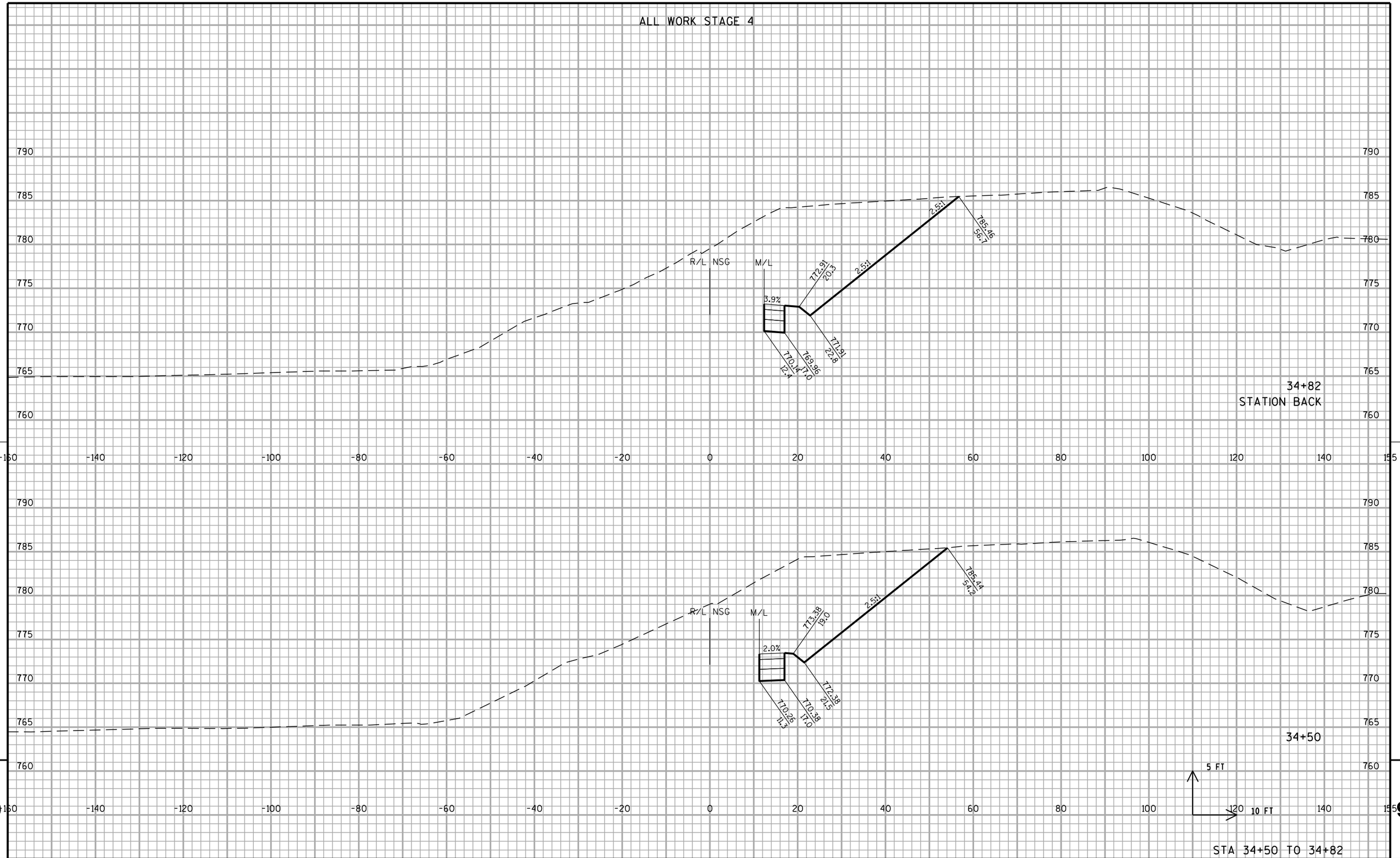
STA 33+50 TO 34+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

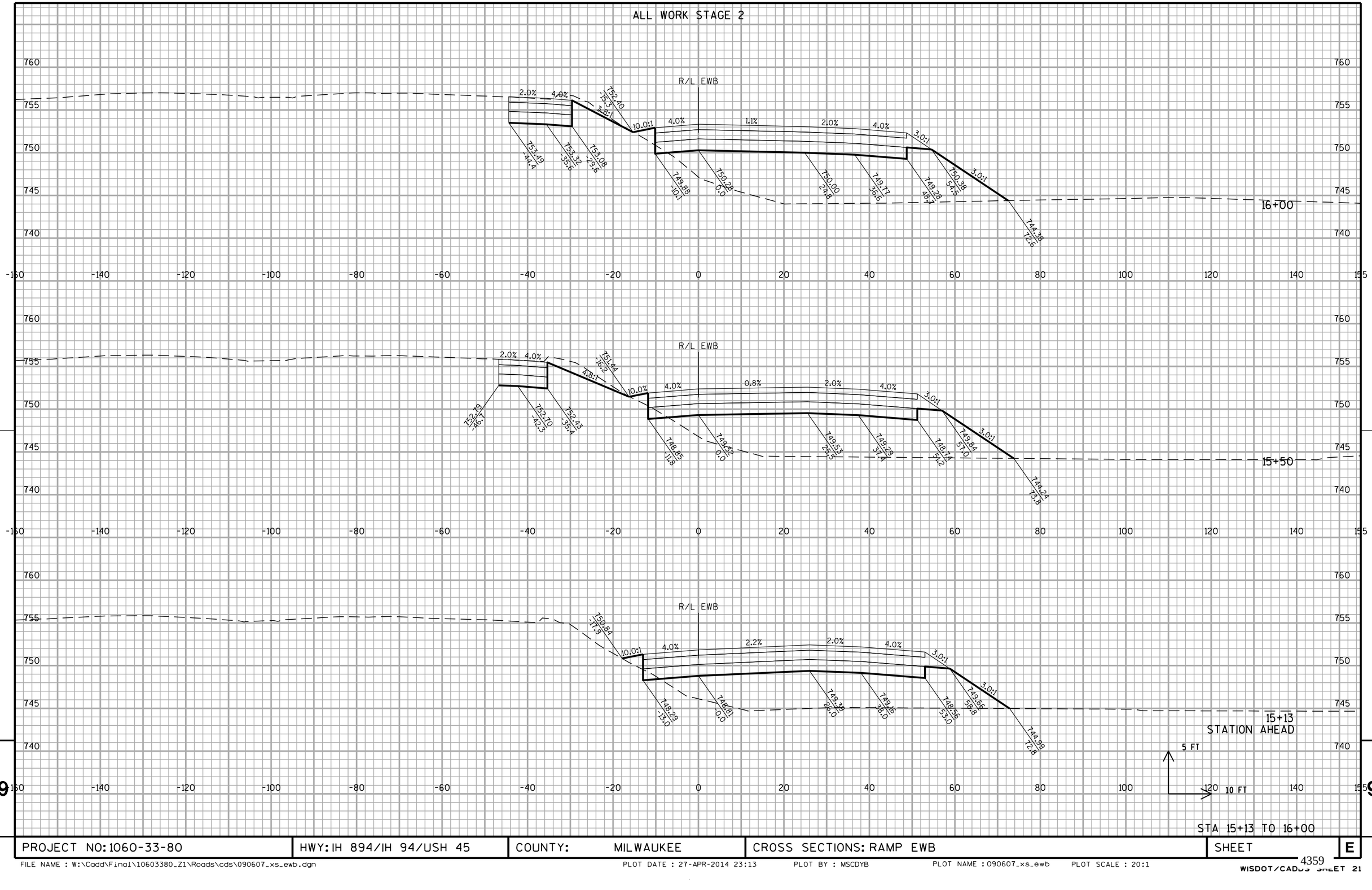
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSG	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090606_xs_nsg.dgn PLOT DATE : 27-APR-2014 23:12 PLOT BY : MSCDYB PLOT NAME : 090606_xs_nsg7 PLOT SCALE : 20:1

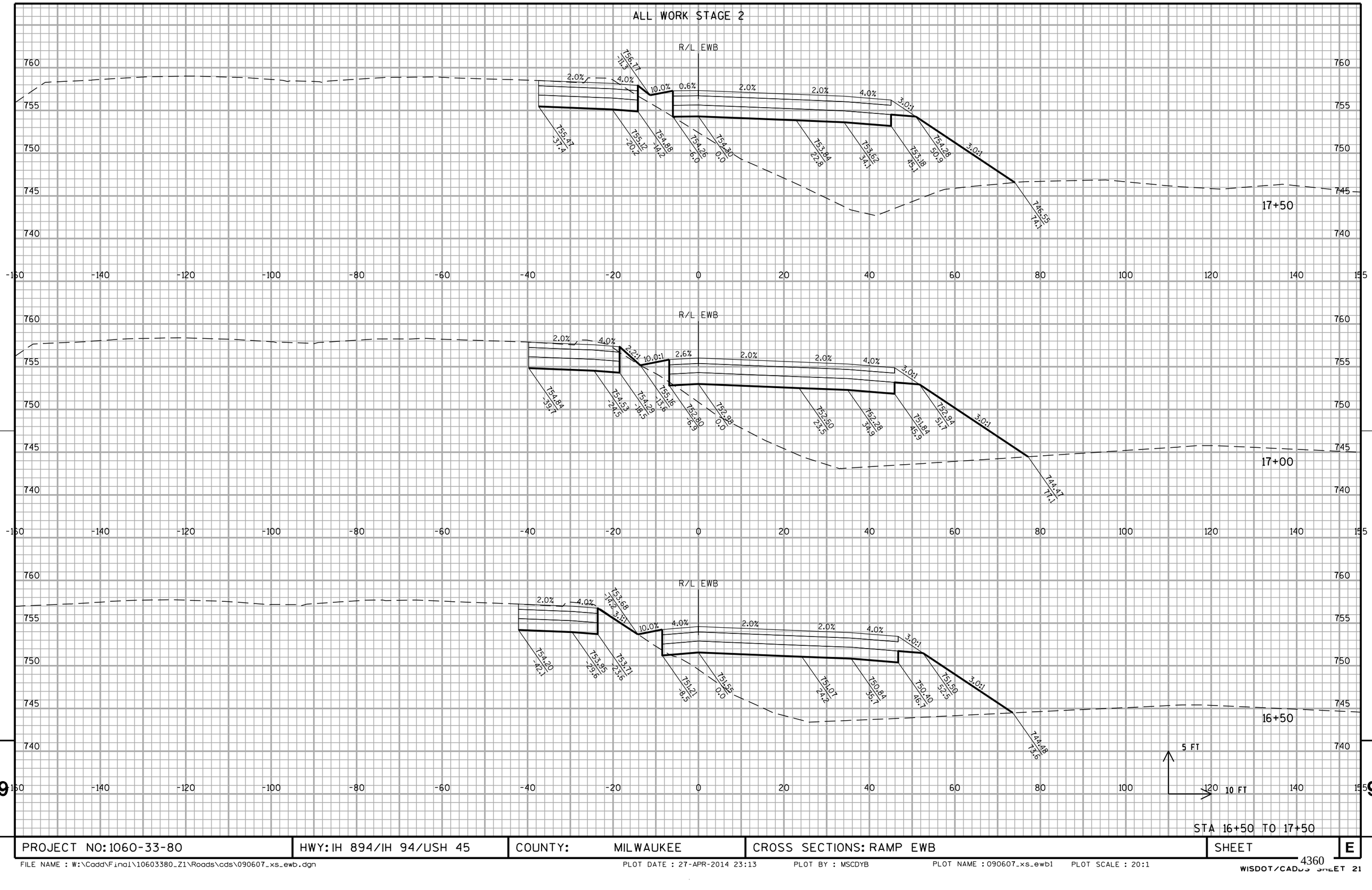
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb PLOT SCALE : 20:1

ALL WORK STAGE 2



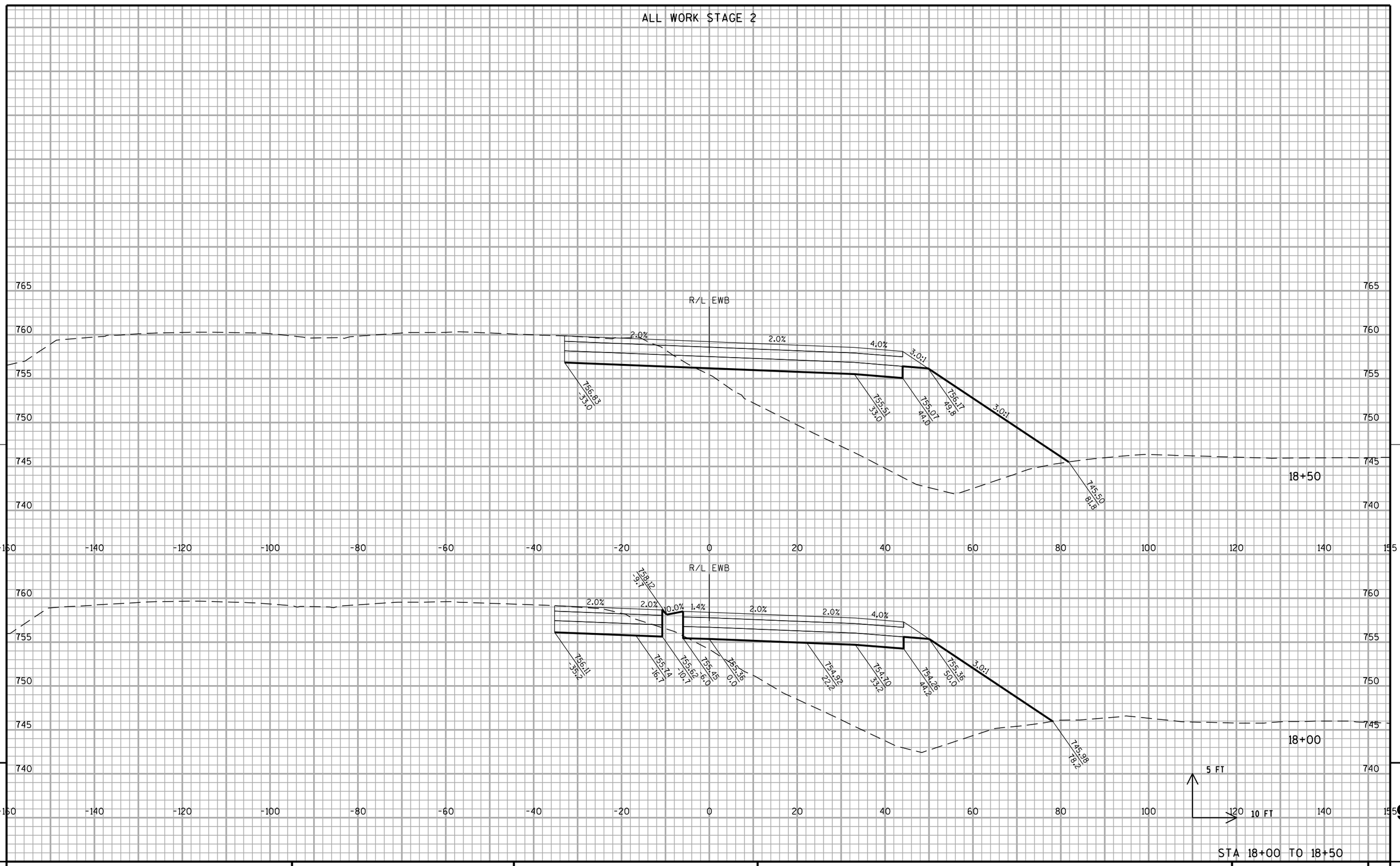
STA 16+50 TO 17+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



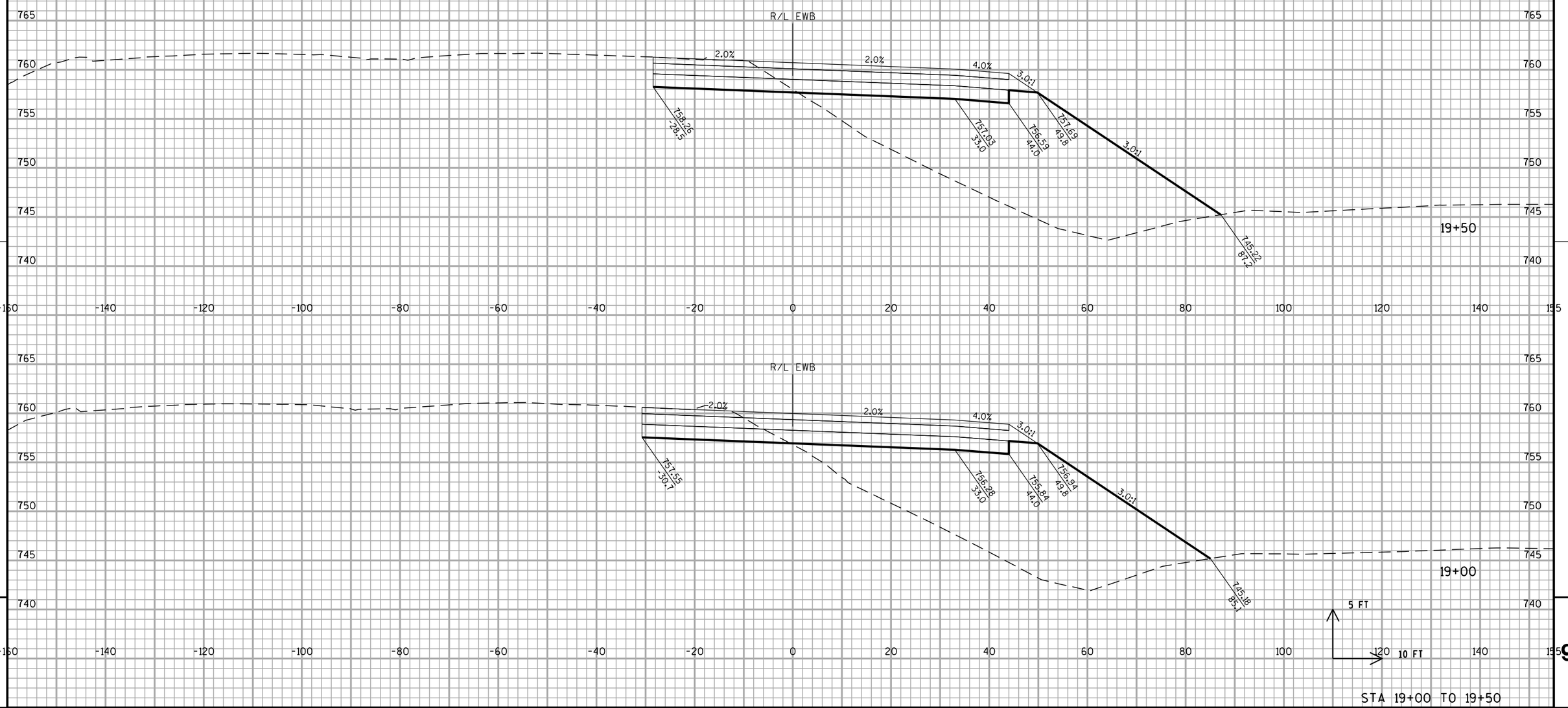
STA 18+00 TO 18+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

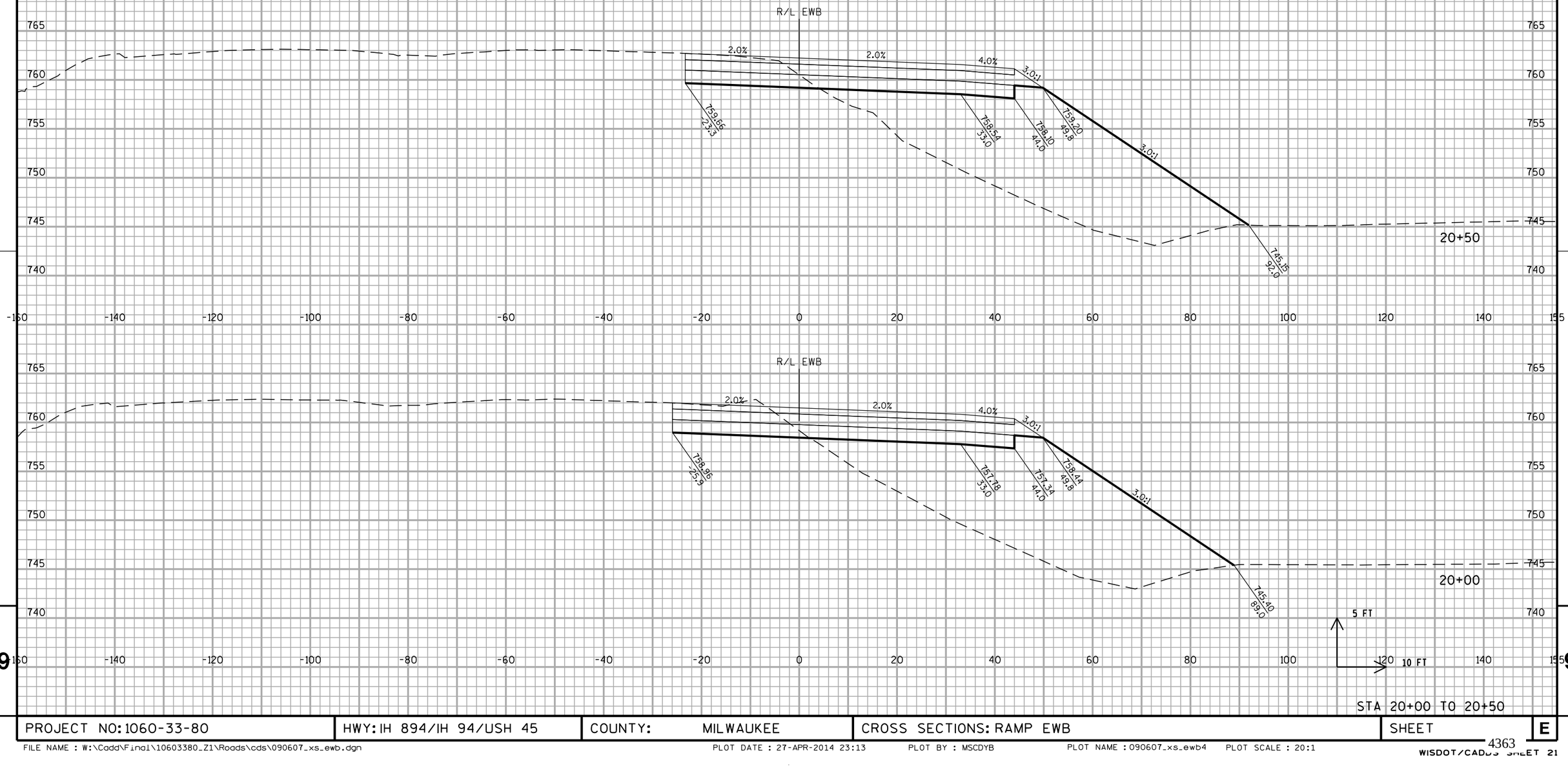


STA 19+00 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb3 PLOT SCALE : 20:1

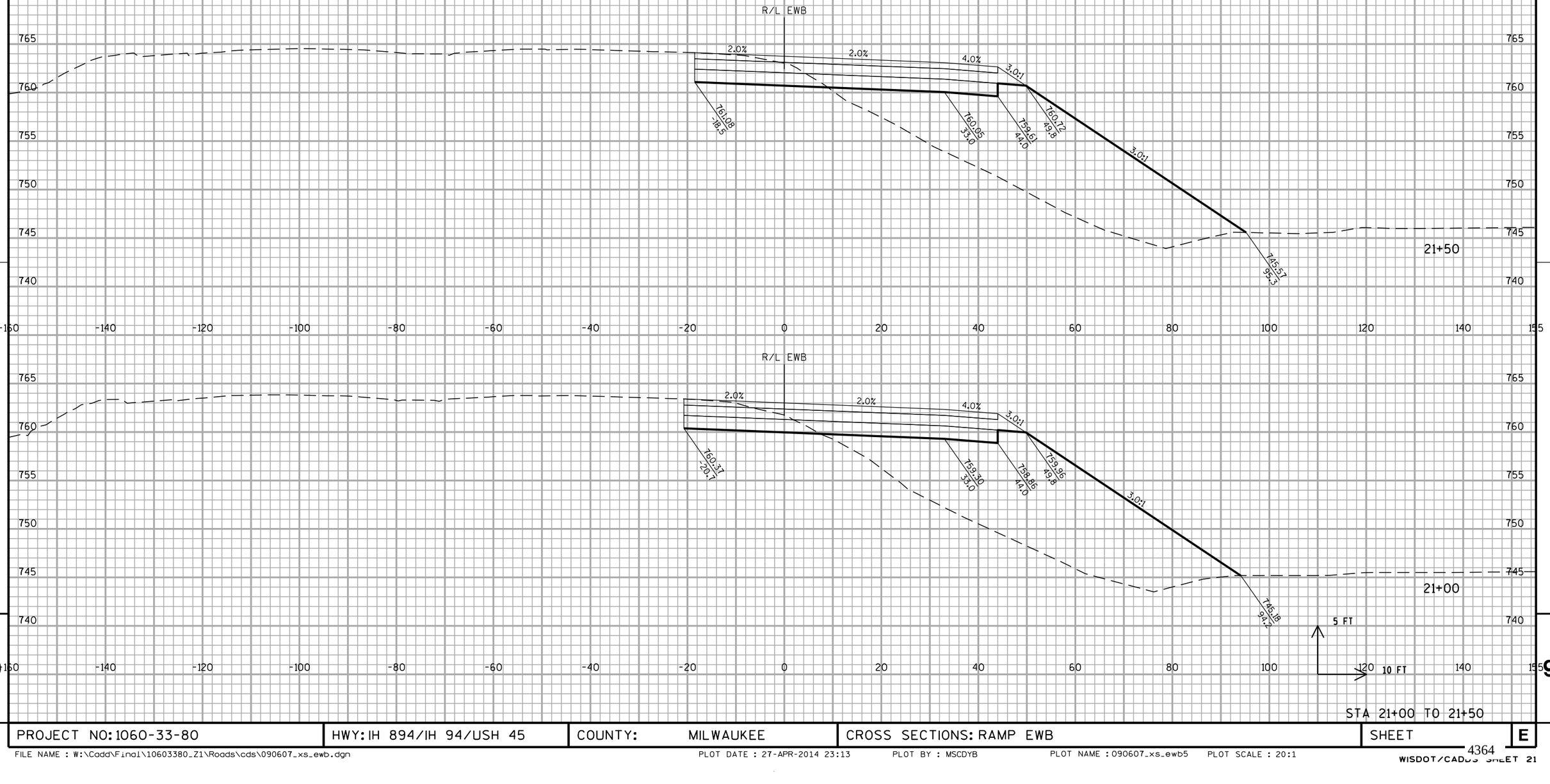
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb4 PLOT SCALE : 20:1

ALL WORK STAGE 2



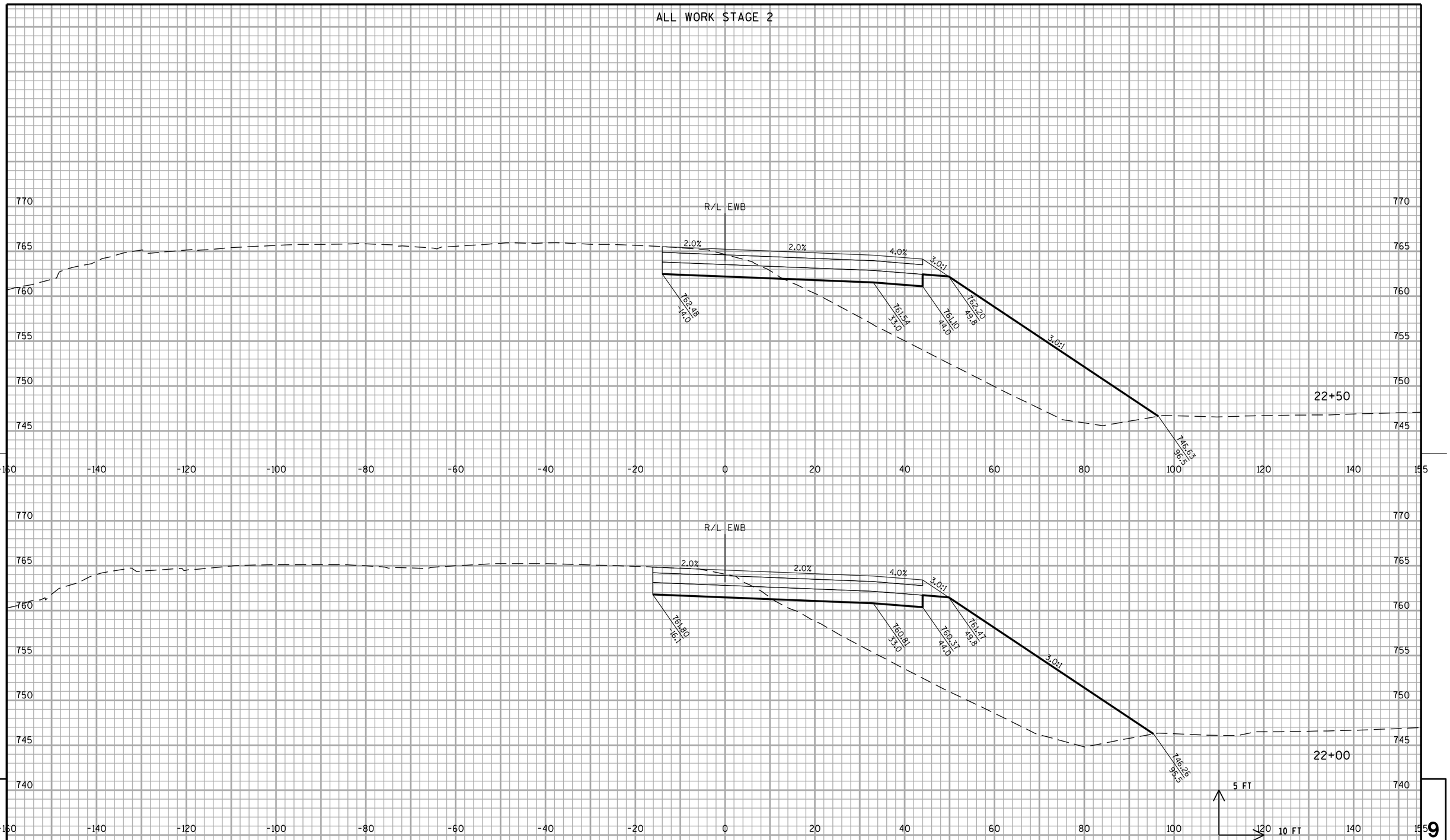
STA 21+00 TO 21+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



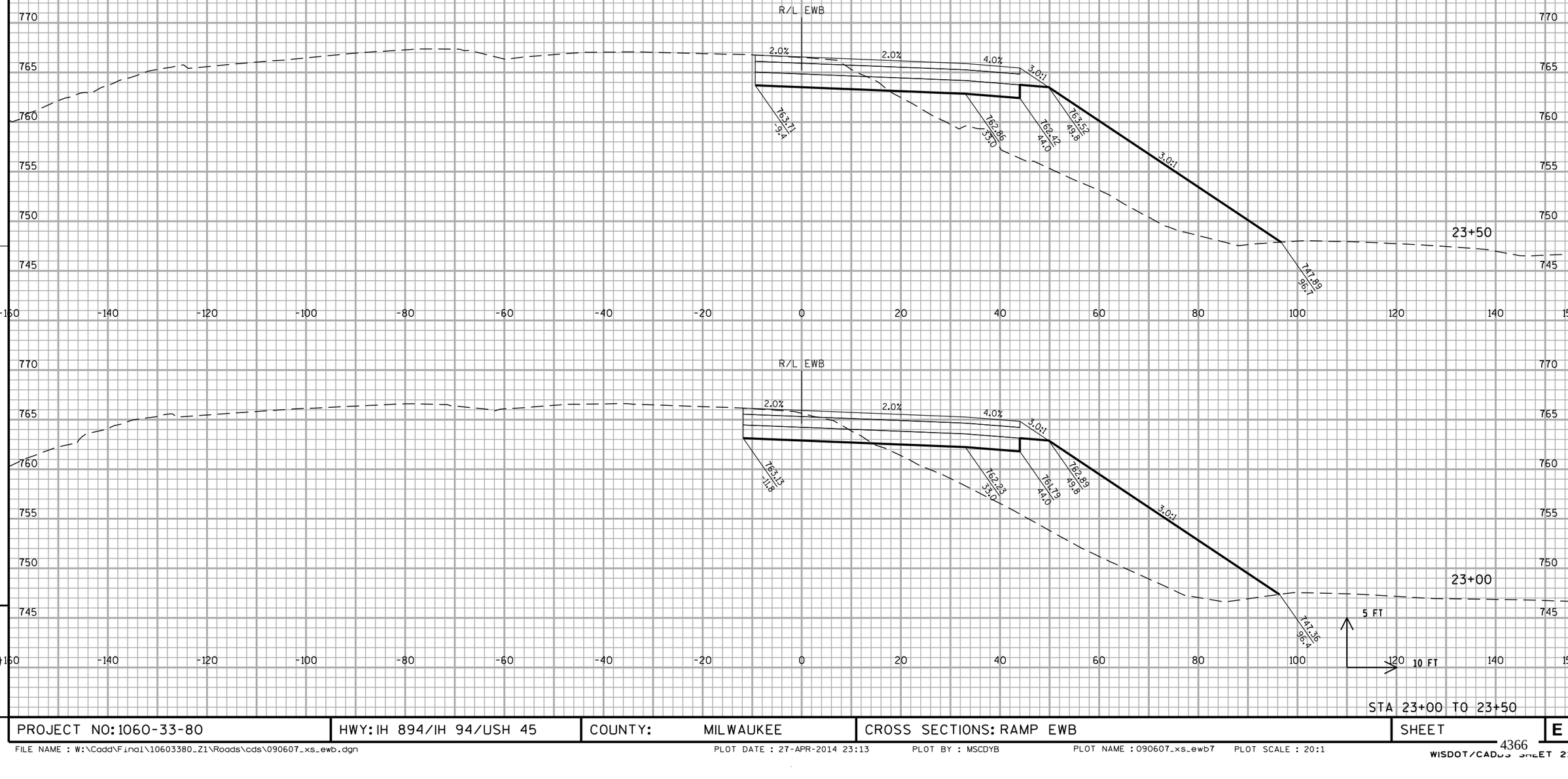
STA 22+00 TO 22+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

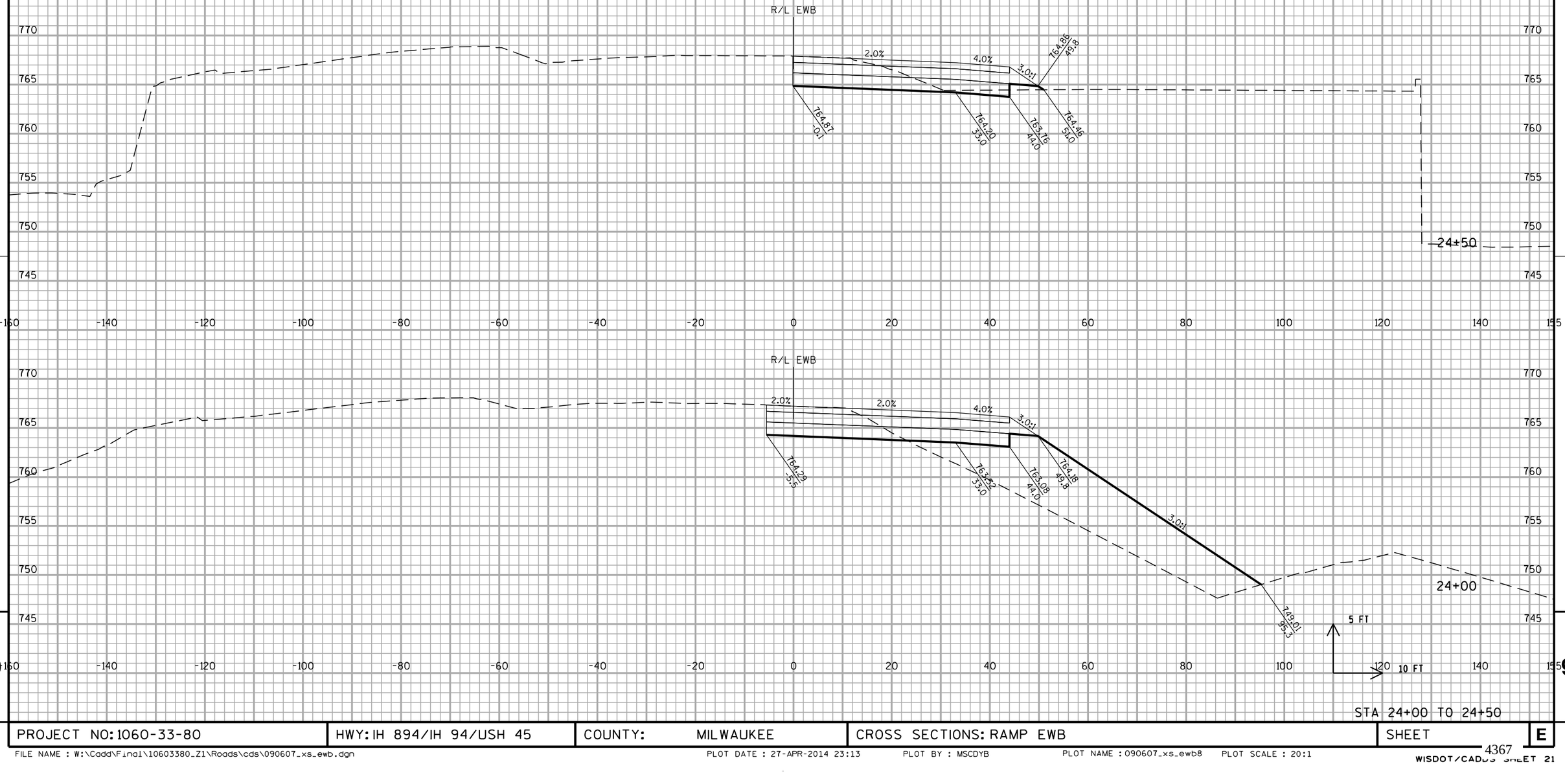


STA 23+00 TO 23+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb7 PLOT SCALE : 20:1

ALL WORK STAGE 2

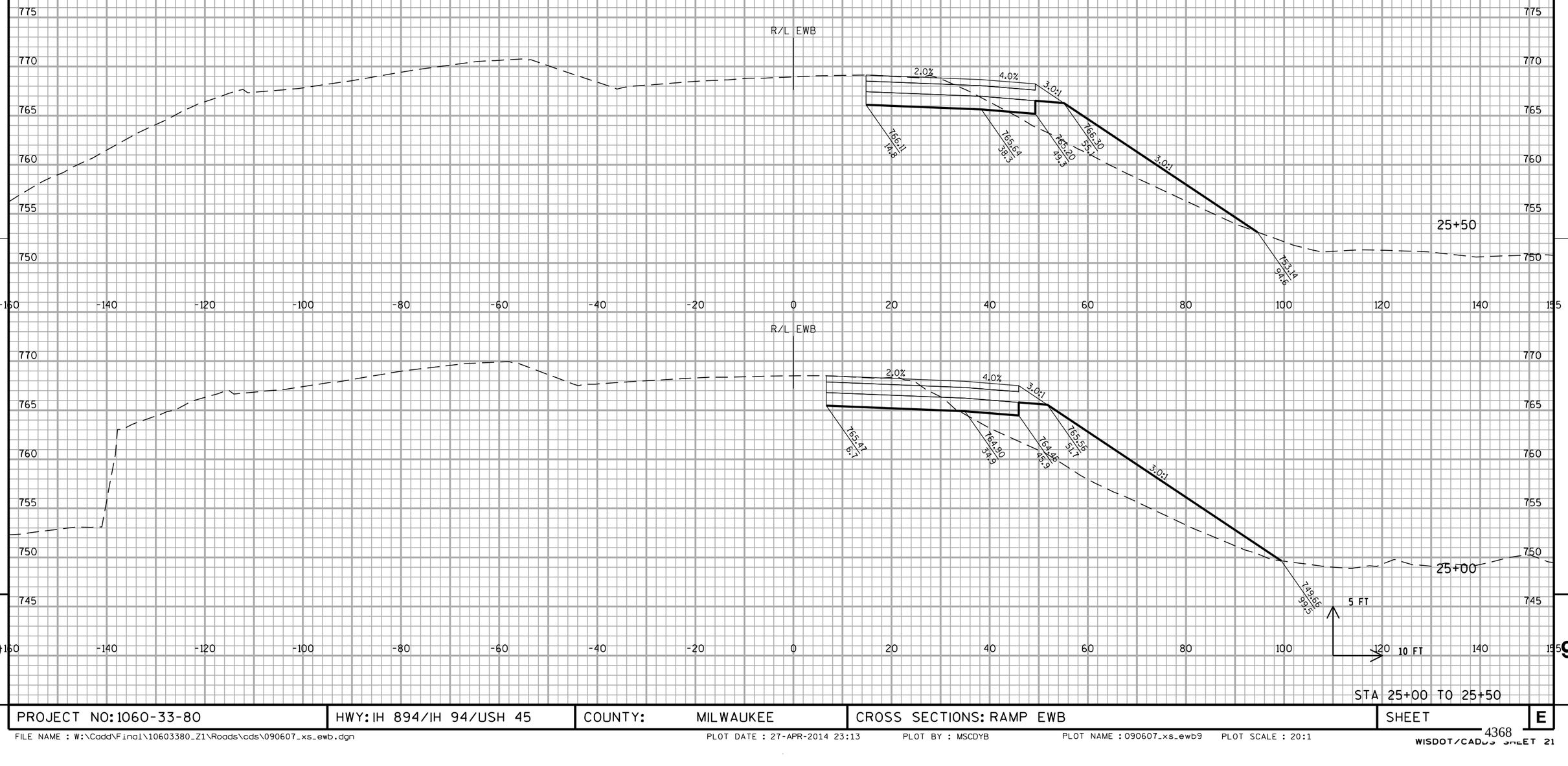


STA 24+00 TO 24+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb8 PLOT SCALE : 20:1

ALL WORK STAGE 2

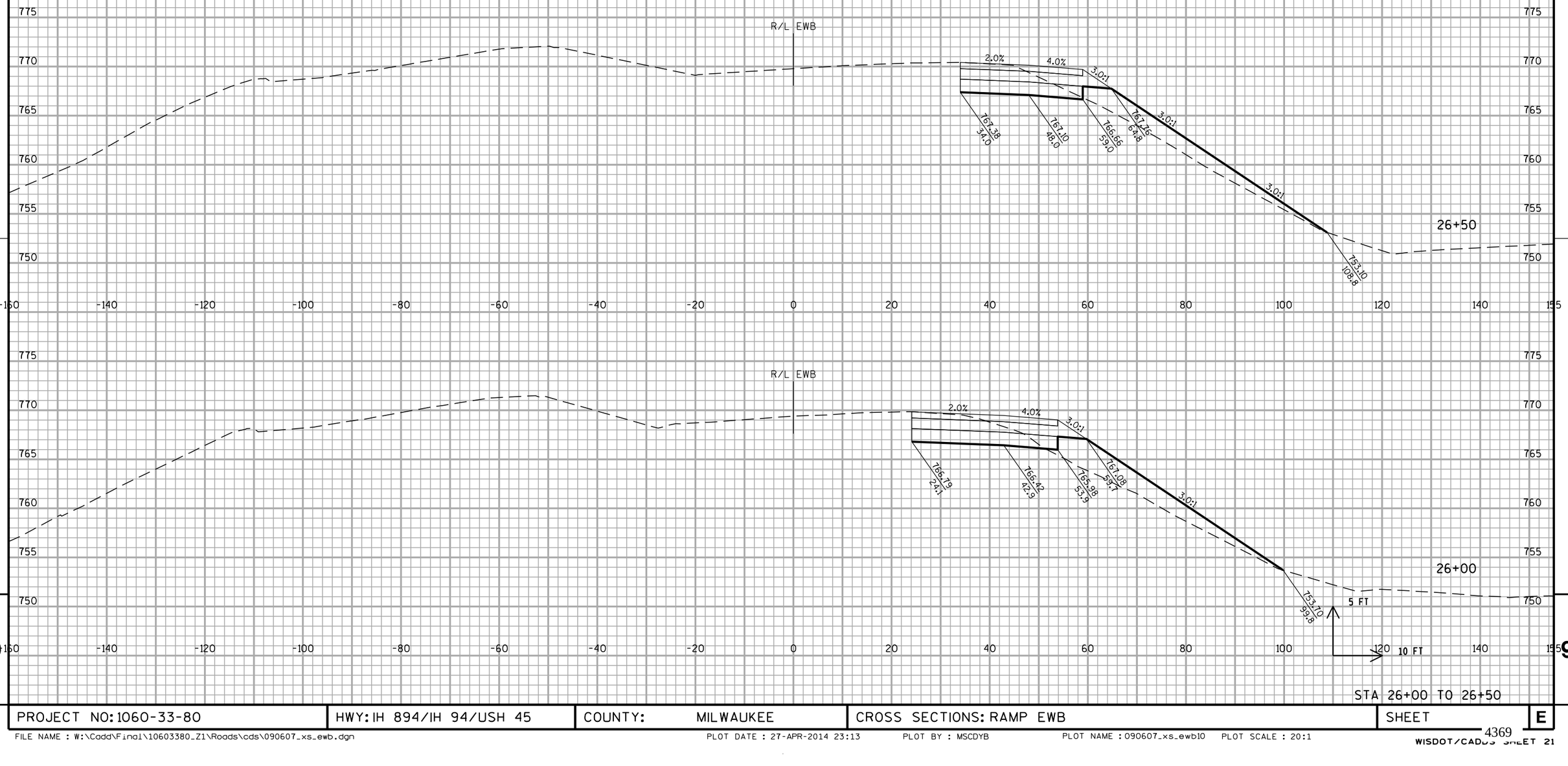


STA 25+00 TO 25+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb9 PLOT SCALE : 20:1

ALL WORK STAGE 2

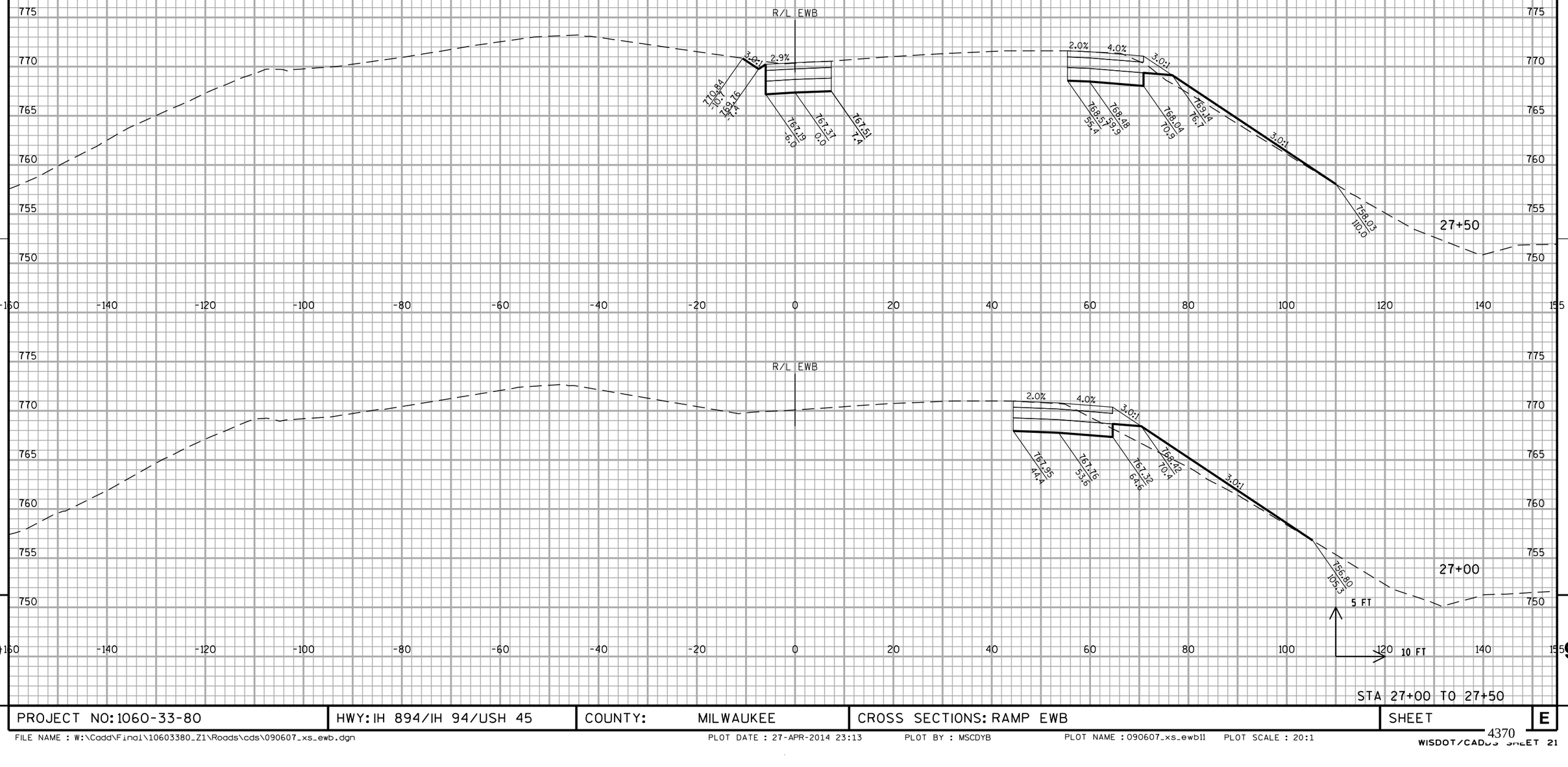


STA 26+00 TO 26+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb10 PLOT SCALE : 20:1

ALL WORK STAGE 2

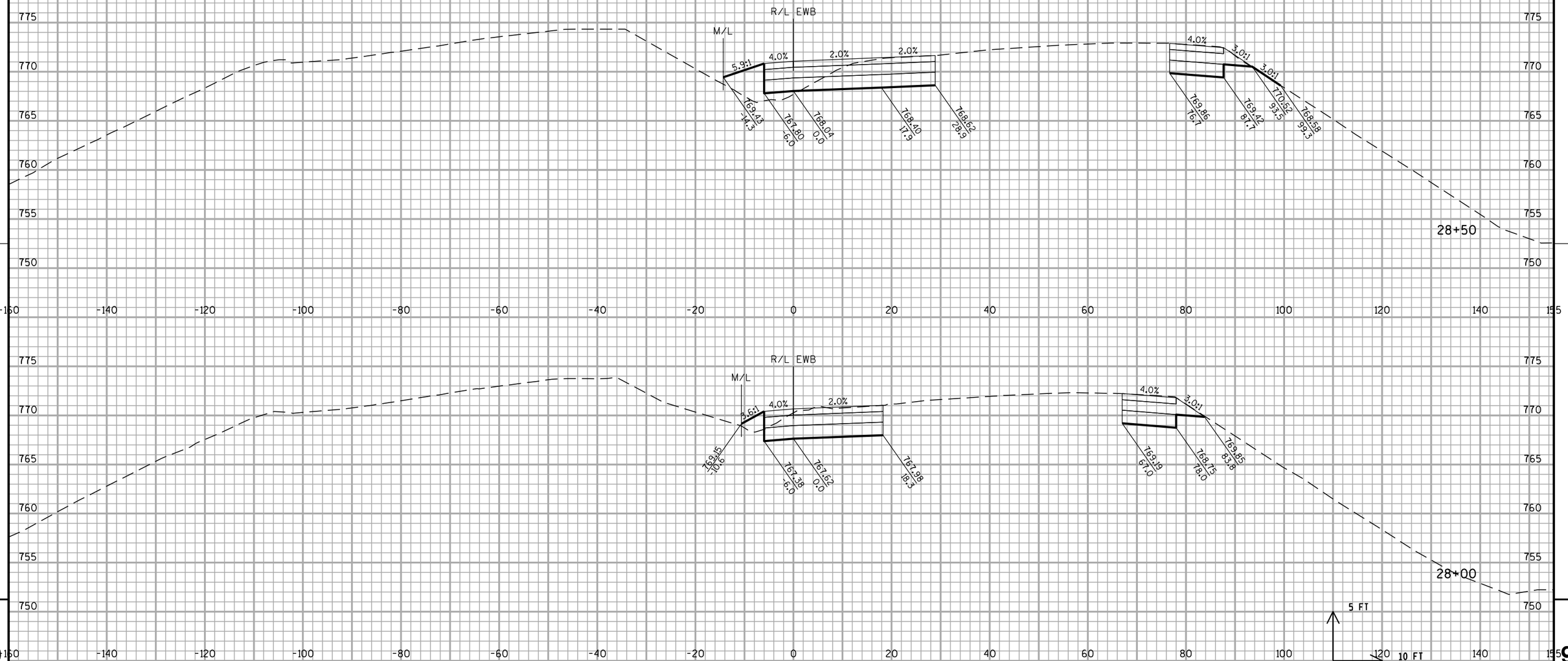


STA 27+00 TO 27+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb11 PLOT SCALE : 20:1

ALL WORK STAGE 2

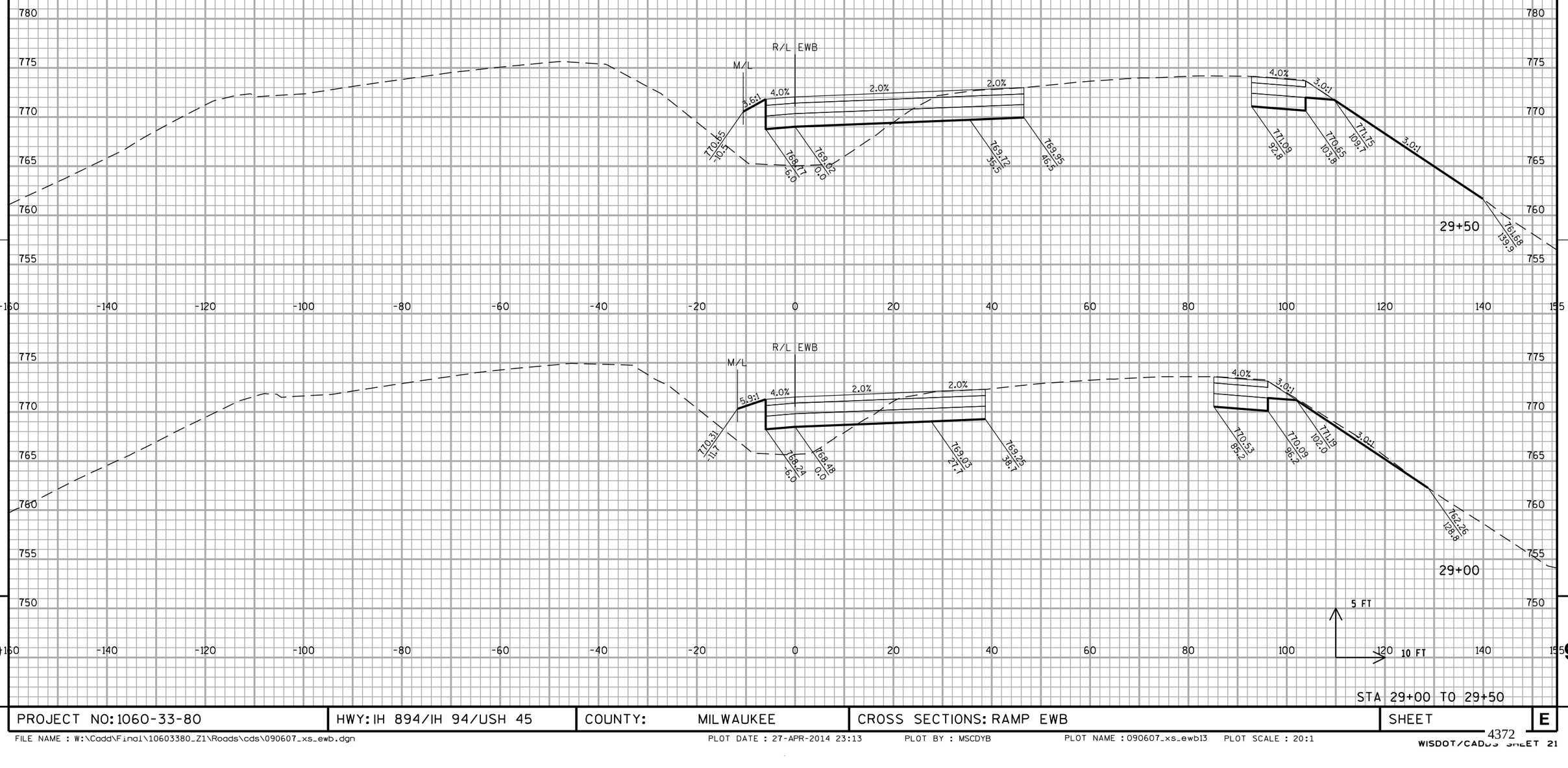


STA 28+00 TO 28+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb12 PLOT SCALE : 20:1

ALL WORK STAGE 2



9

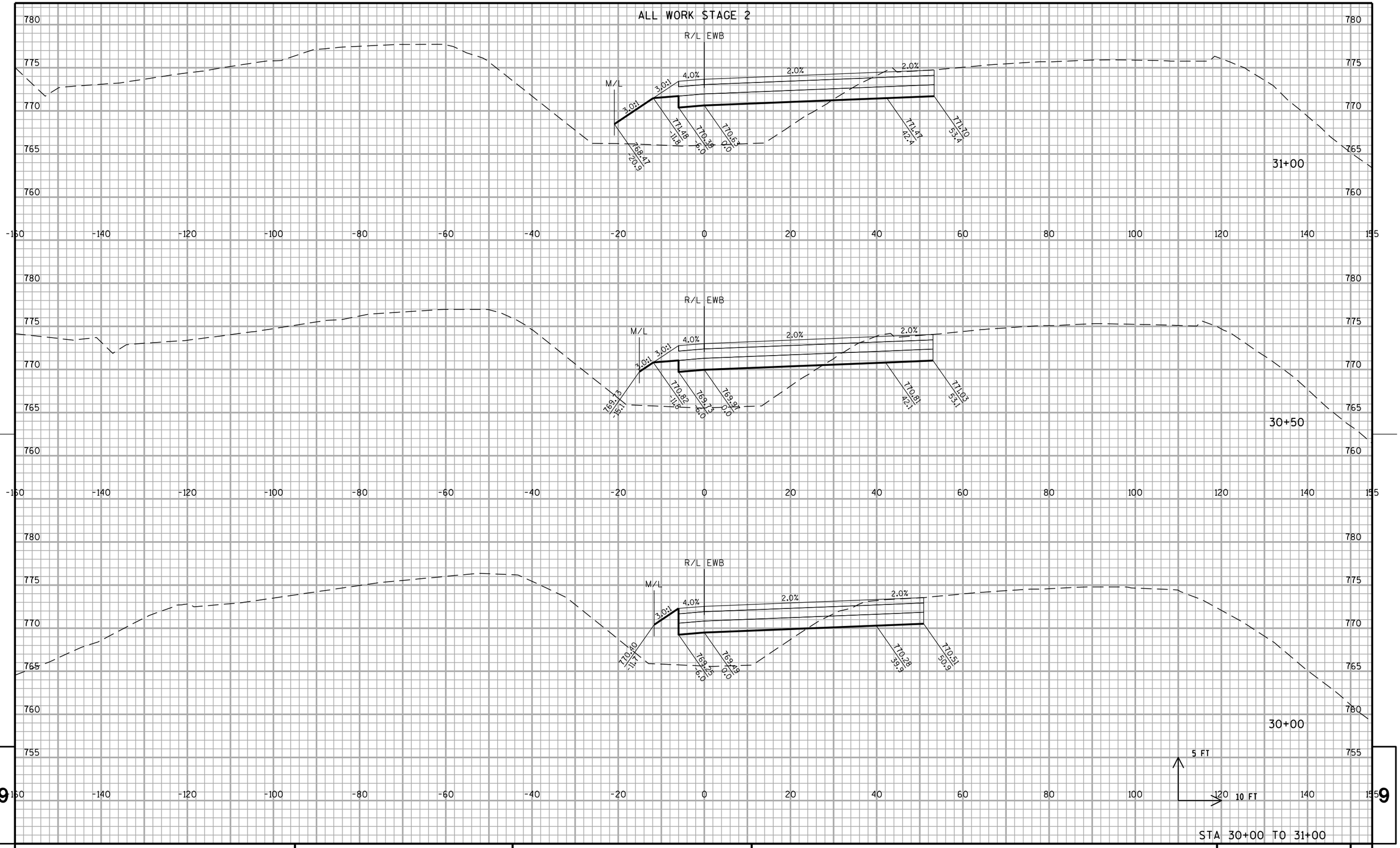
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

STA 29+00 TO 29+50

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb13 PLOT SCALE : 20:1

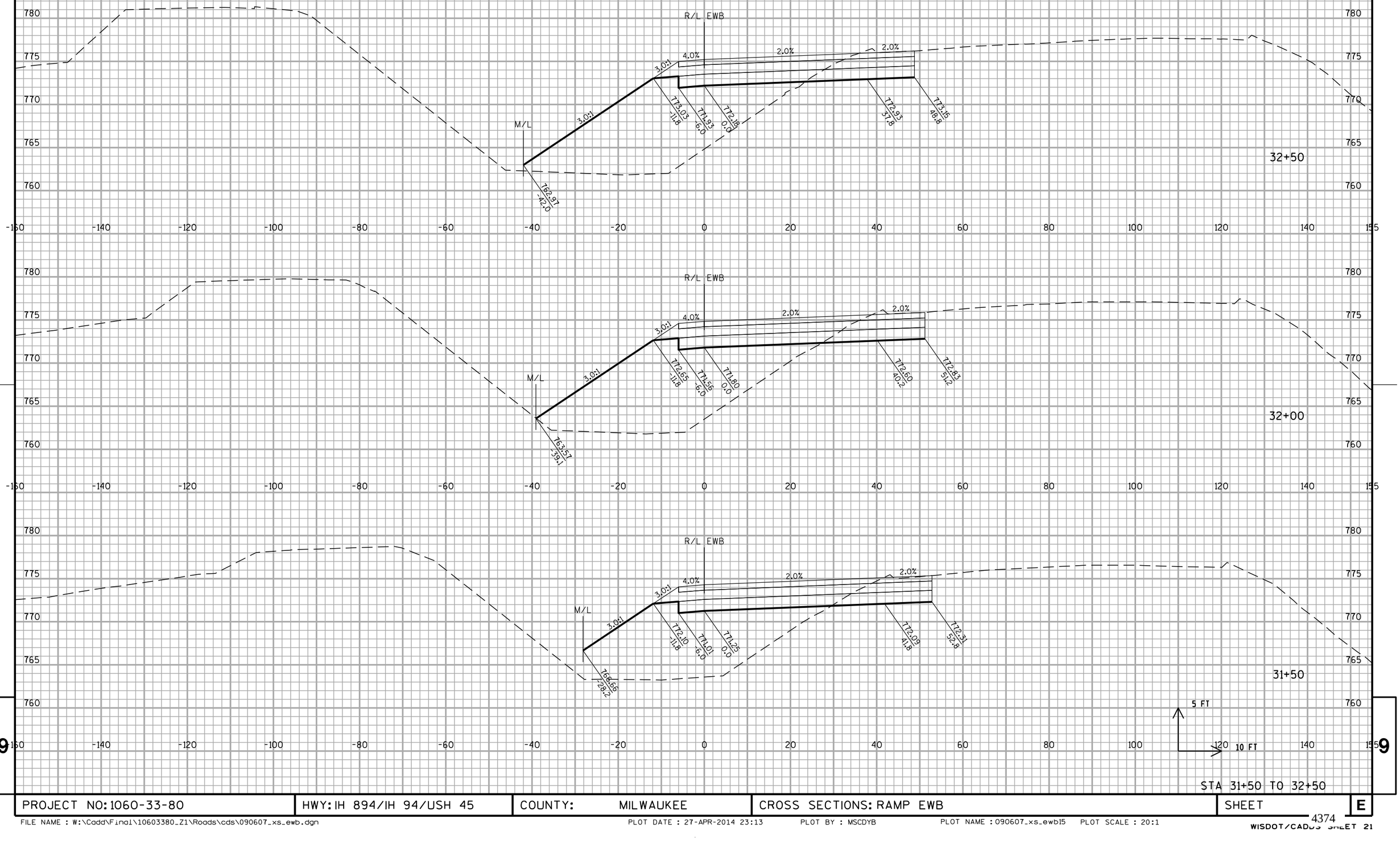
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb14 PLOT SCALE : 20:1

ALL WORK STAGE 2

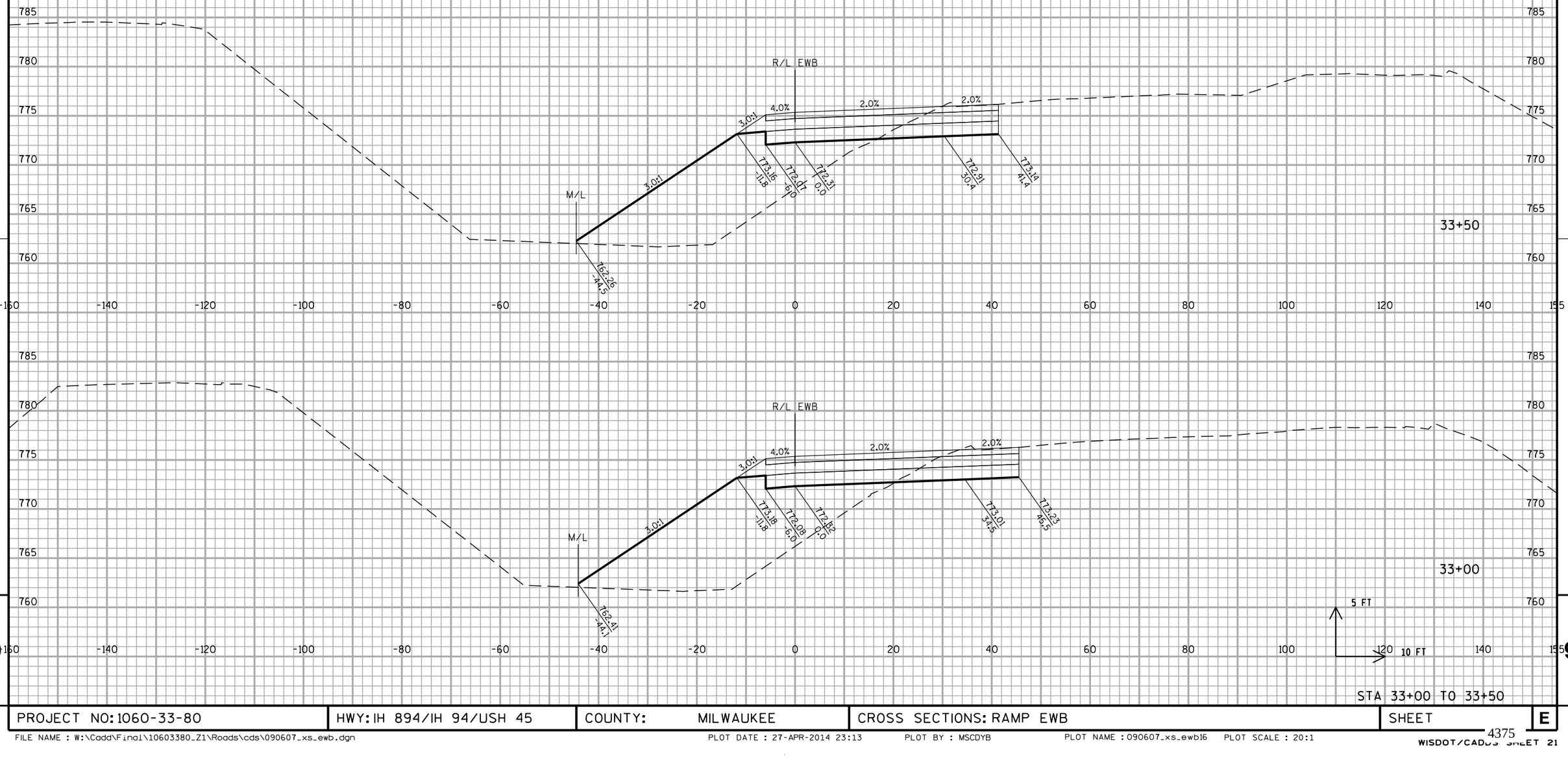


STA 31+50 TO 32+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb15 PLOT SCALE : 20:1

ALL WORK STAGE 2

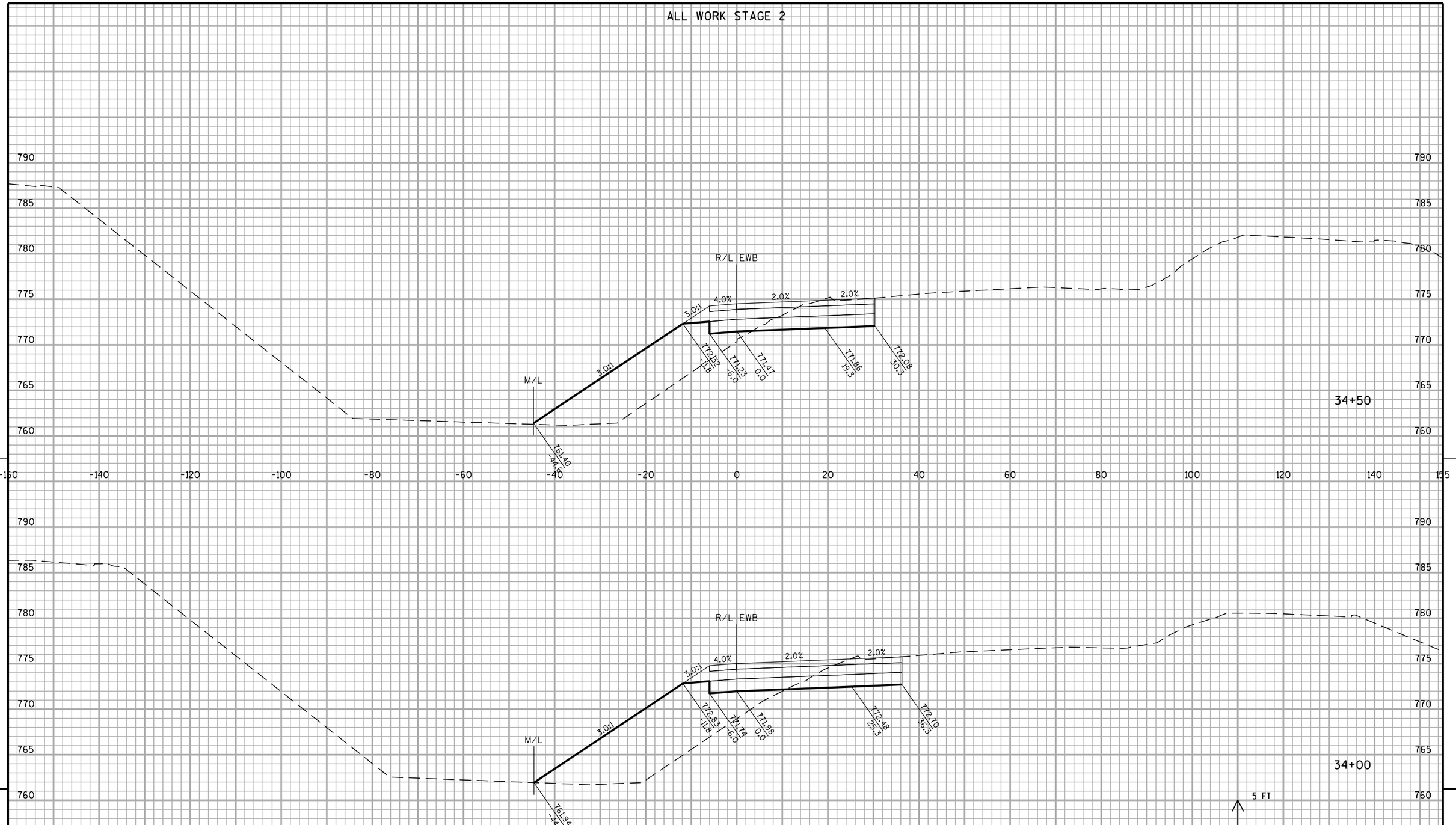


STA 33+00 TO 33+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb16 PLOT SCALE : 20:1

ALL WORK STAGE 2

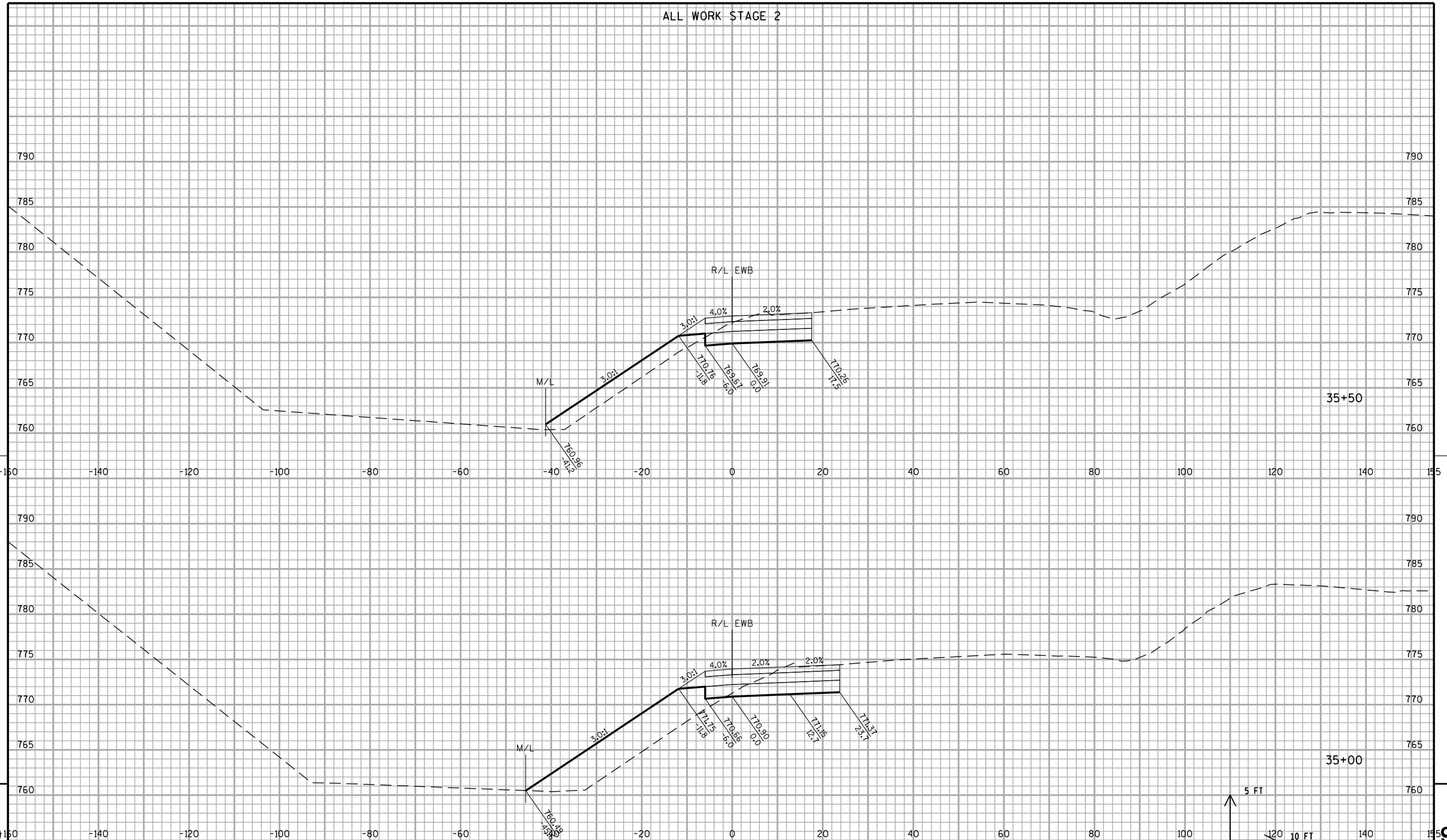


STA 34+00 TO 34+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb17 PLOT SCALE : 20:1

ALL WORK STAGE 2



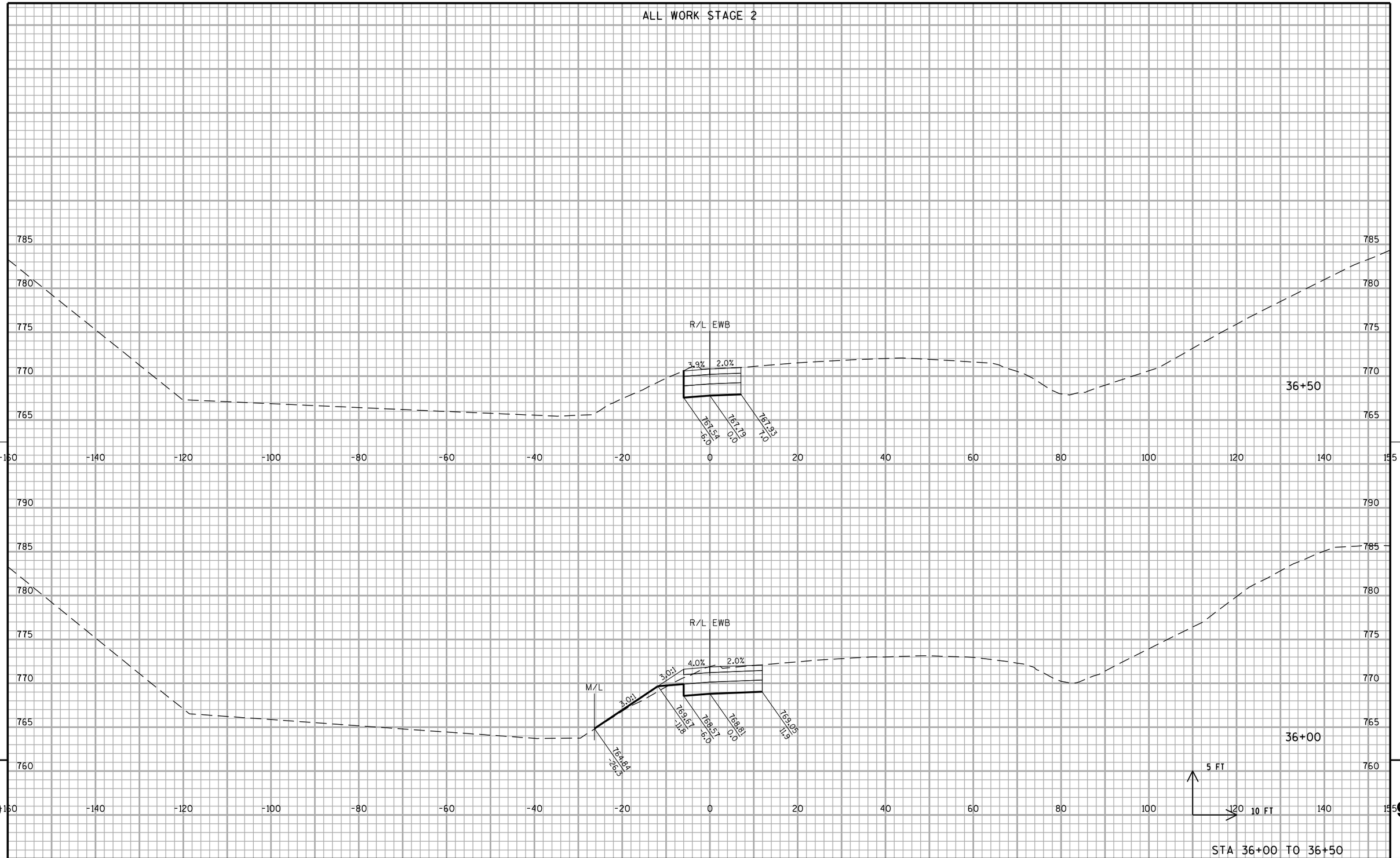
STA 35+00 TO 35+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb18 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



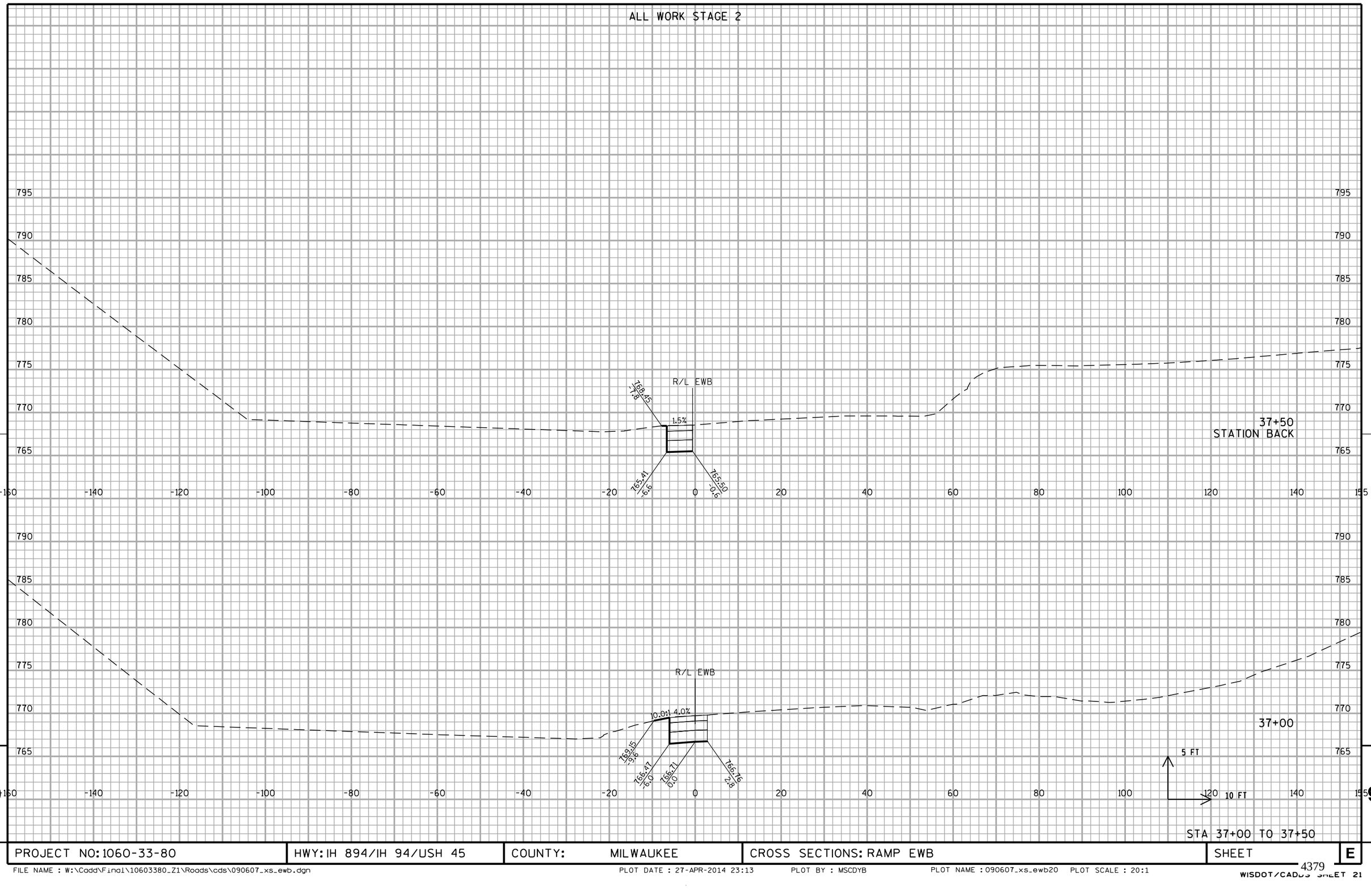
STA 36+00 TO 36+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb19 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

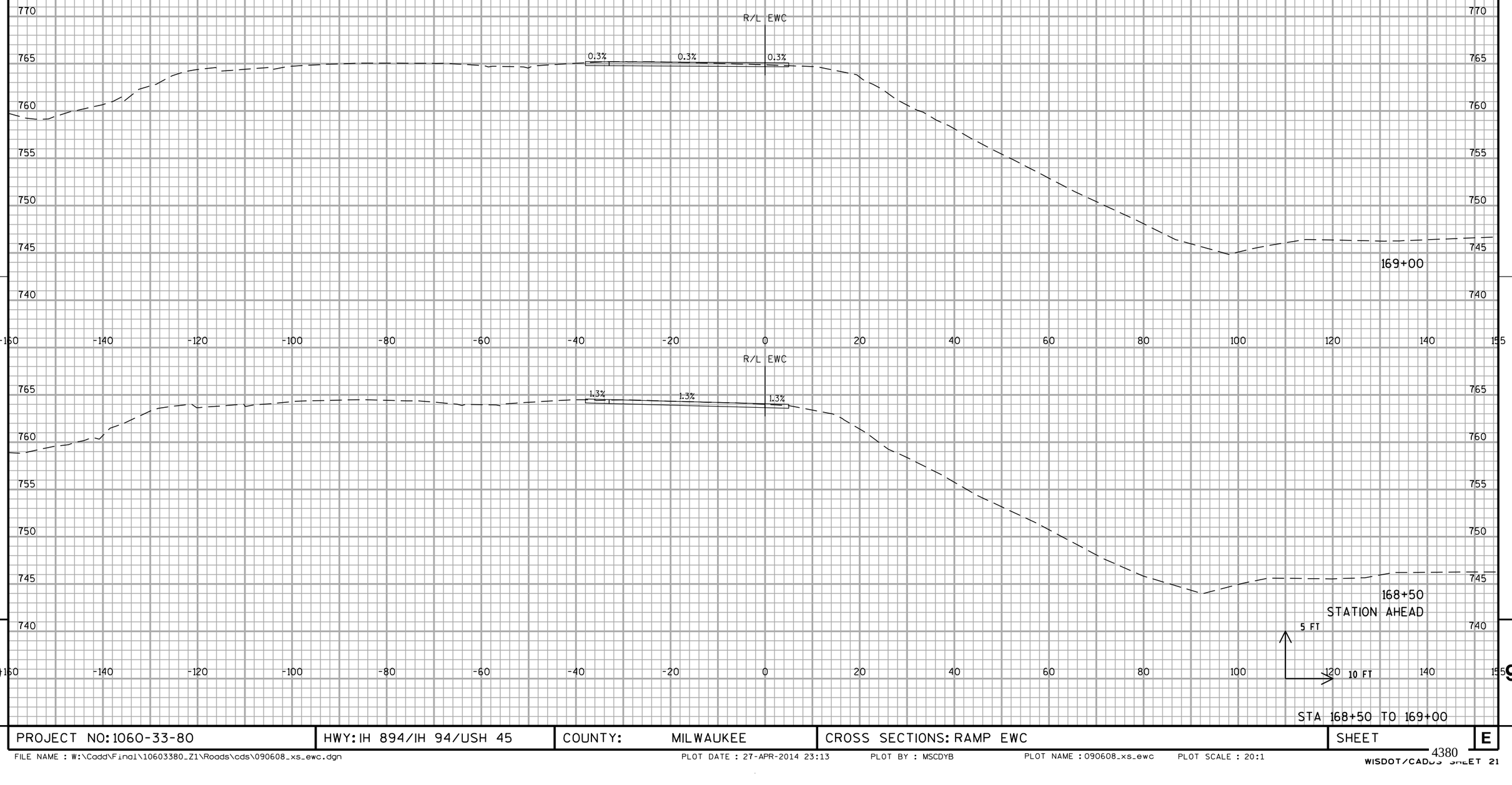


STA 37+00 TO 37+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090607_xs_ewb.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090607_xs_ewb20 PLOT SCALE : 20:1

ALL WORK STAGE 2

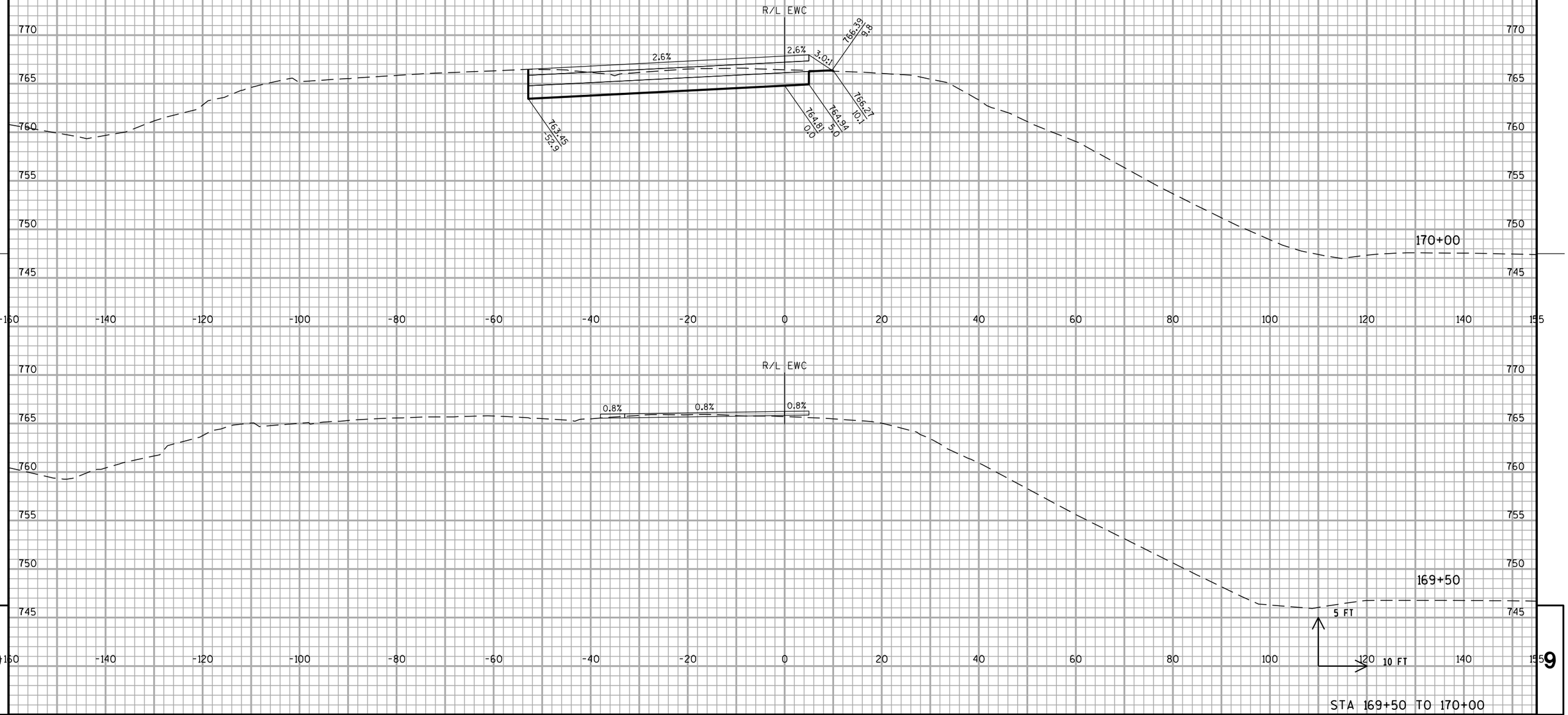


STA 168+50 TO 169+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090608_xs_ewc.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090608_xs_ewc PLOT SCALE : 20:1

ALL WORK STAGE 2

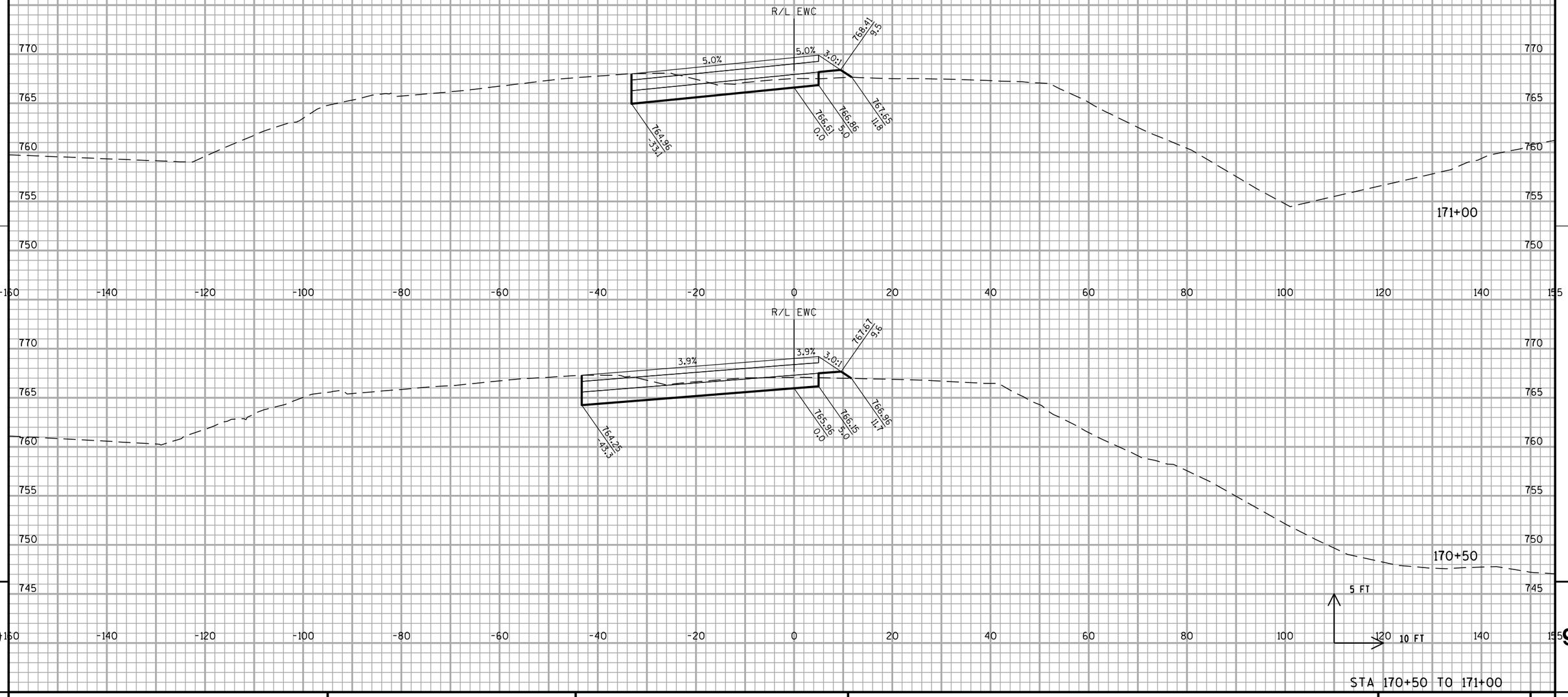


STA 169+50 TO 170+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

9 9

ALL WORK STAGE 2



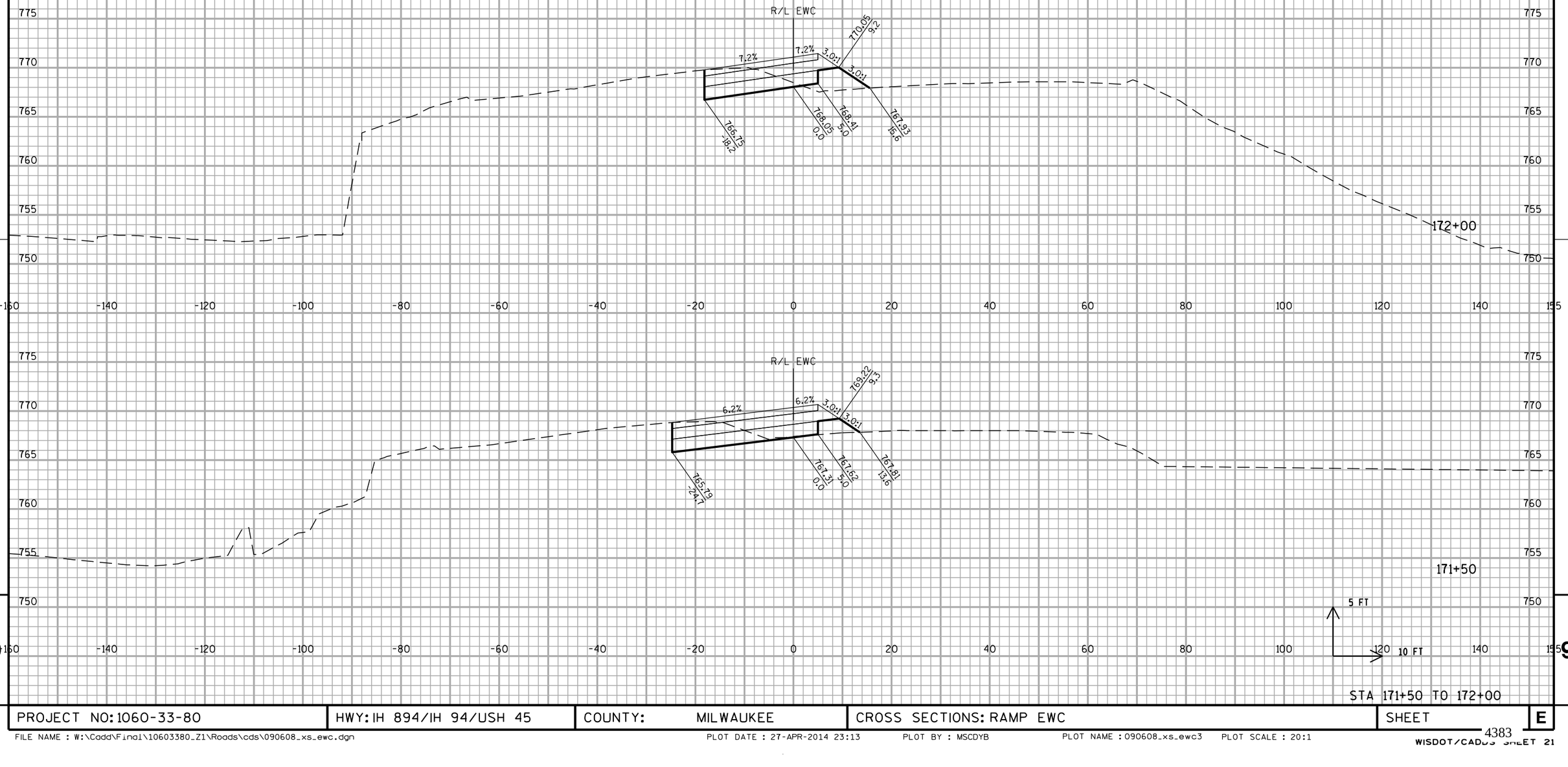
STA 170+50 TO 171+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090608_xs_ewc.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090608_xs_ewc2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



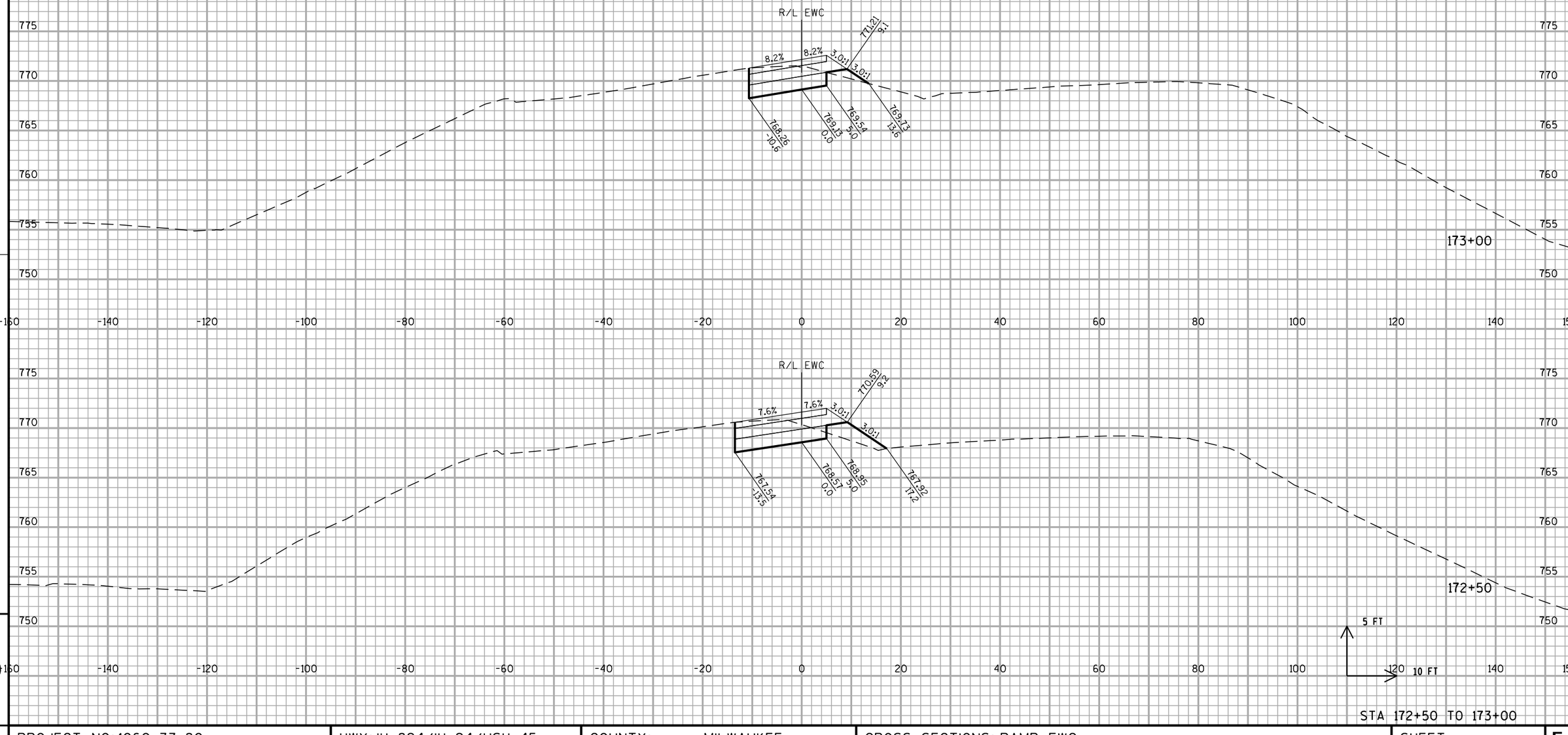
STA 171+50 TO 172+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090608_xs_ewc.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090608_xs_ewc3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

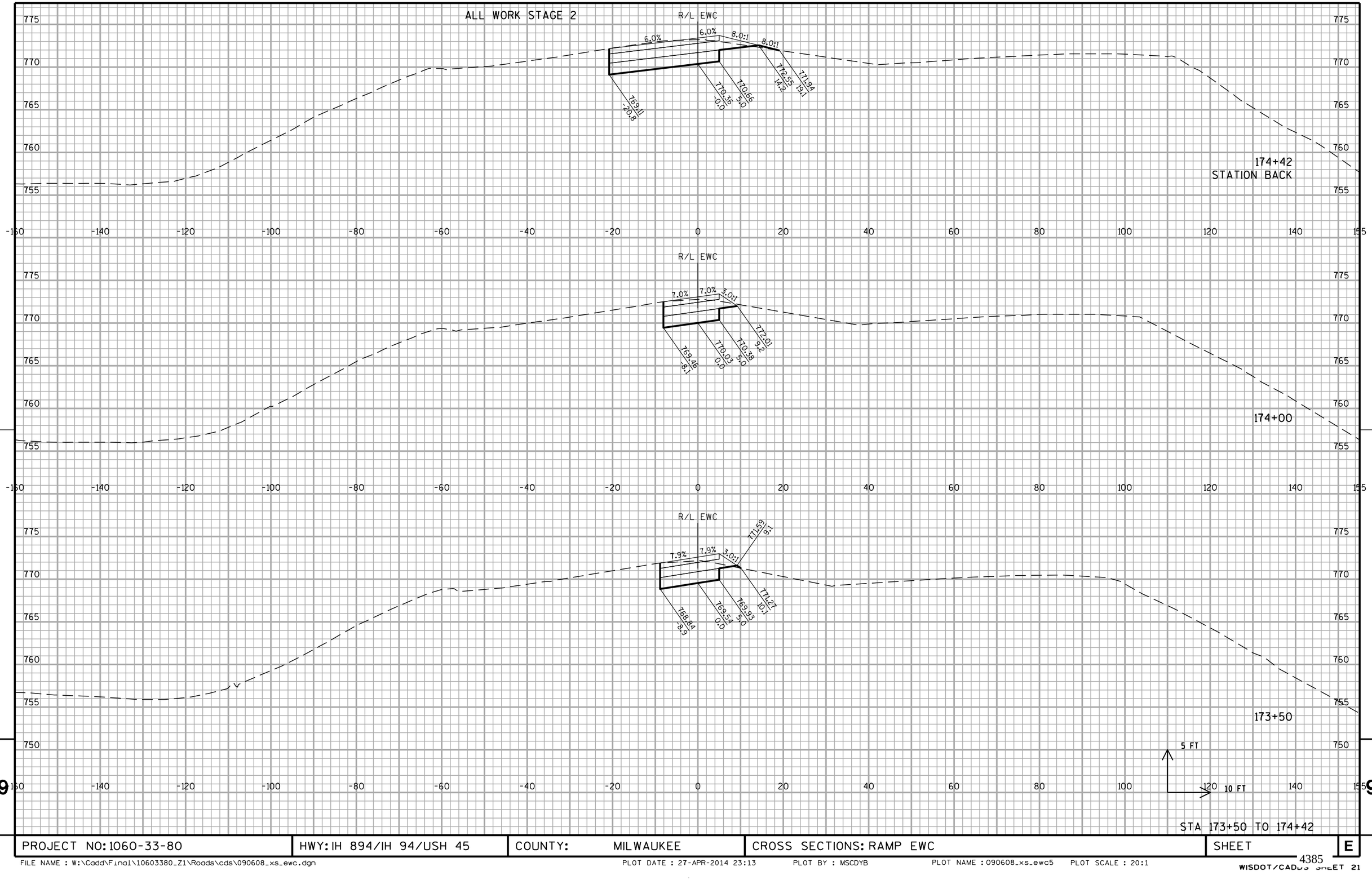


STA 172+50 TO 173+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090608_xs_ewc.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090608_xs_ewc4 PLOT SCALE : 20:1

ALL WORK STAGE 2



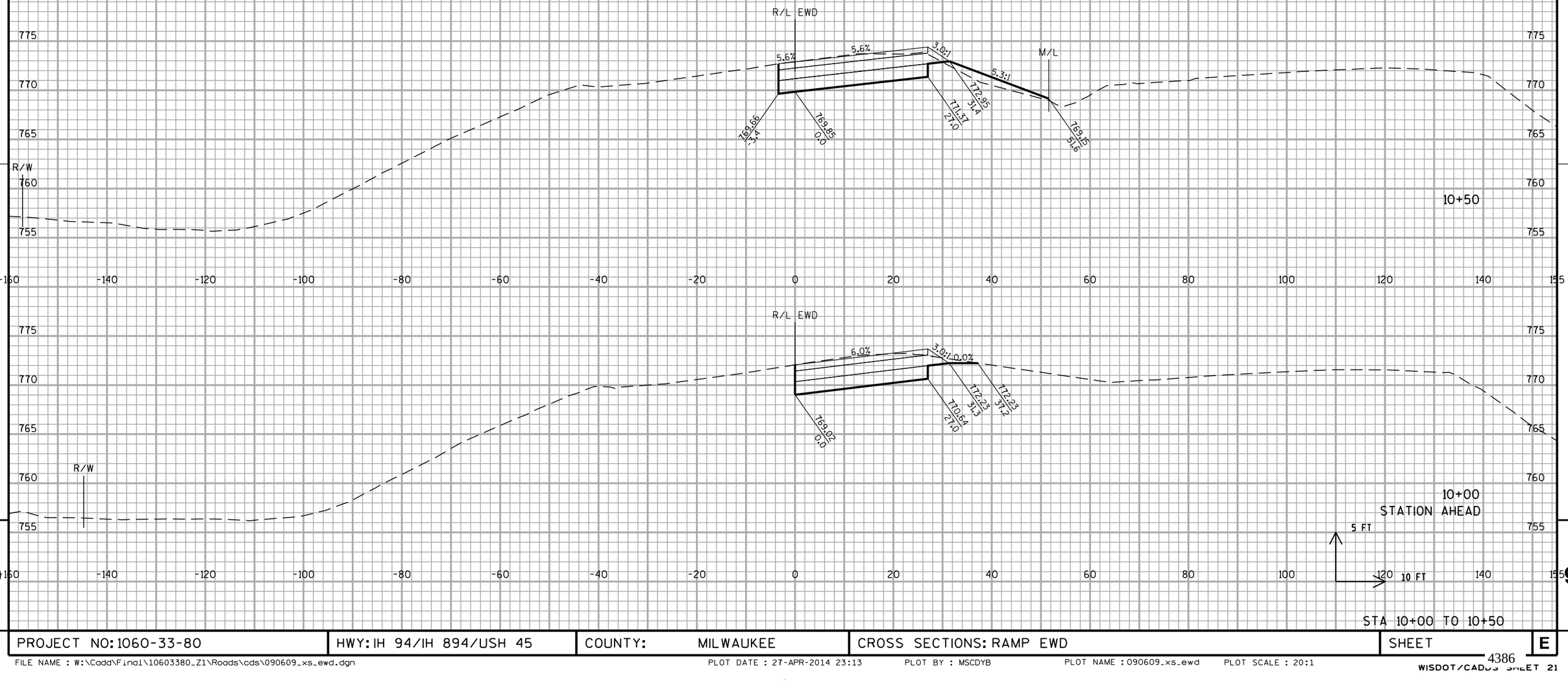
STA 173+50 TO 174+42

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090608_xs_ewc.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090608_xs_ewc5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

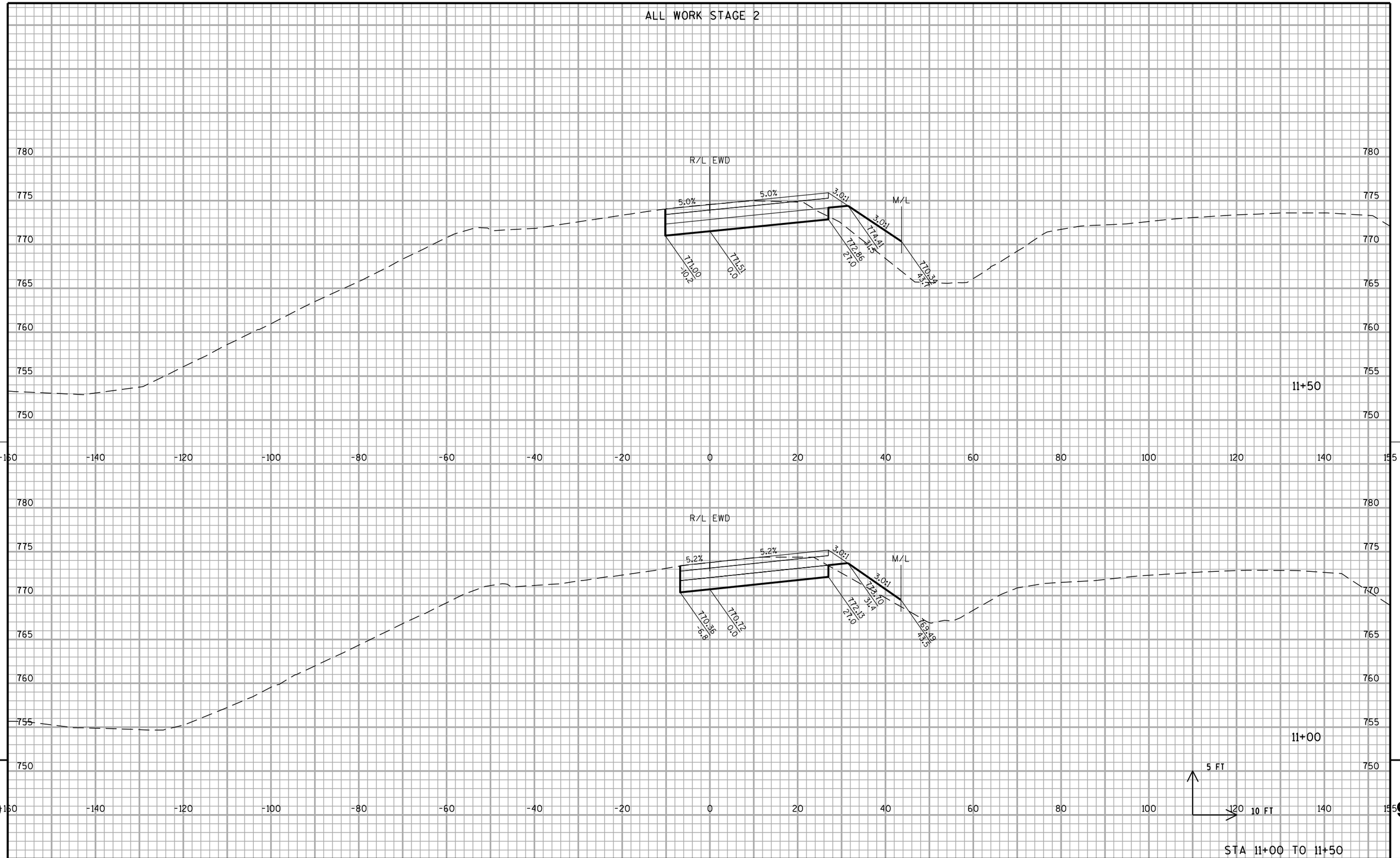


STA 10+00 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd PLOT SCALE : 20:1

ALL WORK STAGE 2



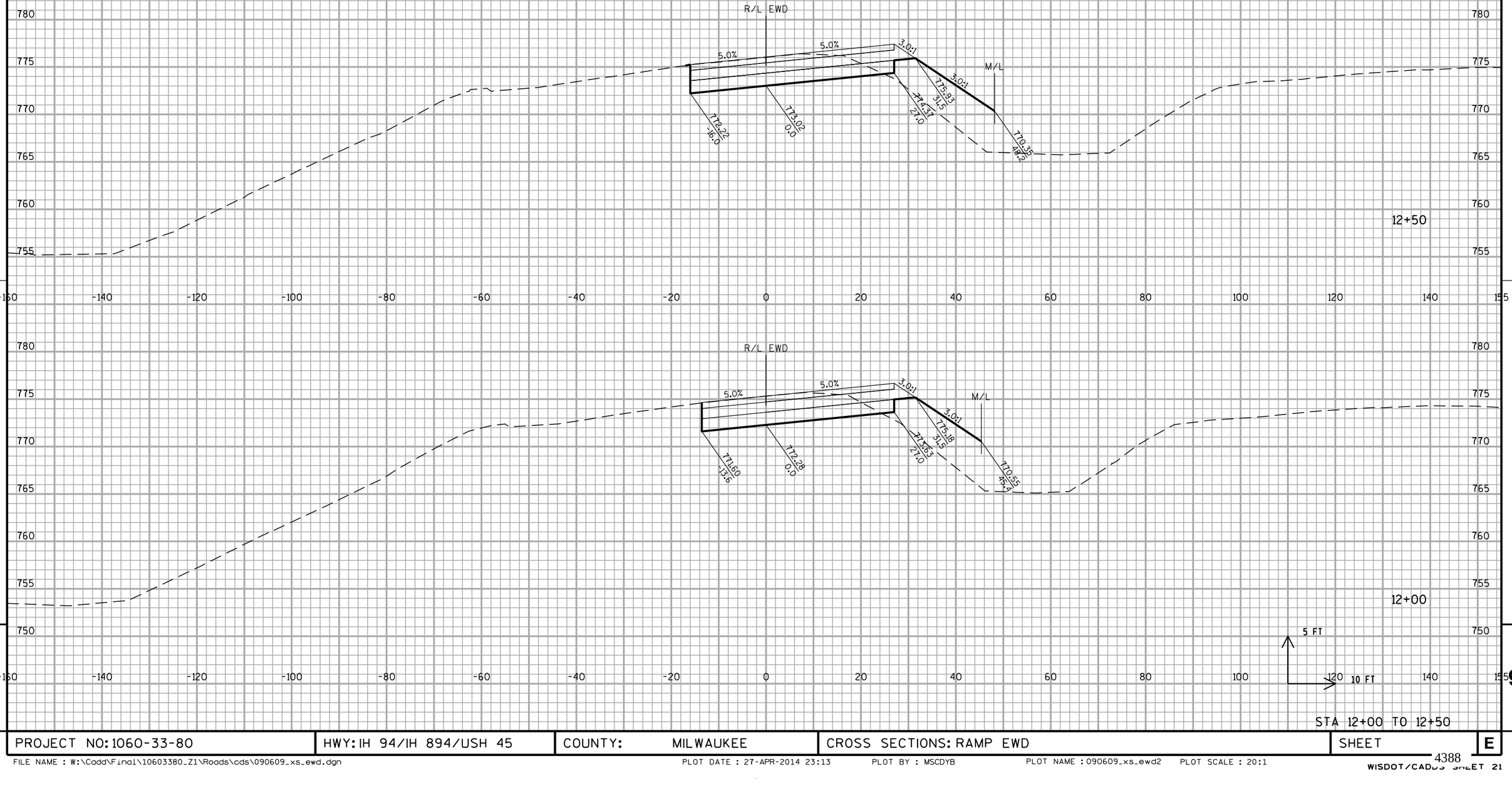
STA 11+00 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

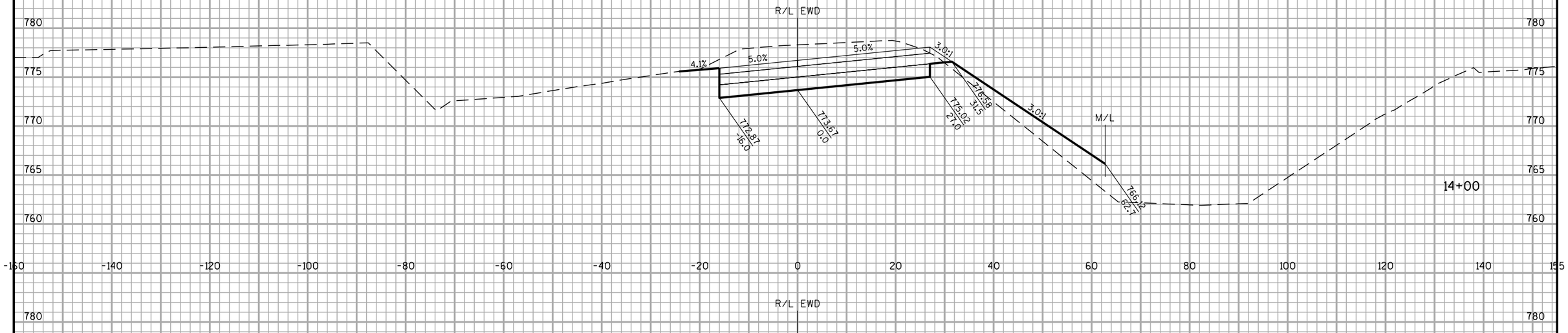


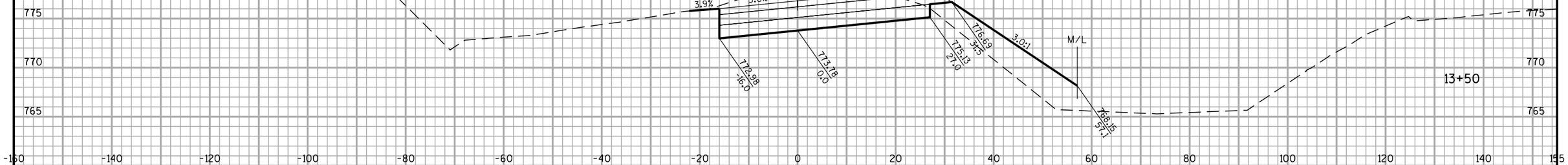
STA 12+00 TO 12+50

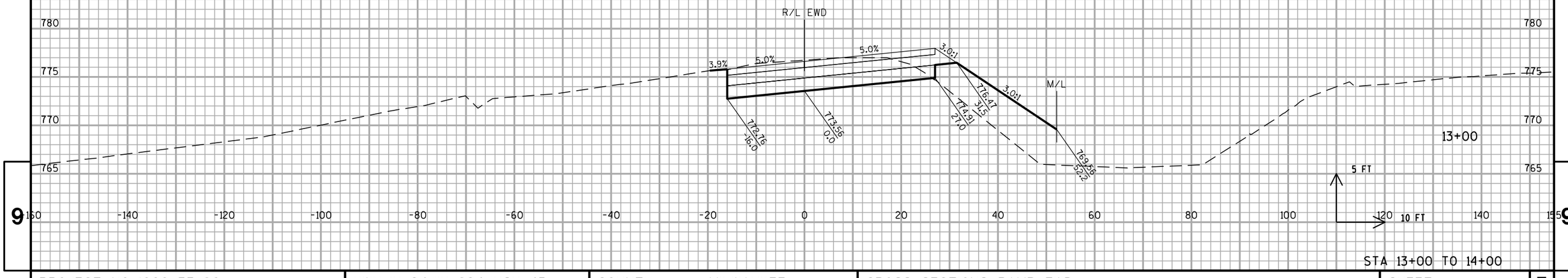
PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd2 PLOT SCALE : 20:1

ALL WORK STAGE 2







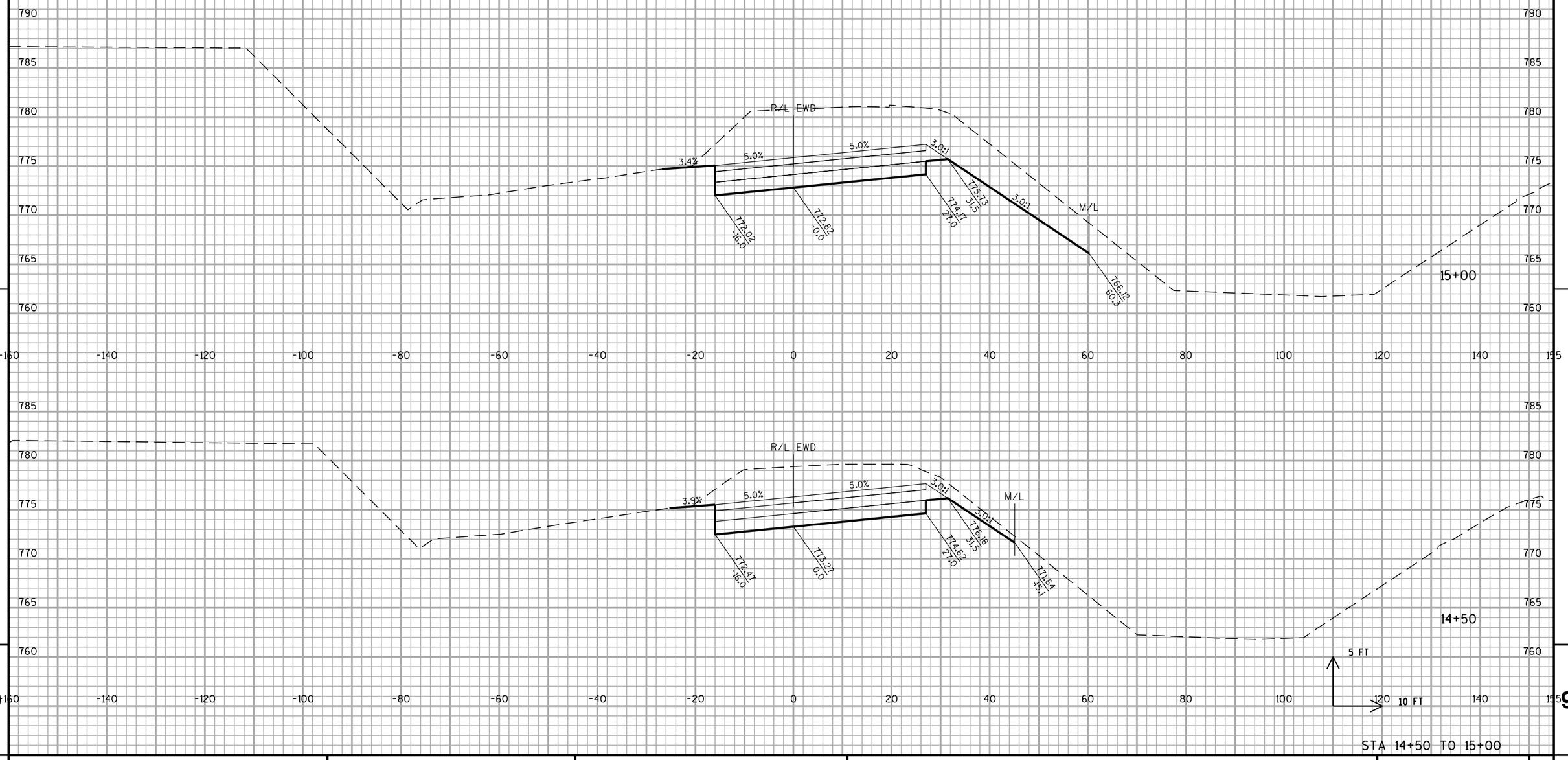
STA 13+00 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

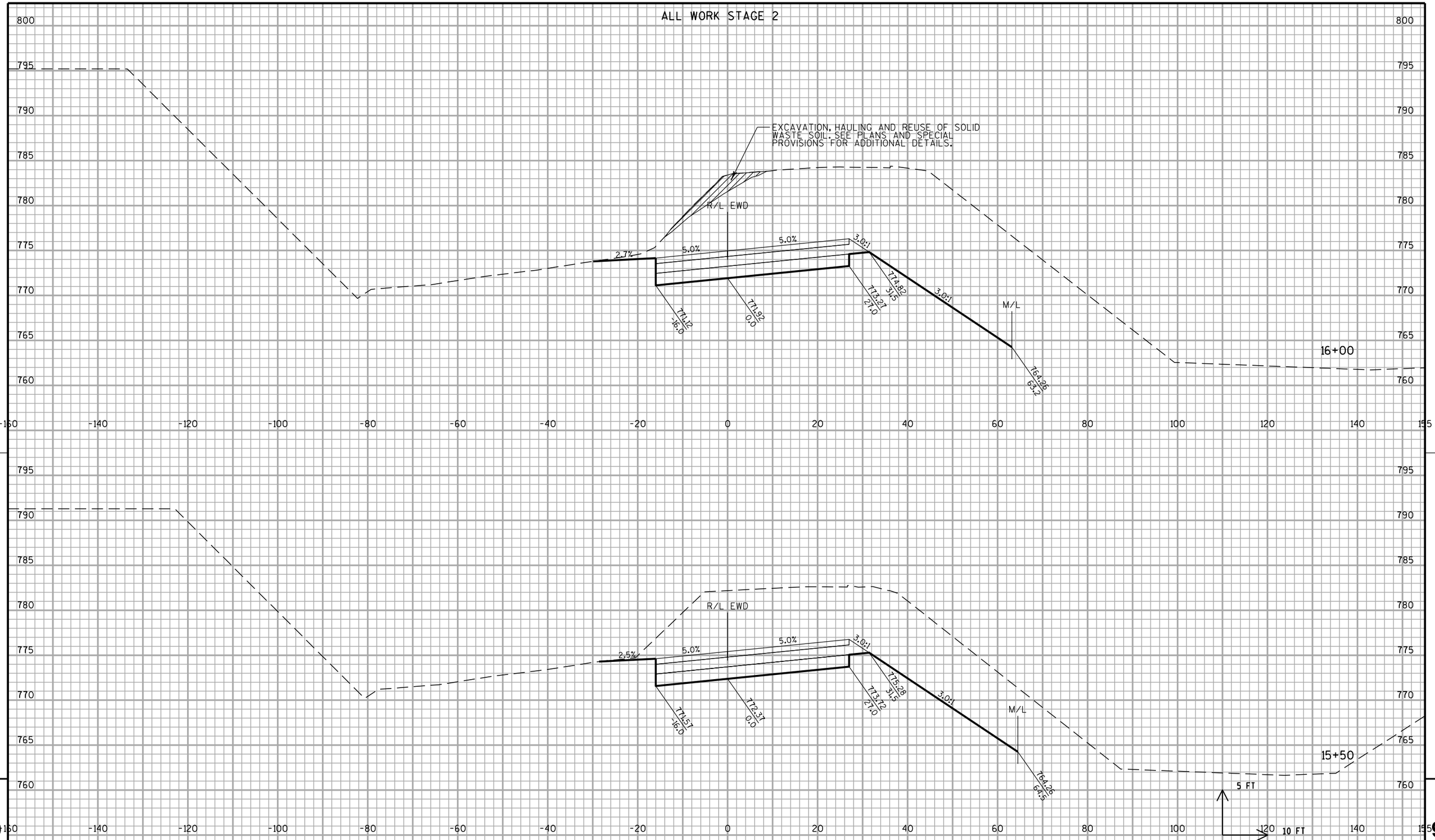


STA 14+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd4 PLOT SCALE : 20:1

ALL WORK STAGE 2

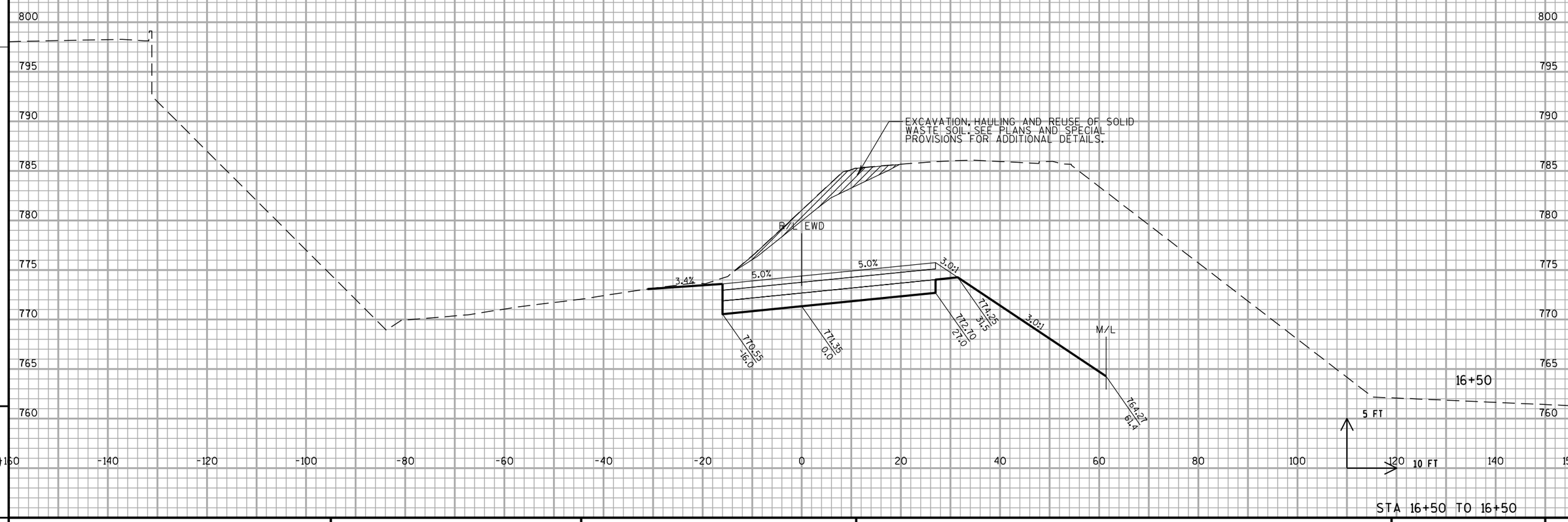


STA 15+50 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd5 PLOT SCALE : 20:1

ALL WORK STAGE 2



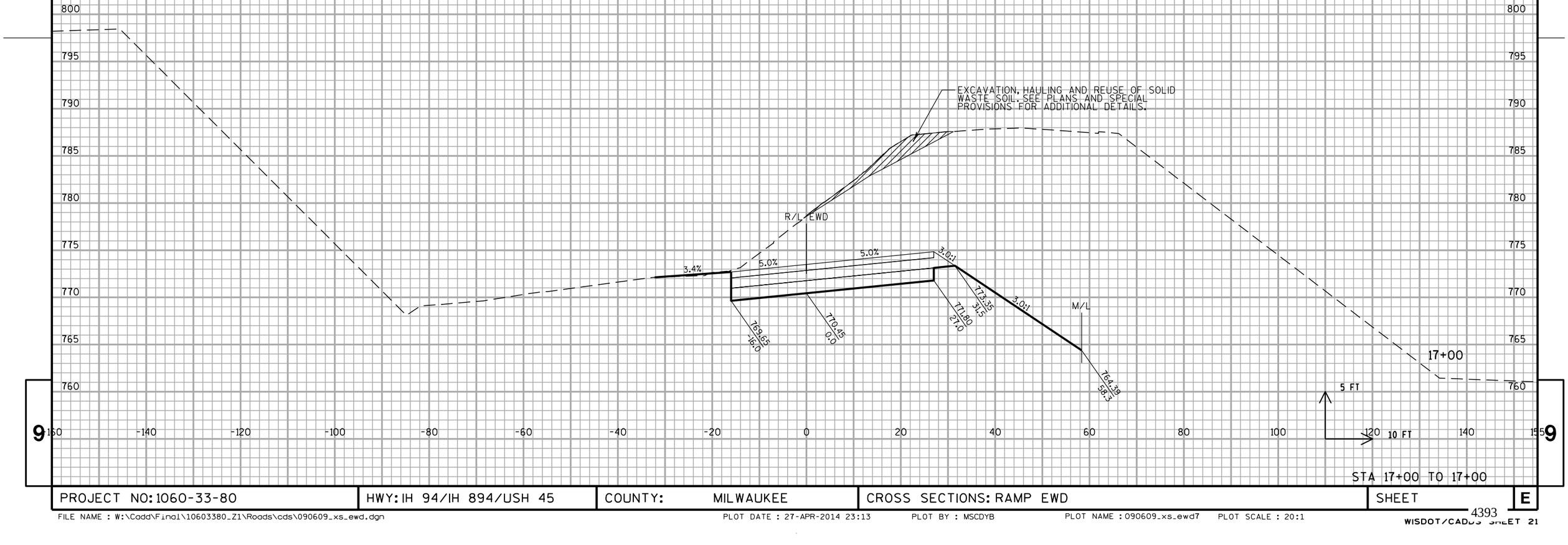
STA 16+50 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

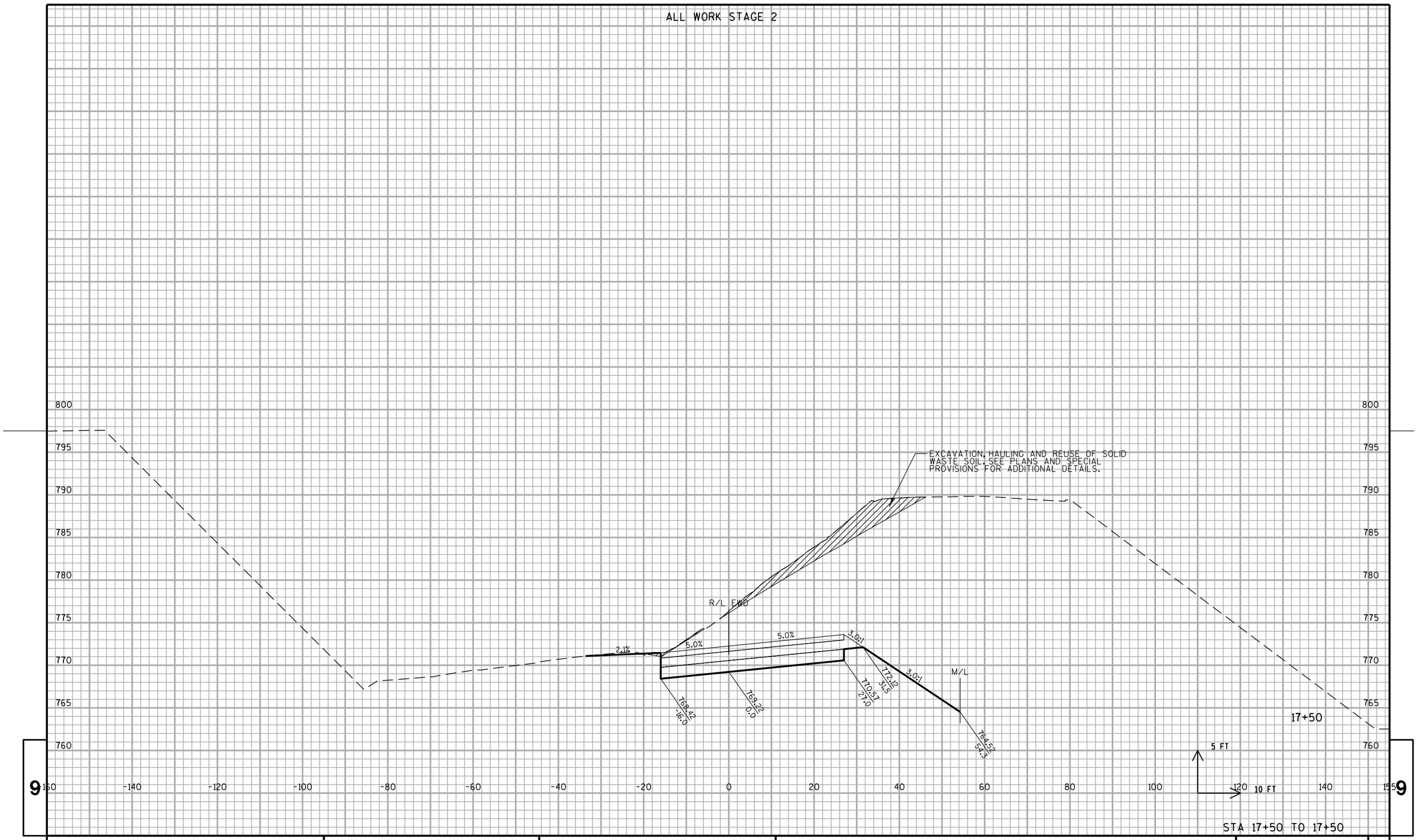


STA 17+00 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd7 PLOT SCALE : 20:1

ALL WORK STAGE 2



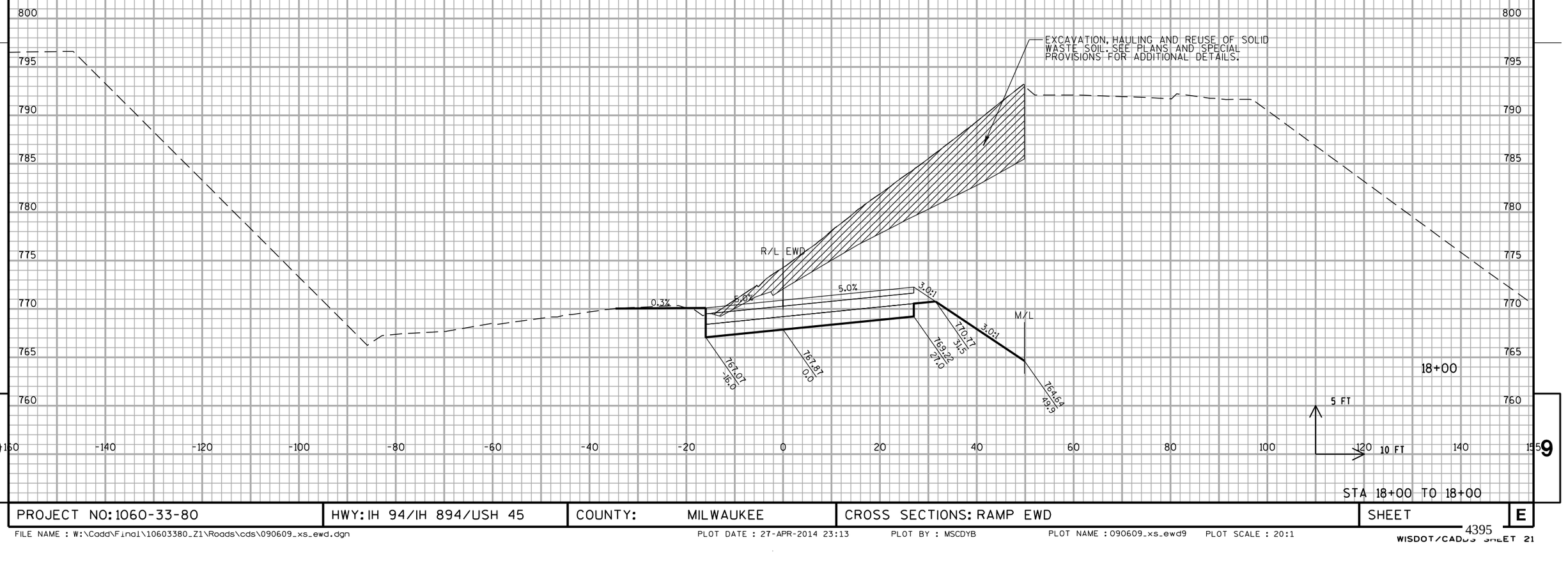
STA 17+50 TO 17+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

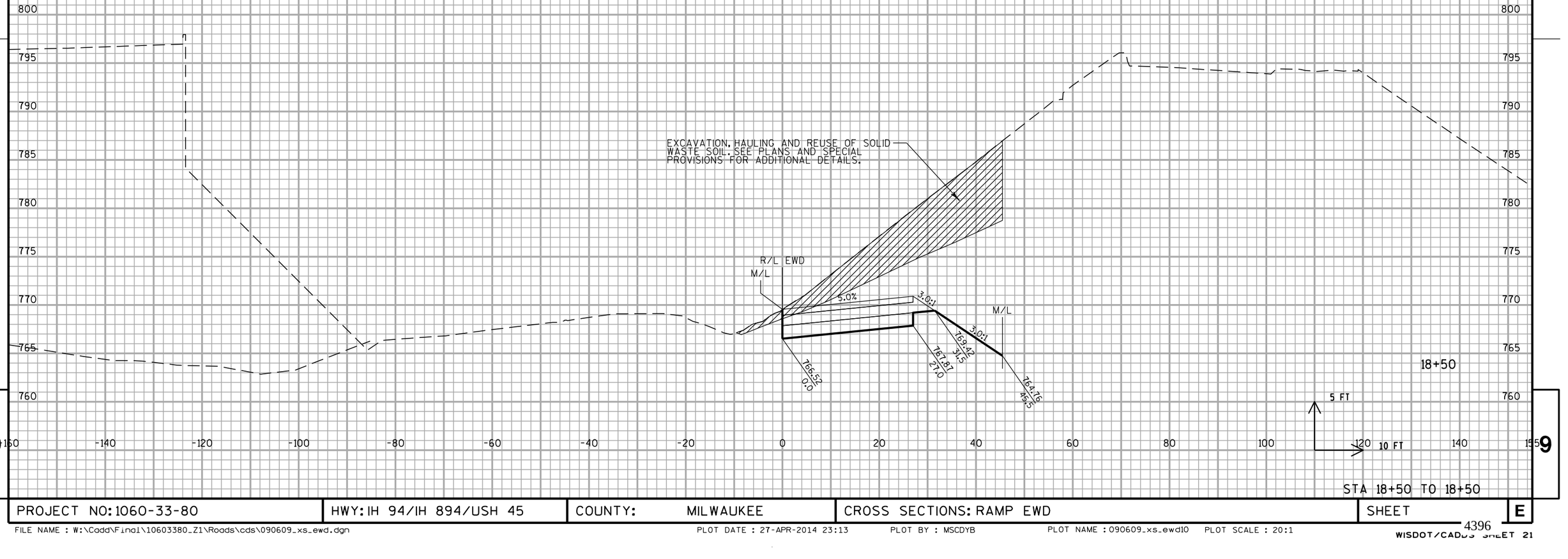
ALL WORK STAGE 2



STA 18+00 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

ALL WORK STAGE 2

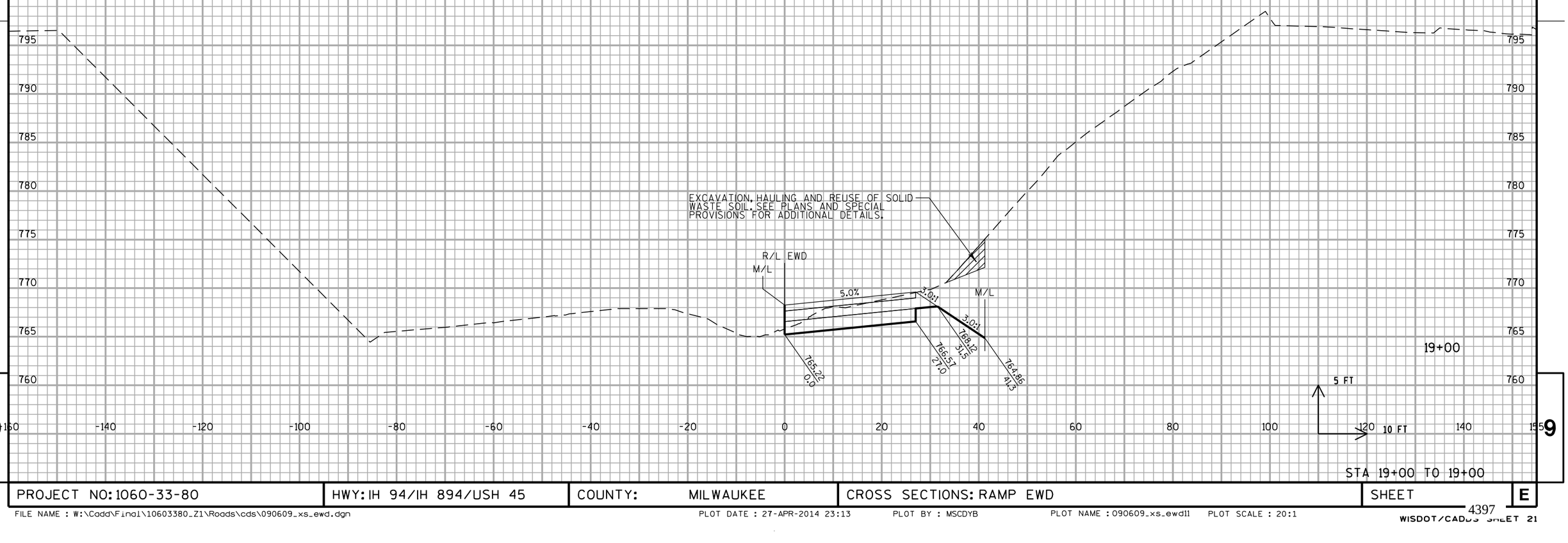


STA 18+50 TO 18+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd10 PLOT SCALE : 20:1

ALL WORK STAGE 2



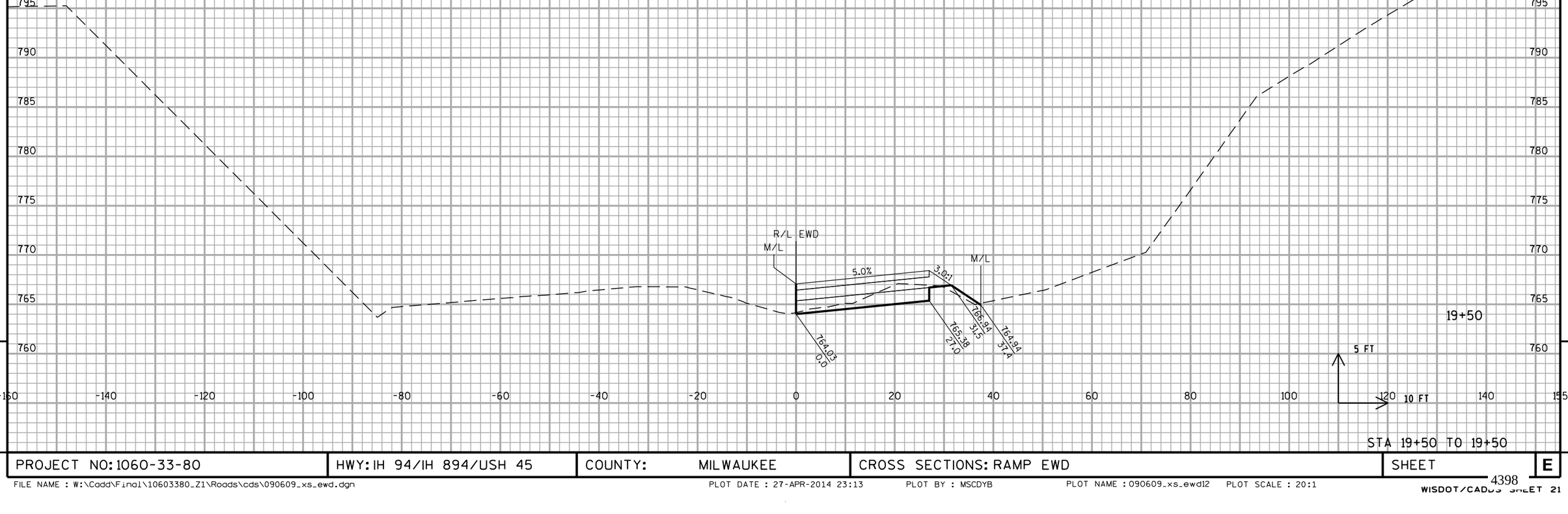
STA 19+00 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

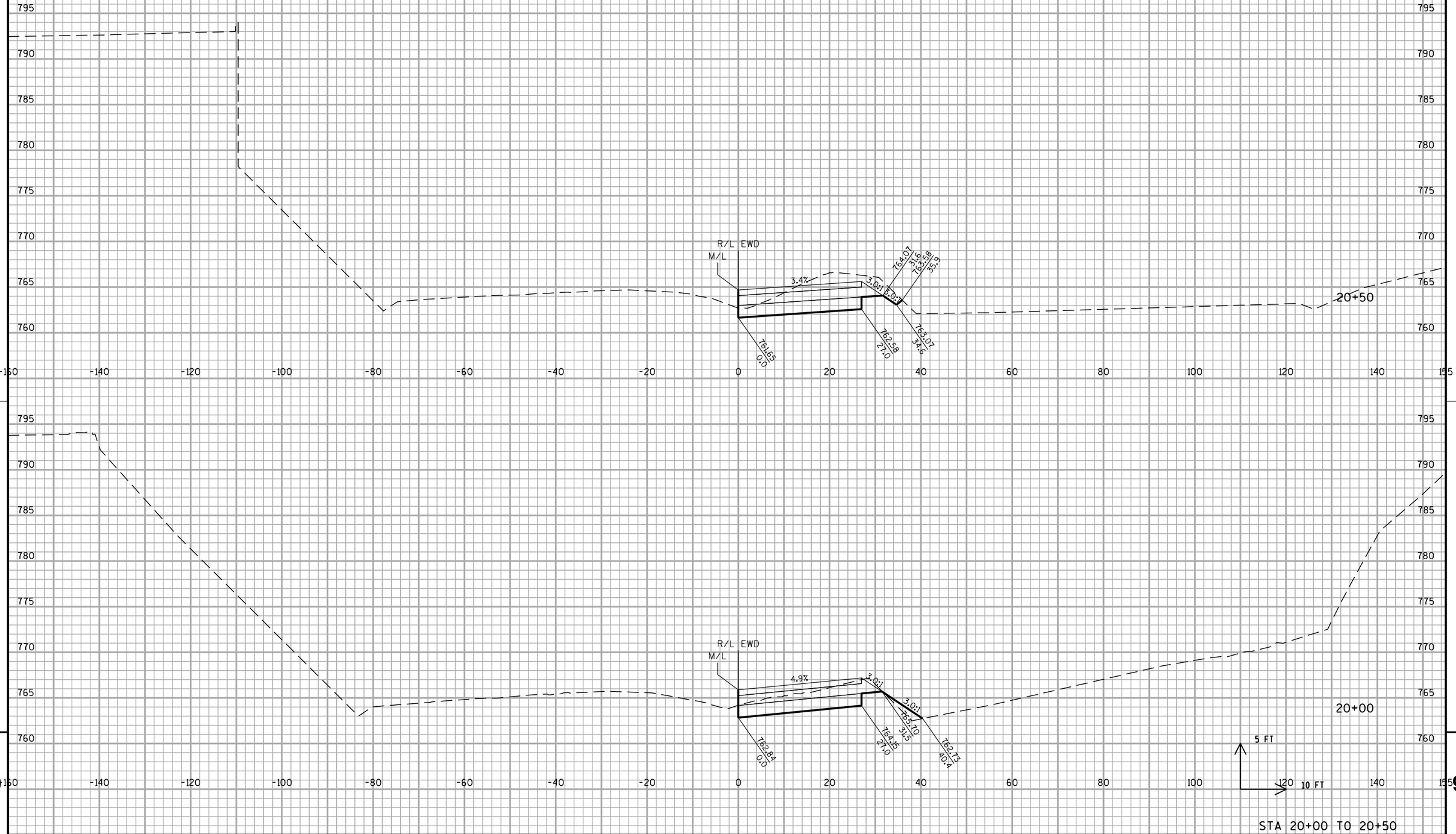
ALL WORK STAGE 2



STA 19+50 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

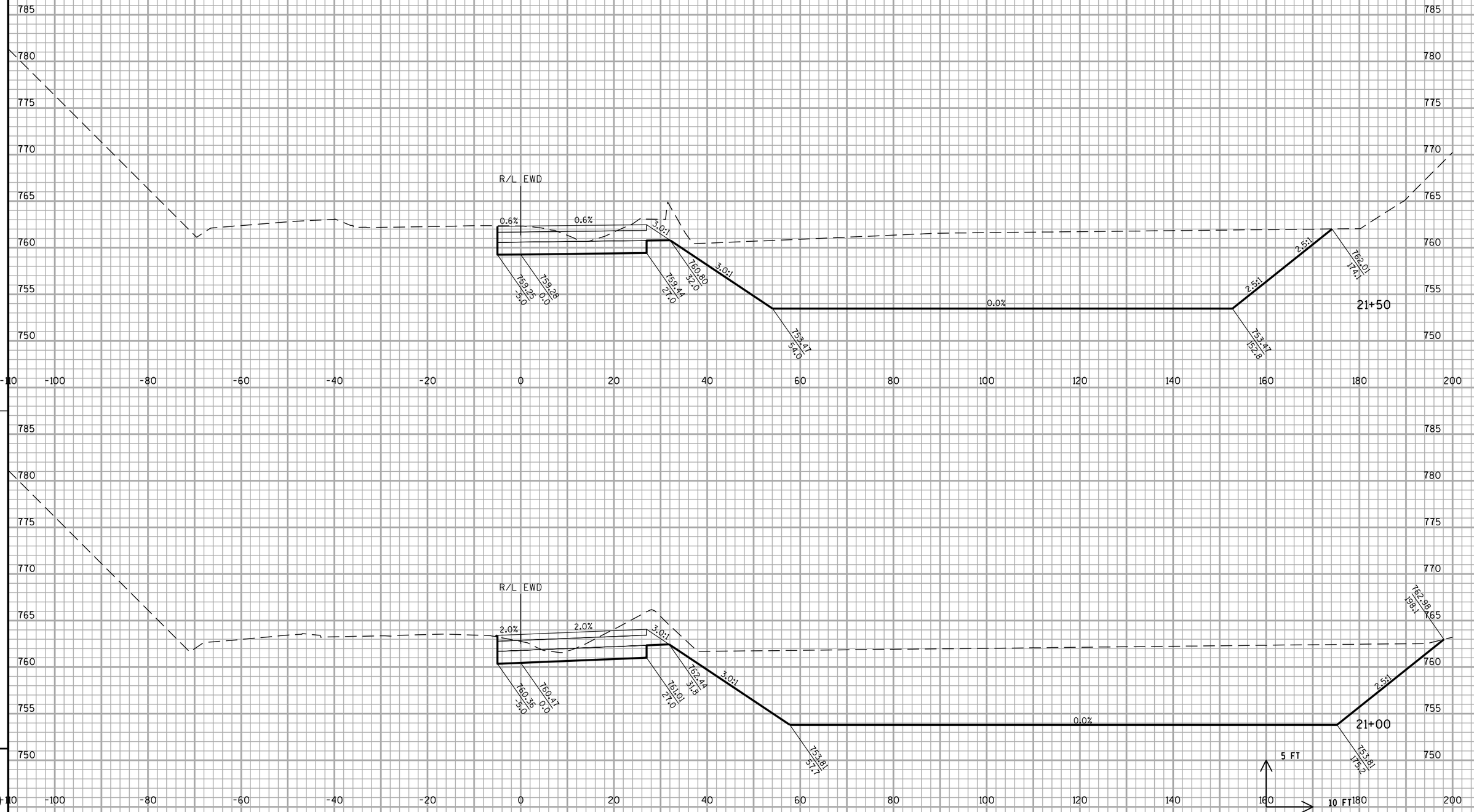
ALL WORK STAGE 2



STA 20+00 TO 20+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

ALL WORK STAGE 2

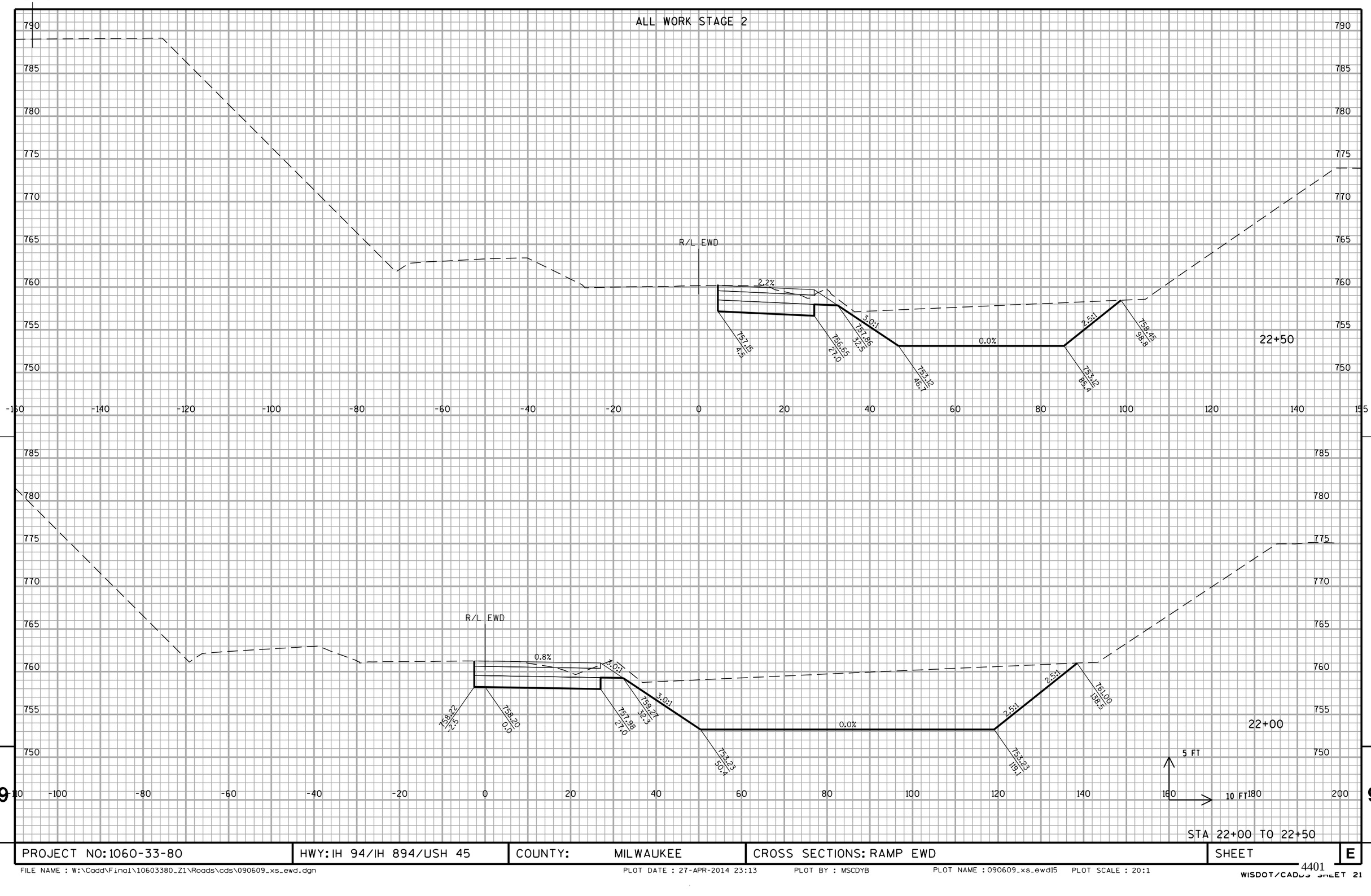


STA 21+00 TO 21+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd14 PLOT SCALE : 20:1

ALL WORK STAGE 2

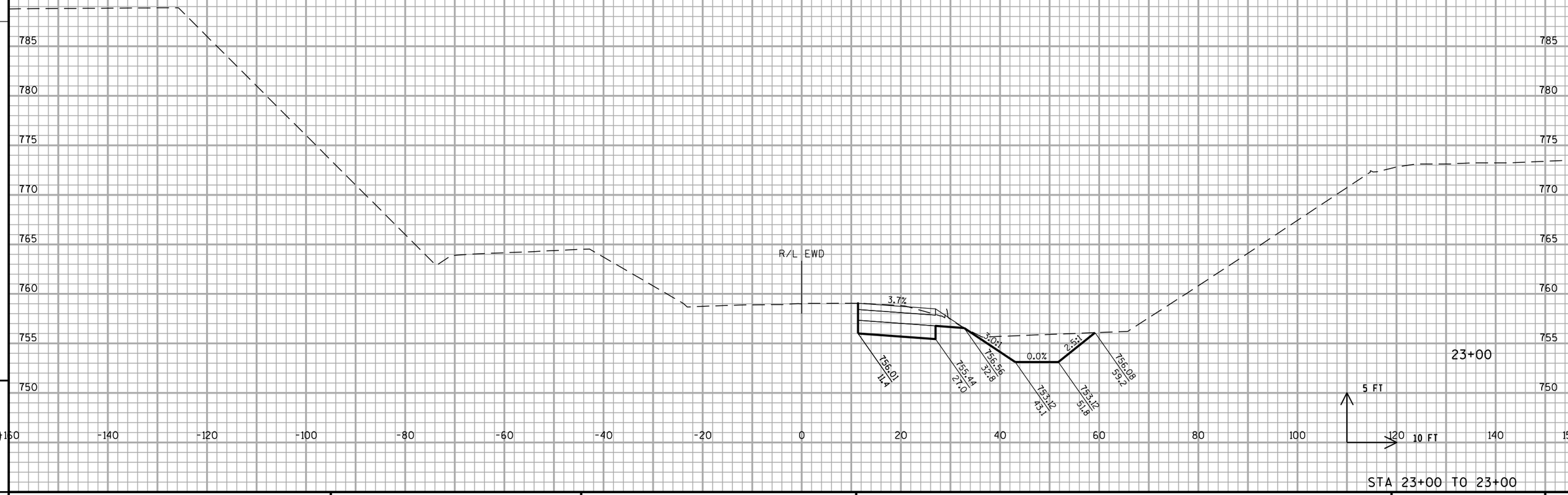


STA 22+00 TO 22+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd15 PLOT SCALE : 20:1

ALL WORK STAGE 2



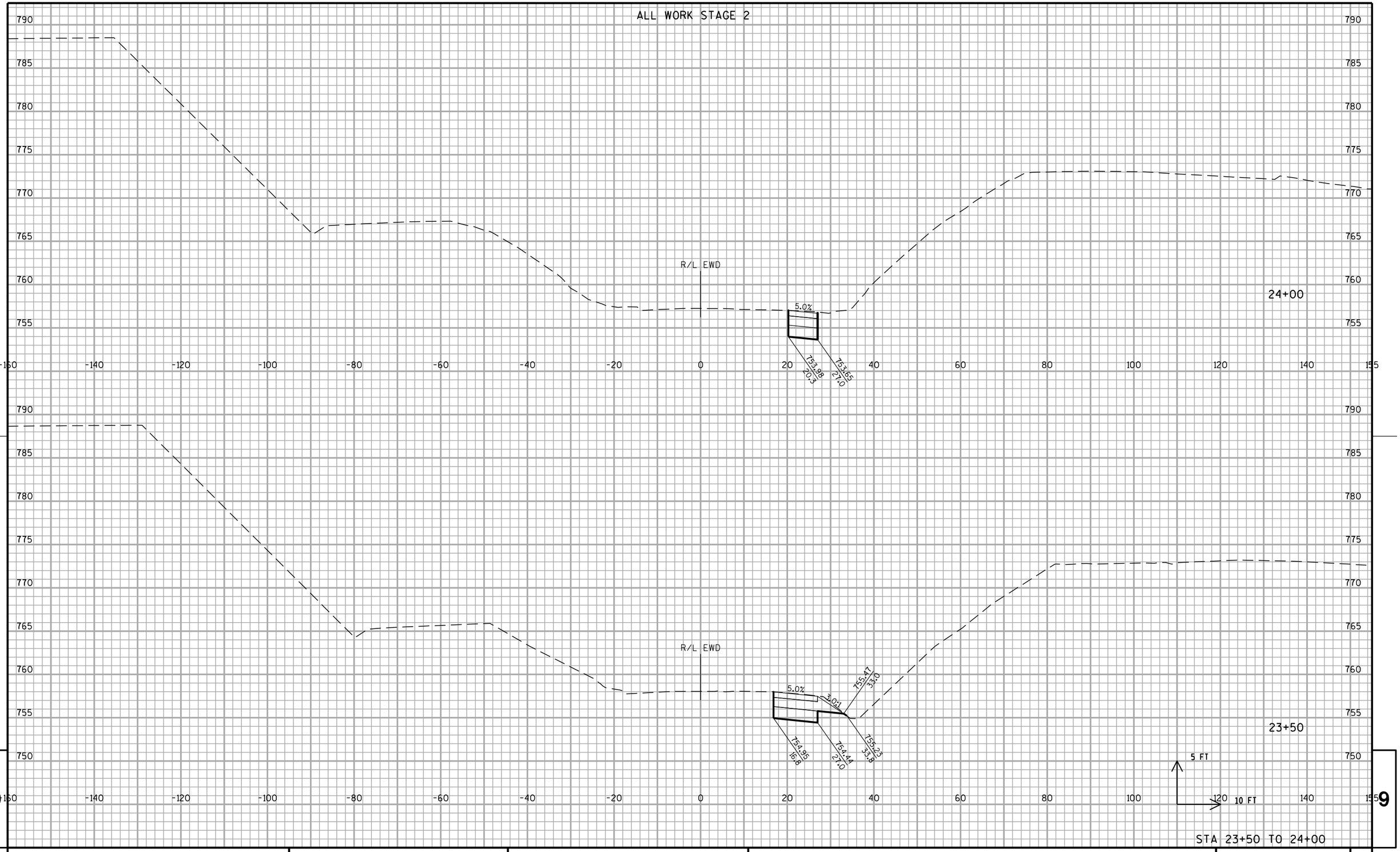
STA 23+00 TO 23+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd16 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



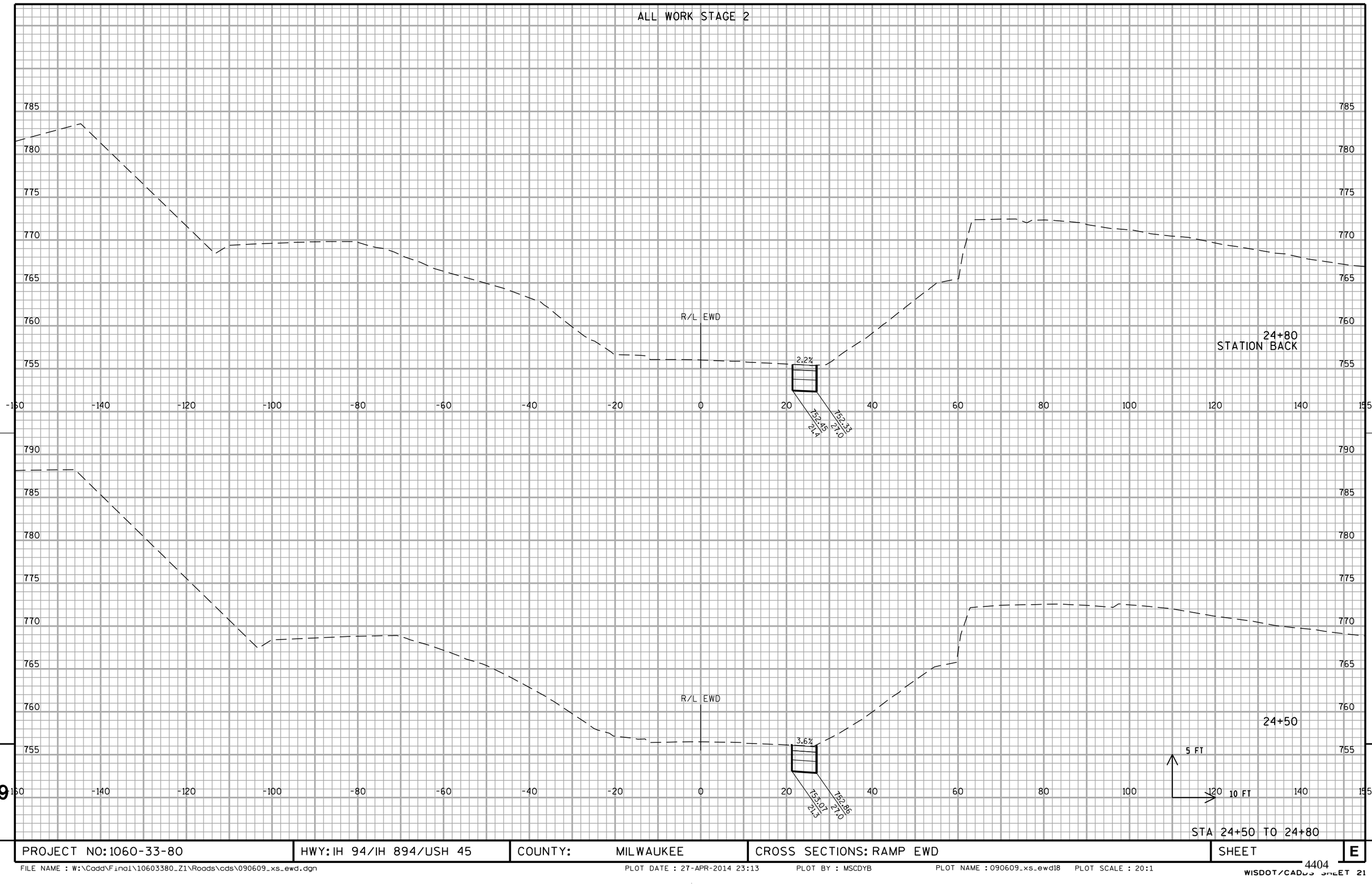
STA 23+50 TO 24+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd17 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



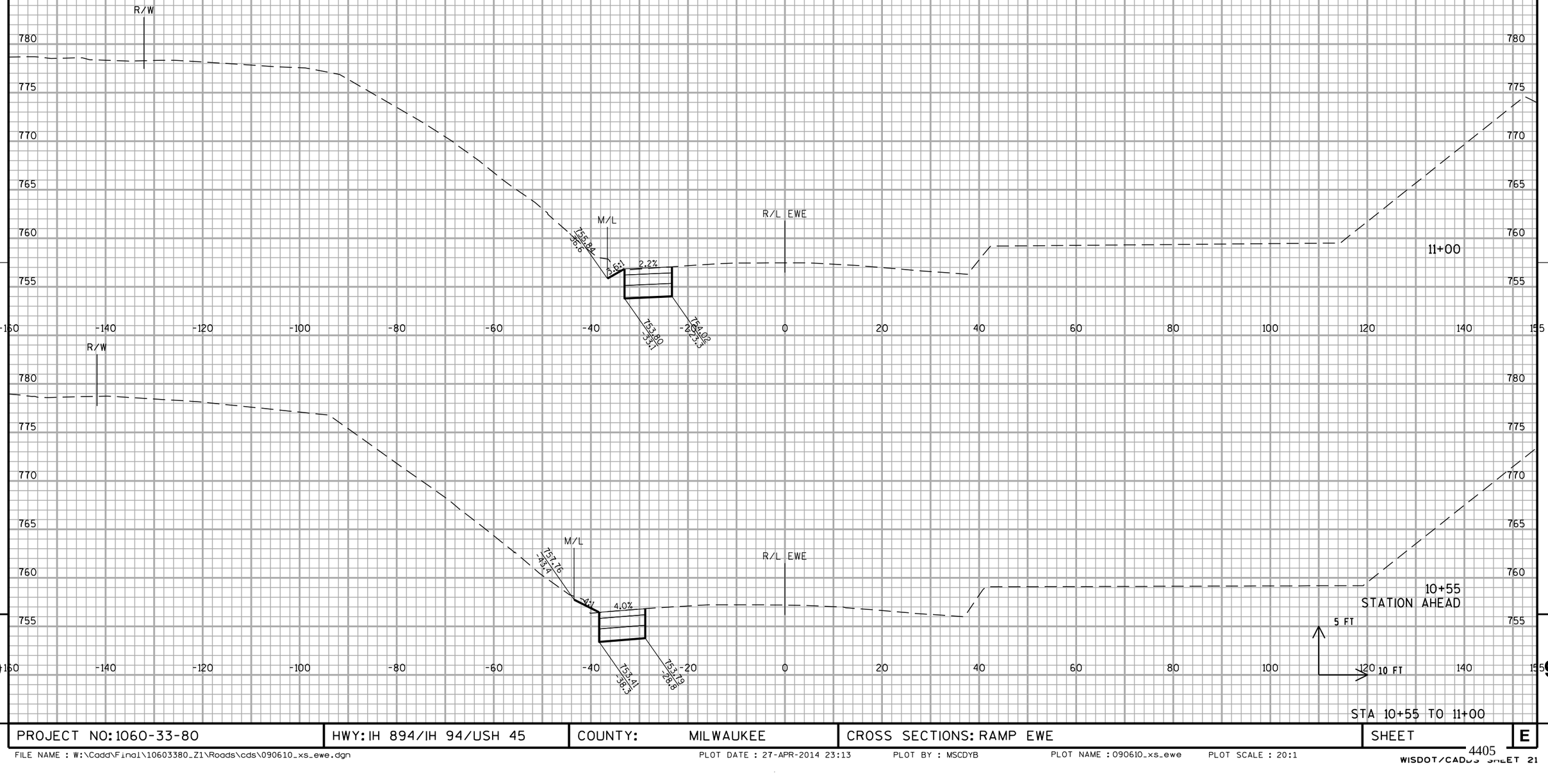
STA 24+50 TO 24+80

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWD	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090609_xs_ewd.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090609_xs_ewd18 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

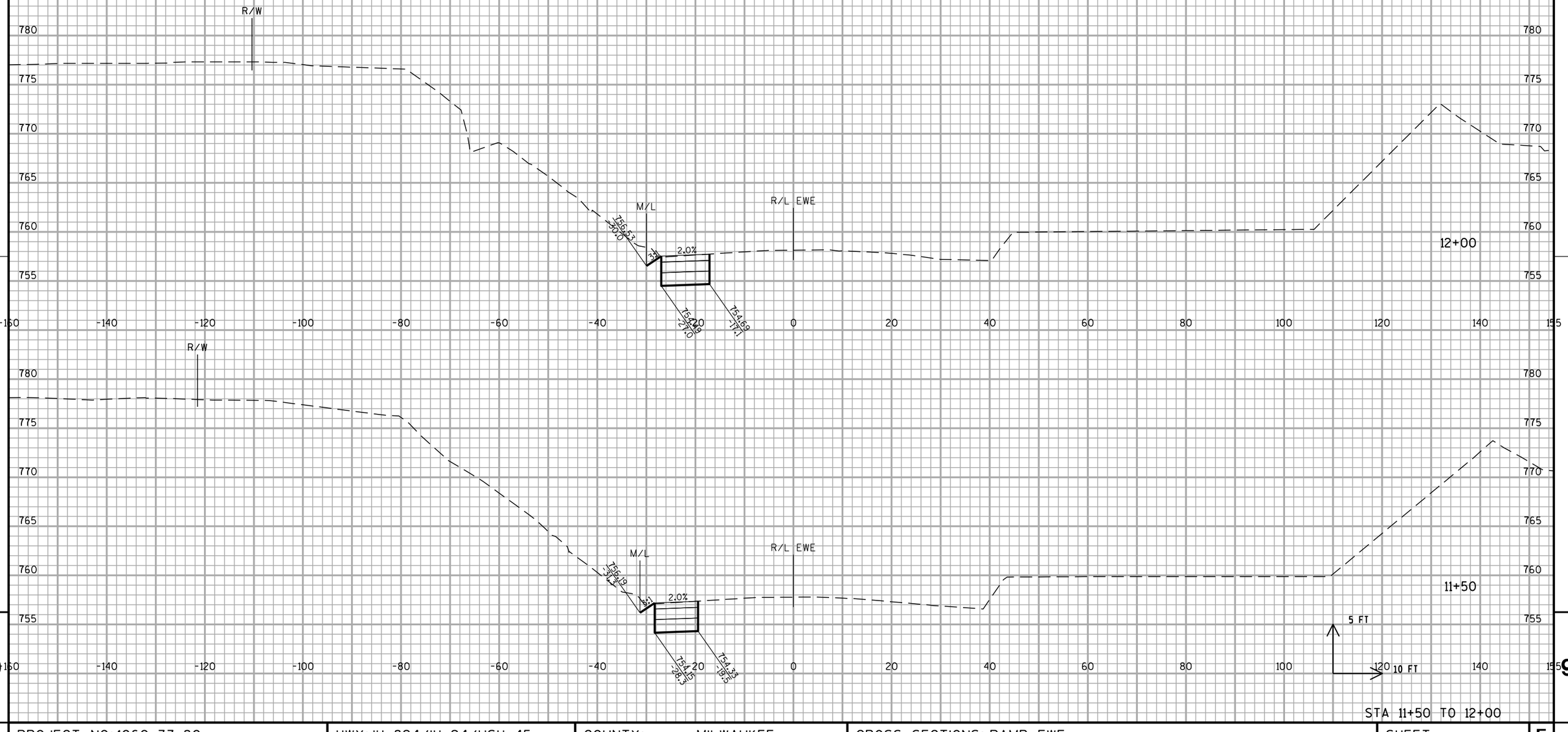


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

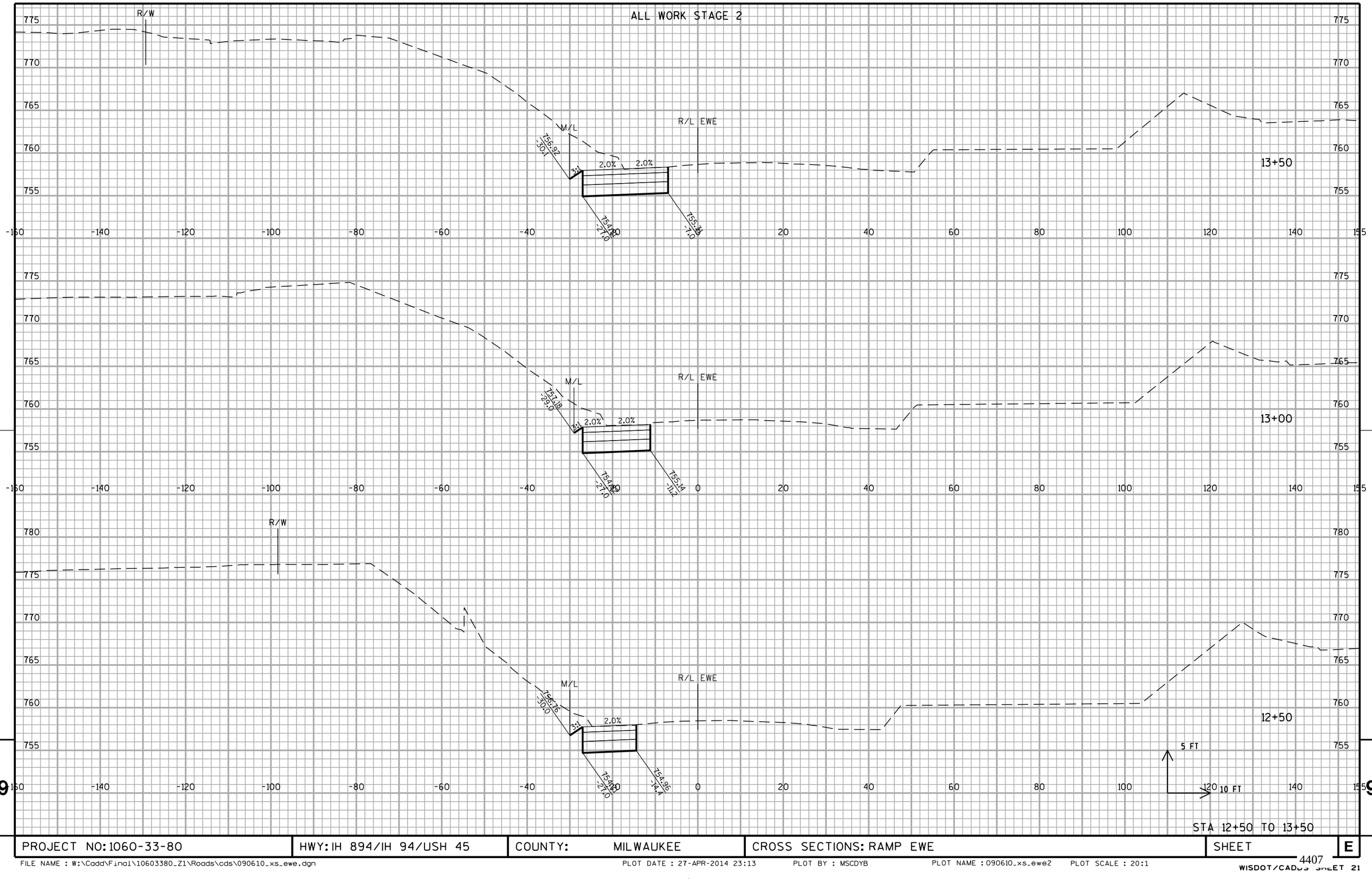


STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe1 PLOT SCALE : 20:1

ALL WORK STAGE 2

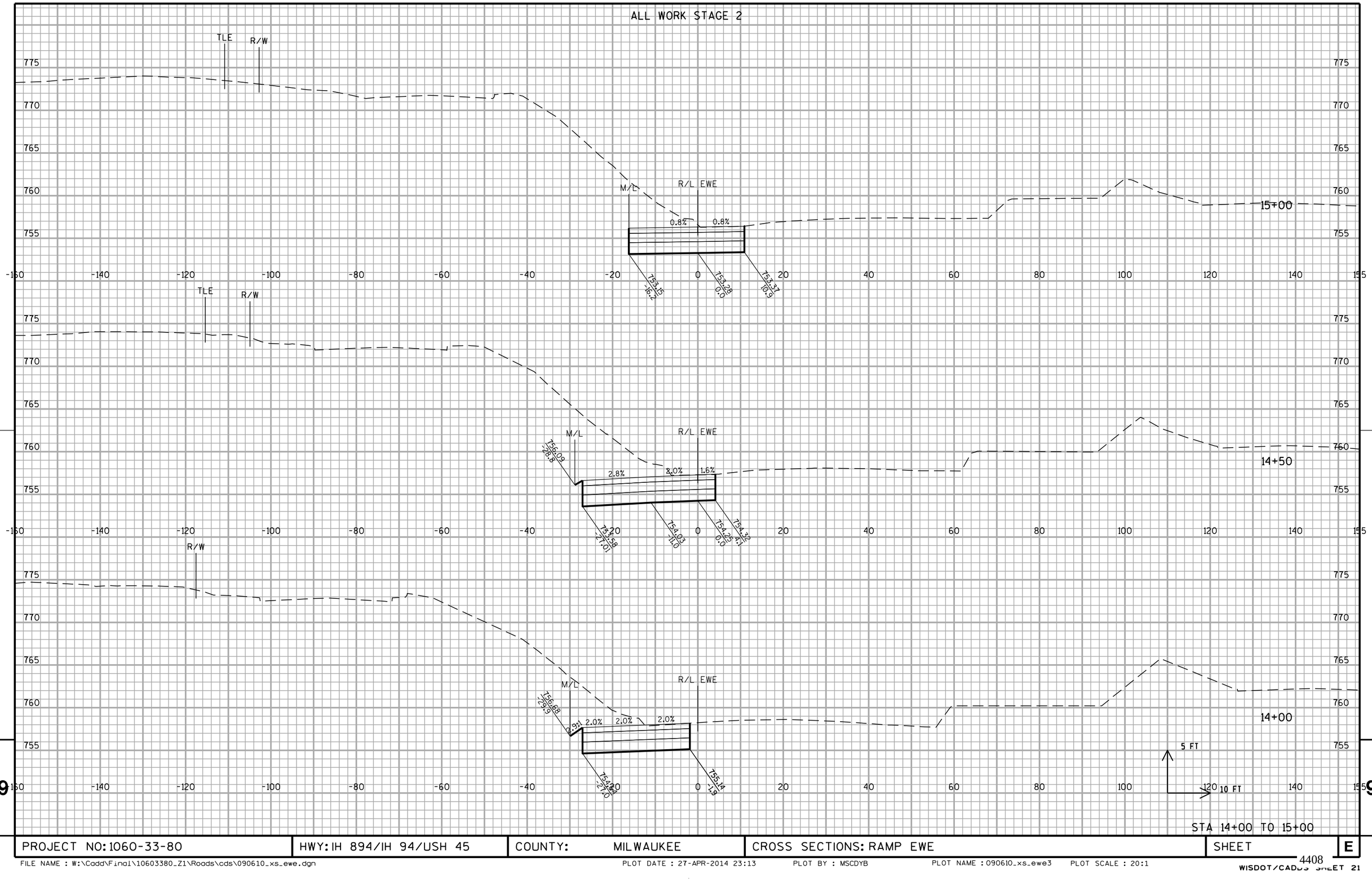


STA 12+50 TO 13+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe2 PLOT SCALE : 20:1

ALL WORK STAGE 2



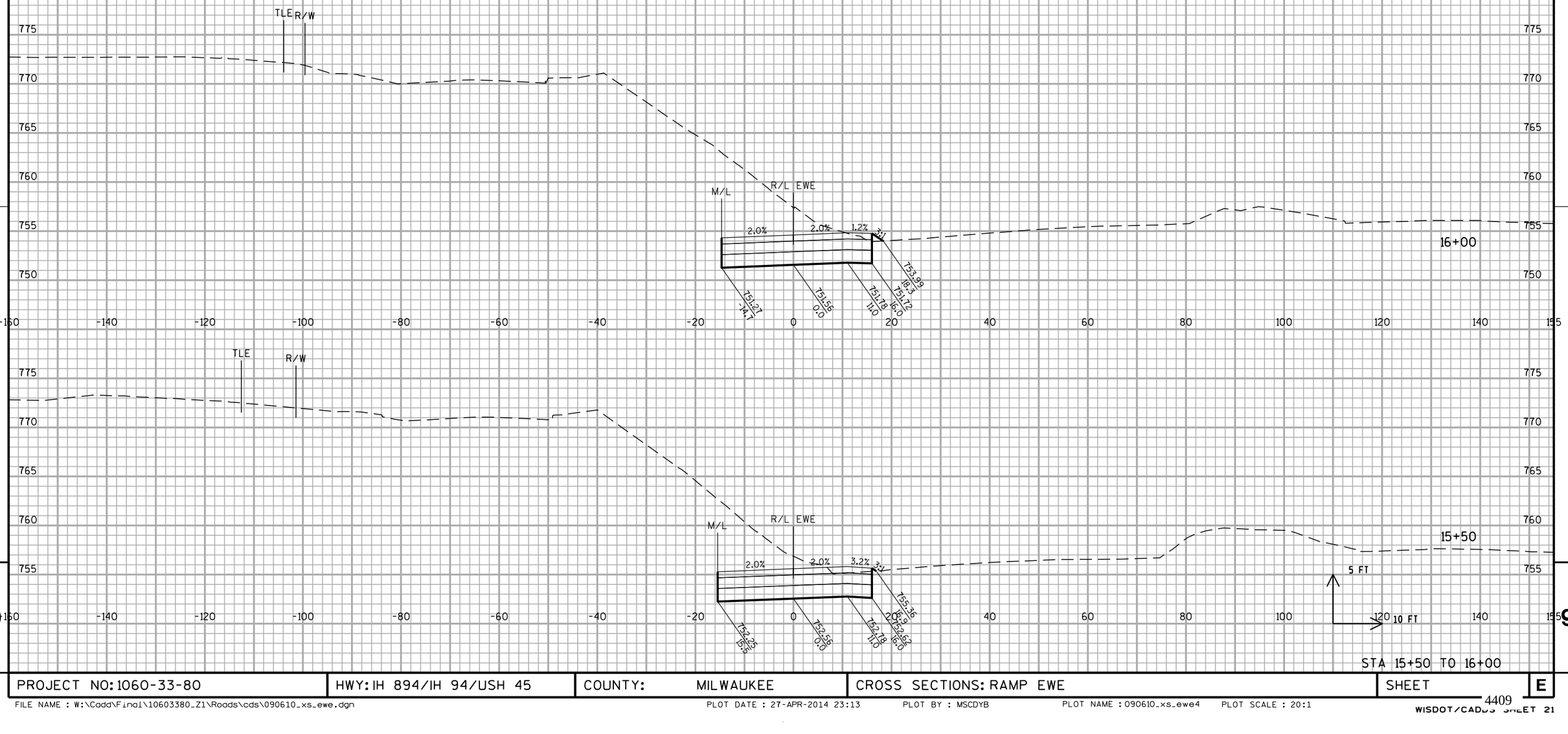
STA 14+00 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe3 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



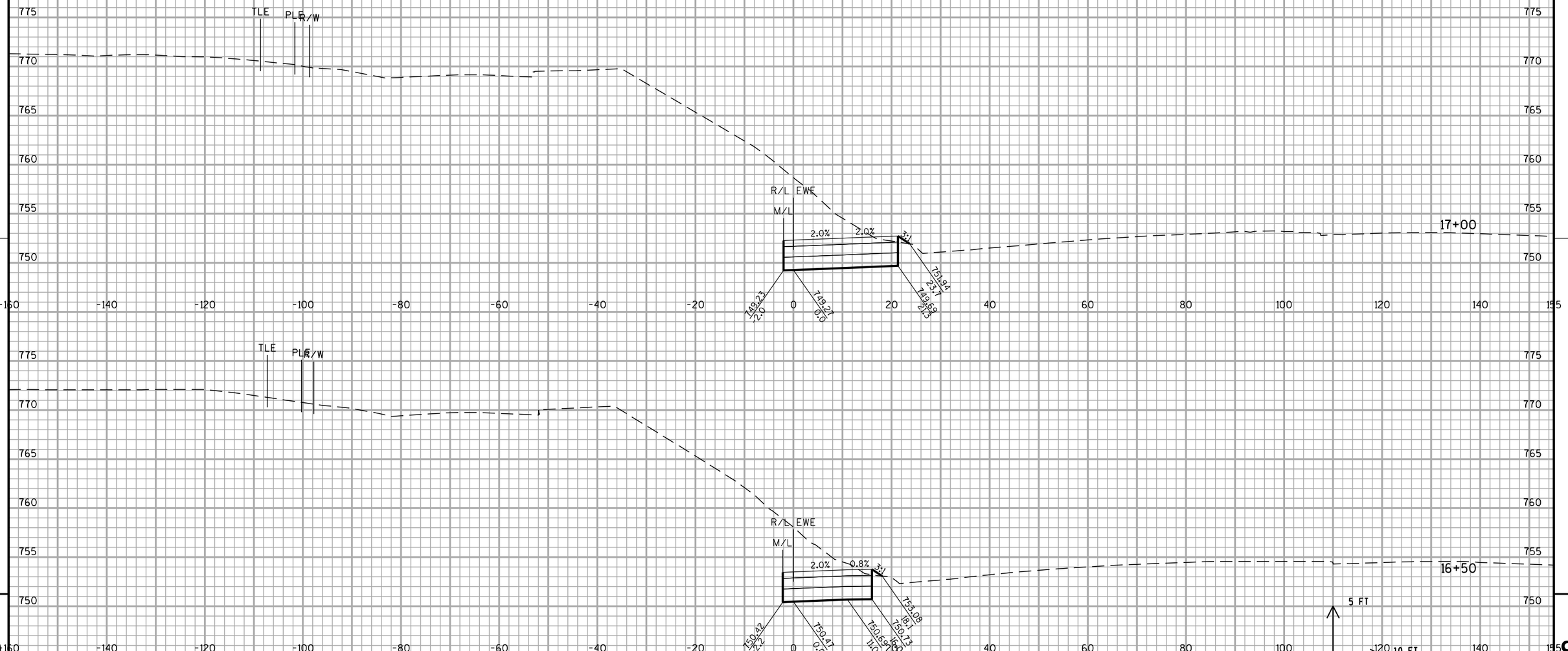
STA 15+50 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



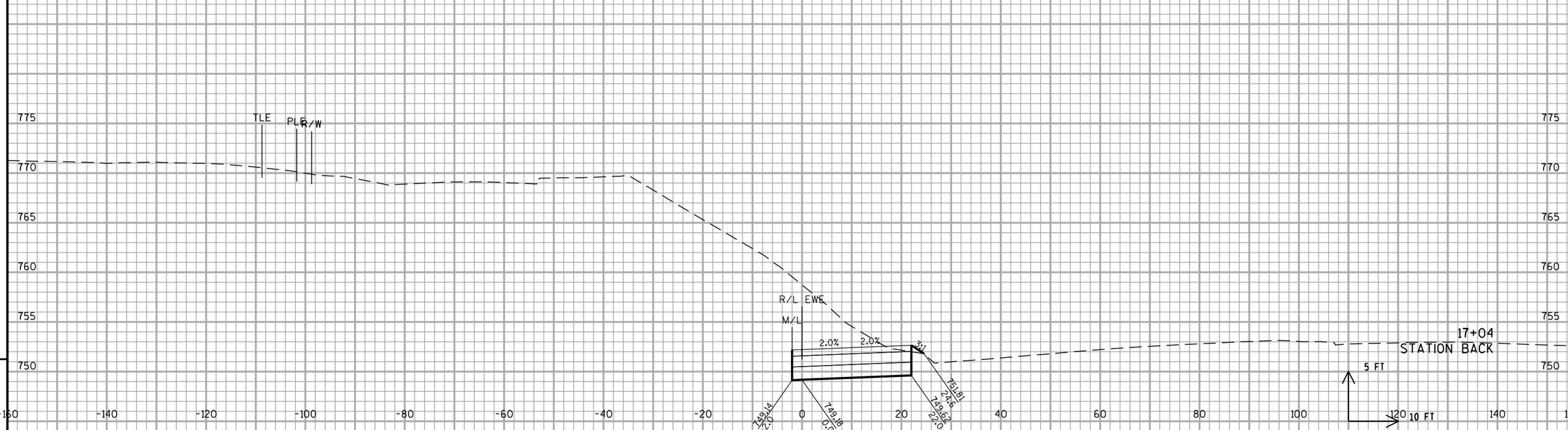
STA 16+50 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



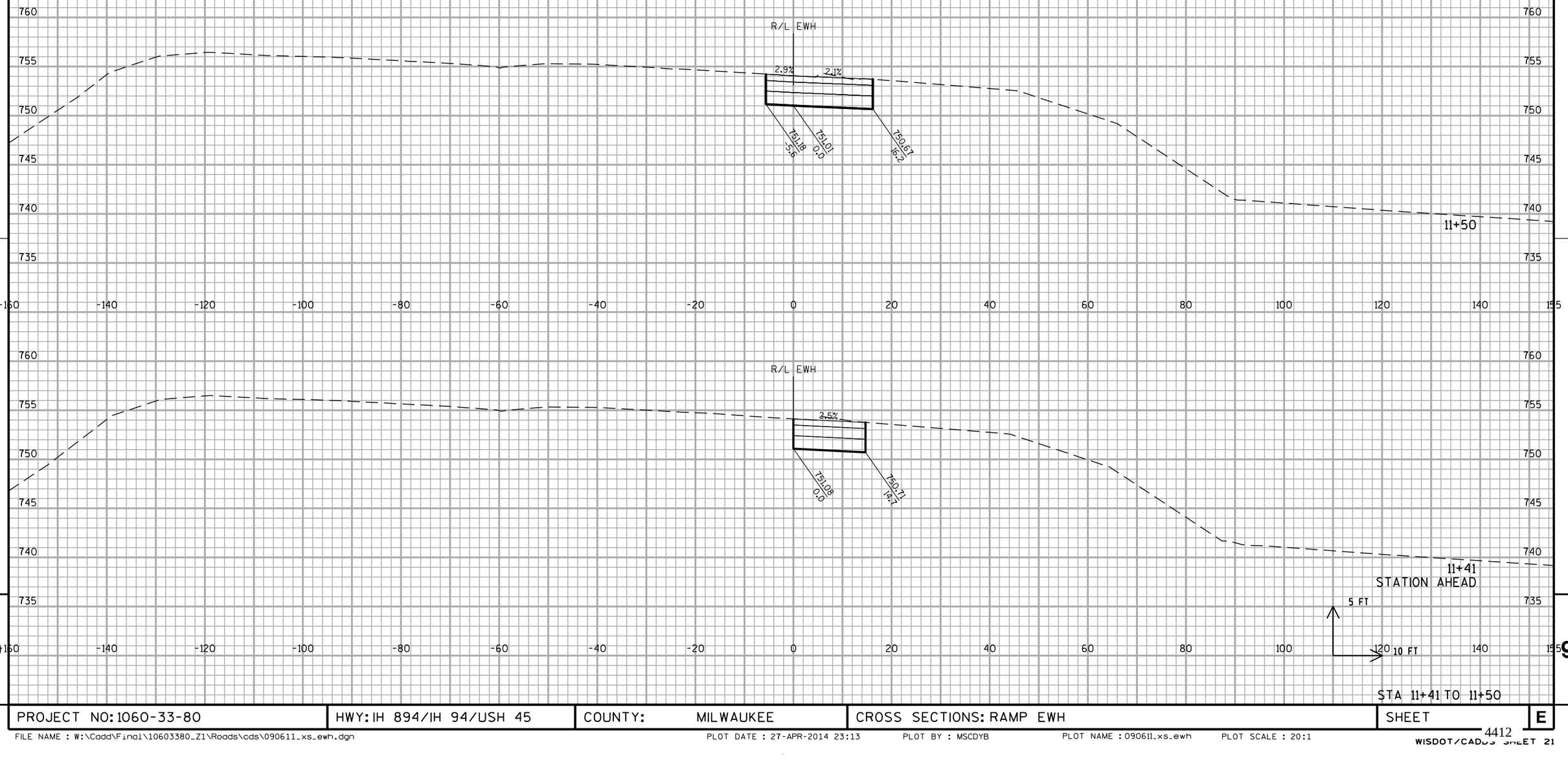
STA 17+04 TO 17+04

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWE	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090610_xs_ewe.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090610_xs_ewe6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

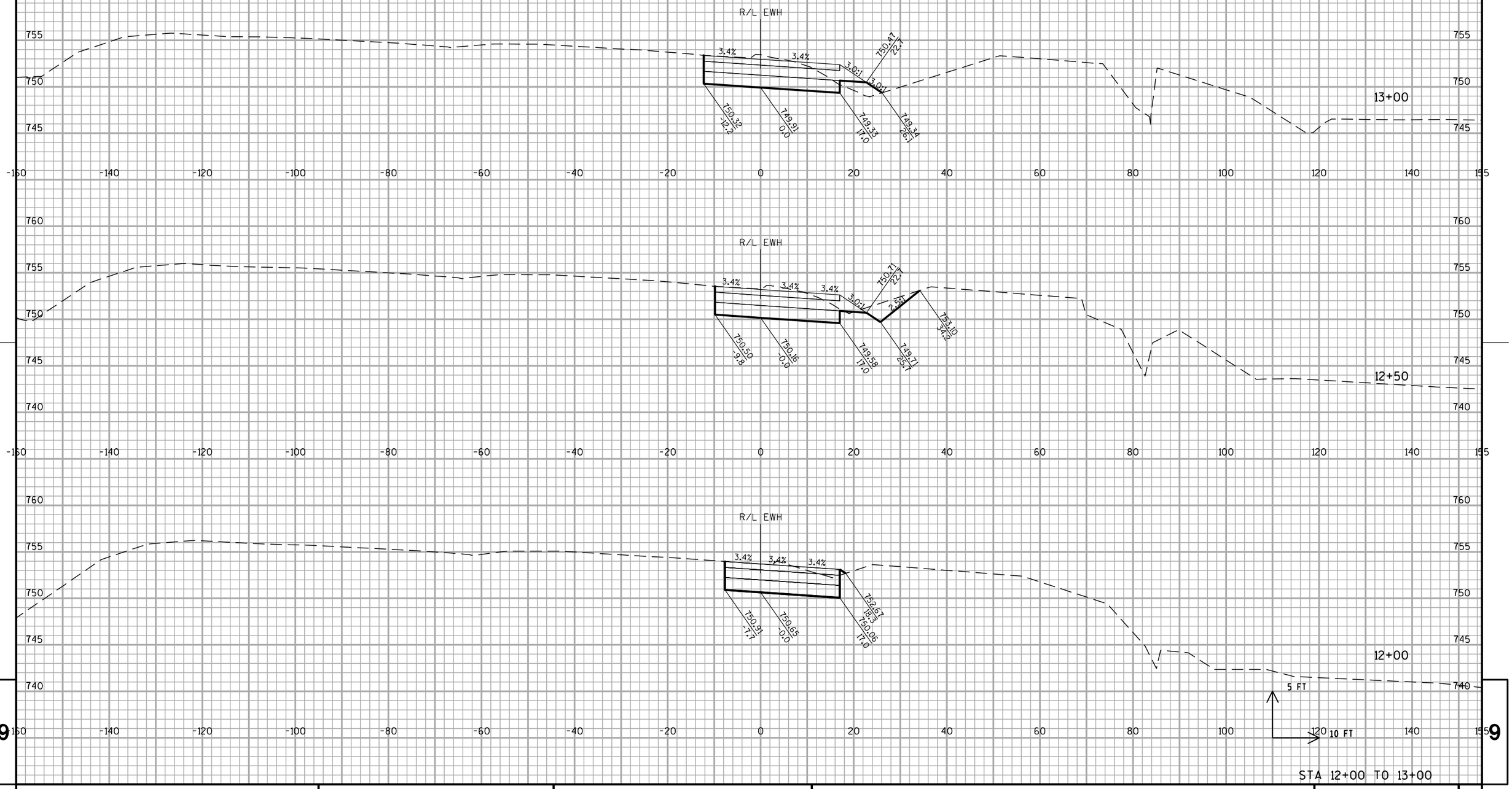


STA 11+41 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh PLOT SCALE : 20:1

ALL WORK STAGE 2



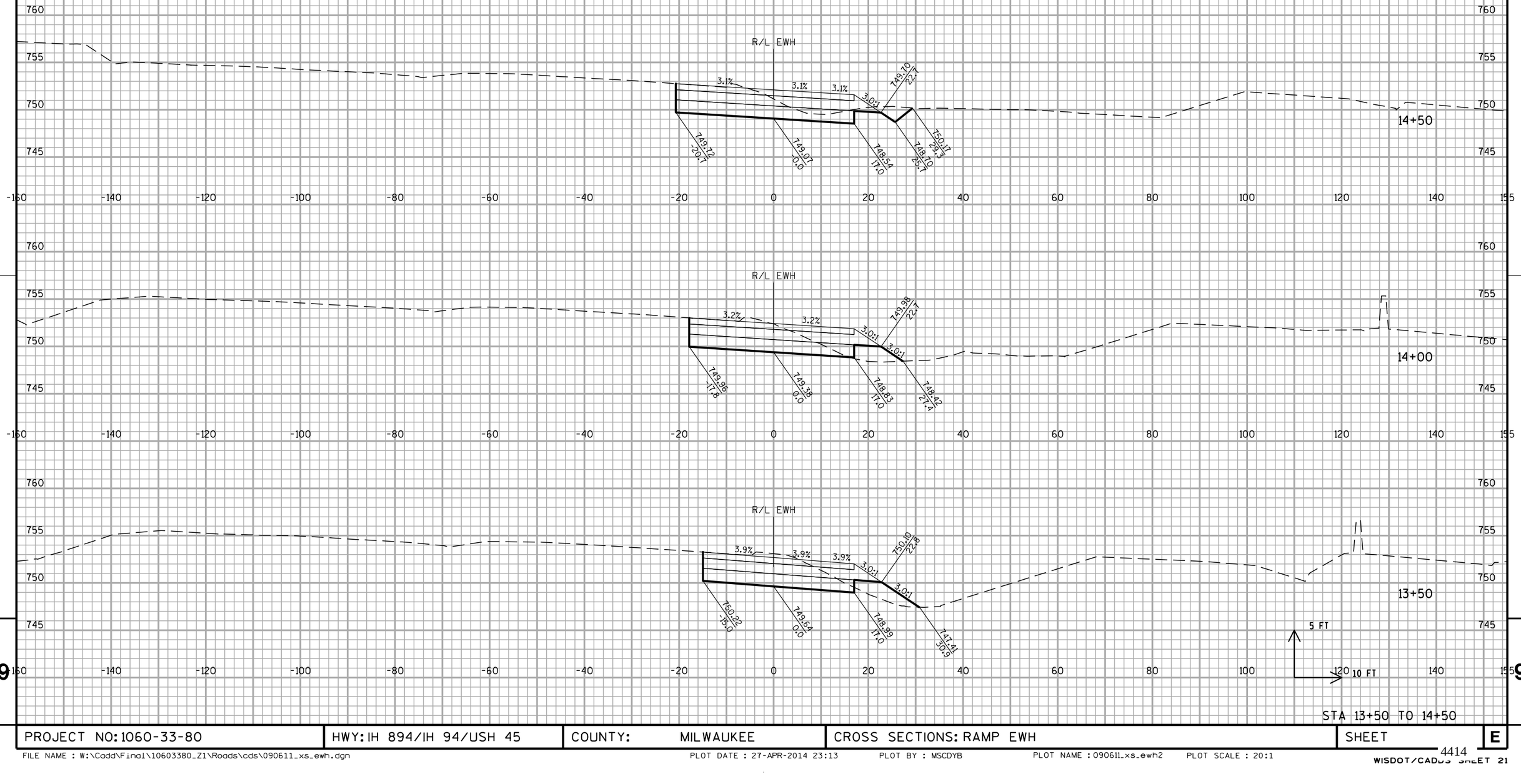
STA 12+00 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

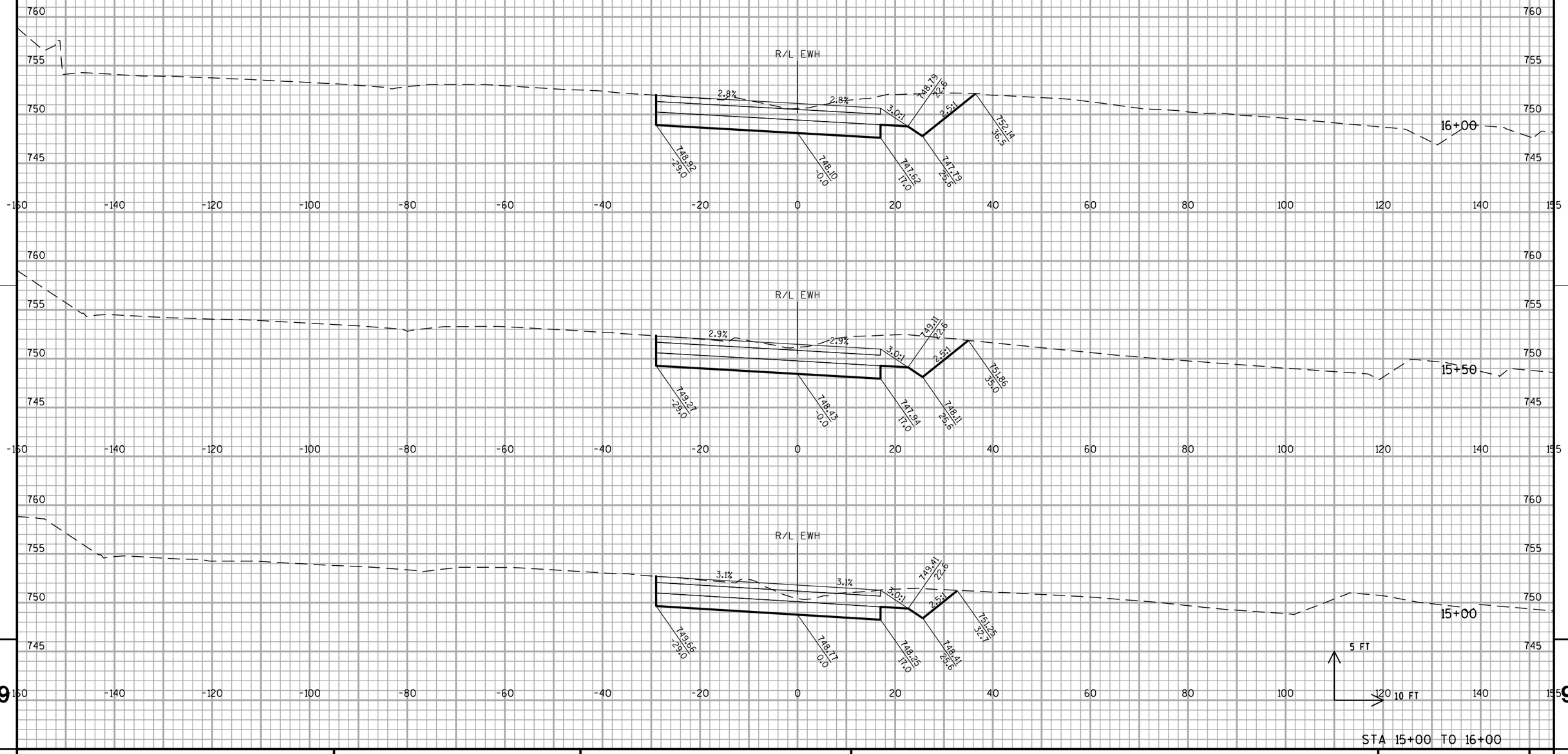


STA 13+50 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh2 PLOT SCALE : 20:1

ALL WORK STAGE 2



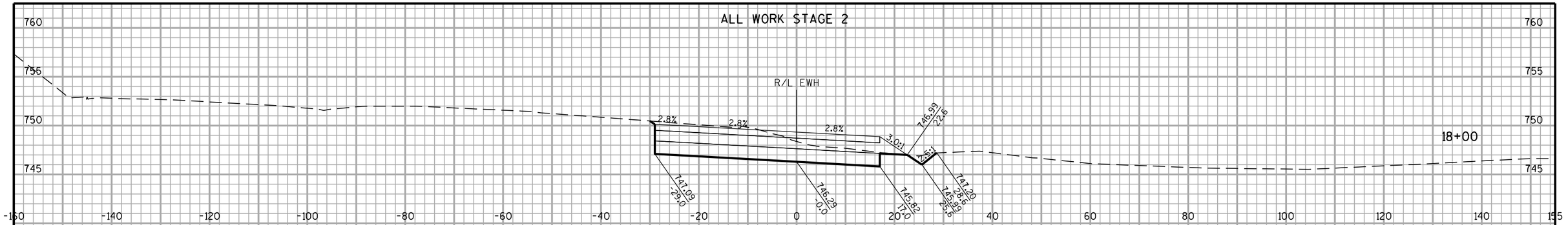
STA 15+00 TO 16+00

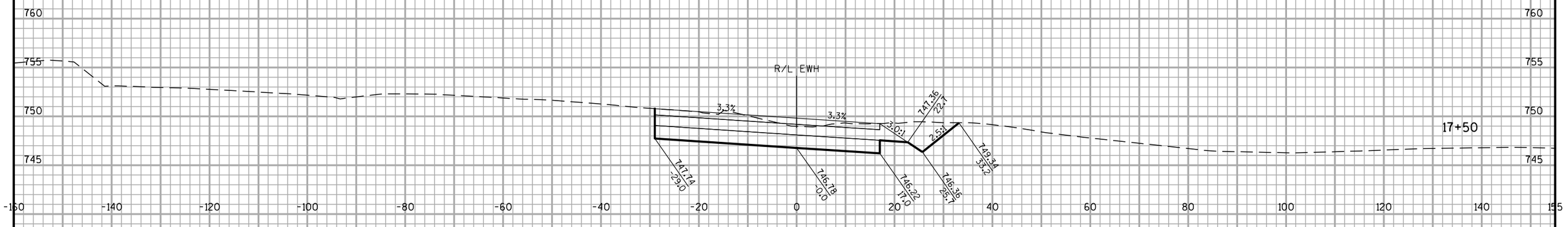
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET	E

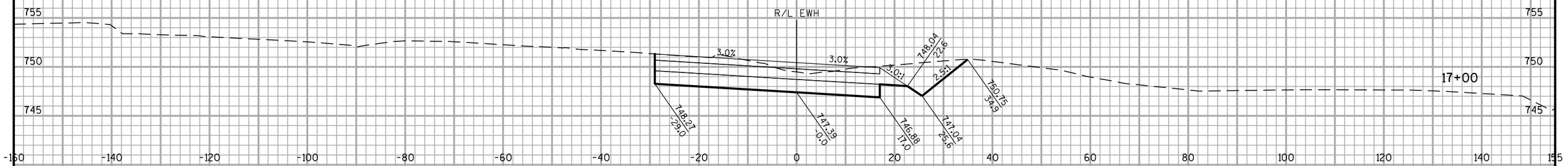
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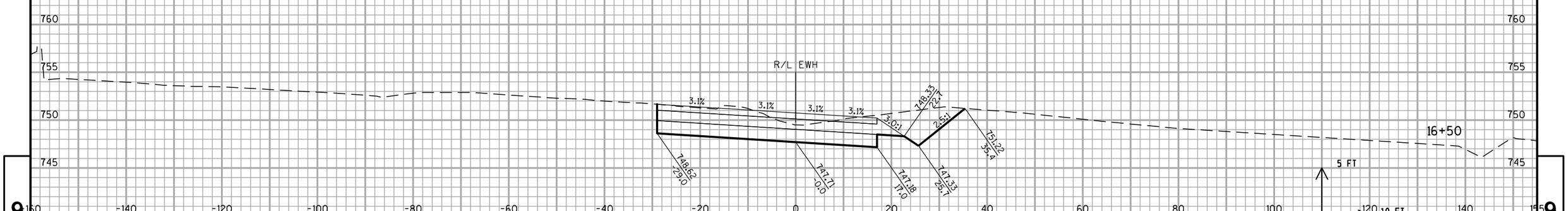
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2









STA 16+50 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh4 PLOT SCALE : 20:1

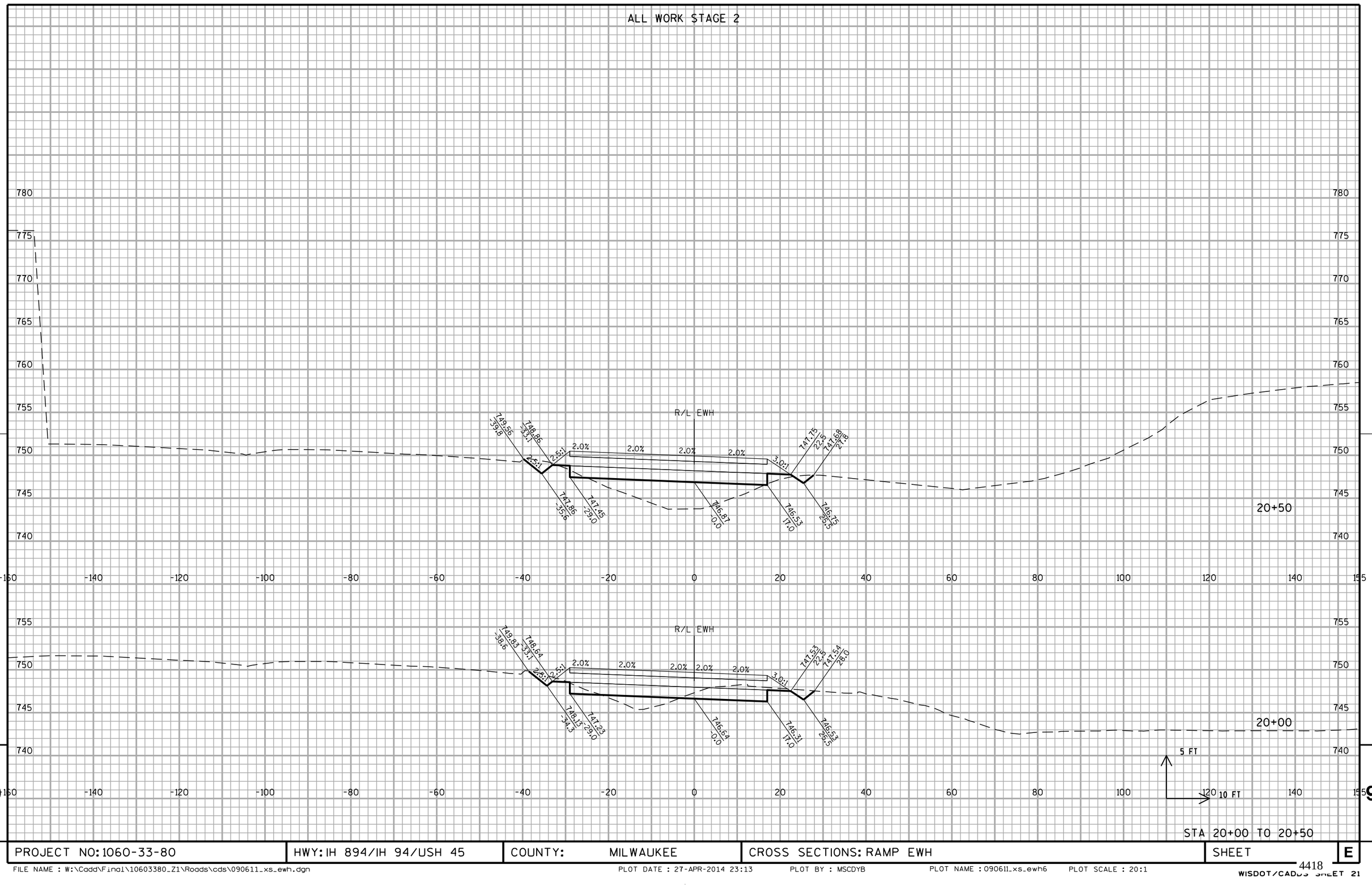
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

STA 18+50 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET	E

ALL WORK STAGE 2



STA 20+00 TO 20+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh6 PLOT SCALE : 20:1

ALL WORK STAGE 2



9

9

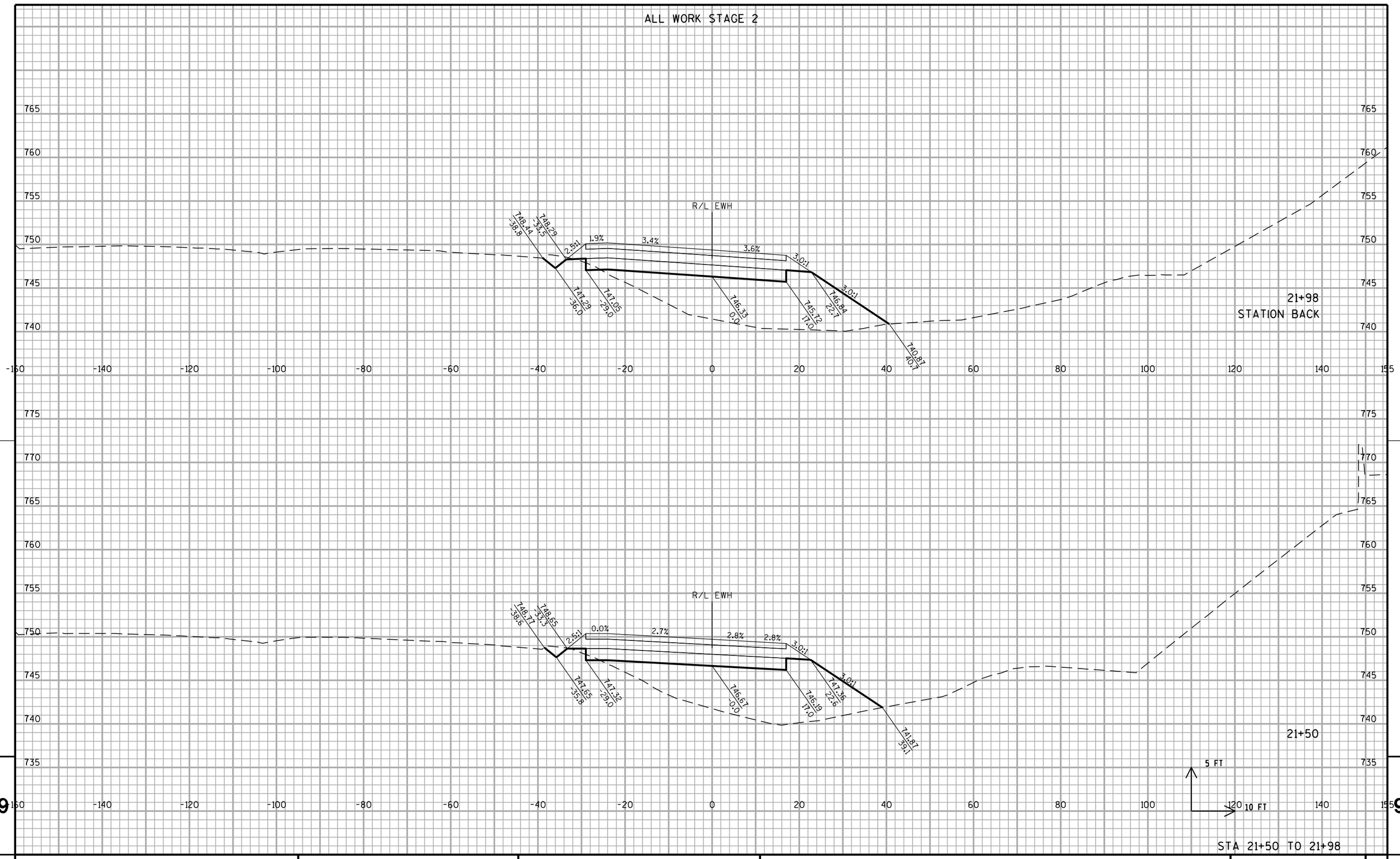
STA 21+00 TO 21+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



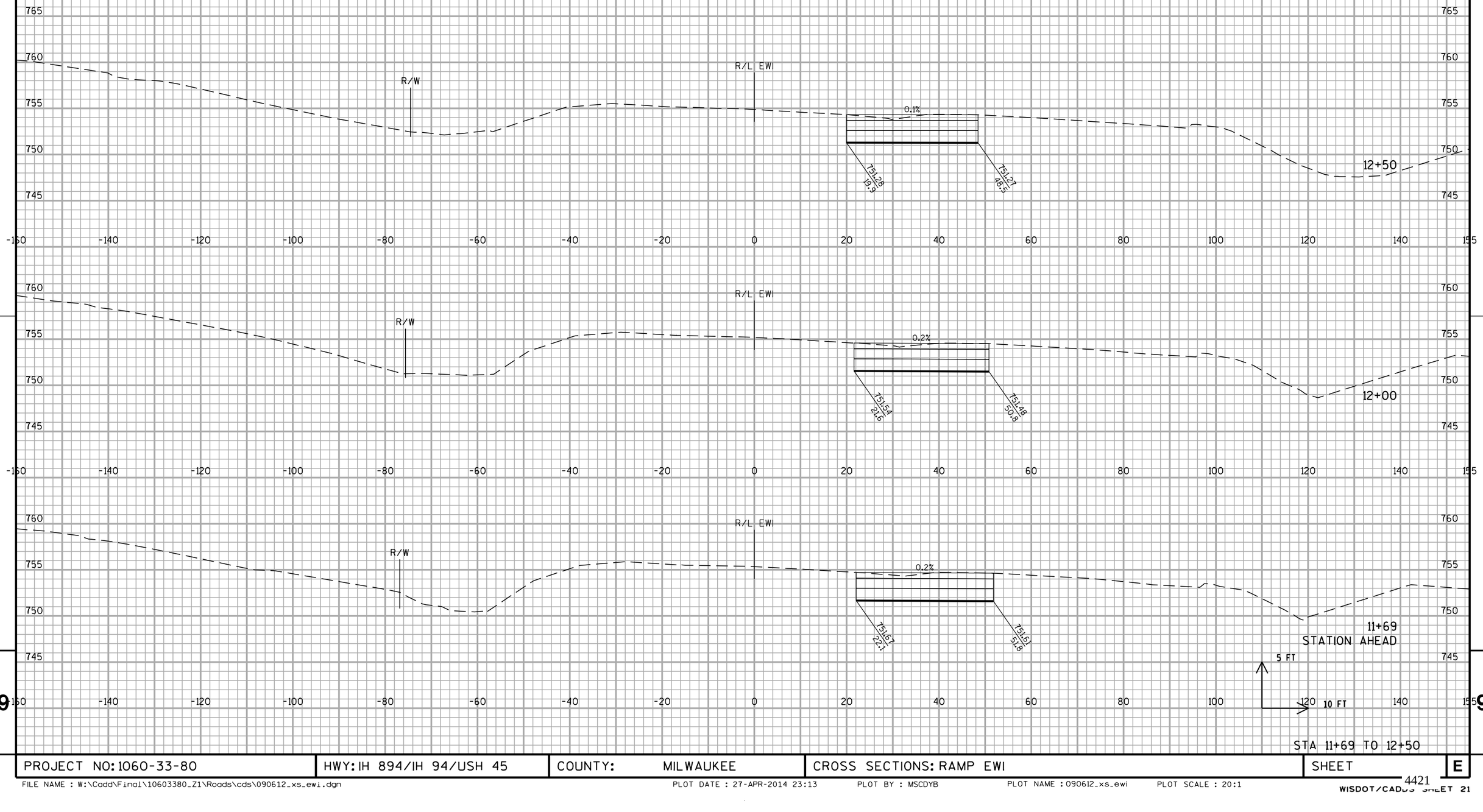
STA 21+50 TO 21+98

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWH	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090611_xs_ewh.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090611_xs_ewh8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



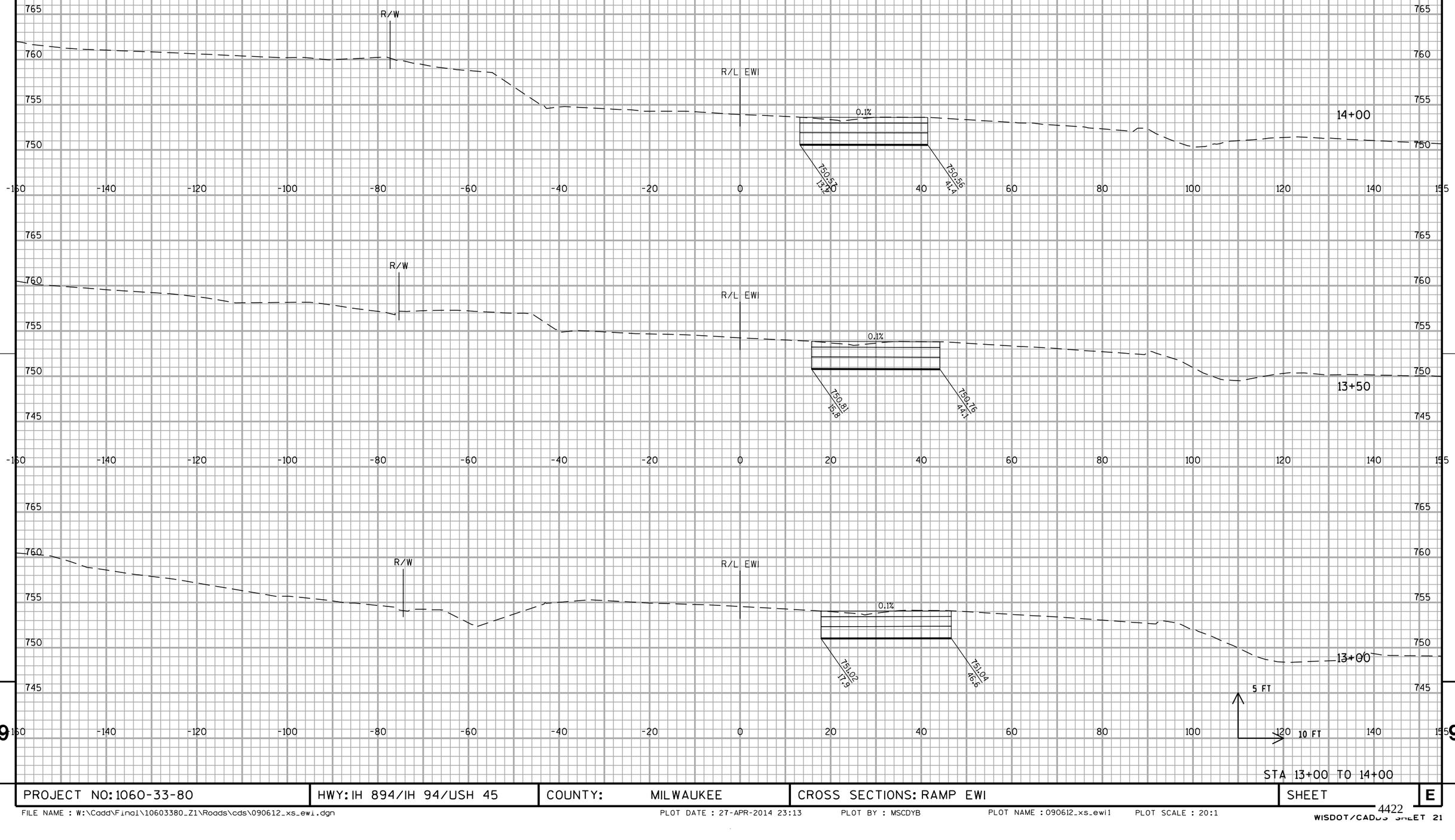
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

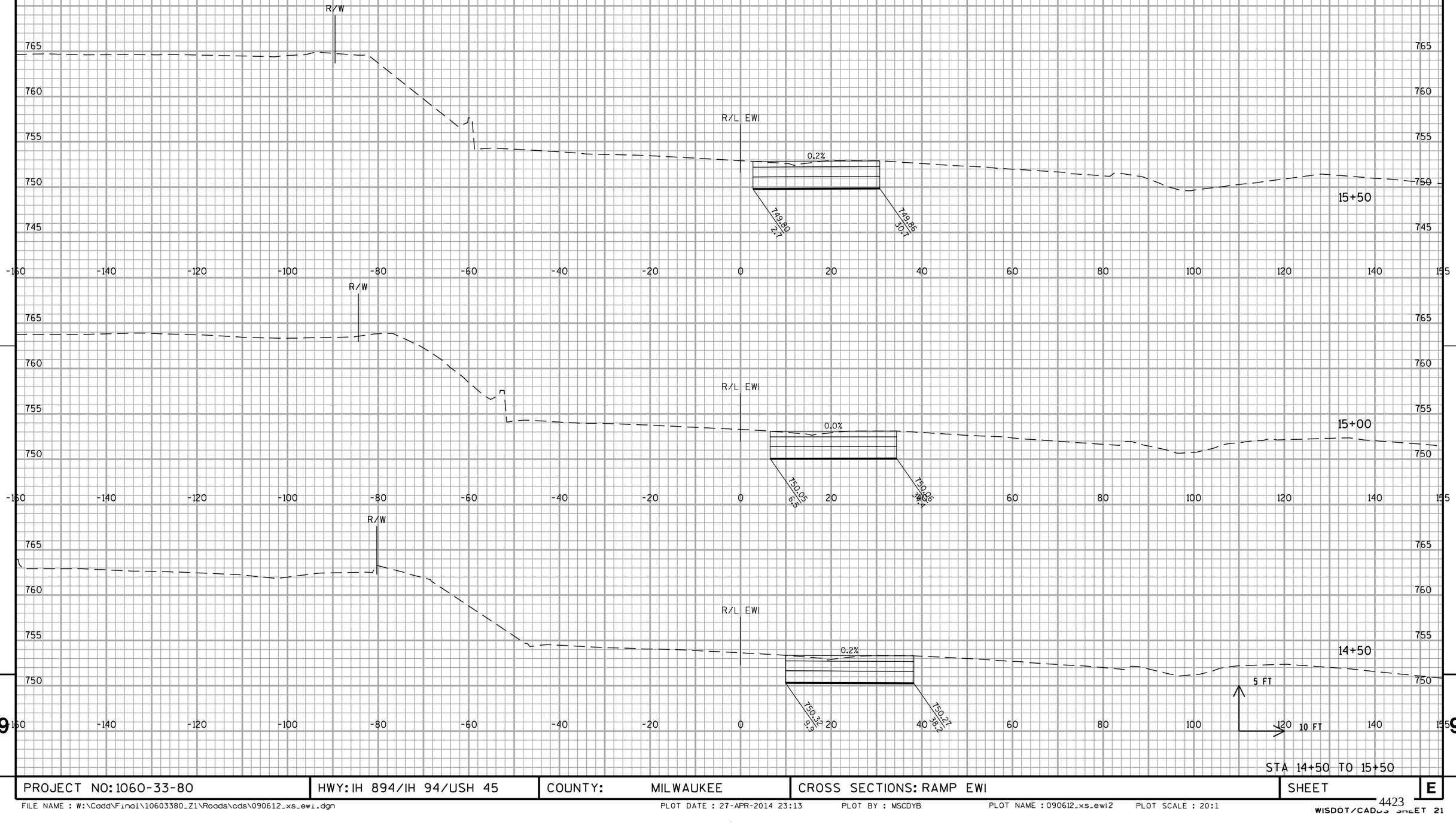


STA 13+00 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi1 PLOT SCALE : 20:1

ALL WORK STAGE 2



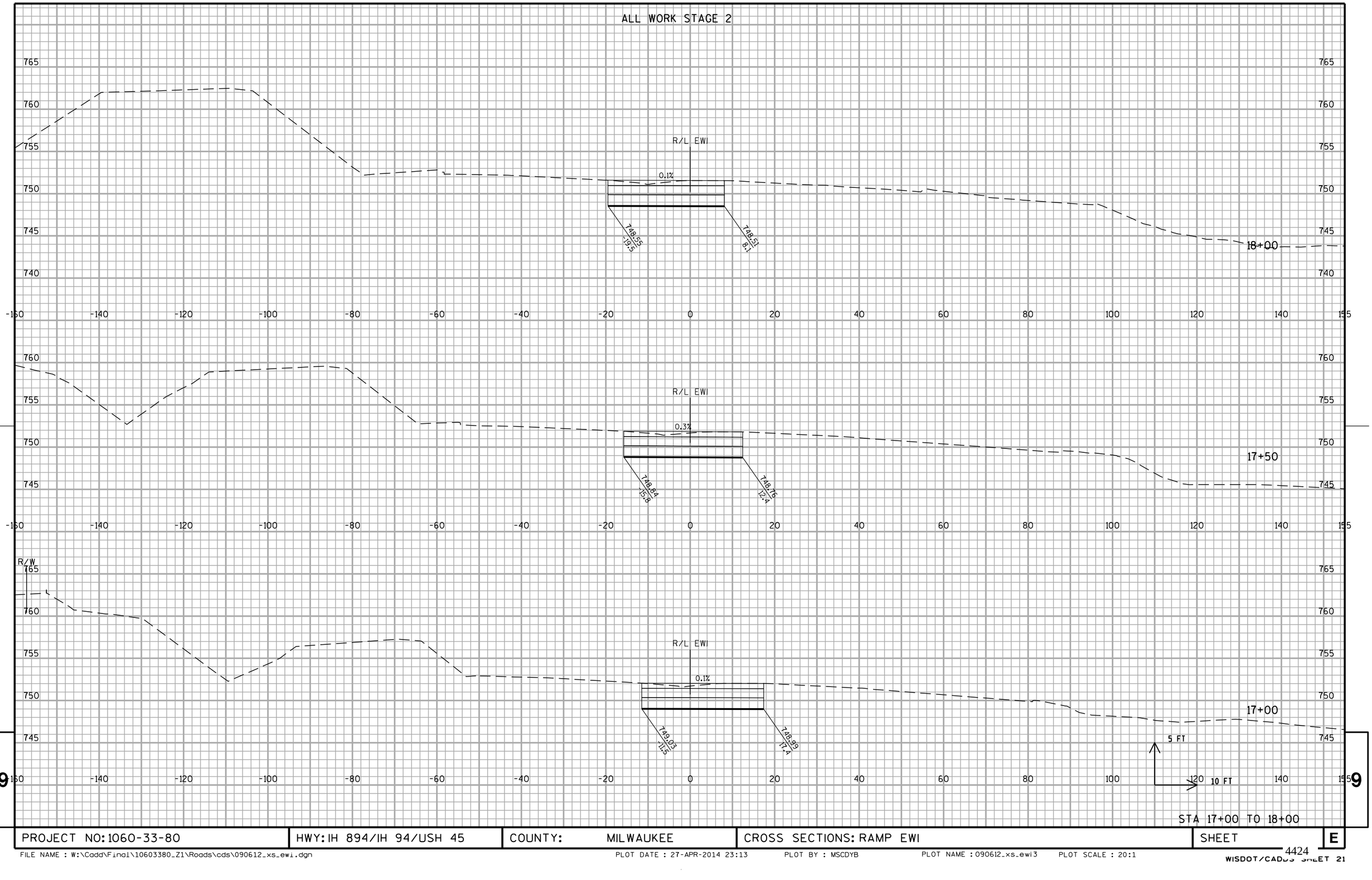
STA 14+50 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

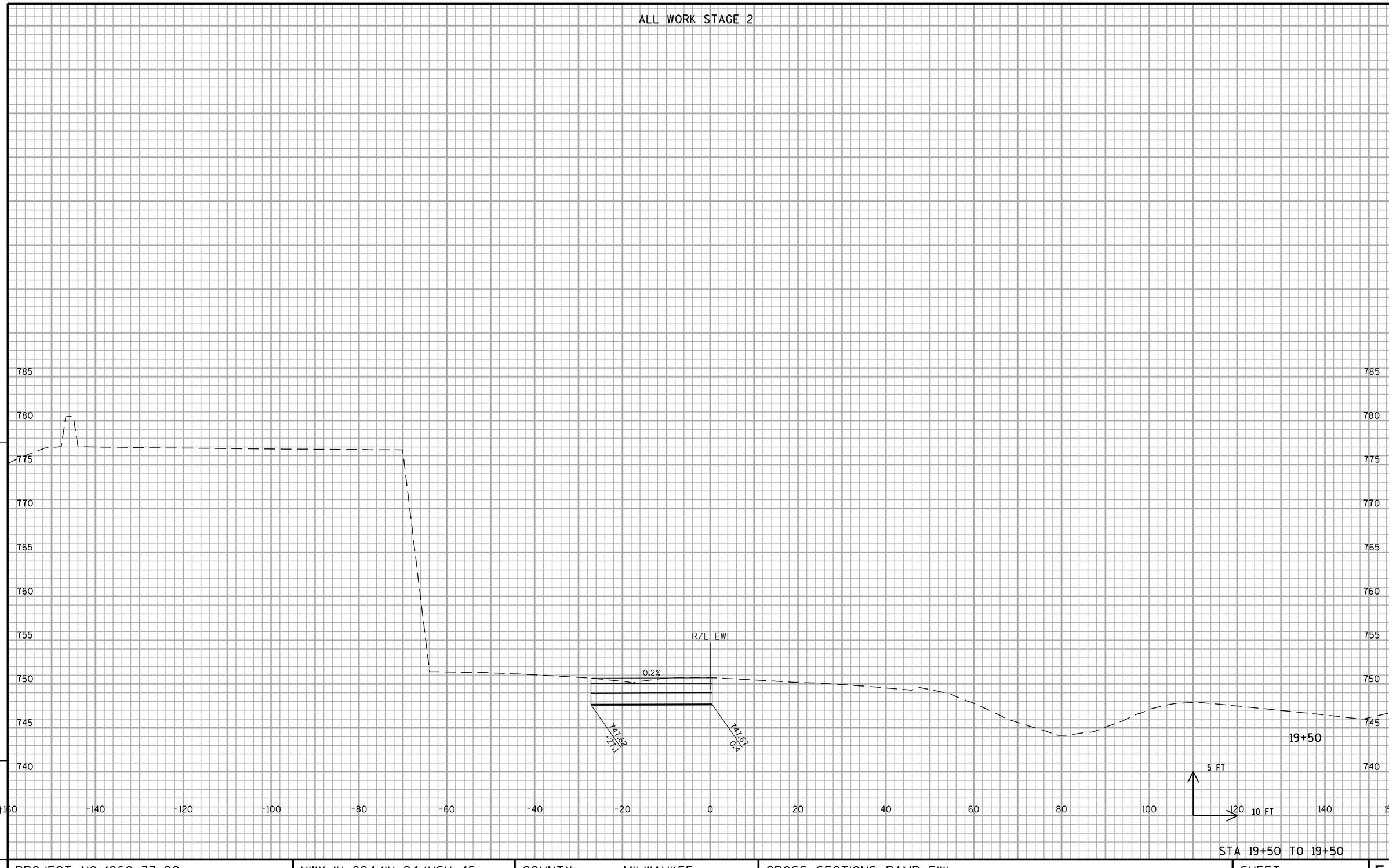


STA 17+00 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi3 PLOT SCALE : 20:1

ALL WORK STAGE 2

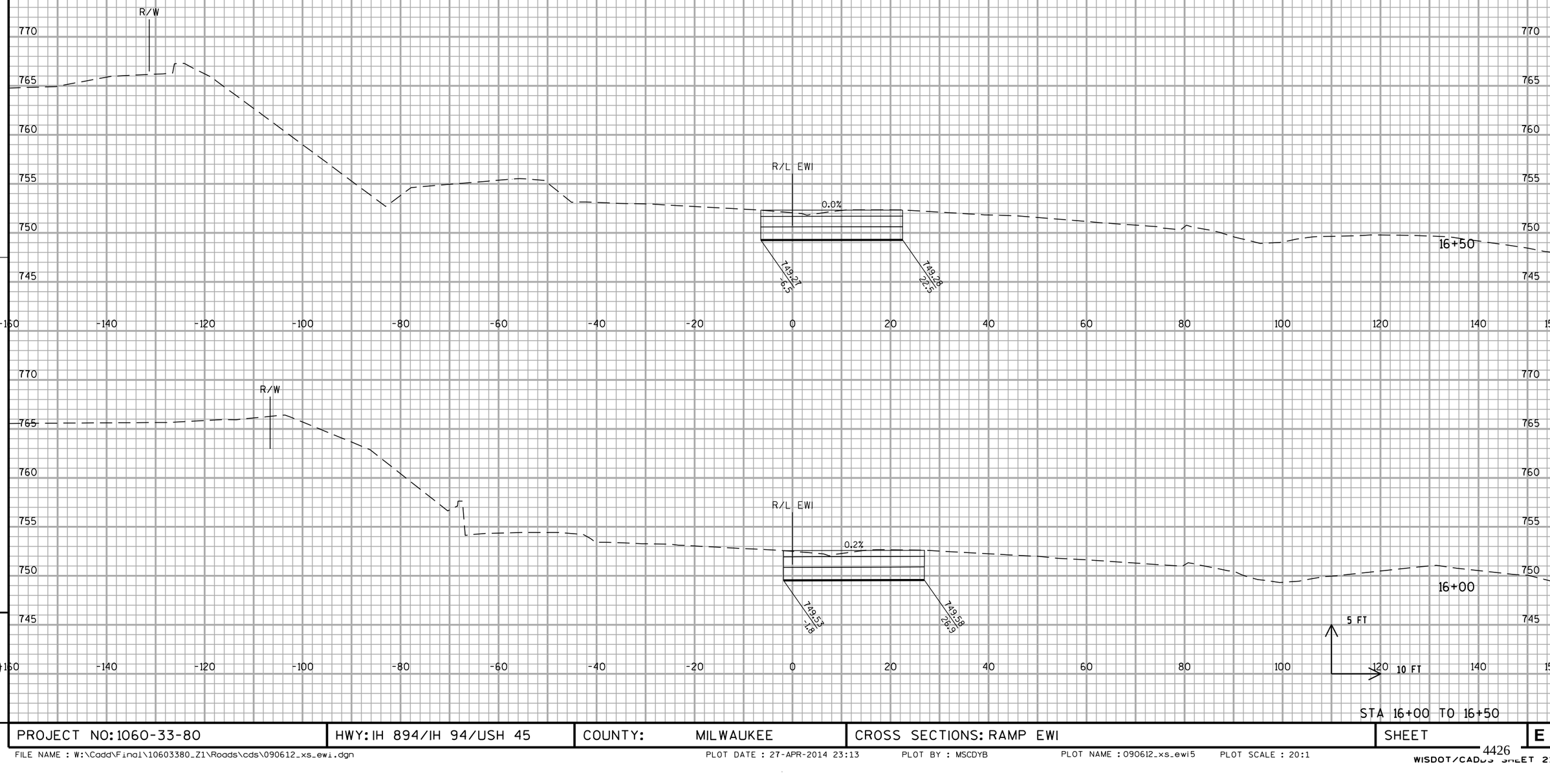


STA 19+50 TO 19+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi4 PLOT SCALE : 20:1

ALL WORK STAGE 2

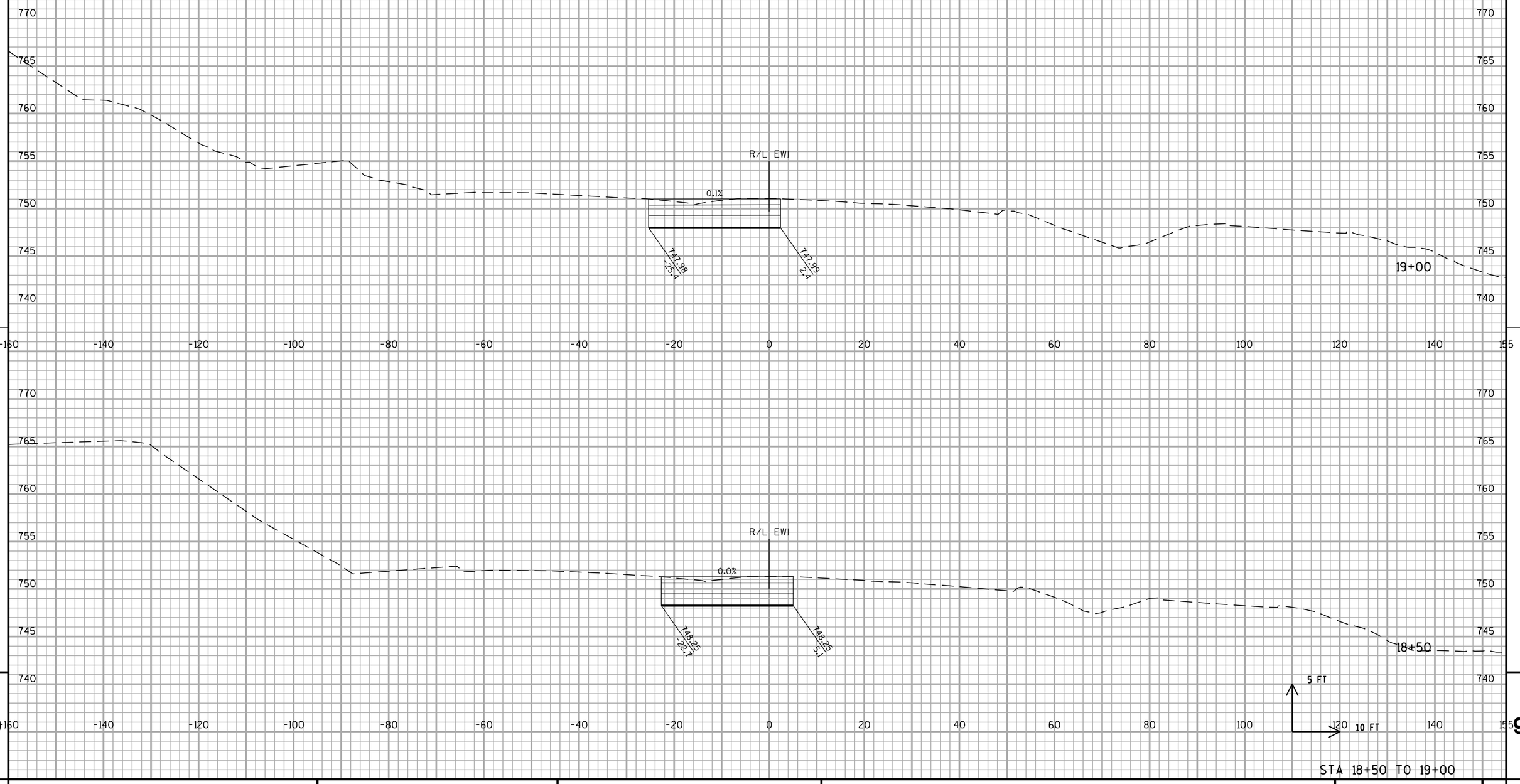


STA 16+00 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi5 PLOT SCALE : 20:1

ALL WORK STAGE 2



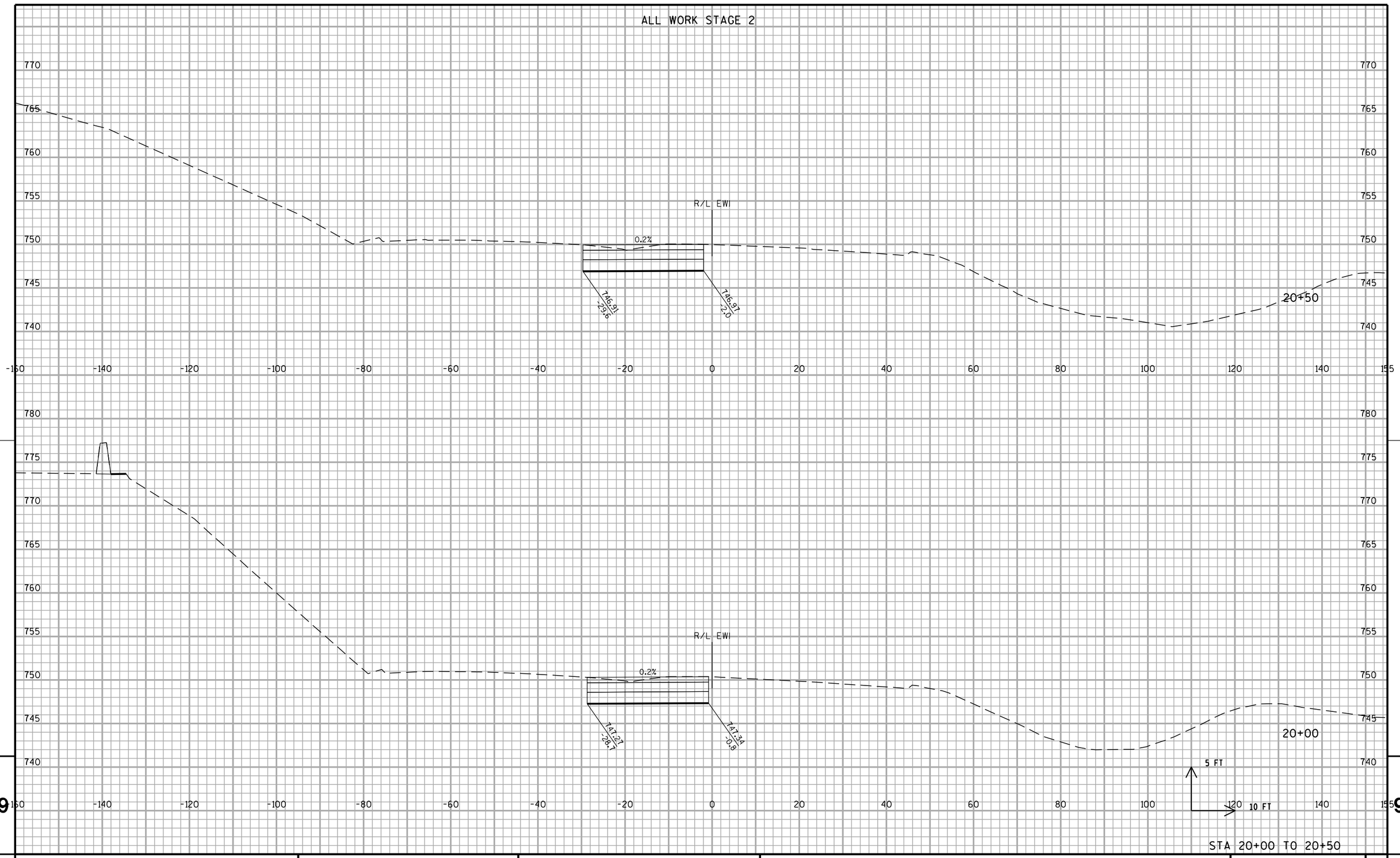
STA 18+50 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:13 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



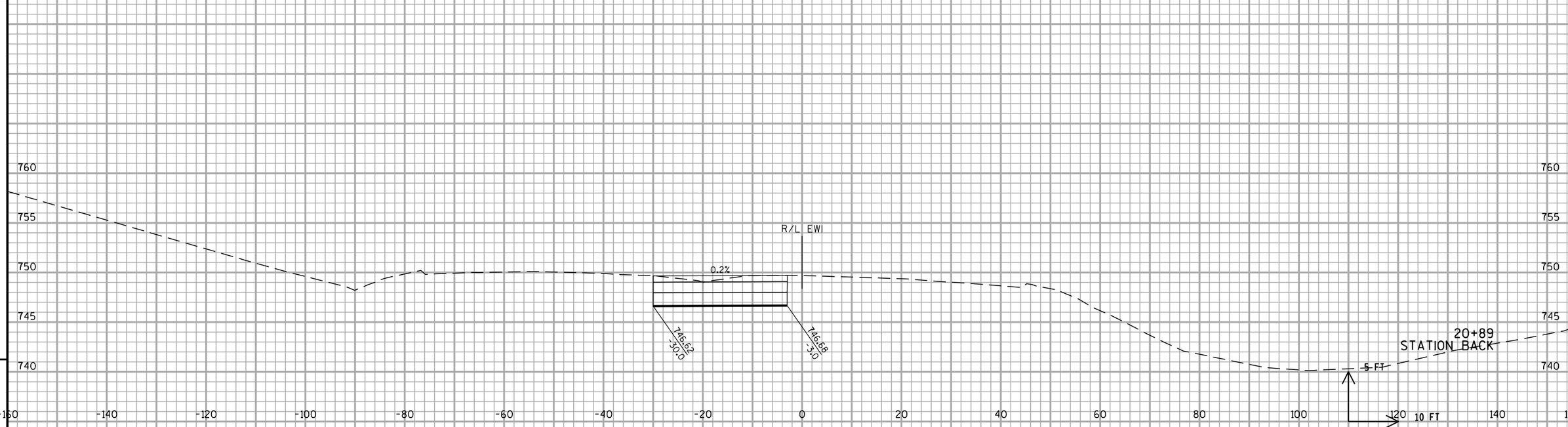
STA 20+00 TO 20+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



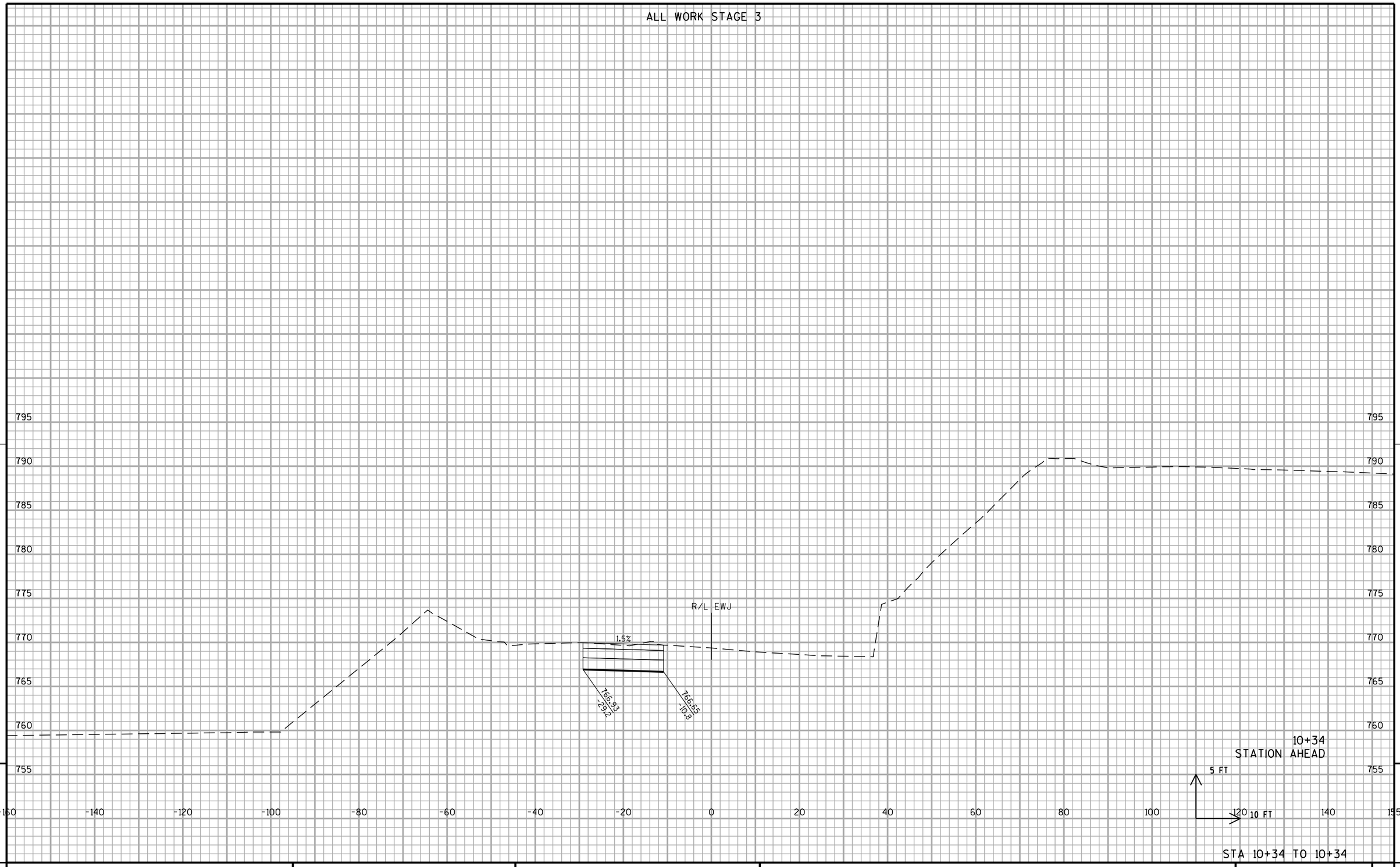
STA 20+89 TO 20+89

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWI	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090612_xs_ewi.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090612_xs_ewi8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



STA 10+34 TO 10+34

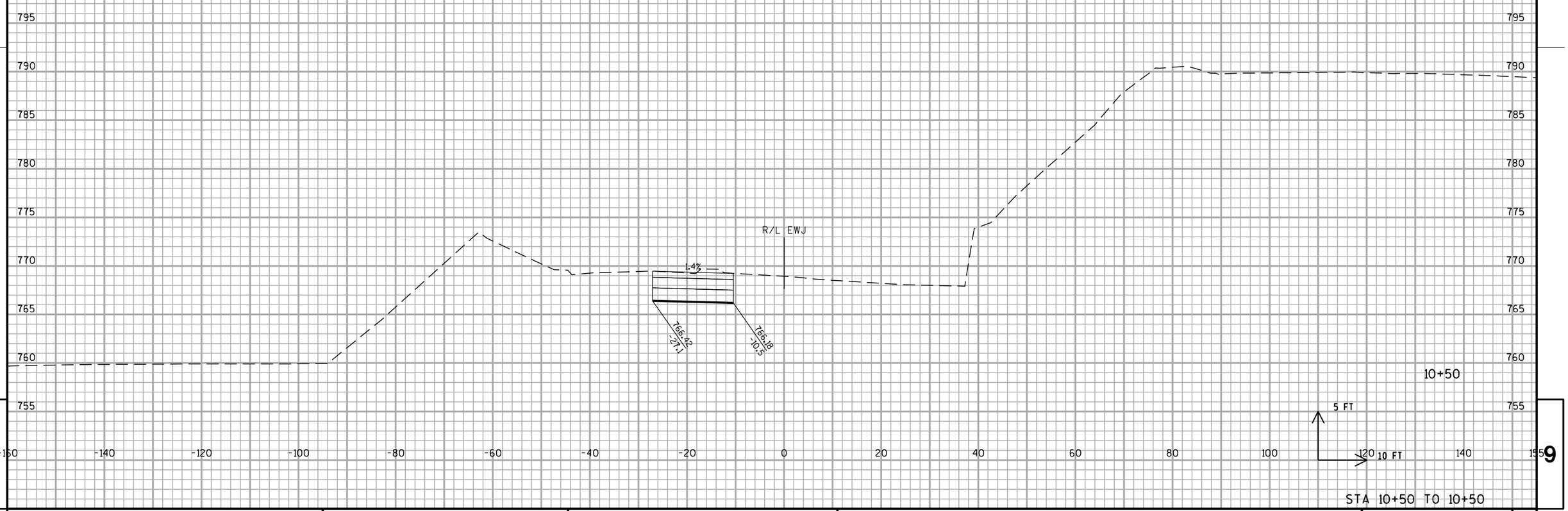
9

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



STA 10+50 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

795 790 785 780 775 770 765 760 755

R/W TLE

R/L EWJ

766.67 -45.1
2.5:1
769.52 -59.9
3.0:1
2.0%
1.0%
764.73 -47.9
764.49 -39.6
764.57 -33.4
764.82 -21.0
764.70 -9.6

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160

11+00

5 FT
10 FT

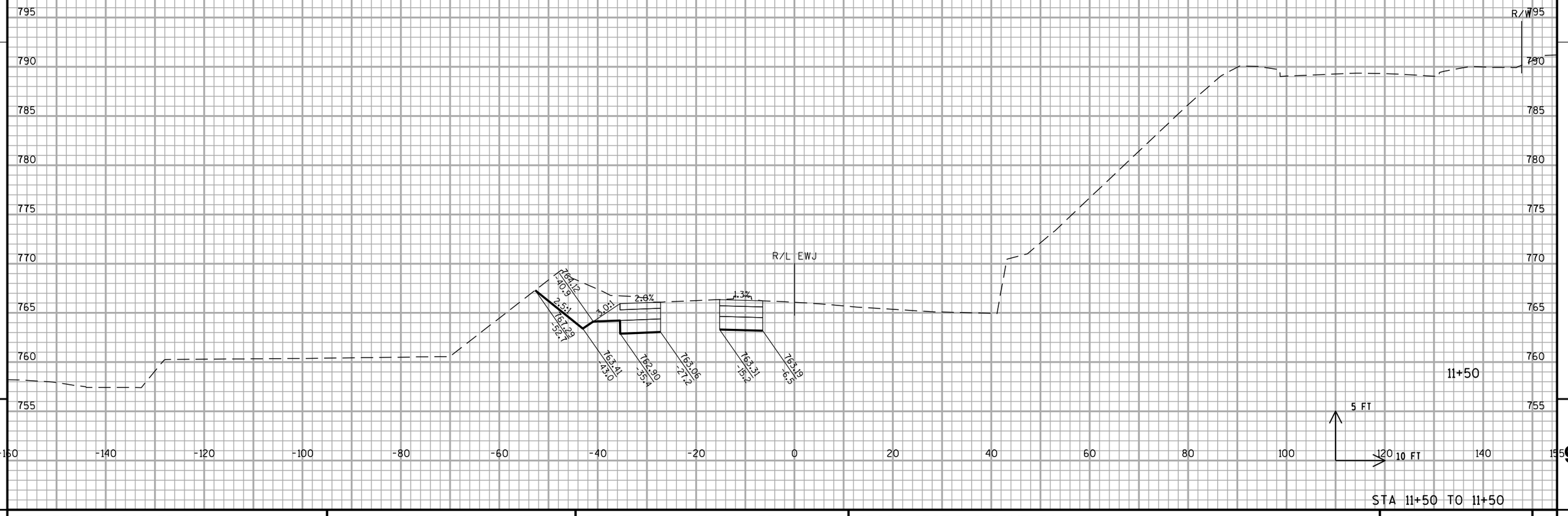
STA 11+00 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



9 9

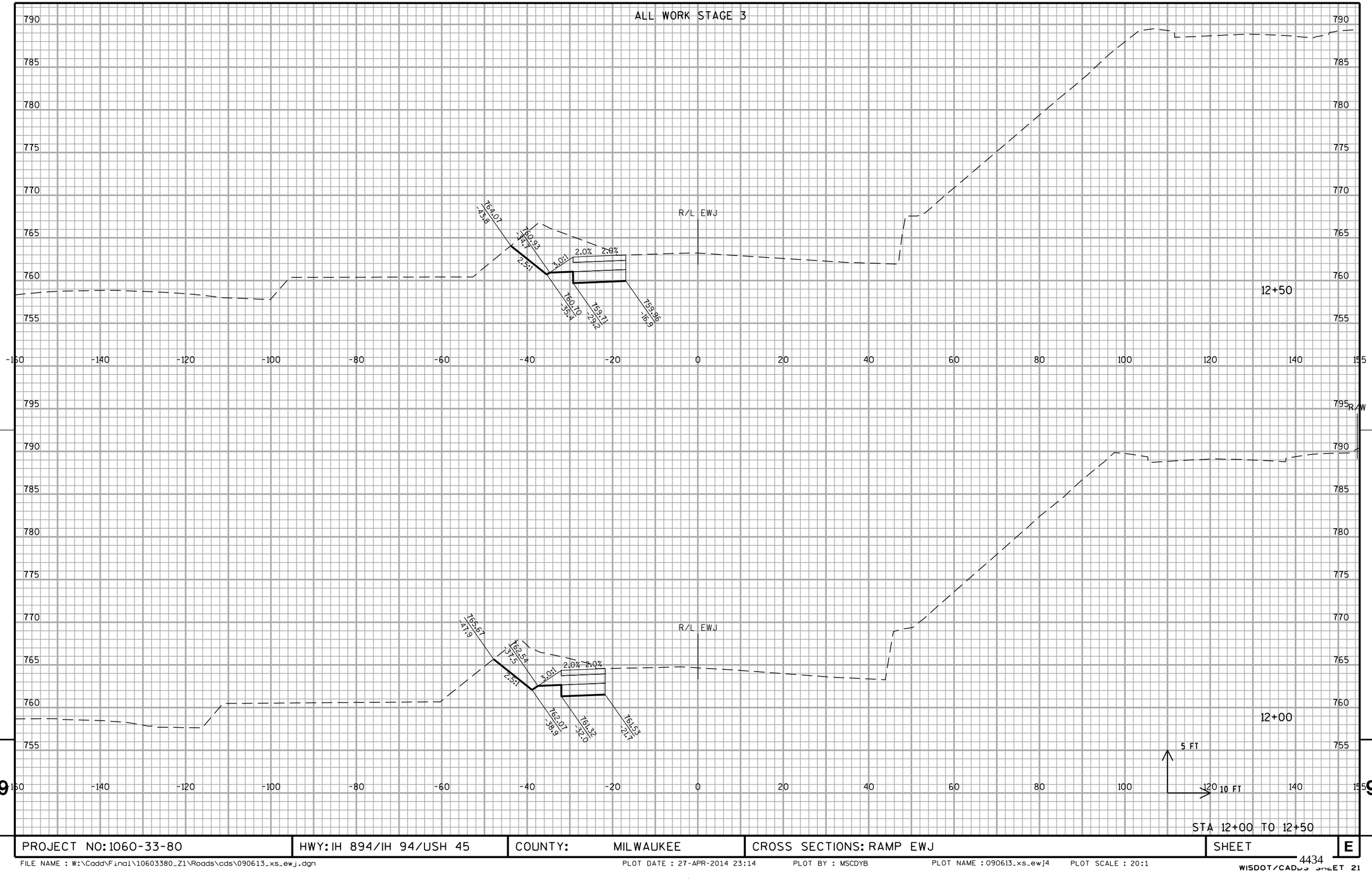
STA 11+50 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

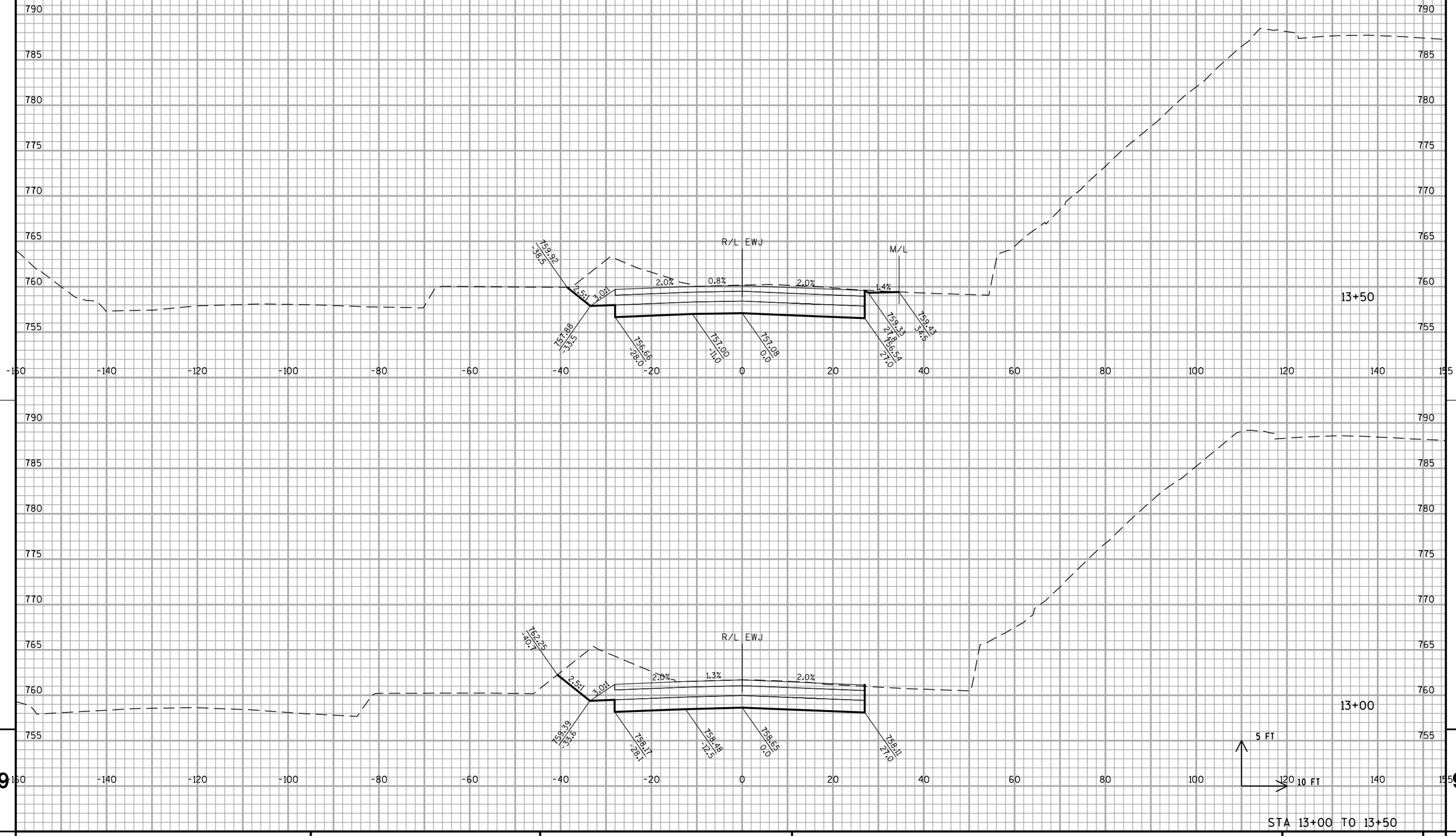


STA 12+00 TO 12+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj4 PLOT SCALE : 20:1

ALL WORK STAGE 3

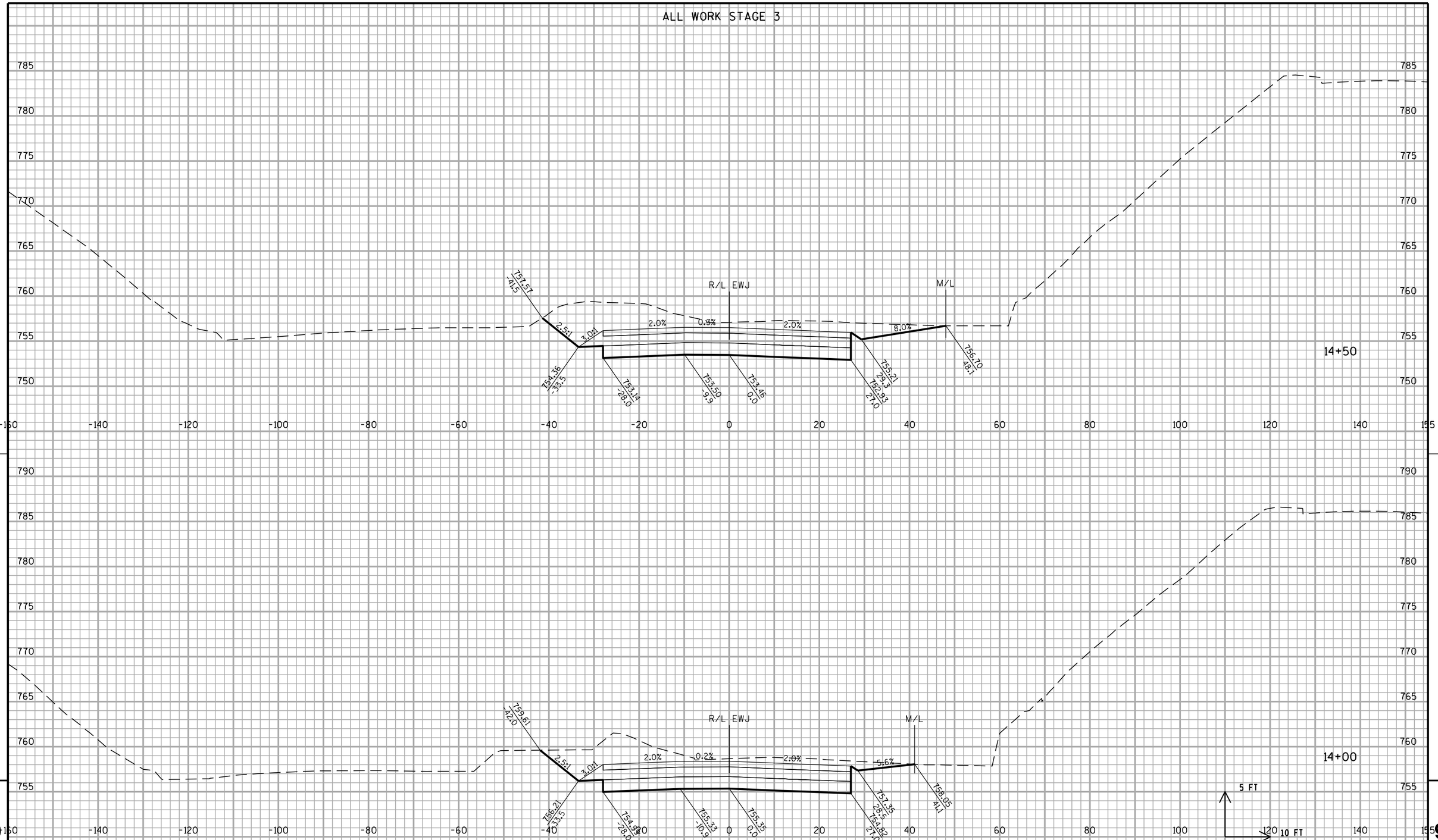


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



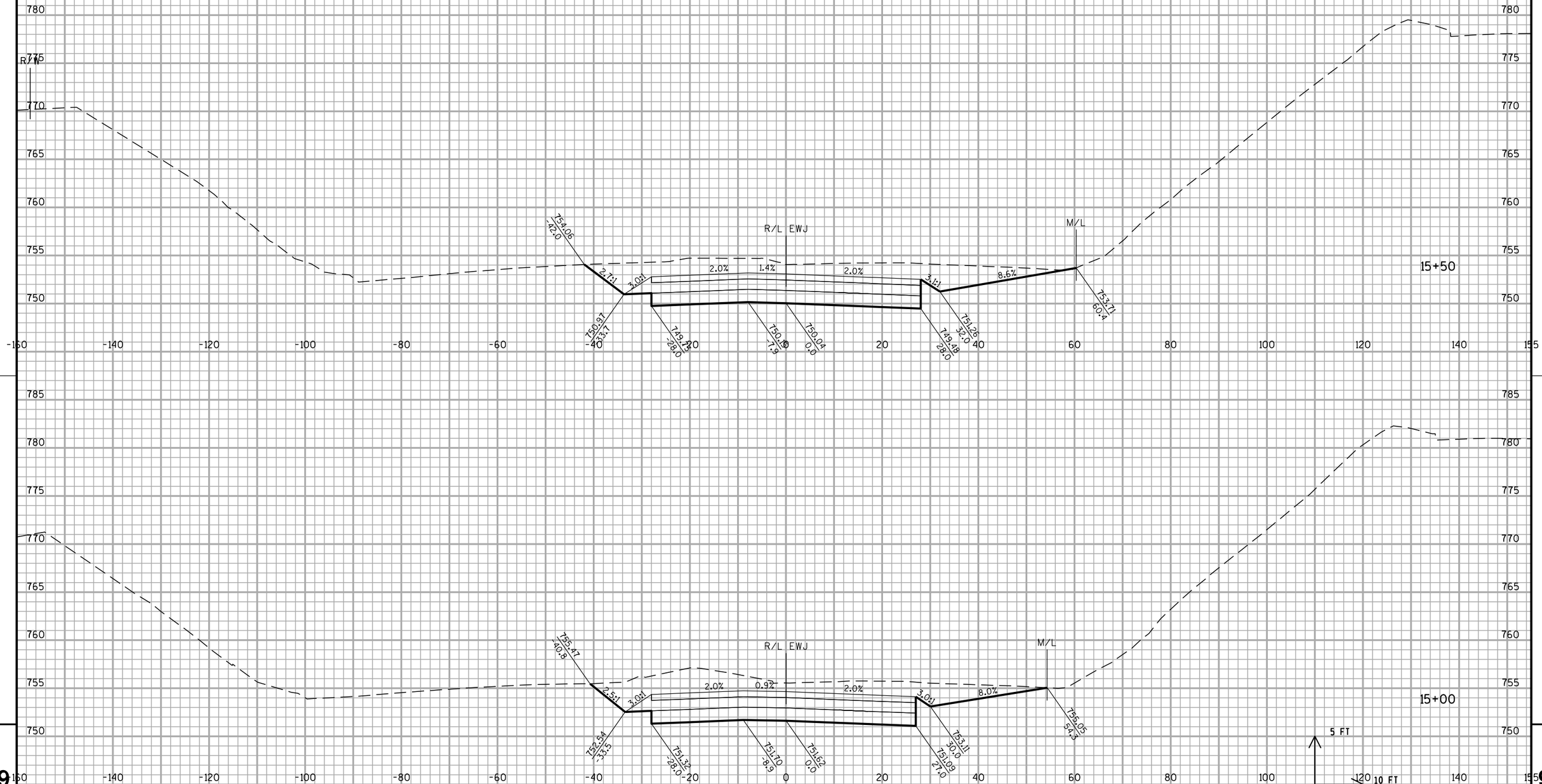
STA 14+00 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



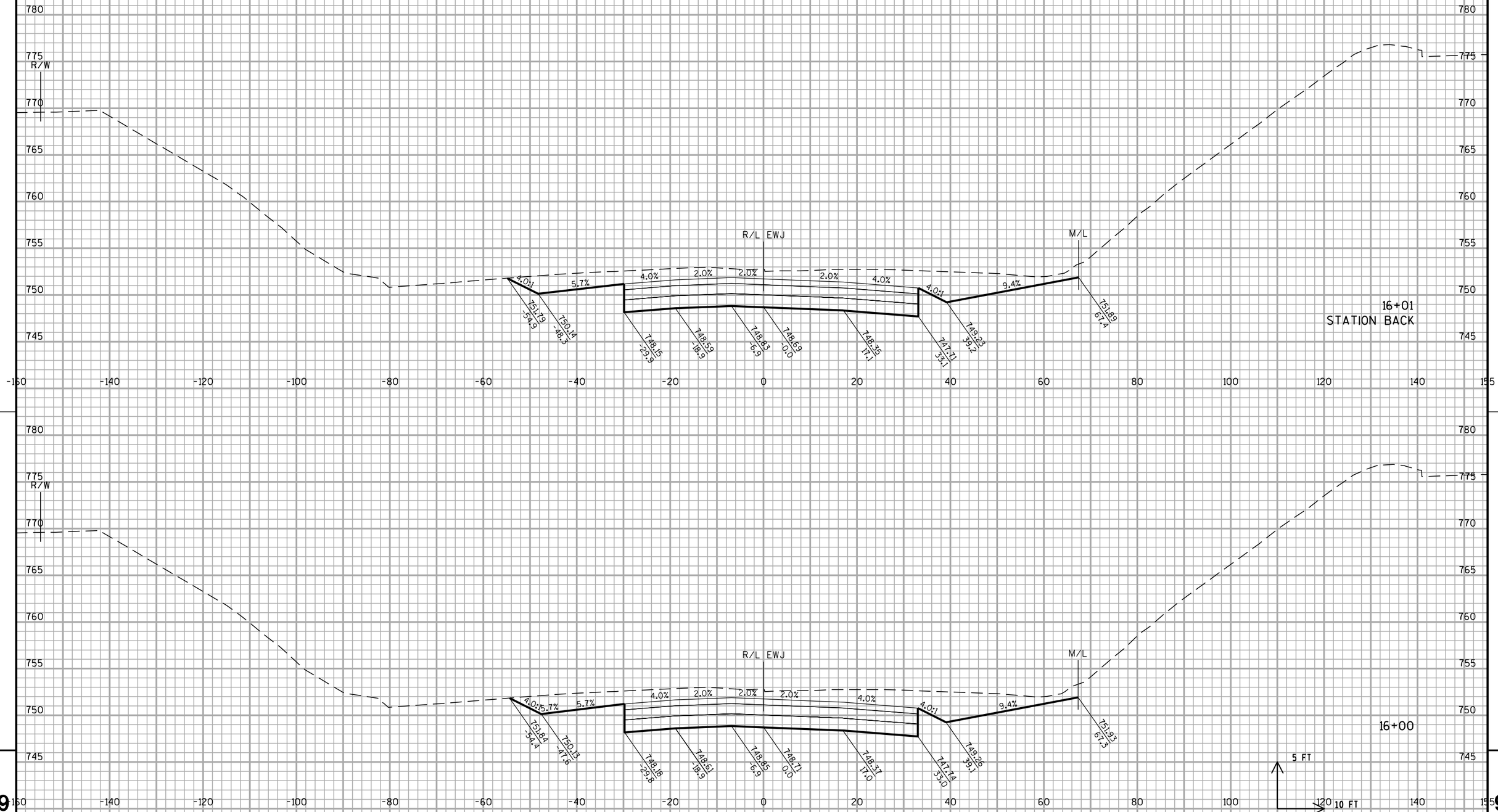
STA 15+00 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



STA 16+00 TO 16+01

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWJ	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090613_xs_ewj.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090613_xs_ewj8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

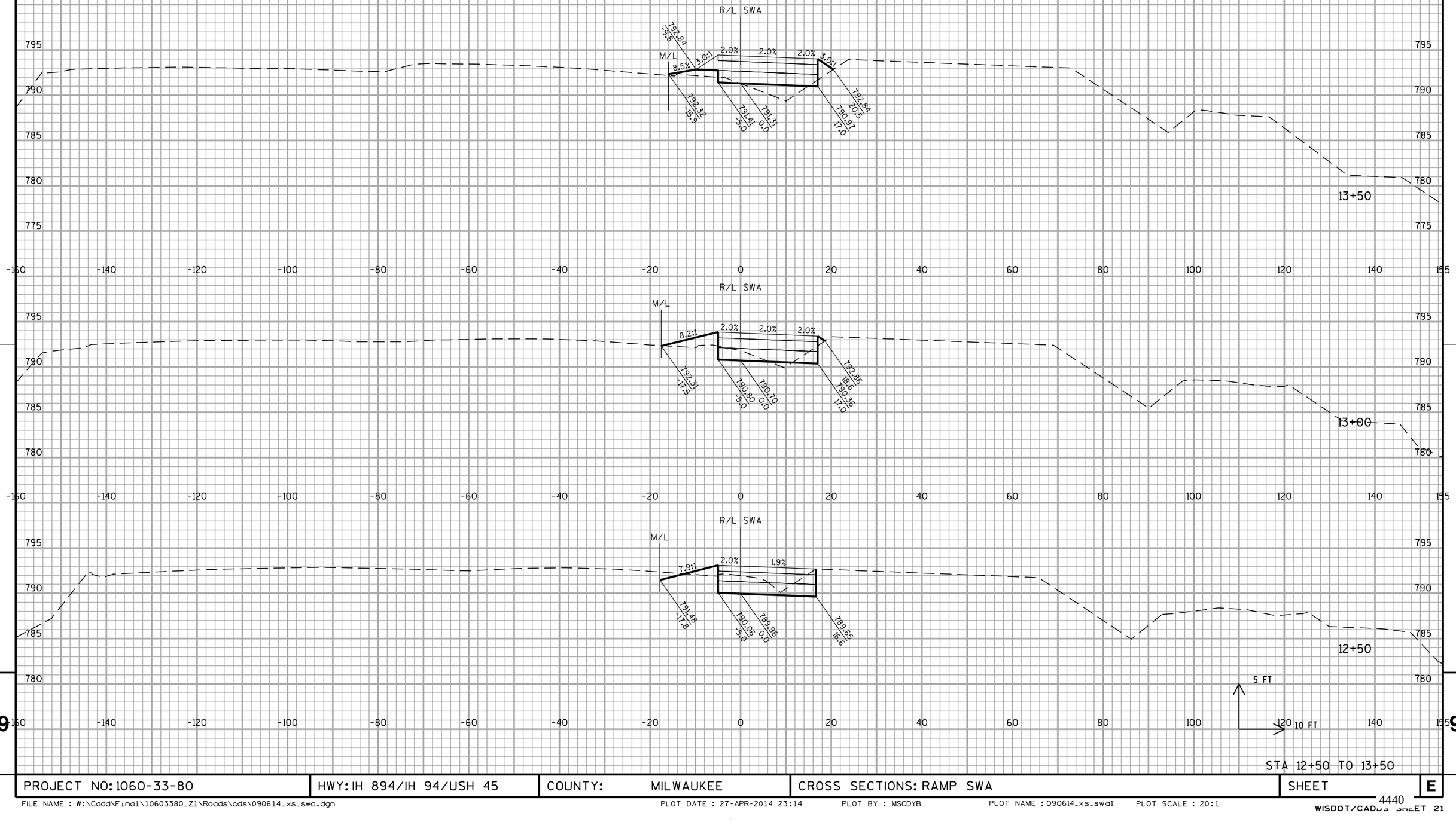
ALL WORK STAGE 4

STA 11+19 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa PLOT SCALE : 20:1

ALL WORK STAGE 4

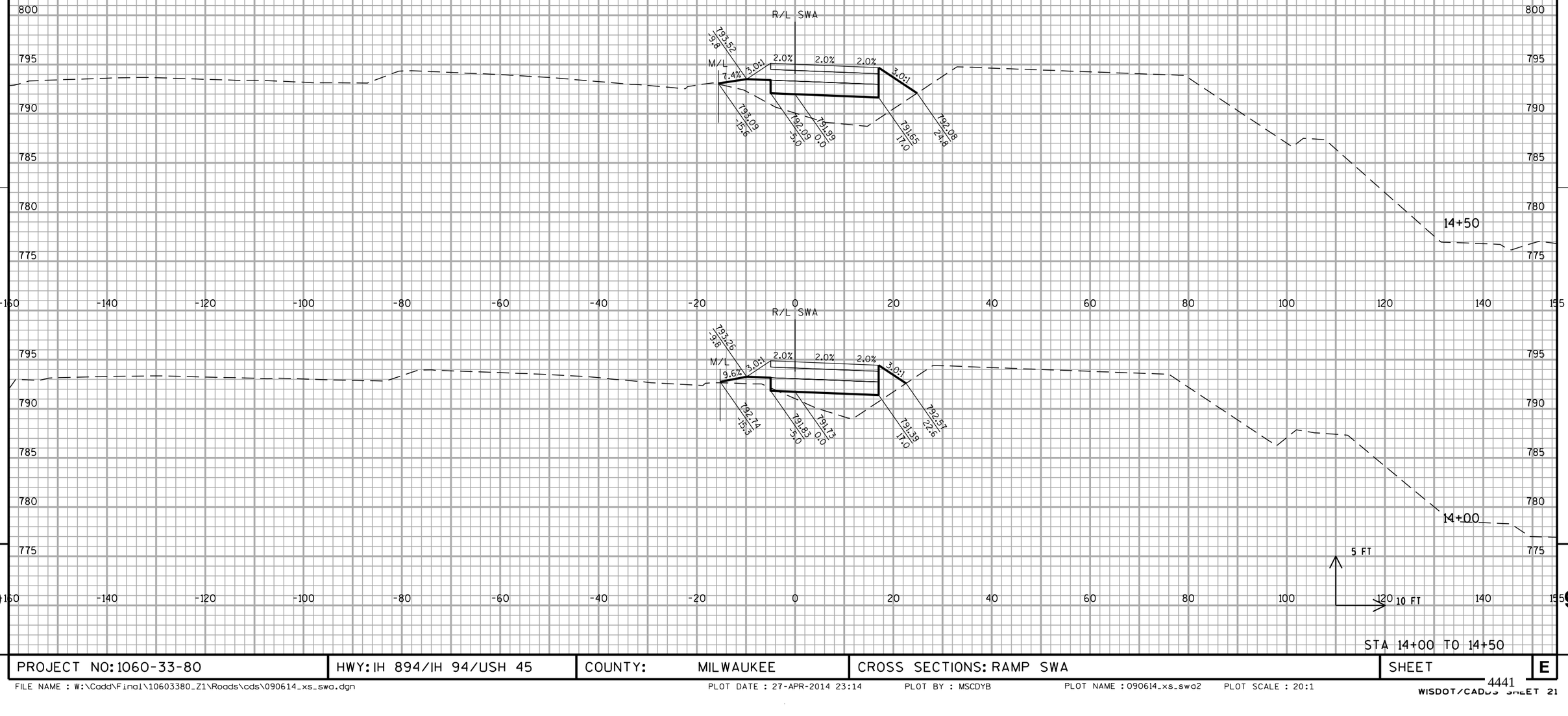


STA 12+50 TO 13+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa1 PLOT SCALE : 20:1

ALL WORK STAGE 4

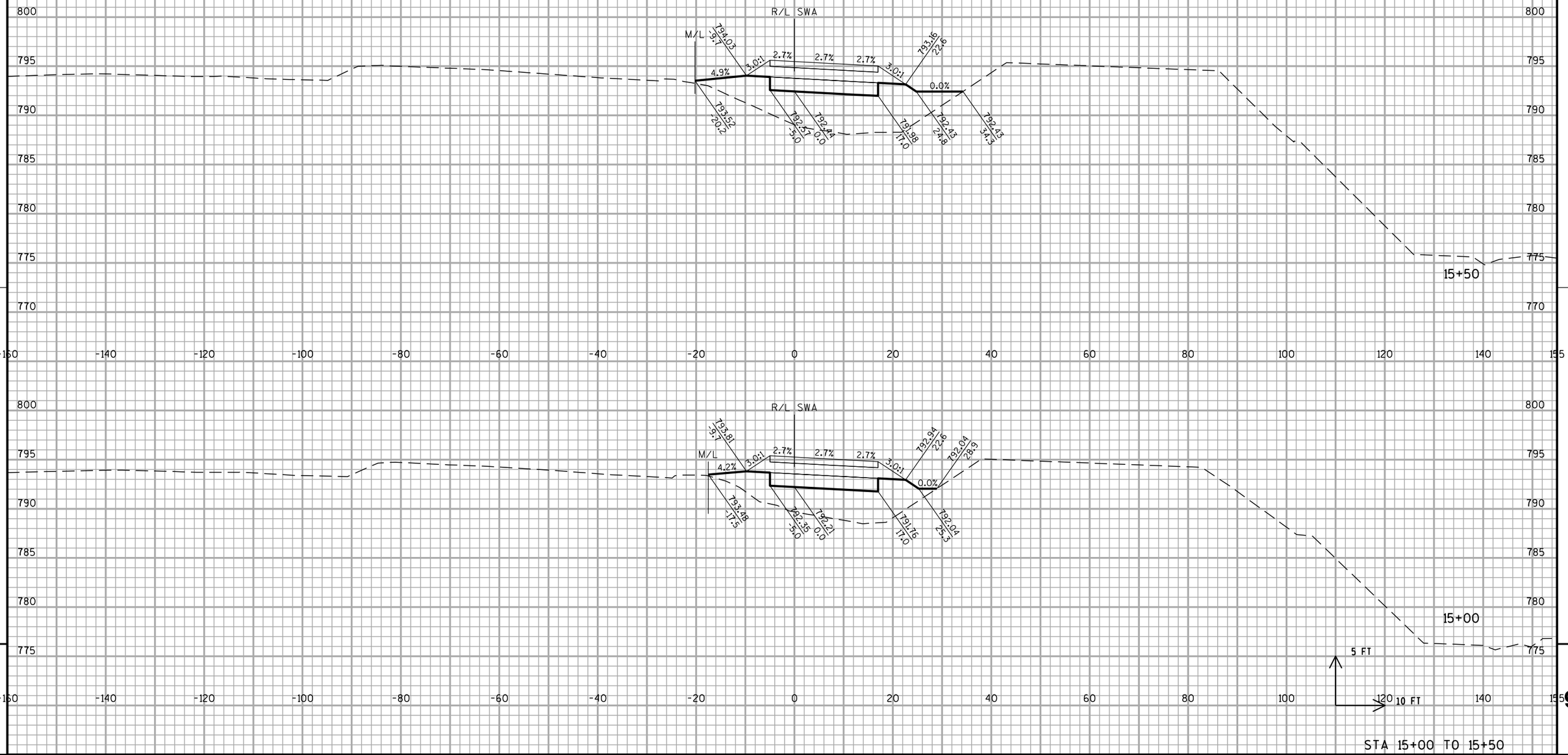


STA 14+00 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa2 PLOT SCALE : 20:1

ALL WORK STAGE 4

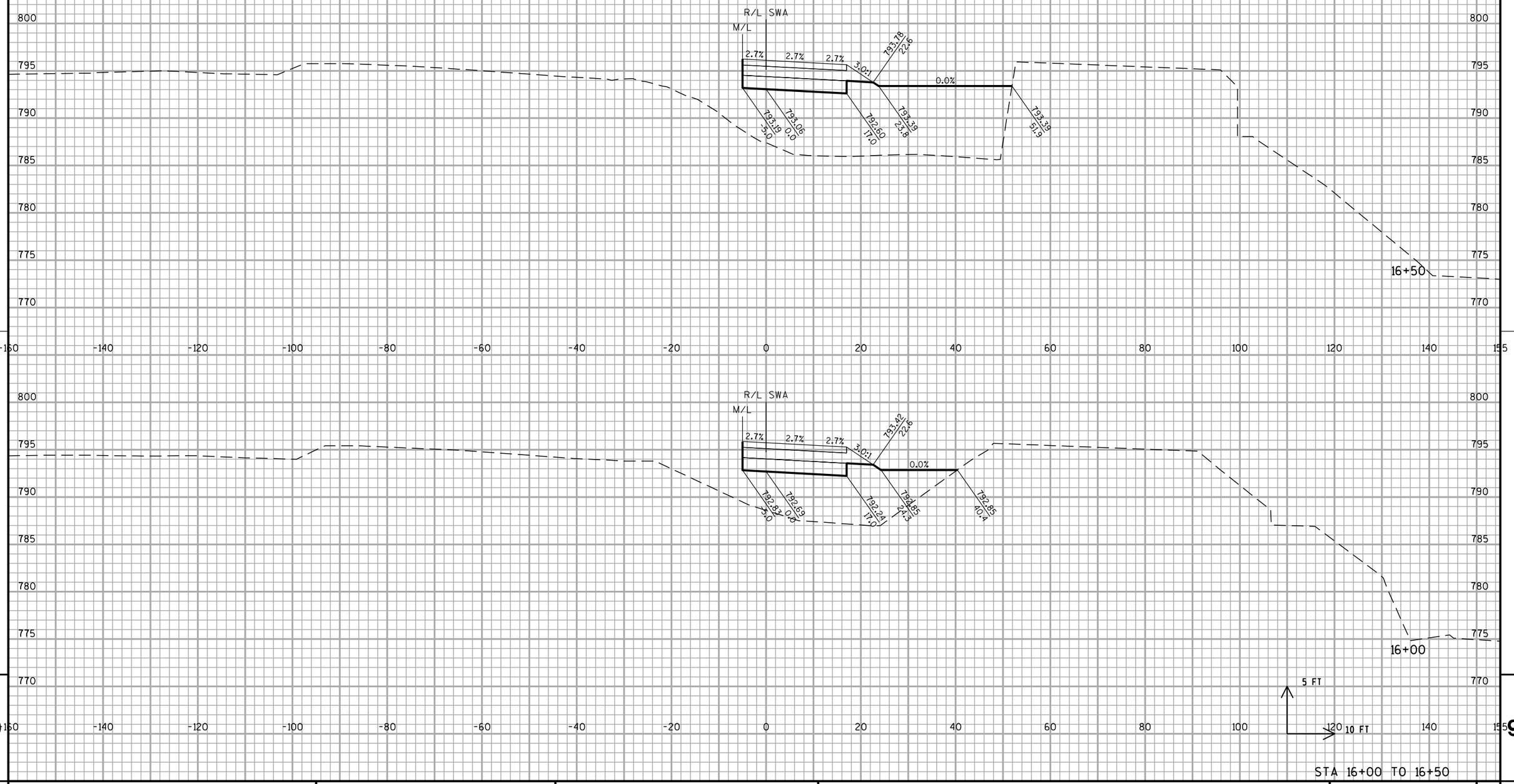


STA 15+00 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa3 PLOT SCALE : 20:1

ALL WORK STAGE 4



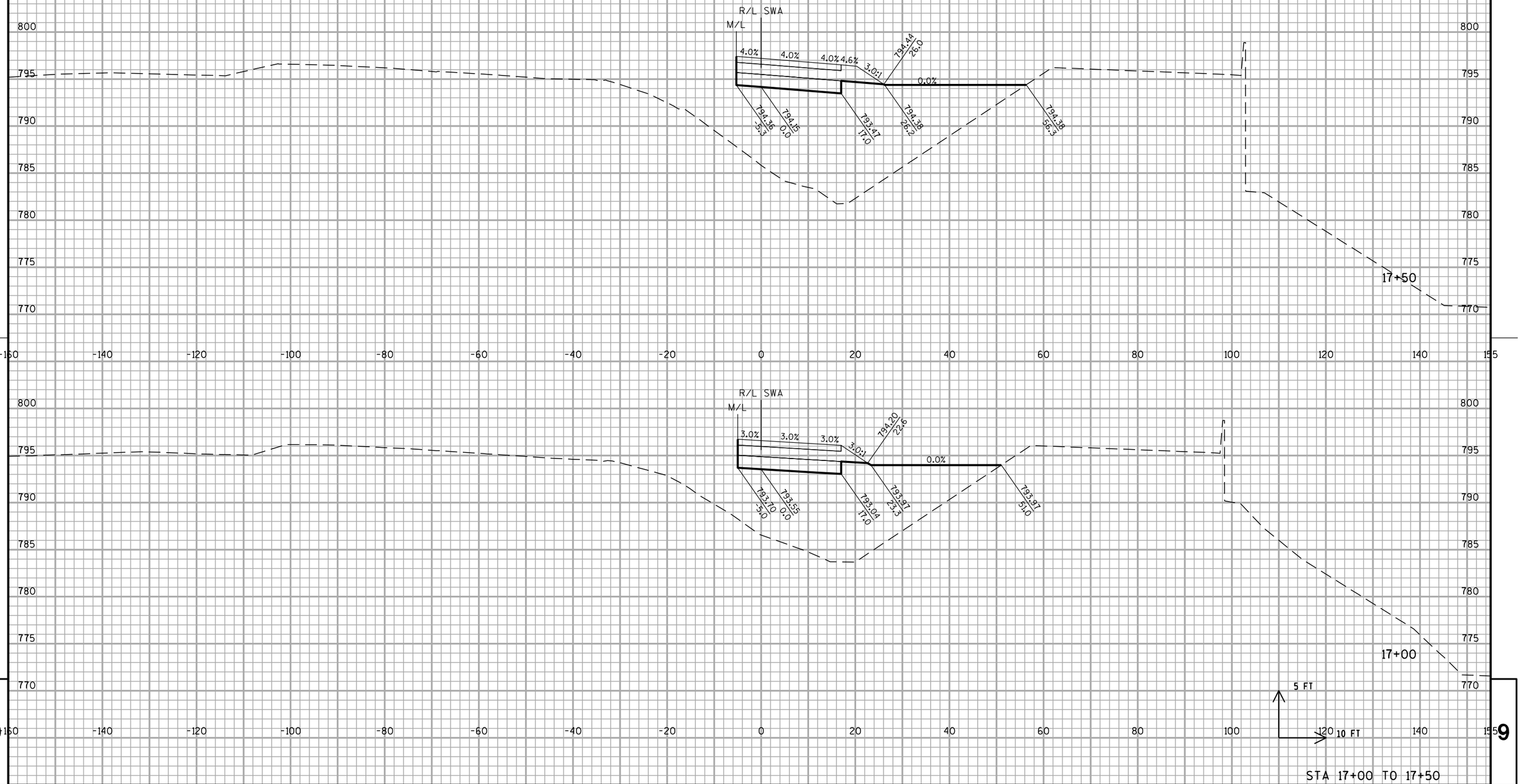
STA 16+00 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

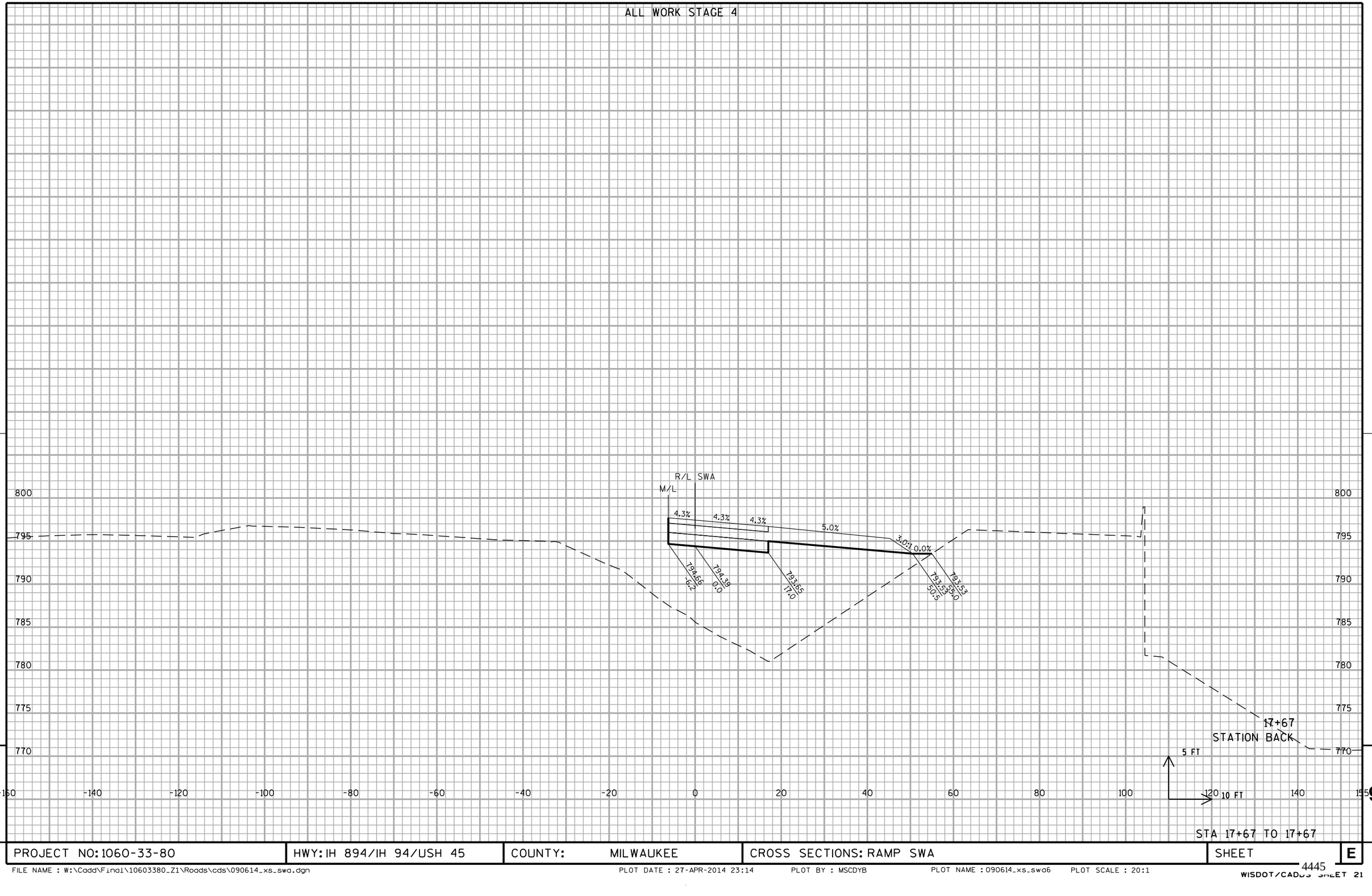


STA 17+00 TO 17+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa5 PLOT SCALE : 20:1

ALL WORK STAGE 4



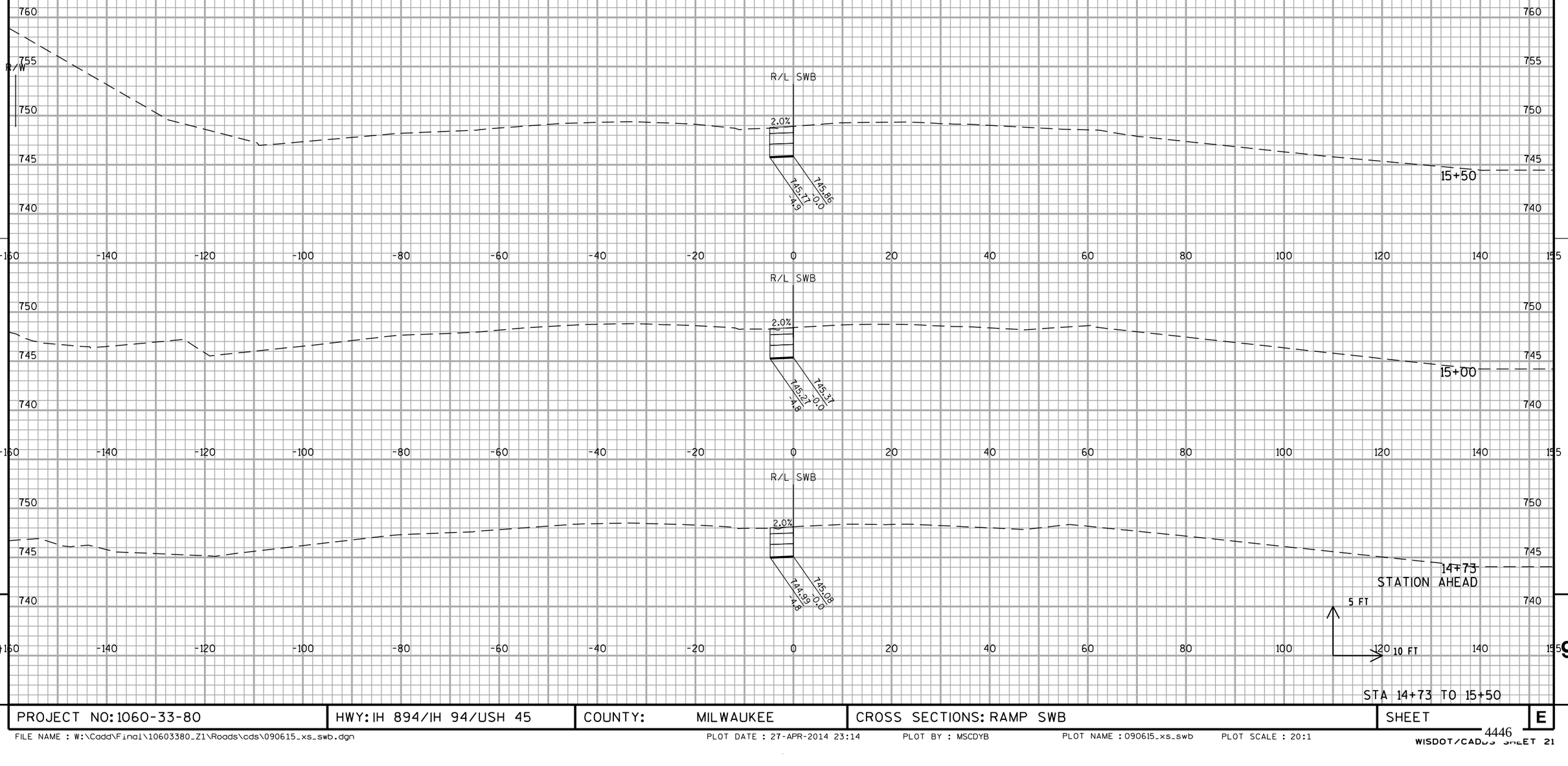
STA 17+67 TO 17+67

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090614_xs_swa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090614_xs_swa6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

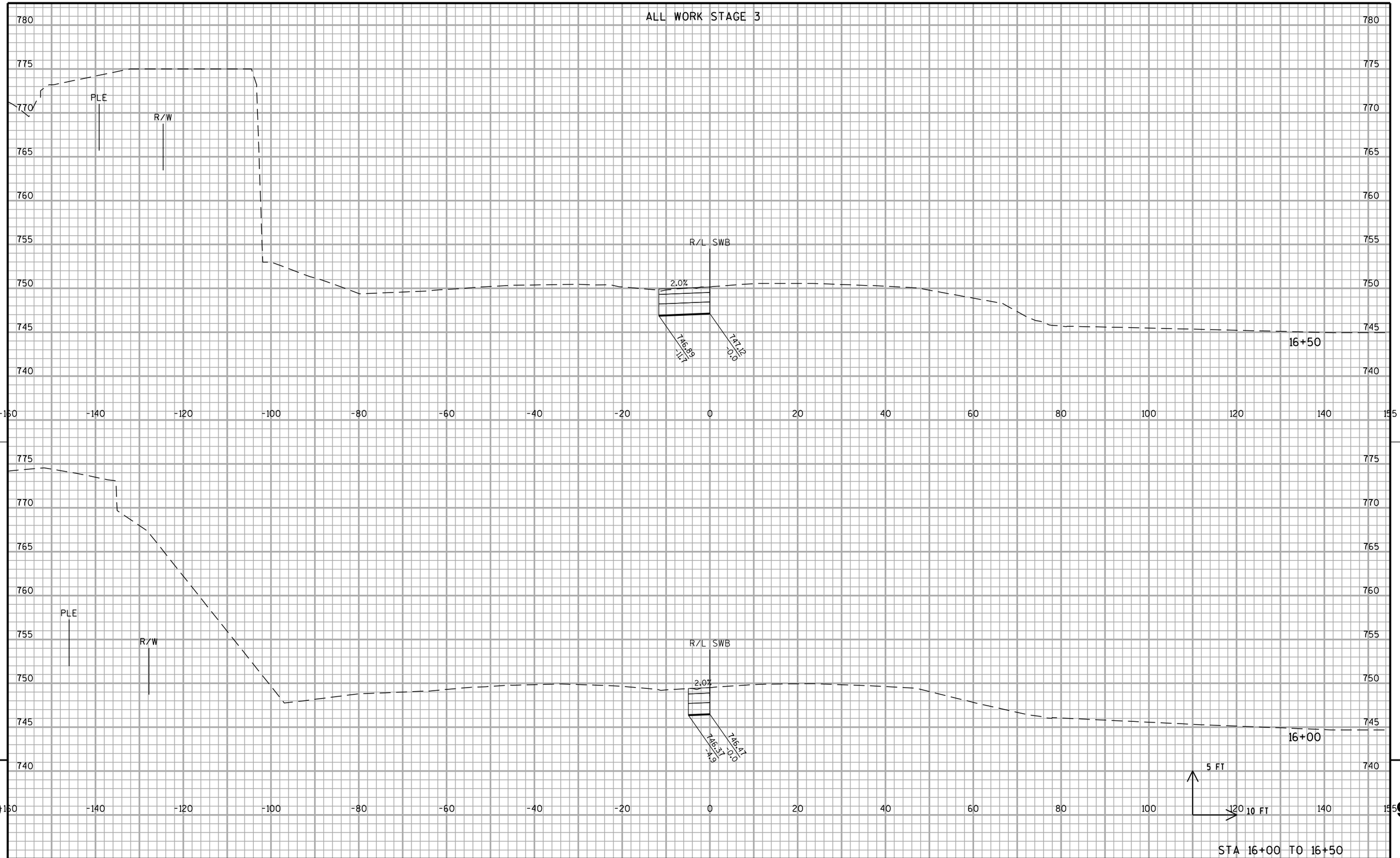


STA 14+73 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090615_xs_swb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090615_xs_swb PLOT SCALE : 20:1

ALL WORK STAGE 3



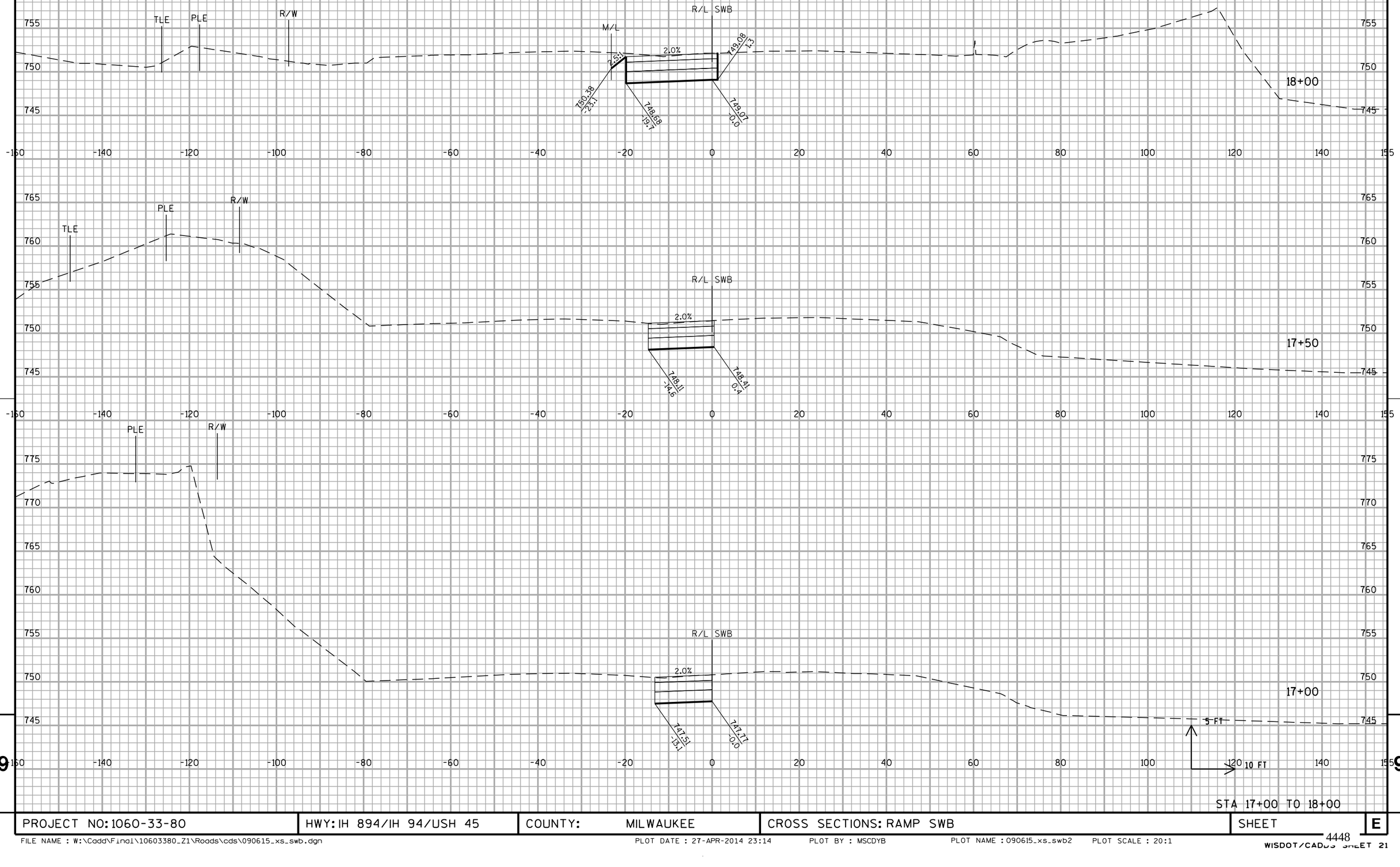
STA 16+00 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090615_xs_swb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090615_xs_swb1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



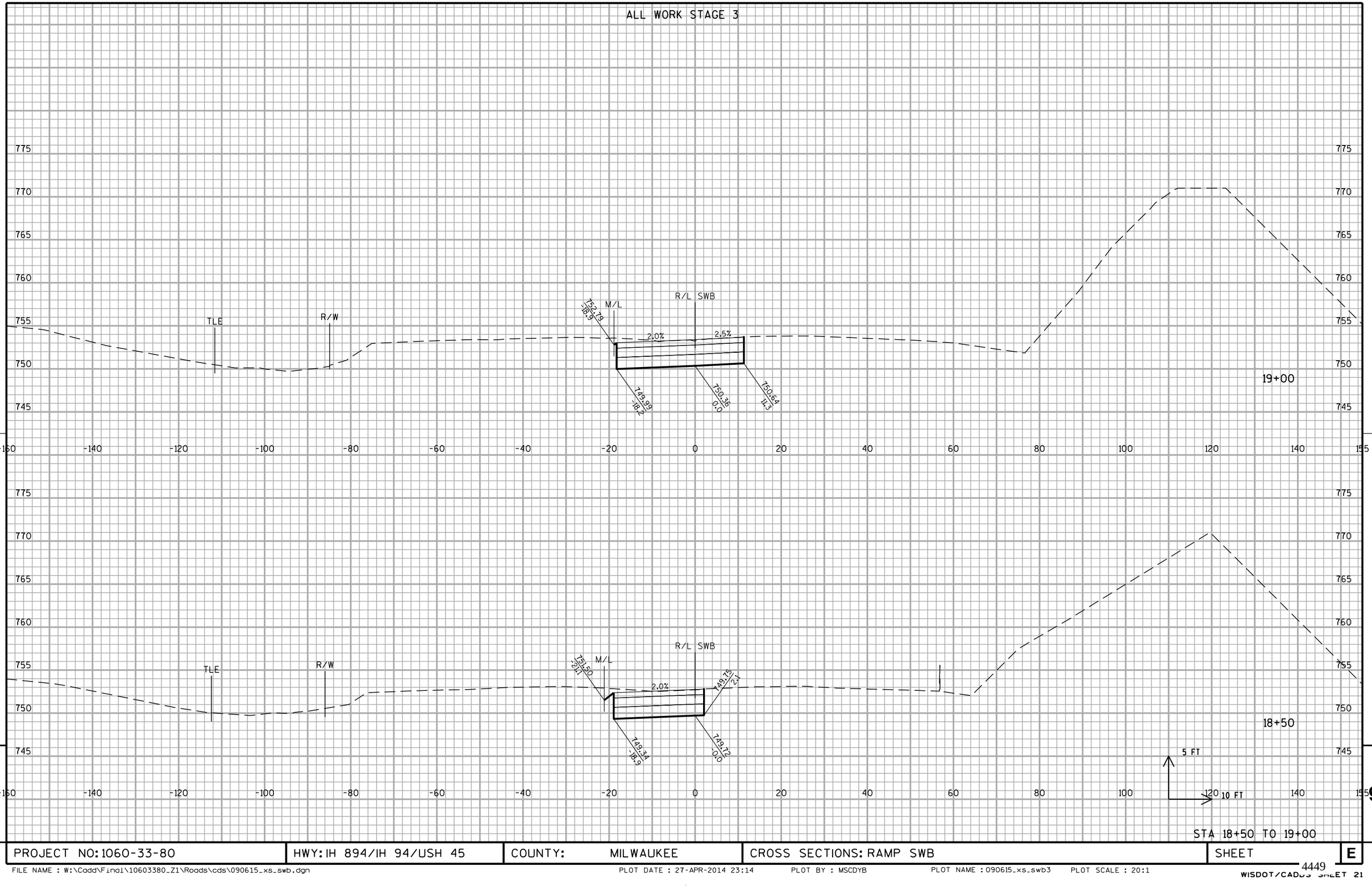
STA 17+00 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090615_xs_swb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090615_xs_swb2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

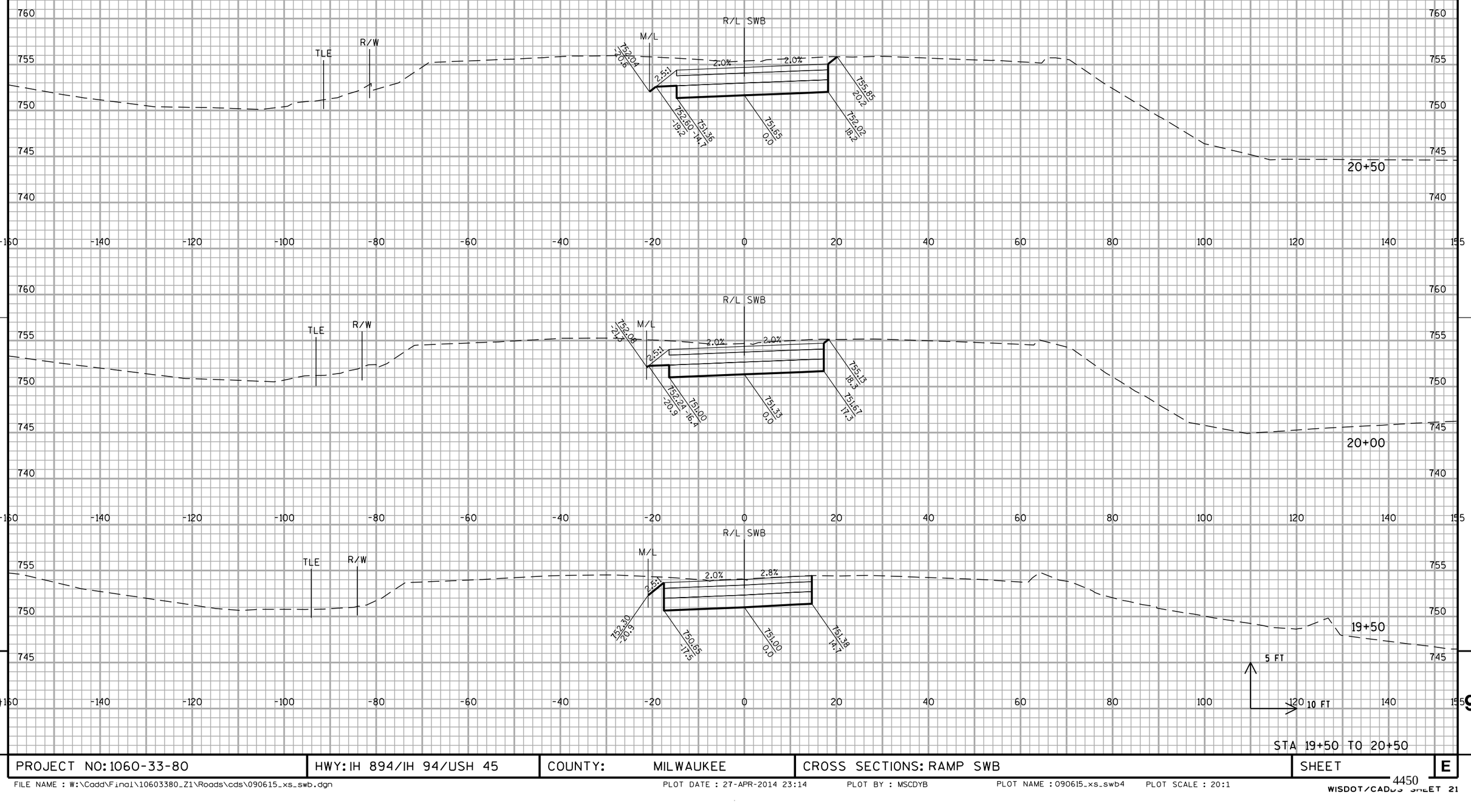
ALL WORK STAGE 3



STA 18+50 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET E

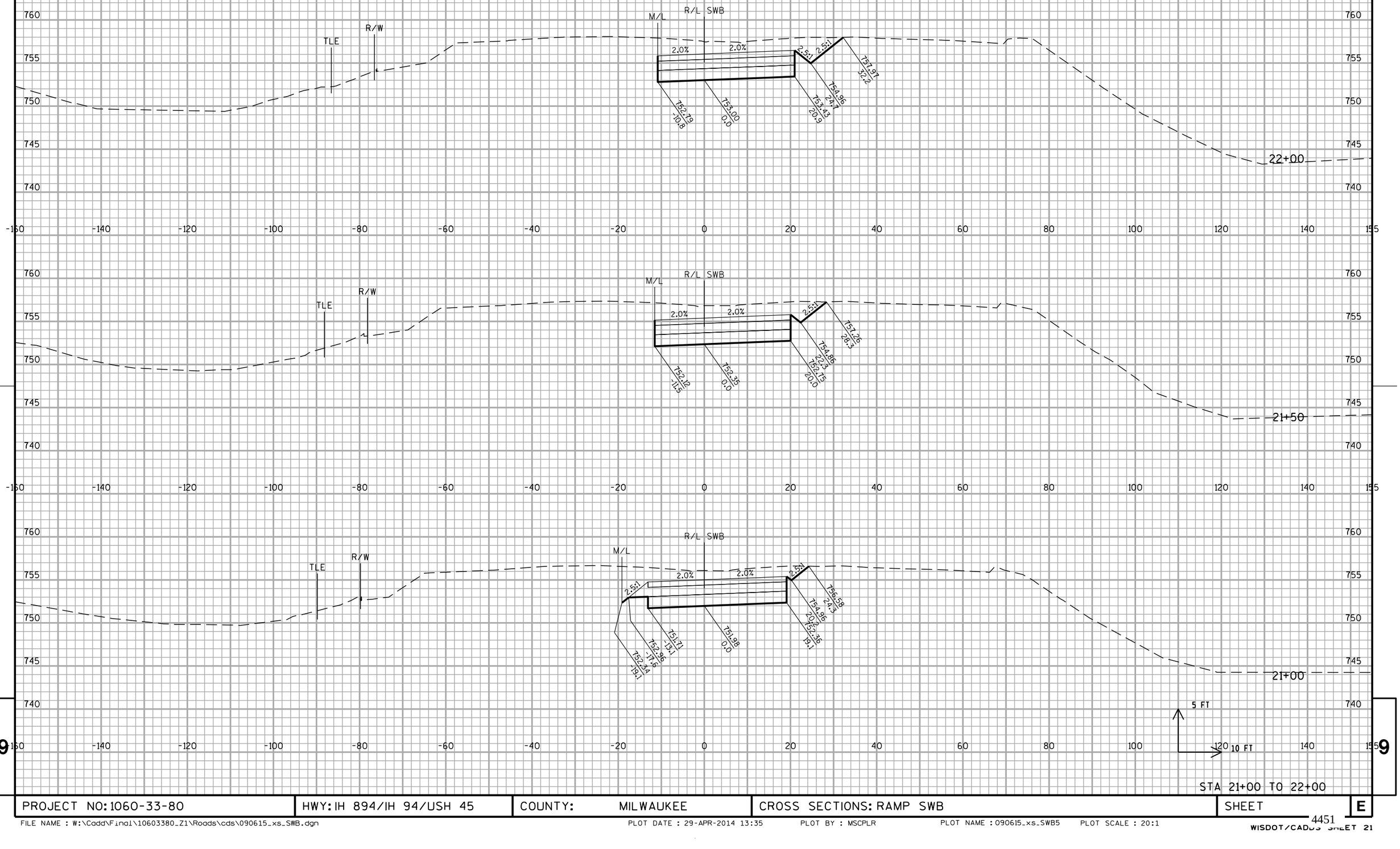
ALL WORK STAGE 3



STA 19+50 TO 20+50

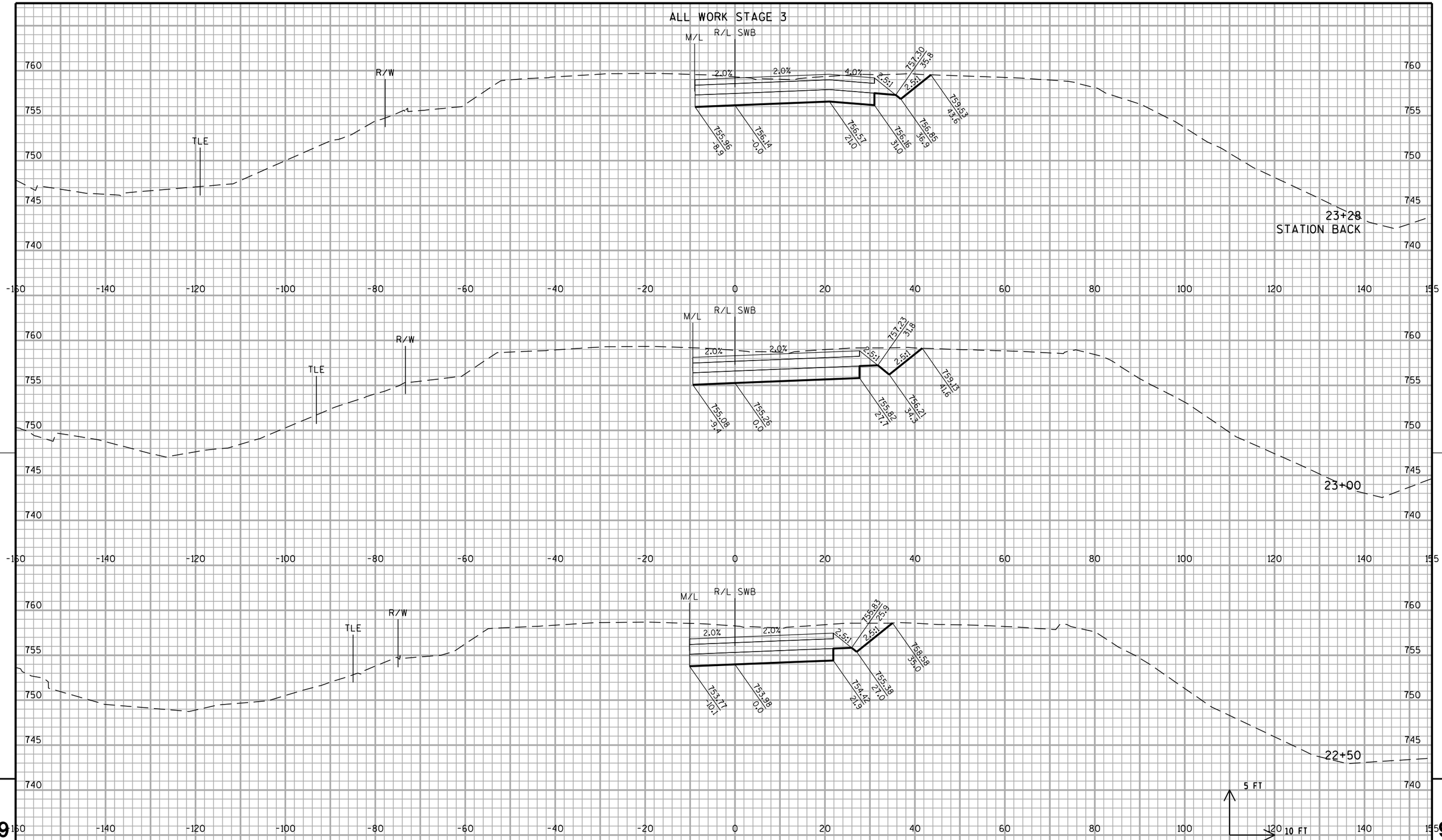
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET	E

ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET E

ALL WORK STAGE 3



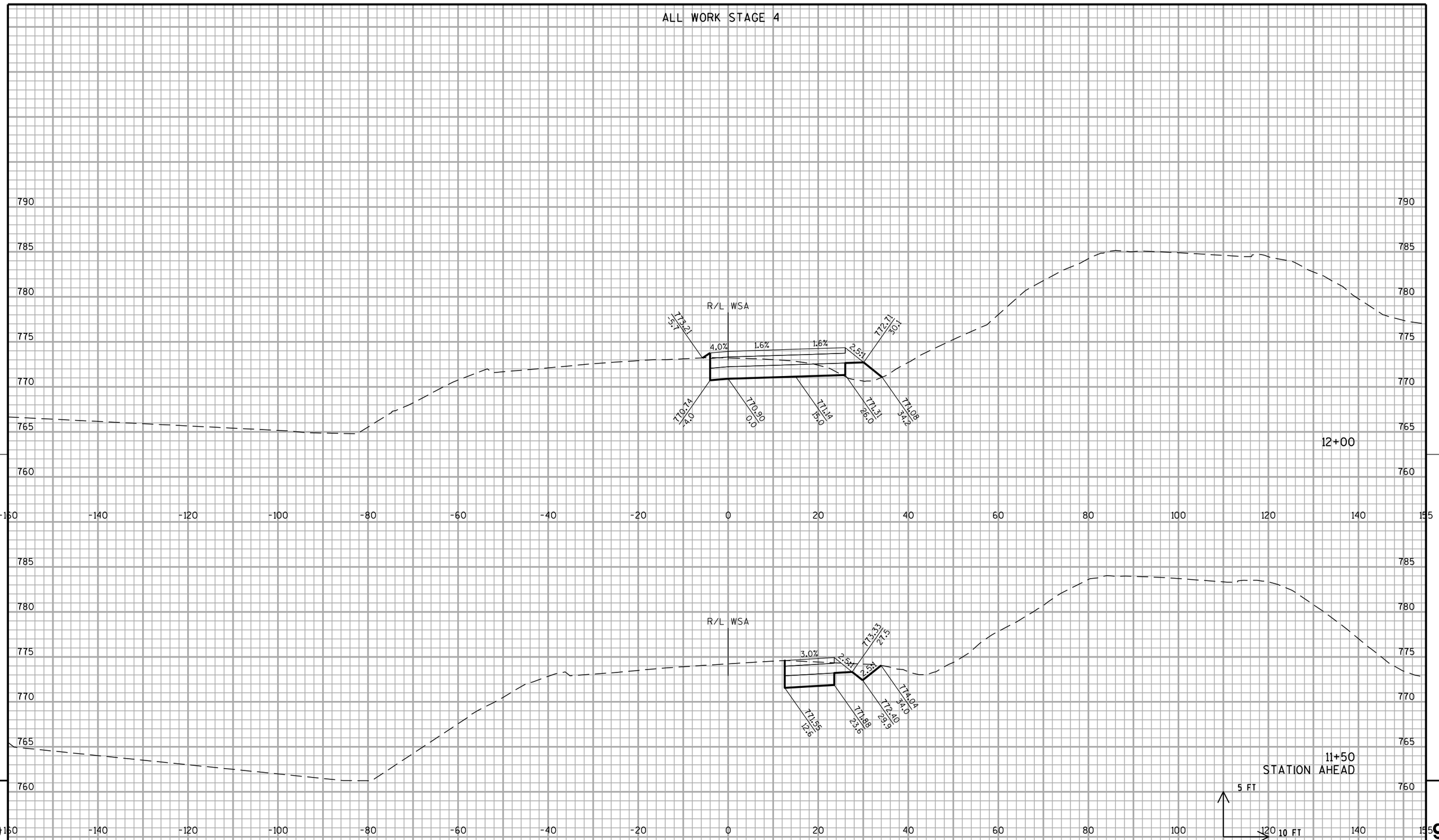
STA 22+50 TO 23+28

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SWB	SHEET E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090615_xs_swb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090615_xs_swb6 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 4

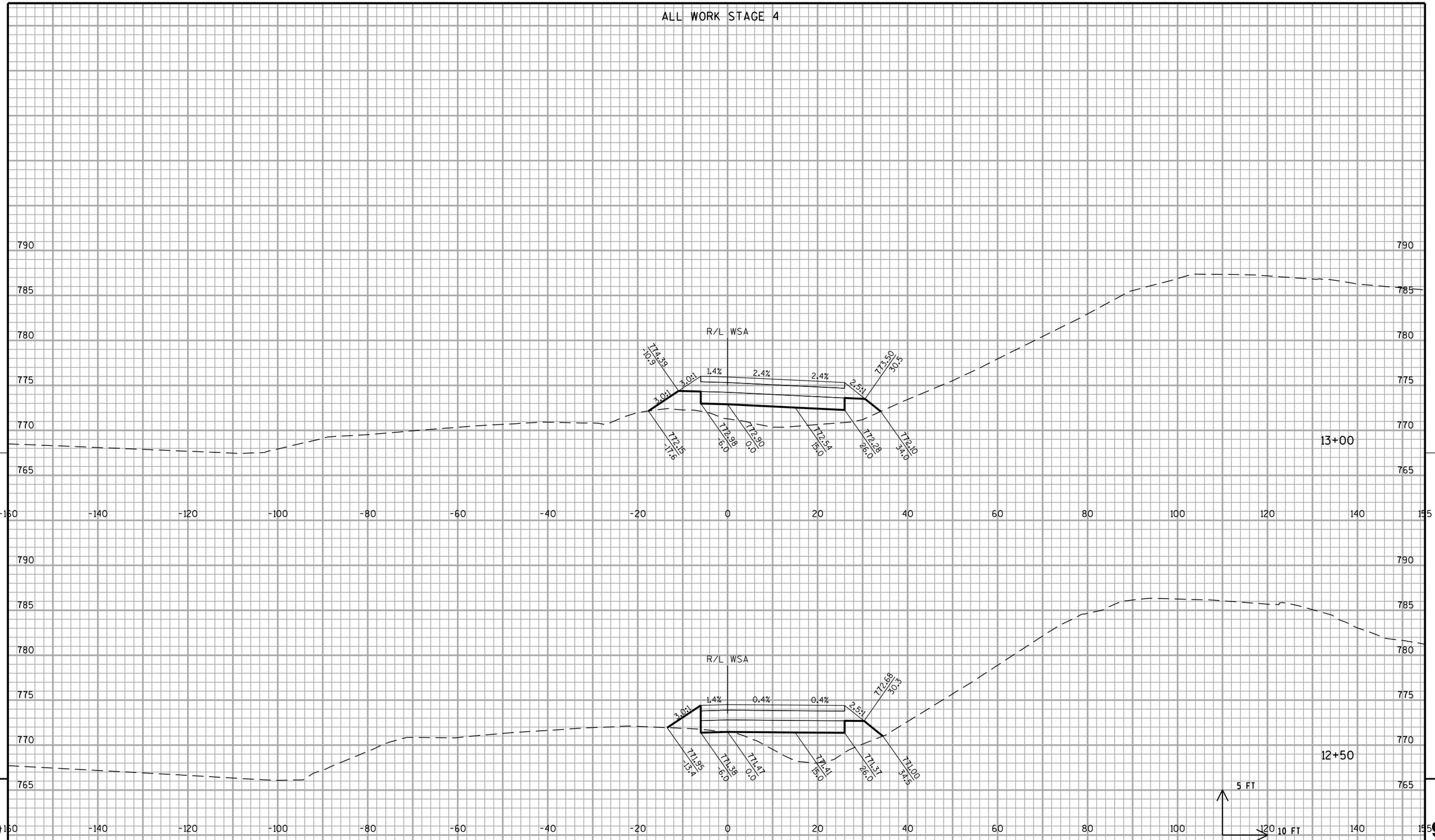


STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WSA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090616_xs_wsa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090616_xs_wsa PLOT SCALE : 20:1

ALL WORK STAGE 4

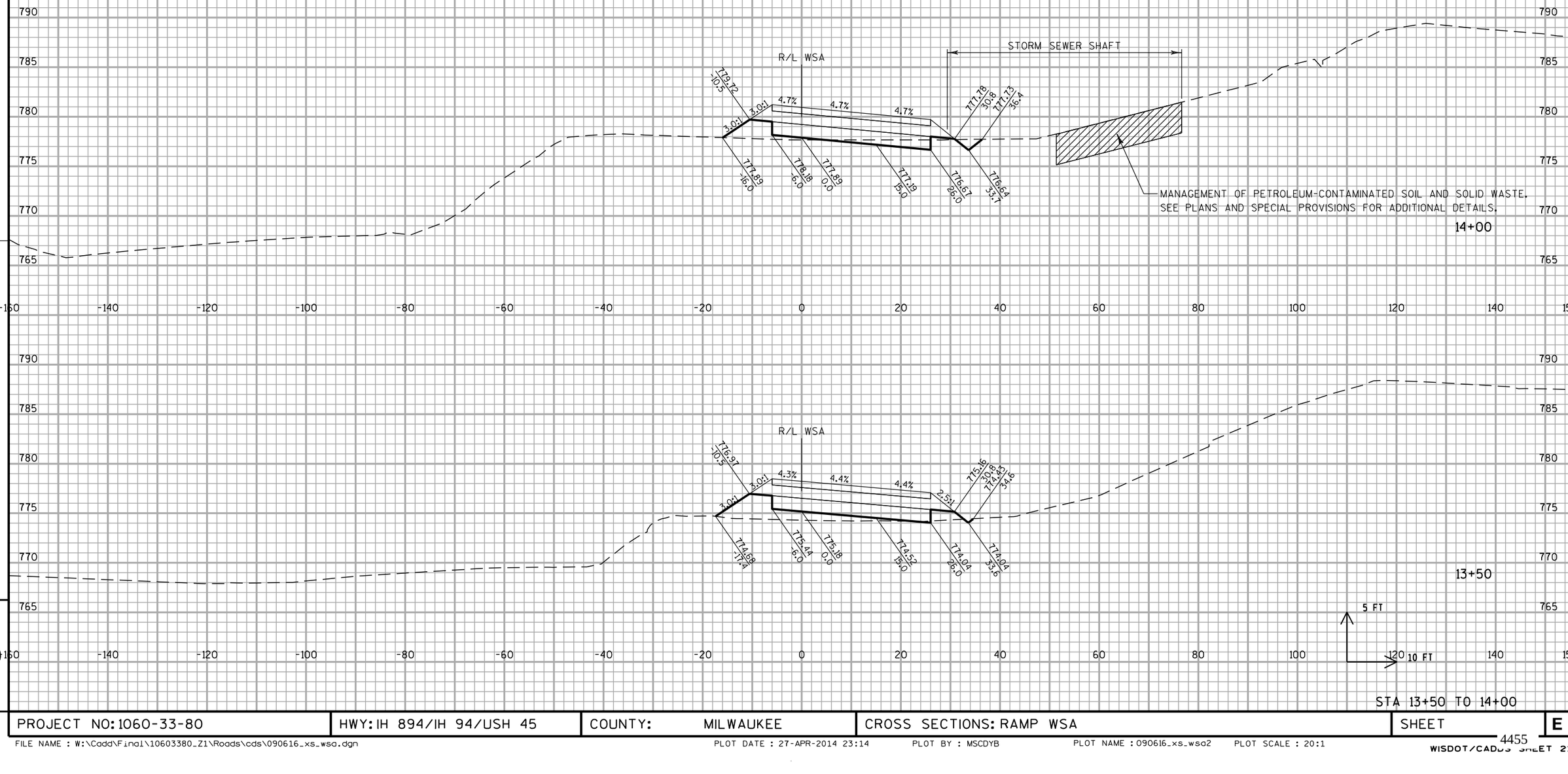


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090616_xs_wsa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090616_xs_wsa1 PLOT SCALE : 20:1

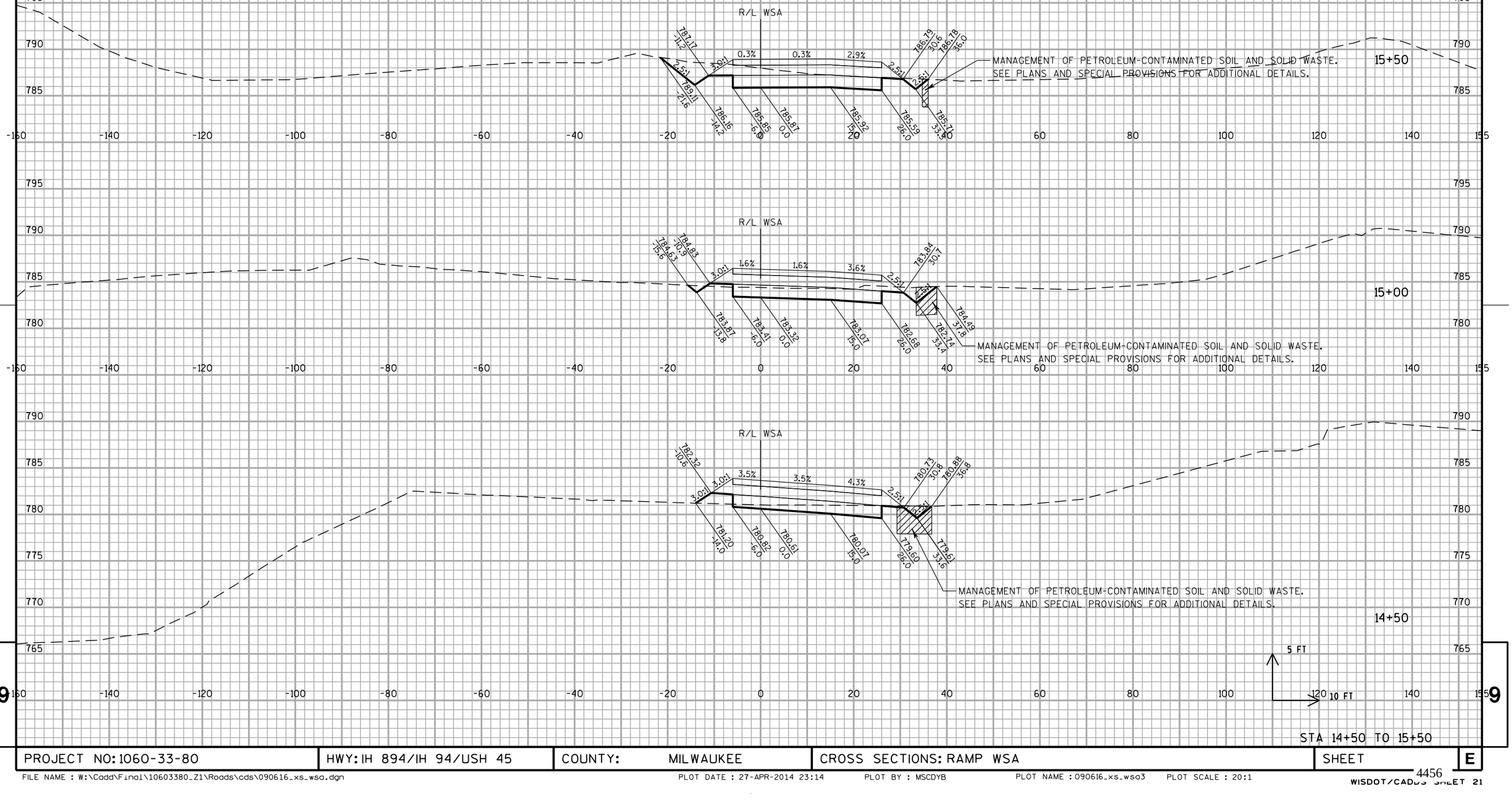
ALL WORK STAGE 4



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WSA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090616_xs_wsa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090616_xs_wsa2 PLOT SCALE : 20:1

ALL WORK STAGE 4

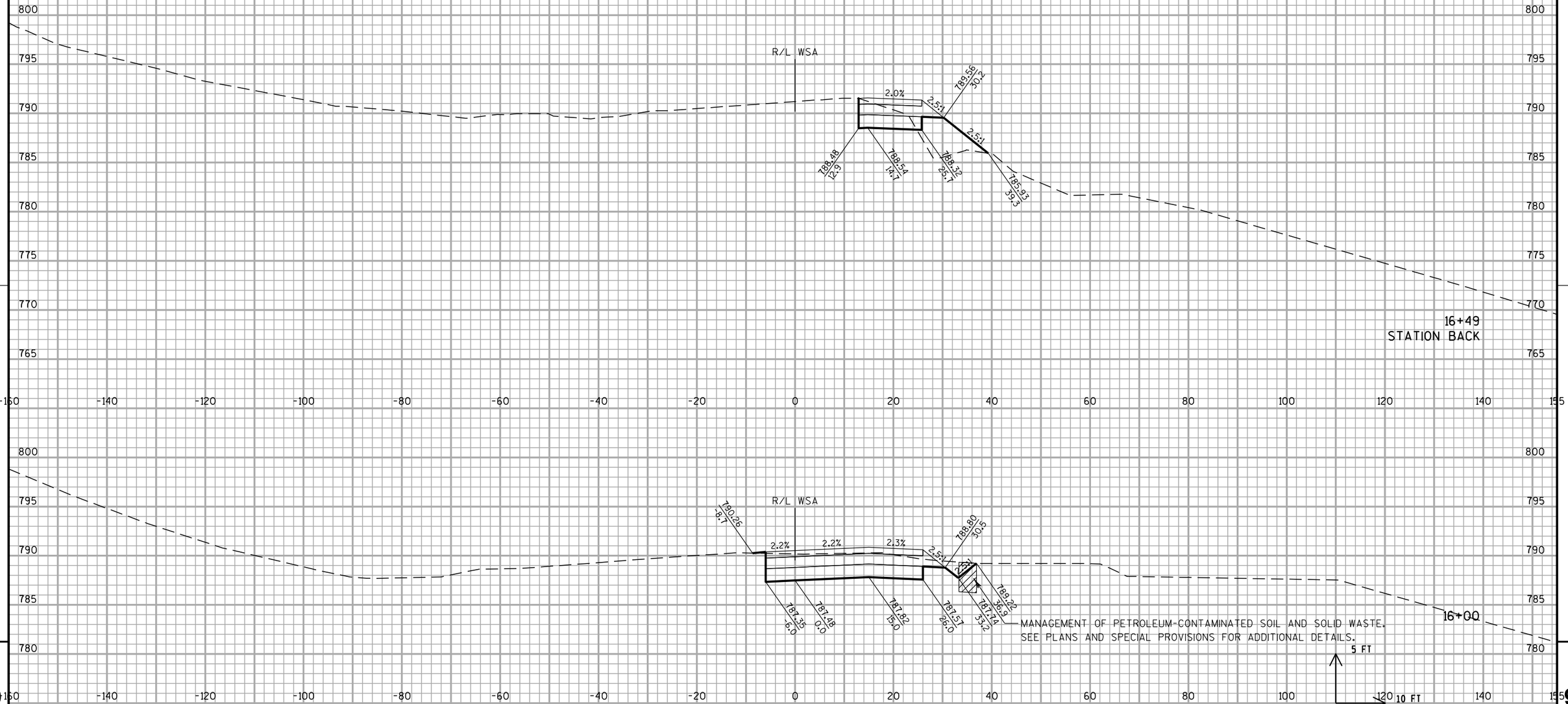


STA 14+50 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090616_xs_wsa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090616_xs_wsa3 PLOT SCALE : 20:1

ALL WORK STAGE 4

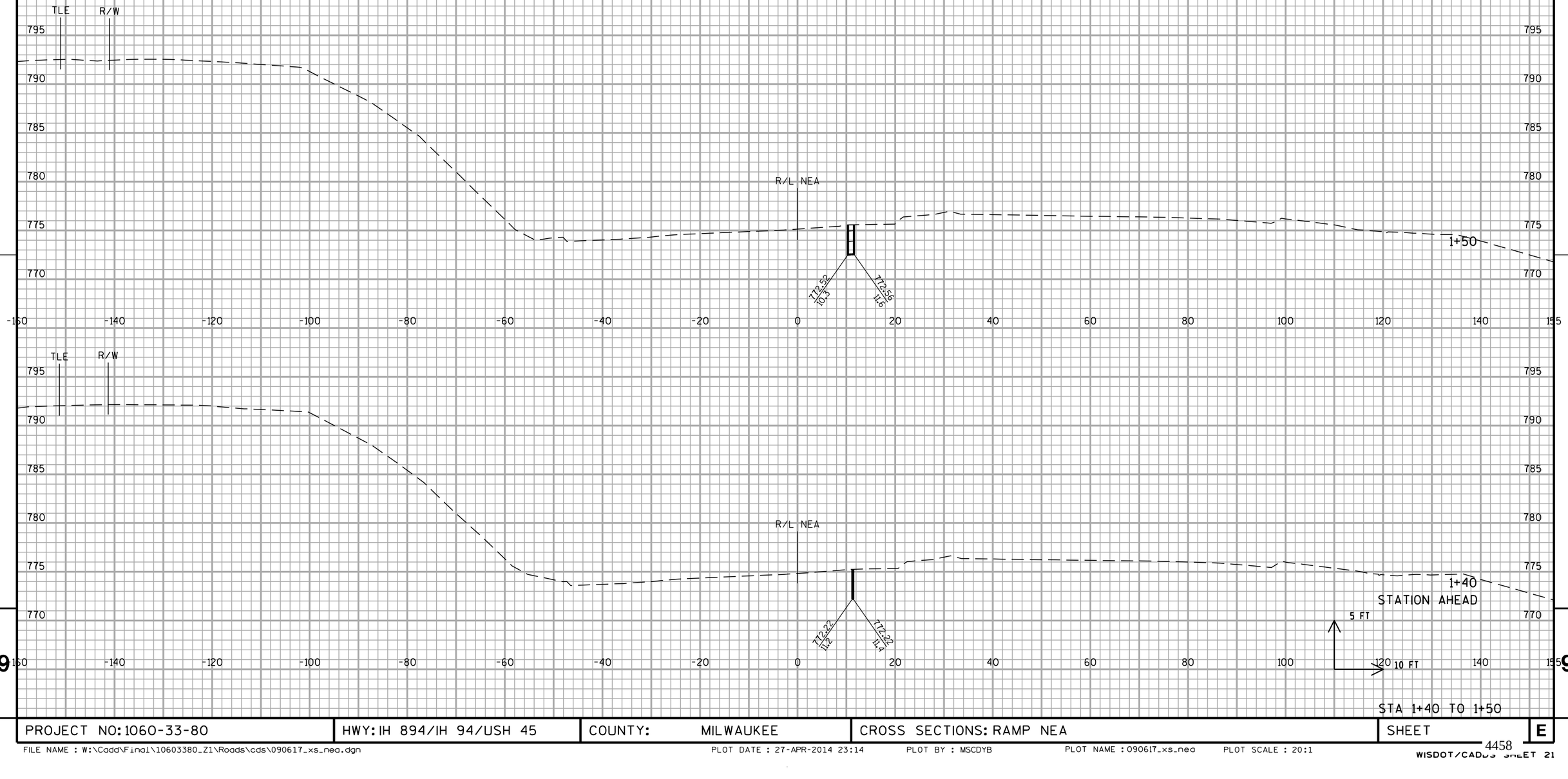


STA 16+00 TO 16+49

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090616_xs_wsa.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090616_xs_wsa4 PLOT SCALE : 20:1

ALL WORK STAGE 3

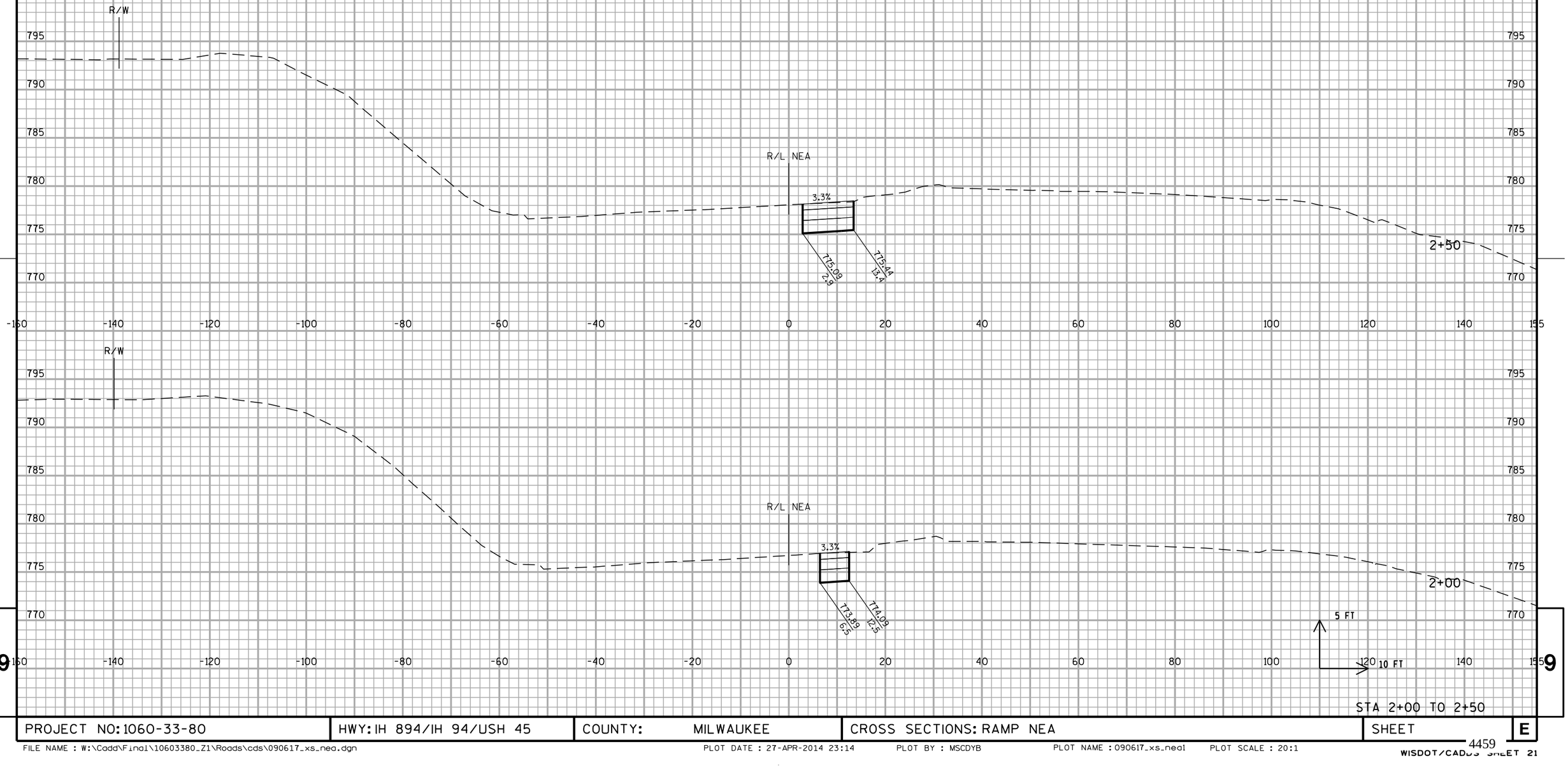


STA 1+40 TO 1+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea PLOT SCALE : 20:1

ALL WORK STAGE 3

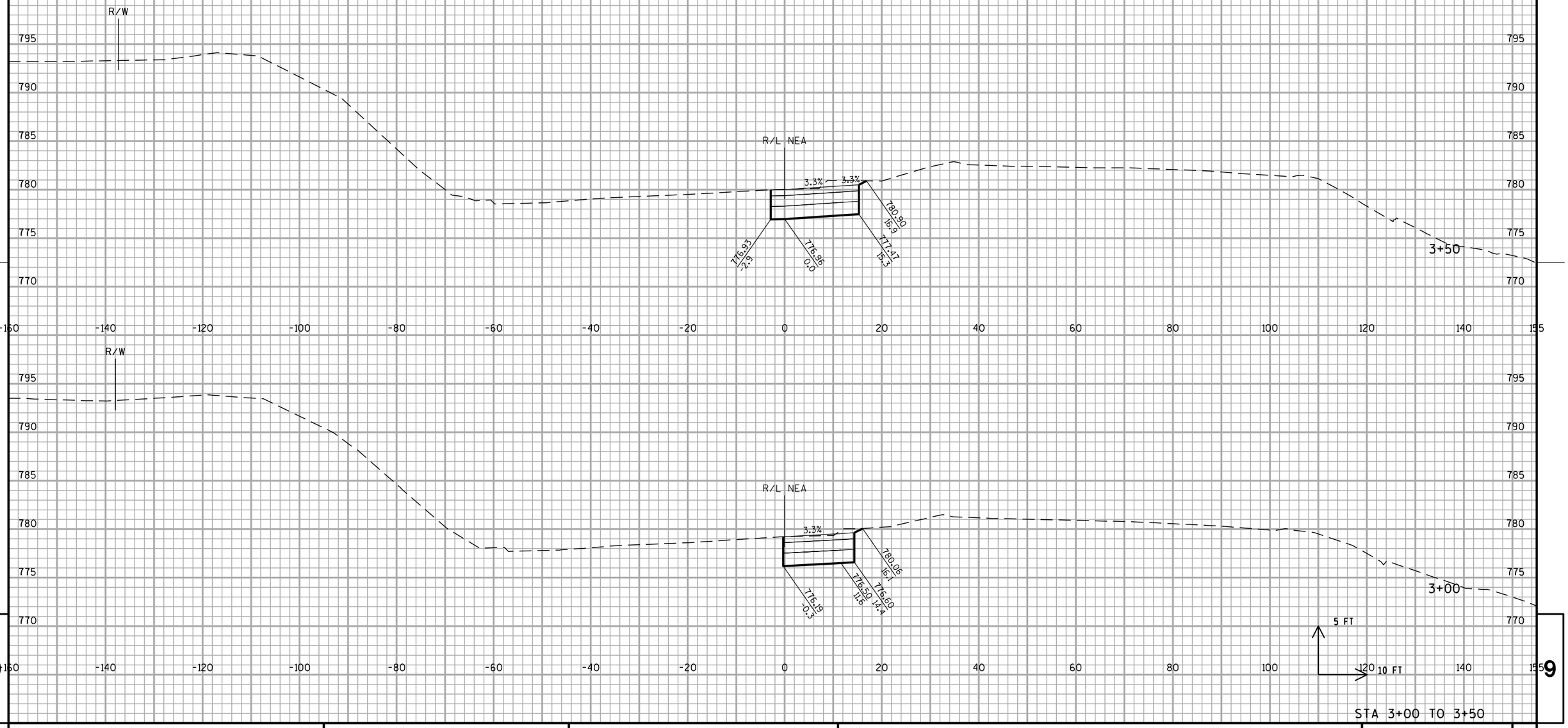


STA 2+00 TO 2+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea1 PLOT SCALE : 20:1

ALL WORK STAGE 3



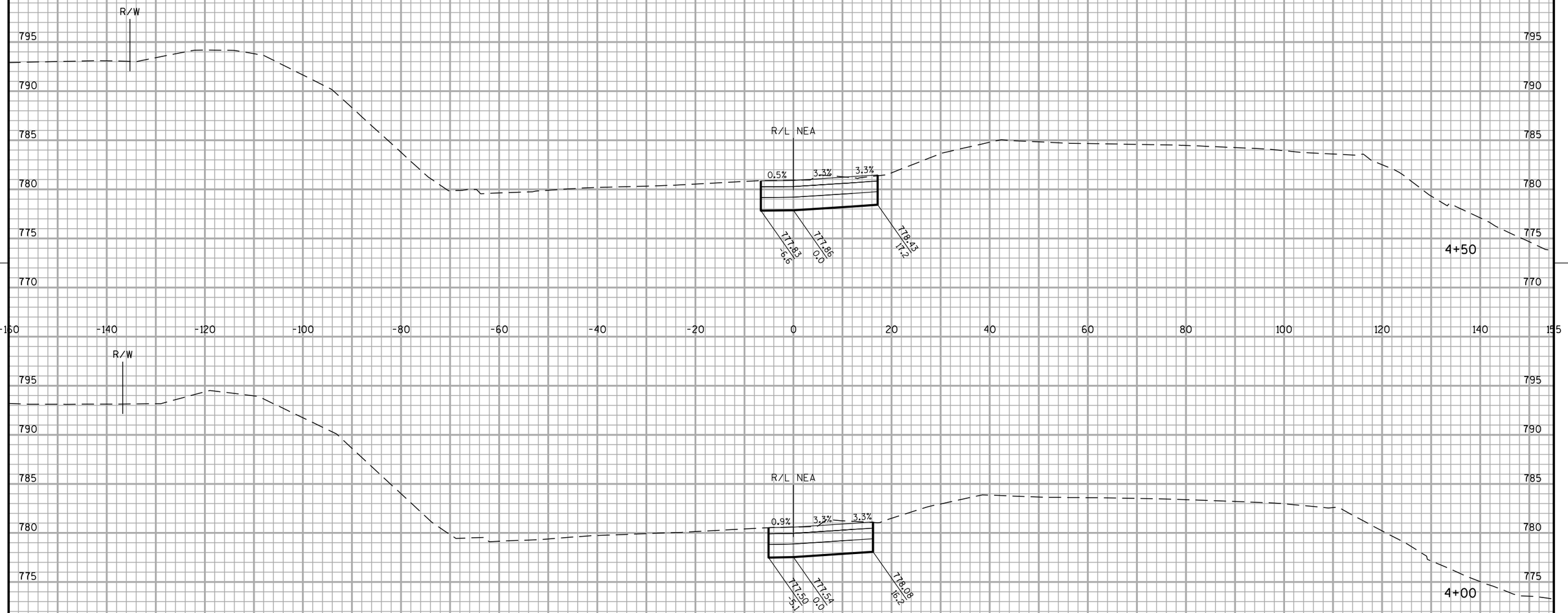
STA 3+00 TO 3+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



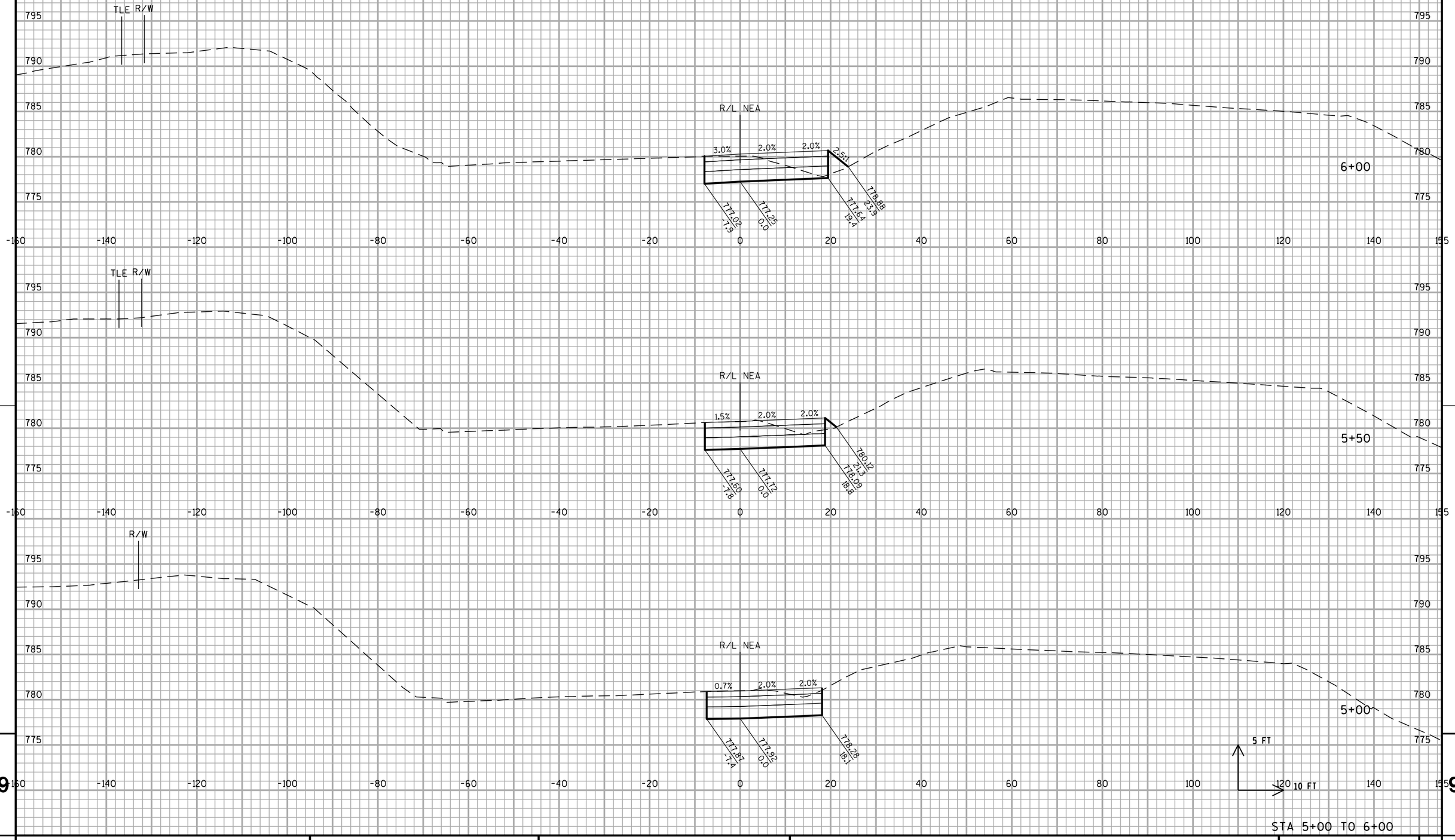
STA 4+00 TO 4+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



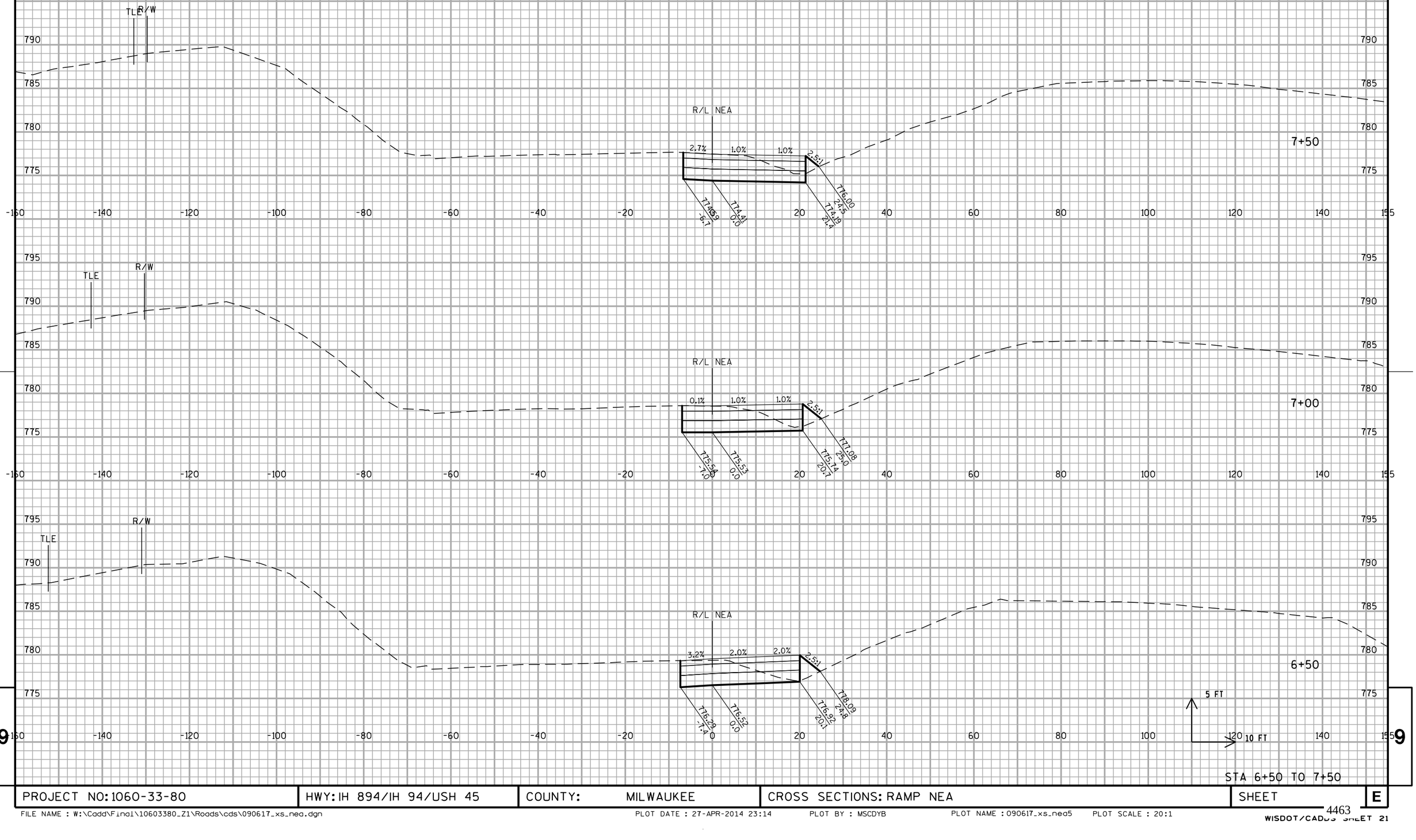
STA 5+00 TO 6+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



STA 6+50 TO 7+50

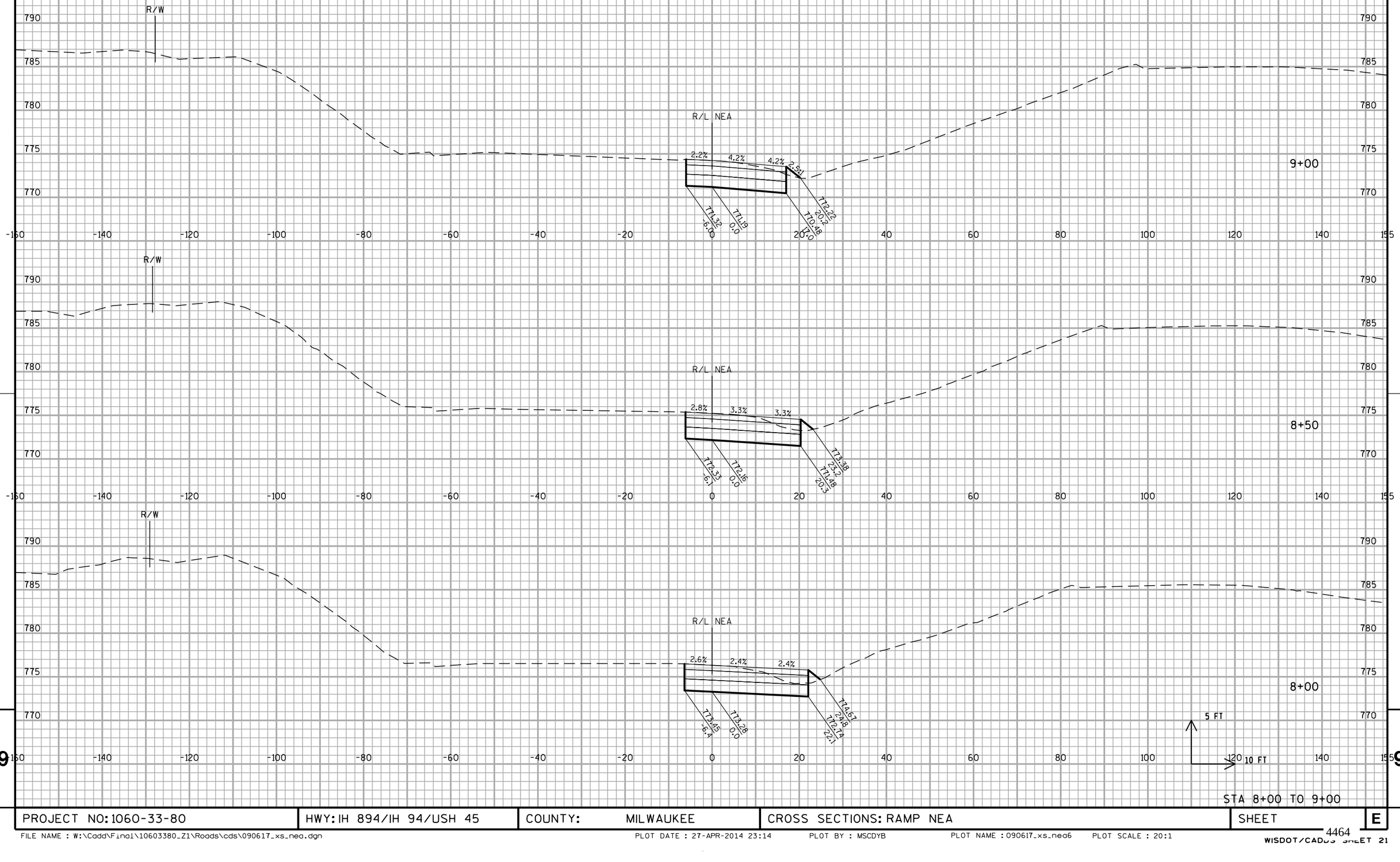
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

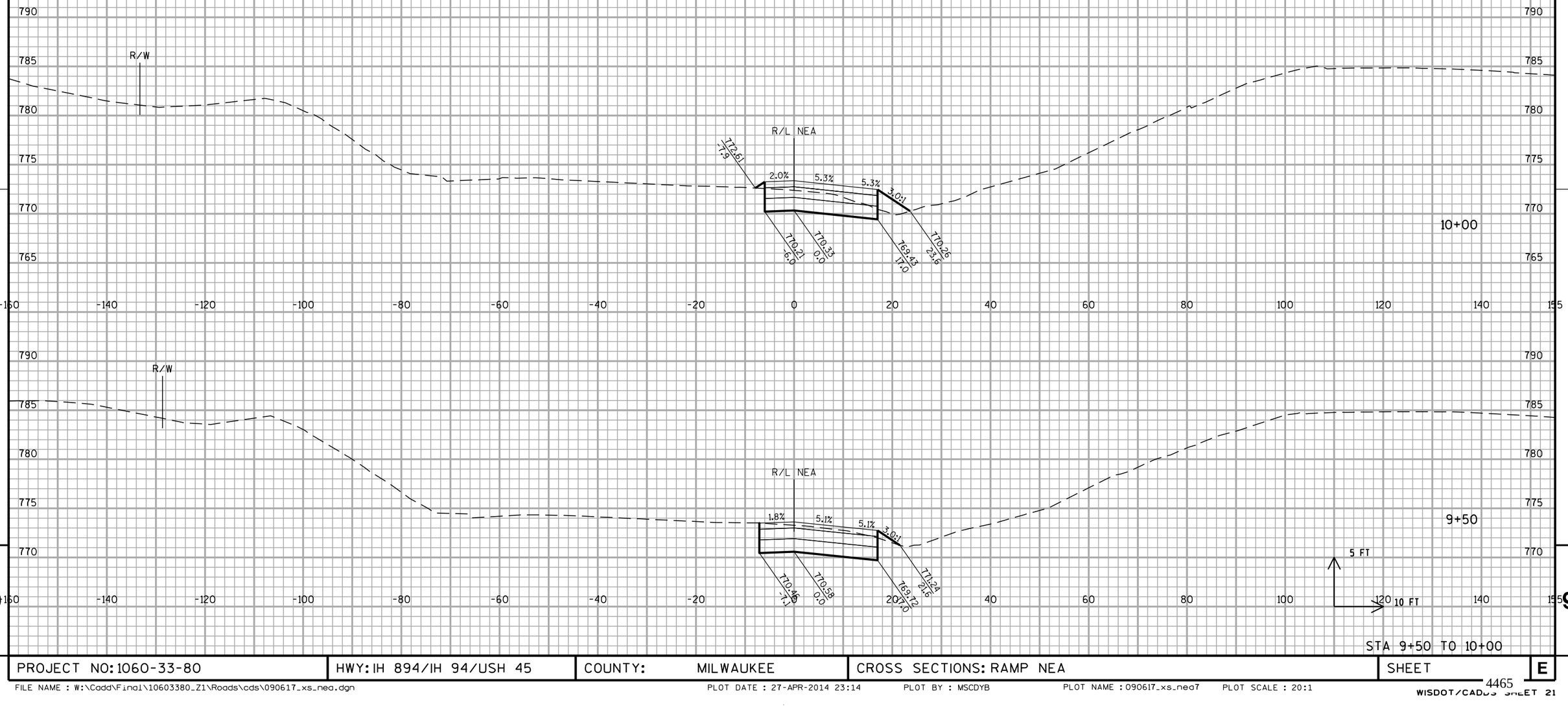
ALL WORK STAGE 3



STA 8+00 TO 9+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

ALL WORK STAGE 3



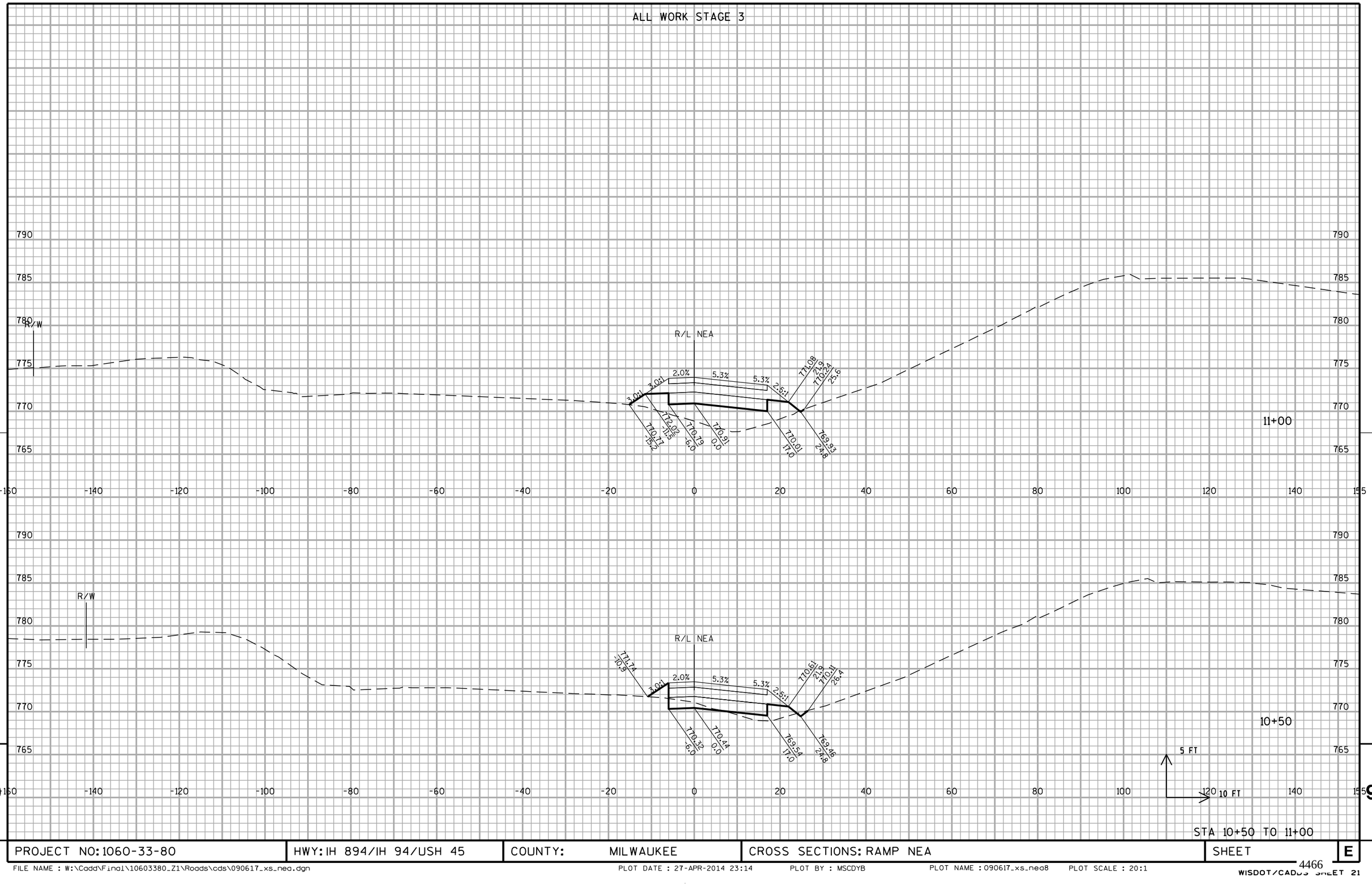
STA 9+50 TO 10+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

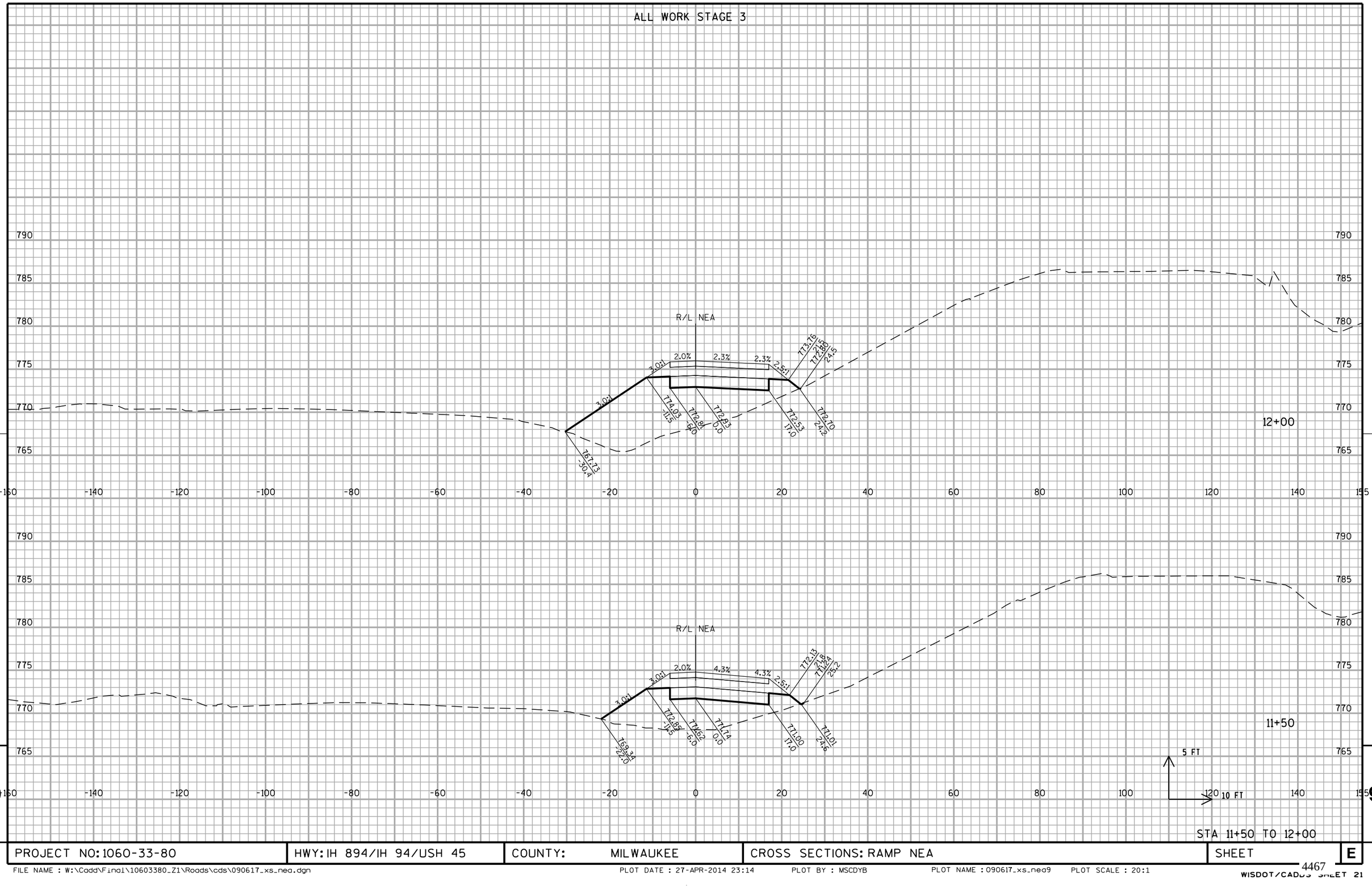
ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea8 PLOT SCALE : 20:1

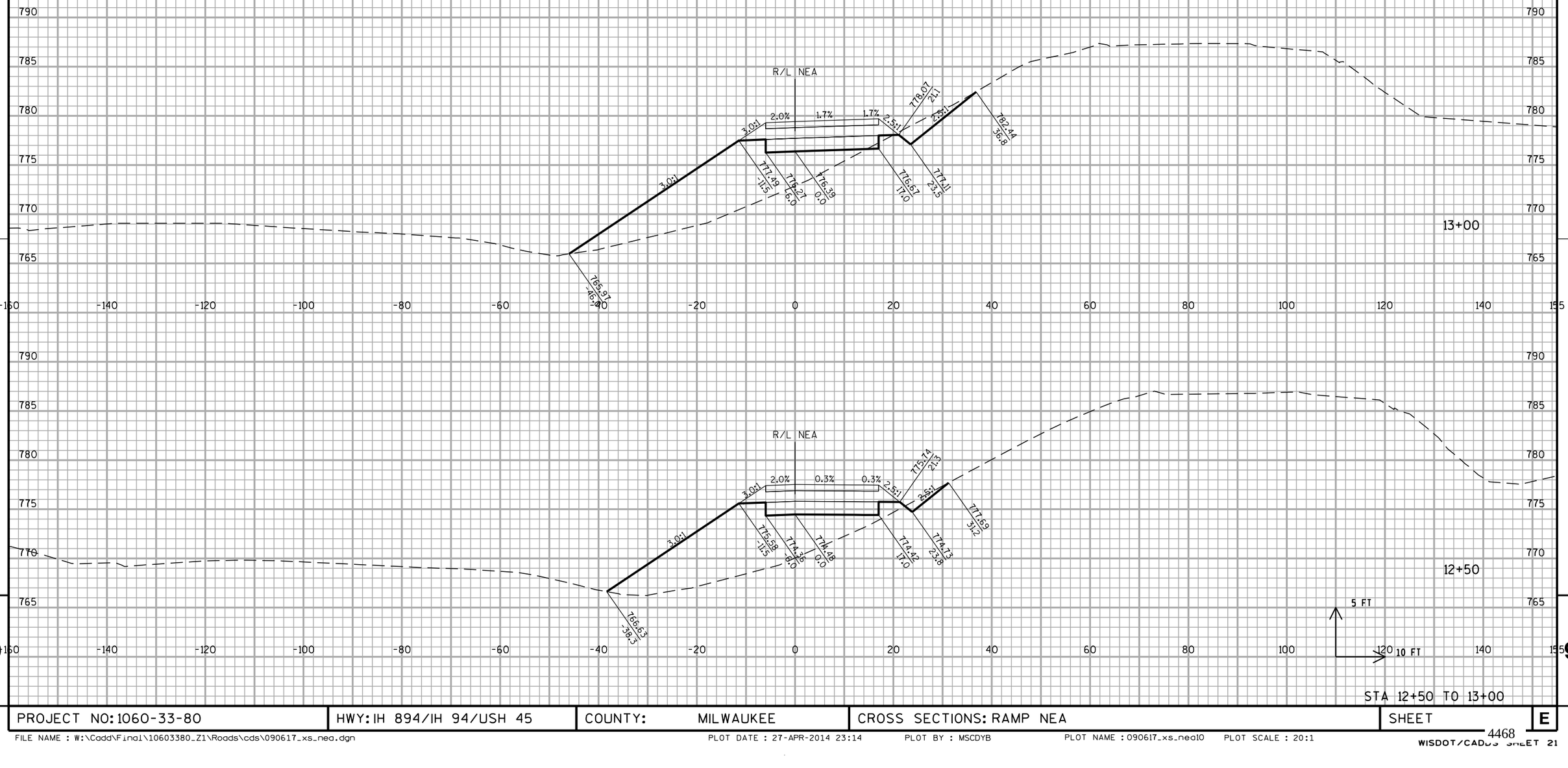
ALL WORK STAGE 3



STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

ALL WORK STAGE 3



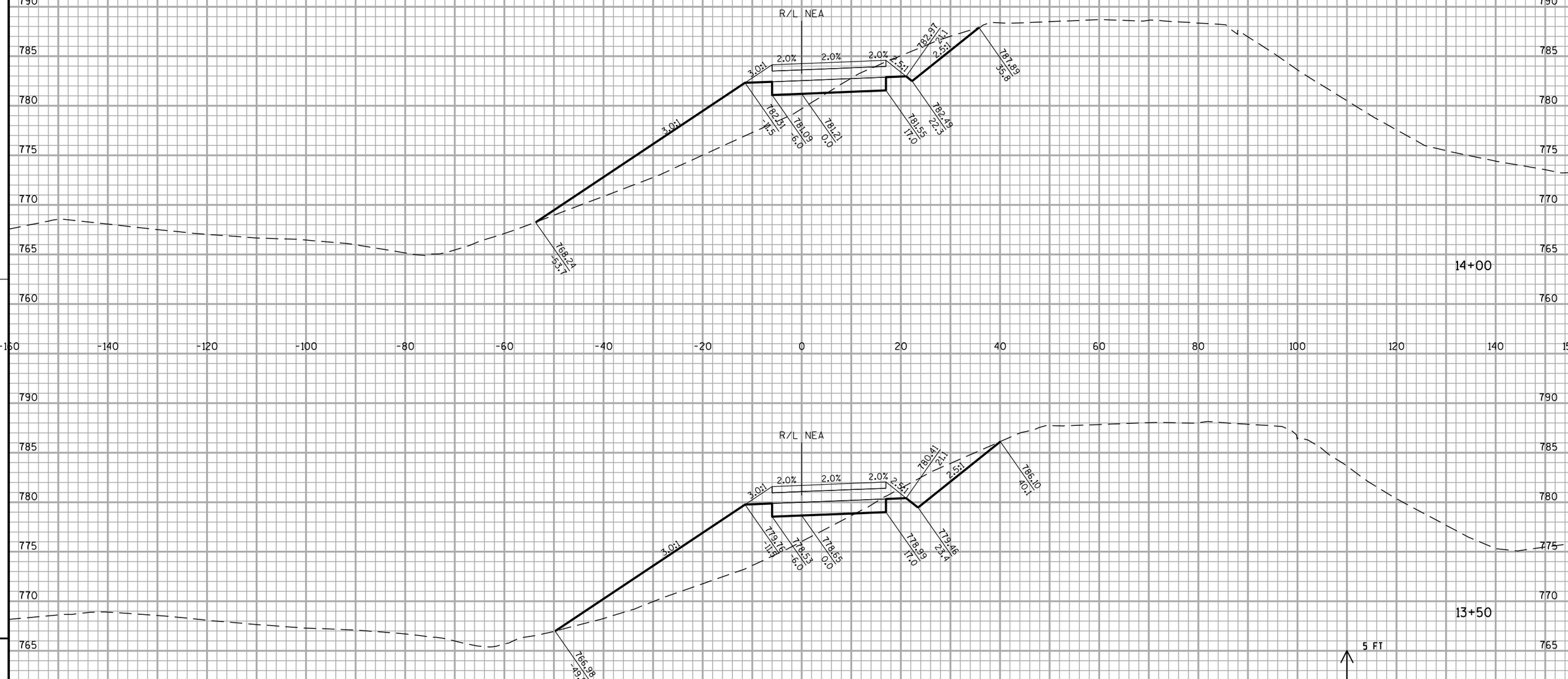
STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

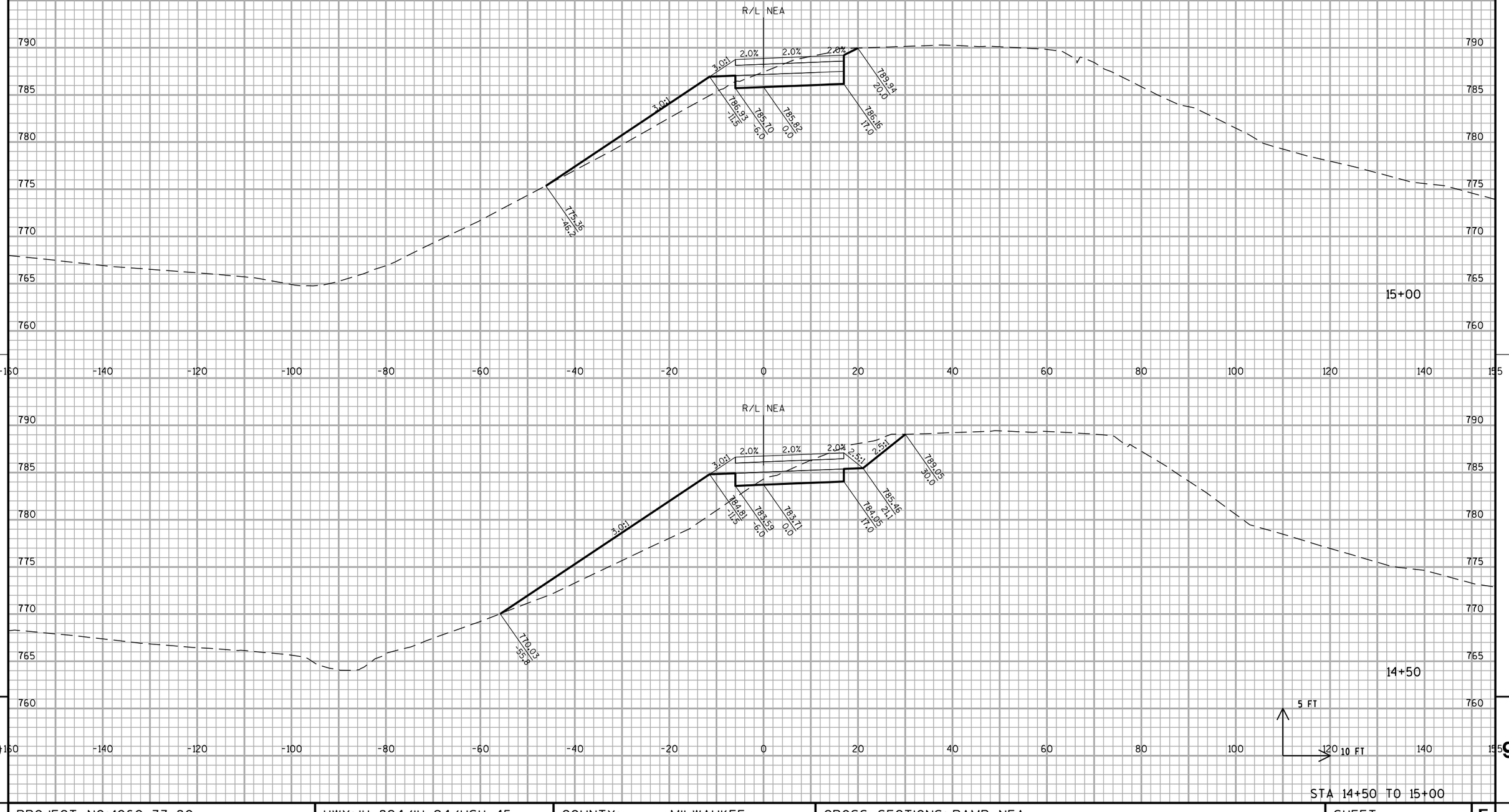


STA 13+50 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea11 PLOT SCALE : 20:1

ALL WORK STAGE 3

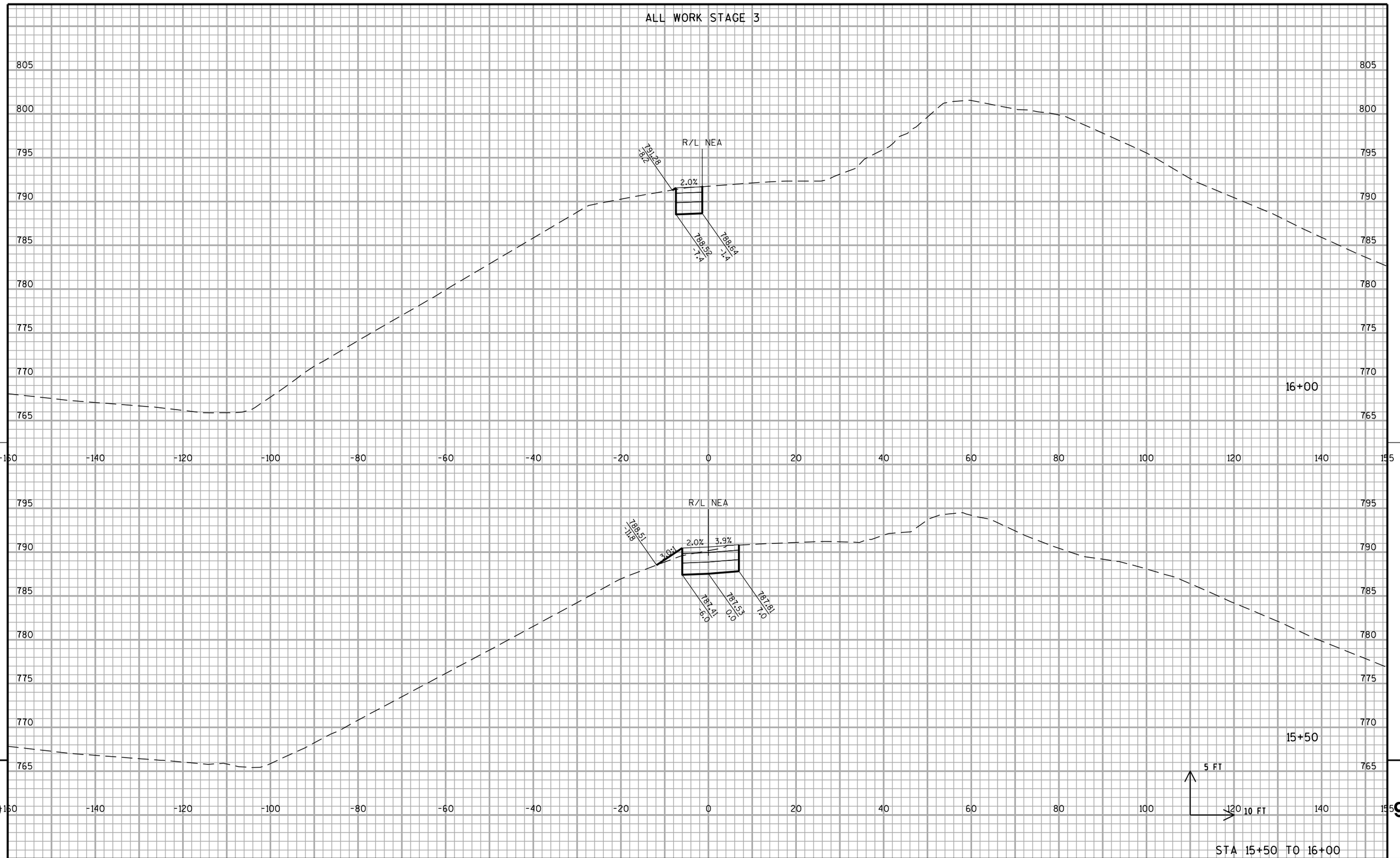


STA 14+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea12 PLOT SCALE : 20:1

ALL WORK STAGE 3

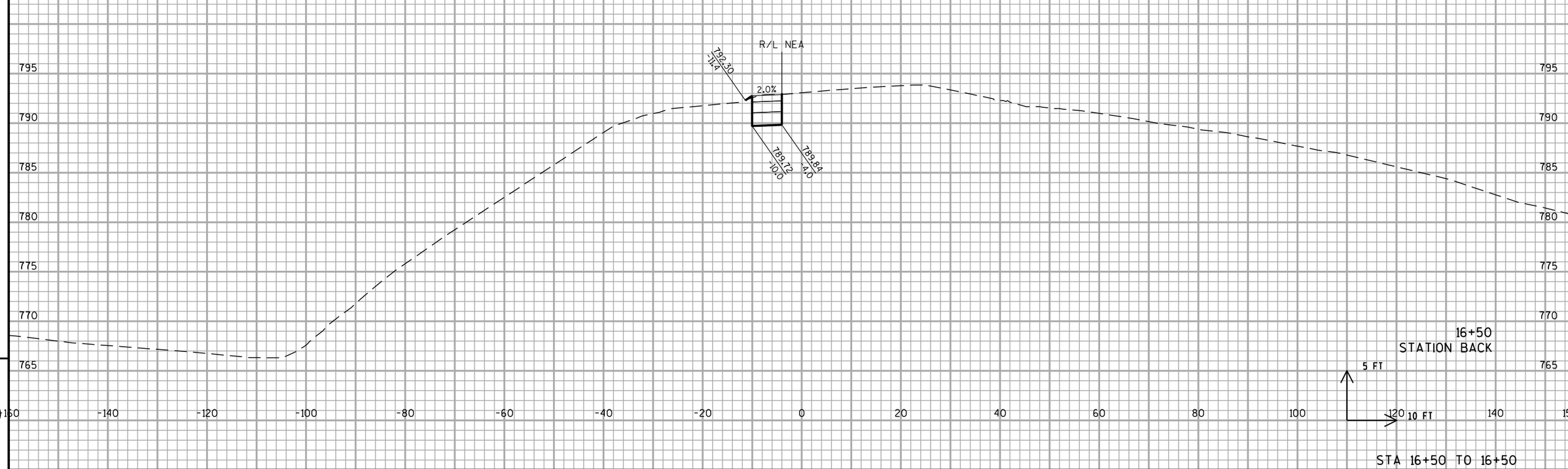


STA 15+50 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea13 PLOT SCALE : 20:1

ALL WORK STAGE 3

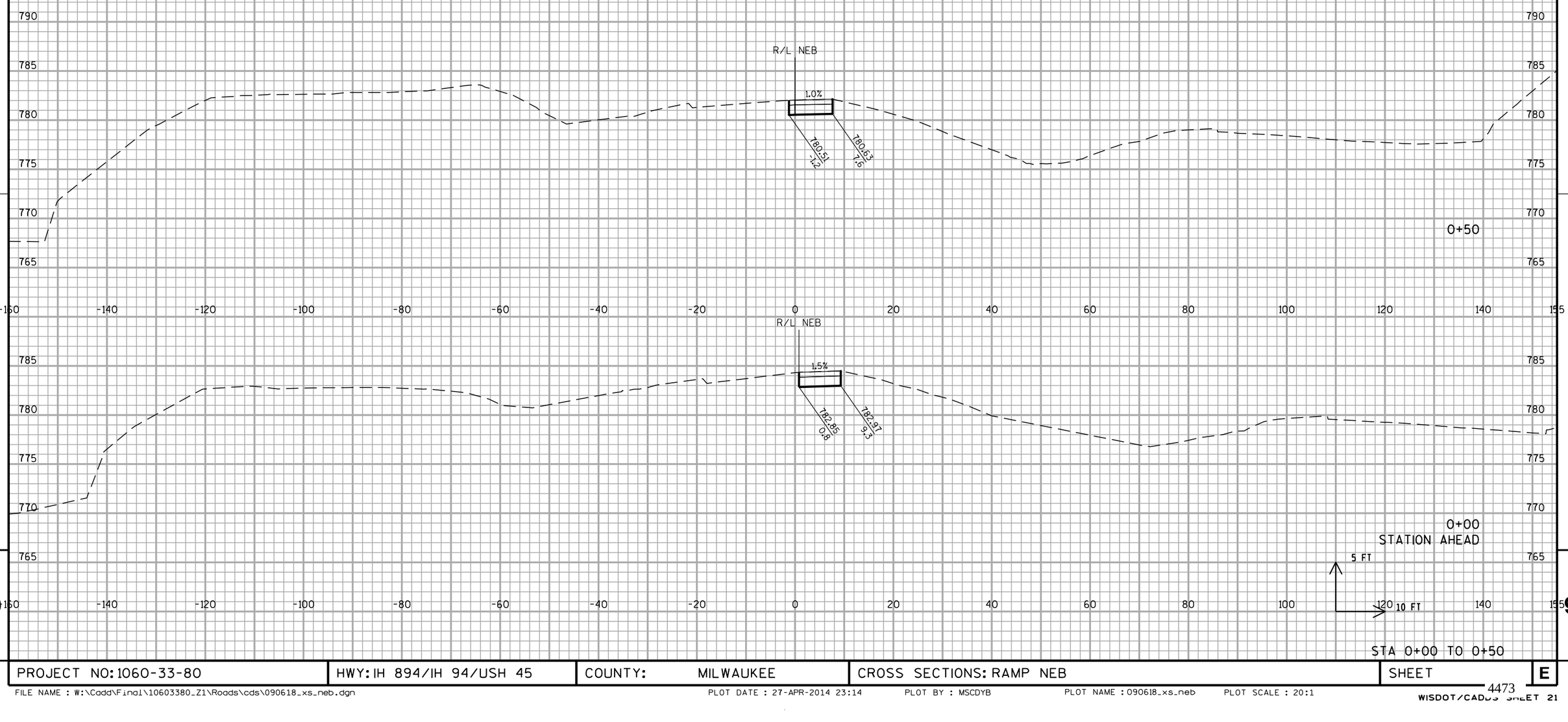


STA 16+50 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090617_xs_nea.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090617_xs_nea14 PLOT SCALE : 20:1

ALL WORK STAGE 2

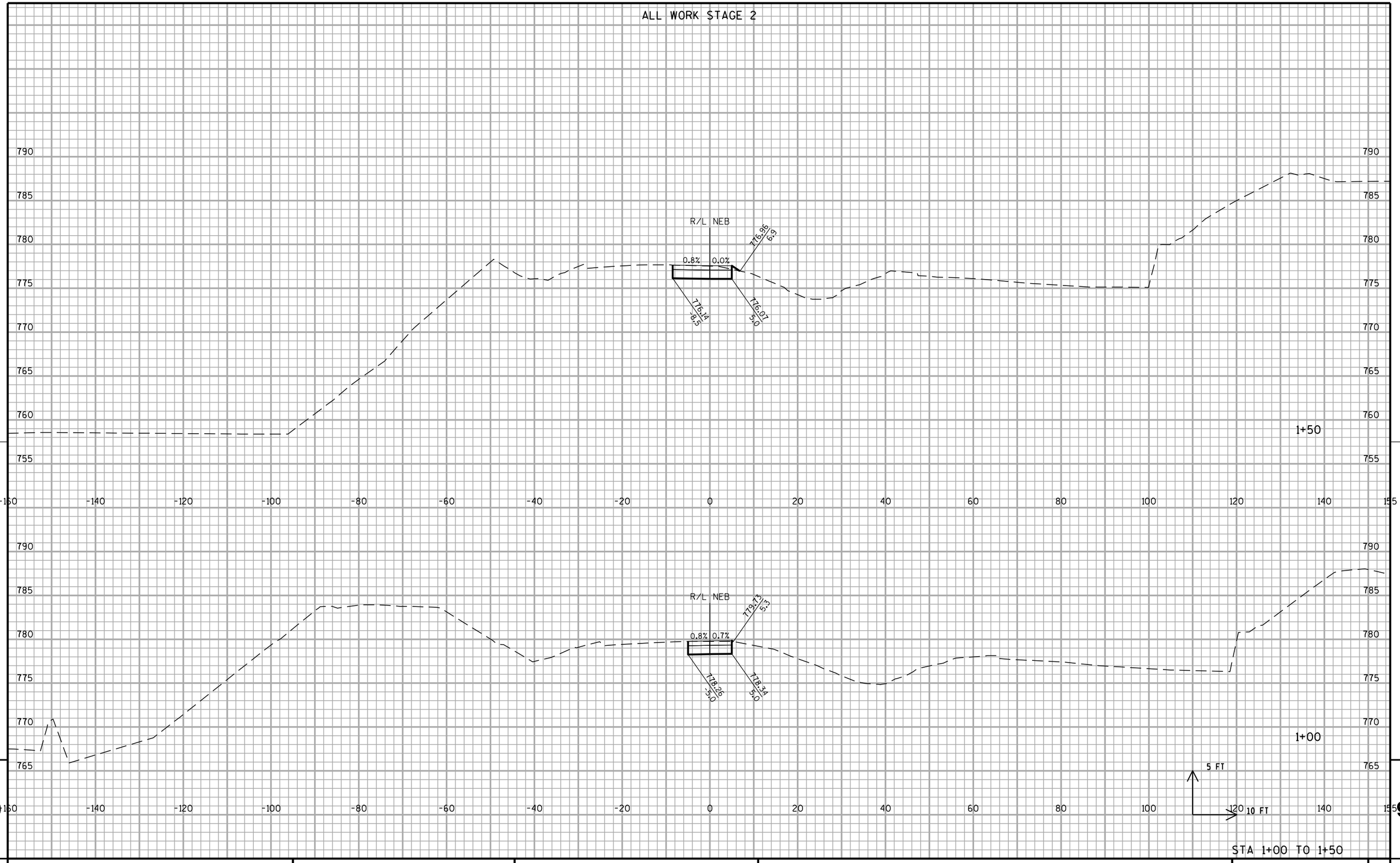


STA 0+00 TO 0+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb PLOT SCALE : 20:1

ALL WORK STAGE 2



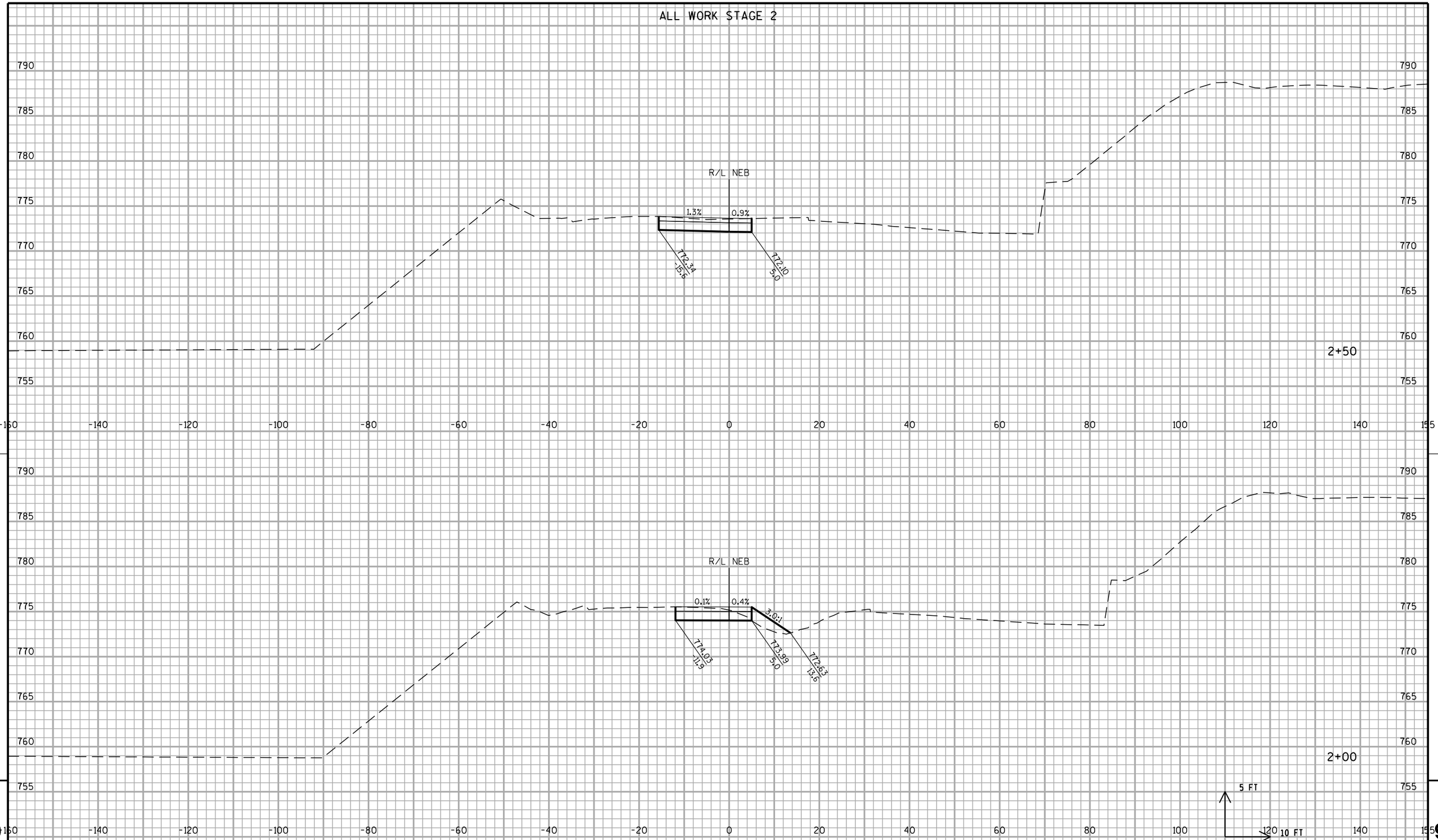
STA 1+00 TO 1+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

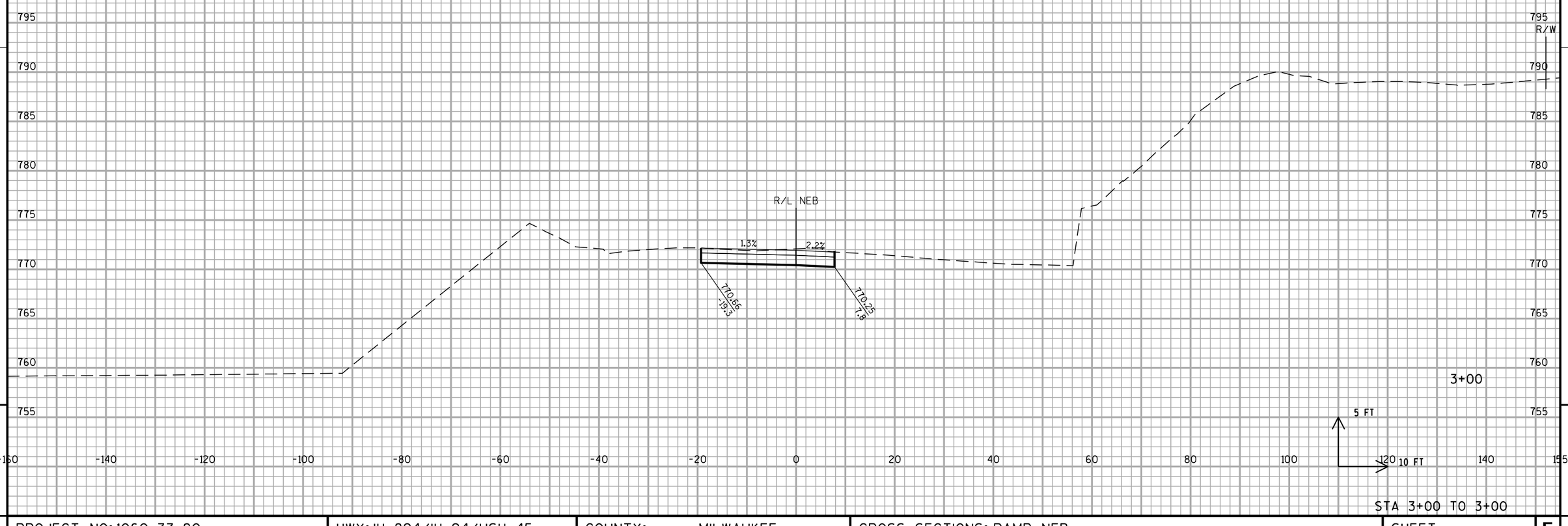


STA 2+00 TO 2+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb2 PLOT SCALE : 20:1

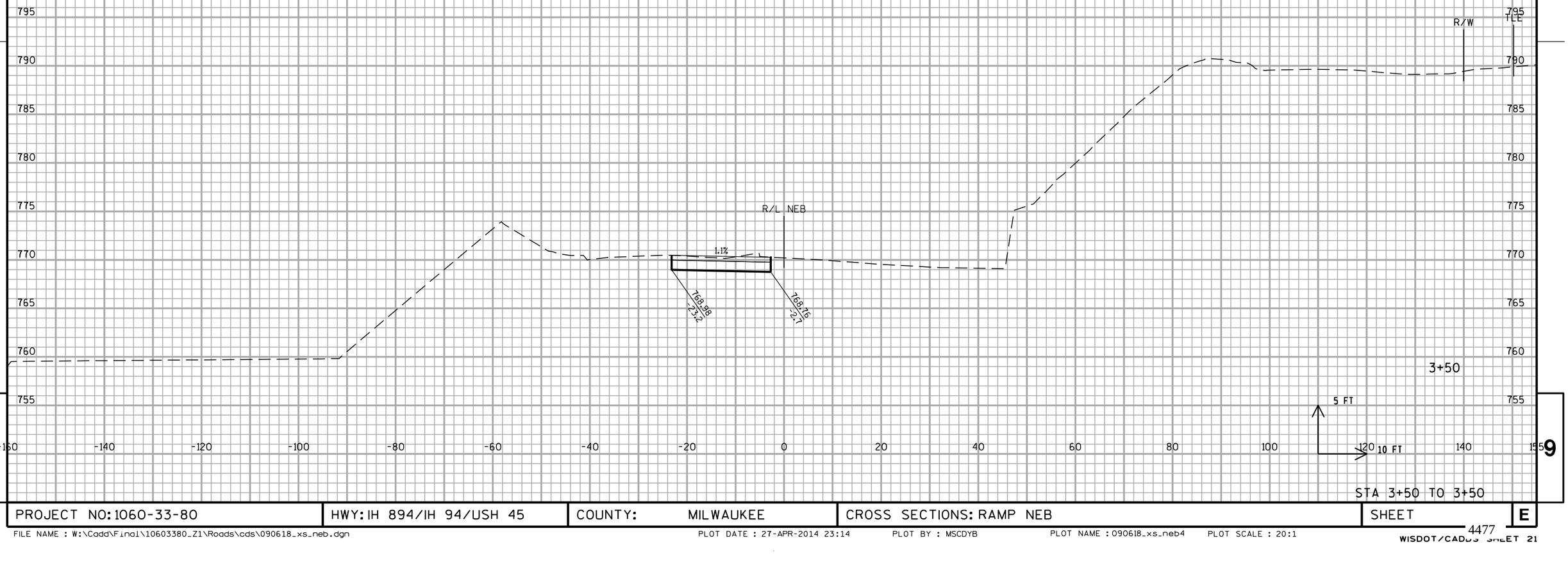
ALL WORK STAGE 2



STA 3+00 TO 3+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

ALL WORK STAGE 2

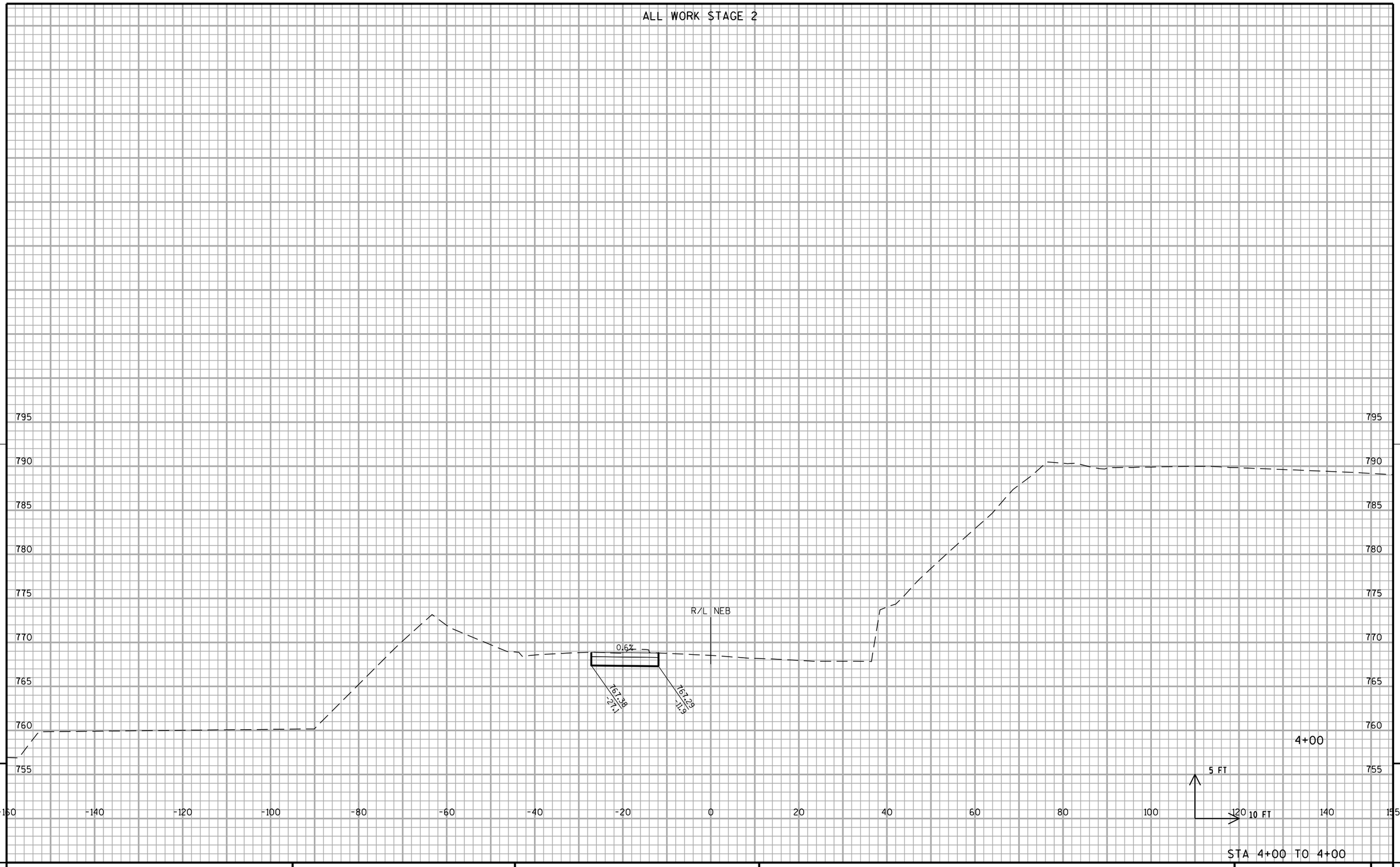


STA 3+50 TO 3+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb4 PLOT SCALE : 20:1

ALL WORK STAGE 2



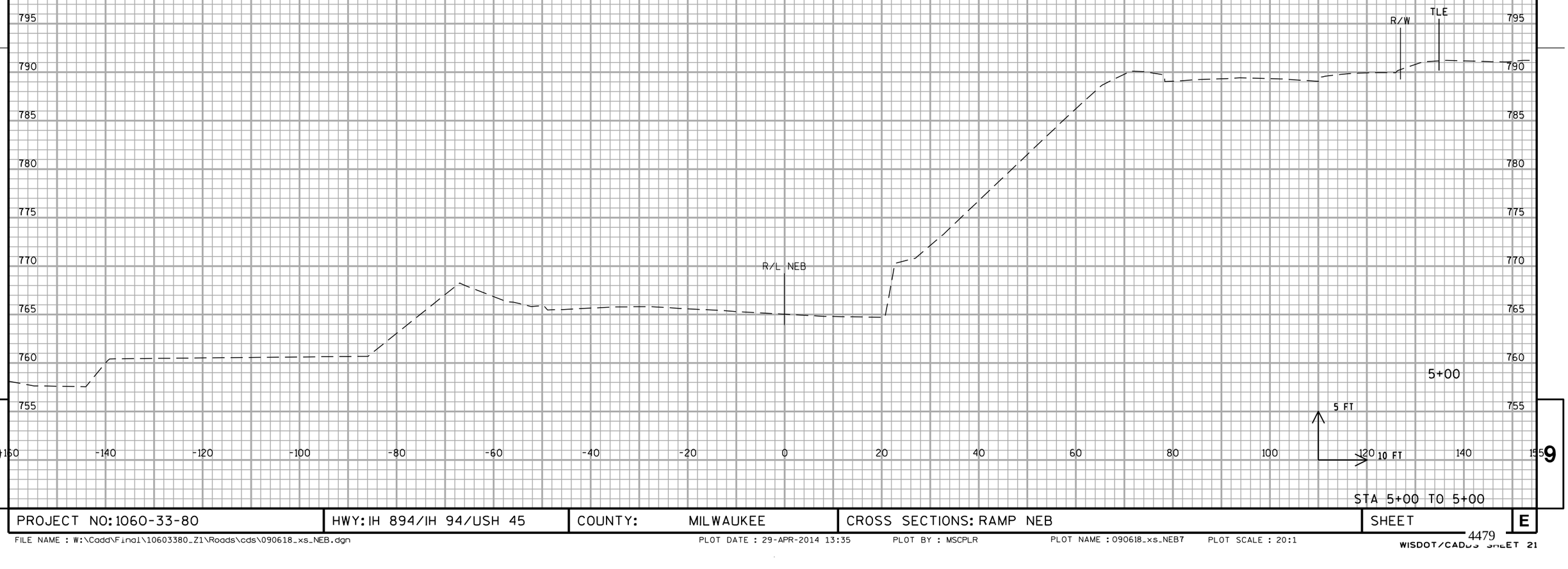
9

STA 4+00 TO 4+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb5 PLOT SCALE : 20:1

NO WORK THIS SHEET

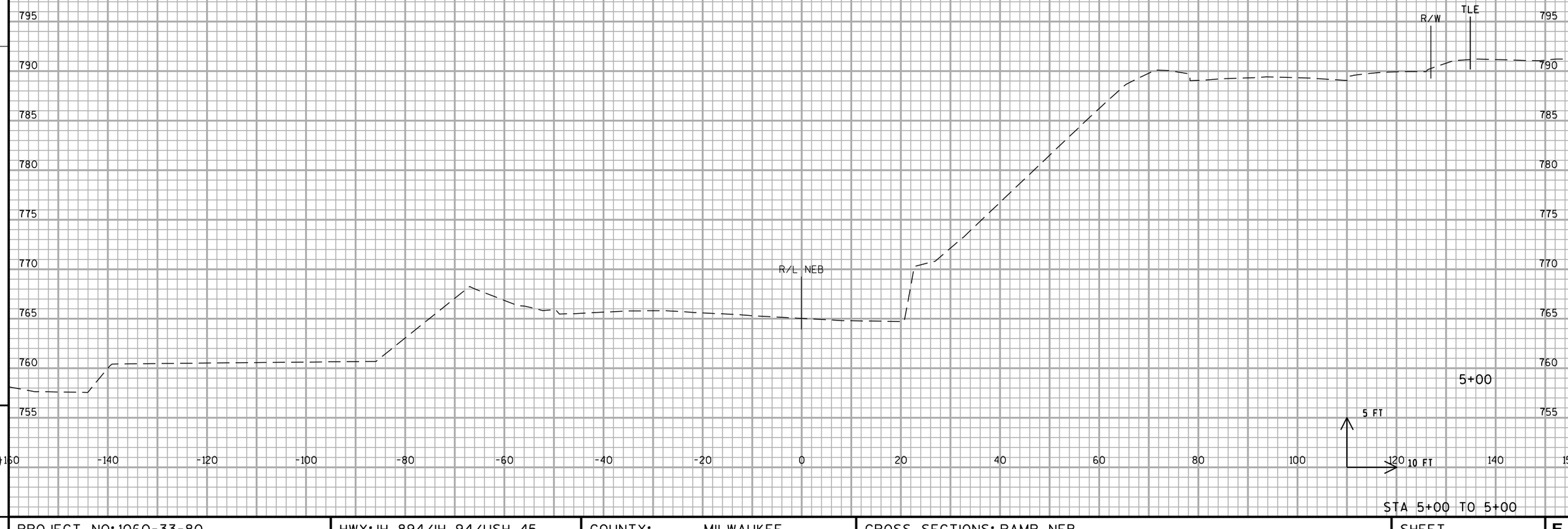


STA 5+00 TO 5+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_NEB.dgn PLOT DATE : 29-APR-2014 13:35 PLOT BY : MSCPLR PLOT NAME : 090618_xs_NEB7 PLOT SCALE : 20:1

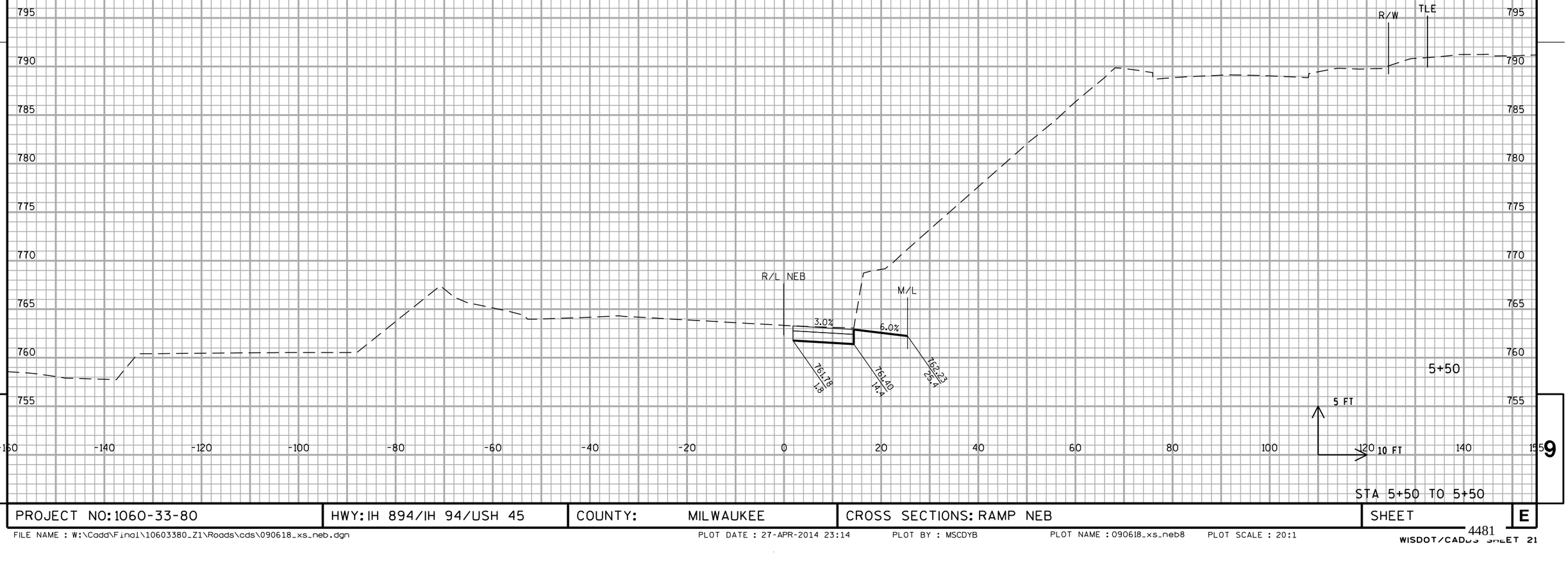
ALL WORK STAGE 2



STA 5+00 TO 5+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

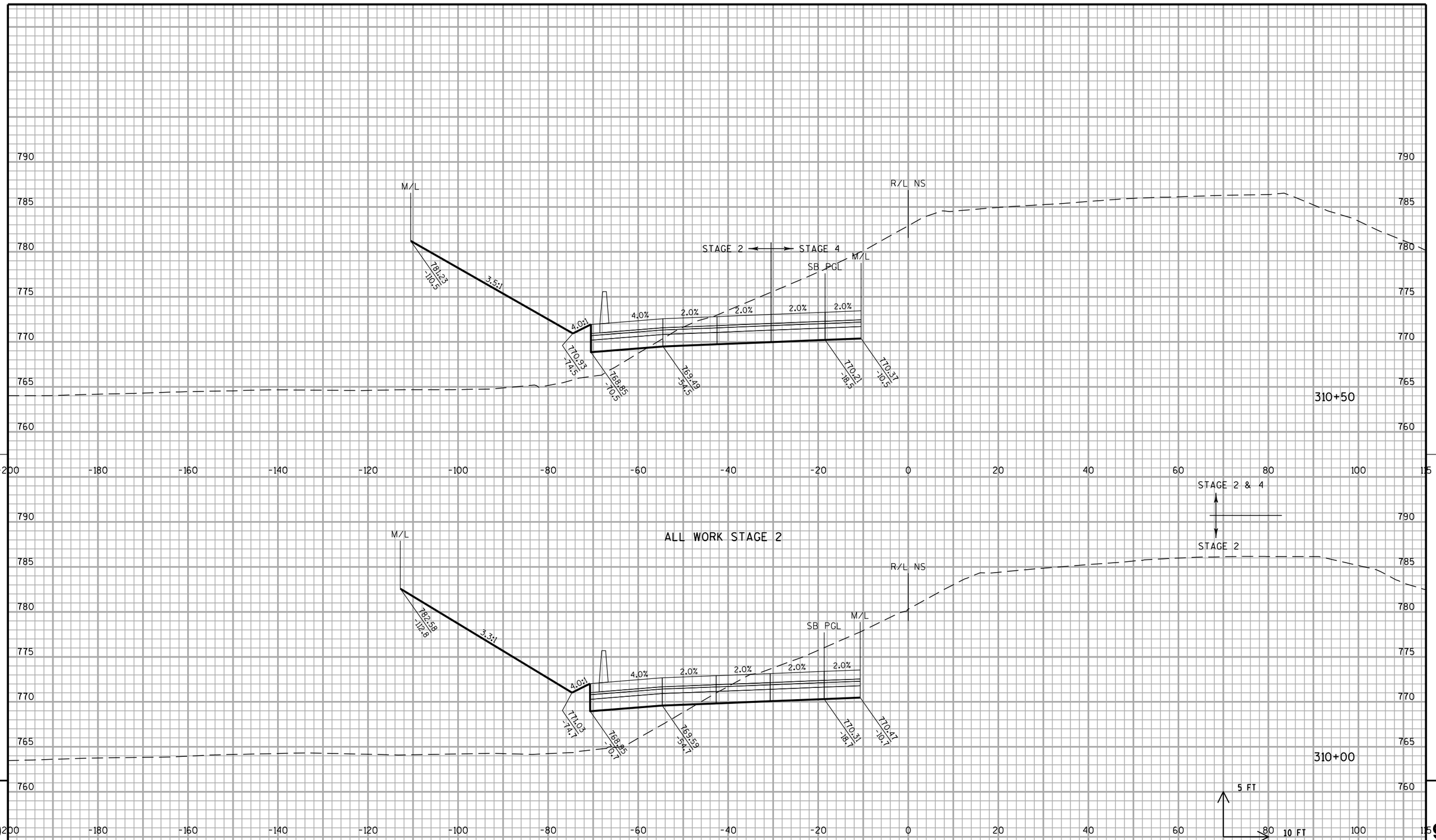
ALL WORK STAGE 2



STA 5+50 TO 5+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

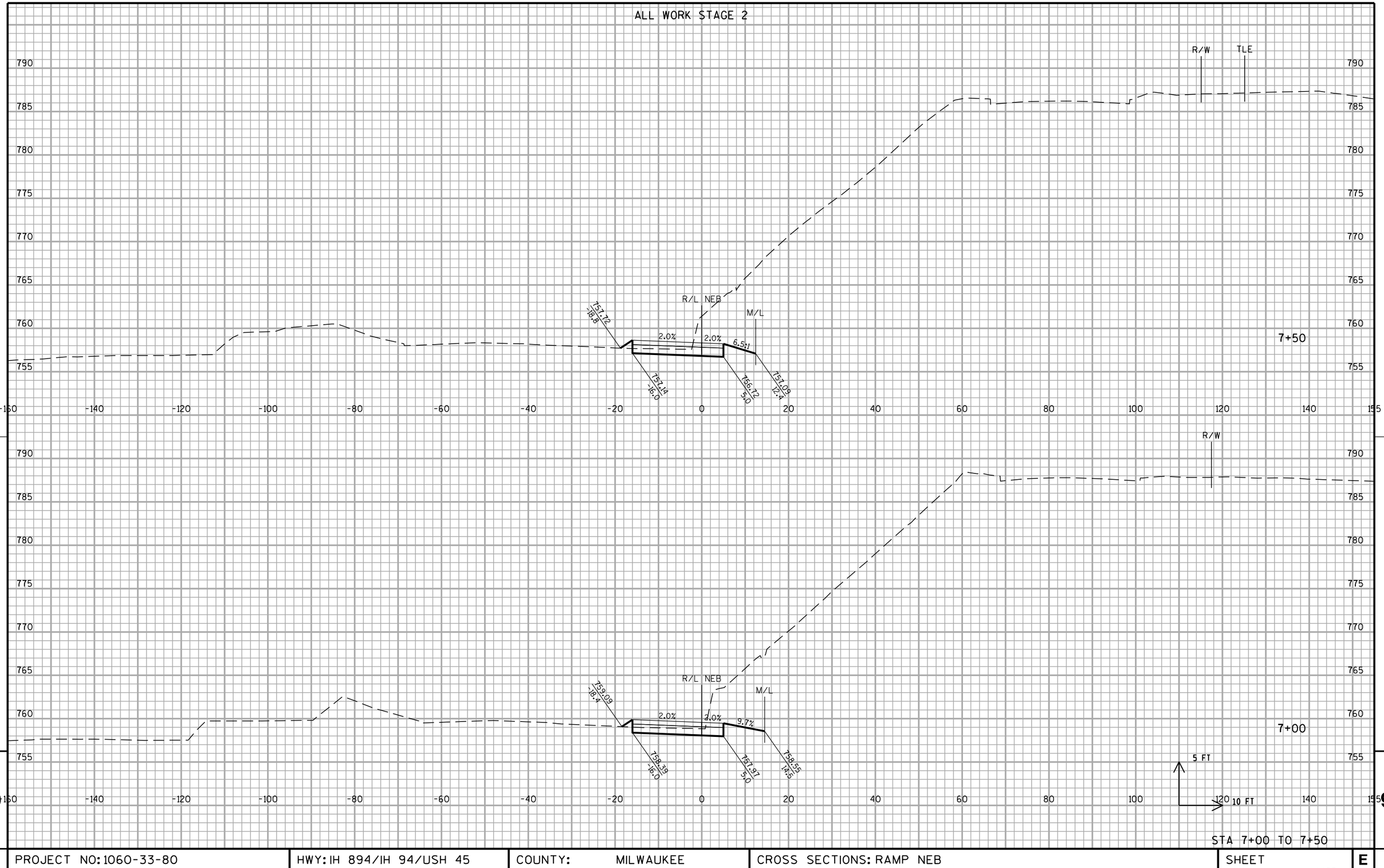
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STA 310+00 TO 310+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB	SHEET	E

ALL WORK STAGE 2



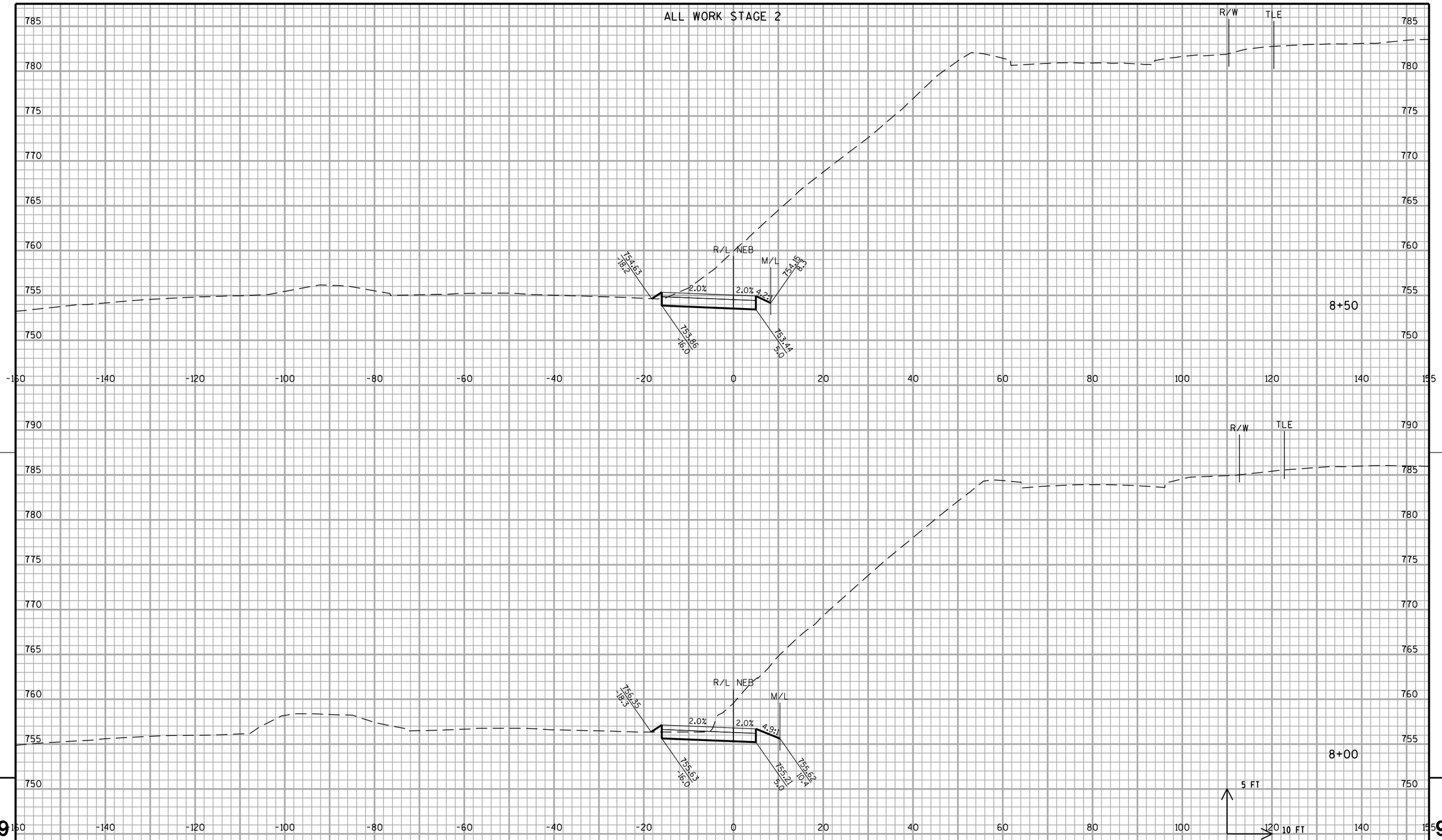
STA 7+00 TO 7+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

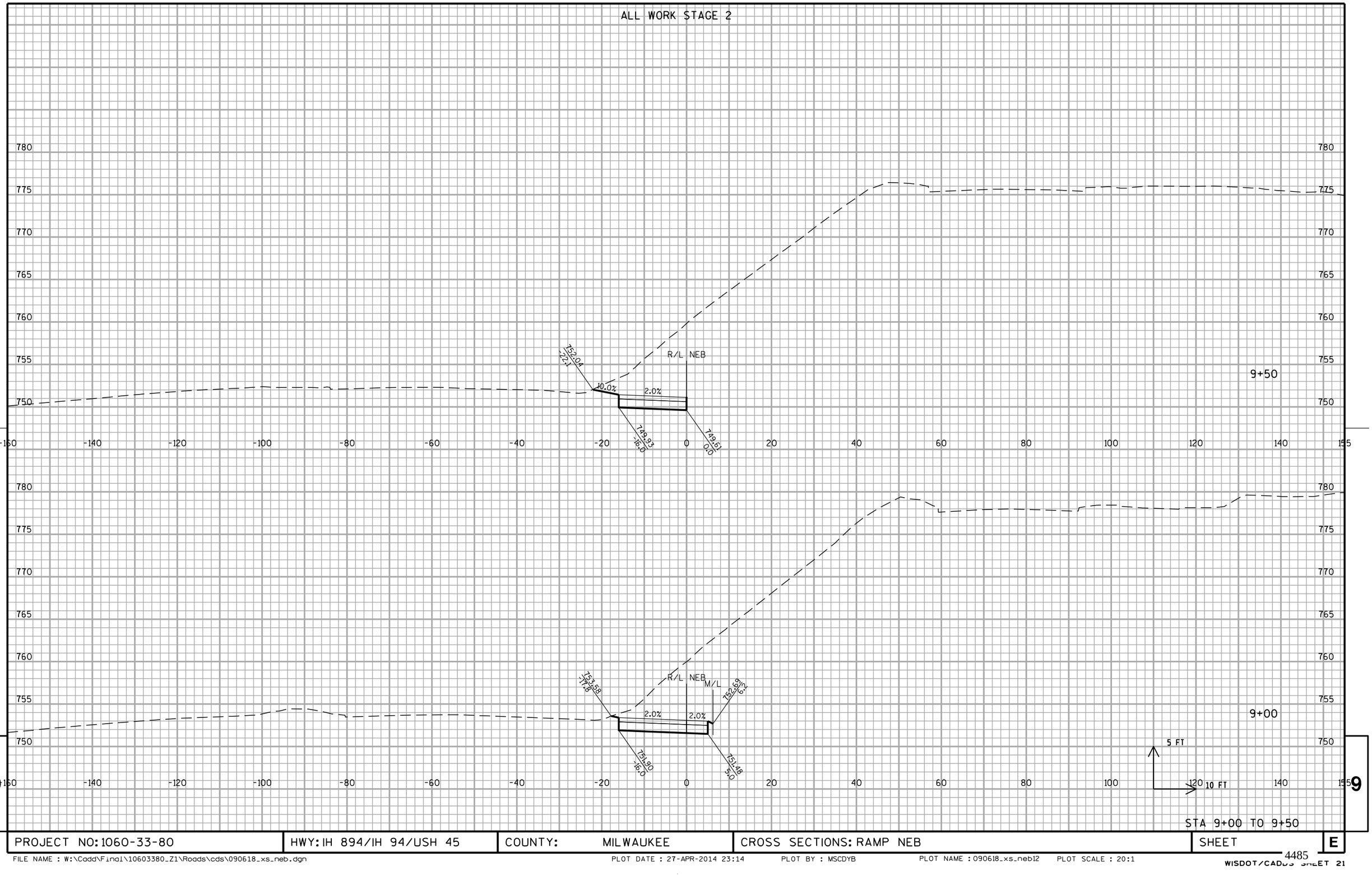


STA 8+00 TO 8+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb11 PLOT SCALE : 20:1

ALL WORK STAGE 2

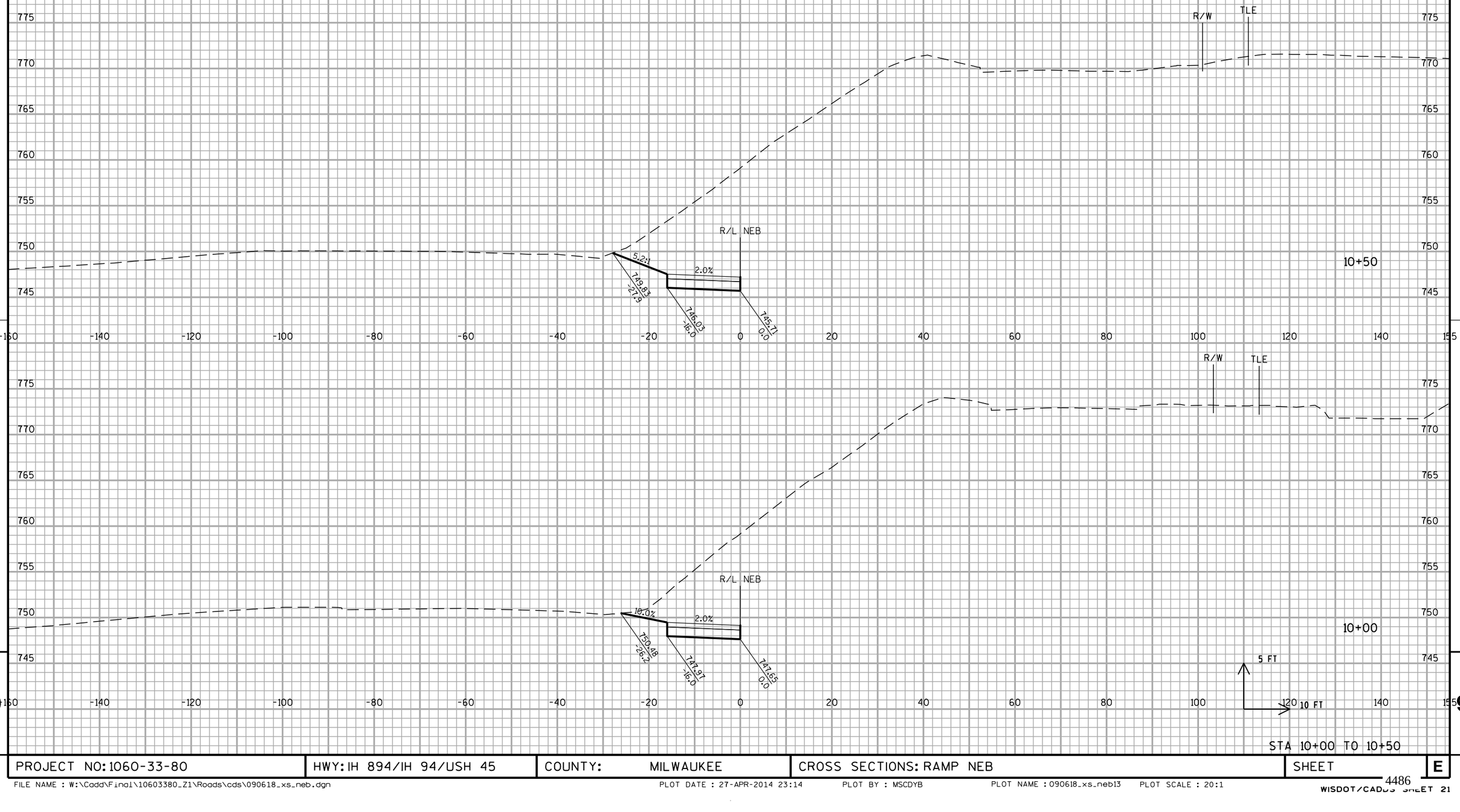


STA 9+00 TO 9+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb12 PLOT SCALE : 20:1

ALL WORK STAGE 2

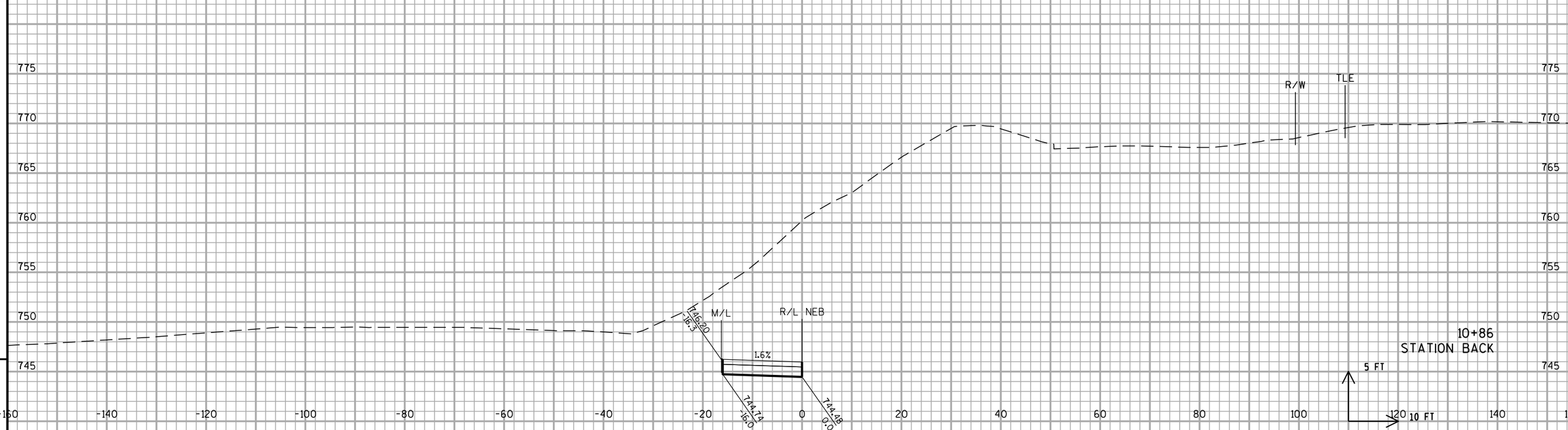


STA 10+00 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb13 PLOT SCALE : 20:1

ALL WORK STAGE 2

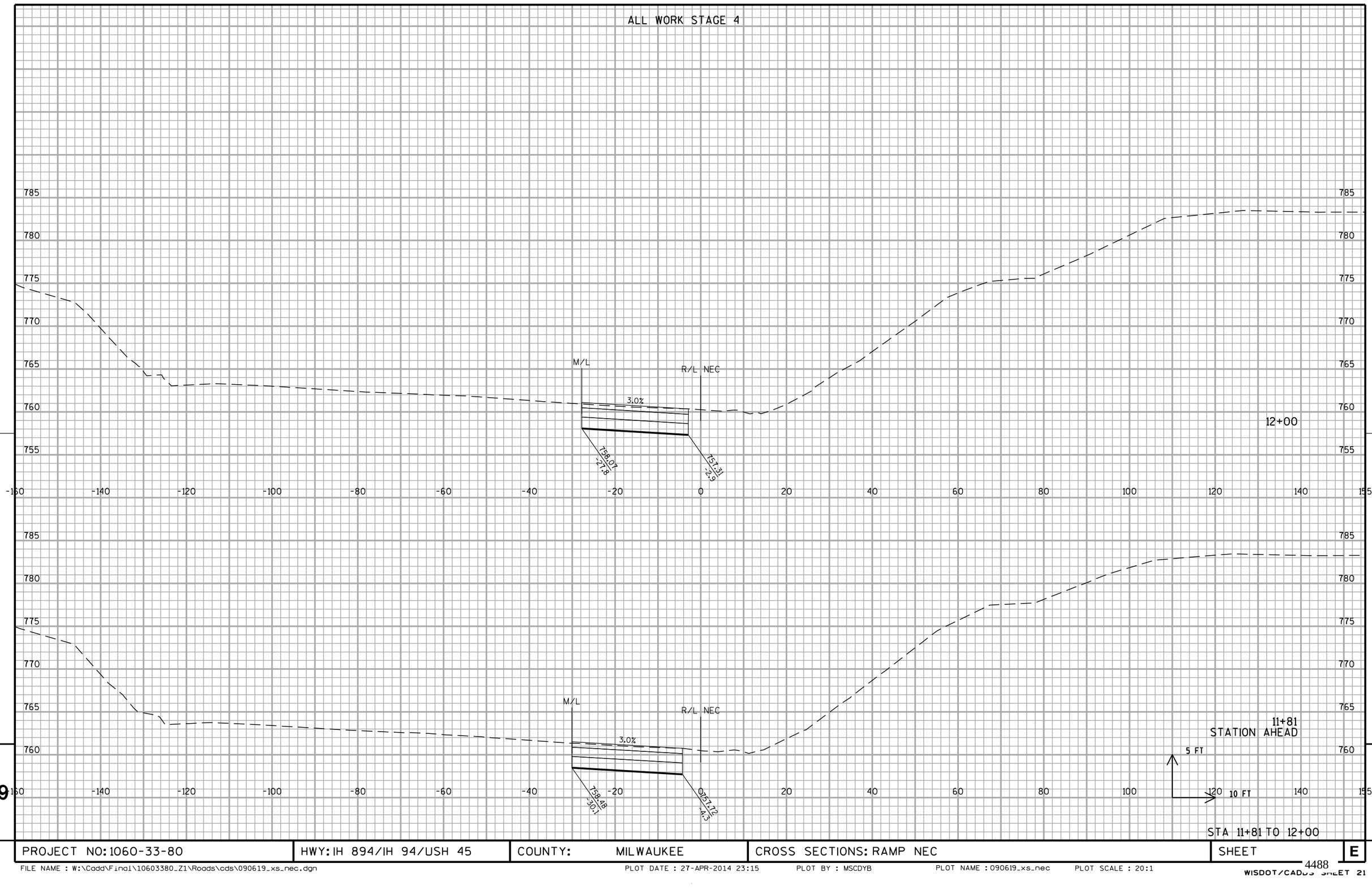


STA 10+86 TO 10+86

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090618_xs_neb.dgn PLOT DATE : 27-APR-2014 23:14 PLOT BY : MSCDYB PLOT NAME : 090618_xs_neb14 PLOT SCALE : 20:1

ALL WORK STAGE 4

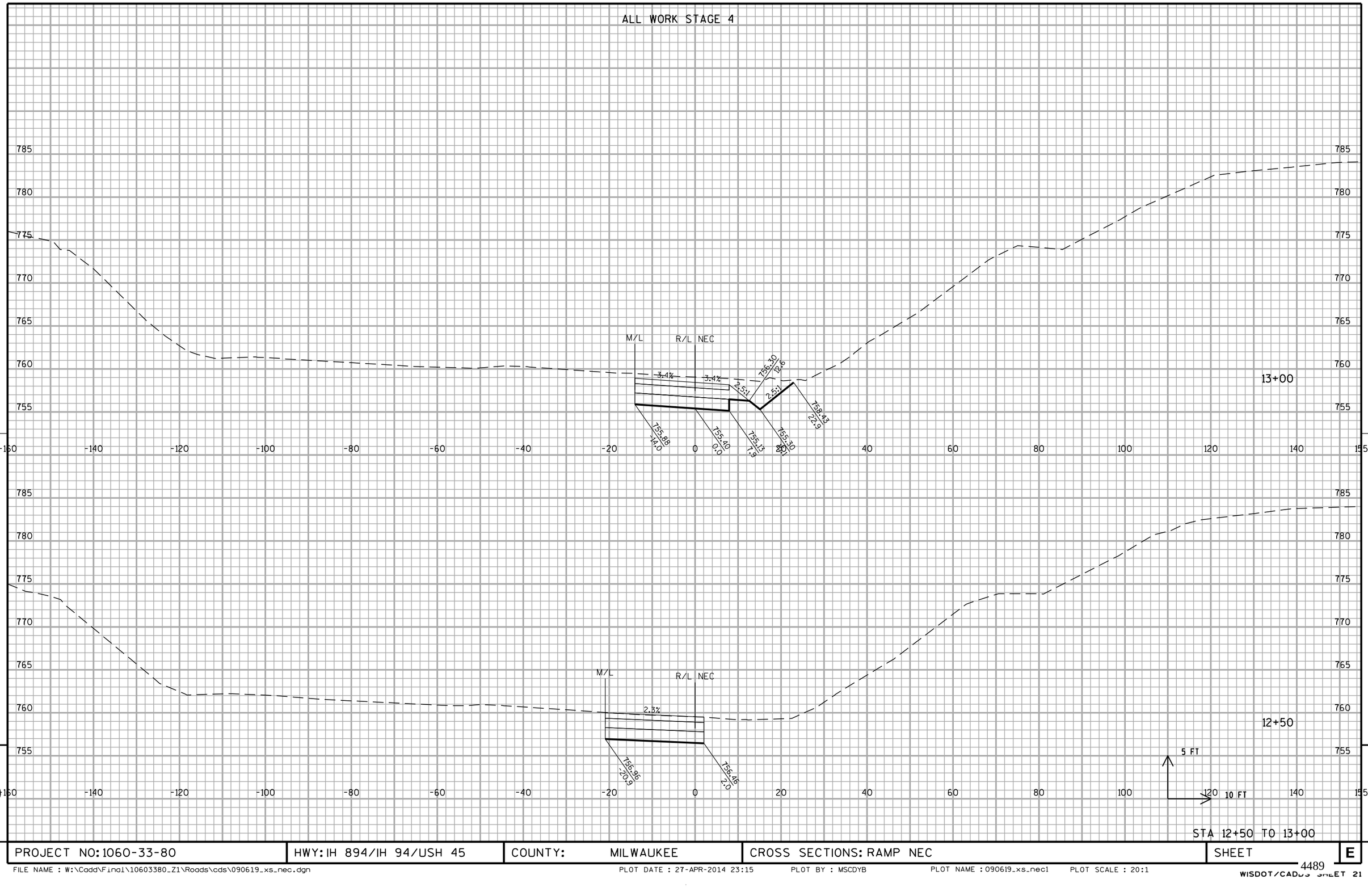


STA 11+81 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090619_xs_nec.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090619_xs_nec PLOT SCALE : 20:1

ALL WORK STAGE 4

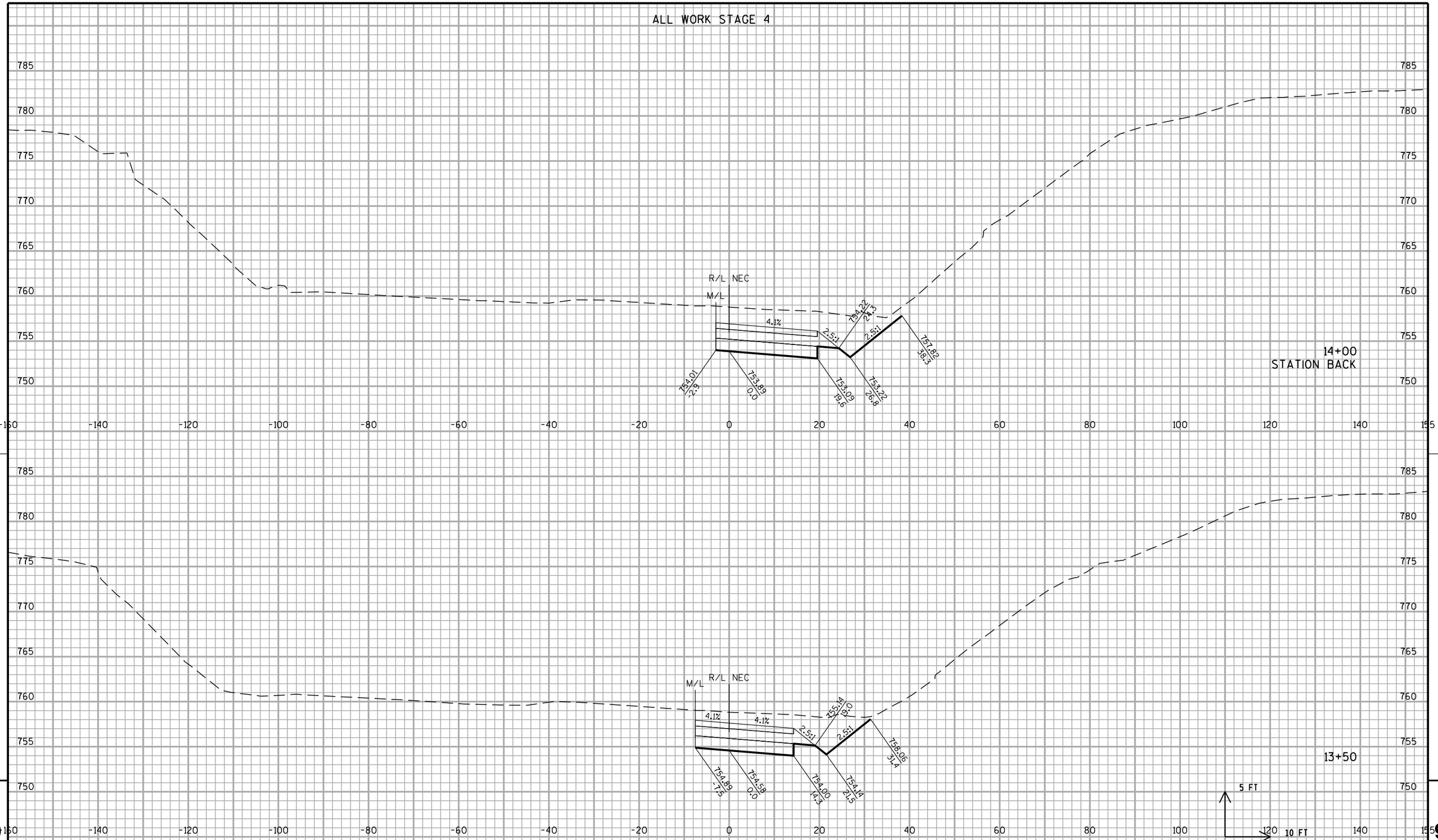


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090619_xs_nec.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090619_xs_nec1 PLOT SCALE : 20:1

ALL WORK STAGE 4



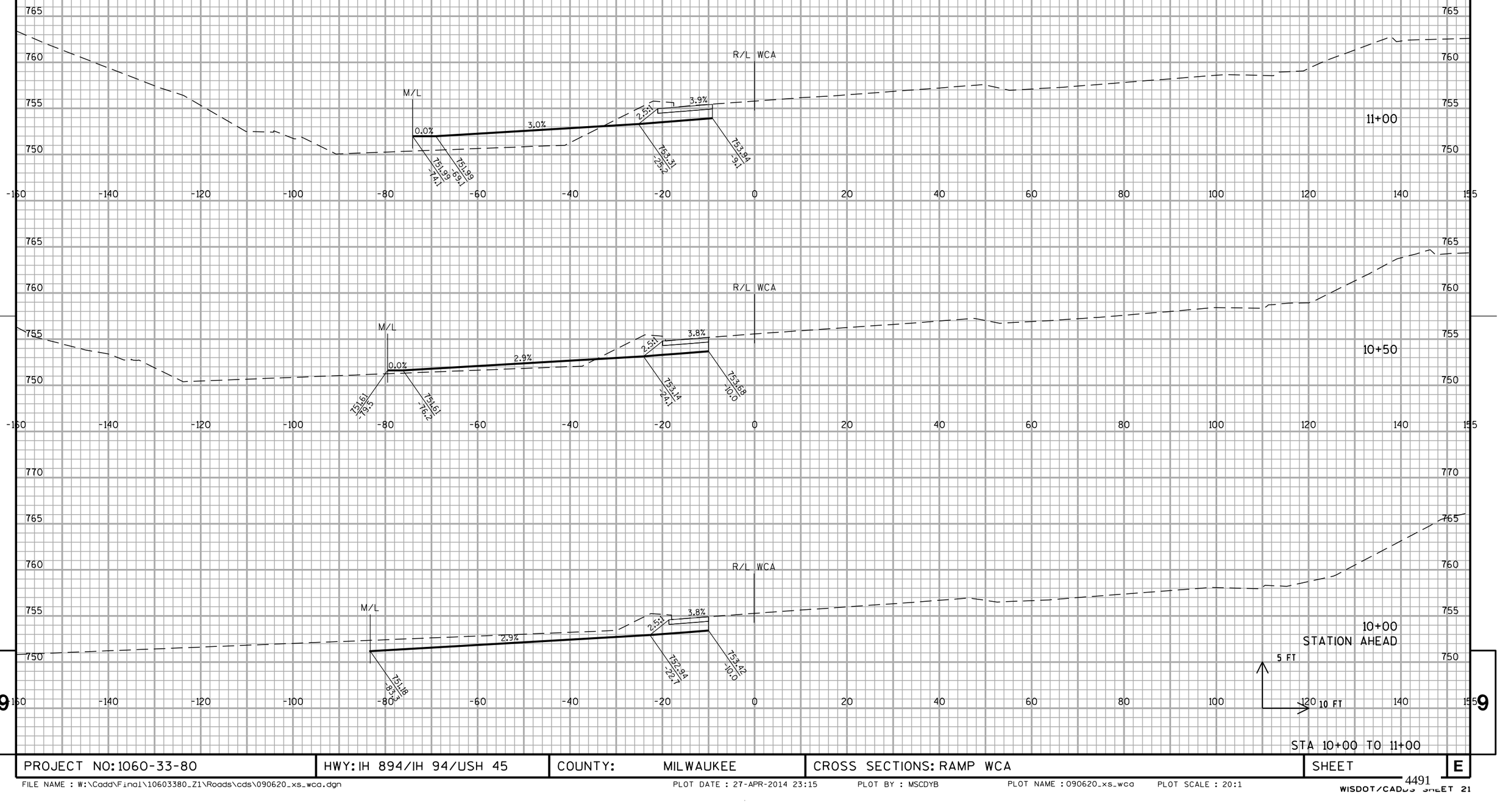
STA 13+50 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NEC	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090619_xs_nec.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090619_xs_nec2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

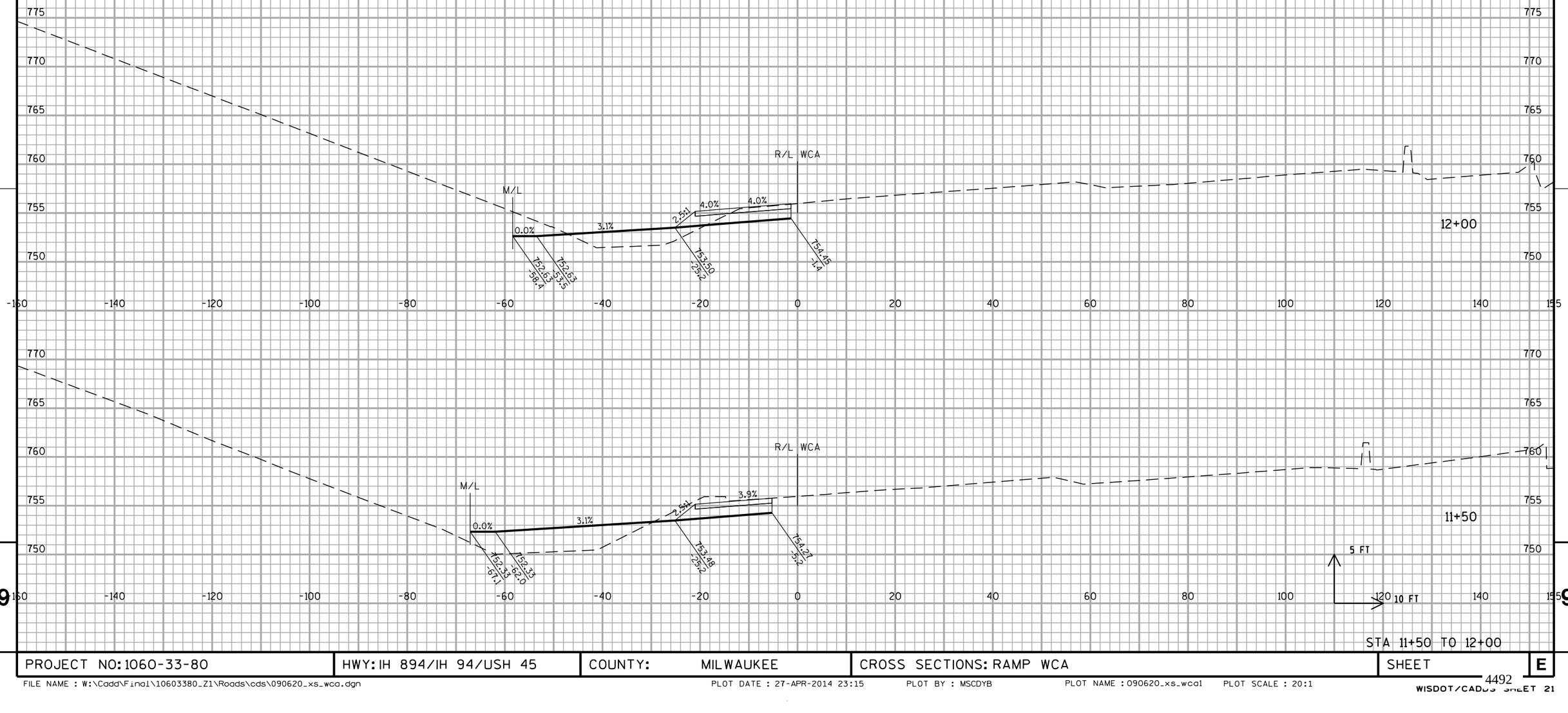


STA 10+00 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090620_xs_wca.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090620_xs_wca PLOT SCALE : 20:1

ALL WORK STAGE 2



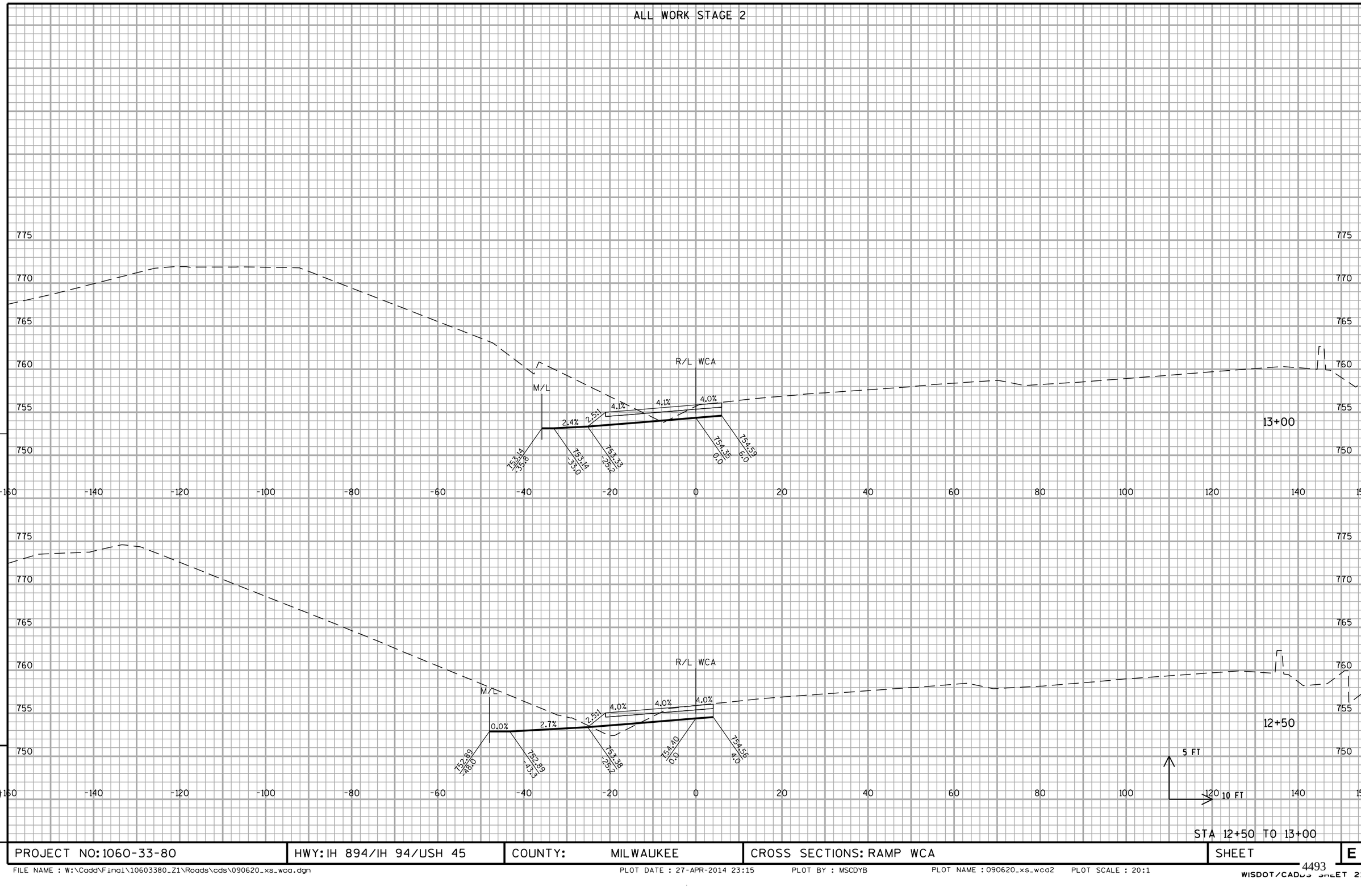
STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090620_xs_wca.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090620_xs_wca1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

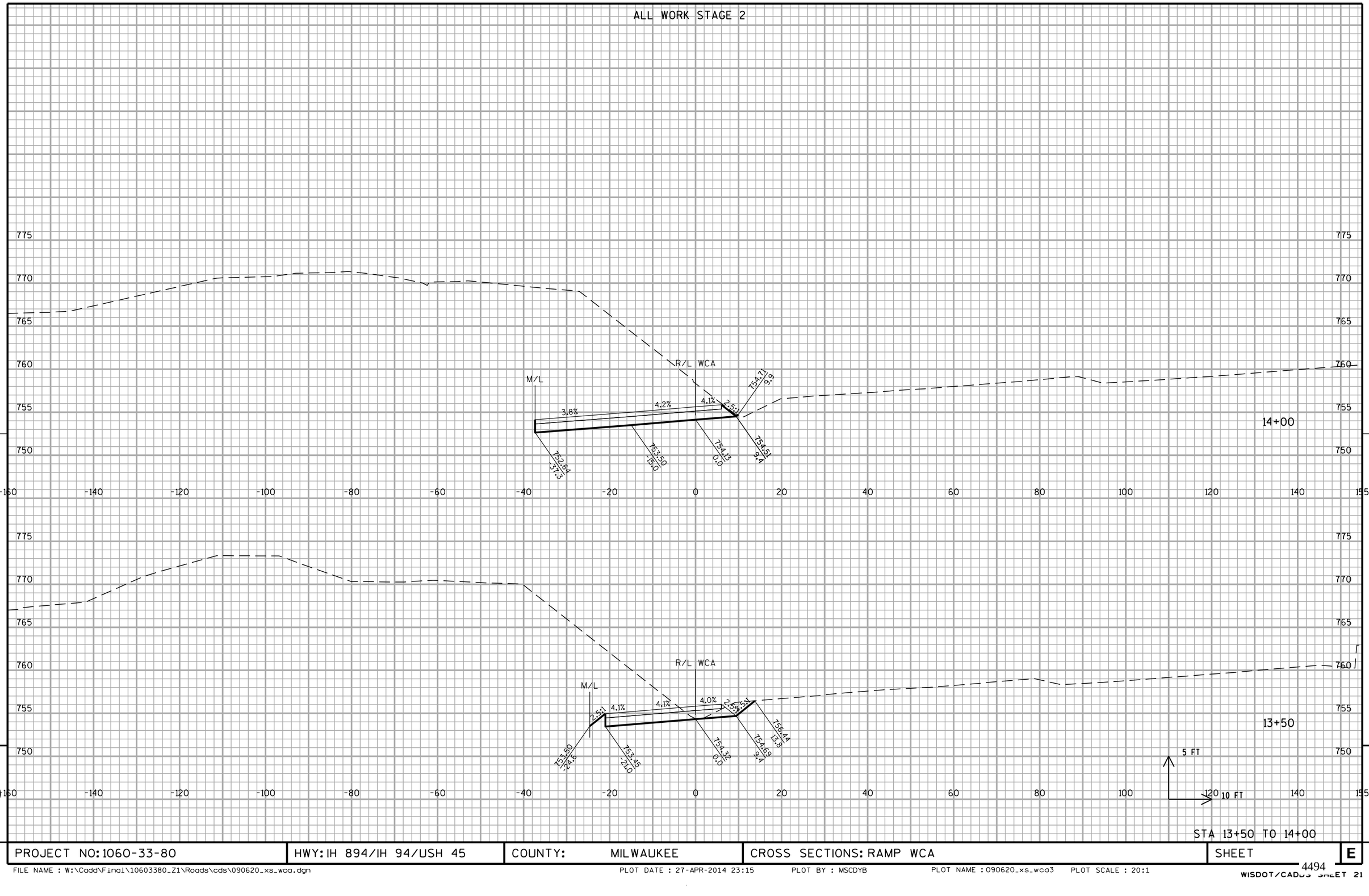


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090620_xs_wca.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090620_xs_wca2 PLOT SCALE : 20:1

ALL WORK STAGE 2



9

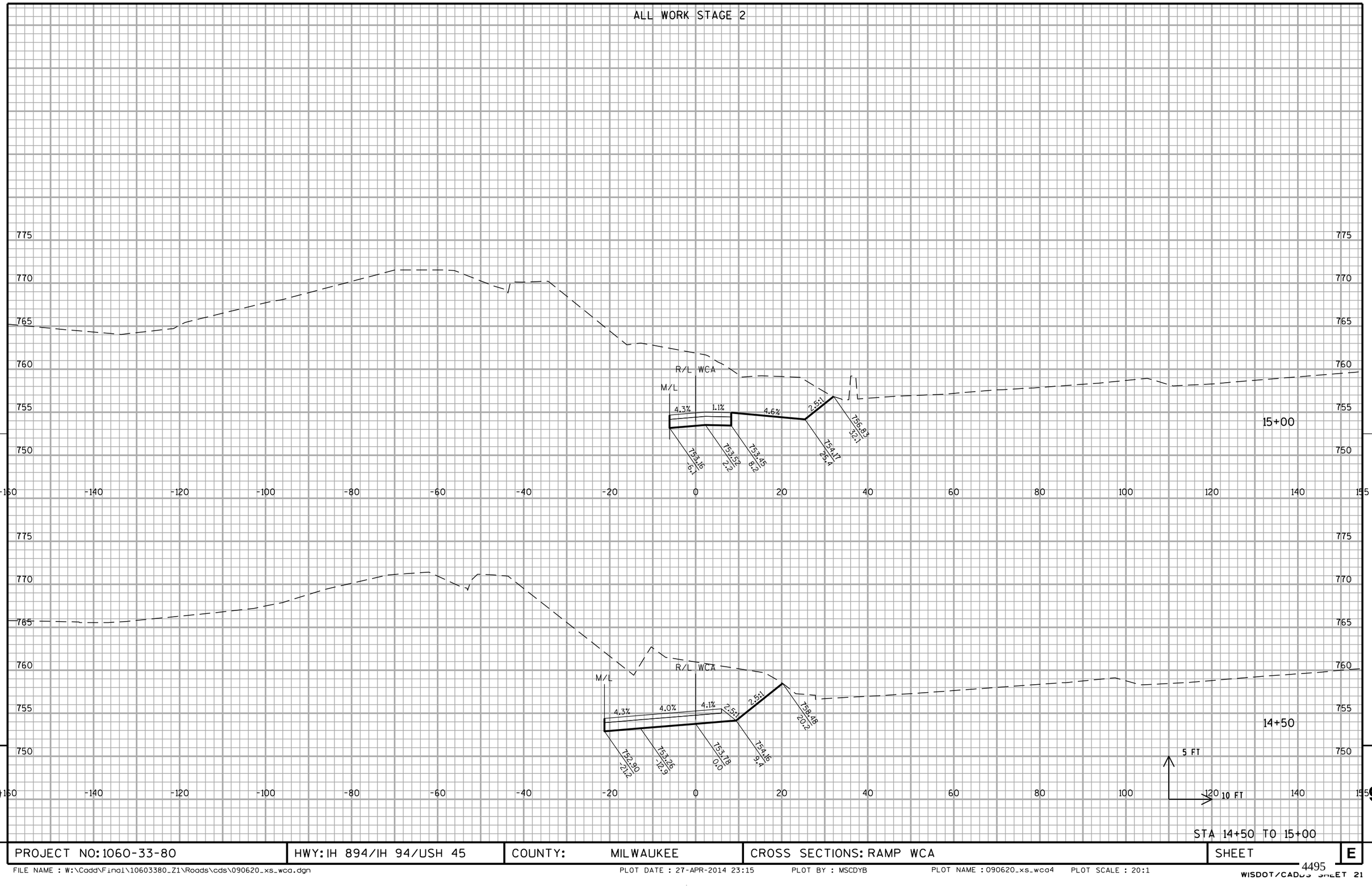
STA 13+50 TO 14+00

9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090620_xs_wca.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090620_xs_wca3 PLOT SCALE : 20:1

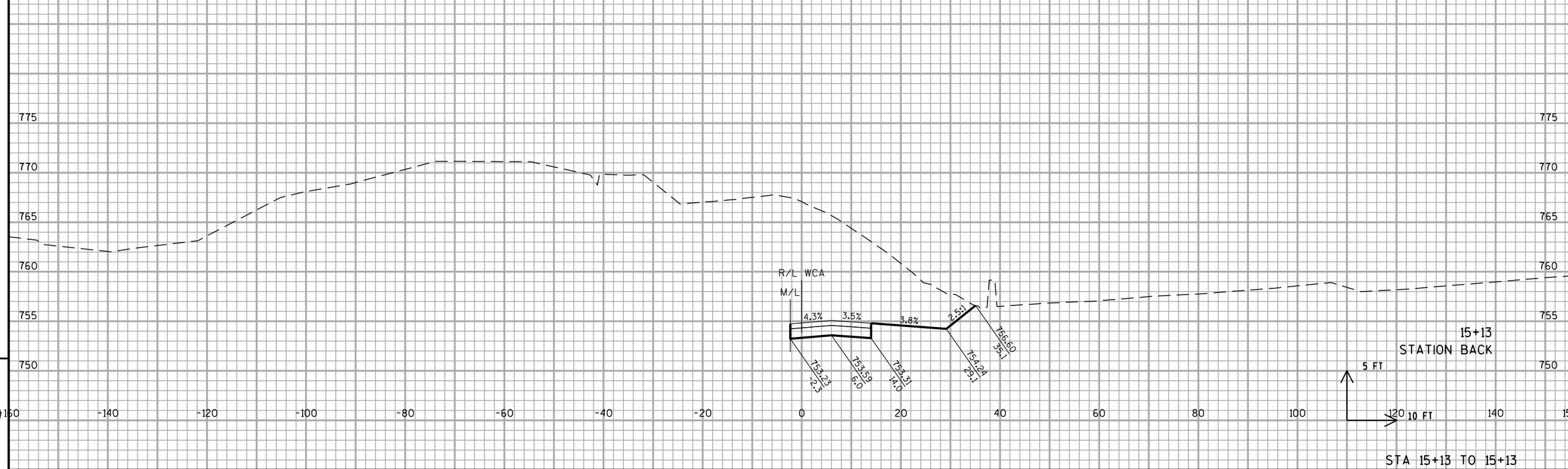
ALL WORK STAGE 2



STA 14+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET	E

ALL WORK STAGE 2

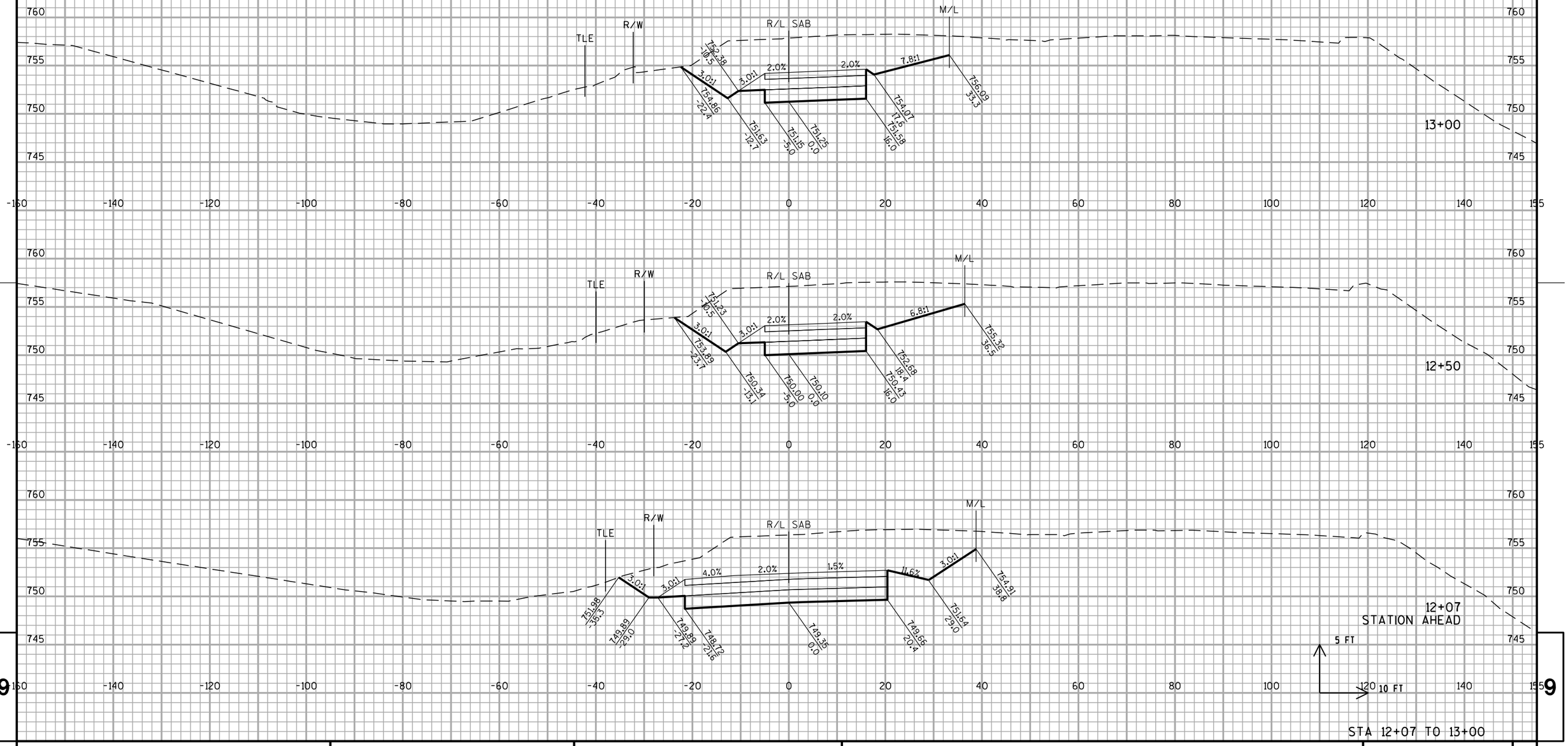


STA 15+13 TO 15+13

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WCA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090620_xs_wca.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090620_xs_wca5 PLOT SCALE : 20:1

ALL WORK STAGE 3

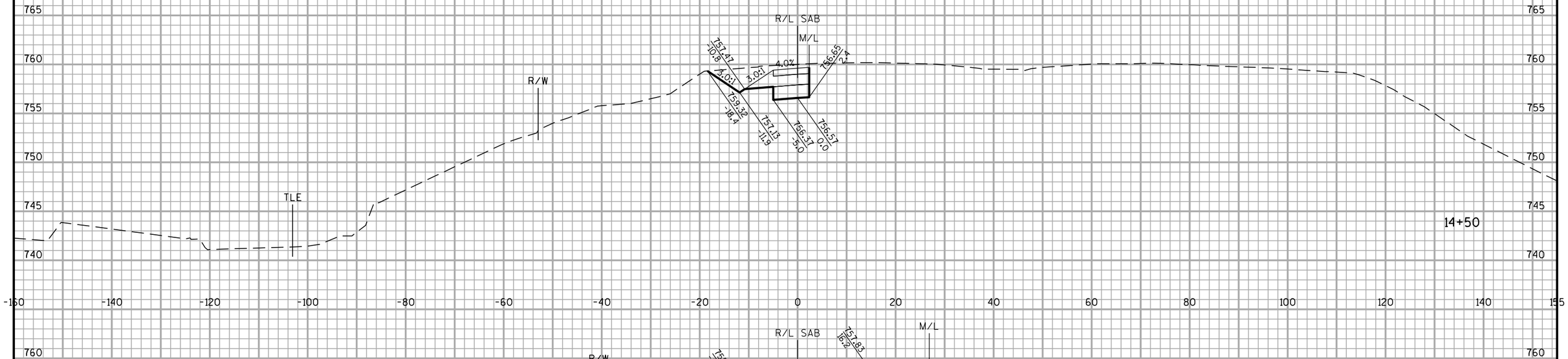


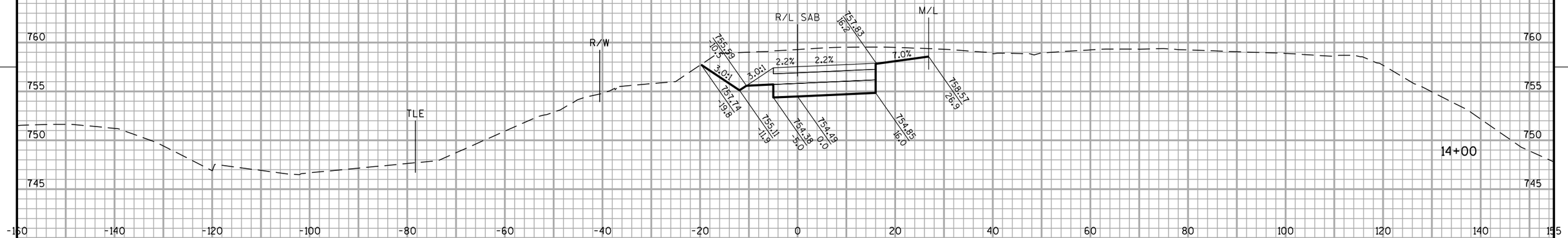
STA 12+07 TO 13+00

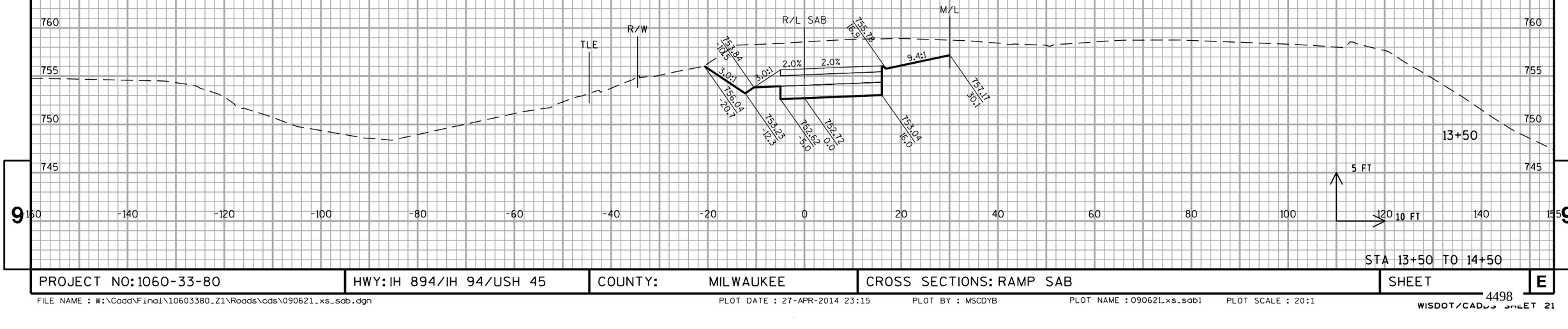
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SAB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090621_xs_sab.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090621_xs_sab PLOT SCALE : 20:1

ALL WORK STAGE 3





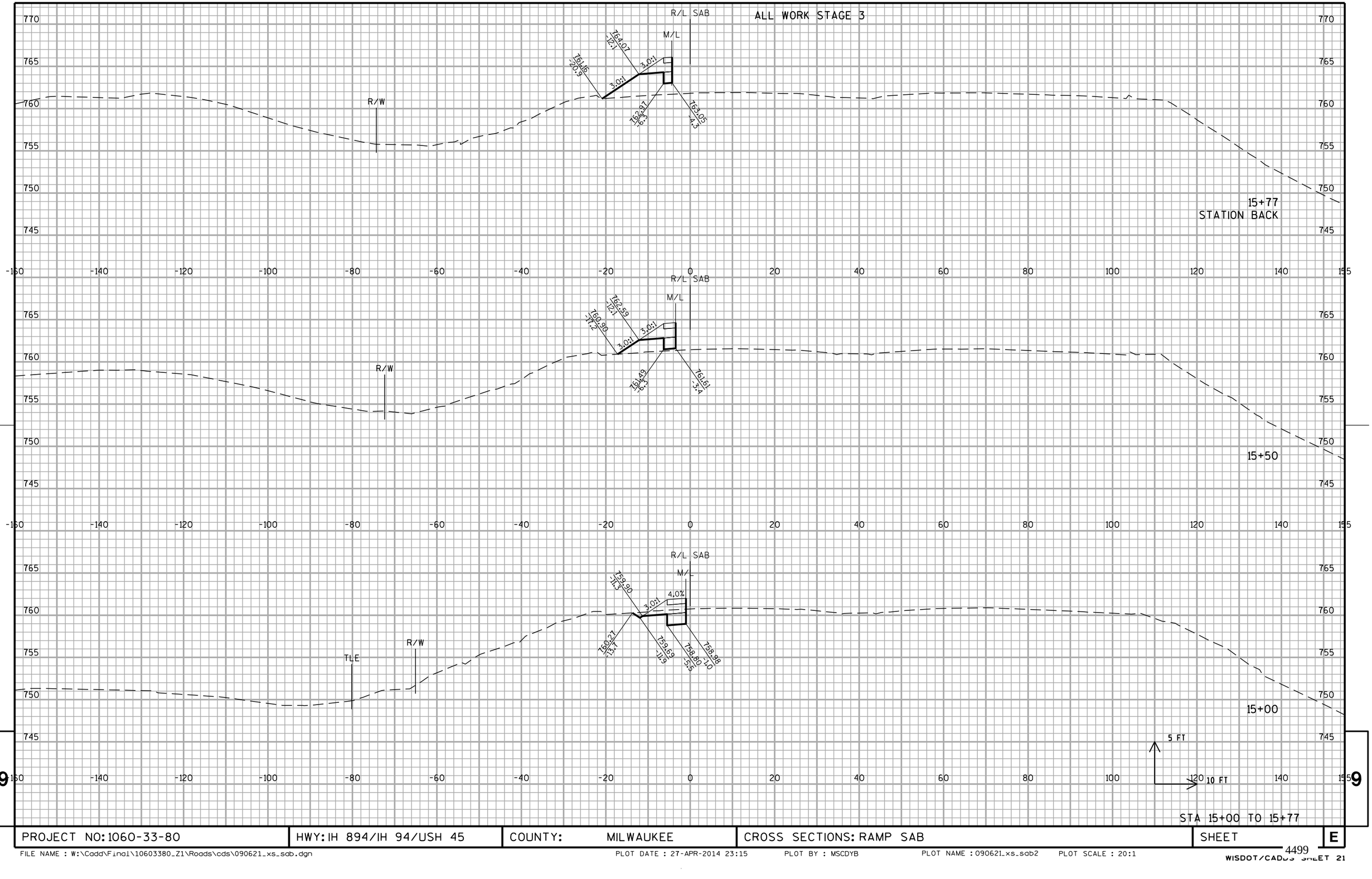


STA 13+50 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SAB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090621_xs_sab.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090621_xs_sab1 PLOT SCALE : 20:1

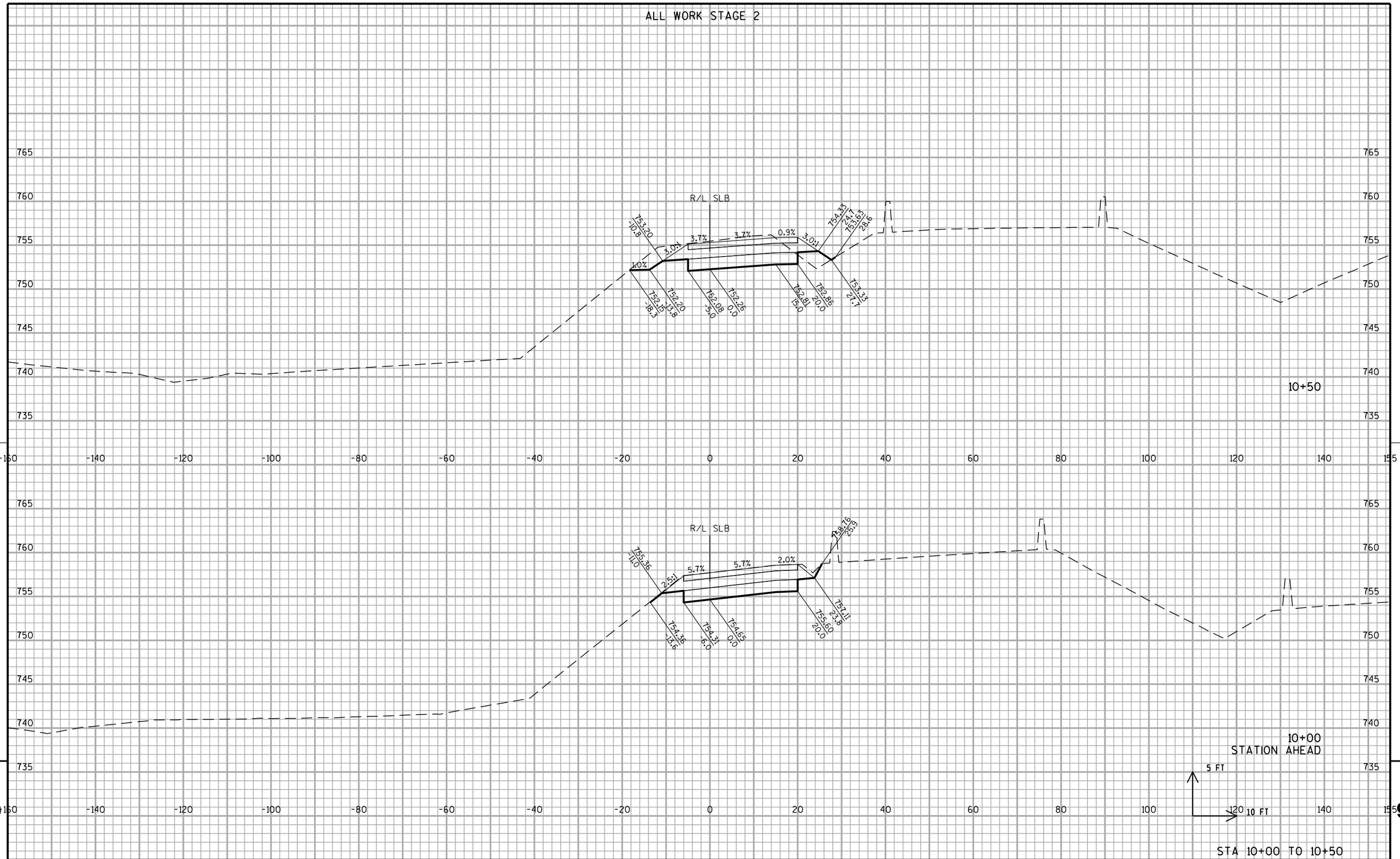
ALL WORK STAGE 3



STA 15+00 TO 15+77

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SAB	SHEET	E

ALL WORK STAGE 2

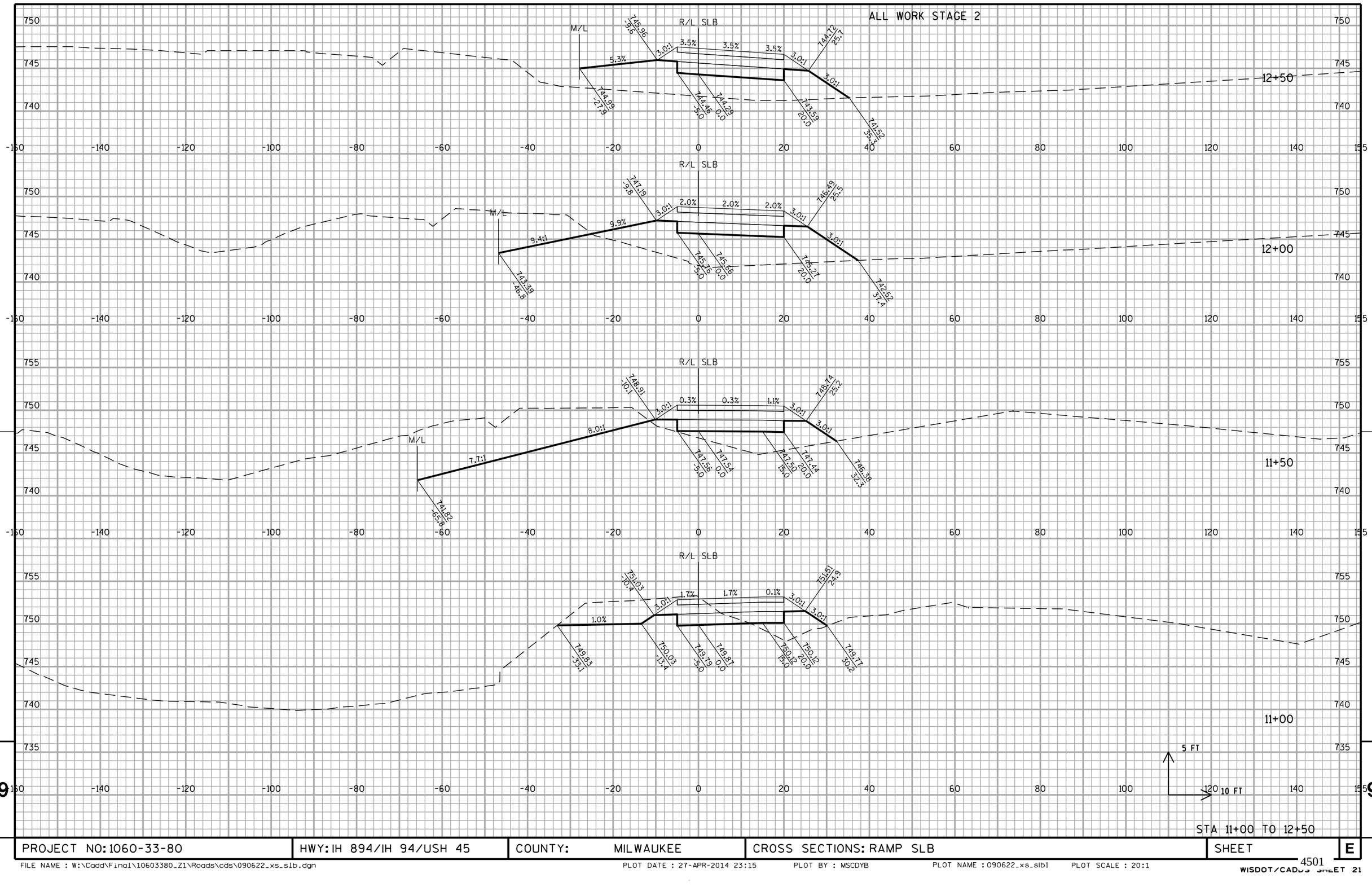


STA 10+00 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SLB	SHEET E

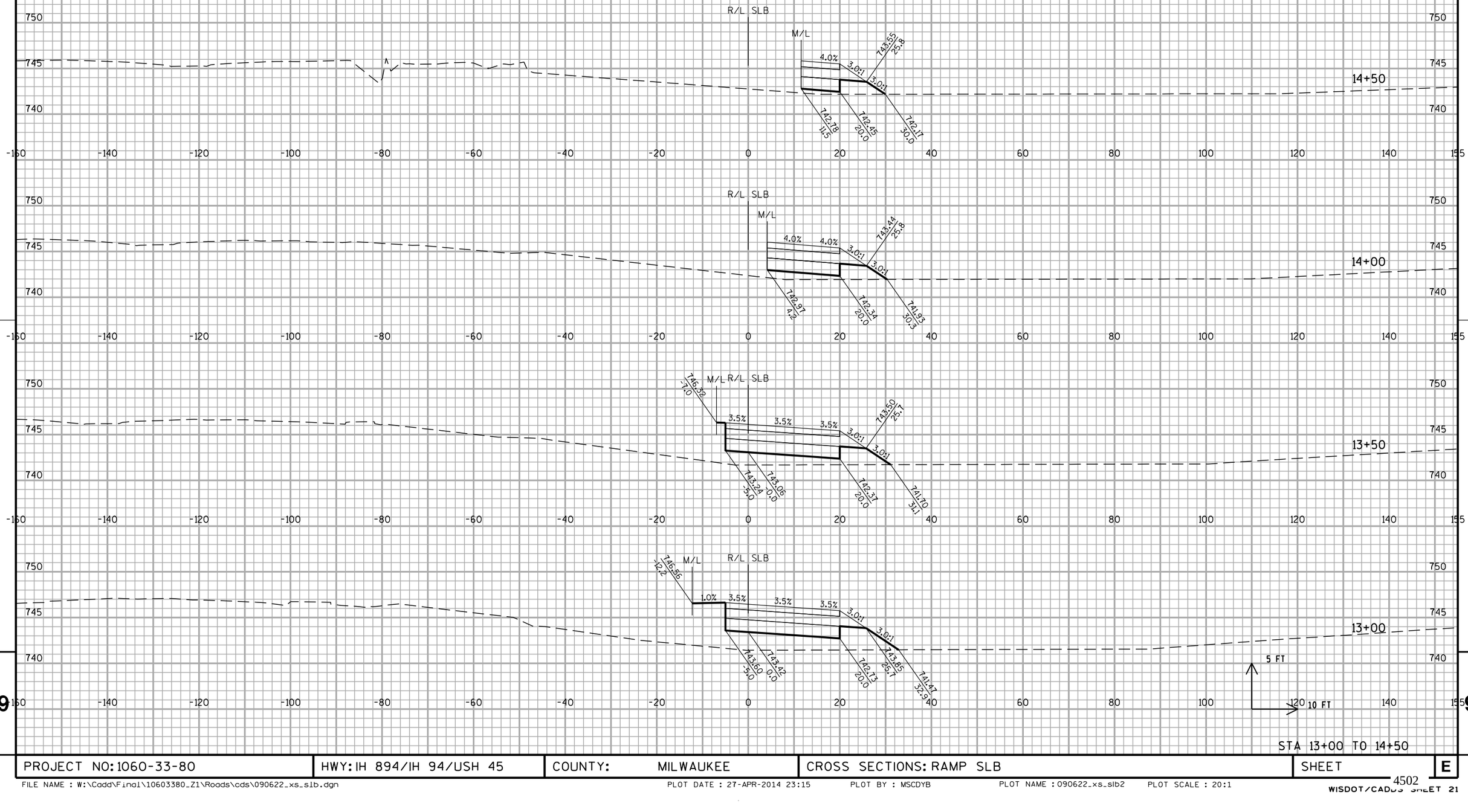
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090622_xs_slb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090622_xs_slb PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SLB	SHEET	E

ALL WORK STAGE 2

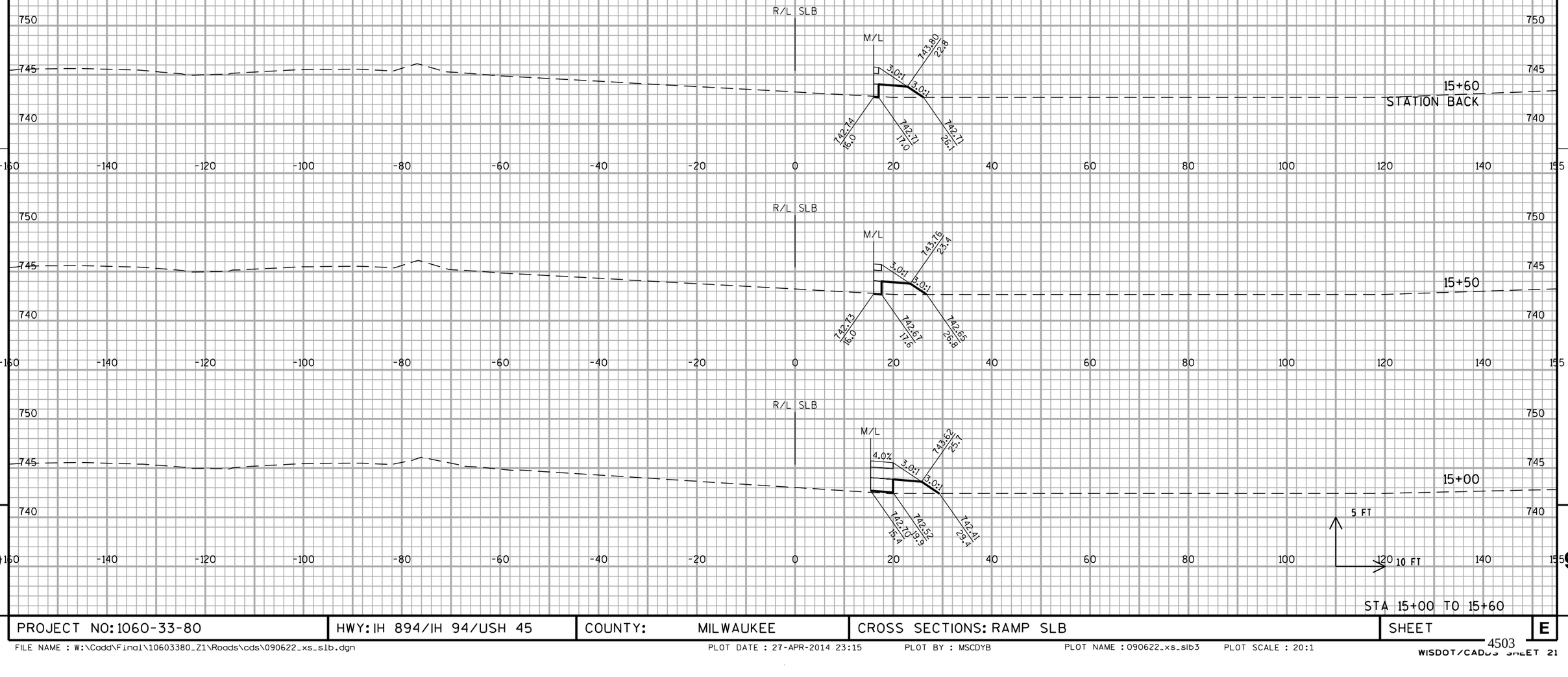


STA 13+00 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SLB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090622_xs_slb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090622_xs_slb2 PLOT SCALE : 20:1

ALL WORK STAGE 2

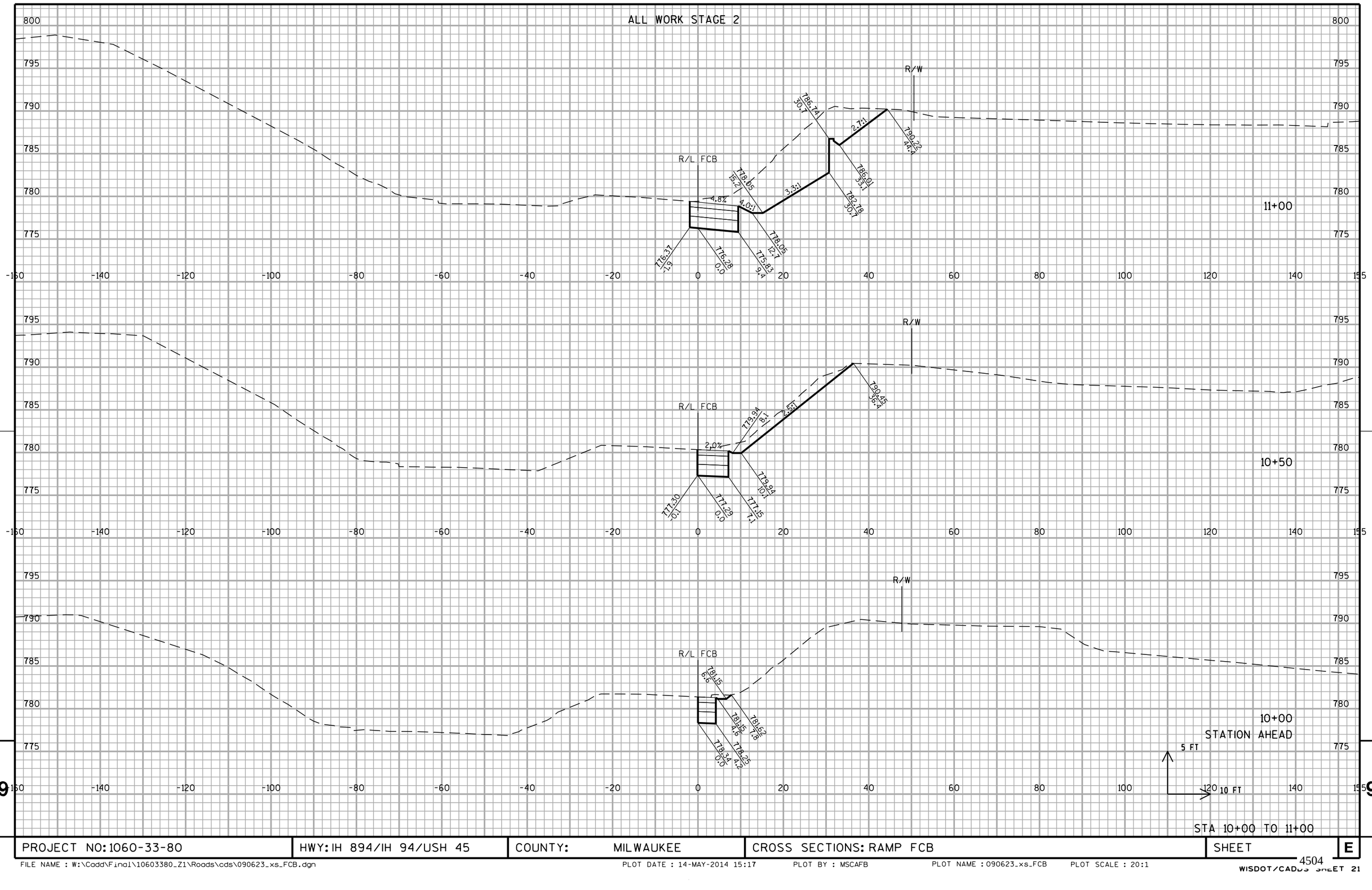


STA 15+00 TO 15+60

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP SLB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090622_xs_slb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090622_xs_slb3 PLOT SCALE : 20:1

ALL WORK STAGE 2

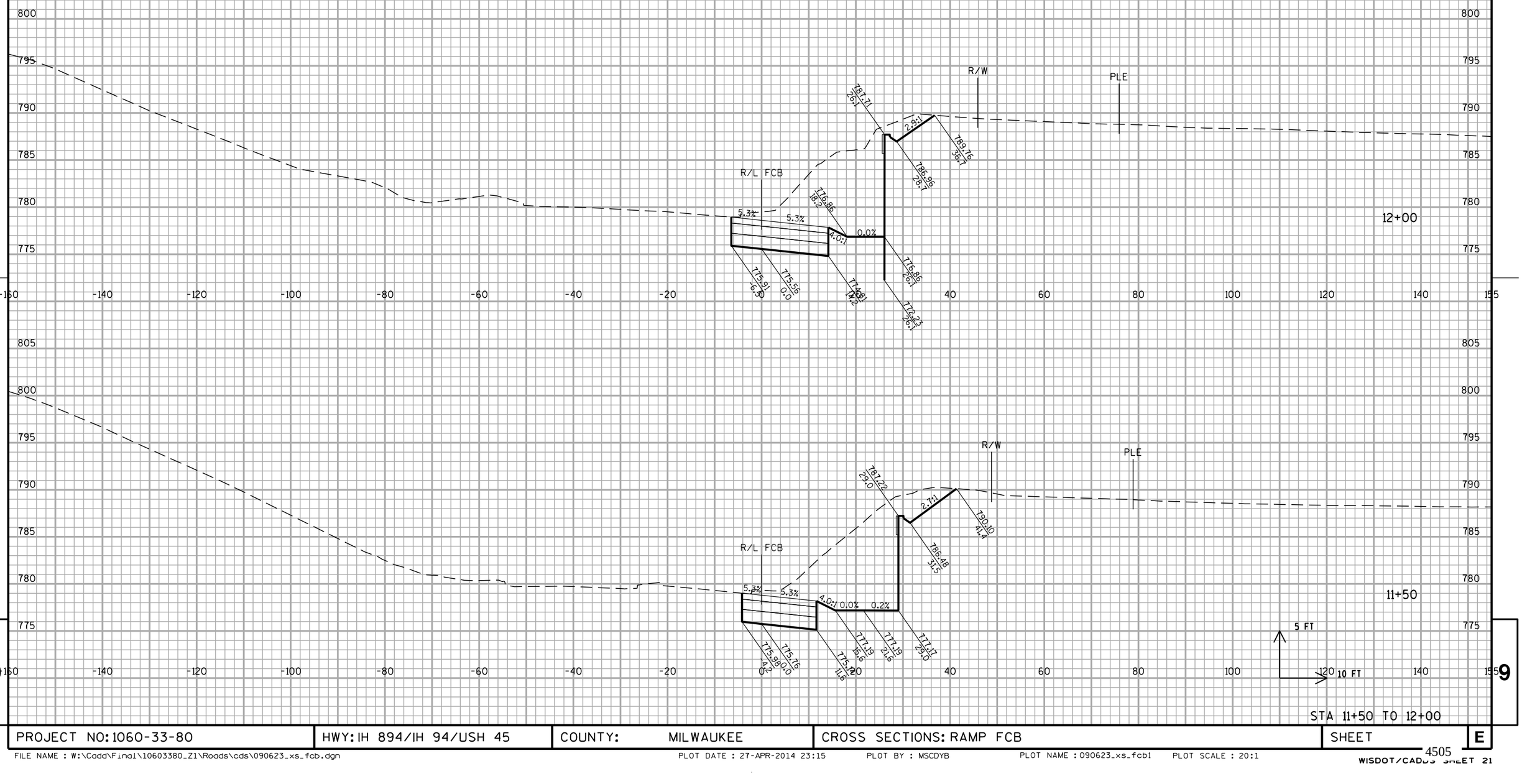


STA 10+00 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_FCB.dgn PLOT DATE : 14-MAY-2014 15:17 PLOT BY : MSCAFB PLOT NAME : 090623_xs_FCB PLOT SCALE : 20:1

ALL WORK STAGE 2

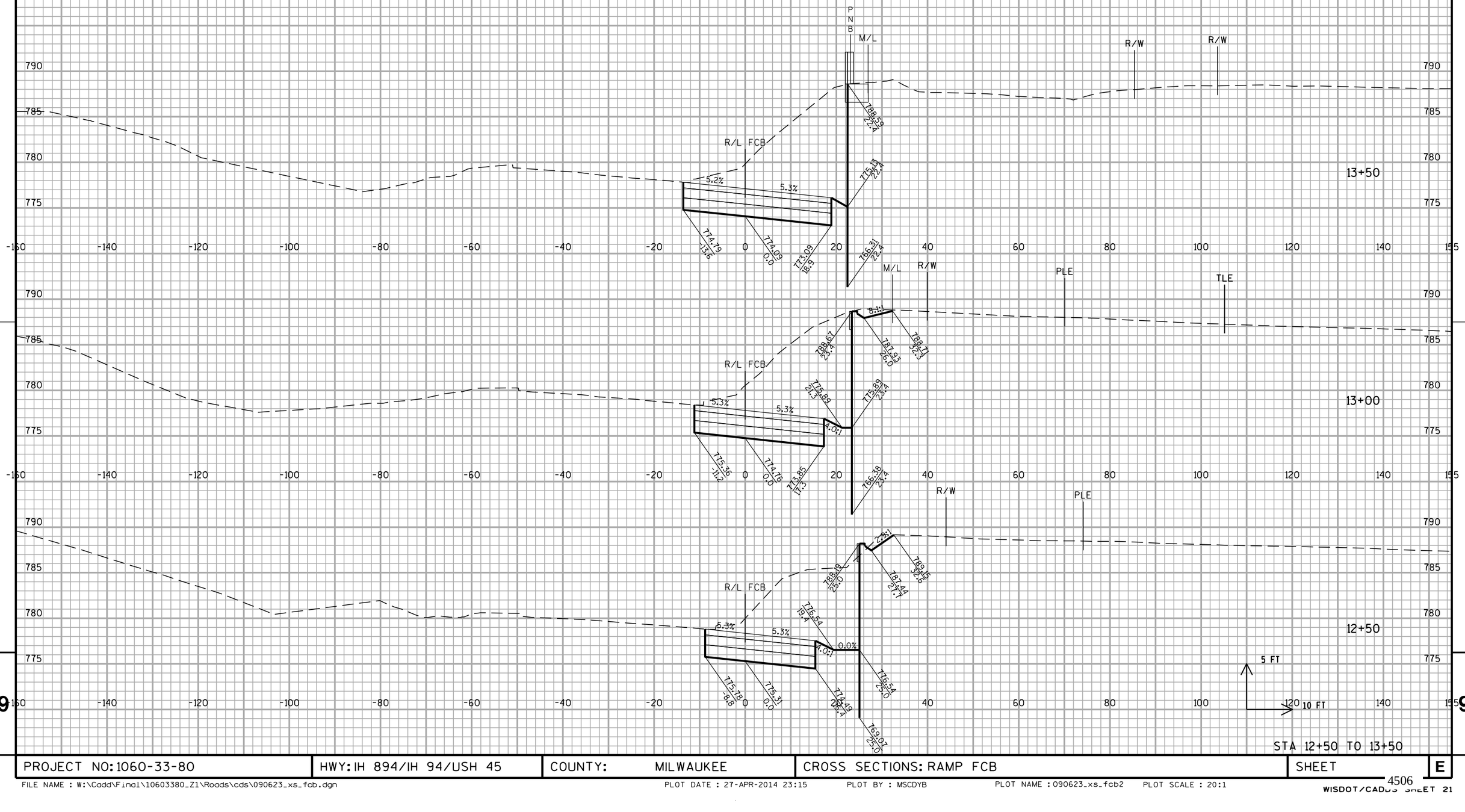


STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb1 PLOT SCALE : 20:1

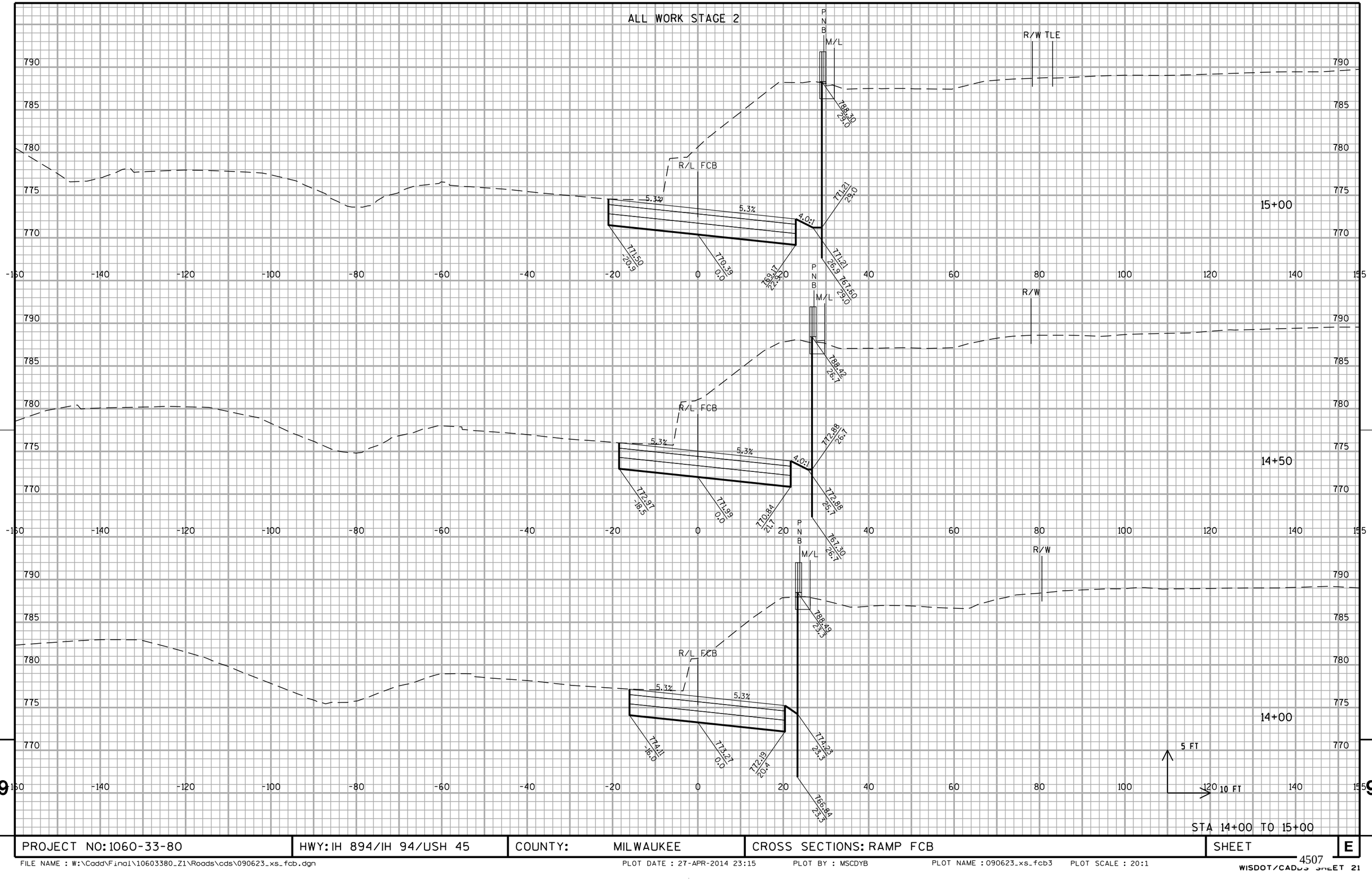
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb2 PLOT SCALE : 20:1

ALL WORK STAGE 2

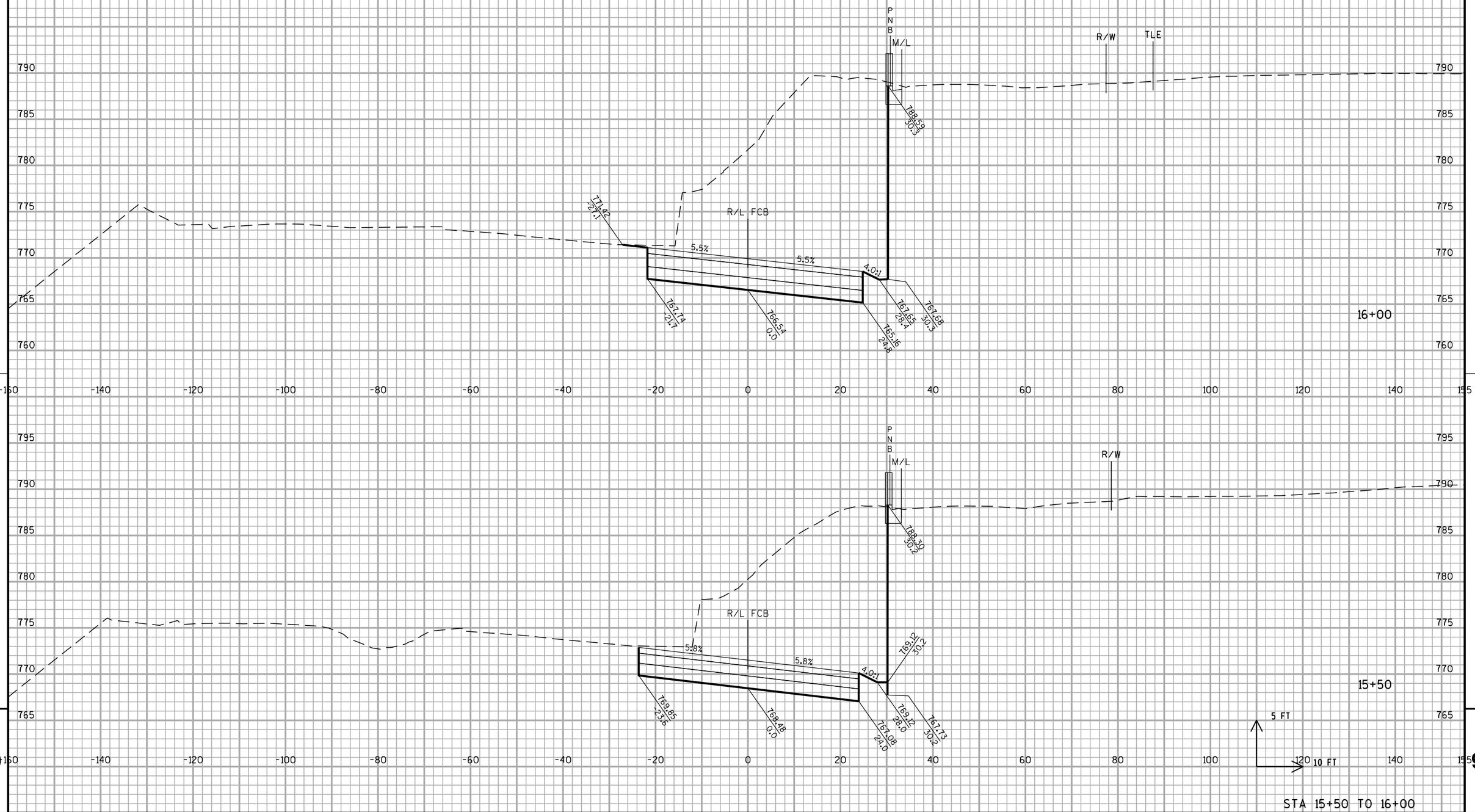


STA 14+00 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb3 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 15+50 TO 16+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb4 PLOT SCALE : 20:1

ALL WORK STAGE 2

R/W

TLE

R/L FCB

768.63
-30.9

767.07
-24.6

3.0:1

2.5:1

3.6%

766.38
-26.2

765.54
-19.0

764.78
2.0

17+00

P
N
B

M/L

789.02
29.5

R/W

TLE

R/L FCB

769.97
-24.8

4.6%

4.6%

0.0%

766.35
-19.8

765.46
0.0

767.46
-24.3

767.48
29.3

764.40
25.0

16+50

5 FT

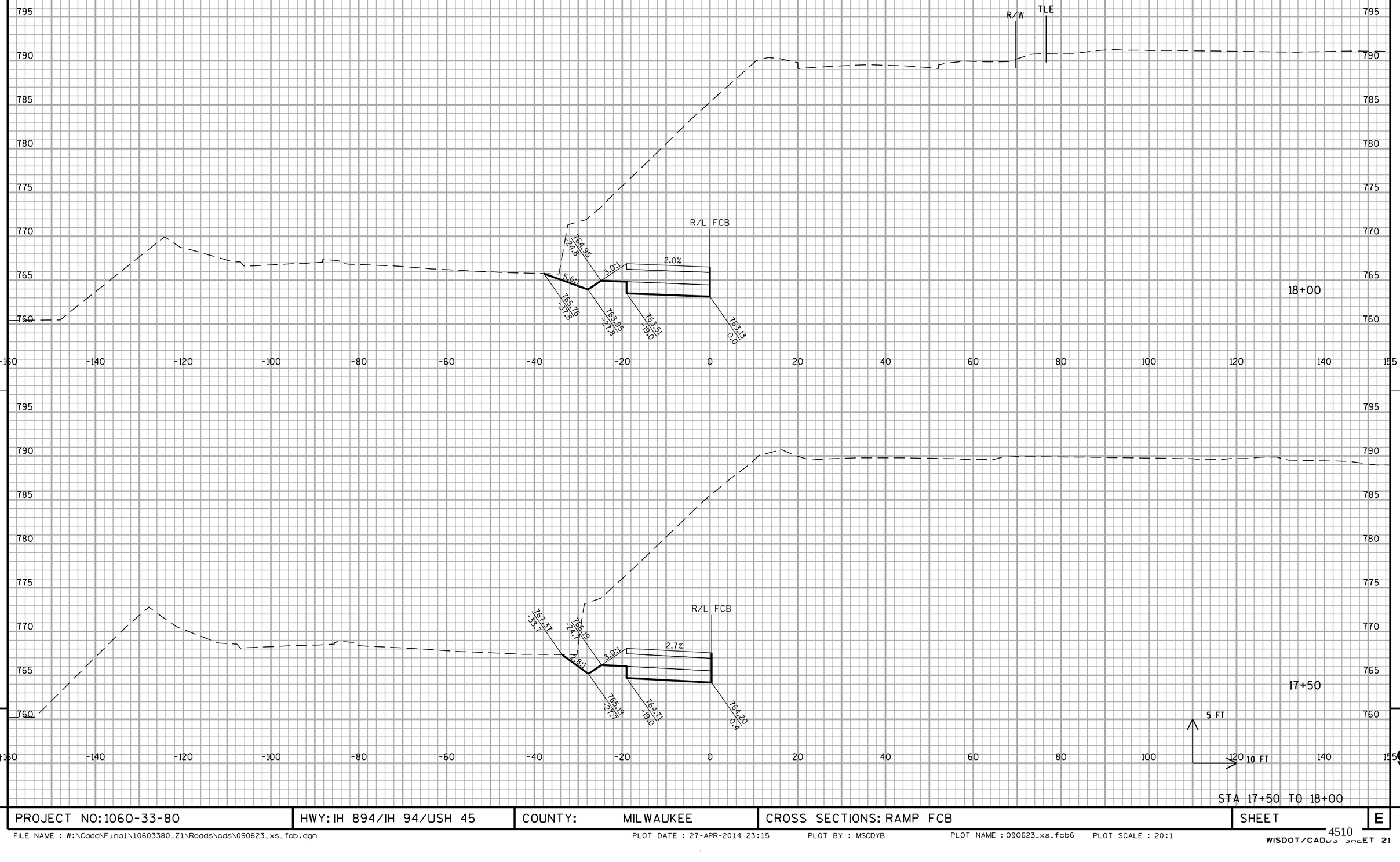
10 FT

STA 16+50 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb5 PLOT SCALE : 20:1

ALL WORK STAGE 2

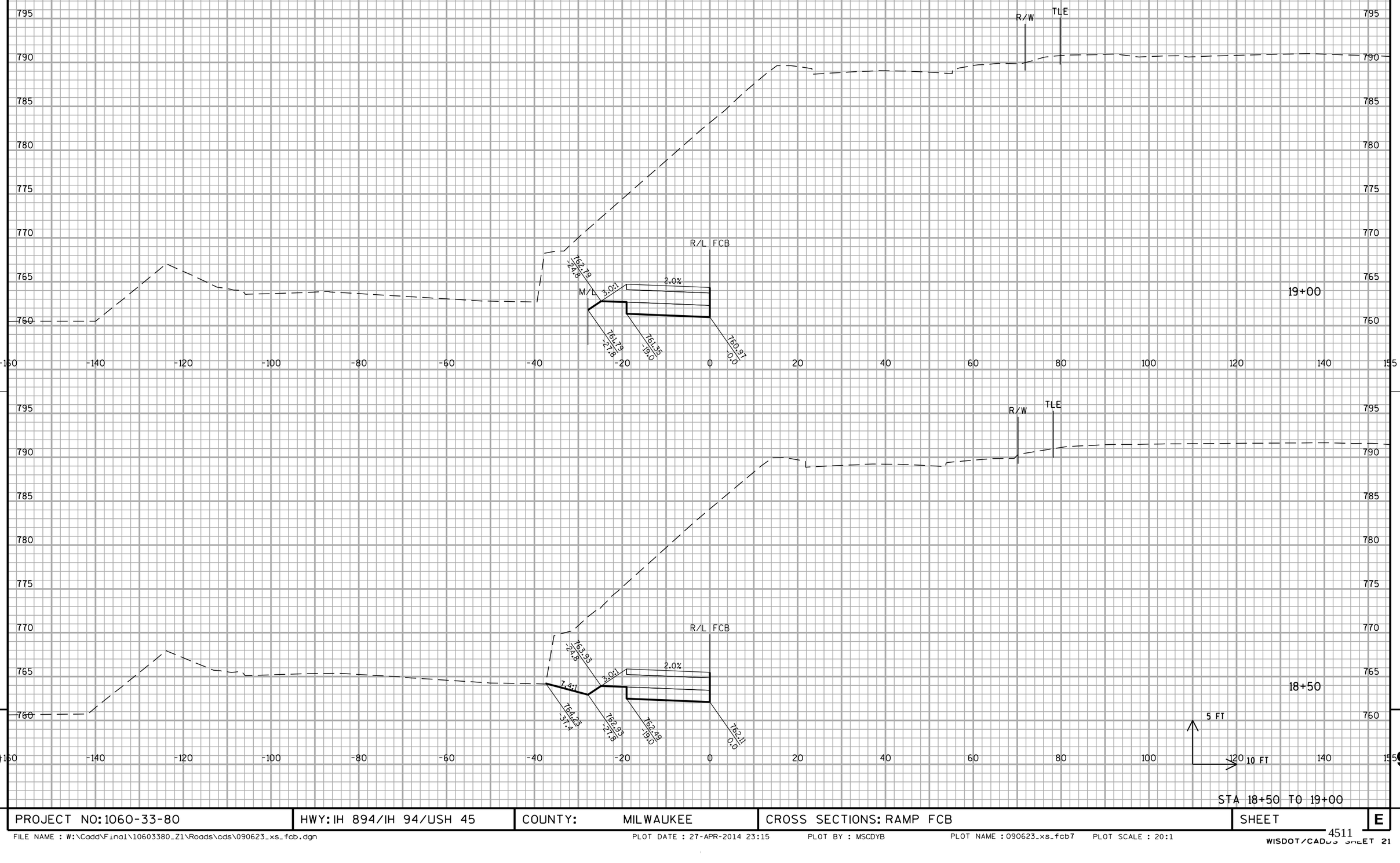


STA 17+50 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb6 PLOT SCALE : 20:1

ALL WORK STAGE 2



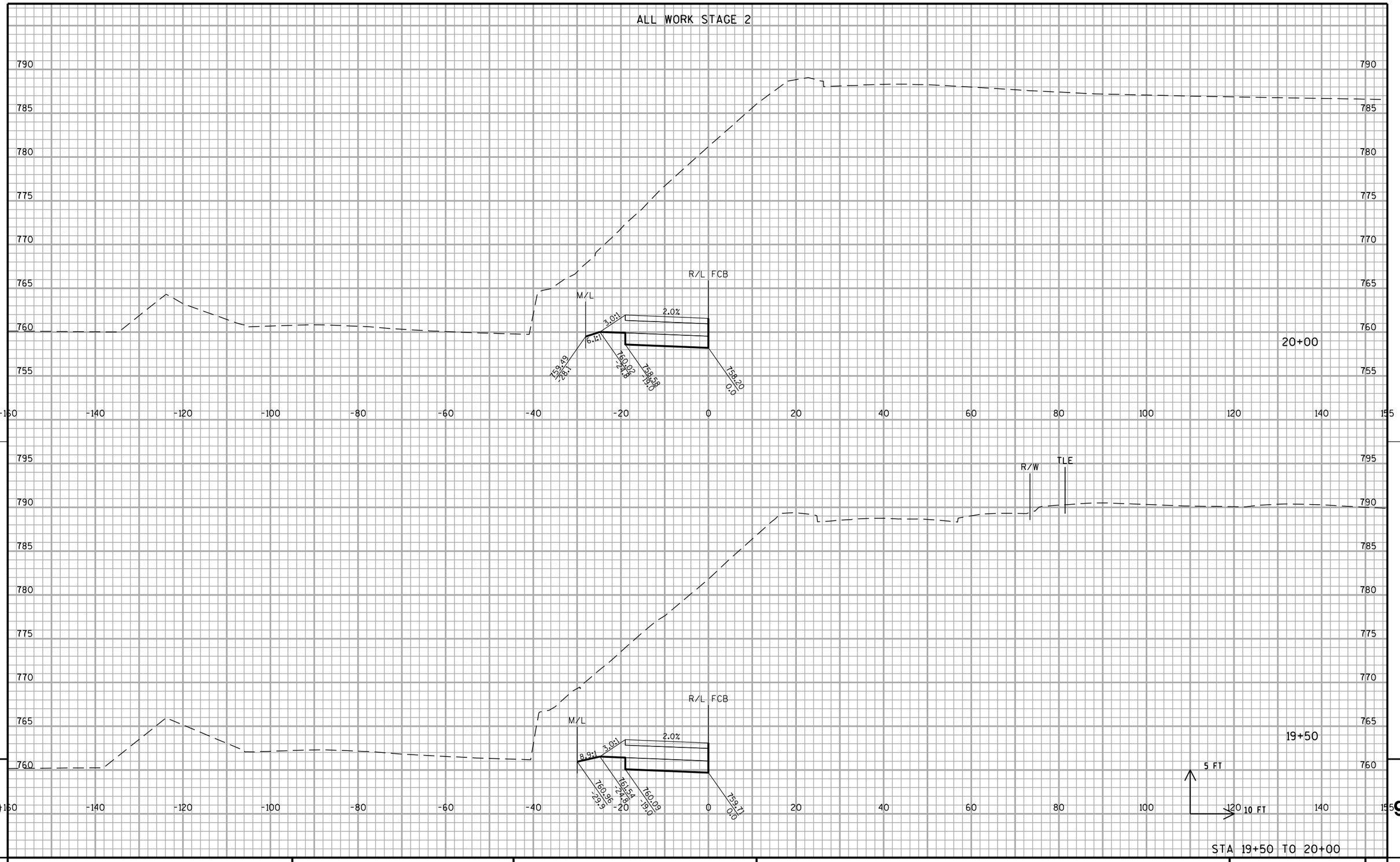
STA 18+50 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

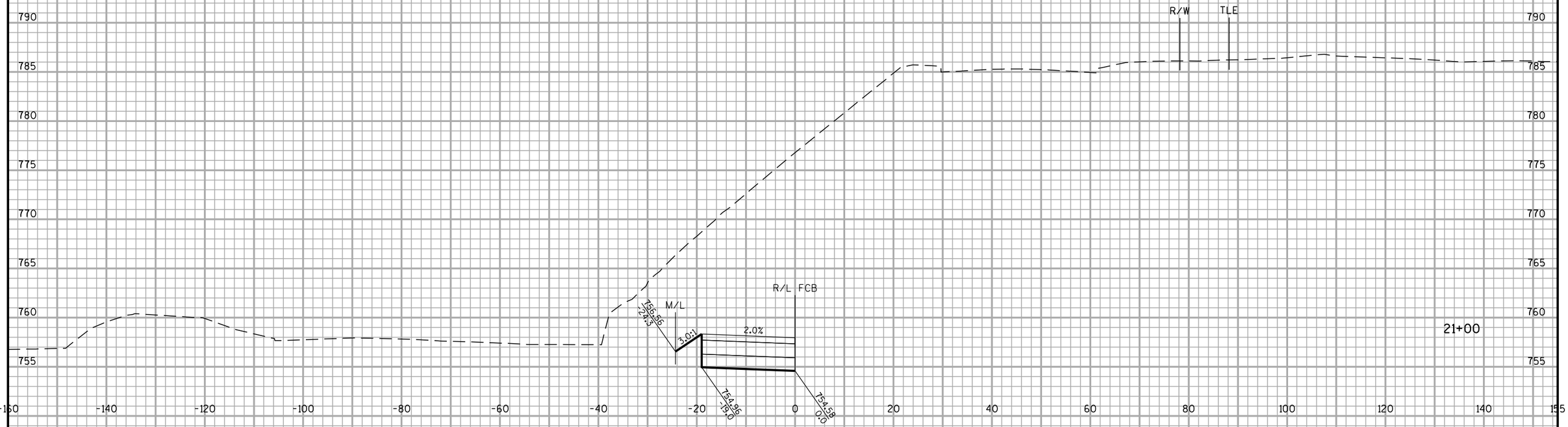


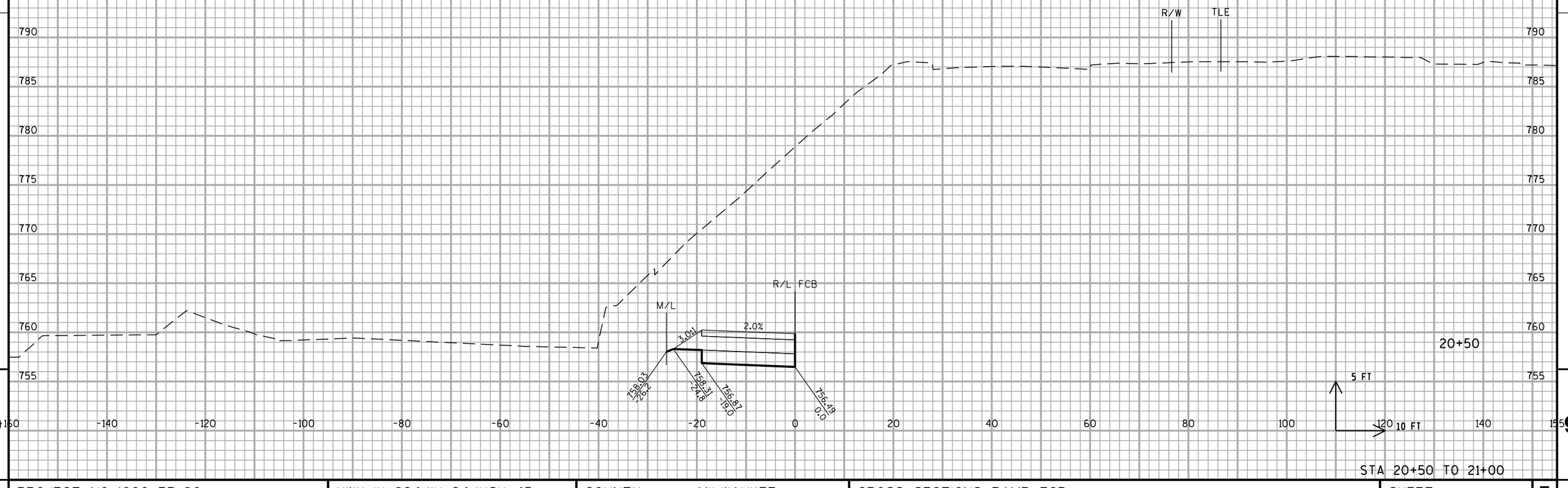
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



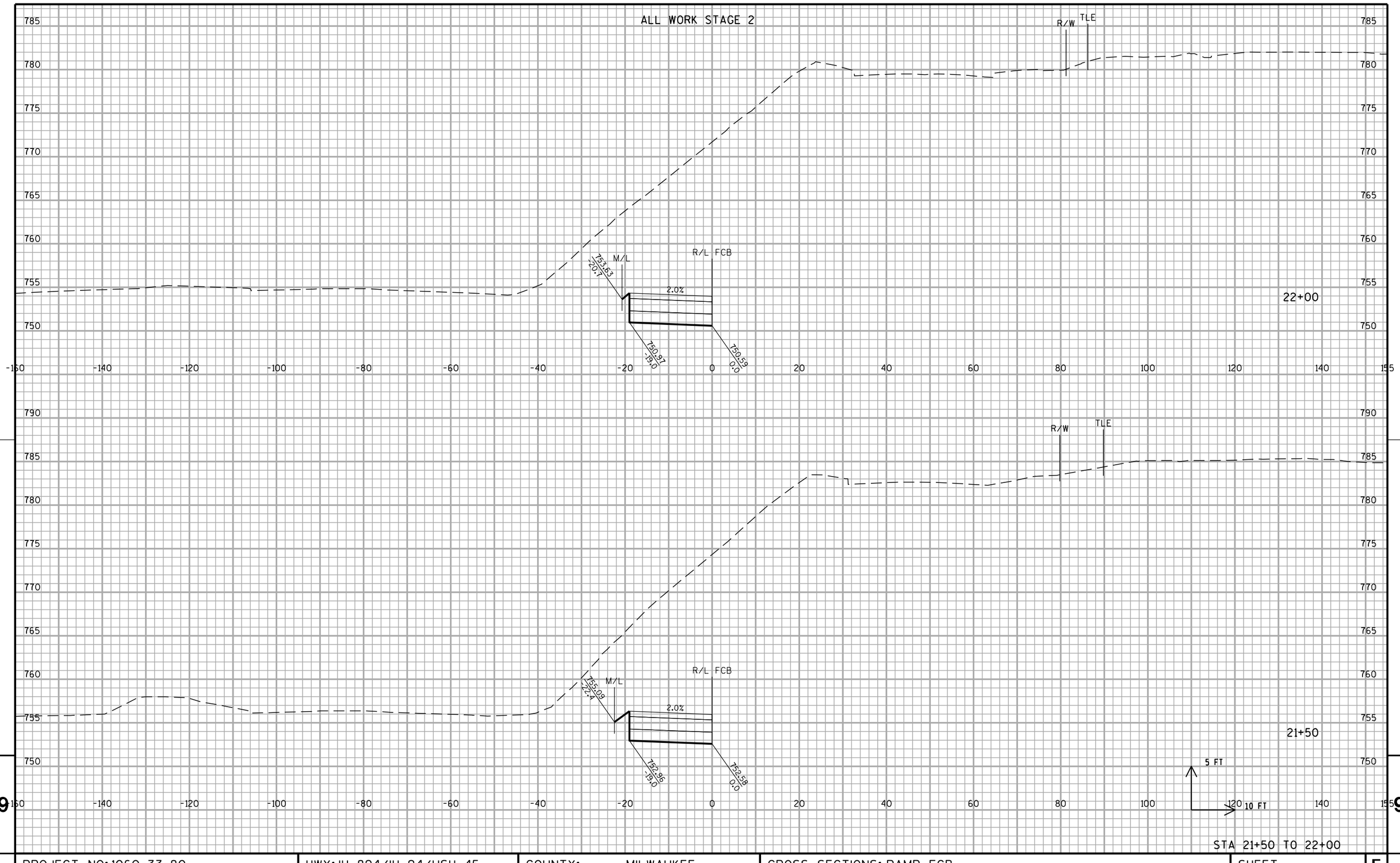


STA 20+50 TO 21+00

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

ALL WORK STAGE 2

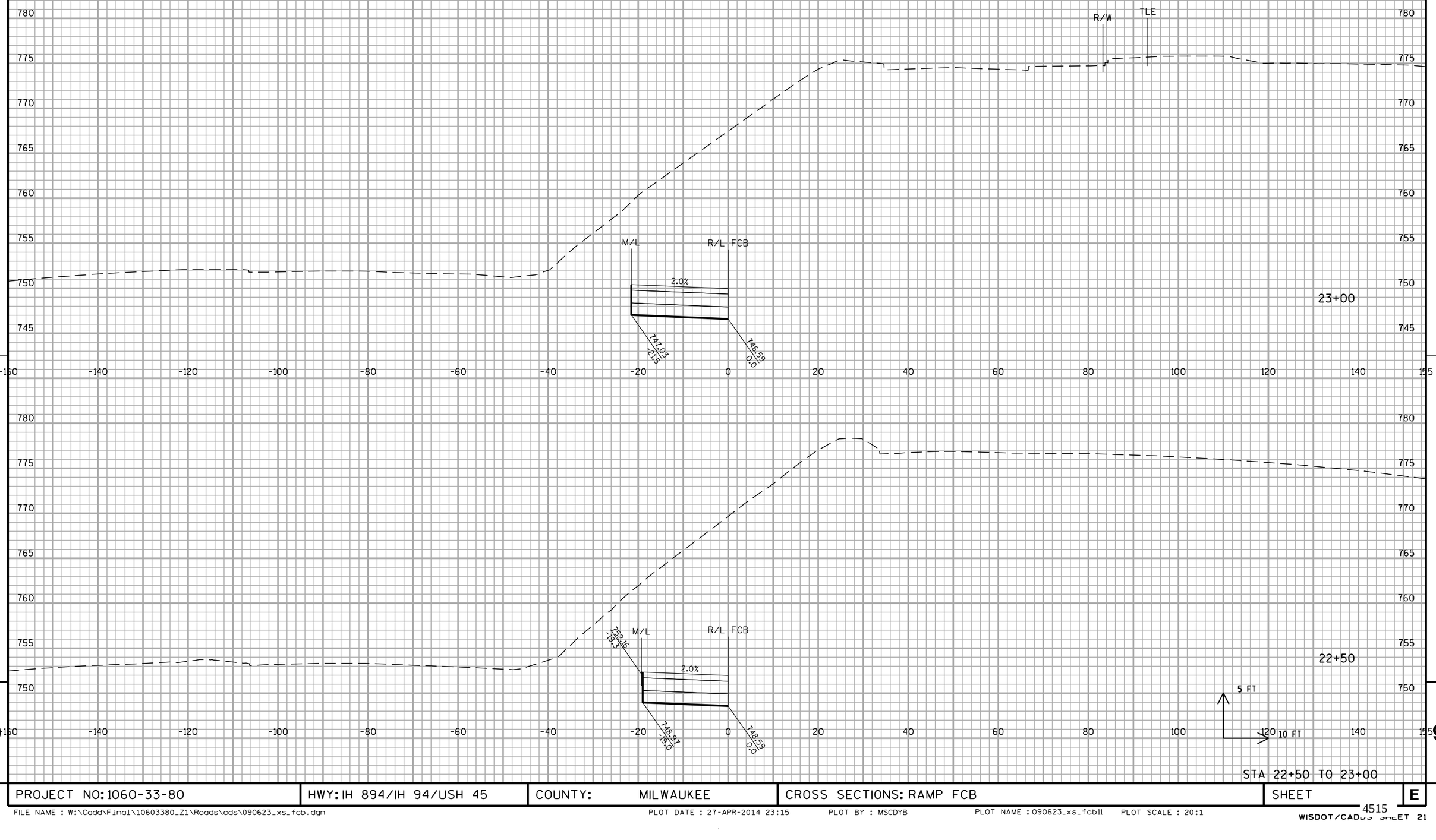


STA 21+50 TO 22+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb10 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 22+50 TO 23+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb11 PLOT SCALE : 20:1

ALL WORK STAGE 2

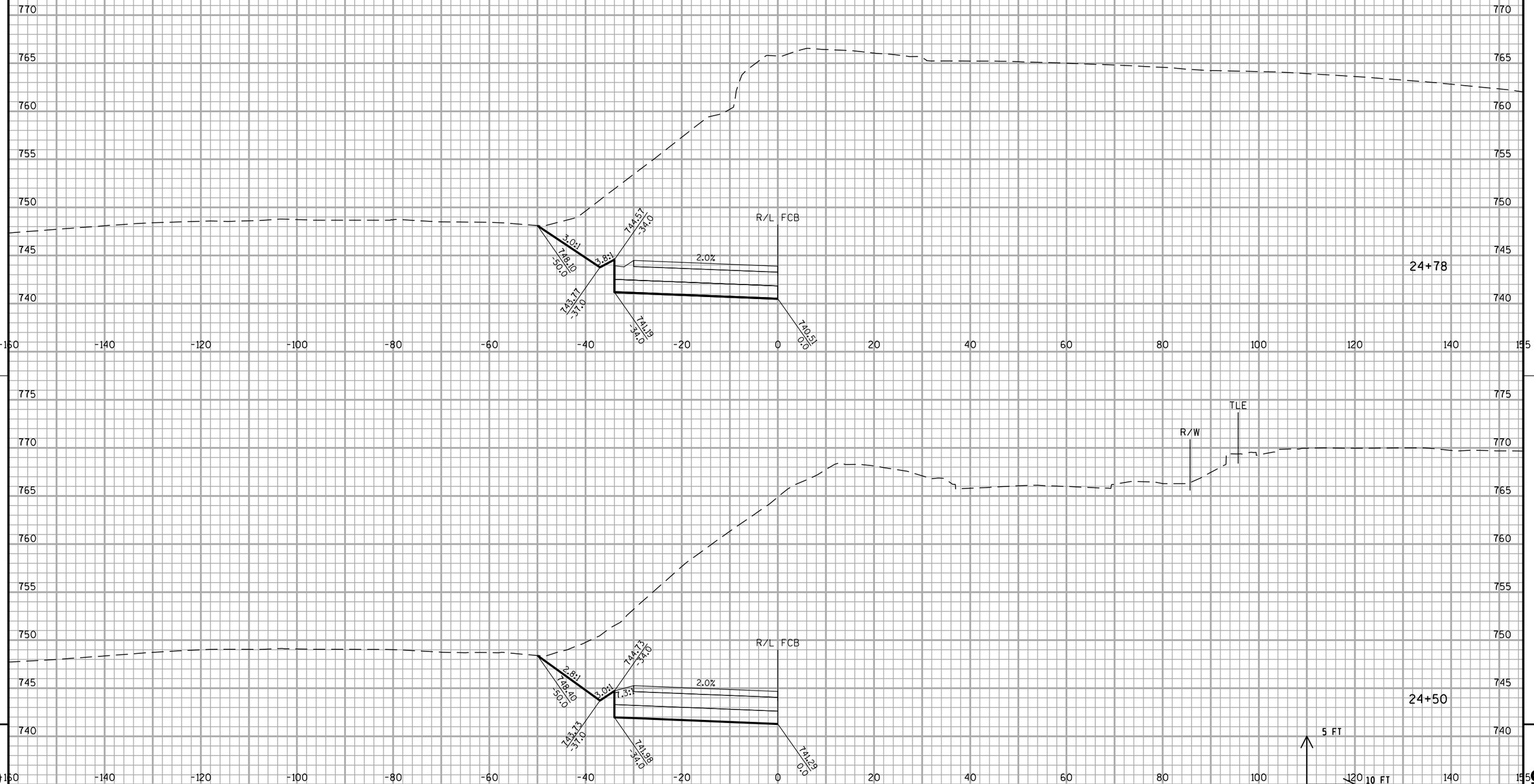


STA 23+50 TO 24+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb12 PLOT SCALE : 20:1

ALL WORK STAGE 2

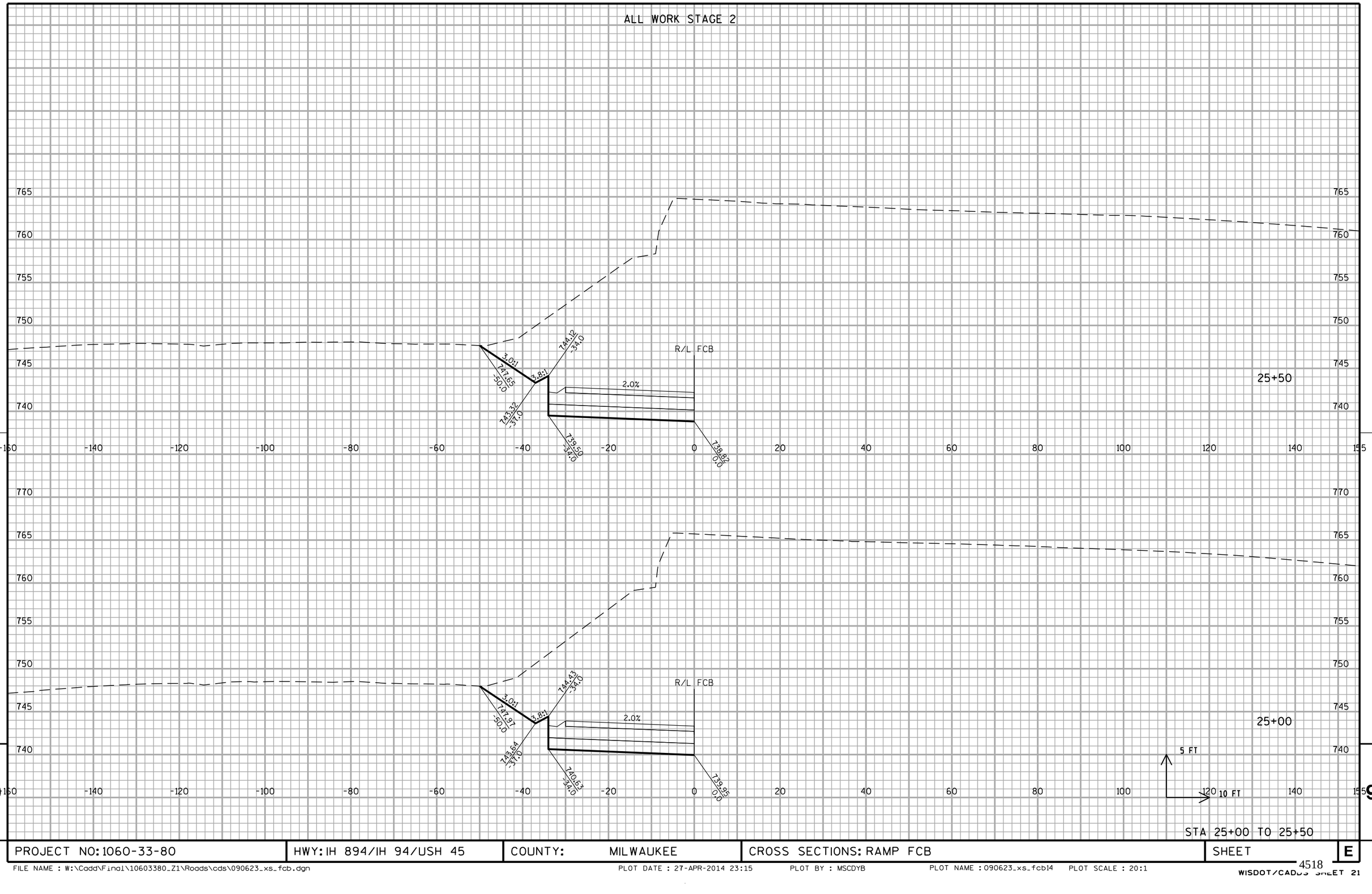


STA 24+50 TO 24+78

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb13 PLOT SCALE : 20:1

ALL WORK STAGE 2

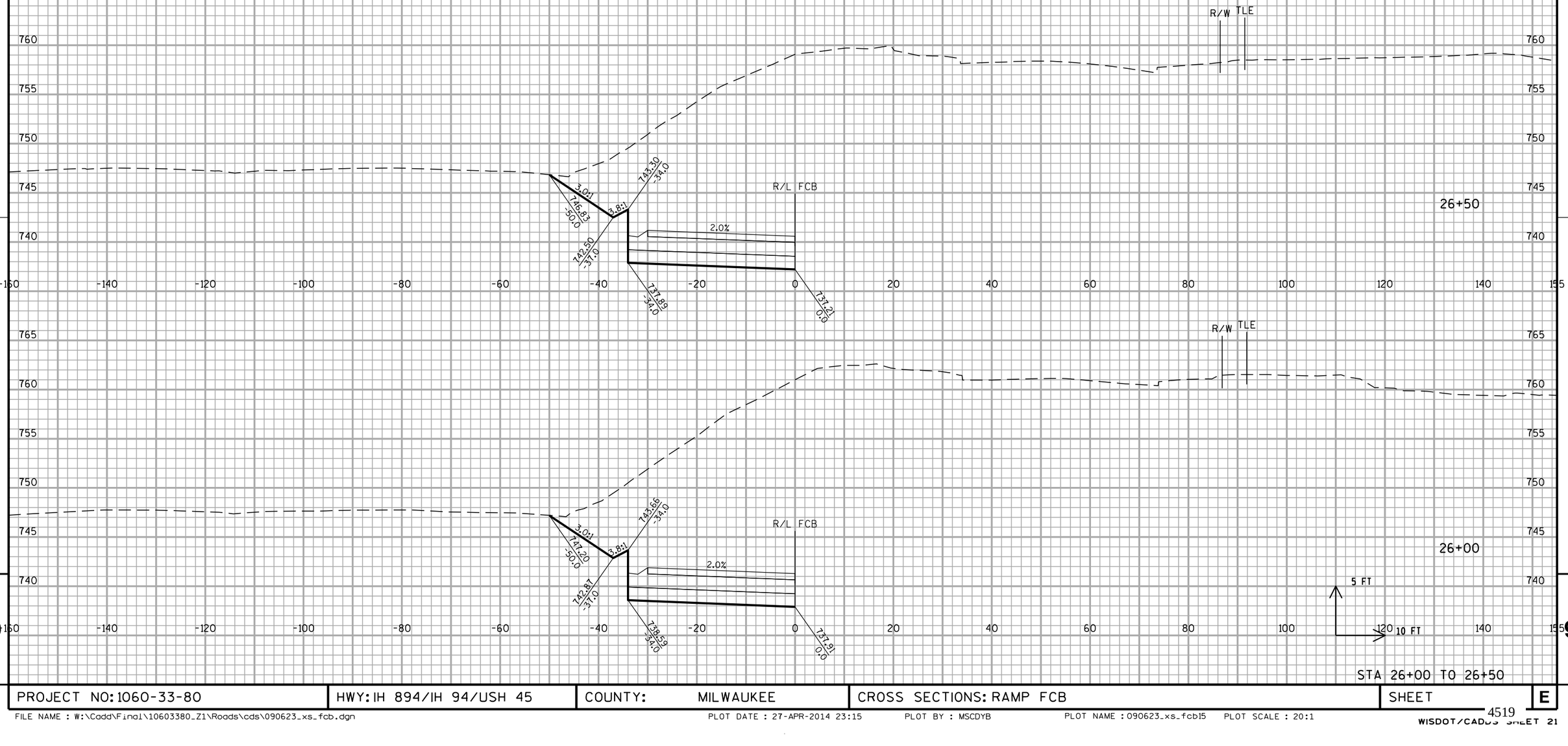


STA 25+00 TO 25+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb14 PLOT SCALE : 20:1

ALL WORK STAGE 2



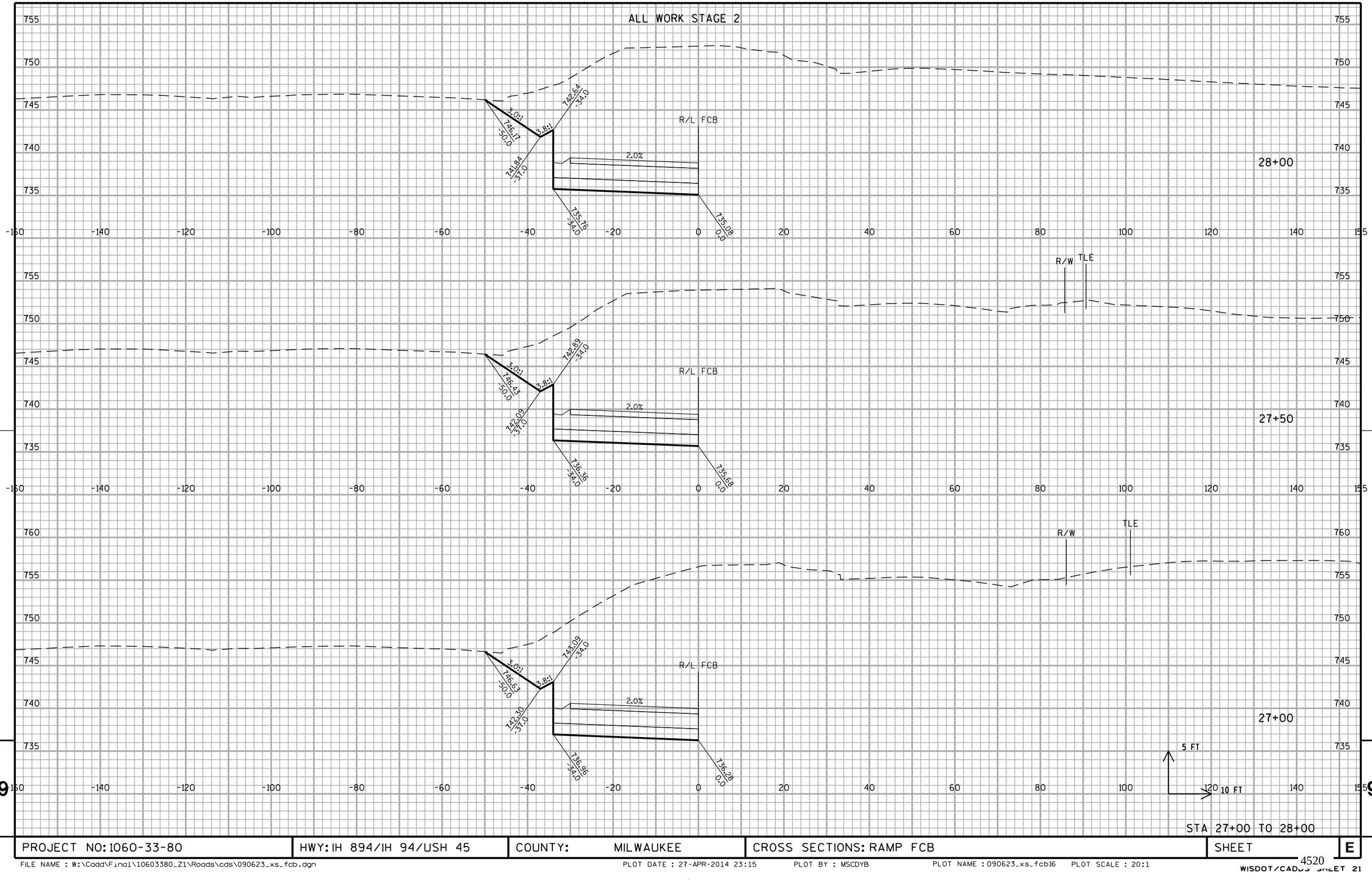
STA 26+00 TO 26+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb15 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

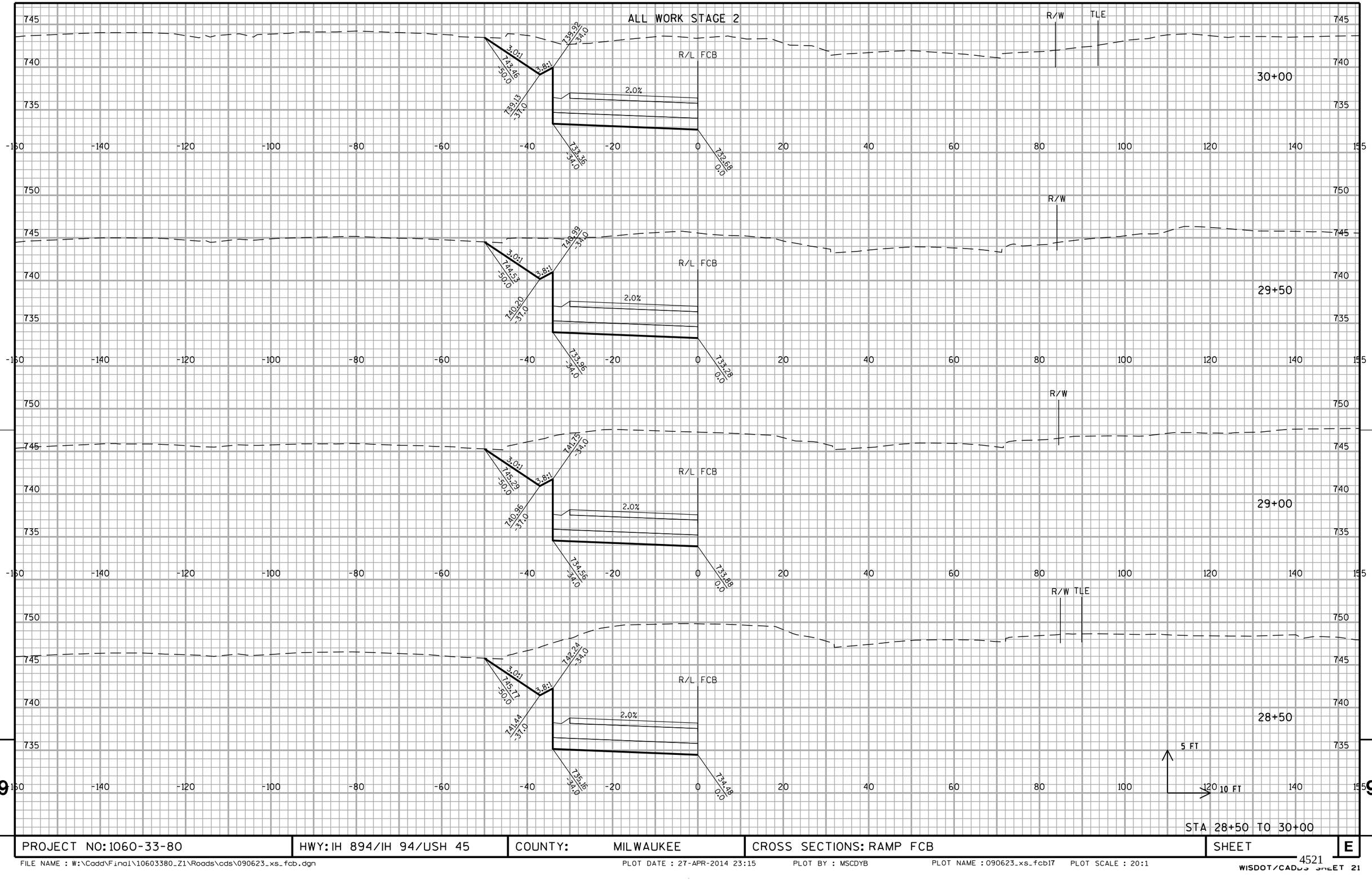
ALL WORK STAGE 2



STA 27+00 TO 28+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

ALL WORK STAGE 2



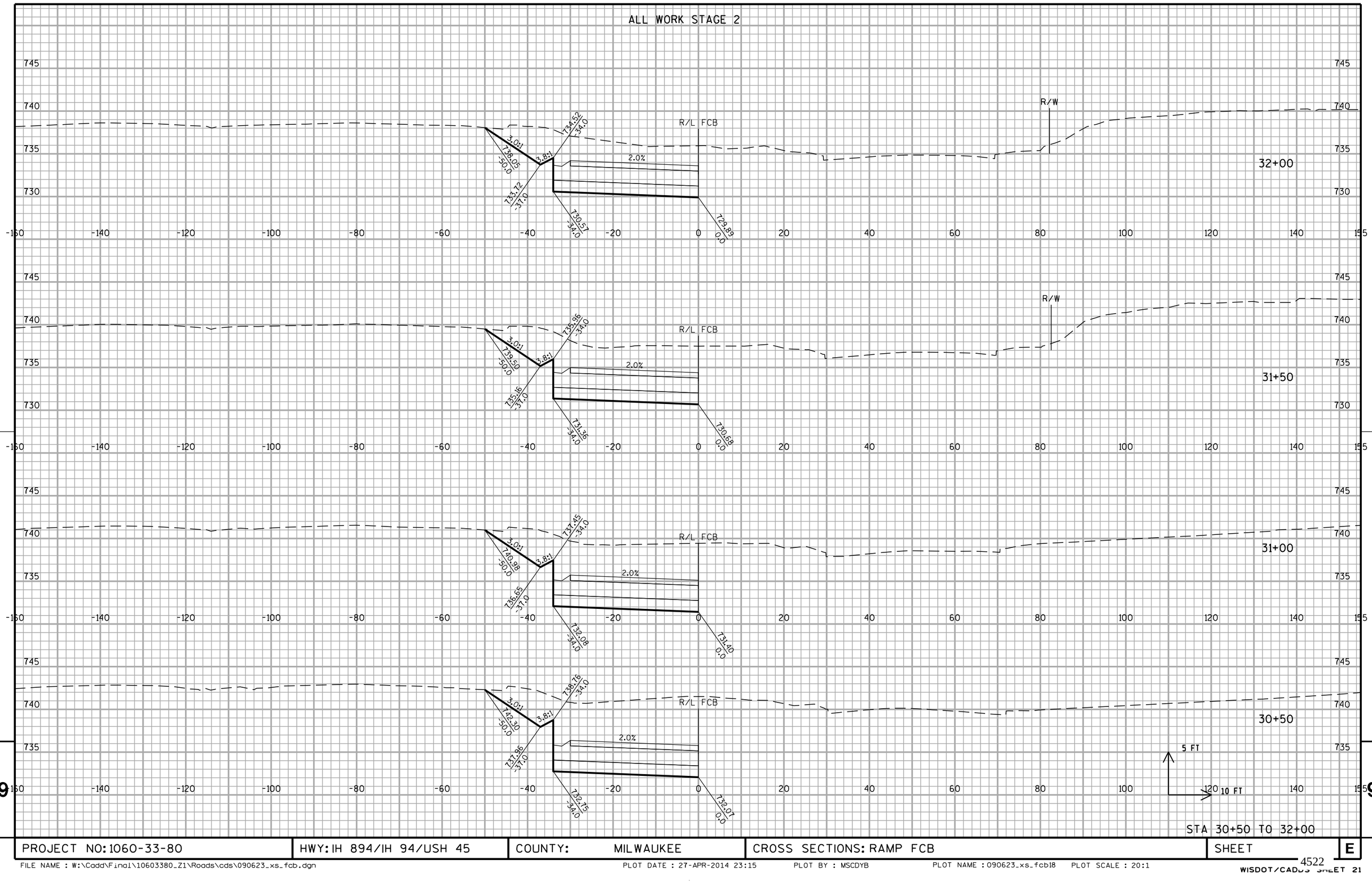
STA 28+50 TO 30+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb17 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

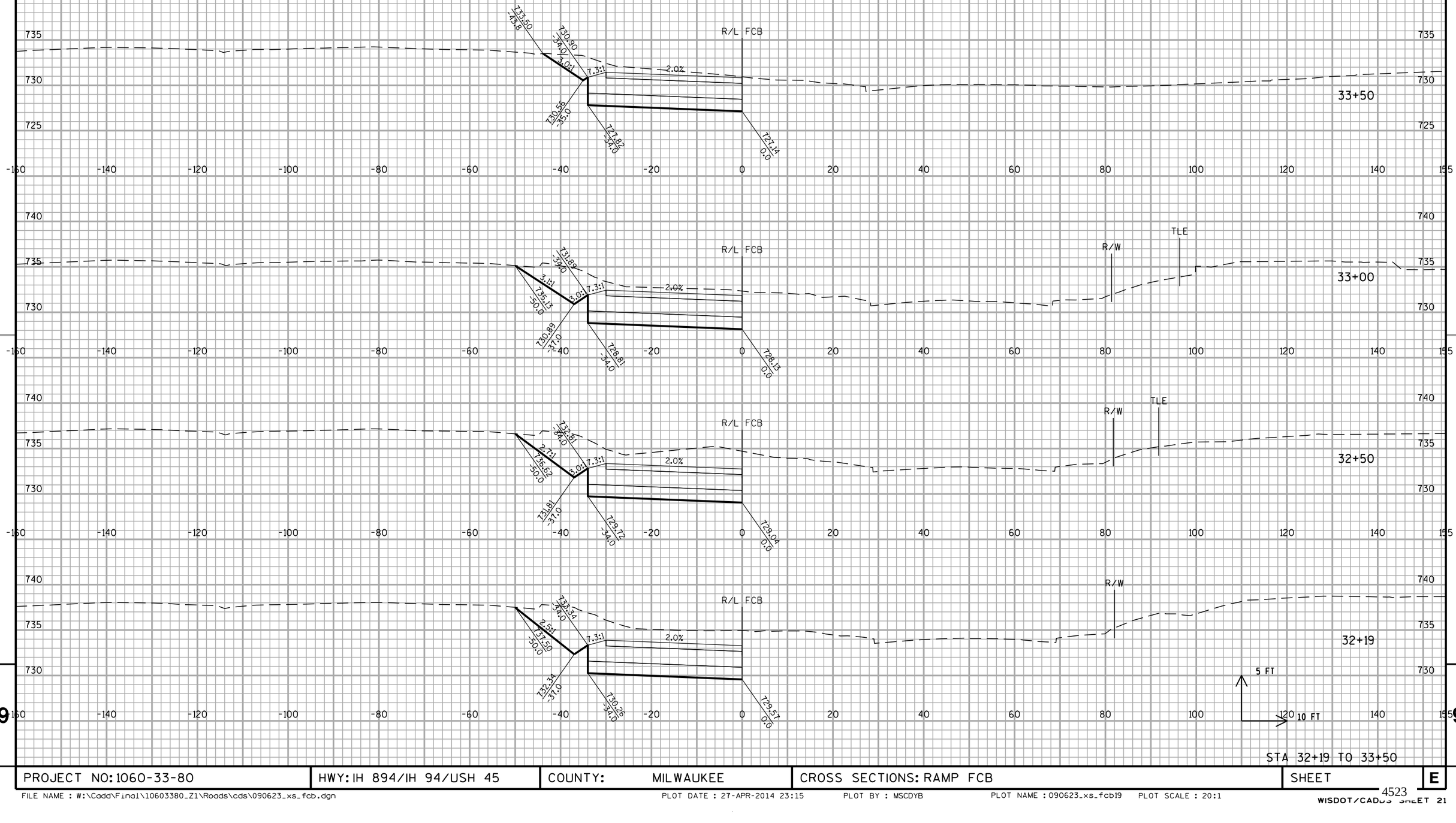


STA 30+50 TO 32+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb18 PLOT SCALE : 20:1

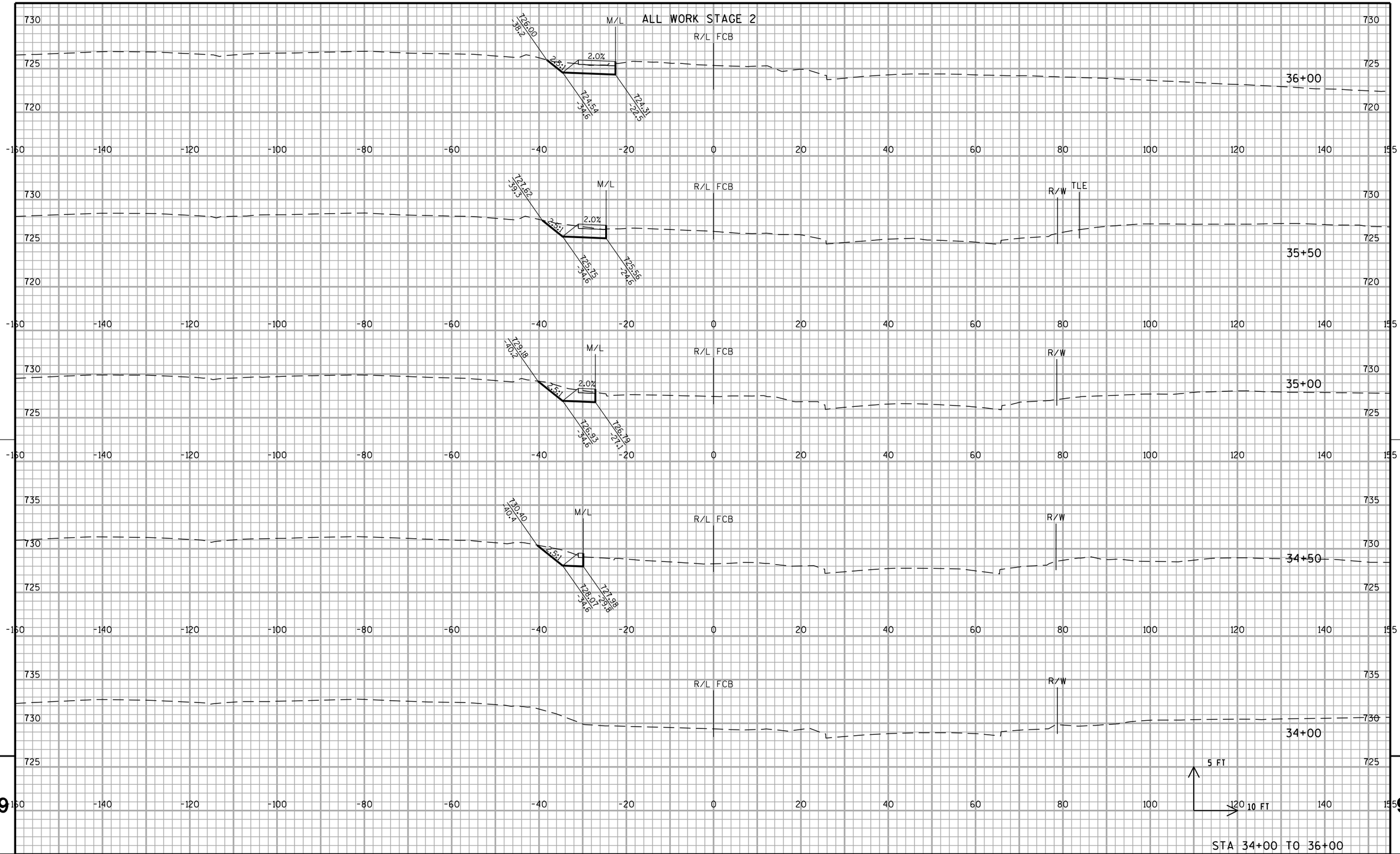
ALL WORK STAGE 2



STA 32+19 TO 33+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

ALL WORK STAGE 2

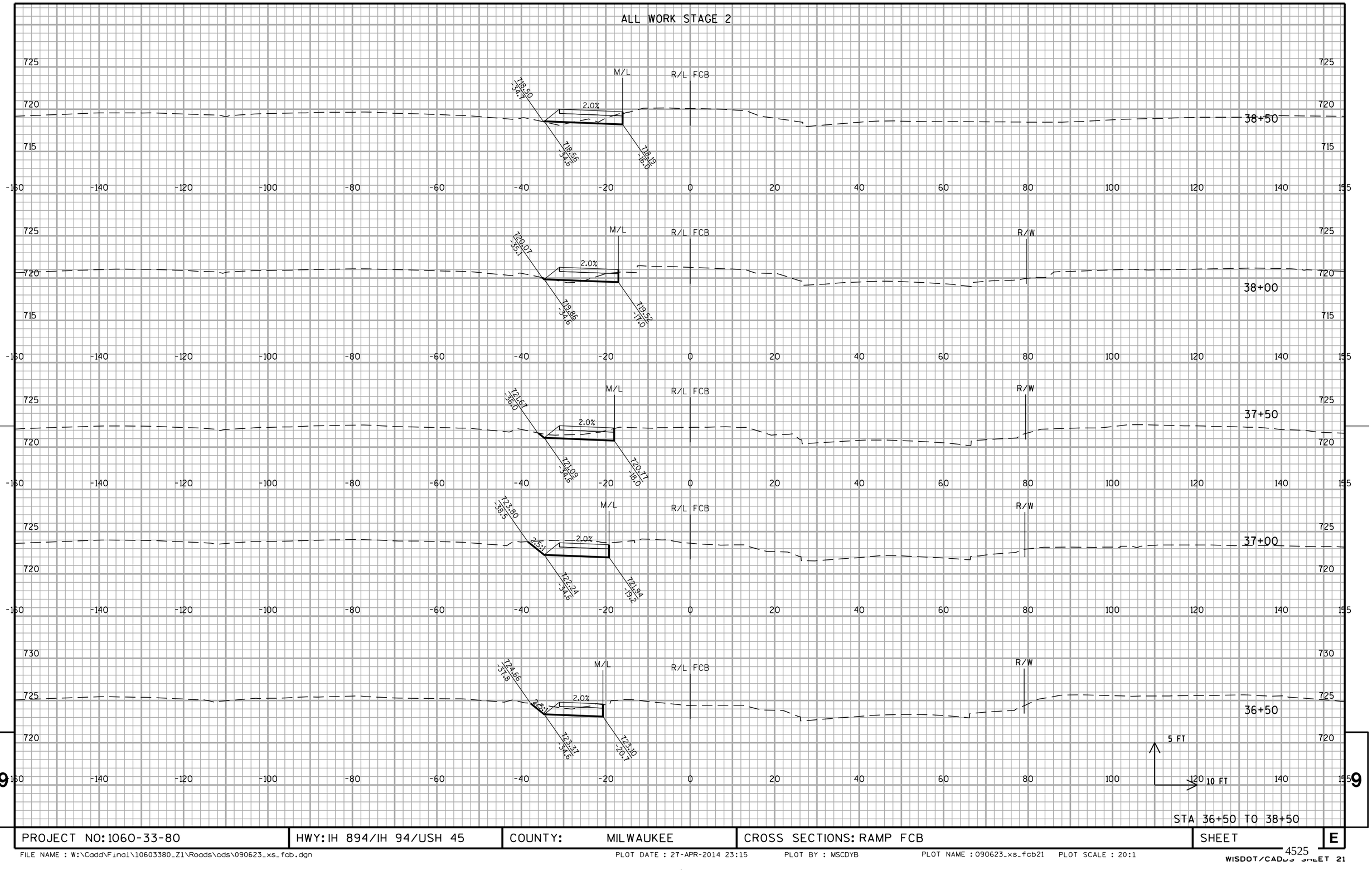


STA 34+00 TO 36+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

9 9

ALL WORK STAGE 2

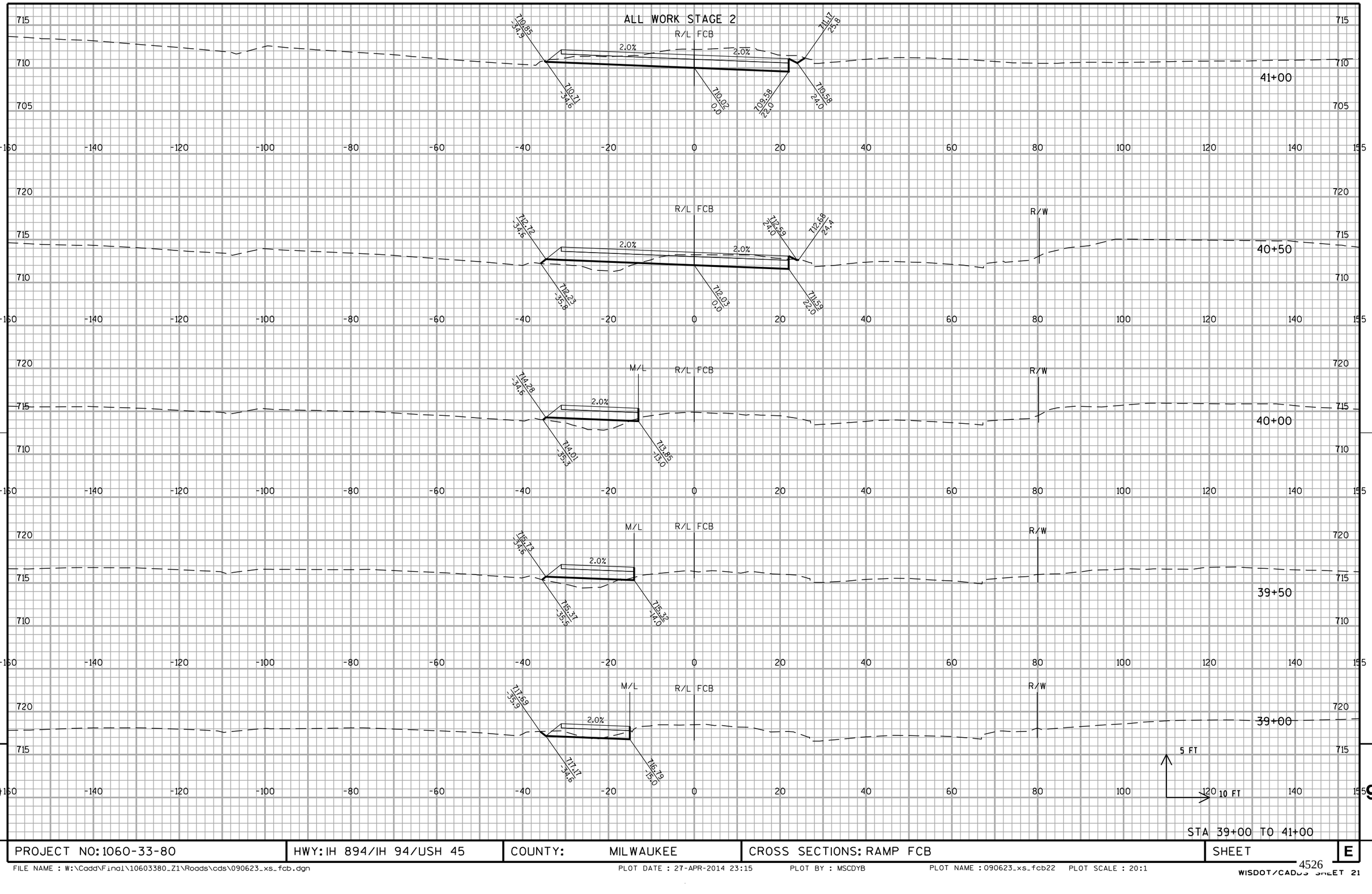


STA 36+50 TO 38+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb21 PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 39+00 TO 41+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb22 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



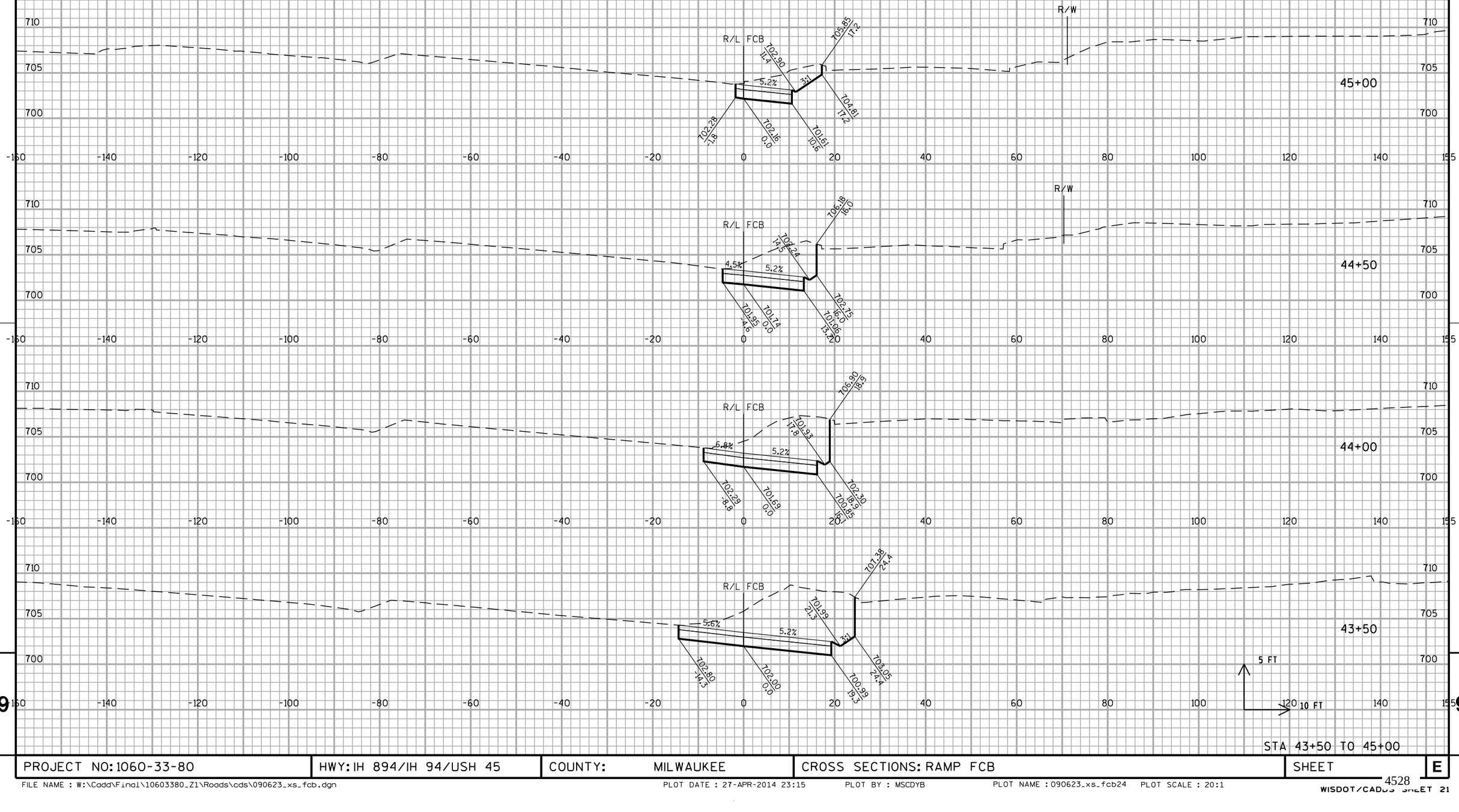
STA 41+50 TO 43+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb23 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

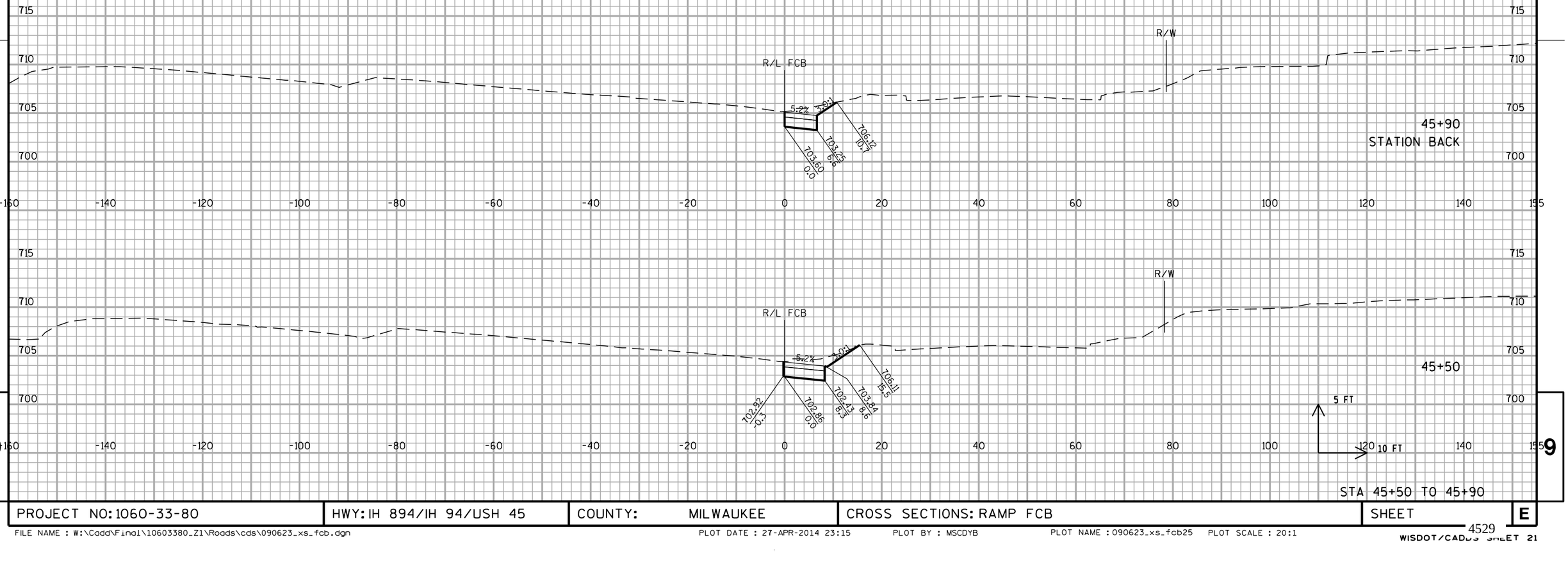


STA 43+50 TO 45+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

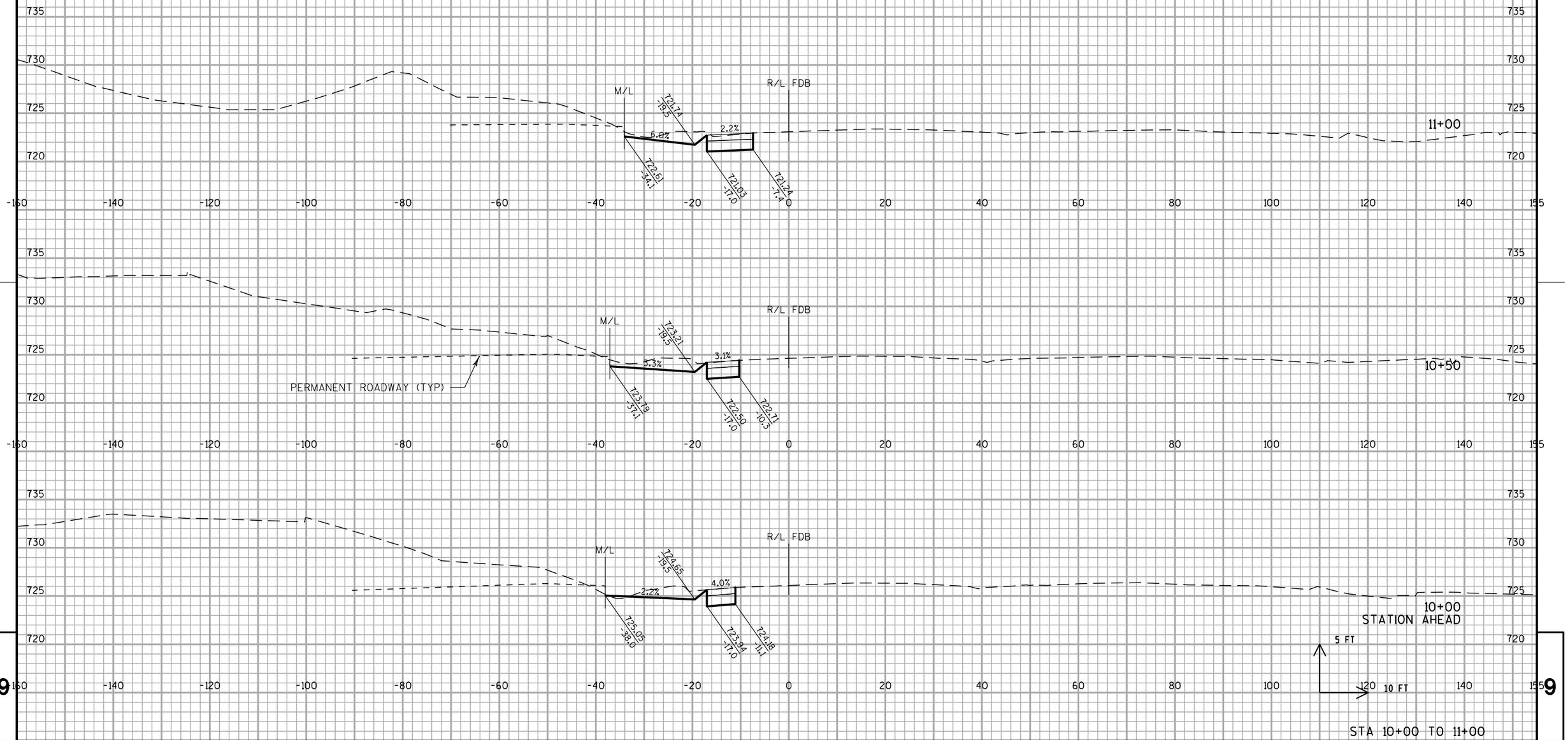
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090623_xs_fcb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090623_xs_fcb24 PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCB	SHEET	E

ALL WORK STAGE 2



STA 10+00 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDB	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090624_xs_fdb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090624_xs_fdb PLOT SCALE : 20:1

ALL WORK STAGE 2

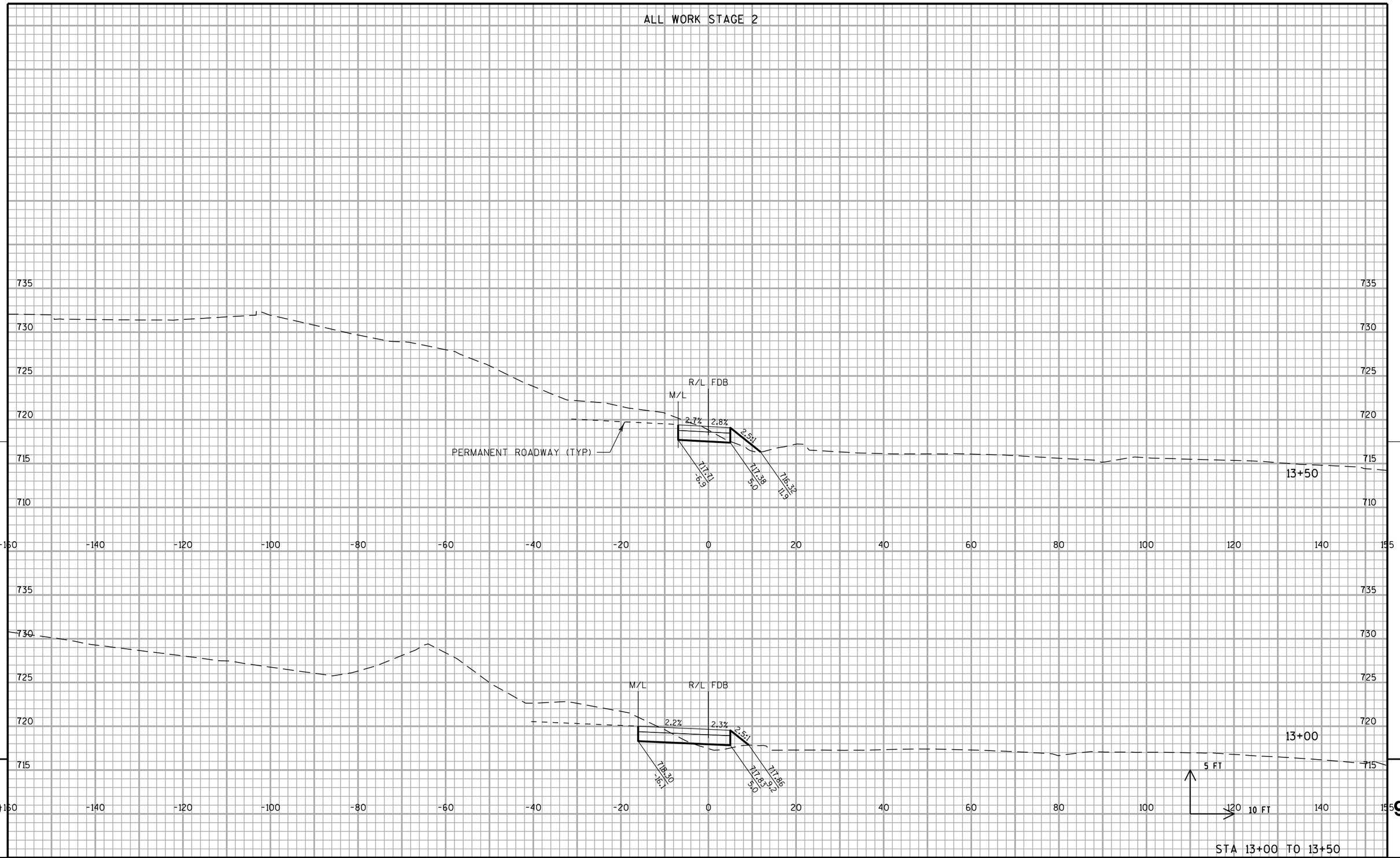
STA 11+50 TO 12+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090624_xs_fdb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090624_xs_fdb1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



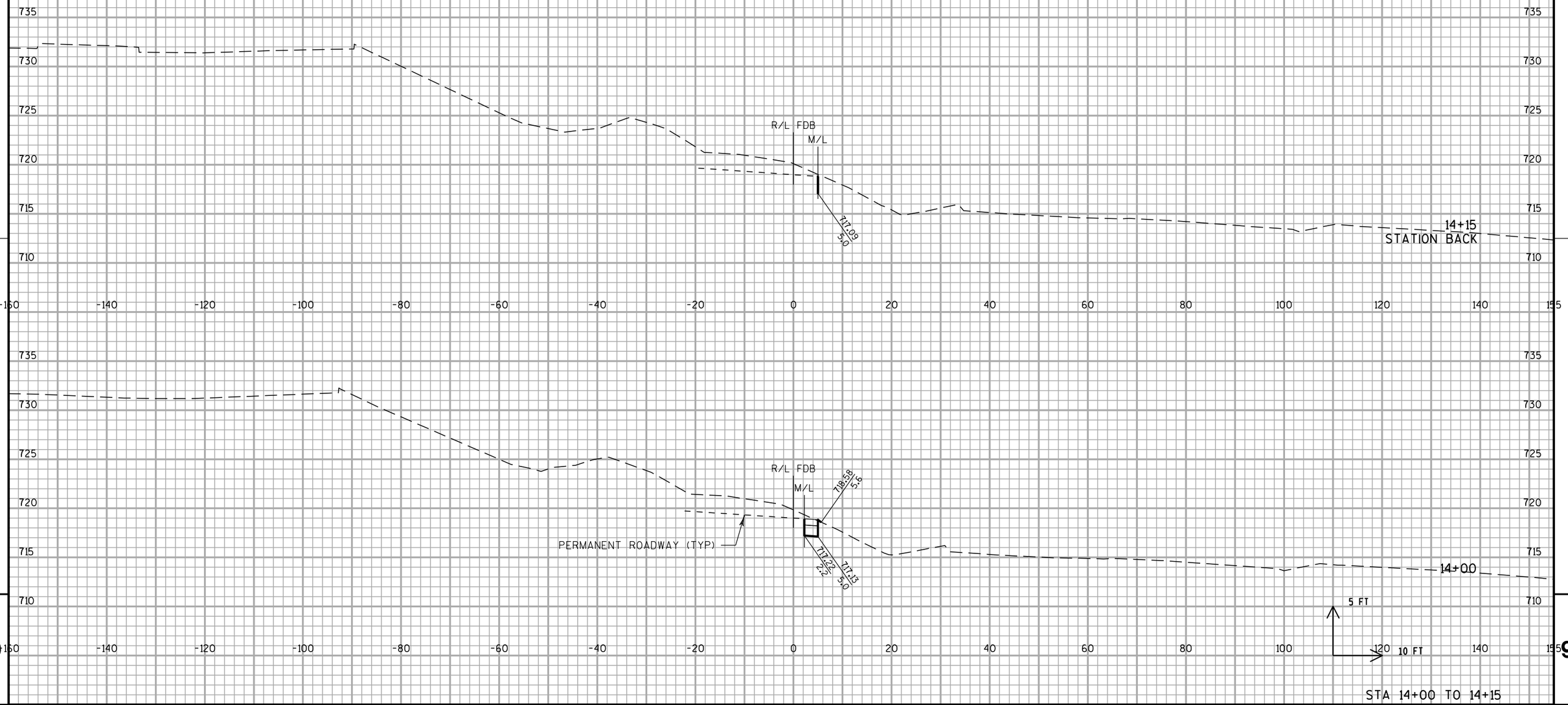
STA 13+00 TO 13+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090624_xs_fdb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090624_xs_fdb2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

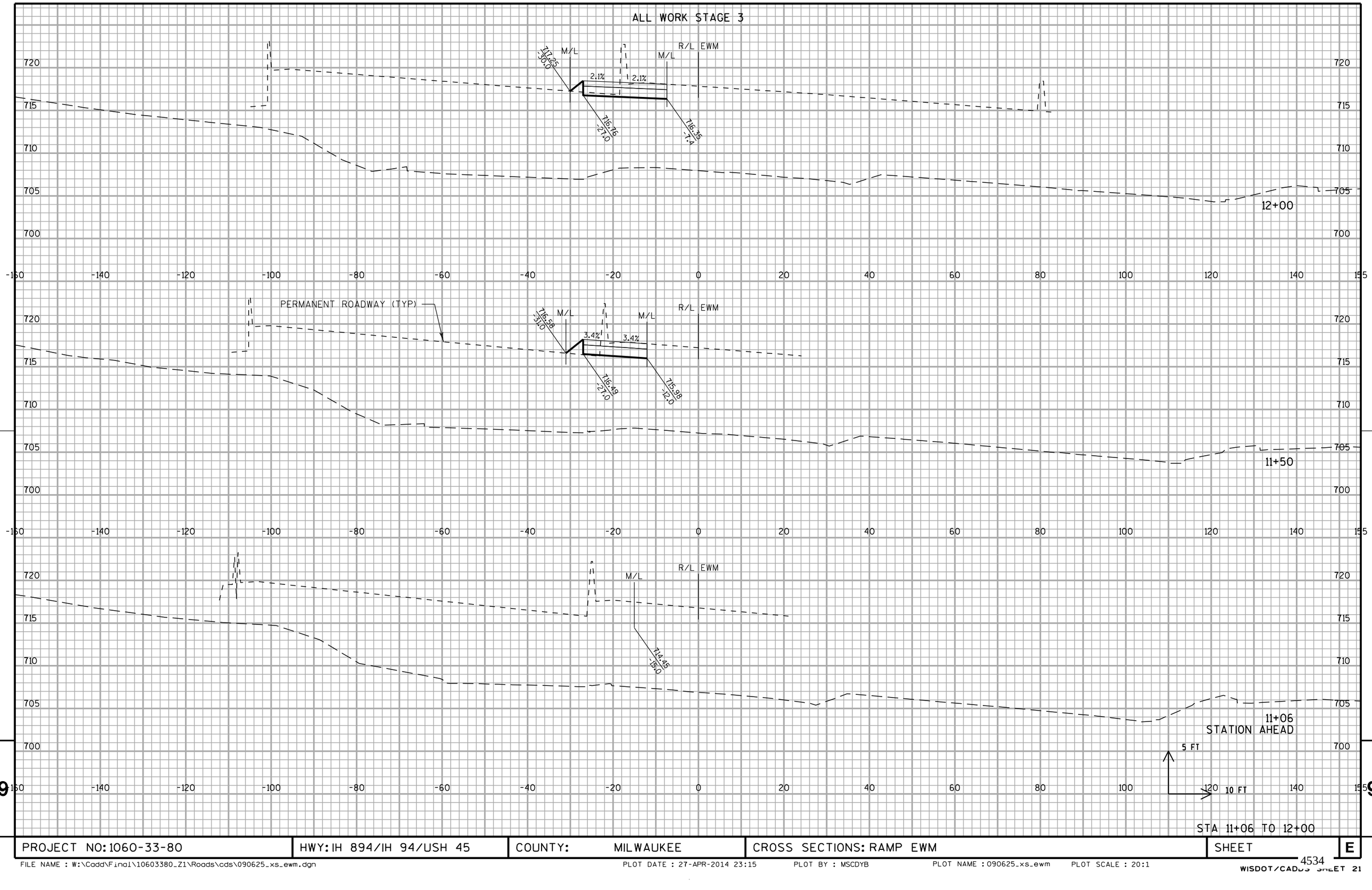


STA 14+00 TO 14+15

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDB	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090624_xs_fdb.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090624_xs_fdb3 PLOT SCALE : 20:1

ALL WORK STAGE 3

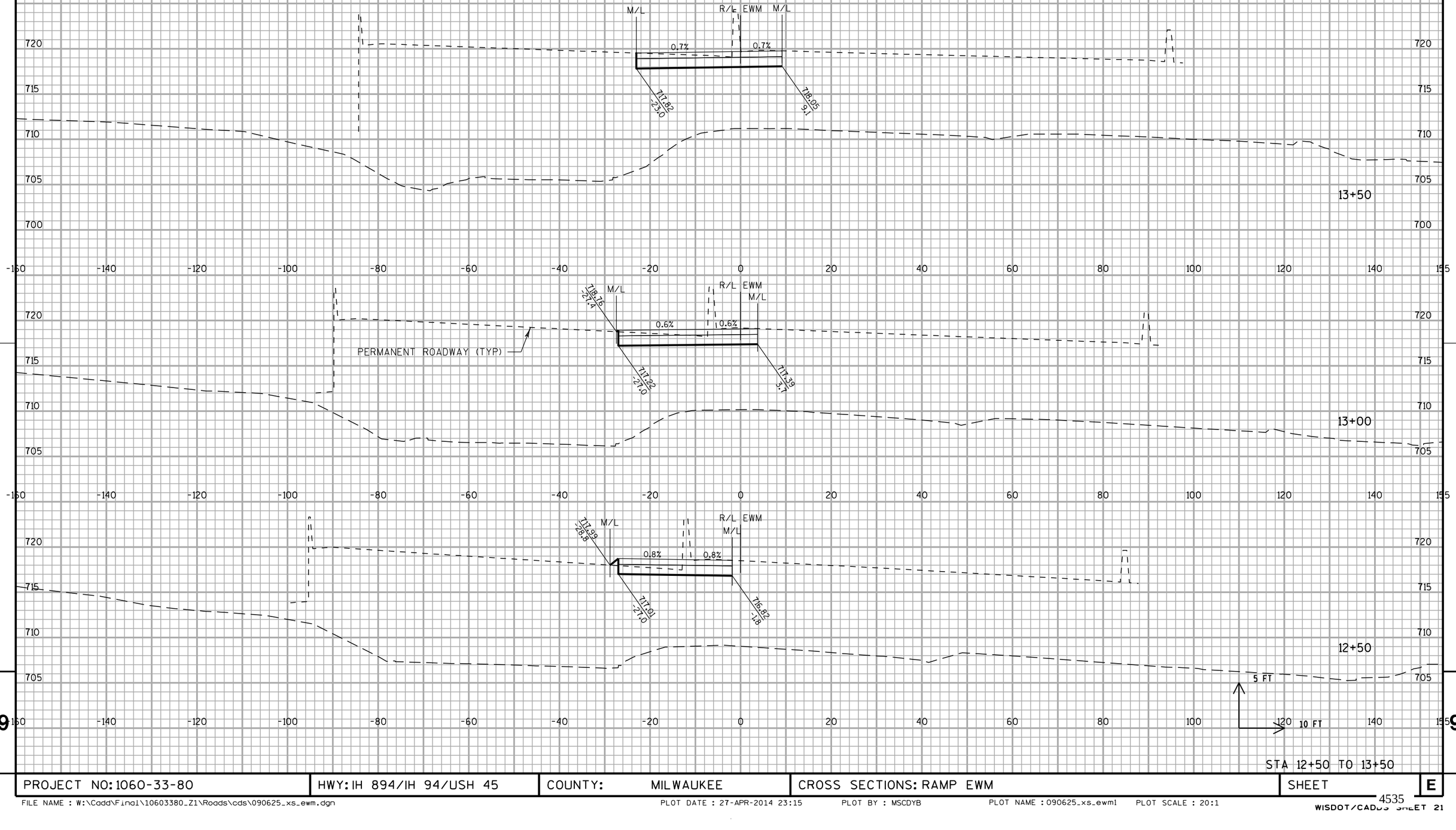


STA 11+06 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWM	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090625_xs_ewm.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090625_xs_ewm PLOT SCALE : 20:1

ALL WORK STAGE 3



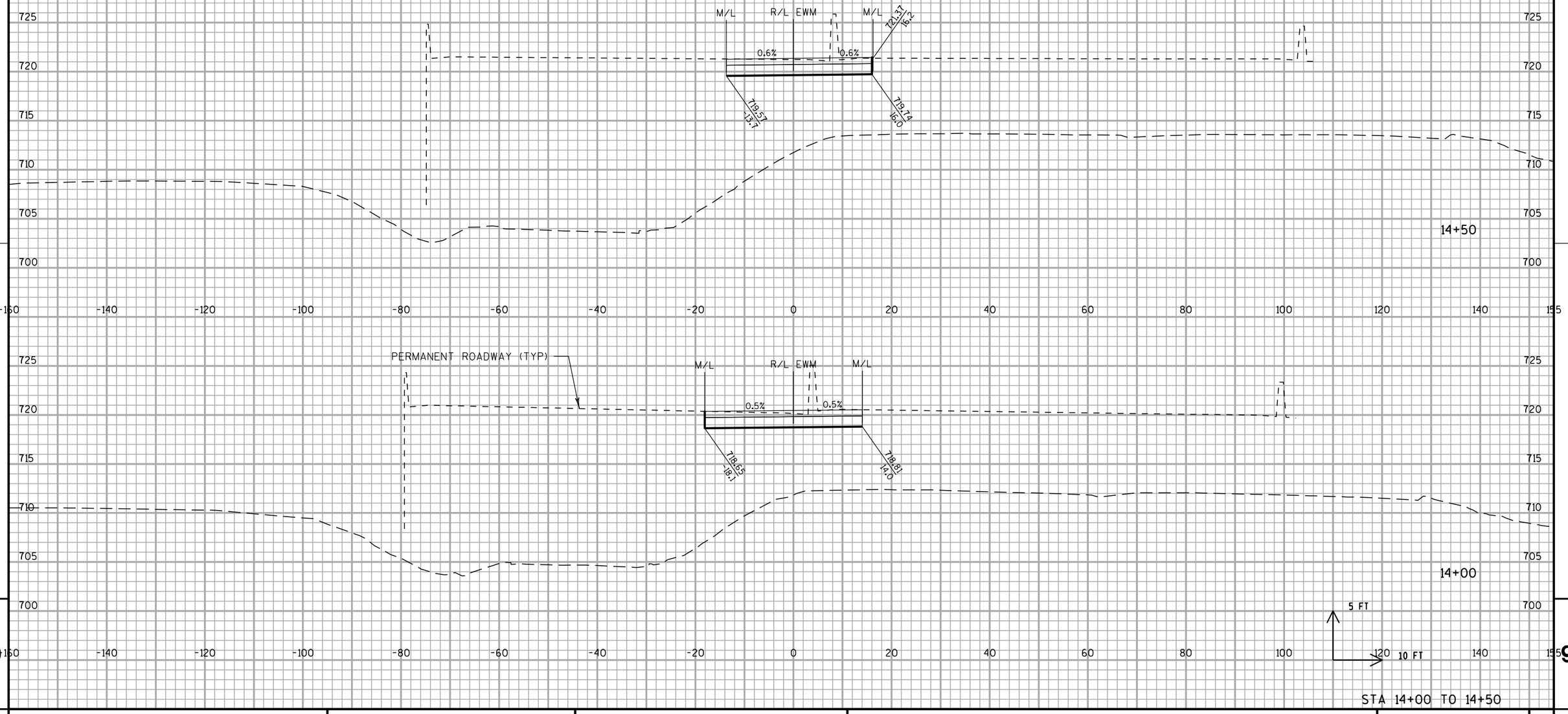
STA 12+50 TO 13+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWM	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090625_xs_ewm.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090625_xs_ewm1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

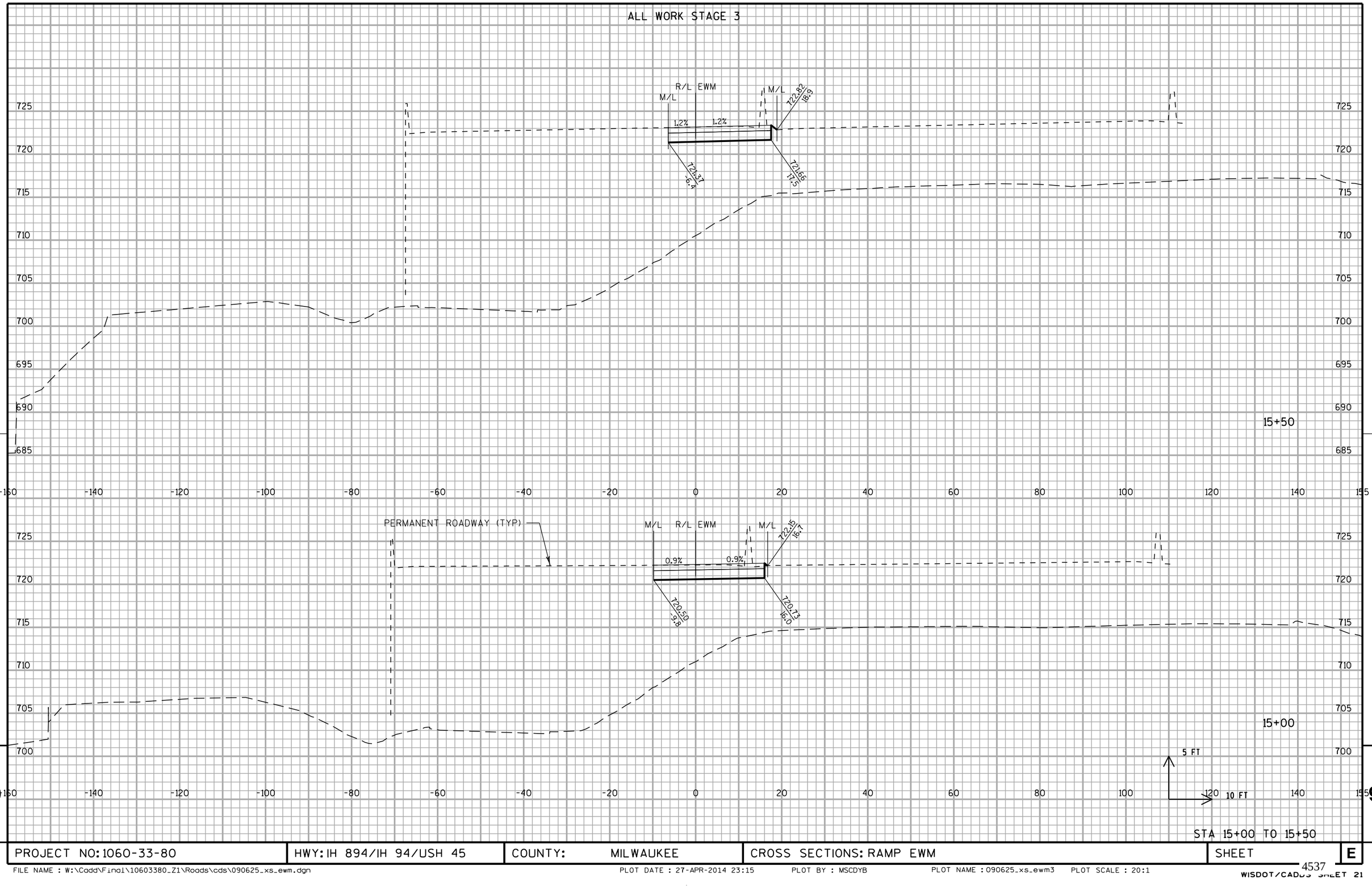


STA 14+00 TO 14+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWM	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090625_xs_ewm.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090625_xs_ewm2 PLOT SCALE : 20:1

ALL WORK STAGE 3



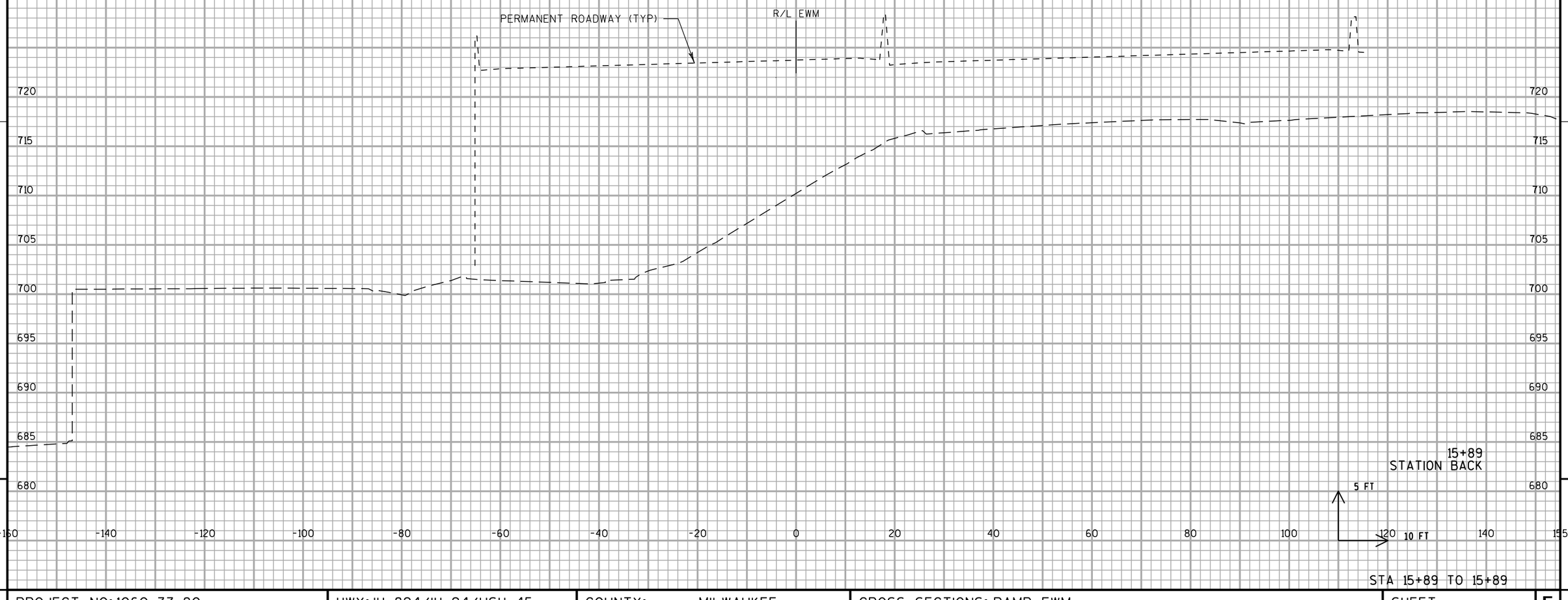
STA 15+00 TO 15+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWM	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090625_xs_ewm.dgn PLOT DATE : 27-APR-2014 23:15 PLOT BY : MSCDYB PLOT NAME : 090625_xs_ewm3 PLOT SCALE : 20:1

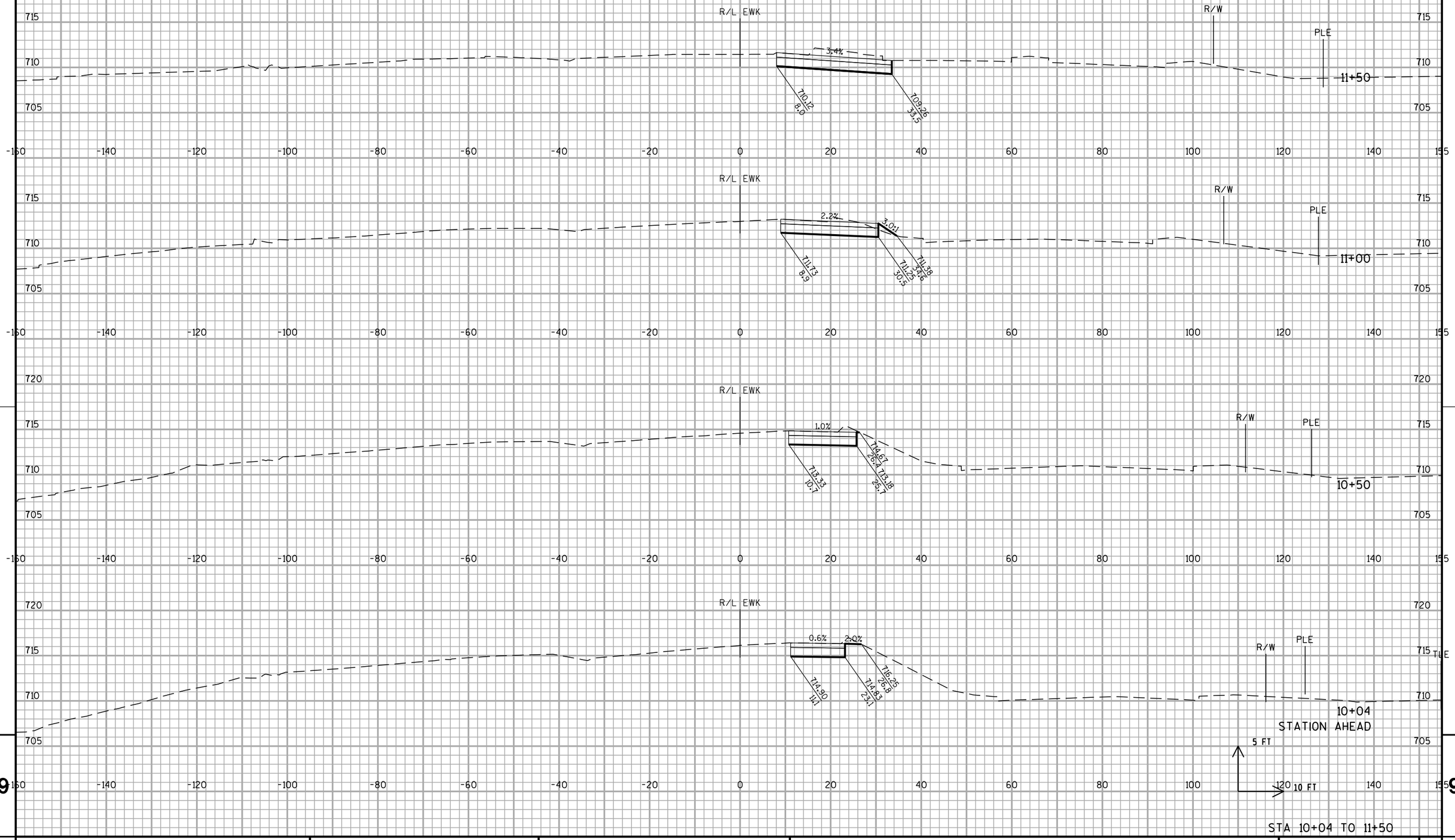
WISDOT/CADDS SHEET 21

ALL WORK STAGE 3



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWM	SHEET	E

ALL WORK STAGE 1

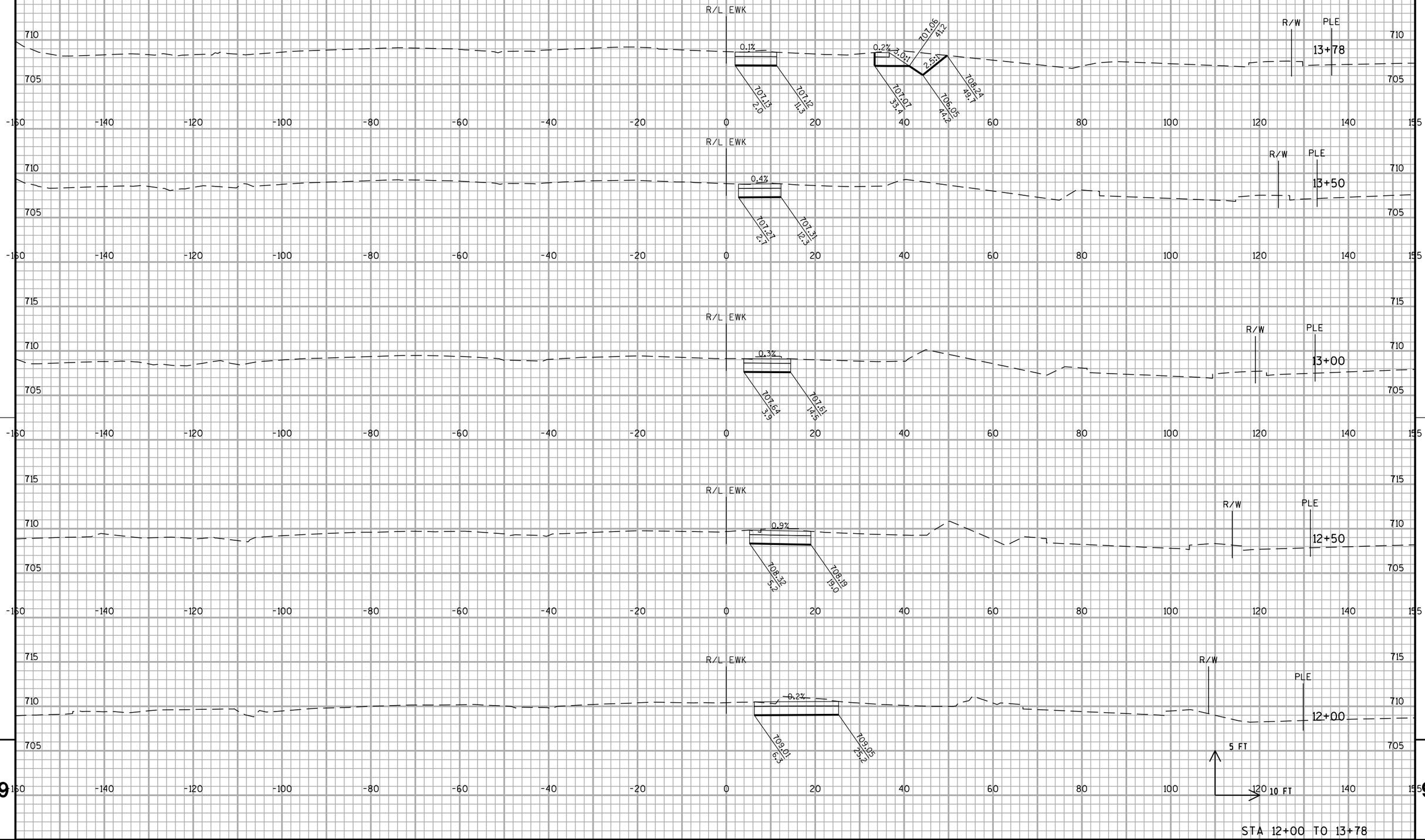


STA 10+04 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk PLOT SCALE : 20:1

ALL WORK STAGE 1



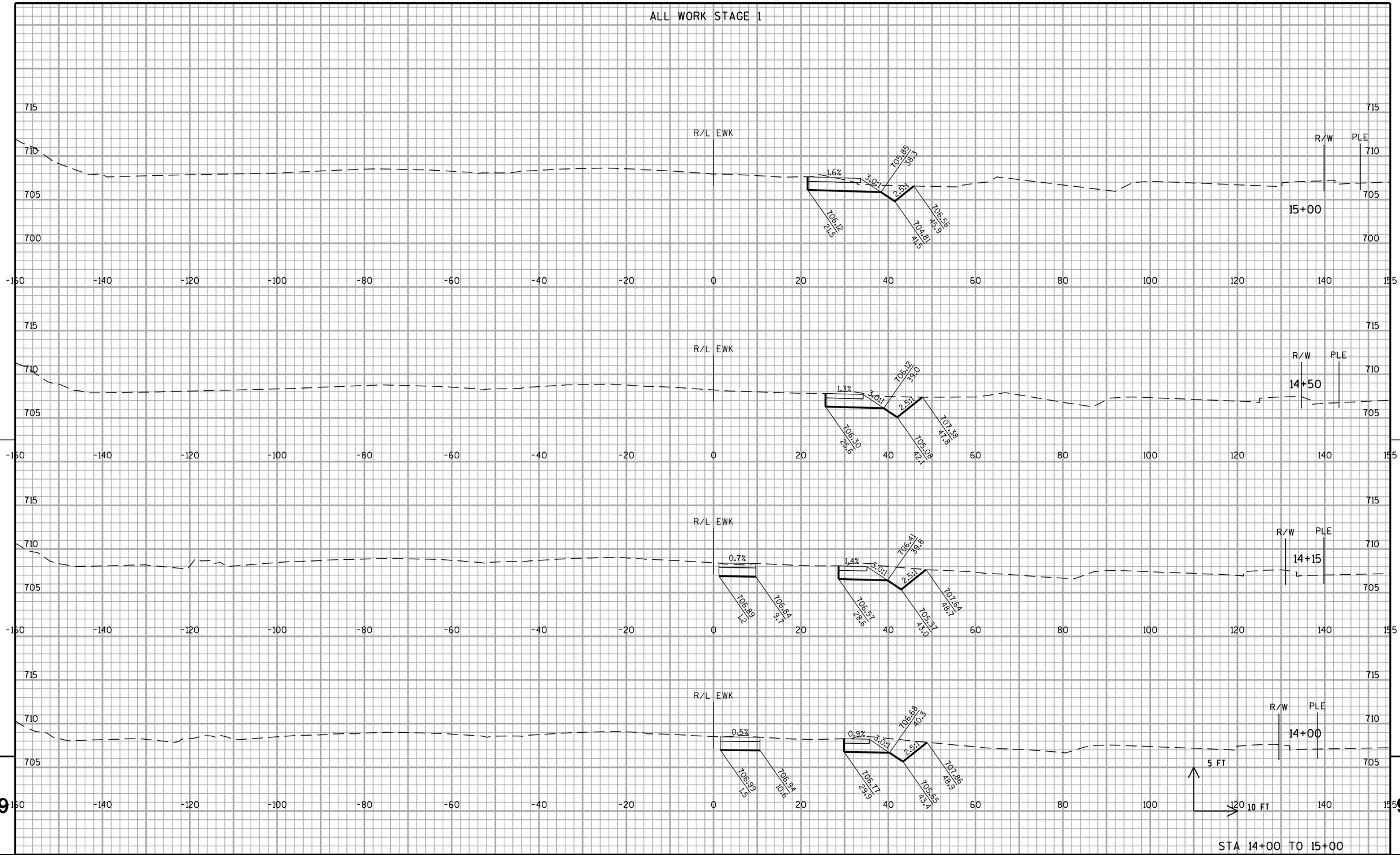
STA 12+00 TO 13+78

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



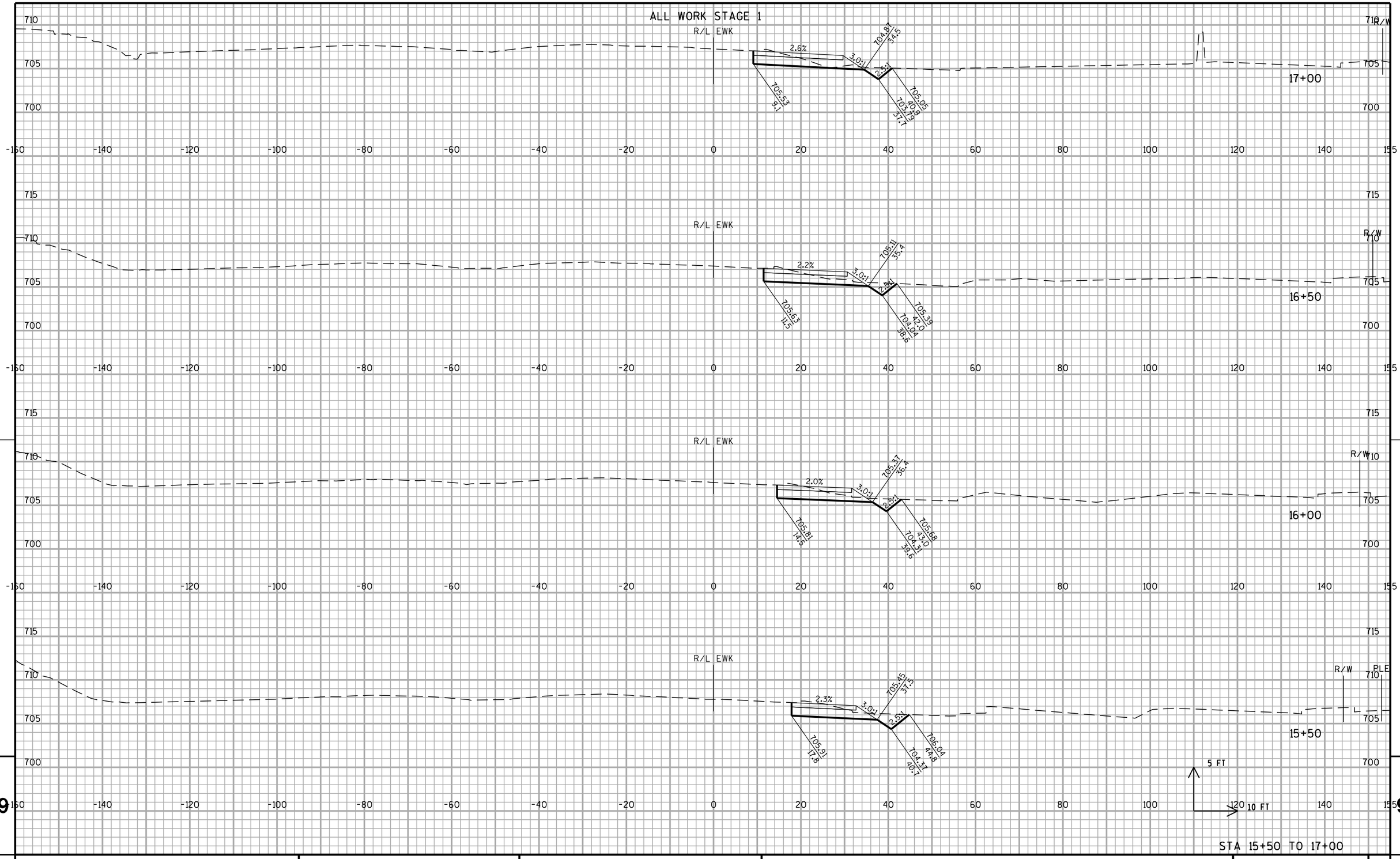
STA 14+00 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

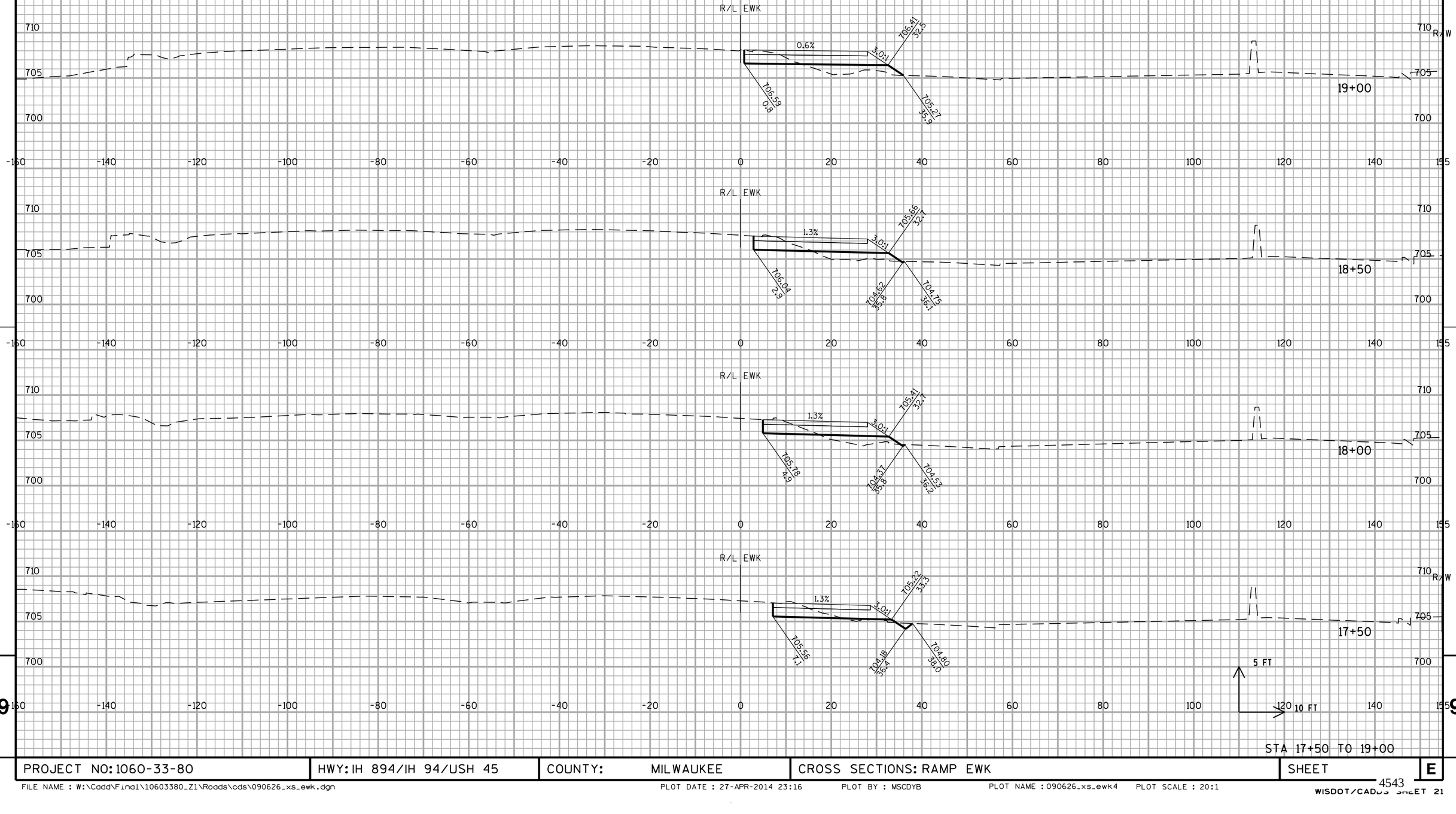


STA 15+50 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk3 PLOT SCALE : 20:1

ALL WORK STAGE 1



STA 17+50 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

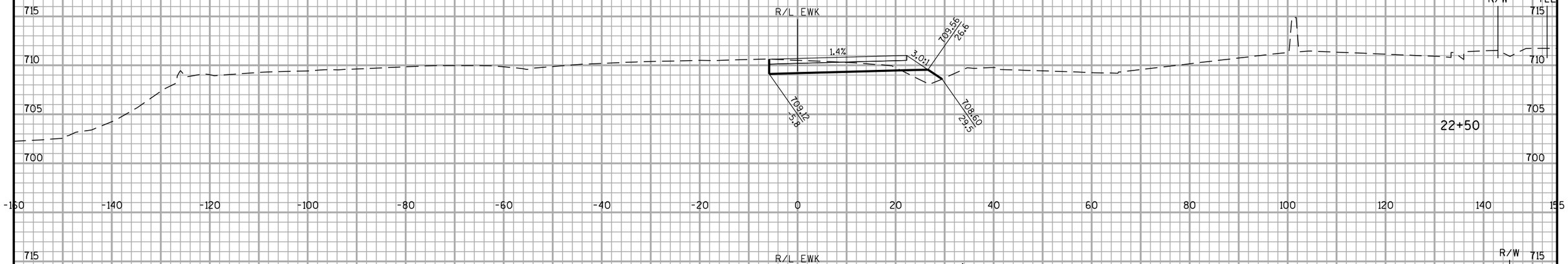
ALL WORK STAGE 1

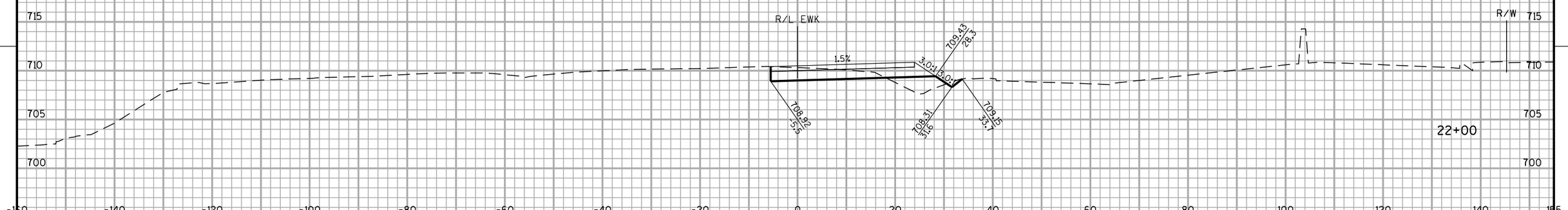
STA 19+50 TO 21+00

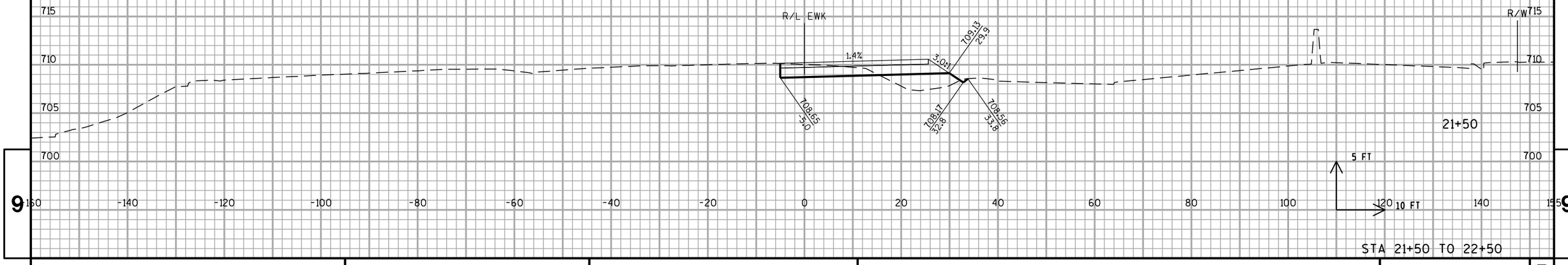
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk5 PLOT SCALE : 20:1

ALL WORK STAGE 1







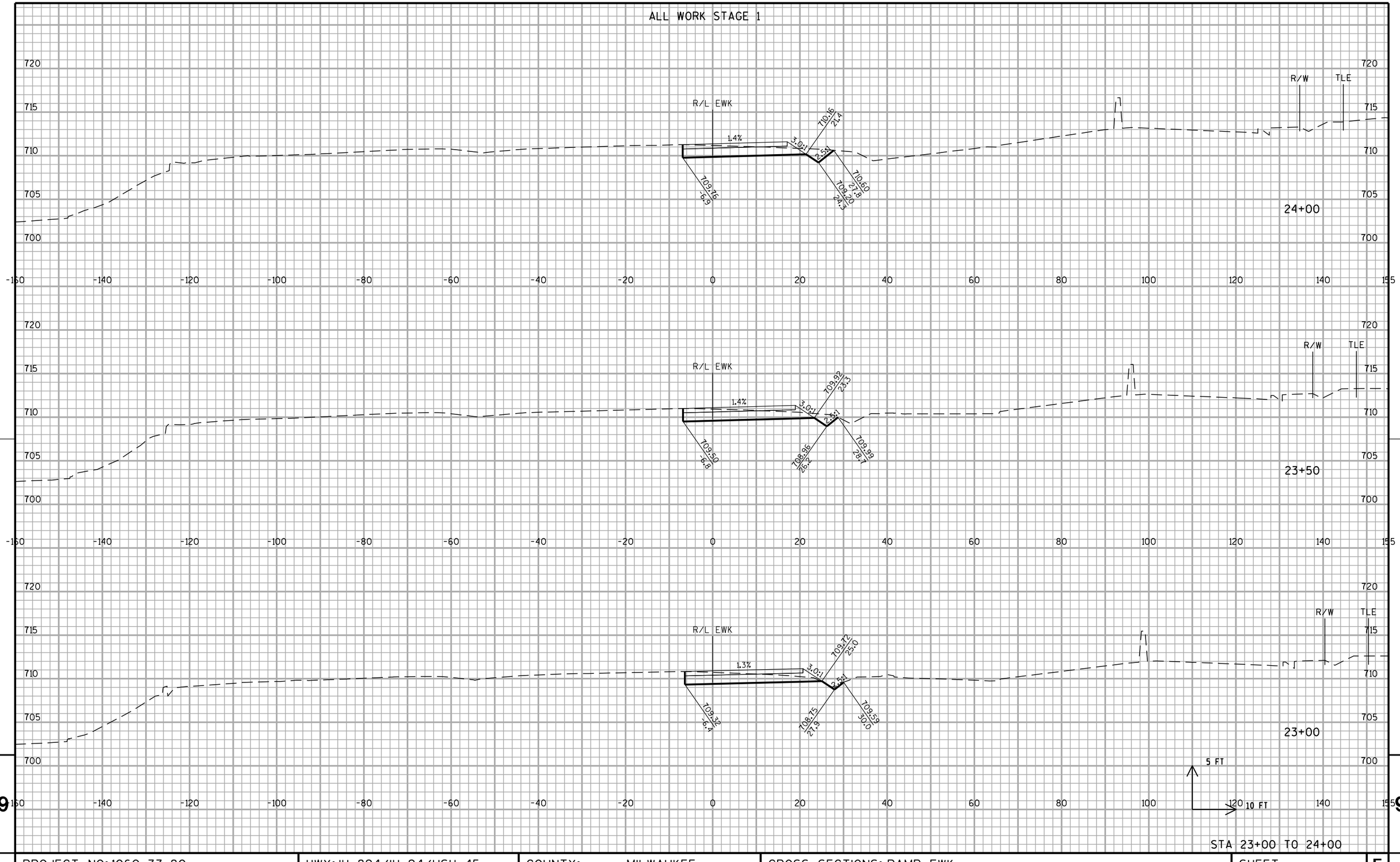
STA 21+50 TO 22+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

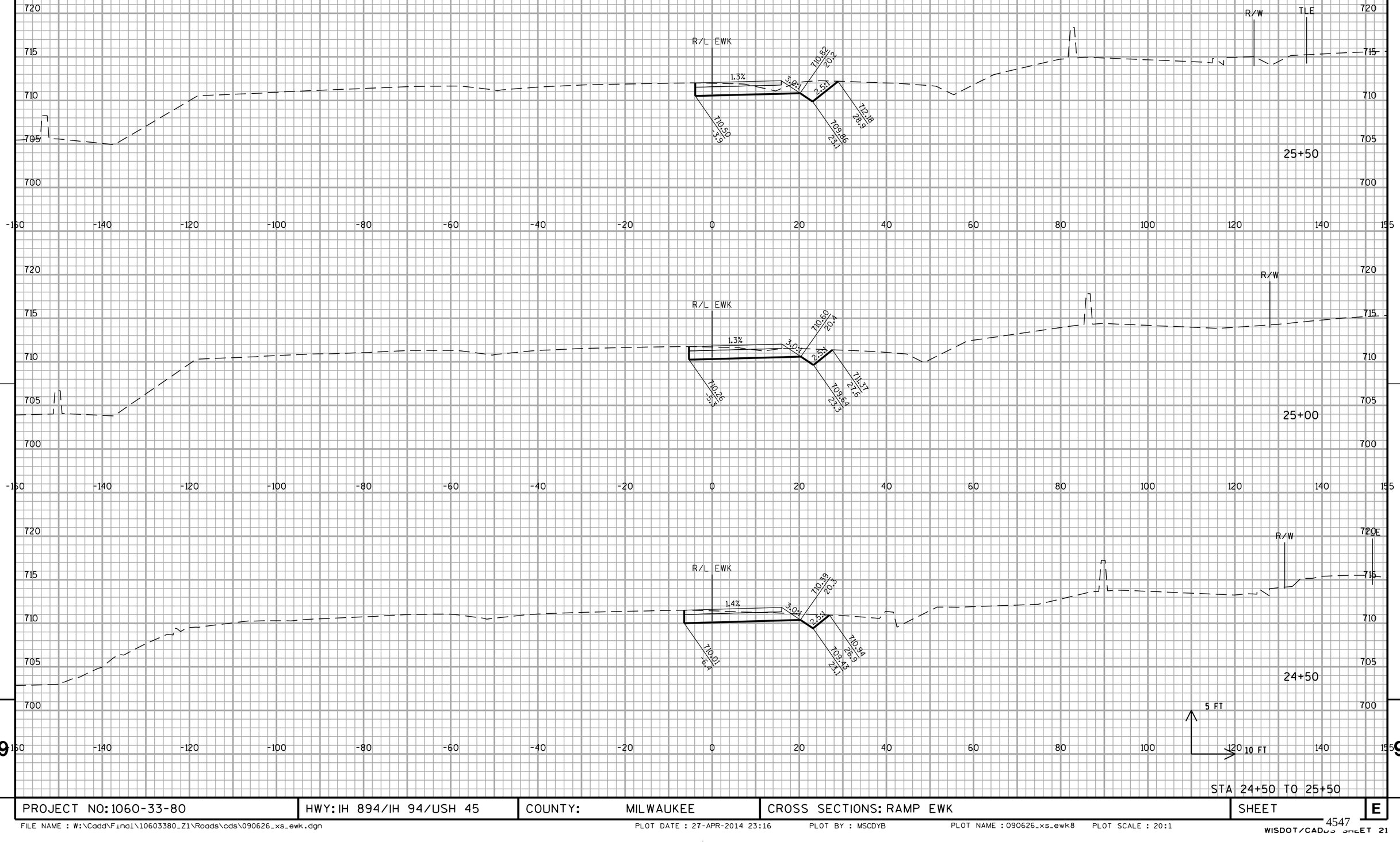
ALL WORK STAGE 1



STA 23+00 TO 24+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

ALL WORK STAGE 1



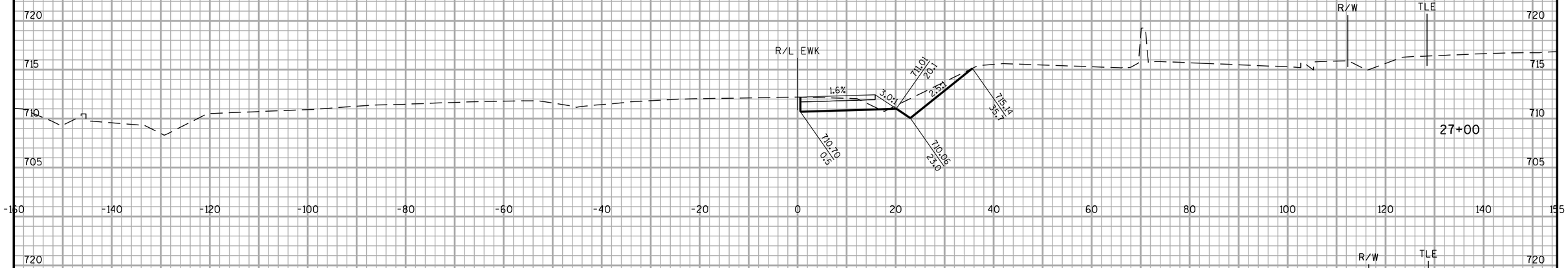
STA 24+50 TO 25+50

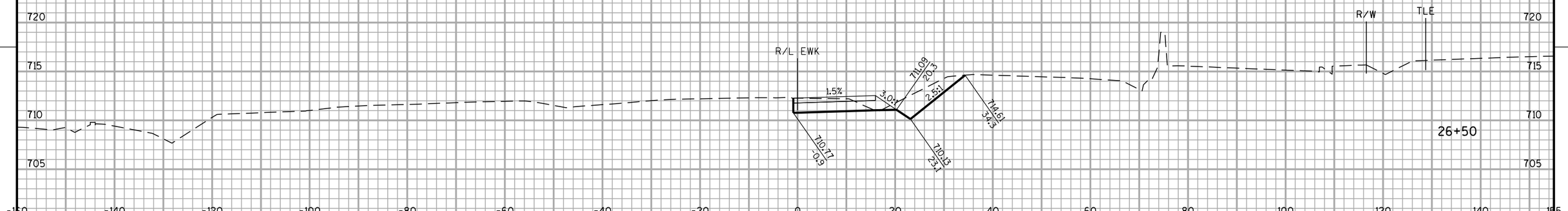
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

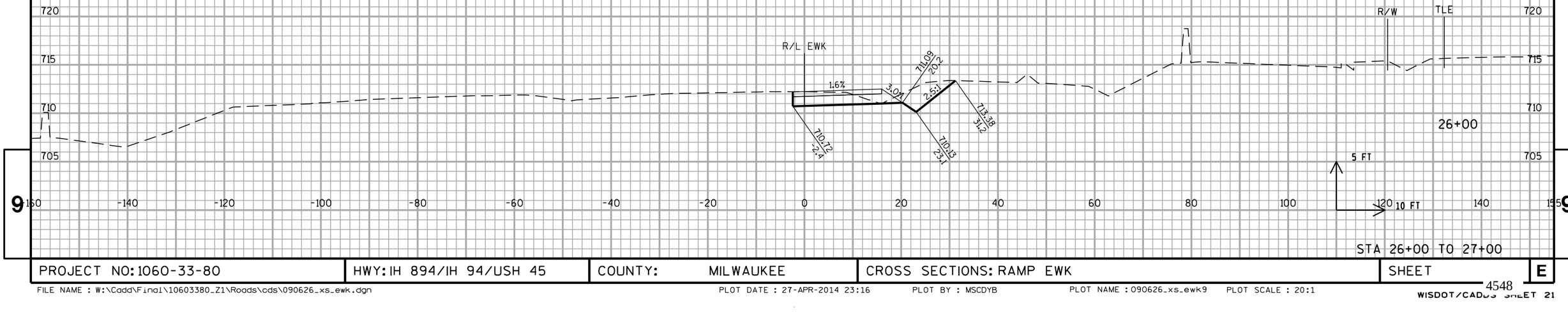
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1



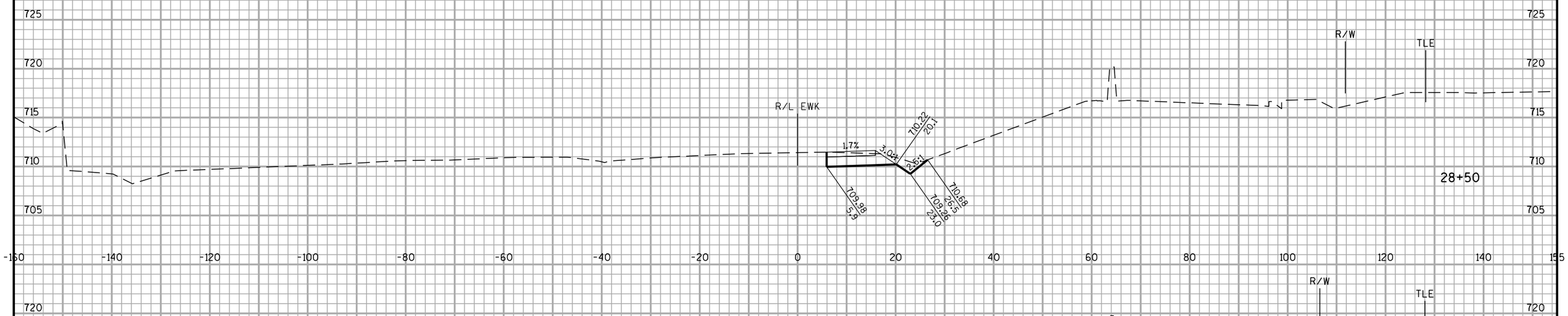


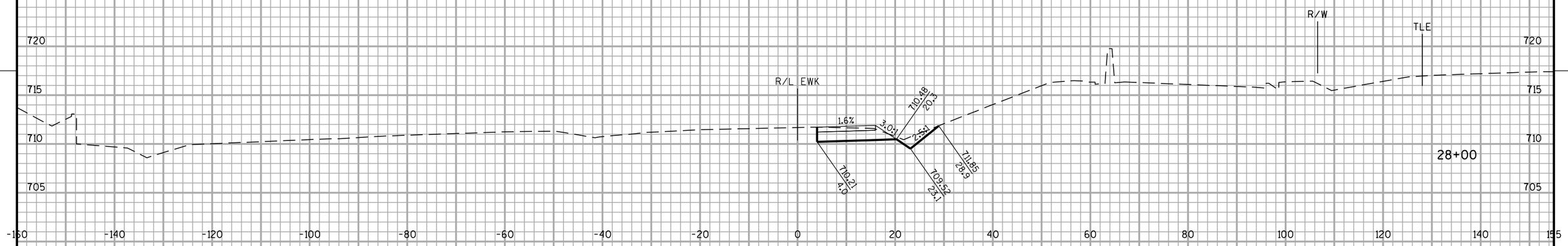


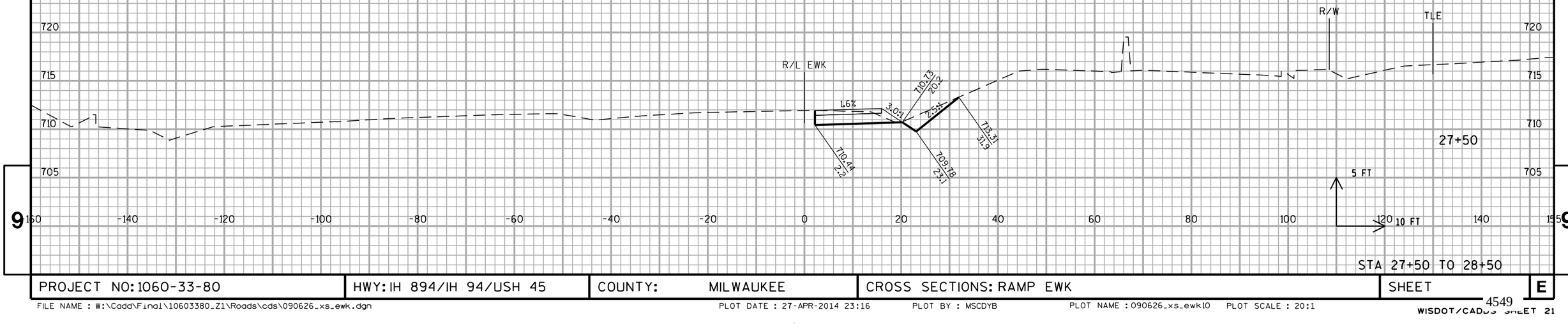
STA 26+00 TO 27+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

ALL WORK STAGE 1





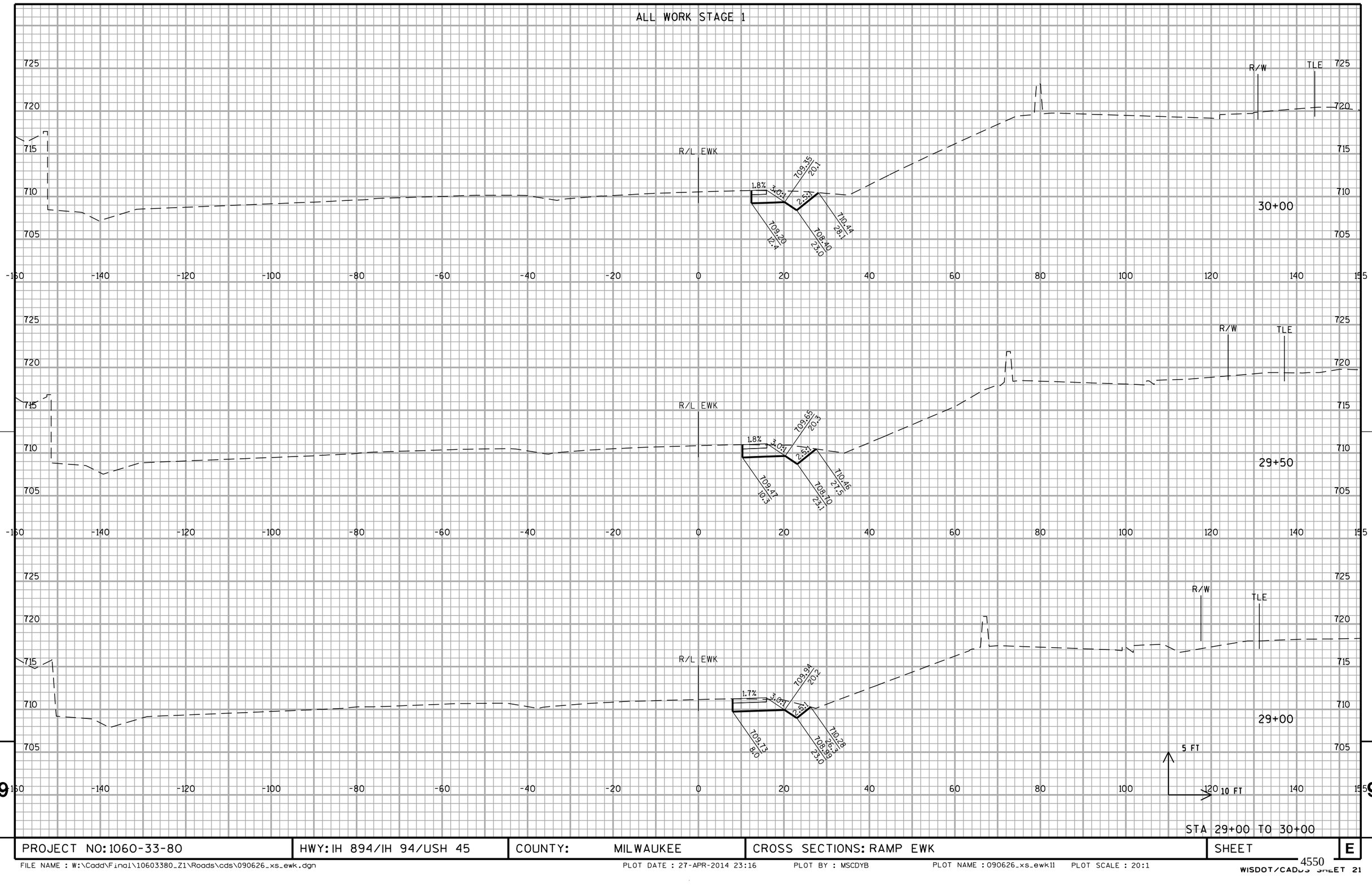


STA 27+50 TO 28+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk10 PLOT SCALE : 20:1

ALL WORK STAGE 1



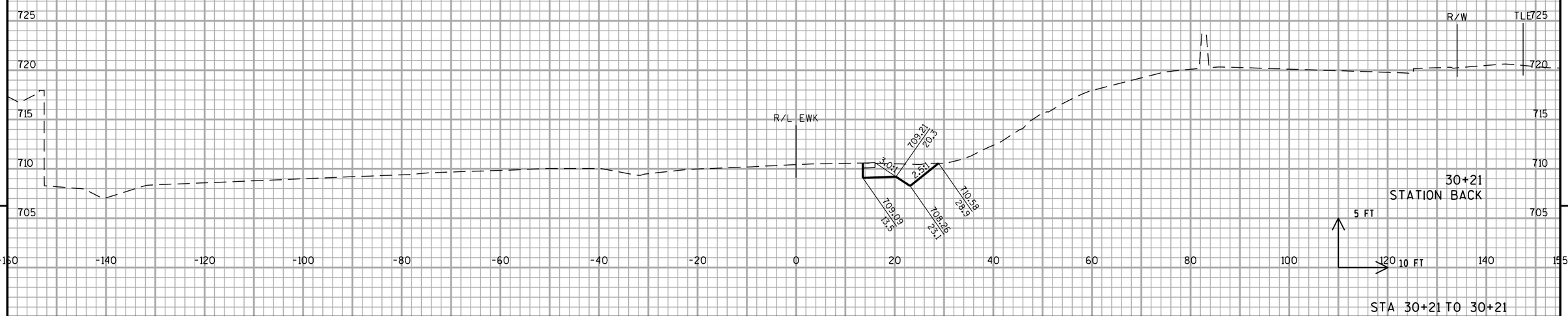
STA 29+00 TO 30+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090626_xs_ewk.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090626_xs_ewk11 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

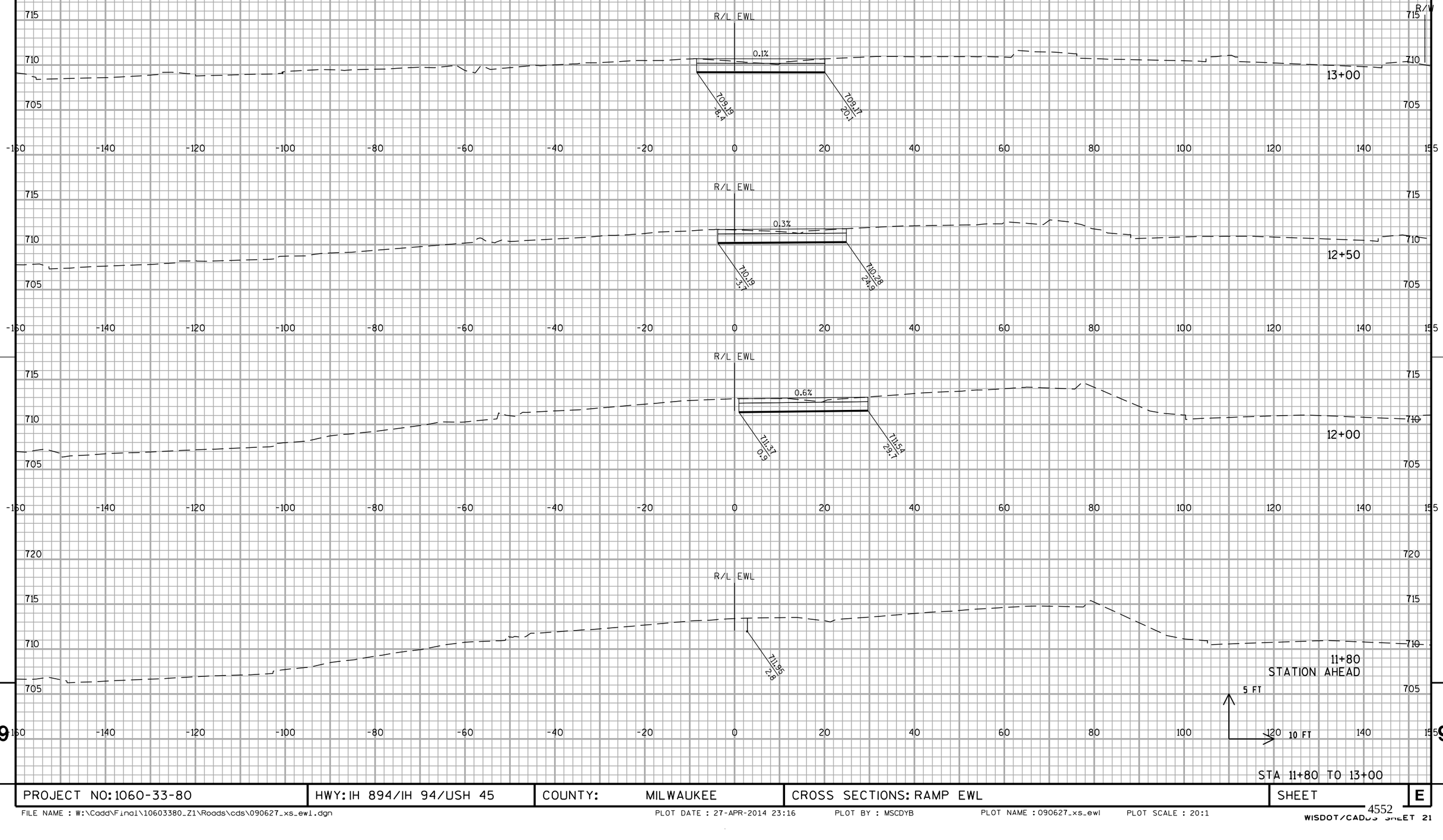
ALL WORK STAGE 1



STA 30+21 TO 30+21

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWK	SHEET	E

ALL WORK STAGE 1

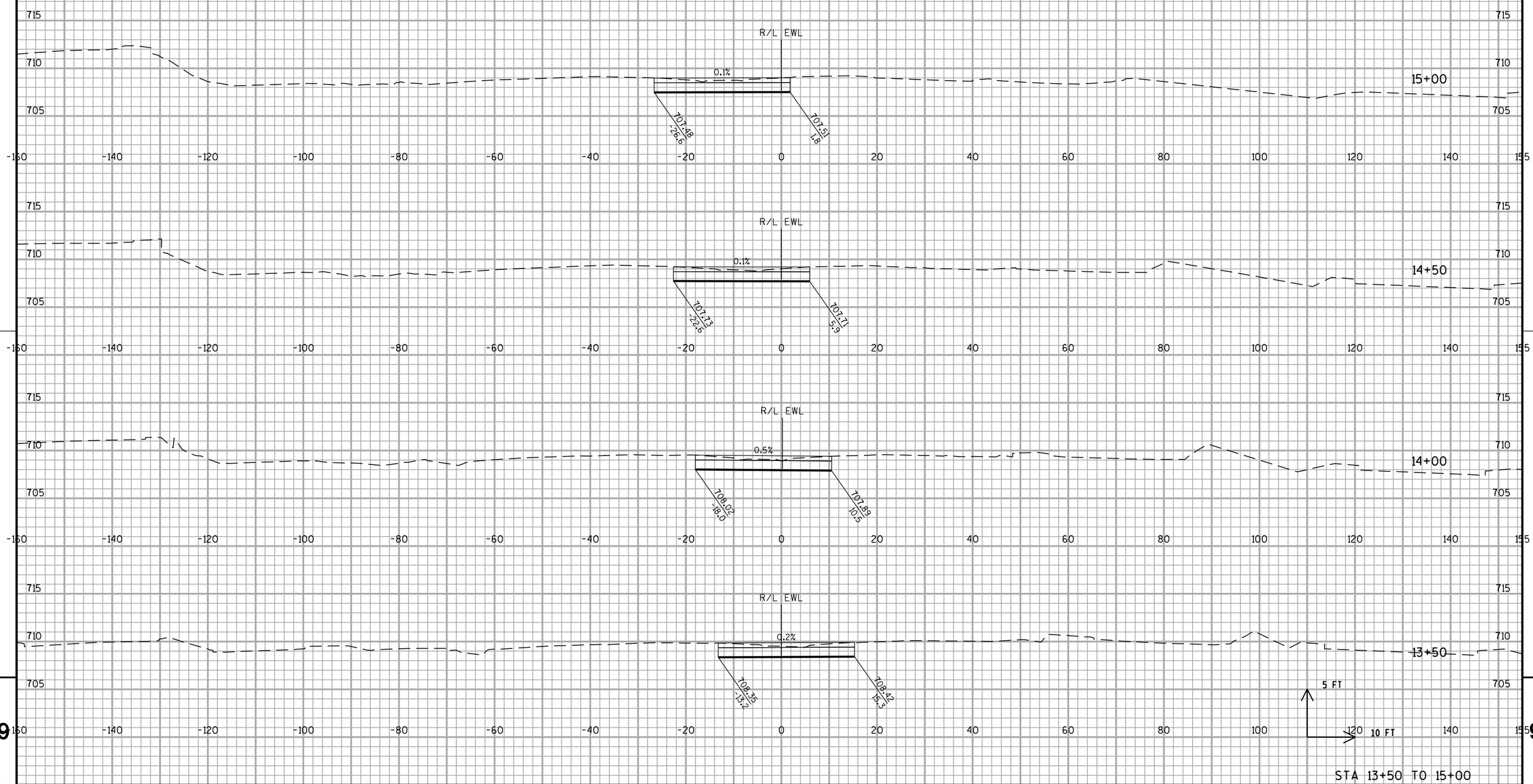


STA 11+80 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ewl.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ewl PLOT SCALE : 20:1

ALL WORK STAGE 1

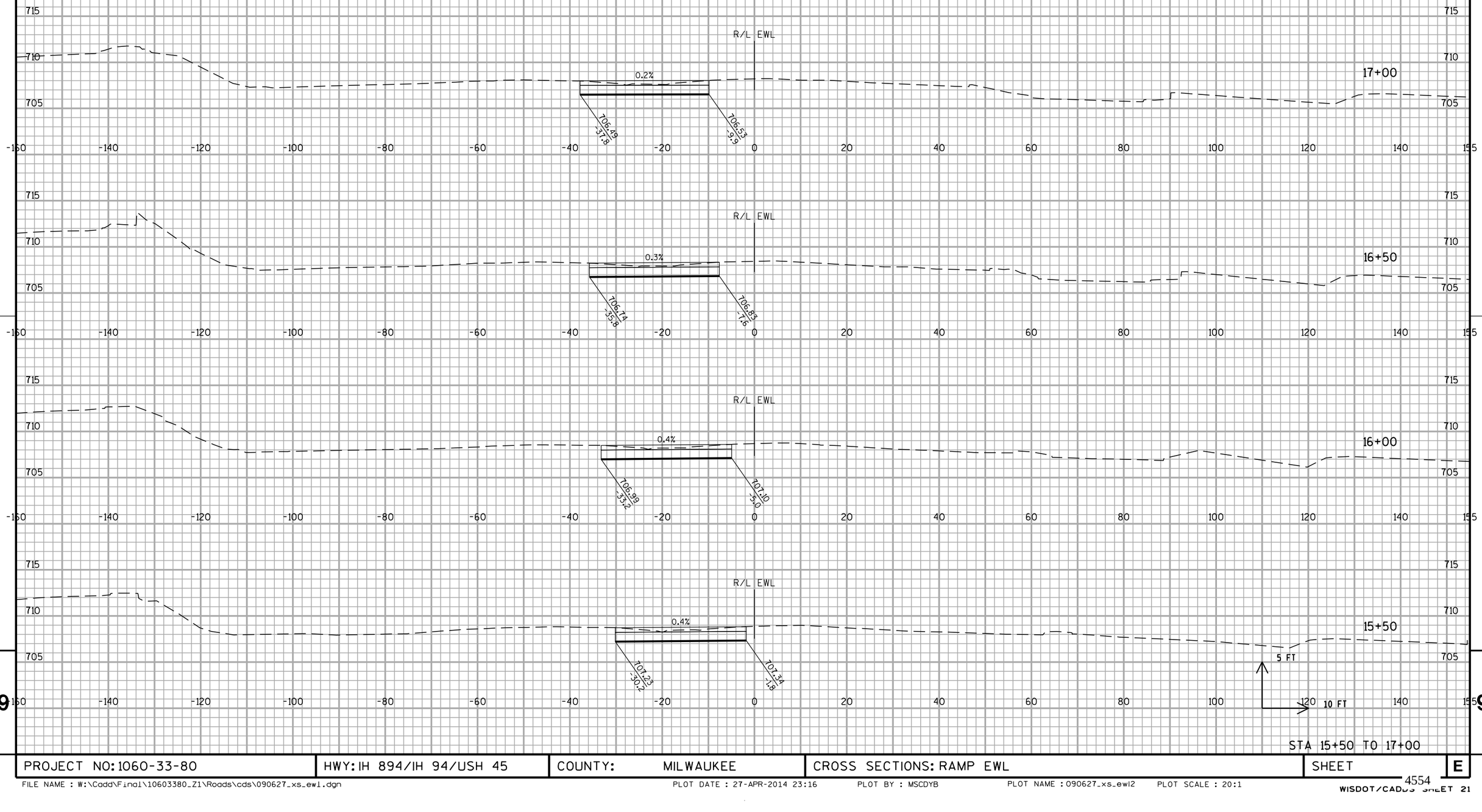


STA 13+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ewl.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ewl PLOT SCALE : 20:1

ALL WORK STAGE 1

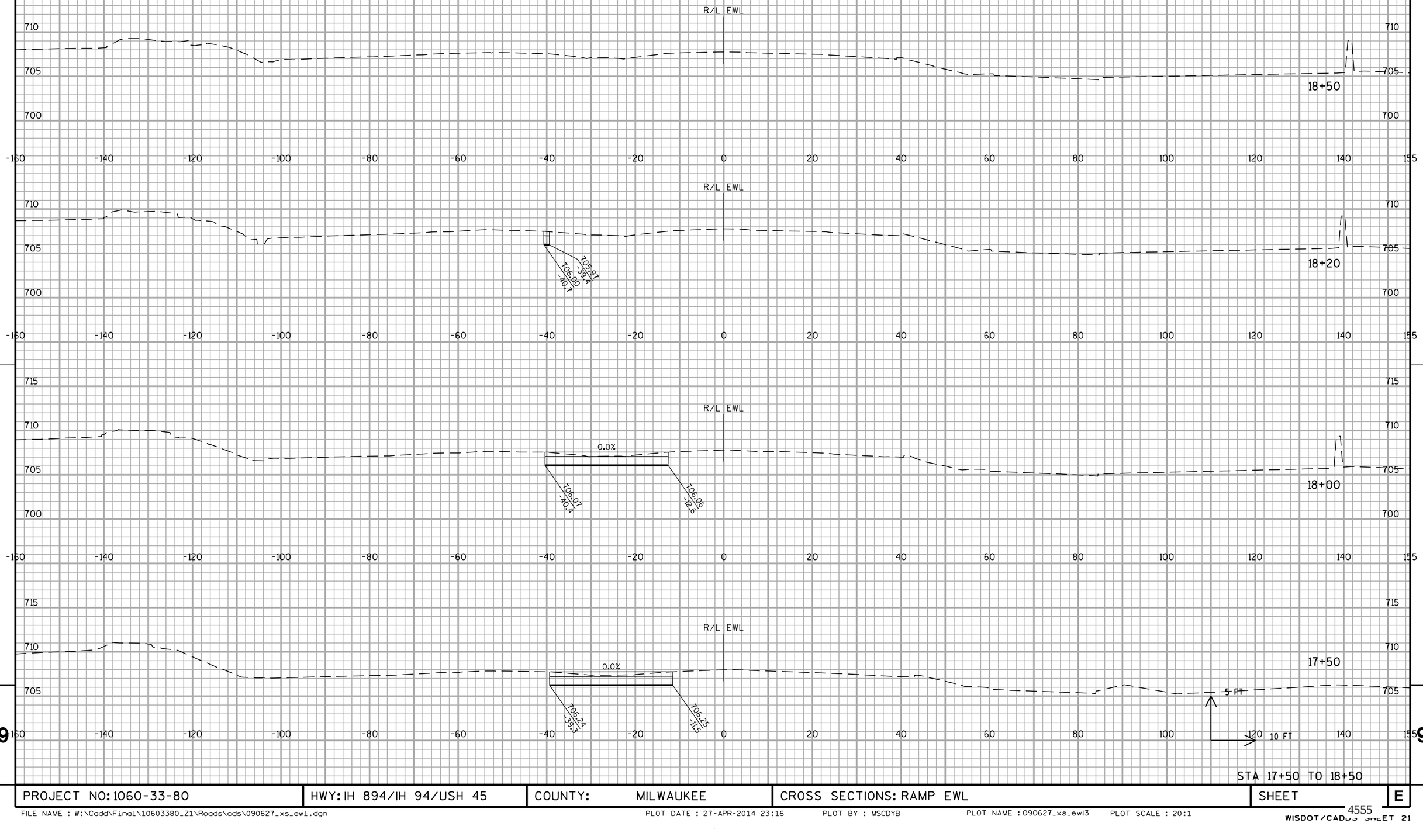


STA 15+50 TO 17+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ewl.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ewl2 PLOT SCALE : 20:1

ALL WORK STAGE 1

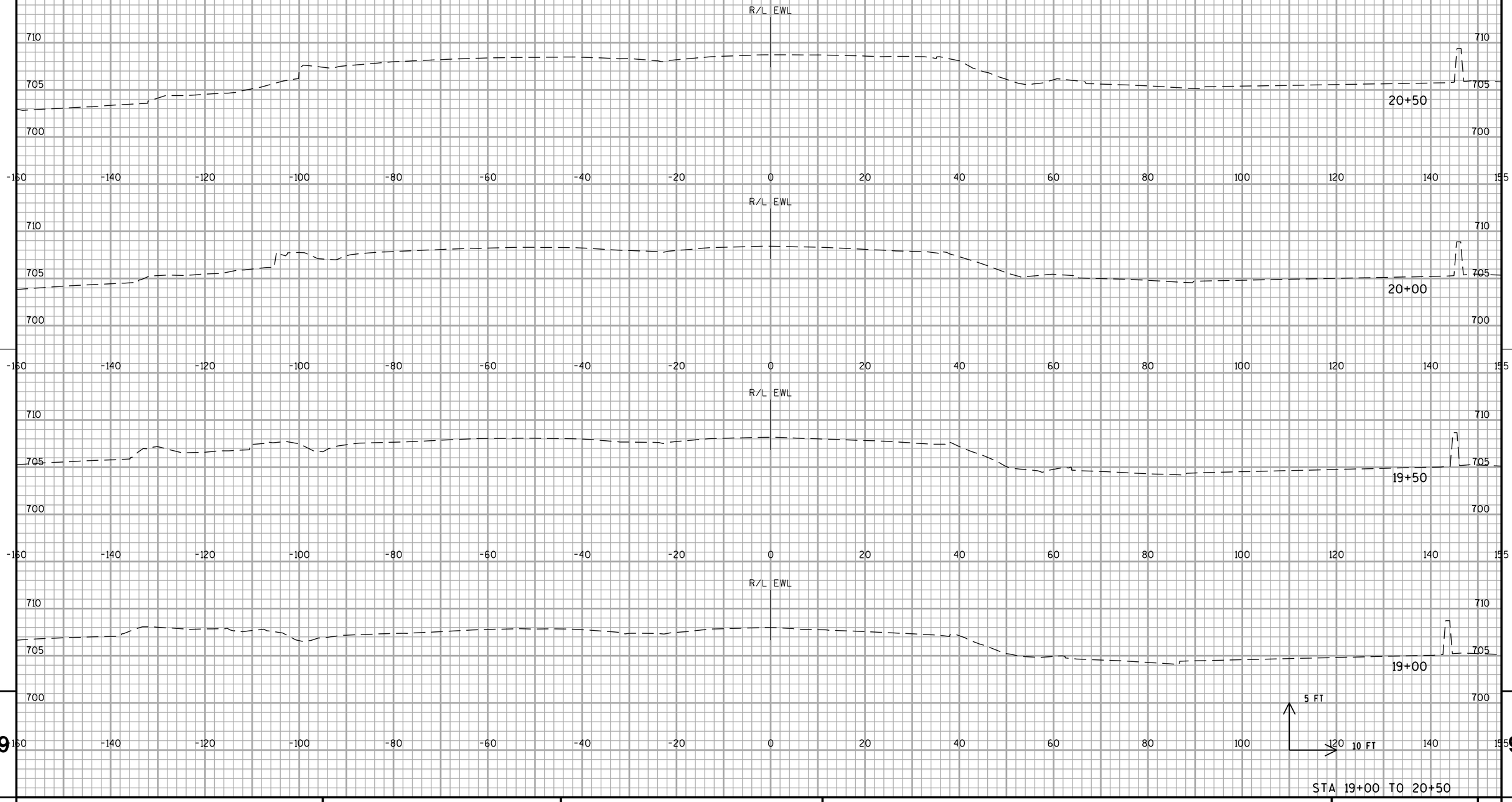


STA 17+50 TO 18+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ewl.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ewl3 PLOT SCALE : 20:1

NO WORK THIS SHEET



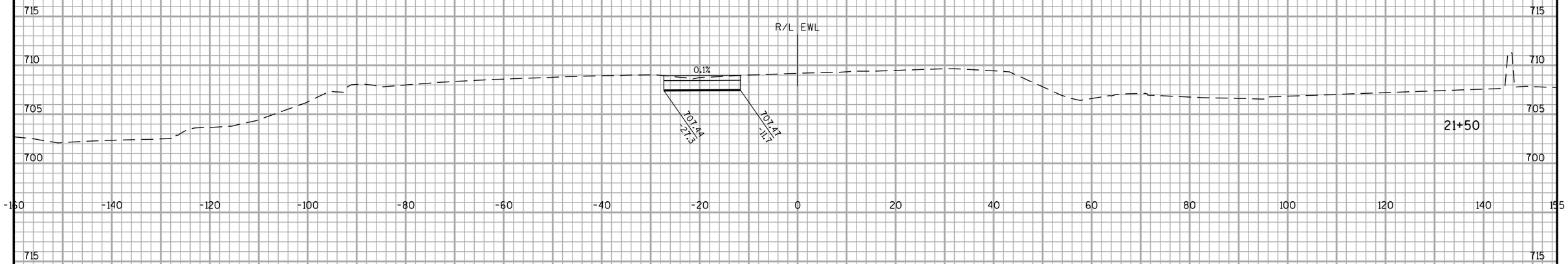
STA 19+00 TO 20+50

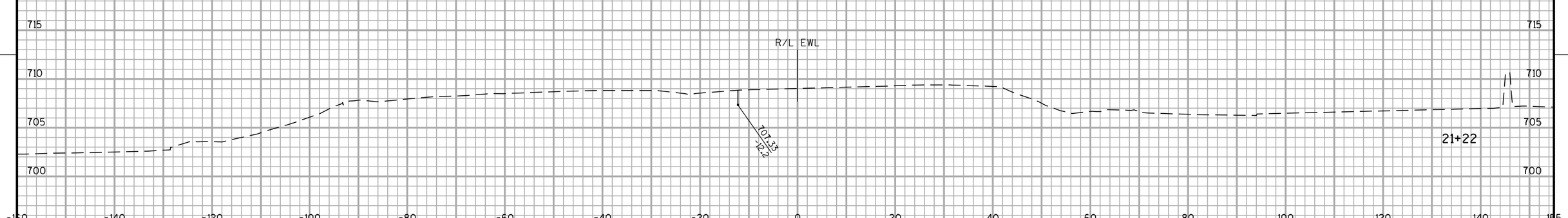
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_EWL.dgn PLOT DATE : 29-APR-2014 13:35 PLOT BY : MSCPLR PLOT NAME : 090627_xs_EWL4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1





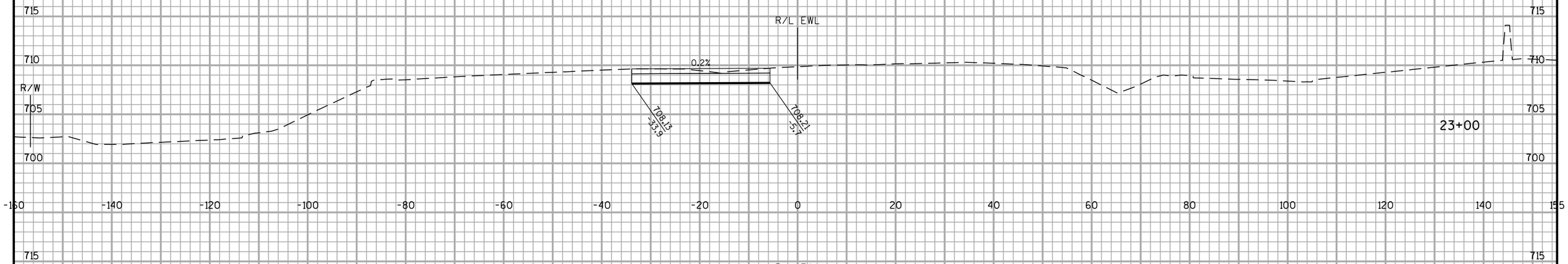


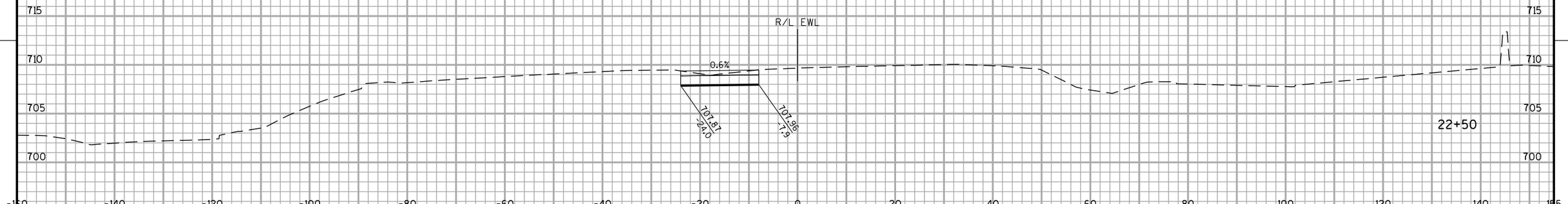
STA 21+00 TO 21+50

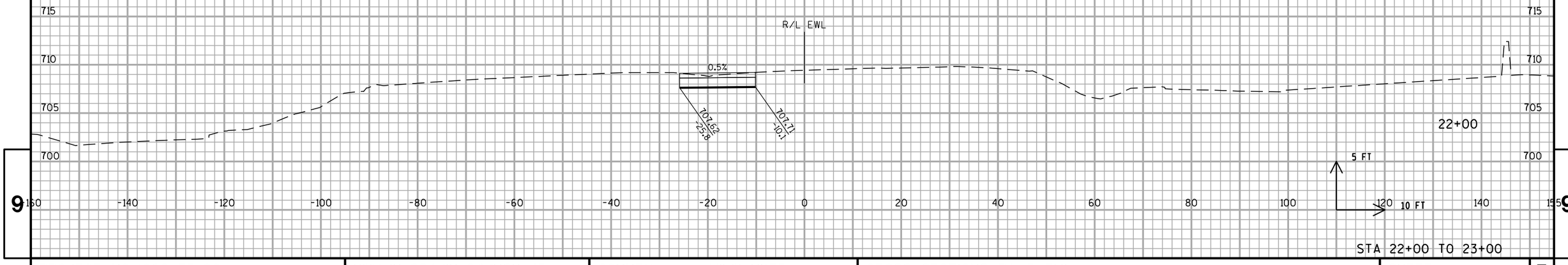
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

9 9

ALL WORK STAGE 1







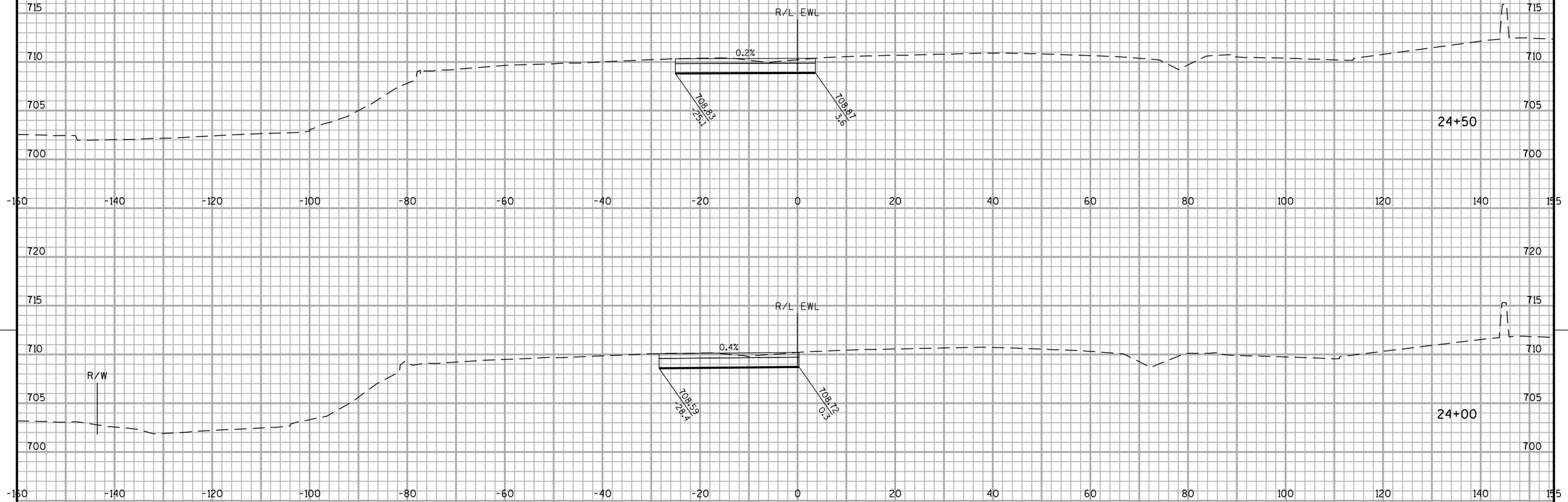
9

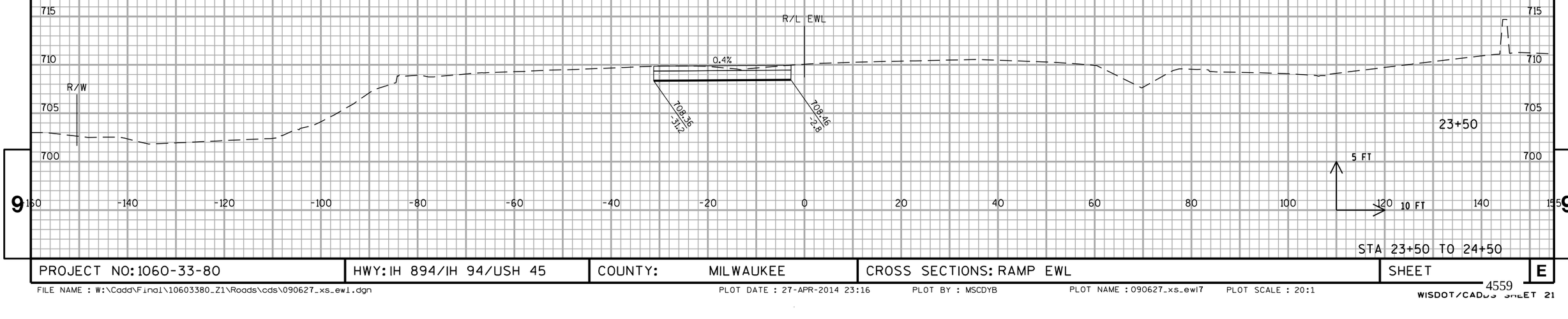
9

STA 22+00 TO 23+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET E

ALL WORK STAGE 1

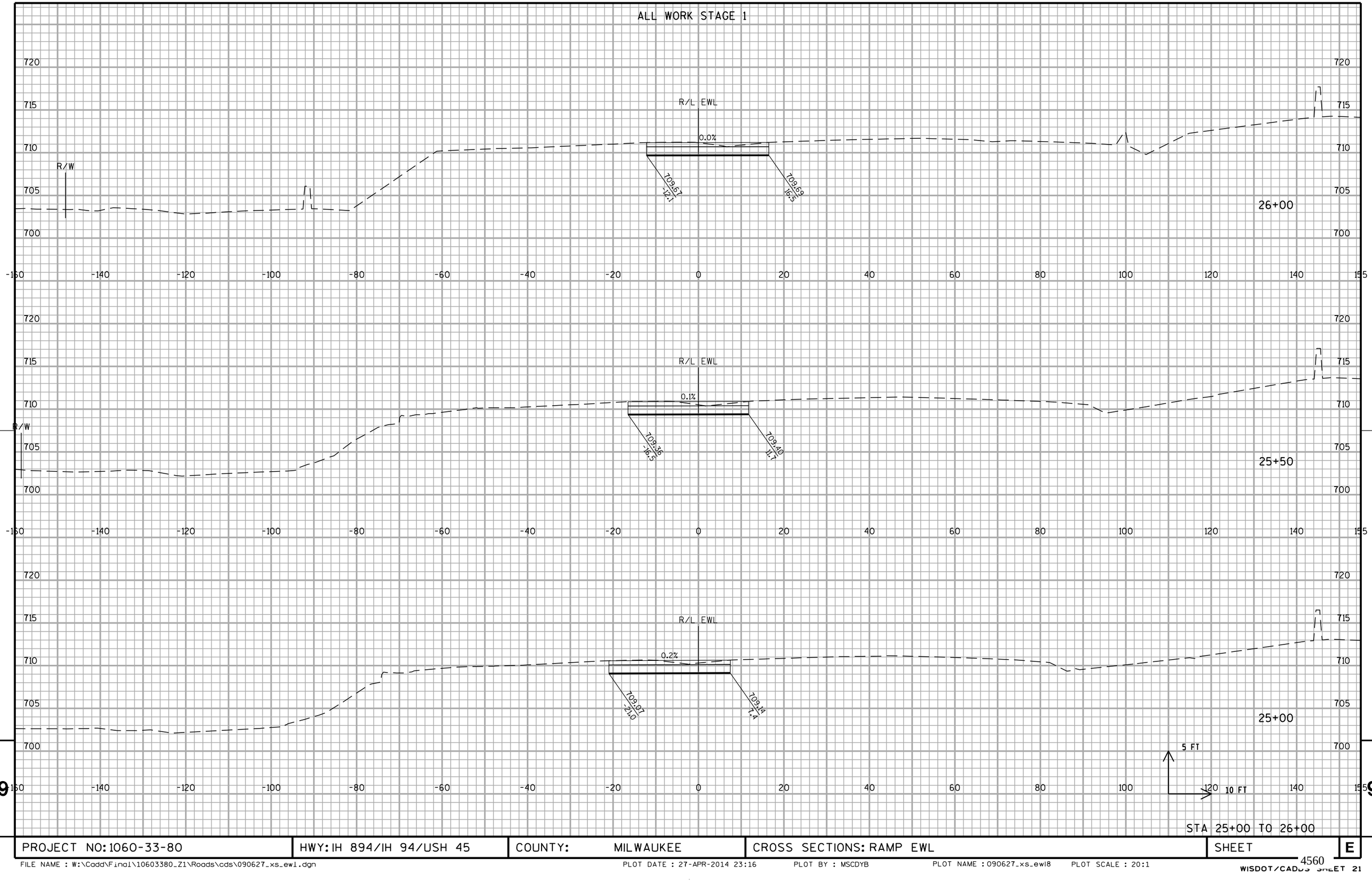




STA 23+50 TO 24+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

ALL WORK STAGE 1

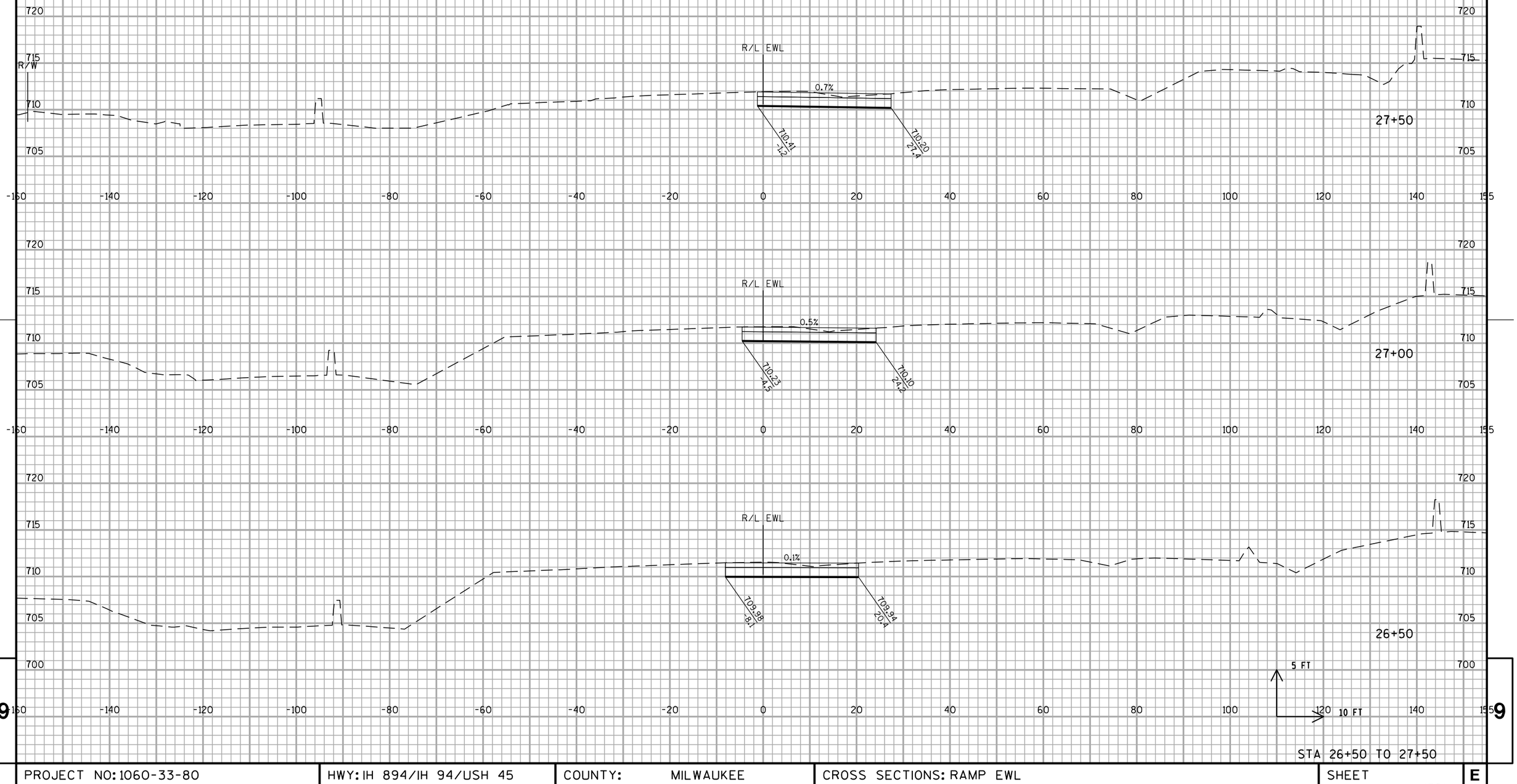


STA 25+00 TO 26+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ewl.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ewl8 PLOT SCALE : 20:1

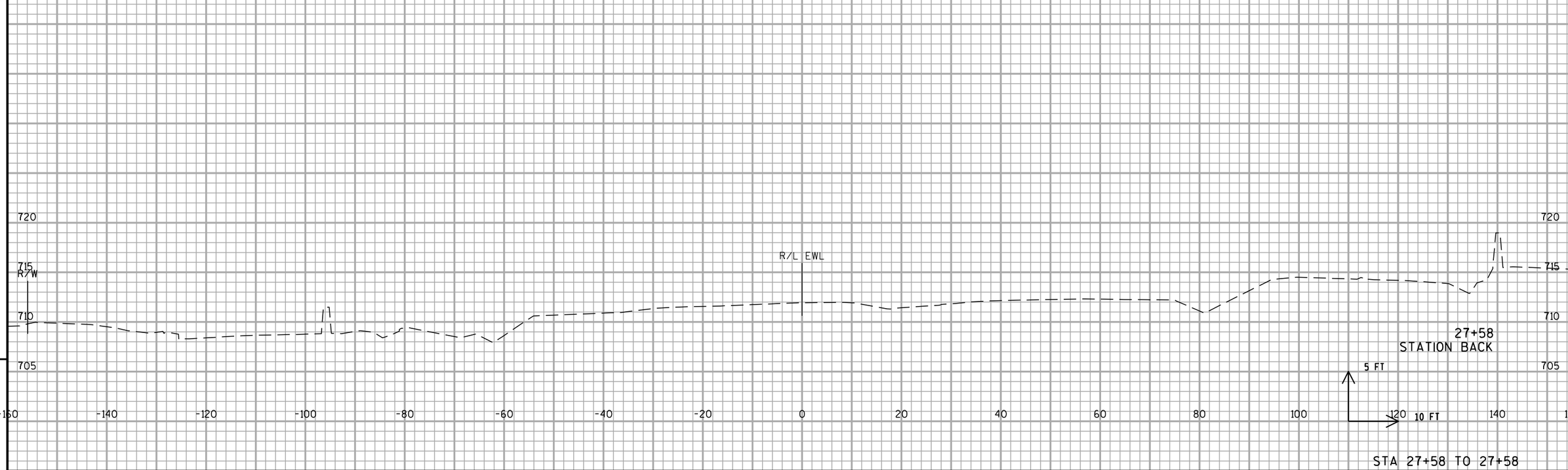
ALL WORK STAGE 1



STA 26+50 TO 27+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

ALL WORK STAGE 1



STA 27+58 TO 27+58

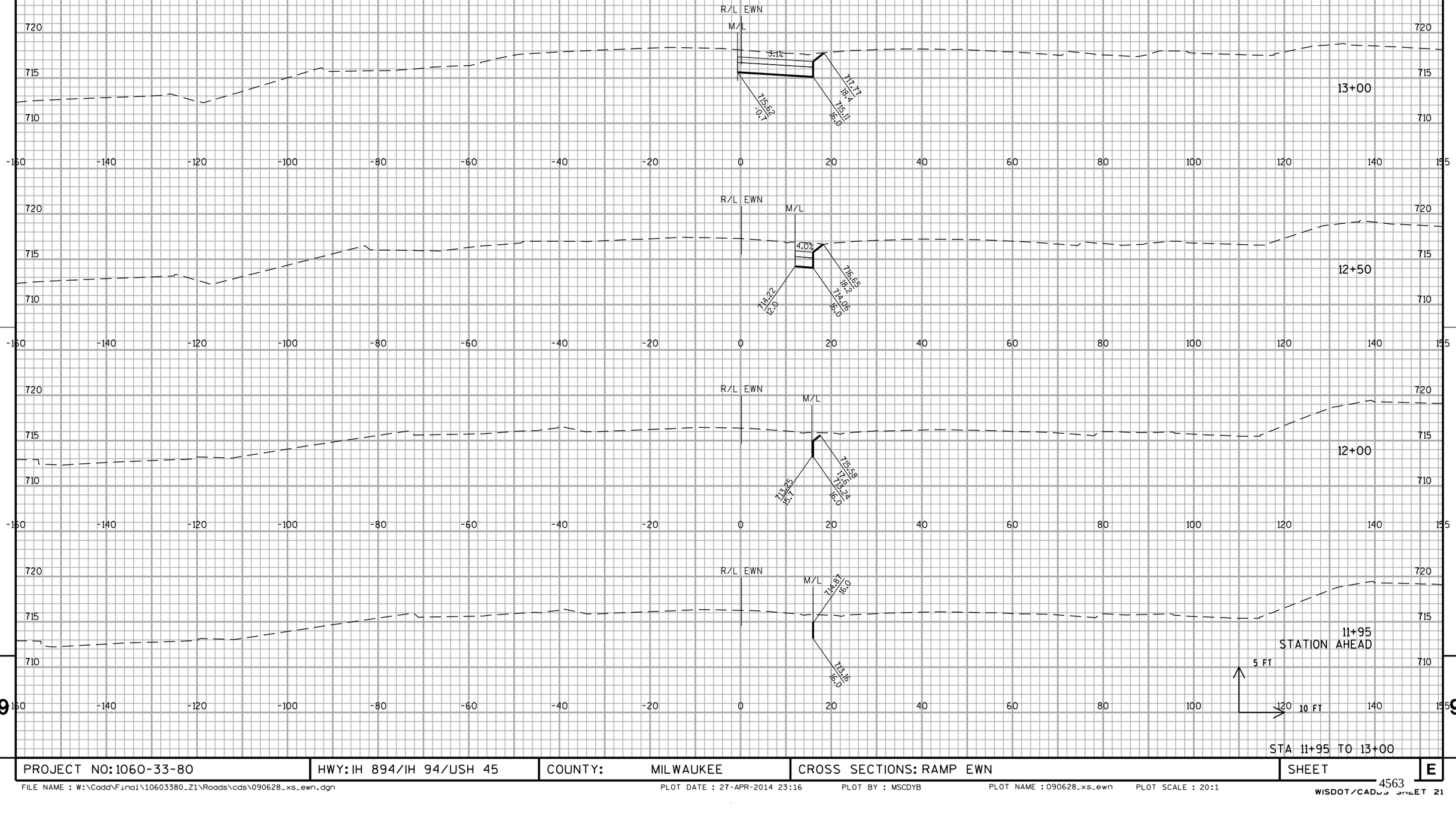
9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090627_xs_ew1.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090627_xs_ew110 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

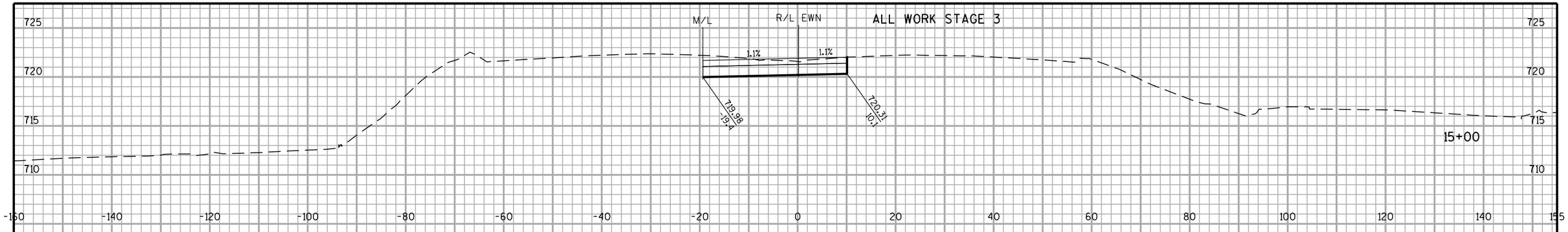
ALL WORK STAGE 3

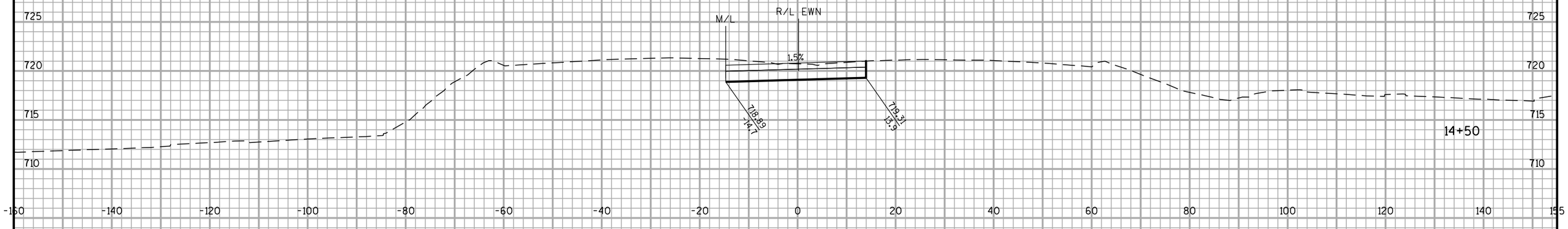


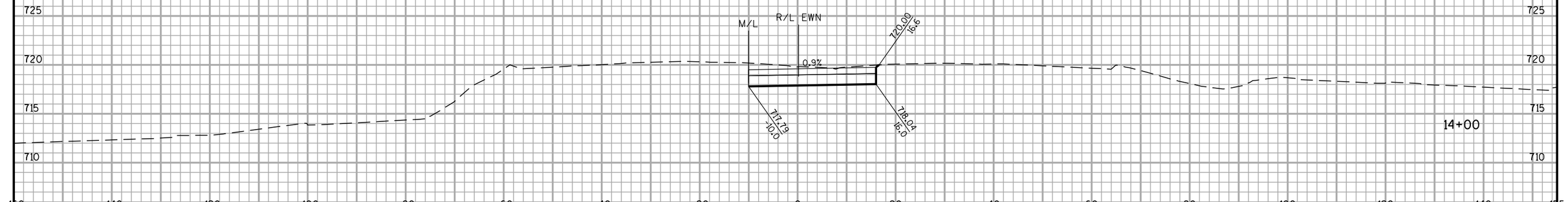
STA 11+95 TO 13+00

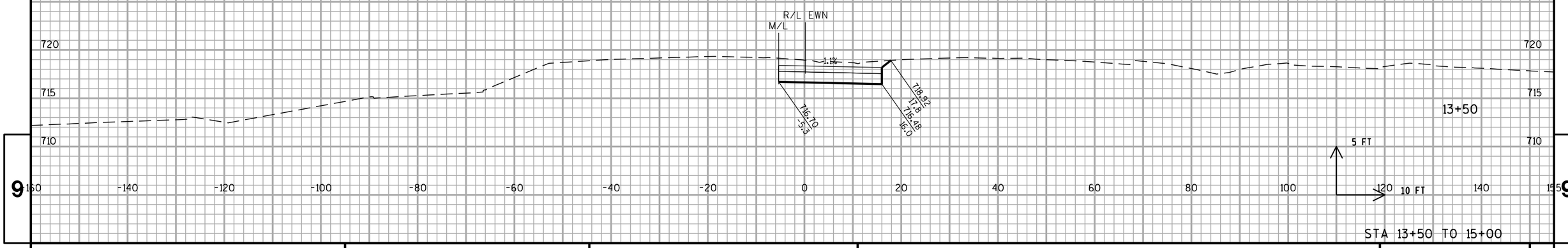
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWN	SHEET	E

ALL WORK STAGE 3









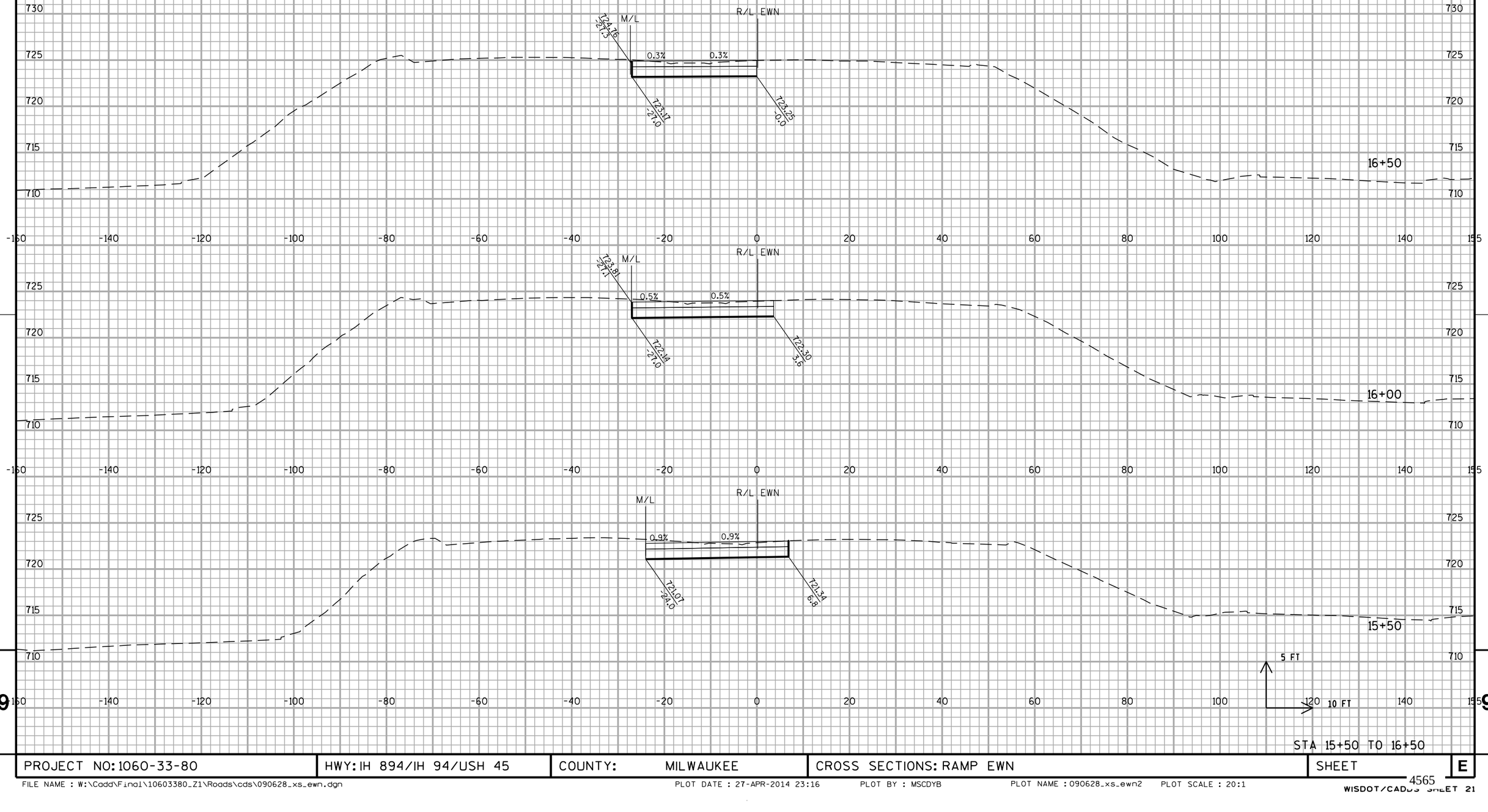
STA 13+50 TO 15+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWN	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090628_xs_ewn.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090628_xs_ewn1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 3

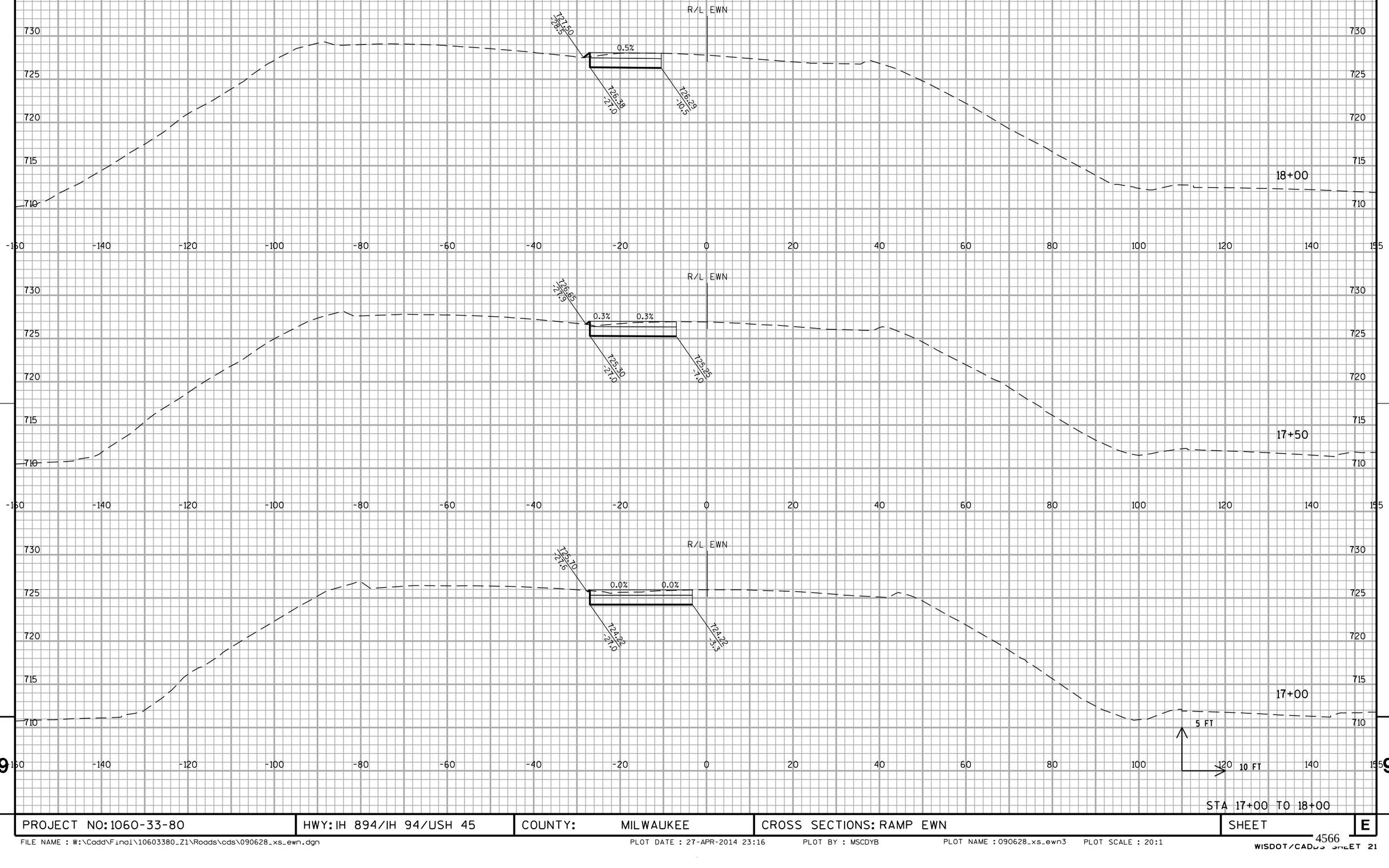


STA 15+50 TO 16+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090628_xs_ewn.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090628_xs_ewn2 PLOT SCALE : 20:1

ALL WORK STAGE 3

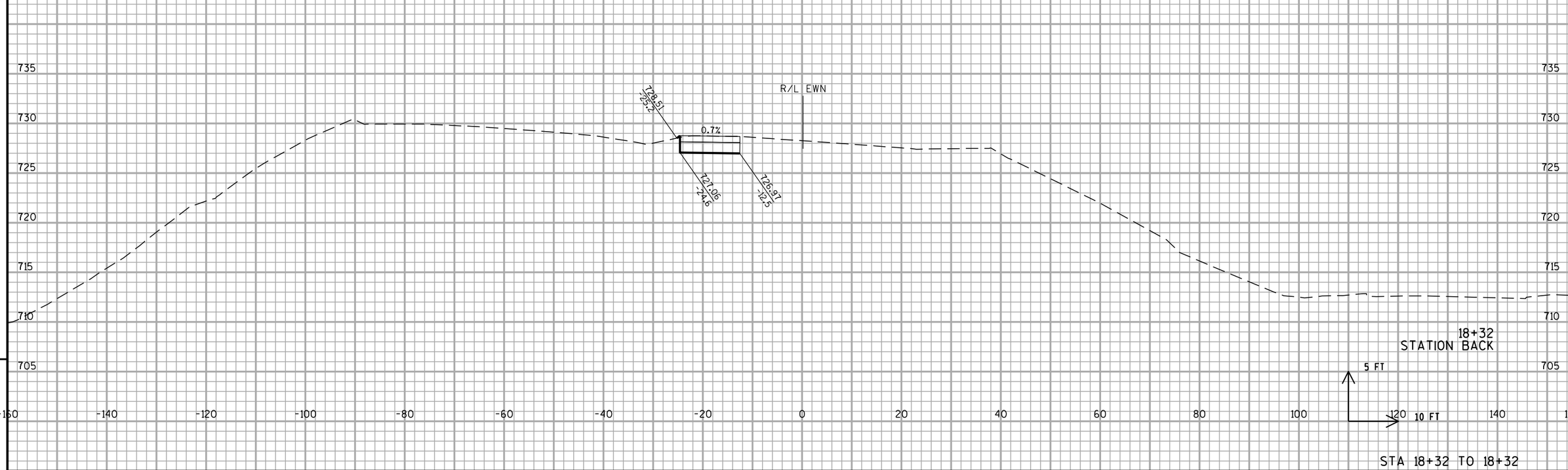


STA 17+00 TO 18+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWN	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090628_xs_ewn.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090628_xs_ewn3 PLOT SCALE : 20:1

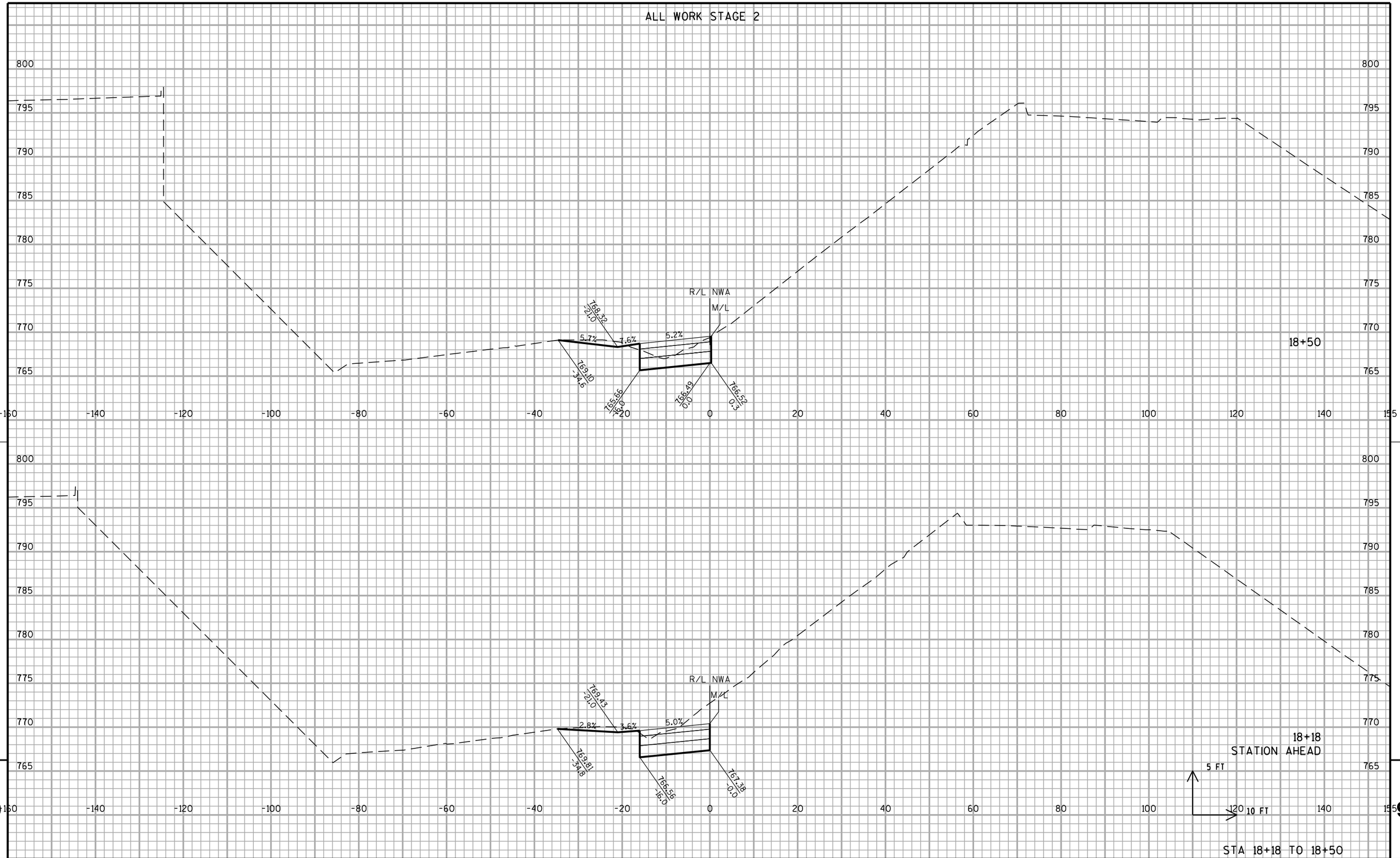
ALL WORK STAGE 3



STA 18+32 TO 18+32

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EWN	SHEET	E

ALL WORK STAGE 2

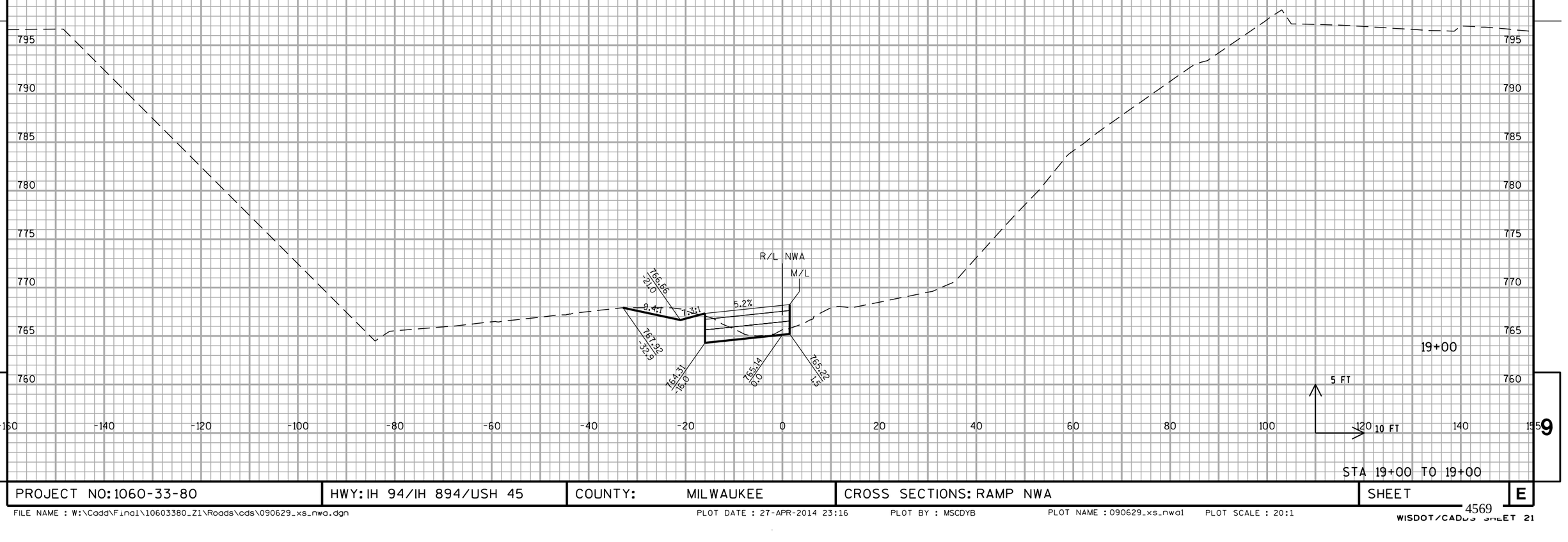


STA 18+18 TO 18+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa PLOT SCALE : 20:1

ALL WORK STAGE 2



STA 19+00 TO 19+00

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa1 PLOT SCALE : 20:1

ALL WORK STAGE 2

805
800
795
790
785
780
775
770
765
760

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

R/L NWA
M/L
5.9%
5.2%
764.02
3.6
3.6%
6.0%
766.82
-29.0
765.02
-22.0
762.98
-16.0
763.81
0.0

19+50

5 FT
10 FT

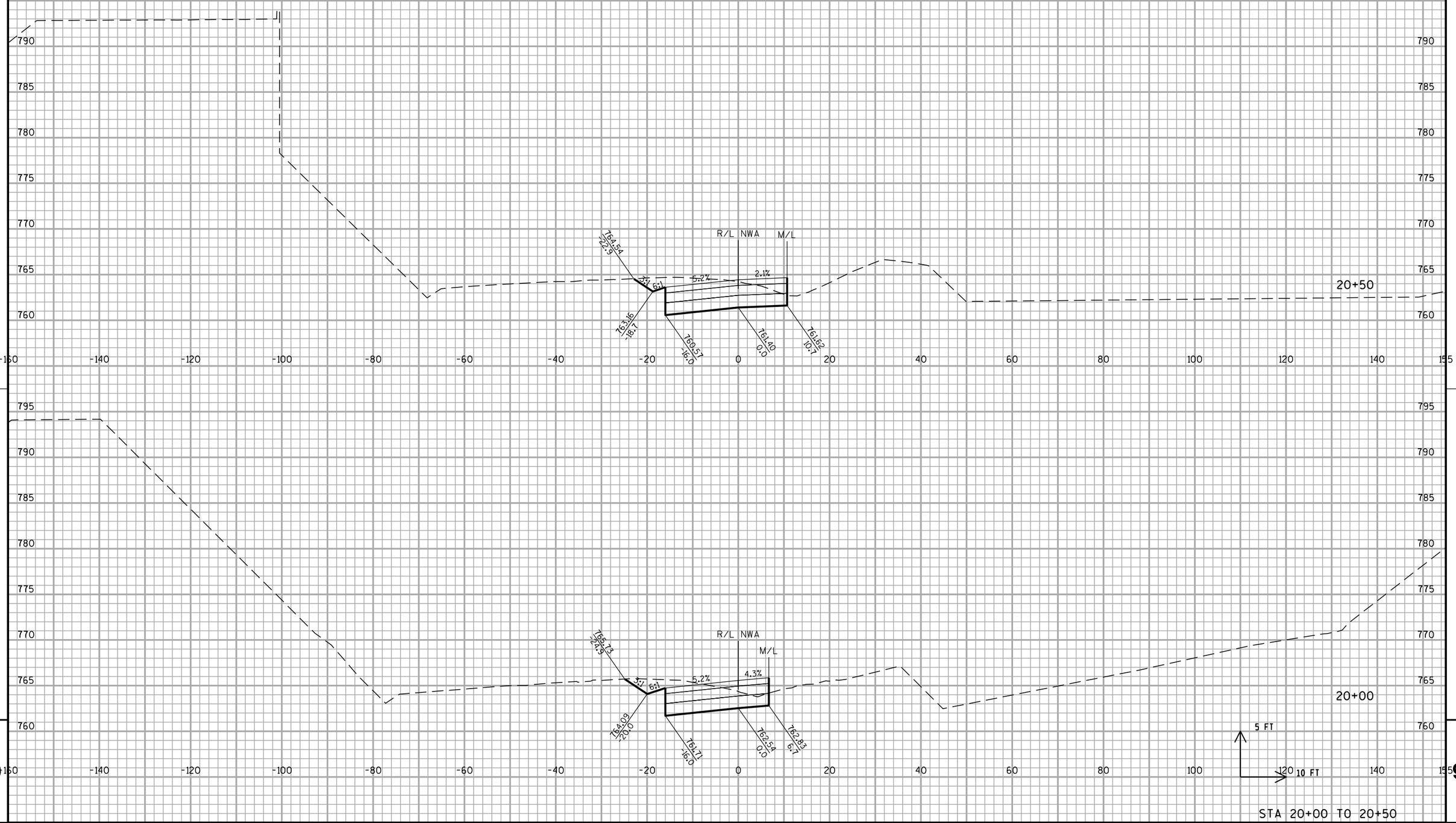
STA 19+50 TO 19+50

9 9

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa2 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

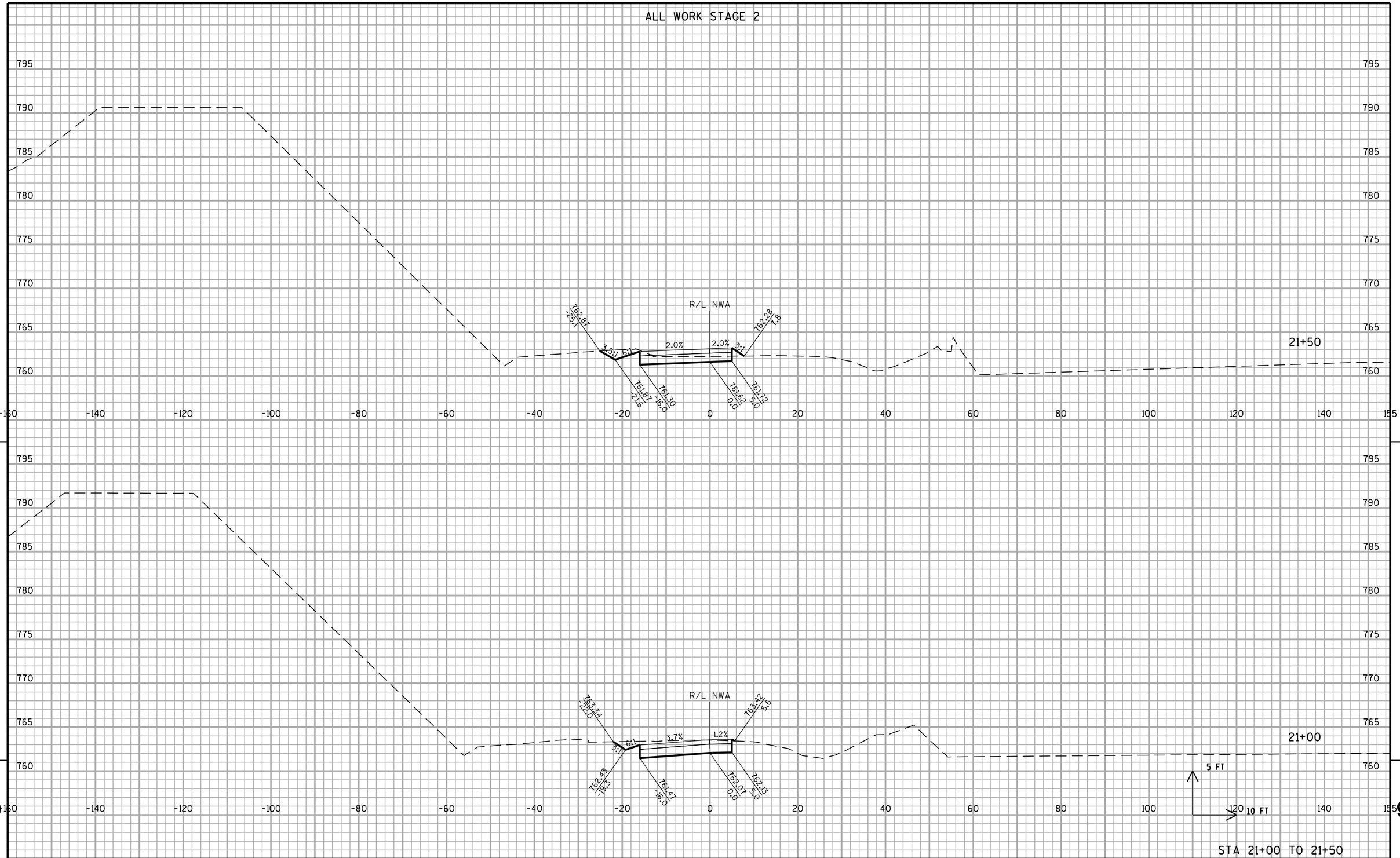


STA 20+00 TO 20+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa3 PLOT SCALE : 20:1

ALL WORK STAGE 2



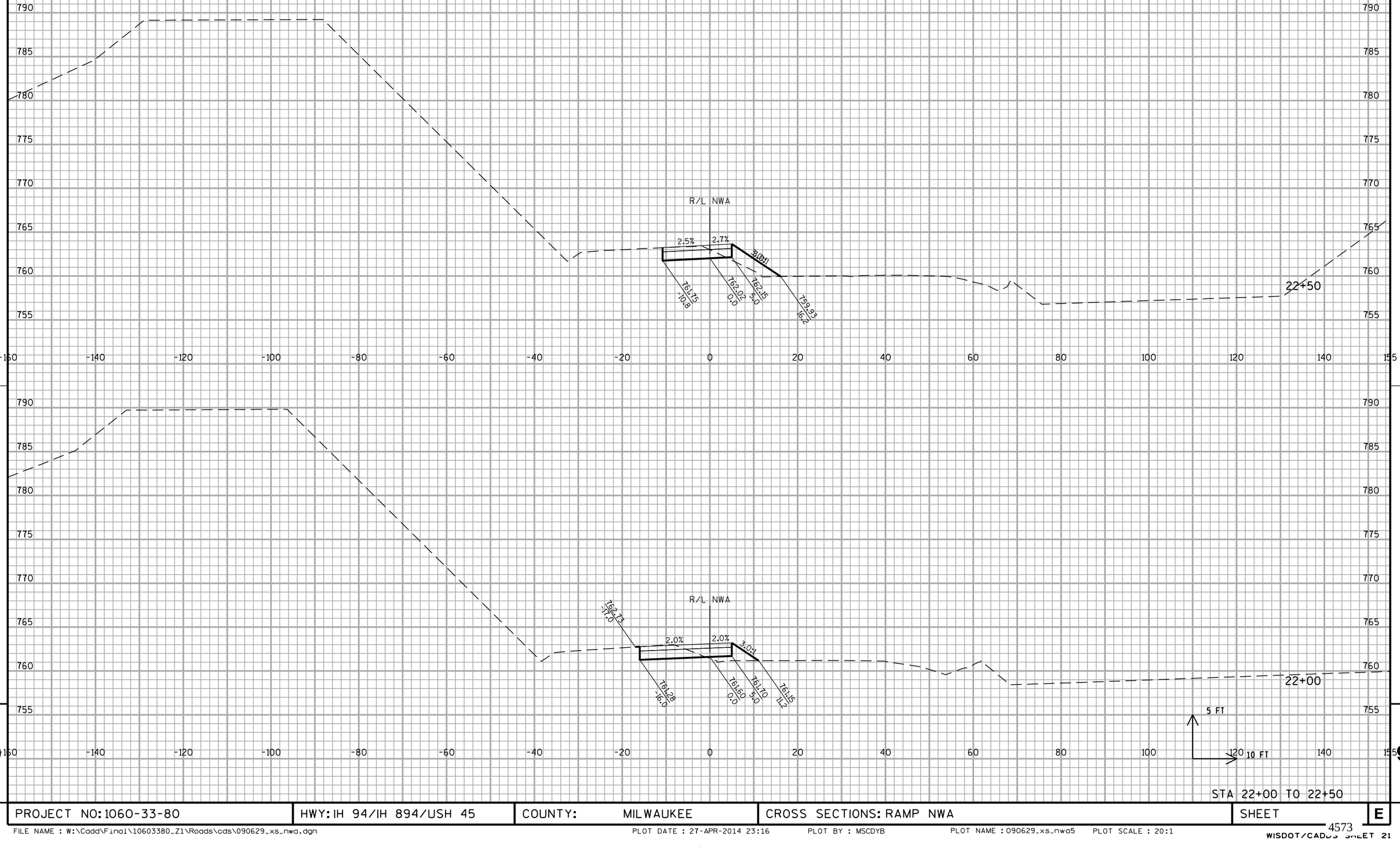
STA 21+00 TO 21+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

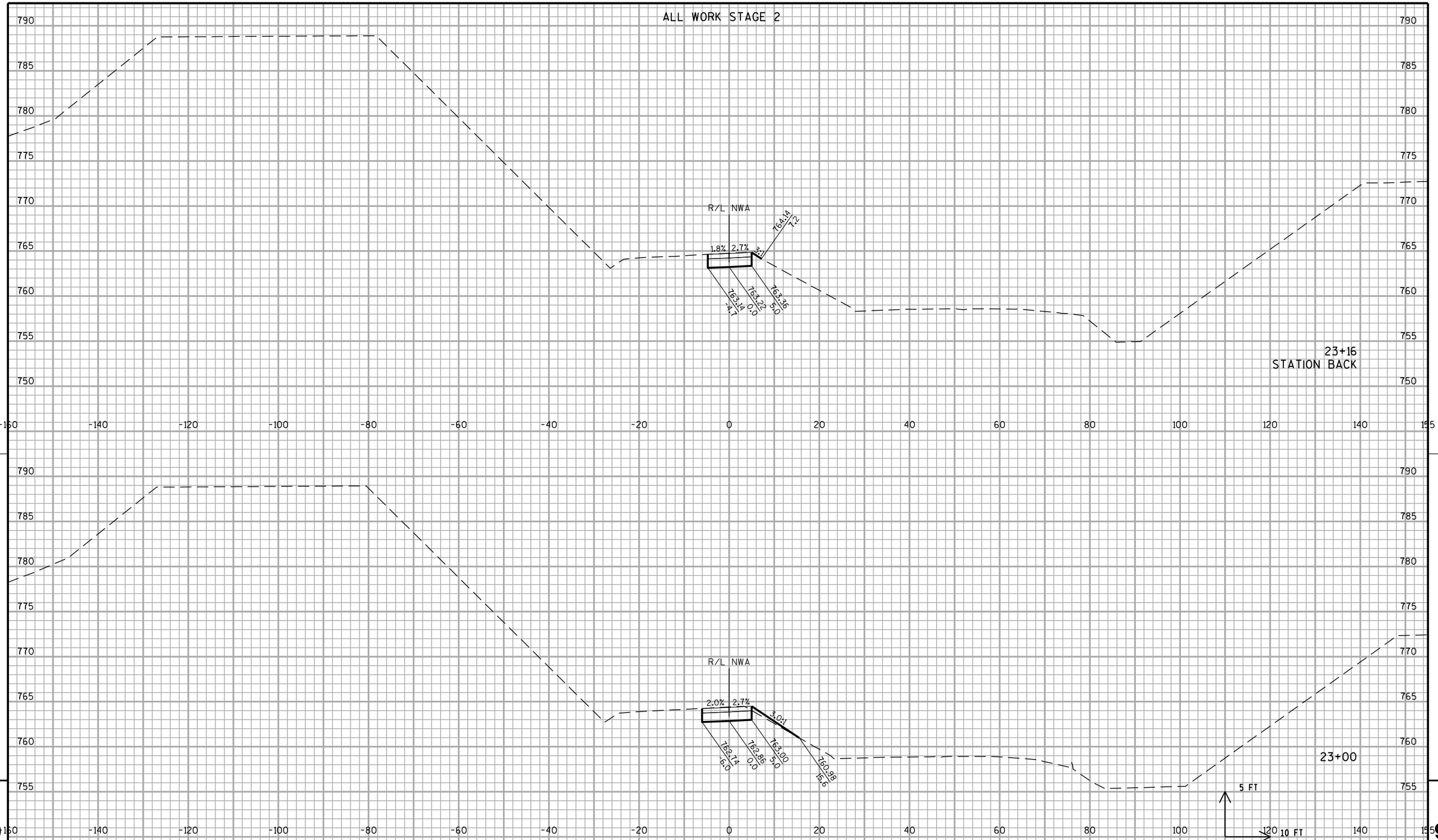


STA 22+00 TO 22+50

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090629_xs_nwa.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090629_xs_nwa5 PLOT SCALE : 20:1

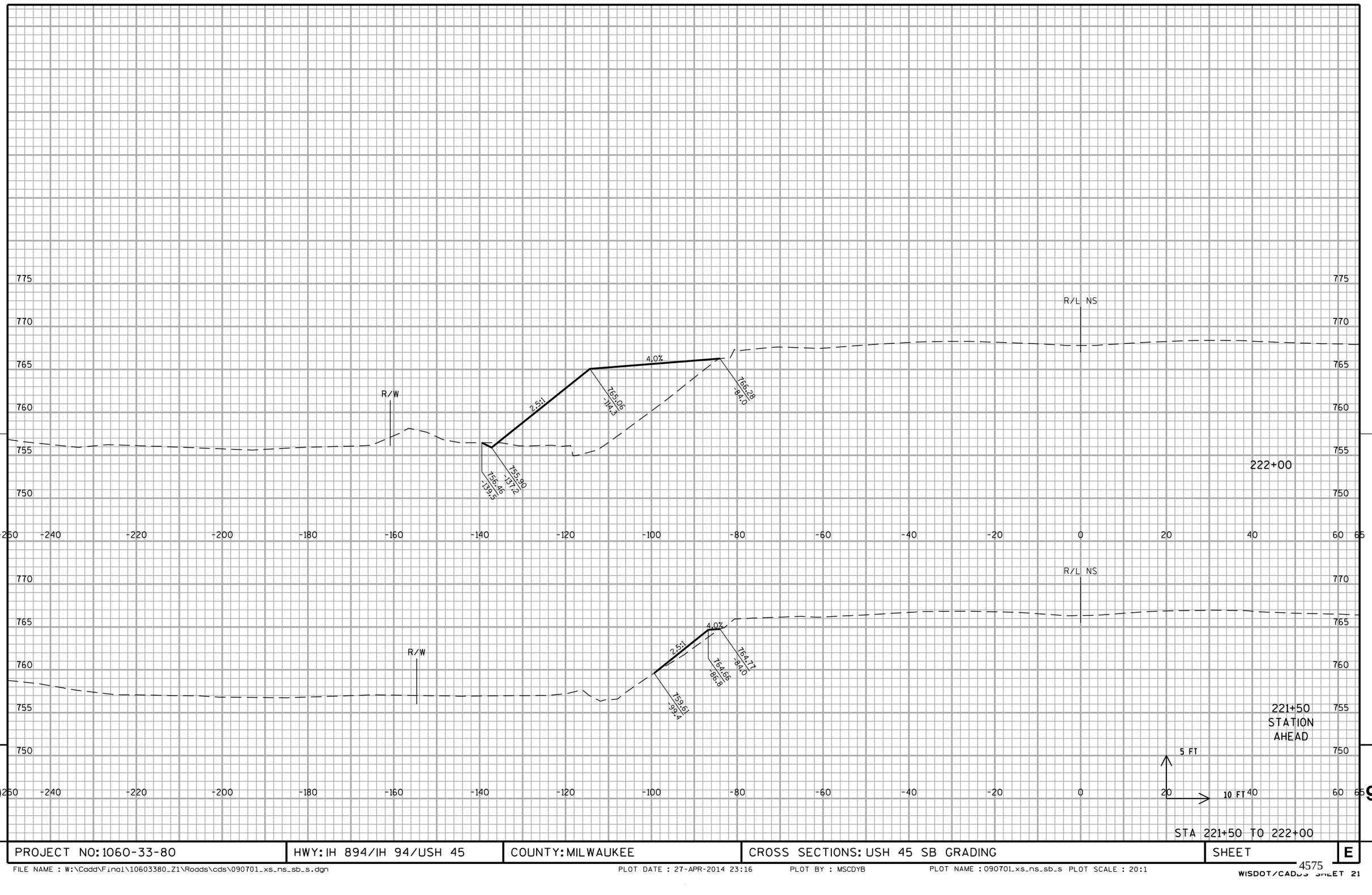
ALL WORK STAGE 2



STA 23+00 TO 23+16

PROJECT NO: 1060-33-80	HWY: IH 94/IH 894/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NWA	SHEET E

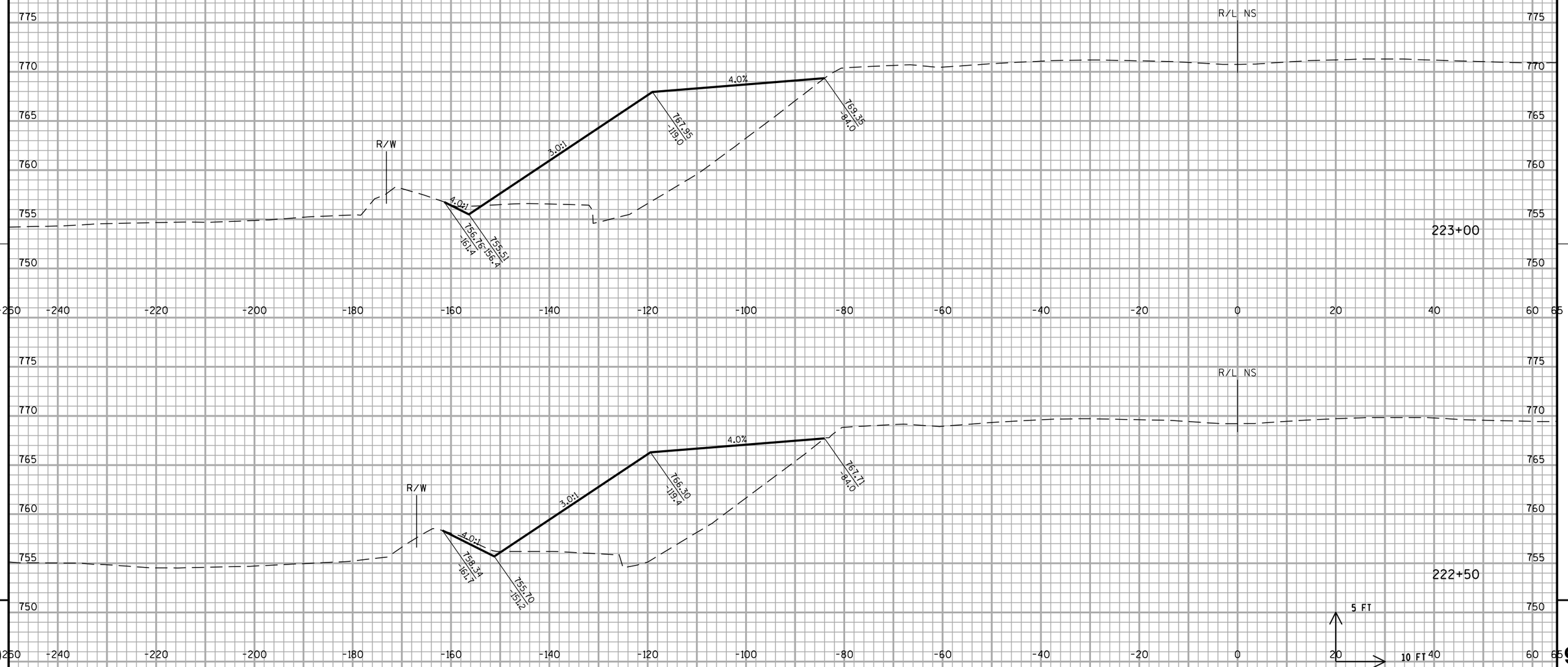
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STA 221+50 TO 222+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

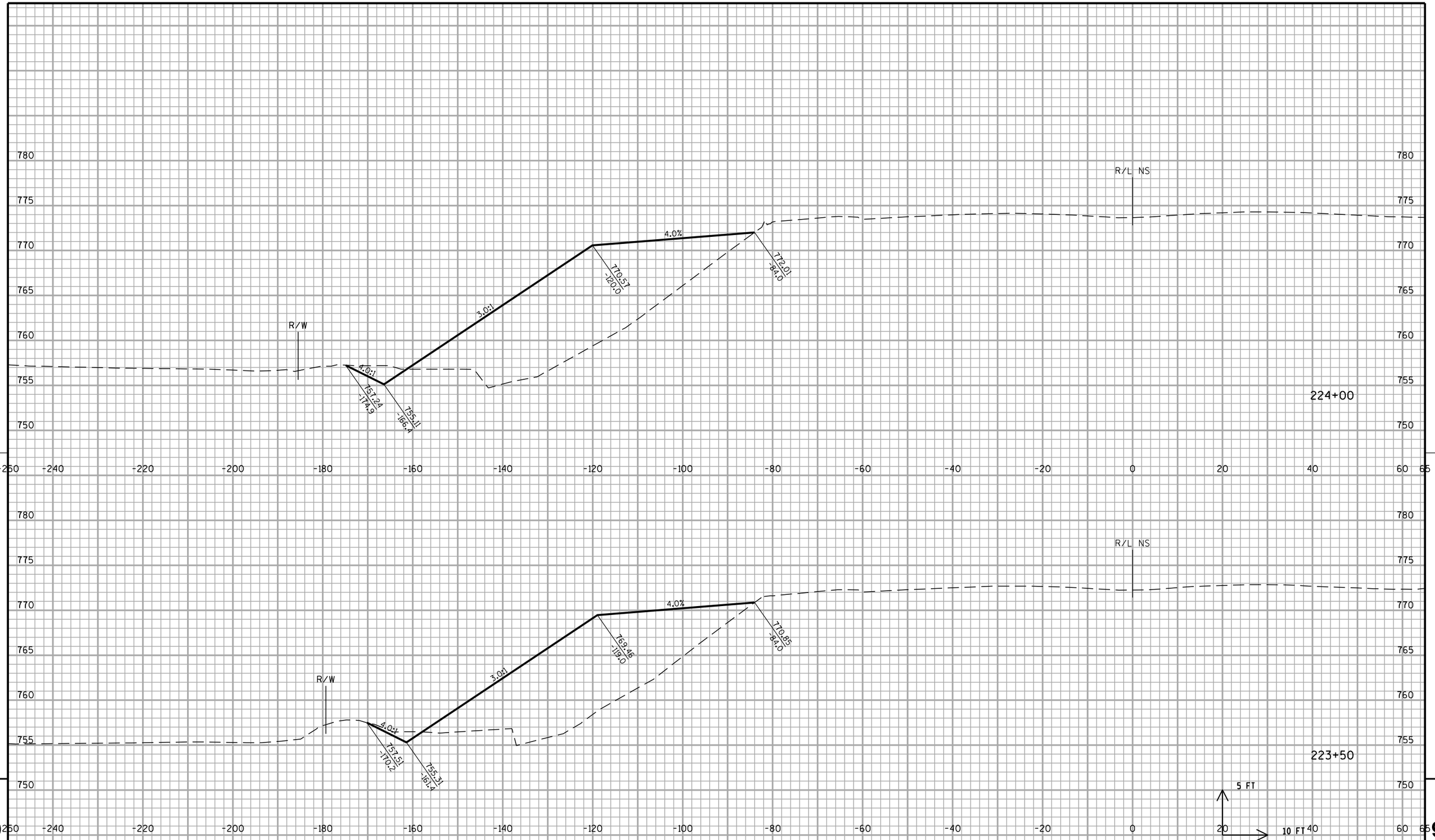
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s PLOT SCALE : 20:1



STA 222+50 TO 223+00

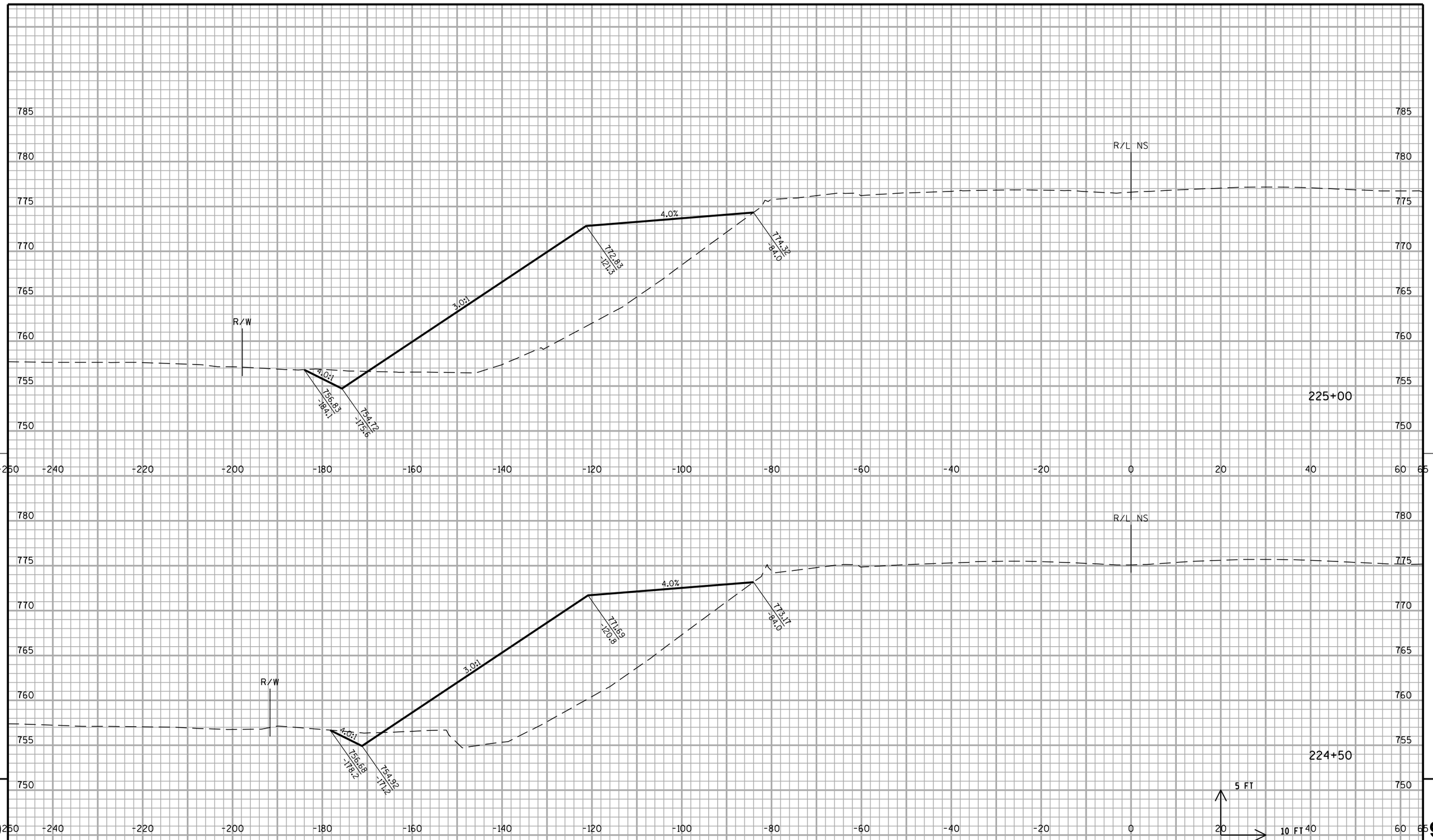
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s1 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



STA 223+50 TO 224+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E



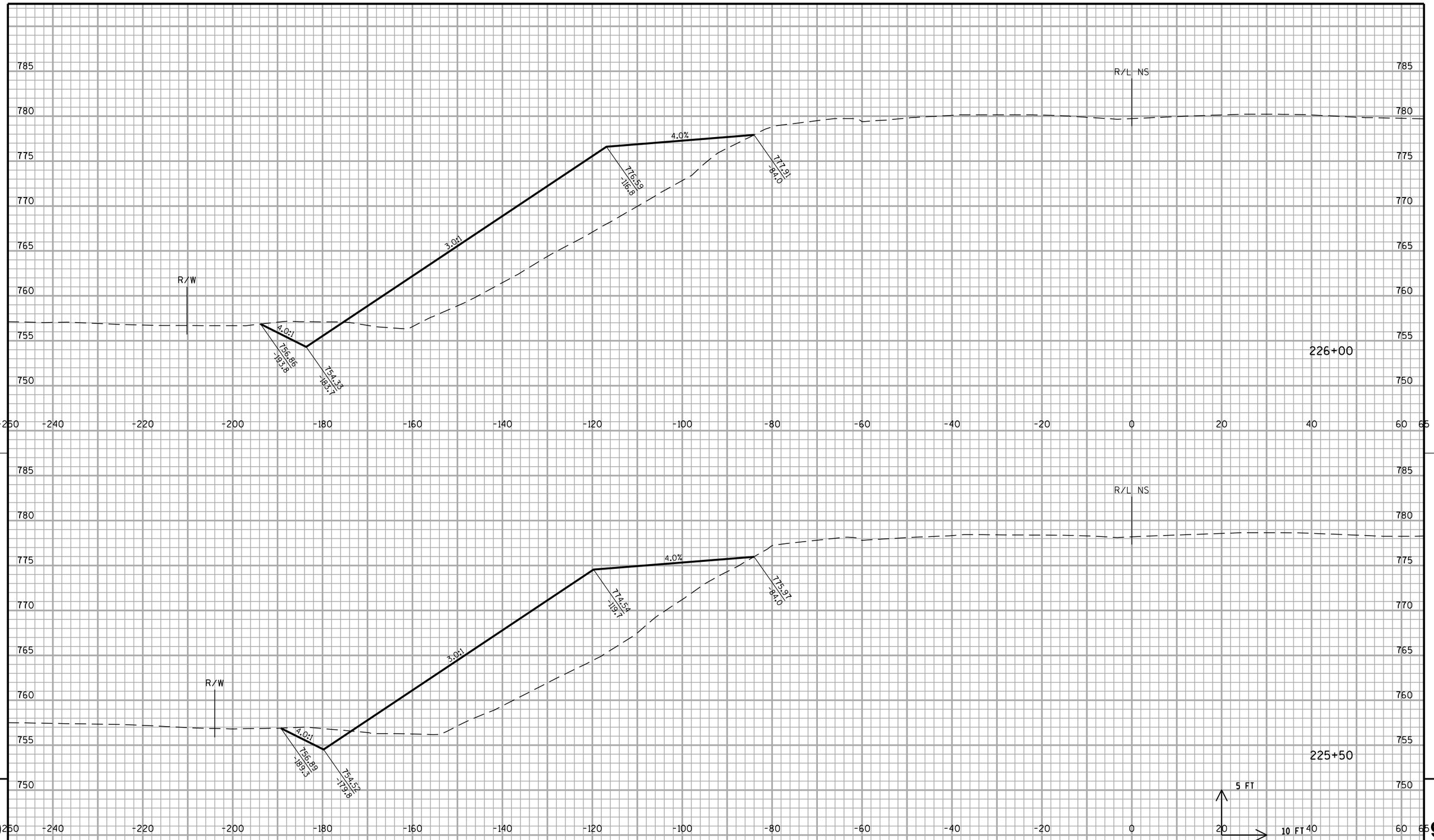
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

STA 224+50 TO 225+00

9

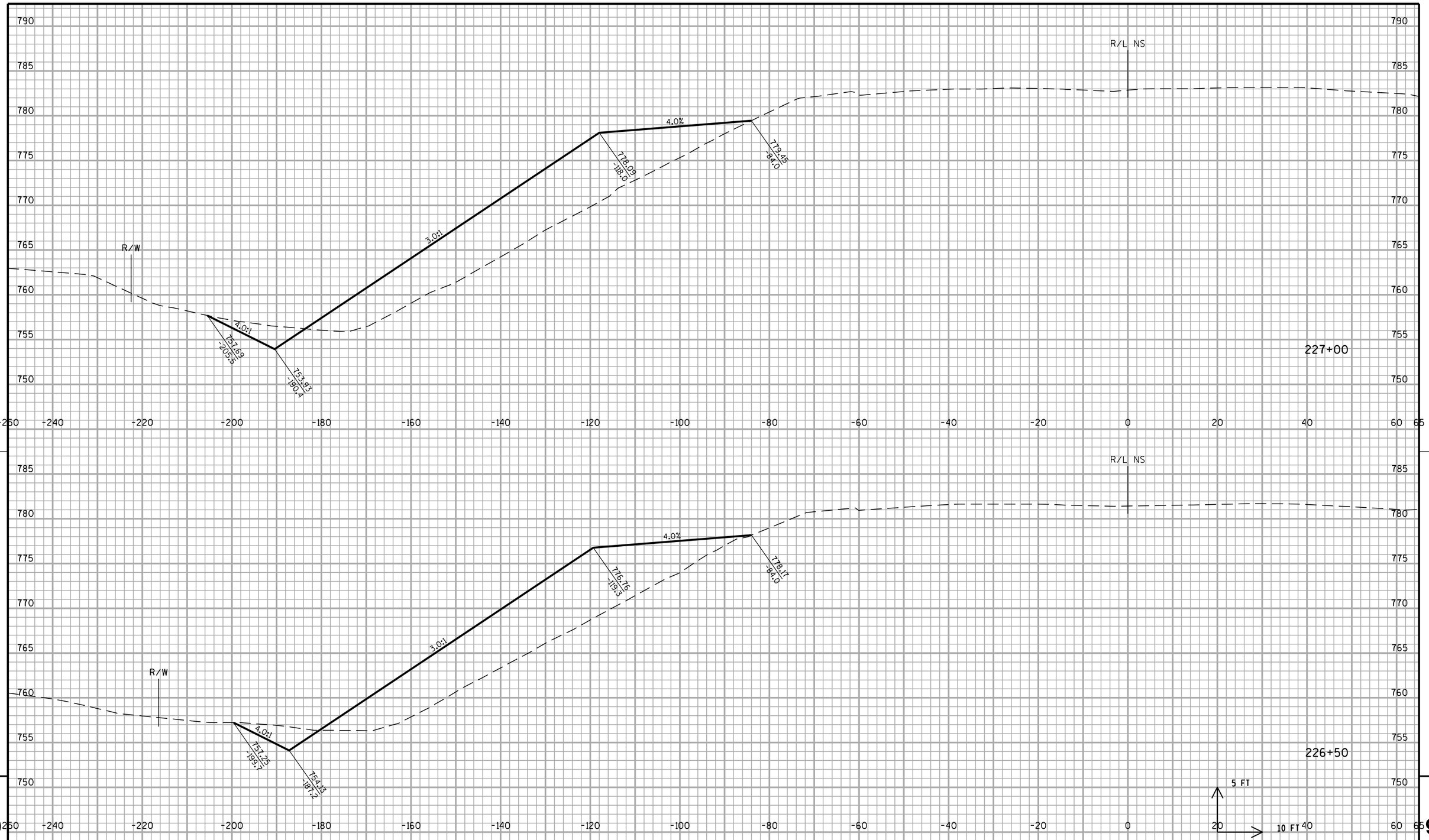
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s3 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



STA 225+50 TO 226+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s4 PLOT SCALE : 20:1



STA 226+50 TO 227+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

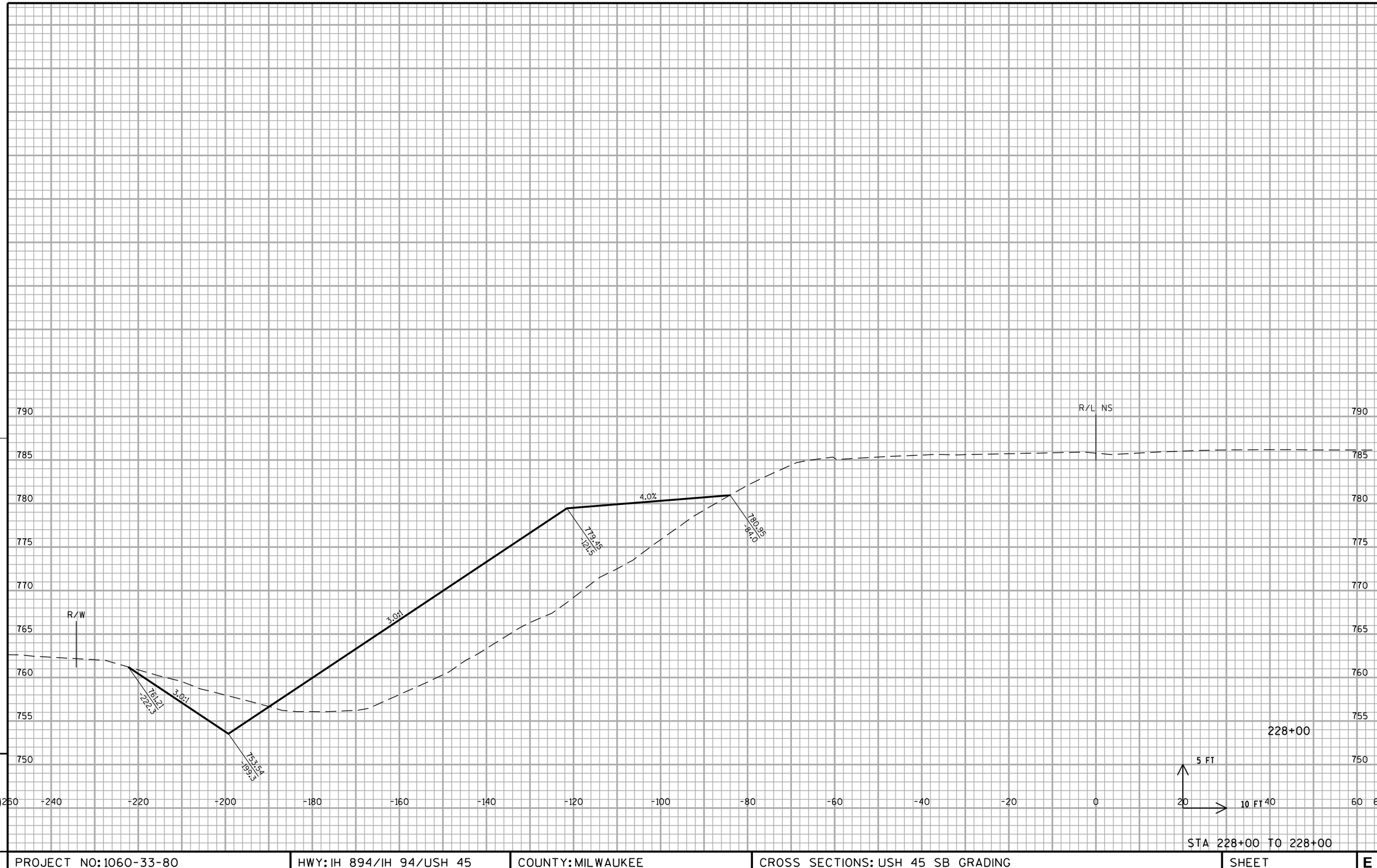
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s5 PLOT SCALE : 20:1

790
785
780
775
770
765
760
755
750
R/L NS
R/W
3.0:1
4.0%
3.0:1
779.25
-148.4
780.62
-84.0
756.97
-204.6
753.74
-194.9
-260
-240
-220
-200
-180
-160
-140
-120
-100
-80
-60
-40
-20
0
20
40
60
65
227+50
5 FT
10 FT
STA 227+50 TO 227+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s6 PLOT SCALE : 20:1

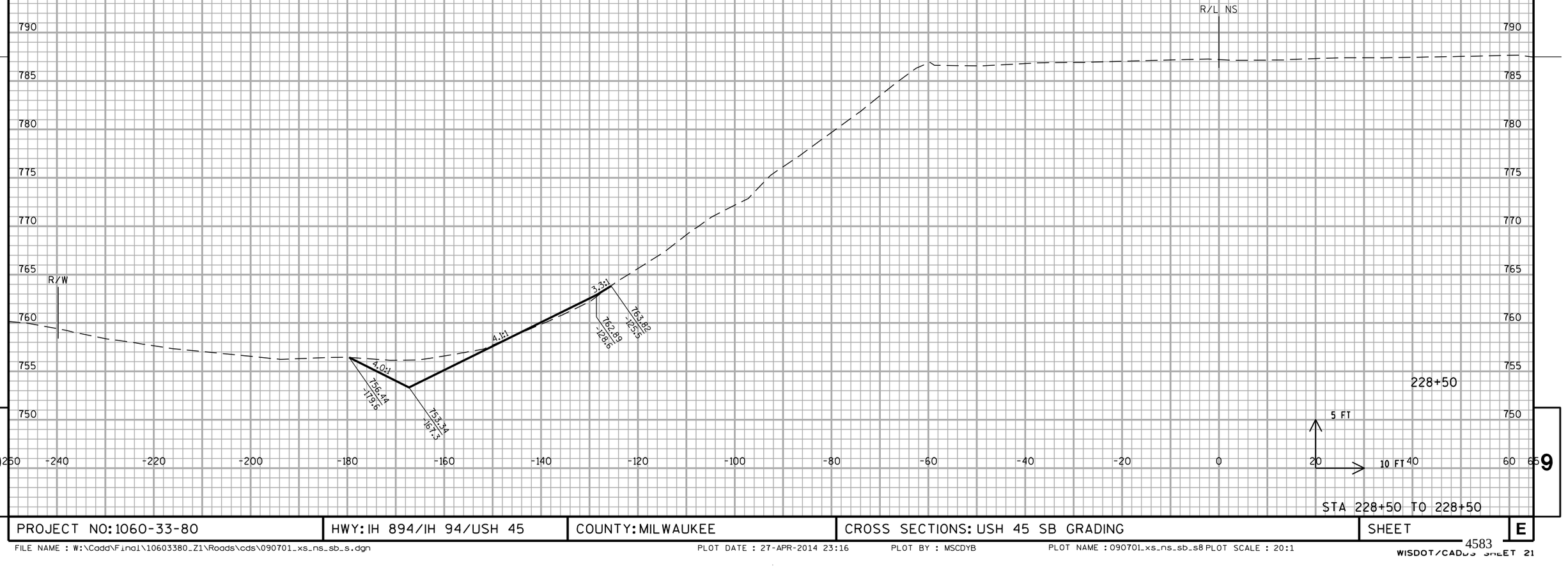
WISDOT/CADDS SHEET 21



STA 228+00 TO 228+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s7 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

STA 228+50 TO 228+50

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s8 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

795
790
785
780
775
770
765
760
755
750

R/L NS

R/W

4.0:1
3.8:1
1
756.36
167.9
753.23
155.5
758.53
135.3

-260 -240 -220 -200 -180 -160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 65

228+74
STATION
BACK

5 FT
10 FT

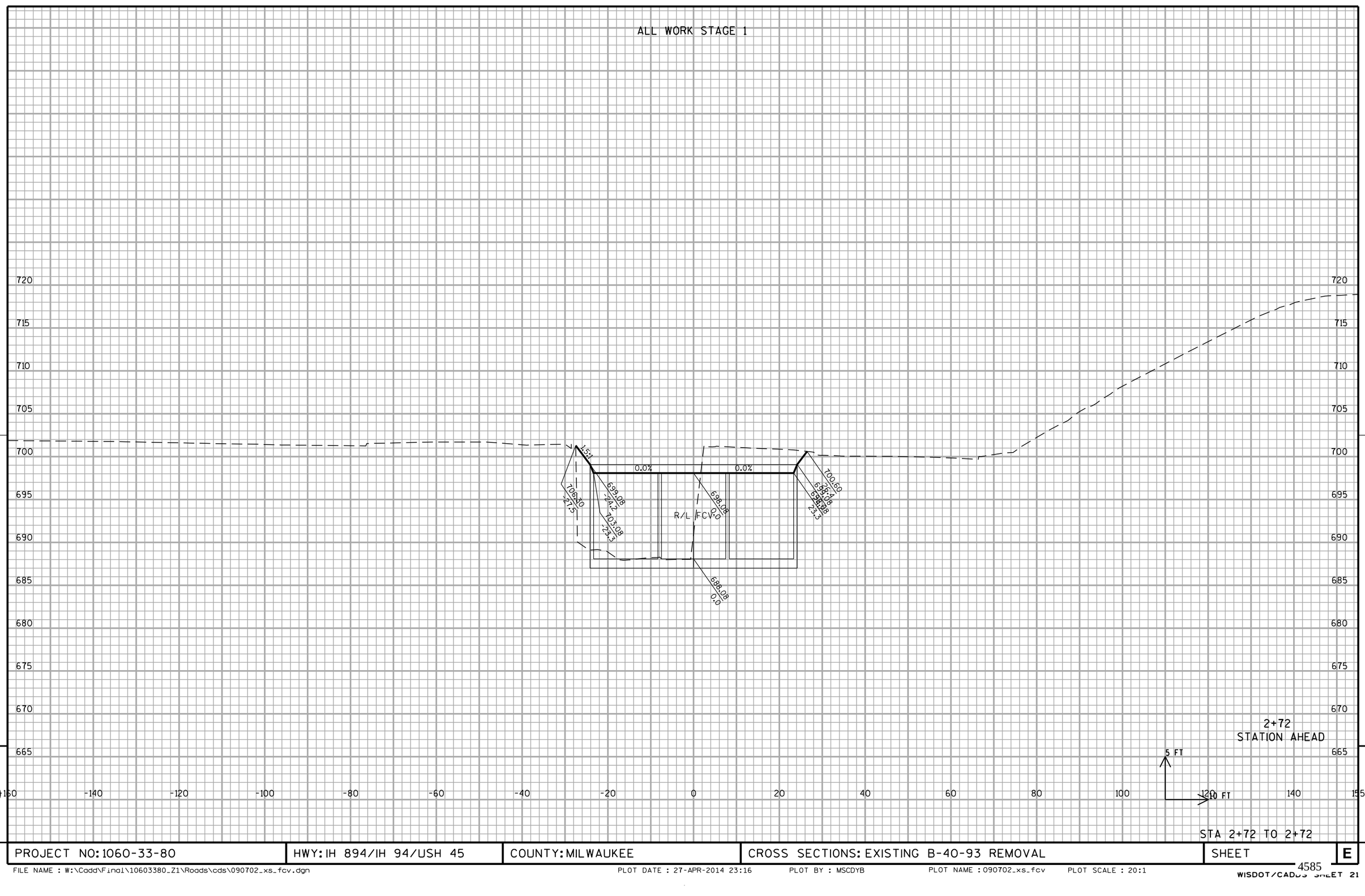
STA 228+74 TO 228+74

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 SB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090701_xs_ns_sb_s.dgn PLOT DATE : 27-APR-2014 23:16 PLOT BY : MSCDYB PLOT NAME : 090701_xs_ns_sb_s9 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

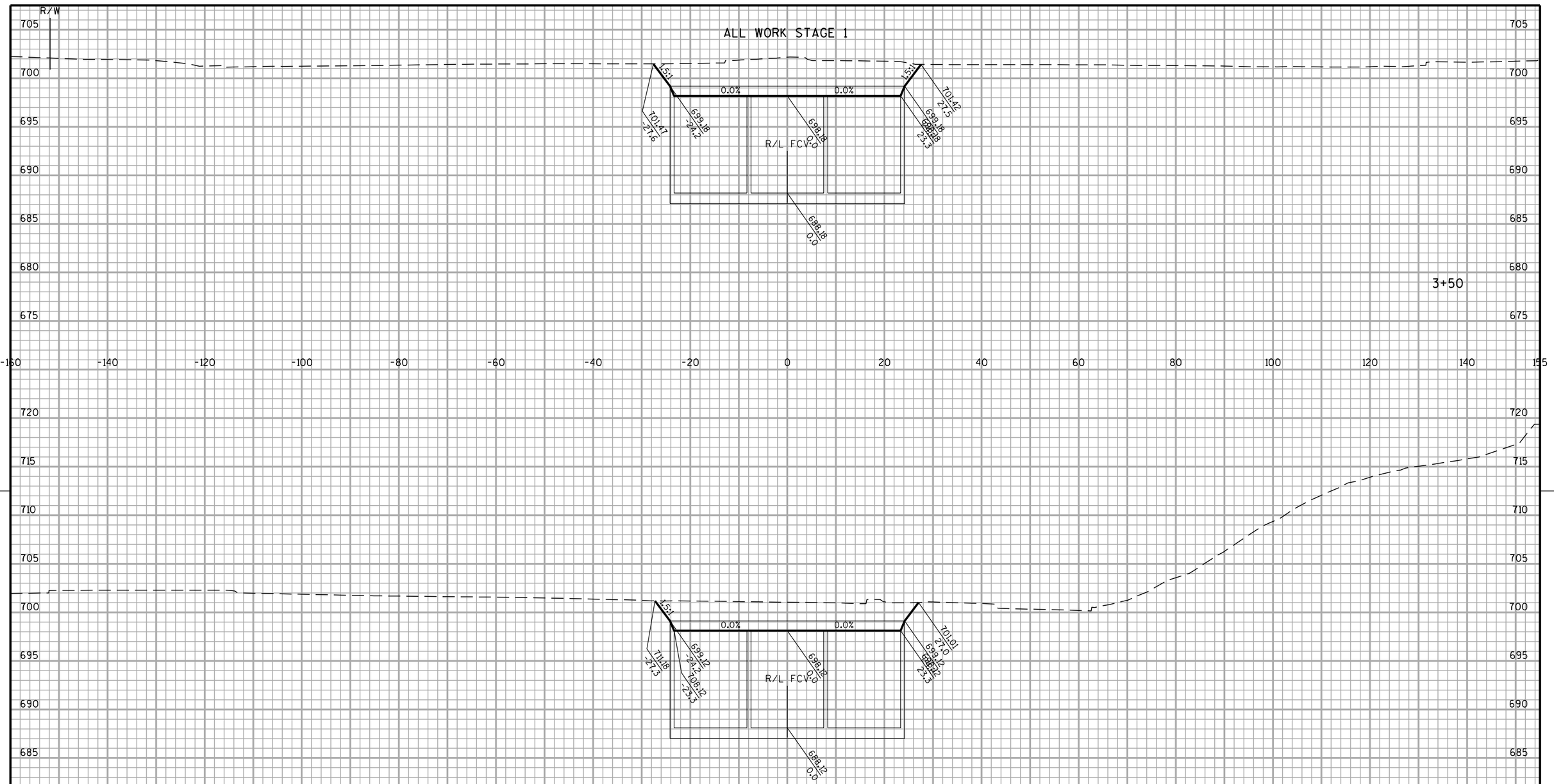
ALL WORK STAGE 1



STA 2+72 TO 2+72

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

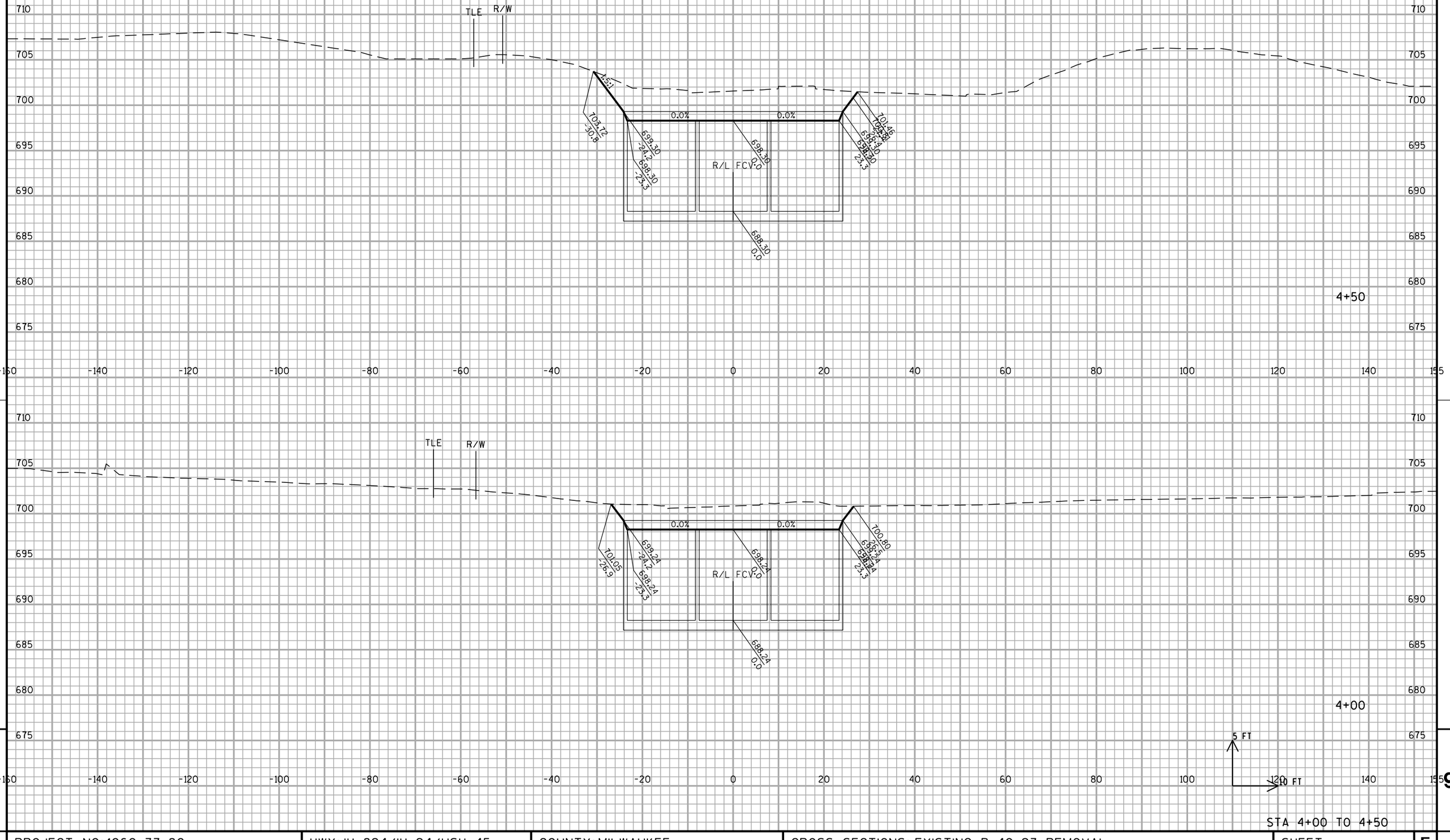
ALL WORK STAGE 1



STA 3+00 TO 3+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

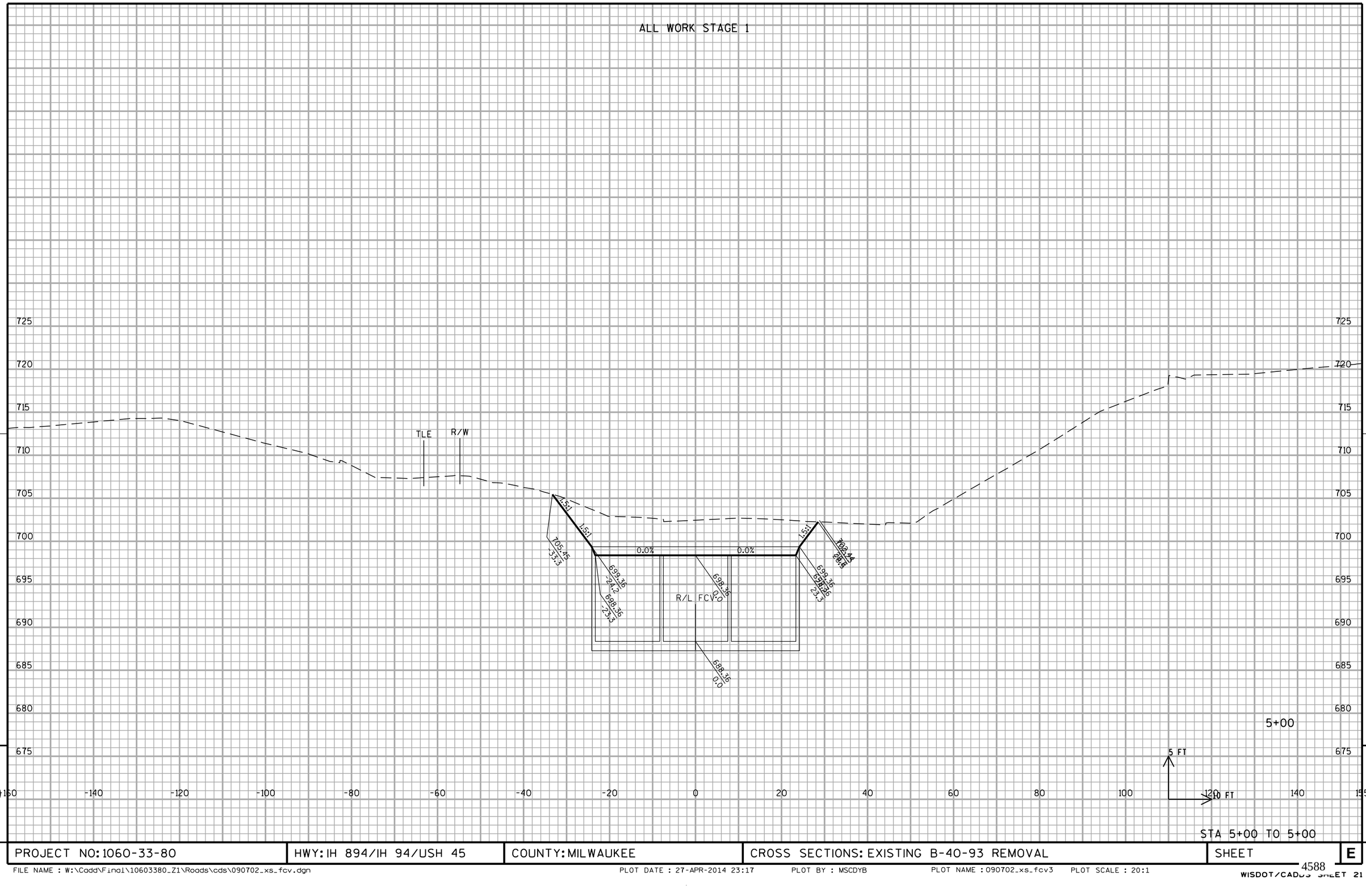
ALL WORK STAGE 1



STA 4+00 TO 4+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

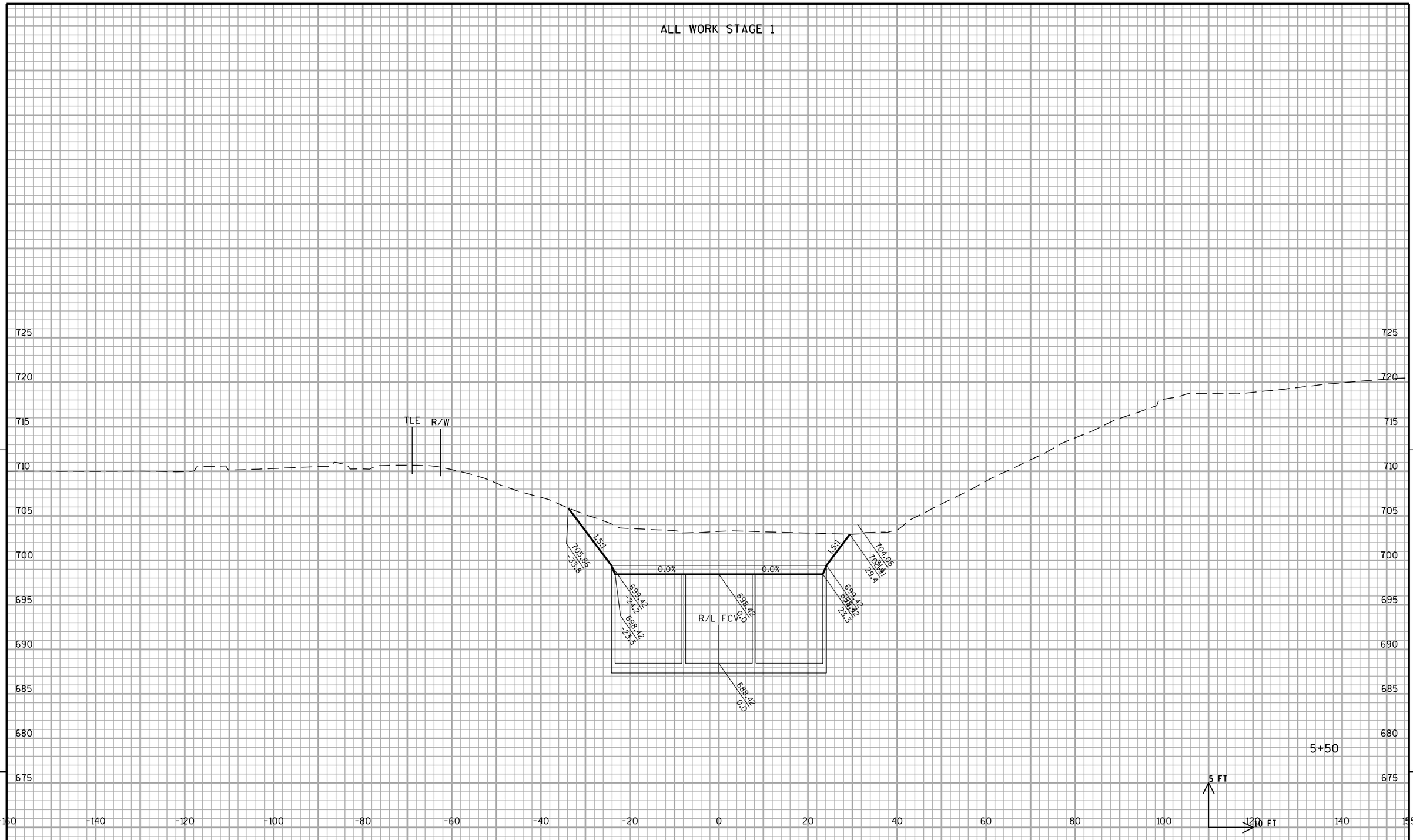
ALL WORK STAGE 1



STA 5+00 TO 5+00

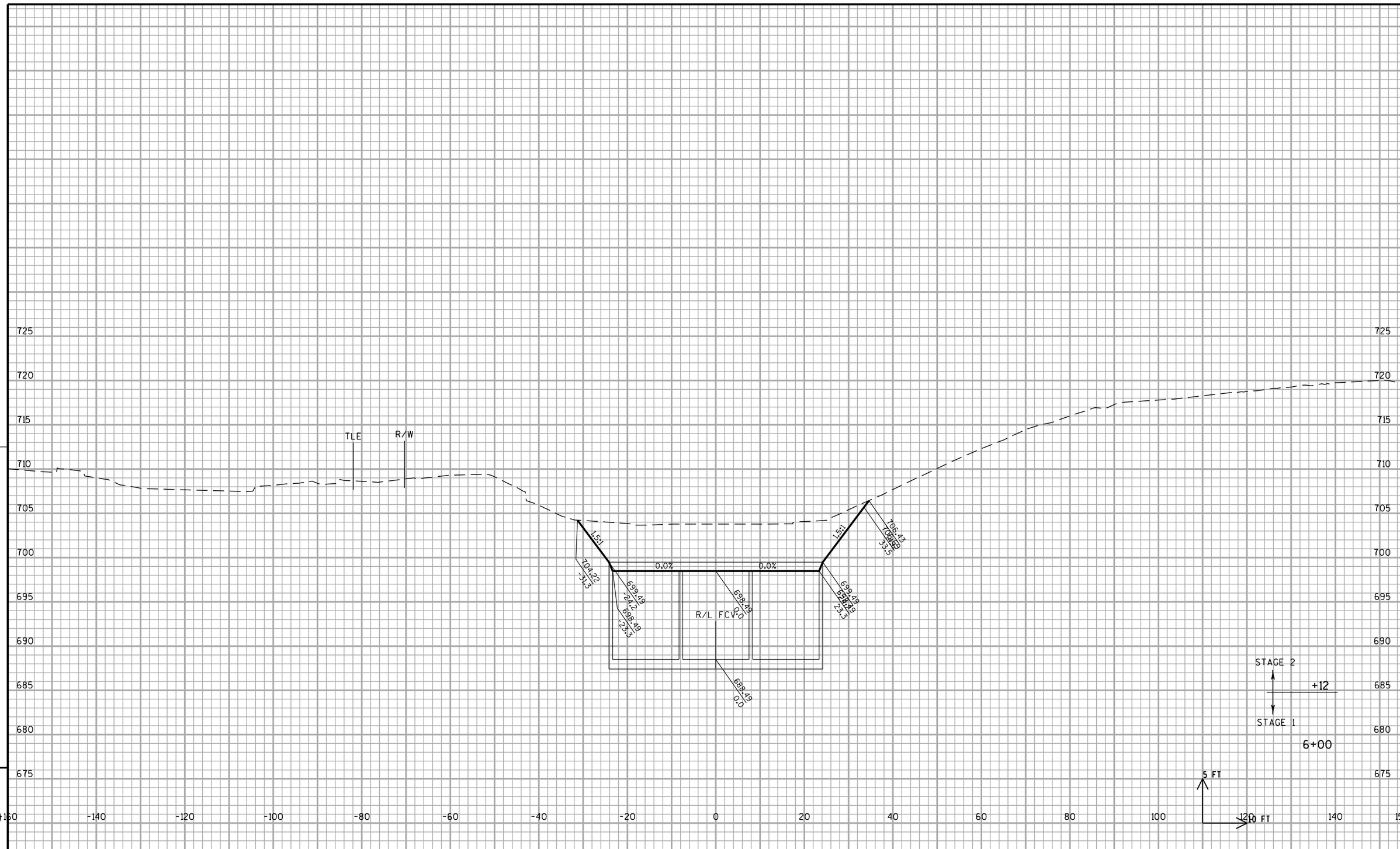
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

ALL WORK STAGE 1



STA 5+50 TO 5+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

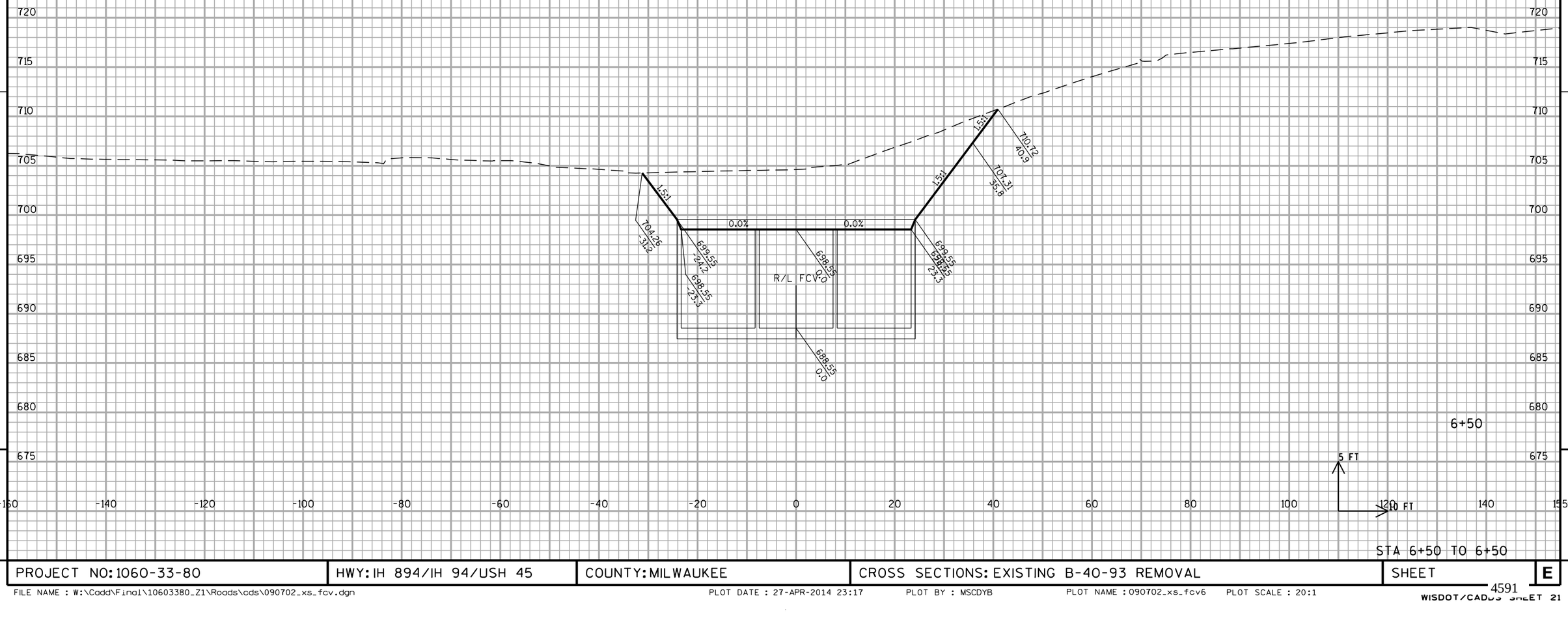


STA 6+00 TO 6+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv5 PLOT SCALE : 20:1

ALL WORK STAGE 2



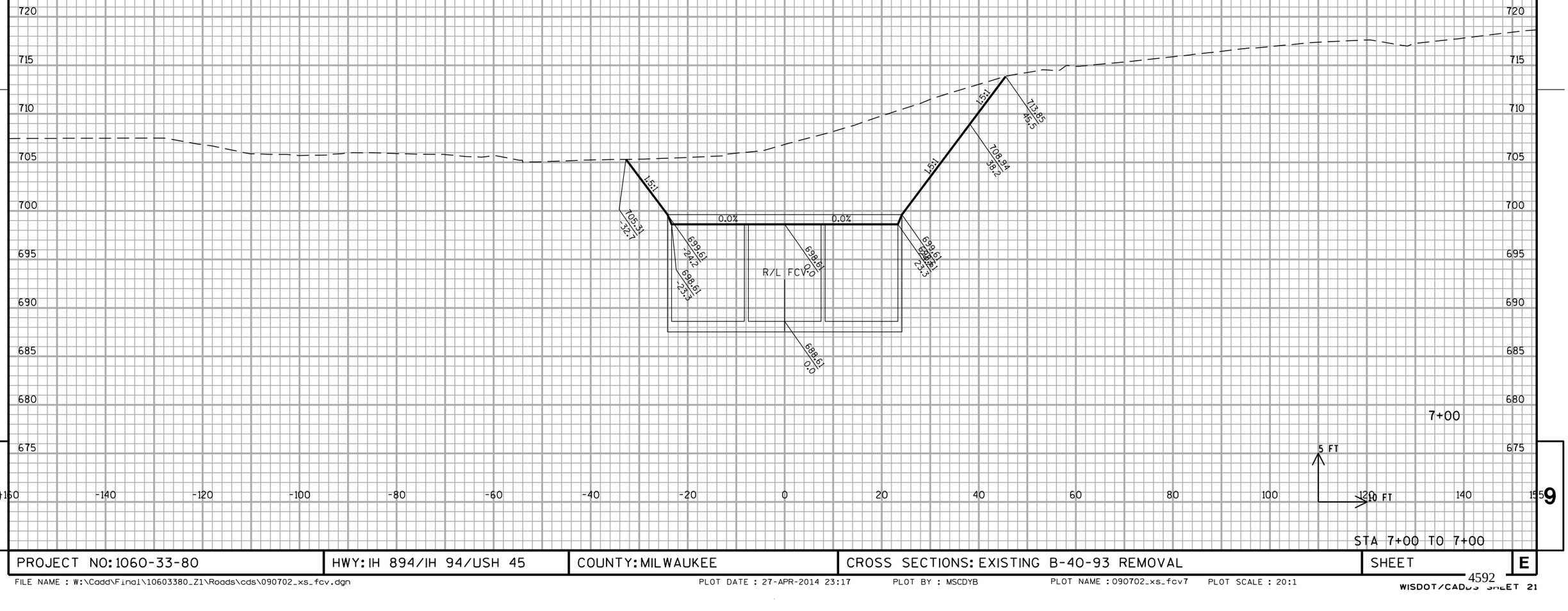
STA 6+50 TO 6+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

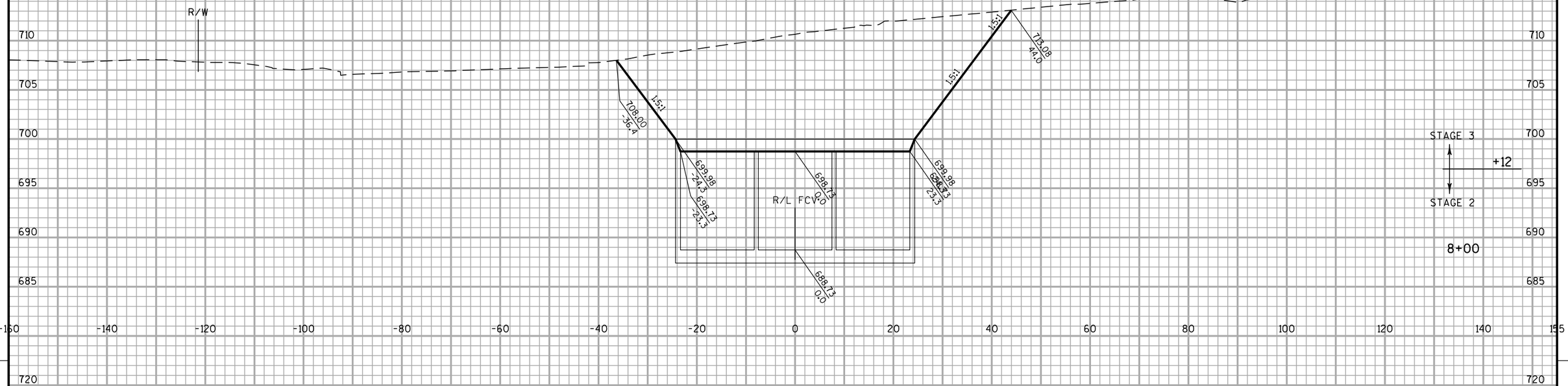


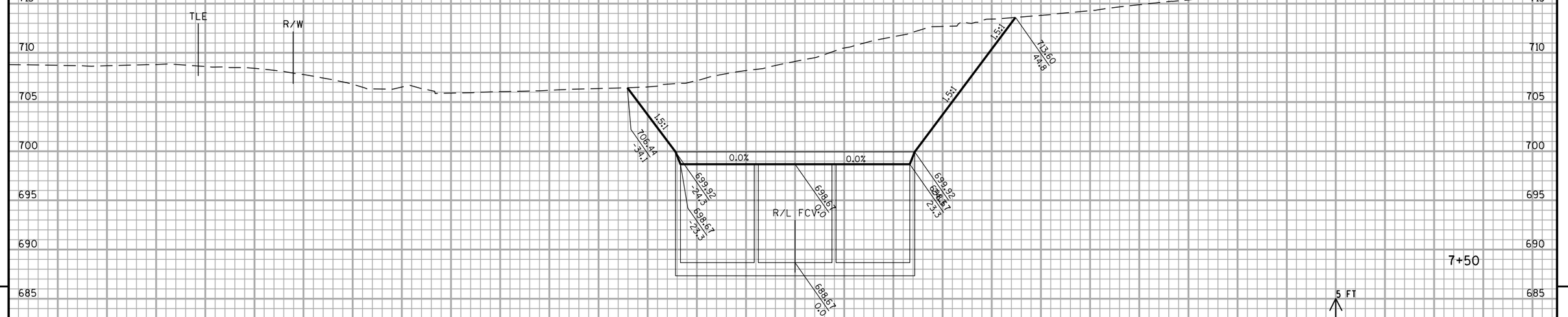
STA 7+00 TO 7+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv7 PLOT SCALE : 20:1

ALL WORK STAGE 3

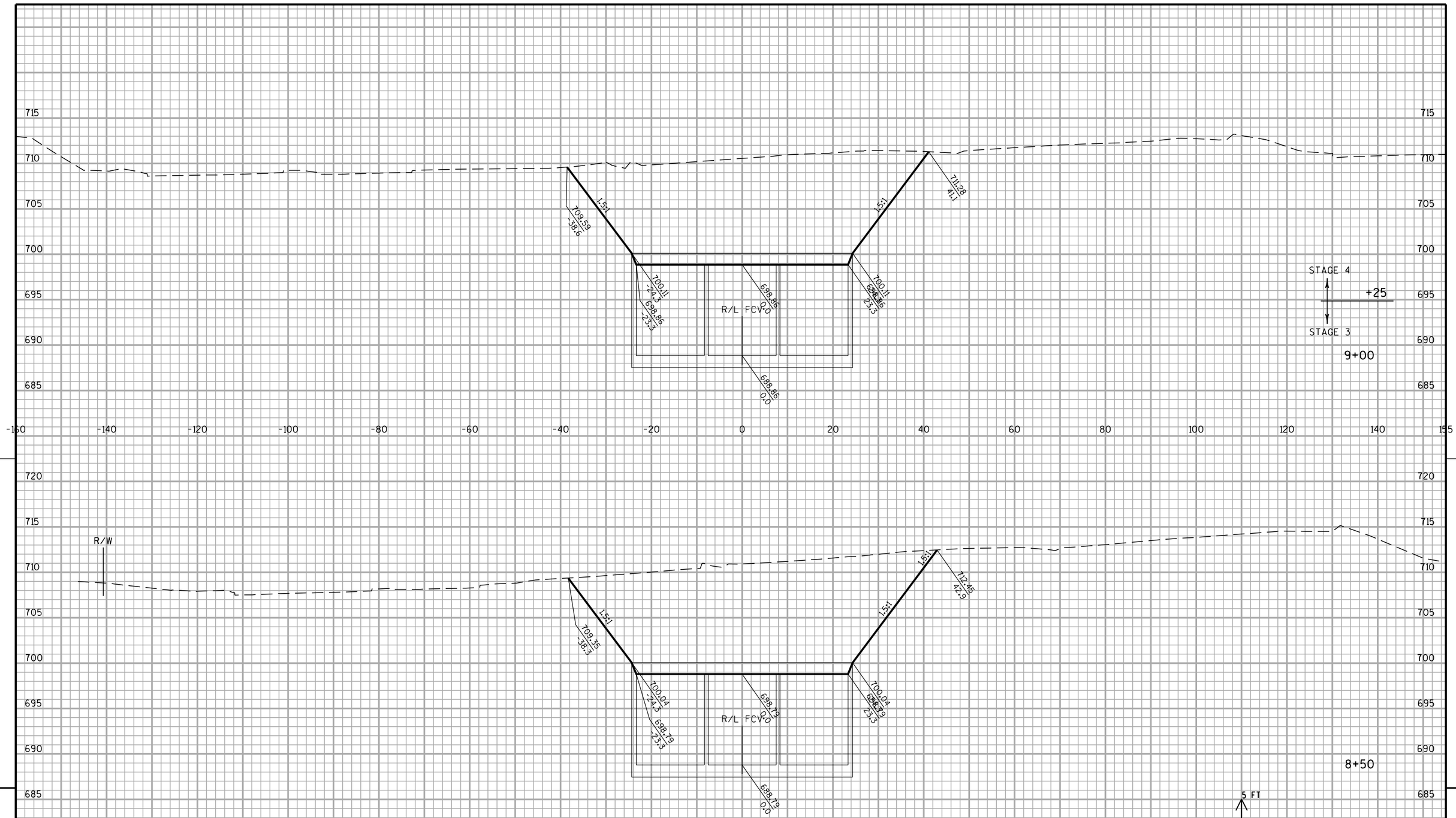




STA 7+50 TO 8+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv8 PLOT SCALE : 20:1



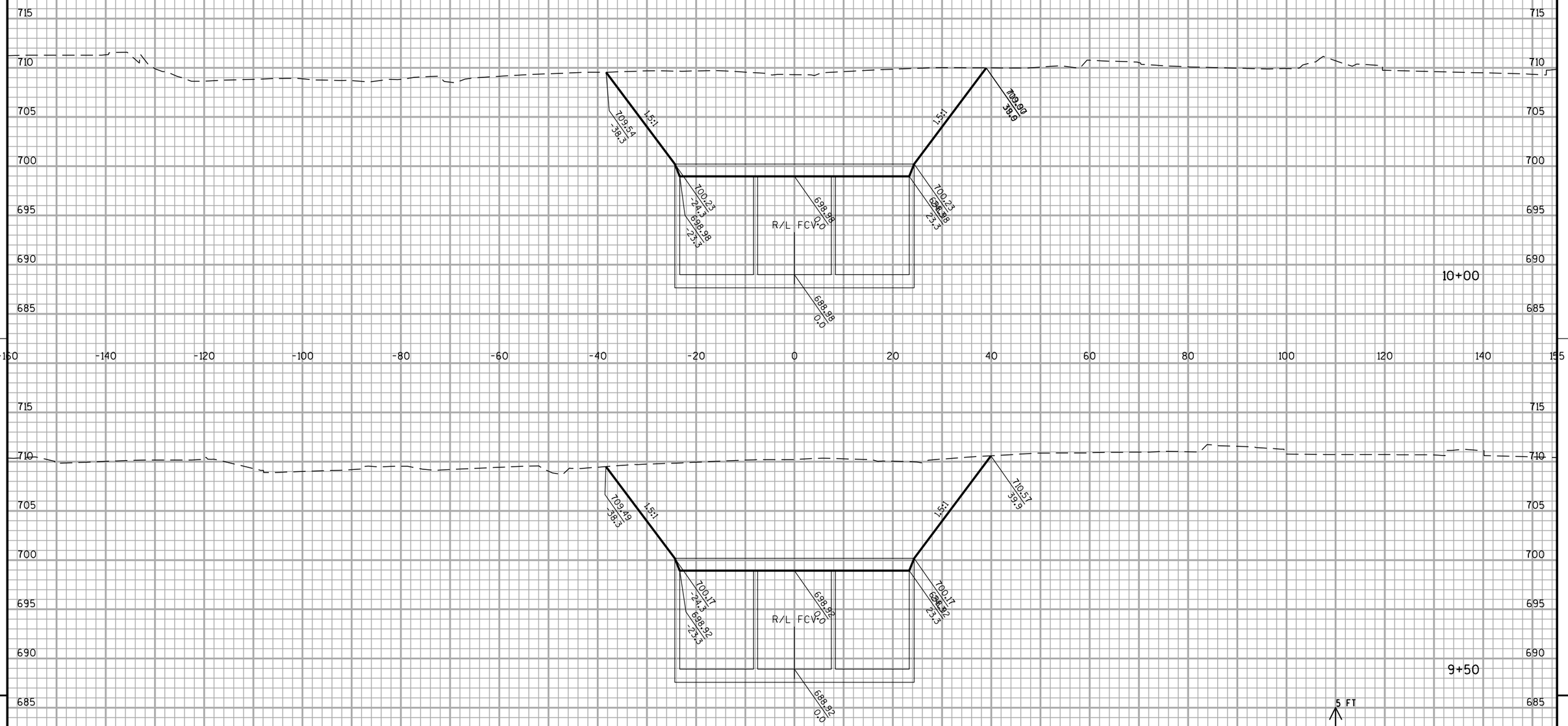
9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv9 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

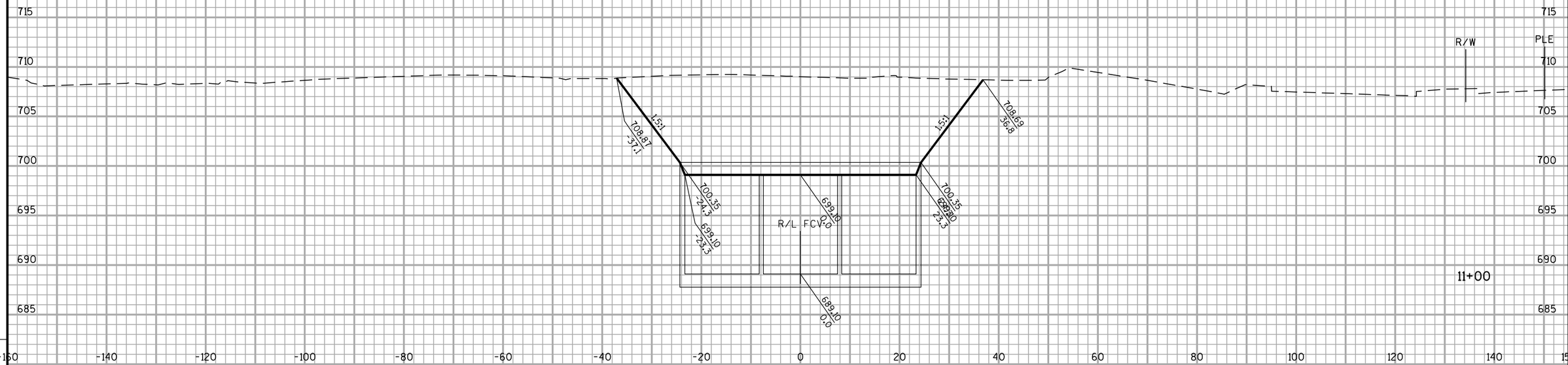
ALL WORK STAGE 4

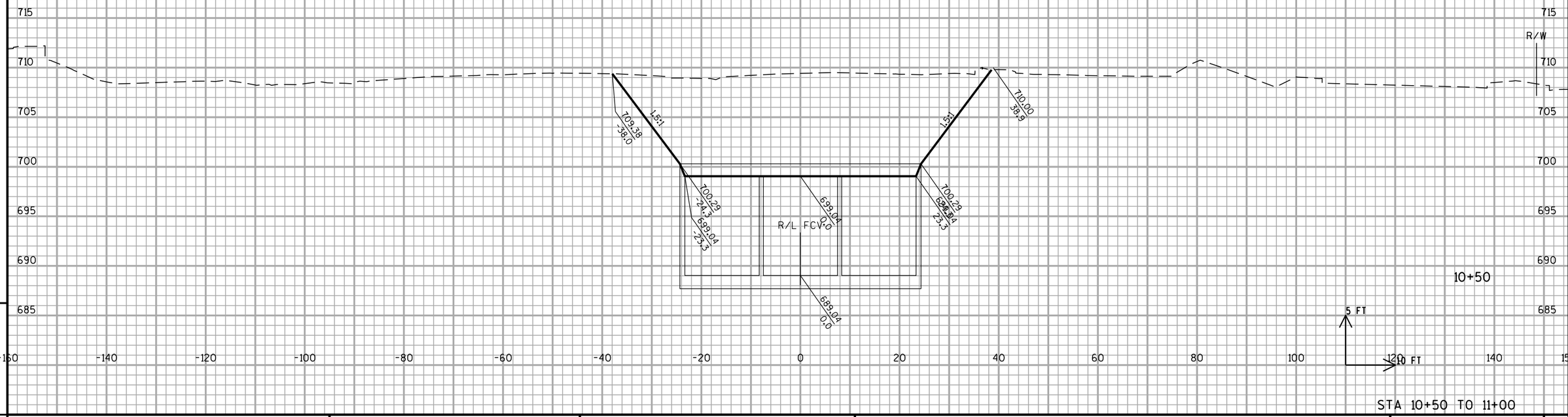


STA 9+50 TO 10+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

ALL WORK STAGE 4



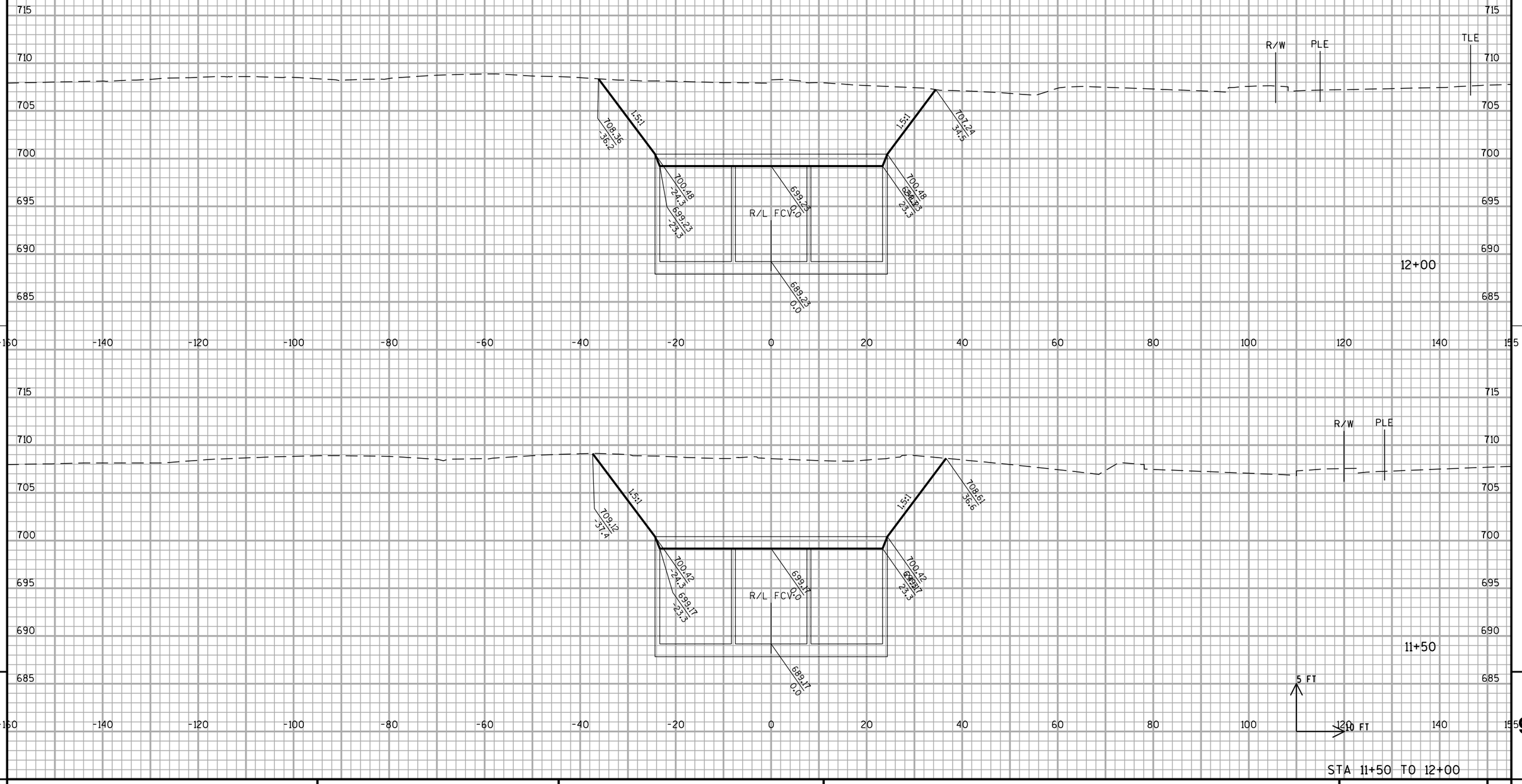


STA 10+50 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv11 PLOT SCALE : 20:1

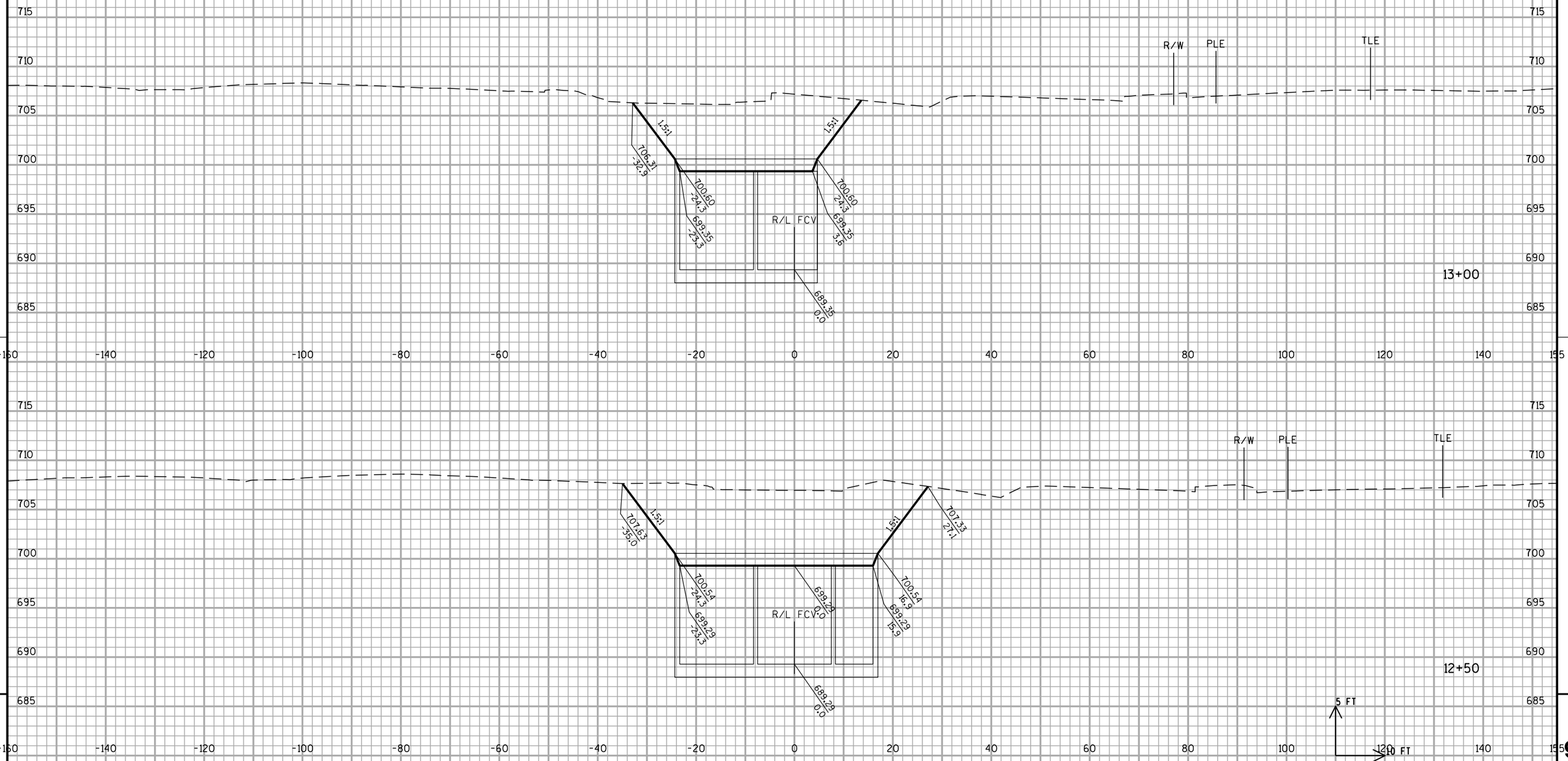
ALL WORK STAGE 4



STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

ALL WORK STAGE 4

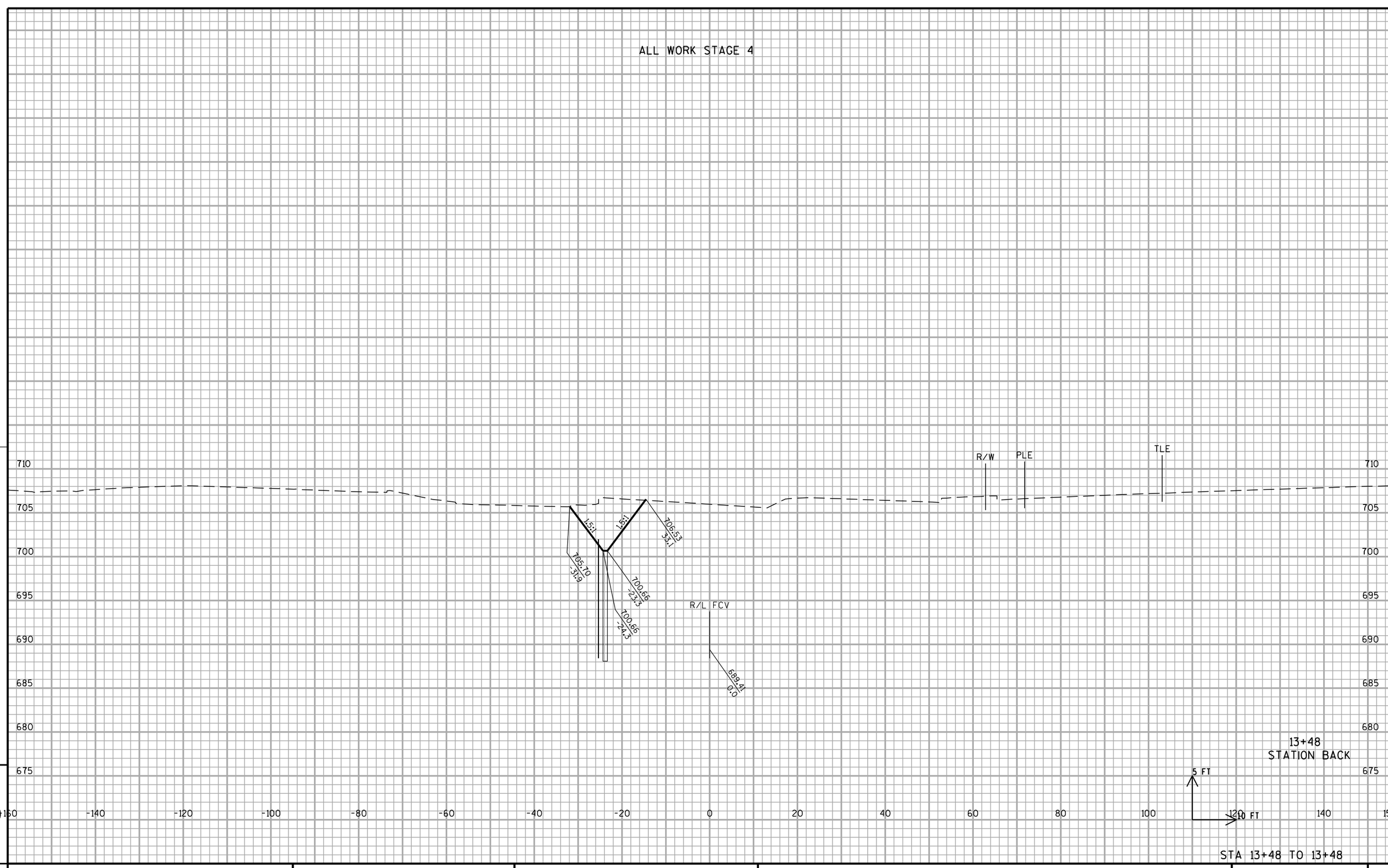


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090702_xs_fcv.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090702_xs_fcv13 PLOT SCALE : 20:1

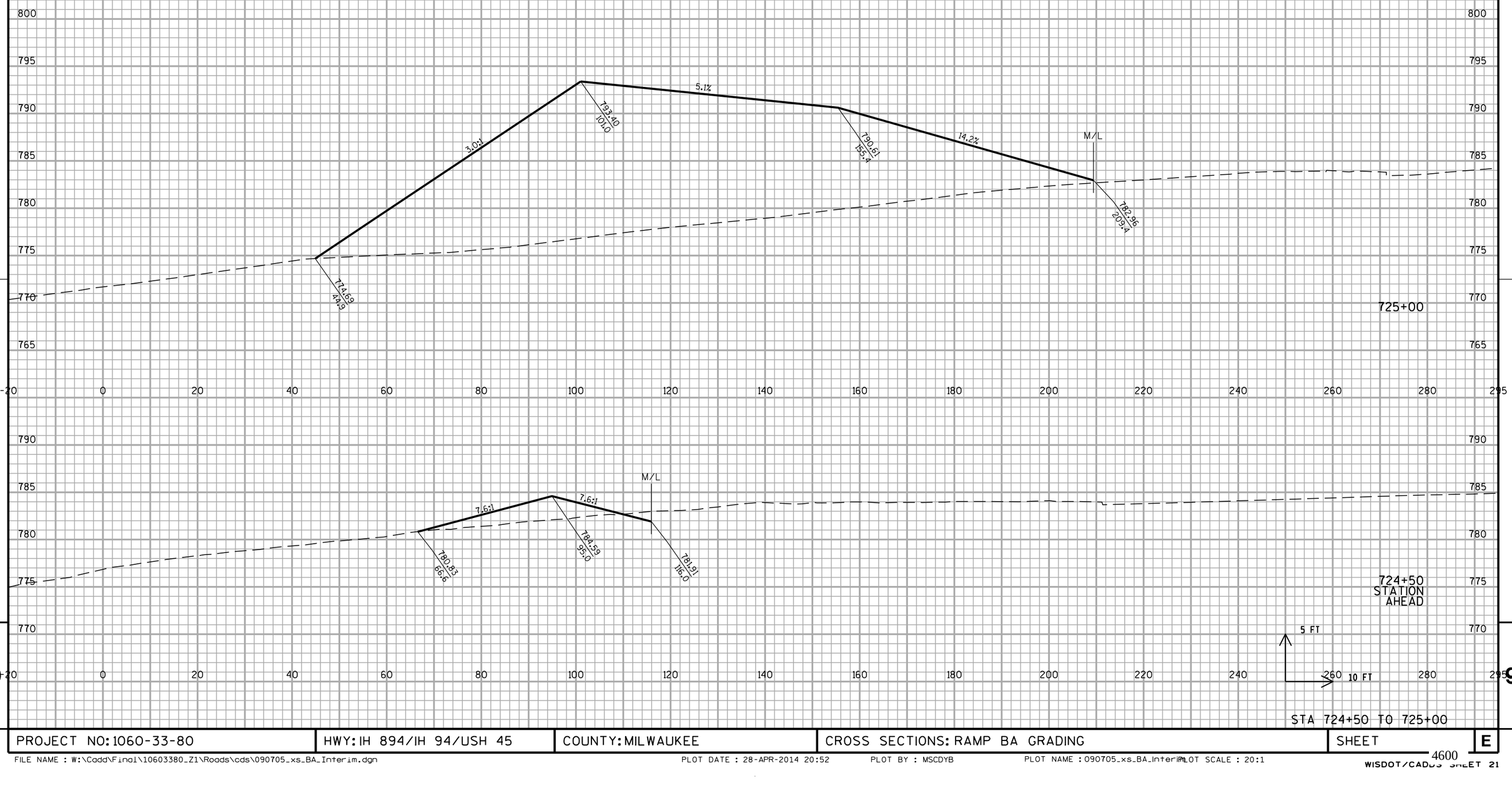
ALL WORK STAGE 4



STA 13+48 TO 13+48

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING B-40-93 REMOVAL	SHEET	E

ALL WORK STAGE 2

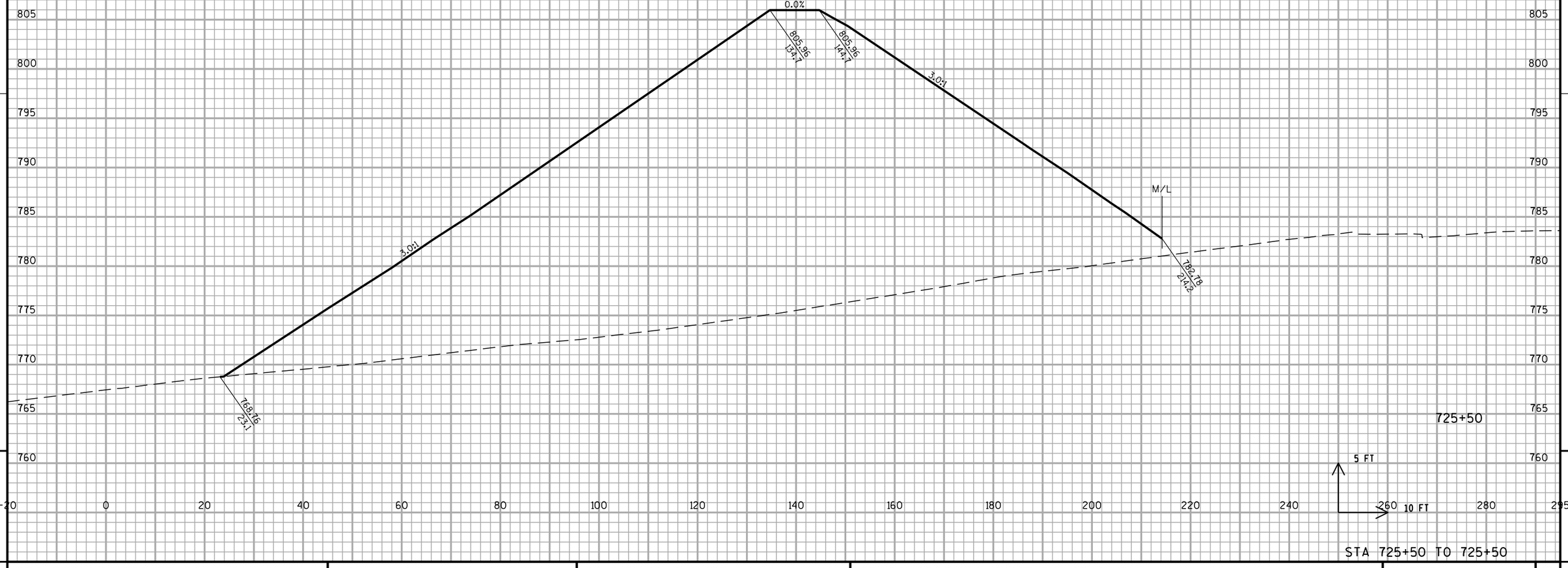


STA 724+50 TO 725+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim PLOT SCALE : 20:1

ALL WORK STAGE 2

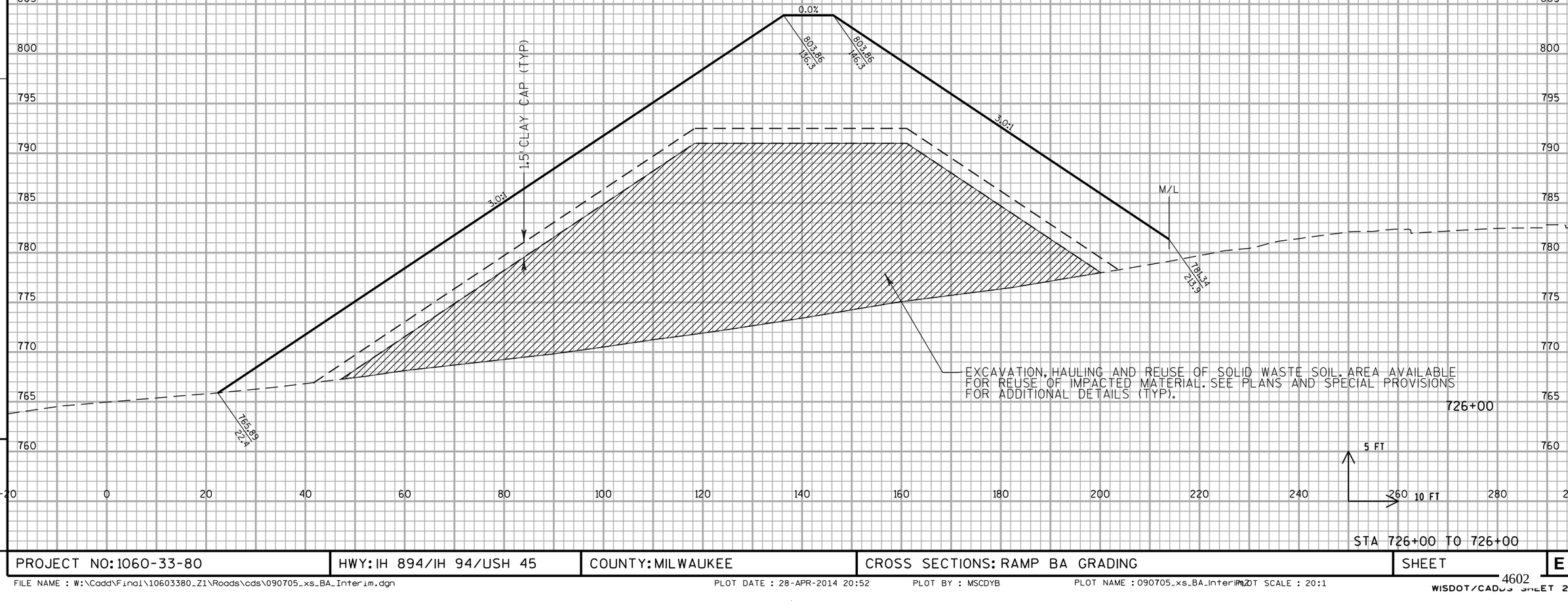


STA 725+50 TO 725+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

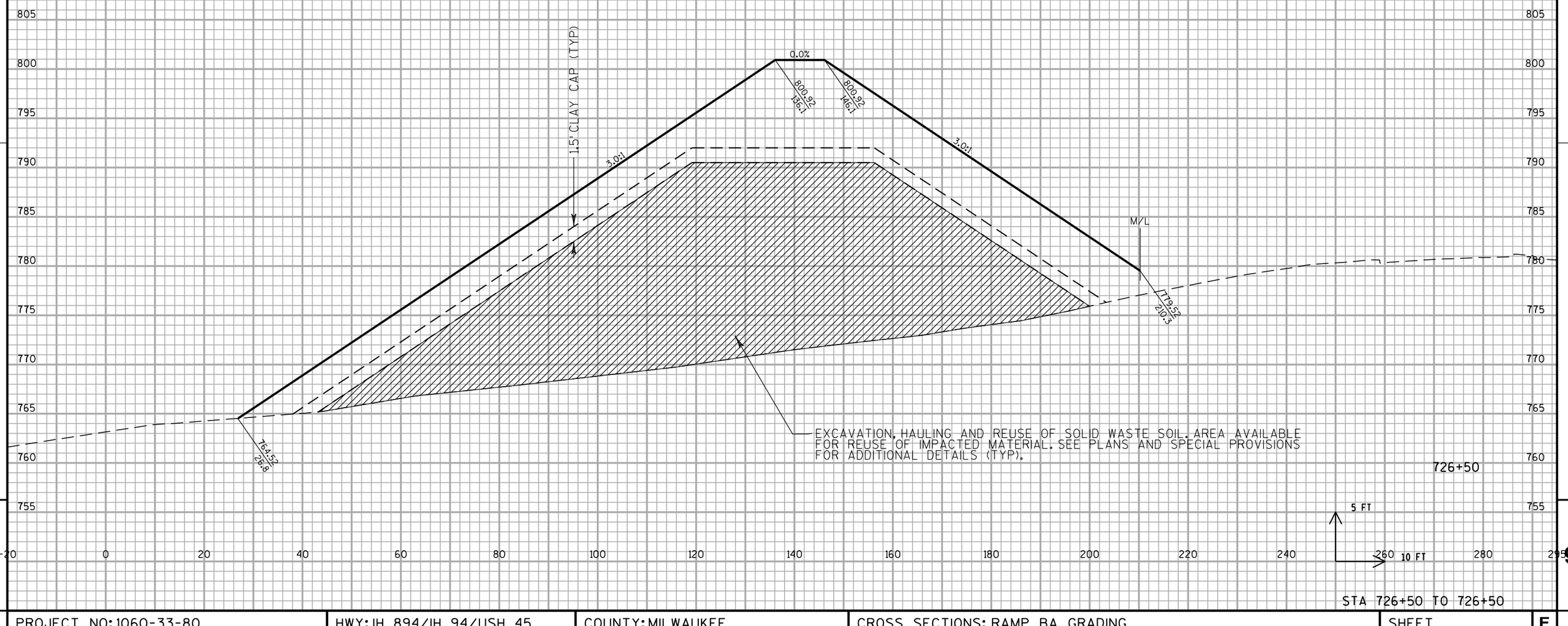
ALL WORK STAGE 2



STA 726+00 TO 726+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

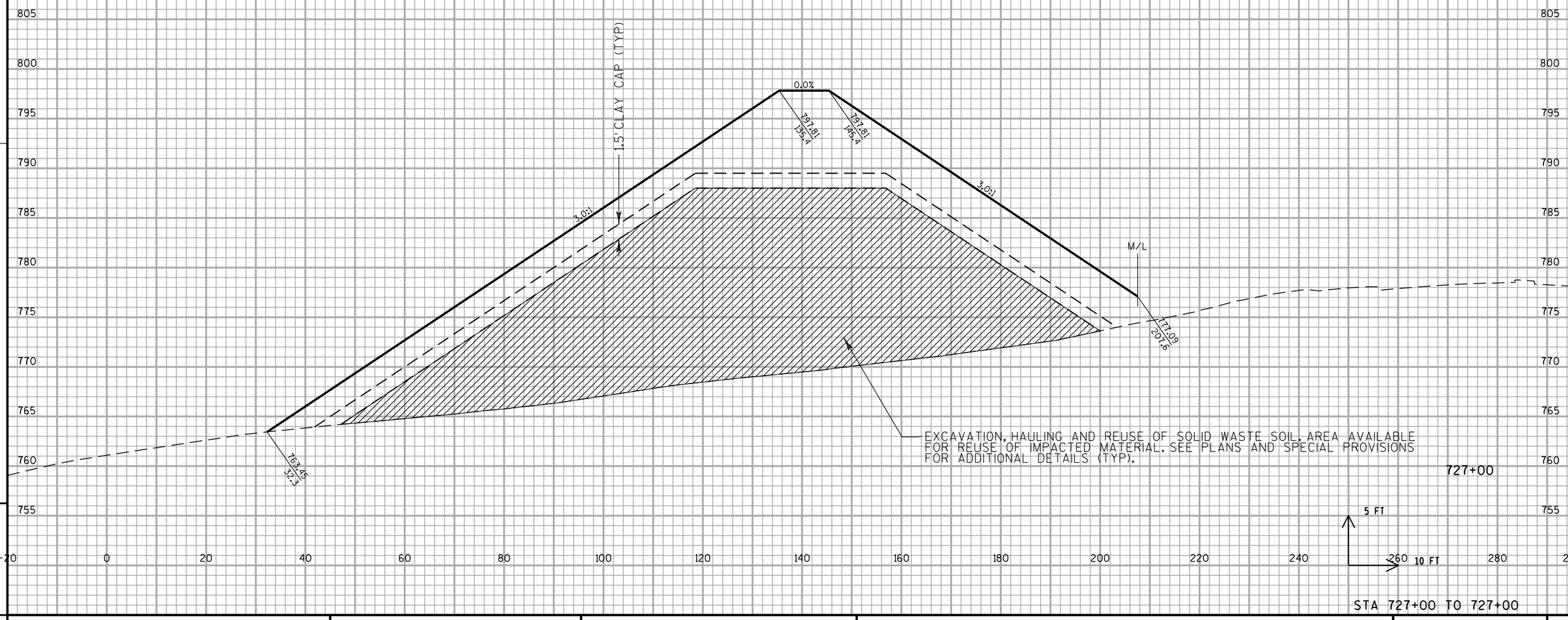
ALL WORK STAGE 2



STA 726+50 TO 726+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

ALL WORK STAGE 2

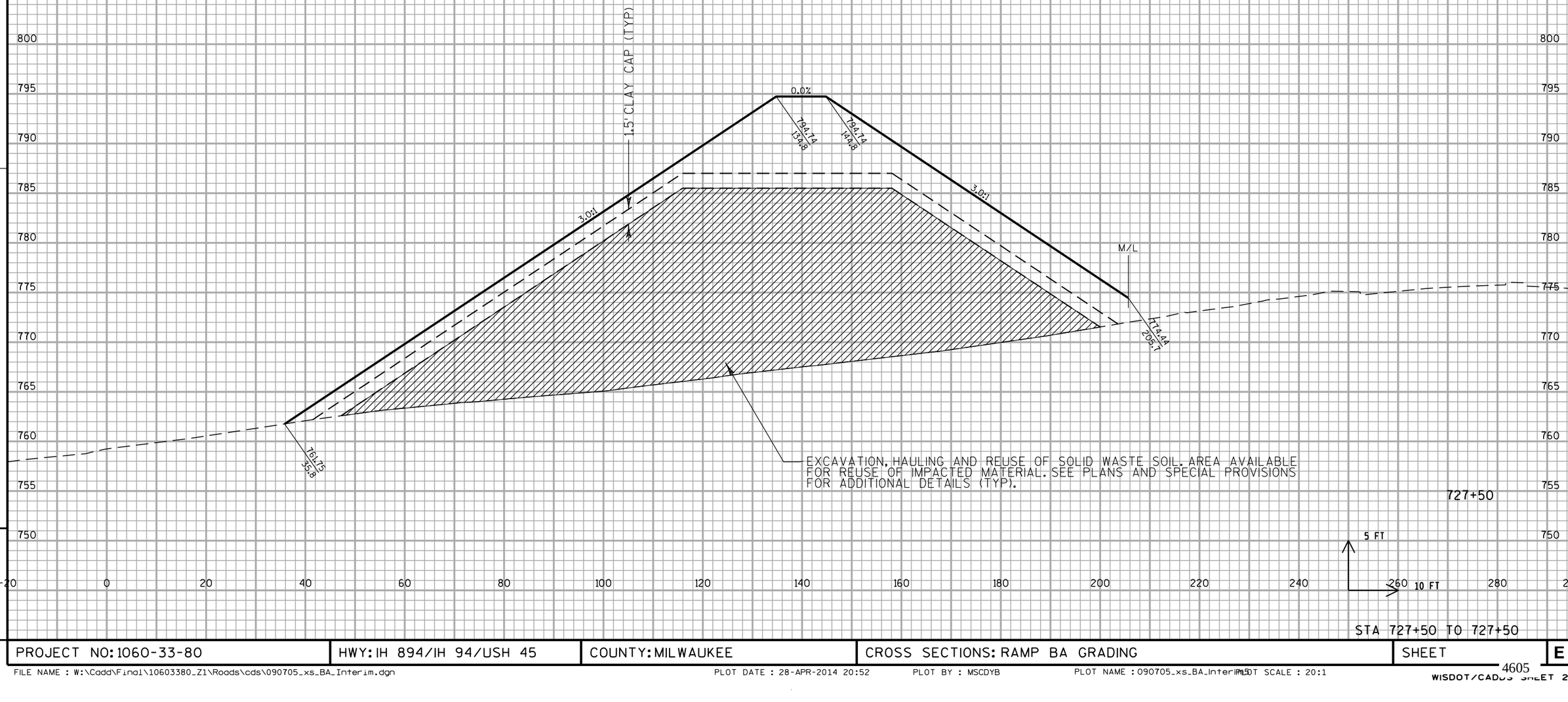


STA 727+00 TO 727+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2



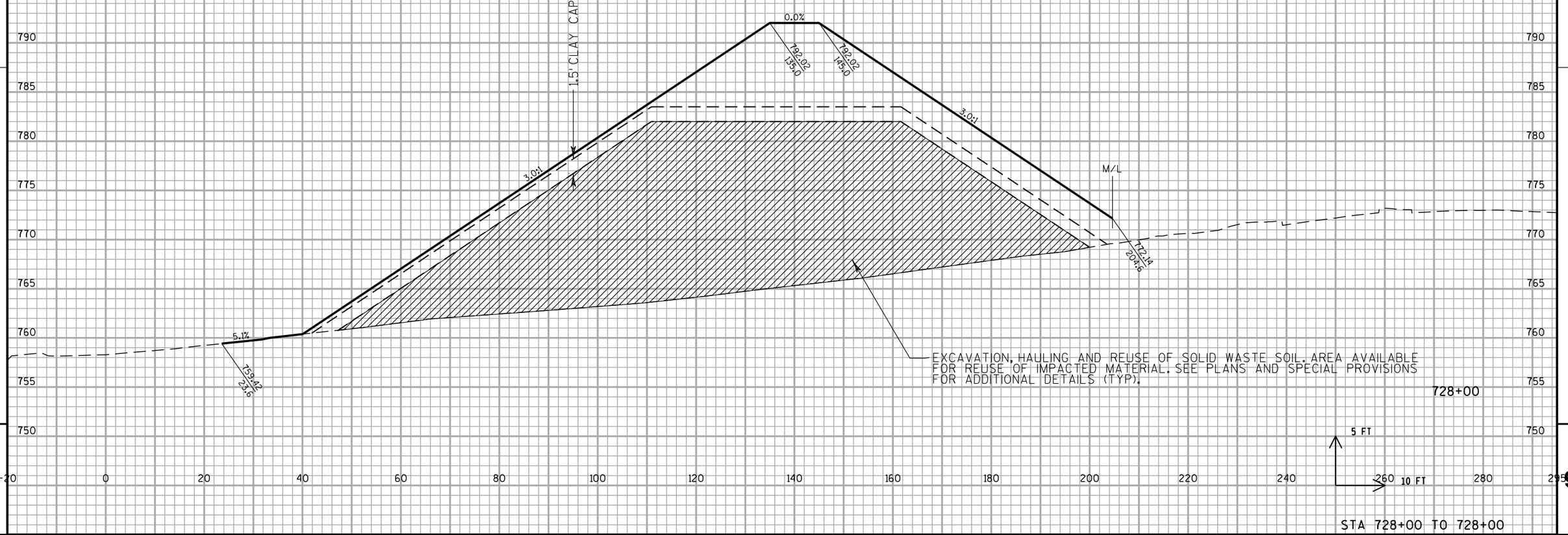
STA 727+50 TO 727+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

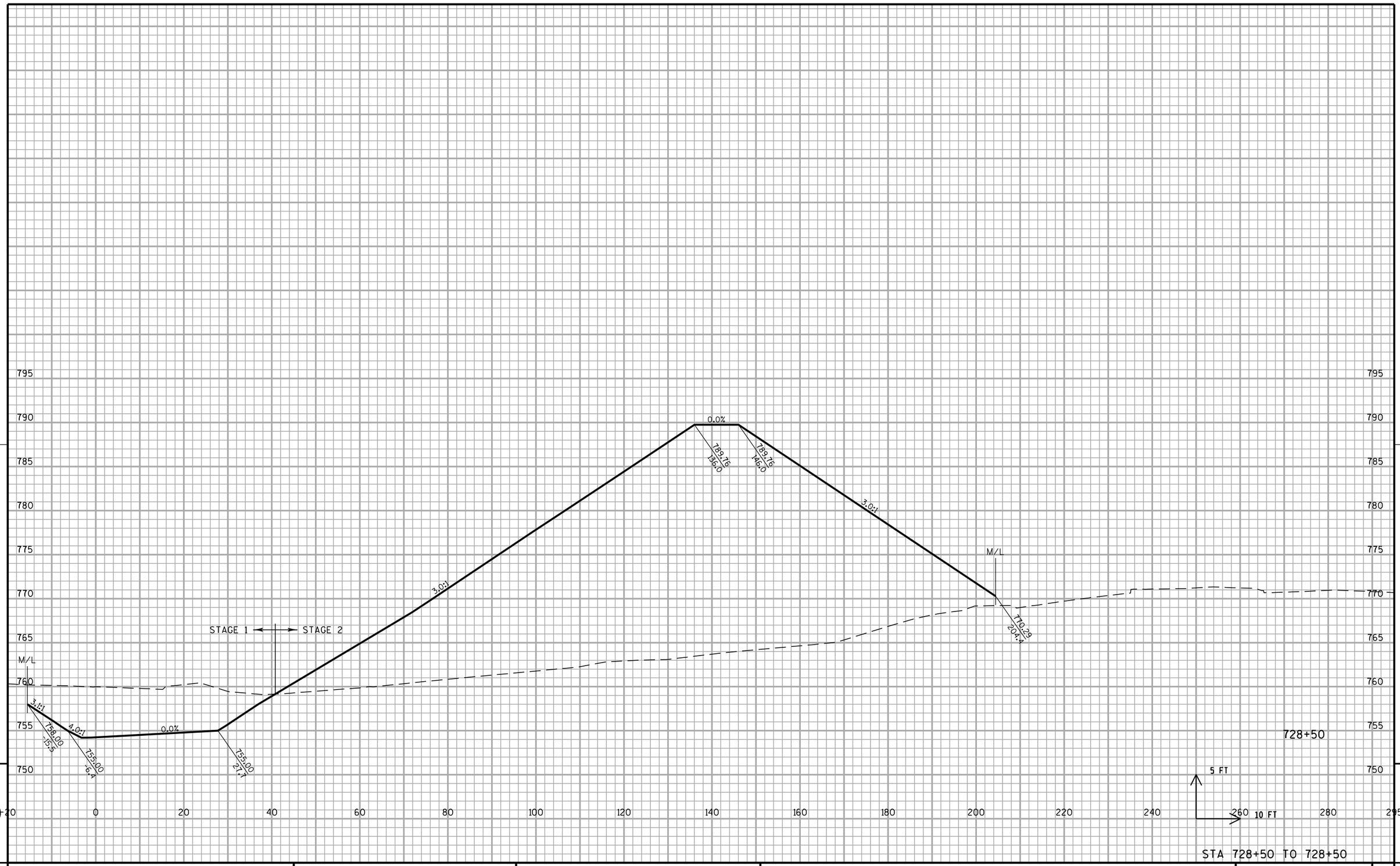
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



STA 728+00 TO 728+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E



STA 728+50 TO 728+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

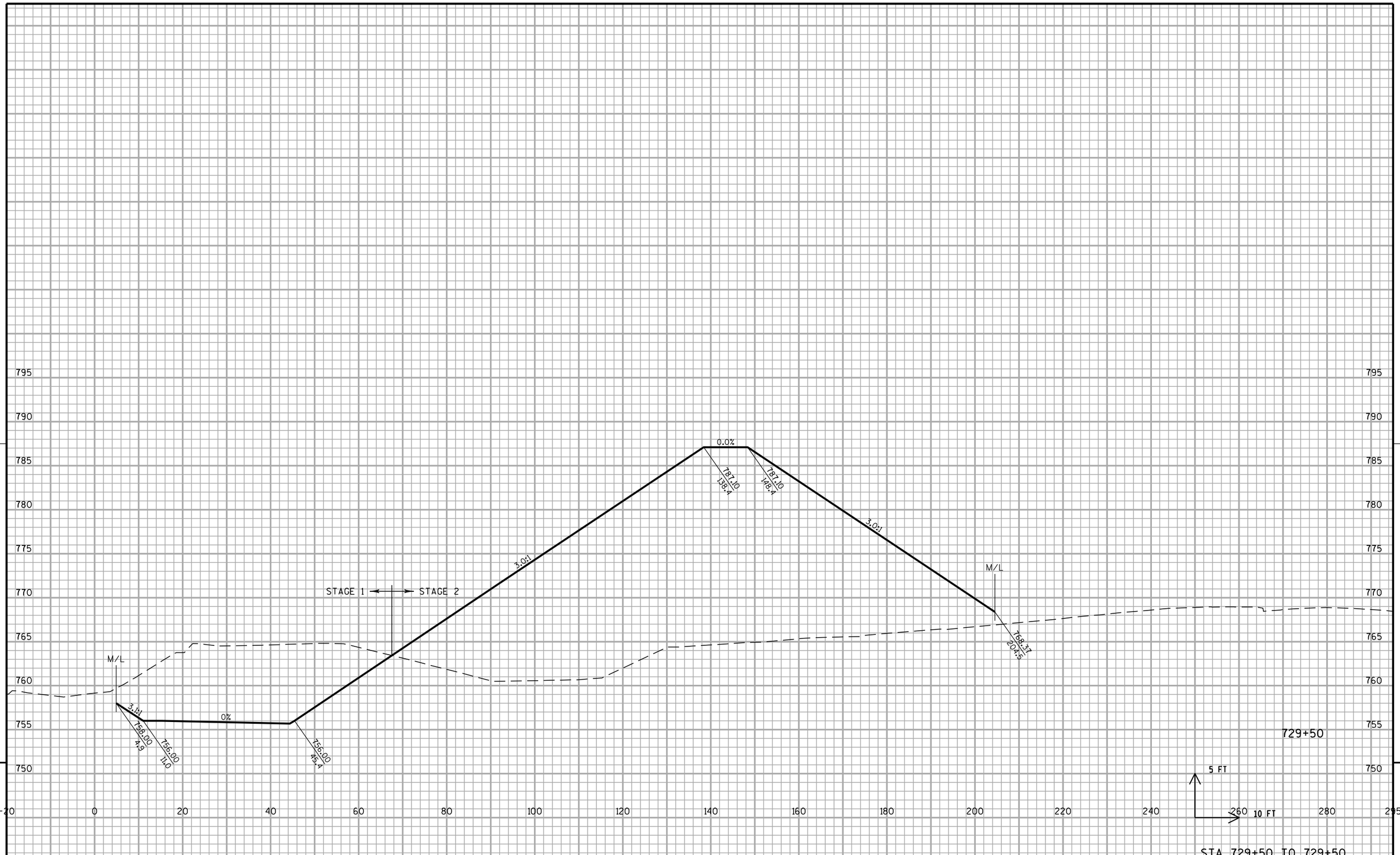
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1



STA 729+00 TO 729+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

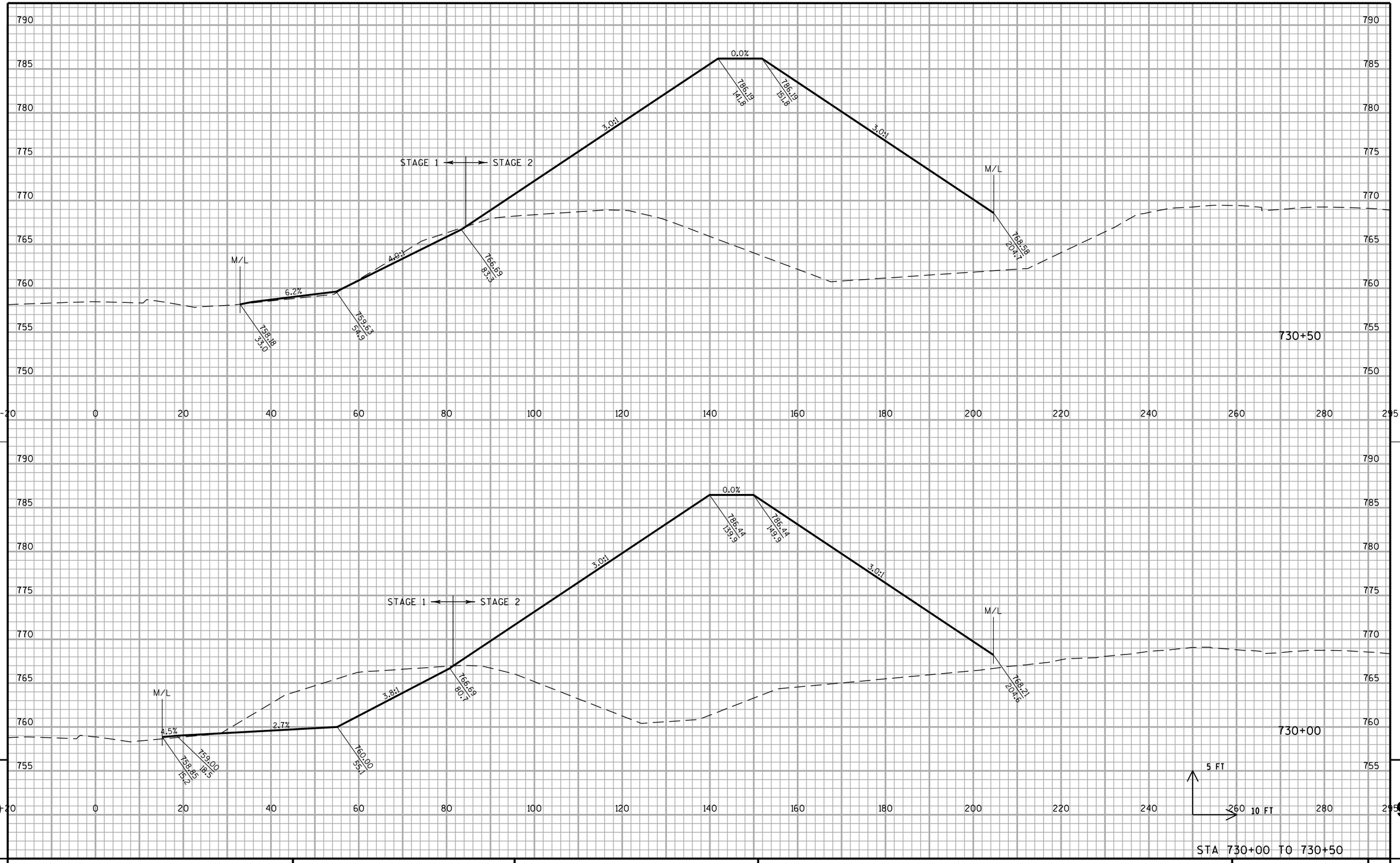


9 9

STA 729+50 TO 729+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

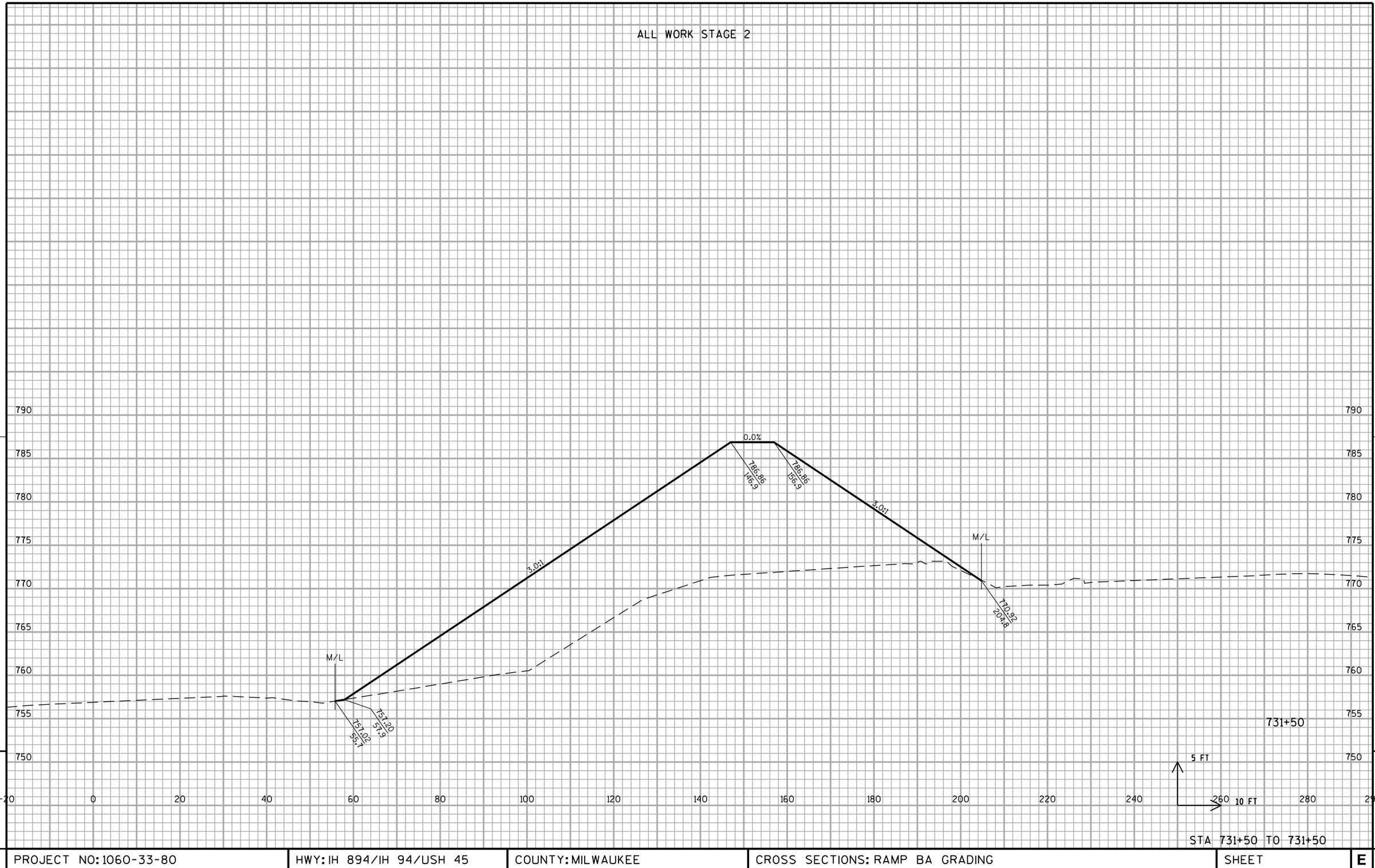
ALL WORK STAGE 2



STA 731+00 TO 731+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

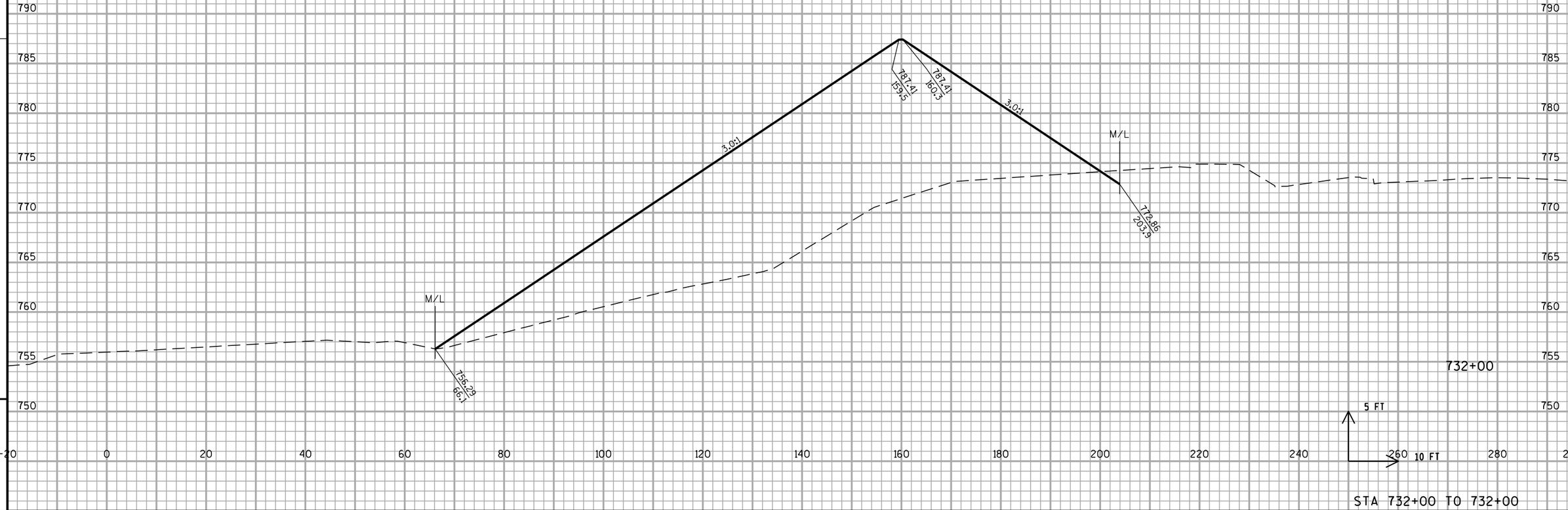
ALL WORK STAGE 2



STA 731+50 TO 731+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

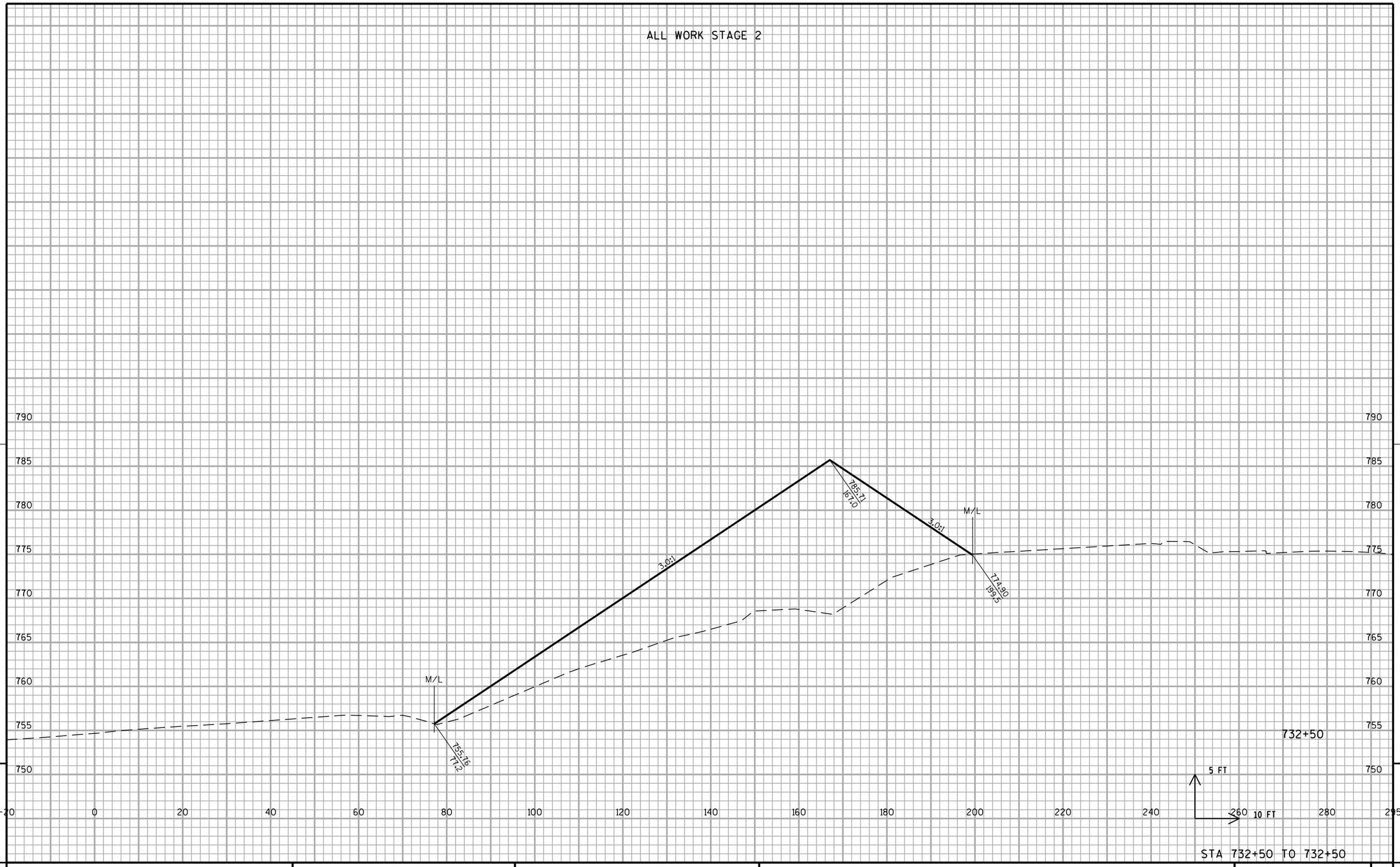
ALL WORK STAGE 2



STA 732+00 TO 732+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

ALL WORK STAGE 2

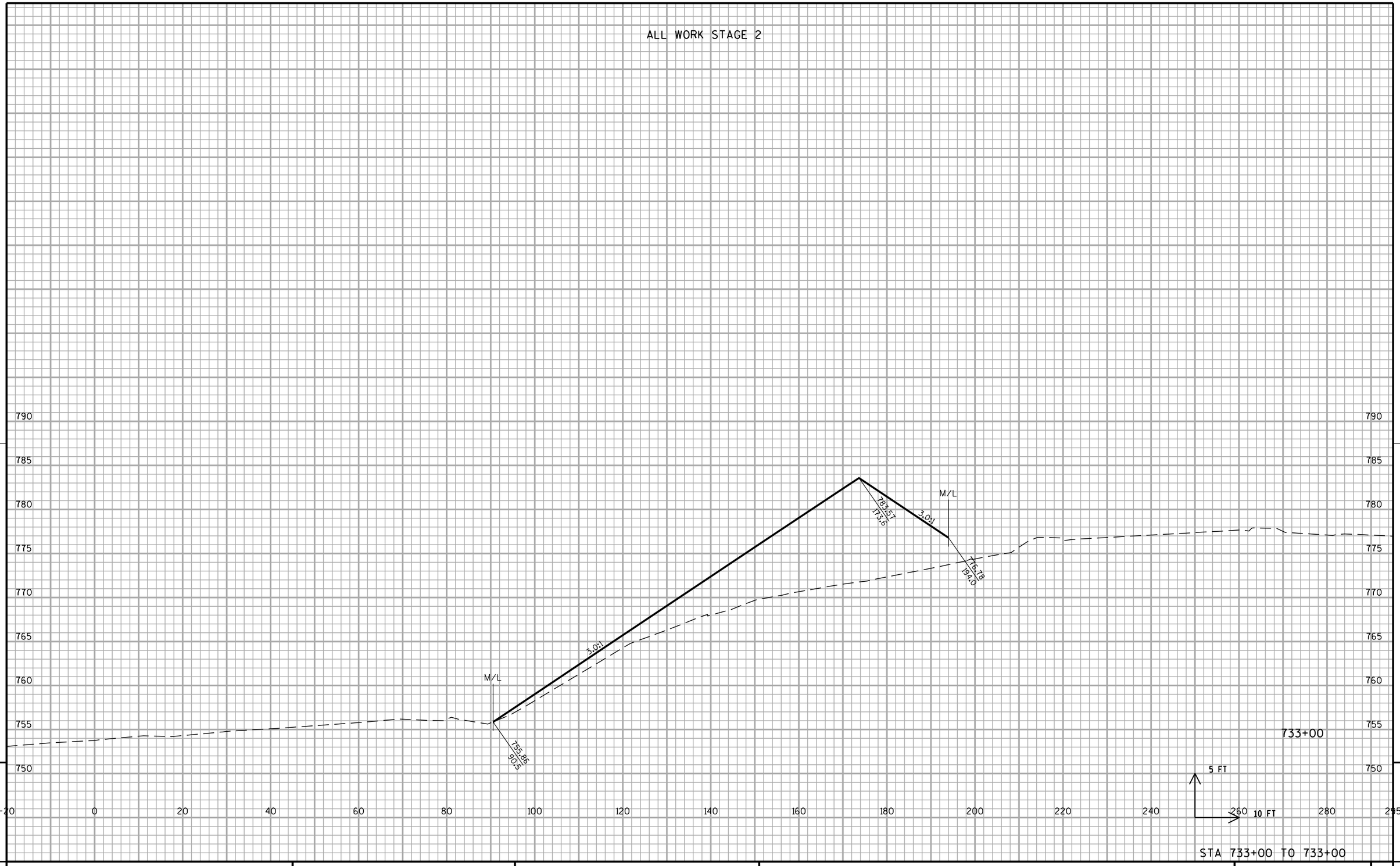


STA 732+50 TO 732+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2



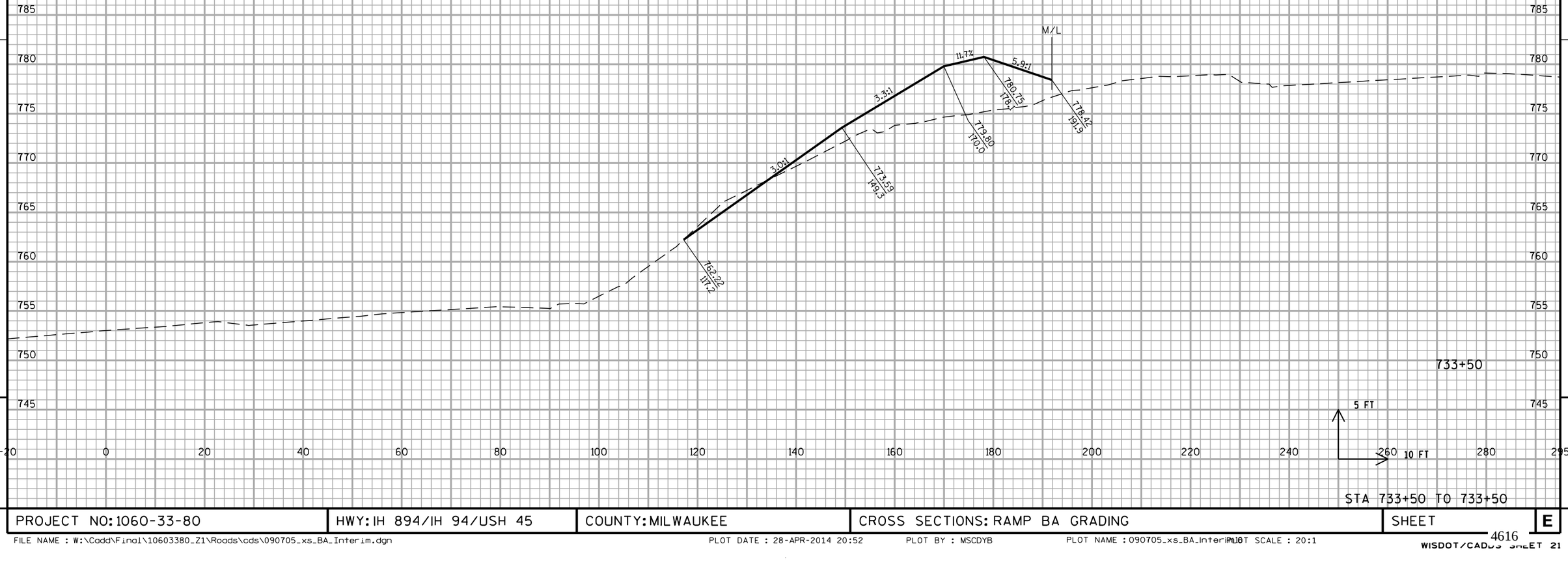
STA 733+00 TO 733+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



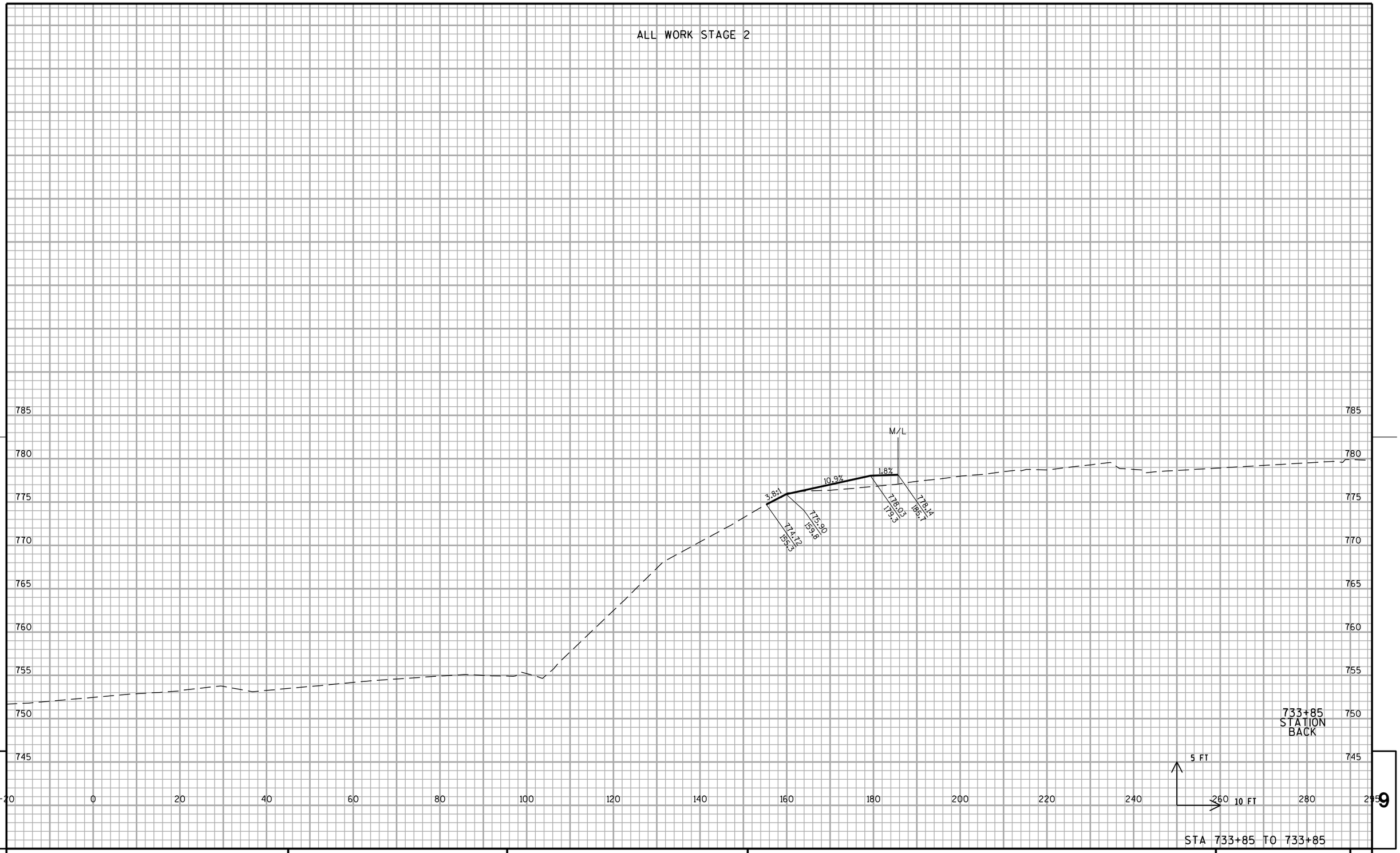
STA 733+50 TO 733+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090705_xs_BA_Interim.dgn PLOT DATE : 28-APR-2014 20:52 PLOT BY : MSCDYB PLOT NAME : 090705_xs_BA_Interim.dgn PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

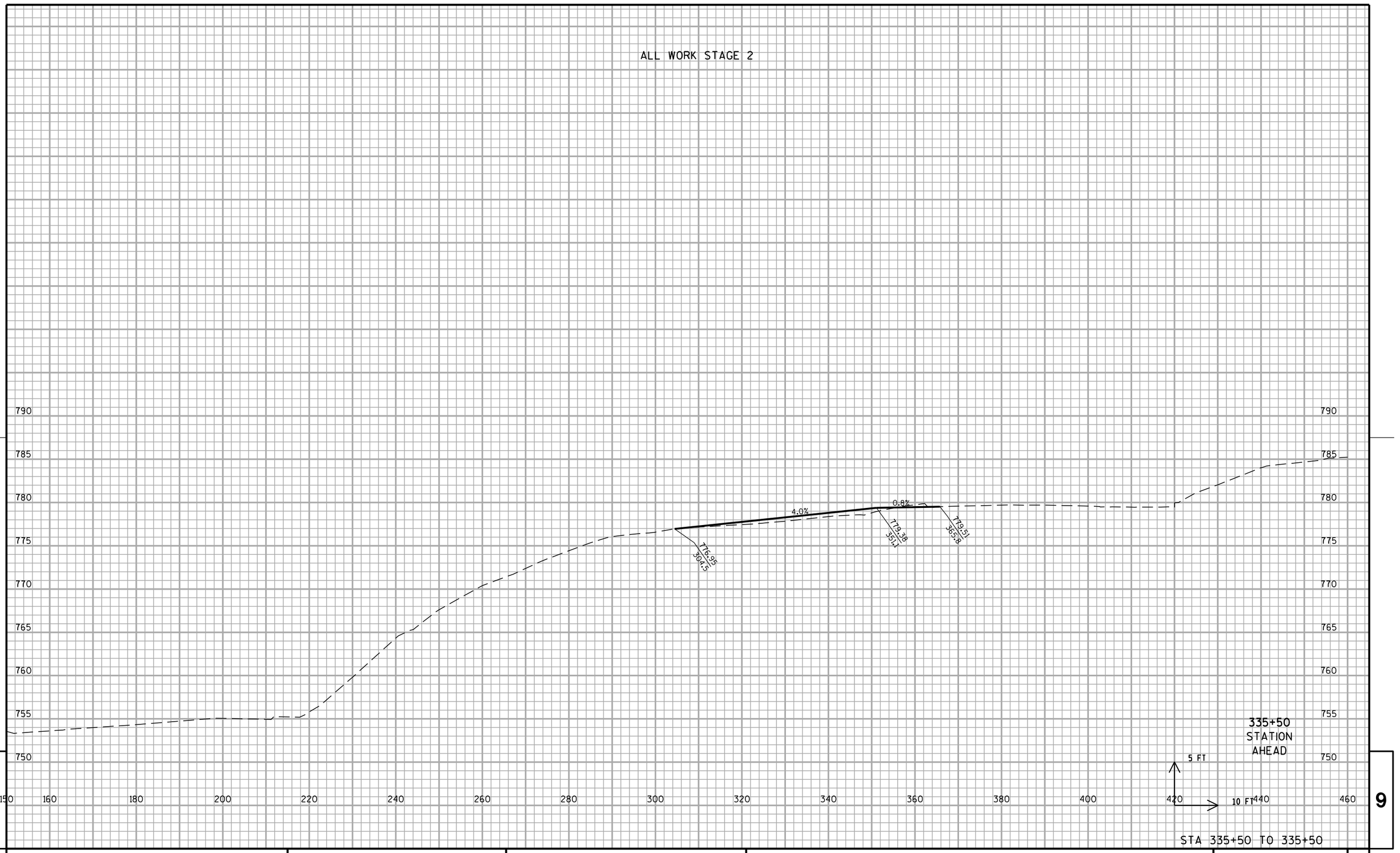
ALL WORK STAGE 2



STA 733+85 TO 733+85

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP BA GRADING	SHEET	E

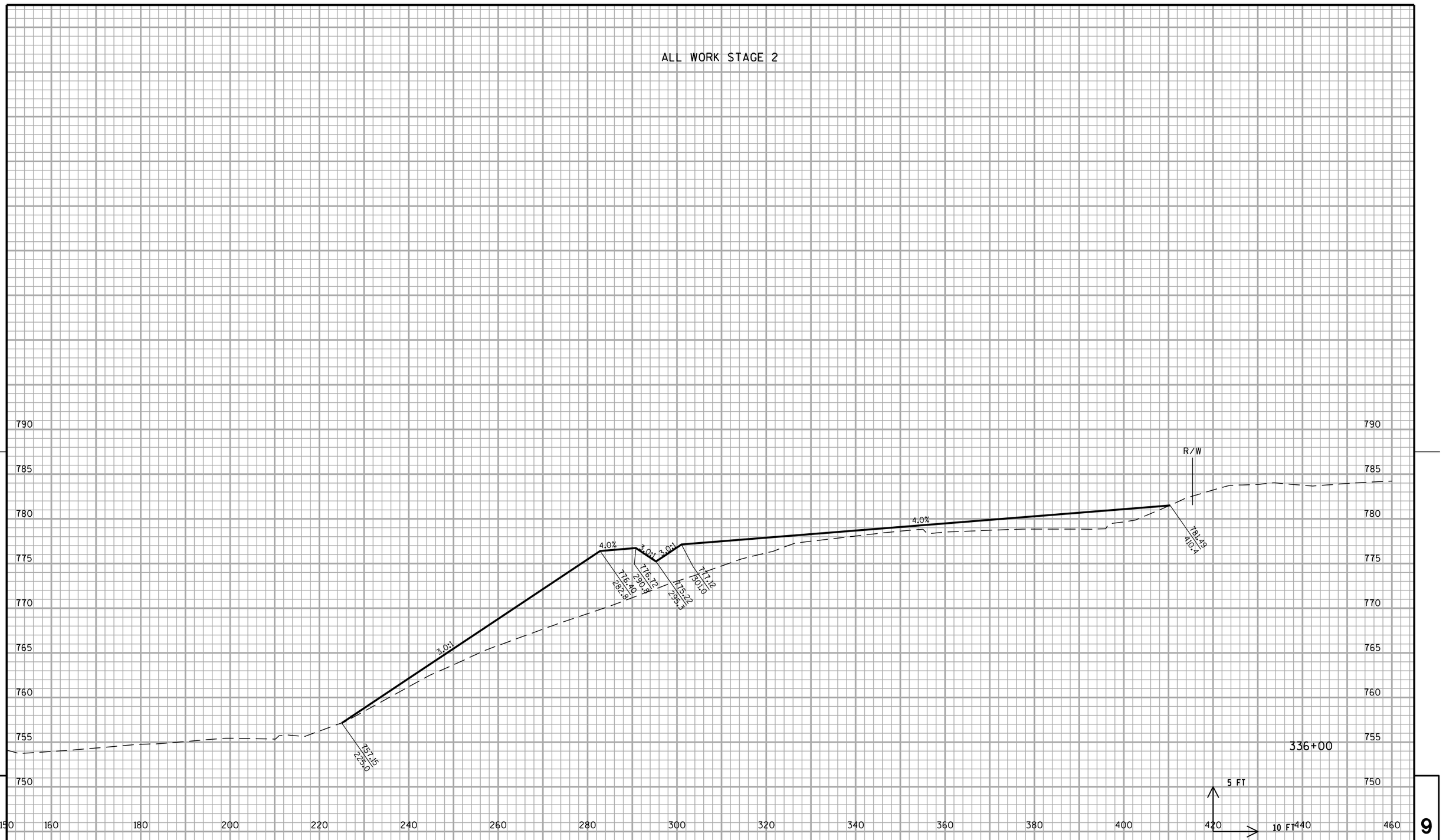
ALL WORK STAGE 2



STA 335+50 TO 335+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

ALL WORK STAGE 2



STA 336+00 TO 336+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn
PLOT DATE : 27-APR-2014 23:17
PLOT BY : MSCDYB
PLOT NAME : 090710_xs_ns_nb_n_berm.dgn
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

337+00

R/W

4.0%

3.0:1

774.23
278.6

774.84
286.6

773.34
291.4

775.25
296.8

779.69
407.4

756.68
225.0

336+50

780.91
408.4

776.18
290.4

775.86
282.4

776.58
300.6

774.89
297.9

756.74
225.0

5 FT

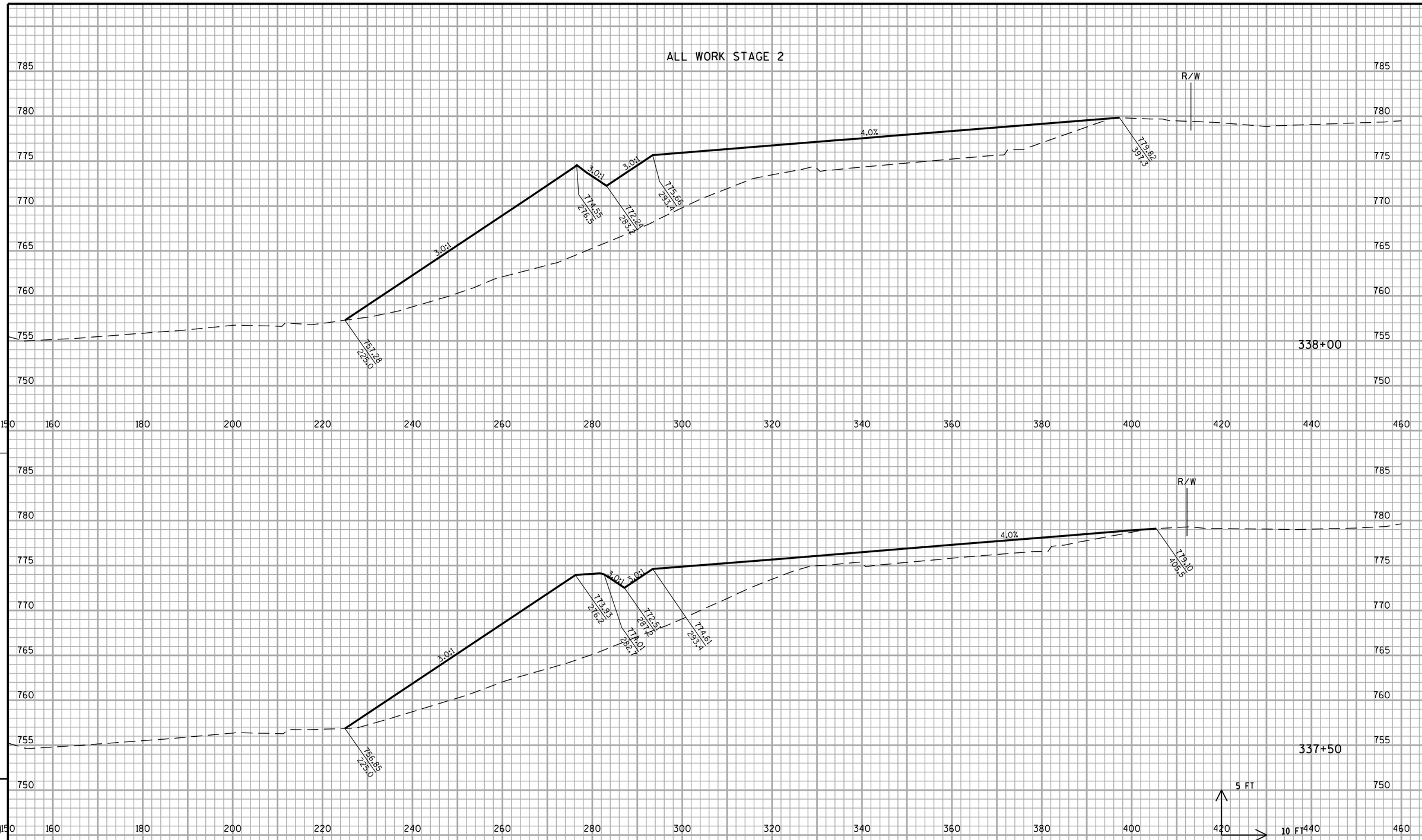
10 FT

STA 336+50 TO 337+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

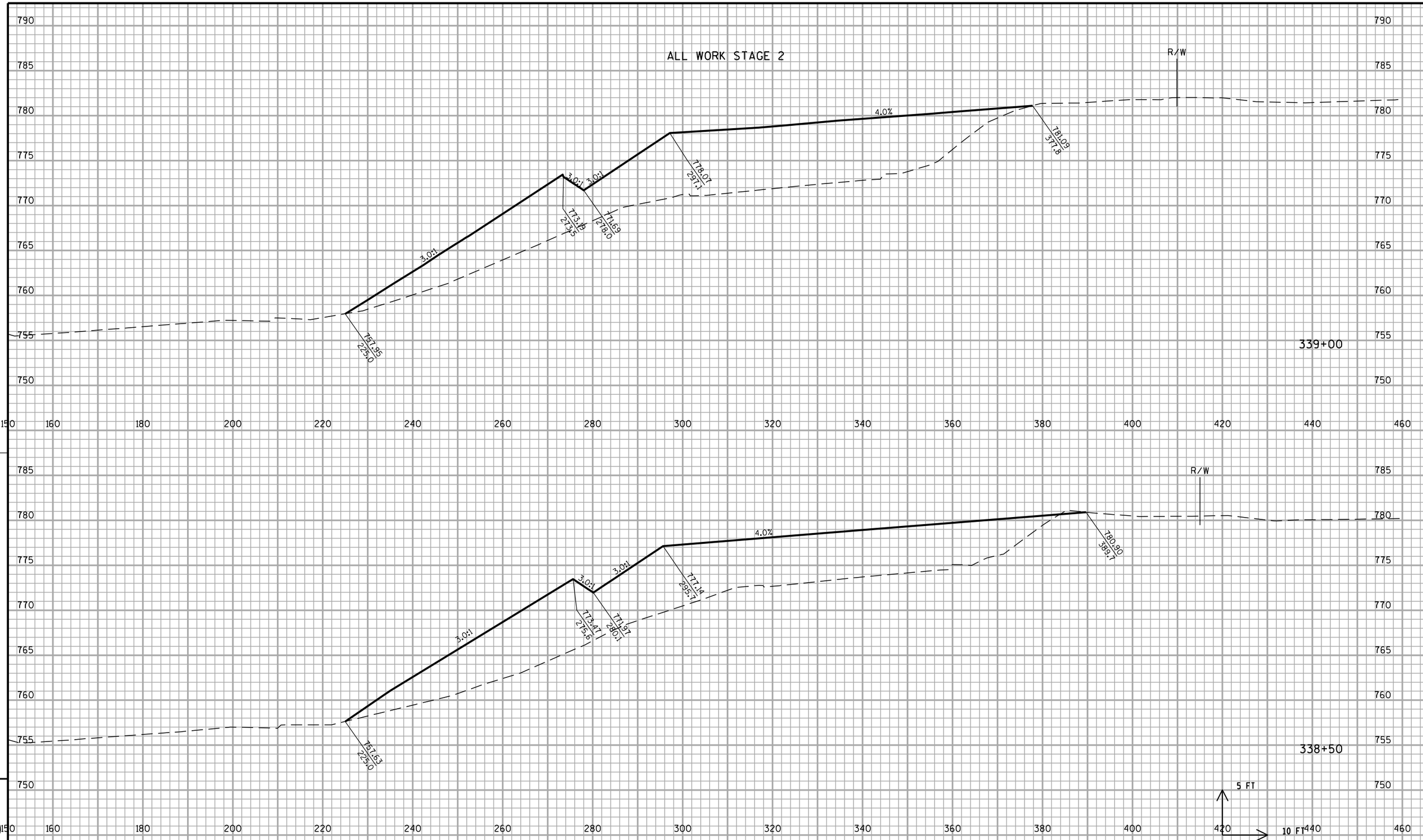
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2

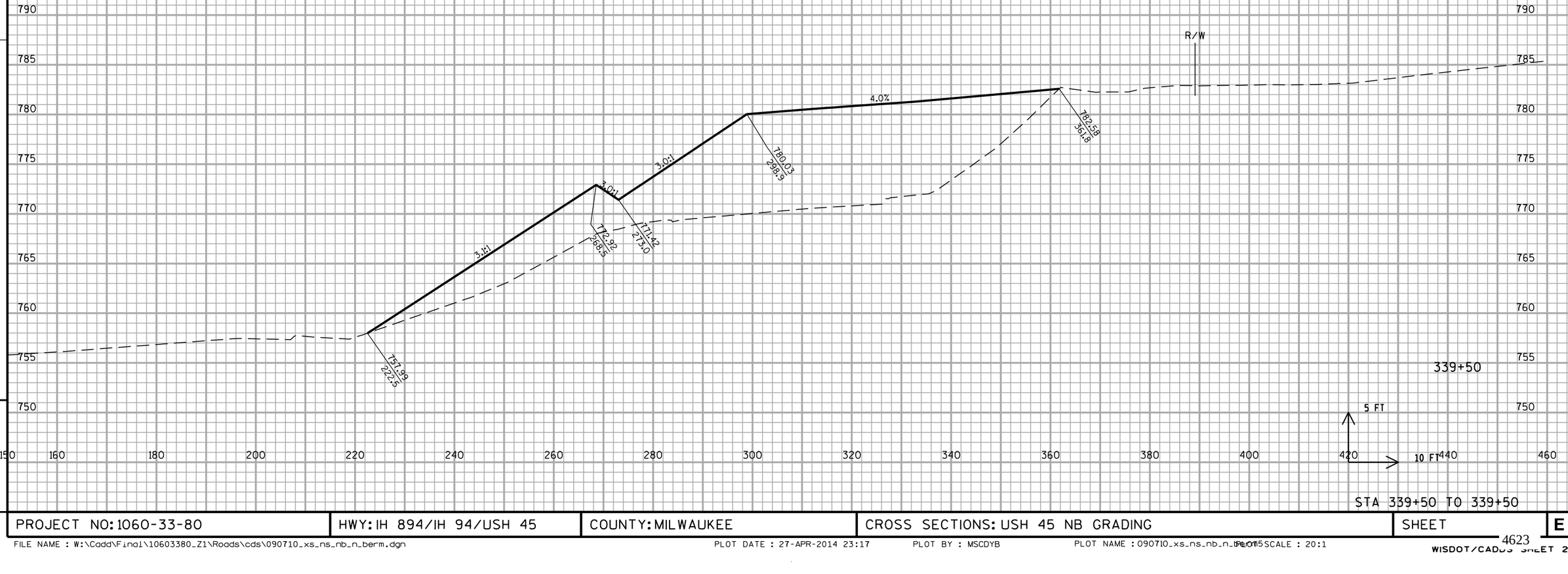


STA 338+50 TO 339+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2

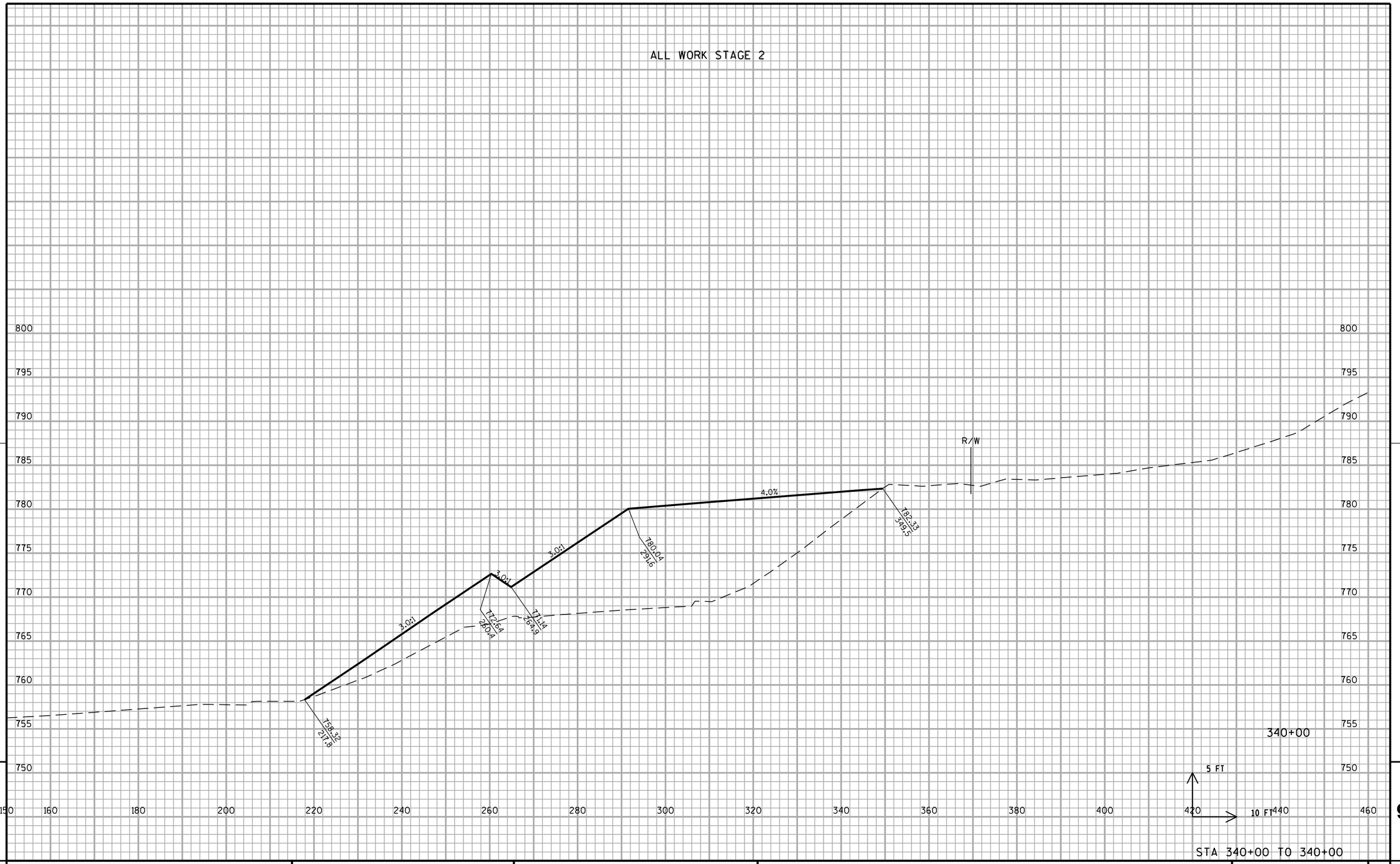


STA 339+50 TO 339+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn
PLOT DATE : 27-APR-2014 23:17
PLOT BY : MSCDYB
PLOT NAME : 090710_xs_ns_nb_n_berm.dgn
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

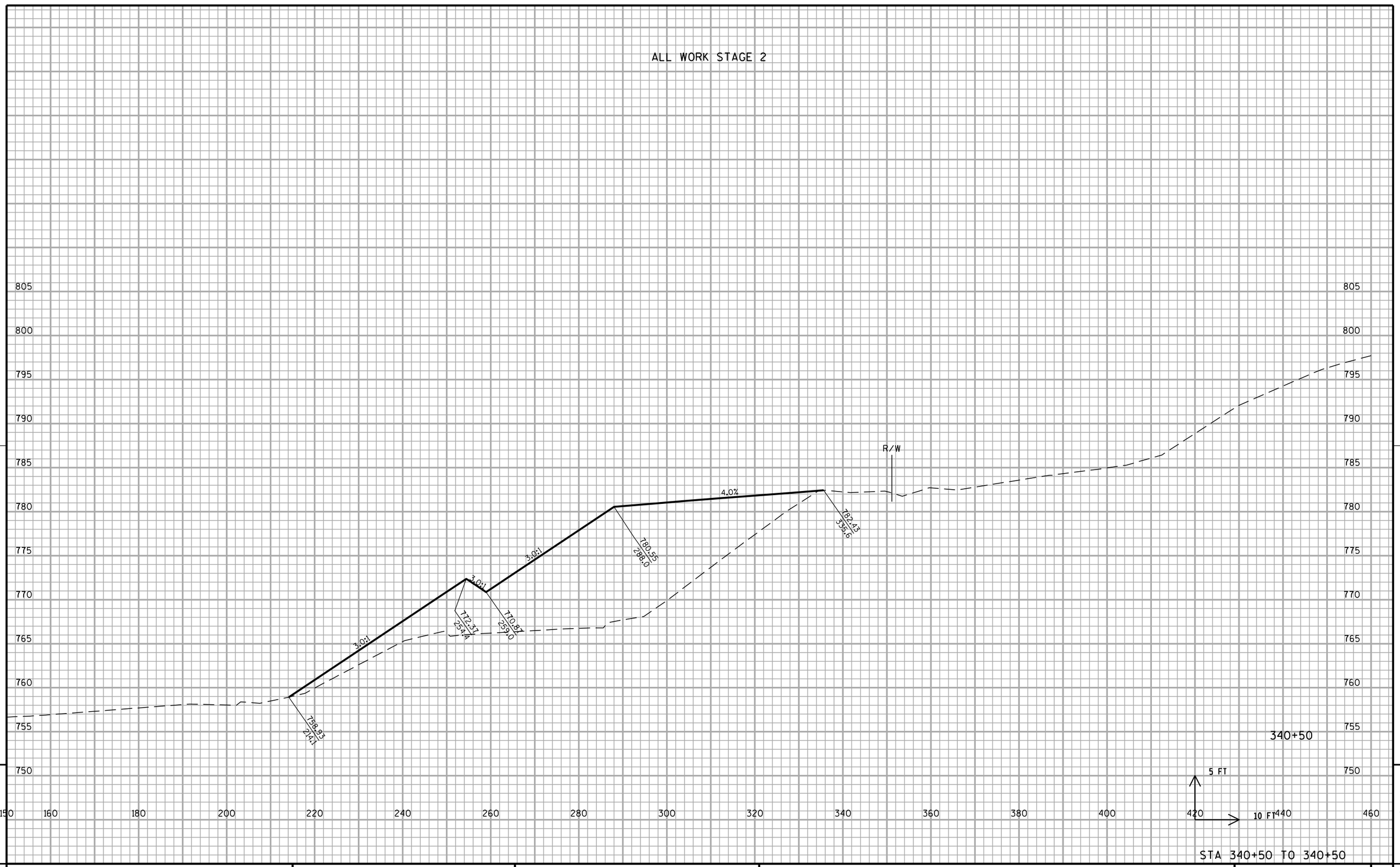


STA 340+00 TO 340+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

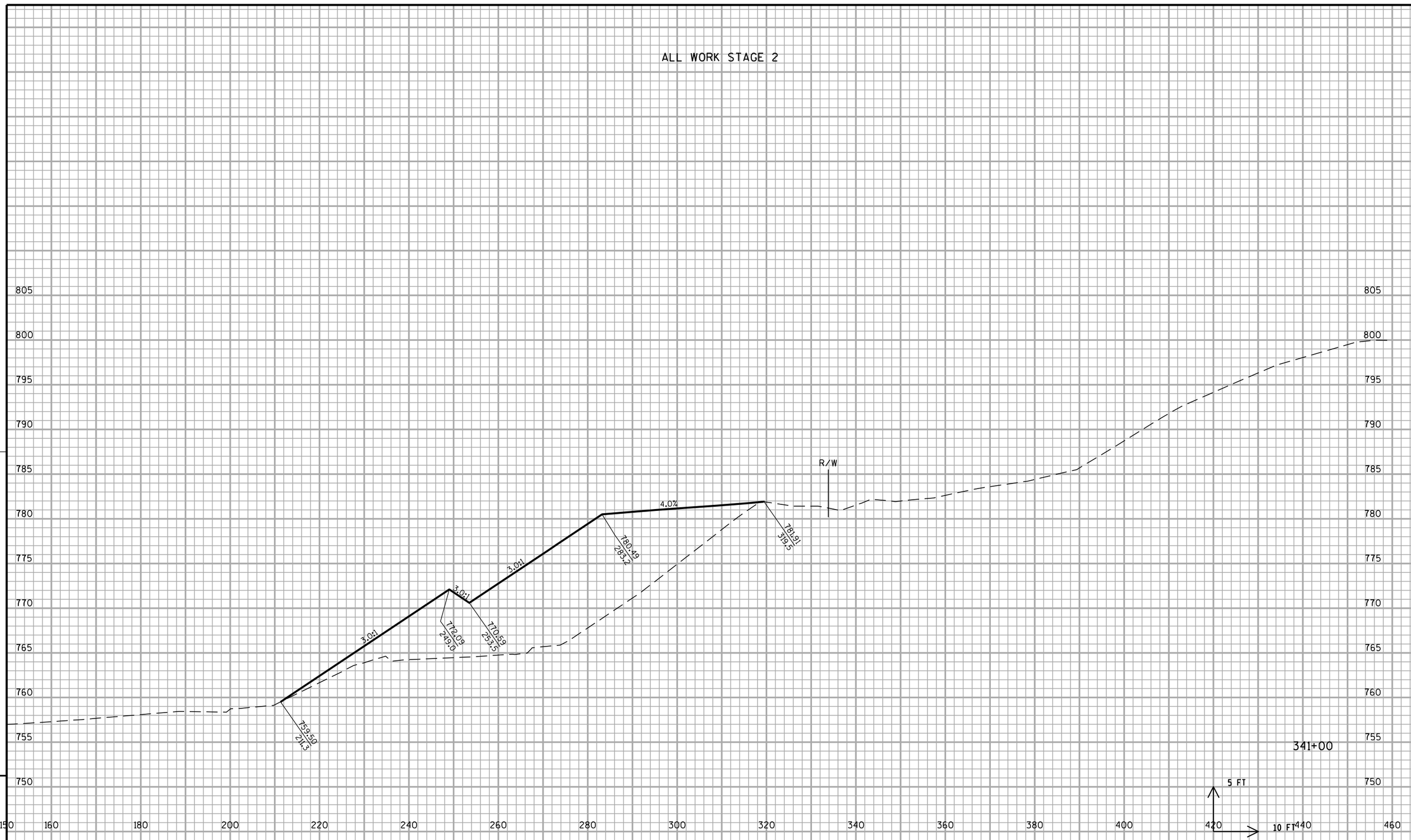
ALL WORK STAGE 2



STA 340+50 TO 340+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

ALL WORK STAGE 2

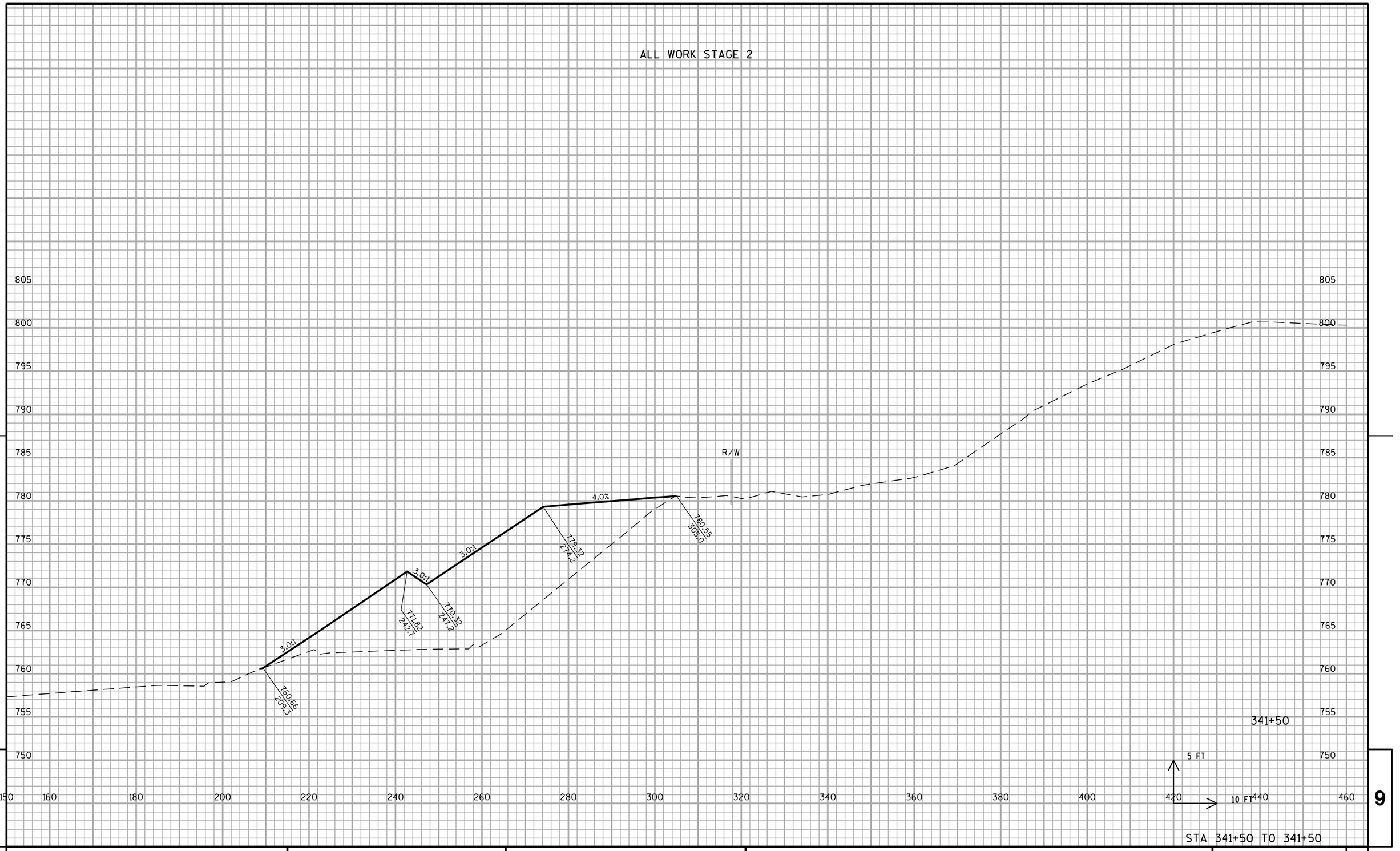


STA 341+00 TO 341+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2

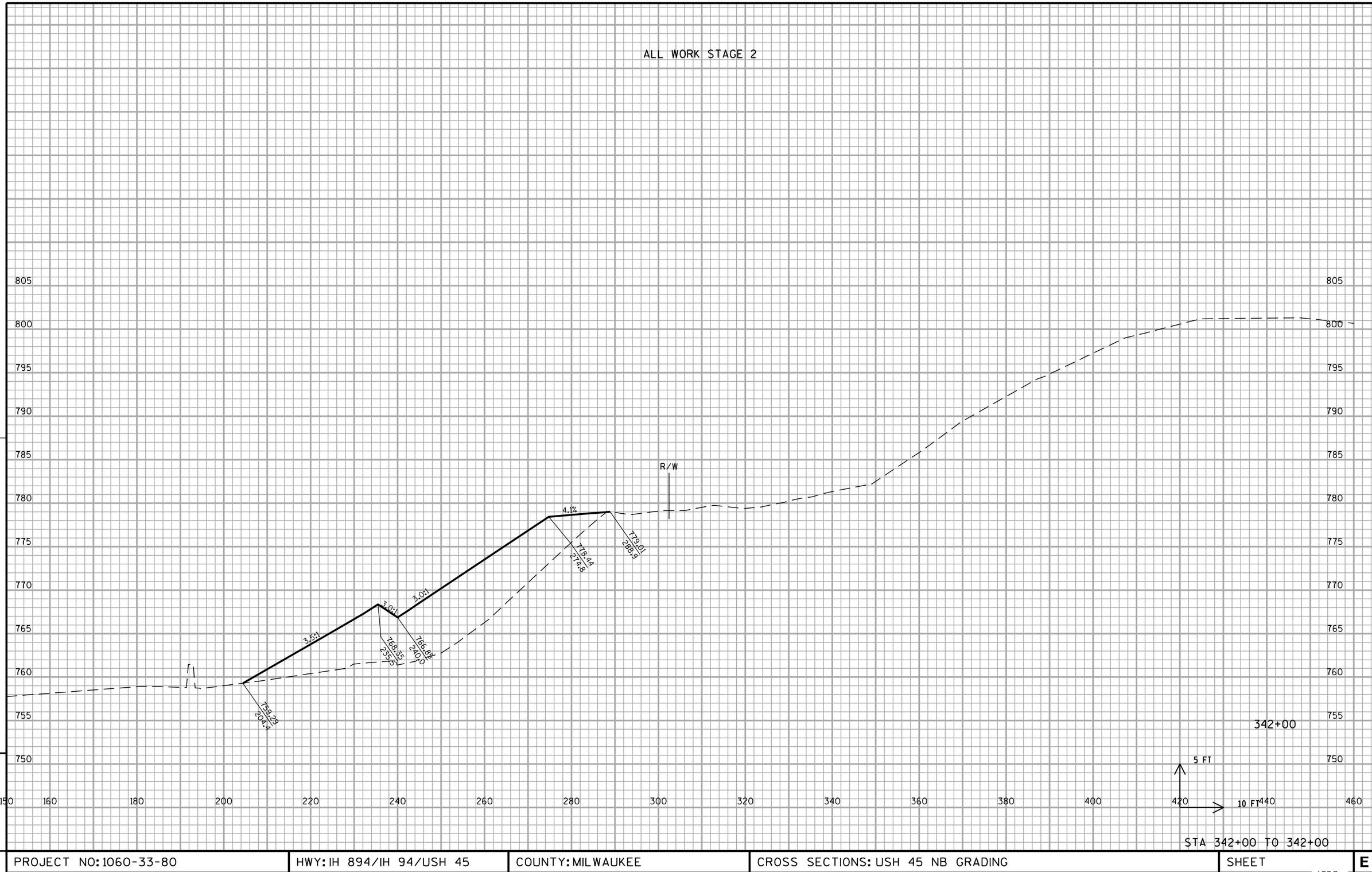


STA 341+50 TO 341+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

ALL WORK STAGE 2

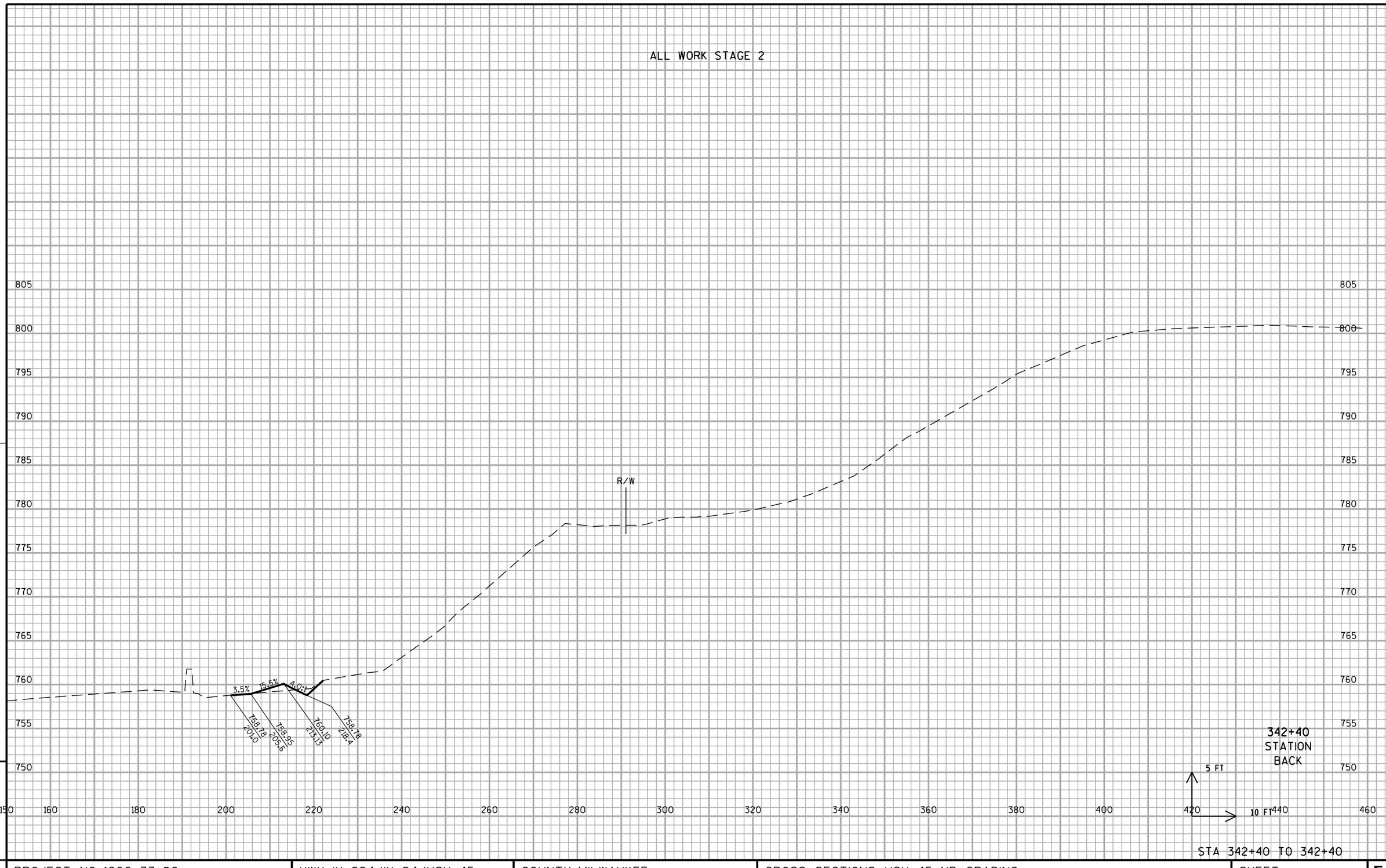


STA 342+00 TO 342+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090710_xs_ns_nb_n_berm.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090710_xs_ns_nb_n_berm.dgn PLOT SCALE : 20:1

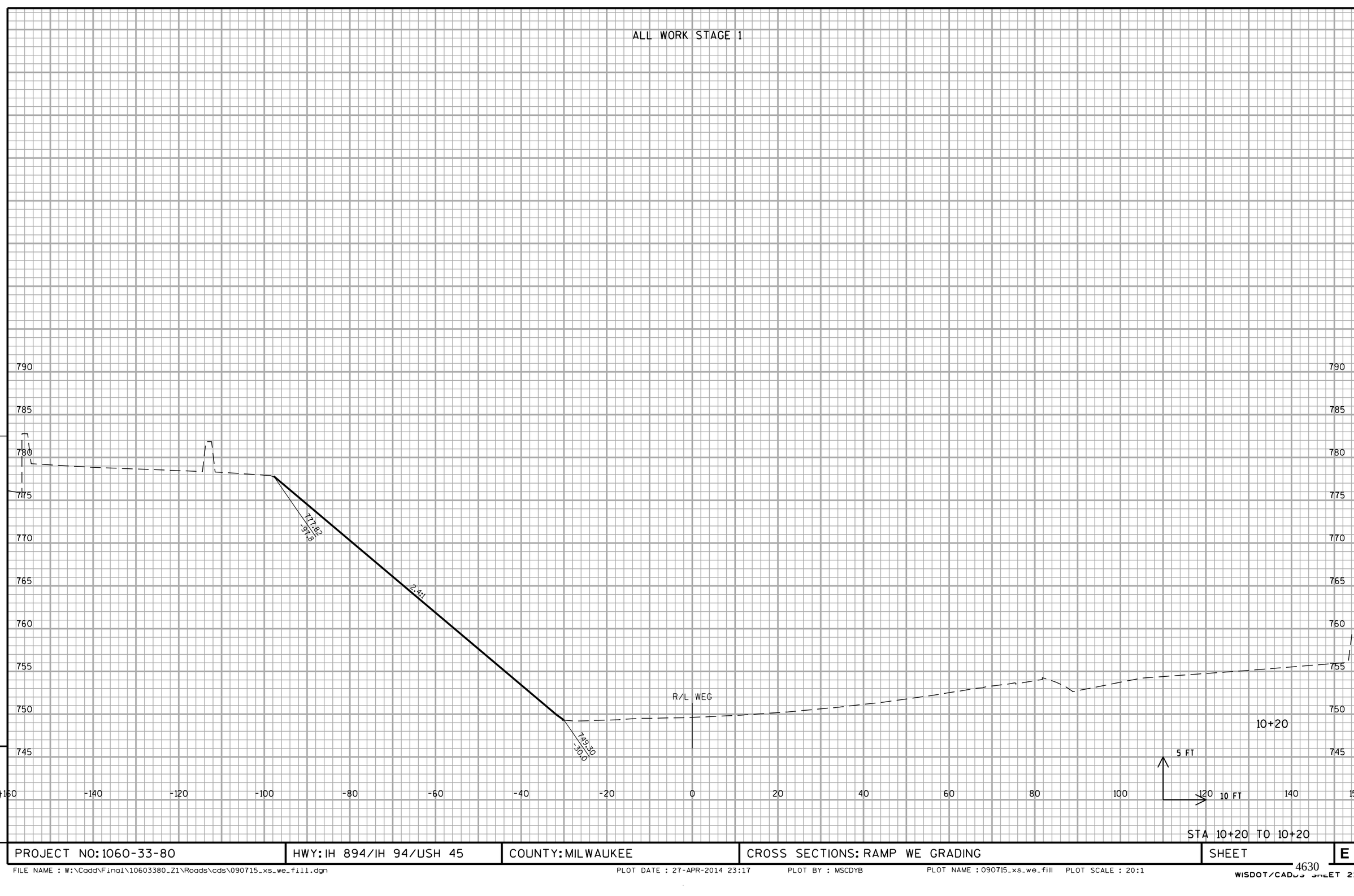
ALL WORK STAGE 2



STA 342+40 TO 342+40

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: USH 45 NB GRADING	SHEET	E

ALL WORK STAGE 1

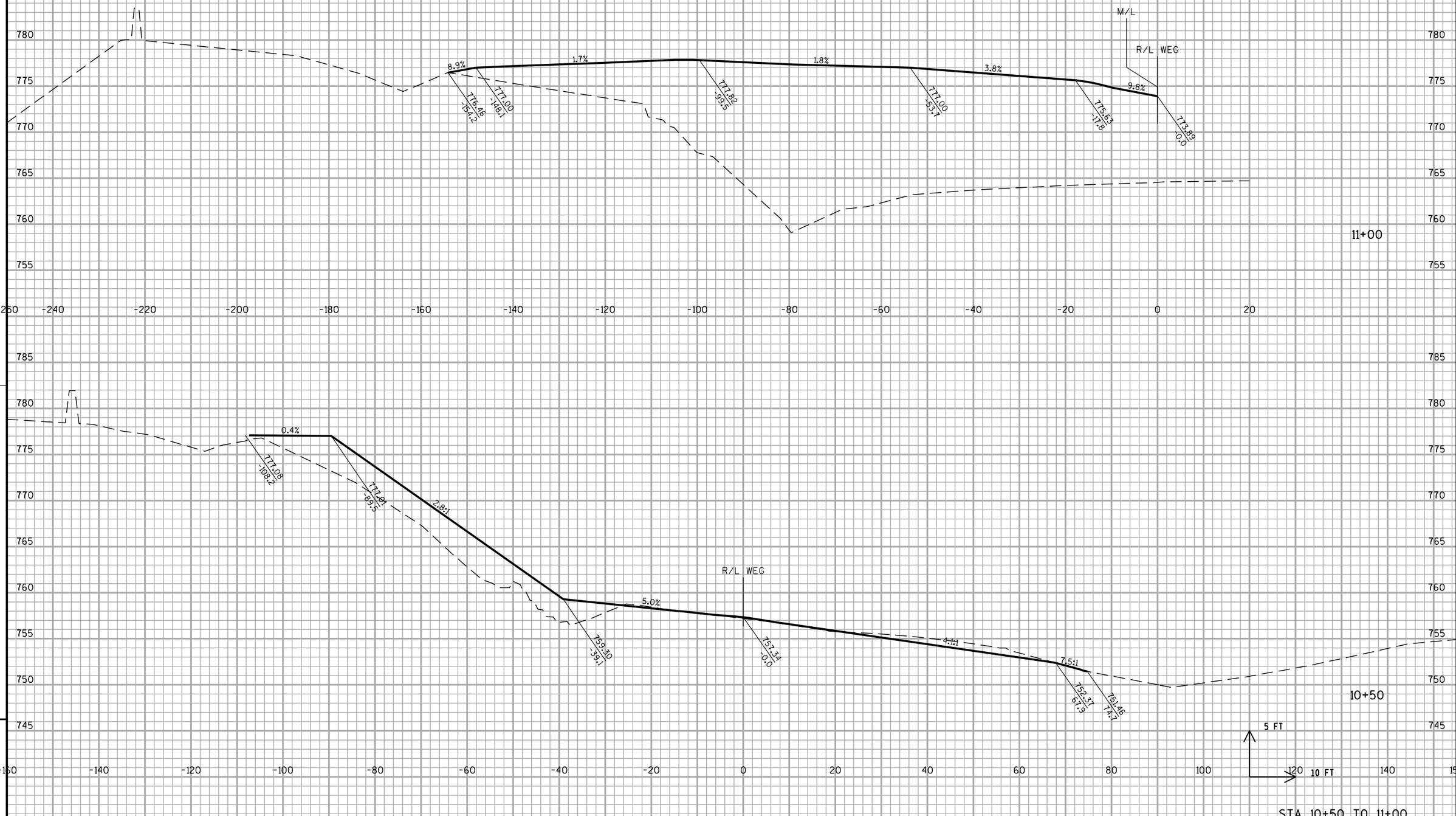


STA 10+20 TO 10+20

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

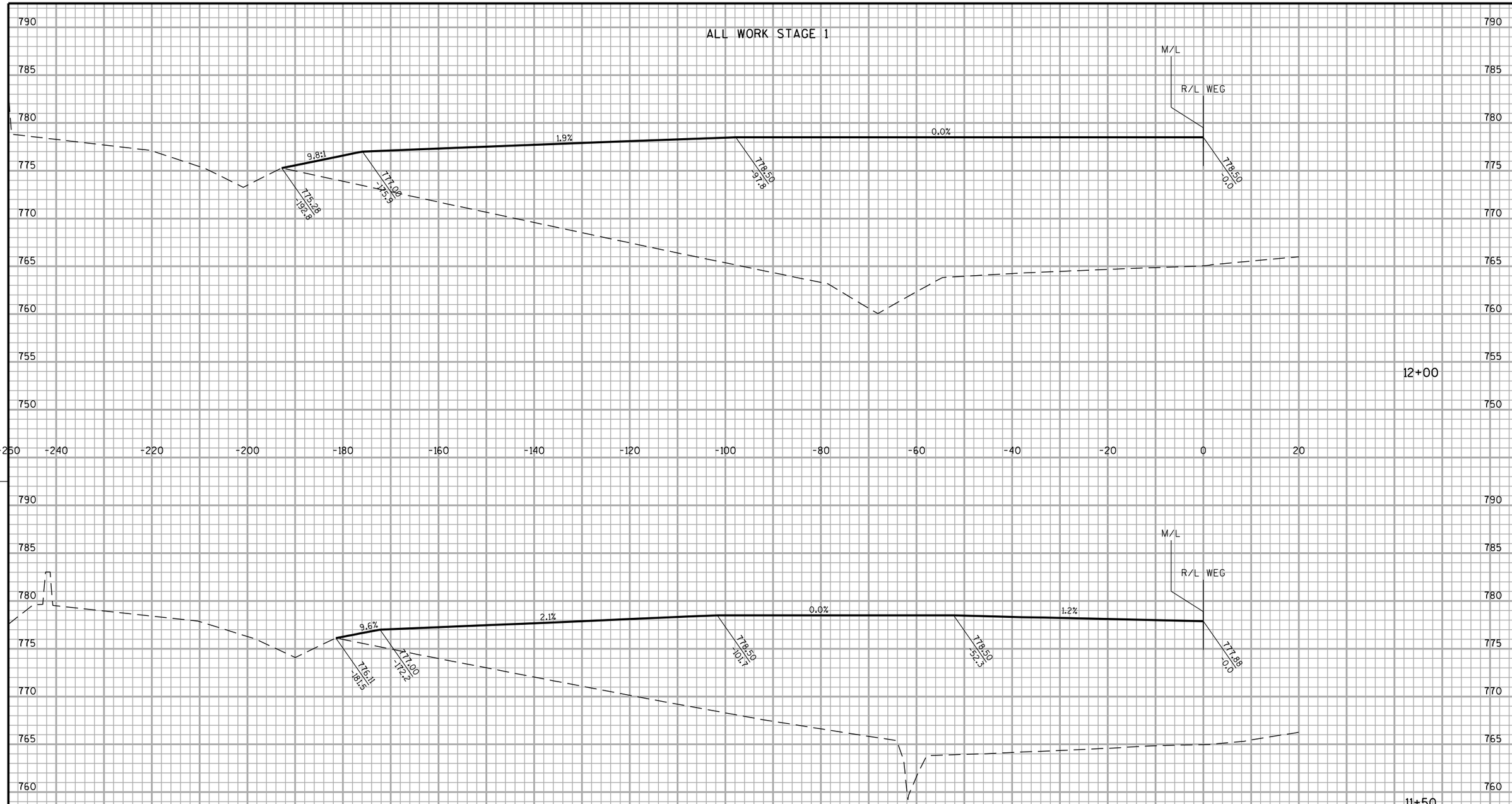
ALL WORK STAGE 1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill PLOT SCALE : 20:1

ALL WORK STAGE 1

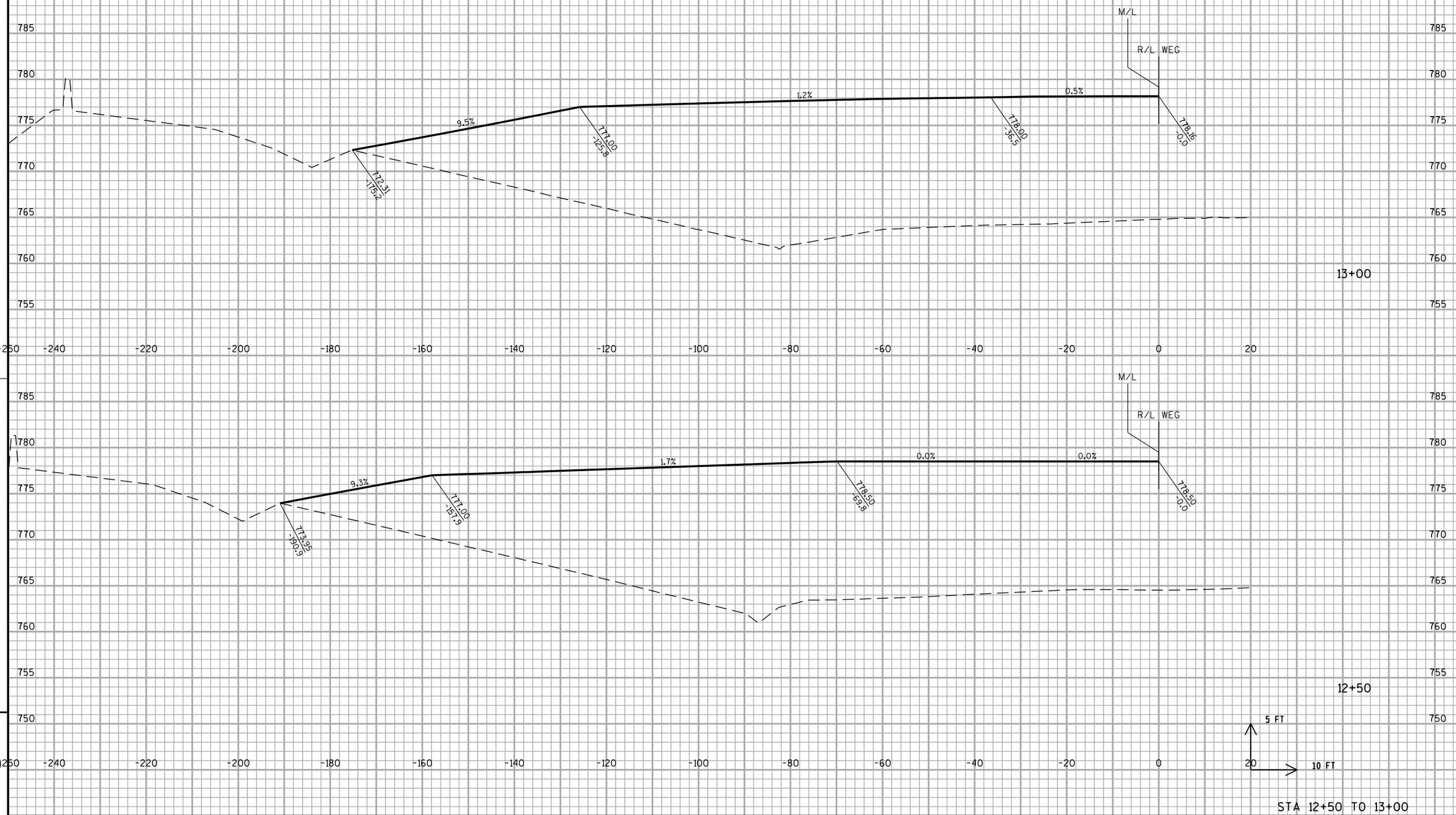


STA 11+50 TO 12+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill2 PLOT SCALE : 20:1

ALL WORK STAGE 1

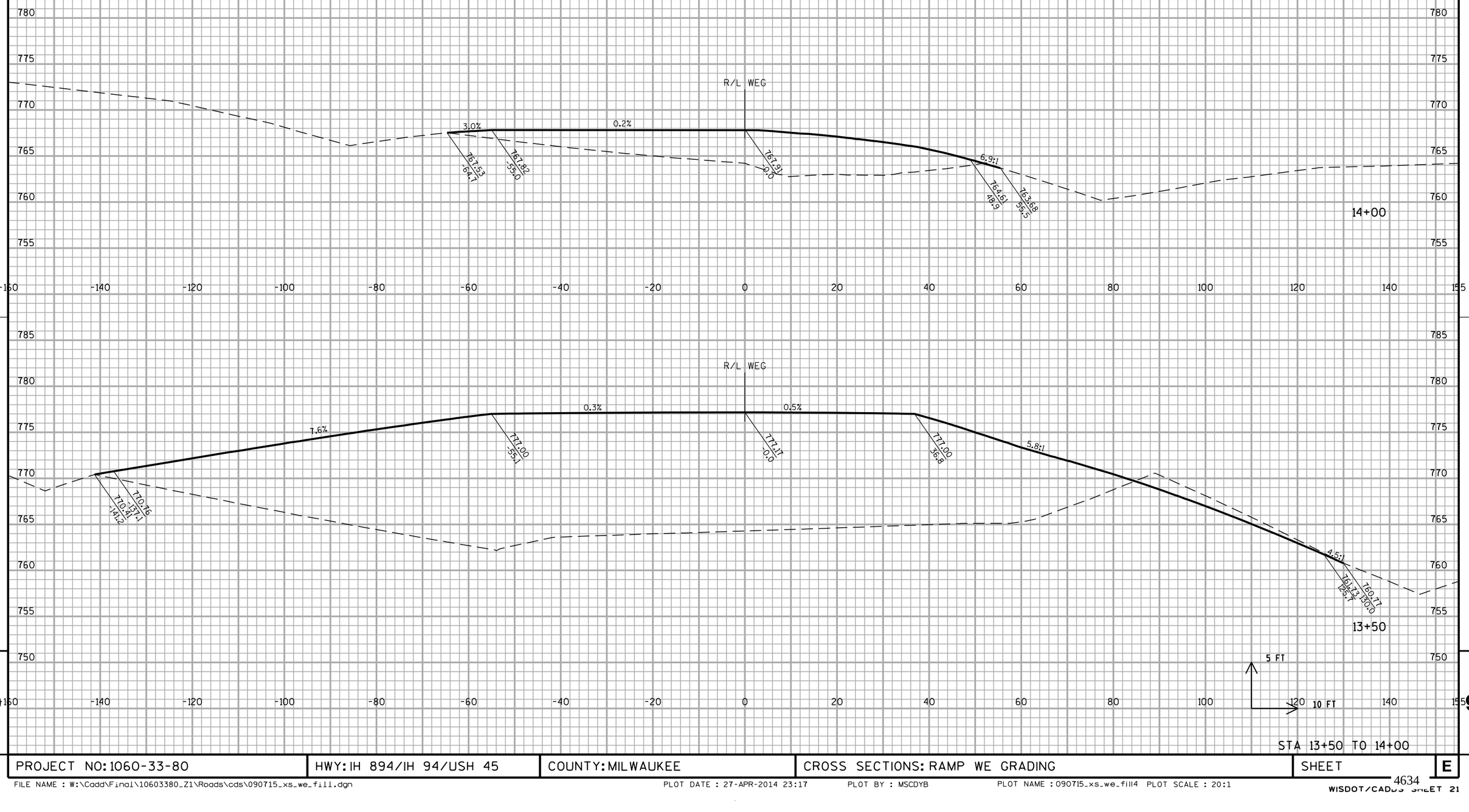


STA 12+50 TO 13+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill3 PLOT SCALE : 20:1

ALL WORK STAGE 1

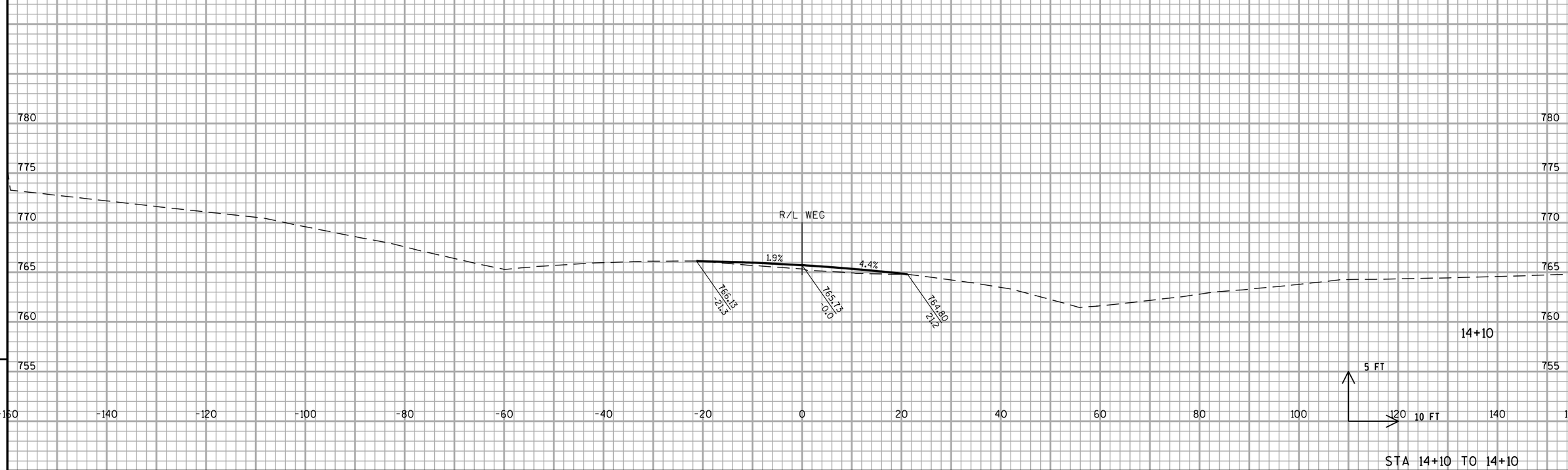


STA 13+50 TO 14+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill4 PLOT SCALE : 20:1

ALL WORK STAGE 1



STA 14+10 TO 14+10

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

M/L
R/L WEG
0.9%
777.88
0.0
777.00
100.1
3.5:1
755.05
177.5
754.07
180.7
11+50

M/L
R/L WEG
9.6:1
773.89
0.0
762.32
111.2
4.5:1
753.96
148.4
4.0:1
752.99
152.2
11+00

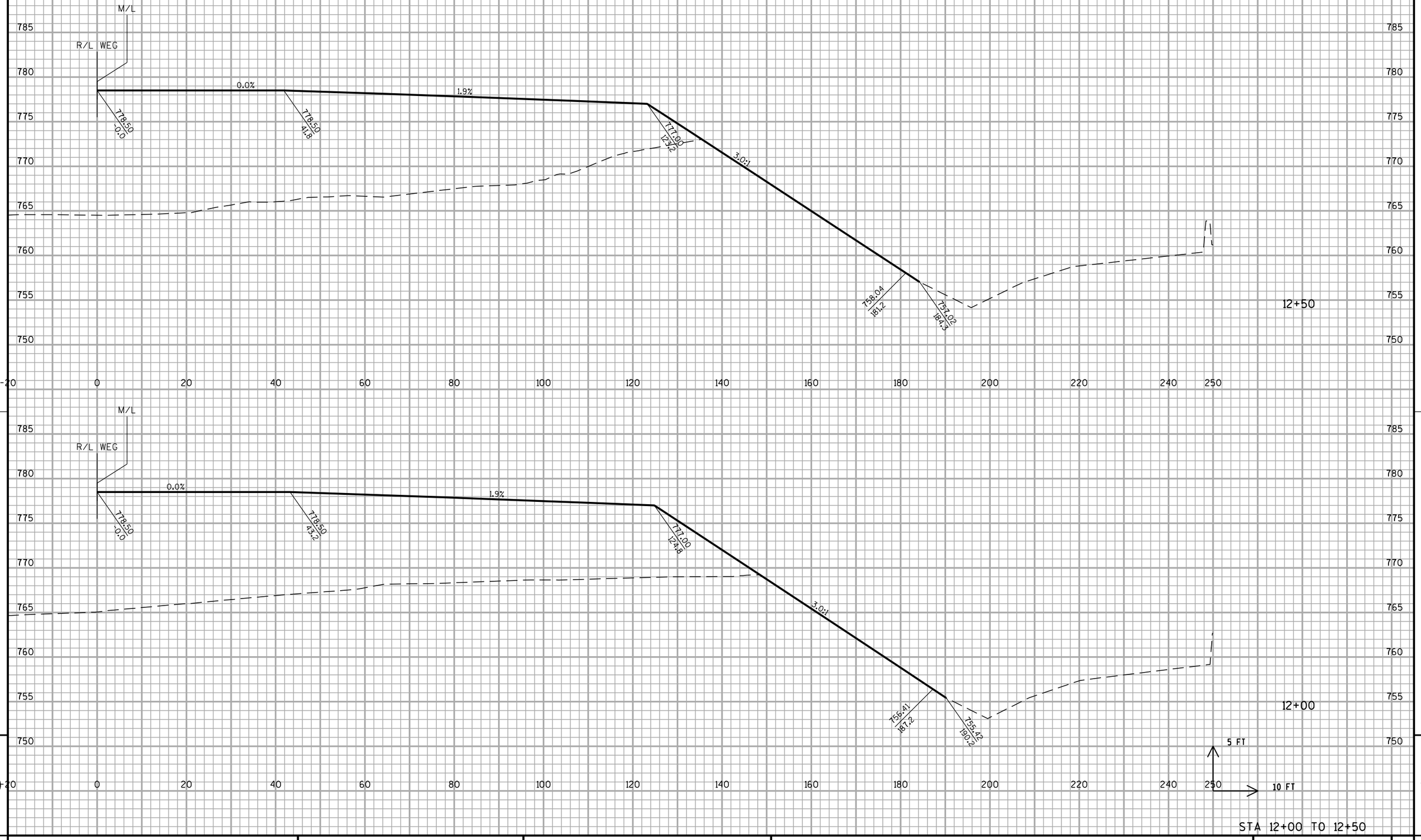
5 FT
10 FT

STA 11+00 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill6 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 1

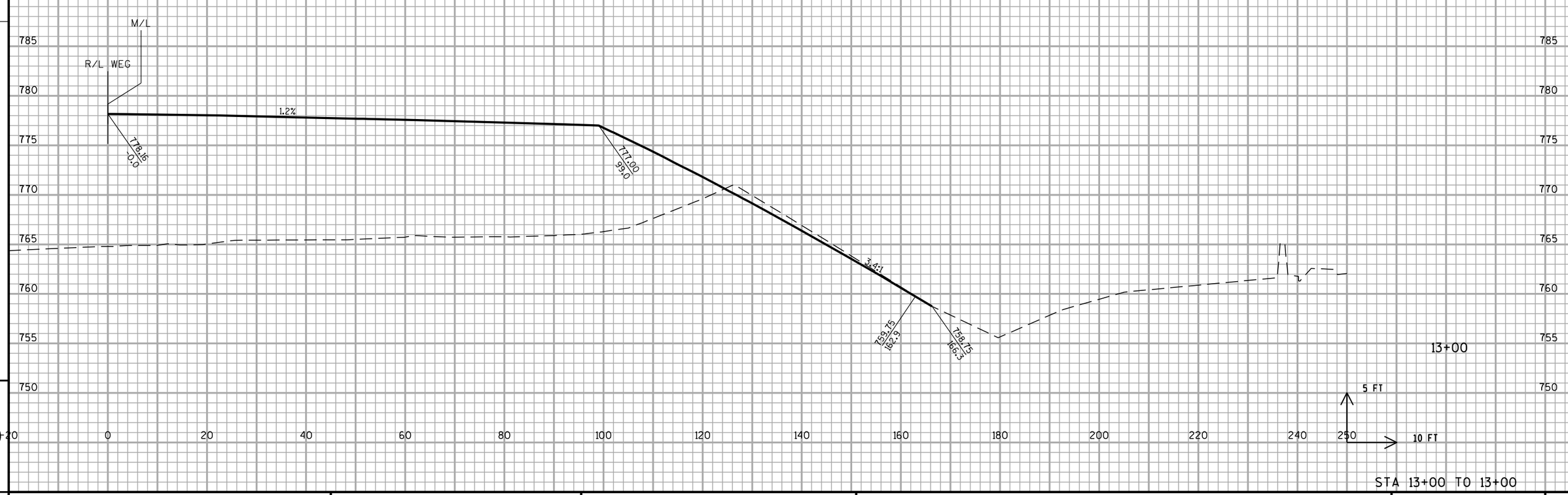


STA 12+00 TO 12+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090715_xs_we_fill.dgn PLOT DATE : 27-APR-2014 23:17 PLOT BY : MSCDYB PLOT NAME : 090715_xs_we_fill7 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

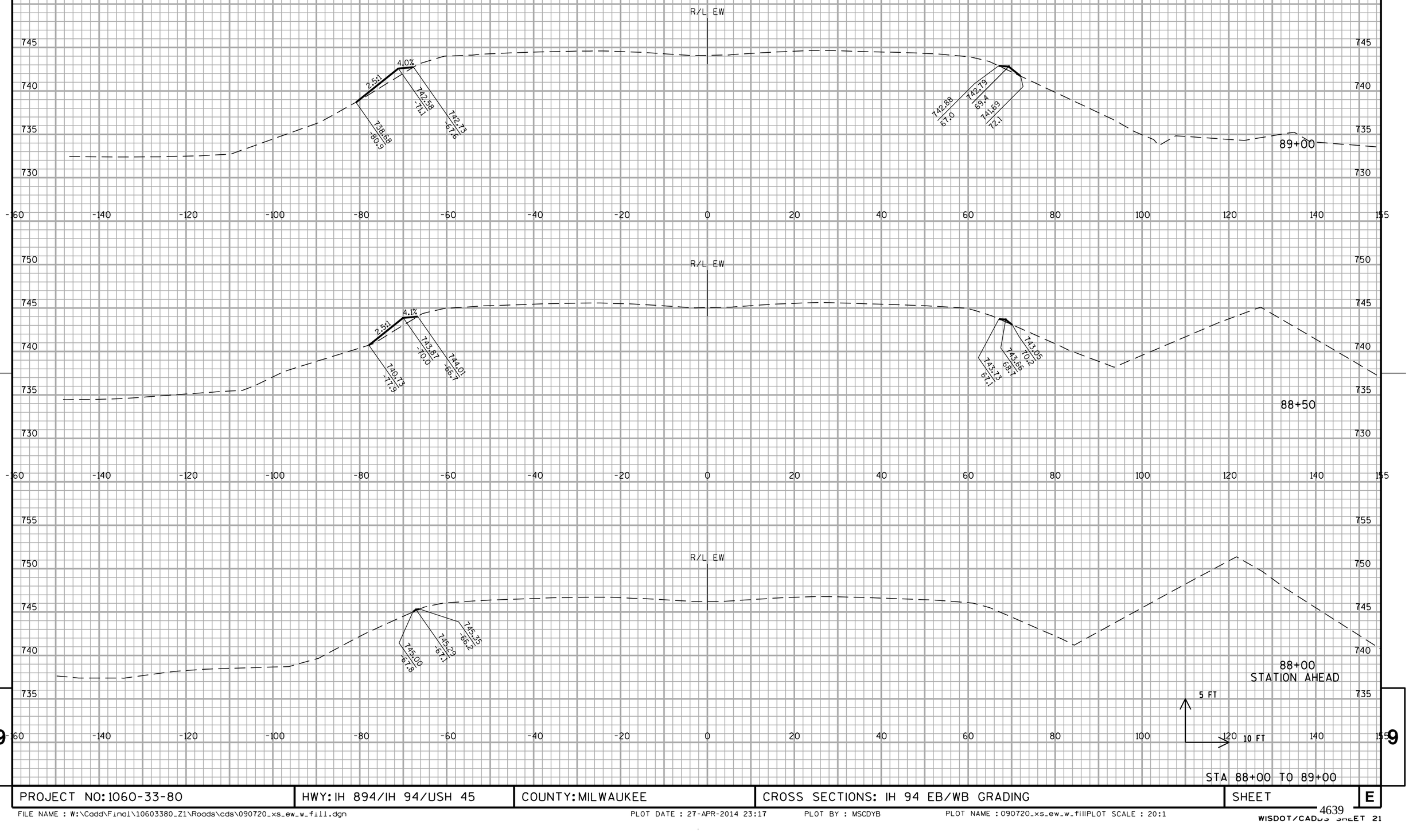
ALL WORK STAGE 1



STA 13+00 TO 13+00

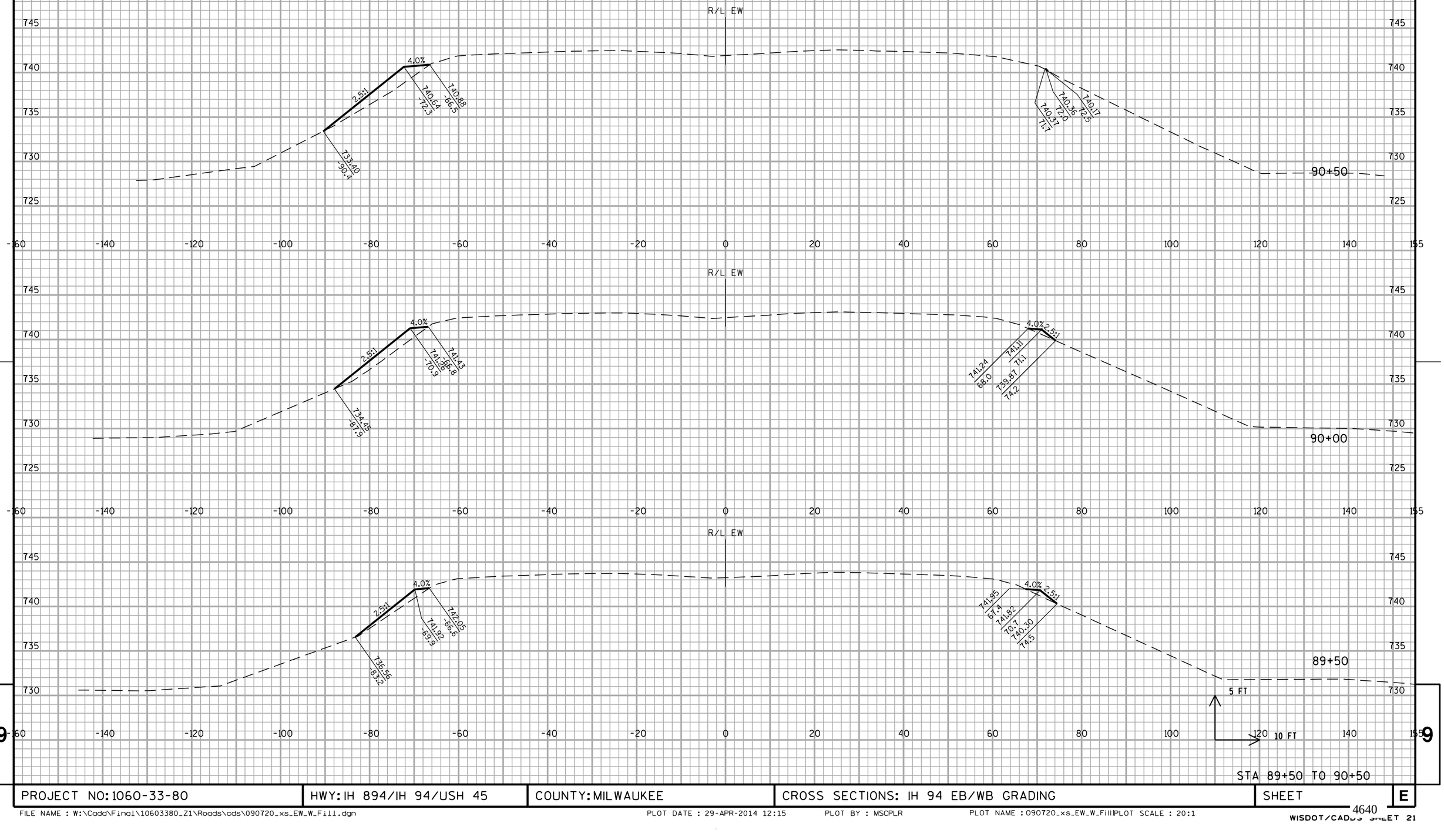
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP WE GRADING	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET E

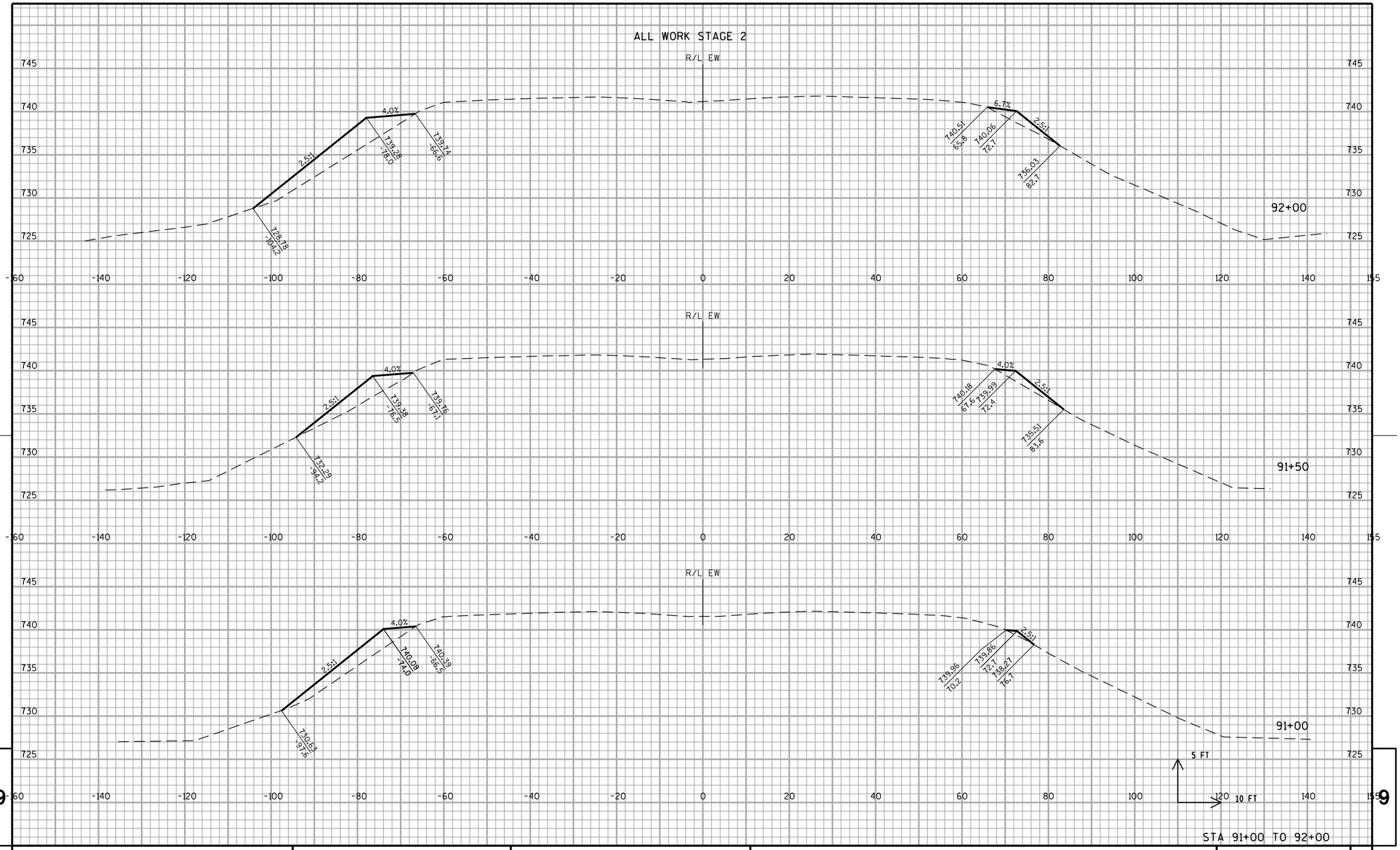
ALL WORK STAGE 2



STA 89+50 TO 90+50

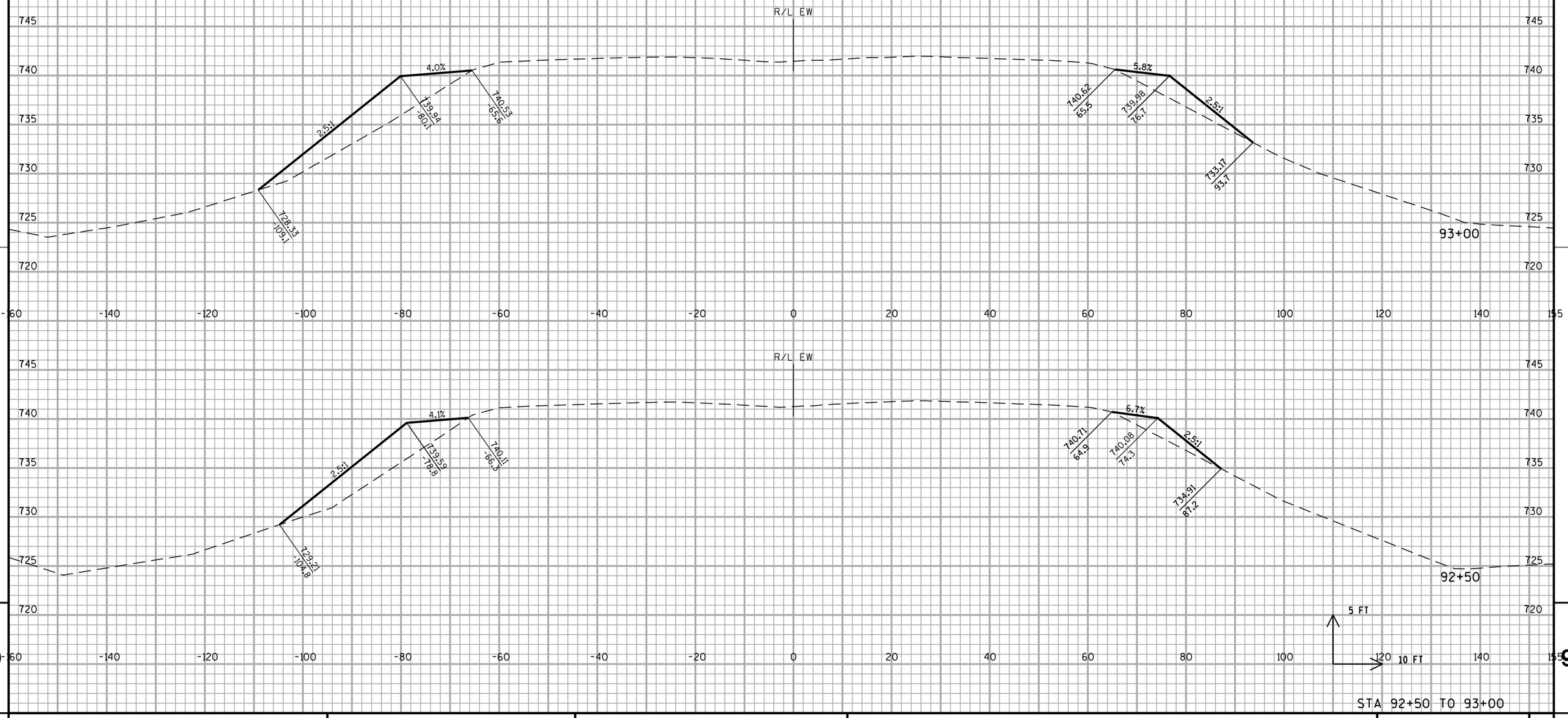
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

ALL WORK STAGE 2



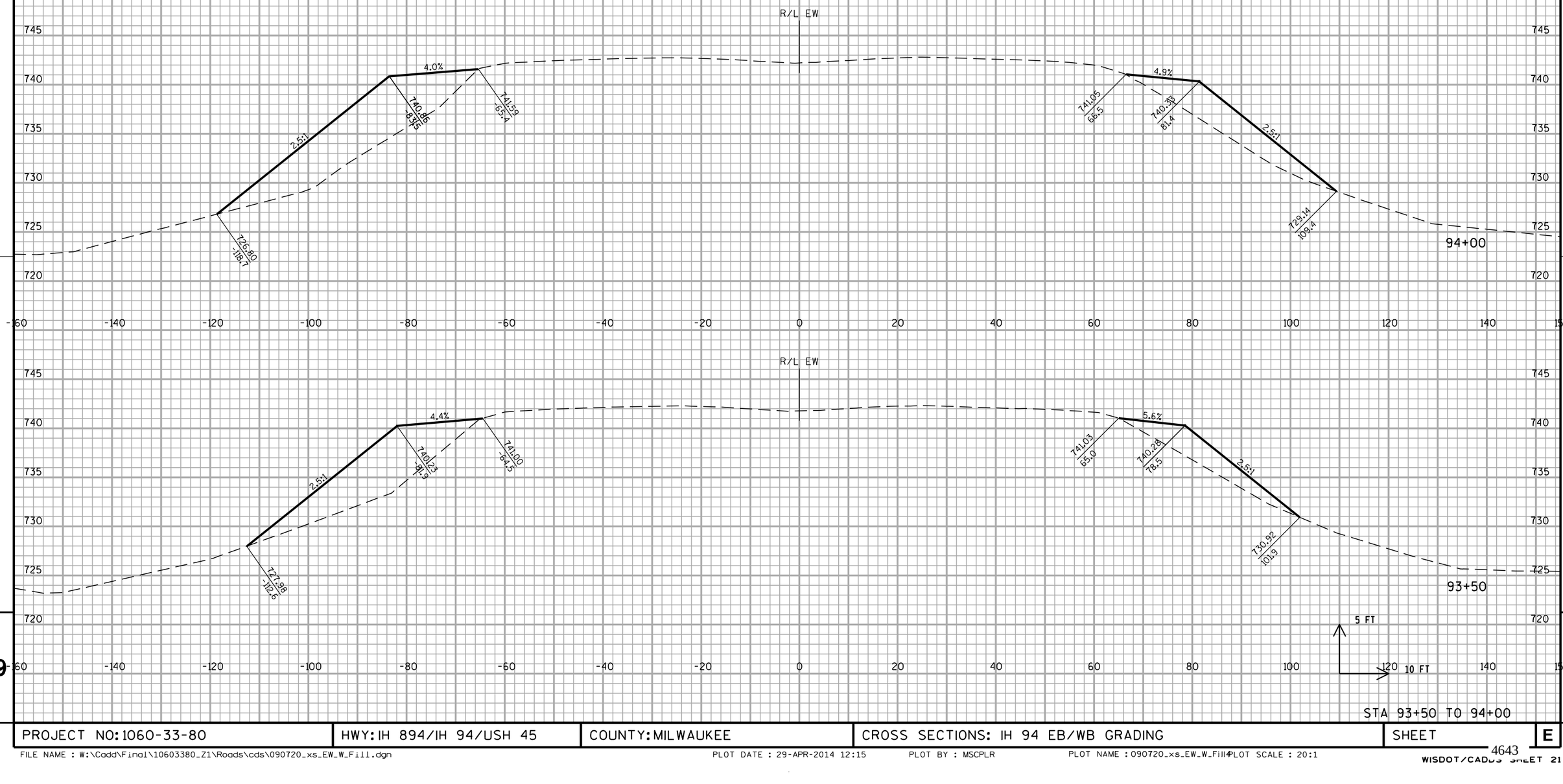
STA 92+50 TO 93+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_ew_w_fill.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090720_xs_ew_w_fill PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

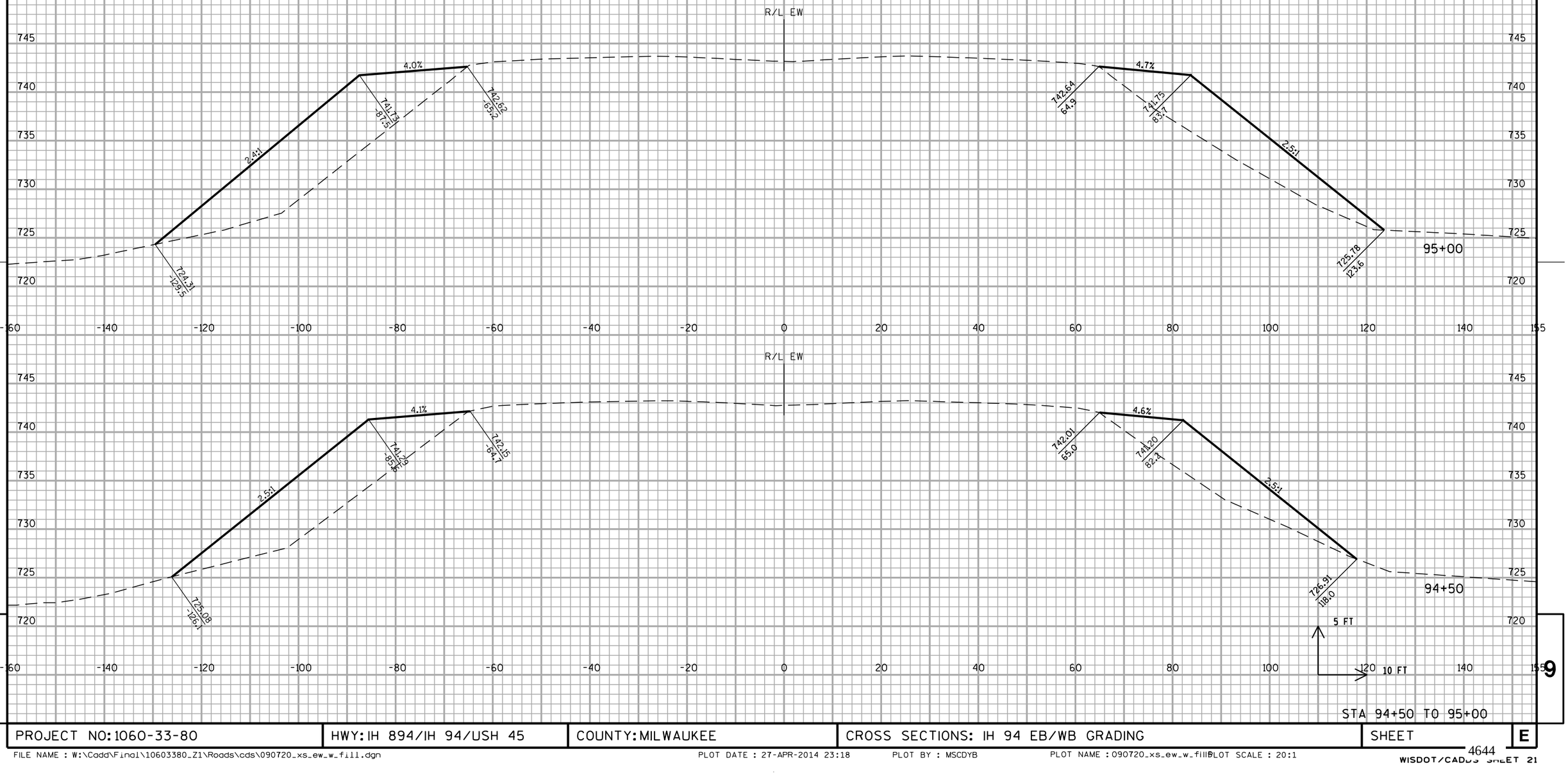


STA 93+50 TO 94+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

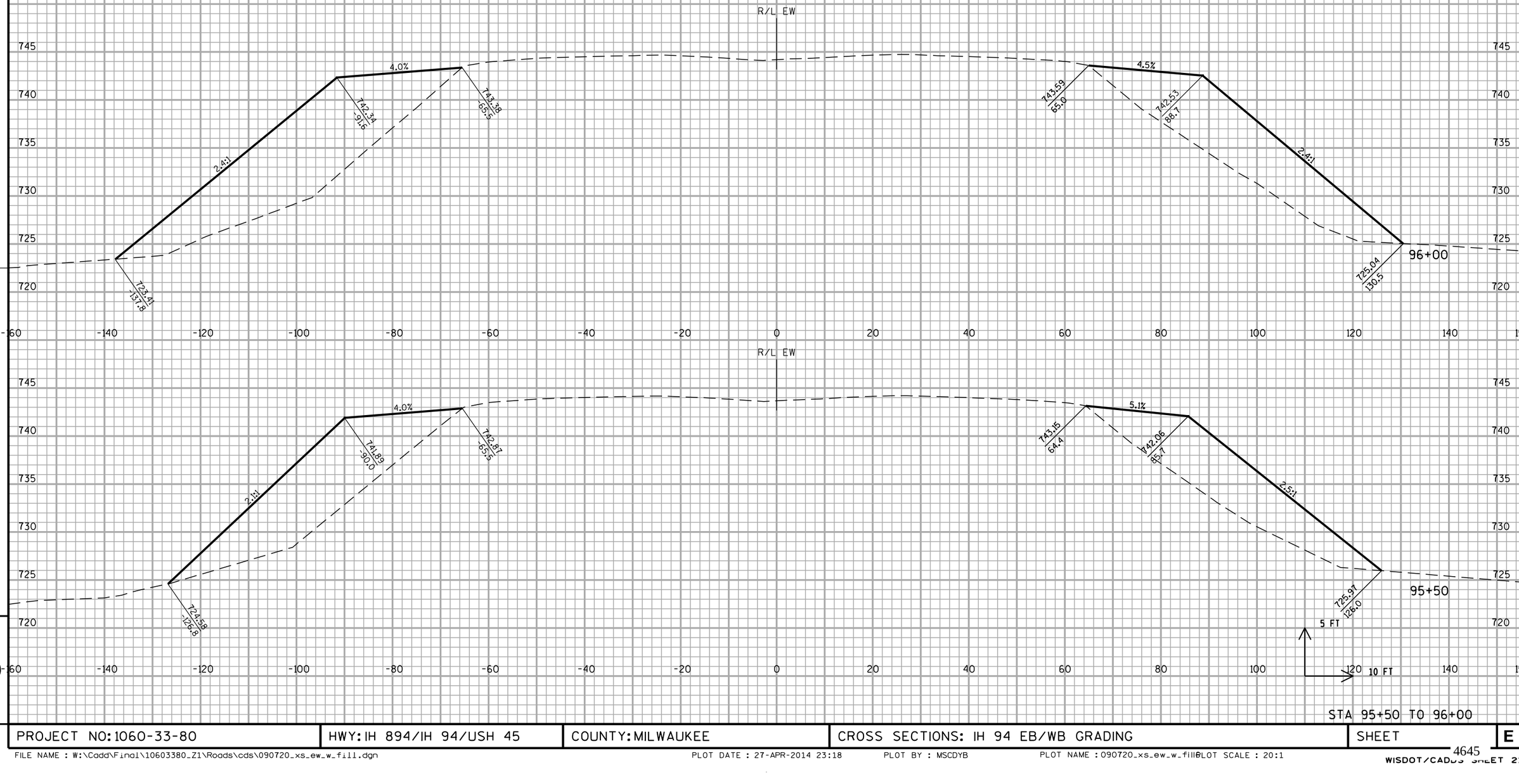
ALL WORK STAGE 2



STA 94+50 TO 95+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

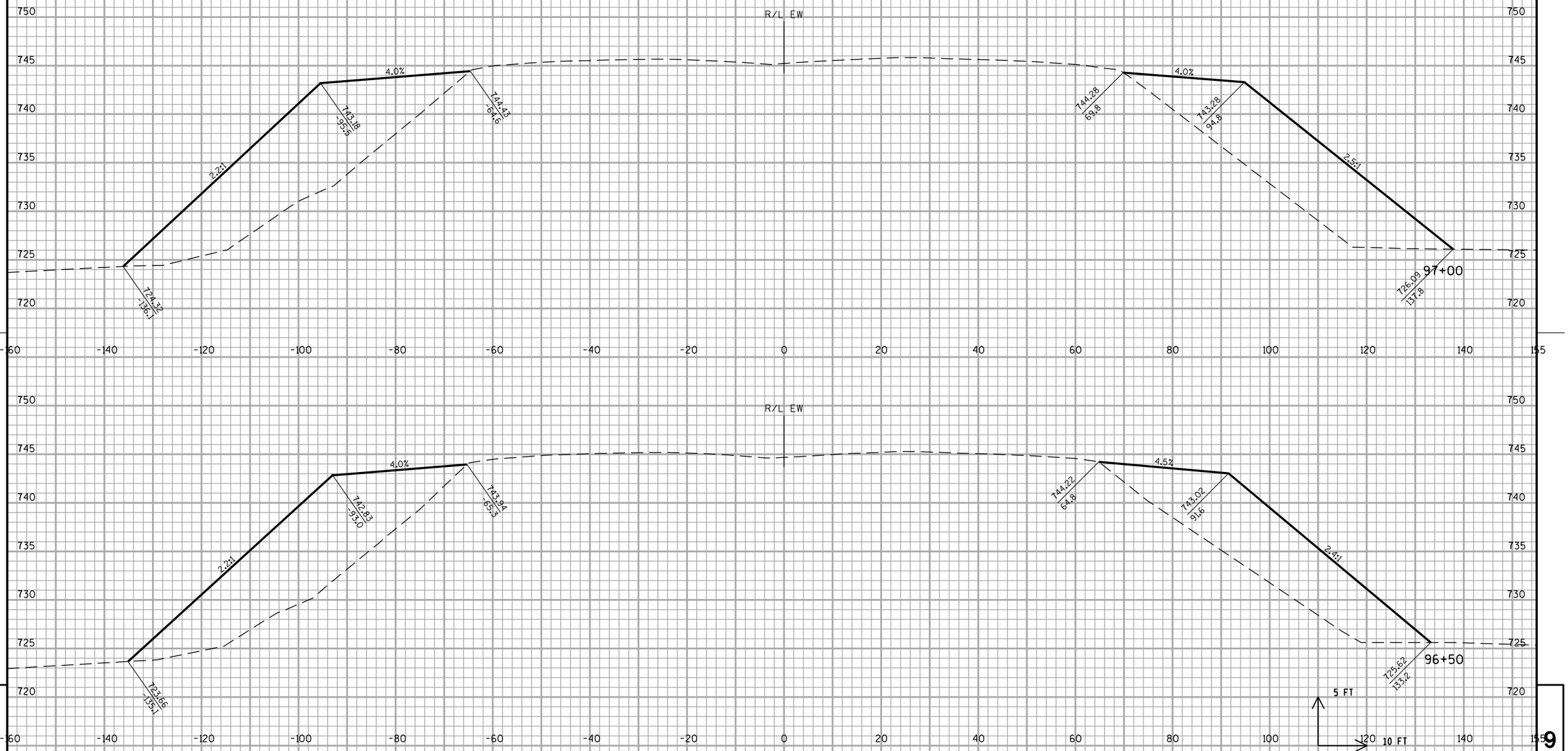
ALL WORK STAGE 2



STA 95+50 TO 96+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

ALL WORK STAGE 2



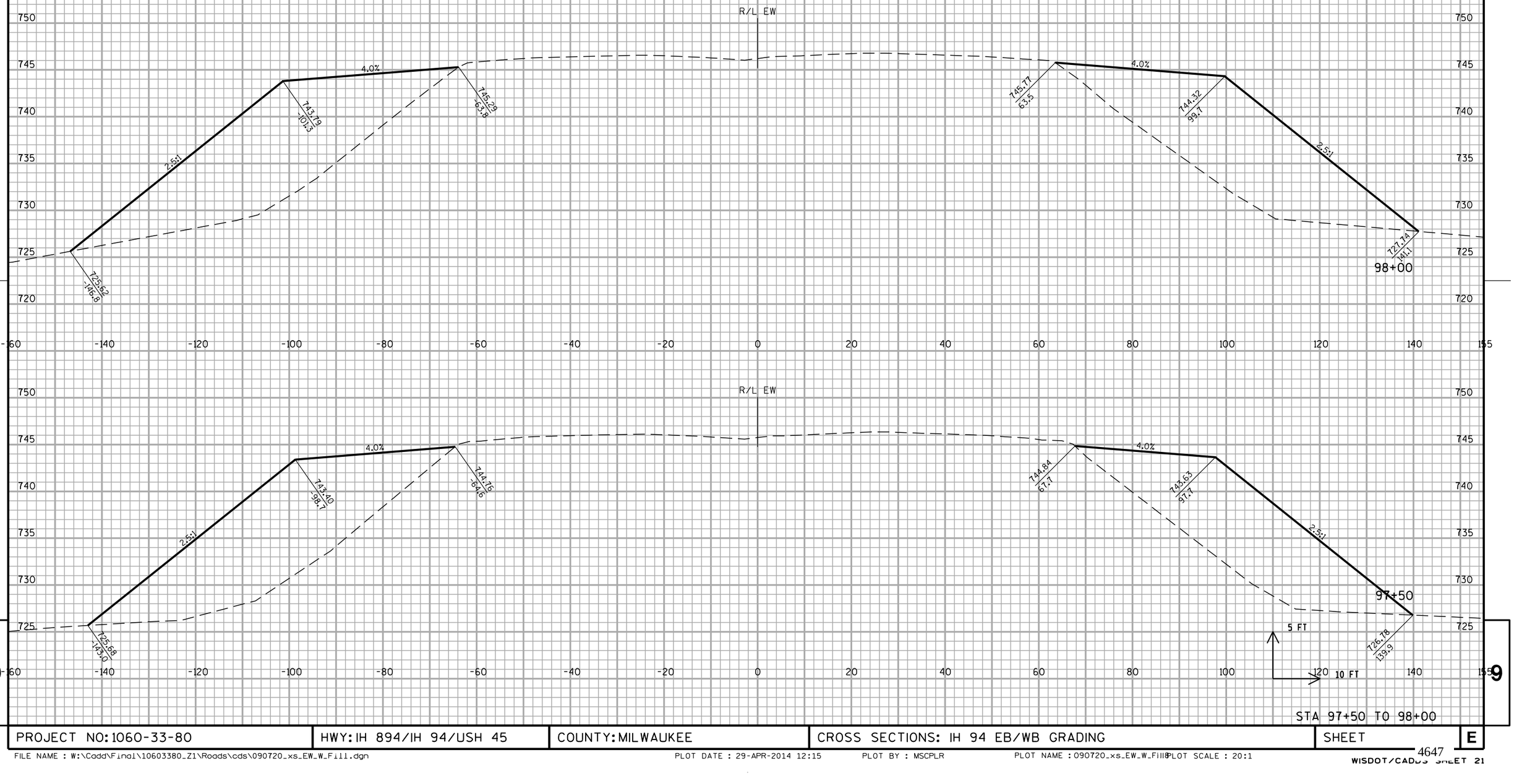
STA 96+50 TO 97+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2



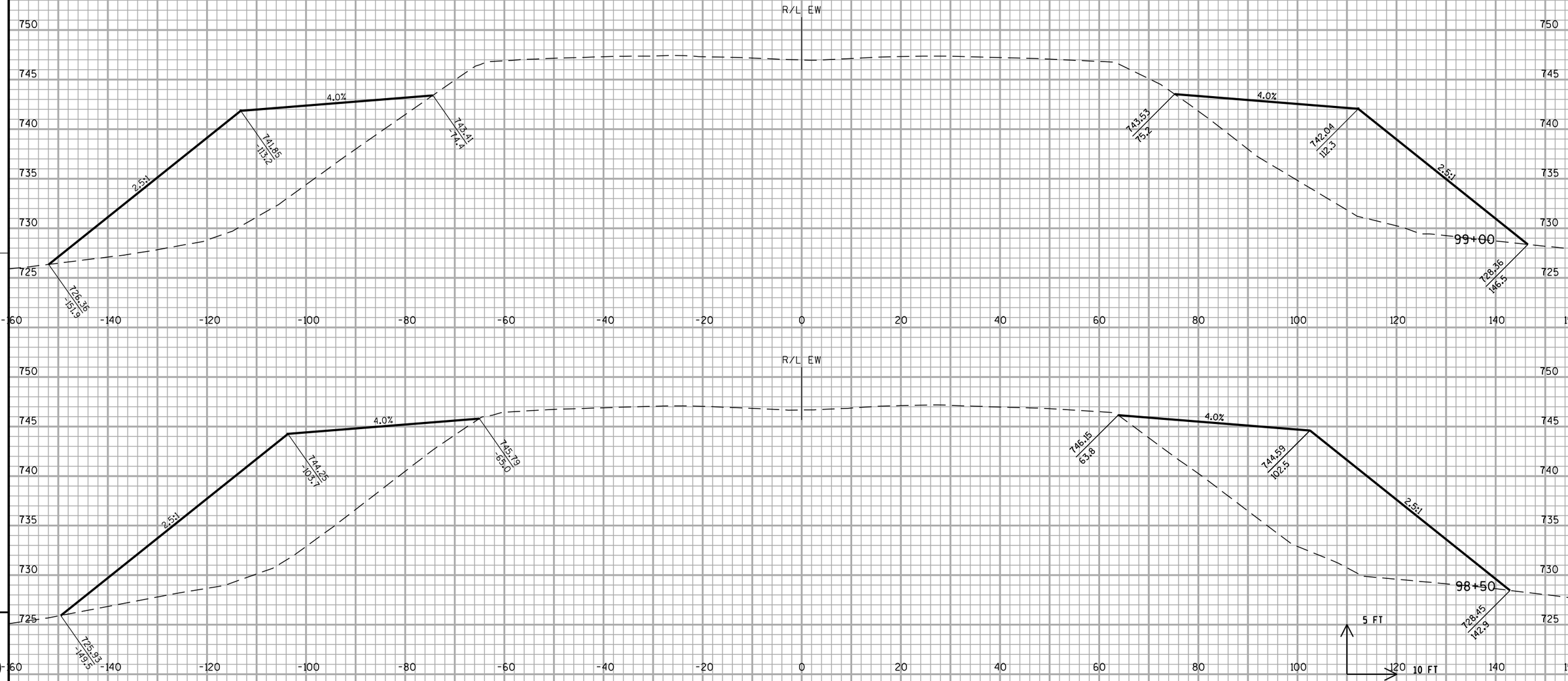
STA 97+50 TO 98+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

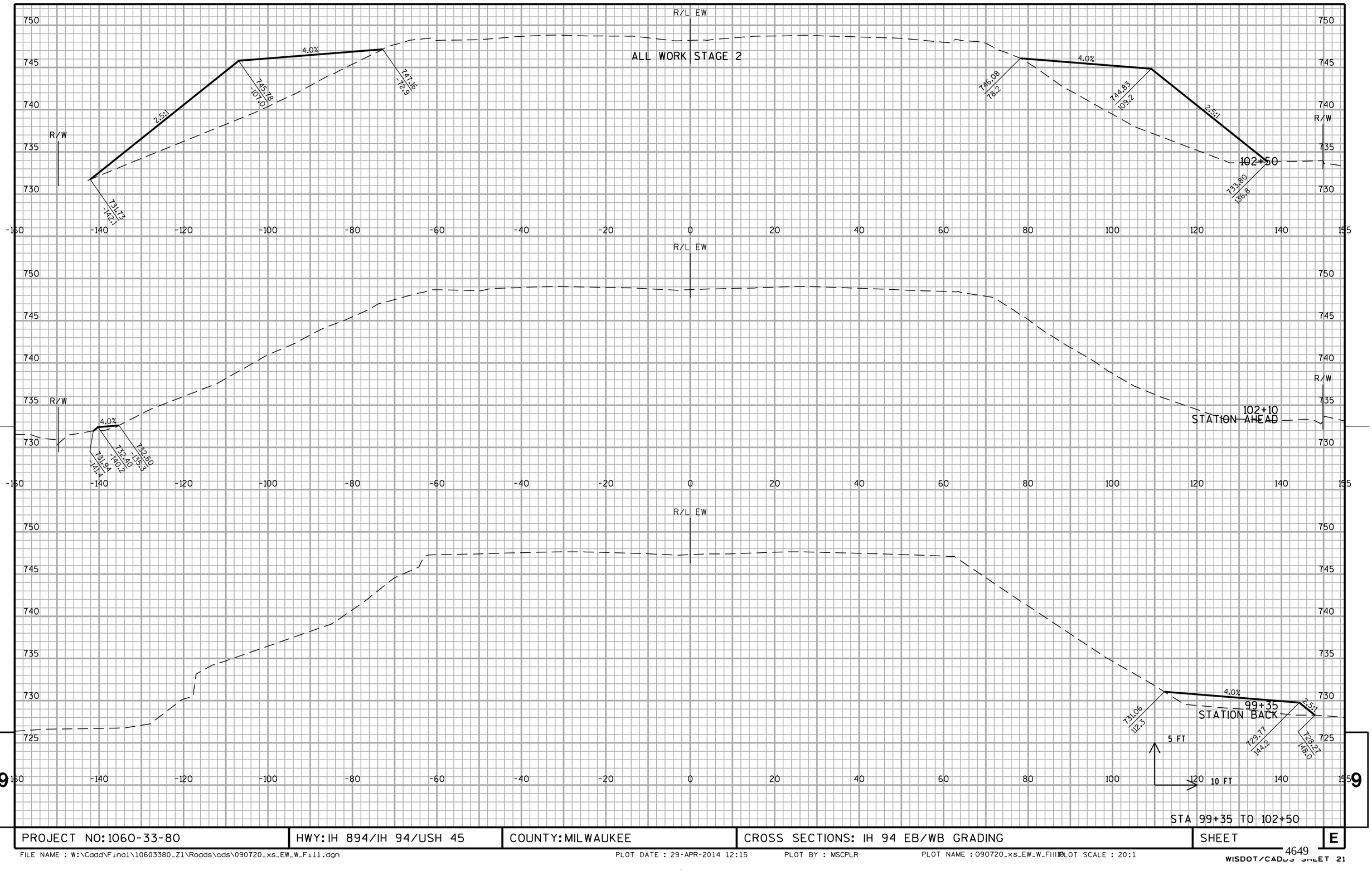


STA 98+50 TO 99+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_ew_w_fill.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090720_xs_ew_w_fill PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



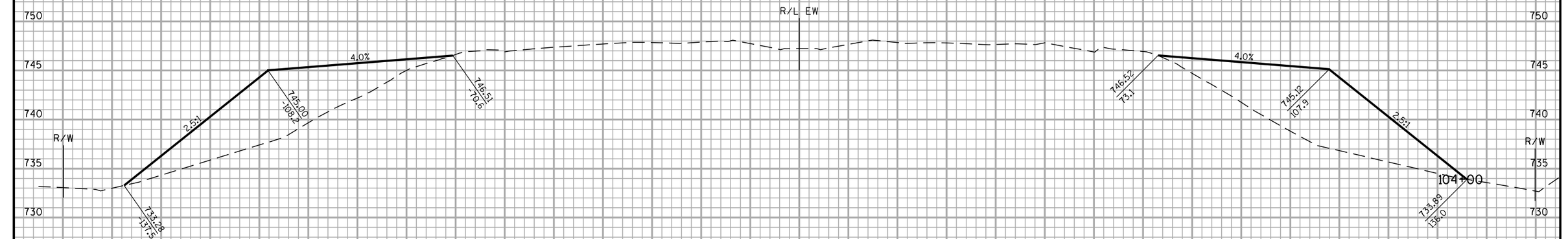
STA 99+35 TO 102+50

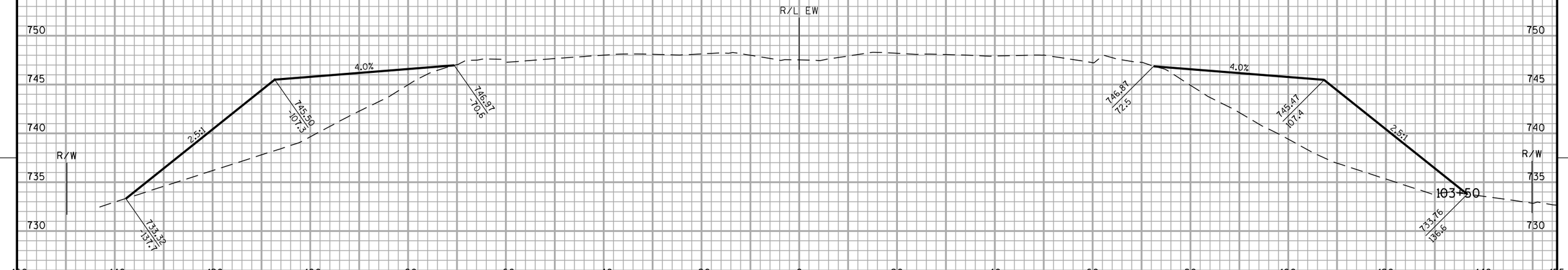
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

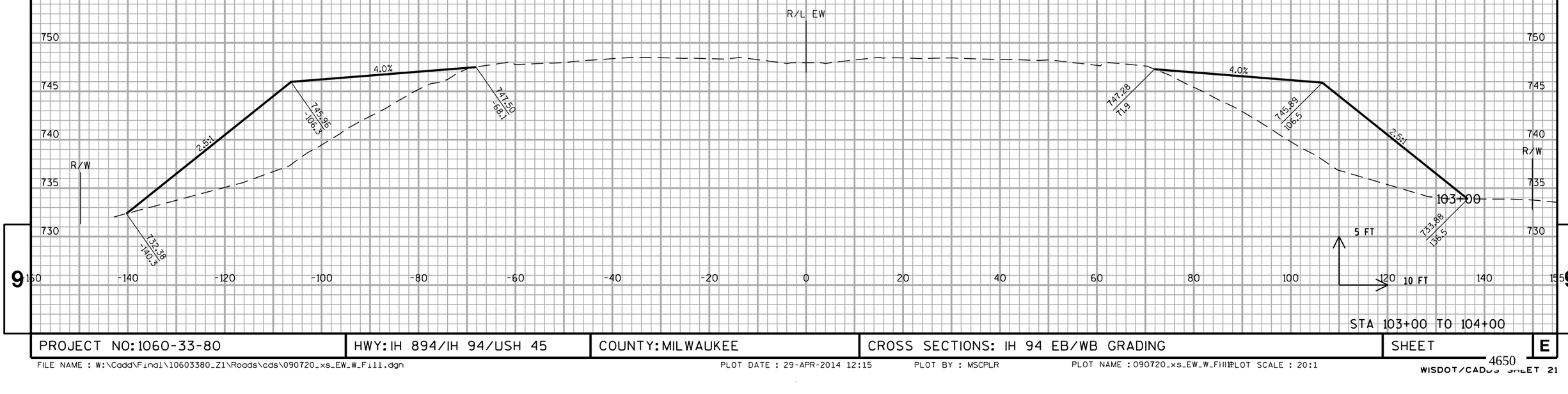
9 9

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn
PLOT DATE : 29-APR-2014 12:15
PLOT BY : MSCPLR
PLOT NAME : 090720_xs_EW_W_Fill
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK STAGE 2





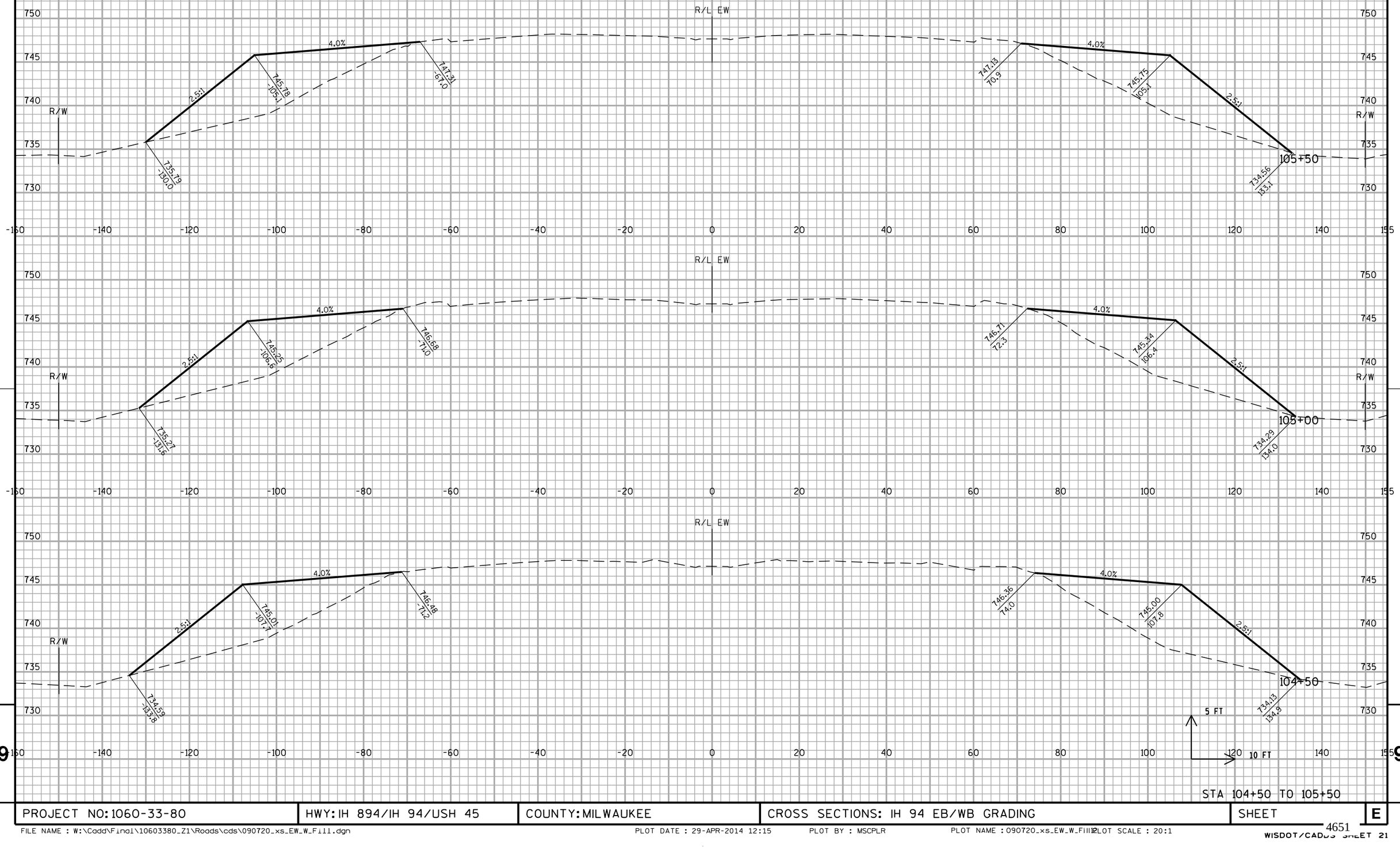


STA 103+00 TO 104+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

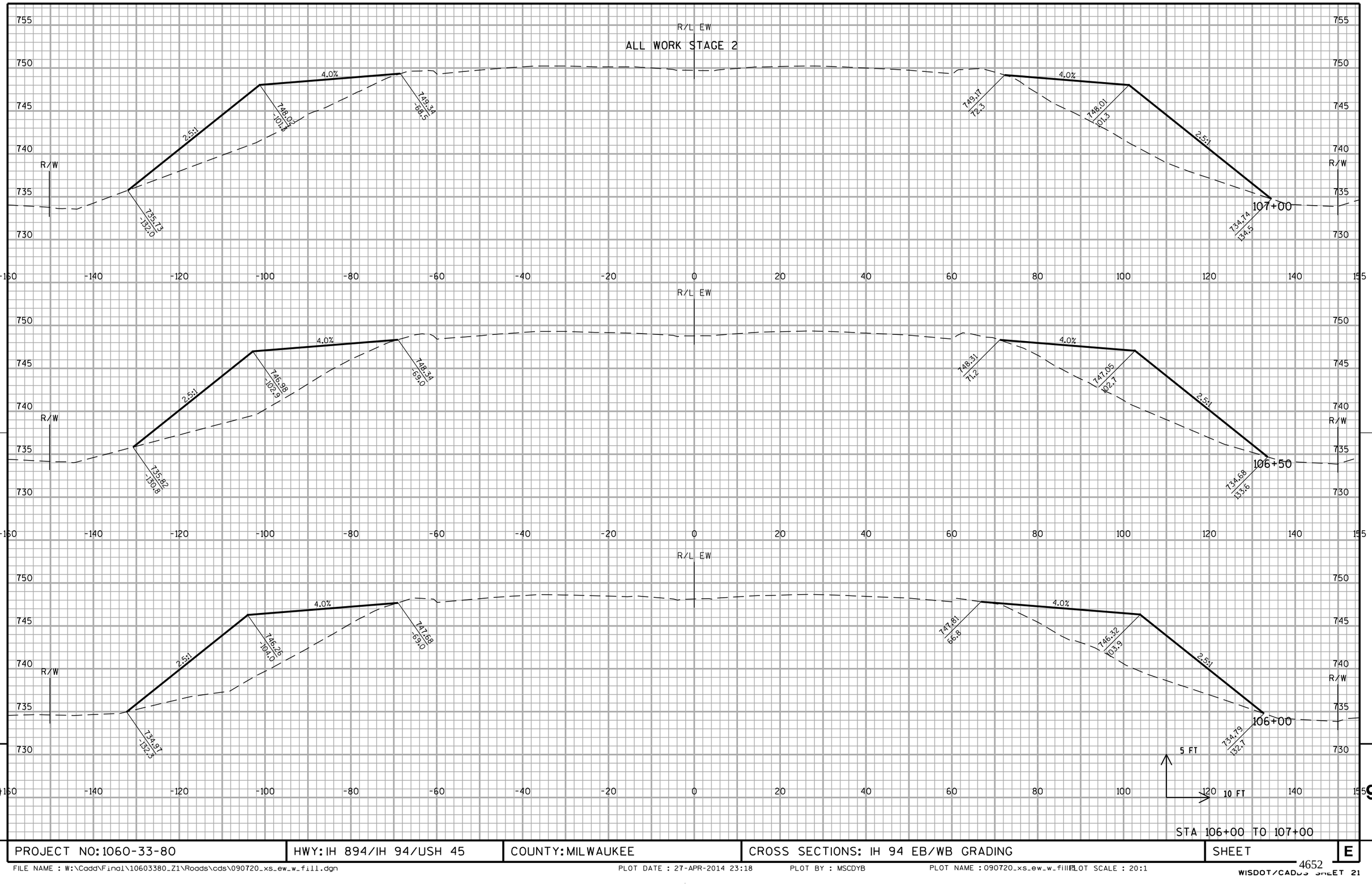
FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

ALL WORK STAGE 2



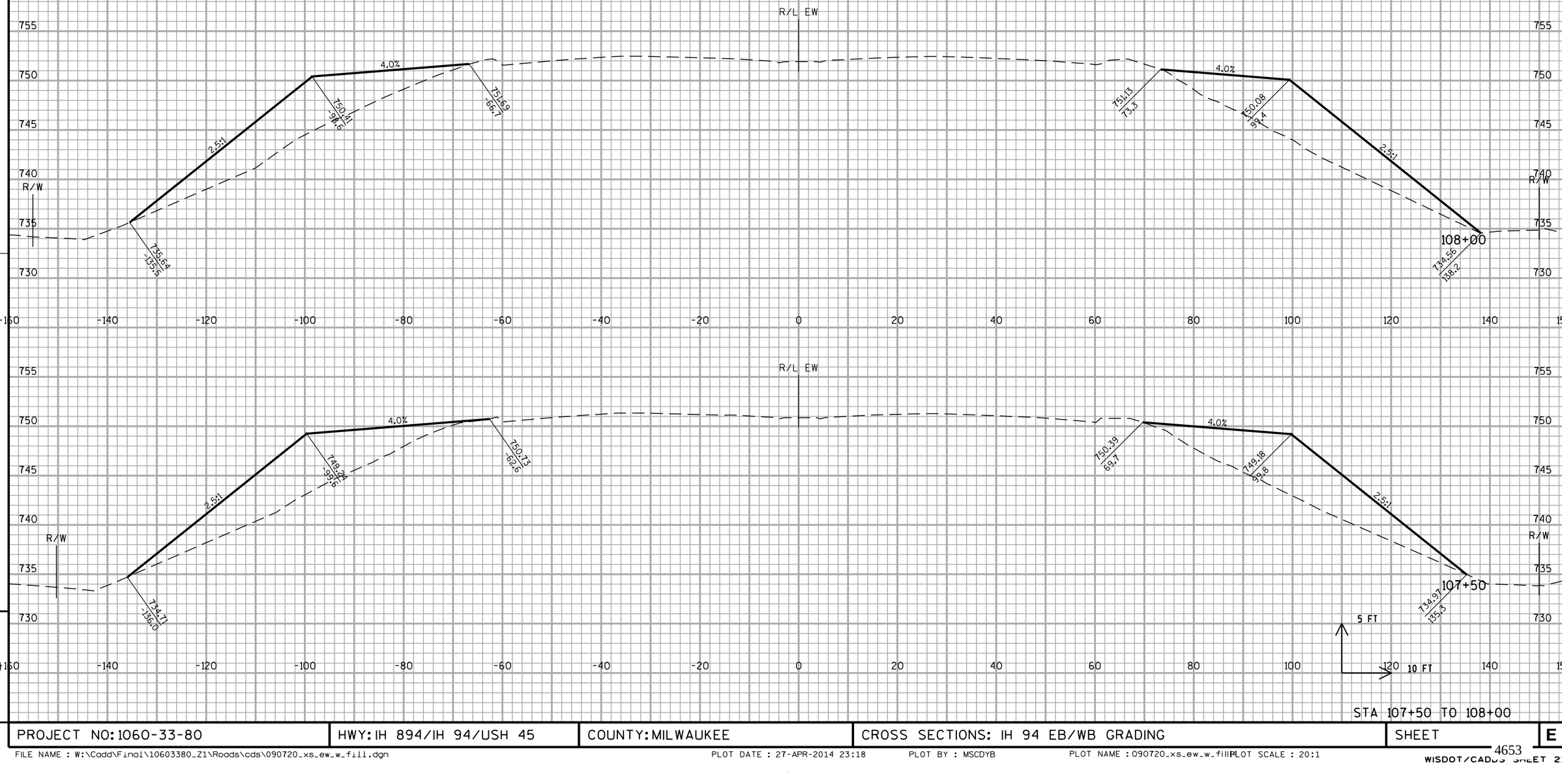
STA 104+50 TO 105+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

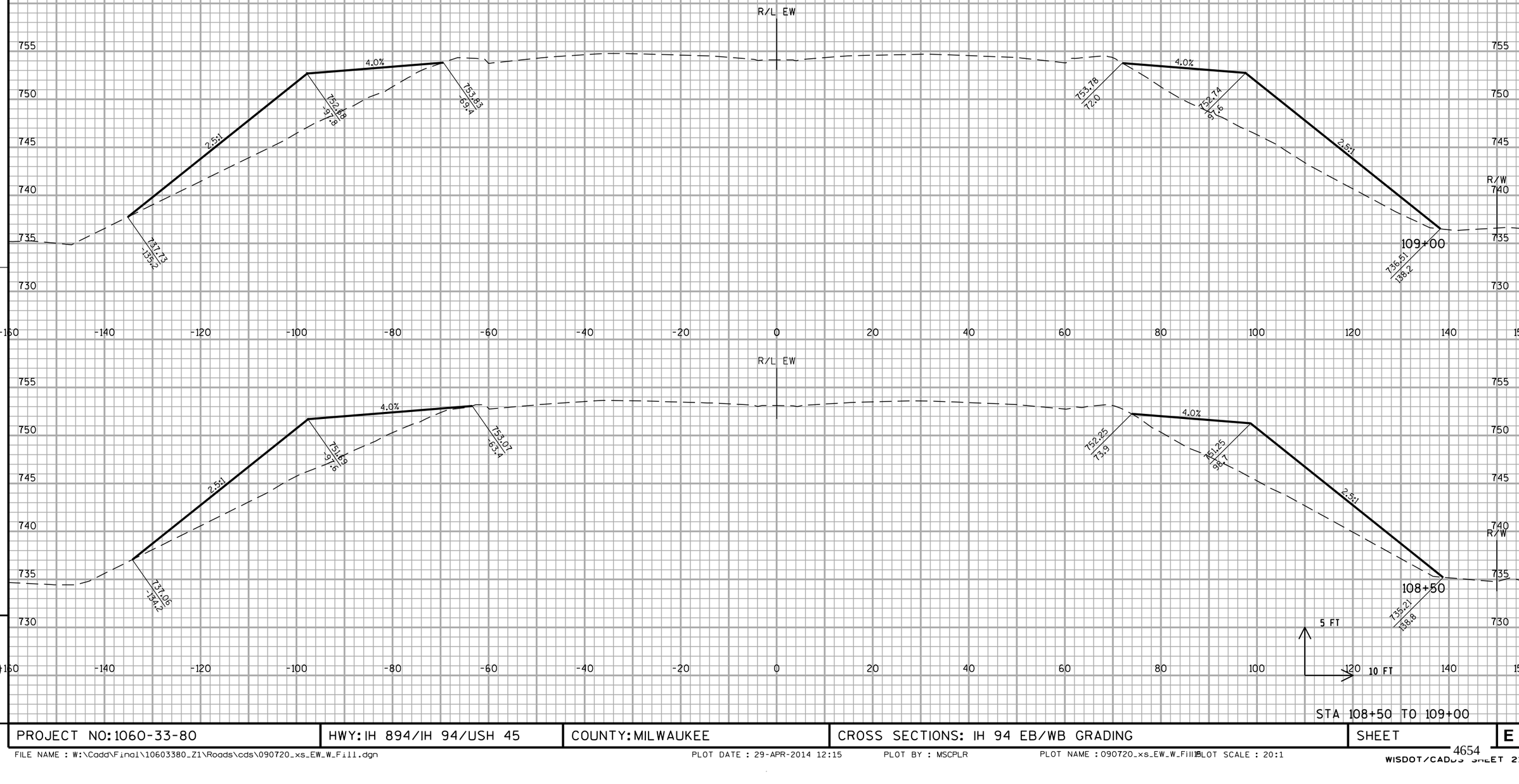
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

STA 107+50 TO 108+00

ALL WORK STAGE 2



STA 108+50 TO 109+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

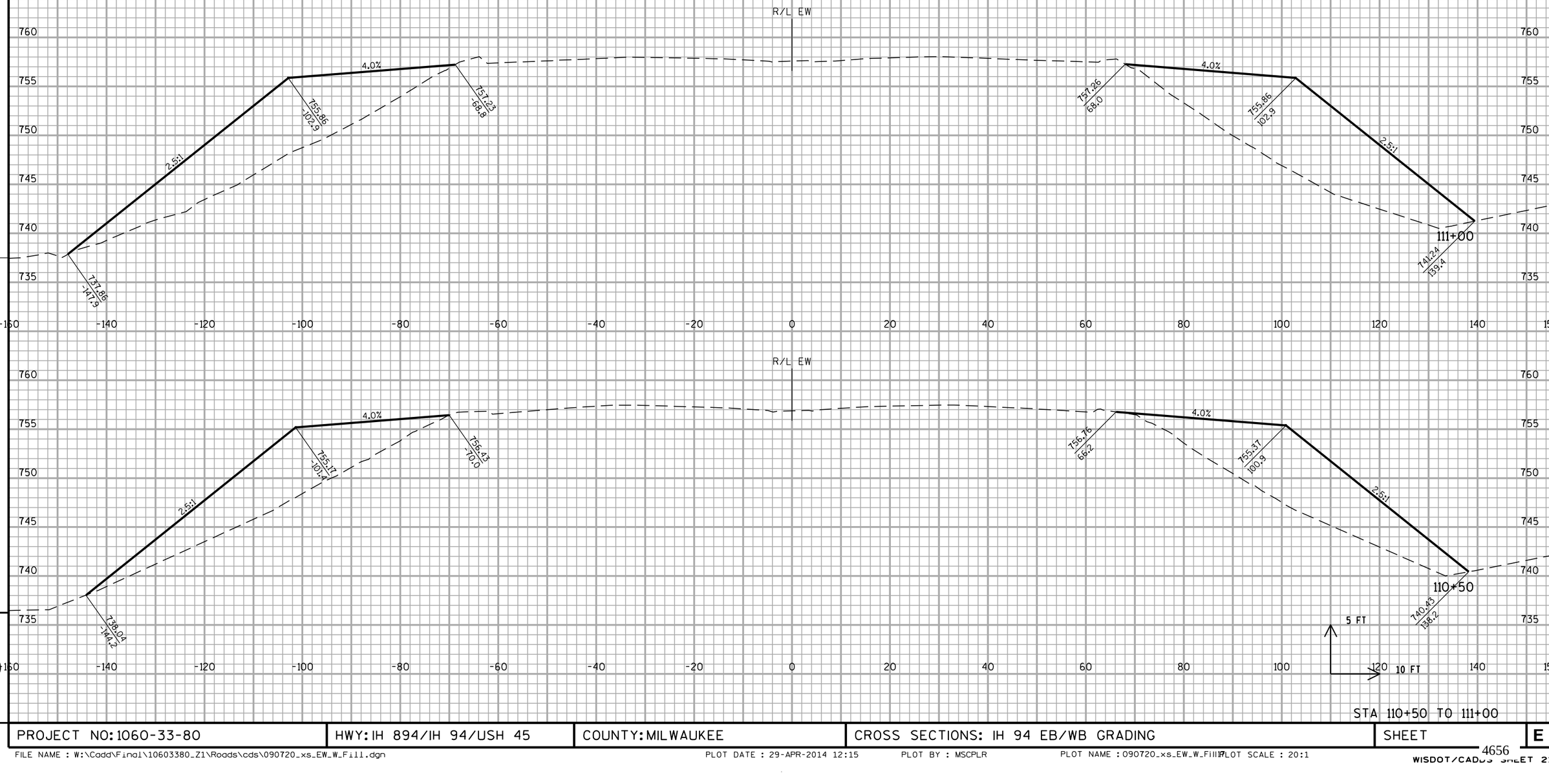


STA 109+50 TO 110+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

ALL WORK STAGE 2

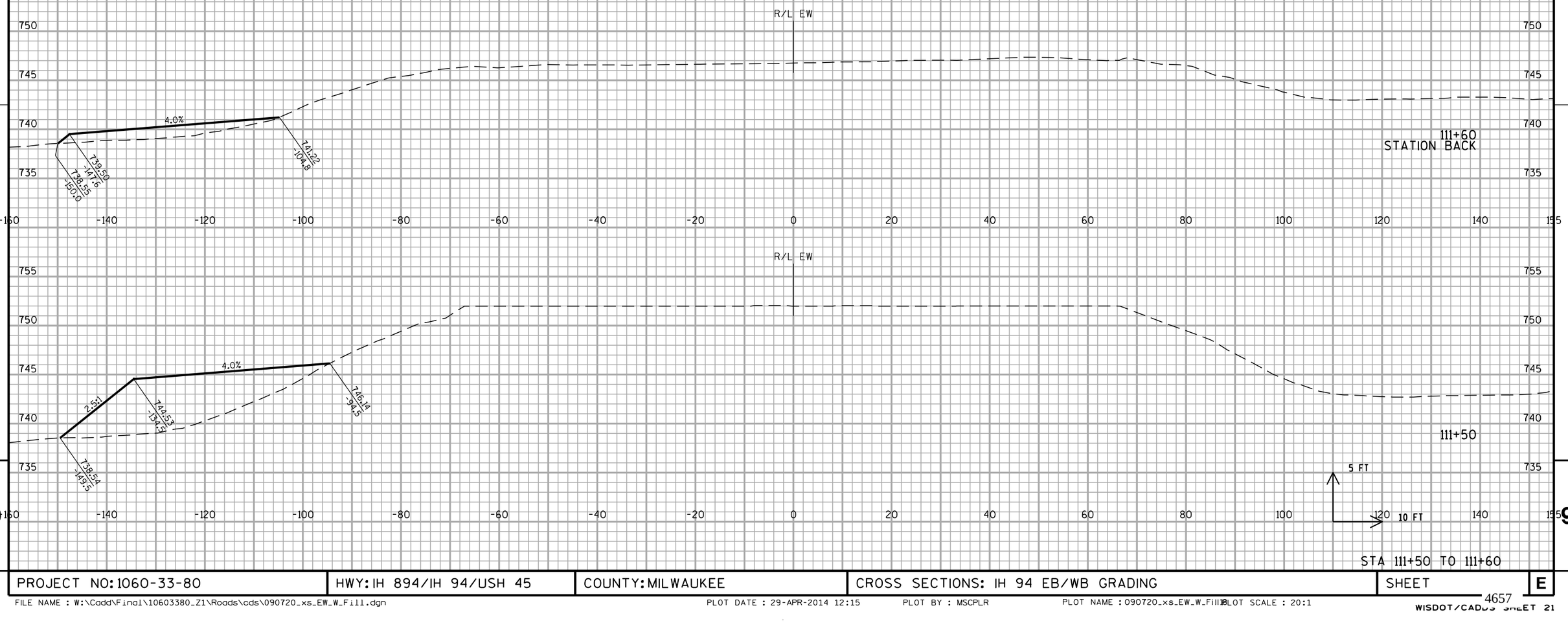


9

STA 110+50 TO 111+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

ALL WORK STAGE 2

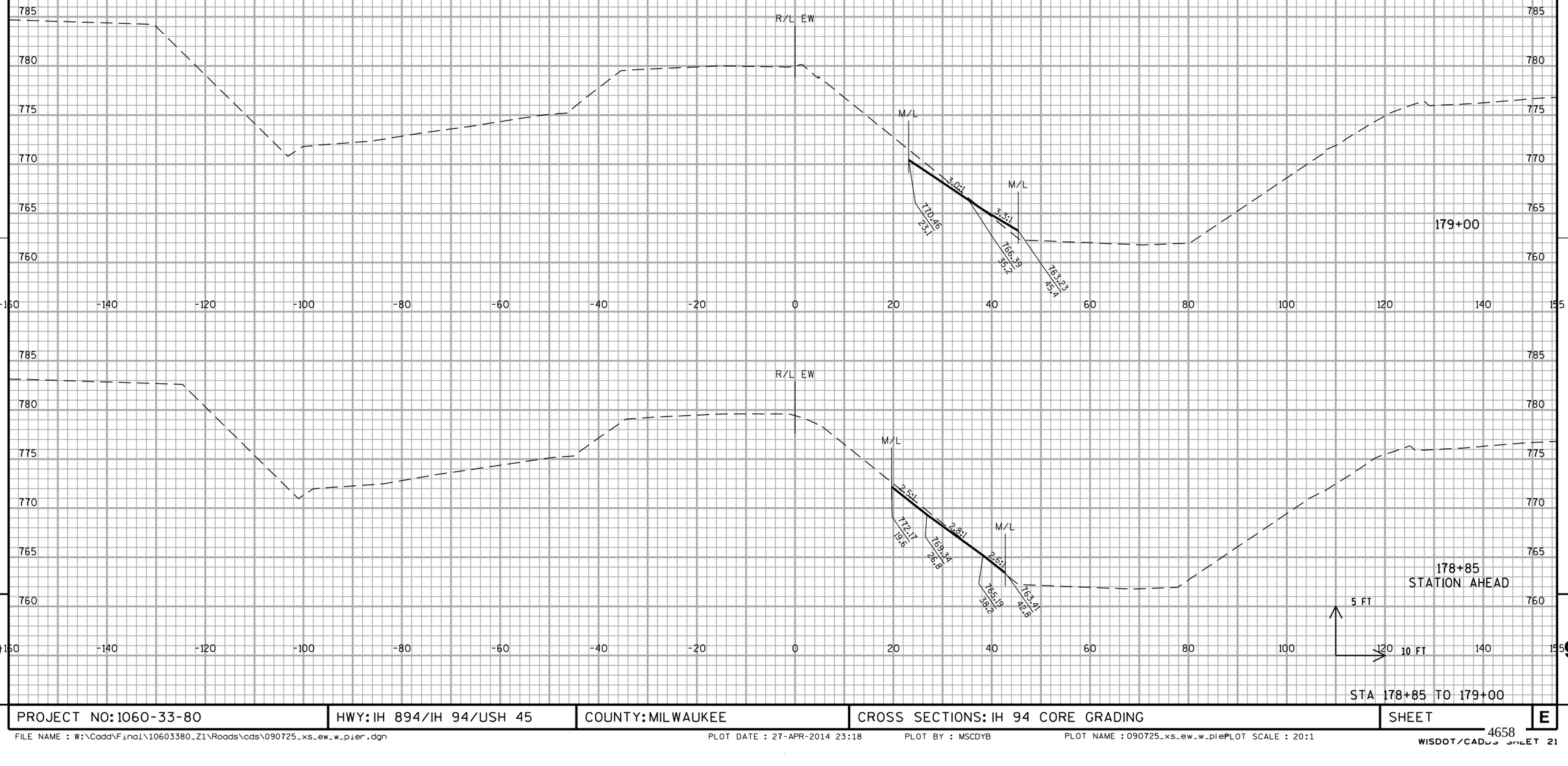


STA 111+50 TO 111+60

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 EB/WB GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090720_xs_EW_W_Fill.dgn PLOT DATE : 29-APR-2014 12:15 PLOT BY : MSCPLR PLOT NAME : 090720_xs_EW_W_Fill PLOT SCALE : 20:1

ALL WORK STAGE 2

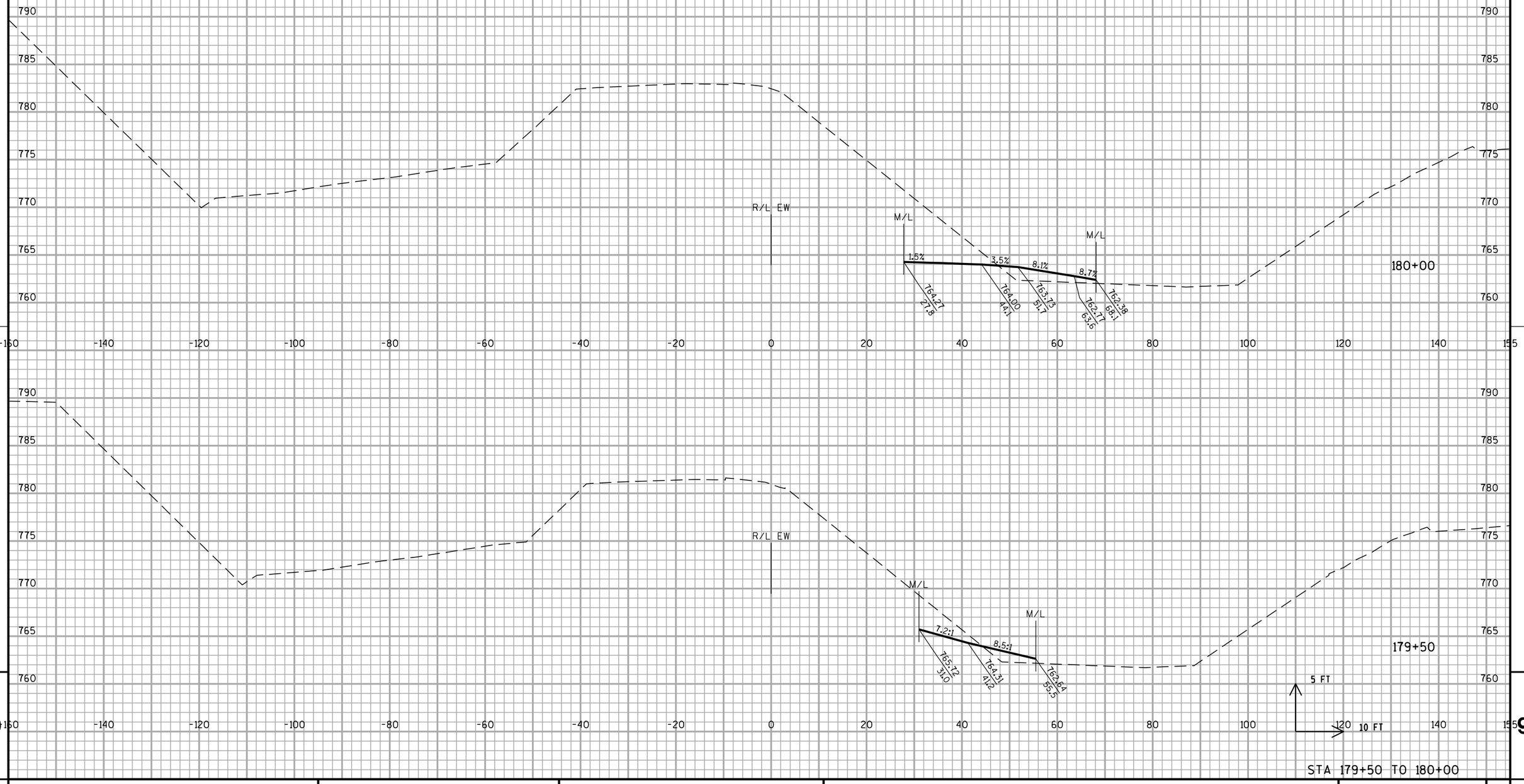


STA 178+85 TO 179+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pie PLOT SCALE : 20:1

ALL WORK STAGE 2



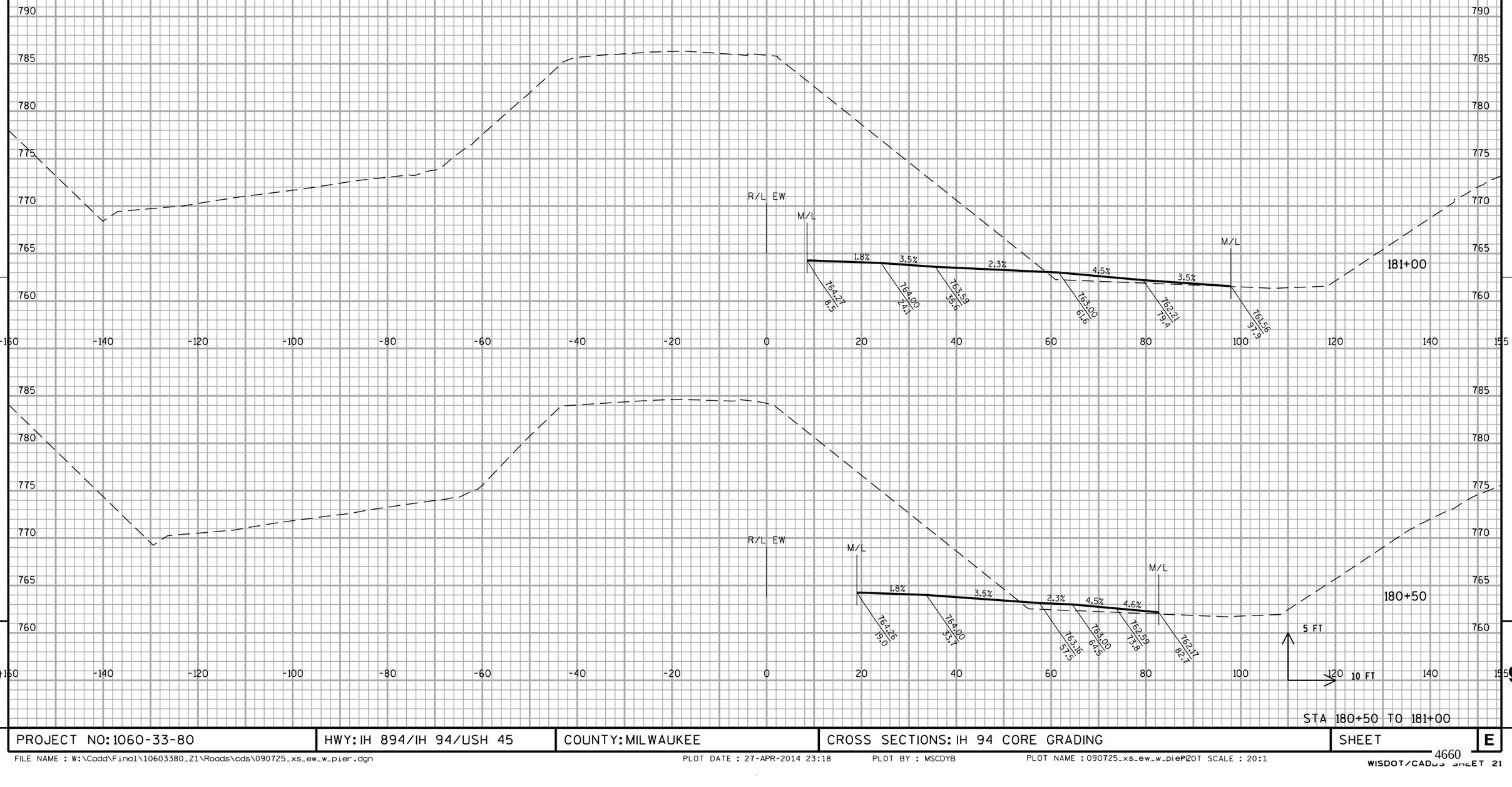
STA 179+50 TO 180+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pier PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

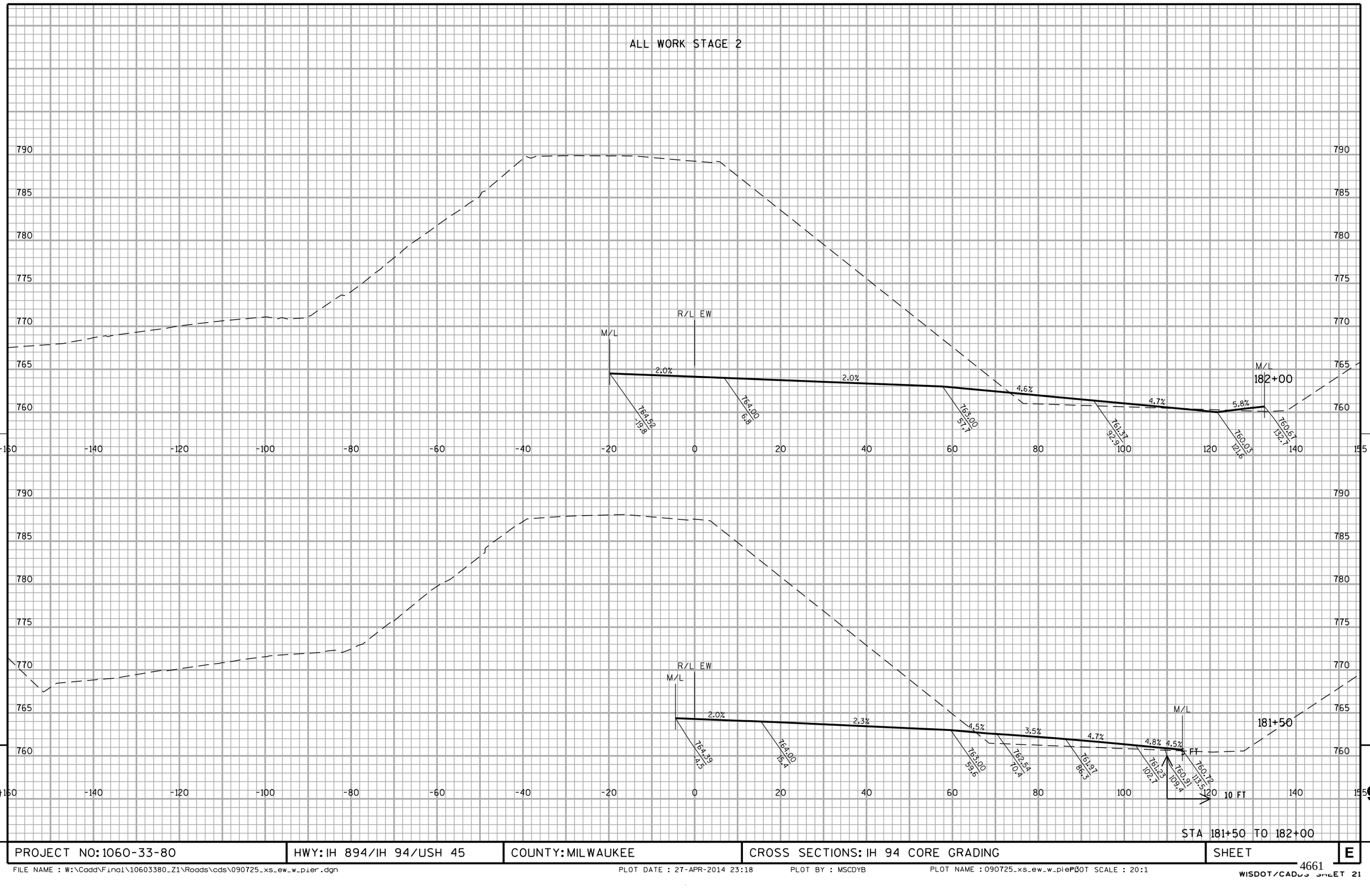


STA 180+50 TO 181+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

9 9

ALL WORK STAGE 2



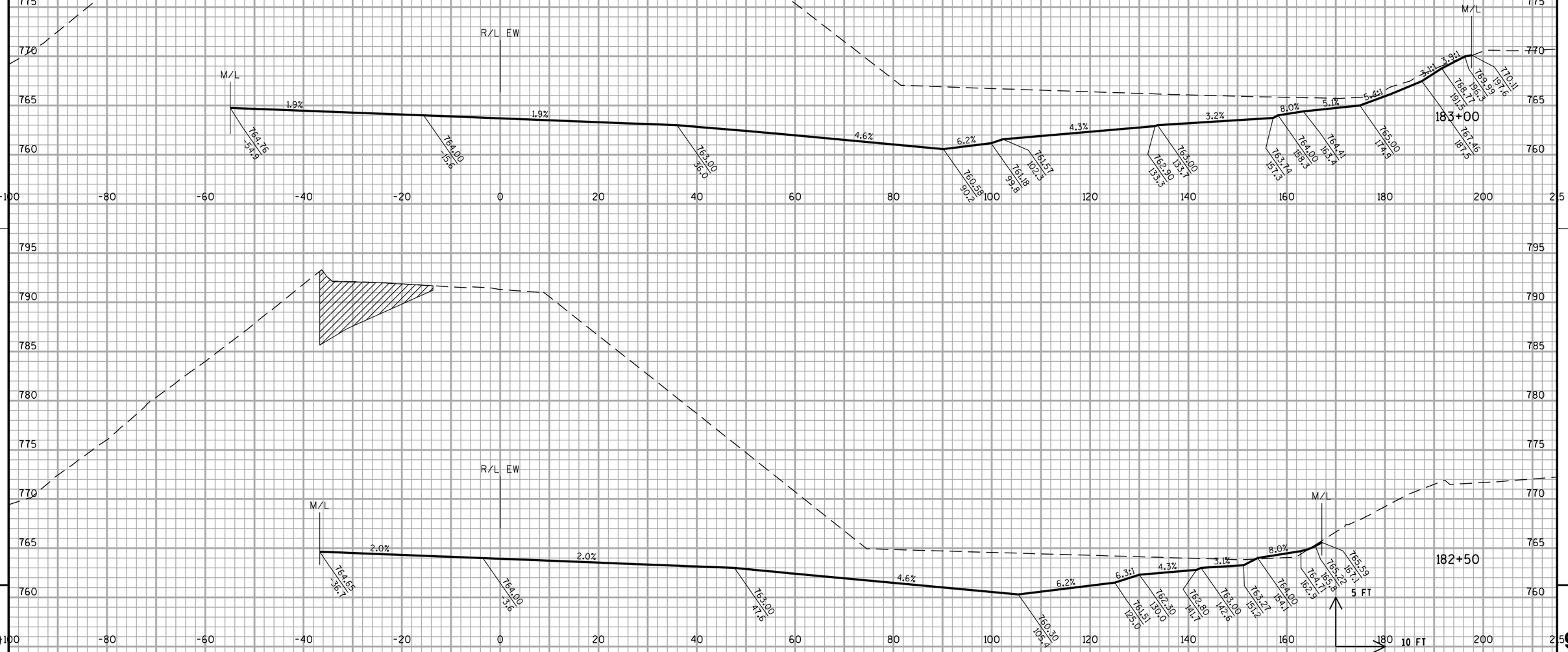
STA 181+50 TO 182+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pier.PLOT SCALE : 20:1

ALL WORK STAGE 2

EXCAVATION, HAULING AND REUSE OF SOLID WASTE SOIL. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS (TYP).



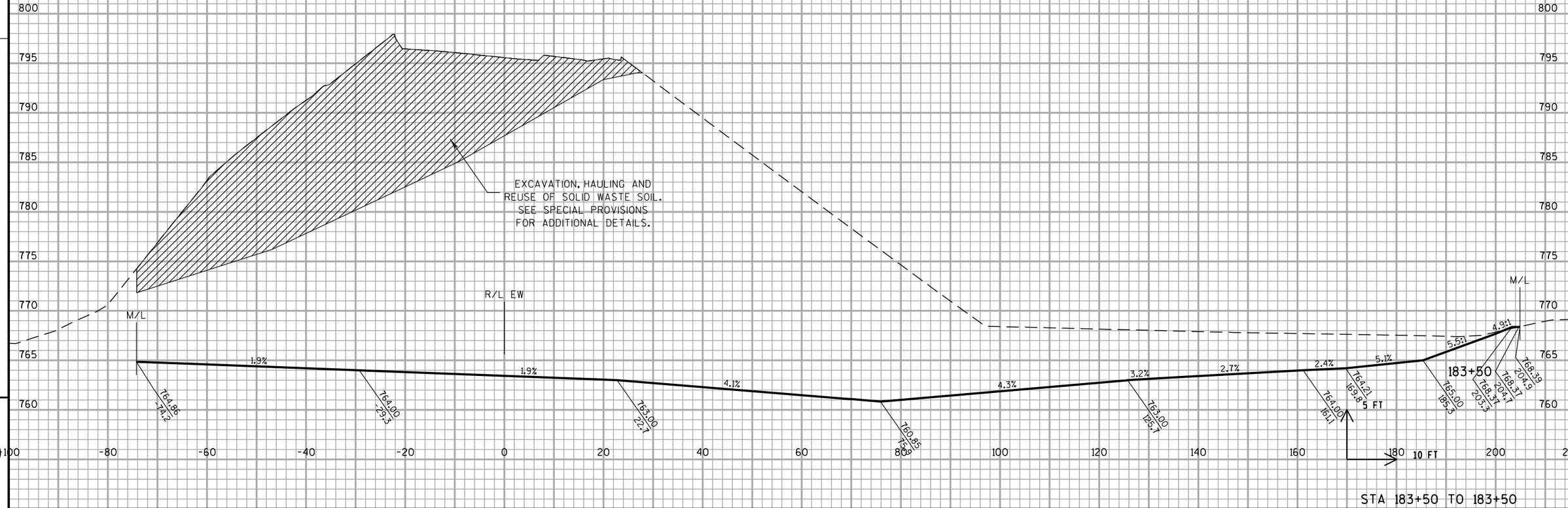
STA 182+50 TO 183+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pier PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK STAGE 2

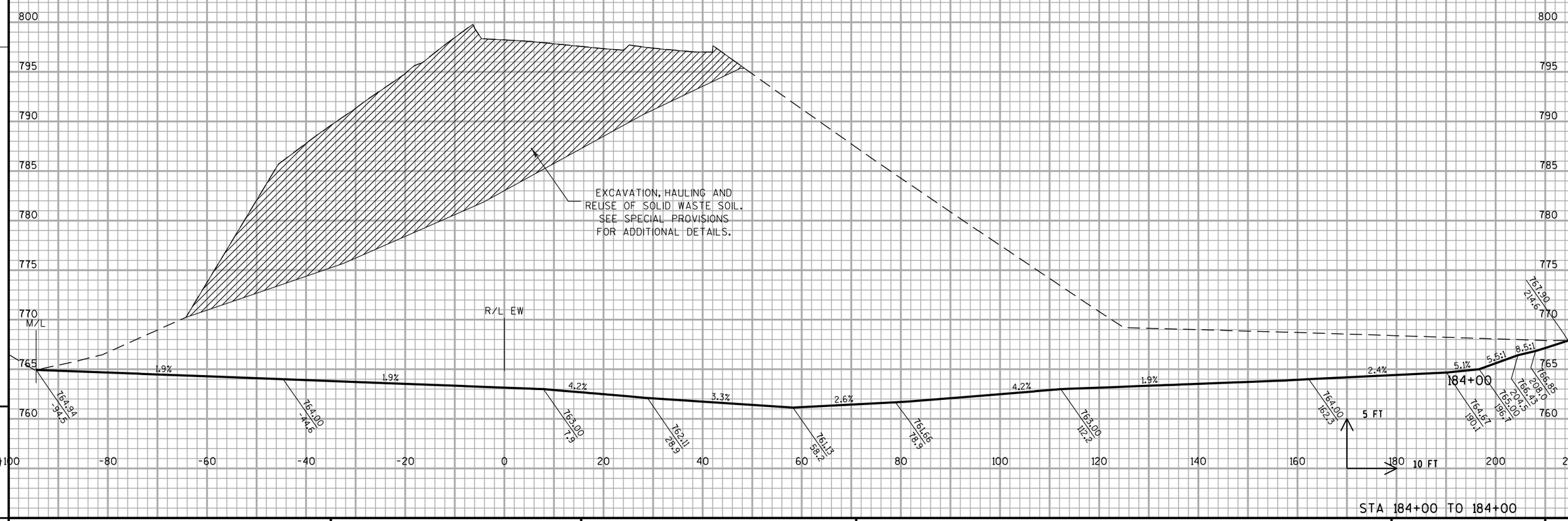


STA 183+50 TO 183+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pier.PLOT SCALE : 20:1

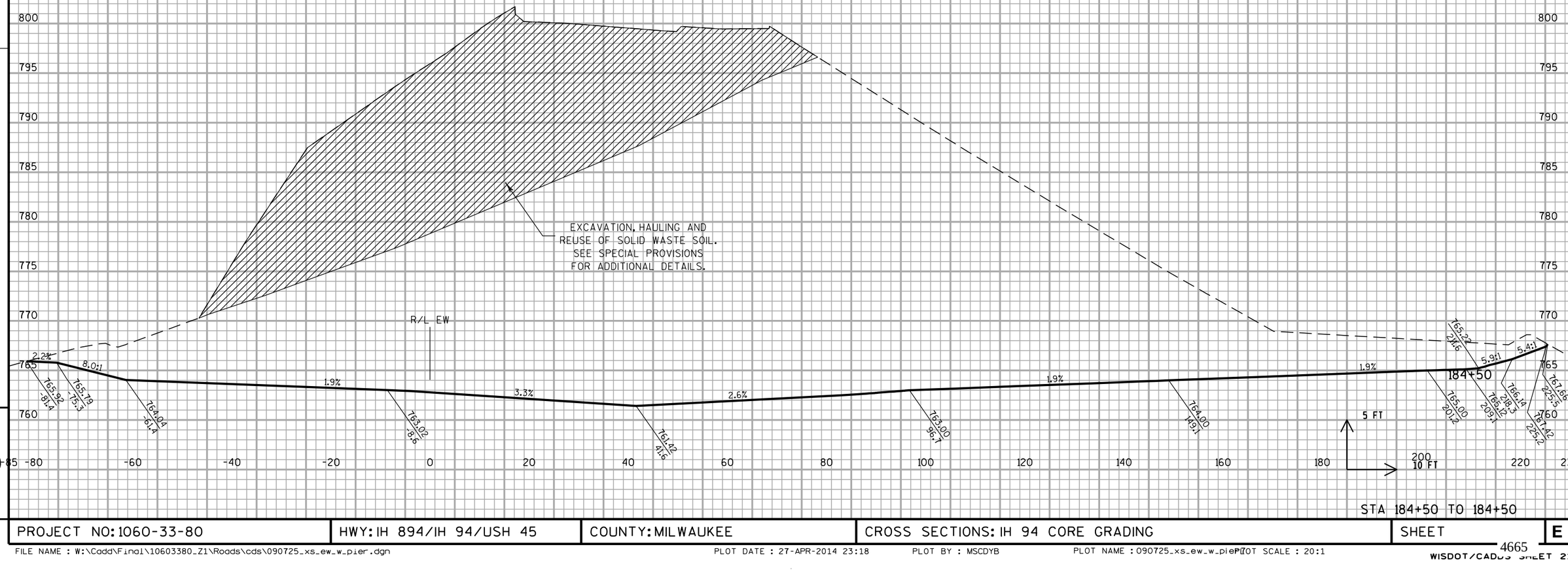
ALL WORK STAGE 2



STA 184+00 TO 184+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

ALL WORK STAGE 2

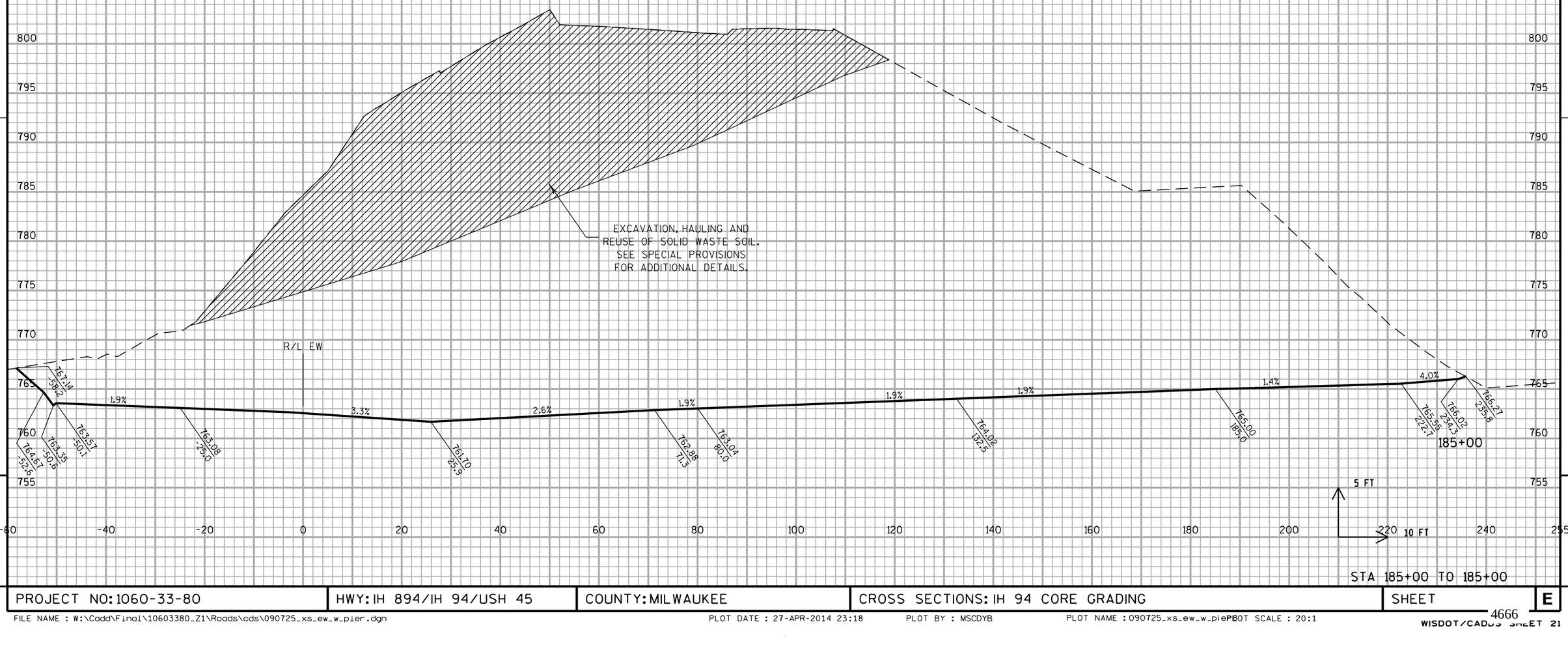


STA 184+50 TO 184+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_ew_w_pier.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090725_xs_ew_w_pier.PLOT SCALE : 20:1

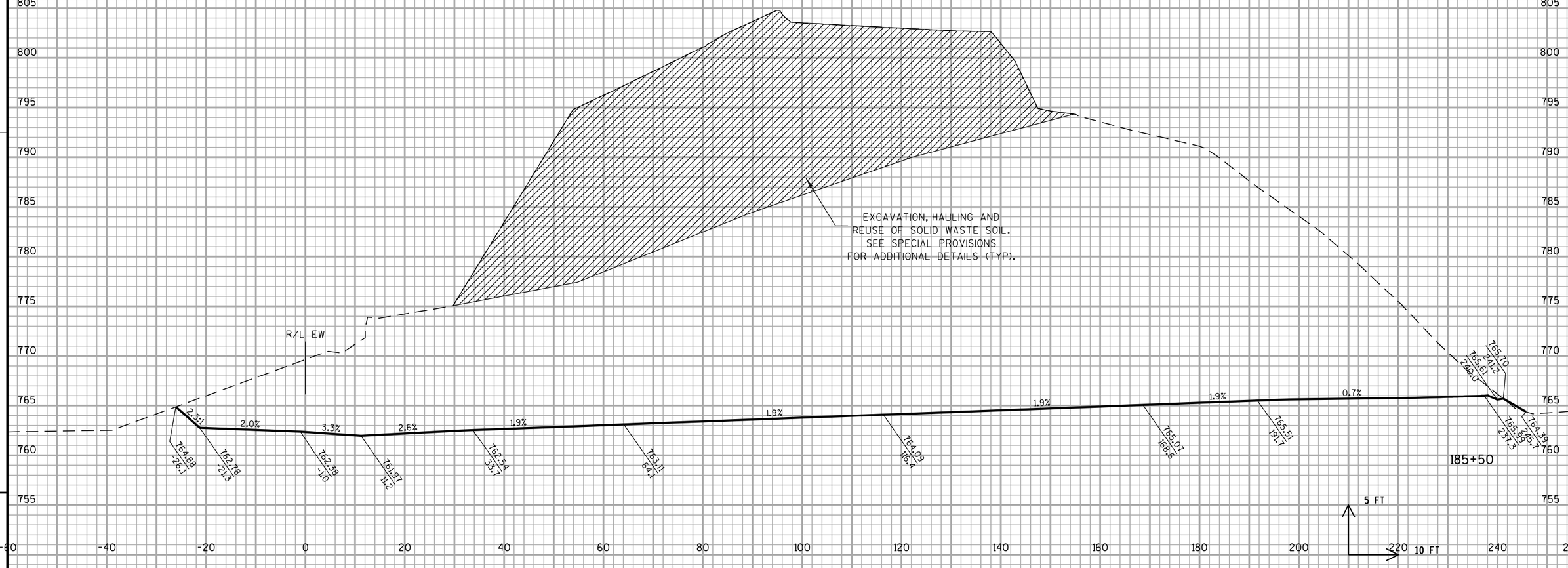
ALL WORK STAGE 2



STA 185+00 TO 185+00

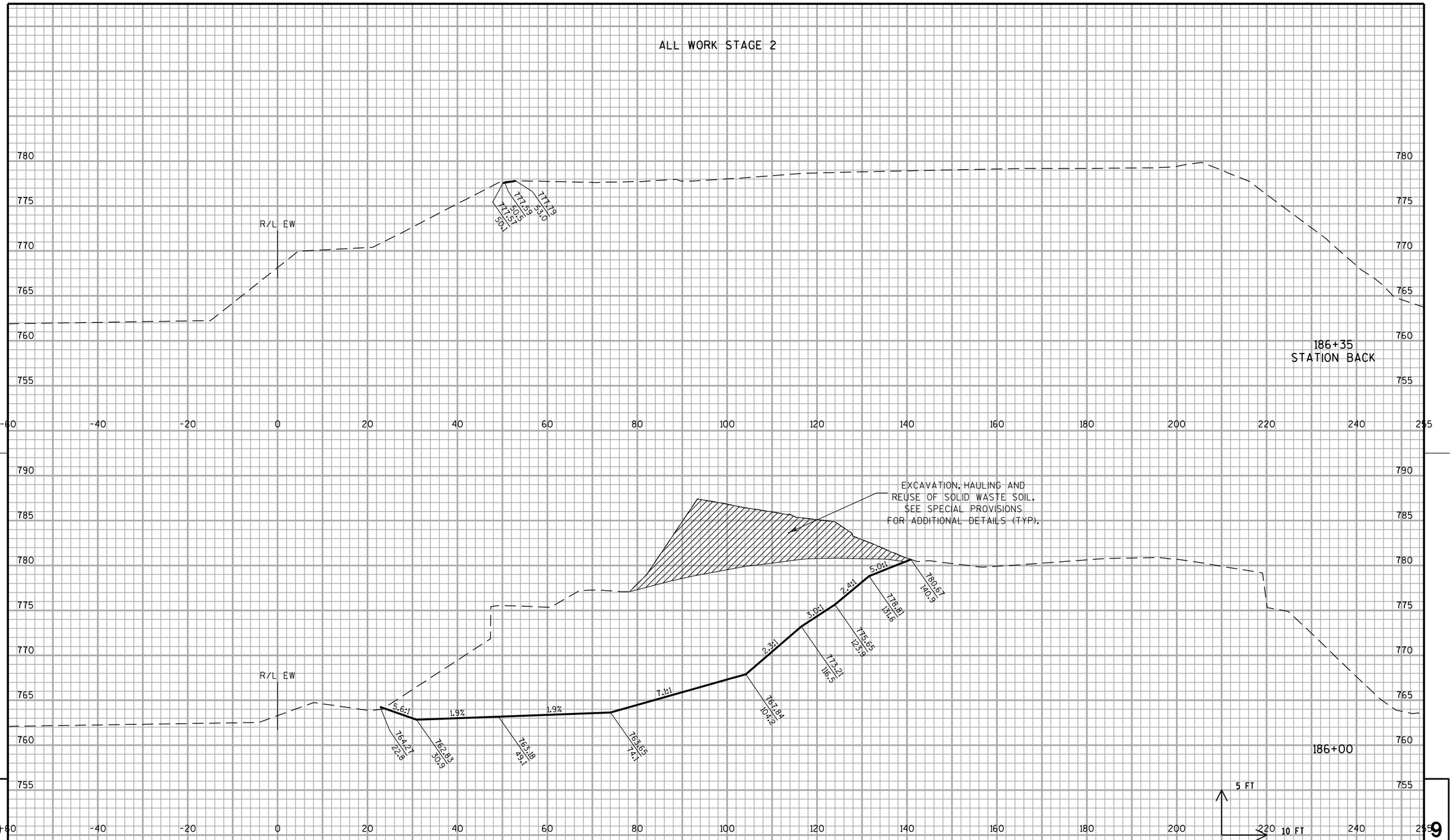
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

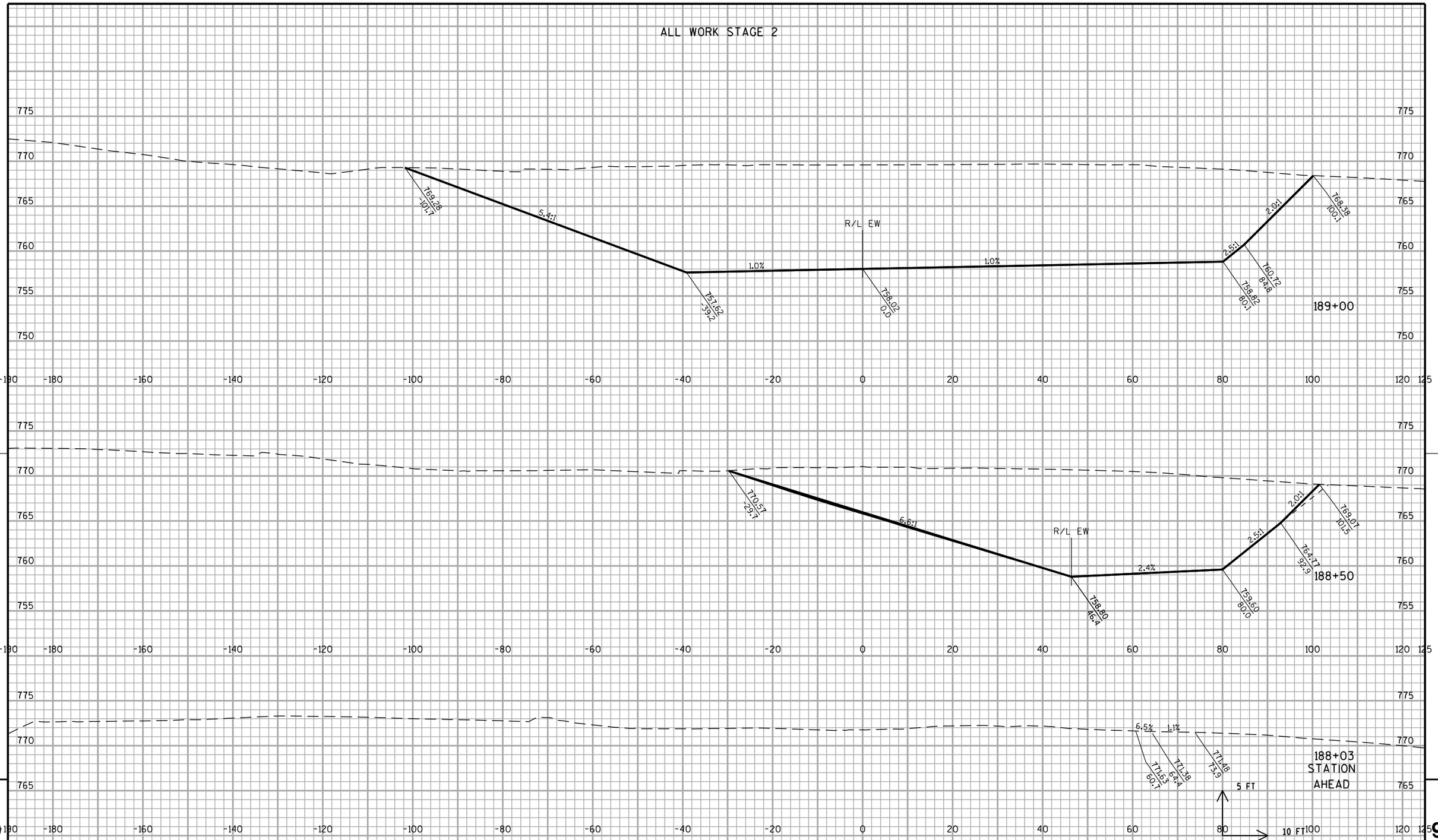
ALL WORK STAGE 2



STA 186+00 TO 186+35

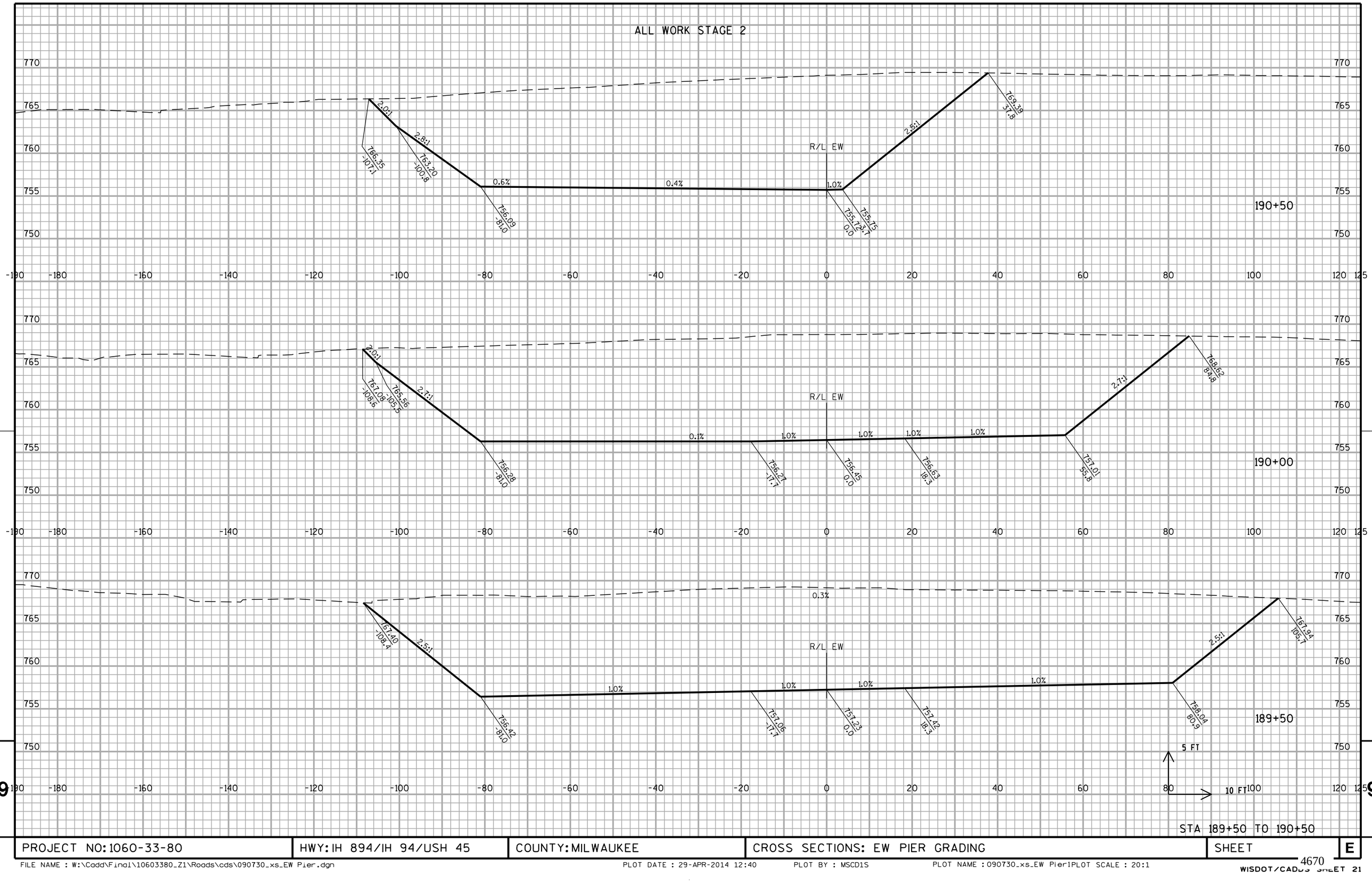
PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94 CORE GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090725_xs_EW_W_Pier.dgn PLOT DATE : 15-MAY-2014 18:46 PLOT BY : MSCJZP PLOT NAME : 090725_xs_EW_W_Pier.dgn PLOT SCALE : 20:1



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EW PIER GRADING	SHEET	E

ALL WORK STAGE 2

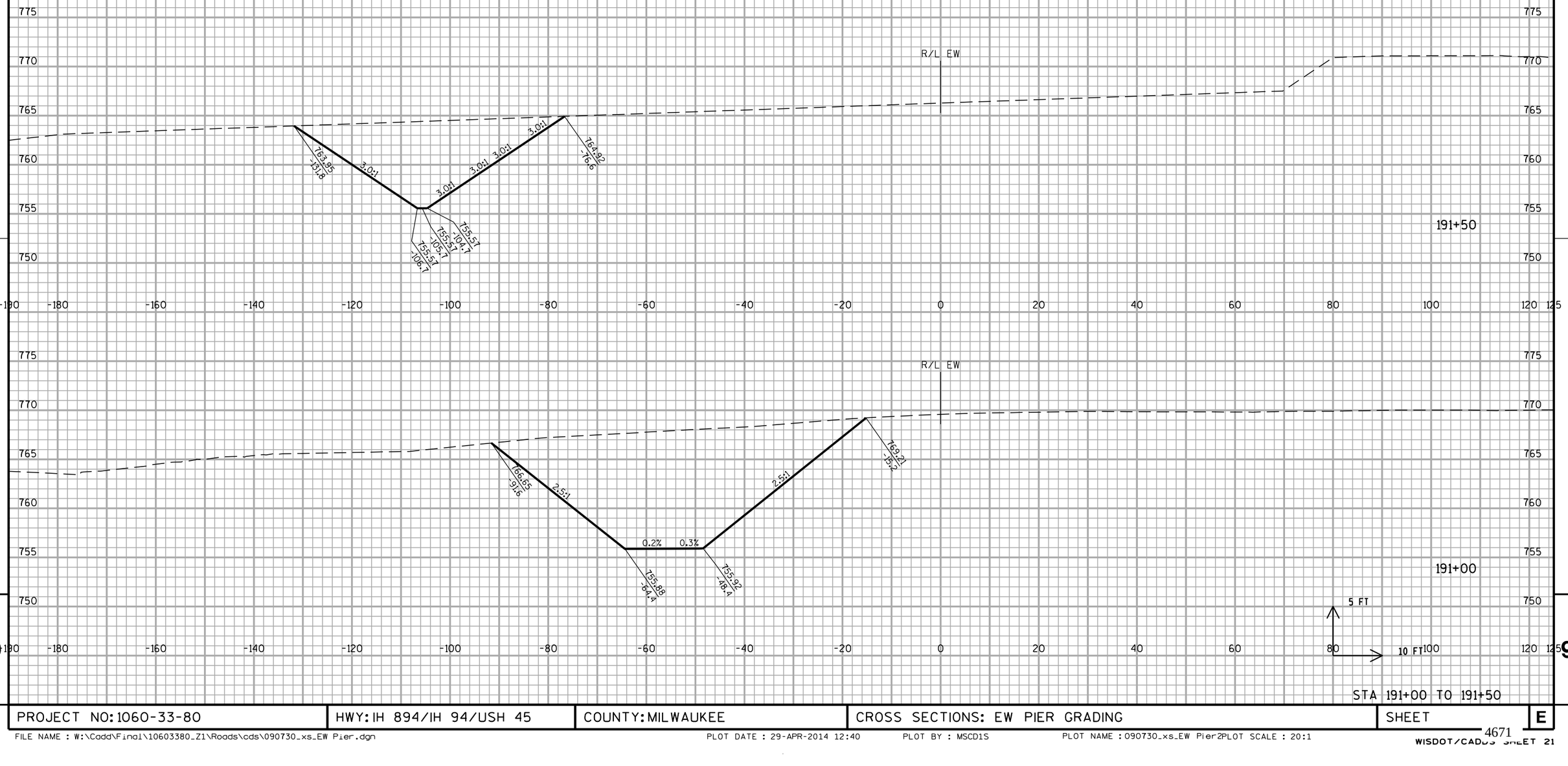


STA 189+50 TO 190+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EW PIER GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090730_xs_EW Pier.dgn PLOT DATE : 29-APR-2014 12:40 PLOT BY : MSCD1S PLOT NAME : 090730_xs_EW Pier1PLOT SCALE : 20:1

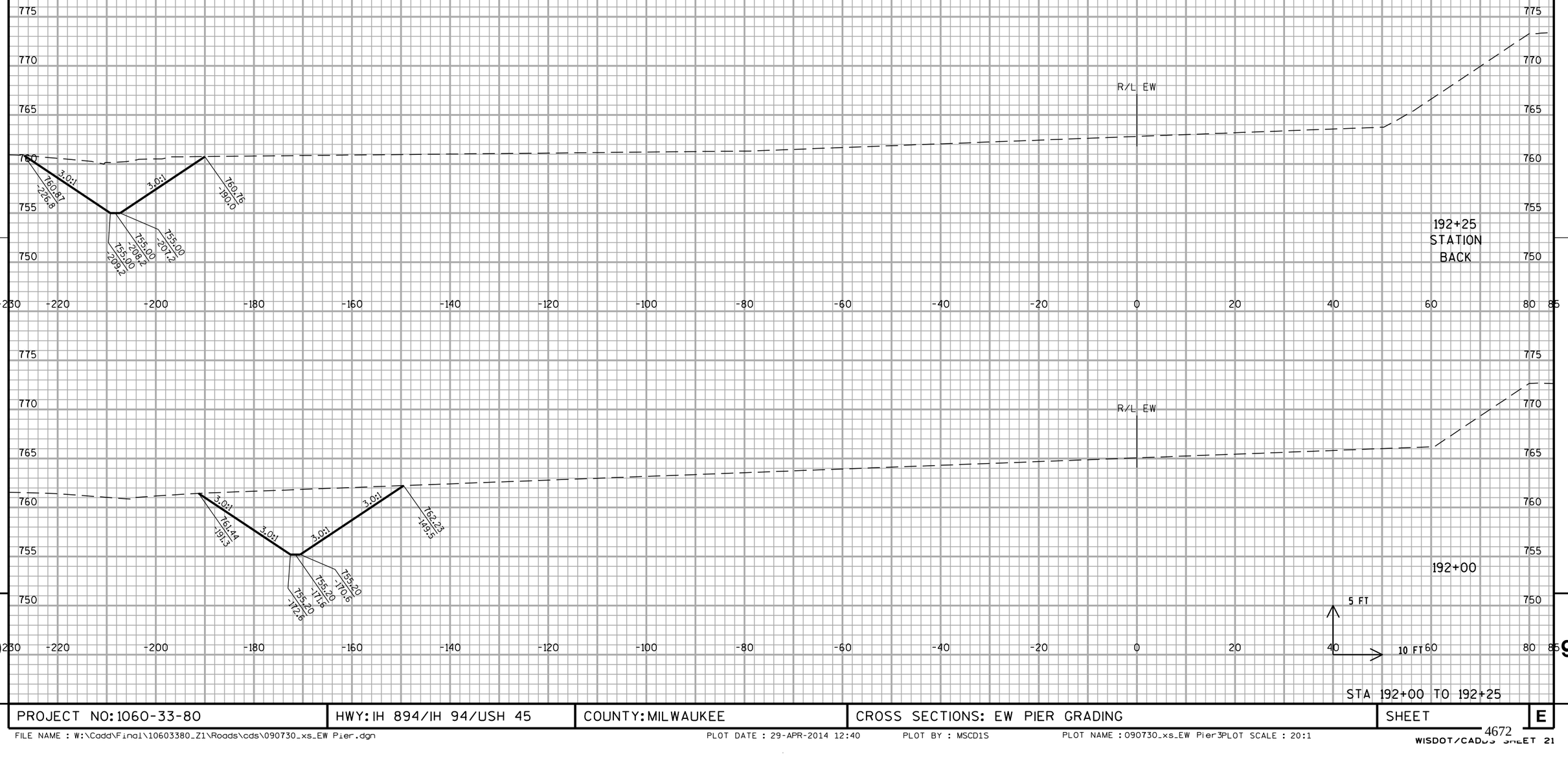
ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EW PIER GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090730_xs_EW Pier.dgn PLOT DATE : 29-APR-2014 12:40 PLOT BY : MSCD1S PLOT NAME : 090730_xs_EW Pier2PLOT SCALE : 20:1

ALL WORK STAGE 2

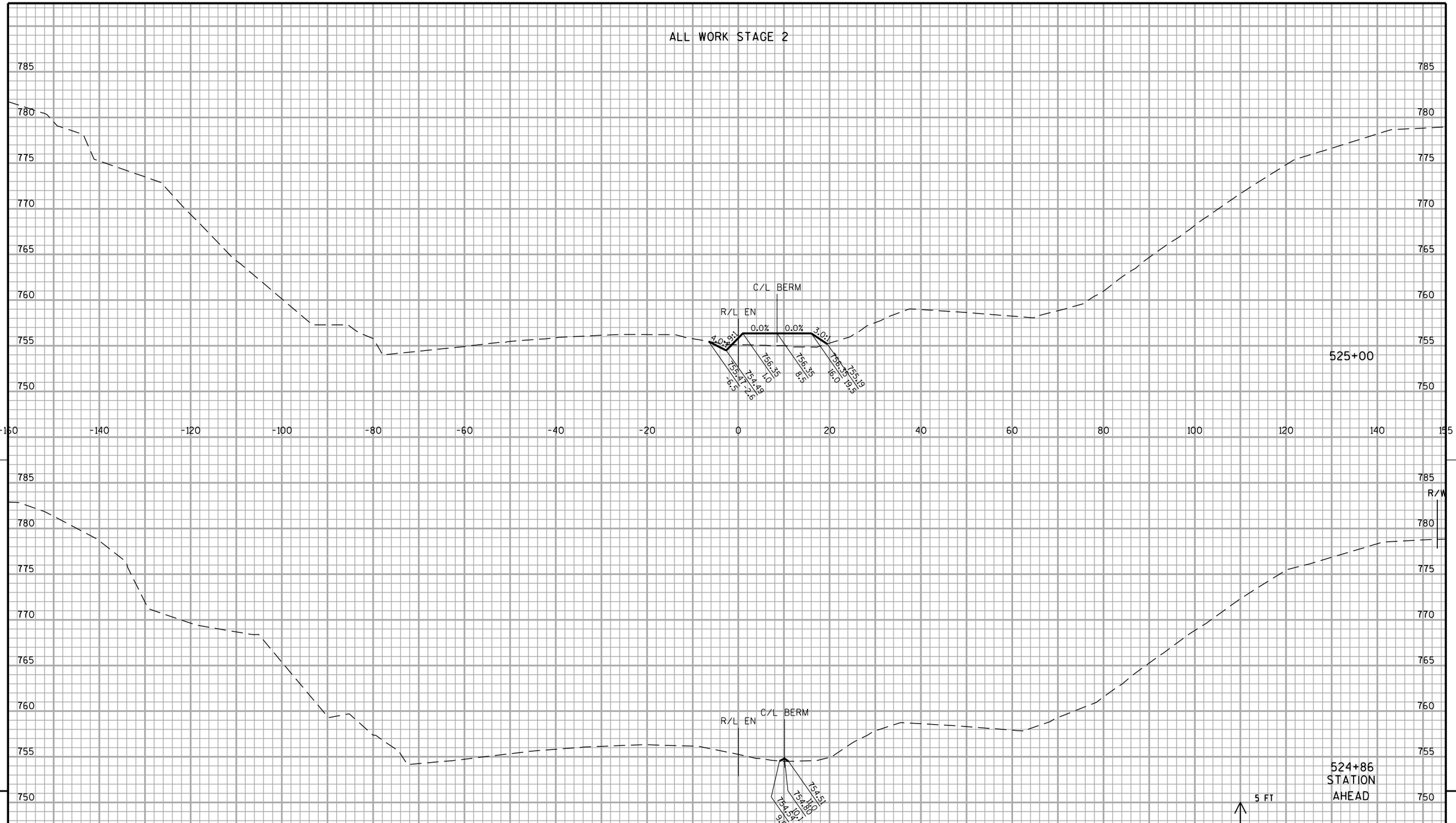


STA 192+00 TO 192+25

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EW PIER GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090730_xs_EW Pier.dgn PLOT DATE : 29-APR-2014 12:40 PLOT BY : MSCD1S PLOT NAME : 090730_xs_EW Pier3PLOT SCALE : 20:1

ALL WORK STAGE 2

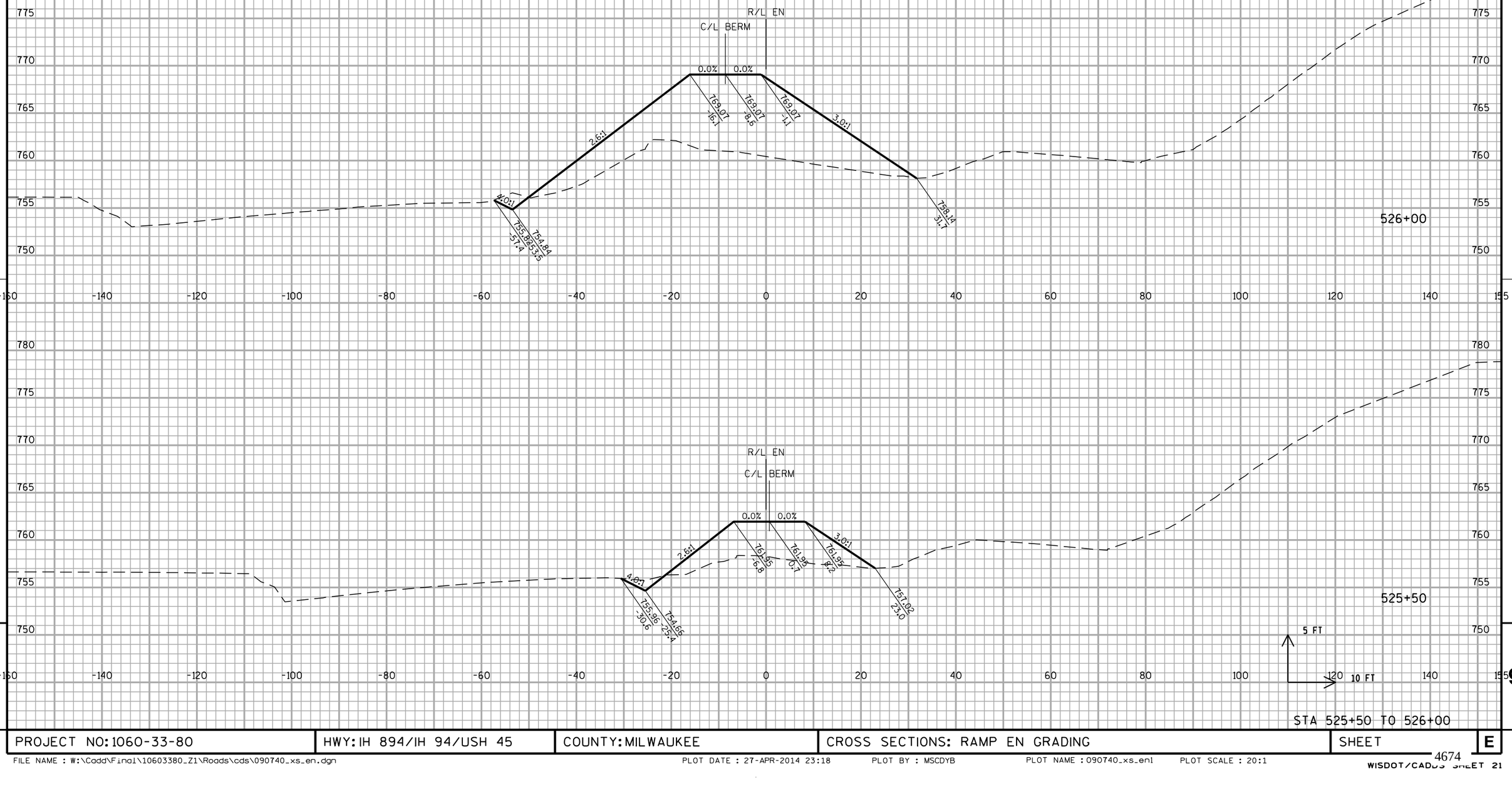


STA 524+86 TO 525+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090740_xs_en.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090740_xs_en PLOT SCALE : 20:1

ALL WORK STAGE 2

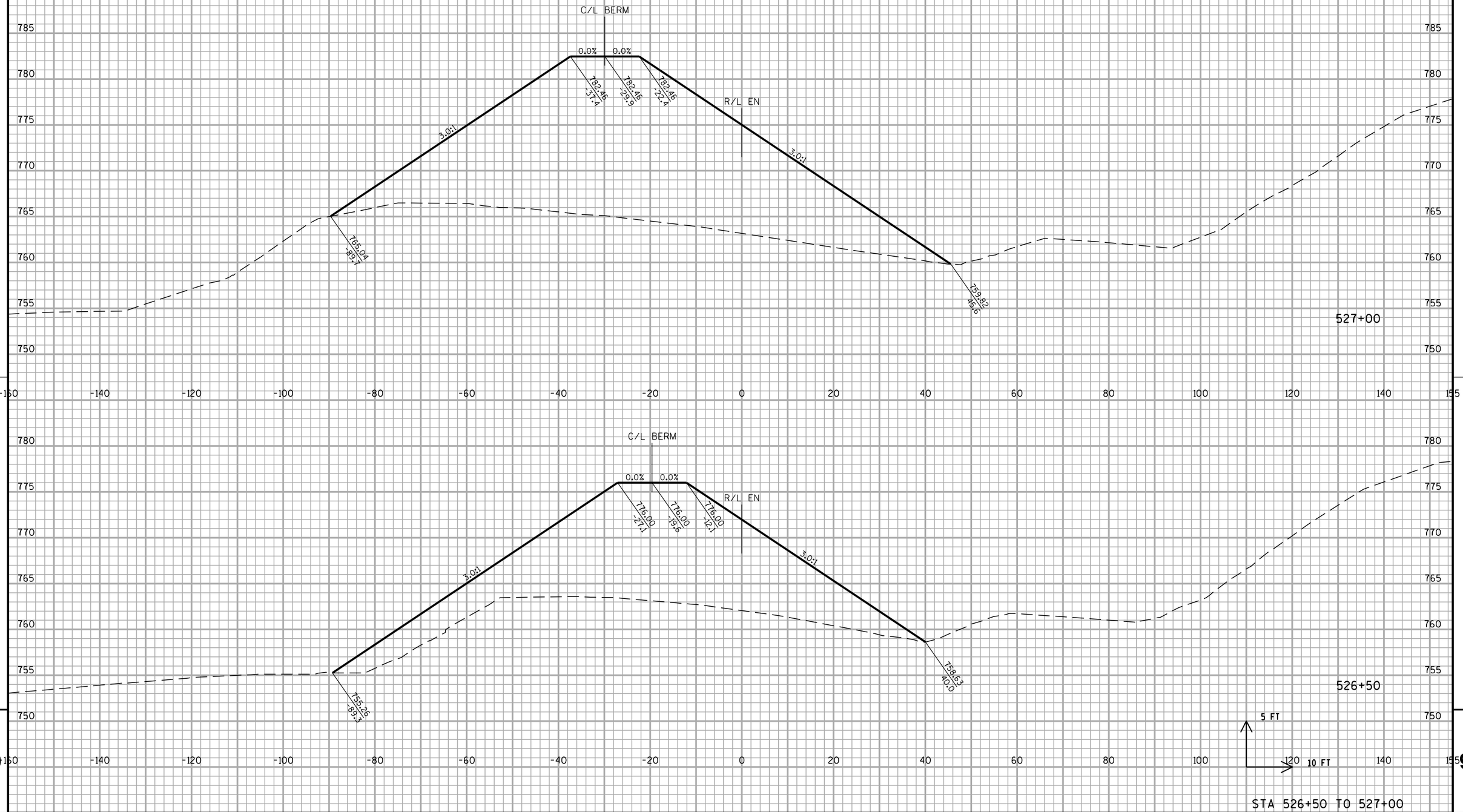


STA 525+50 TO 526+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090740_xs_en.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090740_xs_en1 PLOT SCALE : 20:1

ALL WORK STAGE 2



PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090740_xs_en.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090740_xs_en2 PLOT SCALE : 20:1

C/L BERM

ALL WORK STAGE 2

0.0% 0.0%

789.38 -36.4

789.38 -29.9

789.38 -21.4

R/L EN

2.8:1

3.0:1

4.0:1

769.86 -100.1

768.66 -95.3

761.60 62.0

528+00

790 785 780 775 770 765 760 755

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

C/L BERM

0.0% 0.0%

793.01 -60.6

793.01 -55.1

793.01 -45.6

3.0:1

R/L EN

3.0:1

767.32 -137.6

761.08 50.2

527+50

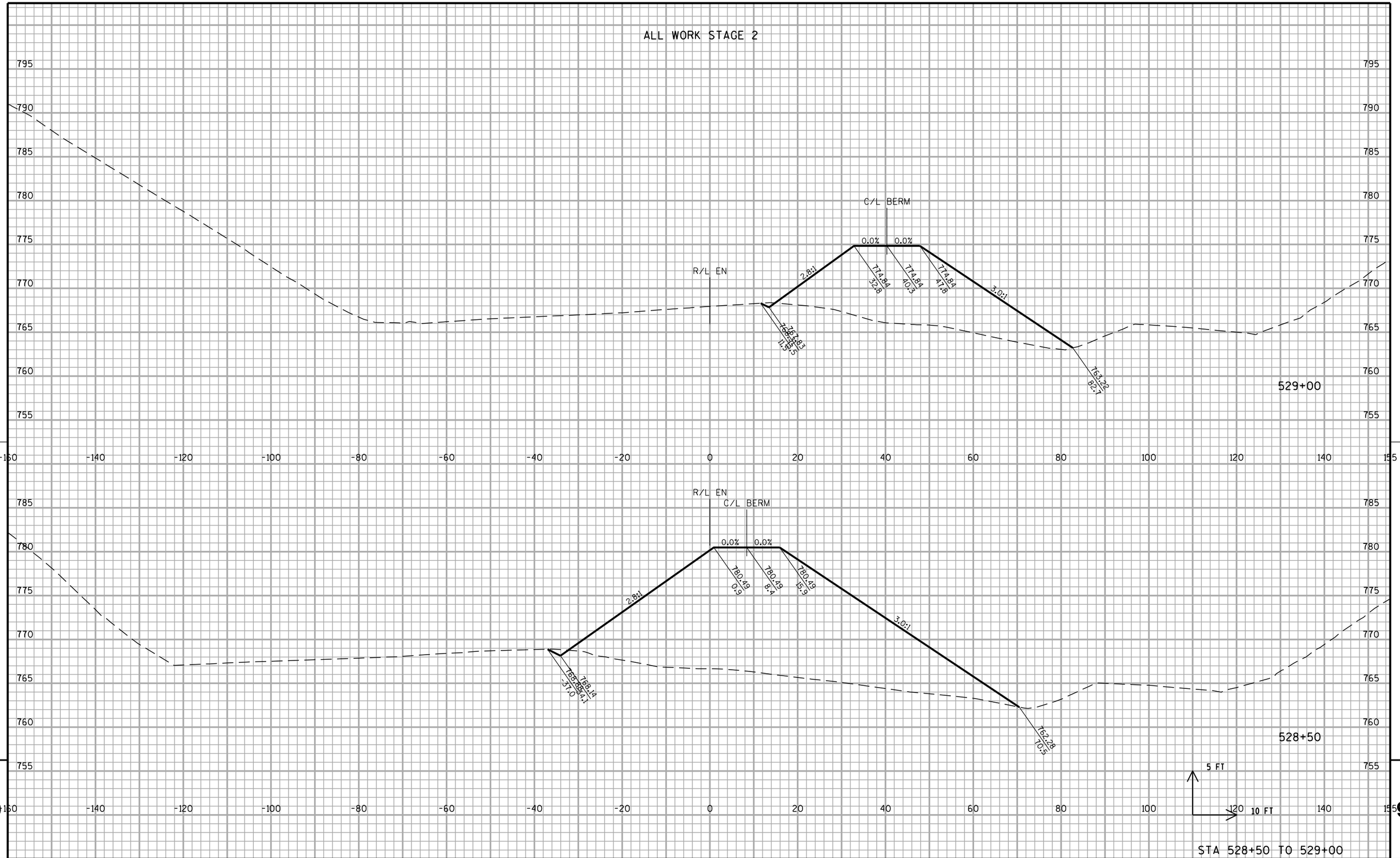
5 FT

10 FT

STA 527+50 TO 528+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

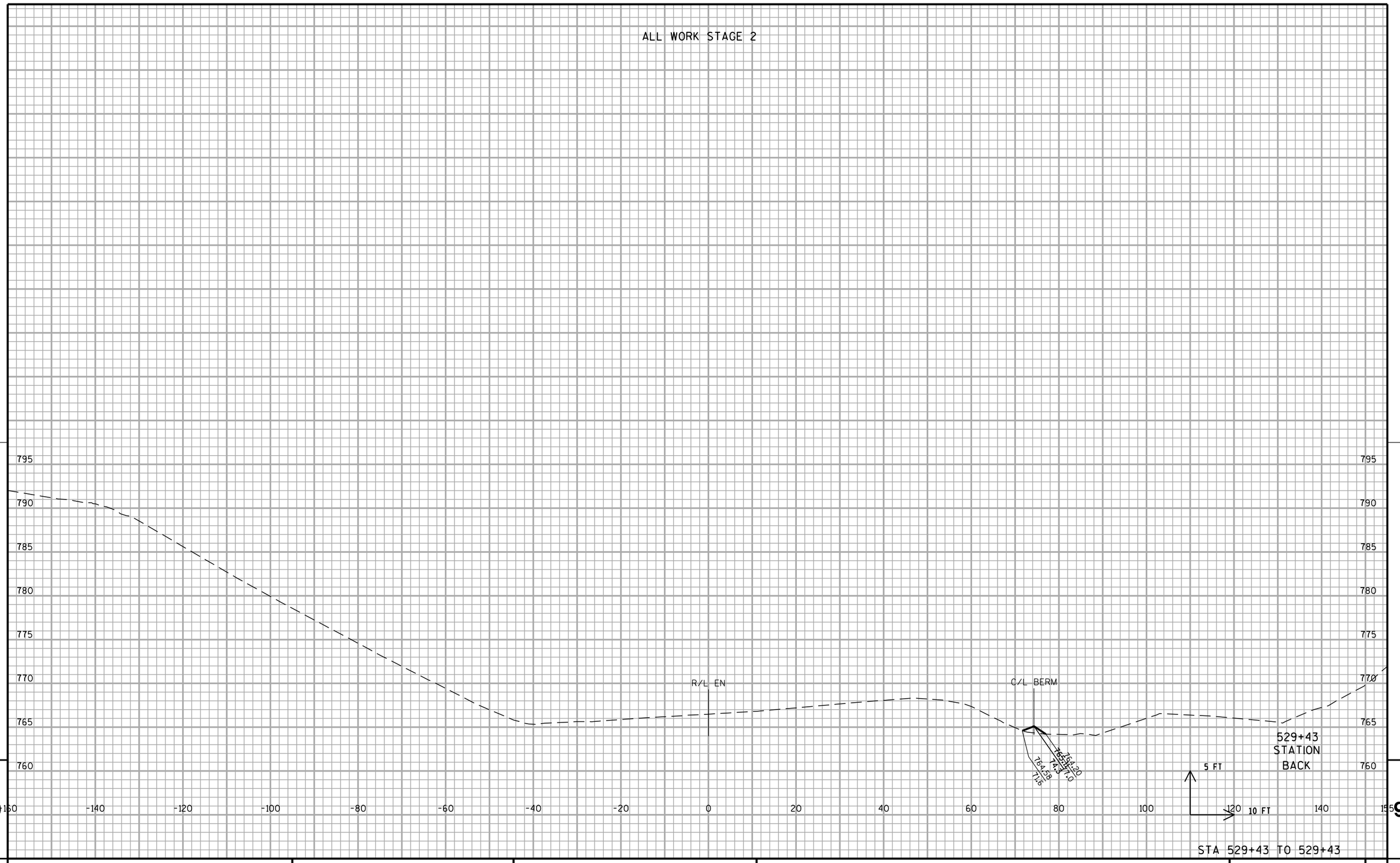
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PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090740_xs_en.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090740_xs_en4 PLOT SCALE : 20:1

ALL WORK STAGE 2



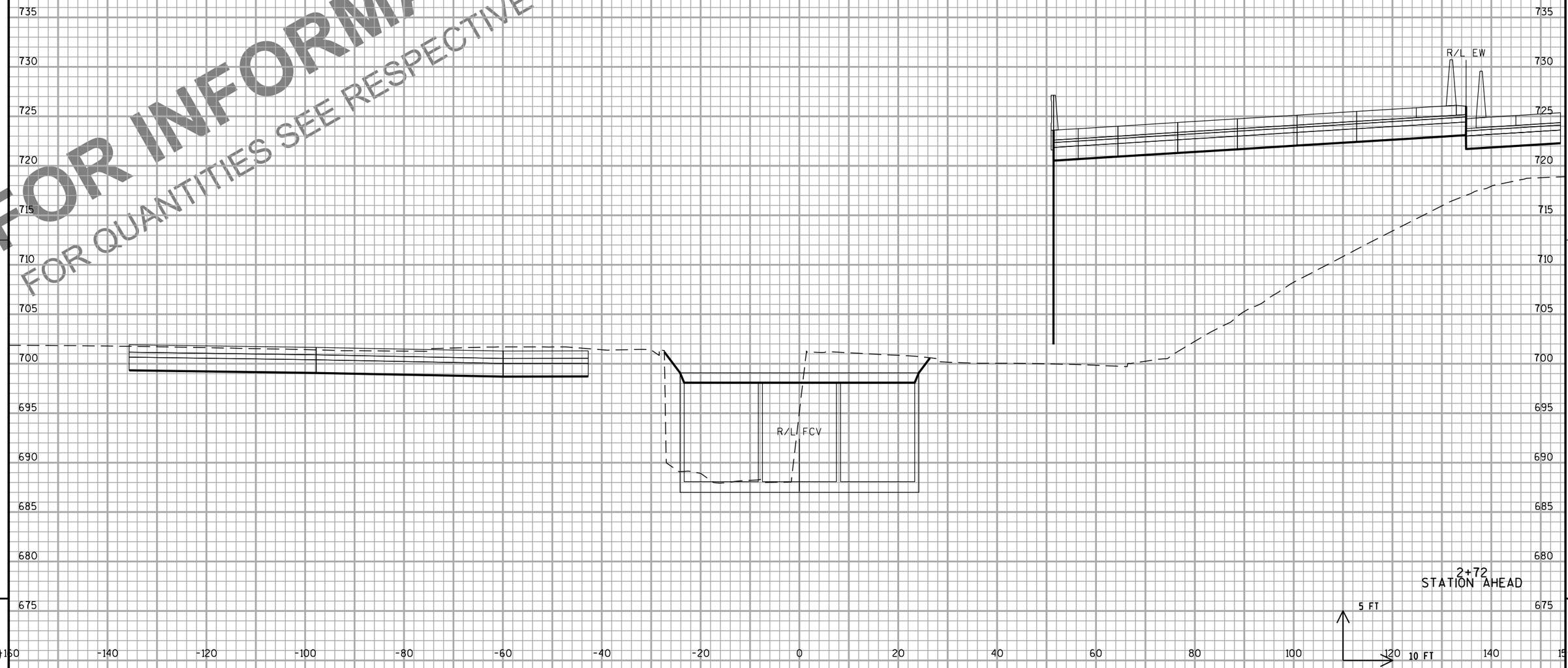
STA 529+43 TO 529+43

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP EN GRADING	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\090740_xs_en.dgn PLOT DATE : 27-APR-2014 23:18 PLOT BY : MSCDYB PLOT NAME : 090740_xs_en5 PLOT SCALE : 20:1

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

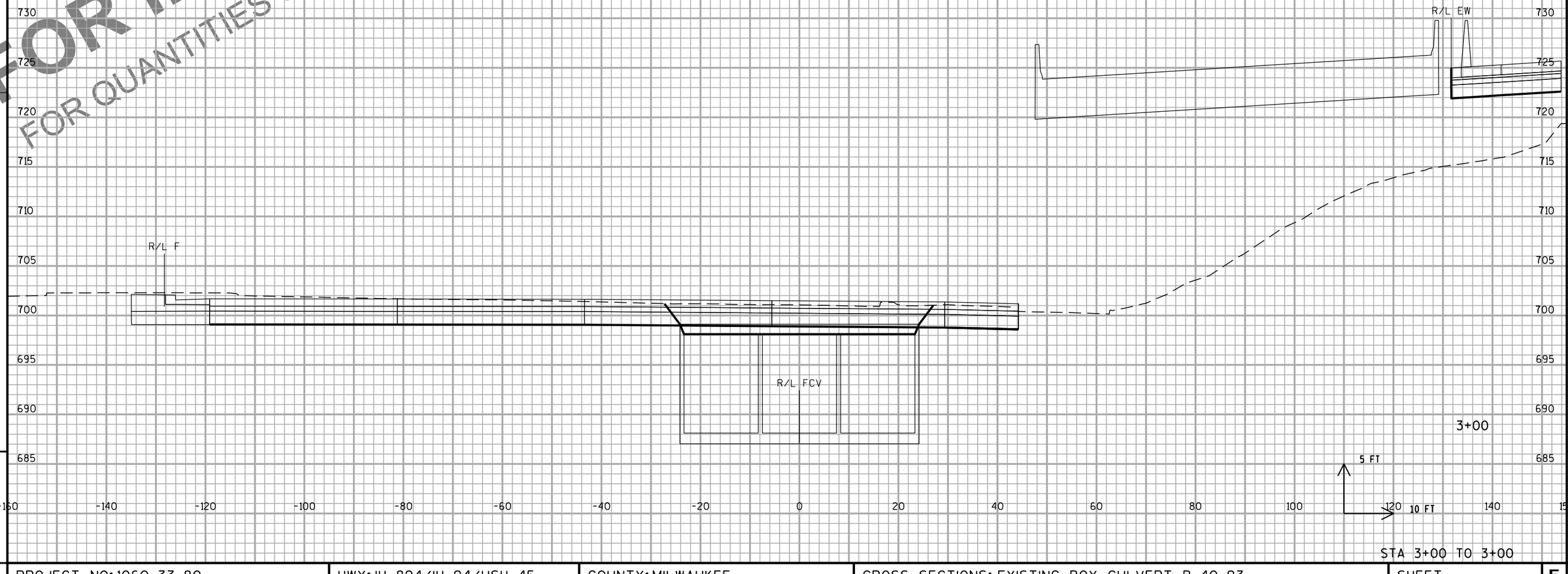


STA 2+72 TO 2+72

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

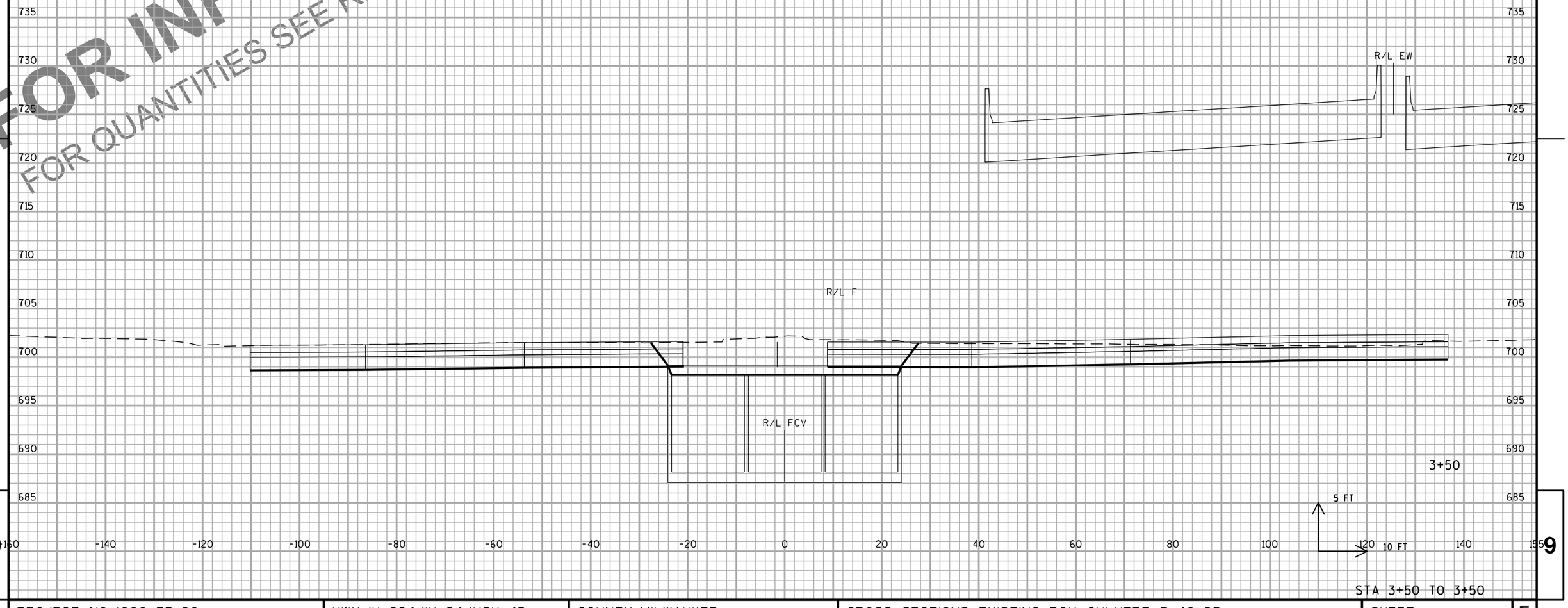


STA 3+00 TO 3+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



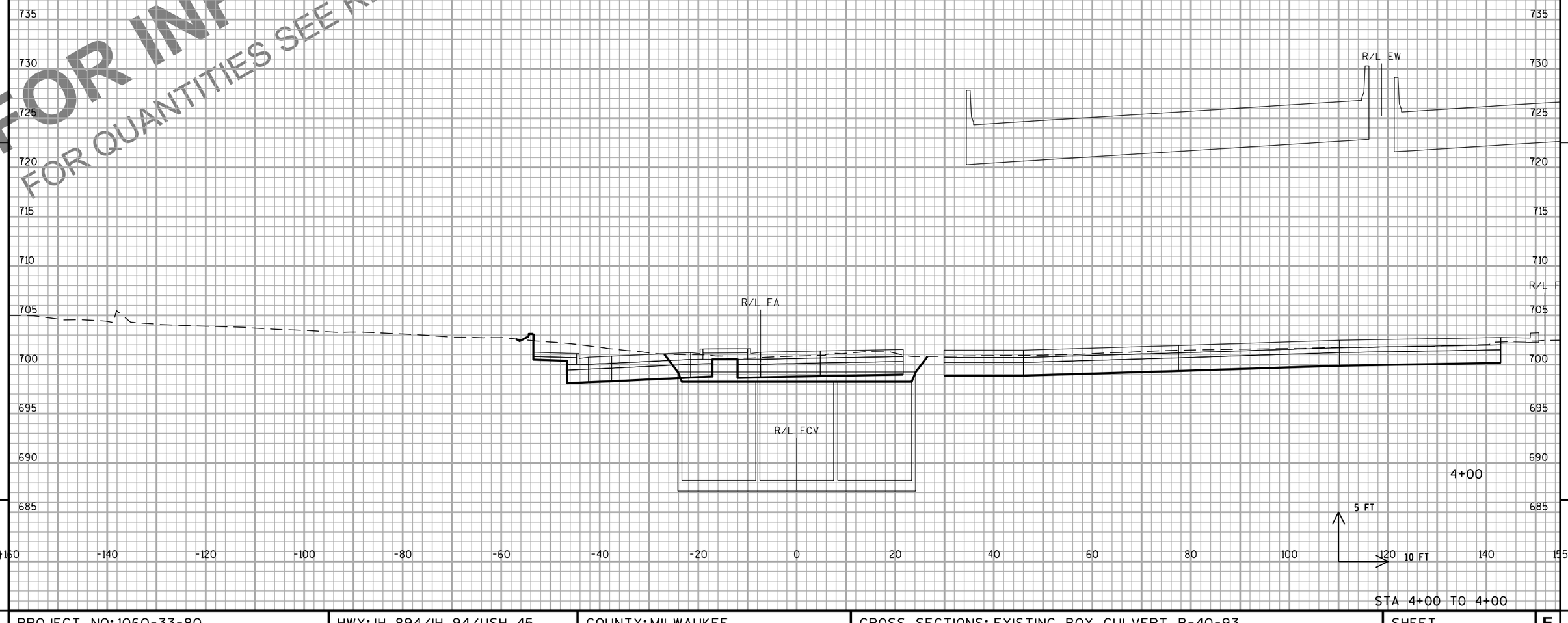
STA 3+50 TO 3+50

9 9

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

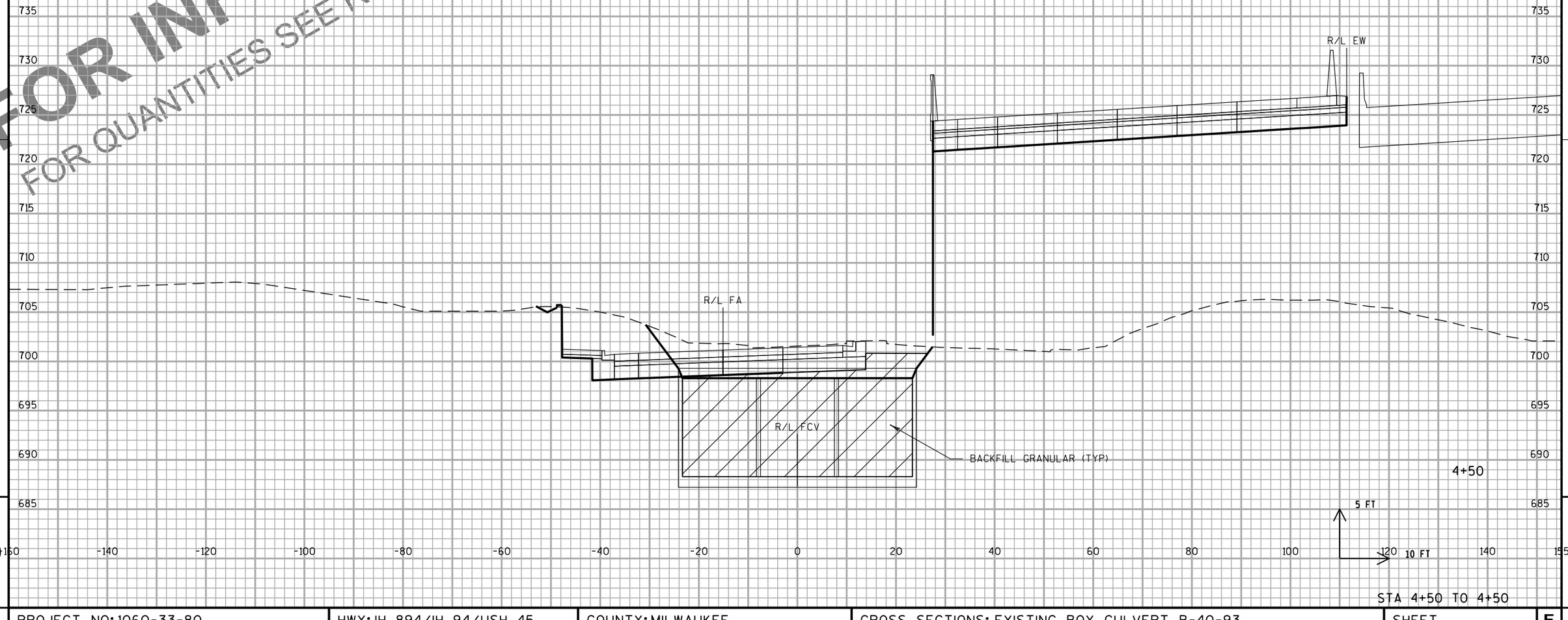


PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn PLOT DATE : 29-APR-2014 12:36 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV3 PLOT SCALE : 20:1

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

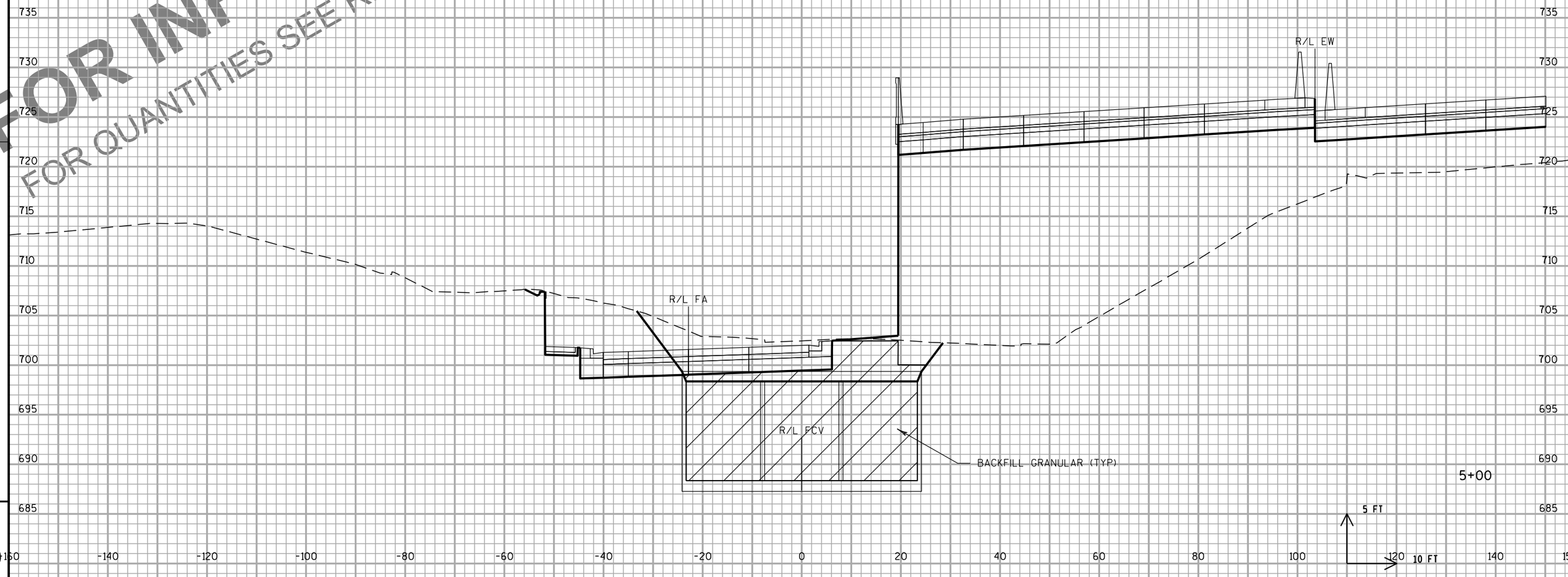


STA 4+50 TO 4+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 1

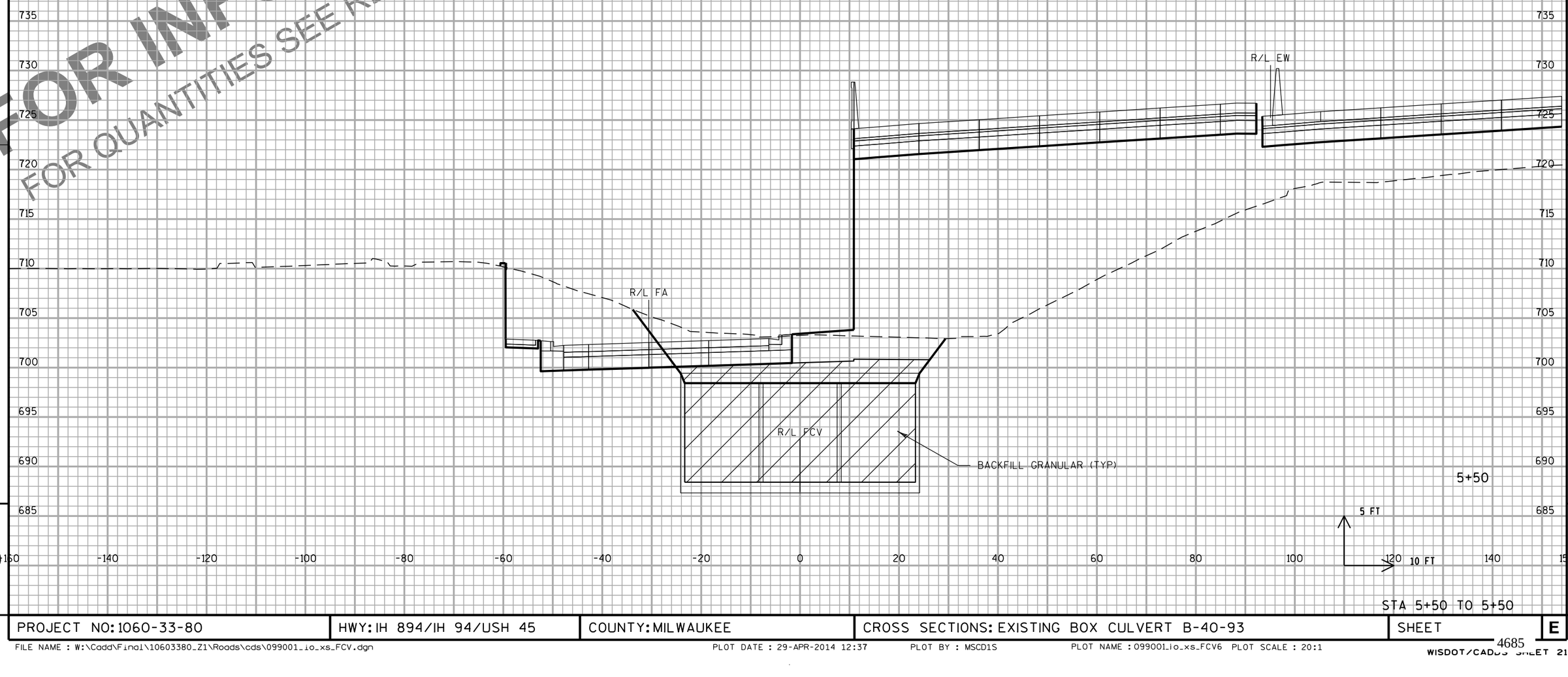


STA 5+00 TO 5+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 1

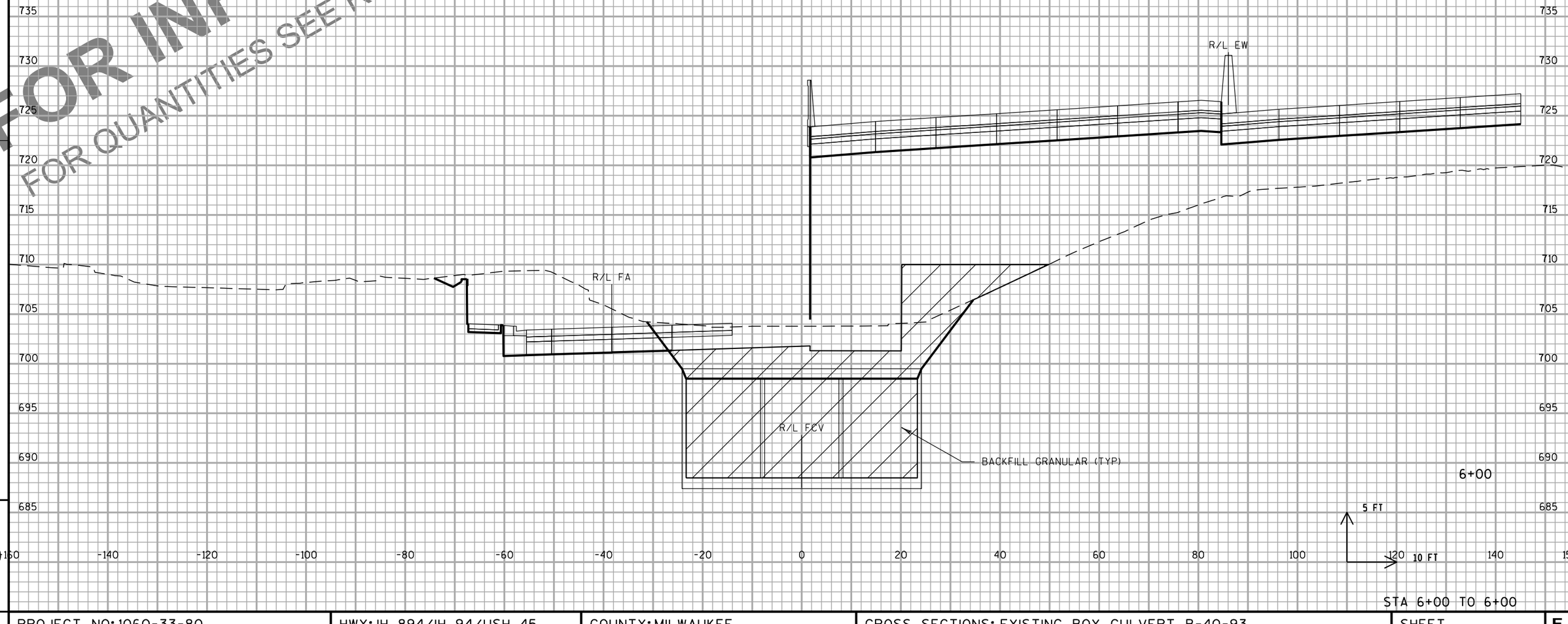


STA 5+50 TO 5+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

ALL WORK STAGE 1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

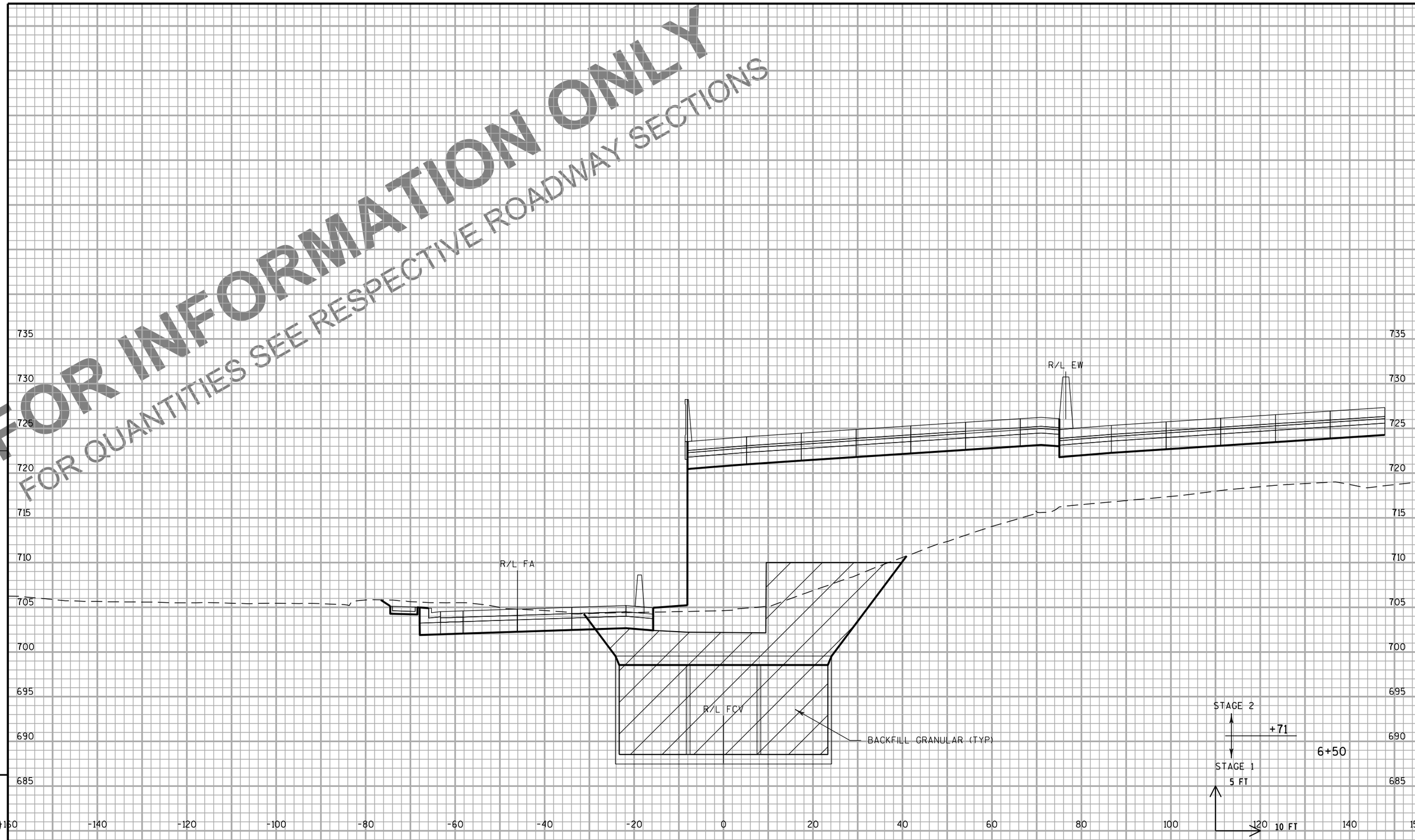


STA 6+00 TO 6+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn PLOT DATE : 29-APR-2014 12:37 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV7 PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

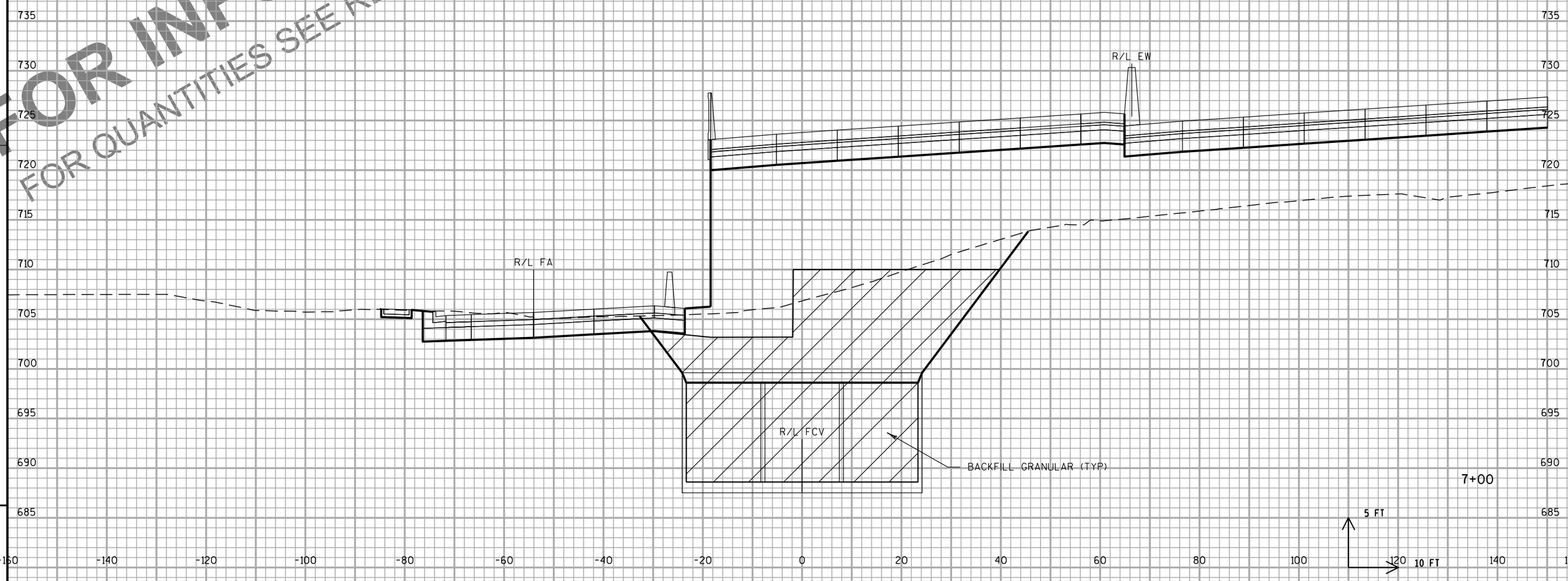


STA 6+50 TO 6+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

ALL WORK STAGE 2

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

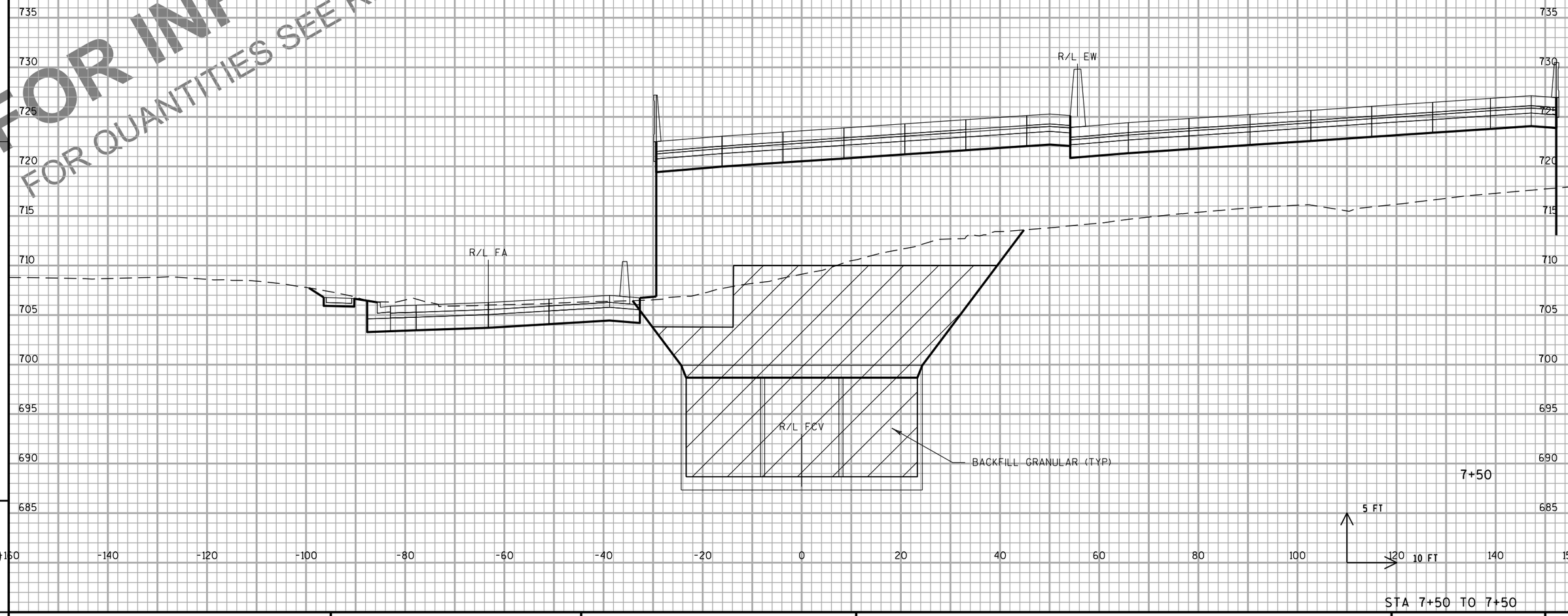


STA 7+00 TO 7+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

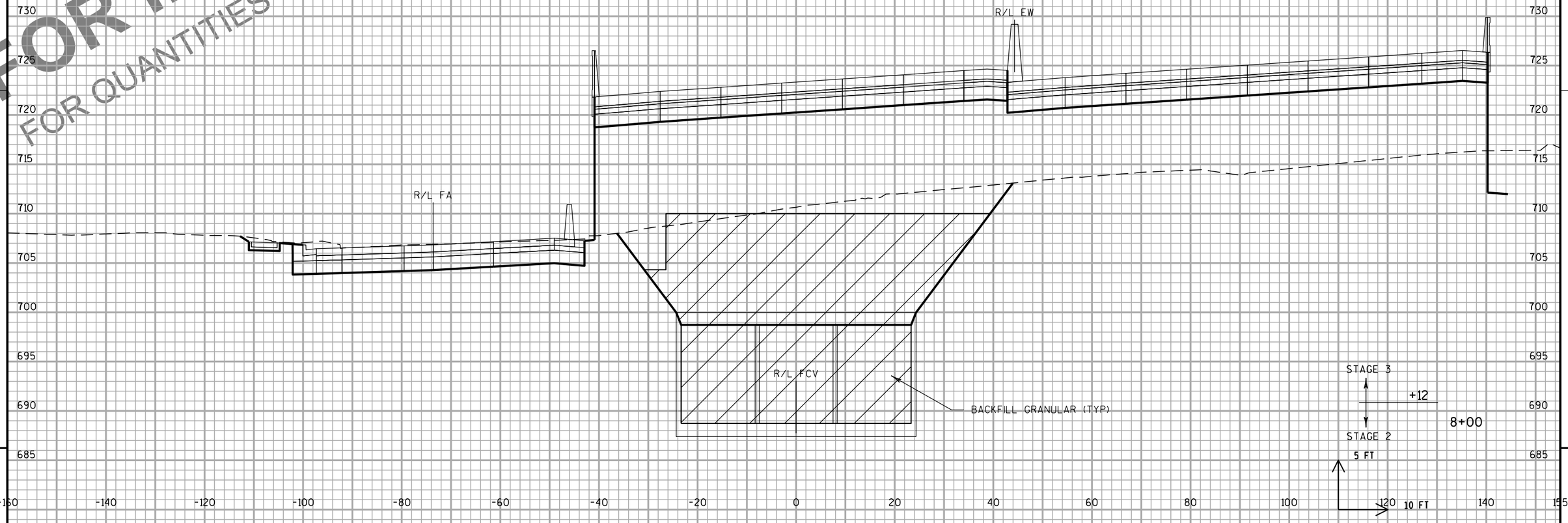
ALL WORK STAGE 2



STA 7+50 TO 7+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



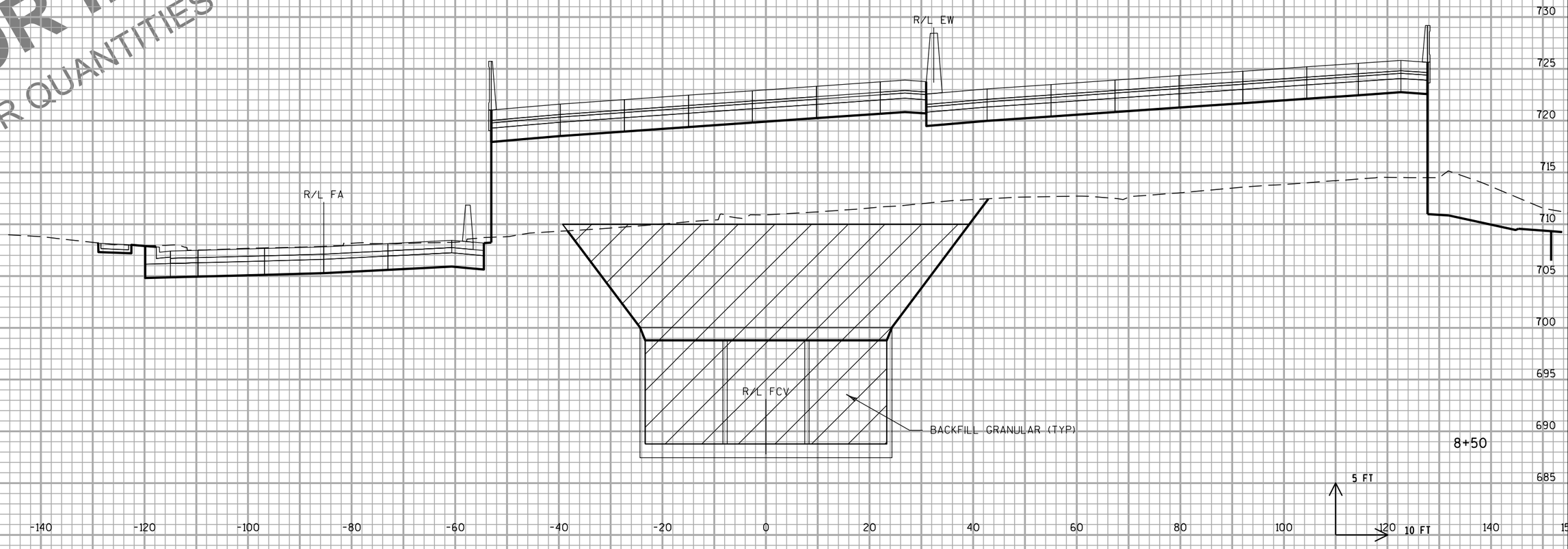
STA 8+00 TO 8+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn
PLOT DATE : 29-APR-2014 12:37 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV11 PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

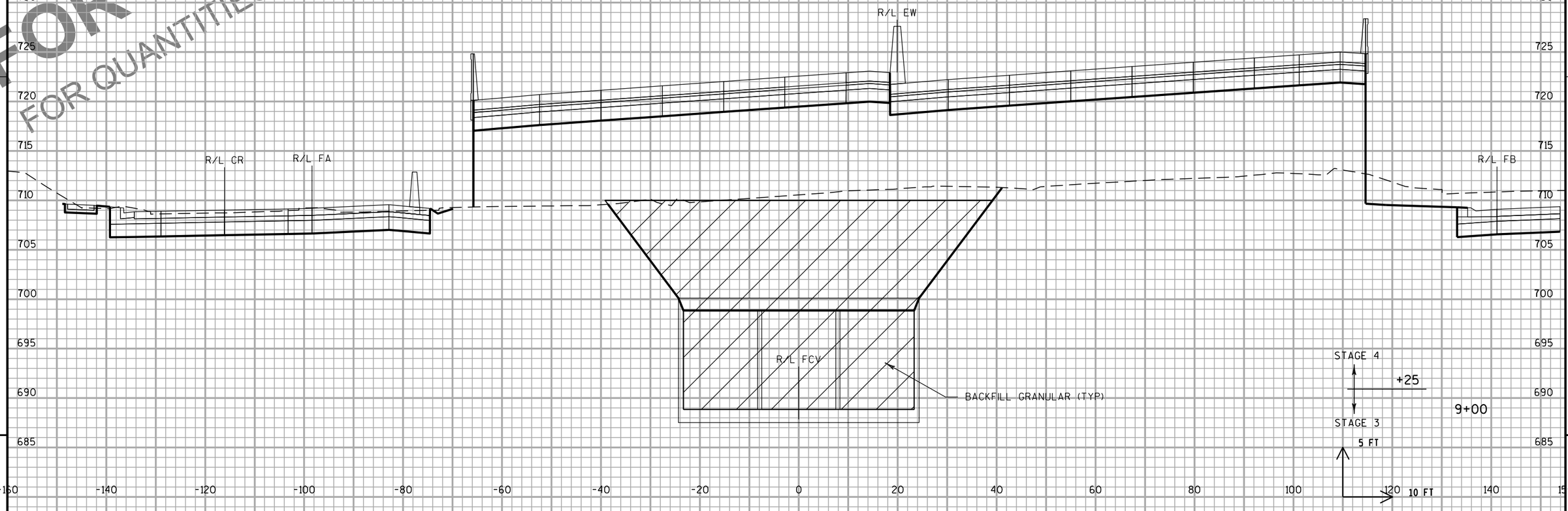
ALL WORK STAGE 3



STA 8+50 TO 8+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

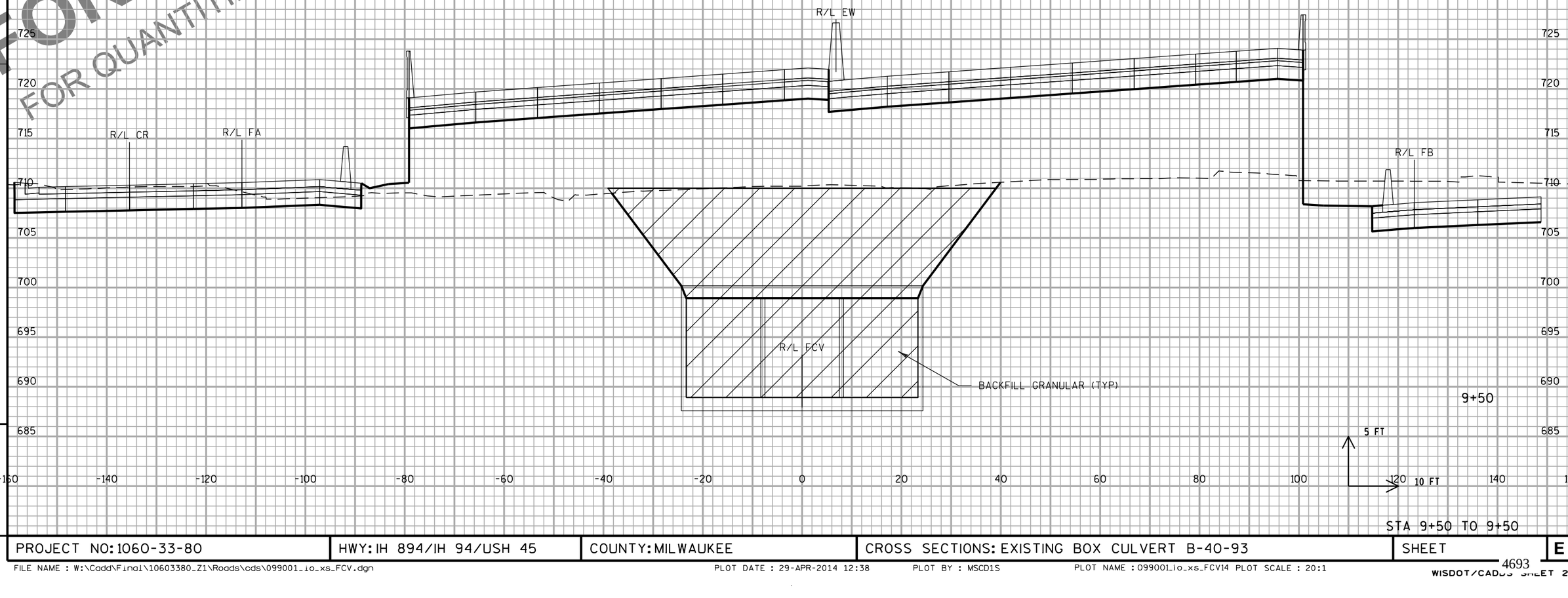


STA 9+00 TO 9+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 4



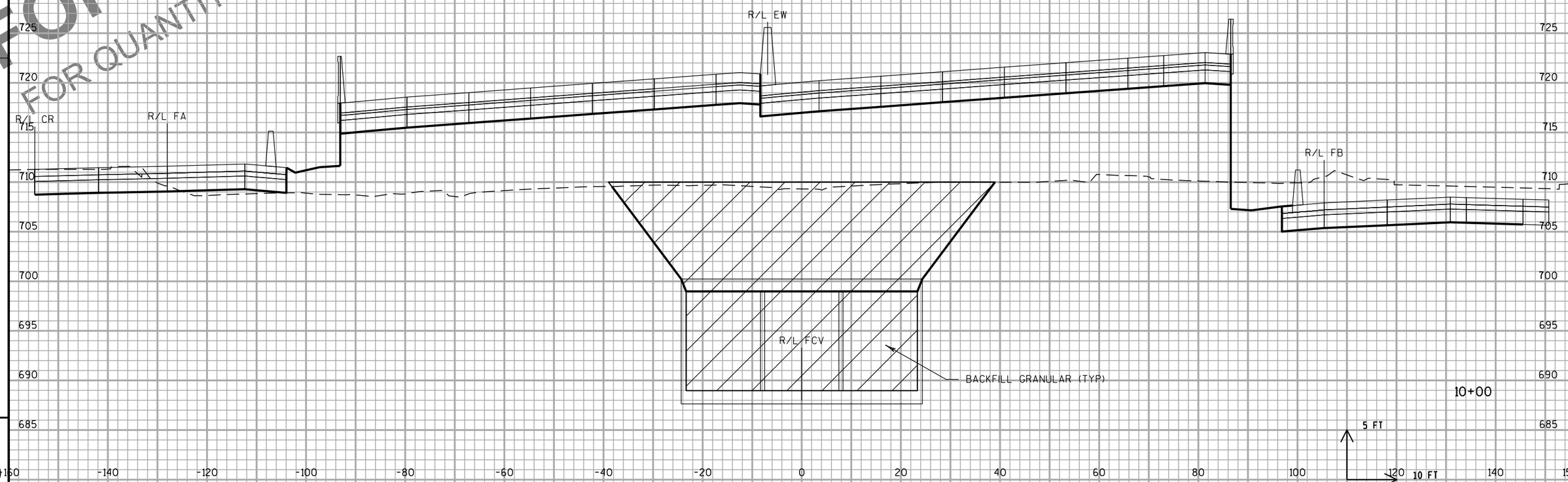
STA 9+50 TO 9+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn PLOT DATE : 29-APR-2014 12:38 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV14 PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 4



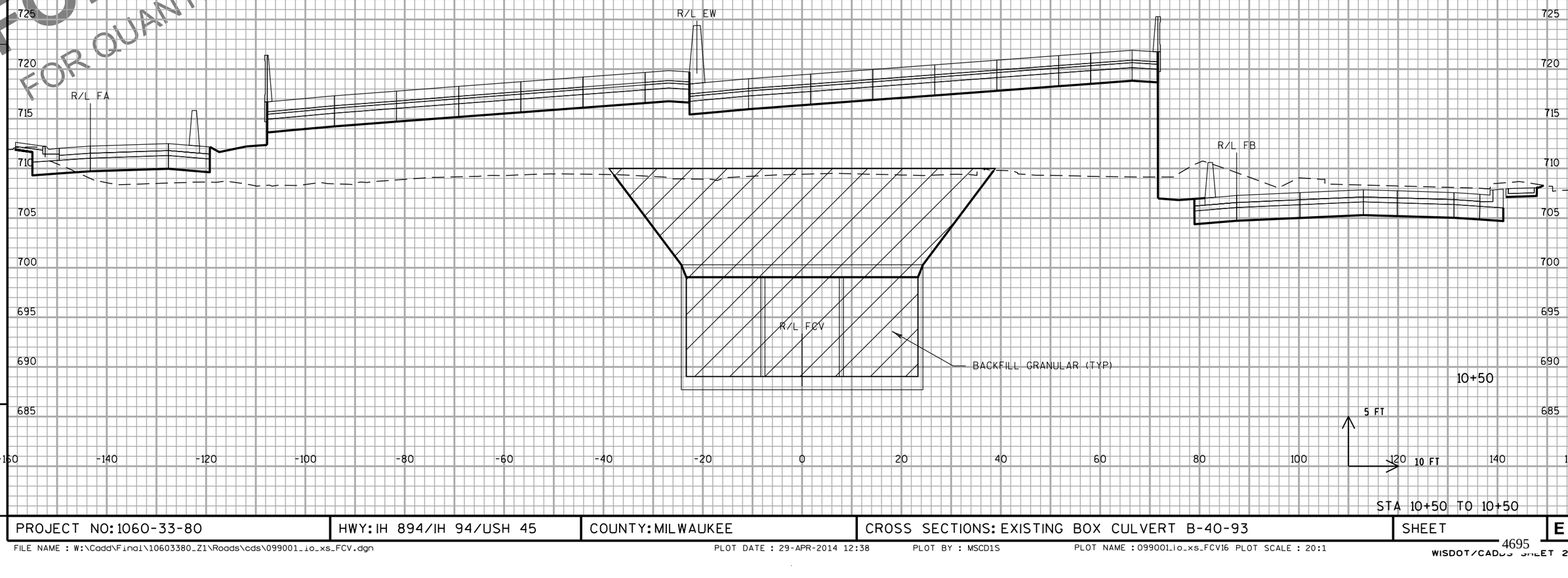
STA 10+00 TO 10+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn PLOT DATE : 29-APR-2014 12:38 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV15 PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 4



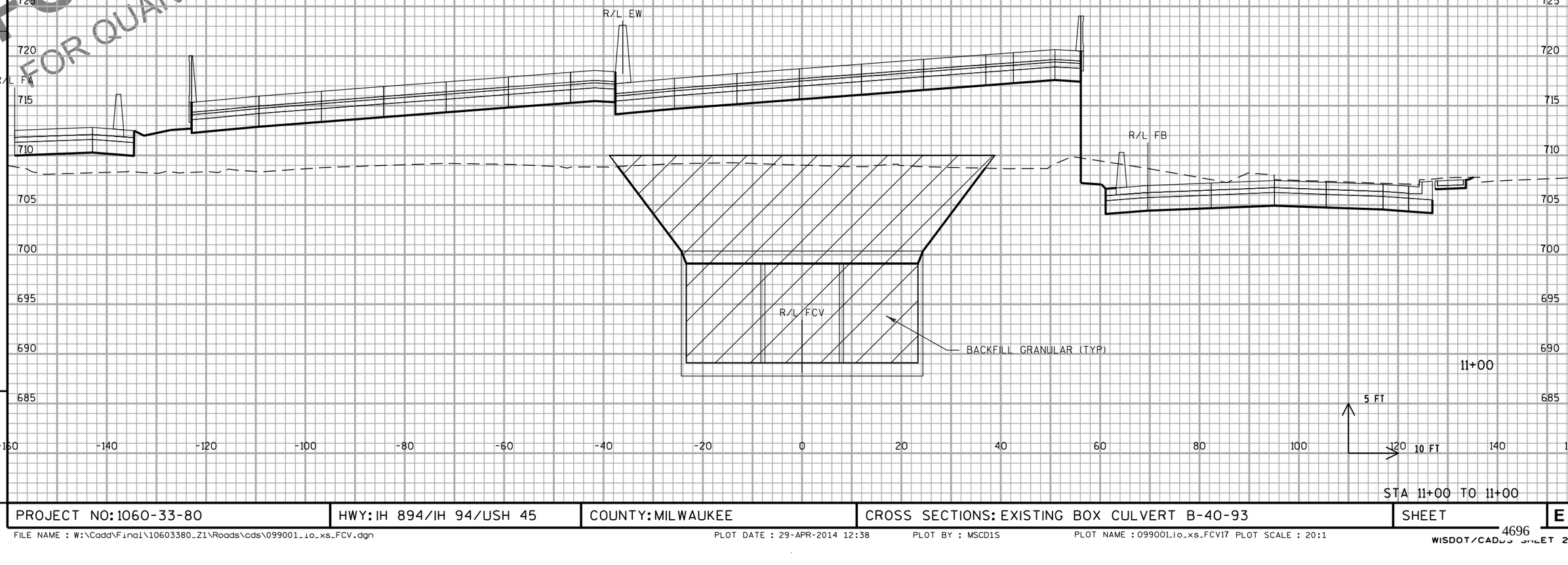
STA 10+50 TO 10+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn PLOT DATE : 29-APR-2014 12:38 PLOT BY : MSCD1S PLOT NAME : 099001_io_xs_FCV16 PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 4

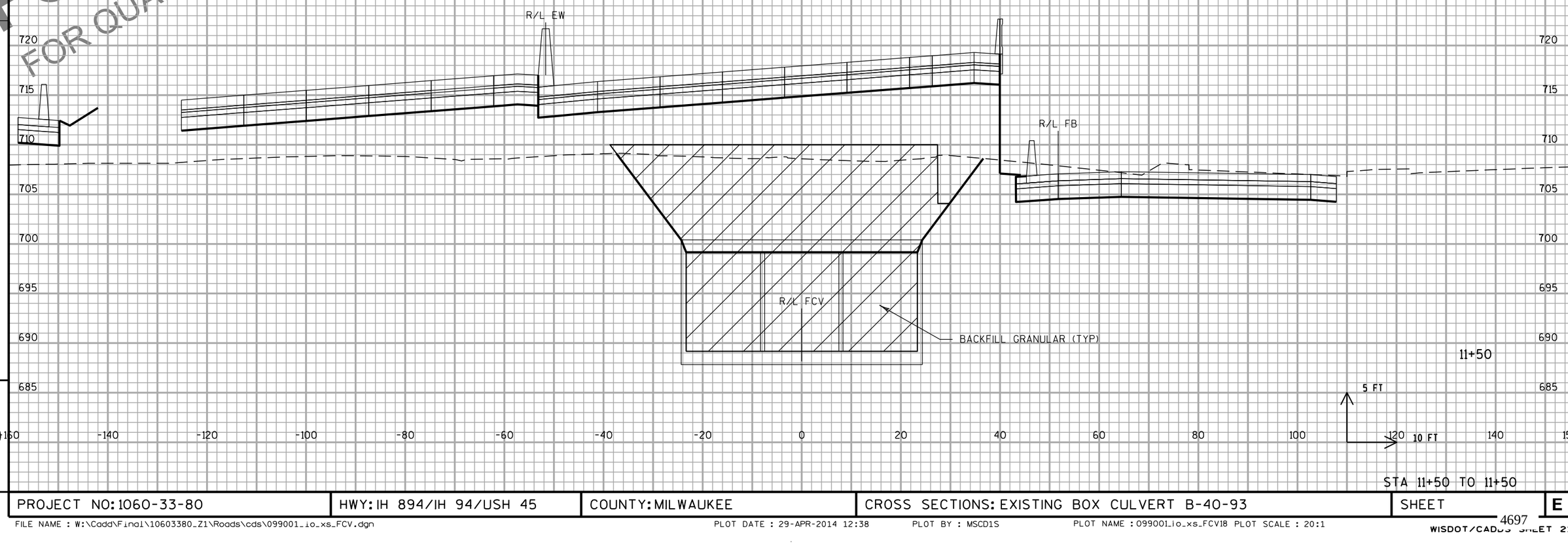


STA 11+00 TO 11+00

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

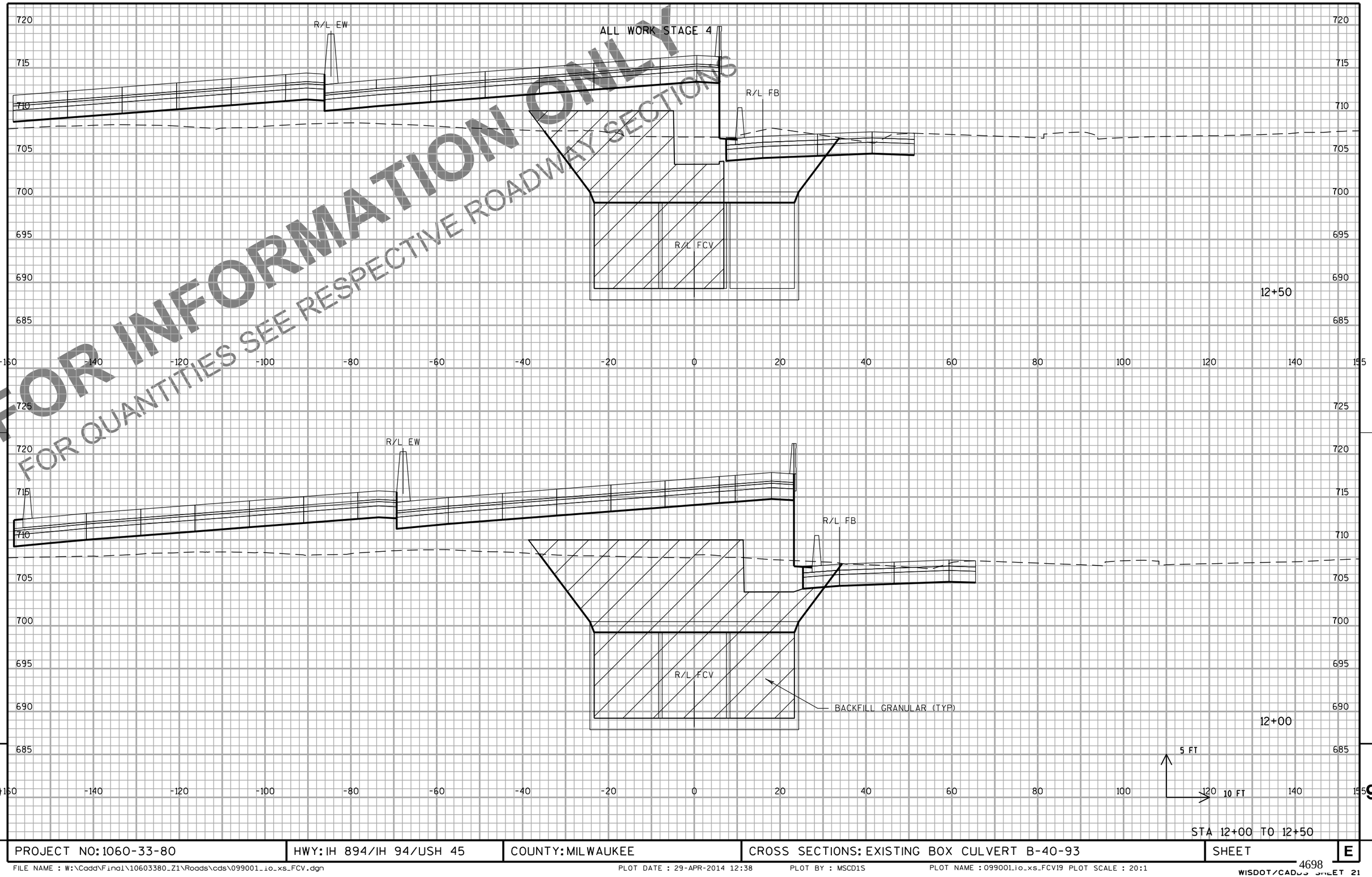
FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

ALL WORK STAGE 4



STA 11+50 TO 11+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E



FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

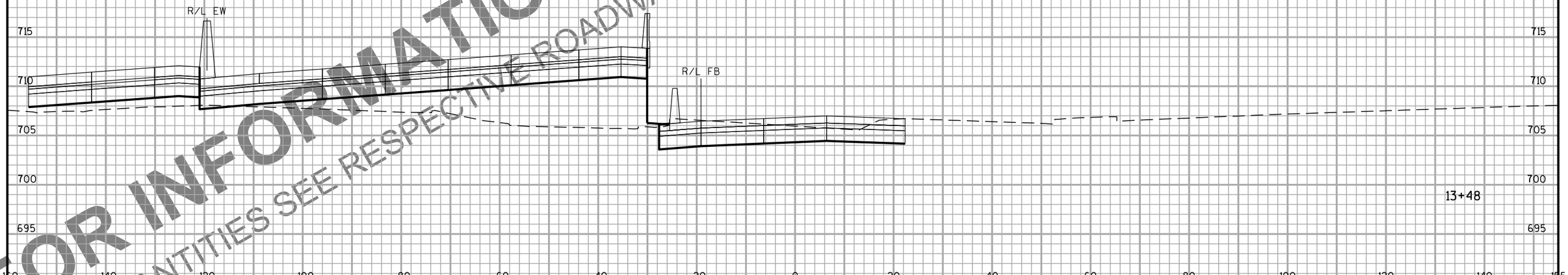
STA 12+00 TO 12+50

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

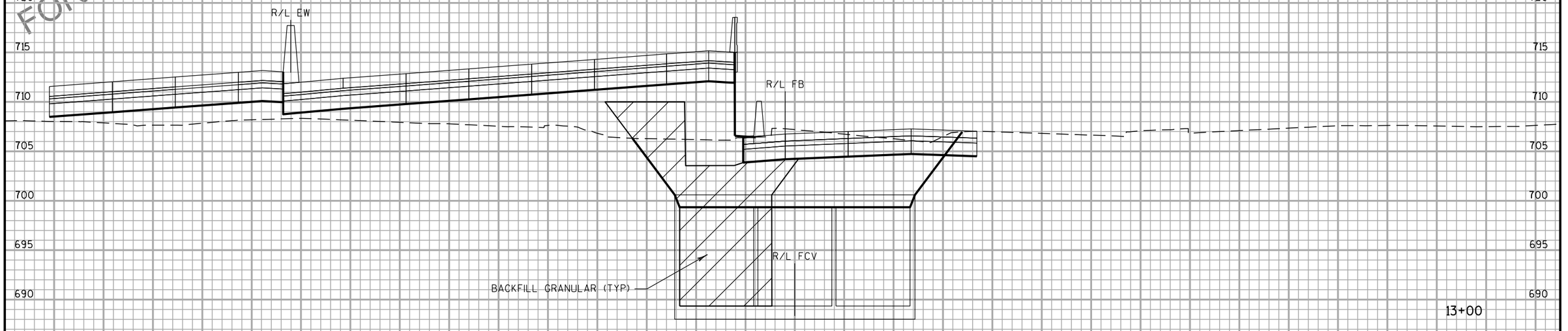
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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

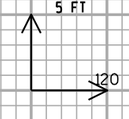
ALL WORK STAGE 4



13+48



13+00



STA 13+00 TO 13+48

PROJECT NO: 1060-33-80	HWY: IH 894/IH 94/USH 45	COUNTY: MILWAUKEE	CROSS SECTIONS: EXISTING BOX CULVERT B-40-93	SHEET	E

FILE NAME : W:\Cadd\Final\10603380_Z1\Roads\cds\099001_io_xs_FCV.dgn
PLOT DATE : 29-APR-2014 12:38
PLOT BY : MSCD1S
PLOT NAME : 099001_io_xs_FCV20 PLOT SCALE : 20:1

Wisconsin Department of Transportation

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